Agenda Item C.2
DISCUSSION/ACTION ITEM
Meeting Date: October 21, 2025

TO: Mayor and Councilmembers

SUBMITTED BY: Luz "Nina" Buelna, Public Works Director

PREPARED BY: Michael Winnewisser, Project Manager

SUBJECT: Approve the Plans and Specifications, Award of Contracts, and Adopt Categorical Exemption for the Citywide Traffic Signal Upgrade Project

RECOMMENDATIONS:

A. Approve the Plans and Specifications for the Citywide Traffic Signal Upgrade Project;

B. Award and authorize the City Manager to execute a Construction Contract with Alfaro Communications Construction, Inc. for the Citywide Traffic Signal Upgrade Project, in the not-to-exceed amount of $2,607,919.86 subject to the requirements of the contract documents;

C. Authorize the Public Works Director to approve contract change orders for the Citywide Traffic Signal Upgrade Project in an amount not to exceed $260,791.97;

D. Authorize the City Manager, or designee, to apply for and enter into or amend any necessary utility and service agreements associated with the Citywide Traffic Signal Upgrade Project at any amount that is supported by the project budget;

E. Award and authorize the City Manager to execute a Professional Services Agreement with Willdan Engineering, Inc. in an amount not-to-exceed $186,904.00 for Construction Management, Inspection, Public Outreach, and Material Testing services with a December 31, 2027, termination date; and

F. Adopt Resolution No. 25-__, entitled "A Resolution of the City Council of the City of Goleta, California, finding the Citywide Traffic Signal Upgrade Project Categorically Exempt from the California Environmental Quality Act (CEQA) Pursuant to State CEQA Guidelines Section 15301."

BACKGROUND:

In 2021, the City received the state-funded Highway Safety Improvement Program (HSIP) Cycle 10 Grant to upgrade and modernize existing City traffic signals at various locations throughout the City. The City was awarded a total of $3,120,100.00 for the project's preliminary engineering, design, and construction phases with no local match required. The deadline to complete construction for HSIP reimbursement is March 31, 2026.

Kimley-Horn and Associates, Inc. (KHA) was originally selected by a request for qualifications/proposals process early in the project development. On July 18, 2023, the City Council authorized a Professional Services Agreement with KHA. KHA prepared the preliminary and final design, which includes preparation of the plans, specifications, and estimate package for the project.

On August 20, 2024, the Council authorized staff to advertise the project for bids. Coordination with Caltrans identified additional right-of-way requirements, which were completed before the project was formally advertised for bids in July 2025.

On August 15, 2024, Public Works staff advertised a Request for Proposals (RFP) for Construction Management, Inspection, Material Testing, and Public Outreach. The RFP closed on September 16, 2024. Staff reviewed the proposals and determined that Willdan Engineering, Inc. (Willdan) was the most qualified firm.

The Public Works Department advertised the project for competitive bids in the Santa Barbara Independent on July 17, 2025, and July 24, 2025. Public Works staff published the bid documents on PlanetBids, where bids were submitted electronically. The bidding period opened on July 17, 2025, and closed on August 26, 2025. The City received a total of two (2) bids. A summary of the bids and the Engineer's Estimate are shown in Table 1 below.

Table 1: Bid Results

Bidder	Base Bid	Bid Alternate 1	Bid Total
Engineer's Estimate	$ 1,946,600.00	$ 433,800.00	$2,380,400.00
Alfaro Communications Construction, Inc.	$ 2,037,177.09	$ 570,742.77	$2,607,919.86
Taft Electric	$ 2,235,200.00	$ 1,164,800.00	$3,400,000.00

The engineer's estimate for construction costs was $2,380,400. Alfaro Communications Construction, Inc. was the apparent lowest responsible bidder at $2,607,919.86. The lowest bid amount was 8.7% over the engineer's estimate. This difference falls within the normal range identified in industry standards, which considers a variance of plus or minus 25 percent from the engineer's estimate as acceptable.

DISCUSSION:

The Citywide Traffic Signal Upgrade Project will enhance safety, efficiency, and reliability at 32 signalized intersections by installing retroreflective back plates to improve visibility, new video detection cameras for traffic monitoring, upgraded controllers, mast arms, and traffic signal heads, with an alternate bid item to include Americans with Disabilities Act (ADA), compliant pedestrian push buttons to improve accessibility for all roadway users.

Construction is tentatively scheduled to begin in the winter of 2025 with completion in the summer of 2026, and staff will conduct public outreach in advance and during construction to notify residents, businesses, and commuters of project timing and traffic impacts.

Public Works staff recommends that the City Council approve the Plans and Specifications for the Citywide Traffic Signal Upgrade Project (Attachments 1 and 2) and award a Construction Contract to Alfaro Communications Construction, Inc., the lowest responsible bidder (Attachment 3). Staff also recommends authorizing the Public Works Director to approve contract change orders as needed to address unforeseen conditions or necessary adjustments during construction. In addition, staff recommends awarding a Professional Services Agreement to Willdan Engineering, Inc. (Attachment 4) for construction management, inspection, public outreach, and materials testing services. These actions will enable the City to proceed with construction, maintain professional oversight, and provide transparent communication with the public throughout the project. This project is categorically exempt from CEQA as a Class 1 Exemption (State CEQA Guidelines Section 15301). The Exemption has been prepared, and no further CEQA action is required. Public Works staff recommends the adoption of the attached resolution (Attachment 5).

GOLETA STRATEGIC PLAN:

City-Wide Initiative: 5. Strengthen Infrastructure
Strategic Goal: 5.5. Improve infrastructure safety and accessibility by incorporating best practices for infrastructure

FISCAL IMPACTS:

The Citywide Traffic Signal Upgrade Project (CIP No. 9083) is funded by the HSIP Grant, Measure A, and General Fund. Table 2 below details the project cost estimates. Staff has also submitted a Cost Change Request Form to Caltrans Local Assistance to increase the HSIP Grant funding amount by $97,201 to cover the additional construction-specific budget limitations. Approval of the funding amendment is anticipated in Fall 2025, prior to the start of construction, and will be followed by corresponding grant budget appropriations.

Table 2 – Project Costs

Project Components	Estimated Costs	Funding Source	Funding Amounts
Conceptual Design	$0.00*	General Fund (101)	$390,499.00
Final Design	$406,902.78 **	Measure A (205)	$95,000.00
Construction Management	$186,904.00	HSIP Grant (417)	$3,120,100.00
Construction (Base Bid)	$2,037,177.09	HSIP Grant (417) Cost Change Request (Pending Caltrans approval)	$97,201.00
Construction (Alternate A)	$570,742.77		
Construction Contingency	$260,791.97		
Staff Time	$240,281.39		
Total:	**$3,702,800.00**	**Total:**	**$3,702,800.00**

*Conceptual design costs were part of the Goleta Traffic Safety Study Project (CIP No. 9089)
**Actual Costs to date

ALTERNATIVES:

City Council may choose not to approve the contract documents or award the project. Doing so would delay the construction of the Project and would jeopardize the HSIP grant funding if the project is not completed by the deadline.

LEGAL REVIEW BY: Isaac Rosen, City Attorney

APPROVED BY: Robert Nisbet, City Manager

ATTACHMENTS:

1. Citywide Traffic Signal Upgrade Project Plans
2. Citywide Traffic Signal Upgrade Project Specifications
3. Construction Contract with Alfaro Communications Construction, Inc.
4. Professional Services Agreement with Willdan Engineering, Inc.
5. Resolution No. 25-__ entitled “A Resolution of the City Council of the City of Goleta, California, finding the Citywide Traffic Signal Upgrade Project Categorically Exempt from the California Environmental Quality Act (CEQA) Pursuant to State CEQA Guidelines Section 15301”

ATTACHMENT 1

Citywide Traffic Signal Upgrade Project Plans

CITY OF GOLETA

PUBLIC WORKS DEPARTMENT

PROJECT PLANS FOR CONSTRUCTION

GOLETA CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS

IN SANTA BARBARA COUNTY

PROJECT NO. 9083

TRAFFIC SIGNAL GENERAL NOTES

1. ALL MATERIAL AND WORK SHALL CONFORM TO THE CALTRANS STANDARD PLANS AND STANDARD SPECIFICATIONS (2023), AND CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD)(2014).
2. ALL TRAFFIC SIGNAL POLES, MAST ARMS, MAST ARM LUMINARIES AND FOUNDATIONS SHALL BE PER THE CALTRANS STANDARD PLANS AND SPECIFICATIONS (2023).
3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, 811, AND ALL CONCERNED UTILITY COMPANIES AT LEAST TWO WORKING DAYS IN ADVANCE OF EXCAVATION.
4. LOCATIONS OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND VERIFY ALL CONDITIONS ON THE JOB SITE PRIOR TO COMMENCING WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ALL DAMAGES OCCURRED DUE TO FAILURE TO LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES. HAND DIG AS NEEDED OR AS DIRECTED BY THE ENGINEER UNTIL CLEAR OF OBSTRUCTIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON CITY RIGHT-OF-WAY AFFECTED BY CONTRACTOR'S WORK. THE CONTRACTOR SHALL KEEP CITY RIGHT-OF-WAY CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. METHOD OF STREET CLEANING SHALL BE DRY SWEEPING OF ALL PAVED AREAS. THERE SHALL BE NO STOCKPILING OF CONSTRUCTION MATERIALS WITHIN THE CITY RIGHT-OF-WAY WITHOUT THE PERMISSION OF THE ENGINEER.
6. EXISTING PRIVATELY OWNED IMPROVEMENTS ON PUBLIC RIGHT-OF-WAY SHALL BE PROTECTED OR REPLACED AS DIRECTED BY THE ENGINEER.
7. SEE CALTRANS STANDARD PLAN ES-1A, ES-1B, AND ES-1C FOR ELECTRICAL SYSTEMS SYMBOLS AND ABBREVIATION LEGENDS.
8. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TRAFFIC SIGNAL EQUIPMENT, SIGNS, AND STRIPING IN ACCORDANCE WITH THE PLANS AND SPECIAL PROVISIONS. ALL SIGNS SHALL BE REFLECTORIZED AND STANDARD SIZE PER SECTION 2 OF CA MUTCD UNLESS OTHERWISE NOTED.
9. CONTROLLER CABINET AND SERVICE CABINET SHALL BE PLACED AT A MINIMUM OF 15 FEET APART.
10. ALL PULL BOXES SIZE SHALL BE NO. 6 PER STANDARD PLAN ES-8B UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER. PULL BOXES IN UNIMPROVED AREAS NOT PROTECTED BY CURB AND GUTTER SHALL BE TRAFFIC BEARING TYPE. MAXIMUM SPACING BETWEEN PULL BOXES SHALL BE 500 FEET.
11. VIDEO DETECTION SHALL BE USED WHERE NOTED ON THE PLANS. THE VIDEO DETECTION PROCESSOR AND EXTENSION MODULES SHALL PLUG INTO THE CABINET FILE SLOTS APPROPRIATE FOR THE DETECTION CHANNELS SERVICED.
12. ALL CABLES AND CONDUCTORS SHALL BE CONTINUOUS WITH A MINIMUM OF 6 FEET OF SLACK INSIDE EACH PULL BOX UNLESS OTHERWISE NOTED. 20 FEET OF SIGNAL INTERCONNECT CABLE SLACK SHALL BE PROVIDED INSIDE THE CONTROLLER CABINET.
13. ALL COMBINATION PEDESTRIAN AND VEHICLE SIGNAL INDICATIONS INCLUDING PV HEADS SHALL UTILIZE LIGHT EMITTING DIODE (LED) SIGNAL MODULES. ALL VEHICLE SIGNAL SECTION AND INDICATIONS SHALL BE 12 INCH.
14. ALL SIGNAL HOUSINGS, VISORS, AND BACKPLATES SHALL BE METAL. VEHICLE SIGNAL HOUSING SHALL BE PROVIDED WITH LOUVERED BACKPLATE. A TUNNEL VISOR SHALL BE PROVIDED FOR EACH SIGNAL FACE.
15. ALL UNUSED TENONS SHALL BE CAPPED IN A WATERPROOF METHOD AS DIRECTED BY THE ENGINEER.
16. ALL EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO FINAL PLACEMENT.
17. ALL IMPROVEMENTS SHALL BE ADA-COMPLIANT PER LATEST ADA STANDARDS.
18. ALL PROPOSED PEDESTRIAN PUSH BUTTON ASSEMBLIES SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSH BUTTON WITH SPEECH MESSAGE.
19. ALL NEW POLES, CONDUIT AND CONDUCTORS SHALL BE IN PLACE AND OPERATIONAL PRIOR TO DEACTIVATION AND REMOVAL OF EXISTING SIGNAL POLES AND EQUIPMENT. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAL, CONTROLLER, WIRING, POSTS/ POLES ETC. AS REQUIRED DURING THE PROGRESS OF WORK. CONTRACTOR IS RESPONSIBLE FOR COST OF MAINTAINING SIGNAL OPERATION.
20. ALL PROPOSED HIGH VISIBILITY RETROREFLECTIVE BACKPLATE BORDER STRIP SHALL BE 2" WIDE.
21. ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO PUBLIC WORKS CORP YARD (290 COROMAR DR, GOLETA, CA 93117). CONTRACTOR SHALL CONTACT JORGE FLORES AT (805) 968-6860 OR JUAN JIMENEZ AT (805)-968-5583 TO COORDINATE THE EQUIPMENT DELIVERY.

ABBREVIATIONS

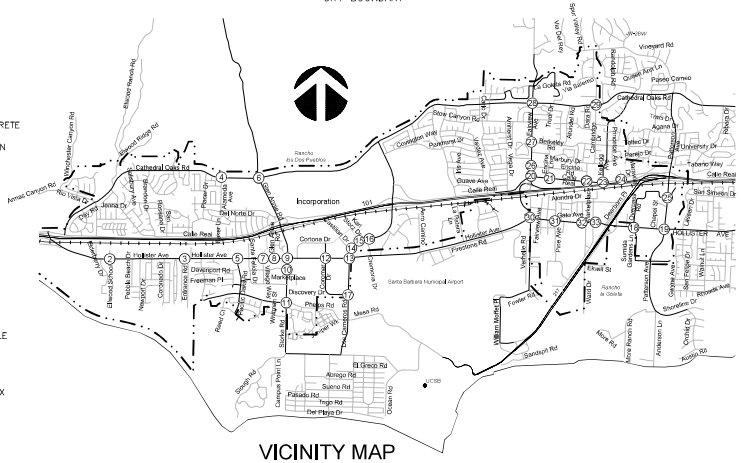
PROJECT ABBREVIATIONS REFER TO CALTRANS STANDARD PLANS A3A TO A3C AND THE FOLLOWING BELOW:

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ADA	AMERICANS WITH DISABILITIES ACT
ALT	ALTERNATIVE
APS	ACCESSIBLE PEDESTRIAN SIGNAL
BBS	BATTERY BACKUP SYSTEM
B.C.R.	BEGINNING OF CURB RETURN
BIU	BUS INTERFACE UNIT
C.	CONDUIT
CCU	CENTRAL CONTROL UNIT
C&G	CURB AND GUTTER
℄ OR CL	CENTER LINE
CL 2 AB	CLASS 2 AGGREGATE BASE
CLF	CHAIN LINK FENCE
CONST	CONSTRUCT
DIA	DIAMETER
DWY OR D/W	DRIVEWAY
DZ	DILEMMA ZONE
EB	EASTBOUND
E.C.R.	END OF CURB RETURN
EX.	EXISTING
FH	FIRE HYDRANT
FO	FIBER OPTIC
FT	FEET
ICP	IRRIGATION CONTROL PAD
ICV	IRRIGATION CONTROL VALVE
IRR	IRRIGATION CONTROL BOX
LED	LIGHT EMITTING DIODE
LT	LEFT
MA	MAST ARM
MH	MANHOLE
MIN	MINIMUM
MPH	MILES PER HOUR
MOD	MODIFIED
NB	NORTHBOUND
NO	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
O/H OR OH	OVERHEAD
PCC	PORTLAND CEMENT CONCRETE
PED	PEDESTRIAN
PPB	PEDESTRIAN PUSH BUTTON
PROP	PROPOSED
∅P	PEDESTRIAN PHASE
PV	PROGRAMMED VISIBILITY
ROW OR R/W	RIGHT OF WAY
RT	RIGHT
S	SECONDS
SB	SOUTHBOUND
SD	STORM DRAIN
SDLC	SYNCHRONOUS DATA LINK CONTROL
SDMH	STORM DRAIN MANHOLE
SE	SOUTHEAST
SIG	SIGNAL
SOCAL	SOUTHERN CALIFORNIA
SNS	STREET NAME SIGN
SS	SEWER
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
STLT	STREET LIGHT
SW/SWK	SIDEWALK
TEL	TELEPHONE
TSPB	TRAFFIC SIGNAL PULL BOX
TYP	TYPICAL
UVLT	UTILITY VAULT
VEH	VEHICLE
W	WATER
WB	WESTBOUND
WM	WATER METER
WV	WATER VALVE

MAP LEGEND

(X) PROJECT INTERSECTION SHEET NUMBER

CITY BOUNDARY


Incorporation
Cathedral Oaks Rd
Hollister Ave
Calle Real
Fairview Ave
Storke Rd
Glen Annie Rd
Los Carneros Rd
Patterson Ave
Turnpike Rd
Santa Barbara Municipal Airport
Goleta Slough
Ellwood
Isla Vista
Goleta
Old Town
Ellwood School
Bacara Resort & Spa
Rancho La Patera & Stow House
Rancho Los Dos Pueblos
Rancho La Vista
Rancho La Goleta
Rancho Dos Pueblos
Vineyard Rd
Palacio Cornejo
Robin Dr
Agana Dr
University Dr
Fabrico Way
Del Sinaloa Dr
Del Norte Dr
Cortona Dr
Discovery Dr
Phelps Rd
Nueva Rd
Abrego Rd
Suerta Rd
Palacio Rd
Trigo Rd
Del Playa Dr
El Greco Rd
Campus Point Dr
Ocean Rd
Sueño Rd
Ward Memorial Blvd
Whittier Dr
Whittier Rd
Whitkirk Ln
Ekwill St
Fowler Rd
William Moffett Pl
Sandpiper Rd
Aero Camino
Aero Vista Rd
Moffett Pl
Moffett Rd
Moffett Ct
Hazard Ln
Anderson Ln
Orchard Dr
Austin Rd
Rhinehart Dr
Ribera Ave
Dearborn Ave
Gaviota Ave
Pine Ave
Berkeley Rd
Cambridge Dr
Kellogg Ave
Maravilla
Encina Rd
Encina Ln
Encina Vista Dr
Encina Vista Ln
Fairview Gardens Ln
Sumida Gardens Ln
Sumida Ln
Sumida Rd
Sumida Gardens Rd
Overpass Rd
Overpass Ln
Overpass Ct
Overpass Cir

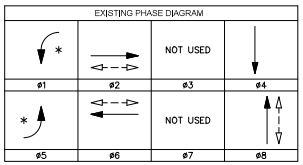
CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
NO. 14 CABLES	(A)	–	–	–	–	–	–	1	–	1
12 CONDUCTORS	(B)	–	–	–	–	–	–	1	–	1
	(C)	–	–	–	–	–	–	1	1	1
3 CONDUCTORS	(D)	–	–	–	–	–	1	–	–	1
	(E)	–	–	–	–	1	1	–	–	1
	(F)	–	–	1	–	1	1	–	–	1
	(G)	–	1	1	1	1	–	–	–	1
	(H)	1	1	1	1	1	1	–	–	1
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		1 1	2 1	3 1	4 3	5 4	2 1	1 1	8 6
#10	LUMINAIRES	–	2	2	2	2	–	–	
COAXIAL VIDEO CABLE		–	1	1	1,1(N)	2,1(N)	1(N)	–	2,2(N)
VIDEO POWER CABLE		–	1	1	1,1(N)	2,1(N)	1(N)	–	2,2(N)
CONDUIT SIZE		2"	3"	3"	3"	3"	3"	2"	2-3"
CONDUIT FILL %		13%	11%	12%	25%	33%	11%	13%	24%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

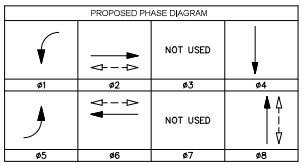
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM



* PROTECTED-PERMISSIVE LEFT TURN

PROPOSED PHASE DIAGRAM



POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING** MAST ARM	SIGNAL MOUNTING** POLE MT'G	SIGNAL MOUNTING** PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	19-2-80	30'	30'	15'	84W	EXISTING		MAS,MAS(N)	SV-1-T	SP-1-T	–	–	–	Ellwood School ➡	–
(B)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	–	ø6(N)	➡	5	–	–
(C)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø6(N)	⬅	5	–	–
(D)	15TS	30'	–	15'	84W	EXISTING		–	SV-1-T(N)	SP-1-T	ø8(N)	➡	7	–	–
(E)	19-2-80	30'	30'	15'	84W	EXISTING		MAS,MAS(N)	SV-1-T	SP-1-T	ø8(N)	⬅	7	⬅ Ellwood School	–
(F)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø2(N)	➡	1	–	–
(G)	15TS	30'	–	15'	84W	EXISTING		–	SV-1-T	–	–	–	–	–	–
(H)	1-A	10'	–	–	–	EXISTING		–	TV-1-T(N)	SP-1-T	ø2(N)	⬅	1	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

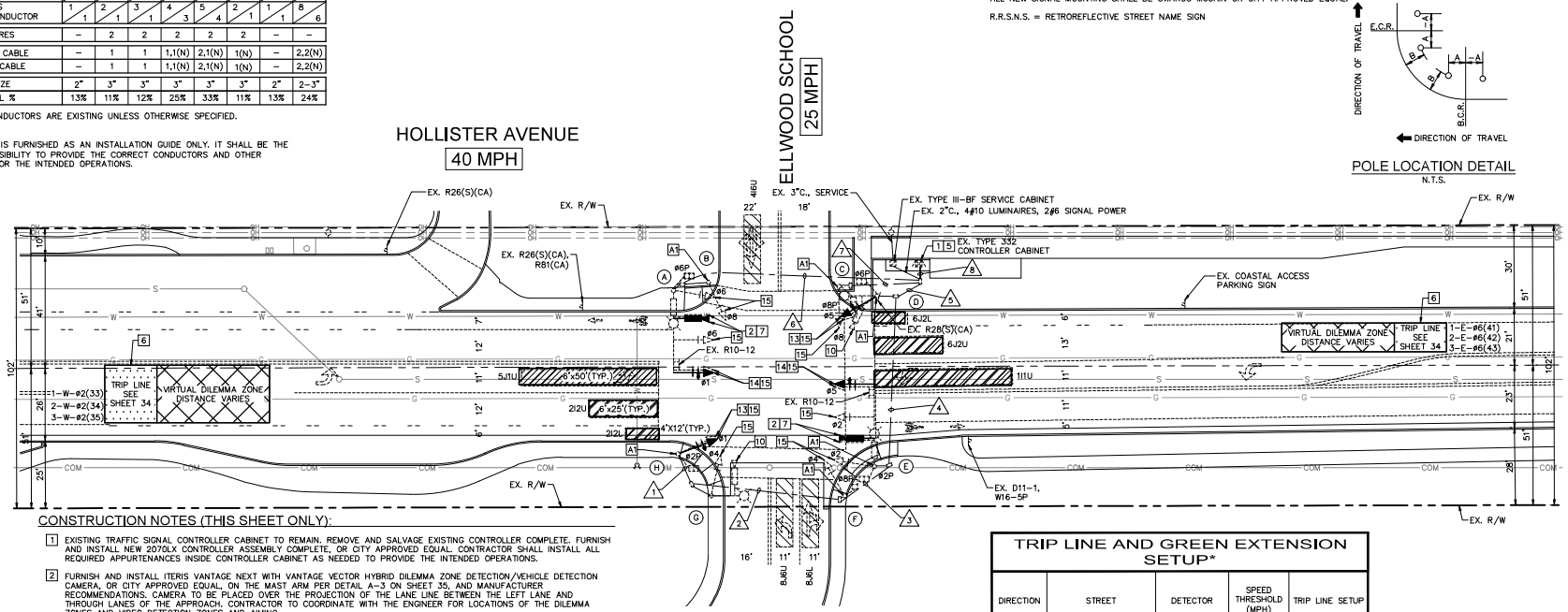
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE. OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.
2. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
5. FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.
6. SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.
7. REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.
10. PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.
13. REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.
14. REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL HEAD. FURNISH AND INSTALL NEW MAST ARM MOUNTED 12" 3-SECTION TRAFFIC SIGNAL HEAD (TYPE MAS) ONTO EXISTING TENON PER SPECIAL PROVISIONS.
15. FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	HOLLISTER AVENUE	1-W-ø2(33)	<38	1
		2-W-ø2(34)	37-43	2
		3-W-ø2(35)	42-48	3
WB		1-E-ø6(41)	<38	1
		2-E-ø6(42)	37-43	2
		3-E-ø6(43)	42-48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT ELLWOOD SCHOOL
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-2
SHEET SHT. 2 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\2-TS-Hollister_Ellwood.dwg; 6/23/2025 11:31 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
NO. 14 CABLES	(A)	–	–	–	–	1	1	1	–
	(B)	–	–	–	–	1	1	1	–
12 CONDUCTORS	(C)	–	–	–	–	1	1	1	–
	(D)	–	–	–	–	–	–	1	–
	(E)	–	–	–	1	–	–	1	–
	(F)	–	–	–	1	–	–	–	1
3 CONDUCTORS	(G)	–	–	1	1	–	–	–	1
	(H)	–	–	1	1	–	–	1	–
	(I)	–	1	1	1	–	–	1	–
	(J)	–	1	1	1	–	–	–	1
	(K)	1	1	1	1	–	–	1	–
TOTAL CABLES		1	2	3	4	2	3	8	–
12-CONDUCTOR/3-CONDUCTOR		1	2	3	4	2	3	8	–
#8	SERVICE	–	–	–	–	–	–	3	3
#10	LUMINAIRES	2	2	2	2	2	2	–	4
	SIG. COMMON	1	1	1	1	1	1	–	–
	TOTAL	3	3	3	3	3	3	–	4
COAXIAL VIDEO CABLE		1	1	1	1,1(N)	1,1(N)	1,1(N)	2,2(N)	–
VIDEO POWER CABLE		1	1	1	1,1(N)	1,1(N)	1,1(N)	2,2(N)	–
CONDUIT SIZE		3"	3"	3"	3"	3"	4"	2–4"	3"
CONDUIT FILL %		10%	16%	21%	30%	18%	14%	17%	2%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

DIRECTION OF TRAVEL
E.C.R.
B.C.R.
DIRECTION OF TRAVEL

POLE LOCATION DETAIL
N.T.S.

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING* MAST ARM	SIGNAL MOUNTING* POLE MT'G	SIGNAL MOUNTING* PED	APS ø	APS ARROW	APS LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26–3–70	30'	40'	12'	84W	EXISTING		2–MAS	SV–1–T(N)	SP–1–T	ø4	←	3	← Entrance Road	–
(B)	1–A	10'	–	–	–	EXISTING		–	TV–2–T(N)	SP–1–T	ø6	→	5	–	–
(C)	1–A	10'	–	–	–	EXISTING		–	TV–1–T(N)	SP–1–T	ø6	←	5	–	–
(D)	1–A	10'	–	–	–	EXISTING		–	TV–2–T(N)	SP–1–T	ø8	→	7	–	–
(E)	24–4–100	30'	40'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	–	–	–	Entrance Road →	–
(F)	PPB POST	3'–6"	–	–	–	EXISTING		–	–	–	ø8	←	7	–	–
(G)	PPB POST	3'–6"	–	–	–	EXISTING		–	–	–	ø2	→	1	–	–
(H)	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	–	–	–	–	–
(I)	1–A	10'	–	–	–	EXISTING		–	TV–1–T(N)	SP–1–T	–	–	–	–	–
(J)	PPB POST	3'–6"	–	–	–	EXISTING		–	–	–	ø2	←	1	–	–
(K)	15TS	30'	–	15'	84W	EXISTING		–	SV–2–TA	SP–1–T	ø4	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

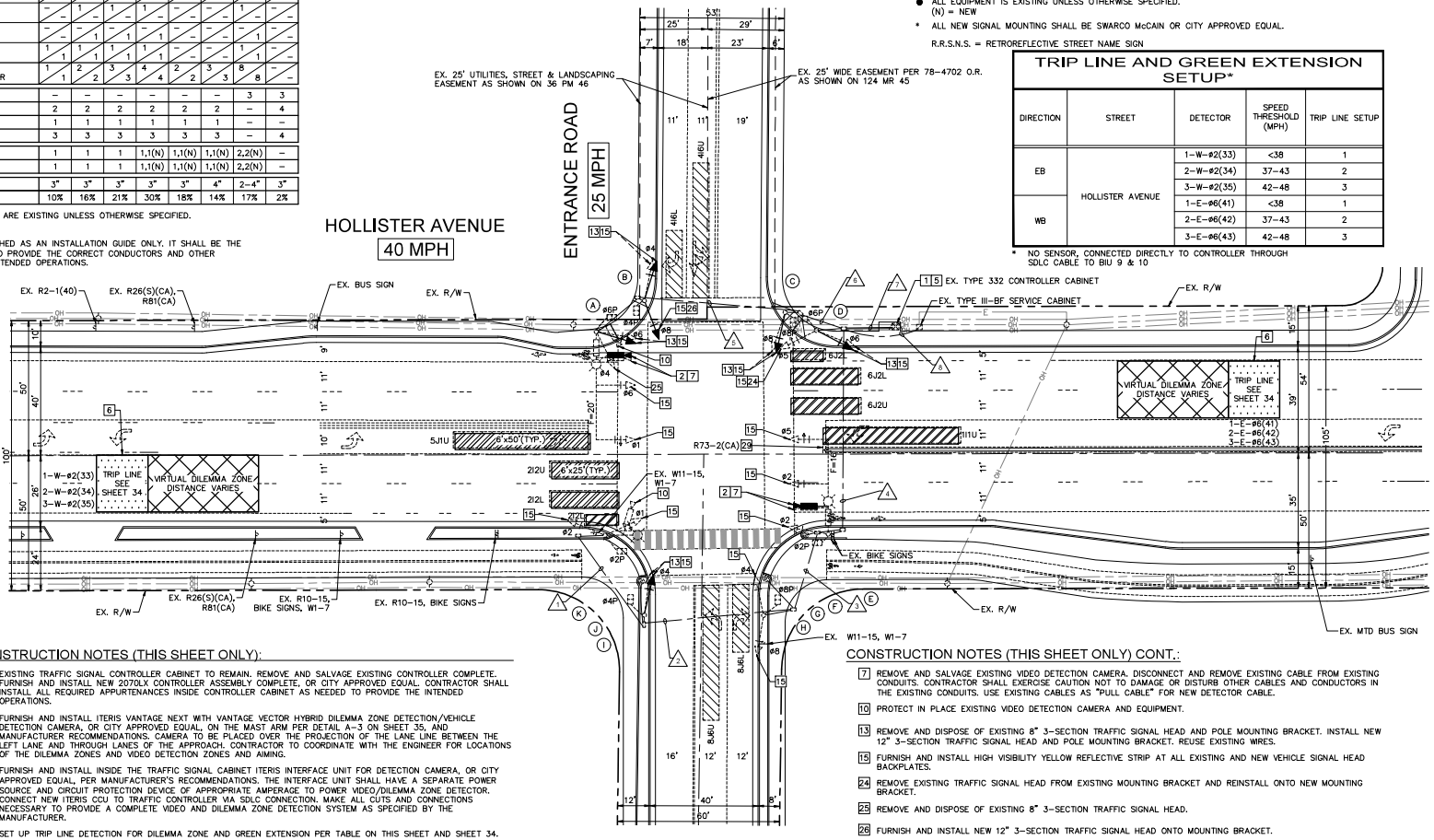
* ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	HOLLISTER AVENUE	1–W–ø2(33)	<38	1
		2–W–ø2(34)	37–43	2
		3–W–ø2(35)	42–48	3
WB		1–E–ø6(41)	<38	1
		2–E–ø6(42)	37–43	2
		3–E–ø6(43)	42–48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

CONSTRUCTION NOTES (THIS SHEET ONLY) CONT.:

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

13 REMOVE AND DISPOSE OF EXISTING 8" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

24 REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.

25 REMOVE AND DISPOSE OF EXISTING 8" 3–SECTION TRAFFIC SIGNAL HEAD.

26 FURNISH AND INSTALL NEW 12" 3–SECTION TRAFFIC SIGNAL HEAD ONTO MOUNTING BRACKET.

29 REMOVE AND SALVAGE EXISTING SIGN AS NOTED.

GRAPHIC SCALE IN FEET
0 10 20 40

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SUITE 700
ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT ENTRANCE ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–3
SHEET SHT. 3 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\3–TS–Hollister_Entrance.dwg; 6/23/2025 11:31 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6	7
CONDUCTORS	NO. 14 CABLES	(A)	–	–	1	–	–	1	–
	12	(B)	–	–	–	–	1	1	–
	12	(C)	–	–	–	1	1	1	–
	3	(D)	–	–	–	–	1	1	–
	3	(E)	–	1	1	–	–	1	–
	3	(F)	1	1	1	–	–	1	–
TOTAL CABLES 12–CONDUCTOR/3–CONDUCTOR			1 / 1	2 / 2	3 / 3	1 / 2	2 / 3	5 / 6	– / –
#8	SERVICE		–	–	–	–	–	3	3
#10	LUMINAIRES		2	2	2	2	2	–	4
	SIG. COMMON		1	1	1	1	1	1	–
	TOTAL		3	3	3	3	3	1	4
COAXIAL VIDEO CABLE			–	–	1,2(N)	1(N)	1,1(N)	1,2(N)	–
VIDEO POWER CABLE			–	–	1,2(N)	1(N)	1,1(N)	1,2(N)	–
CONDUIT SIZE			3"	3"	3"	3"	3"	2–4"	2"
CONDUIT FILL %			7%	13%	21%	14%	20%	11%	9%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

PHASE DIAGRAM

OLA		NOT USED	NOT USED
ø1	ø2	ø3	ø4
NOT USED		NOT USED	
ø5	ø6	ø7	ø8

OLA = ø1+ø8

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	CATHEDRAL OAKS ROAD	1–W–ø2(33)	<38	1
		2–W–ø2(34)	37–43	2
WB		1–E–ø6(41)	<38	1
		2–E–ø6(42)	37–43	2

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

POLE SCHEDULE ●

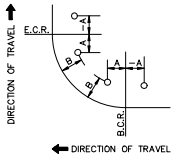
No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	19A–2–80	30'	30'	15'	84W	EXISTING		2–MAS	SV–2–T	SP–1–T	ø8(N)	←	3	Alameda Ave	–
(B)	22	30'	–	15'	84W	EXISTING		–	SV–2–T	SP–1–T	ø8(N)	←	3	–	–
(C)	19A–2–80	30'	30'	15'	84W	EXISTING		MAS	SV–2–T	SP–2–T	ø8(N)	←	7	–	–
(D)	PPB POST(N)	3'–6"(N)	–	–	–	10'	4'	–	–	–	ø2(N)	→	1	–	ALT A
(E)	15	30'	–	15'	84W	EXISTING		–	SV–1–T	SP–1–T	ø2(N)	→	1	–	–
(F)	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø8(N)	←	7	Alameda Ave	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = NEW EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

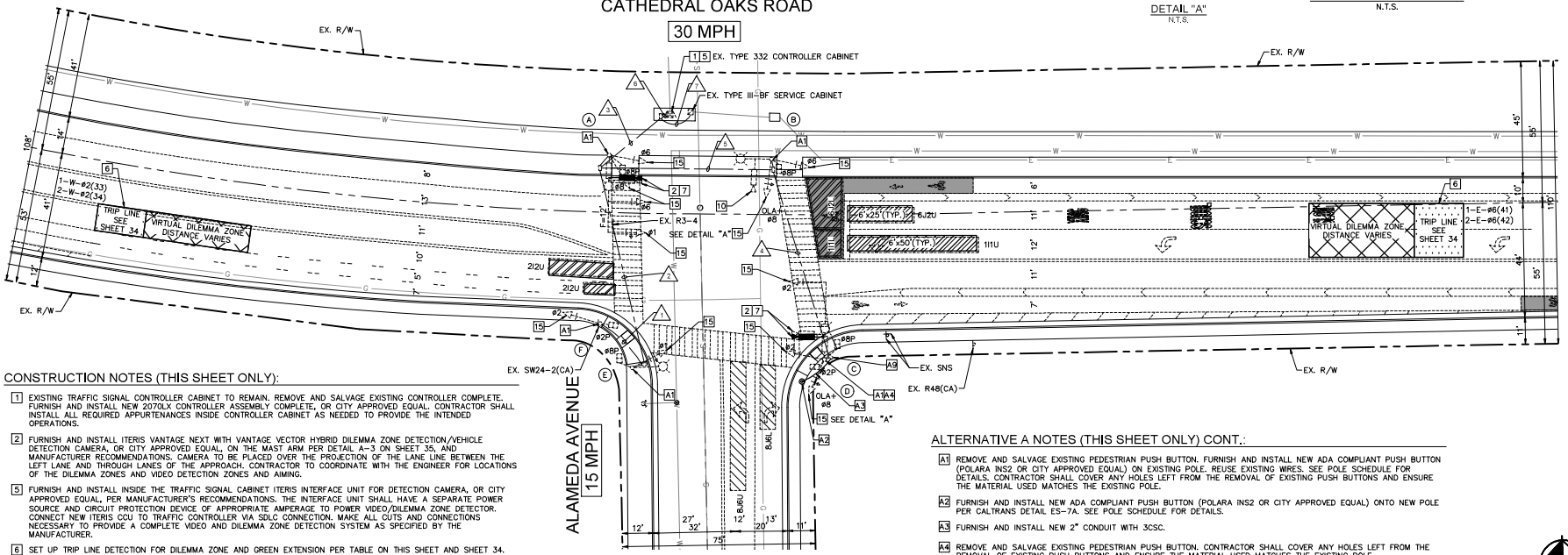
DETAIL "A"
N.T.S.



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.

CATHEDRAL OAKS ROAD
30 MPH



CONSTRUCTION NOTES (THIS SHEET ONLY):

1. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.
2. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
5. FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.
6. SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.
7. REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.
10. PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.
15. FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY) CONT.:

A1. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA iNS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA iNS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES–7A. SEE POLE SCHEDULE FOR DETAILS.

A3. FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9. INSTALL CONDUIT INTO EXISTING PULL BOX.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

CATHEDRAL OAKS ROAD AT ALAMEDA AVENUE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–4
SHEET SHT. 4 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\4–TS–Cathedral_Alameda.dwg; 6/23/2025 11:31 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
CONDUCTORS	NO. 14 CABLES	(A)	–	–	–	–	–	1	1	–
	12 CONDUCTORS	(B)	–	–	–	–	1	1	1	–
		(C)	–	–	–	1	1	1	1	–
		(D)	1	1	1	–	–	1	1	–
	3 CONDUCTORS	(E)	–	1	1	1	–	–	1	1
		(F)	1	1	1	–	–	–	1	1
		(G)	1	1	1	–	–	1	1	–
		(H)	–	–	1	1	–	–	1	1
		(I)	–	1	1	–	–	1	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			2 2	3 3	3 3	1 1	2 2	6 6	6 6	– –
#8	SERVICE		–	–	–	–	–	–	2	2
#10	LUMINAIRES		2	2	2	2	2	4	–	2
	SIG. COMMON		1	1	1	1	1	–	–	–
	TOTAL		3	3	3	3	3	4	1	–
COAXIAL VIDEO CABLE			1(N)	1	1,1(N)	–	1	3,1(N)	3,1(N)	–
VIDEO POWER CABLE			1(N)	1	1,1(N)	–	1	3,1(N)	3,1(N)	–
CONDUIT SIZE			3"	3"	3"	3"	3"	2–4"	2–4"	2"
CONDUIT FILL %			16%	21%	21%	7%	14%	13%	13%	6%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

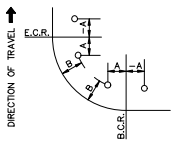
PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

POLE SCHEDULE ●

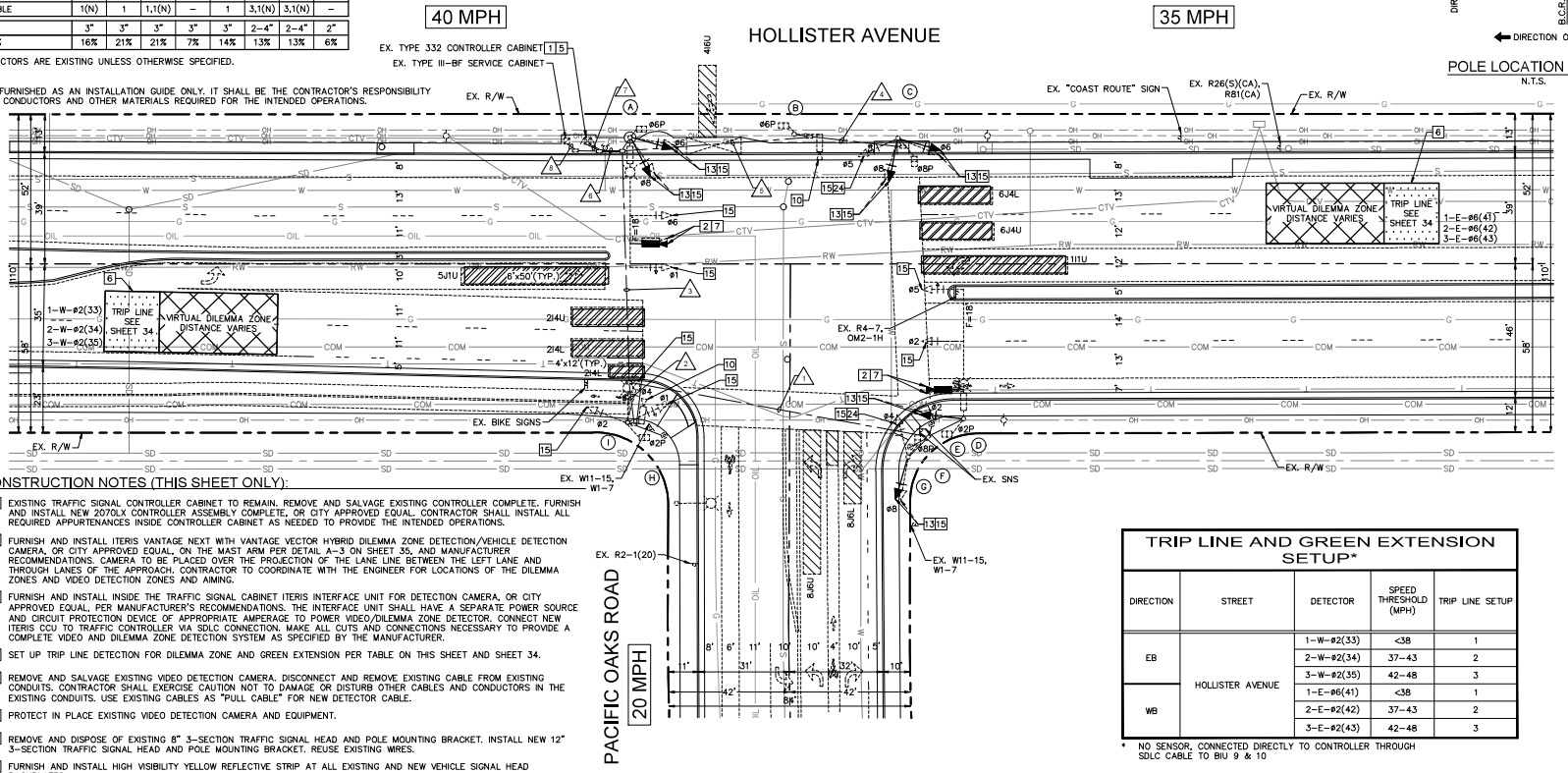
No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING* MAST ARM	SIGNAL MOUNTING* POLE MT'G	SIGNAL MOUNTING* PED	APS ø	APS ARROW	APS LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26–3–70 ■	30'	45'	15'	84W	EXISTING		2–MAS	SV–2–TA(N)	SP–1–T	ø6	→	5	Pacific Oaks	–
(B)	15TS	30'	–	–	–	EXISTING		–	–	SP–1–T	ø6	←	5	–	–
(C)	1–A	10'	–	–	–	EXISTING		–	TV–3–T(N)	SP–1–T	ø8	←	3	–	–
(D)	26–3–70	30'	45'	15'	84W	EXISTING		2–MAS	SV–1–T(N)	SP–1–T	–	–	–	Pacific Oaks	–
(E)	PPB POST	3'–6"	–	–	–	EXISTING		–	–	–	ø8	←	7	–	–
(F)	PPB POST	3'–6"	–	–	–	EXISTING		–	–	–	ø2	→	1	–	–
(G)	1–A	10'	–	–	–	EXISTING		–	TV–2–T(N)	SP–1–T	–	–	–	–	–
(H)	PPB POST	3'–6"	–	–	–	EXISTING		–	–	–	ø2	←	1	–	–
(I)	15TS	30'	–	15'	84W	EXISTING		–	SV–3–TA	SP–1–T	–	–	–	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
■ POLE ON ABOVE–SURFACE FOUNDATION.
* ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

13 REMOVE AND DISPOSE OF EXISTING 8" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

24 REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	HOLLISTER AVENUE	1–W–ø2(33)	<38	1
		2–W–ø2(34)	37–43	2
		3–W–ø2(35)	42–48	3
WB		1–E–ø6(41)	<38	1
		2–E–ø2(42)	37–43	2
		3–E–ø2(43)	42–48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

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

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR PROJECT ENGINEER
DATE 6/23/2025
R.C.E. 65218

HOLLISTER AVENUE PACIFIC OAKS ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-5
SHEET SHT. 5 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\5–TS–Hollister_Pacific.dwg, 6/23/2025 11:32 AM, Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5
CONDUCTORS	NO. 14 CABLES	(A)	–	–	–	1	1	–
	12	(B)	–	–	–	–	–	–
		(C)	–	–	–	1	1	–
	3 CONDUCTORS	(D)	–	–	–	–	1	–
		(E)	–	–	–	–	1	–
		(F)	–	2	–	2	–	–
		(G)	1	1	–	1	–	–
		(H)	1	1	1	–	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			2 / 2	4 / 4	2 / 2	8 / 8	– / –
#6	SIGNAL POWER		–	–	–	–	2
#10	LUMINAIRES		2	2	2	4	–
	SIG. COMMON		1	1	1	–	–
	TOTAL		3	3	3	4	–
COAXIAL VIDEO CABLE			1(N)	2(N)	1(N)	4(N)	–
VIDEO POWER CABLE			1(N)	2(N)	1(N)	4(N)	–
CONDUIT SIZE			3"	3"	3"	2-4"	2"
CONDUIT FILL %			16%	30%	16%	16%	5%

● ALL CONDUITS AND ALL CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

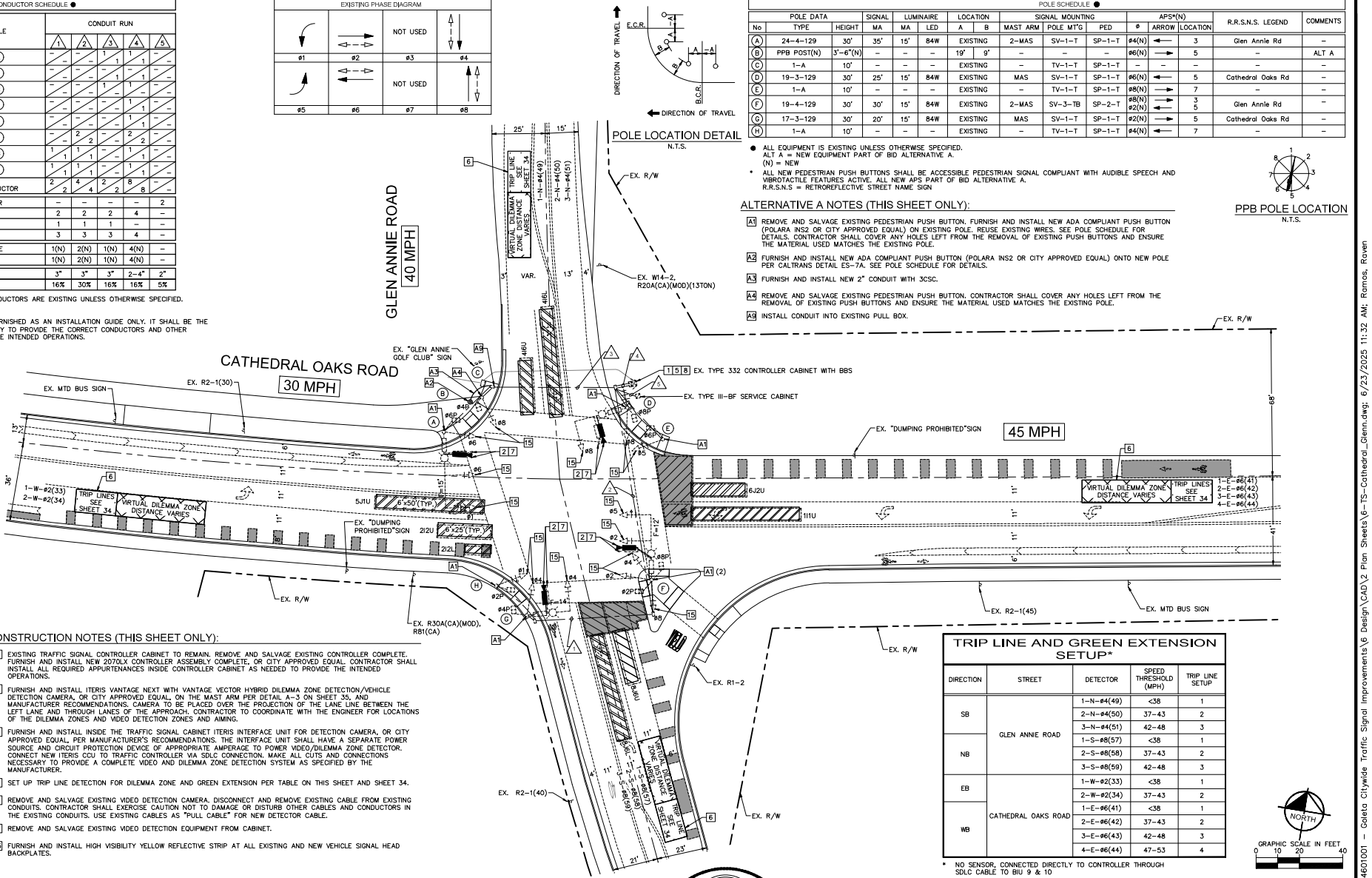
		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LED	LOCATION A	B	SIGNAL MOUNTING MAST ARM	POLE MT'G	PED	APS*(N) ø	ARROW	LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	24-4-129	30'	35'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	ø4(N)	←	3	Glen Annie Rd	–
(B)	PPB POST(N)	3'-6"(N)	–	–	–	19'	9'	–	–	–	ø6(N)	→	5	–	ALT A
(C)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	–	–	–	–	–
(D)	19-3-129	30'	25'	15'	84W	EXISTING		MAS	SV-1-T	SP-1-T	ø6(N)	←	5	Cathedral Oaks Rd	–
(E)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø8(N)	→	7	–	–
(F)	19-4-129	30'	30'	15'	84W	EXISTING		2-MAS	SV-3-TB	SP-2-T	ø8(N) ø2(N)	→ ←	3 5	Glen Annie Rd	–
(G)	17-3-129	30'	20'	15'	84W	EXISTING		MAS	SV-1-T	SP-1-T	ø2(N)	→	5	Cathedral Oaks Rd	–
(H)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø4(N)	←	7	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = NEW EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
R.R.S.N.S = RETROREFLECTIVE STREET NAME SIGN



ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A5 INSTALL CONDUIT INTO EXISTING PULL BOX.

CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

8 REMOVE AND SALVAGE EXISTING VIDEO DETECTION EQUIPMENT FROM CABINET.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	GLEN ANNIE ROAD	1-N-ø4(49)	<38	1
		2-N-ø4(50)	37-43	2
		3-N-ø4(51)	42-48	3
NB		1-S-ø8(57)	<38	1
		2-S-ø8(58)	37-43	2
		3-S-ø8(59)	42-48	3
EB	CATHEDRAL OAKS ROAD	1-W-ø2(33)	<38	1
		2-W-ø2(34)	37-43	2
WB		1-E-ø6(41)	<38	1
		2-E-ø6(42)	37-43	2
		3-E-ø6(43)	42-48	3
		4-E-ø6(44)	47-53	4

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

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

GRAPHIC SCALE IN FEET 0 10 20 40

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

CATHEDRAL OAKS ROAD AT GLEN ANNIE ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-6
SHEET SHT. 6 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\6-TS-Cathedral_Glenn.dwg; 6/23/2025 11:32 AM; Ramos, Raven

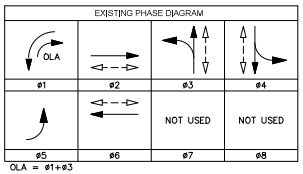
CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
CONDUCTORS — NO. 14 CABLES	Ⓐ	–	–	–	–	1	–	–	–
	Ⓑ	–	–	–	–	–	–	–	–
12 CONDUCTORS	Ⓒ	–	–	–	1	–	–	1	–
	Ⓓ	–	–	1	1	1	–	1	–
3 CONDUCTORS	Ⓔ	1	1	1	1	1	–	1	–
	Ⓕ	–	–	–	–	–	1	1	–
	Ⓖ	–	–	–	–	–	1	1	–
	Ⓗ	–	–	–	–	–	–	1	–
	Ⓘ	–	–	–	–	–	1	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		1 / 1	2 / 2	3 / 3	4 / 4	2 / 2	8 / 8	8 / 8	–
#10	LUMINAIRES	–	2	2	2	2	4	2	4
	SIG. COMMON	1	1	1	1	1	–	–	–
	TOTAL	1	3	3	3	3	4	2	4
COAXIAL VIDEO CABLE		–	–	–	1	1	2	4	–
VIDEO POWER CABLE		–	–	–	1	1	2	4	–
CONDUIT SIZE		3"	3"	3"	3"	3"	2-4"	2-4"	2"
CONDUIT FILL %		6%	13%	18%	27%	16%	15%	16%	4%

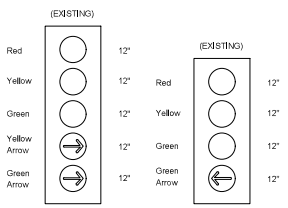
● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM



ØLA = ø1+ø3



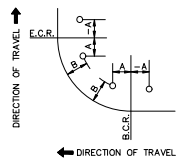
POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
Ⓐ	61-5-100	30'	60'	15'	98W	EXISTING		2-MAS	SV-1-T	SP-1-T	–	–	–	← Camino Real Marketpl Village Way →	–
Ⓑ	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø4(N)	←	3	–	–
Ⓒ	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø6(N)	→	5	–	–
Ⓓ	17-2-100	30'	20'	15'	98W	EXISTING		MAS-4B	SV-1-T	SP-1-T	ø6(N)	→	5	Hollister Av	–
Ⓔ	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø3(N)	→	7	–	–
Ⓕ	26-4-100	30'	40'	15'	98W	EXISTING		2-MAS	SV-1-T	SP-1-T	ø3(N)	←	7	Camino Real Marketpl → ← Village Way	–
Ⓖ	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø2(N)	←	5	–	–
Ⓗ	19-2-100	30'	25'	15'	98W	EXISTING		MAS-4B	SV-1-T	SP-1-T	ø2(N)	←	1	Hollister Ave	–
Ⓘ	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø4(N)	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

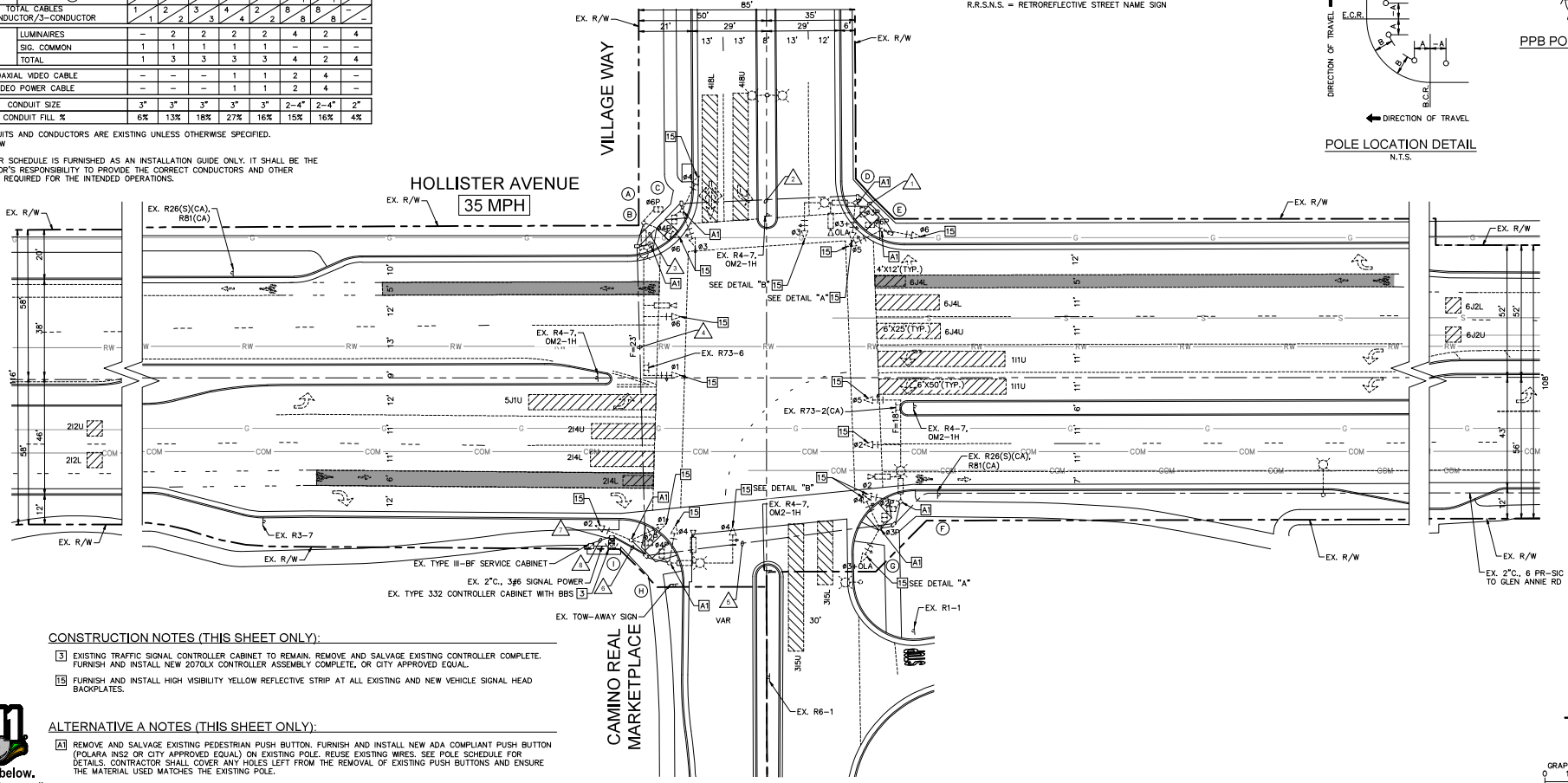
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

3 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

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

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR PROJECT ENGINEER
DATE 6/23/2025
R.C.E. 65218

HOLLISTER AVENUE AT VILLAGE WAY AND CAMINO REAL MARKETPLACE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-7
SHEET SHT. 7 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\7-TS-Hollister_Village.dwg 6/23/2025 11:32 AM: Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6
CONDUCTORS	NO. 14 CABLES	(A)	–	–	1	–	–	1
	12 CONDUCTORS	(B)	–	–	–	1	–	–	–	1
		(C)	–	–	–	–	1	–	–	1
		(D)	–	–	–	–	–	1	1
	3 CONDUCTORS	(E)	–	–	–	1	1	1	–
		(F)	1	1	1	–	–	1	–
		(G)	–	–	1	1	–	–	1
		(H)	–	1	1	–	–	–	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			1 –	2 2	3 3	1 –	1 1	4 4
#8	SERVICE		–	–	–	–	–	2
#10	LUMINAIRES		2	2	2	–	–	–
	SIG. COMMON		1	1	1	1	1	1
	TOTAL		3	3	3	1	1	1
COAXIAL VIDEO CABLE			1	2	3	–	–	3
VIDEO POWER CABLE			1	2	3	–	–	3
CONDUIT SIZE			3"	3"	3"	3"	3"	2-4"
CONDUIT FILL %			8%	16%	27%	5%	6%	9%

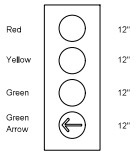
● ALL CONDUITS AND ALL CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

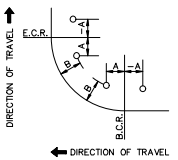
EXISTING PHASE DIAGRAM

NOT USED		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	NOT USED
ø5	ø6	ø7	ø8

(EXISTING)



DETAIL "A"
N.T.S.



POLE LOCATION DETAIL
N.T.S.

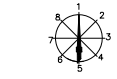
POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26-4-100	30'	35'	15'	84W	EXISTING		MAS	SV-1-T	SP-2-T	–	–	–	S. Glen Annie Rd	–
(B)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø4(N)	→	7	–	–
(C)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø6(N)	←	1	–	–
(D)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø6(N)	←	5	–	–
(E)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–
(F)	26-4-100	30'	40'	15'	84W	EXISTING		2-MAS	SV-2-T	–	–	–	–	S. Glen Annie Rd	–
(G)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø4(N)	←	7	–	–
(H)	19-2-100	30'	25'	15'	84W	EXISTING		MAS-4B	SV-2-T	SP-1-T	–	–	–	Hollister Ave	–

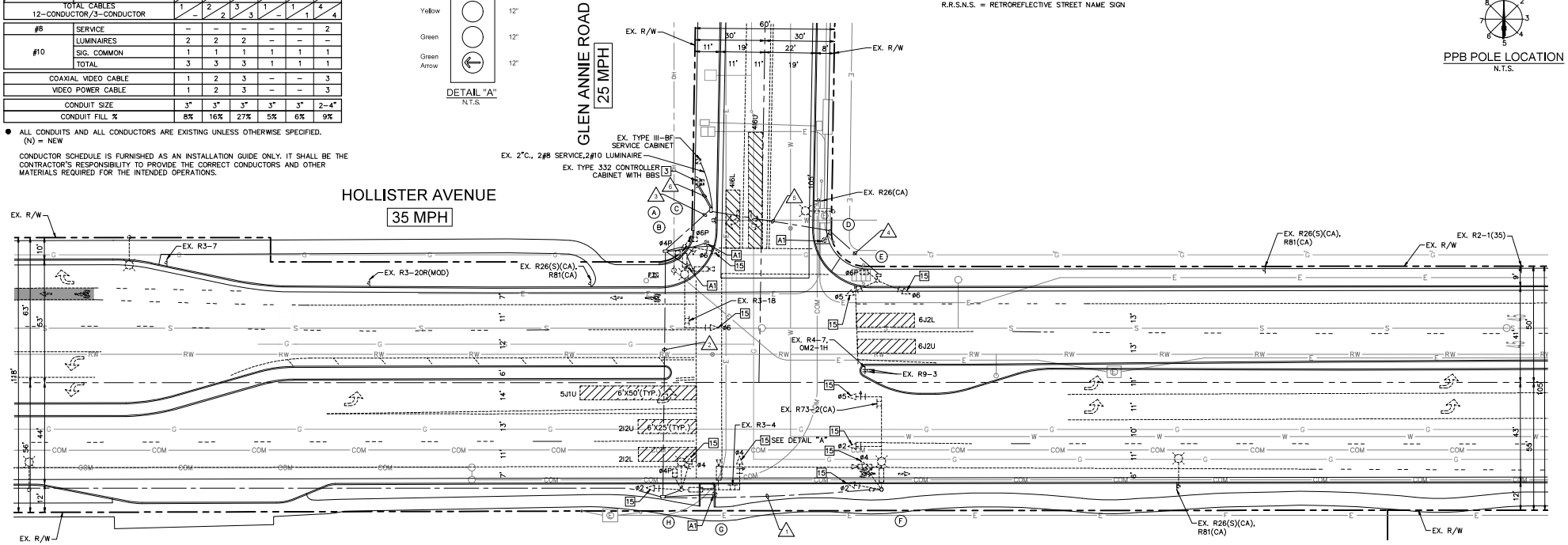
● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

3 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

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

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT GLEN ANNIE ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-8
SHEET SHT. 8 OF 35
PLAN DATE 6/23/2025

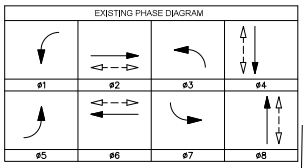
K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\8-TS-Hollister_Glenn.dwg; 6/23/2025 11:32 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●									
AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN							
		1	2	3	4	5	6	7	
CONDUCTORS: NO. 14 CABLES	Ⓐ	–	2	–	–	2	2	2	–
	Ⓑ	–	–	–	–	–	–	–	–
12 CONDUCTORS	Ⓒ	2	2	–	–	2	2	2	–
	Ⓓ	–	–	–	–	–	–	–	–
3 CONDUCTORS	Ⓔ	1	1	–	–	1	1	1	–
	Ⓕ	–	–	–	1	1	1	1	–
	Ⓖ	–	–	–	–	1	1	1	–
	Ⓗ	–	–	–	–	–	2	2	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		2 / 2	4 / 4	1 / 1	2 / 2	8 / 8	8 / 8	8 / 8	– / –
#8	SERVICE	–	–	–	–	–	2	2	
#10	LUMINAIRES	2	2	2	2	4	–	4	
	SIG. COMMON	1	1	1	1	–	1	–	
	TOTAL	3	3	3	3	4	1	4	
COAXIAL VIDEO CABLE		1	2	1	1	4	4	–	
VIDEO POWER CABLE		1	2	1	1	4	4	–	
CONDUIT SIZE		3"	3"	3"	3"	2-4"	2-4"	2"	
CONDUIT FILL %		16%	30%	10%	16%	16%	17%	8%	

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM



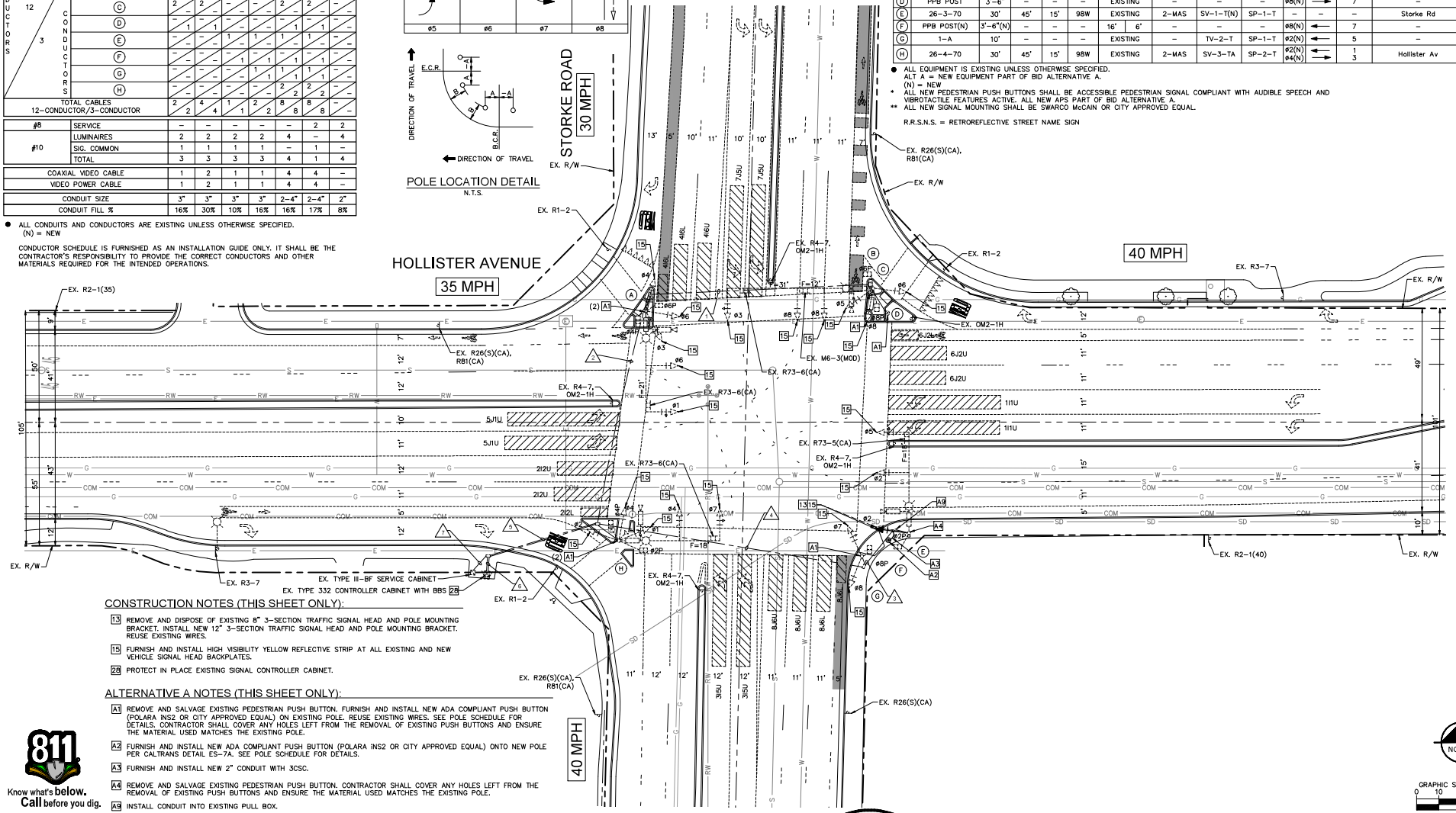
POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.

POLE SCHEDULE ●														
POLE DATA			SIGNAL	LUMINAIRE		LOCATION		SIGNAL MOUNTING**			APS*(N)			R.R.S.N.S. LEGEND	COMMENTS
No	TYPE	HEIGHT	MA	MA	LED	A	B	MAST ARM	POLE MT'G	PED	ø	ARROW	LOCATION		
Ⓐ	26-4-70	30'	45'	15'	98W	EXISTING		2-MAS	SV-3-TA	SP-2-T	ø4(N) ø6(N)	← ←	3 1	Storke Rd	–
Ⓑ	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø6(N)	←	5	–	–
Ⓒ	61-5-100	30'	65'	15'	98W	EXISTING		3-MAS	SV-3-TA	SP-2-T	–	–	–	Hollister Av	–
Ⓓ	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø8(N)	→	7	–	–
Ⓔ	26-3-70	30'	45'	15'	98W	EXISTING		2-MAS	SV-1-T(N)	SP-1-T	–	–	–	Storke Rd	–
Ⓕ	PPB POST(N)	3'-6"(N)	–	–	–	16'	6'	–	–	–	ø8(N)	←	7	–	ALT A
Ⓖ	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø2(N)	←	5	–	–
Ⓗ	26-4-70	30'	45'	15'	98W	EXISTING		2-MAS	SV-3-TA	SP-2-T	ø2(N) ø4(N)	← →	1 3	Hollister Av	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = NEW EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



CONSTRUCTION NOTES (THIS SHEET ONLY):

13 REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

28 PROTECT IN PLACE EXISTING SIGNAL CONTROLLER CABINET.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9 INSTALL CONDUIT INTO EXISTING PULL BOX.

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

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT STORKE ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-9
SHEET SHT. 9 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\9-TS-Hollister_Storke.dwg; 6/23/2025 11:32 AM; Ramos, Roven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7
CONDUCTORS NO. 14 CABLES	A	–	–	1	1	1	1	–
	B	–	–	1	1	1	1	–
12 CONDUCTORS	C	–	–	1	1	1	1	–
	D	–	–	–	1	1	1	–
3 CONDUCTORS	E	–	1	–	1	1	1	–
	F	–	1	–	1	1	1	–
	G	1	1	–	1	1	1	–
	H	1	1	–	1	1	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		2/2	4/3	2/2	8/6	6/6	8/6	–/–
#6	SIGNAL POWER	–	–	–	–	–	2	2
#10	LUMINAIRES	2	2	2	2	4	–	4
	SIG. COMMON	1	1	1	1	1	1	–
	TOTAL	3	3	3	3	5	1	4
COAXIAL VIDEO CABLE		1	1,1(N)	1(N)	1,1(N)	2,2(N)	2,2(N)	–
VIDEO POWER CABLE		1	1,1(N)	1(N)	1,1(N)	2,2(N)	2,2(N)	–
SIGNAL INTERCONNECT		–	–	–	–	–	1	–
CONDUIT SIZE		3"	3"	3"	4"	2-4"	2-4"	2"
CONDUIT FILL %		10%	28%	16%	28%	14%	15%	8%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

NOT USED	ø2	ø3	ø4
ø1			
NOT USED	ø6	ø7	ø8
ø5			

* PROTECTED/ PERMISSIVE

(EXISTING)
Red 12"
Yellow 12"
Green 12"
Green Arrow 12"
DETAIL "A" N.T.S.

(EXISTING)
R Y G
Yellow Arrow 12"
Green Arrow 12"
DETAIL "B" N.T.S.

(EXISTING)
Red 12"
Yellow 12"
Green 12"
Yellow Arrow 12"
Green Arrow 12"
DETAIL "C" N.T.S.

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING** MAST ARM	POLE MT'G	PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
A	26-4-80	30'	45'	15'	84W	EXISTING		MAS-5A,MAS	SV-1-T	SP-1-T	ø2(N)	←	3	Marketplace Drive	–
B	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø4(N)	→	5	–	–
C	19-3-80	30'	25'	15'	84W	EXISTING		MAS-4B	SV-1-T	–	ø4	←	5	Storke Rd	–
D	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–
E	26-4-80	30'	35'	15'	84W	EXISTING		MAS-5A	SV-1-T	SP-1-T	–	–	–	Storke Plaza ➡	–
F	1-A	10'	–	–	–	EXISTING		–	TV-1-T	–	ø8	→	1	–	–
G	17-3-80	30'	20'	15'	84W	EXISTING		MAS-4B	SV-1-T	SP-1-T	ø8	←	1	Storke Rd	–
H	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	–	ø2(N)	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

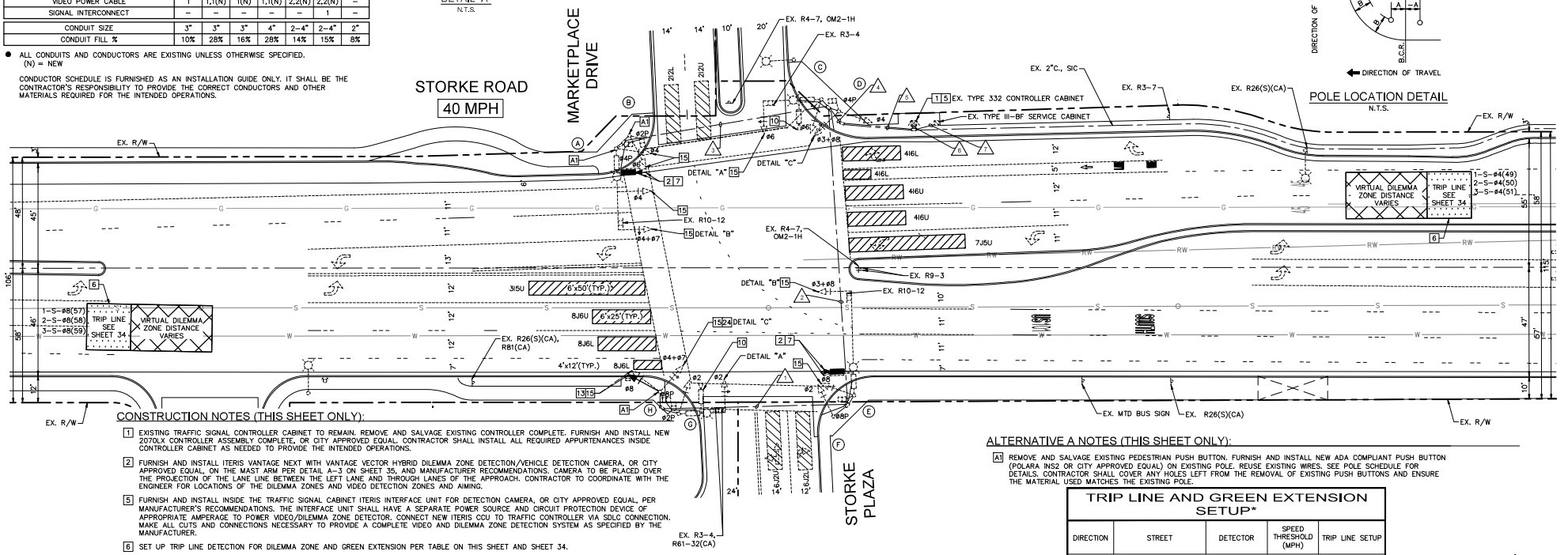
** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

DIRECTION OF TRAVEL
E.C.R.
B.C.R.
DIRECTION OF TRAVEL

PPB POLE LOCATION
N.T.S.

POLE LOCATION DETAIL
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

13 REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

24 REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	STORKE ROAD	1-N-ø4(49)	<38	1
		2-N-ø4(50)	37-43	2
		3-N-ø4(51)	42-48	3
NB		1-S-ø8(57)	<38	1
		2-S-ø8(58)	37-43	2
		3-S-ø8(59)	42-48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

NORTH
GRAPHIC SCALE IN FEET
0 10 20 40

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

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN CA CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

STORKE ROAD AT MARKETPLACE DRIVE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-10
SHEET SHT. 10 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\10-TS-Storke_Marketplace.dwg; 6/23/2025 11:32 AM; Ramos, Roven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
CONDUCTORS NO. 14 CABLES	(A)	–	–	–	–	–	–	1	–
12	(B)	–	–	–	–	–	1	1	–
	(C)	–	–	–	–	–	–	1	–
	(D)	–	–	–	–	1	1	1	–
	(E)	–	–	–	–	1	1	1	–
	(F)	1	1	1	–	–	–	1	–
	(G)	–	1	1	1	–	–	–	1
	(H)	–	1	1	1	–	–	–	1
	(I)	1	1	1	–	–	–	1	–
3 CONDUCTORS	(J)	–	1	1	–	–	–	1	–
	(K)	–	–	1	1	–	–	–	1
	(L)	–	–	–	1	–	–	–	1
	(M)	–	–	–	1	–	–	1	–
TOTAL CABLES		2	3	4	1	2	3	8	–
12-CONDUCTOR/3-CONDUCTOR		2	3	4	1	2	3	8	–
#8	SERVICE	–	–	–	–	–	–	2	2
#10	LUMINAIRES	2	2	2	–	2	2	–	4
	SIG. COMMON	1	1	1	1	1	1	1	–
	TOTAL	3	3	3	1	3	3	1	–
COAXIAL VIDEO CABLE		1(N)	1,1(N)	1,1(N)	–	1	1	2,2(N)	–
VIDEO POWER CABLE		1(N)	1,1(N)	1,1(N)	–	1	1	2,2(N)	–
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	2-4"	2"
CONDUIT FILL %		16%	24%	30%	6%	16%	21%	17%	8%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	STORKE ROAD	1-N-#6(41)	<38	1
		2-N-#6(42)	37-43	2
		3-N-#6(43)	42-48	3
NB		1-S-#2(33)	<38	1
		2-S-#2(34)	37-43	2
		3-S-#2(35)	42-48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

EXISTING PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

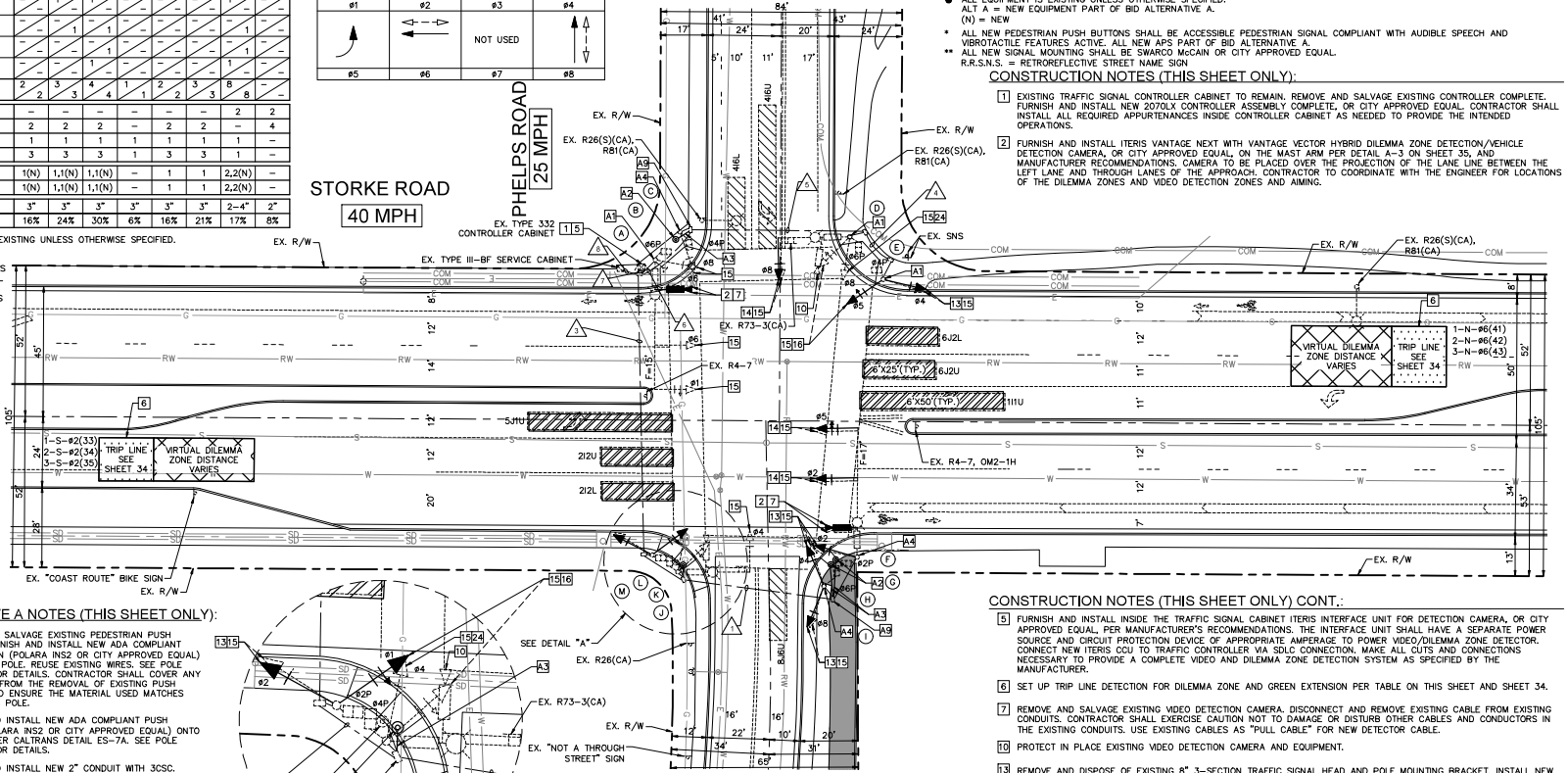
POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING** MAST ARM	SIGNAL MOUNTING** POLE MT'G	SIGNAL MOUNTING** PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26-4-80	30'	45'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	#4(N)	←	3	Phelps Rd	–
(B)	PPB POST(N)	3'-6"(N)	–	–	–	12'	11'	–	–	–	#6(N)	→	5	–	ALT A
(C)	1-D	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	–	–	–	–	–
(D)	19-3-80	30'	25'	15'	84W	EXISTING		MAS(N)	SV-1-T(N)	SP-1-T	#6(N)	←	5	Storke Rd	–
(E)	1-D	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	#8(N)	→	7	–	–
(F)	26-4-80	30'	45'	15'	84W	EXISTING		2-MAS(N)	SV-1-T(N)	SP-1-T	–	–	–	Phelps Rd	–
(G)	PPB POST(N)	3'-6"(N)	–	–	–	13'	5'	–	–	–	#8(N)	←	7	–	ALT A
(H)	PPB POST(N)	3'-6"(N)	–	–	–	13'	5'	–	–	–	#2(N)	→	1	–	ALT A
(I)	1-D	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	–	–	–	–	–
(J)	19-3-80	30'	25'	15'	84W	EXISTING		MAS	SV-1-T(N)	SP-1-T	–	–	–	Storke Rd	–
(K)	PPB POST(N)	3'-6"(N)	–	–	–	19'	5'	–	–	–	#2(N)	←	1	–	ALT A
(L)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	#4(N)	→	3	–	–
(M)	1-D	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	–	–	–	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = NEW EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

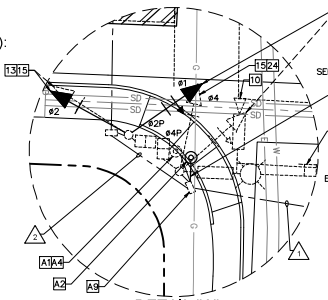
A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9 INSTALL CONDUIT INTO EXISTING PULL BOX.



CONSTRUCTION NOTES (THIS SHEET ONLY) CONT.:

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

13 REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

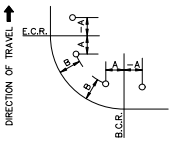
14 REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL HEAD. FURNISH AND INSTALL NEW MAST ARM MOUNTED 12" 3-SECTION TRAFFIC SIGNAL HEAD (TYPE MAS) ONTO EXISTING TENON PER SPECIAL PROVISIONS.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

16 REMOVE AND RELOCATE EXISTING 12" 3-SECTION TRAFFIC SIGNAL HEAD ONTO NEW MOUNTING BRACKET. SEE POLE SCHEDULE FOR DETAILS.

24 REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.

PPB POLE LOCATION
N.T.S.



POLE LOCATION DETAIL
N.T.S.

GRAPHIC SCALE IN FEET
0 10 20 40

Know what's below. Call before you dig.

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN CA CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

STORKE ROAD AT PHELPS ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-11
SHEET SHT. 11 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\11-TS-Storke_Phelps.dwg; 6/23/2025 11:33 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

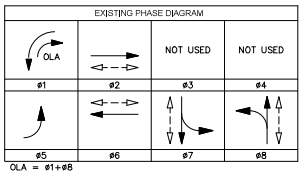
AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
CONDUCTORS NO. 14 CABLES	(A)	–	–	–	–	–	–	–	–
	(B)	–	–	–	–	–	–	–	–
12 CONDUCTORS	(C)	1	1	1	1	1	1	–	–
	(D)	–	–	–	–	–	–	–	–
	(E)	–	–	–	–	–	–	–	–
3 CONDUCTORS	(F)	–	–	–	–	–	–	–	–
	(G)	–	–	–	–	–	–	–	–
	(H)	–	–	–	–	–	–	–	–
	(I)	–	–	–	–	–	–	–	–
	(J)	–	–	–	–	–	–	–	–
	(K)	–	–	–	–	–	–	–	–
TOTAL CABLES		1	2	3	4	5	1	2	8
12-CONDUCTOR/3-CONDUCTOR		1	2	3	4	5	1	2	8

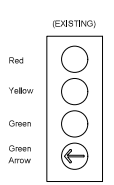
#10									
	LUMINAIRES	–	2	2	2	2	2	2	–
	SIG. COMMON	1	1	1	1	1	1	1	–
	TOTAL	1	3	3	3	3	3	3	–
COAXIAL VIDEO CABLE		–	1(N)	1(N)	1,1(N)	1,1(N)	1	1	2,2(N)
VIDEO POWER CABLE		–	1(N)	1(N)	1,1(N)	1,1(N)	1	1	2,2(N)
SIG. INTERCONNECT 6PR#20		–	–	–	–	–	–	–	1
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	3"	2-4"
CONDUIT FILL %		6%	16%	21%	30%	35%	10%	16%	17%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

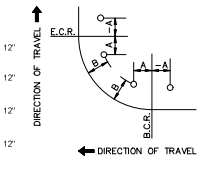
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

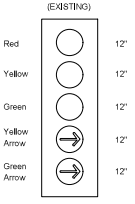




DETAIL "B"
N.T.S.



POLE LOCATION DETAIL
N.T.S.



DETAIL "A"
N.T.S.

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	29-5-100	30'	50'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	–	–	–	Coromar Dr	–
(B)	PPB POST(N)	3'-6"(N)	–	–	–	22'	10'	–	–	–	ø7(N)	→	7	–	ALT A
(C)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø6(N)	→	5	–	–
(D)	26-3-100	30'	40'	15'	84W	EXISTING		MAS-4B	SV-1-T	SP-1-T	–	–	–	Hollister Ave	–
(E)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø6(N)	←	5	–	–
(F)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø8(N)	→	7	–	–
(G)	26-3-100	30'	45'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	ø8(N)	←	7	Coromar Dr	–
(H)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø2(N)	→	1	–	–
(I)	19-2-100	30'	30'	15'	84W	EXISTING		MAS-4B	SV-1-T	SP-1-T	ø2(N)	←	1	Hollister Ave	–
(J)	PPB POST(N)	3'-6"(N)	–	–	–	7'	10'	–	–	–	ø7(N)	→	3	–	ALT A
(K)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = NEW EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

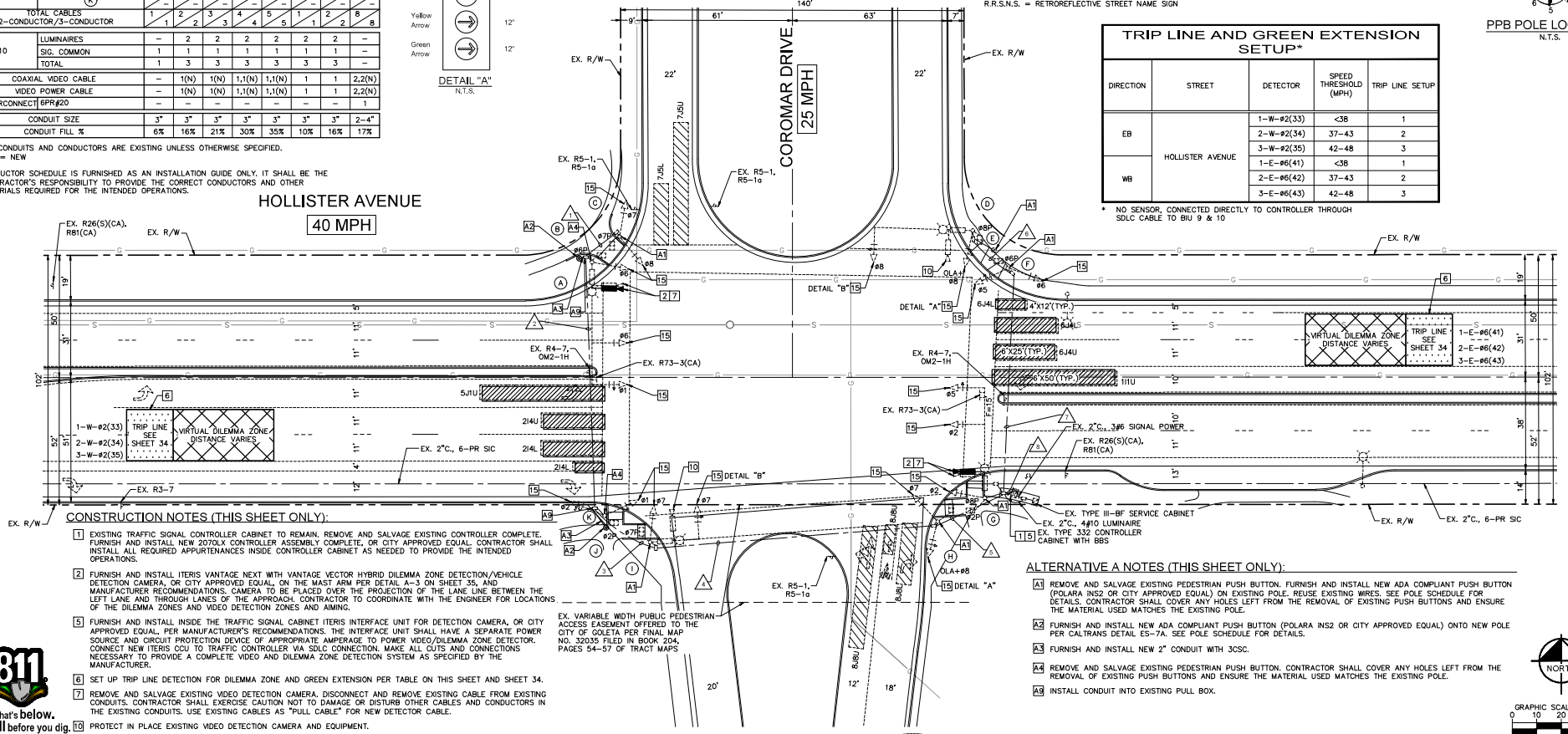
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

PPB POLE LOCATION
N.T.S.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	HOLLISTER AVENUE	1-W-ø2(33)	<38	1
		2-W-ø2(34)	37-43	2
		3-W-ø2(35)	42-48	3
WB		1-E-ø6(41)	<38	1
		2-E-ø6(42)	37-43	2
		3-E-ø6(43)	42-48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN; REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9 INSTALL CONDUIT INTO EXISTING PULL BOX.

GRAPHIC SCALE IN FEET
0 10 20 40

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

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT COROMAR DRIVE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-12
SHEET SHT. 12 OF 35
PLAN DATE 6/23/2025

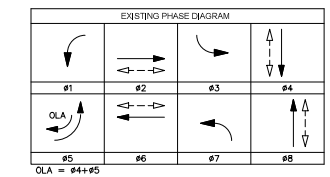
K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\12-TS-Hollister_Coromar.dwg; 6/23/2025 11:33 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8	9	10
NO. 14 CABLES											
CONDUCTORS 12	(A)	–	–	1	1	1	1	–	–	–	1
	(B)	–	–	–	1	1	1	–	–	–	1
	(C)	–	–	–	–	1	1	1	–	–	1
	(D)	–	–	–	–	–	1	1	1	–	1
	(E)	–	–	–	–	–	–	1	1	1	1
	(F)	–	–	–	–	–	–	–	1	1	1
	(G)	–	–	–	–	–	–	–	1	–	1
	(H)	–	–	–	–	–	–	1	1	–	1
	(I)	1	1	1	1	1	1	1	–	–	1
	(J)	–	1	1	1	1	1	–	–	–	1
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		1 / 1	2 / 2	3 / 3	4 / 4	4 / 4	5 / 5	1 / 1	2 / 2	1 / 1	8 / 8
#10 LUMINAIRES		2	2	2	2	2	2	–	2	–	–
#10 SIG. COMMON		1	1	1	1	1	1	1	1	1	–
#10 TOTAL		3	3	3	3	3	3	1	3	1	–
COAXIAL VIDEO CABLE		1(N)	1(N)	2(N)	2(N)	2(N)	3(N)	–	1(N)	–	4(N)
VIDEO POWER CABLE		1(N)	1(N)	2(N)	2(N)	2(N)	3(N)	–	1(N)	–	4(N)
SIG. INTERCONNECT 6PR#20		1	1	1	1	2	2	–	–	–	2
EVP CABLE		–	–	–	–	–	–	–	–	–	1
CONDUIT SIZE		3"	4"	4"	4"	4"	4"	2"	2"	3"	2–4"
CONDUIT FILL %		12%	10%	15%	18%	20%	25%	25%	35%	6%	18%

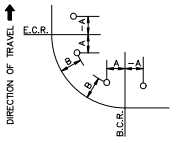
● ALL CONDUITS AND ALL CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED. (N) = NEW
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM



OLA = ø4+ø5

POLE LOCATION DETAIL
N.T.S.



POLE SCHEDULE ●

No	POLE TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING** MAST ARM	SIGNAL MOUNTING** POLE MT'G	SIGNAL MOUNTING** PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26–3–70	30'	45'	15'	84W	EXISTING		2–MAT	SV–1–T(N)	SP–1–T	–	–	–	Los Carneros Rd	–
(B)	PPB POST(N)	3'–6"(N)	–	–	–	14'	8'	–	–	–	ø4(N)	←	3	–	ALT A
(C)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø6(N)	←	1	–	–
(D)	29–5–70	30'	50'	15'	84W	EXISTING		2–MAT	SV–1–T(N)	SP–1–T	ø6(N)	←	5	Hollister Ave	–
(E)	PPB POST(N)	3'–6"(N)	–	–	–	11'	7'	–	–	–	ø8(N)	→	7	–	ALT A
(F)	1–A	10'	–	–	–	EXISTING		–	TV–2–T(N)	SP–1–T	–	–	–	–	–
(G)	29–5–70	30'	50'	15'	84W	EXISTING		2–MAT	SV–1–T(N)	SP–1–T	ø8(N)	←	7	Los Carneros Rd	–
(H)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø2(N)	→	1	–	–
(I)	29–5–100	30'	50'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	ø2(N)	←	1	Hollister Ave	–
(J)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø4(N)	→	3	–	–

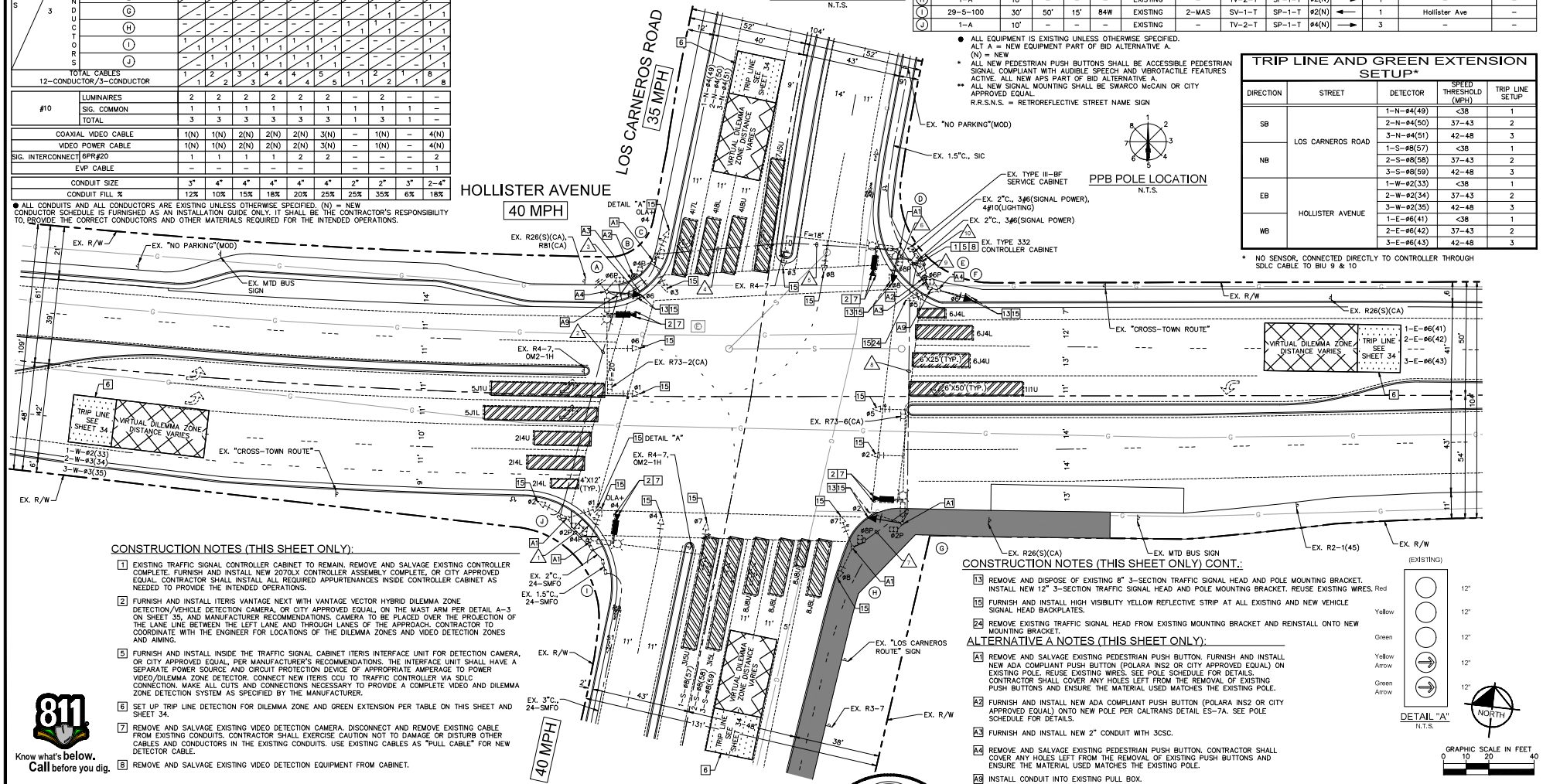
● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = NEW EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

PPB POLE LOCATION
N.T.S.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	LOS CARNEROS ROAD	1–N–ø4(49)	<38	1
		2–N–ø4(50)	37–43	2
		3–N–ø4(51)	42–48	3
NB		1–S–ø8(57)	<38	1
		2–S–ø8(58)	37–43	2
		3–S–ø8(59)	42–48	3
EB	HOLLISTER AVENUE	1–W–ø2(33)	<38	1
		2–W–ø2(34)	37–43	2
		3–W–ø2(35)	42–48	3
WB		1–E–ø6(41)	<38	1
		2–E–ø6(42)	37–43	2
		3–E–ø6(43)	42–48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10



CONSTRUCTION NOTES (THIS SHEET ONLY):

1. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.
2. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
5. FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.
6. SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.
7. REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.
8. REMOVE AND SALVAGE EXISTING VIDEO DETECTION EQUIPMENT FROM CABINET.

CONSTRUCTION NOTES (THIS SHEET ONLY) CONT.:

13. REMOVE AND DISPOSE OF EXISTING 8" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.
15. FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.
24. REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES–7A. SEE POLE SCHEDULE FOR DETAILS.

A3. FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9. INSTALL CONDUIT INTO EXISTING PULL BOX.

DETAIL "A"
N.T.S.

GRAPHIC SCALE IN FEET
0 10 20 40

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DESIGN RR CHECKED JM
JASON J. MELCHOR PROJECT ENGINEER
R.C.E. 65218
DATE 6/23/2025

HOLLISTER AVENUE AT LOS CARNEROS ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–13
SHEET SHT. 13 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\13–TS–Hollister_Los Carneros.dwg, 6/23/2025 11:33 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6
CONDUCTORS	NO. 14 CABLES	(A)	–	–	–	1	1	–
	12 CONDUCTORS	(B)	–	–	–	1	1	–
		(C)	–	–	1	1	1	–
		(D)	–	–	1	1	1	–
	3 CONDUCTORS	(E)	2	2	–	2	2	–
		(F)	–	2	–	2	2	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			2 2	4 4	2 2	8 8	8 8	– –
#6	SIGNAL POWER		–	–	–	–	2	2
#10	LUMINAIRES		2	2	–	2	2	–
	SIG. COMMON		1	1	1	2	2	–
	TOTAL		3	3	1	4	4	–
COAXIAL VIDEO CABLE			1,1(N)	1,1(N)	1	2,2(N)	2,2(N)	–
VIDEO POWER CABLE			1,1(N)	1,1(N)	1	2,2(N)	2,2(N)	–
INTERCONNECT			–	1	–	1	1	–
CONDUIT SIZE			3"	3"	3"	4"	4"	2"
CONDUIT FILL %			16%	27%	15%	33%	33%	4%

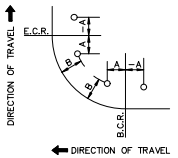
● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

POLE LOCATION DETAIL
N.T.S.



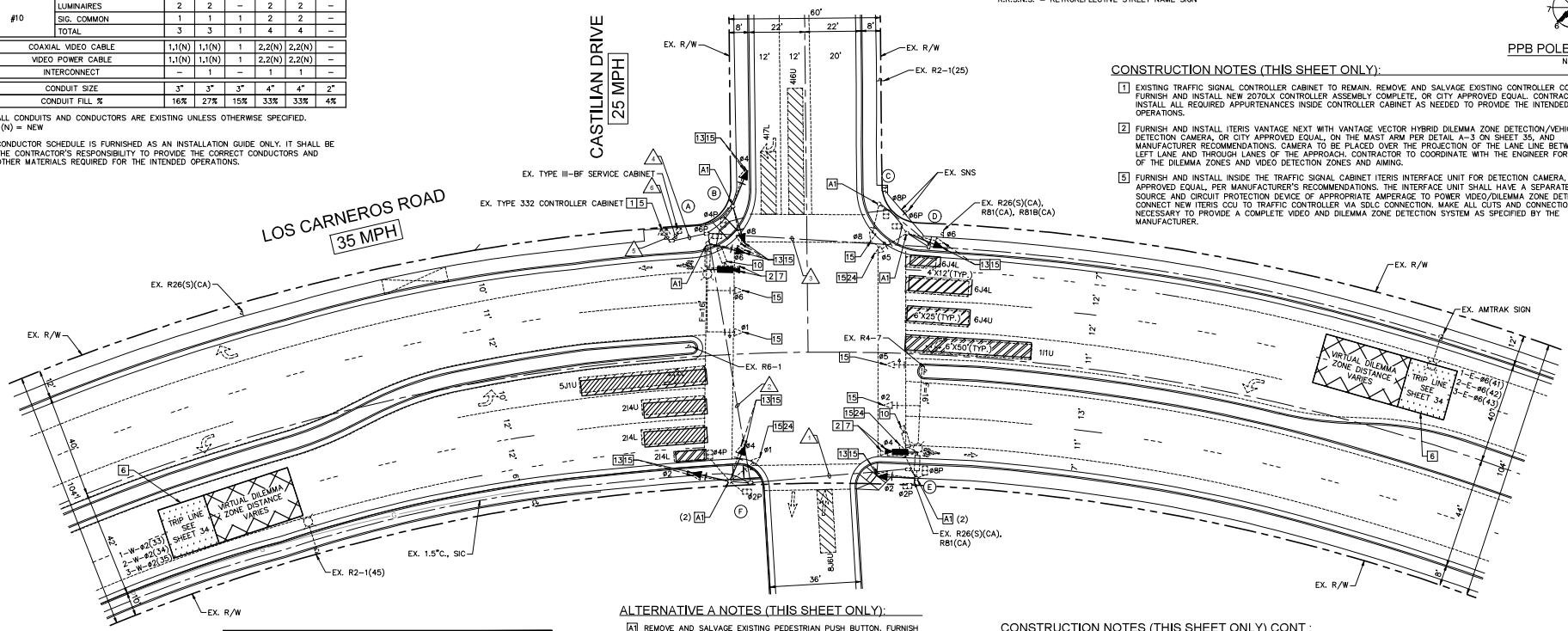
POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING** MAST ARM	SIGNAL MOUNTING** POLE MT'G	SIGNAL MOUNTING** PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	24-3-70	30'	35'	12'	84W	EXISTING		2-MAS	SV-1-T(N)	SP-1-T	ø4(N)	←	3	Castilian Dr. →	–
(B)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	ø6(N)	→	5	–	–
(C)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø6(N)	←	5	–	–
(D)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	ø8(N)	→	7	–	–
(E)	26-3-70	30'	45'	12'	84W	EXISTING		2-MAS	SV-2-TA(N)	SP-2-T	ø8(N) ø2(N)	← →	7 1	← Castilian Dr.	–
(F)	1-A	10'	–	–	–	EXISTING		2-MAS	SV-3-TA(N)	SP-2-T	ø2(N) ø4(N)	← ←	1 7	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	LOS CARNEROS ROAD	1-W-ø2(33)	<38	1
		2-W-ø2(34)	37-43	2
		3-W-ø2(35)	42-48	3
WB		1-E-ø6(41)	<38	1
		2-E-ø6(42)	37-43	2
		3-E-ø6(43)	42-48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

CONSTRUCTION NOTES (THIS SHEET ONLY) CONT.:

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

13 REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

24 REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.

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DESIGN CA CHECKED JM
JASON J. MELCHOR PROJECT ENGINEER
DATE 6/23/2025
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

LOS CARNEROS ROAD AT CASTILIAN DRIVE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-14
SHEET SHT. 14 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\14-TS-Los Carneros_Castillian.dwg; 6/23/2025 11:33 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●									
AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN							
		1	2	3	4	5	6	7	
CONDUCTORS — NO. 14 CABLES	(A)	–	–	–	1	1	1	1	–
CONDUCTORS — 12	(B)	–	–	–	1	1	1	1	–
	(C)	–	–	–	–	–	1	1	–
	(D)	–	–	–	–	–	–	1	–
CONDUCTORS — 3	(E)	–	1	–	–	–	–	1	–
	(F)	1	1	–	–	–	–	1	–
TOTAL CABLES		1	2	1	2	2	5	–	–
12-CONDUCTOR/3-CONDUCTOR		1	1	1	2	3	4	–	
#6	SIGNAL POWER	–	–	–	–	–	2	2	
#10	LUMINAIRES	–	2	–	2	2	–	4	
	SIG. COMMON	1	1	1	1	1	1	–	
	TOTAL	1	3	1	3	3	1	4	
COAXIAL VIDEO CABLE		1	1,1(N)	–	1(N)	1(N)	1,2(N)	–	
VIDEO POWER CABLE		1	1,1(N)	–	1(N)	1(N)	1,2(N)	–	
INTERCONNECT		–	–	–	–	–	2	–	
CONDUIT SIZE		3"	3"	3"	3"	3"	4"	2"	
CONDUIT FILL %		9%	17%	6%	16%	20%	21%	8%	

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM			
NOT USED		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	NOT USED
ø5	ø6	ø7	ø8

POLE SCHEDULE ●														
POLE DATA			SIGNAL	LUMINAIRE		LOCATION		SIGNAL MOUNTING**			APS*(N)			R.R.S.N.S. LEGEND	COMMENTS
No	TYPE	HEIGHT	MA	MA	LED	A	B	MAST ARM	POLE MT'G	PED	ø	ARROW	LOCATION		
(A)	19-1-70	30'	30'	12'	84W	EXISTING		MAS	SV-1-T(N)	SP-1-T	ø4(N)	←	3	Karl Storz Drive	–
(B)	1-A	10'	–	–	–	EXISTING		–	TV-1-T(N)	SP-1-T	ø6(N)	→	5	–	–
(C)	15	30'	–	12'	84W	EXISTING		–	–	–	ø6(N)	←	5	–	–
(D)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	–	–	–	–	–
(E)	26-3-70	30'	45'	12'	84W	EXISTING		2-MAS	SV-2-TA(N)	–	–	–	–	Karl Storz Drive	–
(F)	23-3-70	30'	35'	–	–	EXISTING		MAS	SV-2-TA(N)	SP-1-T	ø4(N)	←	7	Los Carneros Rd	–

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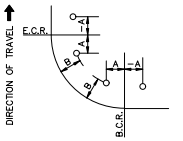
(N) = NEW

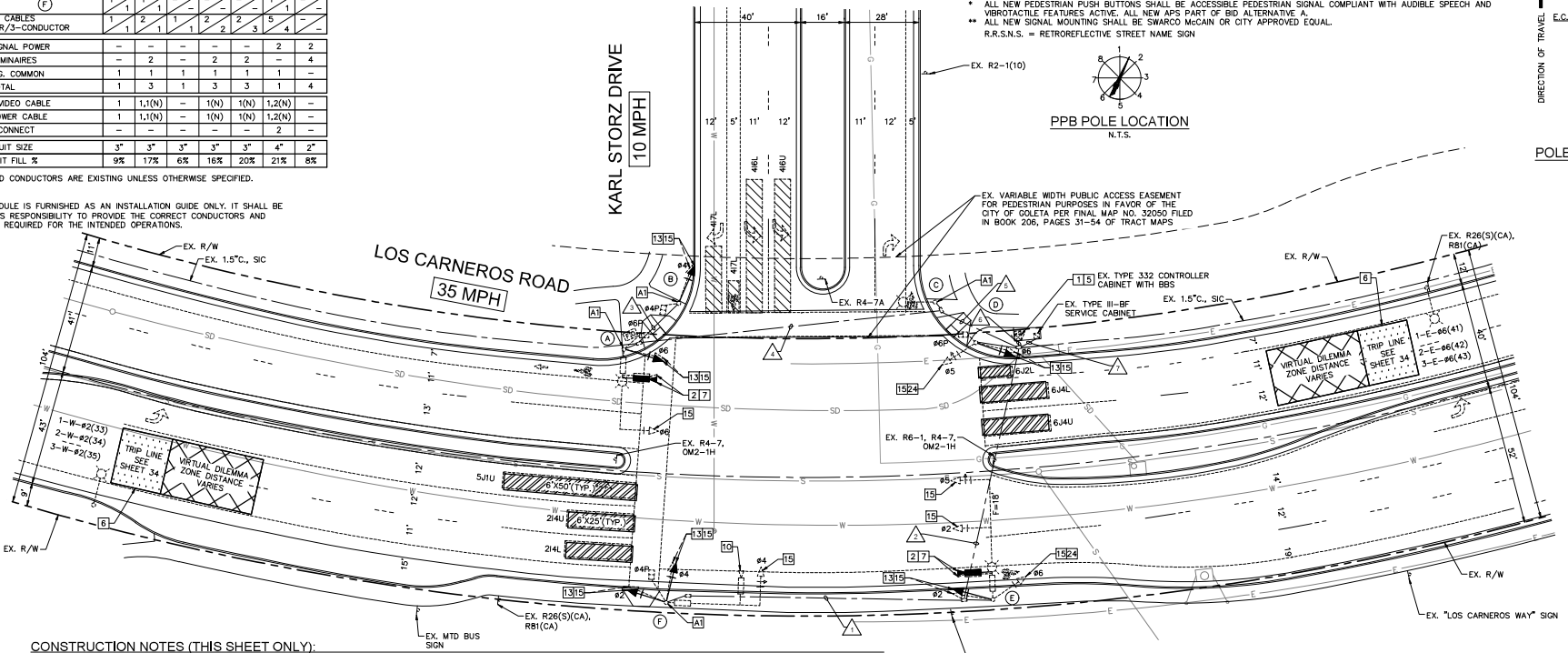
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

PPB POLE LOCATION
N.T.S.



POLE LOCATION DETAIL
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

13 REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

24 REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	LOS CARNEROS ROAD	1-W-ø2(33)	<38	1
		2-W-ø2(34)	37-43	2
		3-W-ø2(35)	42-48	3
WB		1-E-ø6(41)	<38	1
		2-E-ø6(42)	37-43	2
		3-E-ø6(43)	42-48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

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NO.	DATE	REVISIONS	APPD.

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SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

LOS CARNEROS ROAD AT KARL STORZ DRIVE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-15
SHEET SHT. 15 OF 35
PLAN DATE 6/23/2025

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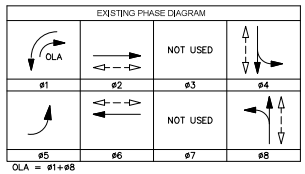
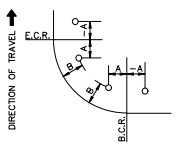
CONDUCTOR SCHEDULE ●												
AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN									
			1	2	3	4	5	6	7	8	9	10
CONDUCTORS	NO. 14 CABLES	(A)	–	1	1	–	1	–	–	–	1	–
	12 CONDUCTORS	(B)	1	1	1	–	1	–	–	–	1	–
		(C)	–	–	–	–	–	–	1	1	1	–
		(D)	–	–	–	–	–	–	–	1	1	–
	3 CONDUCTORS	(E)	–	–	–	–	–	–	–	–	1	–
		(F)	–	–	–	–	–	1	–	–	1	–
		(G)	–	–	–	1	1	–	–	–	1	–
		(H)	–	–	–	–	1	1	–	–	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			1 1	2 2	2 2	1 1	4 4	1 1	1 1	2 2	8 8	–
#6	SIGNAL POWER		–	–	–	–	–	–	–	–	2	2
#10	LUMINAIRES		–	2	2	2	2	–	2	2	–	4
	SIG. COMMON		1	1	1	1	1	1	1	1	–	–
	TOTAL		1	3	3	3	3	1	3	3	–	4
#12	I.I.S.N.S		–	1	1	1	2	–	1	1	–	4
COAXIAL VIDEO CABLE			–	1(N)	1(N)	1	1,1(N)	–	1	1	2,3(N)	–
VIDEO POWER CABLE			–	1(N)	1(N)	1	1,1(N)	–	1	1	2,3(N)	–
6PR#20	SIGNAL INTERCONNECT		–	–	1	–	1	–	–	1	2	–
EVP CABLE			–	–	–	–	–	–	–	–	1	–
CONDUIT SIZE			3"	3"	3"	3"	3"	3"	3"	3"	2–4"	3"
CONDUIT FILL %			6%	16%	18%	10%	36%	6%	10%	18%	19%	5%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

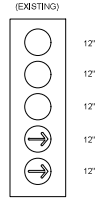
EXISTING PHASE DIAGRAM



OLA = ø1+ø8



POLE LOCATION DETAIL
N.T.S.

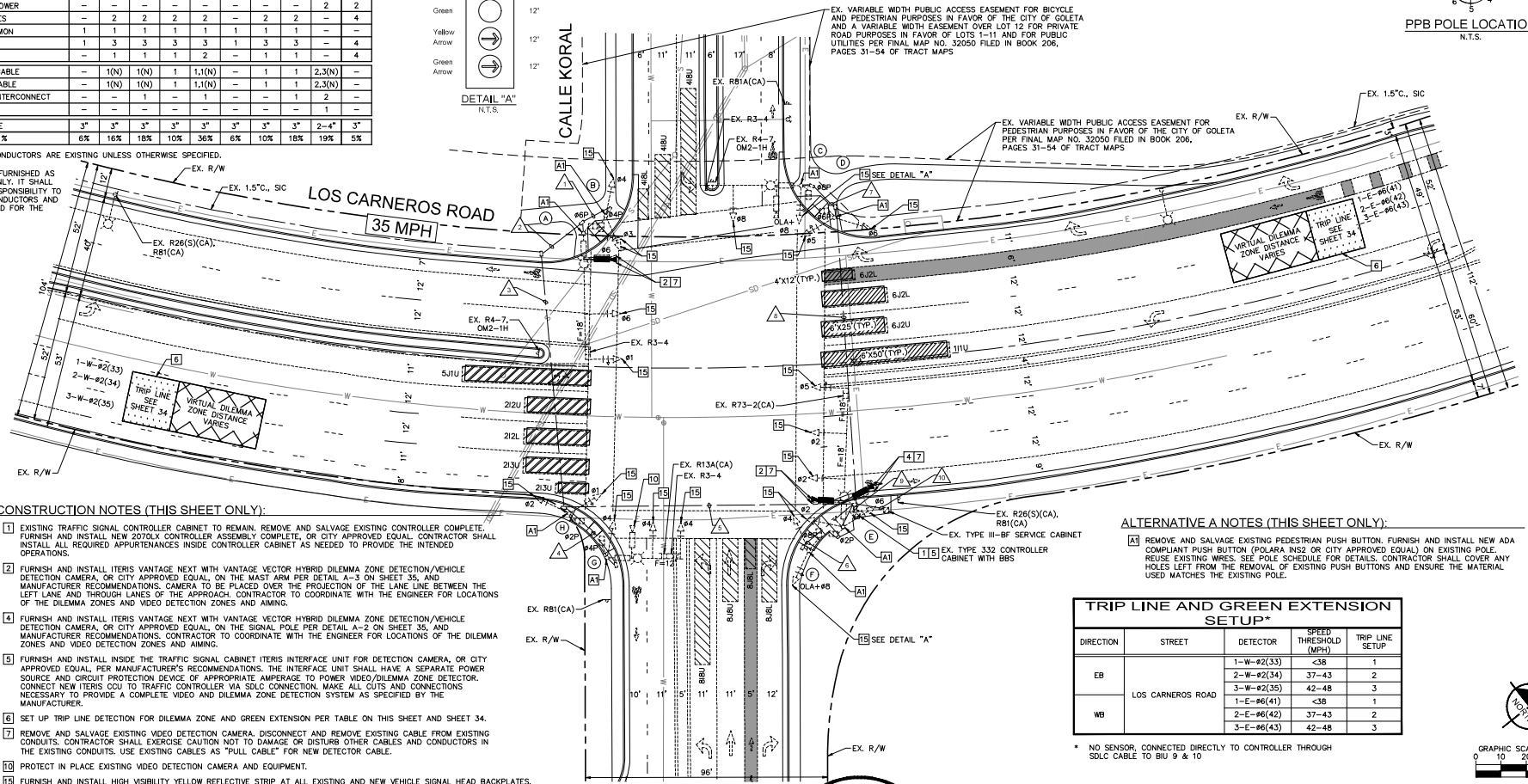


DETAIL "A"
N.T.S.

POLE SCHEDULE ●														
POLE DATA			SIGNAL	LUMINAIRE		LOCATION		SIGNAL MOUNTING			APS*(N)			
No	TYPE	HEIGHT	MA	MA	LED	A	B	MAST ARM	POLE MT'G	PED	ø	ARROW	LOCATION	I.I.S.N.S. LEGEND	COMMENTS
(A)	29A–5–100	30'	50'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	ø4(N)	←	3	Calle Koral	–
(B)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø6(N)	→	5	–	–
(C)	26A–4–100	30'	40'	15'	84W	EXISTING		MAS	SV–1–T	SP–1–T	ø6(N)	←	5	Los Carneros Rd	–
(D)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø8(N)	→	7	–	–
(E)	61A–5–100	30'	55'	15'	84W	EXISTING		3–MAS	SV–1–T SV–1–T**	SP–1–T	ø8(N)	←	7	Calle Koral	–
(F)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø2(N)	→	1	–	–
(G)	19A–4–129	30'	30'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	ø2(N)	←	1	Los Carneros Rd	–
(H)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø4(N)	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
** SIGNAL HEAD MOUNTED AT 17'.
I.I.S.N.S = INTERNALLY ILLUMINATED STREET NAME SIGN

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.
2. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
4. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE SIGNAL POLE PER DETAIL A–2 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
5. FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.
6. SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.
7. REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.
10. PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.
15. FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	LOS CARNEROS ROAD	1–W–ø2(33)	<38	1
		2–W–ø2(34)	37–43	2
		3–W–ø2(35)	42–48	3
WB		1–E–ø6(41)	<38	1
		2–E–ø6(42)	37–43	2
		3–E–ø6(43)	42–48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

GRAPHIC SCALE IN FEET
0 10 20 40

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SUITE 700
ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR PROJECT ENGINEER
DATE 6/23/2025
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

LOS CARNEROS ROAD AT CALLE KORAL
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–16
SHEET SHT. 16 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\16–TS–Los Carneros_Calle Koral.dwg: 6/23/2025 11:34 AM: Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6
CONDUCTORS	NO. 14 CABLES	(A)	–	1	–	–	1	–
		(B)	–	1	–	–	1	–
	12 CONDUCTORS	(C)	–	–	–	–	1	–
		(D)	–	–	–	1	–	–
	3 CONDUCTORS	(E)	–	–	1	1	–	–
		(F)	1	1	–	–	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			1 / 1	3 / 3	1 / –	2 / –	5 / 4	– / –
#10	LUMINAIRES		–	2	2	2	–	2
	SIG. COMMON		1	1	1	1	1	–
	TOTAL		1	3	3	3	1	2
COAXIAL VIDEO CABLE			–	1(N)	1,1(N)	1,1(N)	1,2(N)	–
VIDEO POWER CABLE			–	1(N)	1,1(N)	1,1(N)	1,2(N)	–
6PR	SIGNAL INTERCONNECT		–	–	–	1	1	–
CONDUIT SIZE			3"	3"	3"	3"	2–4"	3"
CONDUIT FILL %			6%	21%	11%	17%	11%	1%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

NOT USED			
ø1	ø2	ø3	ø4
NOT USED	NOT USED	NOT USED	
ø5	ø6	ø7	ø8

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	19–2–100	30'	30'	15'	84W	EXISTING		MAS	SV–1–T	SP–1–T	#2(N)	←	3	–	–
(B)	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	#4(N)	←	1	–	–
(C)	15TS	30'	–	15'	84W	EXISTING		–	–	–	–	–	–	–	–
(D)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	#4(N)	←	5	–	–
(E)	29–5–100	30'	55'	15'	84W	EXISTING		2–MAS	SV–2–TA	–	–	–	–	Discovery Dr	–
(F)	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	#2(N)	←	7	–	–

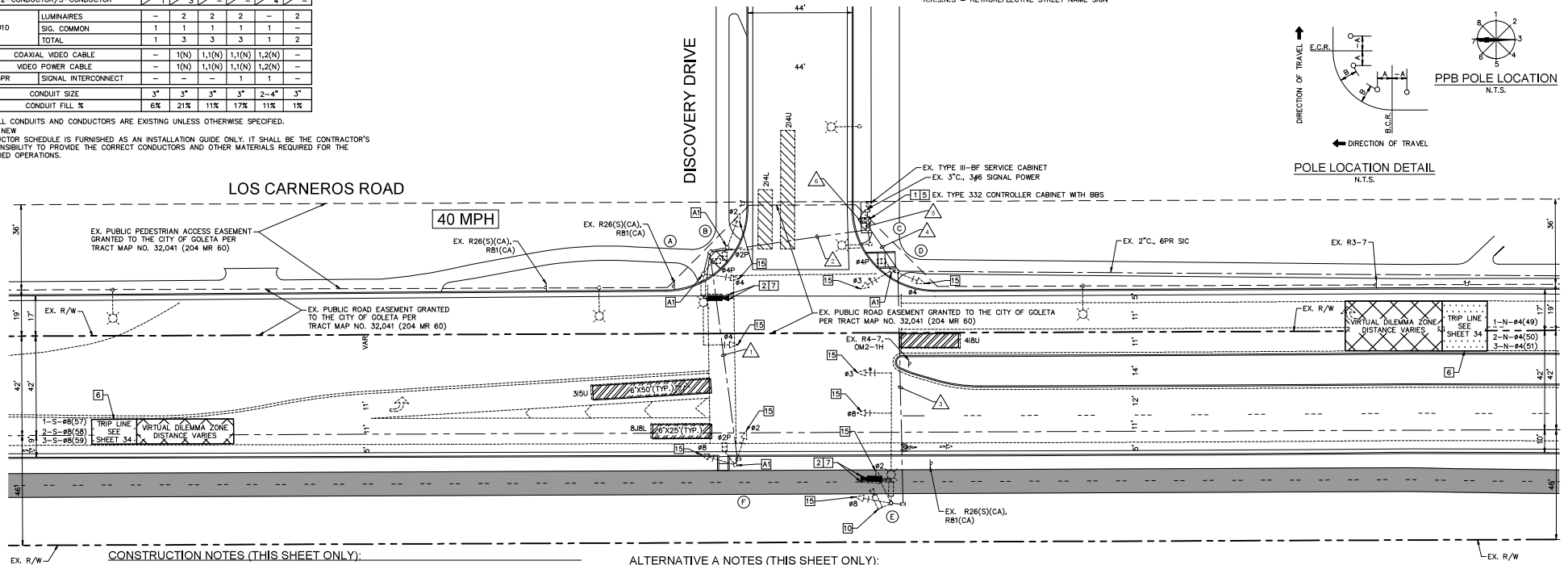
● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S = RETROREFLECTIVE STREET NAME SIGN

POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	LOS CARNEROS ROAD	1–N–ø4(49)	<38	1
		2–N–ø4(50)	37–43	2
		3–N–ø4(51)	42–48	3
NB		1–S–ø8(57)	<38	1
		2–S–ø8(58)	37–43	2
		3–S–ø8(59)	42–48	3

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

GRAPHIC SCALE IN FEET
0 10 20 40

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ORANGE, CA 92868
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WWW.KIMLEY–HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

LOS CARNEROS ROAD AT DISCOVERY DRIVE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–17
SHEET SHT. 17 OF 35
PLAN DATE 6/23/2025

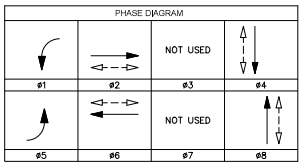
K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\17–TS–Los Carneros_Discovery.dwg; 6/23/2025 11:34 AM; Ramos, Raven

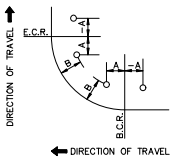
CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
CONDUCTORS NO. 14 CABLES	(A)	–	–	1	–	–	1	–	–
12 CONDUCTORS	(B)	–	–	–	–	–	–	–	–
	(C)	–	1	1	–	–	1	–	–
	(D)	–	–	1	1	–	–	1	–
	(E)	–	1	1	1	–	–	1	–
	(F)	1	1	1	–	–	1	–	–
3 CONDUCTORS	(G)	–	–	–	1	–	1	–	–
	(H)	–	–	–	–	1	–	1	–
	(I)	–	–	–	–	1	–	1	–
	(J)	–	–	–	–	–	1	–	–
	(K)	–	–	–	–	1	1	–	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		1 / 1	2 / 2	3 / 3	1 / 2	1 / 1	6 / 6	– / –	– / –
#6	SIGNAL POWER	–	–	–	–	–	–	–	2
#10	LUMINAIRES	–	2	2	2	–	–	4	–
	SIG. COMMON	1	1	1	1	1	1	–	–
	TOTAL	1	3	3	3	1	1	4	–
COAXIAL VIDEO CABLE		–	1	2	1	–	4	–	–
VIDEO POWER CABLE		–	1	2	1	–	4	–	–
CONDUIT SIZE		3"	3"	3"	3"	3"	2-4"	3"	3"
CONDUIT FILL %		6%	16%	24%	10%	6%	13%	2%	2%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

PHASE DIAGRAM





POLE LOCATION DETAIL
N.T.S.

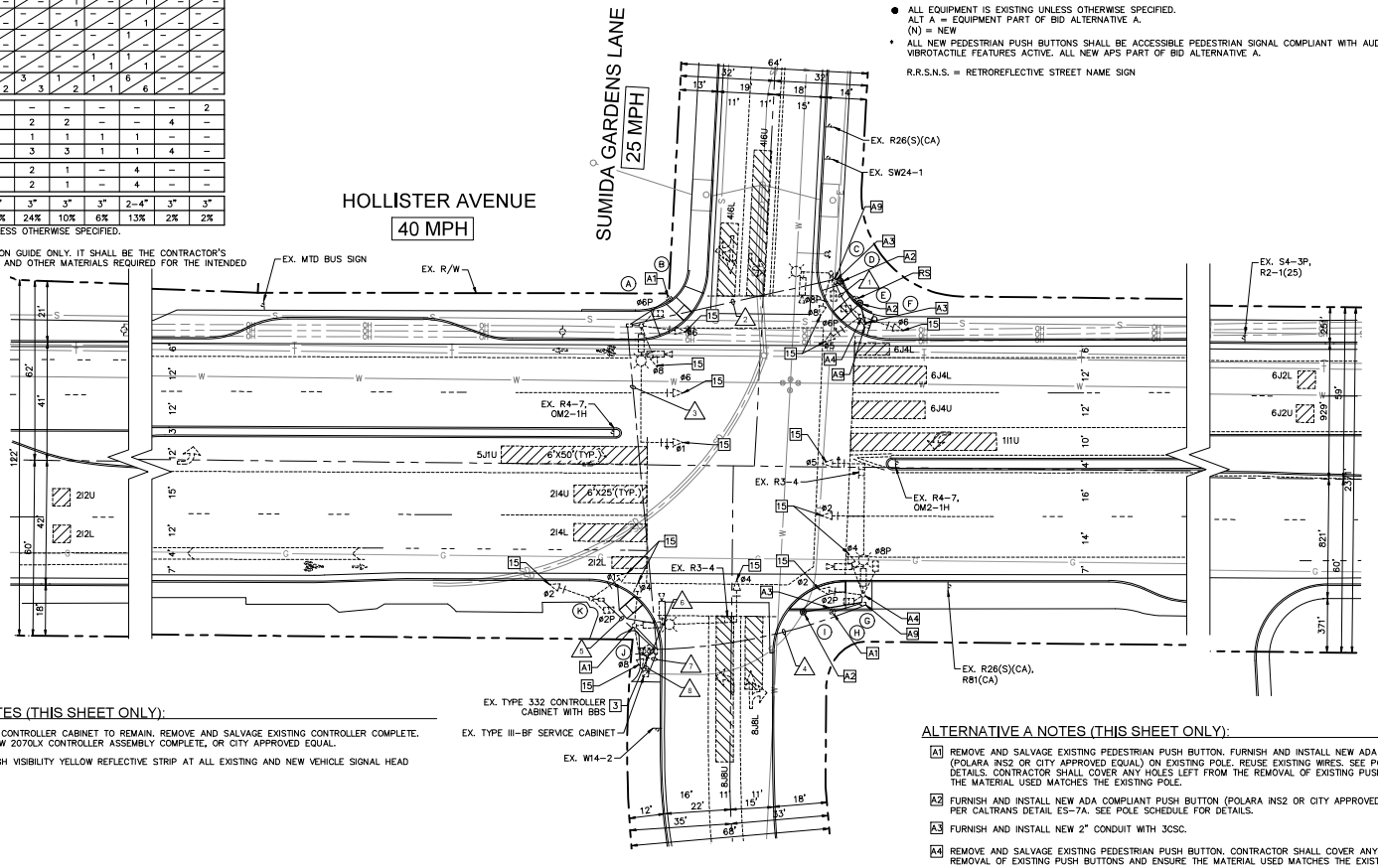
POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26-3-100	30'	40'	15'	84W	EXISTING		MAT,MAS	SV-2-TD	SP-1-T	–	–	–	Sumida Gardens Ln	–
(B)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø6(N)	→	5	–	–
(C)	15TS	30'	–	15'	84W	EXISTING		–	SV-1-TD	SP-1-T	–	–	–	–	–
(D)	PPB POST(N)	3'-6"(N)	–	–	–	6'	7'	–	–	–	ø6(N)	→	1	–	ALT A
(E)	PPB POST(N)	3'-6"(N)	–	–	–	10'	9'	–	–	–	ø8(N)	→	7		ALT A
(F)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–
(G)	26-3-100	30'	45'	15'	84W	EXISTING		MAT,MAS	SV-2-TD	SP-2-T	–	–	–	Sumida Gardens Ln	–
(H)	PPB POST	3'-6"	–	–	–	EXISTING		–	–	–	ø8(N)	←	7	–	–
(I)	PPB POST(N)	3'-6"	–	–	–	14'	5'	–	–	–	ø2(N)	→	1	–	ALT A
(J)	24-3-100	30'	35'	15'	84W	EXISTING		MAS	SV-2-TD	–	ø2(N)	←	1	Hollister Ave	–
(K)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

3 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9 INSTALL CONDUIT INTO EXISTING PULL BOX.

RS REMOVE AND SALVAGE EQUIPMENT.

Know what's below. Call before you dig.

NORTH
GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT SUMIDA GARDENS LANE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-18
SHEET SHT. 18 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\25-TS-Hollister_Sumida Gardens.dwg; 6/23/2025 11:34 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

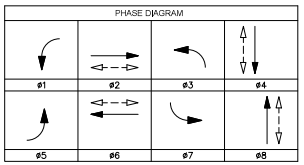
AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
CONDUCTORS NO. 14 CABLES	(A)	–	–	–	–	–	–	1	1
	(B)	–	–	–	–	–	–	–	1
12 CONDUCTORS	(C)	–	–	–	–	–	–	–	1
	(D)	–	–	–	1	–	–	–	1
	(E)	–	–	–	–	1	–	–	1
	(F)	–	–	1	1	1	–	–	1
3 CONDUCTORS	(G)	–	1	1	1	1	–	–	1
	(H)	1	1	1	1	1	–	–	1
	(I)	1	1	1	1	–	–	–	1
	(J)	–	–	–	–	1	1	1	1
	(K)	–	–	–	–	–	1	1	1
TOTAL CABLES		1	2	3	4	1	2	3	8
12-CONDUCTOR/3-CONDUCTOR		1	2	2	4	1	2	3	8

#8	SERVICE	–	–	–	–	–	–	2	2
#10	LUMINAIRES	–	2	2	2	2	2	2	–
	SIG. COMMON	1	1	1	1	1	1	–	–
	TOTAL	1	3	3	3	3	3	2	–
COAXIAL VIDEO CABLE		–	1	1	2	1	1	2	4
VIDEO POWER CABLE		–	1	1	2	1	1	2	4
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	2"	2-4"
CONDUIT FILL %		6%	16%	20%	30%	10%	16%	25%	16%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.

(N) = NEW
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

PHASE DIAGRAM



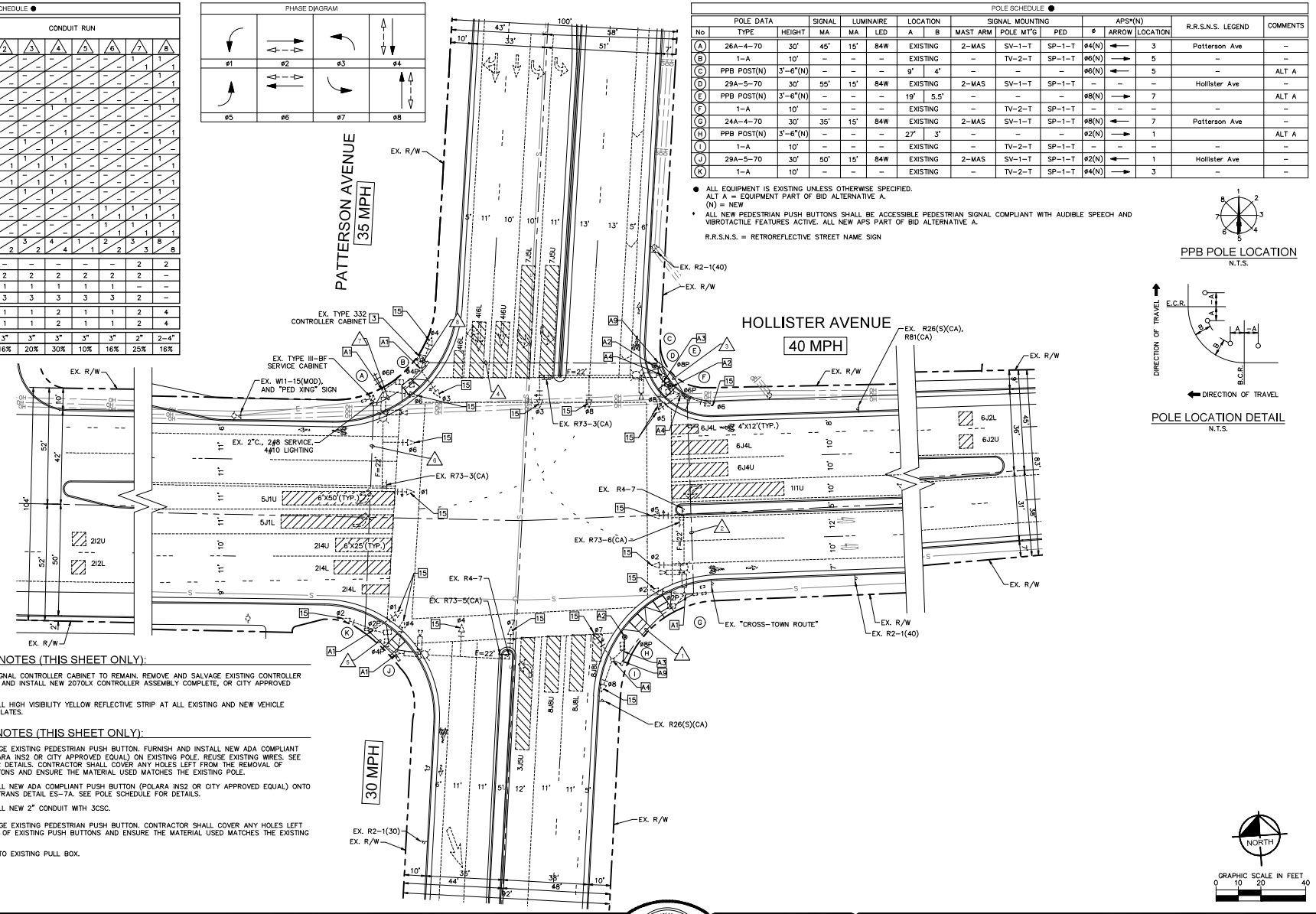
POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26A-4-70	30'	45'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	ø4(N)	←	3	Patterson Ave	–
(B)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø6(N)	→	5	–	–
(C)	PPB POST(N)	3'-6"(N)	–	–	–	9'	4'	–	–	–	ø6(N)	←	5	–	ALT A
(D)	29A-5-70	30'	55'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	–	–	–	Hollister Ave	–
(E)	PPB POST(N)	3'-6"(N)	–	–	–	19'	5.5'	–	–	–	ø8(N)	→	7		ALT A
(F)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–
(G)	24A-4-70	30'	35'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	ø8(N)	←	7	Patterson Ave	–
(H)	PPB POST(N)	3'-6"(N)	–	–	–	27'	3'	–	–	–	ø2(N)	→	1		ALT A
(I)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–
(J)	29A-5-70	30'	50'	15'	84W	EXISTING		2-MAS	SV-1-T	SP-1-T	ø2(N)	←	1	Hollister Ave	–
(K)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø4(N)	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



CONSTRUCTION NOTES (THIS SHEET ONLY):

3 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

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A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9 INSTALL CONDUIT INTO EXISTING PULL BOX.

PPB POLE LOCATION
N.T.S.

POLE LOCATION DETAIL
N.T.S.

GRAPHIC SCALE IN FEET
0 10 20 40

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

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT PATTERSON AVENUE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-19
SHEET SHT. 19 OF 35
PLAN DATE 6/23/2025

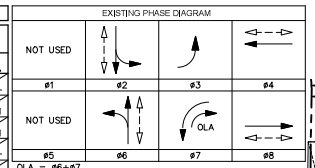
K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\26-TS-Hollister_Patterson.dwg; 6/23/2025 11:34 AM; Ramos, Roven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8	9
NO. 14 CABLES	A	–	–	–	–	–	–	1	1	1	1	–
12 CONDUCTORS	B	–	–	–	–	–	–	1	1	1	1	1
	C	–	–	–	–	–	1	1	1	1	1	1
	D	1	1	1	1	–	–	–	–	–	1	1
	E	–	1	1	1	1	–	–	–	–	–	1
	F	–	1	1	1	1	–	–	–	–	1	1
	G	–	–	1	1	1	–	–	–	–	1	1
	H	–	–	–	1	1	–	–	–	–	1	1
3 CONDUCTORS	I	–	–	–	1	–	–	–	–	–	1	1
	J	–	–	–	–	–	–	–	–	–	1	1
	K	–	–	–	–	–	–	–	–	–	1	1
	L	–	–	–	–	–	–	–	1	1	1	1
	M	–	–	–	–	–	–	1	1	1	1	–
TOTAL CABLES		1	2	3	4	1	2	3	8	8	8
12-CONDUCTOR/3-CONDUCTOR		1	1	2	3	4	1	2	3	8	8	8
#10	LUMINAIRES	2	2	2	2	–	2	2	4	–
	SIG. COMMON	1	1	1	1	1	1	1	–	–
	TOTAL	3	3	3	3	1	3	3	4	–
COAXIAL VIDEO CABLE		1(N)	2(N)	2(N)	2(N)	–	1(N)	1(N)	4(N)	4(N)
● VIDEO POWER CABLE		1(N)	2(N)	2(N)	2(N)	–	1(N)	1(N)	4(N)	4(N)
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	3"	4"	2–4"
CONDUIT FILL %		10%	18%	24%	30%	6%	16%	21%	33%	17%

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

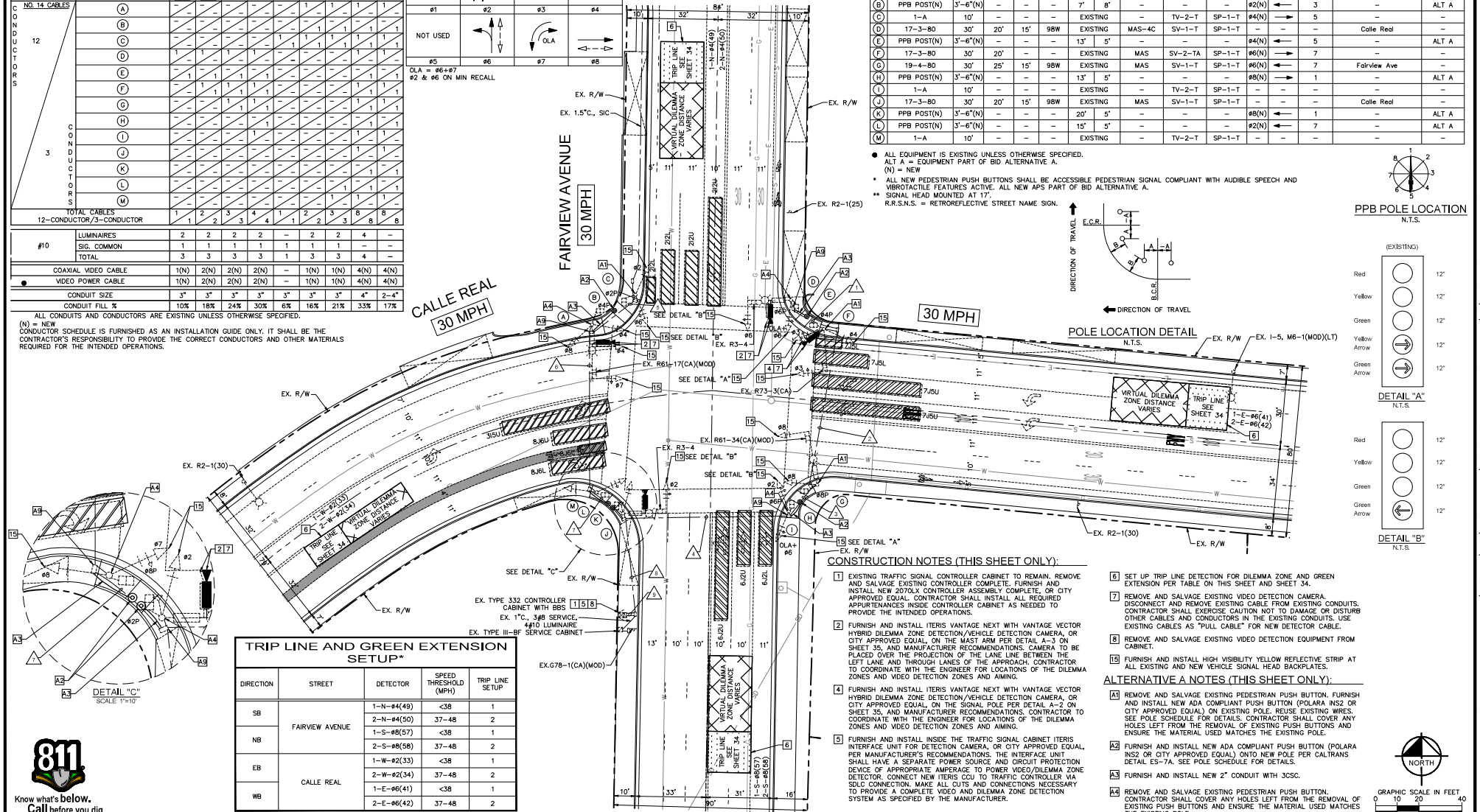


OLA = ø6+ø7
ø2 & ø6 ON MIN RECALL

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
A	19-4-80	30'	25'	15'	98W	EXISTING		MAT,MAS	SV-1-T SV-1-T**	SP-1-T	–	–	–	Fairview Ave	–
B	PPB POST(N)	3'-6"(N)	–	–	–	7'	8'	–	–	–	ø2(N)	←	3	–	ALT A
C	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø4(N)	→	5	–	–
D	17-3-80	30'	20'	15'	98W	EXISTING		MAS-4C	SV-1-T	SP-1-T	–	–	–	Calle Real	–
E	PPB POST(N)	3'-6"(N)	–	–	–	13'	5'	–	–	–	ø4(N)	←	5	–	ALT A
F	17-3-80	30'	20'	–	–	EXISTING		MAS	SV-2-TA	SP-1-T	ø6(N)	→	7	–	–
G	19-4-80	30'	25'	15'	98W	EXISTING		MAS	SV-1-T	SP-1-T	ø6(N)	←	7	Fairview Ave	–
H	PPB POST(N)	3'-6"(N)	–	–	–	13'	5'	–	–	–	ø8(N)	→	1	–	ALT A
I	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–
J	17-3-80	30'	20'	15'	98W	EXISTING		MAS	SV-1-T	SP-1-T	–	–	–	Calle Real	–
K	PPB POST(N)	3'-6"(N)	–	–	–	20'	5'	–	–	–	ø8(N)	←	1	–	ALT A
L	PPB POST(N)	3'-6"(N)	–	–	–	15'	5'	–	–	–	ø2(N)	←	7	–	ALT A
M	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	–	–	–	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
** SIGNAL HEAD MOUNTED AT 17'.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN.



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.

DETAIL "A"
N.T.S.

DETAIL "B"
N.T.S.

DETAIL "C"
SCALE: 1"=10'

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	FAIRVIEW AVENUE	1-N-ø4(49)	<38	1
		2-N-ø4(50)	37-48	2
NB		1-S-ø8(57)	<38	1
		2-S-ø8(58)	37-48	2
EB	CALLE REAL	1-W-ø2(33)	<38	1
		2-W-ø2(34)	37-48	2
WB		1-E-ø6(41)	<38	1
		2-E-ø6(42)	37-48	2

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

CONSTRUCTION NOTES (THIS SHEET ONLY):

1. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.
2. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
4. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE SIGNAL POLE PER DETAIL A-2 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
5. FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.
6. SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.
7. REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.
8. REMOVE AND SALVAGE EXISTING VIDEO DETECTION EQUIPMENT FROM CABINET.
15. FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.
A2. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.
A3. FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.
A4. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.
A9. INSTALL CONDUIT INTO EXISTING PULL BOX.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN CA CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

FAIRVIEW AVENUE AT CALLE REAL
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-20
SHEET SHT. 20 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\27-TS-Fairview_Calle Real.dwg; 6/23/2025 11:34 AM; Ramos, Roven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	CIRCUIT	CONDUIT RUN 1	2	3	4	5	6	7	8	9
#14	ø1	3	3	3	3	3	3	3	6	6
	ø2	–	–	–	–	3	3	3	3	3
	ø4	–	3	3	3	–	3	3	6	6
	ø5	–	–	–	3	–	–	–	3	3
	ø6	3	3	3	3	–	–	–	3	3
	ø8	–	3	3	3	–	–	3	6	6
	ø2P	–	–	–	–	2	2	2	2	2
	ø4P	–	2	2	2	2	2	2	4	4
	ø6P	2	2	2	2	–	–	–	2	2
	ø8P	–	–	2	2	–	–	2	4	4
	ø2PPB	–	–	–	–	1	1	1	1	1
	ø4PPB	–	1	1	1	–	–	–	2	2
	ø6PPB	1	1	1	1	–	–	–	1	1
	ø8PPB	–	–	1	1	–	–	1	2	2
	PPB COMMON	1	1	1	1	1	1	1	2	2
	SPARES	3	3	3	3	3	3	3	6	6
TOTAL #14		13	22	25	28	15	19	25	53	53
#6	SERVICE	–	–	–	–	–	–	–	–	2
#10	LUMINAIRES	2	2	2	2	–	–	–	2	2
	SIG. COMMON	1	1	1	1	–	–	–	2	–
	TOTAL	3	3	3	3	–	–	–	4	2
COAXIAL VIDEO CABLE		2	2	2	2	–	–	–	4	4
VIDEO POWER CABLE		2	2	2	2	–	–	–	4	4
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	3"	2–3"	2–3"
CONDUIT FILL %		11%	13%	14%	15%	4%	5%	7%	15%	9%

● ALL CONDUITS AND WIRES ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

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EXISTING PHASE DIAGRAM

ø1	ø2	NOT USED	ø4
ø5	ø6	NOT USED	ø8

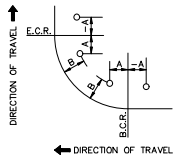
POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
A	26–3–70	30'	40'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	–	–	–	Encina Ln	–
B	PPB POST(N)	3'–6"(N)	–	–	–	15'	5'	–	–	–	ø4(N)	←	3	–	ALT A
C	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø6(N)	→	5	–	–
D	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø6(N)	←	5	–	–
E	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø8(N)	→	7	–	–
F	26–3–70	30'	40'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	ø8(N)	←	7	Calle Real Ctr	–
G	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø2	→	1	–	–
H	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø2	←	1	–	–
I	1–A	10'	–	–	–	EXISTING		–	TV–2–T	SP–1–T	ø4(N)	←	7	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

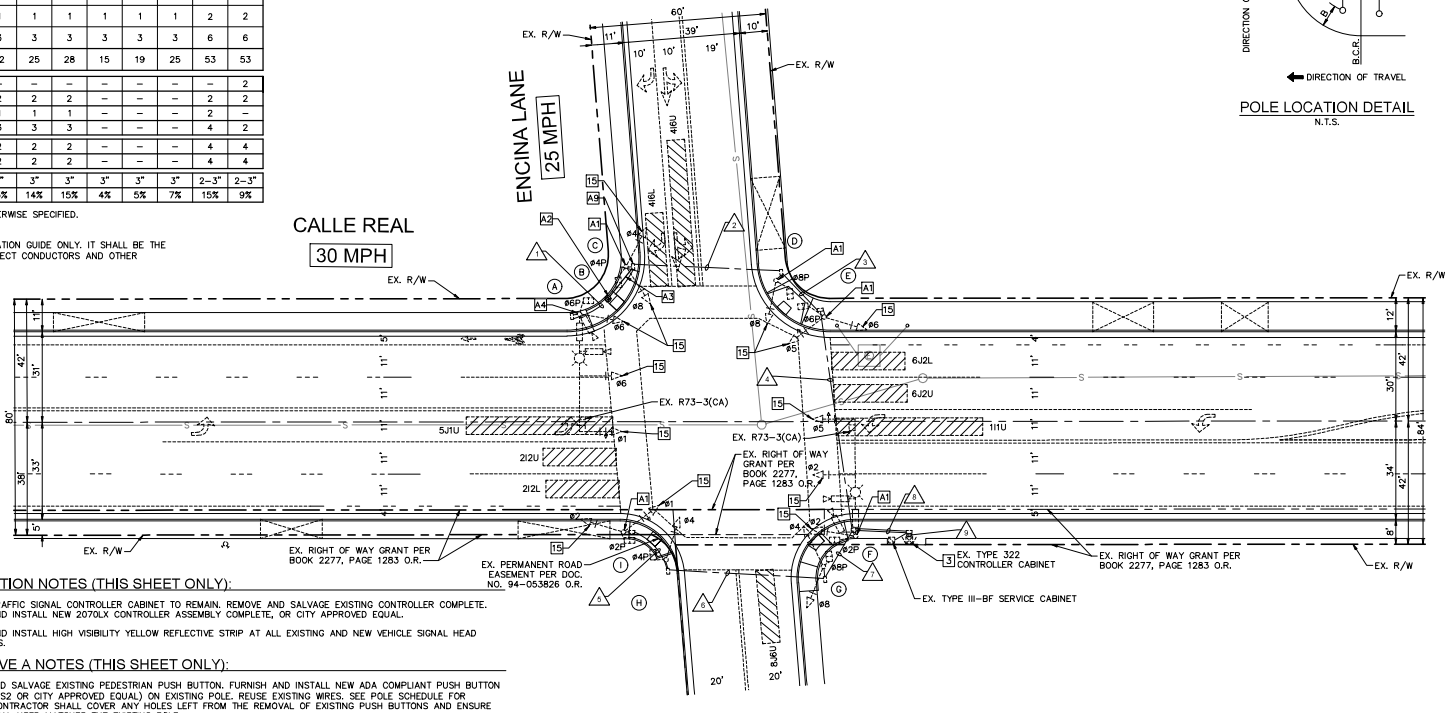
♦ ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

3 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

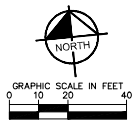
A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES–7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9 INSTALL CONDUIT INTO EXISTING PULL BOX.

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



FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN CA CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

CALLE REAL AT ENCINA LANE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–21
SHEET SHT. 21 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\28–TS–Calle Real_Encina.dwg; 6/23/2025 11:35 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●					
AWG SIZE OR CABLE TYPE	CIRCUIT	CONDUIT RUN			
		1	2	3	4
#14	#2	3	3	6	–
	#6	3	3	6	–
	#8P	2	2	4	–
	#8PPB	1	1	2	–
TOTAL #14		9	9	19	–
#6	SIGNAL POWER	–	–	–	2
#10	LUMINAIRES	2	2	2	4
	SIG. COMMON	1	1	1	–
	TOTAL	3	3	3	4
CONDUIT SIZE		3"	3"	3"	2"
CONDUIT FILL %		4%	4%	7%	9%

● ALL CONDUITS AND WIRES ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM			
NOT USED	→	NOT USED	NOT USED
ø1	ø2	ø3	ø4
NOT USED	←	NOT USED	↑ ↓
ø5	ø6	ø7	ø8

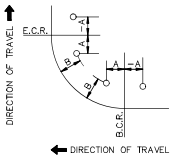
POLE SCHEDULE ●														
POLE DATA			SIGNAL	LUMINAIRE		LOCATION		SIGNAL MOUNTING**			APS*(N)			R.R.S.N.S. LEGEND	COMMENTS
No	TYPE	HEIGHT	MA	MA	LED	A	B	MAST ARM	POLE MT'G	PED	ø	ARROW	LOCATION		
(A)	17-1-70	30'	20'	12'	84W	EXISTING		MAS	SV-2-TA(N)	SP-1-T	ø8(N)	→	7	–	–
(B)	PPB POST(N)	3'-6"(N)	–	–	–	SEE PLAN		–	–	–	ø8(N)	↔	7	–	ALT A
(C)	17-1-70	30'	20'	12'	84W	EXISTING		MAS	SV-2-TA(N)	SP-1-T	ø8(N)	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.

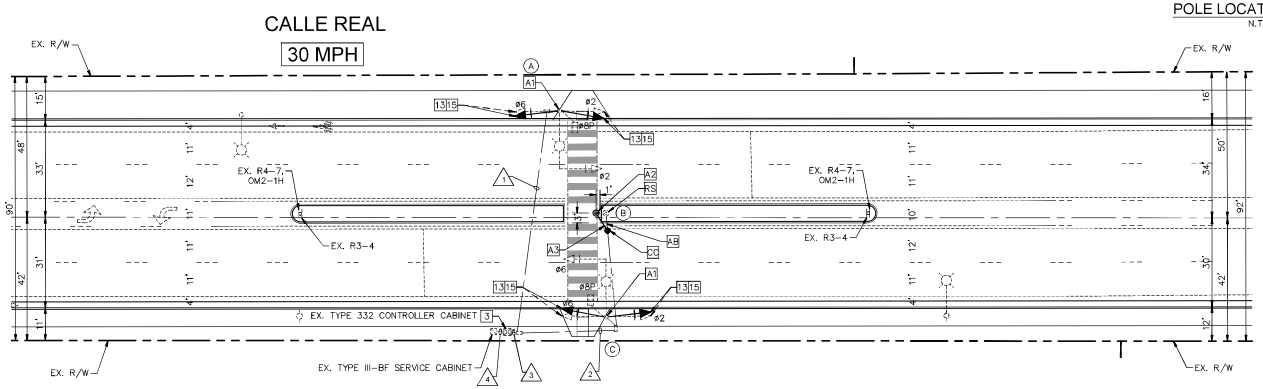
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.

CALLE REAL
SHOPPING CENTER



CONSTRUCTION NOTES (THIS SHEET ONLY):

3 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL.

1,3 REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

1S FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.

CC CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED.

RS REMOVE AND SALVAGE EQUIPMENT.

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

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN CA CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

CALLE REAL AT CALLE REAL SHOPPING CENTER
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-22
SHEET SHT. 22 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\30-TS-Calle Real_Marketplace.dwg; 6/23/2025 11:35 AM; Ramos, Roven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6	7
CONDUCTORS	NO. 14 CABLES	(A)	–	–	–	–	1	1	–
		(B)	–	–	–	–	–	–	–
	12 CONDUCTORS	(C)	–	–	–	1	1	1	–
		(D)	–	–	1	–	1	1	–
	3 CONDUCTORS	(E)	1	1	–	–	1	1	–
		(F)	–	1	–	–	1	1	–
		(G)	–	–	1	–	–	1	–
	TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		1 / –	2 / 1	1 / 1	1 / 1	5 / 4	5 / 4	– / –
#8	SERVICE		–	–	–	–	–	2	2
#10	LUMINAIRES		2	2	–	–	4	–	–
	SIG. COMMON		1	1	1	1	–	1	–
	TOTAL		3	3	1	1	4	1	–
COAXIAL VIDEO CABLE			1	2	–	–	3	3	–
VIDEO POWER CABLE			1	2	–	–	3	3	–
CONDUIT SIZE			3"	3"	3"	3"	2-4"	2-4"	2"
CONDUIT FILL %			8%	17%	6%	6%	10%	11%	4%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

NOT USED		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	NOT USED
ø5	ø6	ø7	ø8

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	19A-2-129	30'	30'	12'	84W	EXISTING		MAS	SV-1-T	SP-1-T	ø4(N)	→	7	Kellogg Ave	–
(B)	PPB POST(N)	3'-6"(N)	–	–	–	11'	9'	–	–	–	ø6(N)	→	5	–	ALT A
(C)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	–	–	–	–	–
(D)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø6(N)	←	5	–	–
(E)	24A-3-129	30'	35'	12'	84W	EXISTING		2-MAS	SV-2-T	–	–	–	–	Kellogg Ave	–
(F)	22TS	30'	–	12'	84W	EXISTING		–	SV-2-T	SP-1-T	–	–	–	–	–
(G)	PPB POST(N)	3'-6"(N)	–	–	–	SEE PLAN		–	–	–	ø4(N)	←	7	–	ALT A

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(N) = NEW

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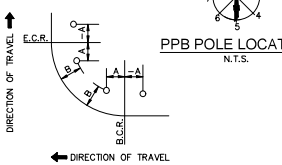
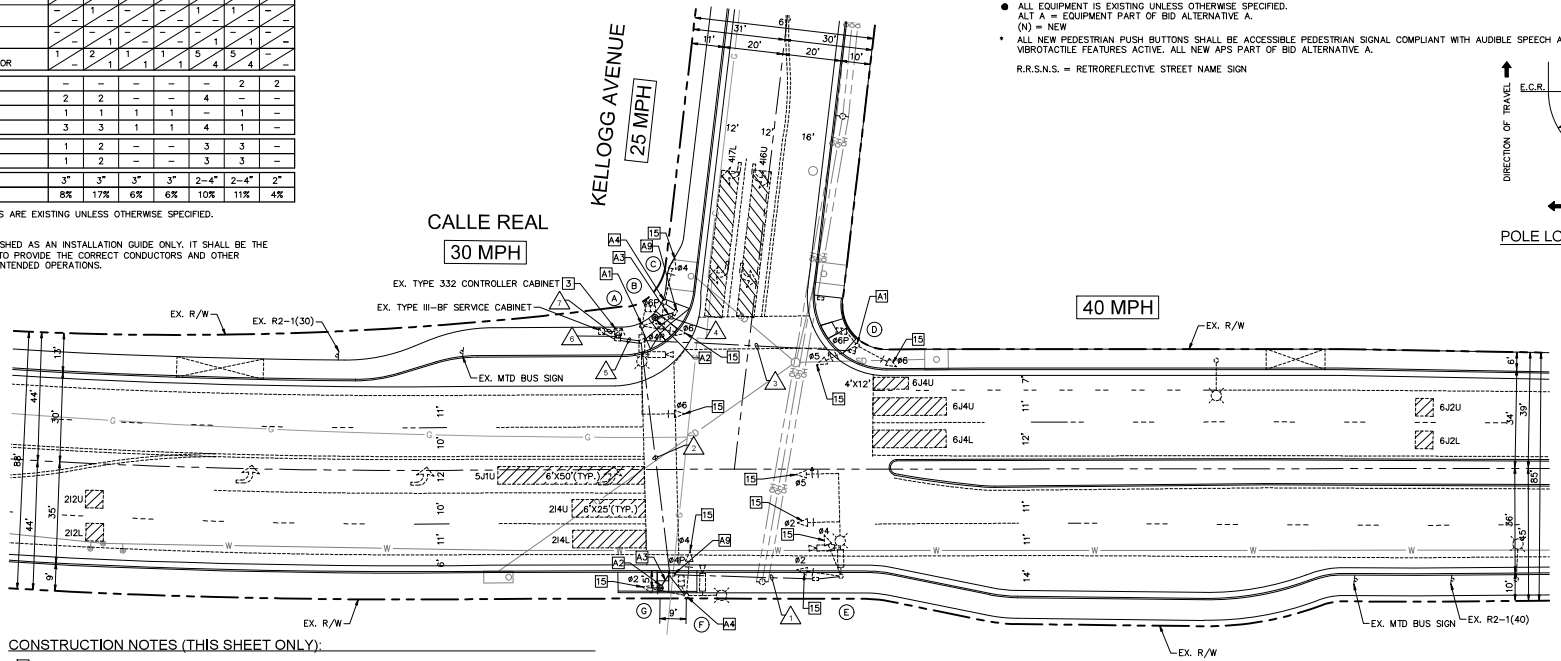
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

3 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

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A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

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A9 INSTALL CONDUIT INTO EXISTING PULL BOX.

Know what's below. Call before you dig.

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

CALLE REAL AT KELLOGG AVENUE

CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS

CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-23
SHEET SHT. 23 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\29-TS-Calle Real_Kellog.dwg, 6/23/2025 11:35 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6
NO. 14 CABLES								
CONDUCTORS	12 CONDUCTORS	(A)	–	–	–	–	1	–
		(B)	–	–	–	1	1	–
		(C)	–	–	1	1	1	–
		(D)	1	1	–	–	1	–
	3 CONDUCTORS	(E)	–	1	–	–	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			1 / –	2 / 1	1 / 1	2 / 2	5 / 4	– / –
#8	SERVICE		–	–	–	–	–	2
#10	LUMINAIRES		2	2	–	–	4	–
	SIG. COMMON		1	1	1	1	–	–
	TOTAL		3	3	1	1	4	–
COAXIAL VIDEO CABLE			1	2	–	–	3	–
VIDEO POWER CABLE			1	2	–	–	3	–
CONDUIT SIZE			3"	3"	3"	3"	3"	3"
CONDUIT FILL %			8%	17%	6%	8%	9%	4%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

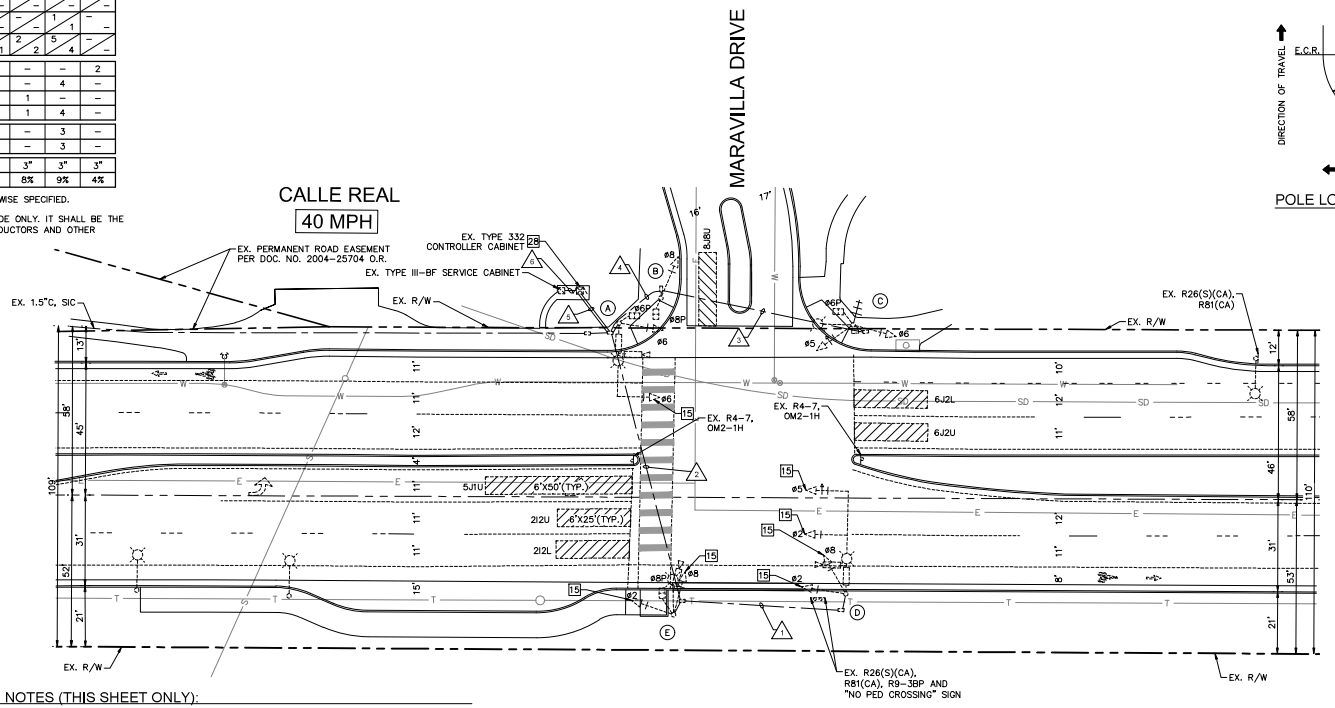
NOT USED		NOT USED	NOT USED
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS ø	APS ARROW	APS LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	19-3-129	30'	25'	12'	84W	EXISTING		MAS	SV-1-T	SP-1-T	ø8	←	3	Maravilla	–
(B)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø6	→	5	–	–
(C)	15	30'	–	–	84W	EXISTING		–	SV-2-T	SP-1-T	ø6	←	5	–	–
(D)	24-4-129	30'	35'	12'	84W	EXISTING		2-MAS	SV-2-TA	–	–	–	–	←Maravilla	–
(E)	15	30'	–	–	84W	EXISTING		–	SV-2-TA	SP-1-T	ø8	←	7	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.

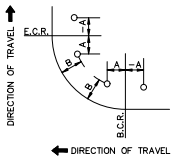
R.R.S.N.S = RETROREFLECTIVE STREET NAME SIGN



CONSTRUCTION NOTES (THIS SHEET ONLY):

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

28 PROTECT IN PLACE EXISTING SIGNAL CONTROLLER CABINET.



POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.

Know what's below. Call before you dig.

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

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WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

CALLE REAL AT MARAVILLA
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-24
SHEET SHT. 24 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\31-TS-Calle Real_Maravilla.dwg 6/23/2025 11:36 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6	7	8	9	10
CONDUCTORS	NO. 14 CABLES	(A)	–	–	–	–	–	–	–	1	1	–
	12 CONDUCTORS	(B)	–	–	–	–	–	–	1	1	1	–
		(C)	–	–	–	–	–	–	1	1	1	–
		(D)	–	–	–	–	–	1	1	1	1	–
		(E)	–	–	–	–	1	1	1	1	1	–
		(F)	1	1	1	1	–	–	–	1	1	–
		(G)	–	–	1	1	1	–	–	–	1	–
		(H)	–	1	1	1	–	–	–	1	1	–
		(I)	–	–	1	1	1	–	–	1	1	–
		(J)	–	–	–	1	1	–	–	1	1	–
	TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR		1 –	2 1	3 2	4 3	1 –	2 1	3 2	8 6	8 6	– –
#8	SERVICE		–	–	–	–	–	–	–	–	2	2
#10	LUMINAIRES		2	2	2	2	–	2	2	4	–	4
	SIG. COMMON		1	1	1	1	1	1	1	–	1	–
	TOTAL		3	3	3	3	1	3	3	4	1	4
COAXIAL VIDEO CABLE			1(N)	1(N)	1,1(N)	1,1(N)	–	1	1	2,2(N)	2,2(N)	–
VIDEO POWER CABLE			1(N)	1(N)	1,1(N)	1,1(N)	–	1	1	2,2(N)	2,2(N)	–
SIG. INTERCONNECT	6PR#20		1	1	1	1	–	–	–	1	2	–
CONDUIT SIZE			3"	3"	4"	4"	3"	3"	4"	2–4"	2–4"	2"
CONDUIT FILL %			11%	17%	14%	17%	5%	14%	11%	16%	17%	8%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

DIRECTION OF TRAVEL
E.C.R.
B.C.R.
DIRECTION OF TRAVEL

POLE LOCATION DETAIL
N.T.S.

PPB POLE LOCATION
N.T.S.

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	26–4–80	30'	45'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	ø4(N)	←	3	Overpass Rd	–
(B)	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø6(N)	→	5	–	–
(C)	PPB POST	3'–6"	–	–	–	EXISTING		–	–	–	ø6(N)	←	5	–	–
(D)	19–3–80	30'	25'	15'	84W	EXISTING		MAS	SV–1–T	–	–	–	–	Patterson Ave	–
(E)	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	–	–	–	–	–
(F)	26–4–80	30'	45'	15'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	–	–	–	Overpass Rd	–
(G)	PPB POST(N)	3'–6"(N)	–	–	–	17'	5'	–	–	–	ø2(N)	→	1	–	ALT A
(H)	1–A	10'	–	–	–	EXISTING		–	TV–1–T	–	–	–	–	–	–
(I)	17–3–80	30'	20'	15'	84W	EXISTING		MAS	SV–1–T	SP–1–T	ø2(N)	→	5	Patterson Ave	–
(J)	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø4(N)	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

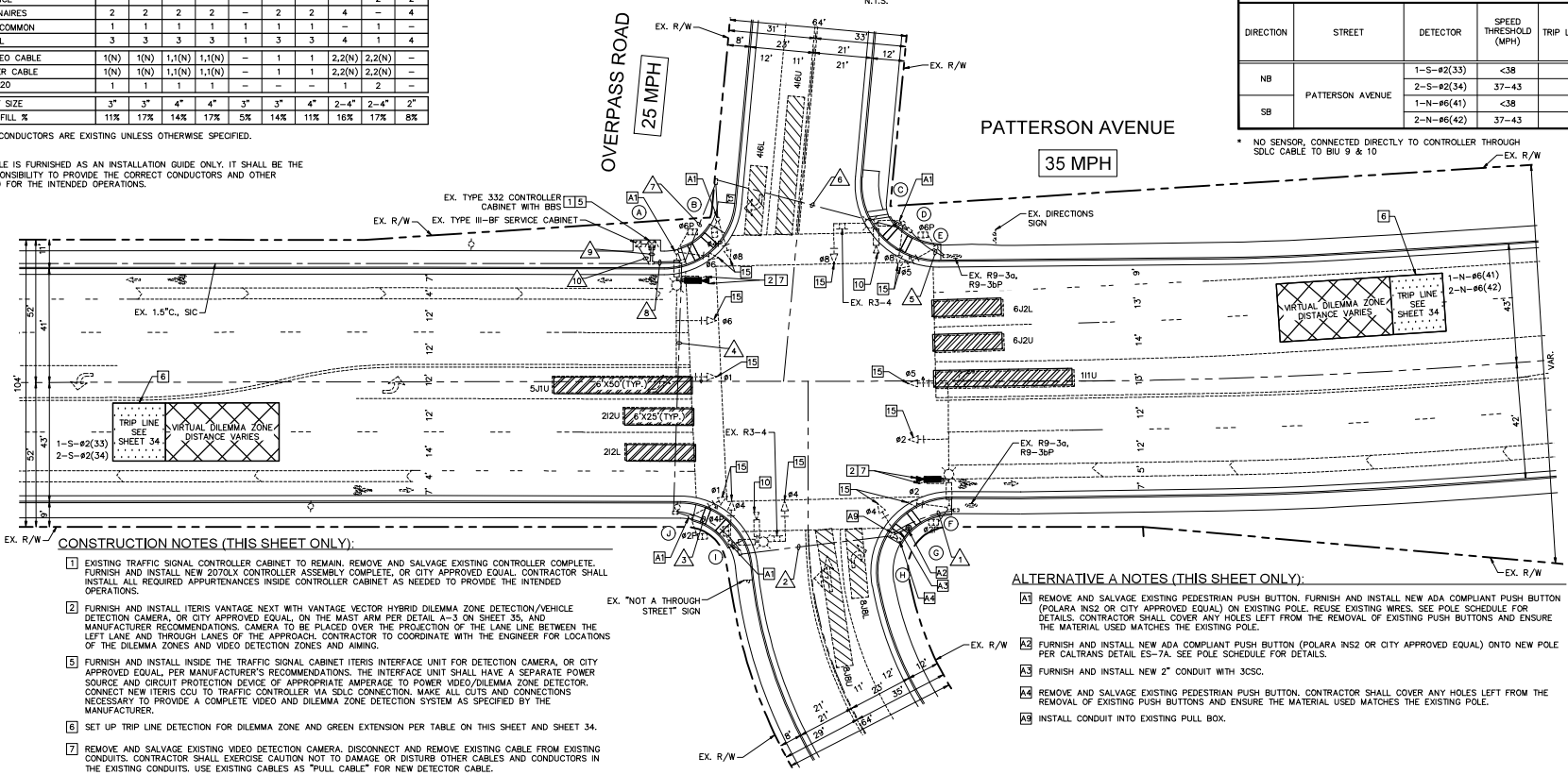
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
NB	PATTERSON AVENUE	1–S–ø2(33)	<38	1
		2–S–ø2(34)	37–43	2
SB		1–N–ø6(41)	<38	1
		2–N–ø6(42)	37–43	2

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2 FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES–7A. SEE POLE SCHEDULE FOR DETAILS.

A3 FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9 INSTALL CONDUIT INTO EXISTING PULL BOX.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN ____ CHECKED JM
JASON J. MELCHOR PROJECT ENGINEER
DATE 6/23/2025
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

PATTERSON AVENUE AT OVERPASS ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–25
SHEET SHT. 25 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\32–TS–Patterson_Overpass.dwg; 6/23/2025 11:36 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

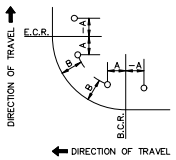
AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6	7
CONDUCTORS	NO. 14 CABLES	(A)	1	1	–	–	–	1	–
		(B)	–	1	–	–	–	1	–
	12	(C)	–	–	–	–	–	1	–
	CONDUCTORS	(D)	–	–	–	–	–	–	1
		(E)	–	–	–	–	1	1	1
	3	(F)	–	–	–	1	1	1	1
	CONDUCTORS	(G)	–	–	–	1	1	1	–
		(H)	–	–	1	1	1	–	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			1 / 1	2 / 2	1 / 1	2 / 2	3 / 3	6 / 6	– / –
#10	LUMINAIRES		2	2	–	–	–	–	2
	SIG. COMMON		1	1	1	1	1	–	–
	TOTAL		3	3	1	1	1	–	2
COAXIAL VIDEO CABLE			1,1(N)	1,1(N)	–	–	–	1,2(N)	–
VIDEO POWER CABLE			1,1(N)	1,1(N)	–	–	–	1,2(N)	–
SIG. INTERCONNECT	12PR#19		1	1	–	–	–	1	–
CONDUIT SIZE			3"	3"	3"	3"	3"	2-3"	3"
CONDUIT FILL %			18%	23%	6%	12%	18%	24%	2%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

EXISTING PHASE DIAGRAM

NOT USED	→	NOT USED	NOT USED
ø1	ø2	ø3	ø4
NOT USED	←	NOT USED	↑ ↓
ø5	ø6	ø7	ø8



POLE LOCATION DETAIL
N.T.S.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	FAIRVIEW AVENUE	1-N-ø6(41)	<38	1
		2-N-ø6(42)	37-43	2
NB		1-S-ø2(33)	<38	1
		2-S-ø2(34)	37-43	2

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

POLE SCHEDULE ●

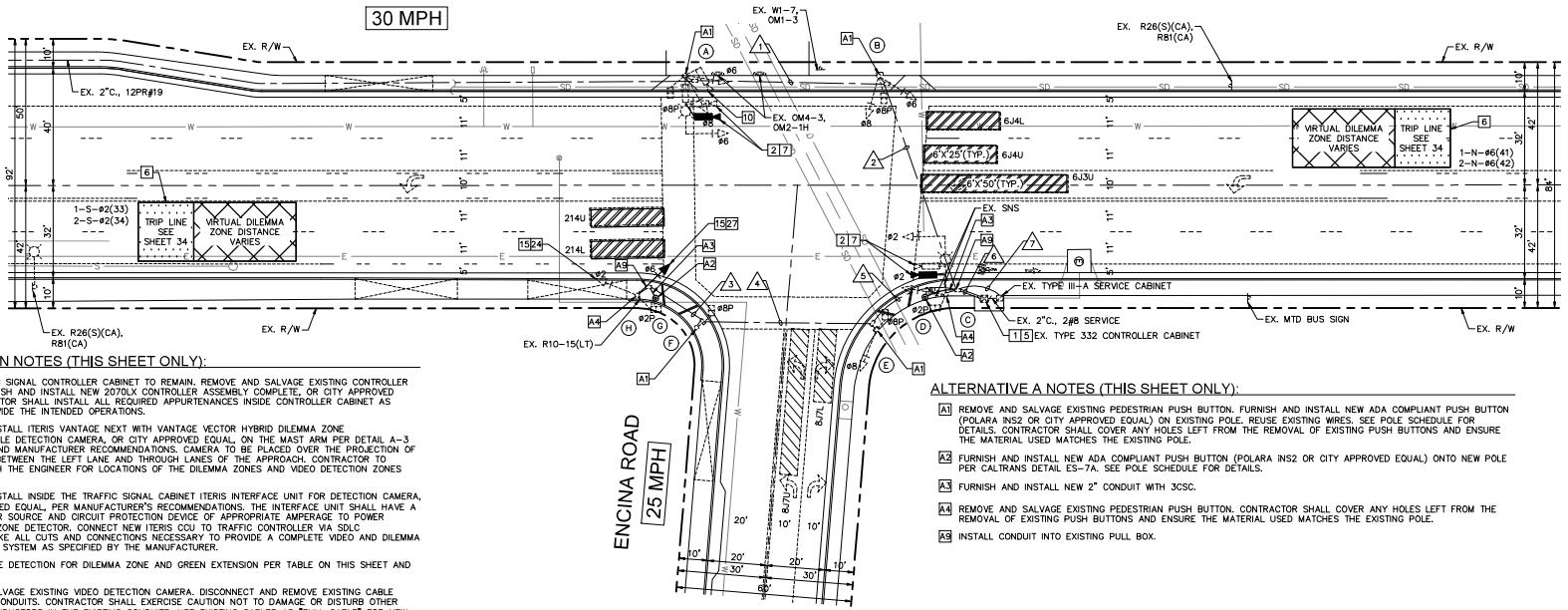
No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	17-1-70	30'	20'	12'	84W	EXISTING		MAS	SV-2-T	SP-1-T	ø8(N)	←	3	–	–
(B)	1-A	10'	–	–	–	EXISTING		–	TV-2-T	SP-1-T	ø8(N)	←	3	–	–
(C)	17-1-70	30'	20'	12'	84W	EXISTING		MAS	SV-1-T	SP-1-T	–	–	–	–	–
(D)	PPB POST(N)	3'-6"(N)	–	–	–	10'	5'	–	–	–	ø8(N)	←	7	–	ALT A
(E)	1-A	10'	–	–	–	EXISTING		–	TV-1-T	SP-1-T	ø2(N)	→	1	–	–
(F)	1-A	7'	–	–	–	EXISTING		–	–	TP-1-T	ø2(N)	←	1	–	–
(G)	PPB POST(N)	3'-6"(N)	–	–	–	6'	6'	–	–	–	ø8(N)	→	3	–	ALT A
(H)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	–	–	–	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
ALT A = EQUIPMENT PART OF BID ALTERNATIVE A.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.
2. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
5. FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.
6. SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.
7. REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.
10. PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.
15. FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.
24. REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.
27. FURNISH AND INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET ONTO EXISTING POLE.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A2. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ONTO NEW POLE PER CALTRANS DETAIL ES-7A. SEE POLE SCHEDULE FOR DETAILS.

A3. FURNISH AND INSTALL NEW 2" CONDUIT WITH 3CSC.

A4. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

A9. INSTALL CONDUIT INTO EXISTING PULL BOX.

Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN CA CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

FAIRVIEW AVENUE AT ENCINA ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-26
SHEET SHT. 26 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\33-TS-Fairview_Encina.dwg; 6/23/2025 11:36 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE	POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
NO. 14 CABLES	A	–	1	1	1	1	1	–	–	–	1
	B	1	1	1	1	1	1	–	–	–	1
12 CONDUCTORS	C	–	–	–	–	–	–	1	1	1	1
	D	–	–	–	–	–	–	–	–	1	1
3 CONDUCTORS	E	–	–	–	–	–	–	–	–	–	1
	F	–	–	–	–	–	1	1	–	–	1
	G	–	–	–	–	1	1	1	–	–	1
	H	–	–	–	1	1	1	1	–	–	1
TOTAL CABLES 12–CONDUCTOR/3–CONDUCTOR		1 / 1	2 / 2	3 / 4	4 / 4	5 / 5	1 / 1	2 / 2	8 / 8
#10	LUMINAIRES	–	2	2	2	2	2	2	–
	SIG. COMMON	1	1	1	1	1	1	1	–
	TOTAL	1	3	3	3	3	3	3	–
COAXIAL VIDEO CABLE		–	1(N)	1(N)	1,1(N)	1,1(N)	1	1	2,2(N)
VIDEO POWER CABLE		–	1(N)	1(N)	1,1(N)	1,1(N)	1	1	2,2(N)
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	3"	2–4"
CONDUIT FILL %		6%	16%	23%	30%	35%	10%	16%	16%

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(N) = NEW
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EXISTING PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING MAST ARM	SIGNAL MOUNTING POLE MT'G	SIGNAL MOUNTING PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
A	24–4–100	30'	35'	12'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	ø4(N)	←	3	Berkeley Rd	–
B	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø6(N)	→	5	–	–
C	17–3–100	30'	15'	12'	84W	EXISTING		MAS	SV–1–T	SP–1–T	ø6(N)	←	5	Fairview Ave	–
D	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø8(N)	→	7	–	–
E	24–4–100	30'	35'	12'	84W	EXISTING		2–MAS	SV–1–T	SP–1–T	ø8(N)	←	7	Berkeley Rd	–
F	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø2(N)	→	1	–	–
G	17–3–100	30'	15'	12'	84W	EXISTING		MAS	SV–1–T	SP–1–T	ø2(N)	←	1	Fairview Ave	–
H	1–A	10'	–	–	–	EXISTING		–	TV–1–T	SP–1–T	ø4(N)	→	3	–	–

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(N) = NEW

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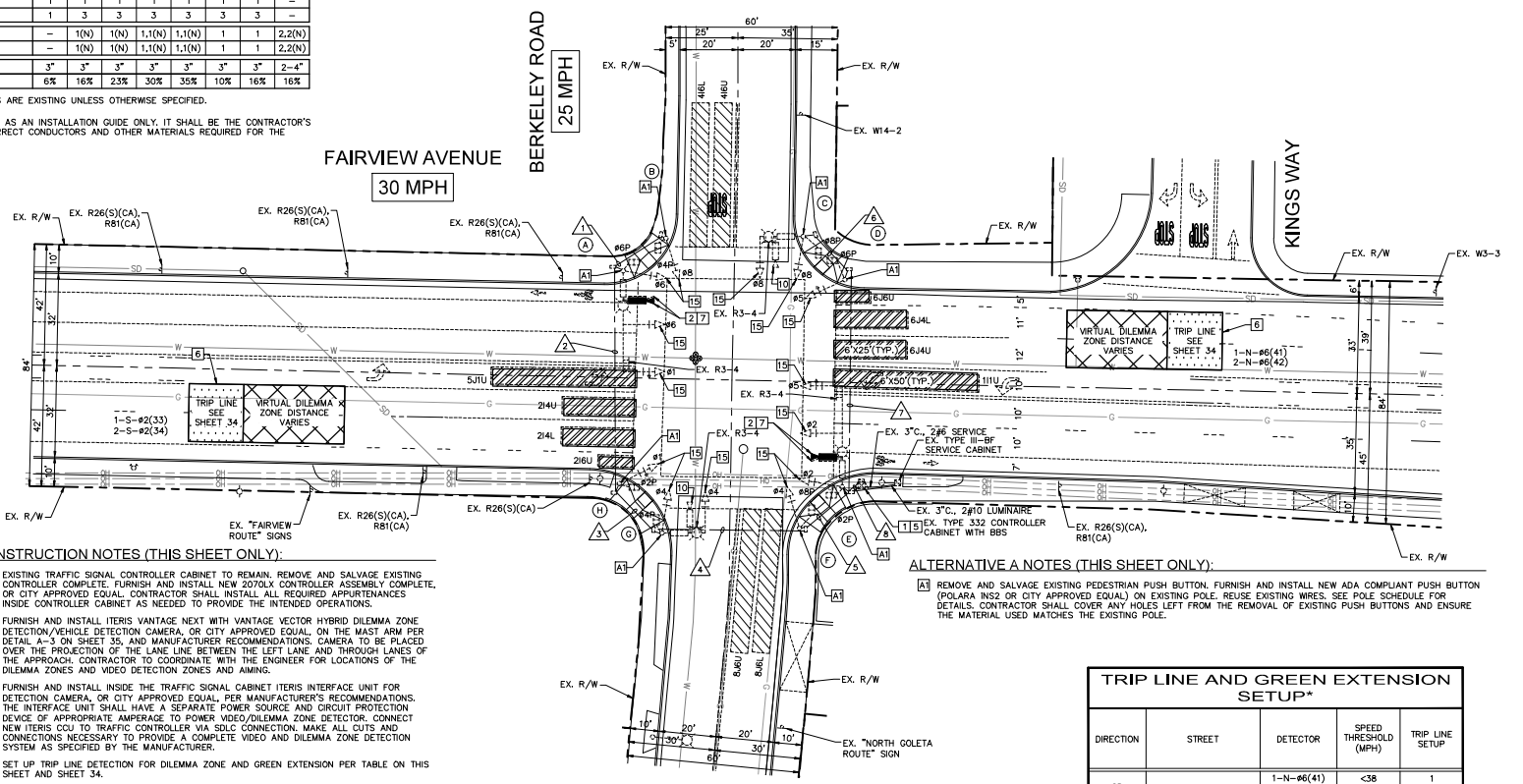
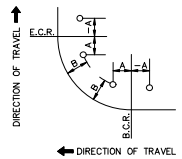
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



PPB POLE LOCATION
N.T.S.



POLE LOCATION DETAIL
N.T.S.

CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

10 PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	FAIRVIEW AVENUE	1–N–ø6(41)	<38	1
		2–N–ø6(42)	37–43	2
NB		1–S–ø2(33)	<38	1
		2–S–ø2(34)	37–43	2

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN CA CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

FAIRVIEW AVENUE AT BERKELEY ROAD
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–27
SHEET SHT. 27 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\34–TS–Fairview_Berkeley.dwg, 6/23/2025 11:36 AM, Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6	7	8	9	10
CONDUCTORS	NO. 14 CABLES	(A)	–	–	–	–	–	–	–	1	1	1
		(B)	–	–	–	–	–	–	1	1	1	1
	12 CONDUCTORS	(C)	–	–	–	–	–	–	–	–	1	1
		(D)	–	–	–	–	–	–	–	–	–	1
		(E)	–	–	–	–	1	1	–	–	–	1
		(F)	–	–	–	1	1	1	–	–	–	1
		(G)	–	–	1	1	1	1	–	–	–	1
		(H)	–	1	1	1	1	1	–	–	–	1
		(I)	1	1	1	1	1	1	–	–	–	1
		(J)	–	–	–	–	–	–	1	1	1	1
	TOTAL CABLES		1	2	3	4	5	1	2	3	4	10
	12–CONDUCTOR/3–CONDUCTOR		1	2	3	4	4	–	1	2	3	8
#10	LUMINAIRES		–	2	2	2	2	–	2	2	2	4
	SIG. COMMON		1	1	1	1	1	1	1	1	1	–
	TOTAL		1	3	3	3	3	1	3	3	3	4
COAXIAL VIDEO CABLE			–	1(N)	1(N)	2(N)	1(N)	1(N)	1(N)	1(N)	2(N)	4(N)
VIDEO POWER CABLE			–	1(N)	1(N)	2(N)	1(N)	1(N)	1(N)	1(N)	2(N)	4(N)
CONDUIT SIZE			2"	2"	2.5"	3"	3"	2"	3"	3"	3"	2–3"
CONDUIT FILL %			14%	35%	31%	30%	31%	17%	14%	20%	28%	34%

● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

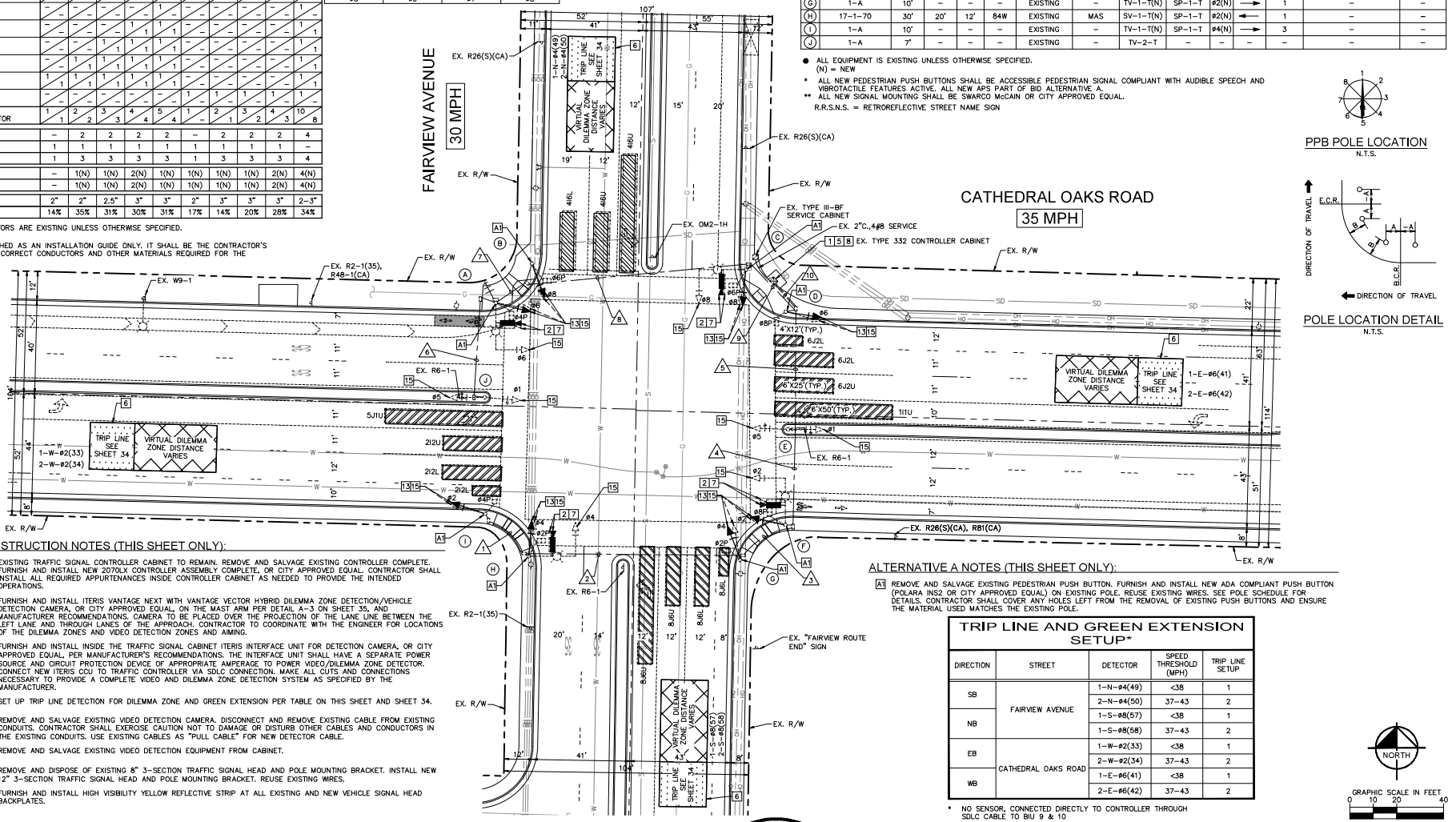
EXISTING PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

POLE SCHEDULE ●

No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING** MAST ARM	SIGNAL MOUNTING** POLE MT'G	SIGNAL MOUNTING** PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	17–1–70	30'	20'	12'	84W	EXISTING		MAS	SV–1–T(N)	SP–1–T	ø4(N)	←	3	–	–
(B)	1–A	10'	–	–	–	EXISTING		–	TV–1–T(N)	SP–1–T	ø6(N)	→	5	–	–
(C)	17–1–70	30'	20'	12'	84W	EXISTING		MAS	SV–1–T(N)	SP–1–T	ø6(N)	←	5	–	–
(D)	1–A	10'	–	–	–	EXISTING		–	TV–1–T(N)	SP–1–T	ø8(N)	→	7	–	–
(E)	1–A	7'	–	–	–	EXISTING		–	TV–2–T	–	–	–	–	–	–
(F)	17–1–70	30'	20'	12'	84W	EXISTING		2–MAS	SV–1–T(N)	SP–1–T	ø8(N)	←	7	–	–
(G)	1–A	10'	–	–	–	EXISTING		–	TV–1–T(N)	SP–1–T	ø2(N)	→	1	–	–
(H)	17–1–70	30'	20'	12'	84W	EXISTING		MAS	SV–1–T(N)	SP–1–T	ø2(N)	←	1	–	–
(I)	1–A	10'	–	–	–	EXISTING		–	TV–1–T(N)	SP–1–T	ø4(N)	→	3	–	–
(J)	1–A	7'	–	–	–	EXISTING		–	TV–2–T	–	–	–	–	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW
* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.
R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN



CONSTRUCTION NOTES (THIS SHEET ONLY):

1 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.

2 FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A–3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.

5 FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.

6 SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.

7 REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.

8 REMOVE AND SALVAGE EXISTING VIDEO DETECTION EQUIPMENT FROM CABINET.

13 REMOVE AND DISPOSE OF EXISTING 8" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3–SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
SB	FAIRVIEW AVENUE	1–N–ø4(49)	<38	1
		2–N–ø4(50)	37–43	2
NB		1–S–ø8(57)	<38	1
		1–S–ø8(58)	37–43	2
EB	CATHEDRAL OAKS ROAD	1–W–ø2(33)	<38	1
		2–W–ø2(34)	37–43	2
WB		1–E–ø6(41)	<38	1
		2–E–ø6(42)	37–43	2

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

PPB POLE LOCATION
N.T.S.

POLE LOCATION DETAIL
N.T.S.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939–1030
WWW.KIMLEY–HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

CATHEDRAL OAKS ROAD AT FAIRVIEW AVENUE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS–28
SHEET SHT. 28 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 – Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\35–TS–Cathedral_Fairview.dwg; 6/23/2025 11:36 AM; Ramos, Raven

CONDUCTOR SCHEDULE ●

AWG SIZE OR CABLE TYPE		POLE	CONDUIT RUN 1	2	3	4	5	6	7	8
CONDUCTORS	NO. 14 CABLES	(A)	1	1	1	1	–	–	1	–
	12 CONDUCTORS	(B)	–	1	1	1	–	–	1	–
		(C)	–	–	1	1	–	–	1	–
		(D)	–	–	1	1	–	–	1	–
	3 CONDUCTORS	(E)	–	–	–	2	–	–	2	–
		(F)	–	–	–	–	–	–	1	–
		(G)	–	–	–	–	1	1	1	–
		(H)	–	–	–	–	1	1	1	–
TOTAL CABLES 12-CONDUCTOR/3-CONDUCTOR			1 / 1	2 / 2	4 / 4	6 / 5	1 / 1	2 / 2	9 / 8	– / –
#8	SIGNAL POWER		–	–	–	–	–	–	3	3
#10	LUMINAIRES		2	2	2	2	–	–	–	2
	SIG. COMMON		1	1	1	1	1	1	2	–
	TOTAL		3	3	3	3	1	1	2	2
COAXIAL VIDEO CABLE			1,1(N)	1,1(N)	1,1(N)	2,2(N)	–	–	2,2(N)	–
VIDEO POWER CABLE			1,1(N)	1,1(N)	1,1(N)	2,2(N)	–	–	2,2(N)	–
CONDUIT SIZE			3"	3"	3"	3"	3"	3"	2-3"	2"
CONDUIT FILL %			13%	18%	30%	45%	6%	12%	32%	7%

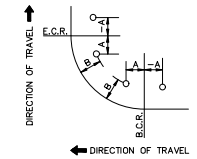
● ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS AND OTHER MATERIALS REQUIRED FOR THE INTENDED OPERATIONS.

PHASE DIAGRAM

		NOT USED	
ø1	ø2	ø3	ø4
		NOT USED	
ø5	ø6	ø7	ø8

POLE LOCATION DETAIL
N.T.S.



POLE SCHEDULE ●

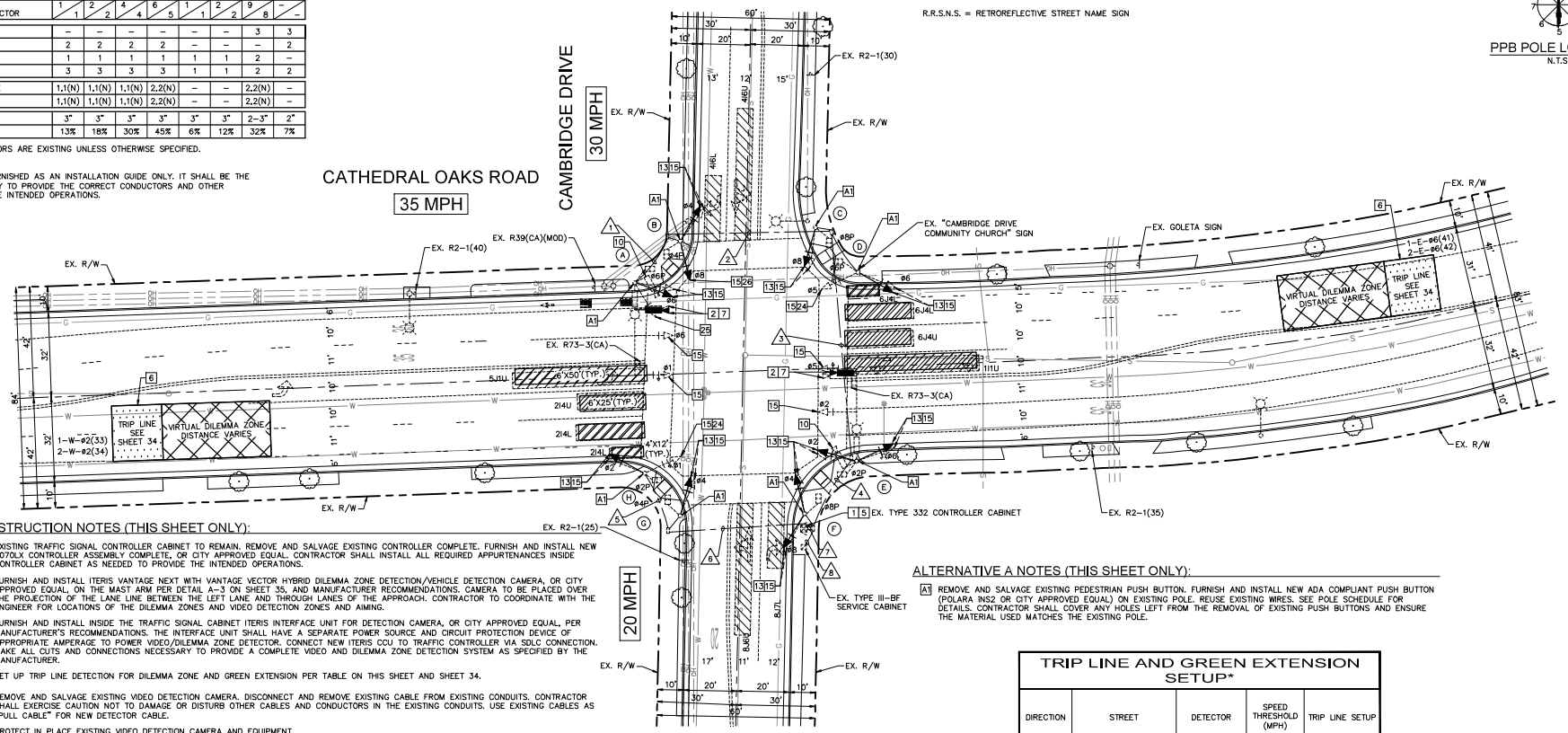
No	POLE DATA TYPE	HEIGHT	SIGNAL MA	LUMINAIRE MA	LUMINAIRE LED	LOCATION A	LOCATION B	SIGNAL MOUNTING** MAST ARM	POLE MT'G	PED	APS*(N) ø	APS*(N) ARROW	APS*(N) LOCATION	R.R.S.N.S. LEGEND	COMMENTS
(A)	24-3-70	30'	35'	15'	84W	EXISTING		2-MAS	SV-1-T(N)	SP-1-T	ø4(N)	←	3	Cambridge	–
(B)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	ø6(N)	→	5	–	–
(C)	1-A	10'	–	–	–	EXISTING		–	TV-1-T(N)	SP-1-T	ø6(N)	←	5	–	–
(D)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	ø8(N)	→	7	–	–
(E)	24-3-70	30'	35'	15'	84W	EXISTING		2-MAS	SV-2-TA(N)	SP-1-T	ø8(N)	←	7	Cambridge	–
(F)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	ø2(N)	→	1	–	–
(G)	1-A	10'	–	–	–	EXISTING		–	TV-1-T(N)	SP-1-T	ø2(N)	←	1	–	–
(H)	1-A	10'	–	–	–	EXISTING		–	TV-2-T(N)	SP-1-T	ø4(N)	→	3	–	–

● ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE SPECIFIED.
(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.
** ALL NEW SIGNAL MOUNTING SHALL BE SWARCO McCAIN OR CITY APPROVED EQUAL.

R.R.S.N.S. = RETROREFLECTIVE STREET NAME SIGN

PPB POLE LOCATION
N.T.S.



CONSTRUCTION NOTES (THIS SHEET ONLY):

1. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET TO REMAIN. REMOVE AND SALVAGE EXISTING CONTROLLER COMPLETE. FURNISH AND INSTALL NEW 2070LX CONTROLLER ASSEMBLY COMPLETE, OR CITY APPROVED EQUAL. CONTRACTOR SHALL INSTALL ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE THE INTENDED OPERATIONS.
2. FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VANTAGE VECTOR HYBRID DILEMMA ZONE DETECTION/VEHICLE DETECTION CAMERA, OR CITY APPROVED EQUAL, ON THE MAST ARM PER DETAIL A-3 ON SHEET 35, AND MANUFACTURER RECOMMENDATIONS. CAMERA TO BE PLACED OVER THE PROJECTION OF THE LANE LINE BETWEEN THE LEFT LANE AND THROUGH LANES OF THE APPROACH. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR LOCATIONS OF THE DILEMMA ZONES AND VIDEO DETECTION ZONES AND AIMING.
5. FURNISH AND INSTALL INSIDE THE TRAFFIC SIGNAL CABINET ITERIS INTERFACE UNIT FOR DETECTION CAMERA, OR CITY APPROVED EQUAL, PER MANUFACTURER'S RECOMMENDATIONS. THE INTERFACE UNIT SHALL HAVE A SEPARATE POWER SOURCE AND CIRCUIT PROTECTION DEVICE OF APPROPRIATE AMPERAGE TO POWER VIDEO/DILEMMA ZONE DETECTOR. CONNECT NEW ITERIS CCU TO TRAFFIC CONTROLLER VIA SDLC CONNECTION. MAKE ALL CUTS AND CONNECTIONS NECESSARY TO PROVIDE A COMPLETE VIDEO AND DILEMMA ZONE DETECTION SYSTEM AS SPECIFIED BY THE MANUFACTURER.
6. SET UP TRIP LINE DETECTION FOR DILEMMA ZONE AND GREEN EXTENSION PER TABLE ON THIS SHEET AND SHEET 34.
7. REMOVE AND SALVAGE EXISTING VIDEO DETECTION CAMERA. DISCONNECT AND REMOVE EXISTING CABLE FROM EXISTING CONDUITS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO DAMAGE OR DISTURB OTHER CABLES AND CONDUCTORS IN THE EXISTING CONDUITS. USE EXISTING CABLES AS "PULL CABLE" FOR NEW DETECTOR CABLE.
10. PROTECT IN PLACE EXISTING VIDEO DETECTION CAMERA AND EQUIPMENT.
13. REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. REUSE EXISTING WIRES.
15. FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.
24. REMOVE EXISTING TRAFFIC SIGNAL HEAD FROM EXISTING MOUNTING BRACKET AND REINSTALL ONTO NEW MOUNTING BRACKET.
25. REMOVE AND DISPOSE OF EXISTING 8" 3-SECTION TRAFFIC SIGNAL HEAD.
26. FURNISH AND INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD ONTO MOUNTING BRACKET.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

A1 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE POLE SCHEDULE FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

TRIP LINE AND GREEN EXTENSION SETUP*

DIRECTION	STREET	DETECTOR	SPEED THRESHOLD (MPH)	TRIP LINE SETUP
EB	CATHEDRAL OAKS ROAD	1-W-ø2(33)	<38	1
		2-W-ø2(34)	37-43	2
WB		1-E-ø6(41)	<38	1
		2-E-ø2(42)	37-43	2

* NO SENSOR, CONNECTED DIRECTLY TO CONTROLLER THROUGH SDLC CABLE TO BIU 9 & 10

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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

FOR REDUCED PLANS
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0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

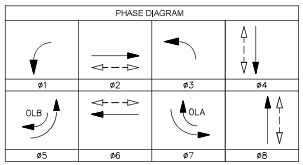
DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

CATHEDRAL OAKS ROAD AT CAMBRIDGE DRIVE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-29
SHEET SHT. 29 OF 35
PLAN DATE 6/23/2025

K:\ORA_TPTO\194601001 - Goleta Citywide Traffic Signal Improvements\6 Design\CAD\2 Plan Sheets\36-TS-Cathedral_Cambridge.dwg; 6/23/2025 11:36 AM; Ramos, Raven



DETAIL "A"
N.T.S.

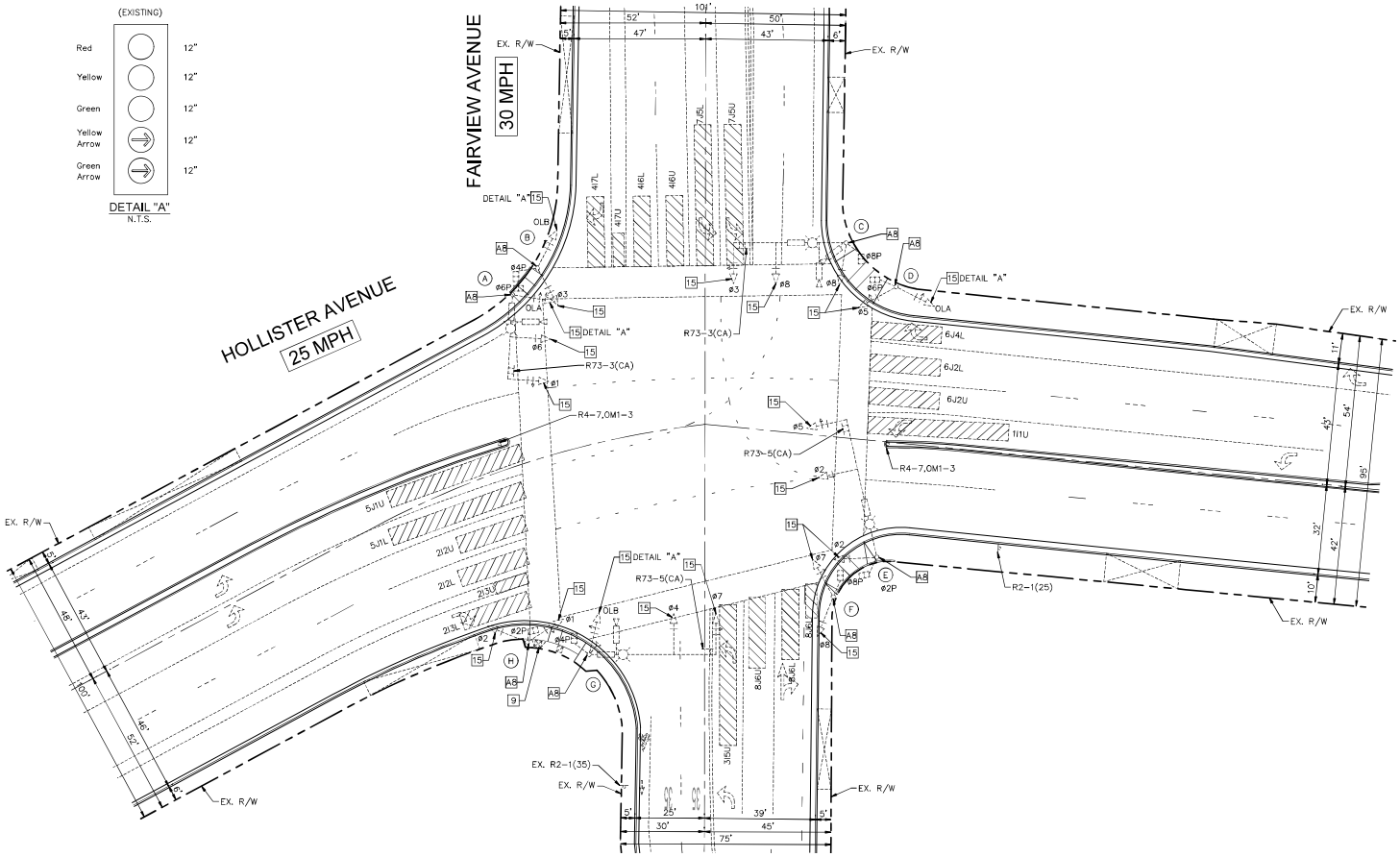
CONSTRUCTION NOTES (THIS SHEET ONLY):

9 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET WITH 2070LX CONTROLLER TO REMAIN.

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A (THIS SHEET ONLY):

A8 REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE DETAIL "A" FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.



DETAIL "A": ALTERNATIVE A APS PED PUSH BUTTON TABLE

		APS*(N)	
No	ø	ARROW	LOCATION
A	ø4	←	3
B	ø6	→	5
C	ø6	←	5
D	ø8	→	7
E	ø8	←	7
F	ø2	→	1
G	ø2	←	1
H	ø4	→	3

(N) = NEW

* ALL NEW PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNAL COMPLIANT WITH AUDIBLE SPEECH AND VIBROTACTILE FEATURES ACTIVE. ALL NEW APS PART OF BID ALTERNATIVE A.

PPB POLE LOCATION
N.T.S.

Know what's below. Call before you dig.

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NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

REGISTERED PROFESSIONAL ENGINEER JASON J. MELCHOR No. 65218 CIVIL STATE OF CALIFORNIA

HOLLISTER AVENUE AT FAIRVIEW AVENUE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-30
SHEET SHT. 30 OF 35
PLAN DATE 6/23/2025

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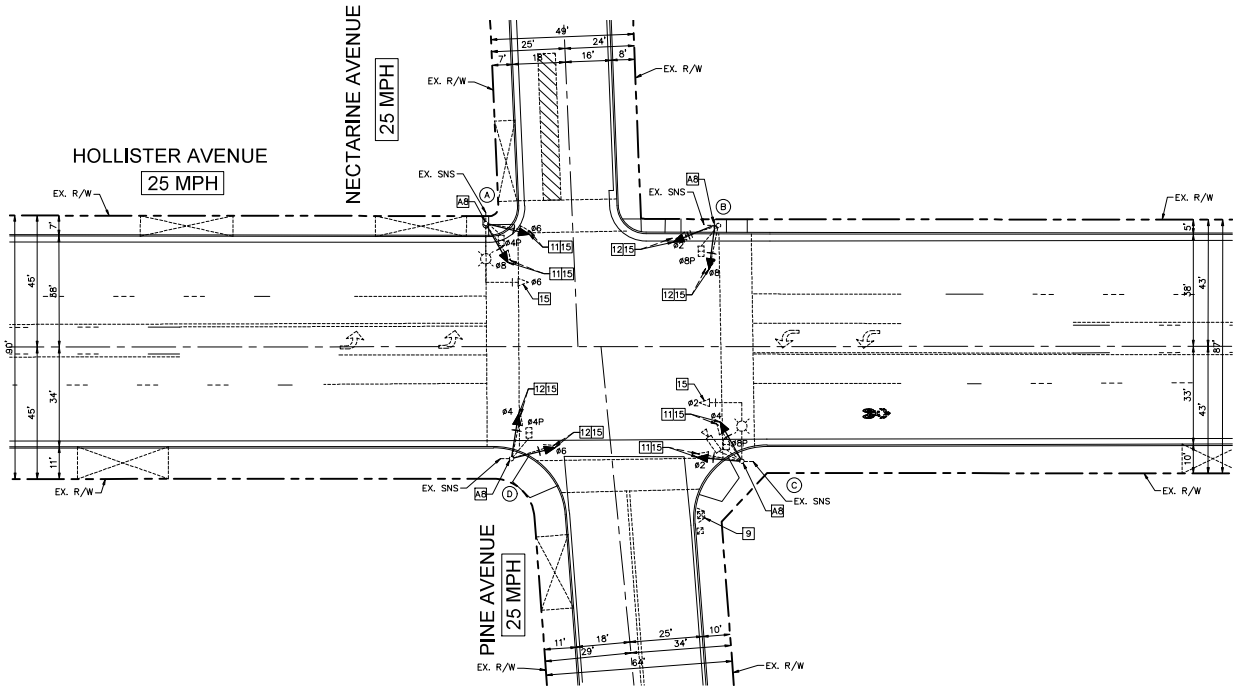

CONSTRUCTION NOTES (THIS SHEET ONLY):

9 EXISTING TRAFFIC SIGNAL CONTROLLER CABINET WITH 2070LX CONTROLLER TO REMAIN.

11 REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND (TYPE SV-2-TA) POLE MOUNTING BRACKET (SWARCO McCAIN OR CITY APPROVED EQUAL).

12 REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND (TYPE TV-2-T) POLE MOUNTING BRACKET (SWARCO McCAIN OR CITY APPROVED EQUAL).

15 FURNISH AND INSTALL HIGH VISIBILITY YELLOW REFLECTIVE STRIP AT ALL EXISTING AND NEW VEHICLE SIGNAL HEAD BACKPLATES.

ALTERNATIVE A NOTES (THIS SHEET ONLY):

AB REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ADA COMPLIANT PUSH BUTTON (POLARA INS2 OR CITY APPROVED EQUAL) ON EXISTING POLE. REUSE EXISTING WIRES. SEE DETAIL "A" FOR DETAILS. CONTRACTOR SHALL COVER ANY HOLES LEFT FROM THE REMOVAL OF EXISTING PUSH BUTTONS AND ENSURE THE MATERIAL USED MATCHES THE EXISTING POLE.

DETAIL "A": ALTERNATIVE A APS PED PUSH BUTTON TABLE

		APS*(N)	
No	ø	ARROW	LOCATION
A	ø4	→	7
B	ø8	←	3
C	ø8	←	7
D	ø4	←	7

(N) = NEW

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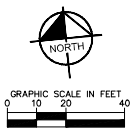
PPB POLE LOCATION
N.T.S.



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SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT NECTARINE AVENUE
AND PINE AVENUE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-31
SHEET SHT. 31 OF 35
PLAN DATE 6/23/2025

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PHASE DIAGRAM			
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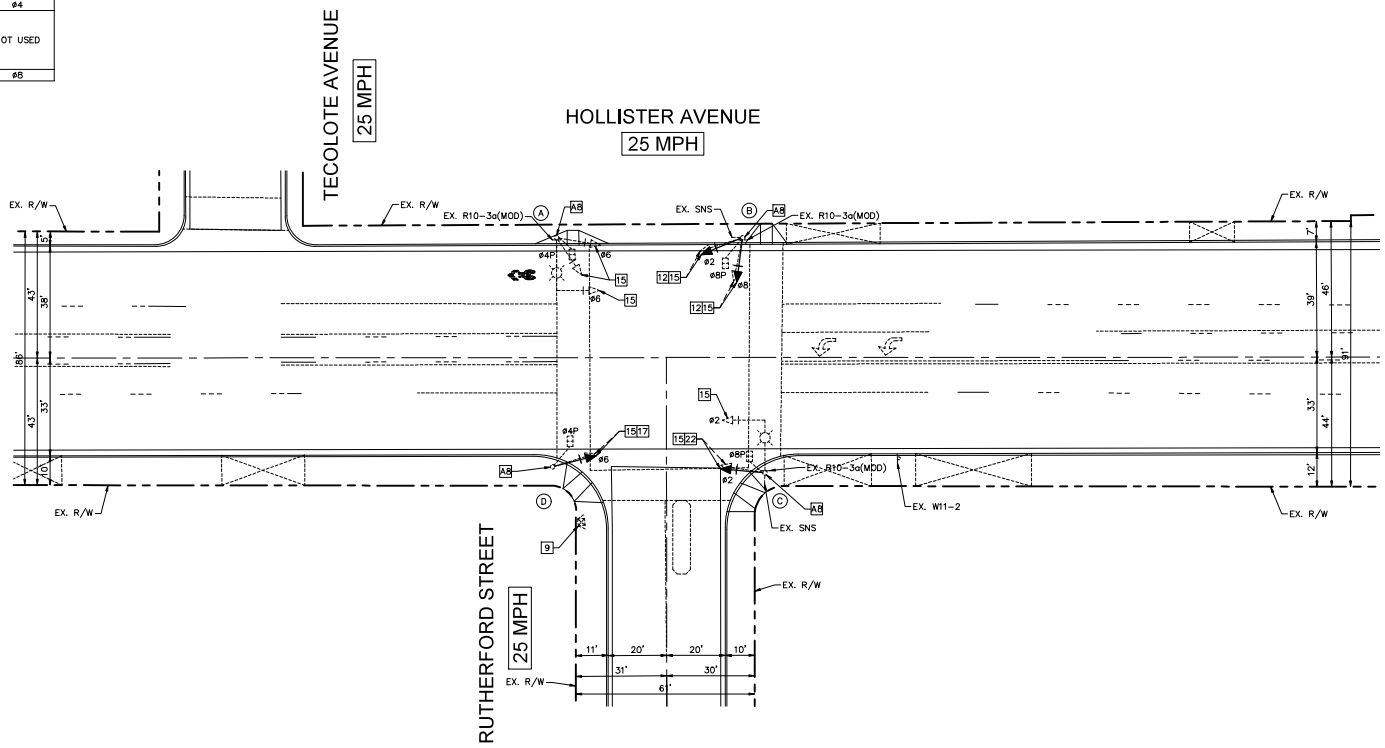

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17 REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL HEAD AND POLE MOUNTING BRACKET. INSTALL NEW 12" 3-SECTION TRAFFIC SIGNAL HEAD AND (TYPE TV-1-T) POLE MOUNTING BRACKET (SWARCO McCAIN OR CITY APPROVED EQUAL).

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ALTERNATIVE NOTES (THIS SHEET ONLY)

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No	ø	APS*(N) ARROW	APS*(N) LOCATION
A	ø4	→	7
B	ø4	←	3
C	ø4	←	7
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(N) = NEW

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PPB POLE LOCATION
N.T.S.

GRAPHIC SCALE IN FEET
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ORIGINAL SCALE IN INCHES
0 1 2 3

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Kimley»Horn
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SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT RUTHERFORD STREET
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-32
SHEET SHT. 32 OF 35
PLAN DATE 6/23/2025

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CONSTRUCTION NOTES (THIS SHEET ONLY):

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No	ø	ARROW	LOCATION
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B	ø6	→	5
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PPB POLE LOCATION
N.T.S.

PHASE DIAGRAM			
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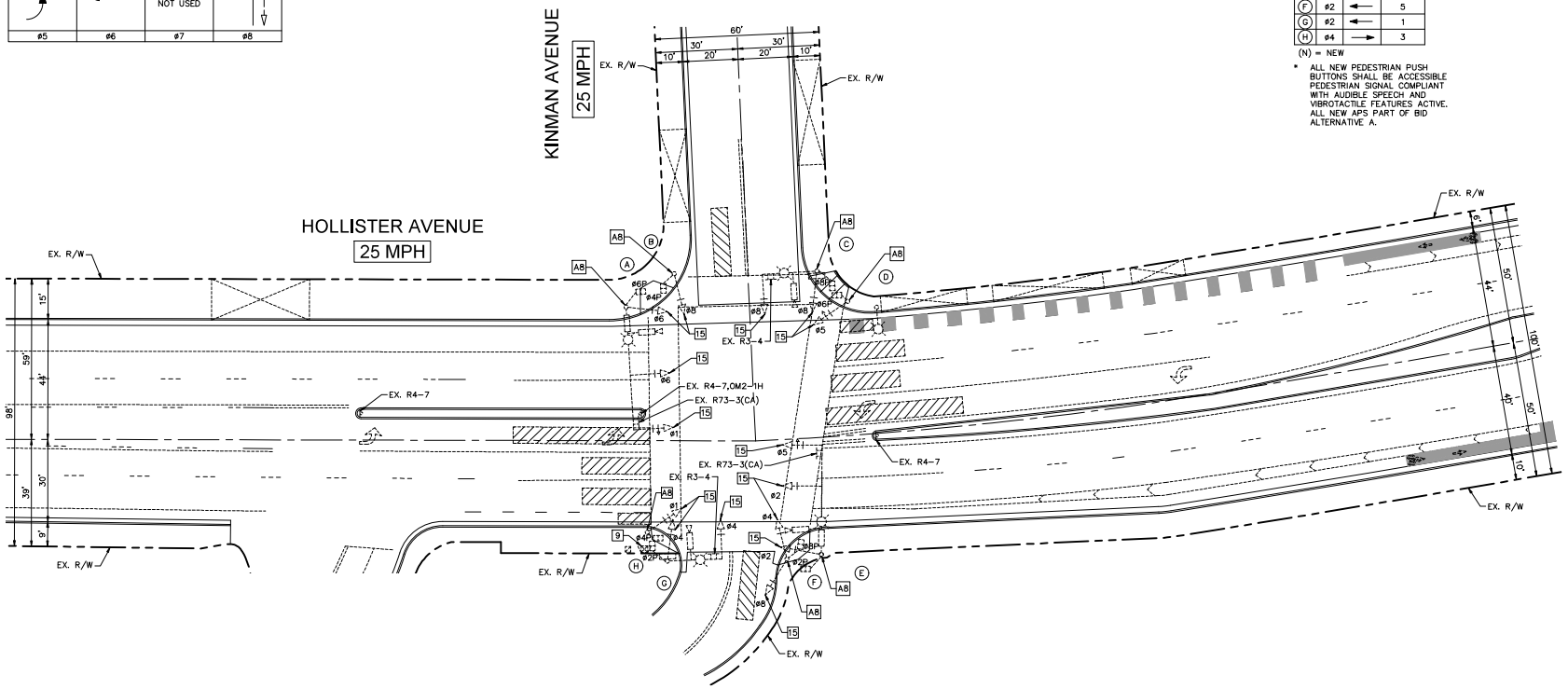
		NOT USED	
ø5	ø6	ø7	ø8



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SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN RR CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

HOLLISTER AVENUE AT KINMAN AVENUE
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-33
SHEET SHT. 33 OF 35
PLAN DATE 6/23/2025

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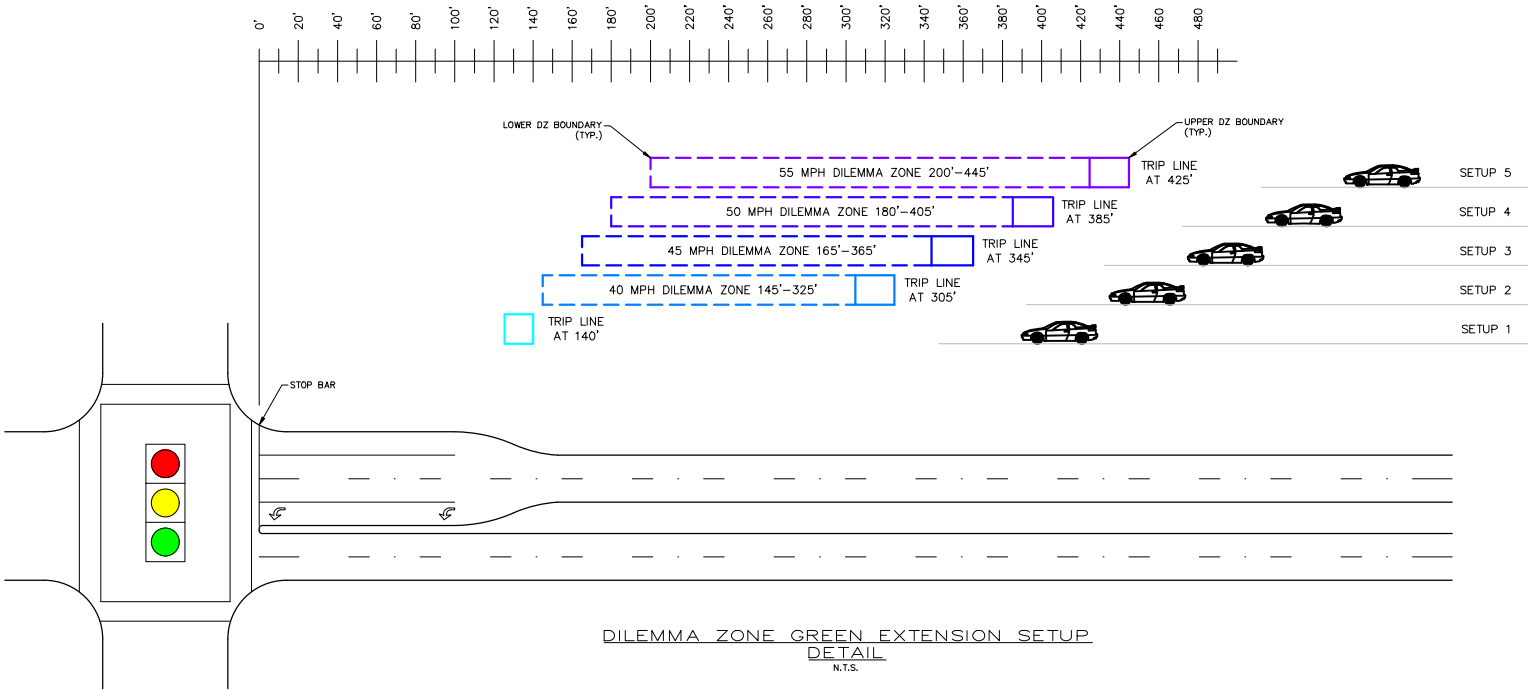

DILEMMA ZONE GREEN EXTENSION SETUP DETAIL

N.T.S.

DILEMMA ZONE TRIP LINE AND EXTENSION SETUP

TARGET SPEED LIMIT (MPH)	SPEED THRESHOLD (MPH)	TRIP LINE DIST (WIDTH ±20') (FT)	GREEN EXTENSION (S)
55	>52	425	2.6
50	47–53	385	2.5
45	42–48	345	2.5
40	37–43	305	2.4
≤35	<38	140	2.0

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

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SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
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DESIGN ____ CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

DILEMMA ZONE BOUNDARIES
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-34
SHEET SHT. 34 OF 35
PLAN DATE 6/23/2025

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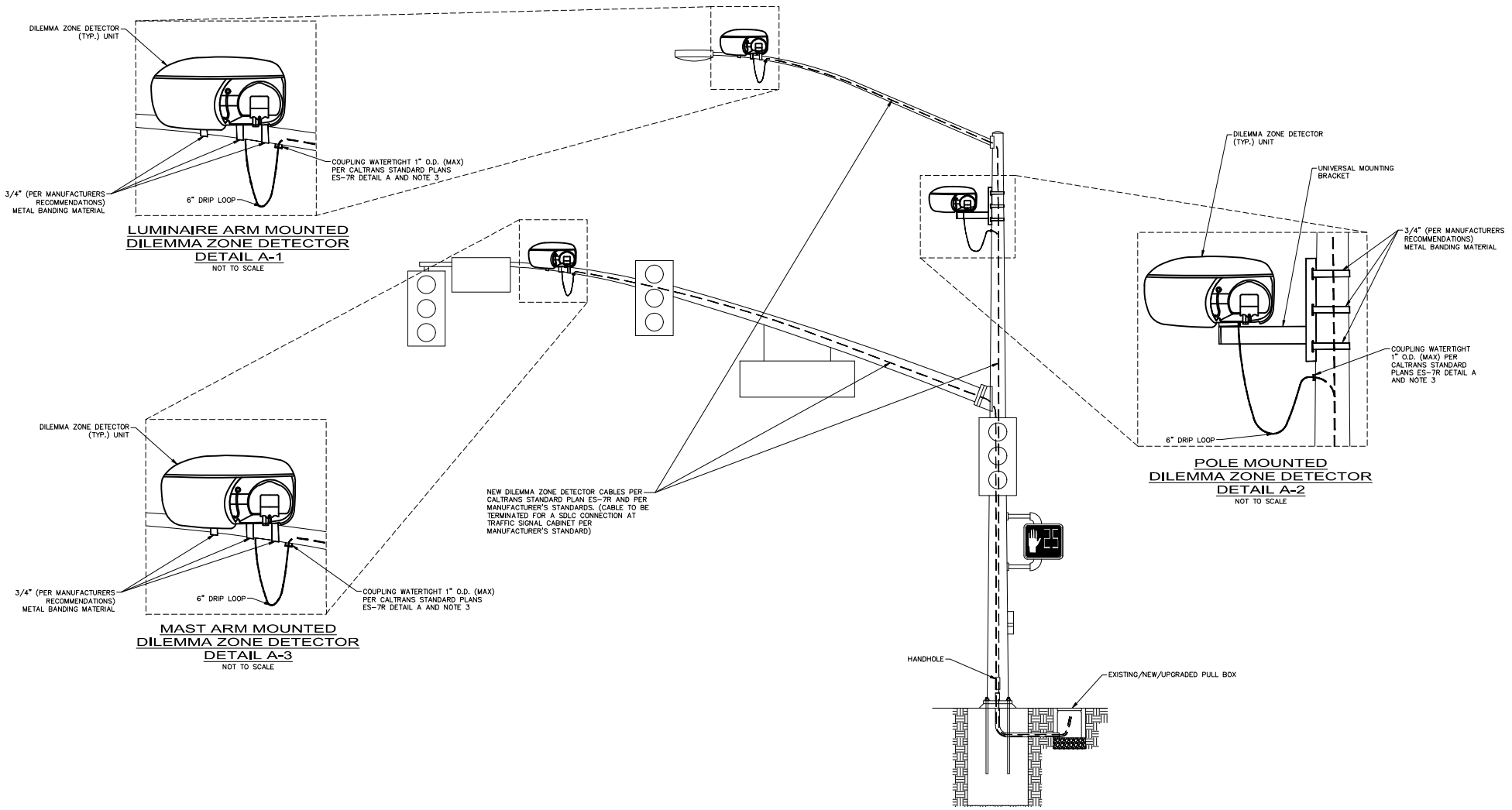

DILEMMA ZONE TYPICAL MOUNTING
DETAIL A
NOT TO SCALE

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

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES
0 1 2 3

NO.	DATE	REVISIONS	APPD.

Kimley»Horn
1100 TOWN AND COUNTRY ROAD
SUITE 700
ORANGE, CA 92868
PHONE: (714) 939-1030
WWW.KIMLEY-HORN.COM

DESIGN ____ CHECKED JM
JASON J. MELCHOR DATE 6/23/2025
PROJECT ENGINEER
R.C.E. 65218

DILEMMA ZONE MOUNTING
CITYWIDE TRAFFIC SIGNAL IMPROVEMENTS
CITY OF GOLETA , STATE OF CALIFORNIA

DRAWING NO. TS-35
SHEET SHT. 35 OF 35
PLAN DATE 6/23/2025

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ATTACHMENT 2

Citywide Traffic Signal Upgrade Project Specifications

Notice to Contractors, Bidding Instructions, Proposal, Agreement, Insurance and Bonds,
City of Goleta Construction Specifications and Special Provisions for the

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

Public Works

Received By:

Luz “Nina” Buelna, P.E.

Public Works Director

The Engineers whose stamp and signature appear herein are in responsible charge of preparing these plans and specifications.

Bids Open: August 26, 2025 ~~August 18, 2025~~ at 3:00 PM

Contact: Michael Winnewisser ~~Daniel Virgen Jr~~

For use with Caltrans Standard Specifications dated 2023, Caltrans Standard Plans dated 2023 and labor surcharge and equipment rates of the California Department of Transportation insofar as the same may apply and in accordance with the Special Provisions.

CITY PROJECT NO. 9083

The Special Provisions contained herein have been prepared by or under the direction of the following Registered Persons.

CIVIL

DATE 06/23/2025

Name: Jason Melchor

Title: Project Engineer

Company: Kimley Horn

City of Goleta

Contract Documents

Citywide Traffic Signal Upgrade Project

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SECTION V INSURANCE AND BONDS	**INS-1**
SECTION VI CITY OF GOLETA CONSTRUCTION SPECIFICATIONS	**GCS-1**
SECTION VII SPECIAL PROVISIONS	**SP-1**

SECTION I

NOTICE TO CONTRACTORS

NOTICE TO CONTRACTORS
INVITING SEALED BIDS
FOR THE
CITWIDE TRAFFIC SIGNAL UPGRADE PROJECT

City Project Number: 9083

PUBLIC NOTICE IS HEREBY GIVEN that the City of Goleta ("CITY"), invites sealed bids for the above stated project and will receive such bids via electronic transmission on the City of Goleta Planet Bids portal site until **~~August 25, 2025~~ August 26, 2025, at 3:00 PM** Late proposals will be rejected. No exceptions.

Copies of the Contract Documents and the Proposal Forms for bidding the project, may be obtained from the PlanetBids Website: https://pbsystem.planetbids.com. Proposals which do not acknowledge addendums to the project documents will be rejected.

All communications relative to this project shall be conducted through PlanetBids. Questions about alleged patent ambiguity of the plans, specifications, or estimate must be asked before bid opening. After bid opening, the CITY does not consider these questions as bid protests.

A **pre-bid meeting will be held at N/A**.

It is required that the Bidders have fully inspected the Project site in all particulars and become thoroughly familiar with the terms and conditions of the Bid Plans and Special Provisions and local conditions affecting the performance and costs of the Work prior to bidding and it is recommended that this be done prior to attending this meeting.

Pursuant to California Labor Code Section 1773, the City has ascertained the General Prevailing Rate of Wages in the County in which the work is to be done to be as determined by the Director of Industrial Relations of the State of California. Contractor is hereby made aware that information regarding prevailing wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: https://www.dir.ca.gov/OPRL/2024-1/PWD/Southern.html. The Contractor is required to post a copy of the applicable wage rates at the job site. Attention is directed to Section 7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC of the State Standard Specifications.

The California Air Resources Board ("CARB") implemented amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulations ("Regulation") which are effective on January 1, 2024 and apply broadly to all self-propelled off road diesel vehicles 25 horsepower or greater and other forms of equipment used in California. A copy of the Regulation is available at https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/off-

roaddiesel/appa-1.pdf. Bidders are required to comply with all CARB and Regulation requirements, including, without limitation, all applicable sections of the Regulation, as codified in Title 13 of the California Code of Regulations section 2449 *et seq.* throughout the term of the Project. Bidders must provide, with their Bid, copies of Bidder's and all listed subcontractors the most recent, valid Certificate of Reported Compliance ("CRC") issued by CARB. Failure to provide valid CRCs as required herein may render the Bid non-responsive.

Bidders must be registered on the City of Goleta's PlanetBids portal in order to receive addendum notifications and to submit a bid. Go to PlanetBids for bid results and awards. It is the responsibility of the bidder to submit the bid with sufficient time to be received by PlanetBids prior to the bid opening date and time. Allow time for technical difficulties, uploading, and unexpected delays. **Late or incomplete bids will not be accepted.**

Bid must be accompanied by a bid security in the form of a money order, a certified cashier's check, or bidder's bond executed by an admitted surety, made payable to CITY. The bid security shall be an amount equal to ten percent (10%) of the total annual bid amount included with their proposals as required by California law.

Note: All bids must be accompanied by a scanned copy of the bid security uploaded to PlanetBids. The original security of the three (3) lowest bidders must be mailed or submitted to the office of the City Clerk at 130 Cremona Drive, Suite B, Goleta, California 93117, in a sealed envelope and be received or postmarked within three (3) City working days after the bid due date and time for the bid to be considered. The sealed envelope should be plainly marked on the outside, "SEALED BID SECURITY FOR <u>CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT</u>."

The Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations (DIR) per California Labor Code Section 1771.4, including prevailing wage rates and apprenticeship employment standards. Affirmative action to ensure against discrimination in employment practices on the basis of race, color, national origin, ancestry, sex, or religion will also be required. The CITY hereby affirmatively ensures that all business enterprises will be afforded full opportunity to submit bids in response to this notice and will not be discriminated against on the basis of race, color, national origin, ancestry, sex, or religion in any consideration leading to the award of contract.

In accordance with the California Public Contract Code 20103.5 when federal funds are involved in local agency contracts, no bid shall be invalidated by the failure of the bidder to be licensed in California at the time of bid opening. However, at the time of award, the selected contractor shall be properly licensed in accordance with the laws of the State and the City of Goleta. Contractor shall possess a valid **<u>Class A - General Engineering Contractor</u>** license prior to award of Contract. Said license shall be maintained during the contract period. It is the Bidder's and Contractor's responsibility to

obtain the correct Contractor's licenses. Bidders shall be skilled and regularly engage in the general class or type of work called for under this contract.

The successful Bidder will be required to furnish a Performance Bond and a Payment Bond each in an amount equal to 100% of the Contract Price. Each bond shall be in the forms set forth herein, shall be secured from a surety company that meets all State of California bonding requirements, as defined in Code of Civil Procedure Section 995.120, and that is a California admitted surety insurer.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the DIR. No Bid will be accepted, nor any contract entered into without proof of the contractor's and subcontractors' current registration with the DIR to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the DIR for the duration of the Project. Failure to provide proof of the contractor's current registration pursuant to Labor Code Section 1725.5 may result in rejection of the bid as non-responsive.

The Contractor Company, including the Responsible Managing Officer (RMO) for the Contractor Company, shall demonstrate a minimum of five (5) years' experience successfully performing projects of substantially similar type, magnitude, and character of the work bid. The CITY reserves the right to reject all bids, reject any bid that is not responsive to the invitation, or to waive any minor irregularity and to take all bids under advisement for a period of up to ninety (90) working days. Failure to provide proof of the Contractor's current registration pursuant to Section 1725.5 of the Labor Code may result in rejection of the bid as non-responsive. Failure to comply with enforcement provisions pursuant to Section 1771.4 of the Labor Code may result in a determination that the Bidder is not responsible.

Bids shall remain open and valid for a period of one hundred twenty (120) calendar days after the Bid Deadline.

Pursuant to Public Contract Code section 22300, the successful bidder may substitute certain securities for funds withheld by CITY to ensure performance under the Contract or, in the alternative, request the CITY to make payment of retention to an escrow agent.

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 8:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially, and caller anonymity will be respected.

Any protest to an intended award of this contract shall be made in writing addressed to the City Clerk prior to the award. Any protest may be considered and acted on by the City Council at the time noticed for award of the contract. To request a copy of the notice of agenda for award, please contact the City Clerk cityclerkgroup@cityofgoleta.org or register on the CITY's website (www.cityofgoleta.org).

CITY OF GOLETA

Deborah S. Lopez, City Clerk

Published:

Santa Barbara Independent: July 17, 2025, and July 24, 2025

END OF NOTICE TO CONTRACTORS

SECTION II

BIDDING INSTRUCTIONS

SECTION II BIDDING INSTRUCTIONS

1 DEFINITIONS. Unless provided otherwise, the definitions in the contract documents are applicable to all contract documents.

1.1 "Addenda" means written or graphic instruments issued by the City before the bid deadline that modify or interpret the contract documents by additions, deletions, clarifications, or corrections.

1.2 "Alternate" means an amount stated in the bid for which the Bidder offers to perform the Work described in the Bidding Documents as Alternate Work, to be added or deducted from the Total Base Bid, which shall be Contractor's responsibility if City accepts the Alternate Bid Item.

1.3 "Bid Deadline" means the date and time designated in the notice inviting sealed bids as the last date and time for receipt of bids, as may be revised by addenda.

1.4 "Bidder" means a person or firm that submits a bid.

1.5 "Bidding/Contract Documents" means the Contract, Addenda, Notice to Contractors, bidding instructions, Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Completion) when attached as an exhibit to the Contract, the Bonds, permits from jurisdictional regulatory agencies, City of Goleta Construction Specifications, Special Provisions, Plans, State Standard Plans, State Standard Specifications, Revised State Standard Specifications, Labor Surcharge and Equipment Rental Rates, Work Directives, Reference Specifications, Change Orders, Supplemental Agreements, Appendices, Project Plans and any other applicable documents not listed, including modifications incorporated in those documents.

1.6 "Contract Price" means the total aggregate amount of the Contractor's bid price based on the estimated quantities listed in the Bidding Sheet as set forth in the award of the Contract approved by the City Council, subject to adjustment for variances in quantities and changes pursuant to Change Orders executed in accordance with the Contract Documents.

1.7 "Inspector" means the person designated by the engineer to ensure specification compliance.

1.8 "Total Base Bid" means the sum stated in the bid for which bidder offers to perform the Work described in the contract documents, but not including alternates.

1.9 "Unit or Contract Unit Price" means an amount entered in the bid by bidder or a "Contract Item" price established by the City in the bid, as a price per unit of measurement for payment for materials, equipment or services including taxes, supervision, overhead and profit for a portion of the work described in the Contract Documents.

2 BIDDER'S REPRESENTATIONS. By making its bid, bidder represents that:

2.1 Bidder has read, understood, and made the bid pursuant to the requirements in the Contract Documents.

2.2 The Bidder, at its sole cost and expense, has carefully examined the Contract Documents and visited the Project site to become fully acquainted with the local site conditions affecting the Work to be performed including transportation, disposal, handling, and storage of materials.

2.3 The bid and the Contract Unit Prices bid are based upon the labor, materials, equipment, and systems required by the Contract Documents.

2.4 Bidder and all subcontractors, regardless of tier, have the appropriate registrations and current licenses issued by the State of California Contractor's State License Board and Department of Industrial Relations (DIR) for the Work to be performed. If bidder is a joint venture, the bidder will have a joint venture license appropriate for the performance of the Work, and each member of the joint venture will likewise have the appropriate license. Business and professions code §§ 7000-7191 establish licensing requirements for contractors. If a bidder, that is a specialty contractor, submits a bid involving 3 or more specialized building trades, the Work of which is more than incidental and supplemental to the performance of the Work for which bidder holds a specialty contractor license, bidder must also hold either (1) a specialty contractor "C" license in each such trade or (2) a general engineering contractor "A" license. This requirement is applicable whether or not bidder lists a subcontractor for each such trade.

2.5 Bidder shall have the expertise, including the Responsible Managing Officer (RMO) for the Contractor Company, demonstrating a minimum of five (5) years' experience successfully performing projects of the same type, magnitude, and character of the work bid, and financial capacity to perform and complete all obligations under the Contract Documents.

2.6 Bidder is aware of and, if awarded the contract, will comply with legal requirements in its performance of the Work.

2.7 Bidder is aware of and, if identified as the apparent lowest responsible bidder, would be required to pay City business license fee(s).

2.8 Bidder shall not damage or endanger and shall preserve and protect adjacent properties.

2.9 Bidder has familiarized itself with the staging and material storage constraints of the Project site and surrounding buildings and will confine its staging and storage operations to approved areas.

2.10 Bidder will coordinate its construction activities with the other contractors and utility companies performing work on the Project site, if any, including, but not limited to, any separate contractor retained by the City.

2.11 Bidder has checked the figures set forth in the bid schedule and understands that neither the City nor any officer or employee therefore will be responsible for any misunderstandings, errors, or omissions on the part of the Bidder in submitting its Bid. The failure of a Bidder to receive or examine any of the Contract Documents or to inspect the site shall not relieve such Bidder from any obligation with respect to the Bid, the Contract, or the Work required under the Contract Documents.

3 CONTRACT DOCUMENTS.

3.1 Bidders may obtain complete sets of the Contract Documents from PlanetBids.

3.2 Bidders will use a complete set of Contract Documents in preparing bids.

3.3 The City makes copies of the Contract Documents available, on the above terms, for the sole purpose of obtaining bids for the Work and does not confer a license or grant permission for any other use of the Contract Documents.

3.4 The City does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, downloading, or printing of the Contract Documents.

4 INTERPRETATION OR CORRECTION OF CONTRACT DOCUMENTS.

4.1 Before submitting its bid, bidder will carefully study and compare the various documents comprising the Contract Documents and compare them with any other work being bid concurrently or presently under construction which relates to the Work for which the bid is submitted; will examine the project site, the conditions under which the Work is to be performed, and the local conditions; and will at once report to the City's representative errors, inconsistencies, or ambiguities discovered. The drawings and specifications contained in these Contract Documents do not constitute a representation or warranty that any conditions shown therein actually exist. All soil and test hole data, groundwater elevations, and soil analyses shown on the Plans or included in the Special Provisions apply only at the location of the test holes and to the depths indicated.

4.2 Bidder requests for clarification or interpretation of the Contract Documents will be addressed to the City's representative at least five (5) calendar days before the bid deadline.

4.3 Clarifications, interpretations, corrections, and changes to the Contract Documents will only be made by addenda. Purported clarifications,

interpretations, corrections, and changes to the Contract Documents made in any other manner will not be binding and bidders will not rely upon them.

5 PRODUCT SUBSTITUTIONS.

5.1 No requests for product substitutions will be considered before award of contract.

6 SUBCONTRACTORS.

6.1 Each bidder will list in the proposal form all first-tier subcontractors that will perform work, labor or render such services in excess of ½ of one percent of the total bid of the total bid or $10,000, whichever is greater. The proposal form contains spaces for the following information when listing subcontractors: (1) work activity; (2) name of subcontractor; (3) city of subcontractor's business location; (4) California contractor's license number, and (5) DIR public works contractor registration number. An inadvertent error in listing the California contractor's license number or public works contractor registration number shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected contractor's license number is submitted to the City by the Bidder within 24 hours after the bid opening and provided the corrected contractor's license number corresponds to the submitted name and location for that subcontractor. Failure to list any of these other items on the proposal form will result in the City treating the bid as if no subcontractor was listed for the work and that bidder represents to the City that it is fully qualified to perform that portion of the Work and will so perform such Work.

6.2 Substitution of subcontractors after the bid deadline who are listed in the proposal form will only be allowed with the City's written consent and in accordance with California law.

7 ADDENDA.

7.1 Before the Bid Deadline, the City may modify the Work, the Contract Documents or any portion(s) thereof by the issuance of written addenda. Addenda will be in writing and issued only by the City.

7.2 Bidders must be registered on the City's PlanetBids portal to receive addendum notifications. Addenda will be posted on the PlanetBids portal.

7.3 Addenda will be made available on PlanetBids.

7.4 The City will issue addenda so that they are received by prospective bidders not less than three (3) working days before the bid deadline. Addenda that withdraw the request for bids or postpone the bid deadline may be issued any time before the bid deadline.

7.5 Each bidder is responsible for ensuring that it has received all issued addenda before submitting a bid. All bidders are required to acknowledge and confirm receipt of each and every addendum in their Bid Proposal Form. Failure to acknowledge all Addenda may result in a Bid being deemed nonresponsive and not eligible for award of the Contract.

8 NOT USED

9 FORM AND STYLE OF BIDS.

9.1 Bids will be submitted on the proposal forms included with the Contract Documents. Bids not submitted on the City's proposal forms will be rejected. All blanks on the proposal form will be filled in legibly.

9.2 Bidder's failure to submit a price for any alternate or unit price will result in the bid being considered as non-responsive. If alternates are called for and no change in the lump sum base bid is required, enter "no change."

9.3 Each bidder must fill out the "bidders statement of past contract disqualifications" form stating any and all instances of contract disqualifications due to a violation of a law or safety regulation. The bidder must explain the circumstances of each disqualification.

9.4 Bidder will make no stipulations on the proposal form nor qualify the bid in any manner.

9.5 The bids will be based upon full completion of all the Work as shown on the plans and specifications. It is expressly understood that the plans are drawn with as much accuracy as is possible in advance, but should errors, omissions or discrepancies exist in the plans which show conditions that vary from those encountered in construction, the bidder (if awarded the contract) specifically agrees to construct a completed Work ready for the use and in the manner which is intended.

9.6 The proposal forms will be signed by a person or persons legally authorized to bind bidder to a contract. Bidder's representative will sign and date the declaration of eligibility to contract included in the proposal form. Failure to sign and date the declaration will cause the bid to be rejected.

10 BID SECURITY.

10.1 Each bid must be accompanied by bid security, in the amount of 10% of the Total Base Bid on the base Contract Work, excluding any Alternate Bid Items, as security for bidder's obligation to enter into a contract with the City on the terms stated in the proposal form and to furnish all items required by the Contract Documents.

10.2 All bids must be accompanied by a scanned copy of the bid security uploaded to PlanetBids. The original security of the three (3) apparent lowest bidders must be mailed to the office of the City Clerk at 130 Cremona Drive, Suite B, Goleta, California 93117, in a sealed envelope

and be received or postmarked within three (3) City working days of the bid due date and time for the bid to be considered. The sealed envelope should be plainly marked on the outside identifying the names as shown in the notice inviting sealed bids.

10.3 If the apparent lowest responsible bidder fails to sign the contract and furnish all items required by the contract documents within the time limits specified in these bidding instructions, the City may reject such bidder and select the next apparent lowest responsible bidder until all bids have been exhausted or the City may reject all bids. In the event the bid is rejected, such bidder will be liable for and forfeit to the City the amount of the difference, not to exceed the amount of the bid security, between the amount of the disqualified bid and the larger amount for which the City procures the Work. The City may also use the bid security to cover the cost of rebidding the project.

10.4 If a bid bond is submitted and an attorney-in-fact executes the bid bond on behalf of the surety, a notarized and current copy of the power of attorney will be affixed to the bid bond. The surety issuing the bid bond must be admitted to provide surety within the State of California.

10.5 The City will retain the bid security until the occurrence of one of the following:

10.5.1.1 All items required by the contract documents have been furnished and the contract has been signed by the successful bidder and the City.

10.5.1.2 The specified time has elapsed during which bids may be withdrawn.

10.5.1.3 All bids have been rejected.

11 BID DELIVERY.

11.1 The proposal forms, bid security, and all other documents required to be submitted with the bid must be submitted via electronic transmission on the City of Goleta PlanetBids portal site. Line Items in PlanetBids will be removed and the bidder shall submit the schedule of bid items using the proposal form in the Contract Documents.

11.2 Bidders must be registered on the City of Goleta's PlanetBids portal in order to submit a bid. Go to PlanetBids for bid results and awards. It is the responsibility of the bidder to submit the bid with sufficient time to be received by PlanetBids prior to the bid opening date and time. Allow time for technical difficulties, uploading, and unexpected delays. Late or incomplete bids will not be accepted.

11.3 Bid Security shall be submitted in accordance with Section 10. "Bid Security" above and per the notice inviting sealed bids.

12 MODIFICATION OR WITHDRAWAL OF BID.

12.1 Bids may not be modified, withdrawn, or canceled within one hundred twenty (120) calendar days after the bid deadline unless otherwise provided in any supplementary instructions to bidders. The bidder shall be prohibited from further bidding on the project and the bid bond shall be forfeited. The City, at its discretion, may award the bid to the next responsive and responsible bidder. In the event the next bidder refuses to enter into the contract, that bidder's bid bond shall then be forfeited.

13 OPENING OF BIDS.

13.1 Bids submitted in the manner required by these instructions and received on or before the bid deadline will be opened and available for viewing on PlanetBids.

14 EVALUATION AND REJECTION OF BIDS.

14.1 Bidders will be evaluated for responsiveness and responsibility based on bid proposal information provided in the bid documents under "designation of subcontractors" and bidder's references."

14.2 A responsive Bid is a Bid that conforms, in all material respects, to these Instructions to Bidders. Non-responsive Bids will be rejected.

14.3 A responsible bidder means a bidder who has demonstrated the attributes of trustworthiness, quality, fitness, capacity, and experience to satisfactorily perform fully the requirements of the Contract Documents and the moral and business integrity and reliability that will assure good faith performance in the sole discretion of the City. Any determination of a bidder's non-responsibility by the City shall be based on the fitness and capacity of the bidder to satisfactorily perform the obligations of the Contract, whether or not the bidder is qualified to perform those obligations, whether or not the bidder is trustworthy, and such other bases as may be relevant.

14.4 In addition to other provisions of the Contract Documents, upon the request of the City, a bidder whose Bid is under consideration for the award of the Contract shall promptly submit satisfactory evidence to City showing the bidder's financial resources, experience in the field, and organization and other factors evidencing bidder's ability to successfully execute and complete the Contract.

14.5 The City reserves the right to reject any or all bids and to waive discrepancies, irregularities, informalities, or any other error in the bid or bidding, when to do so seems to best serve the public interest. The right of the City to waive errors applies even if the Contract Documents state that a discrepancy, irregularity, informality, or other error make a bid nonresponsive, so long as the error does not constitute a material error. The City reserves the right, in its sole discretion, to: judge the bidder's representations as stated in the proposal forms and any post-Bid information to determine whether or not bidder is qualified to perform the Work; be the sole judge regarding the suitability of the

products, services, or supplies offered; to not purchase all items or the full quantity of each item listed in the Bid Item List; reject any or all Bids; waive any deficiencies, irregularities, or informalities in any Bids or in the bidding process; modify, cancel, or withdraw the Notice Inviting Sealed Bids; issue a new Notice Inviting Sealed Bids; suspend or abandon the Project; seek the assistance of outside technical experts in Bid evaluation; require a bidder to provide a guarantee (or guarantees) of the Contract by a third party; and not issue a Notice to Proceed after execution of the Contract. In submitting a Bid in response to the Notice Inviting Sealed Bids, the bidder is specifically acknowledging the City holds these rights. The Notice Inviting Sealed Bids does not commit the City to enter into a Contract, to reject, in its sole discretion, all Bids, nor does it obligate the City pay for any costs incurred by bidders in preparation and submission of a Bid or in anticipation of a Contract. By submitting a Bid, the bidder disclaims any right to be paid for such costs.

14.6 The City may reject any bid not accompanied by the required bid security or any other item required by the contract documents, or a bid which is in any other way materially incomplete, irregular or not responsive to the bid request in the sole determination of the City.

15 AWARD.

15.1 The City may retain all bids for a period of one hundred and twenty (120) calendar days for examination and comparison, and to delete any portion of the Work from the contract.

15.2 The City may waive nonmaterial irregularities in a bid and will accept the lowest responsive bid from a responsible bidder as determined by the City.

15.3 The City will determine the low bidder on the basis of the total bid price in words on the bidding sheet as described on the bidding sheet.

15.4 City Staff will identify the apparent lowest responsive and responsible bidder and notify such bidder within (30) working days (unless the number of days is modified in any Addendum issued to bidders) after the Bid Deadline. Within ten (10) calendar days after receiving the City's written notice that bidder was identified as the apparent lowest responsible bidder, bidder will submit to the City all of the following items as required by the City:

15.4.1 Two originals of the contract signed by bidder.

15.4.2 One original of the payment bond.

15.4.3 One original of the performance bond.

15.4.4 Certificates of insurance and additional insured endorsements.

15.4.5 Copy of current city of Goleta business license certificate.

15.4.6 Names of all subcontractors, with their DIR registration number, license numbers, addresses, telephone number, facsimile number and trade on bidders' company stationery. Evidence, as required by the city, of the reliability and responsibility of the proposed subcontractors such as statements of experience, statements of financial condition, and references.

15.5 A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded. This Project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations.

15.6 If bidder submits the two original signed contracts and all other items within ten (10) working days after receiving the City's notification, and all such items comply with the requirements of the contract documents, the City will submit the bid to the City Council for award of Contract. Following City Council Award of Contract, the City will sign the contract and return a signed copy of the contract to bidder.

16 NOTICE OF INTENT TO AWARD CONTRACT.

Following the opening of bids and determination of the lowest responsible Bidder, the City will issue a notice of intent to award the Contract, identifying the Bidder to whom the City intends to award the Contract. The award of the Contracts shall be made by the City Council.

17 PUBLIC RECORDS.

City seeks to conduct its business openly. Upon identification of the lowest responsive and responsible bidder and upon notifying such bidder, Bids shall be regarded as public, with the exception any elements of each Bid that are identified by the Bidder as business or trade secrets and plainly marked as "trade secret," "confidential," or "proprietary." Each element of a Bid which a Bidder desires not to be considered public must be clearly marked as set forth above; any blanket statement (i.e. regarding entire pages, documents, or other, non-specific designations) shall not be sufficient and shall not bind the City in any way whatsoever. If City receives a request from a third party to make a Bid available for inspection or copying, the City will notify the Bidder of the request. If a Bidder instructs the City that the information is not to be released, City will withhold the information, provided, the Bidder expeditiously seeks a protective order from a court of competent jurisdiction to prevent such release. If disclosure is required by law (despite the Bidder's request for confidentiality), the City shall not in any way be liable or responsible for the disclosure of such records or part thereof.

18 BID PROTEST.

Any registered Bidder may file a protest provided that each and all of the following are complied with:

18.1 The bid protest is in writing;

18.2 Protests based upon alleged defects or improprieties in the Contract Documents are filed with the City prior to the Bid Deadline;

18.3 All other protests are filed and received by the City not more than five (5) calendar days following the date of City's Notice of Intent to Award the Contract; and

18.4 The written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest. All factual contentions must be supported by competent, admissible and credible evidence.

18.5 Any matters not set forth in the written bid protest shall be deemed waived. Any bid protest not conforming to the foregoing shall be rejected by the City as invalid.

19 COMPLIANCE WITH CARB REGULATIONS

The City is a Public Works Awarding Body, as defined under Title 13 California Code of Regulations Section 2449(c)(46). Accordingly, Bidders must submit, with their Bids, a valid Certificate of Reported Compliance ("CRC") for the Bidder's and its listed subcontractors fleet (including any applicable leased equipment or vehicles). Bidder must complete and submit the Fleet Compliance Certification, on the form included in the bid package. Failure to provide a valid CRC for the Bidder's fleet, and for the fleets of all listed subcontractors, or failure to complete the Fleet Compliance Certification, may render the Bid non-responsive.

SECTION III

PROPOSAL

SECTION III PROPOSAL

BID PROPOSAL
FOR
CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

TO THE CITY OF GOLETA ("City"):

In accordance with City's Notice Inviting Sealed Bids, the undersigned Bidder herby proposes to furnish all materials, equipment, tools, labor, and incidentals required for the **CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT** as set forth in the Plans, Specifications, and Contract Documents, and to perform all work in the manner and time prescribed therein.

Bidder declares that this Bid is based upon careful examination of the Work site, Plans, Specifications, Bidding Instructions, and all other Contract Documents. If this Bid is accepted for award, Bidder agrees to enter into a contract with City at the unit and/or lump sum prices set forth in the following Bid Schedule. Bidder understands that failure to enter into a contract in the manner and time prescribed will result in forfeiture to City of the Bid Security accompanying this Bid.

Bidder understands that a Bid is required for the entire Work, that the estimated quantities set forth in the Bid Schedule are solely for the purpose of comparing Bids, and that final compensation under the Contract will be based upon the actual quantities of Work satisfactorily completed. THE CITY RESERVES THE RIGHT TO INCREASE OR DECREASE THE AMOUNT OF ANY QUANTITY SHOWN AND TO DELETE ANY ITEM FROM THE CONTRACT per Section 9-1.06B INCREASES OF MORE THAN 25 PERCENT and Section 9-1.06C DECREASES OF MORE THAN 25 PERCENT. It is agreed that the unit and/or lump sum prices bid include all overhead, profit, appurtenant expenses, taxes, royalties, and fees. In the case of discrepancies in the amounts bid, unit prices shall govern over extended amount, and words shall govern over figures.

If awarded the Contract, the undersigned further agrees that in the event of the Bidder's default in executing the Contract and filing the necessary bonds and insurance certificates WITHIN TEN (10) WORKING DAYS after the City has mailed notice of the award of contract to the Bidder, the proceeds of the Bid Security accompanying this Bid shall become the property of the City and this Bid and the acceptance hereof may, at the City's option, be considered null and void.

SECTION III BID PROPOSAL
FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

The Project insurance requirements are per the State Standard Specifications, as modified by the City of Goleta Construction Specifications contained herein.

Full Legal Name of Bidder: _____

Type of Entity: _____
(corporation, partnership, etc.)

State of Incorporation / Organization: _____

Mailing Address: _____

City, State, Zip: _____

Physical Address: _____
(must be included even if PO box is used for mailing)

City, State, Zip: _____

Telephone Number: Area Code (____) _____

Email Address: _____

California Contractor License No. _____

Contractor (and sub-contractors) wishing to bid on public works contracts shall be registered with the State Department of Industrial Relations and certified to bid on Public Works contracts. Register at: https://www.dir.ca.gov/public-works/contractor-registration.html.

Contractor Department of Industrial Relations Registration No. _____

California Contract License Classification(s) _____

The Contractor must be properly licensed as a contractor from contract award through Contract acceptance (23 CRF 635.110).

The work for which this bid is submitted is for construction in conformance with the Special Provisions (including the payment of not less than the State general prevailing wage rates), the Project Plans described below, including any addenda thereto, the contract annexed hereto, and also in conformance with the California Department of Transportation Standard Plans, dated 2023, the California Department of Transportation

Standard Specifications, dated 2023, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished.

The work to be done and referred to herein is in the City of Goleta, Santa Barbara County, State of California, and is to be constructed in accordance with the Contract Documents and the Prevailing Wage Rates of the Department of Industrial Relations.

The work to be done is described in the Contract Documents entitled **CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT** City of Goleta, California.

The undersigned, as Bidder, declares that the only persons or parties interested in this Proposal as principals are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that he or she has carefully examined the location of the proposed work and the Contract Documents; and proposes, and agrees if this Proposal is accepted, that he or she will Contract with the City of Goleta, in the form of a copy of the Agreement contained in the Bid Document, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Director, as therein set forth, and that he or she will take in full payment therefore prices indicated in the Schedule of Bid Items, including all work modified by addendum numbers _____. (IF NONE, STATE NONE).

In accordance with the provisions of California Labor Code Section 6707, whenever the State, a County, City and County, or City issues a call for bids for the construction of a pipeline, drainage, water, sewer, sewage disposal system, boring or jacking pits, or similar trenches or open excavations, which are five (5') feet or deeper, such call shall specify that each bid submitted in response thereto shall contain, as a bid item, adequate sheeting, shoring, and bracing or equivalent method, for the protection of life or limb, which shall conform to applicable safety orders.

As required under the provisions of California Public Contract Code Section 4104 et seq., any person making a bid or offer to perform the work, shall in his or her bid or offer, set forth: (a)(1) The name and location of the place of business of each subcontractor who will perform work or labor or render service to the prime Contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the primary Contractor specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent (0.5%) of the prime Contractor' s total bid or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of one percent (0.5%) of the prime contractor’s total bid or ten thousand dollars ($10,000) whichever is greater; (2)(A) Subject to subparagraph (B), any information requested by the officer,

department, board, or commission concerning any subcontractor who the prime contractor is required to list under this subdivision, other than the subcontractor's name and location of business, may be submitted by the prime contractor up to 24 hours after the deadline established by the officer, department, board, or commission for receipt of bids by prime contractors; (B) A state or local agency may implement subparagraph (A) at its option; (b) The portion of the work that will be done by each such subcontractor under this Act. The prime Contractor shall list only one (1) subcontractor for each such portion as defined by the prime Contractor in his or her Bid.

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

BIDDING SHEET

The cost of all labor, material and equipment necessary for the completion of the work itemized, even though not shown or specified, shall be included in the unit or lump sum prices for the various items shown herein.

The City further reserves the right to reject any or all bids, to waive any informality or irregularity in any bid or the bidding procedure, and to delete any items of work in the award of contract. The City's decision on the bid amount is final.

Bidders must bid on all items in the Bid Schedule including the Supplemental and/or Alternative Bid Items in order for their bids to be complete. The award of contract will be based on the criteria outlined in Section 14 of the Bidding Instructions.

In the case of unit basis items, the amount set forth under the "Item Total" column (total base bid in words) shall be the product of the unit price bid and the estimated quantity for the item.

Bids on lump sum items are item totals. If a unit price of a lump sum item is entered and it differs from the item total, the item total prevails.

Entries are to be expressed in dollars or decimal fractions of a dollar. Symbols such as commas and dollar signs are ignored and have no significance in establishing unit price or item total.

Unit prices and item totals are interpreted by the number of digits and decimal placement. Do not round item totals or the total bid.

In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price prevails, except as provided in (a) or (b), as follows:

(a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount of the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;

(b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage-wise the unit price or item total in the City's Final Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise, if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

CONTRACTOR: _____

SCHEDULE OF BASE BID ITEMS

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
1	(P)	MOBILIZATION/DEMOBILIZATION, BONDS AND INSURANCE	LS	1	$	$
2	(P)	DEVELOPMENT, PLACEMENT, AND MAINTENANCE OF WATER POLLUTION CONTROL PLAN	LS	1		
3	(P)	TRAFFIC CONTROL, TRAFFIC CONTROL PLAN, AND TRAFFIC CONTROL MAINTENANCE	LS	1	$	$
4	(P)	CLEARING AND GRUBBING	LS	1	$	$
5	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT ELLWOOD SCHOOL	LS	1	$	$
6	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT ENTRANCE RD	LS	1	$	$
7	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS ROAD AT ALAMEDA AVE	LS	1	$	$
8	(P)	TRAFFIC SIGNAL - HOLLISTER AVE AND PACIFIC OAKS ROAD	LS	1	$	$
9	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS AT GLEN ANNIE ROAD	LS	1	$	$
10	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT VILLAGE WAY	LS	1	$	$
11	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT GLEN ANNIE ROAD	LS	1	$	$
12	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT STORKE ROAD	LS	1	$	$

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
13	(P)	TRAFFIC SIGNAL - STORKE ROAD AT MARKETPLACE	LS	1	$	$
14	(P)	TRAFFIC SIGNAL - STORKE ROAD AT PHELPS ROAD	LS	1	$	$
15	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT COROMAR DRIVE	LS	1	$	$
16	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT LOS CARNEROS ROAD	LS	1	$	$
17	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT CASTILIAN DRIVE	LS	1	$	$
18	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT KARL STORZ DRIVE	LS	1	$	$
19	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT CALLE KORAL	LS	1	$	$
20	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT DISCOVERY DRIVE	LS	1	$	$
21	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT SUMIDA GARDENS LANE	LS	1	$	$
22	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT PATTERSON AVENUE	LS	1	$	$
23	(P)	TRAFFIC SIGNAL - FAIRVIEW AVENUE AT CALLE REAL	LS	1	$	$
24	(P)	TRAFFIC SIGNAL - CALLE REAL AT ENCINA LANE	LS	1	$	$
25	(P)	TRAFFIC SIGNAL - CALLE REAL AT CALLE REAL SHOPPING CENTER	LS	1	$	$

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
26	(P)	TRAFFIC SIGNAL - CALLE REAL AT KELLOGG AVENUE	LS	1	$	$
27	(P)	TRAFFIC SIGNAL - CALLE REAL AT MARAVILLA	LS	1	$	$
28	(P)	TRAFFIC SIGNAL - PATTERSON AVENUE AT OVERPASS ROAD	LS	1	$	$
29	(P)	TRAFFIC SIGNAL - FAIRVIEW AVENUE AT ENCINA ROAD	LS	1	$	$
30	(P)	TRAFFIC SIGNAL - FAIRVIEW AVENUE AT BERKELEY ROAD	LS	1	$	$
31	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS ROAD AT FAIRVIEW AVENUE	LS	1	$	$
32	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS ROAD AT CAMBRIDGE DRIVE	LS	1	$	$
33	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT FAIRVIEW AVENUE	LS	1	$	$
34	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT NECATRINE AVENUE/PINE AVENUE	LS	1	$	$
35	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT RUTHERFORD STREET	LS	1	$	$

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
36	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT KINMAN AVENUE	LS	1	$	$
37	(P)	PORTABLE CHANGEABLE MESSAGE SIGNS	EA	12	$	$
		SUBTOTAL ITEMS 1-37 ~~36~~ (BASEBID)				$

* **NOTES:**

(P) DENOTES PARTIAL PAYMENT

ALTERNATIVE A

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
~~37~~ 38	(P)	PUSH BUTTON - HOLLISTER AVENUE AT ELLWOOD SCHOOL	LS	1	$	$
~~38~~ 39	(P)	PUSH BUTTON - CATHEDRAL OAKS ROAD AT ALAMEDA AVE	LS	1	$	$
~~39~~ 40	(P)	PUSH BUTTON - CATHEDRAL OAKS AT GLEN ANNIE ROAD	LS	1	$	$
~~40~~ 41	(P)	PUSH BUTTON - HOLLISTER AVENUE AT VILLAGE WAY	LS	1	$	$
~~41~~ 42	(P)	PUSH BUTTON - HOLLISTER AVENUE AT GLEN ANNIE ROAD	LS	1	$	$
~~42~~ 43	(P)	PUSH BUTTON - HOLLISTER AVENUE AT STORKE ROAD	LS	1	$	$
~~43~~ 44	(P)	PUSH BUTTON - STORKE ROAD AT MARKETPLACE	LS	1	$	$
~~44~~ 45	(P)	PUSH BUTTON - STORKE ROAD AT PHELPS ROAD	LS	1	$	$
~~45~~ 46	(P)	PUSH BUTTON - HOLLISTER AVENUE AT COROMAR DRIVE	LS	1	$	$
~~46~~ 47	(P)	PUSH BUTTON - HOLLISTER AVENUE AT LOS CARNEROS ROAD	LS	1	$	$
~~47~~ 48	(P)	PUSH BUTTON - LOS CARNEROS AT CASTILIAN DRIVE	LS	1	$	$

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
~~48~~ 49	(P)	PUSH BUTTON - LOS CARNEROS AT KARL STORZ DRIVE	LS			
~~49~~ 50	(P)	PUSH BUTTON - LOS CARNEROS AT CALLE KORAL	LS	1	$	$
~~50~~ 51	(P)	PUSH BUTTON - LOS CARNEROS AT DISCOVERY DRIVE	LS	1	$	$
~~51~~ 52	(P)	PUSH BUTTON - HOLLISTER AVENUE AT SUMIDA GARDENS LANE	LS	1	$	$
~~52~~ 53	(P)	PUSH BUTTON - HOLLISTER AVENUE AT PATTERSON AVENUE	LS	1	$	$
~~53~~ 54	(P)	PUSH BUTTON - FAIRVIEW AVENUE AT CALLE REAL	LS	1	$	$
~~54~~ 55	(P)	PUSH BUTTON - CALLE REAL AT ENCINA LANE	LS	1	$	$
~~55~~ 56	(P)	PUSH BUTTON - CALLE REAL AT CALLE REAL SHOPPING CENTER	LS	1	$	$
~~56~~ 57	(P)	PUSH BUTTON - CALLE REAL AT KELLOGG AVENUE	LS	1	$	$
58	(P)	PUSH BUTTON - PATTERSON AVENUE AT OVERPASS ROAD	LS	1	$	$
59	(P)	PUSH BUTTON - FAIRVIEW AVENUE AT ENCINA ROAD	LS	1	$	$
60	(P)	PUSH BUTTON - FAIRVIEW AVENUE AT BERKELEY ROAD	LS	1	$	$
61	(P)	PUSH BUTTON - CATHEDRAL OAKS ROAD AT FAIRVIEW AVENUE	LS	1	$	$

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
62	(P)	PUSH BUTTON - CATHEDRAL OAKS ROAD AT CAMBRIDGE DRIVE	LS	1	$	$
63	(P)	PUSH BUTTON - HOLLISTER AVENUE AT FAIRVIEW AVENUE	LS	1	$	$
64	(P)	PUSH BUTTON - HOLLISTER AVENUE AT NECATRINE AVENUE/PINE AVENUE	LS	1	$	$
65	(P)	PUSH BUTTON - HOLLISTER AVENUE AT RUTHERFORD STREET	LS	1	$	$
66	(P)	PUSH BUTTON - HOLLISTER AVENUE AT KINMAN AVENUE	LS	1	$	$
		SUBTOTAL ITEMS 38-66 ~~37-66~~ (ALTERNATIVE BID A)				$

* **NOTES:**
(P) DENOTES PARTIAL PAYMENT

BASE BID: ENTER SUBTOTAL OF BID ITEMS #1 TO #37 ~~#36~~	$
SUBTOTAL ITEMS #38 TO #66 ~~37-66~~ (ALTERNATIVE BID A)	$
TOTAL OF BASE BID PLUS ALTERNATIVE BID A	$

NOTES:
1) The City of Goleta shall determine the lowest responsible, responsive bidder based on the lowest total of the Base Bid plus the Alternative Bid A.

2) The City of Goleta, if it chooses to award, shall award the contract to the lowest responsible, responsive bidder based on the lowest total of the Base Bid plus the Alternative Bid A. Depending on budget constraints, the actual project may, at the City's discretion, include items from only the Base Bid plus Alternative Bid A.

3) The Contractor must submit pricing for all Base Bid items and Alternative Bid A. No response or a response of zero on any bid items will be deemed a non-responsive bid.

LIST OF SUBCONTRACTORS

The Bidder shall list the name, address, license number, and description of work, bid item number, percentage of bid item subcontracted by cost and Department of Industrial Relations Registration number for each subcontractor to whom the Bidder proposes to subcontract portions of the work, as required by the provisions in Section 2-1.10 SUBCONTRACTOR LIST of the State Standard Specifications. Attention is also directed to Section 5-1.13 SUBCONTRACTING of the Special Provisions. Listed subcontractors must be registered with the Department of Industrial Relations. Pursuant to SB 854, this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations (DIR). Bidder shall list the DIR registration number for each subcontractor.

Bidder proposes to subcontract certain portions of the Work which are in excess of one-half of one percent (0.5%) of the total amount base bid or $10,000, whichever is greater, and to procure materials and equipment from suppliers and vendors.

These Subcontractors are identified as follows:

Bid Item Number(s)	Subcontractor License Number	Subcontractor DIR Registration Number	Percent of Total Bid	Subcontractor's Name & Address

Bid Item Number(s)	Subcontractor License Number	Subcontractor DIR Registration Number	Percent of Total Bid	Subcontractor's Name & Address

BIDDER'S REFERENCES

The following are the names, addresses, and phone numbers for three public agencies for which Bidder has performed projects of the same magnitude and character of the work bid within the past five (5) years:

1. Name of Agency _____
   Agency Address _____
   Telephone _____
   Contact Person _____
   Contract Amount _____

2. Name of Agency _____
   Agency Address _____
   Telephone _____
   Contact Person _____
   Contract Amount _____

3. Name of Agency _____
   Agency Address _____
   Telephone _____
   Contact Person _____
   Contract Amount _____

The following are the names, addresses, and phone numbers for all brokers and sureties from whom Bidder intends to procure insurance bonds:

_____

_____

_____

EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE

Bidder certifies that in all previous contracts or subcontracts, all reports which may have been due under the requirements of any local, State, or Federal equal employment opportunity orders have been satisfactorily filed, and that no such reports are currently outstanding.

ELIGIBILITY TO CONTRACT

The successful Bidder is prohibited from performing work on this Project with a Subcontractor who is ineligible to perform work on the Project pursuant to Section 1777.1 or 1777.7 of the Labor Code.

BIDDER'S INFORMATION

Bidder certifies that the following information is true and correct:

Bidder's Name _____

Business Address _____

_____

Telephone _____

State Contractor's License No. and Class _____

Original Date Issued _____ Expiration Date _____

DIR Registration No: _____

The following are the names, titles, addresses, and phone numbers of all individuals, firm members, partners, joint venturers, and/or corporate officers having a principal interest in this Bid:

_____

_____

_____

The date of any voluntary or involuntary bankruptcy judgments against any principal having an interest in this Bid are as follows:

_____

_____

_____

All current and prior DBA's, alias, and/or fictitious business names for any principal having an interest in this Bid are as follows:

_____

_____

_____

I declare under penalty of perjury under the laws of the State of California that the above representations are true and correct. Executed this _____ day of _____, 20__, at _____ California.

_____

Signature and Title of Bidder
or Authorized Representative

BIDDER'S STATEMENT OF PAST CONTRACT DISQUALIFICATIONS AND DEFAULTS

Identify all instances of being disqualified, removed, determined to be a non-responsible bidder, debarred, assessed liquidated damages, terminated for default or otherwise prevented from bidding on, or completing, a federal, state, or local government project.

1. Have you ever been disqualified from any government contract?

   Yes ☐ No ☐

2. If yes, explain the circumstances including date of public entity action, name of project, contract award amount and current contact person at public entity:

_____

_____

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Signature and Title of Bidder or Authorized Representative

BID BOND FOR:

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

KNOW ALL PERSONS BY THESE PRESENTS that [Bidder] _____ _____ as PRINCIPAL, and _____, a corporation organized under the laws of the State of _____ and licensed by the State of California to execute bonds and undertakings as sole surety, as SURETY, are held and firmly bound unto the City of Goleta, as City, in the penal sum of ten percent (10%) of the total Base Bid Price on the base Contract Work, **excluding** any Alternate Bid Items submitted by PRINCIPAL to CITY for the above stated project, for the payment of which sum, PRINCIPAL and SURETY agree to be bound, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas PRINCIPAL has submitted a proposal to CITY for the above stated project.

NOW, THEREFORE, the penal sum guaranteed by this bond shall be forfeited to the City in the event of any of the following: (1) The aforesaid Principal withdraws said bid after the Bid Deadline contrary to applicable law; or (2) Principal fails, within ten (10) working days after receipt of written notice that the contract has been awarded to Principal and tender of the Contract, to, deliver to City the executed Agreement, in the prescribed form, in accordance with the bid as accepted, and file with the City all documents required in Section 3-1.18 CONTRACT EXECUTION of the City of Goleta Construction Specifications.

In case suit is brought upon this bond, SURETY further agrees to pay all reasonable attorneys' fees and costs incurred by CITY in an amount fixed by the court. SURETY hereby waives the provisions of California Civil Code Sections 2845 and 2849.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this _____day of _____, 20__.

PRINCIPAL: _____

(Address) _____

_____

BY: _____
(Signature and Title of Authorized Officer)

BY: _____
(Signature and Title of Authorized Officer)

SURETY: _____

(Address) _____

_____

BY: _____
(Signature and Title of Authorized Officer)

BY: _____
(Signature and Title of Authorized Officer)

Note: All signatures must be acknowledged before a notary public. Attach appropriate acknowledgment. Also, evidence of the authority of any person signing as attorney-in-fact must be attached.

STATEMENT ACKNOWLEDGING PENAL AND CIVIL PENALTIES CONCERNING THE CONTRACTOR'S LICENSING LAWS

[Business & Professions Code § 7028.15; Public Contract Code § 20103.5]

The undersigned, a duly authorized representative of the Bidder, certify that I am aware of the provisions of California law and that I, or the company/individual on whose behalf this Bid is being submitted, hold a currently valid California contractor's license as set forth in the Business and Professions Code *§* 7028.15 and Public Contract Code § 20103.5 (and any updates).

A contractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

Bidder:_____

License No.:_____ Class _____ Expiration date: _____

DIR Registration No.: _____

Date _____ Signature _____

DECLARATION OF ELIGIBILITY TO CONTRACT
[Labor Code §§ 1777.1 and 1777.7; Public Contract Code § 6109]

The undersigned, a duly authorized representative of the Bidder, certifies and declares that:

1. The Bidder is aware of Sections 1771.1 and 1777.7 of the California Labor Code, which prohibit a contractor or subcontractor who has been found by the Labor Commissioner or the Director of Industrial Relations to be in violation of certain provisions of the Labor Code, from bidding on, being awarded, or performing work as a subcontractor on a public works project for specified periods of time.

2. The Bidder is not ineligible to bid on, be awarded or perform work as a subcontractor on a public works project by virtue of the foregoing provisions of Sections 1771.1 or 1777.7 of the California Labor Code or any other provision of law.

3. The Bidder is aware of California Public Contract Code Section 6109 (and any updates.)

4. The Bidder has investigated the eligibility of each and every subcontractor the contractor intends to use on this public works project, and determined that none of them is ineligible to perform work as a subcontractor on a public works project by virtue of the foregoing provisions of the Public Contract Code, Sections 1771.1 and 1777.7 of the Labor Code, or any other provision of law.

5. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this _____ day of _____, 20__, at _____, California.

Signature:_____

Name: _____

Title: _____

Name of Company: _____

Note: Signature must be acknowledged before a notary public. Attach appropriate acknowledgment.

NON-COLLUSION DECLARATION
FOR
CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

I am the _____ [title] of _____ [name of bidder], the party making the foregoing bid, declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly, colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on

_____[date], at _____[city], _____[state]

_____

(Signature and Title of Authorized Representative)

(THE BIDDER'S EXECUTION ON THE SIGNATURE PORTION OF THIS PROPOSAL SHALL ALSO CONSTITUTE AN ENDORSEMENT AND EXECUTION OF THOSE CERTIFICATIONS WHICH ARE A PART OF THIS PROPOSAL)

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

The bidder_____, proposed subcontractor _____, hereby certifies that he has_____, has not___, participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, he has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filling requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts, which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

_____

PUBLIC CONTRACT CODE

Public Contract Code Section 10285.1 Statement

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ___ , has not ___been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

If the answer is yes, explain the circumstances in the following space.

PUBLIC CONTRACT CODE 10232 STATEMENT

In conformance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.
Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

DEBARMENT AND SUSPENSION CERTIFICATION

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgement rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: Providing false information may result in criminal prosecution or administrative sanctions.
The above certification is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Certification.

_____

IRAN CONTRACTING ACT DISCLOSURE FORM

GENERAL

GENERAL REQUIREMENTS

A. Pursuant to the Iran Contract Act of 2010 (California Public Contract Code, Sections 2202-2208), Bidders are ineligible to bid on projects with a public entity for goods or services of one million dollars ($1,000,000) or more if the Bidder engages in investment activities in Iran.

B. Bidders must provide the below disclosure form as a mandatory submittal for all projects in excess of $1,000,000. The Iran Contracting Act Disclosure Form shall be submitted by the 3 apparent low bidders within 7 working days after opening of the bids.

(California Public Contract, Sections 2202-2208)

When responding to a bid or proposal or executing a contract or renewal for a City contract for goods or services of $1,000,000 or more, a vendor must either: a) certify it is **not** on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person, for 45 working days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS; or b) demonstrate it has been exempted from the certification requirement for that solicitation or contract pursuant to Public Contract Code Section 2203(c) or (d).

To comply with this requirement, please provide your vendor or financial institution name and complete **one** of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of $250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Public Contract Code section 2205.)

OPTION #1 – CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million ($20,000,000) or more in credit to another person/vendor, for 45 working days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

Vendor Name/Financial Institution (Printed)
By (Authorized Signature)

Printed Name and Title of Person Signing	
Date Executed	*Executed in*

OPTION #2 – EXEMPTION

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a vendor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

Vendor Name/Financial Institution (Printed)	
By (Authorized Signature)	
Printed Name and Title of Person Signing	
Date Executed	*Executed in*

DRUG-FREE WORKPLACE POLICY AND AFFIDAVIT

BID MAY BE DECLARED NONRESPONSIVE IF THIS FORM (COMPLETED) IS NOT ATTACHED.

Pursuant to City Council Resolution CC90-498 dated 6/26/90 the following is required.

The undersigned Proposer certifies that it and all subcontractors performing under this contract will provide a drug-free workplace by:

1. Publishing a "Drug-Free Workplace" statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Establishing a Drug-Free Awareness Program to inform employees about:

    a. The dangers of drug abuse in the workplace.
    b. The Contractor's policy of maintaining a drug-free workplace.
    c. Any available drug counseling, rehabilitation, and employee assistance program.
    d. The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

3. Notify employees that as a condition of employment under this Contract, employees will be expected to:

    a. Abide by the terms of the statement.
    b. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace.

4. Making it a requirement that each employee to be engaged in the performance of the Contract be given a copy on the "Drug-Free Workplace" statement.

5. Taking one of the following appropriate actions, within thirty (30) working days of receiving notice from an employee or otherwise receiving such notice, that said employee has received a drug conviction for a violation occurring in the workplace:

    a. Taking appropriate disciplinary action against such an employee, up to and including termination; or
    b. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state, or local health, law enforcement or other appropriate agency.

* I certify that no person employed by this company, corporation, or business has been convicted of any criminal drug statute violation on any job site or project where this company, corporation, or business was performing work within three (2) years of the date of my signature below.

EXCEPTION:

Date	Violation Type	Place of Occurrence

If additional space is required use back of this form.

*The above statement will also be incorporated as a part of each subcontract agreement for any and all subcontractors selected for performance on this project.

IN THE EVENT THIS COMPANY, CORPORATION, OR BUSINESS IS AWARDED THIS CONSTRUCTION CONTRACT, AS A RESULT OF THIS BID; THE PROPOSER WITH HIS/HER SIGNATURE REPRESENTS TO THE CITY THAT THE INFORMATION DISCLOSED IN THIS DOCUMENT IS COMPLETE AND ACCURATE. IT IS UNDERSTOOD AND AGREED THAT FALSE CERTIFICATION IS SUBJECT TO IMMEDIATE TERMINATION BY THE CITY.

The Representations Made Herein On This Document Are Made Under Penalty Of Perjury.

PROPOSER'S NAME:

BY:_____ Date:
_____ Signature Title

Effects of violations: a. Suspension of payments under this contract. b. Suspension or termination of the contract. c. Suspension or debarment of the contractor from receiving any contract from the City of Goleta for a period not to exceed five years.
FM 681 7/10/9

COMPLIANCE WITH ECONOMIC SANCTIONS

IN RESPONSE TO RUSSIA'S ACTIONS IN UKRAINE

SAPC Information Notice 22-15

Per Executive Order N-6-22, all contractors and grantees that have agreements valued at $5 million or more with agencies/departments subject to the California Governor's authority are directed to report to their contracting or grantor agency or department regarding their compliance with economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as sanctions imposed under state law, if any.

Instructions: Complete Section 1, provide a letter for Section 2 and return both to your CPA.

1) ATTESTATION OF COMPLIANCE:

Having conducted a good faith review, I attest that _____ (agency name) is in compliance with the economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as sanctions imposed under state law, if any.

Contractor/Provider Name (Printed):	**Contract Number (s):**
By (Authorized Signature):	
Printed name and title of authorized signor:	
Date of Signed Attestation of Compliance:	

2) REPORT OF ACTIONS/STEPS TAKEN:

Attach a brief report to this notice form, on your agency letterhead describing the steps and actions, if any, you have taken in response to Russia's actions in Ukraine and to ensure compliance with the EO. *Please note that responses may be subject to disclosure under the California Public Records Act. Accordingly, please do not include any confidential information or disclosures that could pose security risks.*

Fleet Compliance Certification.

Bidder hereby acknowledges that they have reviewed the California Air Resources Board's policies, rules and regulations and are familiar with the requirements of Title 13, California Code of Regulations, Division 3, Chapter 9, effective on January 1, 2024 (the "Regulation"). Bidder hereby certifies, subject to penalty for perjury, that the option checked below relating to the Bidder's fleet, and/or that of their subcontractor(s) ("Fleet") is true and correct:

- ☐ The Fleet is subject to the requirements of the Regulation, and the appropriate Certificate(s) of Reported Compliance have been attached hereto.

- ☐ The Fleet is exempt from the Regulation under section 2449.1(f)(2), and a signed description of the subject vehicles, and reasoning for exemption has been attached hereto.

- ☐ Bidder and/or their subcontractor is unable to procure R99 or R100 renewable diesel fuel as defined in the Regulation pursuant to section 2449.1(f)(3). Bidder shall keep detailed records describing the normal refueling methods, their attempts to procure renewable diesel fuel and proof that shows they were not able to procure renewable diesel (i.e. third party correspondence or vendor bids).

- ☐ The Fleet is exempt from the requirements of the Regulation pursuant to section 2449(i)(4) because this Project has been deemed an Emergency, as defined under section 2449(c)(18). Bidder shall only operate the exempted vehicles in the emergency situation and records of the exempted vehicles must be maintained, pursuant to section 2449(i)(4).

- ☐ The Fleet does not fall under the Regulation or are otherwise exempted and a detailed reasoning is attached hereto.

Name of Bidder: _____

Signature: _____

Name: _____

Title: _____

Date: _____

SECTION IV
AGREEMENT

PUBLIC WORKS CONTRACT
BETWEEN THE CITY OF GOLETA
AND
_____

This Public Works Contract (herein referred to as "CONTRACT") is made and entered into by and between the **CITY OF GOLETA**, a municipal corporation (herein referred to as "CITY"), and _____, a _____ (hereinafter referred to as "CONTRACTOR").

SECTION A. RECITALS

1. Pursuant to the Notice Inviting Sealed Bids for the _____ Project, bids were received, publicly opened, and declared on the date specified in the notice.

2. On _____, Goleta's City Council declared CONTRACTOR to be the lowest responsible bidder and accepted the bid of CONTRACTOR and the City Council, approved this CONTRACT and authorized the City Manager to execute the CONTRACT with CONTRACTOR for furnishing labor, equipment, and material for the _____ Project in the City of Goleta.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants herein contained, it is agreed:

SECTION B. TERMS

1. **GENERAL SCOPE OF WORK: CITY agrees to engage CONTRACTOR and CONTRACTOR** agrees to furnish all necessary labor, tools, materials, appliances, and equipment for and do the work for the _____ Project in the City of Goleta. The work shall be performed in accordance with the Plans and Specifications (and as generally described in the "Notice Inviting Sealed Bids," attached as Exhibit A) and in accordance with bid prices set forth in CONTRACTOR'S Bid Proposal (attached as Exhibit B) and in accordance with the instructions of the City Engineer, or City's Manager's designee.

2. **INCORPORATED DOCUMENTS TO BE CONSIDERED COMPLEMENTARY:** The contract documents for the aforesaid project, a complete set of which is on file with the Goleta City Clerk's Office, shall consist of the Notice Inviting Bids, Instructions to Bidders, Bid Proposal, Standard Specifications, Special Provisions, and all referenced specifications, details, standard drawings, and appendices; together with this CONTRACT and all required bonds, insurance certificates, permits, notices and affidavits; and also, including any and all addenda or supplemental agreements clarifying, amending, or extending the work contemplated as may be required to insure its completion in an acceptable

manner. All of the provisions of said contract documents are made a part hereof as though fully set forth herein. This contract is intended to require a complete and finished piece of work and anything necessary to complete the work properly and in accordance with the law and lawful governmental regulations shall be performed by CONTRACTOR whether set out specifically in the contract or not. Should it be ascertained that any inconsistency exists between the aforesaid documents and this written CONTRACT, the provisions of this CONTRACT, and the Standard Specifications, in that order, shall control. Collectively, these contract documents constitute the complete CONTRACT between CITY and CONTRACTOR and supersede any previous agreements or understandings.

3. **COMPENSATION:** CONTRACTOR agrees to receive and accept the prices set forth in its Bid Proposal as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. Said compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid contract documents; and also including those arising from actions of the elements, unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work.

4. **TIME OF PERFORMANCE:** CONTRACTOR agrees to complete the work within the timeframe specified in the Contract Documents from the date of the notice to proceed. By signing this CONTRACT, CONTRACTOR represents to CITY that the contract time is reasonable for completion of the work and that CONTRACTOR will complete such work within the contract time. In accordance with Government Code Section 53069.85, CONTRACTOR agrees to forfeit and pay CITY as liquidated damages, not as a penalty, the sum of $_____ per day for each and every day of unauthorized delay beyond the completion date, which amount shall be deducted from any payments due or to become due the CONTRACTOR.

5. **PREVAILING WAGES:**

   A. Pursuant to Labor Code Sections §§1720 *et seq.*, including but not limited to sections 1771, 1774 and 1775, and as specified in Title 8, California Code of Regulations, Section 16000 et seq., CONTRACTOR must pay its workers prevailing wages. It is CONTRACTOR's responsibility to interpret and implement any prevailing wage requirements and CONTRACTOR agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.

B. In accordance with Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are available upon request from CITY's Engineering Division or the website for State of California Prevailing wage determination at http://www.dir.ca.gov/DLSR/PWD. CONTRACTOR must post a copy of the prevailing rate of per diem wages at the job site.

C. CITY directs CONTRACTOR's attention to Labor Code Sections 1777.5, 1777.6 and 3098 concerning the employment of apprentices by CONTRACTOR or any subcontractor.

D. Labor Code Section 1777.5 requires CONTRACTOR or subcontractor employing tradesmen in any apprenticeship occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate must also fix the ratio of apprentices to journeymen that will be used in the performance of the contract. The ratio of apprentices to journeymen in such cases will not be less than one to five except:

(1) When employment in the area of coverage by the joint apprenticeship committee has exceeded an average of 15 percent in the 90 days before the request for certificate, or

(2) When the number of apprentices in training in the area exceeds a ratio of one to five, or

(3) When the trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis state-wide or locally, or

(4) When assignment of an apprentice to any work performed under a public works contract would create a condition that would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large, or the specific task to which the apprentice is to be assigned is of a nature that training cannot be provided by a journeyman.

Pursuant to Labor Code § 1776, CONTRACTOR shall comply with all Department of Industrial Relations registration requirements.

E. CONTRACTOR is required to make contributions to funds established for the administration of apprenticeship programs if CONTRACTOR employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such

contributions.

F. CONTRACTOR and any subcontractor must comply with Labor Code Sections 1777.5 and 1777.6 in the employment of apprentices.

G. Information relative to apprenticeship standards, wage schedules and other requirements may be obtained from the Director of Industrial Relations (DIR), ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

H. CONTRACTOR and its subcontractors must keep an accurate certified payroll records showing the name, occupation, and the actual per diem wages paid to each worker employed in connection with this CONTRACT. The record will be kept open at all reasonable hours to the inspection of the body awarding the contract and to the Division of Labor Law Enforcement. If requested by CITY, CONTRACTOR must provide copies of the records at its cost.

6. **LEGAL HOURS OF WORK:** CONTRACTOR agrees to comply with the provisions of California Labor Code Section 1813 concerning penalties for workers who work excess hours. Except as provided by Labor Code Section 1815, the CONTRACTOR shall, as a penalty to the CITY, forfeit twenty five dollars ($25) for each worker employed in the execution of the Contract by the CONTRACTOR or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Division 2, Part 7, Chapter 1, Article 3 (commencing at Section 1810) of the California Labor Code.

7. **TRAVEL AND SUBSISTENCE PAY**: CONTRACTOR agrees to pay travel and subsistence pay to each worker needed to execute the work required by this CONTRACT as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Labor Code Section 1773.8.

8. **CONTRACTOR'S LIABILITY:** The CITY and its officers, agents and employees (“Indemnitees”) shall not be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof, or for any of the materials or other things used or employed in performing the work; or for injury or damage to any person or persons, either workers or employees of CONTRACTOR, of its subcontractors or the public, or for damage to adjoining or other property from any cause whatsoever arising out of or in connection with the

performance of the work. CONTRACTOR shall be responsible for any damage or injury to any person or property resulting from defects or obstructions or from any cause whatsoever.

CONTRACTOR will indemnify Indemnities against and will hold and save Indemnitees harmless from any and all actions, claims, damages to persons or property, penalties, obligations or liabilities that may be asserted or claimed by any person, firm, entity, corporation, political subdivision, or other organization arising out of or in connection with the work, operation, or activities of CONTRACTOR, its agents, employees, subcontractors or invitees provided for herein, whether or not there is concurrent passive negligence on the part of CITY. In connection therewith:

a. CONTRACTOR will defend any action or actions filed in connection with any such claims, damages, penalties, obligations or liabilities and will pay all costs and expenses, including attorneys' fees, expert fees and costs incurred in connection therewith.

b. CONTRACTOR will promptly pay any judgment rendered against CONTRACTOR or Indemnitees covering such claims, damages, penalties, obligations and liabilities arising out of or in connection with such work, operations or activities of CONTRACTOR hereunder, and CONTRACTOR agrees to save and hold the Indemnitees harmless therefrom.

c. In the event Indemnitees are made a party to any action or proceeding filed or prosecuted against CONTRACTOR for damages or other claims arising out of or in connection with the work, operation or activities hereunder, CONTRACTOR agrees to pay to Indemnitees and any all costs and expenses incurred by Indemnitees in such action or proceeding together with reasonable attorneys' fees.

CONTRACTOR'S obligations under this section apply regardless of whether or not such claim, charge, damage, demand, action, proceeding, loss, stop notice, cost, expense, judgment, civil fine or penalty, or liability was caused in part or contributed to by an Indemnitee. However, without affecting the rights of CITY under any provision of this CONTRACT, Contractor shall not be required to indemnify and hold harmless CITY for liability attributable to the active negligence of CITY, provided such active negligence is determined by agreement between the parties or by the findings of a court of competent jurisdiction. In instances where CITY is shown to have been actively negligent and where CITY active negligence accounts for only a percentage of the liability involved, the obligation of Contractor

will be for that entire portion or percentage of liability not attributable to the active negligence of City.

So much of the money due to CONTRACTOR under and by virtue of the contract as shall be considered necessary by CITY may be retained by CITY until disposition has been made of such actions or claims for damages as aforesaid.

It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California. This indemnity provision shall survive the termination of the CONTRACT and is in addition to any other rights or remedies which Indemnitees may have under the law.

This indemnity is effective without reference to the existence or applicability of any insurance coverage which may have been required under this CONTRACT or any additional insured endorsements which may extend to Indemnitees.

CONTRACTOR, on behalf of itself and all parties claiming under or through it, hereby waives all rights of subrogation and contribution against the Indemnitees, while acting within the scope of their duties, from all claims, losses and liabilities arising out of or incident to activities or operations performed by or on behalf of the CONTRACTOR regardless of any prior, concurrent, or subsequent passive negligence by the Indemnitees.

9. **THIRD-PARTY CLAIMS:** In accordance with Public Contracts Code Section 9201, CITY will promptly inform CONTRACTOR regarding third-party claims against CONTRACTOR, but in no event later than ten (10) business days after CITY receives such claims. Such notification will be in writing and forwarded in accordance with the “Notice” section of this CONTRACT. As more specifically detailed in the contract documents, CONTRACTOR agrees to indemnify and defend the City against any third-party claim.

10. **WORKERS COMPENSATION:** In accordance with California Labor Code Sections 1860 and 3700, CONTRACTOR and each of its subcontractors will be required to secure the payment of compensation to its employees. In accordance with the provisions of California Labor Code Section 1861, CONTRACTOR, by signing this contract, certifies as follows: “I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.”

11. **INSURANCE:** With respect to performance of work under this CONTRACT, CONTRACTOR shall maintain and shall require all of its subcontractors to maintain insurance as required in the Standard Specifications.

12. **ASSIGNMENT:** This CONTRACT is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported assignment or delegation of any of the rights of obligations of either party without the prior written consent of the other shall be void and of no force and effect.

13. **INDEPENDENT CONTRACTOR:** CONTRACTOR is and shall at all times remain as to the CITY, a wholly independent contractor. Neither the CITY nor any of its agents shall have control of the conduct of CONTRACTOR or any of CONTRACTOR'S employees, except as herein set forth. CONTRACTOR shall not at any time or in any manner represent that it or any of its agents or employees are in any manner agents or employees of CITY.

14. **TAXES:** CONTRACTOR is responsible for paying all retail sales and use, transportation, export, import, special or other taxes and duties applicable to, and assessable against any work, materials, equipment, services, processes and operations incidental to or involved in this contract. CONTRACTOR is responsible for ascertaining and arranging to pay them. The prices established in the contract shall include compensation for any taxes CONTRACTOR is required to pay by laws and regulations in effect at the bid opening date.

15. **LICENSES:** CONTRACTOR represents and warrants to CITY that it has all licenses, permits, qualifications, insurance, and approvals of whatsoever nature which are legally required of CONTRACTOR to practice its profession. CONTRACTOR represents and warrants to CITY that CONTRACTOR shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this CONTRACT any licenses, permits, insurance, and approvals which are legally required of CONTRACTOR to practice its profession. CONTRACTOR shall maintain a City of Goleta business license, if required under CITY ordinance.

16. **RECORDS:** CONTRACTOR shall maintain accounts and records, including personnel, property, and financial records, adequate to identify and account for all costs pertaining to this CONTRACT and such other records as may be deemed necessary by CITY or any authorized representative, and will be retained for three years after the expiration of this CONTRACT. All such records shall be made available for inspection or audit by CITY at any time during regular business hours.

17. **SEVERABILITY:** If any portion of these contract documents are declared by a court of competent jurisdiction to be invalid or unenforceable, then such portion will be deemed modified to the extent necessary in the opinion of the court to render such portion enforceable and, as so modified, such portion and the balance of this CONTRACT will continue in full force and effect provided that it does not frustrate the mutual intent of the parties herein.

18. **WHOLE AGREEMENT:** This CONTRACT supersedes any and all other agreements either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described herein. Each party to this contract acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any other agreement, statements or promise not contained in this contract shall not be valid or binding. Any modifications of this contract will be effective only if signed by the party to be charged.

19. **AUTHORITY:** CONTRACTOR affirms that the signatures, titles, and seals set forth hereinafter in execution of this CONTRACT represent all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest herein. Each party warrants that the individuals who have signed this CONTRACT have the legal power, right, and authority to make this CONTRACT and to bind each respective party. This CONTRACT may be modified by written amendment. CITY's City Manager may execute any such amendment on CITY's behalf.

20. **NOTICES:** All notices permitted or required under this CONTRACT shall be in writing, and shall be deemed made when delivered to the applicable party's representative as provided in this CONTRACT. Additionally, such notices may be given to the respective parties at the following addresses, or at such other addresses as the parties may provide in writing for this purpose.

    Such notices shall be deemed made when personally delivered or when mailed forty-eight (48) hours after deposit in the U.S. mail, first-class postage prepaid, and addressed to the party at its applicable address. Courtesy copies of notices may be sent via electronic mail, provided that the original notice is deposited in the U.S. mail or personally delivered as specified in this Section.

    CITY OF GOLETA
    130 Cremona Drive, Suite B

Goleta, CA 93117
Attn: City Manager

CONTRACTOR
_____
_____
_____

21. **DISPUTES:** Disputes arising from this contract will be determined in accordance with the contract documents.

22. **NONDISCRIMINATION:** The CITY reaffirms its ongoing commitment to equality in the conduct of City business, and prohibits any policy, plan, program, custom or practice, including harassment, in the conduct of City business. No discrimination or discriminatory practice shall occur in either employment of persons for, or completion of, the work contemplated by this CONTRACT, when such discrimination is based on race, color, national origin, or ancestry; religion; sex; gender, gender identity, gender expression, or gender transitioning status; physical disability, mental disability, medical condition, or genetic information; marital or domestic partner status; citizenship status; age; sexual orientation; exercising a legally protected right to an employment leave of absence; status as a victim of domestic violence, sexual assault, or stalking; reproductive health decision-making, or any other classification protected under state or federal law. Among other possible violations of law, a violation of this section exposes CONTRACTOR to the penalties provided for in Labor Code Section 1735.

23. **PAPER PRODUCTS AND PRINTING REQUIREMENTS:** To the extent this contract provides paper products, and printing and writing paper for the City, CONTRACTOR must meet quality standards and criteria specified in SB 1383, Sections 22150-22154 of the Public Contract Code and 16 Code of Federal Regulations (CFR) Section 260.12 by:
    a. If fitness and quality are equal, provide recycled products, instead of nonrecycled products whenever recycled products are available at the same or a lesser total cost than nonrecycled items.
    b. Provide paper products and printing and writing paper that meet Federal Trade Commission recyclability standard as defined in 16 CFR Section 260.12.
    c. Certify in writing, under penalty of perjury, the minimum percentage of postconsumer material in the paper products and printing and writing paper offered or sold to the City. This certification requirement may be

waived if the percentage of postconsumer material in the paper products, printing and writing paper, or both can be verified by a product label, catalog, invoice, or a manufacturer or vendor internet website.

d. Certify in writing, on invoices or receipts provided, that the paper products and printing and writing paper offered or sold to the City is eligible to be labeled with an unqualified recyclable label as defined in 16 CFR Section 260.12.
e. Comply with any other requirements in Goleta Municipal Code Section 8.10.900(B).

24. <u>ORGANIC WASTE USE REQUIREMENTS:</u> To the extent this contract provides landscaping maintenance, renovation, and construction services, CONTRACTOR must:

a. Use compost and SB 1383 eligible mulch, as practicable, produced from recovered organic waste, for all landscaping renovations, construction, or maintenance performed for the City, whenever available, and capable of meeting quality standards and criteria specified. SB 1383 eligible mulch used for land application must comply with 14 CCR Section 18993.1 - 18993.4, and must meet or exceed the physical contamination, maximum metal concentration and pathogen density standards specified in 14 CCR Sections 17852(a)(24.5)(A)(1) through (3).
b. Keep and provide records of procurement of recovered organic waste products (either through purchase or acquisition) to the City's Designated Representative, upon completion of projects. Information to be provided must include:
    i. General description of how and where the product was used and if applicable, applied;
    ii. Source of product, including name, physical location, and contact information for each entity, operation, or facility from whom the recovered organic waste products were procured;
    iii. Type of product;
    iv. Quantity of each product; and,
    v. Invoice or other record demonstrating purchase or procurement.
c. Comply with all requirements in Goleta Municipal Code Section 8.10.900(A).

25. **NO THIRD-PARTY BENEFICIARY:** This CONTRACT and every provision herein is for the exclusive benefit of CONTRACTOR and CITY and not for the benefit of any other party. There will be no incidental or other beneficiaries of any of the CONTRACTOR's or the CITY's obligations under this Contract.

26. **TIME IS OF ESSENCE:** Time is of the essence for each and every provision of the Contract Documents.

27. **ACCEPTANCE OF FACSIMILE OR ELECTRONIC SIGNATURES:** The Parties agree that this CONTRACT, agreements ancillary to this CONTRACT, and related documents to be entered into in connection with this CONTRACT will be considered signed when the signature of a party is delivered by facsimile transmission or scanned and delivered via electronic mail. Such facsimile or electronic mail copies will be treated in all respects as having the same effect as an original signature.

28. **GOVERNING LAW:** This CONTRACT shall be governed by the laws of the State of California, and exclusive venue for any action involving this CONTRACT will be in Santa Barbara County.

IN WITNESS WHEREOF, the parties hereto have executed this CONTRACT with all the formalities required by law on the respective dates set forth opposite their signatures.

This CONTRACT is executed on this _____ day of _____, at Goleta, California, and effective as of _____ _____, 20____.

CITY OF GOLETA:

_____
Robert Nisbet, City Manager

ATTEST:

_____
Deborah Lopez, City Clerk

APPROVED AS TO FORM:
ISAAC ROSEN, CITY ATTORNEY

_____
Scott Shapses, Deputy City Attorney

CONTRACTOR:

_____
Name, Title

State of California License No.

_____
Department of Industrial Relations Registration No.

_____

Business Phone No.

_____

CONTRACTOR'S Emergency Phone No. at which contractor can be reached at any time

_____

_____

_____
Name, Title

EXHIBIT A
NOTICE INVITING SEALED BIDS

EXHIBIT B
BID PROPOSAL

SECTION V

INSURANCE AND BONDS

INSURANCE REQUIREMENTS

General Liability Insurance

The general liability must be at least combined single limits of no less than $2,000,000 per occurrence for all covered losses and no less than $4,000,000 general aggregate, $25,000,000 Umbrella or excess liability, and must contain:

1. Extension of coverage to the City, its officials, officers, agents and employees, as additional insureds, with respect to Contractor's liabilities hereunder in insurance coverages identified above;
2. A provision that coverage will not be canceled or subject to reduction until at least thirty (30) working days' prior written notice has been given to the City Clerk, addressed to 130 Cremona Drive, Suite B, Goleta, CA 93117;
3. A provision that Contractor's insurance shall apply as primary, and not excess of, or contributing with, the City;
4. Contractual liability coverage sufficiently broad so as to include the liability assumed by the Contractor in the indemnity and hold harmless provisions of the Standard Condition;
5. A cross liability clause, or equivalent wording, stating that coverage will apply separately to each named or additional insured as if separate policies had been issued to each;
6. A broad form property damage endorsement;
7. A provision that the policies be provided on an "occurrence" basis;
8. Coverage for XCU (explosion, collapse, underground) hazards if applicable to the work; and
9. Products and completed operations coverage.

Umbrella or Excess Liability policies (Over Primary) if used to meet limit requirements shall provide coverage at least as broad as specified for underlying coverages and covering those insured in the underlying policies. Any such policy shall include a drop-down provision providing primary coverage above a maximum $25,000 self-insured retention for liability not covered by primary but covered by the umbrella. Coverage shall be “pay on behalf,” with defense costs payable in addition to policy limits. There shall be no cross-liability exclusion of claims or suits by one insured against another. Coverage shall be applicable to City for injury to employees of Contractor, subcontractors or others involved in the Work. Limits are subject to review but in no event less than $2,000,000 per occurrence for all covered losses and no less than $4,000,000 general aggregate, except with respect to umbrella or excess liability which must be no less than the amount set forth above.

Approval of insurance by the City or acceptance of the certificate of insurance by City shall not relieve or decrease the extent to which the Contractor may be held responsible for payment of damages resulting from Contractor's services or operation pursuant to the

Agreement, nor shall it be deemed a waiver of City's rights to insurance coverage hereunder.

Policy Forms, Endorsements and Certificates

Provide and maintain current certificates of Insurance on forms supplied by the City and evidencing the above coverage to City prior to execution of this Agreement by City. Exercise due diligence to require any and all subcontractors and/or sub-subcontractors and all tiers of such subcontractors to provide General and Automobile Liability, and Workers' Compensation and Employer's Liability Insurance with minimum limits of coverage and upon terms and provisions required above.

NOTICE TO INSURANCE BROKER

Your client has been awarded a bid by the City Council of the City of Goleta to perform a public works project known as _____. The Contract Conditions for that project require your client ("the Contractor") to return certain evidence of insurance and bonds to the City Attorney of the City within fifteen (15) working days after the Bid award, or else the Bid award may be terminated and awarded to another company.

This package contains the information you will need as an insurance broker to provide the appropriate insurance and bonds to the City. The insurance coverages the Contractor needs are specified in the section entitled "Insurance Requirements." Please note that, in addition to the insurance certificate itself, copies of several endorsements must be actually furnished for review.

Please refer to Special Provisions for modifications of the Standard Construction Specifications and the requirements of this insurance packet.

Please use the standard City of Goleta Bond Forms provided in this package.

The Bonds required must each be in the penal amount of: $_____.

Documents should be forwarded to or questions addressed to:

Office of the City Attorney
City of Goleta
130 Cremona Drive, Suite B
Goleta, CA 93117
(805) 961-7500

When forwarding the documents, please refer to the project name so that the documents can be matched with the Contract for which they are submitted.

Thank you.

INSURANCE REQUIREMENTS

In addition to Section 7-1.06 INSURANCE of the State Standard Specifications the**:**

A. Evidence of Maintenance Required. The Contractor shall, at all times, maintain in full force and effect at a minimum the insurance required by this section; and the Contractor shall not allow any subcontractor to commence work until similar insurance required of the subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Director, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall provide ten (10) working days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Goleta as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best' s Insurance Reports.

C. Insurance Required. Commercial General Liability, automobile liability, and workers' compensation insurance shall be maintained as follows:

1. Commercial General Liability for Minor Construction Projects (Projects under $1,000,000)	$2,000,000 each occurrence $4,000,000 aggregate 5,000,000.00 Umbrella or excess liability Personal Injury: $2,000,000 each occurrence $4,000,000 aggregate $5,000,000.00 Umbrella or excess liability
Commercial General Liability for Major Construction Projects (Projects over $1,000,000)	$5,000,000 each occurrence $10,000,000 aggregate 25,000,000.00 Umbrella or excess liability Personal Injury: $5,000,000 each occurrence $10,000,000 aggregate $25,000,000.00 Umbrella or excess liability

The Commercial General Liability policy shall include coverage or endorsements for:

a. Completed operations.
b. Losses related to independent contractors, products and equipment.
c. Explosion, collapse and underground hazards.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Goleta, and its officers, agents, employees, and volunteers, as additional insureds (except for workers‟ compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the Insurance Services Office (“ISO”) CG 20 38 04 13 or an equivalent, blanket endorsement or section of the policy. Endorsements must include coverage for on-going and completed operations. Endorsements shall cover the City of Goleta, its officers, agents, employees, and volunteers.
b. Cross liability and severability of interest clauses providing that the insurance applies separately to each insured except with respect to the limits of liability.
c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.
d. Such insurance shall specifically cover the contractual liability of the CONTRACTOR.
e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.
f. Waiver of subrogation endorsement.
g. The CONTRACTOR shall furnish a certificate for the period covered.

SPECIAL NOTICE - CLAIMS MADE COVERAGE:

Liability insurance coverage may not be written on a "claims made" basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

1. Comprehensive Automobile Liability for bodily injury (including death) and property damage which provides total limits of not less than One Million Dollars ($1,000,000) combined single limits per accident, applicable to all owned, non-owned, and hired vehicles.
2. Statutory Workers' Compensation and Employer' s Liability Insurance, including a waiver of subrogation endorsement and a Broad Form "All-States" Endorsement for all employees engaged in services or operations under the Contract. The employer' s liability insurance shall provide limits of not less than One Million Dollars ($1,000,000) per occurrence. Both the workers' compensation and employer' s liability policies shall contain

the Insurer' s waiver of subrogation in favor of the City, its officers, agents, employees, and volunteers.

7-1.12.2 BUILDER'S RISK/COURSE OF CONSTRUCTION INSURANCE:

The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion.

The Contractor shall secure "All Risk" type of builder' s Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke.

The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The maximum deductible allowable under the Builder' s All Risk policy shall be five percent (5%) of the Contract amount.

Builder' s Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

7-1.12.3 OTHER INSURANCE PROVISIONS:

A. The requirements of the State Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these provisions may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract. Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by CITY in writing. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or CITY. CITY reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor‟s work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its

subcontractors to comply with these same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE ONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

Additional Insurance Requirements:

Contractor's pollution liability insurance. Coverage shall provide for liability arising out of sudden, accidental, and gradual pollution, and remediation. The policy limit shall be no less than $1,000,000 per claim and in the aggregate. All activities contemplated in this agreement shall be specifically scheduled on the policy as "covered operations." The policy shall provide coverage for remediation of the site in the event of an environmental contamination event arising out of the materials, supplies, products, work, operations, or workmanship.

Transportation pollution liability insurance. Coverage shall be in an amount not less than $5,000,000 combined single limit per accident and shall include Pollution Liability (CA9948) and MCS-90 Endorsements. The policy shall provide coverage for transportation of pollutants/contaminants to and from the job site and the hauling of waste from the project site to the final disposal location, including non-owned disposal sites.

FAITHFUL PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the City of Goleta, has awarded to _____, (hereinafter referred to as the "Contractor") an agreement for the **CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT** (hereinafter referred to as the "Project"). For the purposes of this Faithful Performance Bond, the City of Goleta and Caltrans shall hereinafter be referred to as "City."

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by said Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of said Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Contractor and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the City in the sum of _____ DOLLARS, ($_____), said sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

In the event the Contract is modified, amended, or supplemented in a manner that increases the total Contract price, including but not limited to any Change Order issued pursuant to the Contract, the Contractor shall furnish to the City, at Contractor's sole expense and within fifteen (15) calendar days of such modification, an executed Bond Rider to this Bond reflecting the revised Contract price and increasing the penal sum of this Bond accordingly. The Surety acknowledges and agrees that this obligation to provide a Bond Rider applies to all increases in the Contract amount regardless of whether the Surety has received separate notice of the Contract modification. The Surety further agrees that failure of the Contractor to provide such Bond Rider shall not relieve the Surety of its obligations under this Bond. Nothing in this paragraph shall be construed to limit the City's right to enforce the Bond up to the penal sum then in effect, or to require the City to accept work under a Change Order without such bond adjustment.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one (1) year guarantee of all materials and workmanship; and shall indemnify and save harmless the City, its officials, officers, employees, and authorized volunteers, as stipulated in said Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by City in enforcing such obligation.

As a condition precedent to the satisfactory completion of the Contract Documents, unless otherwise provided for in the Contract Documents, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by City, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the City from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the City's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure Section 337.15.

Whenever Contractor shall be, and is declared by the City to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the City's option:

Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or

Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the City, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Permit the City to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the City may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the City, when declaring the Contractor in default, notifies Surety of the City's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project to be performed thereunder shall in any way affect its obligations on this bond, and it does hereby

waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project.

Surety hereby waives the provisions of Sections 2819 and 2845 of the Civil Code of the State of California.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20___.

(Corporate Seal)

_____
Contractor/ Principal

By_____

Title_____

(Corporate Seal)

_____
Surety

By _____
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title_____

The rate of premium on this bond is _____ per thousand. The total amount of premium charges is $_____.

(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety) _____
_____
_____

(Name and Address of Agent or Representative for service of process in California, if different from above) _____
_____
_____

(Telephone number of Surety and Agent or Representative for service of process in California) _____

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

COUNTY OF _____

On _____, 20___, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

Individual

Corporate Officer

_____
Title(s)

Partner(s) Limited

General

Attorney-In-Fact

Trustee(s)

Guardian/Conservator

Other:

Signer is representing:

Name Of Person(s) Or Entity(ies)

_____

_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
Title or Type of Document

_____
Number of Pages

_____
Date of Document

_____
Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

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COUNTY OF _____

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WITNESS my hand and official seal.

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Signature of Notary Public

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_____
Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of Attorney to local representatives of the bonding company must also be attached.

END OF PERFORMANCE BOND

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS That

WHEREAS, the City of Goleta by action taken or a resolution passed _____ , 20____, has awarded to _____ hereinafter designated as the "Principal," a contract for the work described as follows: the **CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT** (the "Project"). the purposes of this Faithful Performance Bond, the City of Goleta and Caltrans shall hereinafter be referred to as "City."; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract; providing that if said Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the City in the penal sum of _____ Dollars ($_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Civil Code Section 9100, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Revenue and Taxation Code Section 18663, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 9100 so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the

bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the owner or City and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Civil Code Section 9100, and has not been paid the full amount of his claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned, including but not limited to the provisions of sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

(Corporate Seal)

_____
Contractor/ Principal

By_____

Title_____

(Corporate Seal)

_____
Surety

By _____
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title_____

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STATE OF CALIFORNIA

COUNTY OF _____

On _____, 20___, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Signature of Notary Public

OPTIONAL

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CAPACITY CLAIMED BY SIGNER

Individual

Corporate Officer

_____
Title(s)

Partner(s) Limited

General

Attorney-In-Fact

Trustee(s)

Guardian/Conservator

Other:

Signer is representing:

Name Of Person(s) Or Entity(ies)

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COUNTY OF _____

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END OF LABOR AND MATERIAL PAYMENT BOND

SECTION VI

CITY OF GOLETA CONSTRUCTION SPECIFICATIONS

SECTION VI

CITY OF GOLETA CONSTRUCTION SPECIFICATIONS

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SECTION 1. DEFINITION AND TERMS

1-1.03 **ACCEPTANCE**. Shall mean the formal Acceptance by the City Manager of an entire Contract which has been completed in all respects in accordance with the Plans and specifications and any modifications thereof previously approved, causing a notice of completion to be approved by the City Manager.

1-1.13 **DEPARTMENT.** Shall mean the Department of Public Works of the City of Goleta, also referred to as the Department of Contract Administration. References made to the Department of Transportation otherwise shall mean the State of California Department of Transportation.

1-1.15 **DIRECTOR**. Shall mean the Public Works Director or his or her duly authorized representative.

1-1.17 [**Reserved]**

1-1.18 **ENGINEER**. Shall mean the Public Works Director or his or her duly authorized representative.

1-1.19 **ENGINEER'S ESTIMATE**. The estimate prepared by the Public Works Director of quantities of work to be performed.

1-1.26 **LIQUIDATED DAMAGE**. The amount to be deducted from payments due or to become due to the Contractor for delay, as set forth in the Special Provisions.

1-1.29 **PLANS.** The official project Plans, State Standard Plans, Improvement Plans, profiles, typical cross sections, general cross sections, working drawings, and supplemental drawings, or reproductions thereof, approved by the Director which show the location, character, dimensions and details of the work to be performed. All such documents are to be considered as a part of the Plans whether or not reproduced in the special provisions.

In the above definition, the following terms are defined as follows:

(a) State Standard Plans – The 2023 Standard Plans of the Department of Transportation of the State of California.
(b) Revised State Standard Plans – The Revised Standard Plans of the Department of Transportation of the State of California.
(c) Project Plans – The project Plans are specific details and dimension peculiar to the work and supplemented by the State Standard Plans, insofar as the same may apply.
(d) Improvement Standards – The Improvement Standards and Construction Standards of the City of Goleta Department of Public Works.

1-1.30 **SPECIFICATIONS.** State Standard Specifications, revised standard specifications, special provisions

In the above definition, the following terms are defined as follows:

(a) State Standard Specifications – Specifications standard to Caltrans' construction projects. These specifications are in a book titled Standard Specifications 2023.
(b) Revised Standard Specifications – New or revised standard specifications. These specifications are in a section titled Revised Standard Specifications in a book titled REVISIONS TO THE STANDARD SPECIFICATIONS.
(c) Special Provisions – Specifications specific to the project.

1-1.39 **STATE.**

Reference to the State or State of California shall mean City or City of Goleta unless the reference is to a law or regulation of the State.

1-1.50 **CITY ATTORNEY.**

The City Attorney of the City of Goleta.

1-1.51 **ATTORNEY GENERAL.**

The City Attorney of the City of Goleta.

1-1.52 **CITY CLERK.**

Shall mean the City Clerk of the City of Goleta.

SECTION 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1.03 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK

The bidder shall examine carefully the site of the work contemplated, the plans and specifications, and the proposal and contract forms therefor. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the general and local conditions to be encountered, as to the character, quality and scope of work to be performed, the quantities of materials to be furnished and as to the requirements of the proposal, plans, specifications and the contract.

The submission of a bid shall also be conclusive evidence that the bidder is satisfied as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information was reasonably ascertainable from an inspection of the site and the records of exploratory work done by the Department as shown in the bid documents, as well as from the plans and specifications made a part of the contract.

Where the Department has made investigations of site conditions including subsurface conditions in areas where work is to be performed under the contract, or in other areas, some of which may constitute possible local material sources, bidders or contractors may, upon written request, inspect the records of the Department as to those investigations subject to and upon the conditions hereinafter set forth.

Where there has been prior construction by the Department or other public agencies within the project limits, records of the prior construction that are currently in the possession of the Department and which have been used by, or are known to, the designers and administrators of the project will be made available for inspection by bidders or contractors, upon written request, subject to the conditions hereinafter set forth. The records may include, but are not limited to, record drawings, design calculations, foundation and site studies, project reports and other data assembled in connection with the investigation, design, construction and maintenance of the prior projects.

When a log of test borings or other record of geotechnical data obtained by the Department's investigation of surface and subsurface conditions is included with the contract plans, it is furnished for the bidders' or Contractor's information and its use shall be subject to the conditions and limitations set forth in this Section 2-1.03.

When cross sections are not included with the plans, but are available, bidders or contractors may inspect the cross sections and obtain copies for their use, at their expense.

When cross sections are included with the contract plans, it is expressly understood and agreed that the cross sections do not constitute part of the contract, do

not necessarily represent actual site conditions or show location, character, dimensions and details of work to be performed, and are included in the plans only for the convenience of bidders and their use is subject to the conditions and limitations set forth in this Section 2-1.03 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK.

When contour maps were used in the design of the project, the bidders may inspect those maps, and if available, they may obtain copies for their use.

The availability or use of information described in this Section 2-1.03 is not to be construed in any way as a waiver of the provisions of the first paragraph in this Section 2-1.03 and bidders and contractors are cautioned to make independent investigations and examinations as they deem necessary to be satisfied as to conditions to be encountered in the performance of the work and, with respect to possible local material sources, the quality and quantity of material available from the property and the type and extent of processing that may be required in order to produce material conforming to the requirements of the specifications.

The Department assumes no responsibility for conclusions or interpretations made by a bidder or contractor based on the information or data made available by the Department. The Department does not assume responsibility for the representation made by its officers or agents before the execution of the contract concerning surface or subsurface conditions, unless that representation is expressly stated in the contract.

No conclusions or interpretations made by a bidder or contractor from the information and data made available by the Department will relieve a bidder or contractor from properly fulfilling the terms of the contract.

2-1.05 PROPOSAL FORMS.

The Department will furnish to each Bidder a standard proposal form, which, when filled out and executed shall be submitted as his bid. Bids are not presented on forms so furnished will be disregarded.

The proposal form is included in these Contract Documents. The proposal shall set forth for each item of work, in clearly legible figures and words, an item price and a total for the item in the respective spaces provided, and shall be signed by the Bidder, who shall fill out all blanks in the proposal form as required therein.

All items shown on schedule of bid items shall be properly filled in and shall include all costs of labor, materials, equipment, State, Federal, or other taxes applicable to the transaction. The completed forms shall be without inter-lineations, erasures or alterations of any nature. If the proposal is made by an individual, his or her name and post office address must be shown; if made by a firm or partnership, the name and post office address of each member of the firm or partnership must be shown; or if made by a corporation, the proposal shall show the name of the State under the laws of which the corporation was chartered and the names, titles, and business addresses of the president, secretary, and treasurer of said corporation. If the proposal is signed by an agent, a "Power of Attorney" must be filed with the proposal.

The proposal shall be submitted as directed in Section I "Notice to Contractors" and identifying the project to which the proposal relates and the time and date of the bid opening therefore. Proposals which are not properly marked may be disregarded. Proposal forms are not transferable.

2-1.06D PROPOSAL GUARANTY.

All bids shall be presented under sealed cover and accompanied by one (1) of the following forms of Bidder' s security.

1. Cash, a cashier' s check, a certified check, or a Bidder' s bond executed by an admitted surety insurer, made payable to the City.
2. The security shall be in an amount equal to at least ten percent (10%) of the amount bid. A bid will not be considered unless one (1) of the forms of Bidder's security is enclosed with it.
3. A Bidder' s bond will not be accepted unless it conforms to a bond form approved by the City Attorney. Upon request "Bidder's Bond" forms may be obtained from the Department.

2-1.06G PREVIOUS DISQUALIFICATION, REMOVAL OR OTHER PREVENTION OF BIDDING.

A bid may be rejected on the basis of a Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, having been disqualified, removed, or otherwise prevented from bidding on, or completing a Federal, State, or local project because of a violation of law or a safety regulation.

2-1.11 COMPETENCY OF BIDDERS.

If two (2) or more prospective Bidders desire to bid jointly as a joint venture on a single project, they must file an affidavit of joint venture with the Bid on a form approved by the City Attorney, and such affidavit of joint venture will be valid only for the specific project for which it is filed. If such affidavit of joint venture is not filed as aforesaid and approved by the City Attorney prior to the time for awarding bids on the specific project for which it is submitted, a joint bid submitted by said Bidders will be disregarded. No bid will be accepted from or a Contract awarded to any Bidder to whom a proposal form has not been issued pursuant to Section 2-1.05 PROPOSAL FORMS of these Specifications.

2-1.12 GUARANTY AND WARRANTY.

The Contractor shall guarantee and warrant all materials supplied as being fit for the purpose intended. The Contractor shall guarantee and warrant all work performed as having been accomplished in a proper and workman-like manner. The guarantee and warranty required by this section shall continue for a period of one (1) year after Acceptance of the Work.

Should any failure of the work occur within a period of one (1) year, after Acceptance of the project by the City Manager due to faulty materials, poor workmanship, or defective equipment, the Contractor shall promptly make the needed repairs at his or her expense.

The City is hereby authorized to make such repairs if the Contractor fails to make or undertake with due diligence the aforesaid repairs within ten (10) working days after

being given written notice of such failure; provided, however, that in case of emergency where in the opinion of the Engineer of Work, providing a reasonable attempt has been made to notify the Contractor, delay would cause serious loss or damages, or a serious hazard to the public, the repairs may be made or lights, signs, and barricades erected without prior notice to the Contractor, and the Contractor shall pay the entire cost thereof. At the completion of the work the faithful performance bond may be reduced at the discretion of the City Council to not less than ten percent (10%) of the Contract price to cover said guarantee. Additional guarantees or warranties may be required by the Special Provisions.

2-1.40 WITHDRAWAL OF PROPOSALS.

Any bid may be withdrawn at any time prior to the time fixed in the public notice for the deadline submission of bids only by written request for the withdrawal of the bid filed with the Director. The request shall be executed by the bidder or his or her duly authorized representative. The withdrawal of a bid does not prejudice the right of the bidder to file a new bid. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after the deadline for submission of bids nor may any bid be withdrawn after the time fixed in the public notice for deadline for submission of bids. Immediately following the deadline for submission of bids all bids shall become the property of the City of Goleta and City is under no obligation to return.

2-1.47 BID RELIEF.

If the Bidder claims a mistake was made in his or her bid, the Bidder shall give the Department written notice within five (5) calendar days after the opening of the bids of the alleged mistake, specifying in the notice in detail how the mistake occurred. No relief from a claimed mistaken bid shall be granted unless such mistake clearly appears on the face of the bid submitted to the City. Claimed mistakes on backup worksheets, spreadsheets, computerized bidding programs, or any other similar calculative bidding mistake which is not apparent on the face of the bid shall not under any circumstance be considered as a basis for relief. The burden of proving the occurrence of a mistake entitling a bidder to relief from its bid rests entirely on the bidder. Relief from bids shall be in the City's sole discretion.

SECTION 3. CONTRACT AWARD AND EXECUTION

3-1.04 CONTRACT AWARD.

The right is reserved to reject any and all proposals. The award of the Contract, if it be awarded, will be to the lowest responsible Bidder whose proposal complies with all the requirements prescribed. Such award, if made, will be made within ninety (90) working days after the public opening of the proposals. If the lowest responsible Bidder refuses or fails to execute the Contract, the Goleta City Council may award the Contract to the second lowest responsible Bidder. Such award, if made, will be made within one-hundred and twenty (120) working days after the public opening of proposals. If the second lowest responsible Bidder refuses or fails to execute the Contract, the City may award the Contract to the third lowest responsible Bidder. Such award, if made, will be made within one hundred and twenty (120) working days after public opening of the proposals. The periods of time specified above within which the award of Contract may be made shall be subject to extension for such further period as may be agreed upon in writing between the Goleta City Council and the Bidder concerned.

All bids will be compared on the basis of the Director' s estimate of the quantities of work to be done.

3-1.05 CONTRACT BONDS.

The successful Bidder, simultaneously with the execution of the Contract, will be required to furnish a payment bond in an amount equal to one hundred percent (100%) of the Contract price, and a faithful performance bond in an amount equal to one hundred percent (100%) of the Contract price; said bonds shall be in a form approved by the City Attorney and shall be secured by a surety company satisfactory to the City Attorney. If the Contract price increases by the issuance of Change Orders, the Contractor shall within ten (10) working days provide a commensurate increase in the penal amounts of the bonds required.

Furthermore, the successful bidder shall furnish a certificate from the County Clerk as required by California Civil Code of Procedure Section 995.660(a)(3).

3-1.18 CONTRACT EXECUTION.

The Contract, in form and contents satisfactory to the City, shall be executed by the successful Bidder and returned, together with the Contract bonds and certificates of insurance within ten (10) calendar days, after written notice that the Contract has been awarded. No proposal shall be considered binding upon the City until the execution of the Contract by the City.

3-1.20 FAILURE TO EXECUTE CONTRACT.

Failure of the lowest responsible Bidder, the second lowest responsible Bidder, or the third lowest responsible Bidder to execute the Contract and file acceptable bonds and insurance as provided herein within fifteen (15) working days after such Bidder has received notice that the Contract has been awarded to him or her shall be just cause for the annulment of the award and the forfeiture of the proposal guarantee to the City as Liquidated Damages. The successful Bidder may file with the Goleta City Council a written notice, signed by the Bidder or his or her authorized representative, specifying that the Bidder will refuse to execute the Contract if presented to him or her. The filing of such notice shall have the same force and effect as the failure of the Bidder to execute the Contract and furnish acceptable bonds and insurance within the time prescribed by Section 3-1.18 CONTRACT EXECUTION of these Specifications.

SECTION 4. SCOPE OF WORK

Not used.

SECTION 5. CONTROL OF WORK

5-1 MEANS, METHODS AND APPLIANCES.

The means, methods, and appliances adopted by the Contractor shall be planned and executed to produce the highest grade quality of work and will enable the Contractor to complete the Work in the time agreed upon. The City and Engineer shall not supervise, direct, or have control over, or be responsible for, Contractor’s means, methods, and appliances of construction or for the safety precautions and programs incident thereto, or for any failure of Contractor to comply with laws and regulations applicable to the furnishing or performance of Work.

5-1.04 COORDINATION OF PLANS AND SPECIFICATIONS.

These City of Goleta Construction Specifications, the State Standard Specifications, the Standard Plans, the Standard Drawings, project Plans, project Special Provisions (and any addenda), the Agreement, Contract Change Orders, and all supplementary documents are all essential parts of the Contract between Contractor and the City. A requirement occurring in one (1) is as binding as though occurring in all. They are intended to be complementary, and to describe and provide for a complete work.

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in these specifications, the Special Provisions, or the Plans, the Contractor shall apply in writing to the Director for such further explanations as may be necessary and shall conform to them as part of the Contract. In the event of any doubt or question arising respecting the true meaning of these specifications, the special provisions or the Plans, reference shall be made to the Director, whose decision thereon shall be final.

In the event of any discrepancy between any drawing and the figures written thereon, the figures shall be taken as correct. Detail drawings shall prevail over general drawings.

5-2 CONTRACTOR'S RESPONSIBILITY FOR WORK.

Unless specified otherwise in the Contract Documents, until the formal acceptance of the Work by the City, the Contractor shall have the charge and care and shall bear the risk of damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or non-execution of the Work.

The Contractor shall rebuild, repair, restore, and make good all damages to any portion of the Work occasioned by any of the above causes before final acceptance and shall bear the expense, except such damages occasioned by the acts of the Federal government or acts of war.

In case of suspension of work from any cause whatsoever, the Contractor shall be responsible for the Work as previously specified and shall also be responsible for all materials delivered to the Work. Where necessary to protect the Work from damage, the Contractor shall, at its own expense, provide suitable drainage of the worksite and erect such temporary structures as necessary to protect the Work from damage during any period of suspension of work.

The Contractor shall provide 24-hour emergency service for all maintenance and operations of the Work specified and shall supply the City with the name and phone number of the responsible person. Contractor will respond to requests for emergency service for the Work promptly upon notification. If the Contractor fails to provide this service after notice from City, City may perform such emergency service and the cost thereof shall be deducted from the next Progress Pay Estimate due the Contractor.

SECTION 6. CONTROL OF MATERIAL

6-2.04 MATERIAL SITES.

Local material sites used by the Contractor shall be graded so that, at the time of final inspection of the Contract, they will drain and will blend in with the surrounding terrain.

SECTION 7. LEGAL RELATIONS AND RESPONSIBILITY

7-1.01 PREVAILING WAGE.

Pursuant to the provisions of California Labor Code Section 1773, the City has identified the source, stated below, of the general prevailing rate of wages applicable to the work to be done, for straight time, overtime, Saturday, Sunday and holiday work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of workmen concerned. The wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm, and are a part of the Contract. "Pursuant to California Labor Code Section 1773.2, general prevailing wage rates shall be posted by the Contractor at a prominent place at the site of the work.

7-1.02 SOUND CONTROL REQUIREMENTS.

The Contractor shall additionally conform to the provisions of Goleta Municipal Code 12.02.480 Noise, Dust and Debris where they are more restrictive than these specifications.

7-1.03 ASBESTOS.

The Contractor shall comply with all rules, regulations, statutes and ordinances regarding asbestos removal and disposal, including but not limited to, 42 U.S.C. Sections 7401, 7412 and 7601 and 40 C.F.R. Part 61, Subpart M. If the Contractor discovers that a building to be demolished or renovated contains asbestos containing material, the Contractor shall immediately cease work and notify the City.

7-1.04 HIGHWAY CONSTRUCTION EQUIPMENT.

Pursuant to the authority contained in Vehicle Code Section 591, the Department has determined that, within such areas as are within the limits of the project and are open to the public traffic, the Contractor shall comply with all the requirements set forth in Vehicle Code Divisions 11, 12, 13, 14, and 15. Attention is directed to the statement in Section 591 that this section shall not relieve the Contractor or any person from the duty of exercising due care. The Contractor shall take all necessary precautions for safe operation of equipment and the protection of the public from injury and damage from such equipment.

7-1.05 CITY OF GOLETA ENCROACHMENT PERMITS.

The Contractor need not obtain a separate encroachment permit from the City prior to construction within street rights-of-way or other City rights-of-way. Execution of the Contract by the City shall be deemed an encroachment permit for work required by the

Contract within rights-of-way. All work shall conform to the rules and regulations of encroachment permits and shall be subject to the inspection and approval of the Director.

7-1.06 CITY OF GOLETA BUSINESS LICENSE.

The Contractor shall obtain a business license from the City prior to commencing work.

7-1.07 PERMIT FOR TRENCHING OR EXCAVATION.

For trenches or excavation five (5) feet or deeper, the Contractor shall obtain from the Division of Industrial Safety, a permit authorizing such construction.

7-1.08 OTHER PERMITS.

The Contractor in coordination with the Director shall procure any necessary permits which the City is not specifically mentioned as obtaining.

7-1.09 PROJECT APPEARANCE.

The Contractor shall maintain a neat appearance to the work. In any area visible to the public, the following shall apply:

When practicable, broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly. The Contractor shall furnish trash bins for all debris from structure construction. All debris shall be placed in trash bins daily. Forms or falsework that are to be reused shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be reused shall be disposed of concurrently with their removal.

Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in price paid for the various Contract items of work involved, and no additional compensation will be allowed therefore.

7-1.10 SAFETY.

It is the intent of the parties that the City is not an exposing, creating, controlling, or correcting employer under California Labor Code section 6400. In accordance with generally accepted construction practices and State law, the Contractor shall have the authority and be solely and completely responsible for conditions on the job site, including safety of all persons and property during performance of the Work. Moreover, the Contractor shall be the controlling employer and has the authority and responsibility to enforce worksite safety. The Contractor shall be responsible for conducting daily safety inspections and assuring all hazards and violations are abated. The Contractor is responsible for assuring that all subcontractors adhere to the minimum CAL/OSHA safety requirements and that each subcontractor has an effective CAL/OSHA IIP (Illness and Injury Protection Program) in place that specifically addresses all potential exposures, such as, but not limited to, fall protection, confined space, and trenching/shoring. These requirements shall apply continuously and not be limited to normal working hours. The Contractor shall be responsible for any delay costs or damages in the event the progress of Work is slowed or stopped due to a safety violation.

The services of the Director in conducting construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor' s Work methods, equipment, bracing or scaffolding, or safety measures, in, on, or near the

construction site. If a City employee observes a safety violation, the City employee will report the violation to the Contractor who is then responsible for assuring the violation is abated.

The Contractor is hereby informed that Work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous Work areas as to potential dangers and shall provide such necessary safety equipment and instructions as are necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to Work underground.

All Work and materials shall be in strict accordance with all applicable State, City, County, and Federal Rules, Regulations, and Codes, and attention is drawn to the requirements of CAL/OSHA. The Contractor shall be solely responsible for compliance with all City, County and State blasting requirements and for any damages caused by his or her operations.

The Contractor shall conduct its work so as to ensure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the Work and to ensure the protection of persons and property. No road or street shall be closed to the public except with the permission of the Director and the written approval by the proper governmental authority. Fire hydrants on or adjacent to the Work shall be accessible to firefighting equipment. Temporary provisions shall be made by the Contractor to ensure the use of sidewalks, private and public driveways and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.

In accordance with State Labor Code Section 6705, the Contractor shall submit to the City specific plans to show details of provisions for worker protection from caving ground. This in no way relieves the Contractor from the requirement of maintaining safety in all operations performed by the Contractor or the Contractor's subcontractors. The detailed Plan showing design of shoring, bracing, sloping or other provisions shall be prepared and stamped by a registered civil or structural engineer in the State of California as required. Acceptance by the City or its designated agent only constitutes acknowledgment of the submission and does not constitute review or approval of the designs, design assumptions or criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the Plans, which are solely the responsibility of the Contractor and his or her registered engineer.

Notwithstanding any classifications relative to the Tunnel Safety Orders, Work within confined spaces on this project is subject to the definitions and applicable provisions of California Code of Regulations Section 8400 et seq., Title 8.

The Contractor shall so perform its Work as not to expose personnel to, or to discharge into the atmosphere from any source whatever, smoke, dust, asbestos, toxic chemicals or other air contaminants in violation of the laws, rules, and regulations of the governmental entities having jurisdiction. Contractors or subcontractors removing one hundred (100) feet or more square feet of asbestos must be "Certified" in accordance with State law. All Work involving exposure to asbestos and all other hazardous materials shall be performed with protection of personnel in compliance with all applicable regulations and safety requirements.

Nothing in these General Conditions is to be construed to permit Work not conforming to governing codes. When Contract Documents differ from governing codes, the Contractor shall furnish and install the higher standards called for without extra charge. All equipment furnished shall be grounded and provided with guards and protection as required by safety codes. Where vapor tight or explosion proof electrical installation is required by code, this shall be provided. In accordance with the provisions of Labor Code Section 6707, the Contractor shall provide adequate sheeting, shoring and bracing

7-1.10A CONFINED SPACES.

Confined spaces requires compliance with CAL/OSHA and Federal OSHA requirements. Confined spaces for the purposes of this Section shall be as defined by the Division of Industrial Safety. Work within confined spaces of this project is subject to the definitions and applicable provisions of Section 5156 *et seq*., Title 8, Division 1, Chapter 4, Subchapter 7, Group 16, Article 108 of California Code of Regulations, and Title 29 Part 1926 of the Code of Federal Regulations.

In addition the City classifies the following existing facilities as confined space: the interior of pipelines, vaults, manholes, reservoirs and any other such structure or space which is similarly surrounded by confining surfaces as to permit the accumulation of dangerous gases or vapors. The confined spaces are “permit” confined spaces as defined by OSHA and CAL/OSHA and therefore entry is allowed only through compliance with a confined space entry permit program by the Contractor that meets the requirements of 8 C.C.R. Section 5157. While the above mentioned locations have been identified as permit confined spaces, other permit confined spaces may exist. It shall be the responsibility of the Contractor to identify and classify these confined spaces.

It is anticipated that the Contractor may encounter hazardous conditions within these permit confined spaces which include, but are not limited to the following:

a. Exposure to hydrogen sulfide, methane, carbon dioxide and other gases and vapors commonly found in municipal sewers which could have or has the potential of having Immediate Danger to Life or Health Conditions (IDLH).

b. Exposure to atmosphere containing insufficient oxygen to support human life.

c. Exposure to combustible, flammable and/or explosive atmosphere.

d. Exposure to sewage which may contain bacteriological, chemical and other constituents harmful to humans.

e. Work in conditions where engulfment or entrapment may occur.

f. Work in environments which may be slippery and/or have uneven work surfaces.

g. Work in structures where workers may trip, slip and/or fall several feet.

h. Exposure to an oxygen enriched environment.

7-1.11 RESPONSIBILITY FOR DAMAGE.

The City of Goleta and its officers, agents, employees, and volunteers, including but not limited to the Director, shall not be answerable or accountable in any manner: for any loss or damage that may happen to the work or any part thereof; for any loss or damage to any of the materials or any things used or employed in performing the work; for injury to or death of any person, either workers or the public; or for damage to property from any cause which might have been prevented by the Contractor, his or her workers, or anyone employed by the Contractor or his or her subcontractors.

The Contractor shall be responsible for any liability imposed by law and for injuries to, or death of, any person including, but not limited to, workers and the public, or damage to property resulting from defects or obstructions, or from any cause whatsoever during the progress of the work or at any time before its completion and final Acceptance.

To the fullest extent allowed by law, the Contractor shall defend (through counsel acceptable to the City), indemnify, and save harmless the City of Goleta and its officers, agents, employees, and volunteers from all claims, suits, or actions of every name, kind, and description, brought forth, or on account of, injuries to or death of any person including, but not limited to, workers and the public, or damage to property resulting from the performance of the Contract, except as otherwise provided by statute.

The duty of the Contractor to defend, indemnify, and save harmless includes, but is not limited to, the duties to defend as set forth in Civil Code Section 2778.

The Contractor waives any and all rights to any type of express or implied indemnity against the City, its officers, agents, employees, or volunteers.

It is the intent of the parties that the Contractor will defend, indemnify, and hold harmless the City of Goleta, its officers, agents, employees, and volunteers from any and all claims, suits, or actions as set forth above regardless of existence or degree of fault or negligence, whether active or passive, primary, or secondary, on the part of the City, the Contractor, the subcontractor or employee of any of these; except duty does not apply where the injury or damage is due to the sole or active negligence of the City.

The Contractor's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Contract for the full period of time allowed by law. The defense and indemnity obligations of this Contract are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Contract. The parties intend that the defense and indemnity obligations in this Contract shall be broadly construed.

In addition to any remedy authorized by law, so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the City may be retained by the City until disposition has been made of such suits or claims for damages. The retention of money due the Contractor shall be subject to the following:

A. The City will give the Contractor thirty (30) working days' notice of its intention to retain funds from any partial payment which may become due to the Contractor prior to Acceptance of the Contract. Retention of funds from any payment made after Acceptance of the Contract may be made without such prior notice to the Contractor.

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06 PARTIAL PAYMENTS of these Specifications.

C. If the City had retained funds and it is subsequently determined that the City is not entitled to be indemnified and saved harmless by the Contractor in connection with the matter for which such retention was made, the City shall be liable for interest on the amount retained at the legal rate of interest for the period of such retention.

7-1.12 INSURANCE COVERAGE.

A. Evidence of Maintenance Required. The Contractor shall, at all times, maintain in full force and effect at a minimum the insurance required by this section; and the Contractor shall not allow any subcontractor to commence work until similar insurance required of the subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Director, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall provide ten (10) working days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Goleta as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best' s Insurance Reports.

C. Insurance Required. Commercial General Liability, automobile liability, and workers' compensation insurance shall be maintained as follows in the insurance requirements as follows:

1.	Commercial General Liability for Minor Construction Projects (Projects under $1,000,000)	$2,000,000 each occurrence $4,000,000 aggregate $5,000,000.00 Umbrella or excess liability Personal Injury: $2,000,000 each occurrence $4,000,000 aggregate $5,000,000.00 Umbrella or excess liability

Commercial General Liability for Major Construction Projects	$5,000,000 each occurrence $10,000,000 aggregate $25,000,000.00 Umbrella or excess liability
	Personal Injury:
(Projects over $1,000,000)	$5,000,000 each occurrence $10,000,000 aggregate $25,000,000.00 Umbrella or excess liability

The Commercial General Liability policy shall include coverage or endorsements for:

a. Completed operations.

b. Losses related to independent contractors, products and equipment.

c. Explosion, collapse and underground hazards.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Goleta, and its officers, agents, employees, and volunteers, as additional insureds (except for workers" compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the Insurance Services Office ("ISO") CG 20 38 04 13 or an equivalent, blanket endorsement or section of the policy. Endorsements must include coverage for on-going and completed operations. Endorsements shall cover the City of Goleta, its officers, agents, employees, and volunteers.

b. Cross liability and severability of interest clauses providing that the insurance applies separately to each insured except with respect to the limits of liability.

c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.
d. Such insurance shall specifically cover the contractual liability of the CONTRACTOR.

e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.
f. Waiver of subrogation endorsement.

g. The CONTRACTOR shall furnish a certificate for the period covered.

SPECIAL NOTICE - CLAIMS MADE COVERAGE:

Liability insurance coverage may not be written on a "claims made" basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

Comprehensive Automobile Liability for bodily injury (including death) and property damage which provides total limits of not less than One Million Dollars ($1,000,000) combined single limits per accident, applicable to all owned, non-owned, and hired vehicles.

Statutory Workers' Compensation and Employer' s Liability Insurance, including a waiver of subrogation endorsement and a Broad Form "All-States" Endorsement for all employees engaged in services or operations under the Contract.

The employer' s liability insurance shall provide limits of not less than One Million Dollars ($1,000,000) per occurrence. Both the workers' compensation and employer's liability policies shall contain the Insurer's waiver of subrogation in favor of the City, its officers, agents, employees, and volunteers.

7-1.12.2 BUILDER'S RISK/COURSE OF CONSTRUCTION INSURANCE.

The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion.

The Contractor shall secure "All Risk" type of builder' s Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke. The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The maximum deductible allowable under the Builder' s All Risk policy shall be five percent (5%) of the Contract amount.

Builder' s Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

7-1.12.3 OTHER INSURANCE PROVISIONS.

A. The requirements of the State Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these provisions may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract. Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by CITY in writing. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or CITY. CITY reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its subcontractors to comply with these same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE CONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

Additional Insurance Requirements:

Contractor's pollution liability insurance. Coverage shall provide for liability arising out of sudden, accidental, and gradual pollution, and remediation. The policy limit shall be no less than $1,000,000 per claim and in the aggregate. All activities contemplated in this agreement shall be specifically scheduled on the policy as "covered operations." The policy shall provide coverage for remediation of the site in the event of an environmental contamination event arising out of the materials, supplies, products, work, operations, or workmanship.

Transportation pollution liability insurance. Coverage shall be in an amount not less than $5,000,000 combined single limit per accident and shall include Pollution Liability (CA9948) and MCS-90 Endorsements. The policy shall provide coverage for transportation of pollutants/contaminants to and from the job site and the hauling of waste from the project site to the final disposal location, including non-owned disposal sites.

7-1.14 ACCEPTANCE OF CONTRACT.

When the Director has made the final inspection and determines that the Contract work has been completed in all respects in accordance with the Plans and specifications, the Director will recommend that the City Manager formally accept the Contract, and immediately upon and after such Acceptance by the City, the Contractor will be responsible for the work done for a period of one (1) year.

7-1.23 NONDISCRIMINATION.

During the performance of this Contract, Contractor and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age or sex. Contractor and subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractor and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code §12900, et seq.) and the applicable regulations promulgated thereunder (California Administrative Code of Regulations, Title 2, §7285.0 et seq.) and other applicable State and Federal regulations pertaining to nondiscrimination and affirmative action which are incorporated into this Agreement by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the agreement."

Nondiscrimination

Under 2 CA Code of Regs § 11105:

1. During the performance of this contract, the recipient, contractor, and its subcontractors shall not deny the contract's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor shall they discriminate unlawfully against any employee or applicant for employment

because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. Contractor shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

2. Contractor shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, § 12900 et seq.), the regulations promulgated thereunder (Cal. Code Regs., tit. 2, § 11000 et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Gov. Code, §§ 11135-11139.5), and the regulations or standards adopted by the awarding state agency to implement such article.
3. Contractor or recipient shall permit access by representatives of the Department of Fair Employment and Housing and the awarding state agency upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, and all other sources of information and its facilities as said Department or Agency shall require to ascertain compliance with this clause.
4. Recipient, contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
5. The contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

Under 2 CA Code of Regs § 11122:

STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS (GOV. CODE SECTION 12990)

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of $5,000 or more.

1. As used in the specifications:
   a. "Act" means the Fair Employment and Housing Act.
   b. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;
2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall include in each subcontract of $5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference.
3. The contractor shall implement the specific nondiscrimination standards provided in paragraphs 6(a) through (e) of these specifications.
4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer members of any group protected by the Act shall excuse the contractor's obligations under these specifications, Government Code section 12990, or the regulations promulgated pursuant thereto.5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.

5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under steps a. through e. below:
    a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a working environment.
    b. Provide written notification within seven (7) working days to the director of the DFEH when the referral process of the union or unions with which the contractor has a collective bargaining agreement has impeded the contractor's efforts to meet its obligations.
    c. Disseminate the contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.
    d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen, etc., are aware of the contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.
    e. Ensure that seniority practices, job classifications, work assignments, and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the contractor's obligations under these specifications are being carried out.

7. Contractors are encouraged to participate in voluntary associations that assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on equal employment opportunity in the industry, ensures that the concrete benefits of the program are reflected in the contractor's workforce participation, and can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's.
8. The contractor is required to provide equal employment opportunity for all persons. Consequently, the contractor may be in violation of the Fair Employment and Housing

Act (Government Code section 12990 et seq.) if a particular group is employed in a substantially disparate manner.

9. The contractor shall not use the nondiscrimination standards to discriminate against any person because race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status.
10. The contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code section 12990.
11. The contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Government Code section 12990 and its implementing regulations by the awarding agency. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code section 12990.
12. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

7-1.24 CONTRACTOR REGISTRATION.

Registration" is added as follows: No contractor or subcontractor may work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. During the performance of this Contract, Contractor and its subcontractors shall have a continuing legal obligation to maintain current registration with the Department of Industrial Relations. Contractor is hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations."

SECTION 8. PROSECUTION AND PROGRESS

8-1.03 BEGINNING OF WORK.

The Contractor shall begin work within fifteen (15) working days from the date of a "Notice to Proceed" letter, and the Contractor shall thereafter diligently prosecute the work to completion.

The Contractor shall notify the Director, in writing, of his or her intent to commence work at least seventy-two (72) hours before work is begun. The notice shall specify the date on which the Contractor intends to begin work. If a project has more than one (1) location of work, a separate notice shall be given for each location.

Should the Contractor begin work in advance of issuance a "Notice to Proceed," any work performed in advance of such issuance shall be considered to have been done at Contractor' s own risk and as a volunteer.

8-1.15 WASTE REDUCTION.

All procurements for Compost, Mulch, and Paper Products made on behalf of the City must comply with Goleta Municipal Code Chapter 8.10.900 “Procurement Requirements for City Departments, Direct Service Providers, and Vendors”

a. All paper products and content printing and writing paper shall consist of at least thirty percent (30%) by fiber weight post-consumer fiber; and
b. All compost and mulch products must be purchased from a processing facility that does not solely utilize chip and grind methods to produce either product; and
c. All proof of purchase records including weight tickets, receipts, invoices shall be provided to city project manager in a timely manner; and
d. Contractor shall work with city project manager to submit all required procurement records to the Environmental Services Division.

All covered projects must comply with Goleta Municipal Code Chapter 8.10 Article IV “Mandatory Recycling of Construction and Demolition Waste” including but not limited to:

a. Complete and submit a Certification of Implementation and submit to Director—five (5) working days before construction begins.
b. Receive an approved Certificate of Implementation from the Environmental Services Division
c. Manage and track all project materials as well as waste generated to achieve greater than or equal to sixty-five percent (65%) diversion through waste reduction, reuse, and recycling; and
d. Collect all weight tickets and other records associated with project materials as well as waste generated and provide records to designated city project manager in a timely manner; and
e. At least five (5) working days prior to final inspection/project closeout, complete and submit a Post-Construction Waste Reduction & Recycling Summary Report (WRRS) to Environmental Services Manager (or designee) including the WRRS form, weight tickets, and other relevant records.

SECTION 9. MEASUREMENT AND PAYMENT

9-1.05 STOP PAYMENT NOTICES.

The City may, at its option and at any time, retain amounts due to the Contractor, sums sufficient to cover claims (including costs and attorney' s fees), filed pursuant to California Civil Code Section 9350 et seq.

9-1.06 PARTIAL PAYMENTS.

The City, once in each month, shall cause an estimate in writing to be made by the Engineer. The estimate shall include the total amount of work done and acceptable materials furnished, provided the acceptable materials are listed as eligible for partial payment as materials in the special provisions and are furnished and delivered by the Contractor on the ground and not used or are furnished and stored for use on the contract, if the storage is within the State of California and the Contractor furnishes evidence satisfactory to the Engineer that the materials are stored subject to or under the control of the Department, to the time of the estimate, and the value thereof. The estimate shall also include any amounts payable for mobilization. Daily extra work reports furnished by

the Contractor less than five (5) working days before the preparation of the monthly progress estimate shall not be eligible for payment until the following month's estimate.

The amount of any material to be considered in making an estimate will in no case exceed the amount thereof which has been reported by the Contractor to the Engineer on forms properly filled out and executed, including accompanying documentation as therein required, less the amount of the material incorporated in the work to the time of the estimate. Only materials to be incorporated in the work will be considered. The estimated value of the material established by the Engineer will in no case exceed the contract price for the item of work for which the material is furnished.

The Department shall retain five percent (5%) of such estimated value of the work done and five percent (5%) of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for the fulfillment of the Contract by the Contractor.

The Department shall pay monthly to the Contractor, while carrying on the work, the balance not retained, as aforesaid, after deducting therefrom all previous payments and all sums to be kept or retained under the provisions of the contract. No monthly estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the contract.

No monthly estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

Attention is directed to the prohibitions and penalties pertaining to unlicensed contractors as provided in Business and Professions Code Sections 7028.15(a) and 7031.

9-1.065 PAYMENT OF WITHHELD FUNDS.

Except as otherwise prohibited by law, the Contractor may elect to receive all payments due under the Contract pursuant to Section 9-1.06 of these Specifications without any retention. If the Contractor so elects, a deposit with the City of securities with a value equivalent to the retention that would otherwise be withheld by the City shall be made. Said security shall be as provided in California Public Contract Code Section 22300 and shall be approved by the City both as to sufficiency and form. In the alternative, the Contractor may elect to deposit such securities in an escrow account and enter into a standard form Public Works Retention Release/Escrow Agreement. Blank Agreements are available from the Public Works Director and the City Attorney' s Office.

9-1.10 ARBITRATION.

Arbitration is not permitted.

9-1.11 CLAIMS FOR EXTRA COMPENSATION FOR DELAYS.

It is understood and agreed by the City and the Contractor that the Contractor will incur overhead costs for temporary facilities, superintendence, home office overhead, and similar cost items, and that the costs of such overhead for the full Contract period through the specified completion date are included in the Contractor's lump sum bid amounts included in his accepted Proposal. No additional compensation will be made to the Contractor for claims of increased overhead costs occurring within the originally specified

construction Contract period plus any time extensions granted by Change Order. No compensation for extended performance will be granted unless the delay exceeds more than half of the float time available at the time of the delay."

9-1.12 DISPUTES

DISPUTES. Effective January 1, 1991, Section 20104 et seq., of the California Public Contract Code prescribes a process utilizing informal conferences, non-binding judicial supervised mediation, and judicial arbitration to resolve disputes on construction claims of $375,000 or less. Effective January 1, 2017, Section 9204 of the Public Contract Code prescribes a process for negotiation and mediation to resolve disputes on construction claims. The intent of this Section is to implement Sections 20104 et seq. and Section 9204 of the California Public Contract Code. This Section shall be construed to be consistent with said statutes.

CLAIMS. For purposes of this Section, “Claim” means a separate demand by CONTRACTOR, after a change order duly requested in accordance with the terms of this Contract has been denied by the CITY, for (A) a time extension, (B) payment of money or damages arising from Work done by or on behalf of CONTRACTOR pursuant to the Contract, or (C) an amount the payment of which is disputed by the CITY. A “Claim” does not include any demand for payment for which CONTRACTOR has failed to provide notice, request a change order, or otherwise failed to follow any procedures contained in the Contract Documents. Claims governed by this Section may not be filed unless and until CONTRACTOR completes all procedures for giving notice of delay or change and for the requesting of a time extension or change order, including but not necessarily limited to the change order procedures contained herein, and CONTRACTOR’s request for a change has been denied in whole or in part. Claims governed by this Section must be filed no later than fourteen (14) calendar days after a request for change has been denied in whole or in part or after any other event giving rise to the Claim. The Claim shall be submitted in writing to the CITY and shall include on its first page the following in 16 point capital font: “THIS IS A CLAIM.” Furthermore, the claim shall include the documents necessary to substantiate the claim. Nothing in this Section is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims, including all requirements pertaining to compensation or payment for extra Work, disputed Work, and/or changed conditions. Failure to follow such contractual requirements shall bar any claims or subsequent lawsuits for compensation or payment thereon.

Supporting Documentation. The CONTRACTOR shall submit all claims in the following format:
Summary of claim merit and price, reference Contract Document provisions pursuant to which the claim is made
List of documents relating to claim:
Specifications
Drawings
Clarifications (Requests for Information)
Schedules
Chronology of events and correspondence
Analysis of claim merit
Analysis of claim cost
Time impact analysis in CPM format

Other

If CONTRACTOR's claim is based in whole or in part on an allegation of errors or omissions in the Drawings or Specifications for the Project, CONTRACTOR shall provide a summary of the percentage of the claim subject to design errors or omissions and shall obtain a certificate of merit in support of the claim of design errors and omissions.

Cover letter and certification of validity of the claim, including any claims from subcontractors of any tier, shall be in accordance with Government Code section 12650 et seq.

CITY'S RESPONSE. Upon receipt of a claim pursuant to this Section, CITY shall conduct a reasonable review of the claim and, within a period not to exceed forty-five (45) calendar days, shall provide CONTRACTOR a written statement identifying what portion of the claim is disputed and what portion is undisputed. Any payment due on an undisputed portion of the claim will be processed and made within sixty (60) working days after the public entity issues its written statement.

If CITY needs approval from City Council to provide the CONTRACTOR a written statement identifying the disputed portion and the undisputed portion of the claim, and the City Council does not meet within the forty-five (45) working days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, CITY shall have up to three working days following the next duly publicly noticed meeting of the City Council after the forty-five (45) working-day period, or extension, expires to provide CONTRACTOR a written statement identifying the disputed portion and the undisputed portion.

Within thirty (30) working days of receipt of a claim, CITY may request in writing additional documentation supporting the claim or relating to defenses or claims CITY may have against the CONTRACTOR. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of CITY and the CONTRACTOR.

CITY's written response to the claim, as further documented, shall be submitted to CONTRACTOR within thirty (30) working days (if the claim is less than $50,000, within fifteen (15) working days) after receipt of the further documentation, or within a period of time no greater than that taken by CONTRACTOR in producing the additional information or requested documentation, whichever is greater.

MEET AND CONFER. If the CONTRACTOR disputes CITY's written response, or CITY fails to respond within the time prescribed, the CONTRACTOR may so notify CITY, in writing, either within fifteen (15) calendar days of receipt of CITY's response or within fifteen (15) calendar days of CITY's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand, CITY shall schedule a meet and confer conference within thirty (30) calendar days for settlement of the dispute.

MEDIATION. Within ten (10) working days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, CITY shall provide the CONTRACTOR a written statement identifying the portion of the claim

that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within sixty (60) working days after CITY issues its written statement. Any disputed portion of the claim, as identified by CONTRACTOR in writing, shall be submitted to nonbinding mediation, with CITY and CONTRACTOR sharing the associated costs equally. CITY and CONTRACTOR shall mutually agree to a mediator within ten (10) working days after the disputed portion of the claim has been identified in writing unless the parties agree to select a mediator at a later time.

If the Parties cannot agree upon a mediator, each Party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each Party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the Parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

Unless otherwise agreed to by CITY and CONTRACTOR in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

The mediation shall be held no earlier than the date CONTRACTOR completes the Work or the date that CONTRACTOR last performs Work, whichever is earlier. All unresolved claims shall be considered jointly in a single mediation unless a new unrelated claim arises after mediation is completed.

Procedures After Mediation. If following the mediation, the claim or any portion remains in dispute, CONTRACTOR must file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time CONTRACTOR submits his or her written claim pursuant to subdivision (a) until the time the claim is denied, including any period of time utilized by the meet and confer conference or mediation.

CIVIL ACTIONS. The following procedures are established for all civil actions filed to resolve claims subject to this Section:

Within sixty (60) calendar days, but no earlier than thirty (30) calendar days, following the filing or responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties or unless mediation was held prior to commencement of the action in accordance with Public Contract Code section 9204 and the terms of these procedures. The mediation process shall provide for the selection within fifteen (15) calendar days by both parties of a disinterested third person as mediator, shall be commenced within thirty (30) calendar days of the submittal, and shall be concluded within fifteen (15) calendar days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.

If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1114.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.

Government Code Claims. In addition to any and all contract requirements pertaining to notices of and requests for compensation or payment for extra work, disputed work, claims and/or changed conditions, CONTRACTOR must comply with the claim procedures set forth in Government Code sections 900 et seq. prior to filing any lawsuit against the CITY. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to extra work, disputed work, claims, and/or changed conditions have been followed by CONTRACTOR. If no such Government Code claim is submitted, or if any prerequisite contractual requirements are not otherwise satisfied as specified herein, CONTRACTOR shall be barred from bringing and maintaining a valid lawsuit against the CITY. A Government Code claim must be filed no earlier than the date the work is completed or the date CONTRACTOR last performs work on the Project, whichever occurs first. A Government Code claim shall be inclusive of all unresolved claims unless a new unrelated claim arises after the Government Code claim is submitted.

9-1.17 PAYMENT AFTER ACCEPTANCE.

Final Payment shall be made in accordance with this section. The Contractor shall, after the completion of the Contract, submit a final estimate of the amount of work done thereunder and the value of such work. Upon approval of the estimate by the Director, the City of Goleta shall pay the entire sum so found to be due after deducting therefrom all previous payments and all amounts to be kept and all amounts to be retained under the provisions of the Contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment. The final payment shall not be due and payable until the expiration of thirty-five (35) working days from the date of Acceptance of the work by the City Manager, and thirty-five (35) calendar days after filing of the Notice of completion wih the County of Santa Bar.

No certificate given or payments made under the Contract, except the final certificate or final payment, shall be conclusive evidence of the performance of the Contract, either wholly or in part, and no payment (including the final payment) or certificate shall be construed to be an Acceptance of any defective work or improper materials. Final payment shall not release the Contractor from one (1) year guarantee of the work as provided in Section 7-1.14 ACCEPTANCE OF CONTRACT and Section 2-1.12 GUARANTEE AND WARRANTY of these Specifications.

END OF CITY OF GOLETA CONSTRUCTION SPECIFICATIONS

SECTION VII

SPECIAL PROVISIONS

CITY OF GOLETA

BOOK 2 OF 2

SPECIAL PROVISIONS

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT
CITY PROJECT NUMBER: 9083

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SPECIAL NOTICES

- Attention is directed to Section 9-1.03 PAYMENT SCOPE of the State Standard Specifications: "Full compensation for work specified in Divisions I, II, and XI is included in the payment for the bid items unless:
    1. Bid item for the work is shown on the Bid Item List
    2. Work is specified as change order work

SPECIAL PROVISIONS
FOR THE
CITY OF GOLETA
CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

SCOPE OF SPECIAL PROVISIONS

The work described in these Special Provisions shall be performed in conformance with the latest editions of the 2023 State Standard Specifications, City of Goleta Construction Specifications, City of Goleta Design and Construction Standards, and 2023 State Standard Plans, except insofar as these Special Provisions may modify them.

Numbering in these Special Provisions conforms to that in the State Standard Specifications. The existence of a Section in these Special Provisions means that the corresponding Section in the State Standard Specifications is modified in some respect.

Construction materials, payments, etc., for items of work shown in the proposal and on the plans, but not specifically mentioned in these Special Provisions are referred to the State Standard Specifications for conformance.

DISCREPANCIES AND OMISSIONS

Any discrepancies or omissions found in the Contract Documents shall be reported to the Engineer immediately. The Engineer will clarify discrepancies or omissions, in writing, within reasonable time.

In resolving inconsistencies among two or more Sections of the Contract Documents, precedence shall be given in the following order:

1. Change Orders
2. Addenda
3. The Agreement
4. Special Provisions upon Specifications
5. Plans shall govern in matters of quantity and measurement
6. Specifications govern in matters of quality
7. Profile Plans govern upon Layout Plans
8. Specific Notes shall govern over other/general notes
9. Larger scale drawings shall govern within smaller scale ones
10. Detail plans govern over State Standard Plans
11. Figured or numerical dimensions govern over dimensions obtained by scaling.
12. 2023 State Standard Specifications and Revised Standard Specifications, Standard Special Provisions, and Plans
13. City of Goleta Construction Specifications
14. County of Santa Barbara Engineering Design Standards
15. Where provisions of codes, safety orders, Contract Documents, referenced manufacturers' specifications or industry standards are in conflict, the more restrictive and higher quality shall govern.
16. Addenda shall take precedence over all Sections referenced therein. Figure dimensions on Drawings shall take precedence over general Drawings.

ORGANIZATION

Special provisions are under headings that correspond with the main-section headings of the *State Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *State Standard Specifications*.

Each special provision begins with a revision clause that describes or introduces a revision to the *State Standard Specifications* as revised by any revised standard specification.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the *State Standard Specifications* for any other reference to a paragraph of the *State Standard Specifications*.

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DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to Section 1-1.06 ABBREVIATIONS:

APS	Accessible Pedestrian Signal
BIU	Bus Interface Unit
BMP	Best Management Practices
CA	California
CALC	Calculations
CCU	Central Control Unit
CFR	Code Of Federal Regulations
CSMP	Construction Site Monitoring Program
CMIS	Construction Management Information Software
CY	Cubic Yard
DZ	Dilemma Zone
EA	Each
EB	Eastbound
EPA	Effective Projected Area
EX	Existing
FAA	Federal Aviation Administration
FT	Feet
lb	Pound
LF	Linear Foot
MA	Mast Arm
METS	Department's Materials Engineering And Testing Services
MPH	Miles Per Hour
MTD	Santa Barbara Metropolitan District
MT'G	Mounting
N/A	Not Applicable
NAHC	Native American Heritage Commission
NB	Northbound
NOC	Notice Of Completion
NTP	Notice To Proceed
OSD	Office Of Structural Design On Screen Display
OSHA	Occupational Safety And Health Administration
P	Pedestrian Phase
(P)	Partial Payment
PCMS	Portable Changeable Message Sign
PDF	Portable Document Format
PM	Postmile
PRC	Public Resources Code
RRSNS	Retroreflective Street Name Sign
RSS	Revised Standard Specifications
SB	Santa Barbara Southbound
SCE	Southern California Edison
SD	Shop Drawings

SDLC	Synchronous Data Link Control
SF	Square Feet
SR	State Route
SY	Square Yards
TBD	To Be Determined
QA	Quality Assurance
QC	Quality Control
USFWS	United States Fish & Wildlife Service
WB	Westbound

Add or replace the various items of Section 1-1.07 DEFINITIONS:

Whenever in the State Standard Specifications, Special Provisions, Notice to Contractors, Proposal, Contract, or other contract documents, the following terms are used, the intent and meaning must be interpreted as follows:

Agency: City of Goleta
State: California Department of Transportation or City of Goleta to be interpreted by the Engineer
Department: City of Goleta
Director: City of Goleta Public Works Director
District: The Public Works Department, City of Goleta
When a submittal is to be made to METS or to OSD, submit the items to the Engineer unless otherwise noted.
Engineer: The Director of Public Works, City of Goleta, acting either directly or through properly authorized agent or consultants.
Final Completion: The date when the Work is 100% complete, including completion and acceptance of all punch list corrections, as built submittal, operation and maintenance manuals, warranty checklist, and plant establishment, as certified by the Engineer.

References to the Bidder's Exchange means the City of Goleta
References to Notice to Bidders means Notice to Contractors
References to the Department's *Certification Program for Suppliers of Asphalt* means Caltrans' *Certification Program for Suppliers of Asphalt.*
References to the Department's *Construction Site Best Management Practices (BMP) Manual* means Caltrans'.
References to the Department's *Construction Site Monitoring Program (CSMP) Guidance Manual* means Caltrans'.
References to the Department's Dispute Resolution Advisor Candidates List refers to Caltrans'.
References to the Department's Division of Construction Website means Caltrans'.
References to the Department's *Falsework Manual* means Caltrans' manual.
References to the Department's *Field Guide for Construction Site Dewatering* means Caltrans'.
References to the Department's *Field Guide to Partnering on Caltrans Construction Projects* means Caltrans'.
References to the Department's Materials Plant Quality Program means Caltrans'.
References to the Department's *Partnering Facilitator Standards and Expectations* means Caltrans'.
References to the Department's *Quality Control Manual for Hot Mix Asphalt Production and* Placements means Caltrans'.
References to the Department's *Soil and Rock Logging, Classification, and Presentation Manual means Caltrans'.*

References to the Department's *Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Plan* means the project SWPPP.
References to the Department's Traffic Operations Website means Caltrans' website.
References to the Department's *Transportation Permits Manual* means the Department's.
References to the Department's *Value Analysis Team Guide* means Caltrans'.
References to Geotechnical Services website means Caltrans' Website.
References to Geotechnical Services means the Engineer.
References to the METS Website means the Caltrans METS Website.

Replace the following glossary terms in Section 1-1.07B Glossary with:

Authorized Laboratory: Independent testing laboratory (1) not employed or compensated by any subcontractor or subcontractor's affiliate providing other services for the Contract and (2) authorized by Caltrans.

Bid Item List: List of bid items and the associated quantities. The verified Bid Item List is the Bid Item List with verified prices. The Contract Proposal of Low Bidder is the verified Bid Item List. After Contract award, interpret a reference to the Bid Item List as a reference to the verified Bid Item List.

California Test: Caltrans-developed test for determining work quality. For California Tests, go to the METS Web site.

Department: City of Goleta

Director: City of Goleta Public Works Director

Engineer: The Director of Public Works, City of Goleta, acting either directly or through properly authorized agent or consultants.

Material Source Facility Audit: Self-audit and a Caltrans audit evaluating a facility's capability to consistently produce materials that comply with Caltrans standards.

Plans: State Standard plans, revised standard plans, and project plans.

1. **State Standard Plans:** The 2023 Standard Plans of the Department of Transportation of the State of California.
2. **Revised Standard Plans:** The Revised Standard Plans of the Department of Transportation of the State of California.
3. **Project Plans:** Drawings specific to the project, including authorized shop drawings

Schedule:

1. **Baseline Schedule:** Initial schedule showing the original work plan starting on the date of Contract approval. This schedule shows no completed work to date and no negative float or negative lag to any activity.
2. **Updated Schedule:** Current schedule developed from the accepted baseline and any subsequent accepted update schedules through regular monthly review to incorporate actual past progress.

Specifications: State Standard Specifications, revised standard specifications, special provisions

1. **State Standard Specifications:** Specifications standard to Caltrans' construction projects. These specifications are in a book titled Standard Specifications 2023.
2. **Revised Standard Specifications:** New or revised standard specifications.
3. **Special Provisions:** Specifications specific to the project.

Structure Design: City of Goleta Department of Public Works

Add to Section 1-1.07B Glossary:

Caltrans: California Department of Transportation as defined in State and Highway Code Section 20 and authorized in State and Highway Code Section 90; its authorized representatives.
Office Engineer: City of Goleta
Project biologist: A USFWS-approved biologist provided by the City

1-1.12 MISCELLANEOUS

Make checks and bonds payable to the City of Goleta.

^^

2 BIDDING

Add to Section 2-1.01 GENERAL:

2-1.01 GENERAL

The bidder's attention is directed to the provisions in Section 2 BIDDING of the State Standard Specifications for the requirements and conditions which he/she must observe in the preparation of the proposal form and the submission of the bid.

Add Section 2-1.03A CONTRACTOR REGISTRATION:

2-1.03A OBTAINING PLANS AND SPECIFICATIONS

All Contract Documents and the Proposal Forms for bidding this project, may be obtained at PlanetBids at http://www.planetbids.com/. The service requires that the Contractor establish a username and password to download and/or order plans and specifications.

Replace *Reserved* in Section 2-1.05 with:

2-1.05 CONFLICT OF INTERESTS

In conformance with Public Contract Code Section 7106, a Noncollusion Affidavit is included in the Bid Book. Signing the Bid Book shall also constitute signature of the Noncollusion Affidavit.

The Contractor, sub-recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of Title 49 CFR (Code of Federal Regulations), Part 26 in the award and administration of US DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate. Each subcontract signed by the bidder must include this assurance.

Replace Section 2-1.06A General with:

2-1.06A General

The requirements specified in of the State Standard Specifications shall be replaced as follows: Bids must be submitted to the City of Goleta's Planet Bids portal as outlined in the Notice to Contractors and shall be submitted no later than the date and time of public submittal of proposals as specified in the Notice to Contractors. Any addenda to these Special Provisions or other contract documents shall be acknowledged where indicated.

2-1.06.A(1) QUESTIONS

Questions shall be submitted in writing to http://www.planetbids.com/ no later than (5) five working days prior to the bid opening. Questions submitted after the above listed deadline will not be addressed and will be returned to the Contractor. The City will respond in writing to the questions (3) three working days prior to the bid opening.

Add Section 2-1.10 A REQUIRED LISTING OF SUBCONTRACTORS:

2-1.10A REQUIRED LISTING OF SUBCONTRACTORS

The bidder's attention is directed to other provisions of said Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized Subcontractors or by making unauthorized substitutions.

A sheet for listing the Subcontractors, as required herein, is included in the Proposal.

Add Section 2-1.34A WARRANTY BOND:

Nothing in the Contract Documents shall be construed to limit, relieve or release the Contractor's, subcontractor's and/or equipment supplier's liability to the City for damages sustained as the result of latent defects in the equipment furnished or work performed. Further, nothing in the Contract Documents shall be deemed to be a waiver by the City of any rights or remedies, or time limits in which to enforce such rights or remedies, that it may have against the Contractor, subcontractors, suppliers of the equipment and work performed under the Contract Documents.

^^

3 CONTRACT AWARD AND EXECUTION

The bidder's attention is directed to the provisions in Section 3 CONTRACT AWARD AND EXECUTION of the State Standard Specifications and these Special Provisions.

Add Section 3-1.01A AWARD OF CONTRACT:

3-1.01A AWARD OF CONTRACT

The award of contract, if it is to be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed.

The project has been set up using a Base Bid/Alternate format. The City shall determine the lowest responsible, responsive bidder based on the lowest total of the Base Bid plus the Bid Alternates. The City, if it chooses to award, shall award the contract to the lowest responsible, responsive bidder based on the lowest total of the Base Bid plus the Bid Alternates. At its discretion, the City may award the contract for Base Bid only or Base Bid plus one or any/all alternatives. The Contractor must submit pricing for all Base Bid items and Bid Alternates shown in the Schedule of Bid Items. No response or a response of zero on any bid items will be deemed a non-responsive bid.

Bid Alternates shall include items from the Base Bid as required and may also incorporate additional work not included in the Base Bid scope. Bid Alternates modify, supplement, or expand upon the Base Bid, as specified in the contract documents. Work included in Bid Alternates shall conform to the requirements of the State Standard Specifications and these Special Provisions.

The bidder's attention is directed to the provisions in Section 3 CONTRACT AWARD AND EXECUTION of the State Standard Specifications and these Special Provisions for the requirements and conditions concerning award and execution of contract.

Bid protests shall be submitted as outlined in the Notice to Contractors.

The contract shall be executed by the successful bidder and shall be returned, together with the faithful performance and payment bonds, to the City so that it is received within ten (10) working days after the bidder has received the contract for execution. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed contract documents shall be delivered to the office of the City Clerk at 130 Cremona Drive, Suite B, Goleta, California 93117.

Replace Section 3-1.18 CONTRACT EXECUTION with:

3-1.18 CONTRACT EXECUTION

Attention is directed to Book 1 “Bid Book”. The successful bidder must sign the *Contract*.

Deliver to the office of the City Clerk at 130 Cremona Drive, Suite B, Goleta, California 93117.

1. Signed *Contract*
2. Faithful Performance and Payment bonds
3. Documents identified in Section V INSURANCE & BONDS of Book 1 “Bid Book”

The City must receive these documents within ten (10) working days after the bidder has received the contract for execution.

The bidder's security may be forfeited for failure to execute the contract within the time specified (Pub Cont Code §§ 10181, 10182, and 10183).

^^

4 SCOPE OF WORK

Add to Section 4-1.01 GENERAL:

4-1.01 GENERAL

The Project includes, without limitation, furnishing all necessary labor, materials, equipment and other incidental and appurtenant Work necessary to satisfactorily complete the Project, as more specifically described in the Contract Documents. This Work will be performed in strict conformance with the Contract Documents, permits from regulatory agencies with jurisdiction, and applicable regulations. The quantity of Work to be performed and materials to be furnished are approximations only, being given as a basis for the comparison of Bids. Actual quantities of Work to be performed may vary at the discretion of the Engineer. Major work components include installation of 2070 controllers, vehicle heads with 12” signal indications, yellow retroreflective backplates, mounting brackets, Accessible Pedestrian Signals (APS) pedestrian push buttons, installation of Advance Dilemma Zone Detector units and integration of Dilemma Zone operations and settings with City’s existing traffic management system, and implementation of Leading Pedestrian Interval (LPI).

Add Section 4-1.05C SIGNIFICANT CHANGES IN THE CHARACTER OF WORK:

4-1.05C SIGNIFICANT CHANGES IN THE CHARACTER OF WORK

1. The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.
2. If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.
3. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.
4. The term “significant change” shall be construed to apply only to the following circumstances:
    - When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
    - When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

Replace *Reserved* in Section 4-1.06A General with:

During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.

Upon written notification, the Engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

The Contractor will be allowed ten (10) working days from the notification of the Engineer's determination of whether or not an adjustment of the contract is warranted, in which to file a notice of potential claim in conformance with the provisions of Section 9-1.12 DISPUTES of the Goleta Construction Specifications ; otherwise the decision of the Engineer shall be deemed to have been accepted by the Contractor as correct. The notice of potential claim shall set forth in what respects the Contractor's position differs from the Engineer's determination and provide any additional information obtained by the Contractor. The notice of potential claim shall be accompanied by the Contractor's certification that the following were made in preparation of the bid: a review of the contract, a review of the "Materials Information,", and an examination of the conditions above ground at the site. Supplementary information, obtained by the Contractor subsequent to the filing of the notice of potential claim, shall be submitted to the Engineer in an expeditious manner.

Replace Section 4-1.07C Value Analysts Workshop with:

4-1.07C VALUE ANALYSIS WORKSHOP

Not Used

Add to Section 4-1.13 CLEANUP:

The Contractor shall remove all temporary pavement delineation.

Prior to submitting the final payment request, the Contractor shall remove all reference markings (i.e. USA markings, striping reference points, utility reference points) placed during the course of work.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items and no additional compensation will be allowed therefor.

^^

5 CONTROL OF WORK

Replace Reserved in Section 5-1.05 with:

5-1.05 ORDER OF WORK

The Contractor shall prepare a traffic control plan that conforms to Section 12 TEMPORARY TRAFFIC CONTROL of these Special Provisions.

The work shall be performed in conformance with the phases of construction shown on the Contractor's Traffic Control Plan. Non-conflicting work in subsequent phases may proceed concurrently with work in preceding phases.

The Contractor shall contact Underground Service Alert (U.S.A.) and to verify the location of all utilities in the vicinity of project area.

Coordinate, perform, and construct improvements per the Contract Documents. Contractor shall allow utility owners access to the work and shall schedule around interference by utility owners performing concurrent work.

Various items of concrete construction shall be installed or replaced shortly after demolition and removal has begun. In no case shall removal take place unless Contractor can complete installation and replacement within the following time periods.

Contractor shall coordinate with adjacent property owners/tenants in order to schedule demolition/construction activities in order to minimize impacts to residents and/or business operations.

Replace Reserved in Section 5-1.07 SUPERINTENDENCE with:

5-1.07 SUPERINTENDENCE

The Contractor shall designate in writing before starting work, an authorized representative who shall have the authority to represent and act for the Contractor. When the Contractor is comprised of two (2) or more persons, firms, partnerships or corporations functioning on a joint venture basis, the Contractor shall designate in writing before starting work, the name of one authorized representative who shall have the authority to represent and act for the Contractor.

The authorized representative shall be present at the site of the work at all times while work is actually in progress on the contract. When work is not in progress and during periods when work is suspended, arrangements acceptable to the Engineer shall be made for any emergency work which may be required. Whenever the Contractor or the Contractor's authorized representative is not present on any particular part of the work where it may be desired to give direction, orders will be given by the Engineer, which shall be received and obeyed by the superintendent or foreman who may have charge of the particular work in reference to which the orders are given. Any order given by the Engineer, not otherwise required by the specifications to be in writing, will on request of the Contractor, be given or confirmed by the Engineer in writing.

Replace *Reserved* in Section 5-1.08 INSPECTION with:

5-1.08 INSPECTION

All work is subject to inspection and approval by the Engineer. The Contractor shall notify the Engineer, along with all affected utility companies, two (2) working days in advance of the start of work to coordinate and schedule inspection staff.

The City will provide one (1) inspection and one (1) resident engineering cost on 8-hour day and 40-hour week basis only excluding designated City, State, or Federal holidays. The Contractor shall reimburse the City in the amount of $200.00 per hour for the actual cost of all inspection and $260 per hour for Resident Engineer cost in excess of the hours of work specified here and working hours or inspection performed during designated City,

State, or Federal holidays. Designated City holidays are listed in Section 7-1.02K(5) WORKING HOURS of these Special Provisions.

The Contractor shall provide a competent person during normal working hours to assist the Engineer, when required, in checking the Contractor's layout and for measuring quantities for payment purposes. The Contractor shall cooperate with the Engineer so that checking and measuring may be accomplished with the least interference to the Contractor's operations.

No additional compensation will be made to the Contractor for fulfilling these requirements.

Add to the end of Section 5-1.09A General:

The City encourages the project team to exhaust the use of partnering in dispute resolution before engagement of an objective third party.

For certain disputes, a facilitated partnering session or facilitated dispute resolution session may be appropriate and effective in clarifying issues and resolving all or part of a dispute.

To afford the project team enough time to plan and hold the session, a maximum of twenty (20) working days may be added to the Dispute Resolution Board referral time following the Engineer's response to a Supplemental Potential Claim Record.

To allow this additional referral time, the project team must document its agreement and intention in the dispute resolution plan of the partnering charter. The team may further document agreement of any associated criteria to be met for use of the additional referral time.
If the session is not held, the DRB referral time remains in effect as specified in Section 9-1.12 DISPUTES of the Goleta Construction Specifications and as specified herein.

Add to the end of Section 5-1.13A General:

In addition to the requirements of Section 5-1.13 SUBCONTRACTING of the State Standard Specifications, and in accordance with the requirements of Section 4100 to 4113, inclusive, of the Government Code, each bidder shall list in his proposal the name and business address of each Subcontractor to whom the bidder proposes to subcontract all or a portion of the work. Said list shall include a description of the portion of the work which will be done by each Subcontractor. A sheet for listing the Subcontractor's, as required, is included in the proposal.

Add to the end of Section 5-1.16 REPRESENTATIVE:

5-1.16 REPRESENTATIVE

In addition to the requirements of Section 5-1.16 REPRESENTATIVE of the State Standard Specifications, the Contractor must have a representative onsite at all times while work is in progress that has decision making authority.

Add to the end of section 5-1.20A General:

During the progress of the work under this Contract, work under the following contracts may be in progress at or near the job site of this Contract:

Coincident or Adjacent Contracts

Contract no.	County–Route–Post Mile	Location	Type of work
05-4611U4	05-SB-217-1.5/2.5	On Route 217 at Hollister Avenue Between PM 1.5 and 2.5	Interchange Roundabouts, Ekwill Street and Fowler Road Extensions
N/A 2025 Arterial Pavement Project	N/A	Various streets within the City of Goleta	Pavement rehabilitation
05-1H4304	SB-101-21.4/21.9	IN SANTA BARBARA COUNTY IN GOLETA FROM ROUTE 101/217 SEPARATION TO 0.3 MILE NORTH OF SAN JOSE CREEK BRIDGE	Replace Structural Concrete Bridges
05-1C3604	SB-217-0.9/1.4	On Route 217 near Goleta From 0.2 miles East of Goleta Slough Bridge to 0.4 Mile East of San Jose Creek Bridge	Replace Bridge

Add to Section 5-1.23 SUBMITTALS:

The Contractor is required to use Construction Management Information System Software (CMIS) for all project documents and submittals, at the Contractor's expense. All submittals shall be electronic submittals or computer-generated files. Handwritten submittals will not be accepted.

Add to Section 5-1.23A General:

REVIEW TIMEFRAME:

1. Except as may be provided in these Special Provisions, a submittal will be returned as specified in the State Standard Specifications.
2. When a submittal cannot be returned within the specified period, Engineer will, within a reasonable time after receipt of the submittal, give notice of the

date by which that submittal will be returned.

3. The Engineer's acceptance of progress schedule containing submittal review times less than those specified or agreed to in writing by Engineer will not constitute Engineer's acceptance of review times.
4. Critical submittals:
   a) Contractor will notify Engineer in writing that timely review of a submittal is critical to the progress of Work.
5. The Engineer will provide decision on request.
   a) Written acceptance of request.
   b) Written agreement by Engineer to reduce submittal review time will be made only for unusual situations.
   c) Written rejection of request.

SUBMITTAL REVIEW COSTS:

1. The City's cost for review of submittals for the same proposed materials, equipment or work shall be apportioned as follows:
   a. The cost of review of the initial submittal and the first revised submittal will be borne by the City.
   b. The cost to review all additional revised submittals after the first revised submittal will be charged to the Contractor at $2,500 per submittal.
   c. If a submittal is approved and the Contractor elects to submit an alternate item for review for the same application, the Contractor shall be responsible for the review costs for the alternate submittal at $2,500 per submittal.

Delete item 2 in the list in the 3rd paragraph of Section 5-1.23B(2) Shop Drawings.

Add to Section 5-1.23B(2) Shop Drawings:

Each electronic submission must:

1. Be in PDF format submitted through CMIS
2. Have a resolution of at least 300 dpi
3. Contain the following information in the subject line:
   3.1. "Shop Drawing Submittal"
   3.2. Contract number
   3.3. Bid item number

Use the following naming convention for PDF files the Contractor submits:
For shop drawings:
SD_Contract number _Bid item number_Submittal Name
Example: SD_12-345678_123_XXX.PDF
For shop drawings:
CALC_Contract number _Bid item number_Submittal Name
Example: CALC_12-345678_123_XXX.PDF

If submittal of more than 1 copy or set of shop drawings or calculations is specified, submit only 1 electronic copy.

After submitting the Contractor's electronic files, send a notification of the Contractor's electronic submittal to the Engineer. Include the names of the submitted files.

Upon completion of review, the City returns 1 electronic copy with the date of authorization.

Replace *Reserved* in Section 5-1.24 with:

CONTRACTOR'S DAILY REPORTS

The Contractor shall maintain daily job reports recording all significant activity on the project, including number of workers on site, names and job classification of employees, active construction equipment used, notable deliveries, work activities, delays, interruptions or any problems encountered.

The Contractor shall submit a Contractor's Daily Report form, for approval by the Engineer, to record this information and submit this form to the Engineer no later than 9:00 AM the following morning for the previous work day. A sample of the Contractor's Daily Report form is located within Appendix A of these Special Provisions. If this is not submitted on time, the City shall withhold $500/day from the Contractor's progress payment until this report is turned in.

If there is no work performed on any given day, the Contractor shall note the reasons for no work and submit a daily report to the Engineer on those days also.

Failure to stay current with daily reporting will be just cause for the Owner not processing a progress payment until reports are submitted.

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for the various contract items and no additional compensation will be allowed therefore.

Replace *Reserved* in Section 5-1.25 with:

5-1.25 RECORD DRAWINGS

The Contractor shall maintain a neat and accurate marked set of record drawings showing the final locations and layout of roadways, piping and conduit; structures; and other facilities. Maintain record drawings electronically on CMIS and grant access to the Engineer. Drawings shall be kept current weekly, with all work instructions and change orders, and construction adjustments. Drawings shall be subject to the inspection of the Engineer at all times and progress payments, or portions thereof, may be withheld if drawings are not accurate and current. Pipe material shall be added to drawings, if not denoted on contract drawings. Prior to acceptance of the work, the Contractor shall deliver to the Engineer one set of neatly marked record drawings in electronic format accurately showing the information required above.

Record drawings shall be submitted and approved by the Engineer in accordance with these Special Provisions.

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for the various contract items and no additional compensation will be allowed therefore.

Replace *Reserved* in Section 5-1.26 with:

5-1.26 CONSTRUCTION SURVEYS:

The Contractor shall be responsible to hire a licensed land surveyor to provide all surveys to control the lines, elevations and dimensions of the work in conformance with the plans. Any deviation from the lines, elevations and dimensions shown on the plans must receive prior approval from the Engineer. Where new construction connects to existing facilities, the Contractor shall check and establish the exact location prior to construction of the facility.

All stakes or marks will be provided by the Contractor as necessary to establish the lines and grades required for the completion of the work specified in the State Standard Specifications, on the plans, and in these Special Provisions.

The Contractor shall be responsible for the accuracy of his/her own layout work and shall be responsible and liable for the preservation of all established lines, grades and layout points. Stakes damaged or destroyed by the public or operations of the Contractor will be replaced at the Contractor's expense.

Preservation and protection of survey monuments and markers encountered along the line of the work shall conform to the following: The Contractor shall notify the Engineer in writing of monuments that will be encountered and shall not be removed or damaged. If a monument is determined by the Engineer to have been damaged or removed during the course work of the work by the Contractor and, notification is not made as described above, or markers are removed which are not in conflict with construction, the Contractor shall be responsible for the cost of referencing, resurvey, and replacement of the monument or marker. Replacement of Survey monuments and boxes shall be as set forth under Section 8771 of the California Business and Professions Code.

Replace Section 5-1.28 PROJECT SAFETY REVIEWS with:

5-1.28 PROJECT SAFETY SUPERVISOR AND REVIEWS

The Contractor's assigned project safety supervisor must perform and document project safety reviews with the Engineer:

Safety Supervisor – The Contractor shall appoint an employee as safety supervisor who is qualified and authorized to supervise and enforce compliance with the Contractor Safety Program. The Contractor shall notify the Engineer in writing prior to the commencement of work of the name of the person who will act as the Contractor's safety supervisor and furnish the safety supervisor's resume to the Engineer.

The Contractor will, through and with its Safety Supervisor, ensure that all of its employees and its Subcontractors of any tier, fully comply with the Contractor Safety

Program. The Safety Supervisor shall be a full-time employee of the Contractor whose responsibility shall be for supervising compliance with applicable safety requirements on the Project site and for developing and implementing safety training classes for all job personnel. The City shall have the authority to require removal of the Contractor's Safety Supervisor if the representative is judged to be improperly or inadequately performing the duties; however, this authority shall not in any way affect the Contractor's sole responsibility for performing this work safely, nor shall it impose any obligation upon the City to ensure the Contractor performs its work safely.

Safety and Protection – The Contractor shall take all necessary precautions to prevent damage, injury, and loss to:

1. All employees on the Project, employees of all subcontractors, and other persons and organizations who may be affected thereby;

2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, wetlands, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify property owners of adjacent property and of underground facilities and utility districts when prosecution of the Work may affect them and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor, supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the Contractor.

Your assigned project safety supervisor must perform and document project safety reviews with the Engineer:

1. At least 3 working days before the start of job site activities
2. Every other week after the start of job site activities and after any incident that results in serious injury, illness, or fatality to your personnel, subcontractor's and supplier's personnel, and any other persons present at the job site at the request of you or your subcontractors
3. Submit project safety review documentation to the Engineer and correct deficiencies within three (3) working days from the day the project safety review is completed or sooner as directed by the Engineer

Upon Contract acceptance, your project safety supervisor must participate in a safety meeting with the Engineer.

Replace Section 5-1.29 JOB HAZARD ANALYSIS with:

5-1.29 JOB HAZARD ANALYSIS

Contractor Safety Program – The Contractor shall establish, implement, and maintain a written injury prevention program as required by Labor Code Section 6401.7 and CA Code of Regs § 3203(a)(4) and 1511(b). Before beginning the Work, the Contractor shall file with the Engineer a written Contractor Safety Program that provides for the implementation of all of the Contractor's safety responsibilities and a job hazard analysis in connection with the Work at the Project site and the coordination of that program and its associated procedures and precautions with safety programs, precautions and procedures of each of its Subcontractors and other Contractors performing work at the Project site. The Contractor shall be solely responsible for initiating, maintaining, monitoring, coordinating, and supervising all safety programs, precautions, and procedures in connection with the Work and for coordinating its programs, precautions, and procedures of the other Contractors and Subcontractors performing the Work at the Project site. The Contractor Safety Program should contain all the necessary elements for the Contractor to administer its program on the Project site. At a minimum, this written Contractor Safety Program shall address the elements required by Labor Code Section 6401.7 and CA Code of Regs § 3203(a)(4).

Submit each job hazard analysis as an informational submittal. Each job hazard analysis must identify the following:

1. Work activity description
2. Existing and predictable hazards associated with the work activity
3. Hazard control measures, preventative, or corrective actions to be taken for the work activity

Submit each job hazard analysis at least five (5) working days before the start of a work activity. During the project safety reviews required under Section 5-1.28 PROJECT SAFETY SUPERVISOR AND REVIEWS of these Special Revisions, discuss job hazard analyses for active work activities and work activities planned to start within five (5) working days.

Submit a revised job hazard analysis when equipment or methods change results in a change to the hazards previously identified. Submit a revised job hazard analysis within one working day of the identified change.

Add to Section 5-1.32 AREAS FOR USE:

Personal vehicles of the Contractor's employees must not be parked on the traveled way or shoulders, including sections closed to traffic.

Add to Section 5-1.36 PROPERTY AND FACILITY PRESERVATION

The Contractor assumes full responsibility for the protection, security, and maintenance of the job site, including but not limited to materials, equipment, and existing facilities, from the time of Notice to Proceed (NTP) until Final Acceptance. Any loss, theft, or damage to materials, equipment, or the work itself shall be the contractor's sole responsibility and must be repaired or replaced at their expense.

The Contractor shall protect existing pavement, striping, manholes, utilities, sidewalks, curbs, gutter, curb ramps, valley gutters, and driveways at all equipment crossings. The Contractor shall provide materials to shore and brace excavation areas in order to prevent existing structures, private properties and permanent improvements from failure or damage during construction. If requested, provide shoring design calculations and details for review by the Engineer. Damage to existing structures, private properties, and permanent improvements due to construction work conducted by the Contractor shall be restored to existing or better condition with no additional cost to the City.

Add to the list in Section 5-1.36A General:

12. Existing hardscape
13. Retaining walls
14. Trees, shrubs, other plants
15. Irrigation facilities

Replace *Reserved* in Section 5-1.36C(2) with:

The Contractor is responsible for the care and protection of all materials and equipment until the completion and final acceptance of the work.
The Contractor shall provide protection to the project site against trespass, vandalism or theft during the Maintenance Period. Any damage caused by the lack of adequate site protection shall be repaired or replaced at no additional cost to the City.

Replace Section 5-1.43 POTENTIAL CLAIMS AND DISPUTE RESOLUTION with:

5-1.43 POTENTIAL CLAIMS AND DISPUTE RESOLUTION

City shall follow the dispute resolution process per Section 9-1.12 DISPUTES of the Goleta Construction Specifications and as specified herein. A Notice Regarding Assembly Bill 626 is located within Appendix B of these Special Provisions.

Replace the 2nd paragraph of Section 5-1.46 FINAL INSPECTION AND CONTRACT ACCEPTANCE with:

Immediately following the date the Engineer reports to the City Manager as work completed, the Contractor is relieved from:

Add to the end of Section 5-1.46 FINAL INSPECTION AND CONTRACT ACCEPTANCE:

A list of the remaining items (a punch list) will be prepared by the Engineer and given to the Contractor.

All punch list items shall be completed during the contract period. Failure to do so will not be considered an occasion of unavoidable delay. When all items have been completed to the satisfaction of the Engineer, the project will be submitted to the City Manager, who may accept the completed work.

The Contractor shall be responsible for restoring the proposed staging areas, the temporary access road, and any other areas temporarily impacted during construction evaluation to the work prior to the start of work. The project will not be accepted by the City until these areas are restored in kind to the satisfaction of the permits and acceptance of the Engineer. Before any work has begun, Contractor shall review the staging areas and access road with the Engineer to document their existing conditions.

Any paved areas shall be replaced with a structural section equal to or greater than the adjacent paved structural sections.

Any vegetated areas shall be replaced to its existing condition using planting similar to the adjacent undisturbed planting or as directed by the Engineer.

The costs for restoring of staging areas and access roads shall be included in the various items of work associated with this project and no separate payment will be made.

Add to Section 5-1.47 GUARANTEE:

The Contractor hereby agrees to make, at its sole expense, all repairs or replacements necessitated by defects in materials or workmanship, supplied under terms of the Contract Documents, and pay for any damage to other works resulting from such defects, which becomes evident within one (1) year after the date of acceptance of the Project as evidenced by the Notice of Completion recorded by the City. Unless otherwise provided in Contract Documents, the one (1) year warranty period is the shortest duration and such duration may be a longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents. The Contractor further assumes responsibility for a similar guarantee for all work and materials provided by subcontractors or manufacturers of packaged equipment components. The Contractor also agrees to indemnify, defend, and hold the City harmless from liability of any kind arising from damage due to said defects. The Contractor shall repair failed areas in full, from lane line to lane line. All work done on failed areas shall be done in accordance with these Special Provisions and as directed by the Engineer.

The Contractor shall, upon the receipt of notice in writing from the City, promptly make all repairs arising out of defective materials, workmanship, or equipment. The City is hereby authorized to make such repairs, and the Contractor and its surety shall be liable for the cost thereof, if fifteen (15) working days after the City giving of such notice to the Contractor, the Contractor has failed to make or undertake the repairs with due diligence. In case of emergency, where in the opinion of the City delay could cause serious loss or damage, repairs may be made without notice being sent to the Contractor, and the expense in connection therewith shall be charged to the Contractor, and/or its surety shall be liable for the cost thereof.

Prior to the expiration of the warranty period, the City reserves the right to hold a meeting and require the attendance of the Contractor. The purpose of the meeting is to review warranties, bonds and maintenance requirements and determine required repair or replacement of defective items. For the purpose of this paragraph, acceptance of the Work or a portion of the Work by the City, shall not extinguish any covenant or agreement

on the part of the Contractor to be performed or fulfilled under this Contract which has not, in fact, been performed or fulfilled at the time of such acceptance. All covenants and agreements shall continue to be binding on the Contractor until they have been fulfilled.

Nothing in the Contract Documents shall be construed to limit, relieve or release the Contractor's, subcontractor's and/or equipment supplier's liability to the City for damages sustained as the result of latent defects in the equipment furnished or work performed. Further, nothing in the Contract Documents shall be deemed to be a waiver by the City of any rights or remedies, or time limits in which to enforce such rights or remedies, that it may have against the Contractor, subcontractors, suppliers of the equipment and work performed under the Contract Documents.

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6 CONTROL OF MATERIALS

Add to the end of Section 6-1.01 GENERAL:

Material testing for this project will be provided by the Contractor as set forth in Section 6 CONTROL OF MATERIALS of the State Standard Specifications and the most current City of Goleta's Quality Assurance Program. The Contractor shall perform all testing to verify compliance with the Specifications of any and all materials furnished by the Contractor. The Contractor shall submit and receive the Engineer's approval of all compliance test results prior to incorporating materials into the project. The Contractor may elect to place material without the approved certificates of compliance and shall be at the Contractor's own risk. The Contractor shall notify the Engineer in writing to get the approval of placement, and $10,000.00 will be withheld from the Contractor's progress payment for each certificate of compliances until the certificate of compliances are submitted approved.

Samples, certificates of compliance, lists of materials and material sources, access to facilities, requests for testing and all other data relating to material testing shall conform to Section 6 CONTROL OF MATERIALS of the State Standard Specifications. Contractor shall provide the Engineer with five (5) working day's notice of the need for material testing.

Unless otherwise authorized by the Engineer, the substantiation of offers of equivalency must be submitted at the pre-construction meeting.

In the event Contractor furnishes any "or equal" material more expensive than that specified in the bid form, the difference in cost of such material so furnished will be borne by Contractor under Public Contract Code Section 3400.

Along with information supplied by the Contractor regarding equivalency of the proposed item, the Contractor shall clearly identify all deviations from the specified item. Deviations discovered by the Engineer after acceptance of an "or equal" item which were not identified by the Contractor with the submittal shall be cause for rejection of the "or equal" item. Contractor shall be due no additional compensation in time or

money for either acceptance or rejection of a proposed "or equal" item and subsequent replacement with the item specified. Contractor shall pay cost to City for analysis of any submittals which requires more than a general review of an "or equal" item. Changes that result from the Contractor's use of "or equal" items shall be the sole responsibility of the Contractor and he shall bear all time and cost impacts to the project.

"Or equal" products may be accepted by the Engineer upon submittal of the following information:

1. Product Date Design Criteria
2. Physical Properties Limitations of Process
3. Material Specifications List of Previous Projects
4. Installation Specifications Size of Completed Projects
5. Testing Methods List of Current Projects
6. Third Party Test Data
7. Size of Current Projects
8. References (All references must include current names and telephone numbers)
9. List of all deviations from the specifications or referenced product or materials

Additional testing may be required, and all costs for testing shall be borne by the Contractor.

Add to the end of Section 6-2.02A General:

Provide a descriptive outline of the Contractor's planned quality control program for this Project. This program would integrate and compliment the testing and inspection requirements found in the Contract Documents. Also describe how quality control would be managed, and by appendix, the resume of the Contractor's proposed QC Manager for this Project. The QC Manager can be the same person as the full-time Project Manager

1. Quality Control: All those planned and specified actions or operations necessary to produce a product or service that will meet requirements for quality as specified. Quality Control is the responsibility of the Contractor. The Contractor will monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

2. Quality Assurance: Those planned and systematic operations conducted to ensure that the operations and/or products incorporated into the project meet the project specifications. Quality Assurance encompasses oversight of the Contractor's Quality Control; verifying the results of Contractor testing; review of sampler, tester and laboratory qualifications; independent assurance sampling and testing, and inspection for conformance with the plans and specifications. Quality Assurance is the responsibility of the Contractor and Engineer.

3. Specific quality control requirements for the Work are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the Work beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

Quality Control Program:

1. Contractor shall develop a detailed written Quality Control (QC) Program for all Work required in the Contract Documents. The Contractor must submit for the Engineer's acceptance the Contractor's Quality Control Program (QC Program) for the entire Project before beginning any of the Work other than mobilization tasks to install temporary facilities. Except for mobilization, no other work will begin until the Engineer has accepted the Contractor's overall QC Program for the project. This QC Program must meet the objectives and requirements as defined herein. The QC Program must be specific to this Project and the Contract Documents.

2. In addition, the Contractor must submit for the Engineer's acceptance the Contractor's individual QC Plans before starting each area or division of the Work and/or new specialty trade to complete any portion of the Work. Work will be permitted to start only after the Engineer reviews and accepts Contractor's individual QC Plan. The individual QC Plans must identify all QC personnel, procedures, inspections, laboratories, testing equipment calibrations and certifications, tests, inspection/test hold points, instructions, sampling and testing records organized by date and type of material, reports, records, schedules, etc. specific for each area or division of the Work and/or new specialty trade to complete any portion of the Work.

3. Contractor shall appoint a full time QC Officer who will have the sole responsibility for the full-time oversight, implementation, and monitoring of the QC Program on this one project. Contractor shall maintain a log of required testing indicating the tests or sampling and test method required, location, frequency and responsibility.

4. Contractor shall provide written procedures defining methods of construction, control measures, and the performance of inspections and testing for the different types of Work.

5. Procedures shall detail "Hold Points," where Work shall not proceed until the required Quality Control functions are performed and documentation shows the Work meets the requirements of the Contract.

6. Procedures shall detail problem resolution steps and corrective actions in the event the Work does not meet the Contract Specifications.

7. Procedures shall be provided for all major activities of Work.

8. Contractor shall maintain evidence of activities affecting quality, including operating logs, records of inspections and tests, audit reports, material analyses, personnel qualification and certification records, procedures, and document review records.

9. Quality records shall be maintained in a manner that provides for timely retrieval, and traceability. Quality records shall be protected from deterioration, damage, or destruction.

10. Within 24 hours, notify the Engineer of any noncompliance identified by your QC program. The Contractor shall provide the City access to all QC records.

11. Submit QC test data and QC test results within two (2) working days of test completion.

Sampling and Testing

1. Certified Test Reports:
    a. When transcripts or certified test reports are required by the Contract Documents, Contractor shall, before delivery of Materials or Equipment
        1) Perform all testing in an approved independent laboratory or the manufacturer's laboratory.
        2) Submit for approval reports of shop tests within 30 days of testing.
        3) Certificates shall be submitted in the form of a letter stating 1 or more of the following:
            a) Manufacturer has performed all required tests.
            b) Materials to be supplied meet all test requirements.
            c) Tests were performed not more than 1 year prior to submittal of the certificate.
            d) Materials and Equipment subjected to the tests are of the same quality, manufacture, and make as those specified.
            e) Identification of the materials.
2. Manufacturer's Certificates:
    a. All Equipment shall be installed under either the continuous or periodic supervision of the manufacturer's authorized representative.
    b. Manufacturer shall certify that Equipment Perform all testing in an approved independent laboratory or the manufacturer's laboratory.
        1) Has been adjusted and initially operated in the presence of the manufacturer's authorized representative
        2) Operates in accordance with the specified requirements to the manufacturer's satisfaction.

Inspection and Testing Service

1. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the Engineer at the place of manufacture as specified in this bid document.
2. The City or an independent firm retained by the City will perform inspections, testing, and other services as required by the Engineer.
    a. The Contractor shall cooperate with the Engineer or independent firm and furnish samples of materials, design mix, equipment, tools, storage, and assistance as requested.
    b. The Contractor shall notify Engineer three (3) working days prior to the expected time for operations requiring inspection and laboratory testing services.
    c. Retesting required because of non-conformance to requirements shall be performed by the same independent firm on instructions by the Engineer. The Contractor shall be responsible for all costs including administrative, material testing, design and, engineering activities directly related to such retesting.

Installation

1. Inspection: The Contractor shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation and reject damaged and defective items.

2. Measurements: The Contractor shall verify measurements and dimensions of the Work, as an integral step of starting each installation.

3. Manufacturer's Instructions: Where installations include manufactured products, the Contractor shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

a. When manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

Full compensation for conforming to all requirements specified in this Section, “Control of Materials,” shall be considered as included in the contract price paid for other items of work and no additional compensation will be allowed.

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7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Add to Section 7-1.02I(2):

Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM (GOV. CODE, SECTION 12990)

The Contractor's attention is called to the "Nondiscrimination Clause", set forth in Section 7-1.01I(2), NONDISCRIMINATION of the State Standard Specifications, which is applicable to all nonexempt state contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt state construction contracts and subcontracts of $5,000 or more.

Add Section 7-1.02I(3) Nondiscrimination Statement:

7-1.02I(3) NONDISCRIMINATION STATEMENT

The contractor, subrecipient or subcontractor will never exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by 49 CFR 26 on the basis of race, color, sex, or national origin.

Replace the 1st item in the list of the 2nd paragraph of Section 7-1.02K(2) Wages with:

1. In Appendix C.

Add to Section 7-1.02K(2) Wages:

The possibility of wage increases is one of the elements to be considered by the Contractor in determining the bid, and will not under any circumstances be considered as the basis of a claim against the City on the contract.

The general prevailing wage rates determined by the Director of Industrial Relations, for the county or counties in which the work is to be done, are available in Appendix C. These wage rates are not included in the Proposal and Contract for the project. Changes, if any, to the general prevailing wage rates will be available at the same location.

Payment of prevailing wage must be documented through submission of certified payroll records for the prime Contractor and lower tier Subcontractors. Redacted certified payroll records will be submitted and reviewed through CMIS.

Add to Section 7-1.02K(5) Working Hours:

7-1.02K(5) WORKING HOURS

When school is in session, regular working hours may be altered by the Engineer to coincide with the school hours of operations. Working hours are Monday through Friday, 8:00 AM-6:00 PM.

If the Engineer approves overtime work, the City shall make deductions in the contractor progress payment. The Contractor shall reimburse the City as outlined in Section 5-1.08 INSPECTION of these Special Provisions for the actual cost of all inspection cost for work

requested outside of the contract working hours, Saturday and Sunday work, or inspection performed during designated City, State, or Federal holidays.

Requests for authorization to perform work outside the hours listed above shall be made in writing to the Engineer at least 72 hours in advance.

Designated City holidays are: New Year's Day (January 1st), Martin Luther King Day (third Monday in January), President's Day (third Monday in February), Memorial Day (last Monday in May), Juneteenth (June 19th) Independence Day (July 4th), Labor Day (first Monday in September), , Veteran's Day (November 11th), Thanksgiving Day (fourth Thursday in November), day after Thanksgiving Day (fourth Friday in November), Christmas Eve (December 24th), Christmas Day (December 25th), and New Year's (Eve December 31). When a designated holiday falls on a Saturday or Sunday, the preceding Friday or following Monday (respectfully) shall be a designated holiday.

Replace *Reserved* in Section 7-1.02P with:

The Contractor shall submit Federal Aviation Administration (FAA) form 7460-1. The Contractor shall comply with the FAA regulations including marking, lighting, and height restrictions. The form is located at the following website:

https://www.faa.gov/documentLibrary/media/Form/FAA_Form_7460-1_2017.pdf

Anticipate a height restriction of 100 ft above ground level and 129 ft above mean sea level. A draft of the FAA letter is provided as supplemental information.

The Contractor is responsible for filing a Notice of Alteration (FAA Form 7460-1) with the Federal Aviation Administration of any construction activity that would require notification. The City has determined that the permanent alterations are exempt from notification under section 77.9(a)(1) and 77.9(e)(1) as listed on the Form 7460-1 instructions.

Add to the end of Section 7-1.03 PUBLIC CONVENIENCE:

7-1.03 PUBLIC CONVENIENCE

Contractor shall notify the affected residents and businesses five (5) working days in advance of the start of work. Notification shall be done by using "door knob" type notices which shall include a description of the impending work, the date and time when traffic will be restricted, a date and time when parking will not be allowed along the street scheduled for renovation and forty-eight (48) hour window of "no landscape irrigation" prior to work. Contractor's representative name and phone number, City representative name and phone number, along with any other information requested by Engineer. A sample of the required notification is located within Appendix D of these Special Provisions.

Ten (10) working days prior to beginning construction, Contractor shall assist in notifying local schools, hospitals, ambulance services, police and fire departments, transit agencies, refuse collectors and Underground Service Alert (USA) of its schedule of work.

Such notices must be prepared and printed by Contractor, reviewed & approved by Engineer, and must be served by Contractor's representative in person to each residence

and business. Failure of Contractor to properly serve such notices will be cause for suspension of work until compliance with this requirement is achieved. No extension of time will be allowed to Contractor for lost time due to his failure to distribute such notices in a timely manner or from suspension of work due to non-compliance. Contractor must document delivery of notices by providing an e-mailed list of locations where notices were delivered including the date and time of completion, by the end of the day of delivery. Contractor must also e-mail a minimum of five clear photos (2-megapixel) showing completion of the delivery and parking restriction signs for each street notified. Contractor must send e-mail to an e-mail address as directed by Engineer.

If for any reason the work is delayed or rescheduled after the required notifications have been issued, the Contractor shall re-date the signs affected, notify residents and businesses of the change via a new “door knob” notice, and re-contact the local services and agencies. If the work is delayed more than five (5) working days, the Contractor shall remove the signs and place re-dated signs two working days (five working days prior to work beginning on a Monday or Tuesday) in advance of the work. Contractor is responsible for and must deliver public notification for all phases of the work. Contractor must submit for approval all notices for content and delivery schedule two weeks prior to actual delivery.

Contractor shall furnish and place “No Parking” signs, 12 inches by 18 inches minimum size and approved by the Engineer, throughout the area of work at fifty-foot intervals 72 hours (three (3) working days prior to work beginning on a Monday or Tuesday) prior to the start of construction. In rural areas, the signs shall be placed at intervals not to exceed 400 feet. The signs shall include the date and time during which parking is prohibited. A sample of the temporary “No Parking” signs is located within Appendix E of these Special Provisions. The Contractor shall remove these signs immediately when they are no longer needed. The signs shall post the city ordinance referencing towing of vehicles illegally parked.

Replace the 13th paragraph of Section 7-1.04 PUBLIC SAFETY with:

Equipment must enter and leave the highway via existing ramps and crossovers and must move in the direction of traffic. All movements of workers and construction equipment on or across lanes open to traffic must be performed in a manner that do not endanger the public. The Contractor’s vehicles or other mobile equipment leaving an open traffic lane to enter the construction area must slow down gradually in advance of the location of the turnoff to give the traffic following an opportunity to slow down. When leaving a work area and entering a roadway carrying traffic, the Contractor’s vehicles and equipment must yield to traffic. Compensation for flaggers, used for all movement of workers and construction vehicles and equipment on or across lanes open to traffic, is included in the bid items of work involved.

Add to the end of Section 7-1.04 PUBLIC SAFETY:

Contractor shall cooperate with and notify the local police and fire departments, school districts, Refuse, ambulance services, and Public Works Street Division of proposed construction operations two (2) working days before work is to begin.

The Contractor shall be responsible to notify and coordinate their schedule with schools that may be in or adjacent to the projects area.

All work must be coordinated with the Traffic Control Plan, Project Schedule, Contract Period, Submittals and other requirements of these Contract Documents.

Contractor must maintain a minimum of one lane, not less than 12 feet wide, in each direction of travel at all times.

All movements at intersections must be maintained.

No lanes may be closed outside working hours.

To allow for adequate intersection inspection of the work by City and minimize impacts on surrounding neighborhoods the following contract items shall have the hours of work restricted as follows:

1. Various items of concrete construction: No concrete shall be delivered prior to 8:00 a.m. and all concrete shall be placed prior to 3:00 p.m.

2. Early morning activities: No heavy construction activities or motorized or electric equipment shall be used prior to 8:00 a.m.

3. Certain streets near schools require work hour restrictions: The streets shown in Appendix F "School Zone Work Hour Restriction Map" and their associated schools are listed below. Contractor shall coordinate work in school zones by notifying schools and Engineer two weeks in advance of construction and not performing work during the restricted hours. Contractor shall not perform any work on the streets identified in the "School Zone Work Hour Restriction Map" before 8:30 a.m. and from 2:30 p.m. to 3:30 p.m.

4. Contractor may request exceptions by submitting a traffic control plan to Engineer for approval that shows that school pedestrians, bicycles, and vehicular traffic will not be adversely affected by the work. Requested exception does not guarantee excepted work will be allowed.

    i. Elementary Schools:
        - Brandon School - 195 Brandon Drive; (805) 571-3770
        - Ellwood - 7686 Hollister Avenue; (805) 571-3774
        - Kellogg - 475 North Cambridge Drive; (805) 681-1277
        - La Patera - 555 North La Patera Lane; (805) 681-1280
        - Santa Barbara Charter School – 6100 Stow Canyon Road; (805) 967-6522

    ii. Middle School
        - Goleta Valley - 6100 Stow Canyon Road; (805) 967-3486
        - Santa Barbara Charter School – 6100 Stow Canyon Road;

(805) 967-6522

iii. Junior High School
- Goleta Valley - 6100 Stow Canyon Road; (805) 967-3486

iv. High School
- Dos Pueblos - 7266 Alameda Avenue; (805) 968-2541

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

Replace *Reserved* in Section 7-1.10 with:

7-1.10 PERMITS AND LICENSES

The Contractor shall obtain a business license from the City of Goleta prior to performing the work.

The Contractor may use water from Goleta Water District fire hydrants provided that the required permits are obtained and the Contractor has paid the associated fees.

Full compensation for conforming to all requirements specified in this section shall be considered as included in the contract price paid for other items of work and no additional compensation will be allowed therefor.

Add Section 7-1.12 COOPERATION:

7-1.12 COOPERATION

The Contractor shall cooperate with other forces constructing, relocating, and/or modifying facilities within the project limits. The Contractor shall coordinate his work with that of others, including utility companies, to prevent delays.

It is understood and agreed that the Contractor has considered in their bid all of the permanent and temporary utility appurtenances in their present and/or relocated positions as shown on the plans or as described in the specifications, and that no additional compensation will be allowed for any delays, inconvenience, or damages sustained due to any interference from said appurtenances or the operation of moving them. In addition, the Contractor shall not be allowed any additional compensation for delays of inconvenience sustained by the Contractor due to the City not having City-supplied equipment ready for pick-up. In such a case, the City may increase the number of working days for the contract.

Five (5) working days prior to beginning work, the Contractor shall provide to the Engineer, in writing, the name and telephone number of a representative who is directly involved with this project, and under the supervision of the Contractor. The Contractor's representative may be contacted by City staff during non-working hours including nights, weekends and holidays in the case of any public inconvenience and/or emergency relating to the Contractor's operations. The Contractor must address the public inconvenience and/or emergency within two (2) hours of notifications. The contact representative shall not be replaced by another company employee for the duration of the project without a written

explanation from the Contractor which has been approved by the Engineer. Should a new representative be used, they shall be knowledgeable of the project, the events, and/or revisions that may be occurring.

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

Add Section 7-1.13 RIGHTS IN LAND AND IMPROVEMENTS:

7-1.13 RIGHTS IN LAND AND IMPROVEMENTS

The Contractor is responsible for making arrangements to stock-pile and store equipment outside the public right of way as work is performed. Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders, private property, including any Section closed to public traffic.

The Contractor shall secure easements at their own expense for any areas required for plant sites, storage of equipment or materials, or for any other purposes. Before occupying any easement area, the Contractor shall provide the Engineer a written statement from each property owner verifying easement acquisition.

Staging areas located on private property shall be restricted to properties where the property owner has given written authorization to the Contractor for use of said property. The Contractor shall submit, at the Pre-Construction meeting, documentation of the written authorization from the property owner(s). Prior to final acceptance of the project, the Contractor shall provide the Engineer a written statement of release from each property owner that granted an easement for the Contractor’s operations.

If the Contractor elects to use City Right-of-Way for staging areas, a written request must be submitted to the Engineer, and written authorization must be obtained prior to use. The City reserves the right to charge the Contractor for the use of City Right-of-Way for stockpiling materials and storing equipment. Unauthorized use of City Right-of-Way by the Contractor without prior written approval will result in a fine of $1,000 per occurrence, which will be deducted from the Contractor's progress payments.

Full compensation for conforming to all requirements specified in this Section shall be considered as included in the contract price paid for various items of work and no additional compensation will be allowed.

**^^^

Weekly meetings will be held at the job site to discuss interfacing work, scheduling, problems, issues, and other issues related to the project. The meeting will have duration of approximately one hour. The meeting shall be held on the same working day of each week and at the same time of the day as mutually agreed to by Engineer and the Contractor. If not previously submitted, submit the following to the Engineer at the beginning of the meeting:

1. Daily workforce and equipment utilization and certified payroll for the preceding week; and
2. Projected daily work for the next three (3) weeks, in writing using computer software programs; no handwritten schedule will be accepted.

The meeting must include, at a minimum:

1. The Engineer;
2. Inspectors;
3. Utility Representatives
4. Contractor Foreman; and
5. The Contractors Responsible Scheduling Person.

In addition to daily reports required to substantiate the costs of claims and changes performed as force account work and for Disputed Work pursuant to Section 5-1.24 CONTRACTOR'S DAILY REPORTS of these Special Provisions, the Contractor must complete a daily report indicating locations worked, start/finish and milestone dates, total workforce per construction trade for each task, major equipment on site, Contractor's workforce and equipment, each Subcontractor's workforce and equipment, , materials delivered, weather conditions, safety (meetings, inspections, accidents, OSHA citations, actions taken) quality (meetings, inspections, tests), visitors, problems encountered, shortages, delays to planned progress, and any other related information involved in the performance of the work. The daily report must be completed on forms furnished to the Contractor, and submitted as described in Section 5-1.24 CONTRACTOR'S DAILY REPORTS of these Special Provisions. The report must comment on the daily progress and status of the work within each major component of the work.

No progress payments will be made prior to submission and acceptance of the Schedule by the Engineer.

Replace Reserved in Section 8-1.02C(3)(b) with:

8-1.02C(3)(b) SCHEDULE SOFTWARE LICENSES

The Contractor shall provide one licensed copy of the Microsoft Project scheduling software program used to produce the Contractor's Schedule to the Engineer, registered in the Engineers name. This licensed copy must be provided no later than five (5) working days after the NTP date and shall be fully licensed for the project duration and for six (6) months after the Notice of Completion (NOC) date.

Replace Section 8-1.02C(10) Payment with:

Full compensation for conforming to all requirements specified in this Section shall be considered as included in the contract price paid for other items of work and no additional compensation will be allowed.

Add to the end of Section 8-1.03 PRECONSTRUCTION CONFERENCE:

Prior to the start of construction, a preconstruction conference will be called by the Engineer for the purpose of discussing with the Contractor the scope of work, contract drawings, specifications, existing conditions, materials to be tested, equipment to be used, and all essential matters pertaining to the prosecution and the satisfactory completion of the project as required. The Contractor's representative at this conference shall include all major superintendents for the work and may include major Subcontractors and material suppliers.

Submit the following items to the Engineer for review at least five (5) working days prior to the preconstruction conference. Issuance of a NTP is dependent on the timelines and the proper level of detail of these submittals. Submittals shall include, but are not limited to:

1. Key Personnel, Telephone Numbers and Emergency Telephone Numbers
2. Project Construction Schedule per specifications
3. Public Notices (i.e. Notifications and Door Hangers)
4. Storage Site Locations
5. Traffic Control Plan / Detour Plans
6. Parking Restriction Signs
7. Noise mitigation measures
8. Dust Control measures
9. Waste Disposal Plan
10. Copies of pertinent permits, licenses, certifications or required approvals, per specifications
11. Required Inspections
12. Water Pollution Control Plan
13. Electrical and Signal Poles and Equipment
14. Contractor Safety Program
15. Contractor’s Quality Control Program

Replace *Reserved* in Section 8-1.04A with:

8-1.04A GENERAL

Attention is directed to the provisions in in Section 8-1.05 TIME and Section 8-1.10 LIQUIDATED DAMAGES of the State Standard Specifications and these Special Provisions. In addition to Section 8 PROSECUTION AND PROGRESS of the State Standard Specifications, the following shall apply:

All work shall be completed within **40 working days** from the date of the Notice to Proceed.

All punch list items shall be completed within the specified contract working days. The project will not be accepted until all punch list items are completed.

The Contractor shall pay to the City a sum per day as outlined in Section 8-1.10A

LIQUIDATED DAMAGES of these Special Provisions, for each and every calendar days' delay in finishing the work in excess of the number of working days prescribed above.

The Contractor shall be responsible to coordinate utilities relocations within the project area. Coordination of utilities within the project limits, including relocations and maintenance of existing facilities and additions thereto, shall be confirmed in writing by utility representatives and the Contractor at this conference or within five (5) working days thereafter.

NOTICE TO PROCEED

The Contractor shall begin work within fifteen (15) calendar days from the date of a "Notice to Proceed" letter, and the Contractor shall thereafter diligently prosecute the work to completion.

The Contractor shall notify the Director, in writing, of his or her intent to commence work at least seventy-two (72) hours before work is to begin. The notice shall specify the date on which the Contractor intends to begin work. If a project has more than one (1) location of work, a separate notice shall be given for each location.

Should the Contractor begin work in advance of issuance a "Notice to Proceed," any work performed in advance of such issuance shall be considered to have been done at Contractor's own risk and as a volunteer.

Notwithstanding any other provision of the contract, City shall not be obligated to accept or to pay for any work furnished by the Contractor prior to delivery of notice to proceed whether or not the City has knowledge of the furnishing of such work.
Submit no less than ten (10) days in advance of the commencement of the proposed work:

1. Specific date, hours and location of work;
2. Complete description of work to be done;
3. Number and type of equipment to be used;
4. Noise mitigation measures to be employed;
5. Distance of the nearest resident to the work;
6. Electrical, signal poles and equipment proof of order; and
7. Inspection required.
8. Job Hazard Analysis

Replace Section 8-1.04B Standard Start with:

8-1.04B Start of Job Site Activities

Contractor shall not begin any job site activities until the Notice to Proceed is issued. Notify the Engineer seventy-two (72) hours in advance of commencing job site activities.

Add to Section 8-1.05 TIME:

Contractor shall diligently prosecute the work to completion in accordance with the following schedule.

All work shall be completed within working days outlined in Section 8-1.04A GENERAL of these Special Provisions.

A punch list will be created after all bid items have been completed by the Contractor and it shall be the Contractor's responsibility to notify the Engineer in writing that all bid items have been completed. All punch list items shall be completed within the specified contract working days. The project will not be accepted until all punch list items have been completed.

A sample of the weekly statement of working days is in Appendix G You must use the most recent Caltrans weekly statement of working days which can be downloaded at https://dot.ca.gov/programs/construction/contract-time.

Add to the end of Section 8-1.06 SUSPENSIONS:

Responsibilities of Contractor During Suspension Periods

During periods that Work is suspended, Contractor shall continue to be responsible for the Work and shall prevent damage or injury to the project, provide for drainage, and shall erect necessary temporary structures, signs, or other facilities required to maintain the project and public safety and continue to perform in accordance with the safety requirements of the Contract Documents.

Add Section 8-1.06A SUSPENSIONS OF WORK ORDERED BY THE ENGINEER:

8-1.06A SUSPENSIONS OF WORK ORDERED BY THE ENGINEER

1. If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within seven (7) calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.
2. Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The Contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.
3. No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.
4. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

Add to the end of Section 8-1.07B Time Adjustments:

If the Engineer grants an adjustment in time for avoidable delay, the City shall have the right and authority to make deductions in payments due or to become due to the

Contractor as the City may deem just and reasonable for engineering, inspection, general supervision and overhead expenses.

8-1.07B(1) DELAYS TO CRITICAL PATH

Extensions of time, when granted, will be based upon the effect of delays to the critical path of the Work as a whole and will not be granted for non-controlling delays to included portions of Work unless it can be shown that such delays did, in fact, delay the progress of the Work as a whole.

8-1.07B(2) CONDITIONS TO TIME EXTENSIONS

The Contract Time or Milestones shall be extended only if, in the opinion of City, the Contractor is necessarily delayed in completing the Contract by a cause that meets all of the following conditions:

1. Such cause is beyond the control of Contractor, its Subcontractors, or material suppliers and is not due, in whole or in part, to the breach, negligence or fault of Contractor, its Subcontractors, or material suppliers;
2. Such cause arises after the Bid deadline and neither was nor could have been anticipated before the Bid deadline;
3. The effect of such cause could not be anticipated and avoided or mitigated by the exercise of all reasonable precautions, efforts and measures by the Contractor, including re-planning, scheduling and re-sequencing;
4. Such cause, in fact, results in a delay in the performance of the critical path of the Work, which is not thereon thereafter recovered;
5. Contractor has given notice thereof and provided the back-up documentation and analysis as required by the Contract Documents or as requested by the Engineer or City including but not limited to as-planned versus as-built schedules; and
6. The Contractor has exercised all reasonable precautions, efforts and measures to accomplish such changes in the Work without extending the date for completion.

8-1.07B(3) EXCUSABLE NON-COMPENSABLE DELAY

The Parties acknowledge that “Force Majeure” events, as defined in Section 1-1.07B GLOSSARY of the State Standard Specifications, are not within the responsibility or control of the City or are reasonably contemplated by the Parties to occur during the course of performance of the Work, which may impact the schedule for performance of the Work and may entitle Contractor to an extension of the Contract Time (“Excusable Non-Compensable Delays”). If the Critical Path of the Work is delayed by Excusable Non-Compensable Delays, provided that such delays did not result from the acts of Contractor and further provided that Contractor takes reasonable precautions to prevent further delays owing to such causes, then the Contract Time and/or Milestones shall be extended by a Contract Change Order.

An extension to the Contract Time and/or to the completion Milestone(s) identified in the Contract Documents shall be the Contractor’s sole remedy for Excusable Non-Compensable Delays. In no event shall Contractor be entitled to any compensation or recovery of any damages in connection with the Excusable Non-Compensable Delays defined above.

8-1.07B(4) EXCUSABLE COMPENSABLE DELAY

"Excusable Compensable Delay" means any delay to the critical path of the Work occurring after commencement and prior to completion of the Work:

1. which directly impacts the number of Working Days established in the Agreement for completion;
2. for which City is responsible, is unreasonable under the circumstances involved, and not within the contemplation of the Parties; and
3. is not due, in whole or in part, to the breach, negligence, or fault of Contractor, its Subcontractors, or Suppliers. Contractor's remedy for Excusable Compensable Delay shall be extension of the date for completion and Milestones subject to the Conditions to Time

Extensions identified above and reimbursement of actual costs directly resulting from such delays and markup in accordance with Section 9 PAYMENT of the State Standard Specifications.

8-1.07B(5) Inexcusable Delay

"Inexcusable Delay" means any delay in the critical path of activities required for completion of the Work resulting from causes other than those deemed to be an Excusable Non-Compensable Delay or an Excusable Compensable Delay by these Special Provisions. An Inexcusable Delay shall not entitle Contractor to either an extension of the date for completion or Milestones or to any additional compensation whatsoever.

8-1.07B(6) CONCURRENT DELAYS

To the extent the Contractor is entitled to an extension of time due to an Excusable Non-Compensable Delay or to an Excusable Compensable Delay, but the performance of the Work is independently suspended, delayed, or interrupted by an Inexcusable Delay, the delay shall be deemed to be a "Concurrent Delay."
In the case of a Concurrent Delay, Contractor shall be entitled to an extension of the Contract Time or Milestone(s) and Contractor shall not be entitled to any additional compensation whatsoever during the period of Concurrent Delay.

8-1.07B(7) CLAIM FOR ADDITIONAL TIME

Any claim for extension of time shall be made in writing within the time limits provided in Section 9-1.12 DISPUTES of the Goleta Construction Specifications and as specified herein. Within ten (10) calendar days after commencement of such delay the Contractor shall furnish the Engineer with detailed information concerning the circumstances of the delay, the number of days actually delayed, the appropriate Contract Document references, and the measures taken to prevent or minimize the delay including an as-planned versus as-built schedule. The Contractor acknowledges the extreme importance of promptly notifying and thoroughly documenting any request for time extension and further specifically acknowledges that the City will suffer extreme prejudice should Contractor fail in any way to comply with this requirement.

8-1.07B(8) Limits on Adjustment of Contract Time or Contract Sum for Material Shortages or Cost Escalation

No extension of Contract Time or adjustment of the Contract Price will be granted for a delay caused by a shortage of materials, unless the Contractor furnishes to the City documented proof that the Contractor has diligently made every effort to obtain such materials from every known source within reasonable reach of the Work. The Contractor shall also submit proof, in the form of network analysis data that the inability to obtain such materials when originally planned did, in fact, cause a delay in completion of the Work which could not be compensated for by revising the sequence of operations. Only the physical shortage of material will be considered under these provisions as a cause for extension of time. No consideration will be given to any claim for adjustment of the Contract Price on the basis that material could not be obtained at a reasonable, practical, or economical cost except as provided in 9-1.07 PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS of the State Standard Specifications.

Contractor is aware that governmental agencies, such as gas companies, electrical utility companies, water districts and other agencies, may be required to approve Contractor-prepared drawings or approve a proposed installation. Contractor has endeavored to include the cost of such anticipated delays and related costs which may be caused by such agencies in Contractor's Bid. Thus, Contractor is not entitled to make claim upon the City for damages or delays arising from the delays caused by such agencies. Furthermore, the Contractor has scheduled for such delays and is not entitled to an extension of time for delays caused by governmental agencies which Contractor must obtain approvals from. No extension of time will be granted under Section 8-1.07B LIMITS ON ADJUSTMENT OF CONTRACT TIME OR CONTRACT SUM FOR MATERIAL SHORTAGES OR COST ESCALATION of these Special Provisions for any delay to the extent: (1) that performance would have been so delayed by any Contractor induced causes, including but not limited to the fault or negligence of the Contractor or its Subcontractors; or (2) for which any remedies are provided for or excluded by any other provision of the Contract.

8-1.07B(9) No Release of Sureties

An extension of time granted shall not release the sureties from their obligations. Work shall continue and be carried on in accordance with all the provisions of the Contract and the Contract shall be and shall remain in full force and effect during the continuance and until the completion and the City's final acceptance of the Work covered by this Contract unless formally suspended or annulled in accordance with the terms of the Contract Documents.

8-1.07B(10) No Waiver by City

Neither the grant of an extension of time beyond the date fixed for the completion of any part of the Work nor the doing and acceptance of any part of the Work or materials specified by this Contract after the time specified for the completion of the Work, shall be deemed to be a waiver of any other rights and remedies under the Contract.

8-1.07B(11) City's Right to Order Extraordinary Measures to Mitigate Delay

In the event of delays to the project, the Engineer may order Extraordinary Measures as provided below.

8-1.07B(11)(a) Non-Compensable Extraordinary Measures
In the event the Engineer determines that the performance of the Work, or any portion thereof, has not progressed or reached the level of completion required by the Contract Documents due to causes within the control of Contractor, the Engineer shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional workforce, equipment, and facilities, and (3) submitting a recovery schedule for re-sequencing performance of the Work or other similar measures (hereinafter referred to collectively as Extraordinary Measures). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion as required by the Contract Documents. The Contractor shall not be entitled to an adjustment in the Contract Price in connection with the Extraordinary Measures required by the City under or pursuant to this Section. The City may exercise the rights furnished the City under or pursuant to this Section as frequently as the City deems necessary to ensure that the Contractor's performance of the Work will comply with the Contract Time, or interim completion date set forth in the Contract Documents. If Contractor or its Subcontractors fail to commence Extraordinary Measures within forty-eight (48) hours of City's written demand, the City may, without prejudice to other remedies, take corrective action at the expense of Contractor.

8-1.07B(11)(b) Compensable Extraordinary Measures
The Engineer, in its discretion, may issue a written request, to the Contractor requesting Contractor to submit an itemized proposal for Extraordinary Measures in order to achieve early completion of all or a portion of the Work, due to no fault of the Contractor, in a form acceptable to the City within ten (10) calendar days after the City's issuance of the request. Contractor's proposal shall be limited to direct labor cost (itemized hours and rates) and overhead and profit on the labor costs.

8-1.07B(12) Continuation of the Work
If the construction of the Work is not completed within the Contract Time, as may be extended by the City, the Contractor shall continue performing the Work in accordance with the Contract Documents until the completion of and the acceptance of the Work, or Contractor's performance is suspended or terminated.

Replace the 2nd paragraph of Section 8-1.07C Payment Adjustments with:
Losses for idle equipment, idle workers, and moving or transporting equipment are eligible for delay- related payment adjustments.

If the Contractor claims additional costs due to impacts from an excusable delay, the Contractor must comply with Section 5-1.42 REQUESTS FOR INFORMATION of the State Standard Specifications. Support the Contractor's claim for additional costs based on the difference between the cost to perform the work as planned and the cost to perform the work as changed as determined under Section 9-1.04 FORCE ACCOUNT of the State Standard Specifications. The City adjusts payment for the work portion that was impacted.

The Contractor may schedule completion of all of the Work, or portions thereof, earlier

than the Contract Time. Contractor, however, shall not be entitled to an adjustment of the Contract Price or to any additional costs or damages (including, but not limited to, claims for extended general conditions costs, home office overhead, jobsite overhead, and management or administrative costs), or any compensation whatsoever for Contractor's use of float and/or Contractor's inability to complete the Work earlier than the Contract Time for any reason whatsoever, including, but not limited to, delay caused by the City or other Excusable Compensable Delay. The City is exempt from liability for such costs, damages, and compensation.

Add to Section 8-1.10 LIQUIDATED DAMAGES:

Any progress payment made after the completion date shall not be construed as a waiver of liquidated damages.

The City may withhold liquidated damages before the accrual date if the anticipated liquidated damages may exceed the value of the remaining work.

Add to Section 8-1.10A General:

8-1.10A General

The Contractor shall pay to the City the sum of **$4,200 per day**, each and every calendar day's delay in finishing the work in excess of the number of working days prescribed in Section 8-1.04A GENERAL of these Special Provisions. Any progress payment made after the completion date shall not be construed as a waiver of liquidated damages.

For each and every day that any portion of the work remains unfinished after the time fixed for completion in the contract documents as modified by any extension of time, damage will be sustained by the City. Because of the difficulty in computing the actual material loss and disadvantage to the City, the Contractor and City agree that Contractor will pay the City the amount of damages set forth herein as representing a reasonable forecast of the actual damages which the City will suffer by the failure of the Contractor to complete the work within the stipulated time. The execution of the agreement shall constitute acknowledgment by the Contractor that he or she has ascertained and agrees that the City will actually suffer damages in the amount herein fixed for each and every day during which the completion of the work is avoidably delayed beyond the stipulated completion date.

Unless otherwise provided in the contract documents, the Contractor shall have no claim or right of action against the City for damages, costs, expenses, loss of profits, or otherwise because or by reason of any delay in the fulfillment of the contract within the time limited therefore occasioned by any cause or event within or without the Contractor's control, and whether or not such delay may have resulted from anything done or not done by the City.

Add to the end of Section 8-1.10B Failure to Complete Work Parts Within Specified Time:

The roadway section and or intersection shall be opened to traffic by the end of the roadways last working hours outlined in Section 7-1.02K(5) WORKING HOURS of these Special Provisions.

The roadway shall be opened to traffic at the end of the roadways last working hour. The Contractor shall pay to the City the sum of $1,000.00 per hour for each hour, or portion of an hour, after the last working hour are exceeded and that a traveled lane remains closed due to the Contractor's operations.

After the working hours of the roadways are exceeded by one (1) hour, the Contractor shall pay to the City the sum of $1,500.00 per hour for each hour, or, portion of an hour, that a traveled lane remains closed due to the Contractor's operations.

The Engineer will provide written notice of non-conformance to the Contractor within twenty-four (24) hours of the violation. All Contractor's equipment, machinery, traffic control, and personnel shall be off of the pavement and all lanes shall be open to traffic to be considered as full compliance.

Any progress payment made after the completion date shall not be construed as a waiver of liquidated damages.

The table below summarizes liquidated damages associated with all work part failures as described in these Special Provisions.

Work Park	Time Frame	Liquidated Damage	Reference Section
Failure to submit Contractor's Daily Report by specified time	For each day	$500 per day	5-1.24
Unauthorized use of City Right-of-Way	Per occurrence	$1,000 per occurrence	7-1.13
Failure to complete the Project within Contract Period	Notice to Proceed	$4,200 per each consecutive calendar day in excess of the Contract Period	8-1.10A
Failure to open roadway section and or intersection by the end of the roadway's last working hour	For each hour or part thereof	$1,000 per hour	8-1.10B
Failure to open roadway section and or intersection are exceeded by one (1) hour	For each hour or part thereof	$1,500 per hour	8-1.10B
Failure to address BMP deficiencies within specified timeframe	For each hour or part thereof	$500 per hour	13-4.03A

The table below summarizes administrative deductions associated with all work part failures as described in these Special Provisions.

Work Park	Time Frame	Liquidated Damage	Reference Section
Failure to perform work within specified working hours	Per every hour exceeding 8 hours per day or 40 hours per week	$260 per hour for Resident Engineer $200 for Inspector	5-1.08
Failure to receive an approved submittal after the first revision	Per submittal review after the first revision	$2,500 per review	5-1.23A
Alternate item for review after submittal is approved	Per submittal review	$2,500 per review	5-1.23A

Replace *Reserved* in Section 8-1.11 with:

8-1.11 UTILITY AND NON-HIGHWAY FACILITIES

Attention is directed to Section 15 EXISTING FACILITIES of the State Standard Specifications and these Special Provisions.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least three (3) working days, but not more than ten (10) working days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Southern California (USA)	(811) 422-4133 (800) 422-4133

The Contractor is cautioned that there may be underground and overhead utility facilities within the work area including telephone, electrical, cable television, gas, water and sanitary sewer transmission facilities, and storm drainage collection facilities.

Where possible conflict may exist, the Contractor shall verify the grade and location of existing underground utility prior to any work.

It is recognized by the City and the Contractor that the locations of existing utilities as shown on the plans are approximate, their actual location is unknown. Recognition is given to the fact there may be additional existing utilities unknown to either party to the contract. Location of utilities, as shown on the drawings, represents the best information obtainable from utility maps and information furnished by the various agencies and companies involved. The City warrants neither the accuracy nor the extent of the actual utilities involved.

In the event the Contractor discovers utilities not identified on the plans or by the utilities, the Contractor shall immediately notify the Engineer and the utility owners by the most expeditious method reasonably available and later confirm in writing.

The right is reserved to the City and the owners of facilities, or their authorized agents, to enter upon the City right of way for the purpose of making those changes that are necessary for the rearrangement of their facilities or for making necessary connections or repairs to their properties. The Contractor shall cooperate with forces engaged in this work and shall conduct operations in such a manner as to avoid any unnecessary delay or hindrance to the work being performed by the other forces. Wherever necessary, the work of the Contractor shall be coordinated with the rearrangement of utility or other non-highway facilities, and the Contractor shall make arrangements with the owner of those facilities for the coordination of the work.

Attention is directed to the possible existence of underground main or trunk line facilities not indicated on the plans or in these Special Provisions and to the possibility that underground main or trunk lines may be in a location different from that which is indicated on the plans or in these Special Provisions. The Contractor shall ascertain the exact location of underground main or trunk lines whose presence is indicated on the plans or in these Special Provisions, the location of their service laterals or other appurtenances, and of existing service lateral or appurtenances of any other underground facilities which can be inferred from the presence of visible facilities such as buildings, meters and junction boxes prior to doing work that may damage any of the facilities or interfere with their service.

If the Contractor cannot locate an underground facility whose presence is indicated on the plans or in these Special Provisions, the Contractor shall so notify the Engineer in writing. If the facility for which the notice is given is in a substantially different location from that indicated on the plans or in these Special Provisions, the additional cost of locating the facility will be paid for as extra work as provided in Section 4-1.05 CHANGES AND EXTRA WORK of these Special Provisions.

If the Contractor discovers underground main or trunk lines not indicated on the plans or in these Special Provisions, the Contractor shall immediately give the Engineer and the Utility Company written notification of the existence of those facilities. The main or trunk lines shall be located and protected from damage as directed by the Engineer, and the cost of that work will be paid for as extra work as provided in Section 4-1.05 CHANGES AND EXTRA WORK of these Special Provisions. The Contractor shall, if directed by the Engineer, repair any damage which may occur to the main or trunk lines. The cost of that repair work, not due to the failure of the Contractor to exercise reasonable care, will be paid for as extra work as provided in Section 4-1.05 CHANGES AND EXTRA WORK of these Special Provisions. Damage due to the Contractor's failure to exercise reasonable care shall be repaired at the Contractor's cost and expense.

Where it is determined by the Engineer that the rearrangement of an underground facility is essential in order to accommodate the Project and the plans and specifications do not provide that the facility is to be rearranged, the Engineer will provide for the rearrangement of the facility by other forces or the rearrangement shall be performed by the Contractor and will be paid for as extra work as provided in Section 4-1.05 CHANGES AND EXTRA WORK of these Special Provisions.. When ordered by the Engineer in writing, the Contractor shall rearrange any utility or other non-highway facility necessary to be rearranged as a part of the highway improvement, and that work will be paid for as extra work as provided in Section 4-1.05 CHANGES AND EXTRA WORK of the State Standard Specifications.

Should the Contractor desire to have any rearrangement made in any utility facility, or other improvement, for the Contractor's convenience in order to facilitate the Contractor's construction operations, which rearrangement is in addition to, or different from, the rearrangements indicated on the plans or in these Special Provisions, the Contractor shall make whatever arrangements are necessary with the owners of the utility or other non-highway facility for the rearrangement and bear all expenses in connection therewith.

The Contractor shall immediately notify the Engineer of any delays to the Contractor's operations as a direct result of underground main or trunk line facilities which were not indicated on the plans or in these Special Provisions or were located in a position substantially different from that indicated on the plans or in these Special Provisions, or as a direct result of utility or other non-highway facilities not being rearranged as herein provided (other than delays in connection with rearrangements made to facilitate the Contractor's construction operations or delays due to a strike or labor dispute). These delays will be considered right of way delays within the meaning of Section 8-1.09 DELAYS of the State Standard Specifications and compensation for the delay will be determined in conformance with the provisions in Section 8-1.07B TIME ADJUSTMENTS of the State Standard Specifications and these Special Provisions. The Contractor shall be entitled to no other compensation for that delay.

Any delays to the Contractor's operations as a direct result of utility or other non-highway facilities not being rearranged as provided in this Section 8-1.11 UTILITY AND NON-UTILITY HIGHWAY FACILITIES of these Special Provisions, due to a strike or labor dispute, will entitle the Contractor to an extension of time as provided in Section 8-1.07 DELAYS of the State Standard Specifications. The Contractor shall be entitled to no other compensation for that delay.

Add Section 8-1.13 A TERMINATION BY THE CITY FOR CAUSE:

8-1.13A Termination by the City for Cause

8-1.13A(1) Grounds

The City shall have the right to terminate the Contractor’s performance of the Work, in whole or in part, if:

1. Contractor fails to promptly commence the Work or unnecessarily or unreasonably delays the Work or improperly discontinues the diligent prosecution of the Work or abandons the Work;
2. Contractor refuses or fails to supply skilled supervisory personnel, an adequate number of properly skilled workers, proper materials, or necessary equipment to perform the Work in strict accordance with the Contract Documents, and the latest accepted schedule;
3. Contractor fails to make prompt payment of amounts properly due Subcontractors after receiving payment from the City;
4. Contractor disregards applicable laws, statutes, ordinances, codes, rules, regulations, or lawful orders of a public authority;
5. Contractor fails to resume performance of Work which has been suspended or stopped, within ten (10) working days after receipt of notice from the City to do so or (if applicable) after cessation of the event preventing performance;

6. Any representation or warranty made by Contractor in the Contract Documents or any certificate, schedule, instrument, or other document delivered by Contractor pursuant to the Contract Documents shall have been false or materially misleading when made;
7. After commencement of the Work the City becomes aware that the Contractor is using an ineligible Contractor, Subcontractor, or supplier who was barred from performing work or providing materials or services on City projects at the time of Bid;
8. Contractor fails to make payment to Subcontractors for materials or labor in accordance with the respective Contract Documents and applicable law;
9. The Contract is assigned or the Work is sublet otherwise than as specified in the Contract Documents;
10. Contractor otherwise is guilty of breach of a provision of the Contract Documents; or
11. Contractor materially fails to execute the Work in accordance with the Contract Documents or, in the City's opinion, is violating any of the terms of the Contract or is not executing the Contract in good faith or is not following instructions of the City as to additional force necessary in the opinion of the City for its completion within the required time.

8-1.13A(2) City's Rights Upon Termination of Contract for Cause: Notice to Cure and Notice of Termination for Default

When any of the reasons specified above exist, the City may, in addition to and without prejudice to any other rights or remedies of the City, issue a written notice to cure the default to the Contractor and its surety. The Contractor shall commence satisfactory corrective actions within five (5) working days after receipt of the notice to cure. If the Contractor fails to commence satisfactory corrective work within five (5) working days after receipt of the notice to cure, or to diligently continue satisfactory and timely correction of the default thereafter, the City will advise the performance bond surety of the default and that surety will be given fifteen (15) calendar days to arrange for completion of the Work in accordance with the Contract Documents by another Contractor or Contractors satisfactory to the City. Should the surety fail to effect satisfactory arrangements within said 15-day period, the City shall have the right to issue a notice of termination for default and to:

1. Exclude the Contractor from the Site;
2. Take possession of the Site and of all materials, equipment, tools and construction equipment, and machinery thereon owned by the Contractor;
3. Suspend any further payments to Contractor;
4. Accept assignment of subcontracts pursuant to Section 5-1.13 SUBCONTRACTING of the State Standard Specifications and these Special Provisions of the State Standard Specifications; and
5. Finish the Work by whatever reasonable method the City may deem expedient.

When the City terminates the Contractor's performance of the Work for one of the reasons stated in Section 8-1.13A TERMINATION BY THE CITY FOR CAUSE of these Special Provisions, the Contractor shall not be entitled to receive further payment until the Work is finished.

The City shall charge the cost to complete the Work, including, but not limited to, protection, investigation, labor, services, equipment, materials, permits, fees, supervisory, and administrative costs to Contractor and its performance bond surety. If the unpaid balance of the Contract Price is less than all costs of finishing the Work, including compensation for the City's services and expenses made necessary thereby, and other damages incurred by the City and not expressly waived, the Contractor shall pay the difference to the City. This obligation for payment shall survive termination of the Contract. If the unpaid balance of the Contract Price is greater than all costs of finishing the Work, including compensation for the City's services and expenses made necessary thereby, the Contractor shall receive payment for Work properly performed by Contractor for which payment was not made previously; any excess amounts shall be retained by the City.

Upon receipt of the written notice of termination for default, the surety shall immediately assume all rights, obligations and liabilities of the Contractor under the Contract. If the surety fails to protect and maintain the work site, the City may do so, and may recover all costs incurred. The surety shall notify the City that it is assuming all rights, obligations and liabilities of the Contractor under the Contract. Within fifteen (15) working days of receipt of the written notice of termination for default, the Surety shall submit to the City a written plan detailing the course of action it intends to take to remedy the default. The City will review the plan and notify the surety if the plan is satisfactory. If the surety fails to submit a satisfactory plan, or if the surety fails to maintain progress according to the plan accepted by the City, the City may, upon 48 hours written notice, exclude the surety from the premises, take possession of all material and equipment, and complete the Work in any way the City deems to be expedient. The cost of completing the Work by the City shall be charged against the surety and may be deducted from any monies due, or which would become due, the surety. If the amounts due under the Contract are insufficient for completion, the surety shall pay to the City, within thirty (30) days after the City submits an invoice, all costs in excess of the remaining Contract Price. The surety will be paid for completion of the Work in accordance with Section 9 PAYMENT of the State Standard Specifications and these Special Provisions, less the value of damages caused to the City by acts of the Contractor.

8-1.13A(3) Erroneous Termination

If it has been adjudicated or otherwise determined that the City has erroneously or negligently terminated the Contractor for cause, then said termination shall automatically convert to a termination by the City for convenience as set forth in Section 8-1.13B TERMINATION BY THE CITY FOR CONVENIENCE of these Special Provisions.

8-1.13A(4) Acceptance of Incomplete or Non-Conforming Work

In lieu of the provisions of this Section for terminating the Contractor's performance, the City may pay the Contractor for the portion of Work completed according to the provisions of the Contract Documents and may treat the incomplete Work as if they had never been included or contemplated by this Contract, in which case the Contract Price will be reduced by the value of the deleted Work determined in accordance with Section 4-1.05 CHANGES AND EXTRA WORK of the State Standard Specifications and these Special Provisions. No claim under this provision will be allowed the Contractor for overhead or prospective profits on Work not completed by the Contractor.

8-1.13A(5) Adequate Financial Assurances

It is recognized that if Contractor is adjudged a bankrupt or makes a general assignment for the benefit of creditors, or if a receiver is appointed for the benefit of its creditors, or if a receiver is appointed on account of Contractor's insolvency, this could impair or frustrate Contractor's performance of the Work. Accordingly, it is agreed that upon the occurrence of any such event, the City shall be entitled to request of Contractor, or its successor in interest, adequate assurance of future performance in accordance with the terms and conditions hereof. Failure to comply with such request within five (5) calendar days of delivery of the request shall entitle the City to terminate the Contract and to the accompanying rights set forth above. Pending receipt of adequate occurrence of performance and actual performance in accordance therewith, the City shall be entitled to proceed with the Work with its own forces or with other Contractors on a time and material or other appropriate basis, the cost of which will be backcharged against the Contract Price.

8-1.13B Termination by the City for Convenience

The City may, at any time, terminate the Contractor's performance of the Work, in whole or in part, for the City's convenience without regard to Contractor's fault or breach upon fourteen (14) calendar days' written notice to Contractor.

In the event that the City terminates Contractor's performance of the Work for convenience, Contractor agrees to waive any claims for damages, including, but not limited to, home office overhead, loss of anticipated profits on account thereof, and as the sole right and remedy of Contractor, the City shall pay Contractor in accordance with Section 8-1.14E PAYMENT ADJUSTMENT FOR TERMINATION of these Special Provisions. The provisions of the Contract, which by their nature survive final acceptance of the Work, shall remain in full force and effect after such termination to the extent provided in such provisions.

8-1.13C Contractor's Duties Upon Termination

Upon receipt of written notice from the City of such termination for cause or for the City's convenience, the Contractor shall, unless the notice directs otherwise, do the following:

1. Cease performance of the Work to the extent specified in the notice;
2. Cooperate with the City to secure the site and demobilize in a safe and orderly fashion;
3. Take actions necessary, or that the City may direct, for the protection and preservation of the Work;
4. Except for Work directed to be performed in the notice, incur no further costs and enter into no further subcontracts and purchase orders;
5. If requested by the City, assign to the City, in the manner and to the extent directed, all of the right, title and interest to the Contractor under the subcontracts, and the City shall have no liability for acts, omissions or causes of action resulting therefrom which accrued prior to the date of termination and assignment, which liability shall remain with the Contract; and
6. Turn over to the City, as soon as possible, but not later than thirty (30) days after receipt of such termination notice, the originals of all of the Contractor's records, files, documents, drawings and any other items relating to the project, whether located on the project site, at the Contractor's office or elsewhere.

Replace Section 8-1.14E Payment Adjustment for Termination with:

8-1.14E Payment Adjustment for Termination

If the City issues a termination notice, the Engineer determines the payment for termination during the performance period, from contract approval date to contract acceptance date, based on the following:

1. Direct cost for the work performed:
   - 1.1. Including:
     - 1.1.1. Mobilization
     - 1.1.2. Demobilization
     - 1.1.3. Securing the job site for termination
     - 1.1.4. Losses from the sale of materials
   - 1.2. Not including:
     - 1.2.1. Cost of materials you keep
     - 1.2.2. Profit realized from the sale of materials
     - 1.2.3. Cost of material damaged by:
       - 1.2.3.1. Act of God
       - 1.2.3.2. Act of a public enemy
       - 1.2.3.3. Fire
       - 1.2.3.4. Flood.
       - 1.2.3.5. Governor-declared state of emergency
       - 1.2.3.6. Landslide
       - 1.2.3.7. Tsunami
     - 1.2.4. Other credits
2. Cost of remedial work, as estimated by the Engineer, is not reimbursed.
3. Allowance for profit not to exceed 4 percent of the cost of the work performed where a likelihood of having made a profit had the Contract not been terminated is shown.
4. Material handling costs for material returned to the vendor or disposed of as ordered.
5. Costs in determining the payment adjustment due to the termination, excluding attorney fees and litigation costs.
6. Overhead costs.

Termination of the Contract does not relieve the surety of its obligation for any just claims arising out of the work performed.

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9 PAYMENT

Add to the end of Section 9-1.02 MEASUREMENT:

Payment for all work bid at a price per unit of measurement will be based upon actual quantities of work as measured upon completion. The City does not expressly or by implication agree that the actual amount of work or materials of any class will correspond to the estimated quantities given in the proposal. The Contractor shall make no claim for anticipated profits, or loss of profit, for damages, or for any extra payment whatever because of any difference between the amount of work actually done or materials furnished and the estimated amount.

Add to the end of Section 9-1.03 PAYMENT SCOPE:

The items bid on a "lump sum" basis shall result in a complete structure, operating plant, or system, (including all warranty documents and product and operating manuals) in satisfactory working condition in respect to the functional purpose of the installation and no extra compensation will be allowed for anything omitted but implied. Full compensation for additional materials and labor, whether or not shown on the drawing or specified in the State Standard Specifications or these Special Provisions, which are necessary to complete all the work will be considered as included in the lump sum price paid for the work, and no additional compensation will be allowed.

Add Section 9-1.03A Prompt Progress Payment to Subcontractors:

9-1.03A PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

A prime contractor or subcontractor shall pay any subcontractor not later than five (5) working days of receipt of each progress payment in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The five (5) working days is applicable unless a longer period is agreed to in writing. Any delay or postponement of payment over thirty (30) days may take place only for good cause and with the agency's prior written approval. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanction and other remedies of that section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

Replace *Reserved* in Section 9-1.12 with:

9-1.12 PROMPT PAYMENT

The City shall make all project progress payment within thirty (30) days after receipt of an undisputed, complete and properly submitted payment request from the contractor on a construction contract. If the local agency fails to pay promptly, the local agency shall pay interest to the contractor, which accrues at the rate of ten (10) percent per annum on the principal amount of a money judgment remaining unsatisfied and pro-rated as necessary. Upon receipt of the payment request, the local agency shall act in accordance with both of the following:

1. The local agency shall review each payment request as soon as feasible after receipt to verify it is a proper payment request.

2. The local agency must return any payment request deemed improper or incomplete by the local agency to the contractor as soon as feasible, but not later than seven (7) days, after receipt. A request returned pursuant to this paragraph shall include documentation setting forth in writing the reasons why it is an improper payment request.

Mobilization shall be as defined in Section 1-1.07B GLOSSARY of the State Standard Specifications and include the furnishing and providing for regular maintenance of

temporary sanitary facilities on the job for the duration of the project. Failure to comply with this requirement will result in withholding of mobilization payments in the amount deemed appropriate by the Engineer.

9-1.12A PAYMENT

The contract lump sum price paid for **"Mobilization/Demobilization Bonds and Insurance"** shall include all costs associated with insurance, bonds, permits and fees, submittals, moving onto the jobs (mobilization) establishment of stockpile operations, moving off the job (demobilization) removal, clean up and restoration of stockpile area and limits of work, project phasing, supervision, coordination of concurrent work with other Contractors, meetings and other work indicated in the Contract Documents. Mobilization shall also include all costs to provide and mail/deliver required notification in advance and during the project as required by these Special Provisions, posting notices at the project site, and to provide response to residential and business concerns.

Replace Section 9-1.16A with:

9-1.16A PROGRESS PAYMENTS

After award of contract, the progress payments are due on the 15th of each month. The Contractor may request in writing that such monthly closure date be changed. The Engineer may approve such request when it is compatible with the City's payment procedure.

The Contractor shall submit all requests for progress payments using the forms included in Appendix H.

Form CC1: Progress Payment Request - This form is to be completed and signed by the Contractor and attached as a cover sheet to its request for payment. This will be mandatory on all contract requests.

Form CC2: Progress Payment Request – Detail - This form may be used by the Contractor to provide the detail required to verify payment quantities. (City will accept the Contractor's standard form if it provides the required information).

Form CC3: Quantity Change Verification Form - This form is required before any payment can be made based on actual quantities exceeding estimated quantities. At the conclusion of the contract, the City will issue a "Balancing Change Order" incorporating all quantity increases and decreases in the contract items of work.

9-1.16A(1) GENERAL

Based upon Applications for Payment submitted to the Engineer by the Contractor, the City shall make progress payments to the Contractor as provided below and elsewhere in the Contract Documents.

The period covered by each Application for Payment shall be one calendar month ending on the 20th day of the month.

The Contractor shall submit each Application for Payment to the Engineer by the last day of each month.

Pursuant to Section 9-1.02 MEASUREMENT of the State Standard Specifications and these Special Provisions, Contractor's Applications for Payment shall be based on the actual installed measured in place quantities for payment.

Applications for Payment shall indicate the percentage of completion of each portion of the Work for which a lump sum price is specified as of the end of the period covered by the Application for Payment.

9-1.16A(2) Applications for Payment

Contractor shall submit to the Engineer an Application for Payment (on Form CC2 provided in Appendix H for Work completed in accordance with the measurement of quantities. Such application shall be supported by such data substantiating the Contractor's right to payment as the Engineer may require.

By submitting an Application for Payment, the Contractor warrants that all Work has been performed in compliance with the Contract Documents, and that all quantities and amounts set forth therein accurately reflect the amount of Work completed during that pay period.

Each Application for Payment shall be reviewed by the Engineer as soon as practicable after receipt for the purpose of determining that the Application for Payment is a "proper and complete" payment request, accurately reflecting the value of Work completed and submitted with the documents required by the Contract Documents. An Application for Payment shall be deemed "proper" only if it is properly completed and submitted on the proper forms. The Engineer shall have the right to adjust any estimate of quantity and to subsequently correct any error made in any Application for Payment.
The City shall make payment to the Contractor not later than thirty (30) calendar days after the Engineer's verification and approval that an Application for Payment is undisputed and properly submitted.

9-1.16A(3) PAYMENTS FOR AUTHORIZED CHANGES

Applications for Payment may include requests for payment on account of changes in the Work that have been properly authorized by Contract Change Orders, which shall be itemized separately from base Contract Work.

9-1.16A(4) NO REQUESTS FOR DISPUTED SUBCONTRACTOR WORK

Applications for Payment shall not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason, or as to which an appropriate stop payment notice release has not been filed.

9-1.16A(5) CITY REVIEW AND PAYMENT

This Contract is subject to the following provisions of California Public Contract Code Section 20104.50 which provides as follows:

(a)(1) It is the intent of the Legislature in enacting this Section to require all local governments to pay their Contractors on time so that these Contractors can meet their own obligations. In requiring prompt payment by all local governments, the Legislature hereby finds and declares that the prompt payment of outstanding receipts is not merely a municipal affair, but is, instead, a matter of statewide concern.
(2) It is the intent of the Legislature in enacting this article to fully occupy the field of public policy relating to the prompt payment of local governments' outstanding receipts. The Legislature finds and declares that all governmental officials, including those in local government, must set a standard of prompt payment that any business in the private sector that may contract for services should look toward for guidance.
(b) Any local agency which fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted payment request from a Contractor or construction Contract shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of § 685.010 of the Code of Civil Procedure.
(c) Upon receipt of a payment request, each local agency shall act in accordance with both of the following:
(1) Each payment request shall be reviewed by the local agency as soon as practicable after receipt of the purpose of determining that the payment request is a proper payment request;
(2) Any payment request determined not to be a proper payment request suitable for payment shall be returned to the Contractor as soon as practicable, but not later than seven (7) days, after receipt. A request returned pursuant to this Section shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
(d) The number of days available to a local agency to make a payment without incurring interest pursuant to this Section shall be reduced by the number of days by which a local agency exceeds the seven-day return requirement set forth in paragraph (2) of subdivision (c).
(e) For purposes of this Article:
(1) A "local agency" includes, but is not limited to, a City, including a charter City, a county, and a City and county, and is any public entity subject to this part.
(2) A "progress payment" includes all payments due Contractors, except that portion of the final payment designated by the Contract as retention earnings.
(3) A payment request shall be considered properly executed if funds are available for payment of the payment request, and the Financial Officer of the local agency does not delay the payment due to an audit inquiry.
(f) Each local agency shall require that this article, or a summary thereof, be set forth in the terms of any Contract subject to this Article.

9-1.16A(6) Improper Application for Payment
In accordance with Section 20104.50 of the California Public Contract Code, any Application for Payment determined by the Engineer not to be a proper payment request, suitable for payment, shall be returned to the Contractor as soon as practicable, but not later than five (5) working days after receipt by the Engineer. An Application for Payment returned to the Contractor shall be accompanied by written documentation setting forth the reasons why the Application for Payment is not proper and not suitable for payment.

If an Application for Payment is so returned as improper, no payment will be due the Contractor. The City reserves the right to make partial payment of undisputed amounts.

9-1.16A(7) Interest on Undisputed Amounts
If the City fails to make any progress payment within thirty (30) calendar days after receipt of an undisputed and proper Application for Payment from the Contractor, the City shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the California Code of Civil Procedure. The number of days available to the City to make a payment without incurring interest shall be reduced by the number of days by which the Engineer exceeds the seven (7) day return requirement set forth above.

9-1.16A(8) Contractor Warranty of Title to Work
The Contractor warrants that title to all Work covered by an Application for Payment will pass to the City no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment, all Work for which payments have been received from the City shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests, or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. This provision shall not relieve the Contractor from the responsibility for materials and Work upon which payments have been made, the restoration of damaged Work or as waiving the right of the City to require the fulfillment of the terms of the Contract.

Each time the Contractor submits an Application for Payment, the Contractor herby certifies that each Application for Payment is complete and accurate regarding the quantities and amounts stated in the application, and that all Work for which the Contractor seeks payment have been provided in a manner that meets or exceeds the Contract requirements.

9-1.16A(9) Partial Payments
The City, once in each month, shall cause an estimate in writing to be made by the Engineer. The estimate shall include the total amount of work done and acceptable materials furnished, provided the acceptable materials are listed as eligible for partial payment as materials in these Special Provisions and are furnished and delivered by the Contractor on the ground and not used or are furnished and stored for use on the contract, if the storage is within the City and the Contractor furnishes evidence satisfactory to the Engineer that the materials are stored subject to or under the control of the City, to the time of the estimate, and the value thereof. The estimate shall also include any amounts payable for mobilization. Daily extra work reports furnished by the Contractor less than five (5) working days before the preparation of the monthly progress estimate shall not be eligible for payment until the following month's estimate.

- The amount of any material to be considered in making an estimate will in no case exceed the amount thereof which has been reported by the Contractor to the Engineer on State-furnished forms properly filled out and executed, including accompanying documentation as therein required, less the amount of the material incorporated in the work to the time of the estimate. Only materials to be

incorporated in the work will be considered. The estimated value of the material established by the Engineer will in no case exceed the contract price for the item of work for which the material is furnished.

- The City shall retain ten (10) percent of the estimated value of the work done and ten (10) percent of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for the fulfillment of the contract by the Contractor, except that at any time after twenty (20) percent of the work has been completed, if the Engineer finds that satisfactory progress is being made, the City may reduce the total amount being retained from payment pursuant to the above requirements to five (5) percent of the total estimated value of the work and materials and may also reduce the amount retained from any of the remaining partial payments to five (5) percent of the estimated value of the work and materials. In addition, on any partial payment made after ninety-five (95) percent of the work has been completed, the City may reduce the amount withheld from payment pursuant to the requirements of Section 9-1.16A(9) PARTIAL PAYMENTS of these Special Provisions, to such lesser amount as the City determines is adequate security for the fulfillment of the balance of the work and other requirements of the contract, but in no event will that amount be reduced to less than one-hundred and twenty-five (125) percent of the estimated value of the work yet to be completed as determined by the Engineer. The reduction will only be made upon the written request of the Contractor and shall be approved in writing by the surety on the Performance Bond and by the surety on the Payment Bond. The approval of the surety shall be submitted to the Disbursing Officer of the City; the signature of the person executing the approval for the surety shall be properly acknowledged and the power of attorney authorizing the person to give that consent must either accompany the document or be on file with the City.

- The City shall pay monthly to the Contractor, while carrying on the work, the balance not retained, as aforesaid, after deducting therefrom all previous payments and all sums to be kept or retained under the provisions of the contract. No monthly estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the contract.

- No monthly estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

- Attention is directed to the prohibitions and penalties pertaining to unlicensed contractors as provided in Business and Professions Code Sections 7028.15(a) and 7031.

Add to Section 9-1.16D Mobilization:

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

Mobilization also includes public notifications. Demobilization shall include, upon substantial completion of the contracted work, the removal of all signs, construction trailers, storage trailers and bins, temporary fencing, garbage, construction debris, equipment, utility services not scheduled to remain, portable toilet facilities, and all excess construction material not included and paid for within other base bid items. Work shall also include the repair, restoration and/or replacement of facilities damaged by the Contractor and/or Subcontractors and suppliers, including driveways, parking areas, streets, pipelines, and landscaping, and the submittal of Record Drawings. Work area shall be cleaned and restored to original condition or better as further shown on the plans.

The compensation for **"Mobilization/Demobilization Bonds and Insurance"** shall not exceed 10 percent of the total amount of all remaining bid items.

Add to Section 9-1.16E Withholds:

The City will hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the City, of the contract work, and pay retainage to the prime contractor based on these acceptances.

The Agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the Agency of the contract work and pay retainage to the prime contractor based on these acceptances.

The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within seven (7) days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the Agency. Any delay or postponement of payment may take place only for good cause and with the Agency's prior written approval. Any violation of these provisions shall subject the violating prime contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code and Section 10262 of the California Public Contract Code. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance and/or noncompliance by a subcontractor.

Any violation of these provisions of Prompt Progress Payment and Prompt Payment of Withheld Funds to Subcontractors shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified therein. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

The City will withhold five (5) percent of all monthly progress payments as retention to assure completion and payment of labor and materials. Retention will be released to the Contractor thirty-five (35) calendar days after the Notice of Completion is Approved by City Council.

In accordance with Public Contract Code Section 22300, securities shall be permitted in substitution of money withheld by the City to ensure performance under this contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the City, or with a state or federally charged bank in this state as the escrow agent, who shall then pay such moneys to the Contractor. Upon satisfactory completion of the contract, the securities shall be returned to the Contractor.

Alternatively, the Contractor may request and the City shall make payment of retentions earned directly to the escrow agent at the expense of the Contractor. At the expense of the Contractor, the Contractor may direct the investment of the payments into securities and the Contractor shall receive the interest earned on the investments upon the same terms provided for in this section for securities deposited by the Contractor. Upon satisfactory completion of the contract, the Contractor shall receive from the escrow agent all securities, interest, and payments received by the escrow agent from the City, pursuant to the terms of this section.

Securities eligible for investment under this paragraph shall include those listed in Government Code Section 16430, bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contract and the City. The Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon.

If an escrow agreement is used as security, it shall be null, void and unenforceable unless it is substantially similar to the form stated in Public Contract Code Section 22300.

Replace Section 9-1.16E(4) Stop Notice Witholds with:

The City may withhold payments to cover claims filed under Civil Code § 9000 et seq. Stop payment notice information may be obtained from City.

If at any time there shall be evidence of the existence, whether or not same has been asserted, of any mechanics lien, stop payment notice, or claim arising out of or in connection with the performance or default in performance of this Contract or any subcontract or supply contract entered into by Contractor to perform this Contract, and if the City might become liable for the discharge of or satisfaction of such mechanics lien, stop payment notice, or claim, then the City shall have the right to retain out of any payment then due or thereafter to become due, an amount sufficient to discharge such mechanics lien or stop payment notice or satisfy such claim and to reimburse the City and the representatives of the City for all costs and expenses in connection therewith, including attorneys' fees. Further, the City, in its sole discretion, shall have the right to discharge or satisfy such mechanics lien, stop payment notice, or claim and pay all costs and expenses in connection therewith if the Contractor does not have such mechanics lien, stop payment notice, or claim discharged or satisfied within ten (10) days after receiving notice thereof from the City or unless some other procedure for discharge or satisfaction of such lien or claim is agreed upon between the City and Contractor. If the amounts retained are insufficient for the aforesaid purposes, or if such mechanics lien,

stop payment notice, or claim remains undischarged or unsatisfied after all payments have been made to the Contractor, then the Contractor shall refund to the City all monies that may have been paid to discharge such lien or stop payment notice or satisfy such claims, including the costs, expenses, and attorneys' fees in connection therewith.

If the Contractor or a Subcontractor disputes the correctness or validity or enforceability of any stop payment notice, the City may, in its discretion, permit the Contractor to file with the City a bond, on a form provided by the City, executed by one or more corporate California admitted surety insurers, in an amount equal to one hundred and twenty-five percent (125%) of the claim stated in the stop payment notice conditioned for the payment of any sum which the stop payment notice claimant may recover on the claim together with its costs of suit in the action. Upon the City's acceptance of such bond, the City shall not withhold money from the Contractor on account of the stop payment notice. The surety(ies) upon the stop payment notice release bond shall be different than, and jointly and severally liable to the stop payment notice claimant with, the payment bond surety(ies).

If a Subcontractor or material supplier refuses to furnish a release or waiver required by the City, records a mechanics lien, or files a stop payment notice, the Contractor shall, upon the City's request, furnish a bond satisfactory to the City to release the stop payment notice and shall otherwise fully indemnify the City against such stop payment notice and the City shall enforce its right under the preceding paragraph.

Any lien, stop payment notice, or other claim, filed or asserted after the Contractor's acceptance of the final payment, by any Subcontractor, laborer, material supplier, or others, in connection with or for Work performed under the Contract Documents shall be the sole and exclusive responsibility of the Contractor, who further agrees to indemnify, defend, and hold harmless the City and its council members, officers, agents and employees from and against any claims, demands, or judgment arising out of or associated therewith, including, without limitation, attorneys' fees incurred by the City in connection therewith.

Replace *Reserved* in Section 9-1.16E(6) with:

9-1.16E(6) Withhold Amount

The City will withhold 5 percent of all progress payments as retention (Public Contract Code § 7201).

Replace *Reserved* in Section 9-1.16G with:

9-1.16G Release of Retention

This Contract is subject to the following provisions of California Public Contract Code § 7200 which provides as follows:

(a)(1) This section shall apply with respect to all Contracts entered into on or after January 1, 1999, between a public entity and an original Contractor, between an original Contractor and a Subcontractor, and between all Subcontractors thereunder, relating to the construction of any public Work of improvement.

(2) For purposes of this Section, "public entity" means the state, including every state agency, office, department, division, bureau, board, or commission, a City, county, City and county, including chartered cities and chartered counties, district, special district,

public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.
(b) In a Contract between the original Contractor and a Subcontractor, and in a Contract between a Subcontractor and any Subcontractor thereunder, the percentage of the retention proceeds withheld may not exceed the percentage specified in the Contract between the public entity and the original Contractor.
(c) When a performance and payment bond is required in the solicitation for bids, subdivision (b) shall not apply to either of the following:

(1) The original Contractor, if the Subcontractor fails or refuses to provide a performance and payment bond issued by an admitted surety insurer, to the original Contractor.
(2) The Subcontractor, if a Subcontractor thereunder fails or refuses to provide a performance and payment bond issued by an admitted surety insurer, to the Subcontractor.
(d) No party identified in subdivision (b) shall require any other party to waive any provision of this Section.
(e) In the event that the Contractor elects to substitute securities in lieu of retentions, the Contractor may withhold from its Subcontractors, who have not elected to substitute securities in lieu of retentions, the amount of retentions that would have otherwise been withheld.

Replace *Reserved* in Section 9-1.16I with:

9-1.16I City's Right to Disburse Progress and Final Payments by Joint Check or Direct Payments

The City has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the City to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven (7) days, the City shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. The City shall not have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law. The City may, in its sole discretion, issue joint checks to the Contractor and its Subcontractors of any tier and material suppliers or to make payments directly to such Subcontractor or supplier in satisfaction of City's obligation to make progress payments or the final payment due hereunder.

Add to the end of Section 9-1.17B Payment Before Final Estimate:

9-1.17B(1) Affidavit of Final Completion and Final Payment

The Contractor shall, upon completion of the Work and final cleaning up, submit to the City a sworn Affidavit of Final Completion on form CC4 found in Appendix H Properly submitted Claims in stated amounts may be excluded by the Contractor from the operation of the release if the Claims have not yet been resolved. Within thirty (30) calendar days after receipt of the Affidavit of Completion, the Engineer will inspect the Work and will either (1) reject the requested Affidavit of Final Completion, specifying the defective and/or uncompleted portions of the Work, or (2) accept the Affidavit of Final Completion and submit a request to the City Council for final acceptance of the Work.

9-1.17B(2) Rejection and Revision

If the City rejects the Affidavit of Final Completion, specifying defective and/or uncompleted portions of the Work, the Contractor shall promptly remedy the defective and/or uncompleted portions of the Work. Thereafter, the Contractor shall give the City a revised Affidavit of Final Completion with a new date based on when the defective and/or uncompleted portions of the Work were corrected. The foregoing procedure shall apply successively thereafter until the City accepts Contractor's Affidavit of Final Completion.

9-1.17B(3) Documentation

In addition to the requirements for final payment set forth in the other Contract Documents, the final payment shall not become due until at least sixty (60) calendar days after: (i) Contractor has fully performed the Contract, including all punch list work; and (ii) Contractor has submitted to the City:

1. A full, complete and proper Final Application for Payment showing the proposed total amount due the Contractor, segregated as to Contract quantities, changes in the Work, and other basis for payments; deductions made or to be made for prior payments; amounts to be retained; any Claims the Contractor intends to file at that time or a statement that no Claims will be filed; and any unsettled Claims, stating amounts;
2. Written consent of surety(ies) to partial/full release of retention/final payment;
3. Contractor's written assurance that identified corrective work not complete and accepted will be completed by a stated date agreeable to the City;
4. The required Record Drawings (in reproducible format);
5. Reasonable proof that taxes, fees and similar obligations of Contractor have been paid;
6. Documentation that Contractor has inspected, tested, and adjusted performance of every system or facility of the Work to ensure that overall performance is in compliance with terms of the Contract Documents;
7. Reasonable proof that Contractor has discontinued and removed temporary facilities and services from the Site, along with construction tools and facilities, forms, and similar items except for Contractor's field office;
8. Reasonable proof that Contractor has provided instruction for the City's operating personnel on systems and equipment operational requirements;
9. A report on performance of completed installations after adjustment that appear unable to comply with the requirements of the Contract Documents;
10. The operating manuals for operating and maintaining the Work; and
11. Four (4) copies of all warranties from vendors and Subcontractors, operation and maintenance manuals, instructions and related agreements, equipment certifications and similar documents, and maintenance and operating instructions.

The Engineer reserves the right to not require any of the above submittals which the Engineer determines, in his/her sole discretion, is not applicable to a particular project.

9-1.17B(4) Disbursement of Final Payment

Pursuant to California Public Contract Code section 7107, if there is any dispute between the City and the Contractor at the time that disbursement of the final payment is due, the

City may withhold from disbursement of the final payment an amount not to exceed one hundred fifty percent (150%) of the amount in dispute.

9-1.17B(5) No Waiver of Claims by City

The making of final payment shall not constitute a waiver of any Claims by the City including, but not limited to:

1. unsettled stop payment notices;
2. faulty or defective Work;
3. failure of the Work to comply with the requirements of the Contract Documents;
4. terms of special warranties required by the Contract Documents; or
5. any other cause, unless specifically waived by the City in writing.

9-1.17B(6) WAIVER OF CLAIMS BY CONTRACTOR, SUBCONTRACTORS, AND SUPPLIERS

Acceptance of final payment by the Contractor, a Subcontractor, or a material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

Add to Section 9-1.17D Final Payment and Claims:

The Contractor shall submit Form CC4: Final Release Form. This form must accompany all requests for final payment (see Appendix H).

Delete Section 9-1.22 ARBITRATION:

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DIVISION II GENERAL CONSTRUCTION

10 GENERAL

Replace *Reserved* Section 10-1.02A General with:

The Contractor's attention is directed to Sections 8-1.05 TIME of the State Standard Specifications and these Special Provisions for the number of days allowed for this work.

The first order of work shall be for the Contractor to contact Underground Service Alert (U.S.A.) and to verify the location of all utilities in the vicinity of the work.

Prior to commencement of the traffic signal functional test at any location, all items of work related to signal control shall be completed and all roadside signs, pavement delineation, and pavement markings shall be in place at that location.

The Contractor shall prepare a traffic control plan that conforms to Section 12 TEMPORARY TRAFFIC CONTROL of the State Standard Specifications, the California MUTCD, and as described within these Special Provisions prior to construction of each location. The traffic control plan shall include details regarding traffic signal operations to be approved by the Engineer.

Attention is directed to Section 12 TEMPORARY TRAFFIC CONTROL of these Special Provisions and to the stage construction sheets of the plans.

Attention is directed to Section 5-1.23 SUBMITTALS of these Special Provisions regarding the submittal of a general time-scaled logic diagram within 10 days after approval of the contract. The diagram shall be submitted prior to performing any work that may be affected by any proposed deviations to the construction staging of the project.

The work shall be performed in conformance with the phases and stages of construction shown on the plans. Non-conflicting work in subsequent stages may proceed concurrently with work in preceding stages, provided satisfactory progress is maintained in the preceding stages of construction and with Engineer's written approval.

Add to the end of Section 10-1.02C(2) Irrigation Facilities:

Protect any irrigation component to be relocated before performing any other construction activity in the area.

Add to the 3rd paragraph of Section 10-6 WATERING:

Nonpotable water must not be stream water.

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12 TEMPORARY TRAFFIC CONTROL

Add to the end of Section 12-1.01 GENERAL:

12-1.01A Traffic Maintenance

Attention is directed to Sections 7-1.03 PUBLIC CONVENIENCE, 7-1.04, PUBLIC SAFETY, and Section 12 TEMPORARY TRAFFIC CONTROL of the State Standard Specifications and to the Section 7-1.04 PUBLIC SAFETY elsewhere in these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from the responsibilities specified in Section 7-1.04 PUBLIC SAFETY of the State Standard Specifications.

In the State Standard Plans, Note 5 on Standard Plan T11, Note 6 on Standard Plan T12, and Note 5 on Standard Plan T13 are revised to read:

All traffic cones used for night work or remaining in the roadway overnight shall have reflective cone sleeves as specified in the specifications.

12-1.01B Traffic Control Plan

At the pre-construction meeting, the Contractor shall submit a traffic control plan showing traffic control measures and/or, if approved, detours for vehicles and pedestrians affected by the construction work. A maximum of five (5) working days will be required to review and provide the Contractor with comments on the plan. The Contractor shall revise the plan per the City's comments until the plan is accepted by the Engineer. The Contractor will not be allowed to begin work until the Engineer has accepted the traffic control plan.

The Traffic Control Plan shall cover all stages of work, per site, and include (but not limited to) the following information and detail: (1) Street closures and detours including pedestrian access and detours; (2) construction, warning, detour and restriction signs, including "No Parking", “Loose Gravel”, “Construction Area Speed limit Signs,” and “Bump Ahead” signs; (3) temporary striping and pavement markers; (4) barricades; (5) flashing arrow signs; (6) lighted message boards; (7) portable delineators; (8) traffic cones; (9) lights, flares, flaggers, and spacings.

A copy of the approved Traffic Control Plan must be kept at the job site at all times.

Temporary lane closures will be allowed only during approved working hours. Contractor shall provide at least one lane in each direction on all existing streets throughout the construction project unless otherwise approved in writing by the Engineer.

When work is performed within an intersection, the Contractor shall place the traffic signal in red flash. The Contractor shall submit notification at least 48 hours in advance of placing a traffic signal on flashing red. The City shall provide written approval prior to signal reprogramming. If no work is being performed with an intersection, the Contractor shall place the traffic signal into normal operations. Flaggers are required to control traffic at intersections placed in red flash.

The Contractor shall cooperate with and notify the local police and fire department, ambulance services, post office, refuse collectors, Goleta Union School District, Santa

Barbara Unified School District, Santa Barbara Metropolitan Transit District (MTD), and residents of proposed construction operations and traffic control operations a minimum of ten (10) working days before work is to begin in each work area. If changes are made to the traffic control plan, Contractor shall re-notify at least two (2) working days before work is to begin. In addition, the Contractor shall make available a 24-hour telephone number in case of emergencies and/or problems.

The Contractor will be responsible for notifying residents and businesses five (5) working days in advance of the proposed construction. Notifications shall be distributed to residents and businesses within a 100 feet radius of the job limits, including residents and businesses located on streets adjacent to the construction.

Notifications to affected residents and businesses within the project area shall consist of two (2) phases.

The first phase notifies the affected residents and businesses of the upcoming construction through the use of “door hanger” type formatted notifications. The notification shall state the street name, the working hours, and the anticipated beginning and completion dates for each street, and color-coded map. A sample of the required notification is located within Appendix D of these Special Provisions. The Contractor shall distribute the door hanger notifications a minimum of five (5) working days in advance of the work.

At the pre-construction meeting, Contractor shall provide the Engineer a copy of the proposed notification letter for acceptance.

Notifications shall be tucked neatly in doorjambs, handles, or partially under mats. Notifications shall not be glued, stapled, tacked, or otherwise attached to property. The Contractor shall take care to stay on designated walkways during delivery of notifications and be polite to citizens encountered.

The second phase consists of the Contractor posting “No Parking” signs on barricades 48 hours prior to the work. The “No Parking” signs shall also include the exact working day that the resurfacing work will take place. A warning indicating that vehicles will be towed away at the owner’s expense shall also be included on the “No Parking” signs. In addition, the Contractor shall make available a 24-hour telephone number in case of emergencies and/or problems and shall post the telephone number on the “No Parking” signs. At the pre-construction meeting, Contractor shall submit to the Engineer a sample “No Parking” sign for acceptance. The Contractor shall be responsible for placing temporary “No Parking” signs in advance of any construction activity. Barricades shall be placed a maximum of 500 feet apart, on both sides of the affected street.

The Contractor shall be responsible for placing “Construction Speed Limit” signs on both sides of the affected street one (1) hour prior to the Street being opened to traffic. The speed limit for the “Construction Speed Limit” signs cannot be less than 10 miles per hour (mph) below the posted speed. At the pre-construction meeting, Contractor shall submit to the Engineer a sample “Construction Speed Limit” sign for acceptance. Signs shall be placed a maximum of 500 feet apart, on both sides of the affected street.

Emergency access to driveways, intersections, and residential streets shall be maintained at all times. If vehicles are parked in the working area, the Contractor shall not attempt to move the vehicle. The Contractor shall notify the Engineer immediately, and the Engineer shall make proper arrangements to remove the vehicle.

Lane and street closure shall not be allowed without proper advance warning devices, signing and flag persons in conformance with the State Standard Specifications and these Special Provisions. At the completion of each working day, all lanes of traffic shall be open to the public. Street closure shall not be allowed on schedule refuse collections days.

No separate payment will be made for any item of "Traffic Control, Traffic Control Plan, and Traffic Control Maintenance" set forth in the State Standard Specifications to be paid for as extra work. Full compensation for all Traffic Control and Maintenance shall be included in this bid item.

The provisions in this section will not relieve the Contractor from his/her responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.04 PUBLIC SAFETY of the State Standard Specifications.

Full compensation for complying with the above requirements shall be considered as included in the contract price paid for "**Traffic Control, Traffic Control Plan, and Traffic Control Maintenance"** and no additional compensation will be allowed.

12-1.01C Traffic Control

Traffic Control shall include all labor, tools, equipment and materials required to provide, maintain, and remove all signage, flagmen, temporary barricades, and appurtenances to provide traffic control within the project limits as set forth in the State Standard Specifications, these Special Provisions, and as directed by the Engineer.

A specialty construction zone traffic control Contractor, shall be responsible for setting up and removing all traffic control. A specialty Contractor includes a Contractor whose operations are concerned with preparing or removing roadway construction zones, lane closures, flagging, or traffic diversions on roadways, utilizing portable devices, such as cones, delineators, barricades, sign stands, flashing beacons, flashing arrow trailers, and changeable message signs, on roadways including, but not limited to, public streets, highways, or any public conveyance.

The Contractor shall have on their payroll a person responsible for all traffic control required for this project. The person shall be on site at all times whenever traffic control is in effect. Contractor shall identify this person at the pre-construction meeting.

Should the Contractor decide to subcontract the traffic control portion of this project, the subcontractor shall be available as previously described. In addition, the Contractor shall also appoint a person to oversee the traffic control operations. The Contractor's appointee shall be available and responsible to implement the necessary traffic control plan according to the accepted traffic control plan and the latest edition of the California Manual on Uniform Traffic Control Devices (MUTCD).

Any vehicle used to place, maintain, or remove components of a traffic control system on multilane highways at night shall be equipped with a Type II flashing arrow sign which shall be in operation at all times while the vehicle is being used for placing, maintaining, or removing said components. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion.

During the working hours as set forth above, the Contractor may, with the Engineer's approval, close one of the traffic lanes in each direction to perform the required work. Lane closure shall not be allowed without proper advance warning devices and signing, and flag person control in conformance with the State Standard Specifications, and these Special Provisions. The Engineer shall be the sole judge of the spacing, length, and sequence of the lane closure areas. At the completion of each working day, all existing lanes of traffic shall be maintained open to traffic and temporary traffic markers shall be placed (if necessary). Provisions must be made for the uninterrupted passage of emergency vehicles through the project limits at all times, regardless of controlled traffic conditions existing at the time.

If any component in the traffic control system is displaced, or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair said component to its original condition or replace said component and shall restore the component to its original location.

The Contractor shall be responsible for making access available at any time during the workday to emergency vehicles such as fire/rescue units, ambulances, and police cars.

The Contractor shall cooperate and allow the City work crews to use the traffic control system when set up for the Contractor's work. The Contractor is not obligated to maintain the traffic control system beyond his/her scheduled activities.

Full compensation for complying with the above requirements shall be considered as included in the contract price paid for "**Traffic Control, Traffic Control Plan, and Traffic Control Maintenance**" and no additional compensation will be allowed.

Intersection Detours plan shall be submitted and accepted to the Engineer at least five (5) working days prior to the start of any work. When the intersection detour plan is in place the intersection shall be in red flash, have flaggers, and kept open to through traffic.

At all intersections, the Contractor shall provide a minimum of two (2) flaggers per intersection while the intersections are in red flash, as determined by the Engineer.

The Contractor shall diligently progress with operations within signalized intersections and communicate with the Engineer for restoring signalized intersections to normal operations once the Contractor's operations are complete within the limits of signalized intersections.

12-1.01D Contractor Conformance to Traffic Lane Closure Hours

Non-compliance with the traffic lane closure hours shown in the charts above will result in a deduction from the Contractor's progress payment as outlined in Section 8-1.10B FAILURE TO COMPLETE WORK PARTS WITHIN SPECIFIED TIMES of these Special Provisions.

Delete Section 12-1.04 Payment:

Replace Section 12-3.01D Payment with:

Notwithstanding any provisions of the State Standard Specifications and these Special Provisions to contrary, the contract lump sum price for "**Traffic Control, Traffic Control Plan, and Traffic Control Maintenance**" will constitute full compensation for furnishing, installing, and removing traffic control devices, including signs, covers, lights, flares, cones, barricades, flagmen, and other items necessary for the safety, sole convenience, and direction of public traffic through and around the work area, as specified in the State Standard Specifications, these Special Provisions, and as directed by the Engineer.

The provisions in this section will not relieve the Contractor from his responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.04 PUBLIC SAFETY of the State Standard Specifications.

Replace Section 12-3.02 TRAFFIC CONES with:

12-3.02 TRAFFIC CONES

During the hours of darkness traffic cones shall be affixed with reflective cone sleeves. The reflective sheeting of sleeves on the traffic cones shall be visible at 1,000 feet at night under illumination of legal high beam headlights, by persons with vision of or corrected to 20/20.

Reflective cone sleeves shall conform to the following:

1. Removable flexible reflective cone sleeves shall be fabricated from the reflective sheeting specified in these Special Provisions, have a minimum height of 13 inches and shall be placed a maximum of 3 inches from the top of the cone. The sleeves shall not be in place during daylight hours.

2. Permanently affixed semitransparent reflective cone sleeves shall be fabricated from the semitransparent reflective sheeting specified in these Special Provisions, have a minimum height of 13 inches, and shall be placed a maximum of 3 inches from the top of the cone. Traffic cones with semitransparent reflective cone sleeves may be used during daylight hours.

3. Permanently affixed double band reflective cone sleeves shall have 2 white reflective bands. The top band shall be 6 inches in height, placed a maximum of 4 inches from the top of the cone. The lower band shall be 4 inches in height, placed 2 inches below the bottom of the top band. Traffic cones with double band reflective cone sleeves may be used during daylight hours.

The type of reflective cone sleeve used shall be at the option of the Contractor. Only one type of reflective cone sleeve shall be used on the project.

The Contractor shall be responsible for informing the public of the traffic conditions existing within the construction area at all times by placement of appropriate warning and advisory signs. The Contractor shall provide and maintain all traffic control and safety items. The Contractor assumes sole and complete responsibility for job and site conditions during the course of construction, including safety of all persons and property. This requirement shall apply continuously 24 hours/day and shall not be limited to normal working hours.

Full compensation for complying with the above requirements shall be considered as included in the contract price paid for "Traffic Control, Traffic Control Plan, and Traffic Control Maintenance" and no additional compensation will be allowed.

Add to Section 12-3.11 CONSTRUCTION AREA SIGNS:

12-3.11 CONSTRUCTION AREA SIGNS

Construction area signs shall be furnished, installed, maintained, and removed when no longer required in accordance with the provisions in Section 12 TEMPORARY TRAFFIC CONTROL of the State Standard Specifications and these Special Provisions.

Add to Section 12-3.32 PORTABLE CHANGEABLE MESSAGE SIGNS:

12-3.32 PORTABLE CHANGEABLE MESSAGE SIGN

In addition to Section 12-3.32 PORTABLE CHANGEABLE MESSAGE SIGNS of the State Standard Specifications, portable changeable message sign shall be furnished, placed, operated and maintained for the duration of the project at those locations indicated on the plans or where designed by the Engineer in conformance with the provisions in Section 12 TEMPORARY TRAFFIC CONTROL of the State Standard Specifications and these Special Provisions.

Portable changeable message signs shall be placed at least ten (10) working days prior to the start of any work and shall remain in place until all work (including striping) is complete. Changeable messages signs shall state the street the work is taking place, the dates, and the time of work. Changeable messages signs shall be turned off after the completion of the final striping application and shall be turned on five (5) working days prior to striping placement.

The contract unit price paid per each Portable Changeable Message Signs shall include full compensation for furnishing all labor, materials, tools, equipment, maintenance, removal, and incidentals, and for doing all work involved in placing and maintaining Changeable Message Signs, complete in place, as shown on the plans, as specified in the State Standard Specifications and these Special Provisions, and as directed by the Engineer and no additional compensation will be allowed therefor.

Add to Section 12-4.01C Construction:

Provide the following Temporary Traffic Control Measures:

1. Provide detours for emergency vehicles during closures

2. Notify the residents or owners of any properties within 1,000 feet to the project of the construction schedule at least five (5) working days before construction activities that affects their access to nearby streets or directly impacts access to their property
3. Provide access to all affected properties during construction
4. Provide alternative routes for bicycles and pedestrians as needed

Add to the end of Section 12-4.02C(1) General:

Keep the full width of the traveled way open to traffic when no active construction activities are occurring in the traveled way or within six (6) feet of the traveled way. Keep the full width of the ramp traveled way open for use by traffic on designated holidays.

Add to the end of Section 12-4.02C(3)(a) General:

If work vehicles or equipment is parked on the shoulder within six (6) feet of a traffic lane of a freeway or expressway, close the shoulder area as shown on Standard Plan T10.

Replace the 1st paragraph of Section 12-4.02C(7)(a) General with:

Control traffic using stationary closures, except the Contractor may use a moving closure during traffic striping and pavement marker placement using a bituminous adhesive. Do not use a moving lane closure when grinding for recessed striping and recessed markers.

Add to the end of Section 12-4.02C(7)(b) Stationary Closures:

Except for one-way-reversing traffic-control lane closures, the maximum length of the work area inside a closure is 0.5 miles.

Not more than 2 stationary closures are allowed in each direction of travel at one time. Unless authorized by the State Engineer, concurrent stationary closures in the same direction of travel must be spaced no closer than 1 mile apart.

Closure spacing is the distance between the last cone of the upstream closure and the temporary sign W20-1 of the downstream closure. The number of lanes open in the upstream closures must be less than or equal to the number of lanes open in the downstream closures. For multiple closures in each direction of travel, pick up the downstream closures first.

Replace *Reserved* in Section 12-8 MEASUREMENT AND PAYMENT with:

All work for traffic control including the work identified in this section shall be included in the lump sum item for **"Traffic Control, Traffic Control Plan, and Traffic Control Maintenance"** in the Bid Schedule. The work shall include full compensation for furnishing all labor including flagging costs, materials (including signs, barricades, delineators, PCMSs, and other warning devices), tools, equipment, and incidentals, for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of the traffic control system, postings, notifications, street closures, temporary pavement delineation, as specified in the State Standard Specifications and these Special Provisions, and as directed by Engineer.

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13 WATER POLLUTION CONTROL

In addition to the requirements of Section 13 WATER POLLUTION CONTROL of the State Standard Specifications, Best Management Practices (BMP) devices conforming to those shown within Appendix I of these Special Provisions shall be installed and maintained by the Contractor. BMP's shall remain in place during the full construction processes, plastic and or roofing paper is not acceptable to be used for drainage covers. If the Engineer determines that there are deficiencies that need attention, the Contractor shall make all the necessary changes within 12 hours. If the Contractor does not complete these changes within the 12-hour period, the Contractor will be charged $500 per hour until the necessary changes are addressed completely in place to the satisfaction of the Engineer.

Add to Section 13-2.01C Submittals:

A Water Pollution Control Plan template can be found in Appendix J

Replace Section 13-2.04 PAYMENT with:

13-2.04 Payment

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for lump sum of "**Development, Placement, and Maintenance of Water Pollution Control Plan**" and shall include development of plan, materials, application of the materials, maintenance, including labor, equipment, tools and incidentals for this item of work and no additional compensation will be allowed therefor.

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14 ENVIRONMENTAL STEWARDSHIP

Replace Section 14-2.03A General with:

If archaeological materials, including but not limited to human skeletal material and disarticulated human bone, are discovered at the job site, protect and leave undisturbed and in place archaeological materials in accordance with the following codes and these Special Provisions:

1. California Public Resources Code, Division 5, Chapter 1.7 § 5097.5
2. California Public Resources Code, Division 5, Chapter 1.75 § 5097.98 and § 5097.99
3. California Administrative Code, Title 14 § 4308
4. California Penal Code, Part 1, Title 14 § 622-1/2

5. California Health and Safety Code, Division 7, Part 1, Chapter 2, § 7050.5

Immediately upon discovery of archaeological materials, stop all work within a 60-foot radius of the archaeological materials and immediately notify the Engineer who will then notify the City. Archaeological materials found during construction are the property of the State. Do not resume work within the 60-foot radius of the find until the Engineer gives the Contractor written approval. If, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of an archeological find or investigation or recovery of archeological materials, the Contractor will be compensated for resulting losses and an extension of time will be granted in the same manner as provided for in Section 8-1.07 DELAYS of the State Standard Specifications.

If remains of Native American origin are discovered during project construction, it will be necessary to comply with state laws concerning the disposition of Native American burials, which fall within Native American Heritage Commission (NAHC's) jurisdiction (PRC 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the following steps occur:

- The Santa Barbara County coroner (805-681-4145) has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, one of the following occurs:
- The descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98.
- NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within twenty-four (24) hours after being notified.

According to the California Health and Safety Code, six (6) or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are Native American. If the remains are determined to be Native American, the coroner must contact NAHC within twenty-four (24) hours.

Archaeological materials are the physical remains of past human activity and include historic-period archaeological materials and prehistoric Native American archaeological materials. Nonhuman fossils are not considered to be archaeological except when showing direct evidence of human use or alteration or when found in direct physical association with archaeological materials as described in these Special Provisions.

Historic-period archaeological materials include cultural remains beginning with initial European contact in California, but at least fifty (50) years old. Historical archaeological materials include:

1. Trash deposits or clearly defined disposal pits containing tin cans, bottles, ceramic dishes, or other refuse indicating previous occupation or use of the site

2. Structural remains of stone, brick, concrete, wood, or other building material found above or below ground or

3. Human skeletal remains from the historic period, with or without coffins or caskets, including any associated grave goods

Prehistoric Native American archaeological materials include:

1. Human skeletal remains or associated burial goods such as beads or ornaments

2. Evidence of tool making or hunting such as arrowheads and associated chipping debris of fine-grained materials such as obsidian, chert, or basalt

3. Evidence of plant processing such as pestles, grinding slabs, or stone bowls

4. Evidence of habitation such as cooking pits, stone hearths, packed or burnt earth floors or

5. Remains from food processing such as concentrations of discarded or burnt animal bone, shellfish remains, or burnt rocks used in cooking

The City may use other forces to investigate and recover archaeological materials from the location of the find. When ordered by the Engineer furnish labor, material, tools and equipment, to secure the location of the find, and assist in the investigation or recovery of archaeological materials and the cost will be paid for as extra work as provided in Section 4-1.05 CHANGES EXTRA WORK of the State Standard Specifications and these Special Provisions.

Replace *Reserved* in Section 14-6.06 with:

14-6.06 OAK ROOT PROTECTION

Do not operate equipment within the dripline of oak trees.

Replace the 2nd paragraph of Section 14-8.02 NOISE CONTROL with:

The noise level from the Contractor's operations, between the hours of 9:00 pm and 6:00 am, shall not exceed 86 dbA at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

In addition, the Contractor shall conform to the City Goleta Municipal Code Section 17.39.070 NOISE.

All noise-generating project construction activities are limited to Monday through Friday, 8:00 AM to 6:00 PM Exceptions must be requested in writing and authorized by the

Engineer. Prepare a Noise Mitigation Measures submittal for approval in advance of any construction activities planned to be performed after hours or on weekends/holidays. Post a sign at least 24 X 48 inches in size stating the noise limitations at the job site.
Each internal combustion engine, used for any purpose on the job, or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. Internal combustion engines without an appropriate muffler are not allowed on the job site.

Follow the following general noise reduction strategies:
1. Use modern construction equipment
2. Plan noisiest operations for times of least intrusion
3. Use quieter alternate methods or equipment when possible
4. Locate stationary noise sources away from sensitive receiver locations
5. Operate equipment at minimum power as feasible

In addition to the requirements of Section 14-8 NOISE AND VIBRATION of the State Standard Specifications, noise level requirements shall apply to all equipment used on the project including, but not limited to, trucks, transit mixers or transient equipment that may not be owned by the Contractor. The use of loud signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

Replace *Reserved* of Section 14-9.04 with:

14-9.04 CONSTRUCTION DUST CONTROL

Apply water or dust palliative to the site and wash equipment as necessary to control airborne dust. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp to prevent dust from leaving the site and to create a crust after each day's activities cease. At a minimum, wet down such areas in the late morning and after work is completed for the day. Increase watering frequency whenever wind speed exceeds fifteen (15) miles per hour. Dust emissions at adjacent property lines must not exceed twenty (20) percent opacity more than an aggregate of three (3) minutes in any sixty (60) minute period.
Grading and scraping operations must be suspended when wind speeds exceed twenty (20) mph.

Minimize the amount of disturbed area and limit on-site vehicle speeds to fifteen (15) miles per hour.

Install gravel pads at construction site access points. All gravel, dirt, and construction material must be cleaned from the public right-of-way at a minimum of once a day at the end of the work day.

If importation, exportation, and stockpiling of fill material is needed, soil stockpiled for more than two days must be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site must be tarped

If an area is graded and left undeveloped for over four weeks utilize soil binders or revegetation immediately to inhibit dust generation:

No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion).

No demolition or construction equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers.

Any and all debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project.
Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters.

All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day.

The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction. Debris shall be disposed of at a permitted disposal site or recycled at a permitted recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Engineer determines that no amendment or new permit is legally required.

Water for construction purposes as required by these Special Provisions will be provided by the Goleta Water District at the Contractor's expense. The City encourages the Contractor to use reclaimed water when a fill station is located nearby.

Water required for controlling dust, caused by the Contractor's operations and the passage of traffic through the construction site shall be applied as necessary, at the Contractor's expense. The Contractor shall, whenever possible and not in conflict with these Special Provisions, minimize the use of water during construction of the project. Watering equipment shall be kept in good working order and water leaks shall be repaired promptly.

Add to the end of Section 14-11.02 DISCOVERY OF UNANTICIPATED ASBESTOS AND HAZARDOUS SUBSTANCES:

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8-1.07 DELAYS of the State Standard Specifications and these Special Provisions.

15 EXISTING FACILITIES

Add to the end of Section 15-1.03A General:

In addition to Section 5-1.36 PROPERTY AND FACILITY PRESERVATION the State Standard Specifications the following shall apply. Contractor shall protect existing pavement, striping, manholes, utilities, sidewalks, curbs, gutter, curb ramps, valley gutters, and driveways at all equipment crossings. Contractor shall provide materials to shore and brace excavation areas in order to prevent existing structures, private properties and permanent improvements from failure or damage during construction. If requested, provide shoring design calculations and details for review by Engineer. Damage to existing structures, private properties, and permanent improvements due to construction work conducted by Contractor shall be restored to existing or better condition with no additional cost to City.

Contractor agrees to assume sole and complete responsibility for protection of public and private property in the vicinity of the job site and further agrees to, at Contractor's expense, repair or replace to original condition all existing improvements within or in the vicinity of the job site which are not designated for removal, and which are damaged or removed as a result of Contractor's operations.

Repair or replacement must be completed within three (3) working days from the date the damage occurred, unless immediate repair or replacement is determined to be necessary by Engineer. If Contractor fails to restore existing improvements in a timely manner, within the timeframe specified, City may complete the work and costs will be deducted from payments due Contractor.

Contractor must coordinate operations such that damage to newly constructed improvements is avoided. In the event newly constructed improvements, shown on the Contract Documents, interfere with other project work or is necessary for safety or access and must be removed and replaced, City will only pay for the improvements to be constructed one time. Multiple replacements or work necessary for the convenience of Contractor shall be considered performed at Contractor’s expense.

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77 LOCAL INFRASTRUCTURE

Replace *Reserved* in Section 77 with:

77-1 GENERAL

77-1.01 GENERAL

Section 77-1 includes general specifications for constructing electrical systems.

77-1.02 MATERIALS

The electrical equipment and materials must comply with Section 86 GENERAL of the State Standard Specifications.

77-1.03 CONSTRUCTION

Install electrical equipment under Section 87 ELECTRICAL SYSTEMS.

77-1.04 PAYMENT

Not Used

77-2 LIGHTING (CITY STREET)

77-2.01 GENERAL

77-2.01A Summary

Section 77-2 includes specifications for constructing lighting (City Street).
Lighting (City Street) includes relocating, removing, adjusting, or adding:

1. Foundations
2. Pull boxes
3. Conduit
4. Conductors
5. Standards
6. Luminaires
7. Service equipment enclosure
8. Photoelectric control
9. Fuse splice connectors

The components for lighting (City Street) are shown on the project plans.

77-2.03 CONSTRUCTION

Coordinate with Southern California Edison (SCE) for existing street lights removal. The contractor must maintain the non-impacted existing lighting system in operation.

77-2.04 PAYMENT

Not Used

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DIVISION X ELECTRICAL WORK

86 GENERAL

Add to the list in the 2nd paragraph of Section 86-1.02C(1) General:

15. STREET LIGHTING on pull box cover for City street lighting systems
16. TRAFFIC SIGNAL on pull box cover for City signal systems

Add to the end of Section 86-1.02F(2)(a) General:

Conductors must be copper including bonding jumpers and equipment grounding conductors.

Replace the 2nd paragraph of Section 86-1.02F(2)(c)(ii) Bond Jumpers and Equipment Grounding Conductors:

An equipment grounding conductor must be bare.

Replace the 1st sentence in the 15th paragraph of Section 86-1.02P(2) Service Equipment Enclosures with:

The interior of the enclosure must accept cable-in/cable-out circuit breakers. The circuit breakers must be mounted on nonenergized clips and vertically with the up position of the handle being the *ON* position.

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87 ELECTRICAL SYSTEMS

Replace the 1st sentence in the 9th paragraph of Section 87-1.03A General with:

The shutdown of traffic signal systems is allowed only between the hours of 9:00 AM and 3:00 PM.

Add to the beginning of Section 87-1.03B(3)(a) General:

Use Type 3 conduit for underground installation.
Use Type 3, Schedule 80 conduit in a foundation and between a foundation and the nearest pull box.

Add between the 6th and 7th paragraph of section 87-1.03B(3)(a) General:

You may use the trench-in-pavement method to install conduit under existing pavement:

1. For temporary conduit
2. If the delay to vehicles will be less than 5 minutes.

Install conduit to a depth of 14 inches for the trench-in-pavement method.
Conduit shown under a sidewalk may be installed in the street within 3 feet of and parallel to the face of the curb. Install pull boxes behind the curb.

Replace the 3rd paragraph of Section 87-1.03C(2)(a) General with:

Install a pull box on a bed of crushed rock.

Replace the 2nd paragraph of Section 87-1.03H(2) Splice Insulation Methods with:

Use Method B to insulate a splice.

Add to the end of Section 87-1.03T Accessible Pedestrian Signals with:

A manufacturer's representative must program the accessible pedestrian signals.

When the extended pushbutton press is used, program the signals with messages for each street as follows:

1. During the pedestrian clearance interval, the message heard must be *Wait to Cross* <Insert Street Name>. *Wait*.

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DIVISION XI MATERIALS

TECHNICAL SPECIFICATIONS

1. Description

PROJECT LOCATION

The Project Location is at the intersections listed below:

- Hollister Avenue at Ellwood School
- Hollister Avenue at Entrance Rd
- Cathedral Oaks Road at Alameda Ave
- Hollister Ave and Pacific Oaks Road
- Cathedral Oaks at Glen Annie Road
- Hollister Avenue at Village Way
- Hollister Avenue Avenue at Glen Annie Road
- Hollister Avenue at Storke Road
- Storke Road at Marketplace
- Storke Road at Phelps Road
- Hollister Avenue at Coromar Drive
- Hollister Avenue at Los Carneros Road
- Los Carneros at Castilian Drive
- Los Carneros at Karl Storz Drive
- Los Carneros at Calle Koral
- Los Carneros at Discovery Drive
- Hollister Avenue at Sumida Gardens Lane
- Hollister Avenue at Patterson Avenue
- Fairview Avenue at Calle Real
- Calle Real at Encina Lane
- Calle Real at Calle Real Shopping Center
- Calle Real at Kellogg Avenue
- Calle Real at Maravilla
- Patterson Avenue at Overpass Road
- Fairview Avenue at Encina Road
- Fairview Avenue at Berkeley Road
- Cathedral Oaks Road at Fairview Avenue
- Cathedral Oaks Road at Cambridge Drive

- Hollister Avenue at Fairview Avenue
- Hollister Avenue at Nectarine Avenue and Pine Avenue
- Hollister Avenue at Rutherford Street
- Hollister Avenue at Kinman Avenue

PROJECT CONFORMITY

The furnishing and installation of traffic signals, street lighting, roadway signing/striping, and road improvements for this project shall conform to the:

- Standard Specifications of the State of California, dated 2023
- Standard Plans of the State of California, dated 2023
- California Manual of Uniform Traffic Control Devices (MUTCD), dated 2014, Rev. 8
- City's Special Provisions

MATERIALS

The Contractor shall provide all materials, including but not limited to: controller, conduit, signal heads (including hardware, framework and mounts), accessible pedestrian signals, Advance Dilemma Zone Detector units, all wiring and cable; and any other hardware necessary for the installation of equipment as required at each intersection per the contract documents. All materials shall be new.

The contractor shall provide material submittals for the following equipment:

- Video detection system and camera
- Controller
- Signal head, yellow retro-reflective backplate and mounting bracket
- Accessible Pedestrian Push Button (bid alternative A)
- Conduit (bid alternative A)
- Anchor Bolts (bid alternative A)

MEASUREMENT AND PAYMENT

Payment for Traffic Signal Modifications shall be paid in the lump sum (LS) price for each intersection and shall include the necessary work to provide the intended operation and no additional compensation will be made therefore.

2. Video Detection System

This specification sets forth the minimum requirements for a system that detects vehicles on a roadway using a single camera or multi-sensor detection system.

The multi-sensor system shall utilize two different sensors of different technologies, video imaging and radar, to detect and track licensed and unlicensed vehicles at distances over 600 feet (180 meters). The sensor system shall fuse vehicle information from the two sensors to provide highly accurate and precise detection for simultaneous stop bar presence detection, advanced detection, and special or advanced applications. Additionally, the system shall output data related to the system operation and its detection information.

SYSTEM HARDWARE

The multi-sensor detection system (MSDS) shall consist of up to four hybrid video camera/radar sensors or camera only sensors in any combination, a Cabinet Interface (CI) capable of processing from one to four sensors, one Power Injector (PI), input/output extension modules, surge suppressors, HDMI monitor and a pointing device, or any combination thereof.

The MSDS will be deployed at locations where site conditions and roadway geometry vary. The MSDS system may also be deployed at locations where existing cabinets or equipment exist. Existing site configurations will dictate the availability of cabinet space and MSDS usage.

SYSTEM SOFTWARE

The system shall include software that discriminately detects the presence of individual vehicles and bicycles in a single or multiple lanes using only the video image. Detection zones shall be defined using only an embedded software application. A monitor, a keyboard and a pointing device are used to place the zones on a video image. A minimum of 32 video detection zones and 16 radar detection zones plus 5 trip lines per sensor shall be available.

Additionally, the system shall include Artificial Intelligence (AI) algorithms which will detect, track and classify objects into a plurality of classes including, cars, buses, trucks, trailers, work vans, motorcycles, cyclists, pedestrians, emergency vehicles, scooters and mobility devices. There shall be no requirement to set any configuration for the AI algorithms. The AI algorithms will detect, track and classify object anywhere in the Field Of View (FOV) irrelative of direction or location within the intersection. The system will store data on the volume of each class in the Bin Data structure for future retrieval. The system will utilize advanced Artificial Intelligence (AI) algorithms to perform this and other functions.

A separate computer shall not be required to program the detection zones. In addition to creating vehicle and bicycle zones, the system shall automatically define a pedestrian crossing area in front of the stop bar zones. The system shall provide a tracking mechanism that counts pedestrian volume moving within this crossing area, and also determine the average, maximum, and minimum speed of pedestrians moving within this crossing zone for each direction of movement. The system shall also provide discrete outputs when pedestrians are in the crosswalk during normal crossing phases (one for each direction of travel) and when a red phase input has been detected. The system shall also provide a visual indication on the video image that a pedestrian is in the crosswalk.

All the functions described in this section and detailed elsewhere below will be performed in real time at the installation location of the MSDS.

The MSDS shall be made in the U.S.A. in compliance with FTA “Buy America” regulations.

2.1 MSDS Hardware Power Injector

Power Injector (PI) shall be supplied by the MSDS manufacturer.

All connections to the PI shall be on the front panel.

PI POWER

The PI shall be powered from an 110V, 60Hz supply. PI power consumption shall not exceed 10 Watts.

The PI shall be appropriately grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum. PI to ground rod resistance may not exceed 20ohms.

POWER SURGE SUPPRESSION

The PI shall incorporate power surge suppression both on the input power and on the power supplied to the sensors. The PI shall be appropriately grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum.

POWER MANAGEMENT

The PI shall incorporate power management for the various parts of the MSDS such that if fault conditions are detected the power supply will safely shut down the power to that peripheral.

POWER ISOLATION

The PI shall incorporate isolation switches for each sensor connection such that power to individual sensors may be manually disabled. The isolation switch shall incorporate an indicator to identify is power is active to the sensor.

SENSOR INPUT

Each sensor shall be connected to PI via a two part terminal block. The sensor connector shall require no specialized tools to make the connect.

SENSOR CABINET INTERFACE CONNECTION

Connection from the PI to the CI for sensor inputs shall be via four RJ-45 sockets. The connection shall be made with standard Ethernet patch cables.

EM BUS CABINET INTERFACE CONNECTION

Connection from the PI to the CI for EM Bus shall be via one RJ-45 socket. The connection shall be made with standard Ethernet patch cables. The PI shall provide an additional output connection via a RJ-45 connection for expansion of the EM Bus. The EM Bus connection will utilize a 7-segment display to show enumeration of the EM Bus. The RJ-45 sockets will utilize two LEDs to indicate various operations of the EM Bus.

INDICATORS

- The PI shall provide a LED indicator to show power is present.
- The PI shall provide a LED indicator to show the status of the surge protection.

OPERATING TEMPERATURE

The MSDS shall operate satisfactorily in a temperature range from -30° F to +165° F (-34° C to +74° C) and a humidity range from 0%RH to 95%RH, non-condensing as set forth in NEMA specifications.

2.2 MSDS Cabinet Interface

The MSDS Cabinet Interface (CI) shall be supplied by the MSDS manufacturer.

HARDWARE

The CI shall be. shelf-mount format; TS2 version. The CI shall be able to stand up on available shelf-space within the cabinet. All connections shall be made from the front of the CI.

CI POWER

The CI shall be powered from an 110V, 60Hz supply. CI power consumption shall not exceed 60 Watts.

The CI shall be appropriately grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum. CI to ground rod resistance may not exceed 20ohms.

OPERATING TEMPERATURE

The MSDS shall operate satisfactorily in a temperature range from -30° F to +165° F (-34° C to +74° C) and a humidity range from 0%RH to 95%RH, non-condensing as set forth in NEMA specifications.

ON-BOARD MEMORY

The CI shall utilize non-volatile memory technology to store on-board firmware and operational data so that no data is lost during power interruptions.

INTERFACES

EXTENSION MODULES

Extension modules (EM) shall be available to eliminate the need of rewiring the detector rack, by enabling the user to plug an extension module into the appropriate slot in the detector rack to provide additional open collector outputs. The EM shall be available in both 2- and 4-channel configurations. EM configurations shall be programmable from the CI. A separate I/O module shall also be available having 32 outputs through a 37-pin “D” connector on the front panel and 8 inputs through a 15-pin “D” connector using an external wire harness for expanded flexibility.

EM POWER

The EM shall be powered by 12 or 24 volts DC. EM modules shall automatically compensate for either 12 or 24 VDC operation. The EM power consumption shall not exceed 3 watts.

The CI shall provide four ports for connection to the Power Injector. The sensors may be any combination of MSDS Sensor or Video Detection System (VDS) Camera Sensor. The connector shall be an RJ-45 type.

The CI shall provide 2 USB ‘A’ ports and 2 USB ‘C’ ports on the front panel. These ports can be utilized for various functions. For example, keyboard and mouse functions during system configuration, USB storage devices can be utilized for bin data and video collection. The USB ports shall not require special mouse software drivers. The USB ports shall be used as part of system setup and configuration

The CI shall provide an output to a monitor. The port shall be HDMI. The native resolution of the monitor port shall be 1920 x 1080 (Full HD).

COMMUNICATIONS

An Ethernet communications port shall be provided on the front panel. The Ethernet port shall be compliant with IEEE 802.3 and shall use a RJ-45 type connector mounted on the front panel of the CI. The Ethernet communications interface shall allow the user to remotely configure the system and/or to extract calculated vehicle/roadway information. The interface protocol shall be documented or interface software shall be provided. Each MSDS shall have the capability to be IP addressable. The CI shall support data rates of up to100Mbps.

The CI shall provide an SDLC connection to the Traffic Controller. The connector shall be a ‘D-15’ type, in compliance with NEMA TS-2 specifications.

The CI shall provide an indicator when the SDLC port is active.

The CI shall provide an indicator when the unit has power.

The CI shall provide an indicator when the unit is on line.

The CI shall provide a Wi-Fi connection. The connection shall be over a standard 2.4GHz connection. The Wi-Fi connection shall be enabled and disabled by a switch on the CI. The CI shall provide an indicator when the Wi-Fi connection is active.

The CI shall provide a connection for a removable antenna. The antenna connection shall be a SMA Male type.

The CI shall provide system status via an on-board Organic Light Emitting Diode display. The display shall indicate various system parameters, such as sensor health, firmware version. The display will be enabled with a switch on the CI. The display will automatically disable 15 minutes after the button is pressed.

FIRMWARE UPGRADE

The CI shall enable the loading of modified or enhanced software through either the Ethernet or front-panel USB port (using a USB thumb drive) and without removing or modifying the CI hardware. The upgrade will affect all components of the system.

2.3 MSDS Multi-Sensor

The MSDS sensor shall be supplied by the MSDS manufacturer and consist of two components; a camera sensor and a radar sensor mounted in a single housing.

The MSDS sensor shall utilize a single minimum 16AWG 110VAC rated cable for power, communications and video. Cable termination at the camera shall not require crimping or special tools. The cable termination shall only require a standard wire stripper and a screw driver. No connectors (e.g. BNC) shall be allowed.

CAMERA SENSOR

The camera sensor shall allow the user to set the focus and field of view of the camera imager via the MSDS software. Sensor control from the controller cabinet shall communicate over a 16 AWG 3-core cable. No additional wires shall be required.

The camera imager shall produce a useable video image of the features of vehicles under all roadway lighting conditions, regardless of time of day. The minimum range of scene luminance over which the camera shall produce a useable video image shall be the minimum range from nighttime to daytime, but not less than the range 0.5 lux to 10,000 lux.

The camera imager electronics shall include automatic gain control (AGC) to produce a satisfactory image at night for the MSDS algorithms.

The camera imager luminance signal to noise ratio (S/N) shall be more than 50 dB with the automatic gain control (AGC) disabled.

The camera imager shall employ three dimensional dynamic noise reduction (3D-DNR) to remove unwanted image noise.

The camera imager shall employ wide dynamic range (WDR) technology to compensate for wide dynamic outdoor lighting conditions. The dynamic range shall be greater than 100 dB.

The camera imager shall be digital signal processor (DSP) based and shall use a CCD or CMOS sensing element and shall output color video with resolution of 1080P. The color CCD or CMOS imager shall have a minimum effective area of 1920(h) x 1080(v) pixels.

The camera imager shall include an electronic shutter control based upon average scene luminance and shall be equipped with an auto-iris lens that operates in tandem with the electronic shutter. The electronic shutter shall operate between the range of 1/60th to 1/90,000th second.

The camera imager shall utilize automatic white balance.

The camera imager shall include a variable focal length lens with variable focus that can be adjusted, without opening up the camera housing, to suit the site geometry by means of a portable interface device designed for that purpose and manufactured by the detection system supplier.
The horizontal field of view shall be adjustable from 4.5 to 48 degrees. The sensor camera lens shall be a 12x zoom lens with a focal length of 3.5mm to 35mm. The sensor lens should yield a rectilinear image.

The sensor camera lens shall also have an auto-focus feature with a manual override to facilitate ease of setup.

The sensor shall incorporate the use of preset positioning that store zoom and focus positioning information. The sensor shall have the capability to recall the previously stored preset upon application of power.

The camera imager shall be housed in a weather-tight sealed enclosure. The housing shall allow the sensor camera to be rotated to allow proper alignment between the sensor camera and the traveled road surface.

The sensor camera enclosure shall be equipped with a sunshield. The sunshield shall include a provision for water diversion to prevent water from flowing in the camera sensor's field of view. The camera sensor enclosure with sunshield shall be less than 3.5" (89mm) diameter, less than 5.25" (133mm) long, and shall weigh less than 2.5 pounds (1.14kg) when the camera and lens are mounted inside the enclosure.

The enclosure shall be designed so that the pan, tilt and rotation of the camera sensor assembly can be accomplished independently without affecting the other settings.

CAMERA LENS
The camera sensor enclosure shall include a proportionally controlled Indium Tin Oxide (ITO) lens coating for the heating element of the front glass that maximizes heat transfer to the lens. The output power of the heater shall vary with temperature, to assure proper operation of the lens functions at low temperatures and prevent moisture condensation on the optical faceplate of the enclosure. The transparent coating shall not impact the visual acuity and shall be optically clear. The glass face on the front of the camera sensor enclosure shall have an anti-reflective coating to minimize light and image reflections.

When mounted outdoors in the enclosure, the camera sensor shall operate satisfactorily in a temperature range from -30° F to +140° F (-34 °C to +60 °C) and a humidity range from 0% RH to 100% RH. Measurement of satisfactory video shall be based upon DP system operation.

Radar Sensor
The radar sensor shall operate in the 24 GHz frequency band and shall operate without interference with other radar sensors connected to the MSDS.

The radar detection range shall be over 600 feet (180 meters) minimum, +/- 5%.

The radar sensor shall be able to track up to 64 independent objects simultaneously.

The radar sensor shall detect objects by utilization of four dimensions. Those dimensions shall be:
• Speed (Velocity)
• Distance (Range)
• Angle (Azimuth)
• Height (Elevation)

Object speed detection shall be within a range of 0 to 150 miles per hour +/- 1.0 miles per hour (240 km per hour ± 1.5 km per hour).

The radar sensor shall be able to detect vehicles in 1 to 6 traffic lanes.

The radar sensor shall be housed in a weather-tight sealed enclosure conforming to IP-67 specifications. The housing shall allow the radar to be adjusted to allow proper alignment between the sensor and the traveled road surface.

When mounted outdoors in the enclosure, the radar shall operate in a temperature range from
-30 °F to +165 °F (-34 °C to +74 °C) and a humidity range from 0% RH to 100% RH.

The radar sensor shall communicate with the sensor data combiner.

The radar sensor shall acquire its power from the sensor data combiner.

Both camera imager and radar sensors shall be housed in an overall, single enclosure assembly.

The overall size of the multi-sensor enclosure shall not exceed 14 inches x 15 inches x 17 inches (355mm x 380mm x 430mm).

The overall weight of the multi-sensor unit shall not exceed 11 pounds (5kg).

The effective projected area (EPA) shall not exceed 2.0 square feet (0.6 square meters).

The maximum power consumption for the multi-sensor assembly shall be less than 20 watts typical, 25 watts peak.

Recommended sensor placement height shall be 33 feet (or 10 meters) above the roadway, and over the traveled way on which vehicles are to be detected. For optimum detection the MSDS sensor should be centered above the traveled roadway. The camera shall view approaching vehicles at a distance not to exceed 350 feet (107 meters) for reliable detection (height to distance ratio of 10:100). Camera placement and field of view (FOV) shall be unobstructed and as noted in the installation documentation provided by the supplier.

The video signal shall be fully isolated from the sensor enclosure.

SENSOR DATA COMBINER
A sensor data combiner that combines sensor information from both video and radar sensors shall be employed.

The sensor data combiner shall supply primary power to each sensor unit.

The sensor data combiner shall facilitate digital communications between the sensor data combiner and each of the sensor units.

The sensor data combiner shall get its primary power from AC power sourced from the PI using outdoor rated, 16AWG 110VAC cable.

The sensor data combiner shall communicate with the CI using a single outdoor rated, 16AWG 110VAC cable. Both video imaging and radar data shall use the single cable.

The sensor data signal shall be fully isolated from the mechanical enclosure

Cable terminations at the sensor data combiner shall not require crimping tools.

The sensor data combiner shall be housed in a weather-tight sealed enclosure conforming to IP-67 specifications.

A weather-proof protective cover shall be provided shall be provided to protect all terminations at the sensor.

The sensor assembly shall include a temperature sensor. The sensor will be polled by the MSDS every minute and will supply the current air temperature. The MSDS software will display this information on the On-Screen Display for each sensor.

2.4 VDS Camera Sensor

The VDS camera sensor shall be supplied by the VDS manufacturer.

The MSDS sensor shall utilize a single minimum 16AWG 110VAC rated cable for power, communications and video. Cable termination at the camera shall not require crimping or special tools. The cable termination shall only require a standard wire stripper and a screw driver. No connectors (e.g. BNC) shall be allowed.

The camera sensor shall allow the user to set the focus and field of view via the VDS software. Camera sensor control from the controller cabinet shall communicate over a single 16AWG 3 core cable. No additional wires shall be required.

The camera shall produce a useable video image of the features of vehicles under all roadway lighting conditions, regardless of time of day. The minimum range of scene luminance over which the camera shall produce a useable video image shall be the

minimum range from nighttime to daytime, but not less than the range 0.5 lux to 10,000 lux.

The camera electronics shall include automatic gain control (AGC) to produce a satisfactory image at night for the VDS algorithms.

The imager luminance signal to noise ratio (S/N) shall be more than 50 dB with the automatic gain control (AGC) disabled.

The imager shall employ three-dimensional dynamic noise reduction (3D-DNR) to remove unwanted image noise.

The camera imager shall employ wide dynamic range (WDR) technology to compensate for wide dynamic outdoor lighting conditions. The dynamic range shall be greater than 100 dB.

The camera shall be digital signal processor (DSP) based and shall use a CCD or CMOS sensing element and shall output color video with resolution of not less than 540 TV lines. The color CCD or CMOS imager shall have a minimum effective area of 1920(h) x 1080(v) pixels.
The camera shall include an electronic shutter control based upon average scene luminance and shall be equipped with an auto-iris lens that operates in tandem with the electronic shutter. The electronic shutter shall operate between the range of 1/60th to 1/90,000th second.

The camera shall utilize automatic white balance.

The camera shall include a variable focal length lens with variable focus that can be adjusted, without opening up the camera housing, to suit the site geometry by means of a portable interface device designed for that purpose and manufactured by the detection system supplier.

The horizontal field of view shall be adjustable from 4.5 to 48 degrees. This camera configuration may be used for the majority of detection approaches in order to minimize the setup time and spares required by the user. The lens shall be a 12x zoom lens with a focal length of 3.5mm to 35mm. The sensor lens should yield a rectilinear image.

The lens shall also have an auto-focus feature with a manual override to facilitate ease of setup.

The camera shall incorporate the use of preset positioning that store zoom and focus positioning information. The camera shall have the capability to recall the previously stored preset upon application of power.

The camera shall be housed in a weather-tight sealed enclosure. The housing shall allow the camera to be rotated to allow proper alignment between the camera and the traveled road surface.

The camera enclosure shall be equipped with a sunshield. The sunshield shall include a provision for water diversion to prevent water from flowing in the camera's field of view. The camera enclosure with sunshield shall be less than 3.5" (89mm) diameter, less than 5.25" (133mm) long, and shall weigh less than 2.5 pounds (1.14kg) when the camera and lens are mounted inside the enclosure.

The enclosure shall be designed so that the pan, tilt and rotation of the camera assembly can be accomplished independently without affecting the other settings.

CAMERA LENS

The camera enclosure shall include a proportionally controlled Indium Tin Oxide (ITO) lens coating for the heating element of the front glass that maximizes heat transfer to the lens. The output power of the heater shall vary with temperature, to assure proper operation of the lens functions at low temperatures and prevent moisture condensation on the optical faceplate of the enclosure. The transparent coating shall not impact the visual acuity and shall be optically clear.

The glass face on the front of the enclosure shall have an anti-reflective coating to minimize light and image reflections.

The glass face on the front of the enclosure will include a Titanium Dioxide shelf cleaning coating

When mounted outdoors in the enclosure, the camera shall operate satisfactorily in a temperature range from -30° F to +140° F (-34 °C to +60 °C) and a humidity range from 0% RH to 100% RH. Measurement of satisfactory video shall be based upon VDP system operation.

Power consumption shall be 15 watts typical and 20 watts or less under worst conditions.

Recommended camera placement height shall be 33 feet (or 10 meters) above the roadway, and over the traveled way on which vehicles are to be detected. For optimum detection the camera should be centered above the traveled roadway. The camera shall view approaching vehicles at a distance not to exceed 350 feet (107 meters) for reliable detection (height to distance ratio of 10:100). Camera placement and field of view (FOV) shall be unobstructed and as noted in the installation documentation provided by the supplier.

The video signal shall be fully isolated from the camera enclosure.

Cable terminations at the camera for video and power shall not require crimping tools.

A weather-proof protective cover shall be provided shall be provided to protect all terminations at the camera. No special tooling shall be required to remove or install the protective cap.

The camera assembly shall include a temperature sensor. The sensor will be polled by the VDS every minute and will supply the current air temperature. The VDS software will display this information on the On-Screen Display for each camera.

2.5 MSDS Software

GENERAL SYSTEM FUNCTIONS

Detection zones shall be programmed via an embedded application displayed on a video monitor and a keyboard and a pointing device connected to the CI. The menu shall facilitate placement of detection zones and setting of zone parameters or to configure system parameters. A separate computer shall not be required for programming detection zones or to view system operation. All programming function shall occur on live video images and radar blips, no snapshots or still images are allowed.

The MSDS software shall store up to five completely independent detection zone patterns in non-volatile memory. The MSDS can switch to any one of the five different detection patterns within 1 second of user request via menu selection with the pointing device. Each configuration shall be uniquely labeled and able to be edited by the user for identification. The currently active configuration indicator shall be displayed on the monitor.

The MSDS shall detect vehicles and bicycles in real time as they travel across each camera detection zone.

The MSDS shall detect vehicles in real time as they travel across each radar detection zone.

The CI shall automatically define a pedestrian crossing area, and track pedestrians in real-time as they travel across this pedestrian crossing area in both directions of the camera image. The CI shall count pedestrians moving left-to-right, and right-to-left. The CI shall measure the speed of pedestrians moving left-to-right, and right-to-left, and provide the minimum, maximum, and average speed of the pedestrians per the bin interval. These values shall be displayed on-screen for both directions, and an option shall be provided to the user to turn this on-screen display on or off. This data will be stored in local memory for later retrieval via a remote device. The data will be stored at the Bin Interval set in the system.

The CI shall automatically define the intersection approach and track vehicles in real-time as they travel across this area of the camera image. The CI shall classify the vehicle and count each type per the bin interval. This data will be stored in local memory for later retrieval via a remote device. The data will be stored at the Bin Interval set in the system.

The MSDS will incorporate the use of Artificial Intelligence (AI) to perform some or all of the various video detection and data collection functions.

The CI shall provide a discrete output when pedestrians are being tracked in the crosswalk. A separate output may be assigned to each direction of pedestrian travel.

The CI shall provide a discrete output when pedestrians are crossing against a red phase. The CI shall allow up to 4 phase inputs to be assigned to each crosswalk.

The MSDS shall accept new detection patterns from an external computer through the Ethernet port when the external computer uses the correct communications protocol for downloading detection patterns. A Windows™-based software designed for local or remote connection and providing video capture, real-time detection indication and detection zone modification capability shall be provided with the system.

The MSDS shall have the capability to automatically switch to any one of the stored configurations based on the time of day which shall be programmable by the user.

The MSDS shall send its detection patterns to an external computer through the Ethernet port when requested when the external computer uses the appropriate communications protocol for uploading detection patterns.

The MSDS shall default to a safe condition, such as a constant call on each active detection channel, in the event of unacceptable interference or loss of the video and/or radar signal.

The MSDS shall be capable of automatically detecting a low-visibility condition of the camera sensor such as fog and respond by placing all affected detection zones in a constant call mode. A user-selected alarm output shall be active during the low-visibility condition that can be used to modify the controller operation if connected to the appropriate controller input modifier(s). The system shall automatically revert to normal detection mode when the low-visibility condition no longer exists. An On-Screen Icon will be displayed while the system is in this mode.

Up to 32 detection zones per camera input shall be supported and each detection zone must be user-sizeable to suit the site and the desired vehicle detection region.

Up to 16 detection zones per radar input shall be supported and each detection zone must be user-sizeable to suit the site and the desired vehicle detection region.

Up to 5 trip lines per radar input shall be supported and each trip line must be user-positionable to suit the site and the desired vehicle detection application.

The system shall provide a Group output. When a user defined number of vehicles are present in the radar FOV the system shall activate an output.

The MSDS shall provide up to 32 open collector output channels per camera and 16 open collector outputs per radar input using one or more extension modules.

The MSDS shall provide discrete outputs when pedestrians are being tracked in the crosswalk. An output may be assigned to pedestrians crossing from left to right and a separate output may be assigned to pedestrians crossing from right to left.

The MSDS shall provide a discrete output when pedestrians are crossing against a red phase. The MSDS shall allow up to 4 phase inputs to be assigned to each crosswalk.

A single video detection zone shall be able to replace multiple inductive loops and the video detection zones shall be OR'ed as the default or may instead be AND'ed together to indicate vehicle presence on a single approach of traffic movement.

When a vehicle is detected within a detection zone, a visual indication of the detection shall activate on the video and radar overlay display to confirm the detection of the vehicle for the zone.

Detection shall be at least 98% accurate in good weather conditions, with slight degradation possible under adverse weather conditions (e.g. rain, snow, or fog) which reduce visibility. Detection accuracy is dependent upon site geometry, sensor placement, camera image quality and detection zone location, and these accuracy levels do not include allowances for occlusion or poor video due to sensor location or quality.

The MSDS shall provide dynamic zone reconfiguration (DZR). DZR sustains normal operation of existing detection zones when one zone is being added or modified during the setup process. The new zone configuration shall not go into effect until the configuration is saved by the operator.

Detection zone setup shall not require site specific information such as latitude and longitude to be entered into the system.

The RDS shall process the radar signals from each sensor at 50mS intervals. Multiple processors shall process all radar signals simultaneously.

The MSDS shall process the video input from each camera sensor at 30 frames per second. Multiple camera processors shall process all video inputs simultaneously.

The MSDS shall output a constant call during the background learning period of no longer than 3 minutes.

Detection zone outputs shall be individually configurable to allow the selection of presence, pulse, extend, and delay outputs. Timing parameters of pulse, extend, and delay outputs shall be user definable between 0.1 to 25.0 seconds.

Up to eight detection zones per camera sensor view shall have the capability to count the number of vehicles detected. The count value shall be internally stored for later retrieval through the Ethernet port. The zone shall also have the capability to calculate and store average speed and lane occupancy. Bin interval is set to 15 minutes.

The system shall provide an automatic count function per lane for each movement of vehicles, which includes through moving, right, and left turning vehicles. Once standard detection zones have been configured the system will determine the path of vehicles and begin to track them. The data shall be stored at a bin interval of 15 minutes. The current

count will be displayed on the video image. The current count display may be disabled by the user.

In addition, any valid detector output may be assigned to the automatic count. For each count the associated detector output will be pulsed for 100mS.

In addition to the count type zone, the MSDS shall be able to calculate average speed and lane occupancy for all of the video detection zones independently. These values shall be stored in non-volatile memory for later retrieval.
The MSDS shall have an “advance” zone type where raw detection output duration to the traffic controller is compensated for angular occlusion and distance.

The MSDS shall employ color overlays on the video output.

The MSDS shall have the ability to show controller phase status (green, yellow, or red) for up to 8 phases. These indications shall also be color coded.

The user shall have the ability to enable or disable the display of the phase information on the video output.

The MSDS shall have the capability to change the characteristics of a detection zone based on external inputs such as signal phase. Each detection zone shall be able to switch from one zone type (i.e. presence, extension, pulse, etc.) to another zone type based on the signal state. For example, a zone may be a “count” zone when the phase is green but change to a “presence” zone type when the phase is not green. Another application would be zone type of “extension” when the signal phase is green and then “delay” when red.

The MSDS software shall aid the user in drawing additional detection zones by automatically drawing and placing zones at appropriate locations with only a single click of the mouse. The additional zone shall utilize geometric extrapolation of the parent zone when creating the child zone. The process shall also automatically accommodate lane marking angles and zone overlaps.

The radar sensor shall have the capability to control the output of each radar detection zone based on a minimum or maximum speed. The minimum speed can be set from 0 mph (0 kph) to 249 mph (400 kph). The maximum speed can be set between 1 mph (1 kph) to 250 mph (402 kph).

When the user wishes to modify the location of a zone, the MSDS software shall allow the user move a single zone, multiple zones or all zones simultaneously.
When the user wishes to modify the geometric shape of the zone, the MSDS software shall allow the user to change the shape by moving the zone corner or zone sides.

On screen zone identifiers shall be modifiable by the user. The user shall be allowed to select channel output assignments, zone type, input status, zone labels or zone numbers to be the identifier.

The MSDS shall have the capability to show pedestrian activity in the crosswalk through a visual indication on the video output.

The MSDS software shall support bicycle type zones where the zone can differentiate between motorized vehicles and bicycles, producing a call for one but not the other.

Bicycle zone types shall only output when a bicycle is detected. Larger motorized vehicles such as cars and trucks that traverse a bicycle zone shall not provide an output.

The MSDS software shall provide the ability to assign a separate output channel for bicycle zones to allow traffic controllers to implement special bicycle timing.

Placement of bicycle type zones in vehicle lanes shall be allowed.

Upon detection of a bicycle, the video output overlay shall indicate active detection as well as providing a unique bicycle detection identifier to visually distinguish bicycle detection versus vehicle detection.

Up to six bicycle detection zones per camera view shall have the capability to count the number of bicycles detected in addition to their normal detection function. The count value shall be internally stored for later retrieval through the Ethernet port.

RADAR ZONE DATA DISPLAY
Current conditions for the 16 radar zones shall be displayed on the video. The conditions are; un-configured, configured and inactive and configured and active.

RADAR TRIP LINE AND ACTIVITY DISPLAY
Current conditions of the 5 trip lines and any warning flags from the radar shall be displayed on the video.

RADAR DATA DISPLAY
The speed of the last vehicle through the approach will be displayed on the video. The current count of vehicles passing the last trip line will be displayed on the video.

RADAR PERFORMANCE DISPLAY
Various icons will be deployed on the video stream as part of the On-Screen Display (OSD) to indicate radar operation. These will include Group Mode, Fallback Mode, No Radar Data and Radar Interference.

VIDEO PERFORMANCE DISPLAY
Various icons will be deployed on the video stream as part of the On-Screen Display (OSD) to indicate video operation. These will include Low Contrast Mode, Glare Mode, Video Constant Call, Alarm Activated, Algorithm Day and Night Short and Long Modes.

AUTOMATIC TURNING MOVEMENT COUNTS
The system will display the Automatic Turning Movement count for the current bin interval as part of the On-Screen Display (OSD). The data can be disabled by phase.

USER INTERFACES

This section sets forth the minimum requirements for the MSDS to provide a single point interface to remote and local users. The MSDS shall also have the capability to stream up to eight simultaneous video streams over an Ethernet interface. These streams may be from individual sensors or a quad stream from all sensors.

The user interface shall provide capabilities to enable multiple rack-mounted detection processors to be locally and remotely accessed from a single point via an Ethernet connection.

The device shall allow the operator to view ten videos simultaneously or any one video by controls embedded in the MSDS.

The device shall allow the operator to view either individual video stream from each sensor or a quad video stream from all sensors by controls embedded in the MSDS.

Local user access to video detection programming shall be limited to the detection processor unit that is currently being displayed on the monitor.

All local programming and setup parameters for the video detection processor shall be user accessible through the interface unit without requiring the user to swap user interface cables between video detection processors.

Remote access to the device shall be through the built-in Ethernet port via access software running on a Microsoft Windows based personal computer.

A Windows OS remote access firmware shall also be available for remote setup and diagnostics of the interface unit.

The MSDS shall support streaming video technology using H.264 standards to allow the user to monitor video detection imagery over the Ethernet interface. Motion JPEG streaming video shall not be allowed.

The interface unit shall allow eight independent streams, one from each detection processor, to be transported via Ethernet to four independent streaming video players simultaneously in Full HD (1080p) resolution.

The interface unit shall support the streaming and display of four concurrent streams in Full HD (1080p) resolution.

The interface shall allow the user to change the unit’s Ethernet network settings of IP address, subnet mask and default gateway.

The MSDS shall allow the user to upload new application firmware through the use of the interface, remotely or on-site.

A Windows OS based application will be provided to remotely view video streams from the MSDS.

An iOS and Android based application shall be available to remotely access each configured MSDS on the agency's network. This application shall allow the user to choose between any number of pre-configured intersection locations. Using the iOS or Android device, the application will allow the user to view live video from any camera at that intersection, including vehicle and bicycle detections in real-time. The application will also allow the user to view individual intersection data, including turning movement counts and occupancy. The application will show each data set in time periods of day, week, or month, and have the capability of turning on or off right, left, and thru movement data for turning movement count data. The application will also allow the user to view current system diagnostic data, including the following, but not limited to; individual camera glare and low contrast information, system low contrast, constant call, alarm, reboots, logins, and menu access information.

A Windows based PC application shall be available to remotely access each configured MSDS on the agency's network. The application shall allow the user to choose multiple intersection locations to be displayed simultaneously on the screen. Intersections can be displayed in alphanumeric order. Groups of intersections can be configured to be displayed simultaneously to allow the user to monitor particular corridors of detection. Multiple groups may be configured in the application.

2.6 Synchronous Data Link Control (SLDC) Functionality

This section sets forth the minimum requirements for a full-function BIU and integrated MSDS detection communication. The MSDS shall provide outputs to the controller of vehicle calls from DPs that reside within the detector rack.

FUNCTIONAL CAPABILITIES

The MSDS shall have the capability of monitoring phase information and passing that information and other system data such as "time" from the controller to video detection processor modules. The DP shall also accept data from video processor modules and relay the information to the controller. The unit shall provide a maximum of 64 detector outputs to the controller via the SDLC interface.

REQUIREMENTS

The module shall be in compliance with the following industry specifications:

• Transportation Electrical Equipment Specifications (TEES), August 16, 2002 (or latest edition), California Department of Transportation

• NEMA Standard Publication TS 1-1989 (or latest edition), Traffic Control Systems, National Electrical Manufacturers Association

• NEMA Standard Publication TS 2-2003, Traffic Controller Assemblies With NTCIP Requirements, Version 02.06 (or latest edition), National Electrical Manufacturers Association

DATA INTERFACES

The MSDS shall have two data interfaces:

• The interface to the controller shall be accomplished by the use of the TS-2 SDLC port and protocol in accordance with the TS-2 specifications. The module shall be able to be configured to respond to BIU addresses 8, 9, 10 and 11 or a combination thereof.
• The interface to communicate with card rack video detection processors shall be manufacturer specific.

SDLC COMMUNICATION INDICATORS
One LED indicator shall be provided for the TS-2 SDLC interface. The indicator shall be used to inform the user of any communication activity on the SDLC port.

2.7 Real Time Data Stream

DATA STREAMING MECHANISM
The MSDS shall employ a MQTT Publish/Subscribe model for publishing real time data. The Mechanism shall provide multiple data streams. Subscribers may subscribe to one or many of the data streams

DETECTION ZONE STATUS
The MSDS shall provide the status of each configured detection zone at a 100mS refresh rate.

CHANNEL OUTPUT STATUS
The MSDS shall provide the status of each configured channel output at a 100mS refresh rate.

COUNT DATA
The MSDS shall provide the accumulated count for each configured count type zone and each automatically generated count, for example Automatic Turning Movement Counts at a 60S refresh rate.

2.8 Installation

The cable to be used between the sensor and the PI in the traffic cabinet shall be 16AWG, 3 core 110VAC, outdoor rated. This cable shall be suitable for installation in conduit or overhead with appropriate span wire.

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 certification shall be provided.

2.9 Warranty

The supplier shall provide a limited three-year warranty on the MSDS.

During the warranty period, technical support shall be available from the supplier via telephone within 4 hours of the time a call is made by a user, and this support shall be available from factory-certified personnel or factory-certified installers.

During the warranty period, updates to DP software shall be available from the supplier without charge.

MAINTENANCE AND SUPPORT
The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the video detection system. These parts shall be available for delivery within 30 days of placement of an acceptable order at the supplier's then current pricing and terms of sale for said parts.

The supplier shall maintain an ongoing program of technical support for the video detection system. This technical support shall be available via telephone, or via personnel sent to the installation site upon placement of an acceptable order at the supplier's then current pricing and terms of sale for on-site technical support services.

Installation or training support shall be provided by a factory-authorized representative and shall be a minimum IMSA-Level II Traffic Signal Technician certified.

All product documentation shall be written in the English language.

Payment for Video Detection System shall be included in the various lump sum (LS) items of the bidding schedule unless specified otherwise. Payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in order of work as specified herein.

3. 2070 CONTROLLER

Contractor shall furnish and install the McCain 2070LX Controller or City-approved equal and traffic signal equipment as shown on plans to provide a complete functioning controller for the intended operation as shown in the proposed phase diagram. Traffic signal controllers shall come furnished with Omni Ex software or City-approved equal and all necessary hardware components for the intended intersection operation. The work shall consist of remove and salvage existing materials in conformance with specifications and the special provisions and in conformance with the details shown on the plans or directed by the City.

The Contractor shall provide a qualified technician from the manufacturer to assist on the day of the signal turn-on. Controller operation and preliminary timing shall be set by the field Engineer and the equipment manufacturer, subject to field adjustment instructions by the Engineer. Flasher units shall be set “red” on the intersections specified in the project.

At each intersection, the Contractor shall only install these traffic signal controllers between the hours of 9 AM to 3 PM Monday thru Friday so not to hinder morning and evening traffic. The controllers must be programmed before the installation to limit the amount of time that the intersection will be in four (4) way flash. It is the Contractor’s responsibility to implement traffic signal timing sheets with Leading Pedestrian Interval (LPI) provided by the City.

Payment for 2070 Controller shall be included in the various lump sum (LS) items of the bidding schedule unless specified otherwise. Payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in order of work as specified herein.

4. Signal Heads and Yellow Retro-Reflective Backplates

Vehicle signal faces, signal heads and auxiliary equipment, as shown on the plans, and the installation thereof, shall conform to the provisions in Sections 86-1.02R and 87-1.03R "Signal Heads" of the Caltrans Standard Specifications and these Special Provisions.

All signal head sections shall be 12" metallic three, four or five section as applicable. LED indications, as shown on the plans, and the installation thereof, shall conform to the provisions in Sections 86-1.02R, 86-1.02S, 87-1.03R, and 87-1.03S of the Caltrans Standard Specifications and these Special Provisions.

All signal indications shall be 12" LED modules.

Backplates and visors shall be provided and installed on the signals. Backplates and visors shall be premanufactured metallic and shall be one piece construction. Backplates shall have louvers. The fasteners attaching the backplate to the signal head shall be stainless steel or steel with a zinc finish "Tek" self-drilling/tapping hex head screws with integral or captive flat washer. The proper size is 12-14 x ¾. Note: these are not provided by the signal manufacturer.

Retro-reflective backplates shall be powder coated aluminum or polycarbonate border inserts manufactured by Swarco McCain or City-approved equal. Retro-reflective tape border shall be 3M adhesive reflectorized 2" thickness strips, must be federal yellow, and must conform to the CA MUTCD requirements. All new backplates shall have retro-reflective borders.
Retro-reflective improvements shall be implemented to existing signal heads by either:

1) Retrofit existing backplate by installing the 3M retro-reflective tape border by thoroughly washing existing backplate surface with acid-wash per manufacturer specifications and apply the retro-reflective tape border and the adhesion of the reflectorized tape is ensured to last 5 years or more.
2) If the existing vehicle head manufacturer is known, install pre-fabricated backplates with 3M tape in the factory and swap out existing backplate with new compatible backplate. This method is preferred.

All signal mounting hardware, including pipe and fittings, shall not be aluminum. The standpipe on all four and five section signal mounts shall be schedule 160. This extra thickness is to prevent the standpipes from breaking in the wind.
If installation of vehicle heads and retroreflective backplates require lane closures, Contractor shall perform work at night.
Once installed, traffic signal faces shall be covered until signal turn-on. Covers shall be specifically designed for this purpose. No cardboard or plastic shall be used.

Payment for Signal Heads and Yellow Retro-Reflective Backplates shall be included in the various lump sum (LS) items of the bidding schedule unless specified otherwise.

Payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in order of work as specified herein.

4. Accessible Pedestrian Push Buttons (Bid Alternative A)

Pedestrian Push Buttons shall be per the 11th edition of the MUTCD and 87-1.03U "Push Button Assemblies" and shall be Polara 2-Wire Accessible Pedestrian Signal (APS) push buttons and must be on the Authorized Material List for Audible Pedestrian Signals.
The Audible-Tactile Pedestrian Signal System shall consist of all electronic control equipment, mounting hardware, push buttons and signs, which are designed to provide both a push button with a raised vibrating tactile arrow on the button, along with a variety of audible sounds for different pedestrian signal functions.
A 2 Wire APS system consists of push button stations installed on poles with existing or new pairs of button wires and a Central Control Unit installed in the traffic cabinet. The Central Control Unit powers the push button stations over the 2 wires and uses digital data including pedestrian interval information and pedestrian calls for each phase to communicate with each push button station over the two low voltage button wires.

Substantiating documentation for meeting ISO, NEMA, IEC, and FCC requirements must be supplied from an outside Testing Services Laboratory.

General Description

1. The System shall consist of a Central Control Unit (CCU) and Pedestrian Push Button Stations (PBS), as described below, and be capable of communicating with and programming with devices that support an iOS client application, or an Android client application, or Windows PC with Bluetooth® Low Energy dongle and Windows client application, for programming the system settings.
2. The System shall be manufactured by an ISO 9001:2015 (minimum) registered company.
3. The System shall meet the requirements of Made in America and/or The Buy American Act.

Design Compliance

1. The System shall meet the functionality requirements of MUTCD 11th ed. – 4K and CAMUTCD 2011 – 4E.
2. The System shall meet NEMA TS 2 Section 2.1 Temperature & Humidity requirements, or TS4 equivalent.
3. The System shall meet NEMA TS 2 Section 2.1 Transient Voltage Protection requirements, or TS4 equivalent.
4. The System shall meet NEMA TS 2 Section 2.1 Mechanical Shock and Vibration requirements, or TS4 equivalent.
5. The System shall meet IEC 61000-4-4, IEC 61000-4-5 Transient Suppression requirements.
6. The System shall meet FCC Title 47, Part 15, Class A Electronic Noise requirements.

7. The Push Button Station (PBS) Enclosure shall meet NEMA 250 – Type 4X requirements.
8. The Central Control Unit (CCU) Enclosure shall meet NEMA 250 – Type 1 requirements.

Functional Requirements

1. The System shall support at least 16 PBS's per intersection (on at least 1 channel) controlled by a single base unit located in the traffic control cabinet.
2. The System shall vibrate a tactile arrow button during the WALK interval following a button push and/or every time the walk comes up.
3. The System shall have the field-selectable function known as "LOCATE TONE". This means that during the FLASHING DON'T WALK and DON'T WALK intervals, the system shall provide a locating tone that emanates from the PBS. The system shall provide at least 3 different sounds to choose from.
4. The System shall have the field selectable function known as "Extended Push Activation". This is defined as the audible WALK message shall only be activated and audible during the WALK interval if the button is depressed for a field selectable minimum period of time (from 0.5 to 6 seconds). Also, for the walk and clearance intervals that follow an extended push, the volumes shall have a separately settable minimum and maximum volume level.
5. The System shall have the field selectable function known as "Informational Message". This means that a custom message giving the location of the street to cross and the intersection (or other information) will be vocalized only when the button is depressed for a minimum field selectable time.
6. The System shall provide a "Wait" message that plays once the button is activated, and until the Walk cycle goes into effect. This message must have the field selectable option of OFF, or repeating every 4, 6, 8 or 10 seconds.
7. The System shall have standard "Travel Direction" options that can be selected at the time of installation.
8. The System shall have at least 10 field selectable WALK sound options including a cuckoo, a chirp, an MUTCD rapid tick or custom voice message.
9. The System shall provide at least 7 Ped-clearance sound choices including audible countdown (field selectable). The audible countdown shall represent the time remaining during the pedestrian Clearance interval. Timing is automatically adjusted to the CLEARANCE INTERVAL timing, provided by the Traffic Controller. Due to flasher relay timing variables, audible and PED Head numbers may vary by approximately one second.
10. The System shall provide 2 language capabilities, selectable by user (as a field selectable feature).
11. The PBS's shall have wireless synchronization capabilities, from button to button, (including between a 2 wire PBS and a 3 wire PBS), matched to a phase partner. Sync distance may vary based on the environment. Pedestrian button presses are communicated between phase partners in order to keep the pilot LED in sync, as well as the audible messages during the Walk and Clearance PED intervals. This shall be implemented on corners that do not contain button wires. The wireless synchronization capability shall include sending Standard and Extended Push information to allow a call to be placed from a PBS without

button wires (or degraded button wires) via a phase partner PBS that does have button wires to the traffic controller.

12. The System shall provide an Emergency Preemption Message in conjunction with a preemption system (selectable feature).
13. The System LOCATE TONE, WALK, and DON'T WALK audible features shall have independent assignable minimum and maximum volume limits. CLEARANCE volume level shall be controlled by WALK volume setting.
14. All sounds for all PBS's shall be synchronized.
15. The System shall have a non-visible, ambient sensing microphone located in the pedestrian station in an environmentally protected housing.
16. The LOCATE TONE volume shall adjust automatically in response to ambient noise with field selectable adjustment levels from -30dB below to +20dB above ambient in 2.5dB increments.
17. All other sound volumes shall adjust automatically in response to ambient noise with field selectable adjustment
18. levels from -30dB below to +20dB above ambient in 5dB increments. 18. The System shall utilize high quality digital audio technology, with a minimum 16-bit sample at a 48 kHz sample rate.
19. The PBS firmware and voice messages shall be updatable via Bluetooth Low Energy level 5 at a minimum. There shall be no requirement for IC chips or module hardware to be removed or exchanged in order to complete a firmware or audio update.
20. The System shall have the option to mute sounds on all crosswalks except activated crosswalk (selectable feature).
21. The System shall have a real time clock capable of keeping time when there is no system power, for at least 2 years from the date of manufacture.
22. The System shall have the ability to have four separate program configurations with all features available, and any single configuration can be selected through an external input.
23. The System shall provide a user settable calendar function, allowing four separate configuration profiles to be configured to become active at different times of the day on a daily, weekly, or holiday basis.
24. The entire System shall be configurable from any PBS over Bluetooth Low Energy.
25. The entire System shall be configurable from the CCU over Wi-Fi or Ethernet.
26. All field access to selectable options using Bluetooth Low Energy, Wi-Fi or Ethernet devices shall be protected using password security.
27. Each PBS shall be capable of interacting with a pedestrian app on iOS or Android smart phones, via Bluetooth Low Energy.
28. Each PBS shall be capable of interacting with the PedApp® smartphone App to allow pedestrians to remotely actuate ped call into PBS. PedApp can be configured to help provide visually impaired and all pedestrians location/directionality information, as well as place calls, and receive ped interval information via smartphone.
29. Touchless actuation option when ordered/included in PBS, shall be capable of detecting movement within 1-4 inches to actuate/place ped call via the PBS.
30. The touchless actuation option shall be capable of adjusting the distance or range of detection from 1-20 inches.

31. The touchless actuation option shall be capable of adjusting minimum wave detection time (amount of time that a wave must be performed before a call is activated). The setting times shall be in milliseconds and be settable to 0ms, 50ms, 250ms, and 500ms.
32. The touchless actuation option performance shall not be impeded or affected by ice buildup on the push button station.
33. The touchless actuation option – detection system shall be inconspicuous and vandal resistant.

Central Control Unit (CCU)

The CCU is the control unit that provides data for the Push Button Stations. The CCU shall be either a shelf mount (CCU-S) or card rack mount (CCU-C) assembly.

1. The CCU-S shall be installed inside the Traffic Cabinet and powered by the AC supply mains (115 VAC).
2. The Central Control Unit powers the push button stations over the 2 wires and uses digital data including pedestrian interval information and pedestrian calls for each phase to communicate with each push button station over the two low voltage button wires.
3. The CCU-C shall be installed inside a 300 series Traffic Cabinet's Input File, replacing 2 PED isolator boards and receiving power from the rack (24VDC).
4. The CCU-S shall provide internal power to operate up to 16 PBS's.
5. A 24-volt power brick shall power up to 16 PBS's in a CCU-C configuration.
6. The CCU shall control at least 16 PBS's.
7. The CCU shall be logically configurable to assign any PBS to one of 16 traffic/PED phases.
8. The CCU through SDLC shall be able to place PED calls on up to 8 phases.
9. The CCU-S shall receive pedestrian phase Walk, Don't Walk and Clearance inputs from either the traffic cabinet load switches or an SDLC input.
10. The CCU-C shall receive pedestrian phase Walk, Don't Walk and Clearance inputs from a Transport Electrical Equipment Specification (TEES) C4S connector.
11. The CCU shall be able to self-test all PBS's and put a corresponding phase into recall should a PBS assigned to a phase fail the self-test.
12. The CCU-S shall provide optically isolated general-purpose inputs.
13. The CCU-S shall incorporate four separate cable assemblies to access all functions, so any combination of the four cable assemblies can be used to access any combination of functions.
14. The CCU shall have internal storage to log several thousand events with a date-time stamp for each event.
15. The CCU shall have an internal real-time clock capable of being set in the field and propagating the time to each connected PBS.
16. The CCU firmware shall be updatable via either Wi-Fi or Ethernet. There shall be no requirement for IC chips or module hardware to be removed or exchanged in order to complete the firmware update.
17. The CCU shall monitor PED interval conflicts and set affected PBS's to an off/safe mode when a conflict occurs.
18. The CCU-S shall meet NEMA 250 – Type 1 enclosures requirements.

19. The CCU shall have a backlit LCD screen and button interface to allow placing test calls and display status.

PEDESTRIAN PUSH BUTTON STATION (PBS)

The PBS allows the pedestrian to place calls to the Traffic Controller and provides vibro-tactile feedback during the Walk cycle. This equipment is typically mounted on a pole, near the start of the crossing.

1. The PBS shall be mounted to a pole by banding or bolting.
2. The PBS shall be a single fixture that contains a 2" activation area, in which resides an ADA compliant vibro-tactile push button with a raised directional tactile arrow, and a sign mounted above the button.
3. The PBS Speaker shall be 8 Ohms, 6 Watt, and weather-proof.
4. The button shall be cast aluminum, nickel-plated and powder coated black around the arrow, to provide high contrast to arrow color. The PBS arrow shall allow for change in orientation to one of four directions.
5. The PBS button actuation shall use Hall Effect Sensor technology rated to greater than 20 million operations.
6. The PBS button push force shall have three adjustable pressure settings "Light, Medium, and Firm" over a range of approximately .5 LB to 3.5 LBS to activate a button push.
7. The PBS button shall pulse and vibrate at approximately 20 Hz with displacement factor based on pounds of force used to actuate.
8. The PBS shall have a rear facing speaker projecting sound from front and back, providing 360º omnidirectional sound performance.
9. The PBS shall include internal Conflict Monitoring that monitors WALK, and DON'T WALK input signals for conflict conditions; disables system operation and logs errors if conflict occurs.
10. The PBS firmware and voice messages shall be updatable via Bluetooth Low Energy. There shall be no requirement for the hardware to be changed out to update.
11. The system shall operate with the vendor's client application to record and upload cumulative PED count & call data.
12. The PBS shall meet or exceed NEMA 250 type 4X enclosure requirements.
13. The PBS Construction shall be:
    a. FRAME and BUTTON COVER: Cast Aluminum, Powder Coated.
    b. HOUSING: Reinforced, UL-listed Thermoplastic.
    c. MESSAGE SIGN: Aluminum, Powder Coated, Ink Markings, or Reflective Vinyl Sheeting
    d. PUSH BUTTON: Aluminum, Nickel Plated, Powder Coated.
14. Electronic circuits (printed circuit board assemblies) shall be in a thermoplastic housing/enclosure having a UL94-V0 flammability rating. The housing/enclosure shall provide NEMA 250 4X protection to all covered components.
15. At time of order customer shall be able to specify sign size, and Message Sign Markings to be either the International Walking Person or the Informational Explanations for the three (3) distinct pedestrian displays (WALK, DON'T WALK, and PED CLEARANCE) that a pedestrian would see on an active pedestrian signal.

16. The PBS shall be a modular design with a separate speaker compartment that can be field-replaced.
17. A 2-Wire PBS shall include a 3-position terminal block to support the capability of operating as a 3-Wire PBS (3-WirePed Head Based System) by adding a Control Unit in the pedestrian signal head that converts 115 VAC to 24VDC, and a 3 wire cable that carries power, data, and ground wires from Control Unit to the PBS.
18. The PBS shall have Bluetooth Low Energy communication that allows a pedestrian to use an app to get PED status information, and place a PED call when in close proximity to a button, without having to touch/push the button

Field Programming via Client Application (Apple iOS v9.0 or higher devices, or Android 5.0 or a PC with Windows 8 or 10)

1. The System shall use Bluetooth Low Energy 5 or higher technology to program firmware and audio voice messages, and to communicate to other buttons or external devices.
2. The System shall be password protected through the programming/configuration interface.
3. The iOS, Android, and PC applications shall be upgradable.
4. The iOS, Android, and PC applications shall notify the user when a newer version of the application is available.
5. The iOS, Android, and PC applications shall notify the user when newer PBS and CCU firmware is available.
6. The iOS, Android, and PC applications shall provide the mechanism to download the latest PBS and CCU firmware.
7. The iOS, Android, and PC applications shall be capable of setting all volumes and features of the APS system specific to the PBS's.
8. The iOS, Android, and PC applications shall be capable of setting/updating configuration options for a single PBS or all PBS's on the intersection for most functions from a single PBS or CCU. (Global updating).
9. The iOS, Android, and PC applications shall be capable of storing, modifying, loading, and emailing PBS configuration settings, audio files and health logs.

Contractor shall reuse existing wires when indicated on the Project Plans.
Contractor shall splice existing spare wires to new pedestrian push button to provide the intended operation as shown on the Plans.
Contractor shall make holes on existing pole for installation of new pedestrian push button as shown on the Plans.
Contractor shall remove and salvage existing pedestrian push buttons as specified on the Plans.
Contractor shall cover holes left from the removal of existing pedestrian push button as shown on the Plans.
Contractor shall furnish and install pedestrian push button posts using existing mounting bolts and conform to the Caltrans Standard Plans, the provisions of Section 56-3.02 "Steel Standards, Poles, Pedestals, and Posts" of the Caltrans Standard Specifications, MUTCD 11th edition, and these Special Provisions.
If 2 push buttons are installed on a 2.9" pole, Contractor shall furnish and install Polara iNSDM-2.9-B iNS Dual Mount or City-approved equal to ensure 9"x15" signs shall be

mounted without interference. The mount attaches to the traffic signal pole with a single 1” long 1/4-20 bolt through the center plate. The push button stations attach to the pole with two 2.5” long 1/4-20 hex bolts each. These dual mounts are constructed from aluminum, powder-coated black or City-approved equal.
If 2 push buttons are installed on a 4.5” pole, Contractor shall furnish and install Polara iNSPA4X2-B Adapter or City-approved equal to ensure 9”x15” signs shall be mounted without interference.
If 2 push buttons are installed on a pole greater than 4.5” in diameter, Contractor shall ensure that there is no conflict with the 9”x15” signs. Contractor shall furnish and install adaptive brackets if there are any conflicts.
Contractor shall coordinate with manufacturer or representative to be present at signal turn-on.

SPLICING
Splicing shall conform to Section 87-1.03H “Conductor and Cables Splices” of the Caltrans Standard Specifications and these special provisions. Multi conductor signal cable, GTT cable, PTZ cable and loop detector lead-in cable shall not be spliced.

Payment
Payment for Accessible Pedestrian Push Buttons shall be included in the various lump sum (LS) items of the bidding schedule under BID ALTERNATIVE A, unless specified otherwise. Payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in order of work as specified herein.

5. Conduits (Bid Alternative A)

Conduit shall conform to the provisions in Section 86-1.02B, "Conduit and Accessories" and Section 87-1.03B(3) “Conduit Installation Underground”, of the Caltrans Standard Specifications, and these Special Provisions.
Contractor shall reuse existing cables/wires as shown on the plans. If it is determined by the Contractor and verified by City inspector that the existing cables/wires or spare cables/wires cannot be reused, existing cables/wires are incompatible with the new equipment installed, or new wire cannot be installed due to damaged conduit or exceeding conduit fill per Caltrans conduit fill percentage requirements, Contractor to furnish and install new 3” conduits.

The conduit shall be free from defects including non-circularity, foreign inclusions, etc. It shall be nominally uniform (as commercially practical) in color, density, and physical properties. It shall be straight and the ends shall be cut square to the inside diameter. The conduit system shall be designed so that straight sections and fittings will assemble without the need for lubricants or cement.

The conduit shall have a circumferential ring on the spigot end, which shall be used to insure proper insertion depth when connecting conduit ends.

All bend radii shall be four (4) feet or greater as set forth elsewhere in this specification.

The conduit shall have a longitudinal running print line that denotes "Install This Side Up" so as to assure proper alignment.

The conduit shall also be marked with data traceable to plant location, date, shift, and machine of manufacture.

Conduits entering splice vaults and pull boxes shall terminate flush with the inside walls of each pull box.

Conduits entering splice vaults and pull boxes shall be capped or sealed to prevent ingress of water and debris into the conduit. Conduits containing innerducts shall be plugged using a termination kit as provided by the manufacturer and are to be secured inside the conduit and around the innerduct. Innerduct containing one cable shall be plugged using an expandable cable seal off.

Immediately prior to installing cables, conduit shall be blown out with compressed air until all foreign material is removed. After cables have been installed, the ends of conduit shall be sealed with a reusable mechanical plug.

Conduit and fittings shall be supplied with an ultraviolet inhibitor.

PVC Schedule 80 Conduit
2” PVC Schedule 80 conduit shall be used for conduit for electrical service per Southern California Edison Requirements. The new PVC Schedule 80 conduits shall conform NEMA TC-2 and UL651 standards. Contractor shall bore 3” PVC conduits in sidewalk as shown on plans or as directed by the Engineer and Southern California Edison.

Coupling Body
The coupling body shall be factory assembled in the bell end of the outer duct and shall be manufactured from a high impact engineered thermoplastic. The coupling body face shall be supplied with lead-ins to facilitate assembly. The coupling body shall have one key locator identified with raised marks that can be felt through a glove.

When a standard coupling cannot be used for coupling metal type conduit, a UL or ETL listed threaded “Erickson” type union coupling shall be used. All couplings for metal type conduit shall be tightened to provide a good electrical connection throughout the entire length of the conduit run.

Gaskets
The coupling body shall include a factory assembled, multistage gasket that is anti-reversing, sealing both the outer and innerducts. (Gasket on coupling body already accomplishes this function). Full compensation for furnishing and incorporating the gaskets shall be considered as included in the unit price paid for the conduit installation, and no separate payment will be made therefore.

General Installation

All new conduits, notwithstanding the installation method, shall have the following minimum depth of cover:

- Within the traveled roadway – 36 inches below the flow line.
- Behind curbs – 24 inches below top of curb.
- Under railroad tracks – 60 inches below bottom of ties.

All conduits shall be installed at locations as shown on the plans, or as directed by the Engineer. Locations of proposed conduit are approximate and may be changed to suit field conditions as directed or approved by the Engineer. Whenever possible, conduit shall be installed next to the gutter to minimize the disruption of traffic. Conduit sizes shown on the plans shall be used.

Conduit runs are shown schematically in the desired locations. Field conditions at the time of construction may dictate minor changes to facilitate the contractor's work. Such minor changes will not constitute extra work. Actual installation shall be done in the most direct manner or as directed by the Engineer. After two failed attempts to bore or jack conduit, due to rock or other unavoidable obstructions, as verified by the Inspector, in lieu of installing conduit under existing pavement as specified in Section 87-1.03B(3) "Conduit Installation Underground" of the Caltrans Standard Specifications, the Contractor may use the following method when approved by the Engineer:

The Contractor shall obtain all necessary permits and notify all utility companies and underground service alert at least 2 working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. It shall be the responsibility of the contractor to coordinate all phases of construction with the various utility companies ahead of time to avoid conflict with any utilities. Underground Service Alert phone number is 1-800-422-4133.

Conduit shall be installed by trenching or jacking and boring or directional drilling methods, unless specified otherwise in the Plans or these Special Provisions. Jacking and drilling pits shall be kept at least two (2) feet clear of the edge of any type of pavement wherever possible. Excessive use of water, such that pavement might be undermined or subgrade softened, will not be permitted.

Conduit shall be laid to a minimum depth of 24 inches of cover to the top of the conduit is required at all locations.

Conduit shall be placed in a manner to allow the cable/wire to be pulled in a straight line and clear the side of the pull box by at least two inches.

Where conduits are shown on the plans to be installed parallel and adjacent to each other, they shall be installed together in a common trench.

Make right-angle bends in conduit runs with long-radius elbows or conduits bent to radii not less than six times the inside diameter of the conduit.

All bend radii shall be six times the inside diameter of the conduit unless otherwise set forth elsewhere in this Special Provisions or as directed by the Engineer. The sum of the angles for conduit bends between two consecutive pull boxes shall not exceed 270 degrees. All conduit bends shall be factory bends done by the manufacturer. Hot box or other field bends will not be accepted. Transition of the conduit without bends shall not exceed more than one foot for every ten feet.

Make bends and offsets so that the inside diameter of conduit is not effectively reduced. Unless otherwise indicated, keep the legs of a bend in the same plane and the straight legs of offsets parallel.

Do not use diagonal runs except when specifically noted in the drawings.

Provide a waterproof label on each end of the pull rope to indicate the destination of the other end.

Conduits entering vaults and pull boxes shall terminate flush with the inside walls of each pull box.

Conduits entering pull boxes shall be capped or sealed to prevent ingress of water, debris, and other foreign matters into the conduit.

Within pull box, conduit shall be placed to provide a minimum clearance of two (2) inches between the lowest portion of the opening and the bottom of the pull box. And there shall be a minimum clearance of eight inches between the top portion of the opening and the top of the pull box.

Conduit shall enter the pull box at not more than a 45-degree angle. In addition, conduit may not be terminated less than 45 degrees to the ground level, except for pull boxes with extension. Conduit ends shall be terminated three (3) inches above the gravel surface and nine (9) inches clearance between the top of the bushing and the top of the pull box shall be provided.

After conductors/cables have been installed, the exposed end of conduits remaining in pull boxes service and controller cabinets shall be sealed with “a duct seal” type of sealing compound as approved by the Engineer.

Conduit ends shall be sealed after installation to preclude water and dirt infiltration prior to pulling conductors.

Insulated bonding bushings are required on all conduits.

Trenching

1. Trenching/rock wheeling within the traveled roadway shall be done to a depth that allows 36 inches of cover between the top of the conduit to the surface of the roadway. If new conduit is being installed above or below existing utility, the conduit shall be laid no closer than 12 inches from existing utility.

2. Conduit shall be placed in the bottom of the trench using spacers as support and shall be placed in the trench approximately two inches wider than the outside diameter of the conduit to be installed. The trench shall be backfilled with commercial quality concrete. Trench widths shall be as directed by the Engineer.
3. Different conduits within the same trench shall be different colors or uniquely marked, and consistent throughout the project.
4. All excavated areas in the pavement shall be backfilled, except for the top two (2) inches, by the end of each work period. The top two (2) inches shall be placed within three (3) working days after trenching.
5. If the trench is excavated below the required grade, refill any part of the trench excavated below the grade at no additional cost to the City with cement-slurry backfill.
6. During trench excavation, place the excavated material only within the working area. Do not obstruct any roadways or streets. Conform to federal, state, and the City codes governing the safe loading of trenches with excavated material. Excess excavated material shall be removed from the jobsite at the end of each working day.
7. Installation of conduit in unpaved areas (dirt) shall conform to the following:
   a. Conduit shall be placed in a trench approximately two (2) inches wider than the outside diameter of the conduit to be installed. Trench shall not exceed eight (8) inches in width. A minimum of twenty-four (24) inches of cover to the top of the conduit is required. For all pull boxes the trench may be hand dug to required depth.
   b. The conduit shall be placed in the bottom of the trench and the trench shall be backfilled with sand-cement slurry backfill, containing not less than two (2) sacks (188 pounds) of cement per cubic yard of Type I or IT Portland cement added per cubic yard of imported sand and sufficient water for workability. The top four (4) inches shall be backfilled and compacted with native soil.
8. No open trench will be allowed in the travel lane overnight. Final Trench Repair shall be as per the following:
   a. Removal of 0.10’ minimum depth of existing asphalt twelve (12) inches wide on each side of the trench edges (24" total plus width of trench), with an abrasive type grinder specifically used for that purpose. Cuts shall be neat and true with no shatter outside the removal area.
   b. Final asphalt concrete materials, distribution and spreading shall be as per Section 302-5 and 302-6 of the Standard Specifications for Public Works Construction.
   c. Repair of the street must occur within 24 hours after trenching. If repair is not possible within 24 hours, the trenched area shall be filled with temporary asphalt or plated per City direction.
9. Earth Saw (rock wheel) Trenching, Installation of Conduit - Conduit shall be placed under existing pavement in a trench approximately 2 inches wider than the outside diameter of the conduit to be installed.

Cement Slurry Backfill

A slurry cement backfill shall be used as part of the trench backfill for the installation of conduits.

The conduit shall be placed in the bottom of the trench and the trench shall be backfilled with two-sack slurry (if less than 15" of cover, the Engineer may require substitute backfill material) before the end of the work day, flush with the existing finish surface of the A.C.

The backfill shall contain not less than two (2) sacks (188 pounds) of cement per cubic yard of Type I or Portland cement added per cubic yard of imported sand and sufficient water for workability. The top four (4) inches shall be backfilled and compacted with native soil.

Payment

Payment for Conduits shall be included in the various lump sum (LS) items of the bidding schedule under BID ALTERNATIVE A, unless specified otherwise. Payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in order of work as specified herein.

APPENDIX A
CONTRACTOR'S DAILY REPORT

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

DLA ASSISTANT ENGINEER'S DAILY REPORT

DOT LAPM 16-C1 (NEW 10/2023)

PROJECT NO. _____ REPORT NO. _____

FEDERAL PROJECT NO. _____ DATE _____

PROJECT NAME _____

CONTRACTOR _____ DAY: ☐ S ☐ M ☐ T ☐ W ☐ TH ☐ F ☐ S (CHECK ONE)

SHIFT HOURS START: _____ STOP: _____

TEMP MIN: _____ MAX: _____

LOCATION OF WORK (ROADWAY and STATIONS)			HOURS – BID ITEM NO./DESCRIPTION								WEATHER CONDITION (TEMP)
			BID ITEM							IDLE OR DOWN	
NAME	CLASSIFICATION	EQUIPMENT TYPE									REMARKS

DESCRIPTION OF WORK PERFORMED FOR THE DAY

NAME	SIGNATURE	TITLE

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APPENDIX B
NOTICE OF ASSEMBLY BILL 626

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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NOTICE REGARDING ASSEMBLY BILL 626

Assembly Bill 626 (AB 626), signed into law September 29, 2016, established a new claim resolution process for public works project contracts entered into on or after January 1, 2017. AB 626 is codified in Section 9204 of the California Public Contract Code. Section 9204 remains in effect until January 1, 2020, and as of that date will be repealed unless another statute extends or deletes this sunset date.

Public Contract Code Section 9204 applies to any "claim," as defined in Section 9204, which is presented by the Contractor to the City. Section 9204 defines a "claim" as a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following: (1) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by the City; (2) payment by the City of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled; or (3) payment of an amount that is disputed by the City.

If Contractor presents a claim to the City in accordance with the provisions of Public Contract Code Section 9204 (hereafter referred to as a "Claim"), the process specified in Section 9204 will be followed, and the provisions of Section 4-8 (Disputed Claims) and Section 4-9 (Review by Claim Review Committee and Issuance of Decision by Department Director) of the City's Standard Specifications for Public Construction will not apply to the Claim. Contractor's Claim shall comply with the provisions of Section 4-7 (Notice of Claims for Additional Compensation or Damages) of the City's Standard Specifications or Contractor shall give a separate written notice of potential claim that complies with the requirements specified in Section 4-7, except in any case where compliance with the requirements specified in Section 4-7 would conflict with Public Contract Code Section 9204.

Subsection (e) of Public Contract Code Section 9204 requires that the text of Section 9204 or a summary be set forth in the plans or specifications for any public works project that may give rise to a claim under Section 9204.

The full text of Public Contract Code Section 9204 is as follows:
9204.
(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.
(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.
(c) For purposes of this section:
(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.
(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
(C) Payment of an amount that is disputed by the public entity.

(2) “Contractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with apublic entity for a public works project.
(3) (A) “Public entity” means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.
(B) “Public entity” shall not include the following:
(i) The Department of Water Resources as to any project under the jurisdiction of that department.
(ii) The Department of Transportation as to any project under the jurisdiction of that department.
(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.
(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.
(v) The Military Department as to any project under the jurisdiction of that department.
(vi) The Department of General Services as to all other projects.
(vii) The High-Speed Rail Authority.
(4) “Public works project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.
(5) “Subcontractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.
(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.
(B) The claimant shall furnish reasonable documentation to support the claim.
(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.
(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 daysafter the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.
(2) (A) If the claimant disputes the public entity’s written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.
(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the

disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that

(1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the

timeframes and procedures set forth in this section.
(g) This section applies to contracts entered into on or after January 1, 2017.
(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.
(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

APPENDIX C
PREVAILING WAGE RATES

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

Download State Prevailing Wage Rates from State website

https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm

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APPENDIX D
SAMPLE DOOR HANGER

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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PROJECT NAME

The City of Goleta is pleased to inform you that the PROJECT NAME is about to begin. Our contractor, CONTRACTOR NAME, will be working over the next LENGTH OF PROJECT to construct this project. During that time, CONTRACTOR will be DESCRIPTION OF WORK. We apologize for any inconvenience this may cause and ask for your patience and cooperation so that we may complete this work as soon as possible.

Sign up for email/text notifications from the City on this project here:
https://public.govdelivery.com/accounts/CAGOLETA/subscriber/new**.**

WORK HOURS/PARKING: The work will generally be performed between the hours of 7:30 a.m. and 4:30 p.m. However, there are work hour restrictions in some instances. Local access will be maintained during most of the work. However, parking restrictions will be necessary and will be posted a minimum of 72-hours in advance of the work. Cars will be towed if parked during the no parking dates posted on your street.

TIMELINE: Some or all of the following activities will be performed on your street:

- DESCRIPTION OF ACTIVITY DATE
- DESCRIPTION OF ACTIVITY DATE
- DESCRIPTION OF ACTIVITY DATE

CONTACTS: If you have any questions or need information, please contact:

NAME OF CITY CONTACT PHONE NUMBER
NAME OF CONTRACT CONTACT PHONE NUMBER

APPENDIX E
TEMPORARY NO PARKING SIGN

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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TOW-AWAY

TEMPORARY

NO PARKING

TIME: _____

DATES: _____

REASON: _____

CONTRACTOR'S NAME: _____

PHONE NUMBER: _____

(LOCAL OR 800#)

APPENDIX F
SCHOOL ZONE WORK HOUR RESTRICTION MAPS

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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School Zone Map - West
Map 1 of 2
Legend
School
Street with Work Hour Restrictions
Brandon Elementary
Dos Pueblos High
Ellwood Elementary
Ellwood Ridge Rd
Evergreen Dr
Rio Vista Dr
Gerard Dr
Winchester Canyon Rd
Bradford Dr
Calle Del Sur
Brandon Dr
San Rossano Dr
San Blanco Dr
Alpine Dr
Ancona Ave
Savona Ave
Placer Dr
Alameda Ave
Butte Dr
Tuolumne
Calaveras Ave
Cathedral Oaks Rd
Del Norte Dr
Madera Dr
Glen Annie Rd
Calle Real
Hollister Ave
Pebble Beach Dr
Palo Alto Dr
Coronado Dr
Daytona Dr
Mathilda Dr
Santa Felicia Dr
Bollay Dr
Corona Dr
Google earth
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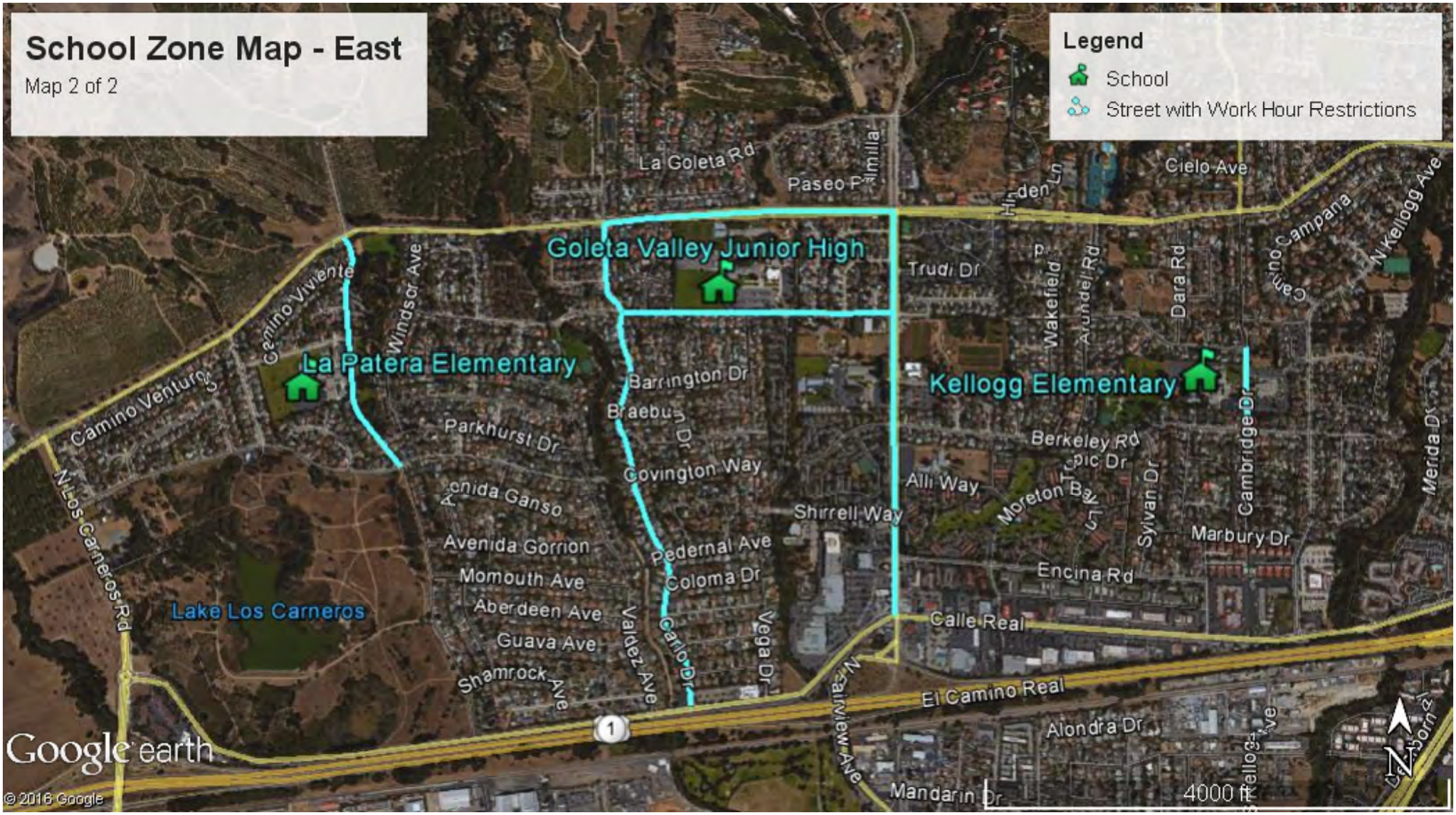
4000 ft
N


School Zone Map - East
Map 2 of 2
Legend
School
Street with Work Hour Restrictions
Goleta Valley Junior High
La Patera Elementary
Kellogg Elementary
La Goleta Rd
Paseo Pimilla
Cielo Ave
Camino Viviente
Windsor Ave
Camino Ventura
Barrington Dr
Braebus Dr
Parkhurst Dr
Covington Way
Avenida Ganso
Avenida Gorrion
Momouth Ave
Aberdeen Ave
Guava Ave
Shamrock Ave
Pedernal Ave
Coloma Dr
Valdez Ave
Carlo Dr
Vega Dr
Shirrell Way
Trudi Dr
Wakefield
Arundel Rd
Dara Rd
Berkeley Rd
Alli Way
Sylvan Dr
Cambridge Dr
Marbury Dr
Encina Rd
Calle Real
Los Carneros Rd
Lake Los Carneros
El Camino Real
Fairview Ave
Alondra Dr
Mandarin Dr
Merida Dr
4000 ft
Google earth
© 2016 Google

APPENDIX G
WEEKLY STATEMENT OF WORKING DAYS

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

DLA WEEKLY STATEMENT OF WORKING DAYS

DOT LAPM 16-A (NEW 10/2023)

JOB STAMP

REPORT NUMBER

CONTRACTOR

WEEK ENDING (month, day, year)

	Day (A)	Day (B)	Weather Conditions or Other Explanation[1] (C)	Working Day (D)	Nonworking Day (E)	Working Day No Work Done on Controlling Activity[6] (F)
1						
2		Monday				
3		Tuesday				
4		Wednesday				
5		Thursday				
6		Friday				
7						
8	Days this week (total lines 1 thru 7)					
9	Days previously reported (take from previous week's report)					
10	Total days to date (lines 8 + 9)					

	Change Order Time Adjustments	Change Order Days Approved	Change Order Numbers[2]
11	Days this report		
12	Days previously reported (taken from previous week's report)		
13	Total change order days to date (lines 11D + 12D)		

	Computation of Extended Date for Completion	Number of Days	Numbered Day[4]	Date
14	First Working Day			
15	Original working days specified in contract			
16	COMPUTED DATE FOR COMPLETION (line 14E + line 15D minus 1)			
17	Total change order days approved to date (from line 13)			
18	Total Nonworking days to date[3] (from box 10E)			
19	EXTENDED DATE FOR COMPLETION (line 16E + line 17D + line 18D)			
20	Revised working days for contract (line 15D + line 17D)			
21	Total working days to date (from box 10D)			
22	WORKING DAYS REMAINING (line 20D – line 21D)			

CONTROLLING ACTIVITY(IES)[5]

REMARKS

If the contractor disagrees with this report, submit a Request for Information within the time specified.

NOTE: *Footnote Instructions to Resident Engineer* are on page 2.

RESIDENT ENGINEER SIGNATURE | DATE

Distribution: Original -- Contractor; Copy -- Resident Engineer

ADA Notice This document is available in alternative accessible formats. For more information, please contact the Forms Management Unit at (279) 234-2284, TTY 711, in writing at Forms Management Unit, 1120 N Street, MS-89, Sacramento, CA 95814, or by email at Forms.Management.Unit@dot.ca.gov.

DLA WEEKLY STATEMENT OF WORKING DAYS

DOT LAPM 16-A (NEW 10/2023)

FOOTNOTE INSTRUCTIONS TO RESIDENT ENGINEER

1. When determining if the day is a working day or non-working day, first determine the controlling operation (taken from the critical path of the updated approved project schedule.), second, If you determine the day is a "nonworking day", provide the contractual reason -for example, "clear-wet grade" to describe conditions when the weather is clear, but the grade is too wet. Do not list days merely as "Unworkable". When recording nonworking days due to "other", provide explanation contract lane closure restrictions, State of emergency, area-wide labor strike, etc.

2. List numbers of change orders providing for time extensions.

3. Do not include nonworking days which occur after expiration of the **Extended Date of Completion**. On contracts that are overtime, the total under Working Days Shall not be greater than the total of revised Working Days (line 7). After approved total of working days has been reached, continue recording working and nonworking days but do not add into the totals. Make a statement under Remarks that working and nonworking days are shown for record only since the contact time has elapsed.

   If an extension of time is subsequently approved, determine the new **Extended Date** by taking into account all nonworking days that are reachable.

4. From the calendar issued by the Division of Construction with working days numbered for convenience in computations.

5. Determine the controlling activity from the updated approved contract schedule. If the controlling activity is completed in the middle of the week and a new one begins, make this clear. For example, "Class 2 base -M, T, W; HMA -Th, Fri." This is not the place to list all the operations the contractor worked on for the week. Record that information in the Daily Report or under "remarks" if you wish.

6. Column F (lines 1-10) is informational only and tracks those days determined in column D to be working days, but the Contractor failed to work on the controlling operation.

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APPENDIX H
CC1 – CC5 FORMS

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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CITY OF GOLETA

Department of Public Works
130 Cremona Drive, Suite B
Goleta, CA 93117

MONTHLY PROJECT PAYMENT ESTIMATE SUMMARY

Payment Estimate No: _____

Work Performed Through: _____

Contractor: _____ Project: _____

Address: _____ Acct.No: _____

Contract Summary	
Original Contract Amount:	
Approved Change Orders through #: _____	
Quantity Changes (Requires Project Engineer/Inspector verification):	
Total Contract Amount to Date:	

Payment Summary	CURRENT PAY PERIOD AMOUNT	PREVIOUS AMOUNT	TO DATE AMOUNT
Original Contract Payments			
Change Order Payments			
Total Earnings			
Less: Retention (5%)			
Less: Administrative Deductions			
Net Amounts			

The undersigned Contractor or Contractor's Authorized Representative certifies that to the best of thier knowledge, information, and belief, the work covered in this application for payment has been completed in accordance with the contract documents and the costs shown are true and correct.

Resident Engineer:	**Project Engineer:**	**Contractor:**
Date:	**Date:**	**Date:**

Form CC 1 REV: 03/2023

CITY OF GOLETA

Department of Public Works
130 Cremona Drive, Suite B
Goleta, CA 93117

Project: _____

Acct.No: _____

Contractor: _____

PROJECT PAYMENT ESTIMATE

Payment Estimate No: _____

Work Performed Through: _____

Item No.	Item Description	Unit	Estimated Quantity	Unit Cost	Contract Amount	This Estimate		Previous Estimates		Work Completed		Work Remaining	
						Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount

Form CC 2 REV: 03/2023

CITY OF GOLETA

Department of Public Works
130 Cremona Drive, Suite B
Goleta, CA 93117

Project: _____

Project No: _____

Contractor: _____

QUANTITY ADJUSTMENT FORM

Payment Estimate No: _____

Work Performed Through: _____

INSTRUCTIONS

This form is to accompany Progress Payments or the Final Payment where there are quantity changes (variations in quantities) authorized by the Department of Public Works that adjust the Total Contract Amount.

Quantity Changes in the amount of:
Accompanying Progress Payment # (or Final Payment) _____ **have been reviewed and the actual quantities verified.**

Item No.	Item Description	Unit	Unit Cost	Contract Quantity Adjustments								
				This Estimate			Previous Estimates			To-Date Totals		
				Quantity	Increase (Decrease)	Amount	Quantity	Increase (Decrease)	Amount	Quantity	Increase (Decrease)	Amount
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00
						$0.00			$0.00			$0.00

Contractor Signature **Date**

Resident Engineer Signature **Date**

CONSTRUCTION CONTRACT FINAL RELEASE

CITY OF GOLETA

130 Cremona Drive, Suite B
Goleta, CA 93117

From: _____
Contractor

_____

_____
Address

Date: _____

Payment Request No: _____

Contract No: _____

Project Name:

_____

_____

To: CITY OF GOLETA
Department of Public Works
CIP Division
130 Cremona Drive, Suite B
Goleta, CA 93117

Upon receipt by the undersigned of a check from the City of Goleta in the sum of

_____

payable to _____

_____

This release covers the final payment to the undersigned for all labor, services, equipment or material furnished on the job, including the work of or all materials furnished for all subcontractors, suppliers, or other agents acting on behalf of the undersigned on this work. There are no disputed claims for additional work.

Contractor Signature: _____ **Print Name:** _____

Title: _____ **Date:** _____

Form CC4 REV: 03/2023

CITY OF GOLETA

CONTRACT CHANGE ORDER MEMO

Department of Public Works
130 Cremona Drive, Suite B
Goleta, CA 93117

Change Order No. _____

Date Prepared: _____

Project No.: _____

Contractor: _____

Project: _____

Address: _____

_____

DESCRIPTION OF ITEMS INCLUDED IN CONTRACT CHANGE ORDER-03:
Modifications to the Project listed in CCO-XX have been due to the following:

What is the change:

Who initiated the change:

Why is the change necessary:

Where is the change located:

How will the change be implemented:

Method of Payment:

Time Adjustment:
A time adjustment of X working days is included as part of this change order.

CONTRACT CHANGE ORDER-XX FINANCIAL IMPACT:

Original Contract Amount:		
Total Change Order Authority Approved by Council:		
Total Change By Previous Change Orders:		
Contract Amount Prior to This Change Order:	$	-
Amount to be Increased By This Change Order:		
Adjusted Contract Amount Including This Change Order:	**$**	**-**
Total Remaining Change Order Authority:	$	-
Contract Period Increase Due to This Change Order:		Days
Final Contract Completion Date Including This Change Order:		Days

By: _____
Name: John Plummer, Resident Engineer

CITY OF GOLETA

Department of Public Works
130 Cremona Drive, Suite B
Goleta, CA 93117

CONTRACT CHANGE ORDER

Change Order No. _____

Date Prepared: _____

Project No.: _____

Contractor: _____

Project: _____

Address: _____

_____

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract.

Description of work to be done, estimate of quantities, and prices to be paid:
In accordance with Section 4-1.05 CHANGES AND EXTRA WORK of the 2023 Standard Specifications, the Contractor shall...

For this work, the Contractor is compensated $X,XXX.XX.This sum, measured in accordance with the Standard Specifications constitutes full and complete compensation, for providing all labor, materials, equipment, tools, and incidentals, including all markups for this change.

(Database Code; XXX) Total This Item:

X Working Days Added

	Estimated Cost:	***Decrease***	***Increase***

By reason of this order, the time of completion will be adjusted as follows: XXX (X) working days added.

Original Contract Amount:	
Total Change by Previous Change Orders and/or Quantity Adjustment:	
Contract Amount Prior to this Change Order:	$ -
Contract Amount to be *Increased/Decreased* by this Change Order:	
Adjusted Contract Amount Including this Change Order:	$ -

SIGNATURE	(PRINT NAME & TITLE)	DATE

REVIEWED BY:

SIGNATURE	(PRINT NAME & TITLE)	DATE
	John Plummer, Principal Civil Engineer	

APPROVAL RECOMMENDED BY:

SIGNATURE	(PRINT NAME & TITLE)	DATE
	Andrew Fuller, Principal Engineer	

CITY APPROVAL BY:

CITY OF GOLETA

Department of Public Works
130 Cremona Drive, Suite B
Goleta, CA 93117

CONTRACT CHANGE ORDER

Change Order No. _____

Date Prepared: _____

Project No.: _____

Contractor: _____ Project: _____

SIGNATURE	(PRINT NAME & TITLE)	DATE
	Nina Buelna, Public Works Director	

We, the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment, therefore, the prices shown above. **NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

CONTRACTOR ACCEPTANCE BY:

SIGNATURE	(PRINT NAME & TITLE)	DATE

Form CC 5

APPENDIX I
BMP DEVICES

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

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Construction Site Best Management Practices (BMP) Manual

CTSW-RT-17-314.18.1

May 2017

California Department of Transportation
Division of Environmental Analysis, Stormwater Program
1120 N Street
Sacramento, California 95814
http://www.dot.ca.gov/hg/env/stormwater/index.htm

For individuals with sensory disabilities, this document is available in alternate formats upon request.

Please call or write to:

Stormwater Liaison, Caltrans Division of Environmental Analysis

MS 27, P.O. Box 942874, Sacramento, CA 94274-0001

(916) 653-8896 Voice or dial 711 to use a relay service.

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CALTRANS Technical Report Documentation Page

1. Report No.	2. Type of Report	3. Report Phase and Edition
CTSW-RT-17-314.18.1	Guidance Manual	Final

4. Title and Subtitle	5. Report Date
Construction Site Best Management Practices (BMP) Manual	May 2017
6. Copyright Owner(s)	7. Caltrans Project Coordinator
California Department of Transportation	Hamid Hakim
8. Performing Organization Names and Addresses Brown and Caldwell 201 North Civic Drive, Suite 115 Walnut Creek, CA 94596 WRECO 1243 Alpine Road, Suite 108 Walnut Creek, CA 94596	9. Task Order No. 18 10. Contract No. 43A0314
11. Sponsoring Agency Name and Address California Department of Transportation Stormwater Program MS-27 1120 N Street Sacramento, California 95814	12. Caltrans Functional Reviewers: Greg Balzer, Jack Broadbent Kim Christmann, Mark Doroudian Johnathan Fitzgerald, Dave Fredrickson Hamid Hakim, Dave Meress Sean Penders, Ben Rubio Hamzeh Ramadan, Tom Rutsch Tom Yi, Walter Yu
13. Supplementary Notes	14. External Reviewers

15. Abstract

The Manual presents guidance for California Department of Transportation (Caltrans) staff, consultants and Contractors to use to determine applicability of Best Management Practices for implementation in construction projects.

16. Key Words	17. Distribution Statement	18. No. of pages
Stormwater, guidance, manual, BMPs, installation, maintenance SWPPP, WPCP		318

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List of Abbreviations

ASBS	Areas of Special Biological Significance
ATS	Active Treatment System
BAT	Best Available Technology
BCT	Best Conventional Technology
BMP	Best Management Practice
Caltrans	State of California, Department of Transportation
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CCS	Cellular Confinement System
CFR	Code of Federal Regulations
CGP	Construction General Permit
CPESC	Certified Professional in Erosion and Sediment Control
CSBMP	Construction Site Best Management Practices
CWA	Clean Water Act
DFW	Department of Fish and Wildlife
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substance Control
DEA	Division of Environmental Analysis
DWQ	Division of Water Quality
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
HQ	Headquarters
IC/ID	Illegal Connection/Illicit Discharge
IH	Information Handout
LRP	Legally Responsible Person
LTCGP	Lake Tahoe Hydrologic Unit Construction General Permit
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NAL	Numeric Action Level
NEL	Numeric Effluent Limitation
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Units
NWS	National Weather Service
OHSD	Office of Hydraulics and Stormwater Design
O&M	Operation and Maintenance
PRDs	Permit Registration Documents
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
RE	Resident Engineer
REAP	Rain Event Action Plan
RECP	rolled erosion control products
RW	Receiving Water
RWQCB	Regional Water Quality Control Board
SDS	Safety Data Sheet
SAP	Sampling and Analysis Plan
SMARTS	Storm Water Multiple Application Reporting and Tracking System
SS	Settleable Solids
SSC	Suspended Sediment Concentration
SSPs	Standard Special Provisions
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USACOE	U.S. Army Corps of Engineers
USGS	United States Geological Service
H:V	Horizontal versus Vertical
WDID	Waste Discharger Identification Number
WDR	Waste Discharge Requirement
WQS	Water Quality Certification
WQS	Water Quality Standards
WPC Manager	Water Pollution Control Manager
WPCD	Water Pollution Control Drawing
WPCP	Water Pollution Control Program
WPCS	Water Pollution Control Schedule

Section 1
Introduction

1.1 Overview

This Construction Site Best Management Practices (CSBMP) Manual (Manual) provides guidance on the selection and implementation of Best Management Practices (BMPs) into construction projects within the Caltrans right-of-way.

The primary objective of this CSBMP Manual is to provide the overall process for selecting, installing, and maintaining temporary BMPs in Caltrans construction projects. The CSBMP Manual provides a general background of stormwater documents and references to other stormwater manuals, includes a flowchart showing applicable BMP triggers for each of the six Construction Site BMP categories, and detailed guidance for the selection, installation, and required maintenance for individual BMPs. The Manual ties into the Caltrans 2015 Standard Specifications applicable to BMP installation and maintenance frequency,

This Manual is organized as follows:

Section 1 – Introduction

This section provides a background on regulations and stormwater permits, and relevant stormwater guidance documents and websites.

Section 2 – Caltrans Construction Stormwater Program Requirements

provides a description of general documents prepared for or related to the construction phase of the project, instructions for the selection and implementation of Construction Site BMPs and details the minimum BMP inspections required for construction sites.

Section 3 – Temporary Soil Stabilization BMPs

provides an overview of the Soil Stabilization BMP category and a listing and working details for Caltrans Construction Site BMPs for Temporary Soil Stabilization.

Section 4 – Temporary Sediment Control BMPs

provides an overview of the Sediment Control BMP category and a listing and working details for Caltrans Construction Site BMPs for Temporary Sediment Control.

Section 5 - Wind Erosion Control BMPs

provides an overview of the Wind Erosion BMP category and a listing and working details for Caltrans Construction Site BMPs for Wind Erosion Control.

Section 6 - Tracking Control BMPs

provides an overview of the Tracking Control BMP category and a listing and working details for Caltrans Construction Site BMPs for Tracking Control.

Section 7 - Non-Stormwater Management BMPs

provides an overview of the Non- Stormwater Management BMP category and a listing and working details for Caltrans Construction Site BMPs for Non-Stormwater Management.

Section 8 - Waste Management and Material Pollution Control BMPs

provides an overview of the Waste Management and Materials Pollution Control BMP category and a listing and working details for Caltrans Construction Site BMPs for Waste Management and Materials Pollution Control.

Appendix A - provides definitions of terms used throughout this Manual.

Appendix B - provides guidance on the selection of temporary soil stabilization controls.

Appendix C - provides guidance on the requirements for the implementation of Active Treatment System (ATS) to comply with the CGP or the LTCGP.

1.2 Regulations and Stormwater Permits

Federal Regulations

The Clean Water Act is a Federal regulation that deals in part with controlling discharges of pollutants from Municipal Separate Storm Sewer Systems (MS4s), construction sites, and industrial activities as part of the National Pollutant Discharge Elimination System (NPDES) permit process. In 1990, the Environmental Protection Agency (EPA) promulgated federal stormwater regulations requiring municipal, construction and industrial stormwater discharges to comply with an NPDES permit.

In California, the EPA delegated its authority to issue NPDES permits to the State Water Resources Control Board (SWRCB). The State Board has nine regional water quality control boards across the State. Figure 1-1 presents a depiction of the nine regional board boundaries in relation to the Caltrans Districts.

Caltrans NPDES Statewide Permit and NPDES Construction General Permits

On July 15, 1999, the SWRCB issued the first “NPDES Permit, Statewide Stormwater Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans)” (NPDES No. CAS000003) hereby called “Caltrans Permit.” The Caltrans Permit requires the preparation and implementation of the Caltrans Statewide Stormwater Management Plan (SWMP). The SWMP describes how Caltrans plans to implement the Caltrans Permit requirements and describes Caltrans’ program addressing stormwater pollution control related to various activities, including planning, design, construction, maintenance, and operation of roadways and facilities.

The Caltrans Permit regulates stormwater discharges from Caltrans properties, facilities, and activities, and requires that Caltrans’ construction program comply with the requirements of the “NPDES General Permit, WDRs for Discharges of Stormwater Runoff Associated with Construction Activity” (NPDES No. CAS000002) (Construction General Permit) issued by the SWRCB.

Both the Caltrans Permit and the Construction General Permit (CGP) have been reissued since 2009. The current Caltrans Permit Order 2012-0011-DWQ became effective July 1, 2013 and requires construction projects with one acre or more of soil disturbance to comply with the CGP Order 2009-009-DWQ and amendments thereto. There are a small number of Caltrans projects that are situated in the Lake Tahoe Regional Board area; those projects are subject to the Lake Tahoe Construction General Permit (LTCGP) Order No.R6T-1016-0010. The CGP and the LTCGP require SWPPP projects to upload the authorized SWPPP and all other relevant documents and data to the State Board’s Stormwater Multiple Application and Report Tracking System (SMARTS).

Other NPDES Permits

There are other Permits that might be applicable to Caltrans construction projects depending on the specific activities. Any construction project might trigger the Statewide Industrial Permit coverage if there is a proposed batch plant or other industrial activities as outlined below. In addition, if there is any dewatering being proposed, there are specific Regional Permits that might be applicable.

Industrial Permit

Industrial Activities are not covered under the Caltrans Permit. The Statewide Permit for Stormwater Discharges Associated with Industrial Activities (IGP) (Order 2014-0057-DWQ) regulates nine broad categories of industrial activities. There are certain activities that might occur ancillary to construction projects; for those operations, the industrial permit is triggered. Caltrans contracts include language requiring the Contractor to implement BMPs and seek coverage as required under the IGP.

Dewatering Permit

Dewatering discharge requirements vary among the nine regional boards. Caltrans has developed a Dewatering Manual that should be referred to determine appropriate requirements for the individual construction site. The Dewatering Manual can be accessed via the website link included in Table 1-4.

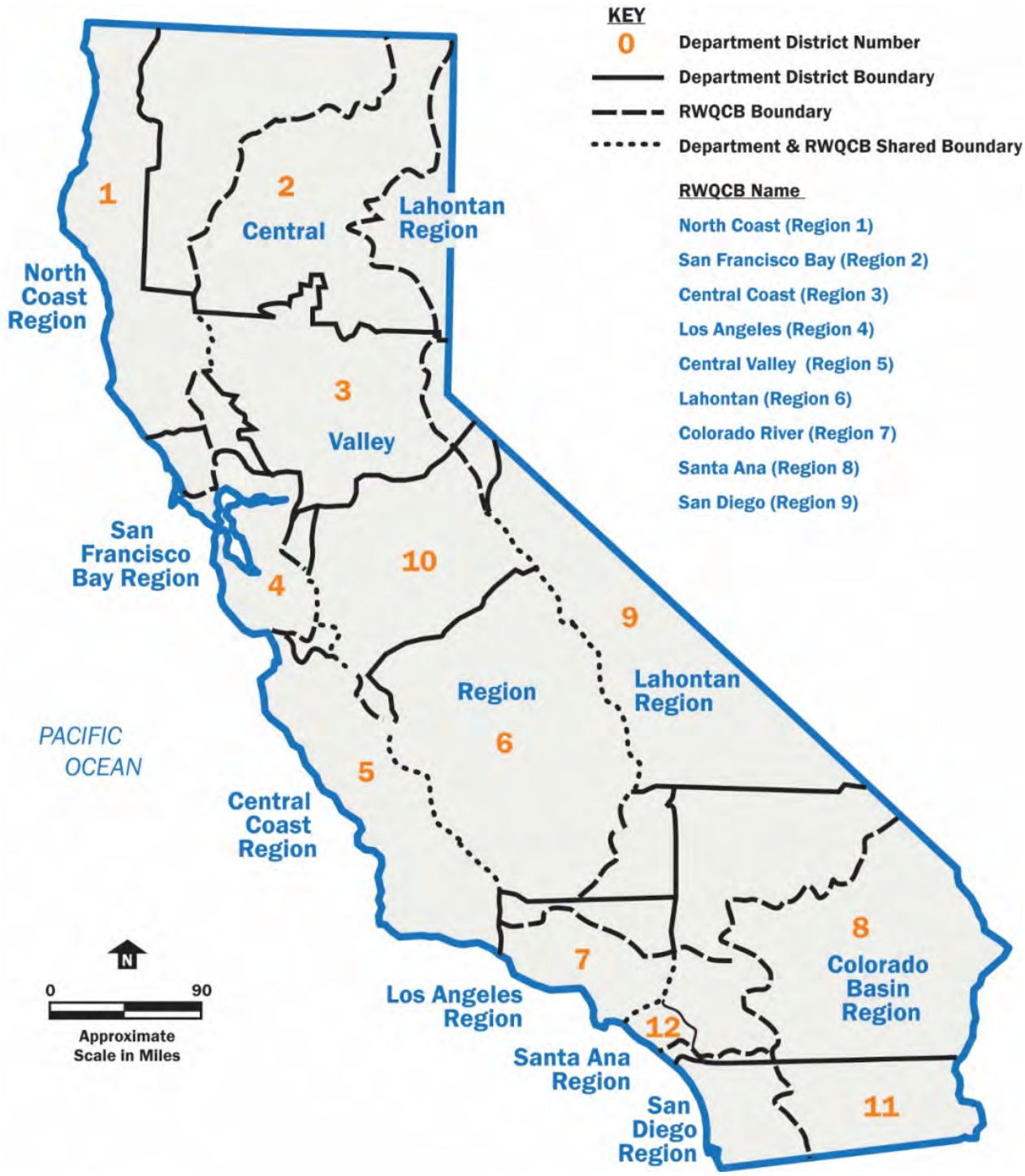


Figure 1-1. Map of California with Regional Water Quality Control Boards and Caltrans Districts

1.3 Caltrans Stormwater Manuals and Websites

Caltrans has devised a comprehensive stormwater program to comply with Caltrans Permit requirements. In addition to the 2016 SWMP, Caltrans has developed several stormwater guidance manuals that are available on their website for staff, consultants and anyone in the public to use to implement appropriate BMPs.

Table 1-3 presents a list of the primary reference material to be used for determining applicable permit requirements and specific compliance mechanisms developed by Caltrans. This Manual is intended to be used in conjunction with the SWPPP/WPCP Preparation Manual as both are directly related to water pollution control when performing construction operations within Caltrans projects and/or rights of way.

Table 1-3. Relevant Caltrans Stormwater Documents, Manuals and their Purpose [1]

Date	Document	Purpose
July 2016	Caltrans Stormwater Management Plan (SWMP)	Describes how Caltrans plans to implement the Caltrans Permit requirements. The SWMP describes Caltrans' program and addresses stormwater pollution control related to various activities, including planning, design, construction, maintenance, and operation of roadways and facilities.
February 2016	Stormwater Quality Handbooks: Project Planning and Design Guide (PPDG)	Guides project planning staff in preparing and selecting appropriate Best Management Practices for inclusion into Contract Plans. Includes step-by-step guidance for documenting the selection and implementation of BMPs.
	Appendix E - Stormwater Data Report (SWDR)	Document prepared by the Project Engineer or Landscape Architect which forms basis for ensuring compliance with the Caltrans Permit requirements for the Design Division. Determination of SWPPP/WPCP applicability based on DSA and BMP line items included as part of the Contract Plans.
June 2016	Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual	Guides Contractors and Caltrans staff through the process of preparing a SWPPP and WPCP. This manual provides detailed step-by-step procedures, instructions, sample text and a template that Contractors must use to prepare the SWPPP/WPCP. Templates conform to CGP requirements based on risk level, LTCGP requirements including deviations from CGP language, and Caltrans requirements for preparing WPCPs.
August 2013	Construction Site Monitoring Program Guidance Manual	This manual presents guidance for Caltrans staff and Contractors to use in the planning and implementation of stormwater monitoring programs at construction sites. Describes and provides guidance on developing Sampling and Analysis Plans, standard operating procedures for pH and turbidity sampling and other requirements of the CGP and LTCGP.
July 2003	Guidance for Temporary Soil Stabilization	The main purpose of this document is to help direct the planning, selection, and implementation of Caltrans-approved temporary soil stabilization BMPs.
July 2014	Field Guide to Construction Site Dewatering	The purpose of this Dewatering Guide is to inform and guide intended users in selecting, implementing, and monitoring construction site dewatering operations.
September 2008	Erosion Prediction Procedure Manual	Describes the method established and approved by headquarters (HQ) Office of Hydraulics and Stormwater Design (OHSD) for the prediction of erosion rates before, during, and after construction of Caltrans projects to meet the erosion and sediment control requirements identified in the Caltrans Permit, the CGP and the LTCGP.

Table 1-4 presents website links for Caltrans Manuals, procedures and other documents along with other websites that can be used to either gain a deeper understanding of stormwater requirements or as

[1] There may be other relevant Manuals that pertain to specific enforcement or general criteria, see Table 1-4 for additional Manuals and links

guidance when preparing stormwater documents and selecting appropriate temporary construction site BMPs.

Table 1-4. Stormwater Related Websites

Description		Websites
EPA Agency	U.S. Environmental Protection Agency (EPA)	http://www.epa.gov
Laws/ Regulations	Code of Federal Regulations (CFR)	http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR
NPDES Permits	Caltrans NPDES Statewide Stormwater Permit (Caltrans Permit)	http://www.swrcb.ca.gov/water_issues/programs/stormwater/caltrans.shtml
	Construction General Permit (CGP)	http://www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml
	Lake Tahoe Construction General Permit (LTCGP)	http://www.waterboards.ca.gov/lahontan/water_issues/programs/storm_water/docs/r6t_2016_0010_cgp_combined.pdf
	Industrial General Permit (IGP)	http://www.swrcb.ca.gov/water_issues/programs/stormwater/industrial.shtml
Caltrans Stormwater Program	Caltrans Statewide Stormwater Program – HQ DEA (contains links such as SWMP, Annual Report)	http://www.dot.ca.gov/hq/env/stormwater/index.htm
State Water Resources Control Board	State Water Resources Control Board website, particularly Stormwater Multiple Application and Report Tracking System (SMARTS)	https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml
Caltrans Stormwater Manuals	Division of Construction - Stormwater Quality Link. Contains links to resources for developing SWPPP, WPCP, Construction Site Dewatering and other Manuals and resources.	http://www.dot.ca.gov/hq/construc/stormwater/
	Caltrans Construction Stormwater Quality Manuals and Handbooks	http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm
Caltrans SSP and Stormwater Costs Estimating Guidance	Caltrans Construction Contract Standards Specifications, Plans, Standard Special Provisions (SSPs)[2]	http://www.dot.ca.gov/hq/esc/oe/specs_html/index.html
	Caltrans Cost estimating guidance	http://www.dot.ca.gov/hq/oppd/costest/costest.htm

[2] Contract Documents could include specific project requirements such as specific monitoring requirements under CWA 401 or 404 Permit or others included in the Informational Handout.

Section 2
Caltrans Construction Stormwater Management Program Requirements

2.1 Stormwater Pollution Prevention Plan and Water Pollution Control Program

Caltrans requires Contractors to prepare and implement a program to effectively control water pollution during the construction of all projects (see Standard Specification Section 13 Water Pollution Control). Projects resulting in one acre or more of disturbed soil area (DSA) are subject to the CGP or the LTCGP depending on the project location. Caltrans Standard Specifications require that for these projects, Contractors prepare and submit a SWPPP.

If two or more small projects [less than one acre of soil disturbance] in the same corridor are part of a larger common plan of development [one acre or more], then these small projects are also subject to the requirements of the CGP or the LTCGP to develop and implement a SWPPP. There also might be instances where a SWPPP is required even when there is less than one acre of DSA, if it is determined that the project poses a significant water quality risk; this determination will be made by the District/Regional NPDES Coordinator or the Construction Stormwater Coordinator or if mandated by the RWQCB or SWRCB or another regulatory agency. Potential examples when this might occur could be work over a 303d waterbody, water implosions, etc.

Caltrans requires that a WPCP addressing control measures be prepared and implemented by the construction Contractor for projects resulting in soil disturbance of less than one acre. The specific requirements and detailed instructions are included in Section 4 of the SWPPP/WPCP Preparation Manual. These general requirements are included in the Construction BMP Applicability Flowchart, Figure 2-1 of this Manual.

Projects that have a DSA between one and less than five acres may qualify for a rainfall erosivity waiver under the CGP if the rainfall erosivity factor (R factor) is less than a value of five. The R factor takes into account project location, length of construction period, and time of year so projects that begin and complete construction within a short period are likely to qualify for a rainfall erosivity waiver. To calculate the R value, refer to Section 1.4.2.1 of the SWPPP/WPCP Preparation Manual, a link to the manual is provided in Table 1-4.

Projects that qualify for a rainfall erosivity waiver do not need to prepare a SWPPP but are required to submit proper documentation via SMARTS (to be exempted from the CGP) as well as prepare and implement a site-specific Water Pollution Control Program (WPCP).

2.2 Construction BMP Applicability

The flowchart presented in Figure 2-1 guides the user as to whether the project triggers a SWPPP or a WPCP and where to find additional information, if needed. The flowchart also includes general questions to determine applicability of BMP categories that are described in Sections 3-8 of this Manual.

The steps described below correspond to the steps shown in Figure 2-1.

Step 1 - Start

The Contractor, the Water Pollution Control (WPC) Manager, the Qualified SWPPP Developer (QSD) or the Qualified SWPPP Practitioner (QSP) should use Figure 2-1, the guidance provided in this section, and the SWPPP/WPCP Preparation Manual to determine the project's entire BMP selection and applicability for the duration of the construction phase.

Step 2 - Is a Construction project being proposed?

A construction project is defined as any activity, including, but not limited to, clearing, grading, grubbing, or excavation. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility is not deemed a construction activity that requires a SWPPP or a WPCP.

If the project qualifies as a construction project, proceed to step 3.

If the project does not meet the definition of construction, then the project is subject to Maintenance BMPs, refer to the Caltrans July 2016 SWMP or the Caltrans Maintenance Staff Guide.

Step 3 - Will the project create one acre or more of Disturbed Soil Area?

If the construction project will disturb more than one acre of soil, it is subject to either the CGP or the LTCGP depending on its location and must prepare and maintain an up to date SWPPP during the entire duration of the project.

If the project disturbs less than an acre of soil, the project must have a WPCP prepared and implemented, see Section 4 of the SWPPP/WPCP Preparation Manual for specific instructions.

Step 4 - Can the construction project qualify for a Rainfall Erosivity Waiver?

If a project will be a short duration and is more than one acre but less than five acres of soil disturbance, it might qualify for an EPA rainfall erosivity waiver as discussed in Section 1.4.2 of the SWPPP/WPCP Preparation Manual.

If you answered yes, the project does not need coverage under the CGP but it still requires some paperwork to be filed via SMARTS. In addition, a WPCP must be prepared and implemented.

If you answered no, then project is subject to SWPPP requirements. See Section 3 of the SWPPP/WPCP Preparation Manual for further guidance on preparing a SWPPP.

Step 5 - Are any soil areas expected to be exposed and need stabilization as part of the project or is there a need to stabilize concentrated flow conveyances?

Any project subject to CGP or LTCGP is required to implement appropriate controls year-round. If the project has exposed soil areas or unlined conveyances, the WPC Manager or QSP must be diligent in ensuring appropriate BMPs are implemented. See Section 3 of this Manual for specific BMP factsheets and proceed to Step 6. For further guidance on proper selection and costs, see Appendix B of this Manual.

If there are no soil areas needing stabilization and no unstable conveyances, then proceed to Step 6.

Step 6 - Will the project require temporary controls to intercept/slowdown onsite or offsite flows?

If the project has areas where offsite flows are coming onto the project area, flows must be conveyed and the WPC Manager or QSP must ensure that no materials or contaminants including soil are being carried by the offsite flows. Onsite flows must be conveyed via lined or vegetated channels to reduce potential for turbid flows. See Section 4 of this Manual for specific BMP factsheets to control sediment-laden runoff.

Step 7 - Will the project require a dust control plan or is there a potential for dust control BMPs to be applicable?

Utilize Section 5 of this Manual for specific BMP factsheets if the contract documents require the preparation and implementation of a Dust Control Plan or if there is a potential for dust to be generated at any time during the duration of the construction project.

Step 8 - Will the project require tracking controls in any area within project limits?

Any areas where construction vehicles are entering or exiting the project must be stabilized to prevent tracking of sediment or other materials. See Section 6 of this Manual for specific BMP factsheets for tracking control. Additionally, SC-7, Street Sweeping should be evaluated and implemented either standalone or in combination to ensure compliance with all permits and contract documents.

Step 9 - Will the project day to day operations require good housekeeping practices or have a need for non-stormwater BMPs?

Section 7 of this Manual includes a list of source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with stormwater.

Step 10 - Will the project include storage of materials, spill prevention needs, waste management or other housekeeping practices?

All materials or wastes either stored or generated during the construction phase must be properly stored and disposed of. Section 8 of this Manual includes lists of BMPs that must be utilized at the Contractor's yard, where the materials are stored, or where construction activities are being conducted to ensure proper usage, containment, and disposal of materials and waste products.

END - Specific BMP factsheets should be reviewed and the Project's SWPPP or WPCP text and tables along with the Water Pollution Control Drawings (WPCDs) should be modified to ensure appropriate controls are implemented year-round

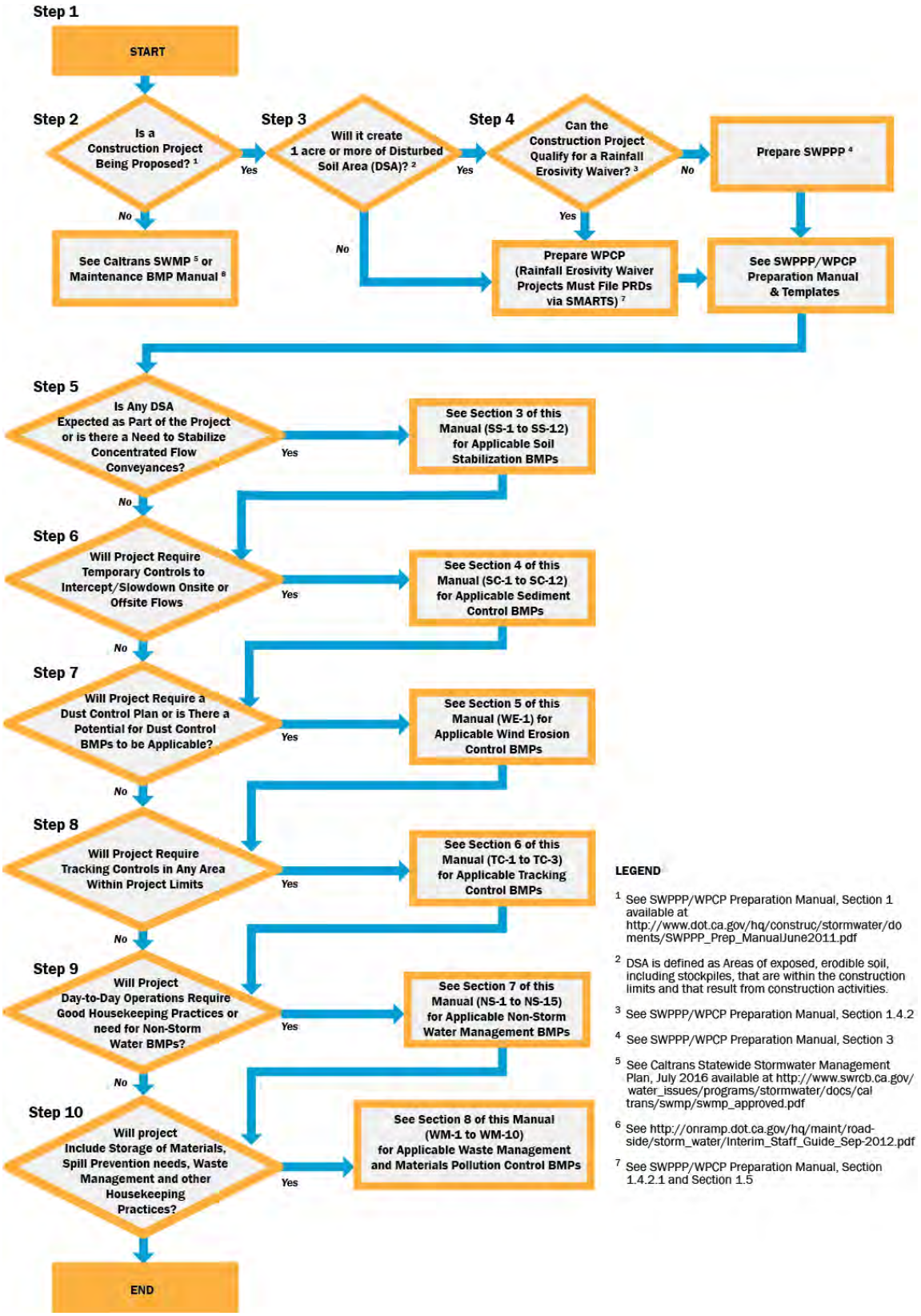


Figure 2-2. Construction Site BMP Applicability Flowchart

2.3 Minimum Construction BMPs

This section provides the minimum construction BMPs required for a project subject to the CGP or the LTCGP or one that requires the preparation and implementation of a WPCP. It is important to note that the requirements of this Section are minimum requirements, and that Caltrans contracts may impose more stringent requirements. Working details of Construction Site BMPs are presented in Sections 3 through 8 of this Manual.

Construction Site BMPs (also sometimes called temporary control practices or BMPs) are best conventional technology/best available technology (BCT/BAT)-based BMPs that are consistent with the BMPs and control practices required under the CGP and the LTCGP. Caltrans Construction Site BMPs are divided into six categories as shown in Table 2-1.

Stormwater pollution control requirements are intended to be implemented on a year-round basis at an appropriate level. The requirements must be implemented in a proactive manner during all seasons while construction is ongoing. Appropriate water pollution control includes the implementation of an effective combination of both soil stabilization and sediment controls, implementation of wind erosion, tracking controls, non-stormwater and waste management, and material pollution BMPs. Some BMPs can be implemented as a stand-alone device while others can be combined to improve effectiveness and compliance.

Section 2 of the SWPPP/WPCP Preparation Manual describes in detail specific requirements under the applicable CGP. The CGP and LTCGP both require minimum controls and require BMPs based on the projects' calculated risk level to apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths.

Table 2-1. Construction Site BMPs

ID	BMP Name	Minimum Requirement	
		CGP	LTCGP
Temporary Soil Stabilization			
SS-1	Scheduling	X	X
SS-2	Preservation of Existing Vegetation	X	X
SS-3	Hydraulic Mulch	X[1]	X[1]
SS-4	Hydroseeding		
SS-5	Soil Binders		
SS-6	Straw Mulch		
SS-7	Temporary Cover and Rolled Erosion Control Products (RECP)		
SS-8	Wood Mulching		
SS-9	Earth Dikes/Drainage Swales & Lined Ditches	-	-
SS-10	Outlet Protection/Velocity Dissipation Devices[2]	X	X
SS-11	Slope Drains	-	-
SS-12	Streambank Stabilization	-	-
Temporary Sediment Control			
SC-1	Silt Fence	X[1]	X[1]
SC-2	Sediment/Desilting Basin	-	-

Table 2-1. Construction Site BMPs			
		Minimum Requirement	
ID	BMP Name	CGP	LTCGP
SC-3	Sediment Trap/Curb Cutback	-	-
SC-4	Check Dam	-	-
SC-5	Fiber Rolls	X[1]	X[1]
SC-6	Gravel Bag/Earthen Berm		
SC-7	Street Sweeping	X	-
SC-8	Sandbag Barrier	X	X
SC-9	Straw Bale Barrier	X[1]	X[1]
SC-10	Temporary Drainage Inlet Protection	X	X
SC-11	Compost Sock	X[1]	X[1]
SC-12	Flexible Sediment Barrier		
Wind Erosion Control			
WE-1	Wind Erosion Control	X	X
Tracking Control			
TC-1	Temporary Construction Entrance/Exit	X	X
TC-2	Temporary Construction Roadway	-	-
TC-3	Temporary Entrance/Outlet Tire Wash	-	-
Non-Stormwater Management			
NS-1	Water Conservation Practices	-	-
NS-2	Dewatering Operations	-	X[3]
NS-3	Paving, Sealing, Sawcutting and Grinding Operations	X	X
NS-4	Temporary Stream Crossing	-	-
NS-5	Clear Water Diversion	-	-
NS-6	Illegal Connection and Illicit Discharge Detection and Reporting	X	X
NS-7	Potable Water/Irrigation	-	-
NS-8	Vehicle and Equipment Cleaning	X	X
NS-9	Vehicle and Equipment Fueling	X	X
NS-10	Vehicle and Equipment Maintenance	X	X
NS-11	Pile Driving Operations	-	-
NS-12	Concrete Curing	-	-
NS-13	Material and Equipment Use Over Water	-	-
NS-14	Concrete Finishing	-	-
NS-15	Structure Demolition/Removal Over or Adjacent to Water	-	-

Table 2-1. Construction Site BMPs			
ID	BMP Name	Minimum Requirement	
		CGP	LTCGP
Waste Management and Materials Pollution Control			
WM-1	Material Delivery and Storage	X	X
WM-2	Material Use	X	X
WM-3	Stockpile Management	X	X
WM-4	Spill Prevention and Control	X	X
WM-5	Solid Waste Management	X	X
WM-6	Hazardous Waste Management	X	X
WM-7	Contaminated Soil Management	X	X
WM-8	Concrete Waste Management	X	X
WM-9	Sanitary and Septic Waste Management	X	X
WM-10	Liquid Waste Management	X	X

[1] Can be selected as a standalone BMP or a combination of temporary soil stabilization BMPs is selected depending on site conditions, minimum requirement is met when the individual BMP or the combination is properly implemented.
[2] Only applicable when outlet protection/velocity dissipation is required.
[3] When dewatering is expected, must have a dewatering and/or diversion plan as required under LTCGP Section N.

2.4 BMP Inspection Frequency

The SWPPP or WPCP implemented on Caltrans construction projects includes specific visual monitoring requirements to comply with the CGP, LTCGP, and/or Caltrans Permit. All BMPs deployed on construction sites must be inspected on a frequency as described below. Improperly installed or damaged BMPs must be corrected immediately, or by a later date and time if requested by the Contractor and approved by the Resident Engineer (RE) in writing. Corrections must be made before the onset of forecasted rain events. Inspections of Construction Site BMPs are to be conducted at a minimum as follows:

- Prior to a forecast storm event
- After a qualified rain event that causes runoff from the construction site
- At 24-hour intervals during extended rain events
- Weekly throughout the duration of the construction project

Table 2-2 shows the monitoring requirements for projects subject to CGP or LTCGP. The SWPPP/WPCP Preparation Manual includes more details on what each inspection should include.

Table 2-2. Monitoring Requirements for CGP and LTCGP

Risk Level		Visual Inspections					Sampling		
			Pre-Storm			Post Storm			
		Quarterly Non-stormwater Discharge	Baseline	REAP	Daily Storm BMP	Post Storm	Non-visible Pollutant	Stormwater Discharge	Receiving Water
CGP	1	X	X		X	X	X		
	2	X	X	X	X	X	X	X	
	3	X	X	X	X	X	X	X	X
LTCGP	N/A	X	X	X	X	X	X	X	X

Section 3
Temporary Soil Stabilization BMP

3.1 Temporary Soil Stabilization

Temporary soil stabilization consists of preparing the soil surface and applying one of the BMPs shown in Table 3-1, or combination thereof, to disturbed soil areas. Temporary soil stabilization must be applied to disturbed soil areas of construction projects in conformance with contract documents and this Manual. Refer to Appendix B for additional guidance on the selection of temporary soil stabilization controls.

3.2 Temporary Concentrated Flow Conveyance Controls

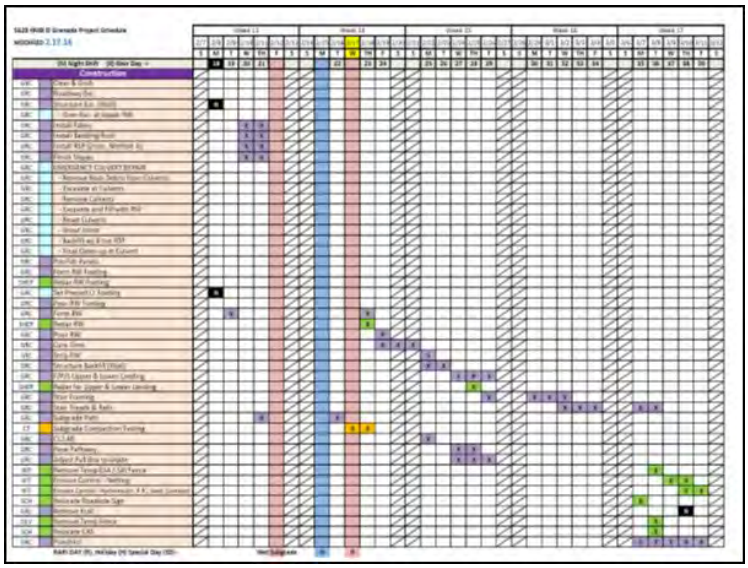
Temporary concentrated flow conveyance controls consist of a system of measures or BMPs that are used alone or in combination to intercept, divert, convey and discharge concentrated flows with a minimum of soil erosion, both on-site and downstream (off-site). Temporary concentrated flow conveyance controls may be required to direct run-on around or through the project in a non-erodible fashion. Temporary concentrated flow conveyance controls include the following BMPs:

- Earth Dikes/Drainage Swales & Lined Ditches
- Outlet Protection/Velocity Dissipation Devices
- Slope Drains

Table 3-1. Temporary Soil Stabilization BMPs

ID	BMP Name
SS-1	Scheduling
SS-2	Preservation of Existing Vegetation
SS-3	Hydraulic Mulch
SS-4	Hydroseeding
SS-5	Soil Binders
SS-6	Straw Mulch
SS-7	Temporary Cover and Rolled Erosion Control Products (RECP)
SS-8	Wood Mulching
Temporary Concentrated Flow Conveyance Controls	
SS-9	Earth Dikes/Drainage Swales & Lined Ditches
SS-10	Outlet Protection/Velocity Dissipation Devices
SS-11	Slope Drains
SS-12	Streambank Stabilization

The remainder of this section shows the working details for each of the BMPs.



Standard Symbol

BMP Objectives

Soil Stabilization	✓
Sediment Control	✓
Tracking Control	✓
Wind Erosion Control	✓
Non-Stormwater Management	
Materials and Waste Management	

Definition and Purpose

This BMP involves developing, for every project, a schedule that includes sequencing of construction activities with the implementation of construction site BMPs such as temporary soil stabilization and temporary sediment control measures. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

Appropriate Applications

Construction sequencing should be scheduled to minimize land disturbance during the wetter months for all projects. In addition, any construction windows required by regulatory permits, and any winter suspension work should be described in the schedule. Appropriate BMPs must be implemented year-round.

Limitations

Environmental constraints such as nesting season prohibitions reduce the full capabilities of this BMP.

Standards and Specifications

General Requirements

Developing a schedule and planning the project operations to minimize erosion and the potential to discharge pollutants to stormwater are the very first steps in an effective stormwater program. The construction schedule must be incorporated into the SWPPP or WPCP. Refer to Section 8 and 13 of the Standard Specifications.

The schedule should clearly show when work activities that could pollute stormwater with sediment or other contaminants would occur (e.g., grading, move-in, move-out, stockpiling, pile driving), and when soil stabilization, sediment control, and other BMPs associated with each phase of construction would be implemented.

The schedule should include details on the implementation and deployment of:

- Temporary and permanent soil stabilization BMPs
- Temporary sediment control BMPs
- Tracking control BMPs
- Wind erosion control BMPs
- Non-stormwater BMPs, and
- Waste management and materials pollution control BMPs

The schedule should also include dates for significant long-term operations or activities that may have planned non-stormwater discharges such as dewatering, sawcutting, grinding, drilling, boring, crushing, blasting, painting, hydro-demolition, mortar mixing, bridge cleaning, etc.

The construction schedule should reflect requirements for in-water work and other construction activity with potential to disturb water and biological resources contained in regulatory agency permits and approvals (RWQCB 401 WQC, USACE 404 permit, DFG 1602 permit, etc.).

Recommendations

Schedule work to minimize soil disturbing activities during predicted rain events. Consider rescheduling activities for dry periods to minimize maintenance requirements.

Develop the sequencing and timetable for the start and completion of each item such as site clearing and grubbing, grading, excavation, paving, pouring foundations, installing utilities, etc., to minimize the active construction area.

Schedule major grading operations during dryer months when practical.

Stabilize inactive areas within 15 days from the cessation of soil-disturbing activities or one day prior to the onset of precipitation, whichever occurs first. Must consider manufacturers recommendation for the selected soil stabilization BMP to ensure they meet the minimum dry time required. See Appendix B of this Manual for additional guidance.

Monitor the weather forecast for storm events, which are storms that produce or are forecasted to produce at least 0.1 inch of precipitation within a 24-hour period. When rainfall is predicted, adjust the construction schedule to allow the implementation of soil stabilization, sediment controls, and, if applicable, sediment treatment controls on all disturbed areas prior to the onset of rain.

Ensure ample supply of BMP materials are on site in order to quickly mobilize and implement required BMPs, particularly ahead of rain events when materials may be in short supply or back order.

Be prepared year-round to deploy soil stabilization and sediment control practices. Erosion may be caused during dry seasons by unseasonal rainfall, wind, and vehicle tracking. Keep the site stabilized year-round, and retain and maintain sediment trapping devices in operational condition.

Sequence trenching activities so that most open portions are closed before new trenching begins. Trenched material should be stored on the upstream side of the trenches.

Incorporate staged seeding and re-vegetation of graded slopes as work progresses.

Consider the early planting and establishment of permanent vegetation in the schedule to maximize plant establishment success and minimize irrigation and continuous maintenance needs.

Apply permanent erosion control to areas deemed substantially complete during the project's defined seeding window.

Maintenance and Inspection

Verify that work is progressing in accordance with the schedule. If progress deviates, take corrective actions.

Keep the schedule up to date and ensure it is consistent with the contractor's three-week look ahead, or other routine schedule submitted to the RE under the contract.

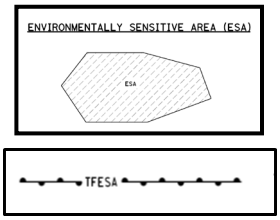
Amend the schedule when changes are warranted or when directed by the RE.

SWPPP or WPCP

A Water Pollution Control Schedule (WPCS) must include construction operations and BMP implementation for the entire duration of the project. The WPCS is to be included as an attachment and discussed in section 500.7 of the SWPPP or Section 30.5 of the WPCP.

Preservation of Existing Vegetation

SS-2



Standard Symbol

Definition and Purpose

Preservation of existing vegetation is the identification and protection of desirable vegetation that provides erosion and sediment control benefits.

Appropriate Applications

Preserve existing vegetation at areas on a site where no construction activity is planned or will occur at a later date. This BMP is very applicable for multi-year or multiple location projects, where existing vegetation can be preserved until the area becomes active.

On a year-round basis, temporary fencing shall be provided prior to the commencement of clearing and grubbing operations or other soil-disturbing activities in areas.

Clearing and grubbing operations should be staged to preserve existing vegetation.

Areas where natural vegetation exists and is designated for preservation. Such areas often include steep slopes, watercourse, and building sites in wooded areas.

Areas where local, state, and federal government require preservation, such as vernal pools, wetlands, marshes, certain oak trees, etc.

Clearly marking and leaving a buffer area around these unique areas during construction will help to preserve these areas as well as take advantage of natural erosion prevention and sediment trapping.

During clearing and grubbing do not injure standing trees, plants, and improvements shown in the plans to be protected.

For any trenching or tunneling. Trenching shall be as far away from tree trunks as possible, usually outside of the tree drip line or canopy. Curve trenches around trees to avoid large roots or root concentrations. If roots are encountered, consider tunneling under them.

When trenching and/or tunneling near or under trees to be retained, tunnels shall be at least 8 in below the ground surface, and not below the tree center to minimize impact on the roots. Tree roots shall not be left exposed to air; they shall be covered with soil as soon as possible, protected, and kept moistened with wet burlap or peat moss until the tunnel and/or trench can be completed.

Limitations

Protection of existing vegetation requires planning, and may limit the area available for construction activities.

For sites with diverse topography, it is often difficult and expensive to save existing trees while grading the site satisfactory for the construction project.

Standards and Specifications

General Requirements

Specifications for preservation of existing vegetation can be found in Standard Specifications Section 5-1.36A.

Section 14 "Environmental Stewardship" of the Standard Specifications specifies the requirements related to environmental compliance and resource management, including requirements related to Environmentally Sensitive Areas (ESAs).

Refer to Section 16-2.03 of the Standard Specifications for "High-Visibility Fences" used to delineate ESAs.

Refer to 16-2.04 of the Standard Specifications for "Temporary Construction Mats" used to protect wetlands and other areas.

Schedule

Preservation of existing vegetation must be provided prior to the commencement of clearing and grubbing operations or other soil-disturbing activities in areas identified on the plans to be preserved, including areas designated as ESAs.

Preservation of existing vegetation should conform to scheduling requirements set forth in the special provisions.

Design and Layout

Mark areas to be preserved with temporary fencing (Type ESA). The temporary fencing must be made of high visibility fabric secured with 6 foot (minimum) posts. Refer to Section 16-2.03B of the Standard Specifications for more information on temporary high-visibility fence materials.

Fence posts can be either wood or steel, at the Contractor's discretion, as appropriate for the intended purpose. The post spacing must be 8 feet center-to-center (maximum) and embedded at least 16 inches into the ground to completely support the fence in an upright position.

See Standard Plan T65 for "Temporary Fence (Type ESA)."

Installation

Construction materials, equipment storage, and parking areas should be located where they will not cause damage to vegetation designated for preservation. This could include: keeping equipment away from trees to prevent trunk and root damage, considering the impact of grade changes to existing vegetation and the root zone, and minimizing disturbed areas by avoiding stands of trees and shrubs and following existing contours to reduce cutting and filling for temporary roads.

Maintain existing irrigation systems.

Employees and subcontractors must be instructed to honor protective devices. No heavy equipment, vehicular traffic, or storage piles of any construction materials is permitted within the drip line of any tree to be retained. Removed trees should not be felled, pushed, or pulled into any retained trees. Fires should not be permitted within 100 ft of the drip line of any retained trees. Any fires must be of limited size, and must be kept under continual surveillance. No toxic or construction materials (including paint, acid, nails, gypsum board, chemicals, fuels, and lubricants) should be stored within 50 feet of the drip line of any retained trees, nor disposed of in any way which would injure vegetation.

After all other work is complete, fences and barriers must be removed last. This is because protected trees may be destroyed by carelessness during the final cleanup and landscaping.

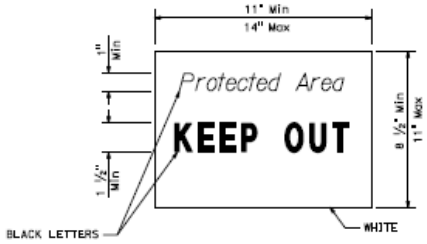
Maintenance and Inspection

During the entire construction phase, the limits of disturbance must remain clearly marked to avoid damage to the existing vegetation during site cleanup and stabilization. Irrigation or maintenance of existing vegetation must conform to the requirements in the landscaping plan. If damage to protected trees still occurs, maintenance guidelines described below must be followed:

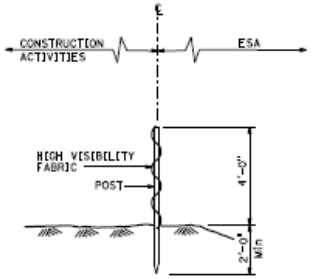
- Serious tree injuries must be attended to by an arborist.
- During construction, the District Environmental Branch must be contacted to ensure that ESAs are protected and any environmental regulations are followed.
- Existing Vegetated Areas to be Preserved must be clearly demarcated in the WPCDs.

SWPPP or WPCP

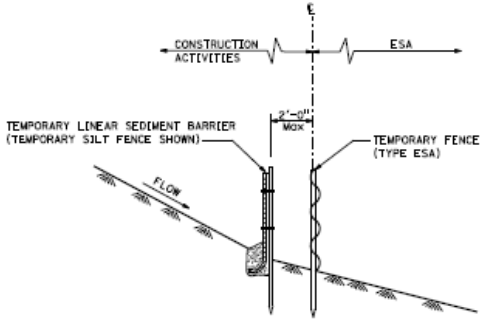
Preservation of Existing Vegetation must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.



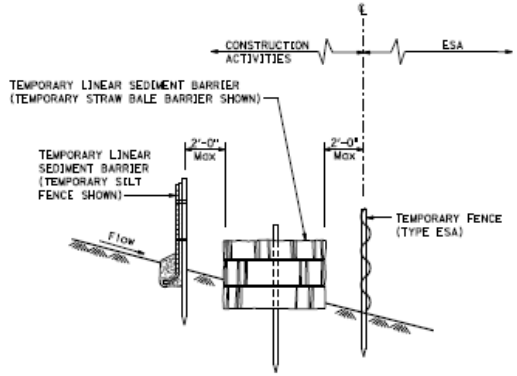
SIGN DETAIL



SECTION
TEMPORARY FENCE (TYPE ESA)



SECTION
PLACEMENT DETAIL
FOR TEMPORARY LINEAR SEDIMENT BARRIER
USED WITH TEMPORARY
FENCE (TYPE ESA)



SECTION
PLACEMENT DETAIL
FOR TEMPORARY SILT FENCE
AND TEMPORARY STRAW BALE BARRIER
USED WITH TEMPORARY FENCE (TYPE ESA)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

October 30, 2015
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

2015 STANDARD PLAN T65

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

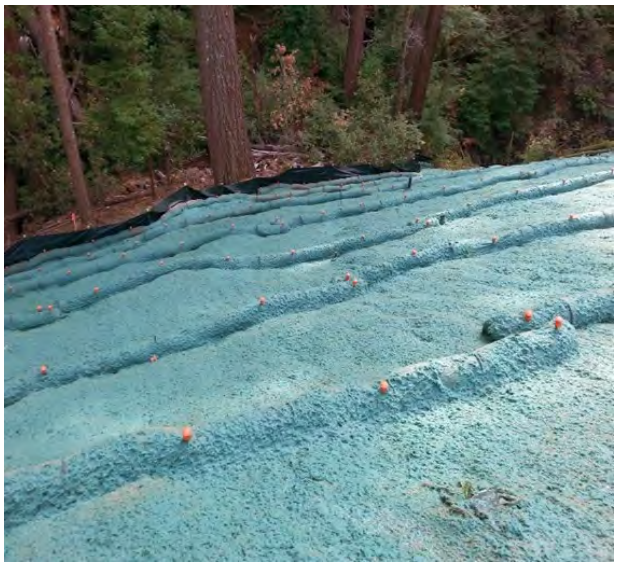
TEMPORARY WATER POLLUTION CONTROL DETAILS [TEMPORARY FENCE (TYPE ESA)]

NO SCALE

T65

Hydraulic Mulch

SS-3



Standard Symbol

Definition and Purpose

Hydraulic mulch consists of applying a mixture of natural fibers and a stabilizing compound with hydroseeding equipment to temporarily protect exposed soil from erosion by raindrop impact or wind. This is one of five temporary soil stabilization alternatives to consider.

Appropriate Applications

Hydraulic mulch is applied to disturbed areas requiring temporary protection until permanent vegetation is established, or disturbed areas that must be re-disturbed following an extended period of inactivity.

Limitations

Wood fiber hydraulic mulches are generally short-lived (only last a part of a growing season) and require (24 hours or more) time to dry before rainfall occurs to be effective.

Paper mulches are not permitted.

Avoid use in areas where the mulch would be incompatible with immediate future earthwork activities and would have to be removed.

Cellulose fiber mulches alone may not perform well on steep slopes or in coarse soils.

Standards and Specifications

General Requirements

See Standard Specifications Section 13-5.03D to 13-5.03G for placing various types of hydraulic mulch.

Standard Specifications Section 21-2.02D and 21-2.02E contain material specifications for fiber and tackifier, respectively.

A certificate of compliance, as required under Standard Specifications Section 21-2.01C(4), is required for tackifier and bonded fiber matrix (BFM).

Hydraulic matrices require time to dry before rainfall occurs to be effective. Refer to the manufacturer's specifications for drying times.

Avoid mulch over-spray onto the traveled way, sidewalks, lined drainage channels, and existing vegetation.

Selection of hydraulic mulches by the Contractor must be approved by a licensed professional.

Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical.

Temporary Hydraulic Mulch

Temporary hydraulic mulch contains mixtures of fiber and tackifier that is applied to soil with hydraulic spray equipment.

Fiber for temporary hydraulic mulch must be at least 50 percent wood fiber. The remaining percentage must be cellulose fiber, alternate fiber, or a combination of these fibers.

Temporary hydraulic mulch application rates must follow the manufacturer's recommendations. If not provided, apply at a rate of 2,000 lb/ac.

Tackifier should be applied per the manufacturer's instructions for the slope, soil, and wind conditions

Temporary BFM Hydraulic Mulch

BFM contains 100% wood fiber and tackifier, sometimes combined with seed and fertilizer that is applied to soil hydraulically.

BFM applications rates must follow the manufacturer's recommendations. If not provided, apply at a rate of 3,500 lb/ac.

Tackifier used for BFM must be:

- Bonded to the fiber or prepackaged with the fiber by the manufacturer
- Contain a minimum of 10 percent of the combined weight of the dry fiber, activating agents, and additives
- Organic, high viscosity colloidal polysaccharide with activating agents or a blended hydrocolloid-based binder

Temporary Cementitious Binder Hydraulic Mulch

Temporary cementitious binder hydraulic mulch is a mixture of fiber and a cementitious binder that is applied to soil with hydraulic spray equipment.

Application rates of temporary cementitious binder hydraulic mulch must be according to the manufacturer's specifications. If not provided, apply at a rate of 2,000 lb/ac and cementitious binder at 4,000 lb/ac.

Additional standards for cementitious binder are provided in Section 13 5.03G.

Additional guidance on the selection of soil stabilization BMPs can be found in Appendix B of this Manual.

Maintenance and Inspection

A certificate of compliance under Standard Specifications Section 21-2.01C(4) for the applicable BMP must be submitted to the RE prior to application to ensure proper mix is being used.

It is recommended that a small test area/mock-up occurs prior to large area application to verify sufficient cover for the approved mix.

Maintain an unbroken, temporary mulched ground cover throughout the period of construction when the soils are not being reworked. Inspect before expected rain storms and repair any damaged ground cover and re mulch exposed areas of bare soil.

After any rainfall event, the Contractor is responsible for maintaining all slopes to prevent erosion.

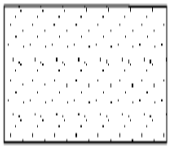
Areas where Hydraulic Mulch will be implemented must be shown in the WPCDs and match site conditions.

SWPPP or WPCP

Hydraulic Mulch, Temporary BFM Hydraulic Mulch or Temporary Cementitious Hydraulic Mulch must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WP

Hydroseeding

SS-4



Standard Symbol

Definition and Purpose

Hydroseeding typically consists of applying a mixture of wood, fiber, seed, fertilizer, and stabilizing emulsion with hydromulch equipment, which temporarily protects exposed soils from erosion by water and wind.

Appropriate Applications

Hydroseeding is applied on disturbed soil areas requiring temporary protection until permanent vegetation is established or disturbed soil areas that must be re-disturbed following an extended period of inactivity.

Can be used in conjunction with other rolled erosion control products.

Limitations

Hydroseeding may be used alone only when there is sufficient time in the season to ensure adequate vegetation establishment and erosion control. Otherwise, hydroseeding must be used in conjunction with a soil binder or mulch, such as SS-5 “Soil Binders” and SS-6 “Straw Mulch.”

Steep slopes are difficult to protect with temporary seeding.

Temporary seeding may not be appropriate in dry periods without supplemental irrigation.

Temporary vegetation may have to be removed before permanent vegetation is applied.

Temporary vegetation is not appropriate for short-term inactivity.

Hydroseeding should not be used in areas subject to heavy traffic.

Could trigger non-visible sampling if the appropriate application timeframe (before a rain event) and manufacturer recommendations are not followed.

Standards and Specifications

General Requirements

Refer to Standard Specifications Section 13-5.03I "Temporary Hydroseed."

To select appropriate hydroseeding mixtures, an evaluation of site conditions shall be performed with respect to:

Soil conditions Maintenance requirements

Site topography– Sensitive adjacent areas

Season and climate – Water availability

Vegetation types– Plans for permanent vegetation

Selection of hydroseeding mixtures must be approved by the licensed professional.

Seed mix must comply with Standard Specifications Section 21-2.02F "Seed," and the project's special provisions.

Seed may be dry applied to small areas not accessible by hydroseeding equipment if authorized.

Seeds must not contain seeds of prohibited noxious weeds and more than 1.0% total weed seed by weight. Seeds must be delivered to the project site with each species in separate, unopened containers with the seed tag attached. Measure individual seed species and mix in the presence of the RE.

Fiber must be at least 50 percent wood fiber. The remaining percentage must be cellulose fiber, alternate fiber, or a combination of these fibers.

Commercial fertilizer must conform to the requirements of the California Food and Agricultural Code. Fertilizer can be pelleted or granular form.

Application Procedures

Prior to application, roughen the slope, fill area, or area to be seeded with the furrows trending along the contours. Rolling with a crimping or punching type roller or track walking is required on all slopes prior to hydroseeding. Track walking should only be used where other methods are impractical.

Add water to hydroseed materials as recommended by the manufacturer and mix sufficiently to ensure an even application. A dispersing agent may be added to the mixture if authorized.

Equipment must have a built-in continuous agitation and discharge system capable of producing a homogeneous mixture and a uniform application rate. The tank must have a minimum capacity of 1,000 gallons. A smaller tank can be used if authorized by the RE.

Apply temporary hydroseed at the following rates:

- Apply seed at rates specified in the project's erosion control plans.
- Apply fiber at 2,000 lb/ac.
- Apply tackifier according to manufacturer's recommendations for the slope, soil, and wind conditions.
- Apply materials in locations, rates, and number of applications shown and as follows:
- Start application within 60 minutes after adding seed to the tank.
- Apply in successive passes as necessary to achieve the specified application rate.
- Apply all hydroseed materials shown for a single area within 72 hours.

If hydroseed materials are applied to areas covered by Rolled Erosion Control Products (RECP), apply hydroseed materials to the RECP as follows:

- Verify the RECP is in uniform contact with the slope surface.
- Spray materials into the RECP perpendicular to the slope and integrate well.
- Do not displace or damage the RECP.
- After the final application, do not allow pedestrians or equipment on the treated areas.
- Follow-up applications shall be made as needed to cover weak spots, and to maintain adequate soil protection.
- Avoid over-spray onto the traveled way, sidewalks, lined drainage channels, and existing vegetation.

Additional guidance on the selection of soil stabilization BMPs can be found in Appendix B of this Manual.

Maintenance and Inspection

All seeded areas must be inspected for failures and re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates. Any temporary revegetation efforts that do not provide adequate cover must be reapplied at a scheduled recommended by the licensed professional.

A certificate of compliance under Standard Specifications Section 21-2.01C(4) for the applicable BMP must be submitted to the RE prior to application to ensure proper mix is being used.

It is recommended that a small test area/mock-up occurs prior to large area application to verify sufficient cover for the approved mix.

After any rain event, the Contractor is responsible for maintaining all slopes to prevent erosion.

Areas where Hydroseeding will be implemented must be shown in the WPCDs. Application timeframes (dates) must be included in the WPCS.

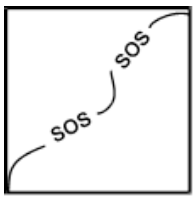
Must ensure correct application rates and passes (different directions) take place to ensure adequate coverage.

SWPPP or WPCP

Hydroseeding must be discussed in Section 500.3.2 of SWPPP or Section 30.2 of the WPCP.

Soil Binders

SS-5



Standard Symbol

Definition and Purpose

Soil binders consist of applying and maintaining a soil stabilizer to exposed soil surfaces. Soil binders are materials applied to the soil surface to temporarily prevent water-induced erosion of exposed soils on construction sites. Soil binders also provide temporary dust, wind, and soil stabilization (erosion control) benefits. This is one of five temporary soil stabilization alternatives to consider.

Appropriate Applications

Soil binders are typically applied to disturbed areas requiring short-term temporary protection. Because soil binders can often be incorporated into the work, they may be a good choice for areas where grading activities will soon resume. Application on stockpiles to prevent water and wind erosion.

Limitations

Soil binders are temporary in nature and may need reapplication.

Soil binders require a minimum curing time until fully effective, as prescribed by the manufacturer. Soil binders may need reapplication after a storm event.

Soil binders will generally experience spot failures during heavy rainfall events. If runoff penetrates the soil at the top of a slope treated with a soil binder, it is likely that the runoff will undercut the stabilized soil layer and discharge at a point further down slope.

Soil binders do not hold up to pedestrian or vehicular traffic across treated areas.

Soil binders may not penetrate soil surfaces made up primarily of silt and clay, particularly when compacted.

Some soil binders may not perform well with low relative humidity. Under rainy conditions, some agents may become slippery or leach out of the soil.

May not cure if low temperatures occur within 24 hours of application.

Standards and Specifications

General Requirements

Site-specific soil types will dictate appropriate soil binders to be used.

A soil binder must be environmentally benign (non-toxic to plant and animal life), easy to apply, easy to maintain, economical, and shall not stain paved or painted surfaces, refer to Standard Specifications Section 13,18 and 21.

Some soil binders are compatible with existing vegetation.

Performance of soil binders depends on temperature, humidity, and traffic across treated areas.

Avoid over-spray onto the traveled way, sidewalks, lined drainage channels, and existing vegetation.

Storm water quality runoff sampling is required for many soil binders. Per table 5-1, footnote 7, of the 2013 Construction Site Monitoring Program Guidance Manual the following copolymers/polymers do not discharge pollutants and water quality sampling and analysis is not required Super Tak, M-binder, Fish Stik, Pro40dc, Fisch-Bond, Soil Master WR and EarthGuard.

Soil Binders Applications

After selecting an appropriate soil binder, the untreated soil surface must be prepared before applying the soil binder. The untreated soil surface must contain sufficient moisture to assist the agent in achieving uniform distribution. In general, the following steps shall be followed::

- Follow manufacturer's recommendations for application rates, pre-wetting of application area, and cleaning of equipment after use.
- Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be used where rolling is impractical.
- Consider the drying time for the selected soil binder and apply with sufficient time before anticipated rainfall. Soil binders shall not be applied during or immediately before rainfall.
- Avoid over-spray onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation.
- Soil binders shall not be applied to frozen soil, areas with standing water, under freezing or rainy conditions, or when the air temperature is below 4oC (40oF) during the curing period.

- More than one treatment is often necessary, although the second treatment may be diluted or have a lower application rate.
- Generally, soil binders require a minimum curing time of 24 hours before they are fully effective. Refer to manufacturer's instructions for specific cure times.

For liquid agents:

- Crown or slope ground to avoid ponding.
- Uniformly pre-wet ground at0.03 to 0.3 gal/yd2 or according to manufacturer's recommendations.
- Apply solution under pressure. Overlap solution 6 to 12 in.
- Allow treated area to cure for the time recommended by the manufacturer; typically, at least 24 hours.
- In low humidities, reactivate chemicals by re-wetting with water at 0.1 to 0.2 gal/yd2.

Selecting a Soil Binder

Properties of common soil binders used for erosion control are provided in Table 1 and Appendix B. Use Table 1 to select an appropriate soil binder.

Table 1
Properties of Soil Binders for Erosion Control

Chemicals	Plant Material Based (Short Lived)	Plant Material Based (Long Lived)	Polymeric Emulsion Blends	Cementitious-Based Binders
Relative Cost	Low	Low	Low	Low
Resistance to Leaching	High	High	Low to Moderate	Moderate
Resistance to Abrasion	Moderate	Low	Moderate to High	Moderate to High
Longevity	Short to Medium	Medium	Medium to Long	Medium
Minimum Curing Time before Rain	9 to 18 hours	19 to 24 hours	0 to 24 hours	4 to 8 hours
Compatibility with Existing Vegetation	Good	Poor	Poor	Poor
Mode of Degradation	Biodegradable	Biodegradable	Photodegradable/ Chemically Degradable	Photodegradable/ Chemically Degradable
Labor Intensive	No	No	No	No
Specialized Application Equipment	Water Truck or Hydraulic Mulcher	Water Truck or Hydraulic Mulcher	Water Truck or Hydraulic Mulcher	Water Truck or Hydraulic Mulcher
Liquid/Powder	Powder	Liquid	Liquid/Powder	Powder
Surface Crusting	Yes, but dissolves on rewetting	Yes	Yes, but dissolves on rewetting	Yes
Clean-Up	Water	Water	Water	Water
Erosion Control Application Rate	Varies (1)	Varies (1)	Varies (1)	4,500 to 13,500 kg/ha

(1) Dependent upon product, soil type, and slope inclination

Factors to consider when selecting a soil binder include the following:

- Suitability to situation - Consider where the soil binder will be applied; determine if it needs a high resistance to leaching or abrasion, and whether it needs to be compatible with any existing vegetation. Determine the length of time soil stabilization will be needed, and if the soil binder will be placed in an area where it will degrade rapidly. In general, slope steepness is not a discriminating factor for the listed soil binders.
- Soil types and surface materials - Fines and moisture content are key properties of surface materials. Consider a soil binder's ability to penetrate, likelihood of leaching, and ability to form a surface crust on the surface materials.
- Frequency of application - The frequency of application can be affected by subgrade conditions, surface type, climate, and maintenance schedule. Frequent applications could lead to high costs. Application frequency may be minimized if the soil binder has good penetration, low evaporation, and good longevity. Consider also that frequent application will require frequent equipment clean-up.

After considering the above factors, the soil binders in Table 1 will be generally appropriate as follows:

Plant Material Based (Short Lived)

Guar: Guar gum based tackifier must be derived from the ground endosperm of the guar plant, *Cyanmopsis tetragonolobus*. It must be treated with dispersing agents for easy mixing.. It shall be diluted at the rate of 1 to 5 lb per 100 gallons of water, depending on application machine capacity. Recommended minimum application rates are as follows:

Application Rates for Guar Soil Stabilizer					
Slope (V:H):	Flat	1:4	1:3	1:2	1:1
Kg/Ha:	45	50	56	67	78
lb/ac	40	45	50	60	70

Psyllium: Psyllium is composed of the finely ground muciloid coating of plantago seeds that is applied as a dry powder or in a wet slurry to the surface of the soil. It dries to form a firm but rewettable membrane that binds soil particles together but permits germination and growth of seed. Psyllium requires 12 to 18 hours drying time. Psyllium shall be applied at a rate of 80 to 200 lb/ac, with enough water in solution to allow for a uniform slurry flow.

Starch: Starch is non-ionic, water soluble granular cornstarch. The material is mixed with water and applied at the rate of 150 lb/ac. Approximate drying time is 9 to 12 hours.

Plant Material Based (Long Lived)

Pitch and Rosin Emulsion: Generally, a non-ionic pitch and rosin emulsion has a minimum solids content of 48%. The rosin shall be a minimum of 26% of the total solids content. The soil stabilizer shall be non-

corrosive, water-dilutable emulsion that upon application cures to a water insoluble binding and cementing agent. For soil erosion control applications, the emulsion is diluted and shall be applied as follows:

For clayey soil: 5 parts water to 1 part emulsion

For sandy soil: 10 parts water to 1 part emulsion

Application can be by water truck or hydraulic seeder with the emulsion/product mixture applied at the rate specified by the manufacturer. Approximate drying time is 19 to 24 hours.

Polymeric Emulsion Blends

Acrylic Copolymers and Polymers: Polymeric soil stabilizers shall consist of a liquid or solid polymer or copolymer with an acrylic base that contains a minimum of 55% solids. The polymeric compound shall be handled and mixed in a manner that will not cause foaming or shall contain an anti-foaming agent. The polymeric emulsion shall not exceed its shelf life or expiration date; manufacturers shall provide the expiration date. Polymeric soil stabilizer shall be readily miscible in water, non-injurious to seed or animal life, non-flammable, shall provide surface soil stabilization for various soil types without totally inhibiting water infiltration, and shall not re-emulsify when cured. The applied compound shall air cure within a maximum of 36 to 48 hours. Liquid copolymer shall be diluted at a rate of 10 parts water to 1 part polymer and applied to soil at a rate of 1,175 gal/ac.

Liquid Polymers of Methacrylates and Acrylates: This material consists of a tackifier/sealer that is a liquid polymer of methacrylates and acrylates. It is an aqueous 100% acrylic emulsion blend of 40% solids by volume that is free from styrene, acetate, vinyl, ethoxylated surfactants or silicates. For soil stabilization applications, it is diluted with water in accordance with manufacturer's recommendations, and applied with a hydraulic seeder at the rate of 20 gal/ac. Drying time is 12 to 18 hours after application.

Copolymers of Sodium Acrylates and Acrylamides: These materials are non-toxic, dry powders that are copolymers of sodium acrylate and acrylamide. They are mixed with water and applied to the soil surface for erosion control at rates that are determined by slope gradient:

Slope Gradient (V:H)	kg/ha (lb/ac)
Flat to 1:5	3-5
1:5 to 1:3	5-10
1:2 to 1:1	10-20

Poly-Acrylamide and Copolymer of Acrylamide: Linear copolymer polyacrylamide is packaged as a dry-flowable solid. When used as a stand-alone stabilizer, it is diluted at a rate of 1 lb/100 gal of water and applied at the rate of 5 lb/ac.

Hydro-Colloid Polymers: Hydro-Colloid Polymers are various combinations of dry-flowable poly-acrylamides, copolymers and hydro-colloid polymers that are mixed with water and applied to the soil surface at rates of 53 to 62 lb/ac. Drying times are 0 to 4 hours.

Cementitious Based Binders

Gypsum: This is a formulated gypsum-based product that readily mixes with water and mulch to form a thin protective crust on the soil surface. It is composed of high purity gypsum that is ground, calcined and processed into calcium sulfate hemihydrate with a minimum purity of 86%. It is mixed in a hydraulic seeder and applied at rates 4,000 to 12,000 lb/ac. Drying time is 4 to 8 hours.

Additional guidance on the selection of soil stabilization BMPs can be found in Appendix B of this Manual.

Maintenance and Inspection

Reapplying the selected soil binder may be needed for proper maintenance. High traffic areas shall be inspected daily, and lower traffic areas shall be inspected weekly.

A certificate of compliance under Standard Specifications Section 21-2.01C(4) must be submitted to the RE prior to application.

It is recommended that a small test area/mock-up occurs prior to large area application to verify sufficient cover for the approved mix.

After any rainfall event, the Contractor is responsible for maintaining all slopes to prevent erosion.

Maintain an unbroken, temporary stabilized area while DSAs are inactive. Repair any damaged stabilized area and re-apply soil binder to exposed areas.

Cleaning of equipment must be done in a designated area that can collect the water to prevent triggering of non-visible and non-stormwater requirements.

SWPPP or WPCP

Soil Binders must be discussed in Section 500.3.2 of the SWPPP or Section 30.2 of the WPCP.

Straw Mulch

SS-6

Standard Symbol

Definition and Purpose

Straw mulch consists of placing a uniform layer of straw and incorporating it into the soil with a studded roller, or anchoring it with a tackifier or Rolled Erosion Control Product (RECP). This is one of the temporary soil stabilization alternatives to consider.

Appropriate Applications

Straw mulch is typically used for soil stabilization as a temporary surface cover on disturbed areas until soils can be prepared for revegetation and permanent vegetation is established.

Also typically used in combination with temporary and/or permanent seeding strategies to enhance plant establishment.

Limitations

Availability of erosion control contractors and straw may be limited prior to the rain events due to high demand.

There is a potential for introduction of weed-seed and unwanted plant material.

Straw mulch applied by hand is more time intensive and potentially costly.

May have to be removed prior to permanent seeding or soil stabilization.

"Punching" of straw does not work in sandy soils, must use a tackifier.

Standards and Specifications

General Requirements

Straw and tackifier must conform to Standard Specifications Sections 21-2.02H, 21.2-03G and 21-2.02E.

Submit a certificate of compliance for straw before application. If weed-free straw is used, the certificate of compliance must include the certificate of quarantine compliance.

Straw must be derived from wheat, rice, or barley.

A tackifier is the preferred method for anchoring straw mulch to the soil on slopes.

Selected tackifier must be environmentally benign (non-toxic to plants and animal life) and does not pose a threat to water quality.

Crimping, "punch" roller-type rollers, or track-walking may also be used to incorporate straw mulch into the soil on slopes. Track walking shall only be used where other methods are impractical.

Avoid placing straw onto the traveled way, sidewalks, lined drainage channels, sound walls, and existing vegetation.

Straw mulch with tackifier should not be applied during or immediately before a rain event.

Application Procedures

Apply loose straw at the rate indicated either by machine or by hand distribution.

The straw mulch must be evenly distributed on the soil surface.

Straw may be anchored in place by incorporating it into soil or using a tackifier. Additionally, in small areas and/or steep slopes, straw mulch can also be held in place using Rolled Erosion Control Product. Refer to BMP SS-7, "Temporary Cover and Rolled Erosion Control Products."

If a tackifier will be used to anchor the straw mulch in lieu of incorporation, roughen embankment or fill areas by rolling with a crimping or punching-type roller. Track walking should only be used where rolling is impractical.

A tackifier acts to glue the straw fibers together and to the soil surface. Factors influencing tackifier selection include longevity and ability to hold the fibers in place.

Apply tackifier according to the manufacturer's instructed rate for the slope, soil, and wind conditions.

If incorporation of straw mulch into soil is the selected method for anchoring, then do as follows:

- A spade or shovel can be used to incorporate straw into soil in small areas.

- On slopes with soils that are stable enough and of sufficient gradient to safely support construction equipment without contributing to compaction and instability problems, straw can be "punched" into the ground using a knife-blade roller or a straight bladed coulter, known commercially as a "crimper" under Section 21-2.03J of the Standard Specifications.

Maintenance and Inspection

Straw needs to last long enough to achieve erosion control objectives.

Maintain an unbroken, temporary mulched ground cover while DSAs are inactive. Repair any damaged ground cover and re-mulch exposed areas.

Reapplication of straw mulch and tackifier may be required by the RE to maintain effective soil stabilization over disturbed areas and slopes.

After any rainfall event, the Contractor is responsible for maintaining all slopes to prevent erosion.

SWPPP or WPCP

Straw Mulch must be discussed in Section 500.3.2 of the SWPPP or Section 30.2 of the WPCP.

Temporary Cover and Rolled Erosion Control Products

SS-7

Standard Symbol

Definition and Purpose

This BMP involves the placement of geosynthetics, turf reinforcement mats, plastic covers, or rolled erosion control products (RECPs), including erosion control blankets, to stabilize disturbed soil areas and protect soils from erosion by wind or water. This is one of the temporary soil stabilization alternatives to consider.

Appropriate Applications

These measures are used when disturbed soils may be particularly difficult to stabilize, including the following situations:

- Steep slopes, generally steeper than 3:1 (H:V).
- Slopes where the erosion potential is high.
- Slopes and disturbed soils where mulch must be anchored.
- Disturbed areas where plants are slow to develop.
- Channels with flows exceeding 3 ft/s.
- Channels to be vegetated.
- Slopes adjacent to receiving waters or ESAs.

Standards for plastic sheeting used for stockpile covers are provided in Section 14-11.05A of the Standard Specifications.

Limitations

Blankets and mats are typically more expensive than other erosion control measures, due to labor and material costs. This usually limits their application to areas inaccessible to hydraulic equipment, or where other measures are not applicable, such as channels.

May delay seed germination due to reduction in soil temperature.

Plastic netting should not be used when regulatory permits prohibit their use or if there is a potential for plastic netting to endanger wildlife.

Blankets and mats are generally not suitable for excessively rocky sites or areas where the final vegetation will be mowed (since staples and netting can catch in mowers).

Blankets and mats should be removed and disposed of prior to application of permanent soil stabilization measures as required by the contract plans. Long-term erosion control blankets must be Class 8 Rock Slope Protection fabric.

Plastic sheeting is easily vandalized, easily torn, photodegradable, and must be disposed of at a landfill and requires extensive inspection and maintenance.

Plastic results in 100 percent runoff, which may cause serious erosion problems in the downstream areas receiving the increased flow.

The use of plastic should be limited to covering stockpiles, or very small graded areas for short periods of time (such as through one imminent storm event), until alternative measures, such as seeding and mulching, can be installed.

Geosynthetics, mats, plastic covers, and RECPs have maximum flow rate limitations; consult the manufacturer for proper selection.

Additional guidance for selection of soil stabilization BMPs is provided in Appendix B of this Manual.

Standards and Specifications

Material Selection

There are many types of temporary cover material and RECPs, and selection of the appropriate type is based on the specific type of application and site conditions. Selection(s) made by the Contractor must be approved by the Resident Engineer; certification of compliance must be in accordance with Standard Specifications Sections 6-2 and 21-2.01C and 21-2.02O.

Temporary Cover: Geosynthetics

Material shall be a woven polypropylene fabric with minimum thickness of 0.06 inch, minimum width of 12 feet and meet all requirements of Standard Specification Section 96-1 Temporary Cover. Material shall have

a minimum tensile strength of 150 lb (warp) and 80 lbs (fill) in conformance with the requirements in ASTM Designation: D 4632. The permittivity of the fabric must be approximately 0.07 sec –1 in conformance with the requirements in ASTM Designation: D4491. The fabric must have an ultraviolet (UV) stability of 70 percent in conformance with the requirements in ASTM designation: D4355. Geotextile blankets should be secured in place with wire staples or sandbags and by keying into tops of slopes and edges to prevent infiltration of surface water. Staples should be made of minimum 16 gauge steel wire and be U-shaped with 8-inch legs and 2-inch crown.

Geotextiles may be reused if, in the opinion of the RE, they are suitable for the use intended.

Submit a certificate of compliance for each type of geosynthetic material used.

Temporary Cover: Plastic Sheeting

Plastic sheeting shall comply with Standard Specification Section 13-5 and 96-1 which requires a minimum thickness of 0.39 inches, and be keyed in at the top of slope and firmly held in place with gravel-filled bags placed no more than 6 feet apart or other weights authorized by the RE. Seams are typically taped or weighted down their entire length, and there should be at least a 12 to 24 inches overlap of all seams. Edges must be embedded a minimum of 6 inches in soil.

All sheeting must be inspected periodically after installation and after rain events to check for erosion, undermining, and anchorage failure. Any failures must be repaired immediately. If washout or breakages occurs, the material should be re-installed after repairing the damage to the slope or area.

Rolled Erosion Control Products

RECPs are typically composed of jute fibers, curled wood fibers, straw, coconut fiber, or a combination of these materials. For an RECP to be considered 100 percent biodegradable, the netting, sewing or adhesive system that holds the biodegradable mulch fibers together must also be biodegradable.

- Jute mesh is made from a natural fiber that is spun into a yarn, then loosely woven into a biodegradable mesh. It is designed to be used in conjunction with vegetation and has longevity of approximately one year. The material is supplied in rolled strips that are secured to the soil with steel U-shaped staples. Jute mesh shall comply with all requirements of Jute mesh table included in Standard Specification Section 21-2.
- Erosion control blanket is a machine-produced mat made of processed natural fibers that are bound together to form a continuous matrix surrounded by two natural nets. The processed natural fibers comprising the matrix of the blanket may be a mixture of straw (70 percent) and coconut (30 percent), woven coir (100 percent), or excelsior (curled wood fiber) (80 percent). Erosion control blankets must be furnished in rolled strips a minimum of 72 inches wide, and secured in place with steel U-shaped staples. Erosion control blankets must also comply with Section 21-2.02O(4) of the Standard Specifications.

- Netting consists of pure coconut fibers, or coir, woven into a matrix. Coir netting must be furnished in rolled strips a minimum of 72 to 158 inches in width and 0.3 inches thick. There are three classes of coir netting: Type A, Type B, and Type C. See Section 21-2.02O(3) of the Standard Specifications for the minimum requirements for each type of netting.

Non-biodegradable RECPs are typically composed of polypropylene, polyethylene, nylon or other synthetic fibers. In some cases, a combination of biodegradable and synthetic fibers is used to construct the RECP. Netting used to hold these fibers together is typically non-biodegradable as well. Check contract special provisions to determine whether non-biodegradable products are not to be used based on regulatory requirements.

- Turf reinforcement mat is a nondegradable, open-weave textile made of synthetic fibers, filaments, nets, wire mesh, or other elements processed into a permanent three-dimensional matrix. Turf reinforcement mats must be a minimum of 72 inches in width and 0.25 inches thick. There are three classes of turf reinforcement mat: Type A, Type B, and Type C. See section 21-2.02O(5) of the Standard Specifications for the minimum requirements for each type of netting.
- Plastic netting is a lightweight biaxially-oriented netting designed for securing loose mulches like straw to soil surfaces to establish vegetation. The netting is photodegradable. The netting is supplied in rolled strips, which should be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- Plastic mesh is an open-weave geotextile that is composed of an extruded synthetic fiber woven into a mesh with an opening size of less than 0.25 inch. It is used with revegetation or may be used to secure loose fiber such as straw to the ground. The material is supplied in rolled strips, which should be secured to the soil with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- Synthetic fiber with netting is a mat that is composed of durable synthetic fibers treated to resist chemicals and ultraviolet light. The mat is a dense, three-dimensional mesh of synthetic (typically polyolefin) fibers stitched between two polypropylene nets. The mats are designed to be revegetated and provide a permanent composite system of soil, roots, and geomatrix. The material is furnished in rolled strips, which should be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- Bonded synthetic fibers consist of a three-dimensional geomatrix nylon (or other synthetic) matting. Typically it has more than 90 percent open area, which facilitates root growth. Its tough root-reinforcing system anchors vegetation and protects against hydraulic lift and shear forces created by high volume discharges. It can be installed over prepared soil, followed by seeding into the mat. Once vegetated, it becomes an invisible composite system of soil, roots, and geomatrix. The material is furnished in rolled strips that should be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.
- Combination synthetic and biodegradable RECPs consist of biodegradable fibers, such as wood fiber or coconut fiber, with a heavy polypropylene net stitched to the top and a high-strength continuous-filament geomatrix or net stitched to the bottom. The material is designed to enhance revegetation.

The material is furnished in rolled strips, which should be secured with U-shaped staples or stakes in accordance with manufacturers' recommendations.

Site Preparation

Proper site preparation is essential to ensure complete contact of the blanket or matting with the soil.

Grade and shape the area of installation.

Remove all rocks, clods, vegetation or other obstructions larger than 1 inch in size. Fill voids or depressions.

Proper site preparation ensures that the products and covers will have complete, direct contact with the soil.

Seeding

If applicable, seed the area before RECP installation for erosion control and revegetation.

Check all slots and other areas disturbed during installation must be re-seeded.

For turf reinforcement mats, seeding is often specified to occur after installation.

Anchoring

U-shaped wire staples, metal stake pins, triangular wooden stakes, or fasteners recommended by manufacturers can be used to anchor mats and blankets to the ground surface in conformance with Standard Specification section 13-10.

Staples should be made of minimum 16 gauge steel wire and be U-shaped with 8-inch legs and 2-inch crown.

Metal stake pins should be 0.188 inch diameter steel with a 1.5 inch steel washer at the head of the pin, and 8 inch in length.

Wire staples and metal stakes should be driven flush to the soil surface.

All anchors should be 6 inch to 18 inch long and have sufficient ground penetration to resist pullout. Longer anchors may be required for loose soils.

Installation on Slopes

Refer to Standard Plans T53 and T54 for details regarding installation on slopes for temporary uses, and H52 for permanent uses.

Installation in Channels

Refer to Standard Plan T55 for details regarding installation in channels.

Installation shall be in accordance with the manufacturer's recommendations. In general, these will be as follows:

- Dig initial anchor trench 12 in deep and 6 in wide across the channel at the lower end of the project area.
- Excavate intermittent check slots, 6 in deep and 6 in wide across the channel at 25 ft to 30 ft intervals along the channels.
- Cut longitudinal channel anchor slots 4 in deep and 4 in wide along each side of the installation to bury edges of matting, whenever possible extend matting 2 in to 3 in above the crest of the channel side slopes.
- Beginning at the downstream end and in the center of the channel, place the initial end of the first roll in the anchor trench and secure with fastening devices at 12 in intervals. Note: matting will initially be upside down in anchor trench.
- In the same manner, position adjacent rolls in anchor trench, overlapping the preceding roll a minimum of 3 in.
- Secure these initial ends of mats with anchors at 12 in intervals, backfill and compact soil.
- Unroll center strip of matting upstream. Stop at next check slot or terminal anchor trench. Unroll adjacent mats upstream in similar fashion, maintaining a 3 in overlap.
- Fold and secure all rolls of matting snugly into all transverse check slots. Lay mat in the bottom of the slot then fold back against itself. Anchor through both layers of mat at 12 in intervals, then backfill and compact soil. Continue rolling all mat widths upstream to the next check slot or terminal anchor trench.
- Alternate method for non critical installations: Place two rows of anchors on 6 in centers at 25 ft to 30 ft intervals in lieu of excavated check slots.
- Shingle lap spliced ends by a minimum of 12 in apart on 12 in intervals.
- Place edges of outside mats in previously excavated longitudinal slots, anchor using prescribed staple pattern, backfill and compact soil.
- Anchor, fill and compact upstream end of mat in a 12 in by 6 in terminal trench.
- Secure mat to ground surface using U-shaped wire staples, geotextile pins, or wooden stakes.
- Seed and fill turf reinforcement matting with soil, if specified.

Soil Filling (if specified for turf reinforcement)

Always consult the manufacturer's recommendations for installation.

Do not drive tracked or heavy equipment over mat.

Avoid any traffic over matting if loose or wet soil conditions exist.

Use shovels, rakes or brooms for fine grading and touch up.

Smooth out soil filling, just exposing top netting of mat.

Temporary Soil Stabilization Removal

When no longer required for the work, temporary soil stabilization becomes the property of the Contractor.

Temporary soil stabilization removed from the site of the work must be disposed of outside the highway right-of-way in conformance with the provisions in Standard Specifications Section 14-10. If approved by the RE, the contractor may leave the temporary soil stabilizer in place.

Maintenance and Inspection

Areas treated with temporary soil stabilization must be inspected as specified in the Standard Specifications and special provisions. Areas treated with temporary soil stabilization must be maintained to provide adequate erosion control. Temporary soil stabilization should be reapplied or replaced on exposed soils when area becomes exposed or exhibits visible erosion.

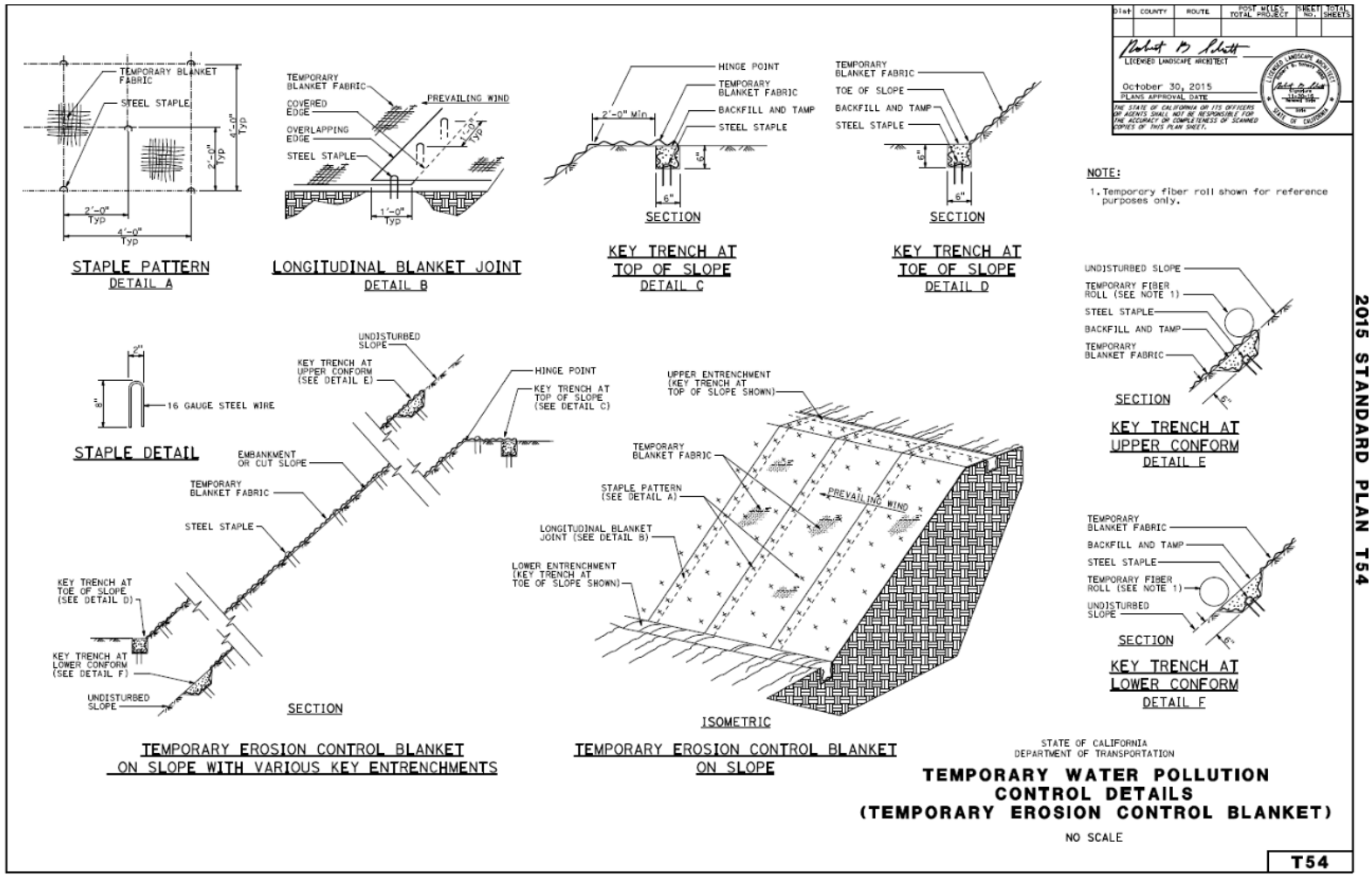
- All blankets and mats must be inspected periodically after installation.
- Installation should be inspected after significant rain events to check for erosion and undermining. Any failures must be repaired immediately.
- If washout or breakage occurs, re-install the material after repairing the damage to the slope or channel.

SWPPP or WPCP

RECP must be discussed in Section 500.3.2 of the SWPPP or Section 30.2 of the WPCP.

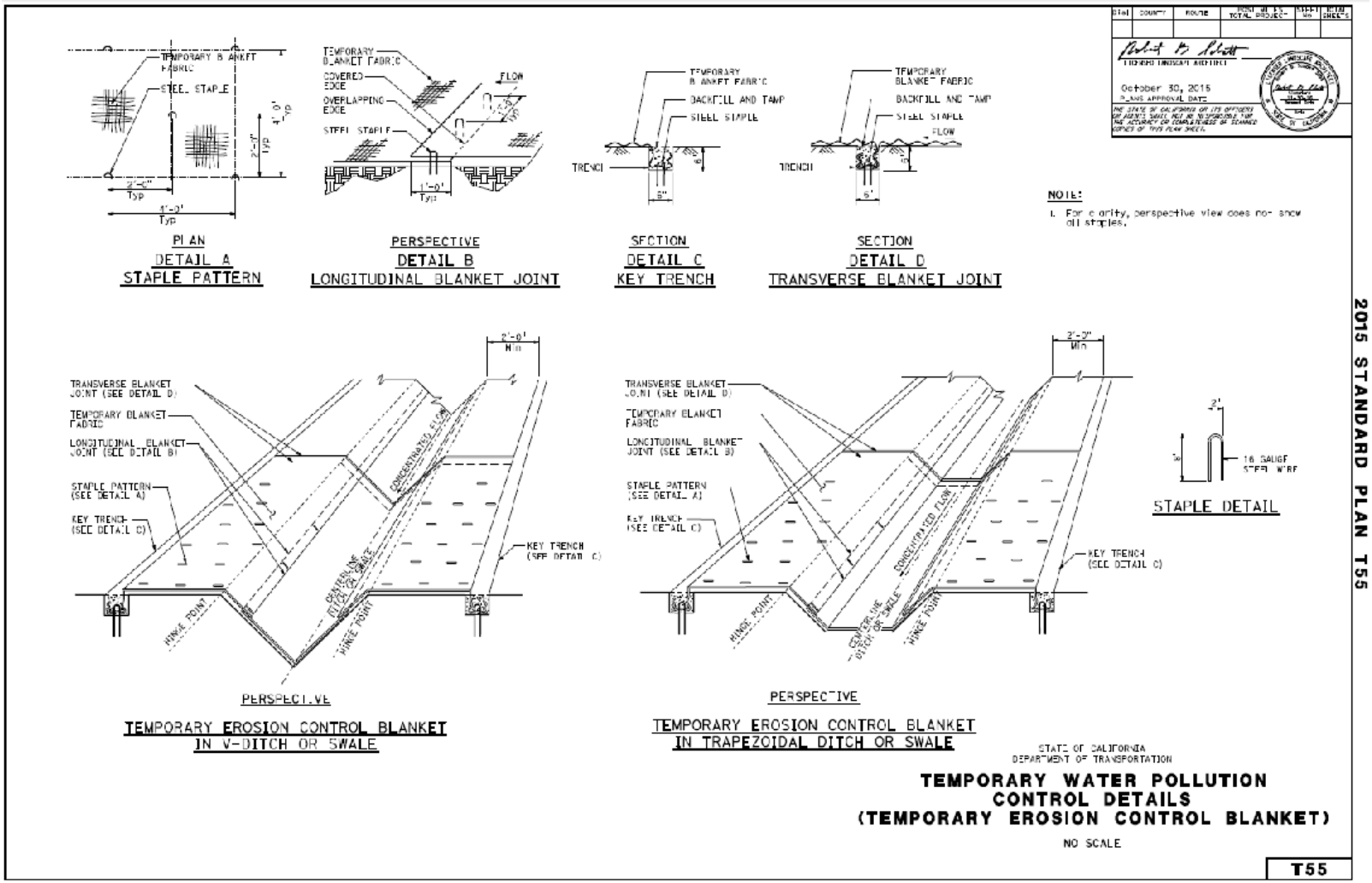
Temporary Cover and Rolled Erosion Control Products

SS-7



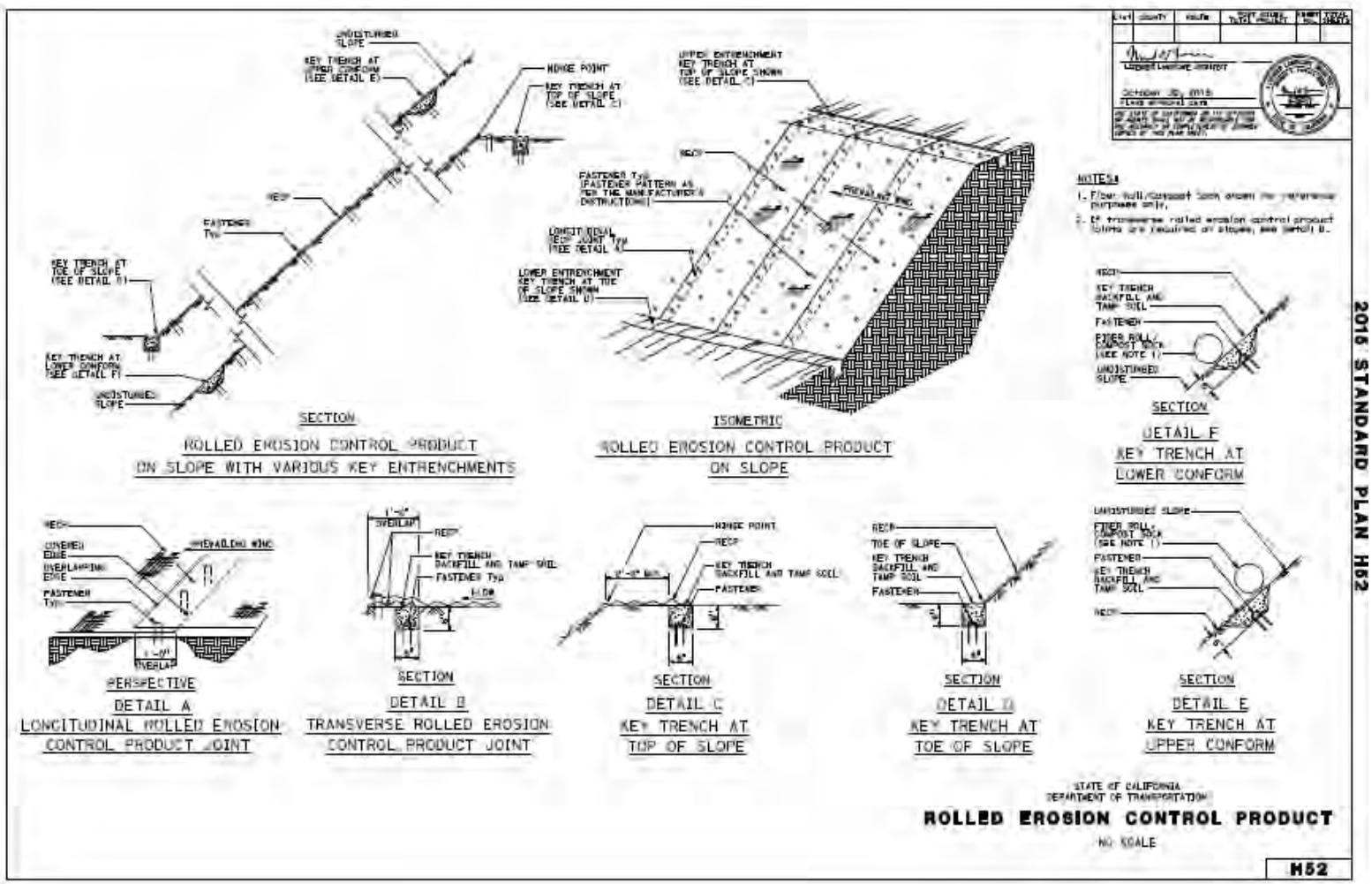
Temporary Cover and Rolled Erosion Control Products

SS-7



Temporary Cover and Rolled Erosion Control Products

SS-7



Wood Mulching

SS-8

Standard Symbol

Definition and Purpose

Wood mulching consist of applying a mixture of shredded bark, wood chips, or tree trimmings on top of soil. Wood mulch is mostly applicable to landscape projects.

The primary function of wood mulching is to reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff.

Appropriate Applications

Wood mulching is considered a temporary soil stabilization alternative in the following situations:

- As a stand-alone temporary surface cover on disturbed areas until soils can be prepared for revegetation and permanent vegetative cover can be established.
- As short term, non-vegetative ground cover on slopes to reduce rainfall impact, decrease the velocity of sheet flow, settle out sediment and reduce wind erosion.
- In combination with other BMPs, mulch may be used to stabilize roadway embankment slopes and control wind erosion.

Limitations

Wood mulch may introduce unwanted species of vegetation.

Shredded wood does not withstand concentrated flows and is prone to sheet erosion.

Green material has the potential for the presence of unwanted weeds and other plant materials. Delivery system is primarily by manual labor, although pneumatic application equipment is available.

Mulch may need to be removed prior to further earthwork.

Mulch should not be used alone to stabilize embankments or sides of swales where concentrated flows could mobilize the material.

Standards and Specifications

Mulch Selection

There are many types of mulches, including tree bark mulch, wood chip mulch, shredded bark mulch, and tree trimming mulch. Selection of the appropriate type should be based on the type of application and site conditions. Prior to use of wood mulches, obtain concurrence with the District Landscape Architect because some mulch used on construction projects may not be compatible with planned or future projects.

Selection of wood mulches must comply with Standard Specifications Section 20-5.03E, and must be approved by the RE.

Tree Bark Mulch

Tree bark mulch must be derived from cedar, Douglas fir, or redwood tree species.

Tree bark mulch must be ground such that at least 95 percent of the material by volume is less than 2 inches in any direction and no more than 30 percent by volume is less than 1 inch in any direction.

Wood Chip Mulch

Wood chip mulch must be derived from clean wood, and it may not contain leaves or small twigs.

Wood chip mulch must contain at least 95 percent wood strands by volume with an average thickness of 1/8 to 1-1/2 inches in any direction and 2 to 8 inches in length.

Shredded Bark Mulch

Shredded bark mulch must be derived from trees. The mulch must be a blend or loose, long, thin wood or bark pieces.

Shredded bark mulch must contain at least 95 percent wood strands by volume with an average thickness of 1/8 to 1-1/2 inches in any direction and 2 to 8 inches in length

Tree Trimming Mulch

Tree trimming mulch is derived from chipped trees and may contain leaves, small twigs, and green material.

Tree trimming mulch must contain at least 95 percent material by volume less than 3 inches and no more than 30 percent by volume less than 1 inch

Application Procedures

Do not use soil sterilant or filter fabric.

Mulch should be placed uniformly from the outside edge of area designated for mulch. Permanent, landscape mulch should be placed after vegetation has been installed.

Mulch may be installed by manual application or with pneumatic devices.

Do not place mulch within 4 ft of the flow line of drainage ditches or other channels, or the edge of paved roads.

All material must be removed before re-starting work on the slopes.

Maintenance and Inspection

Wood mulch needs to last long enough to achieve erosion-control objectives. If the mulch is applied as a stand-alone erosion control method over disturbed areas (without seed), it should last the length of time the site will remain barren or until final re-grading and revegetation. Additional information is provided in Appendix B of this Manual.

Where vegetation is not the ultimate cover, such as ornamental and landscape applications of bark or wood chips, inspection and maintenance should focus on longevity and integrity of the mulch.

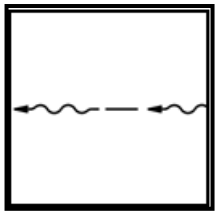
May require reapplication when bare soil becomes visible.

SWPPP or WPCP

Wood Mulch must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.

Earth Dikes/Drainage Swales and Lined Ditches

SS-9



Standard Symbol

Definition and Purpose

These are structures that intercept, divert and convey surface run-on, generally sheet flow, to prevent erosion.

Appropriate Applications

Earth dikes/drainage swales and lined ditches may be used to:

- Convey surface runoff down sloping land.
- Intercept and divert runoff to avoid sheet flow over sloped surfaces.
- Divert and direct runoff towards a stabilized watercourse, drainage pipe or channel.
- Intercept runoff from paved surfaces.

Earth dikes/drainage swales and lined ditches also may be used:

- Below steep grades where runoff begins to concentrate.
- Along roadways and facility improvements subject to flood drainage.
- At the top of slopes to divert run-on from adjacent or undisturbed slopes.
- At bottom and mid-slope locations to intercept sheet flow and convey concentrated flows.

Limitations

Earth dikes/drainage swales and lined ditches are not suitable as sediment trapping devices.

May be necessary to use other soil stabilization and sediment controls, such as check dams, plastics, and blankets, to prevent scour and erosion in newly graded dikes, swales and ditches.

Temporary swales and ditches should not or any other runoff diversion device should not adversely impact upstream or downstream properties.

Standards and Specifications

Standard Specification Section 19-6 "Embankment Construction," which covers allowable materials and construction procedures for dikes.

Standard Specification Section 72-5 "Concrete Slope Protection, Gutter, Ditch and Channel Lining" covers ditch and channel lining materials and construction procedures.

Care must be applied to correctly size and locate earth dikes, drainage swales and lined ditches. Excessively steep, unlined dikes and swales are subject to erosion and gully formation.

Must complete a careful evaluation of the risks due to erosion of the selected measure based on flow velocity, soil types, potential for over topping, flow backups, washouts, and drainage patterns for each BMP location.

Conveyances shall be stabilized. Consider using a lined ditch for high flow velocities to prevent scour. Compact any fills or backfills to prevent unequal settlement.

Do not divert runoff from the highway right-of-way onto other property.

When possible, install and utilize permanent dikes, swales and ditches early in the construction process.

Earthen berms should be 8 inches tall and 36 inches wide at a minimum. Earthen berms must be compacted either by hand or mechanical methods.

Provide stabilized outlets. Refer to SS-10, "Outlet Protection/Velocity/ Dissipation Devices."

Maintenance and Inspection

Inspect temporary measures prior to, daily during extended rain events post-storm and weekly year-round.

Inspect ditches and berms for washouts. Replace lost riprap, damaged linings or soil stabilizers as needed.

Inspect channel linings, embankments, and beds of ditches and berms for erosion and accumulation of debris and sediment.

Remove debris and sediment, and repair linings and embankments to ensure they function as intended.

Temporary conveyances should be completely removed as soon as the surrounding drainage area has been stabilized, or at the completion of construction.

Earth Dikes/Drainage Swales and Lined Ditches

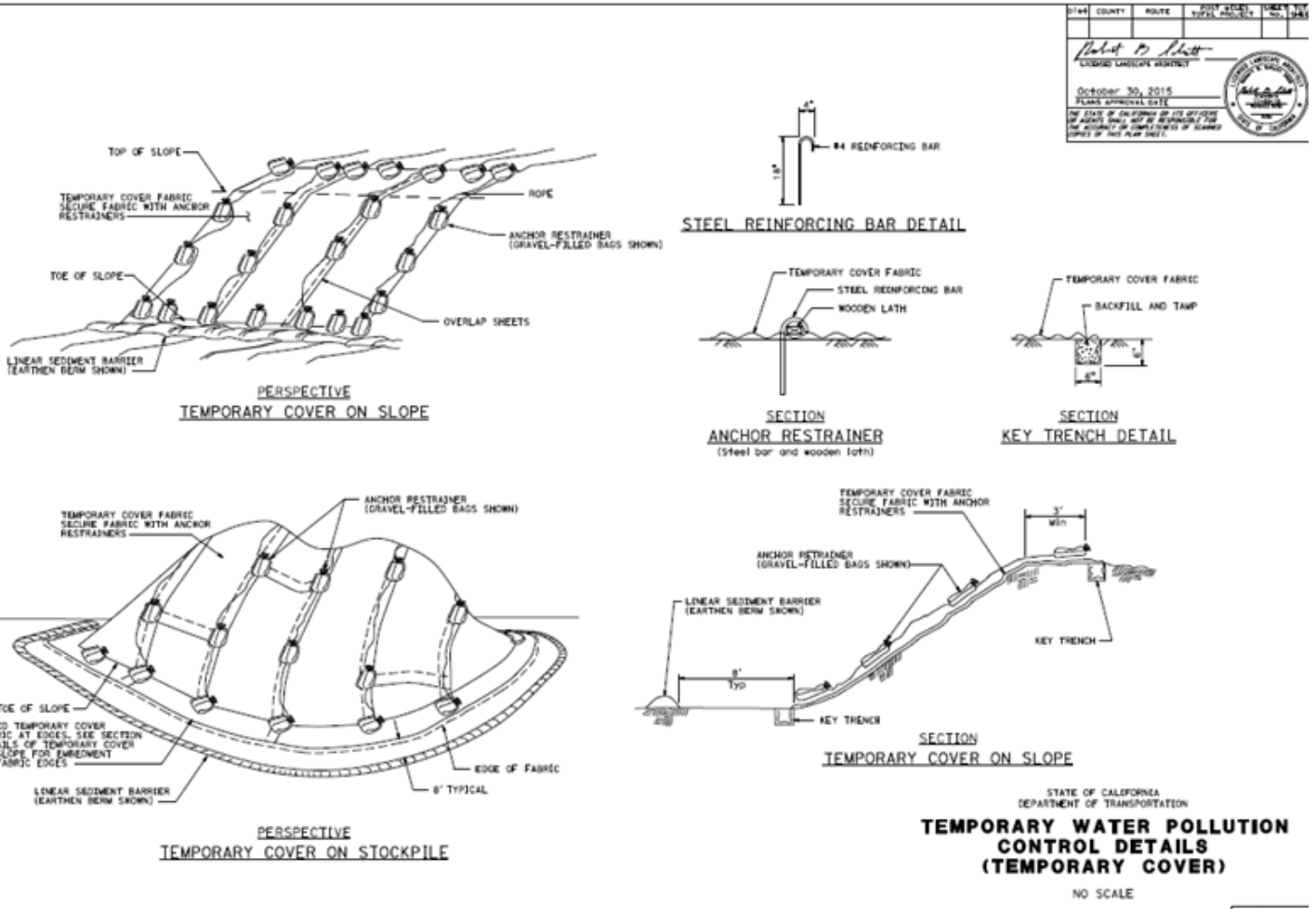
SS-9

SWPPP or WPCP

Earth Dikes/Drainage Swales and Lined Ditches must be discussed in Section 500.3.2 of SWPPP or Section 30.2 of the WPCP.

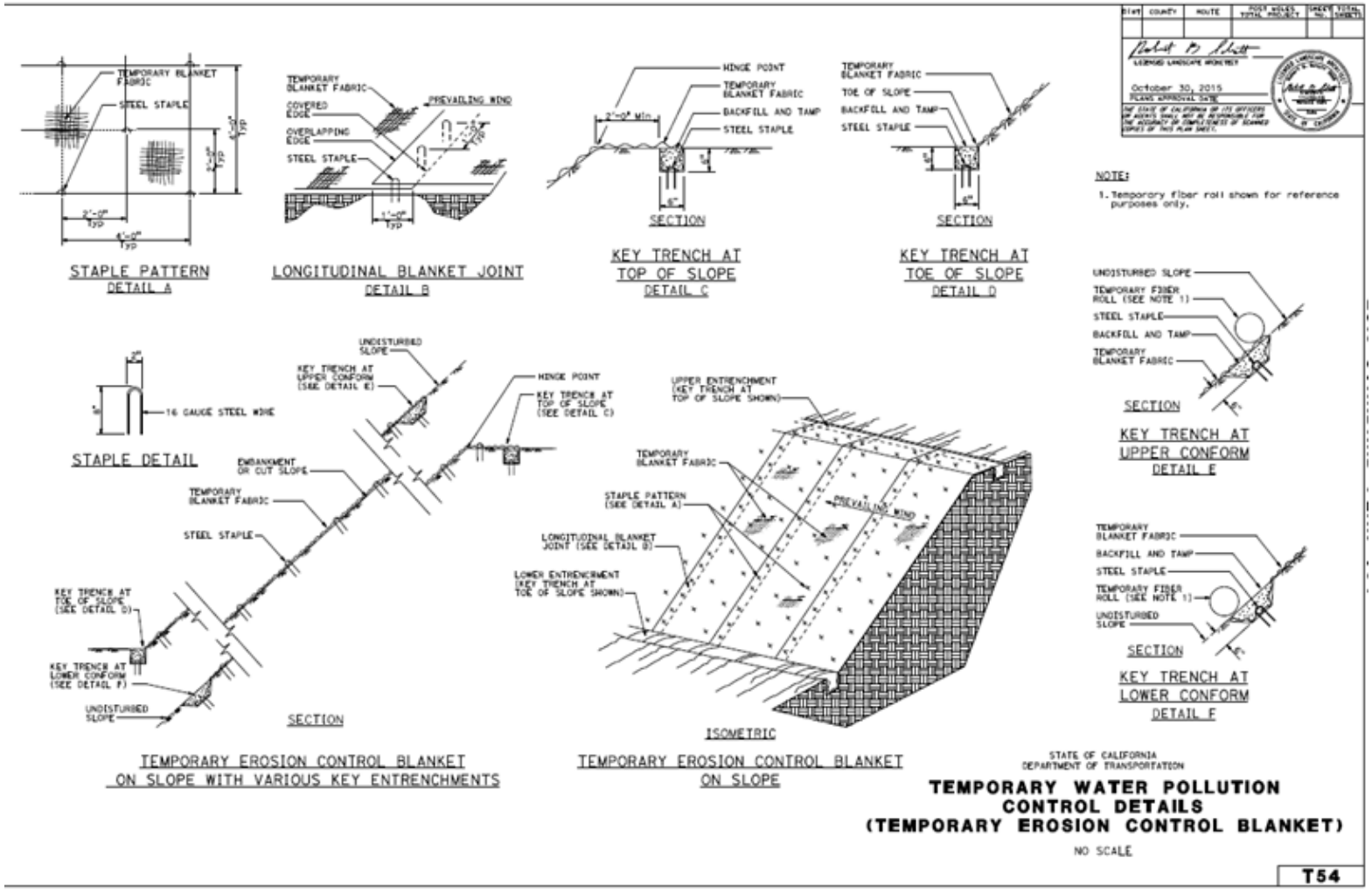
Earth Dikes/Drainage Swales and Lined Ditches

SS-9



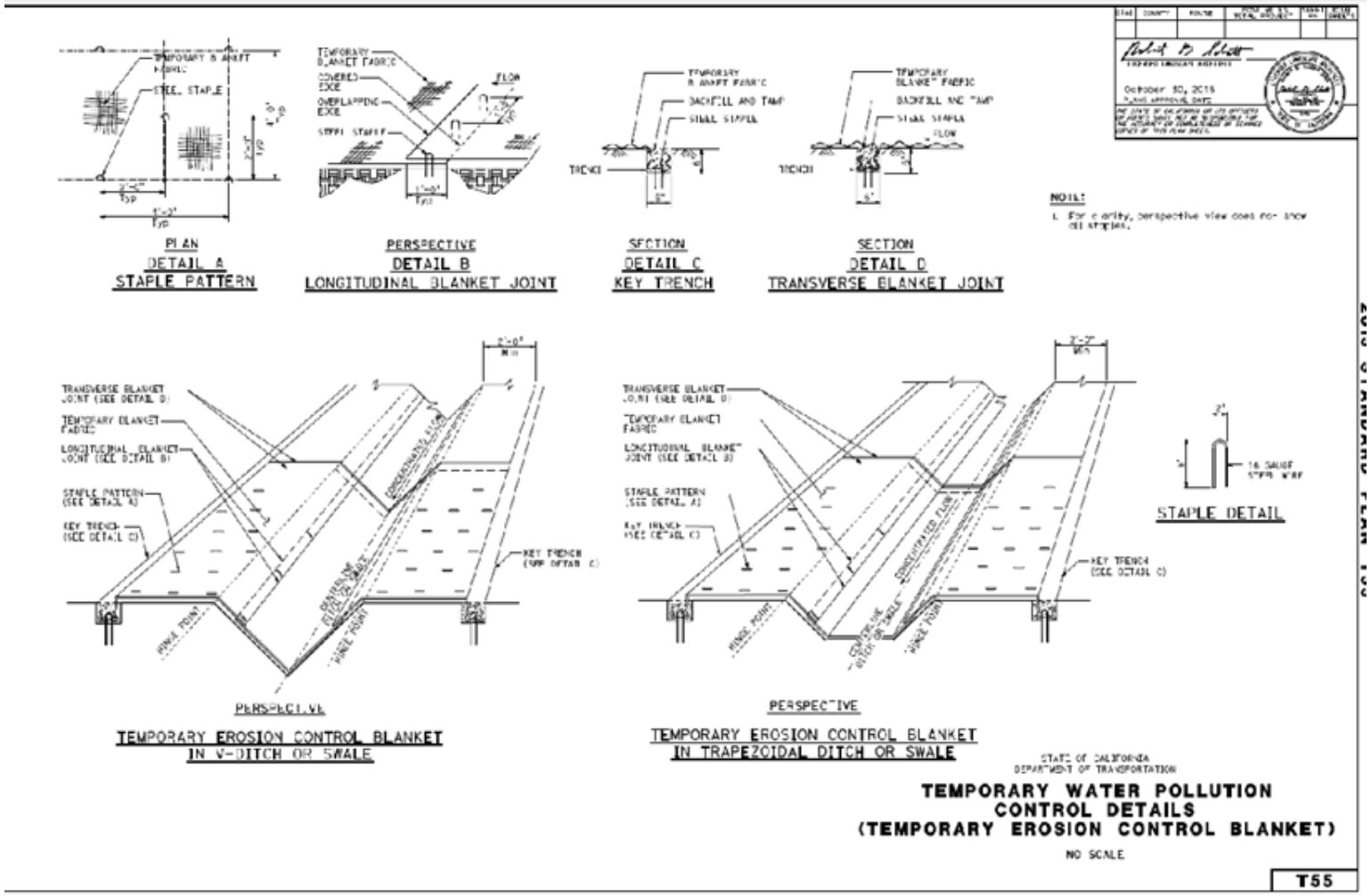
Earth Dikes/Drainage Swales and Lined Ditches

SS-9



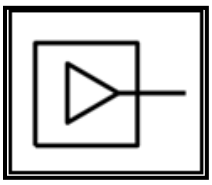
Earth Dikes/Drainage Swales and Lined Ditches

SS-9



Outlet Protection/Velocity Dissipation Devices

SS-10



Standard Symbol

Definition and Purpose

These devices are placed at pipe outlets to prevent scour and reduce the velocity and/or energy of stormwater flows.

Appropriate Applications

These devices may be used at the following locations:

- Outlets of pipes, drains, culverts, slope drains, diversion ditches, swales, conduits or channels.
- Outlets located at the bottom of mild to steep slopes.
- Discharge outlets that carry continuous flows of water.
- Outlets subject to short, intense flows of water, such as flash floods.
- Points where lined conveyances discharge to unlined conveyances.

Limitations

Loose rock may have stones washed away during high flows.

Grouted rock slope protection may break up in areas of freeze and thaw.

If there is not adequate drainage, and water builds up behind grouted rock slope protection, it may cause the grouted rock slope protection to break up due to the resulting hydrostatic pressure.

Outlet protection may negatively impact the channel habitat.

Outlet Protection/Velocity Dissipation Devices

SS-10

Standards and Specifications

There are many types of energy dissipaters; a flared end section and rock slope protection is shown in the figure on the previous page. Please note that this is only one example and the RE may approve other types of devices proposed by the contractor.

Flared end sections must comply with Standard Specification 70-5.02.

Rock slope protection must comply with Standard Specification Section 72.

Install rock slope protection, grouted rock slope protection, or concrete apron at selected outlet. Rock slope protection aprons are best suited for temporary use during construction.

Carefully place rock slope protection to avoid damaging the filter fabric.

For proper operation of apron:

- Align apron with receiving stream and keep straight throughout its length. If a curve is needed to fit site conditions, consider placing it in upper section of apron.
- If size of apron rock slope protection is large, consider protecting underlying filter fabric with a gravel blanket.

Outlets on slopes steeper than 10% should have additional protection.

Maintenance and Inspection

At a minimum, perform inspections weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

Minimize areas of standing water by removing sediment blockages and filling scour depressions. If persistent, it might be necessary to have licensed professional re-evaluate size and type of device implemented.

Inspect apron for displacement of the rock slope protection and/or damage to the underlying fabric. Repair fabric and replace rock slope protection that has washed away.

Inspect for scour beneath the rock slope protection and around the outlet. Repair damage to slopes or underlying filter fabric immediately.

Temporary devices should be completely removed as soon as the surrounding drainage area has been stabilized, or at the completion of construction.

Outlet Protection/Velocity Dissipation Devices

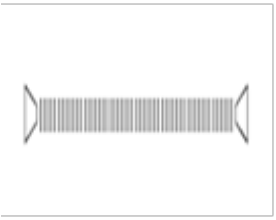
SS-10

SWPPP or WPCP

Outlet Protection/Velocity Dissipation Devices must be discussed in Section 500.3.2 of SWPPP or Section 30.2 of the WPCP.

Slope Drains

SS-11



Standard Symbol

Definition and Purpose

A slope drain is a pipe used to intercept and direct surface runoff or groundwater into a stabilized watercourse, trapping device or stabilized area. Slope drains are used with lined ditches to intercept and direct surface flow away from slope areas to protect cut or fill slopes.

Appropriate Applications

Slope drains may be used on construction sites where slopes may be eroded by surface runoff.

Drainage for top of slope dikes or swales.

Drainage for top of cut and fill slopes where water can accumulate.

Emergency spillway for a sediment basin.

Limitations

Severe erosion may result when slope drains fail by overtopping, piping, or pipe separation.

Sediment accumulation, scour depressions, and/or persistent non-stormwater discharges in energy dissipaters associated with slope drain outlets can result in suitable areas for vector production.

Standards and Specifications

Maximum slope generally limited to 2:1 (H:V), as energy dissipation below steeper slopes is difficult.

Direct surface runoff to slope drains with interceptor dikes. See BMP SS 8, "Earth Dikes/Drainage Swales, and Lined Ditches."

Slope drains can be placed on or buried underneath the slope surface.

Recommended materials are plastic or corrugated metal, or comparable pipe.

When installing slope drains:

- Install slope drains perpendicular to slope contours.
- Compact soil around and under entrance, outlet, and along length of pipe.
- Securely anchor and stabilize pipe and appurtenances into soil.
- Check to ensure that pipe connections are water tight.
- Protect area around inlet with filter cloth. Protect outlet with rock slope protection or other energy dissipation device. For high energy discharges, reinforce rock slope protection with concrete or use reinforced concrete device.
- Protect inlet and outlet of slope drains; use standard flared end section at entrance and exit for pipe slope drains 12 in and larger.

Maintenance and Inspection

Inspect before, daily during and after each rain event, and weekly during the duration of the construction project. Inspect outlet for erosion and downstream scour.

If eroded, repair damage and install additional energy dissipation measures. If downstream scour is occurring, it may be necessary to reduce flows being discharged into the channel.

Inspect slope drainage for accumulations of debris and sediment.

Remove built-up sediment from entrances, outlets, and within drains as required.

Make sure stormwater is not ponding onto inappropriate areas (e.g., active traffic lanes, material storage areas, etc.).

SWPPP or WPCP

Slope Drains must be discussed in Section 500.3.2 of SWPPP or Section 30.2 of the WPCP.

Standard Symbol

Definition and Purpose

Drainage systems including the stream channel, streambank, and associated riparian areas, are dynamic and sensitive ecosystems that respond to changes in land use activity. Streambank and channel disturbance resulting from construction activities can increase the stream's sediment load, which can cause channel erosion or sedimentation and have adverse affects on the biotic system. BMPs can reduce the discharge of sediment and other pollutants and minimize the impact of construction activities on watercourses. Streams included on the 303(d) list by the State Water Resources Control Board (SWRCB) may require careful evaluation to prevent any increases in sedimentation, siltation and/or turbidity to the stream.

Appropriate Applications

These procedures typically apply to all construction projects that disturb or occur within stream channels and their associated riparian areas. Streambank stabilization typically consists of a combination of several BMPs to prevent destabilization and enhance stability of eroding streambanks.

Limitations

Specific permit requirements or mitigation measures such as Regional Water Quality Control Board (RWQCB) 401 Certification, U.S. Army Corps of Engineers 404 permit and approval by California Department of Fish and Wildlife Service may be included in contract documents. Specific requirements could include in-water work windows, vegetation species, seed mixes, stabilization measures, water quality monitoring protocols and specific reporting requirements. If numerical-based water quality standards are

mentioned in any of these and other related permits, testing and sampling may be required. Streams included on the 303(d) list by the SWRCB because of sediment, silt, or turbidity impairment are required to conduct sampling to verify that there is no net increase in sediment load due to construction activities.

Standards and Specifications

Planning

Proper planning, design, and construction techniques can minimize impacts normally associated with in-stream construction activities. Poor planning can adversely affect soil, fish, and wildlife resources, land uses, or land users. Planning should take into account: scheduling, avoidance of in-stream construction; minimizing disturbance area and construction time period; using pre-disturbed areas; selecting crossing location; selecting equipment and proper stabilization techniques once the activity is completed.

Scheduling (SS-1)

Construction activities should be scheduled according to the relative sensitivity of the environmental concerns and in accordance with SS-1, "Scheduling." Scheduling considerations will be different when working near perennial streams vs. ephemeral streams, and are as follows:

- Construction work near perennial streams should optimally be performed during the dry season (see below).
- When working in or near ephemeral, intermittent, or perennial streams, construction should be performed during the dry season and in accordance with regulatory agency permits and approvals. By their very nature, ephemeral and intermittent streams are usually dry in the summer, and therefore, in-stream construction activities will not cause significant water quality problems. For perennial streams, clear water diversion (see NS-5 for "Clear Water Diversion"), dewatering (see NS-2 for "Dewatering Operations"), and water quality monitoring may be required.
- When closing the site at the end of the job, wash any fines that were formed in-situ back into the channel the bed material, to decrease pollution from the first rainstorm ("first flush") of the season. When working near stream channels, erosion and sediment controls (see silt fences, straw bale barriers, etc.) should be implemented on the banks to keep sediment out of the stream channel.
- Regulatory permits might require or allow for the stockpiling of native bed material to be backfilled during stabilization.

Minimize Disturbance

Minimize disturbance through: selection of the narrowest crossing location; limiting the number of equipment trips across a stream during construction; and, minimizing the number and size of work areas (equipment staging areas and spoil storage areas). Provide stabilized access to the stream when in-stream work is required. Field reconnaissance should be conducted during the planning stage to identify work areas.

Comply with regulatory permit requirements, if none are applicable, then place work areas (stage area, active construction) at least 50 ft from the stream channel. Perform each of the following activities at least 100 feet

from a drainage course if it is performed within the floodplain, or at least 50 feet outside the floodplain: stockpiling materials, storing pile-driving equipment and liquid waste containers, washing vehicles and equipment, fueling and maintaining vehicles and equipment.

Locate access and staging areas in paved or pre-disturbed areas when possible. If not possible, select access and staging areas that minimizes disturbance to aquatic species, riparian vegetation, and habitat.

Avoid steep and unstable banks, highly erodible or saturated soils, or highly fractured rock, wherever possible.

Select equipment that reduces the amount of pressure exerted on the ground surface, and therefore, reduces erosion potential and/or use overhead or aerial access for transporting equipment across drainage channels. Use equipment that exerts ground pressures of less than 5 or 6 pounds per square inch (PSI), where possible. Low ground pressure equipment includes: wide or high flotation tires (34 to 72 inch wide); dual tires; bogie axle systems; tracked machines; lightweight equipment; and central tire inflation systems.

Streambank Stabilization: Preservation of Existing Vegetation (SS-2)

Preserve existing vegetation in accordance with SS-2, "Preservation of Existing Vegetation." In a streambank environment preservation of existing vegetation provides the following benefits:

Water Quality Protection

Vegetated buffers on slopes trap sediment and promote groundwater recharge. The buffer width needed to maintain water quality ranges from 15 to 100 feet. On gradual slopes, most of the filtering occurs within the first 30 feet of the buffer. Steeper slopes require a greater width of vegetative buffer to provide water quality benefits.

Streambank Stabilization

The root system of riparian vegetation stabilizes streambanks by increasing tensile strength in the soil. The presence of vegetation modifies the moisture condition of slopes (infiltration, evapotranspiraton, interception) and increases bank stability.

Riparian Habitat

Buffers of diverse riparian vegetation provide food, shelter, and shade for riparian and aquatic organisms. Minimizing impacts to fisheries habitat is a major concern when working near streams and rivers. Riparian vegetation provides shade, shelter, organic matter (leaf detritus and large woody debris), and other nutrients that are necessary for fish and other aquatic organisms. Buffer widths for habitat concerns are typically wider than those recommended for water quality concerns (100 to 1,500 feet).

When working near watercourses, it is important to understand the work site's placement in the watershed. Riparian vegetation in the headwater streams has a greater impact on overall water quality than vegetation in downstream reaches. Preserving existing vegetation in upstream areas is necessary to maintain water quality, minimize bank failure, and maximize riparian habitat downstream of the work site.

Local county and municipal ordinances regarding width, extent and type of vegetative buffer required may exceed the specifications provided here; these ordinances should be investigated prior to construction.

As a general rule, the width of a buffer strip between a road and the stream is recommended to be 50 feet plus four times the percent slope of the land, measured between the road and the top of stream bank.

Hydraulic Mulch (SS-3), Hydroseeding (SS-4), and Soil Binders (SS-5)

Apply hydraulic mulch, hydroseed, or soil binders on disturbed streambanks above the mean high water level to provide temporary soil stabilization.

Do not place hydraulic mulch, tackifiers, fertilizers, or soil binders below the mean high water level, as these materials could wash into the channel and impact water quality or possibly cause eutrophication.

Straw Mulch (SS-6)

Apply straw mulch to disturbed streambanks in accordance with SS-6, "Straw Mulch."

Do not place straw mulch or tackifiers below the mean high water level, as this material could wash into the channel and impact water quality.

Earth Dikes/Drainage Swales, and Lined Ditches (SS-9)

Convey, intercept, or divert runoff from disturbed streambanks using SS-9, "Earth Dikes/Drainage Swales, and Lined Ditches."

Do not place earth dikes in watercourses, as these structures are only suited for intercepting sheet flow, and should not be used to intercept concentrated flow.

Outlet Protection/Velocity Dissipation Devices (SS-10)

Place outlet protection or velocity dissipation devices at outlets of pipes, drains, culverts, slope drains, diversion ditches, swales, conduits or channels in accordance with SS-10.

Slope Drains (SS-11)

Use slope drains to intercept and direct surface runoff or groundwater into a stabilized watercourse, trapping device or stabilized area in accordance with SS-11, "Slope Drains." The use of slope drains minimizes potential streambank erosion from overland flows.

Streambank Sediment Control: Silt Fences (SC-1)

Install silt fences in accordance with SC-1, "Silt Fence" to control sediment. Silt fences should only be installed where sediment-laden water can pond, thus allowing the sediment to settle out.

Fiber Rolls (SC-5)

Install fiber rolls in accordance with SC-5, "Fiber Rolls" along slope contour above the high water level to intercept runoff, reduce flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff. In a stream environment, fiber rolls should be used in conjunction with other sediment control

methods such as SC-1, “Silt Fence” or SC-9, “Straw Bale Barrier.” Install silt fence, straw bale barrier, or other erosion control methods along the toe of slope above the high water level. Typical fiber roll installation is illustrated at the end of this Section.

Gravel Bag Berm (SC-6)

A gravel bag berm or barrier can be utilized to intercept and slow the flow of sediment-laden sheet flow runoff in accordance with SC-6, “Gravel Bag Berm.” In a stream environment gravel bag barriers can allow sediment to settle from runoff before water leaves the construction site and can be used to isolate the work area from the stream. Gravel bag barriers are not recommended as a perimeter sediment control practice around streams.

Straw Bale Barrier (SC-9)

Install straw bale barriers in accordance with SC-9, “Straw Bale Barrier” to control sediment. Straw bale barriers should only be installed where sediment-laden water can pond, thus allowing the sediment to settle out. Install a silt fence in accordance with SC-1, “Silt Fence” on the down-slope side of the straw bale barrier closest to stream channel to provide added sediment control.

Compost Stock (SC-8)

Compost socks are a mesh sock containing compost that act as three dimensional, biodegradable structures that intercept and filter sheet flow. Compost socks can filter runoff, retain sediment, and reduce sheet flow velocities. Compost may be pre-seeded to assist in the establishment of vegetation. Compost socks may be used as either a temporary or permanent sediment control measure.

Maintenance and Inspection

Inspect BMPs daily during construction.

Maintain and repair BMPs.

Remove accumulated sediment as necessary.

SWPPP or WPCP

Streambank Stabilization must be discussed in Section 500.3.2 of the SWPPP or Section 30.2 of the WPCP.

Section 4

Temporary Sediment Control BMP

4.1 Temporary Sediment Controls

Temporary sediment control practices include those practices that intercept and slow or detain the flow of stormwater to allow sediment to settle and be trapped. These practices can consist of installing temporary linear sediment barriers (such as silt fences, sandbag barriers, and straw bale barriers); providing fiber rolls, gravel bag berms, or check dams to break up slope length or flow; or constructing a temporary sediment/desilting basin on sediment trap. Linear sediment barriers are typically placed below the toe of exposed and erodible slopes, downslope of exposed soil areas, around temporary stockpiles, and at other appropriate locations along the site perimeter.

Temporary sediment control practices must be implemented in conformance with the criteria presented in Section 2 of this Manual and the SWPPP/WPCP Preparation Manual. Temporary sediment control practices include the BMPs listed in Table 4-1.

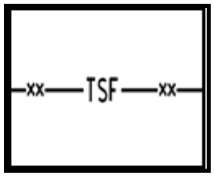
Table 4-1. Temporary Sediment Control BMPs

ID	BMP Name
SC-1	Silt Fence
SC-2	Sediment/Desilting Basin
SC-3	Sediment Trap/Curb Cutback
SC-4	Check Dam
SC-5	Fiber Rolls
SC-6	Gravel Bag Berm/Earthen Berm
SC-7	Street Sweeping
SC-8	Sandbag Barrier
SC-9	Straw Bale Barrier
SC-10	Temporary Drainage Inlet Protection
SC-11	Compost Sock
SC-12	Flexible Sediment Barrier

The remainder of this Section describe the working details for each of the temporary sediment control BMPs.

Temporary Silt Fence

SC-1



Standard Symbol

Definition and Purpose

A silt fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site.

Appropriate Applications

Below the toe of exposed and erodible slopes.

Down-slope of exposed soil areas.

Around temporary stockpiles.

Along streams and channels.

Along the perimeter of a project.

Limitations

Not effective unless trenched and keyed in.

Not intended for use as mid-slope protection on slopes greater than 4:1 (H:V).

Must be maintained.

Must be removed and disposed of.

Don't use below slopes subject to creep, slumping, or landslides.

Don't use in streams, channels, drain inlets, or anywhere flow is concentrated.

Don't use silt fences to divert flow.

Don't use in locations where ponded water may cause a flooding hazard.

Standards and Specifications

Design and Layout

The drainage area above any fence should not exceed a quarter of an acre, (100-feet of silt fence per 10,000 square feet of DSA).

Slope of area draining to silt fence should be less than 1:1 (H:V).

Silt fences must be placed parallel to the slope contour.

Silt fences rely on temporary ponding to encourage sediment deposition and achieve water quality benefits. Limit application to areas where ponding and deposition may occur on the uphill side of the silt fence.

Temporary silt fence fabrics generally have life spans ranging between five and eight months. Projects with longer durations may require replacing silt fence fabric.

Silt fences constructed across concentrated flows are susceptible to washout. Silt fences shall not be installed across concentrated flows.

For slopes adjacent to water bodies or Environmentally Sensitive Areas (ESAs), additional temporary soil stabilization BMPs should be used.

For any 50 foot section of silt fence, the elevation of the base of the fence may not vary by more than 1/3 of the fence height.

Install along a level contour, so water does not pond more than 1.5 ft at any point along the silt fence.

Join separate sections to form reaches not more than 500 feet without openings. Ensure there are no gaps between posts.

Reinforced Silt Fence

Temporary reinforced silt fence is typically used in areas affected by high winds. They are also often used on slopes steeper than 2:1 (H:V) that contain a high number of rocks or large dirt clods that tend to dislodge, or where area draining fence contains moderate sediment loads.

Temporary reinforced silt fence (type 2) may also be used to provide sediment control and delineate ESAs.

Materials

Silt fence fabric should be a woven or unwoven geosynthetic textile that complies with Section 96-1.02E of the Standard Specifications. The Contractor must submit a certificate of compliance for silt fence fabric in accordance with Standard Specifications Section 6-2.03C.

Wood posts should be untreated fir, redwood, cedar, or pine lumber. Each silt fence post should be at least 4 feet long, except reinforced silt fence posts should be at least 6 feet for Type 1 and 5 feet for Type 2 installations. Posts should be free from decay, splits or cracks longer than the thickness of the post or other defects that would weaken the posts and cause the posts to be structurally unsuitable. Steel posts may be used as well. Posts should comply with the requirements in Standard Specifications sections 16-2.03B and 13-10.02C.

Anchors may be used. Anchors consist of a number 4 steel reinforcing bar. End protection shall be provided for any exposed bar reinforcement.

Staples used to fasten the fence fabric to the posts and to join adjacent silt fence sections shall be U-shaped and have 1/2-inch legs and a 1-inch crown. Staples should be 1/16-inch in diameter. At least four staples should be installed on each silt fence post for adequate fastening, with a maximum of 8-inches between each staple.

Installation

Install in accordance with Pages 5 and 6 of this BMP (Standard Plans T51 “Temporary Silt Fence” and T60 “Temporary Reinforced Silt Fence”).

Generally, silt fences should be used in conjunction with soil stabilization source controls up slope to provide effective erosion and sediment control.

Excavate a trench that is 6-inches deep and 6-inches wide with a length consistent with the project design plans. Place the bottom of the silt fence fabric in the trench. Backfill the trench with soil over the base of the silt fence fabric. Compact the backfill soil by hand or mechanical methods.

Construct the length of each reach so that the change in base elevation along any 50-foot reach does not exceed 1/3 the height of the barrier; in no case should any reach of temporary silt fence exceed 500 feet in length.

Construct silt fences with a set-back of at least 3 feet from the toe of a slope. Where a silt fence is determined to be not practical with a 3 foot set-back from the toe due to specific site conditions, the silt fence may be constructed at the toe of the slope, but should be constructed as far from the toe of the slope as practical.

Maintenance and Inspection

Repair undercut silt fences.

Repair or replace split, torn, slumping, or weathered fabric.

Inspect silt fence when rain is forecast. Perform necessary maintenance, or maintenance required by the Engineer.

Inspect silt fence following rain events. Perform maintenance as necessary, or as required by the Engineer.

Maintain silt fences to provide an adequate sediment holding capacity. Sediment should be removed when the sediment accumulation reaches one-third (1/3) of the barrier height.

Silt fences that are damaged and become unsuitable for the intended purpose should be removed from the site of work, disposed of outside the highway right of way in conformance with the Standard Specifications, and replaced with new silt fence barriers.

Holes, depressions or other ground disturbance caused by the removal of the temporary silt fences should be backfilled and repaired in conformance with the Standard Specifications.

Remove silt fence when no longer needed. Fill and compact post holes and anchorage trench, remove sediment accumulation, and grade fence alignment to blend with adjacent ground.

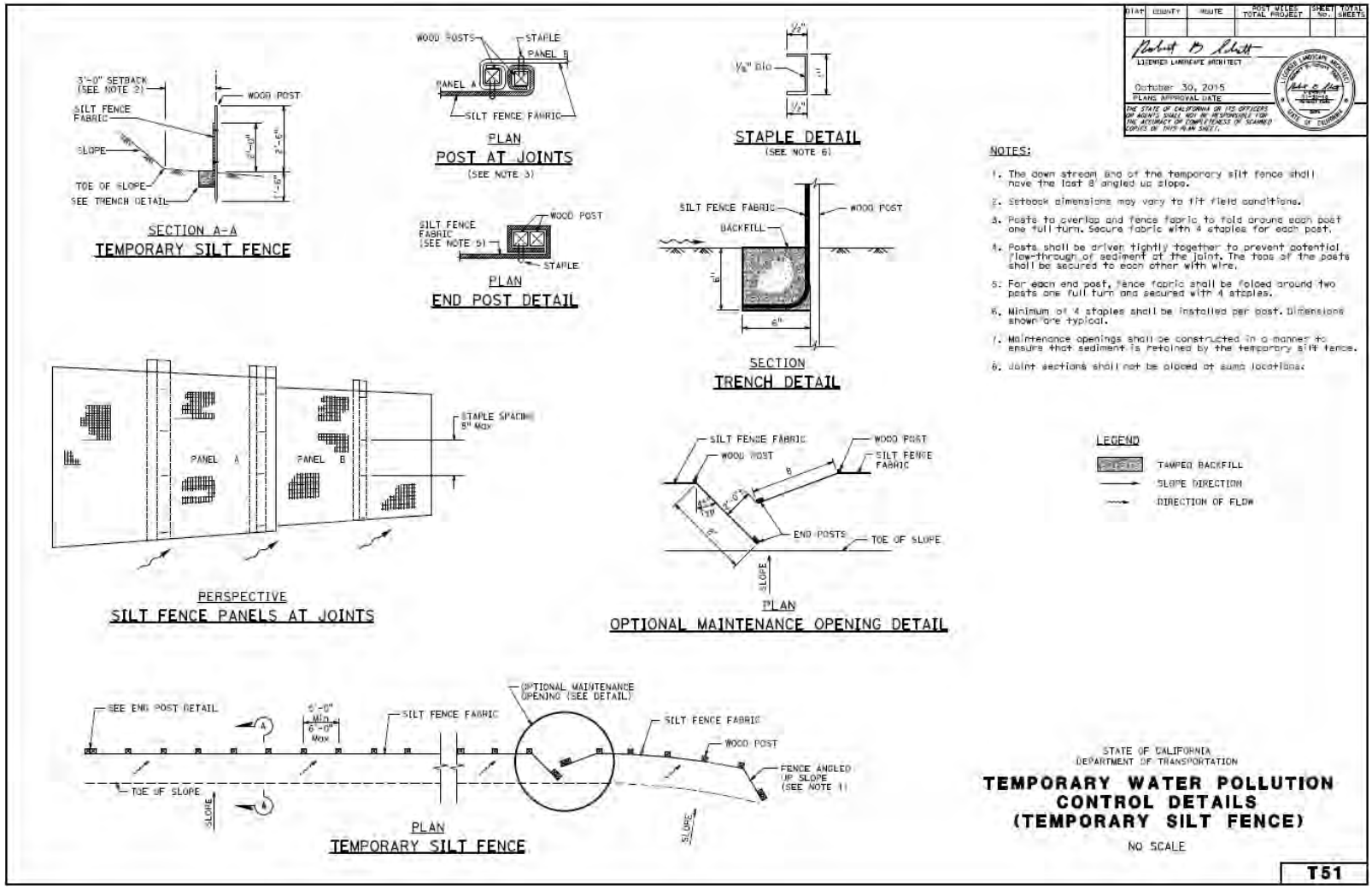
Silt Fence placement is to be shown in the WPCDs along with other BMPs.

SWPPP or WPCP

Temporary Silt Fence or Reinforced Silt Fence must be discussed in Section 500.3.3 of the SWPPP or Section 30.2.2 of the WPCP.

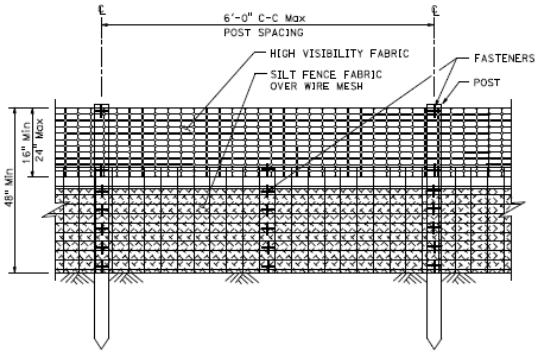
Temporary Silt Fence

SC-1

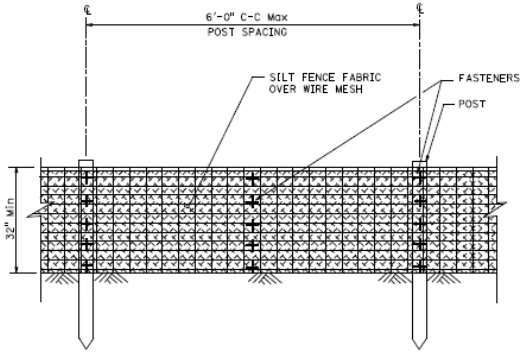


Temporary Silt Fence

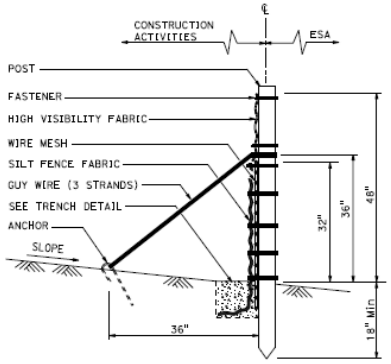
SC-1



ELEVATION

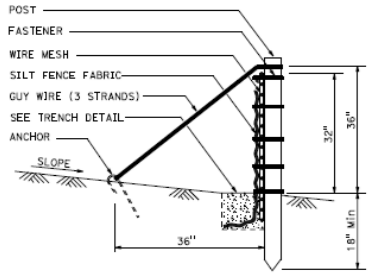


ELEVATION



SECTION

TEMPORARY REINFORCED SILT FENCE (TYPE 1)



SECTION

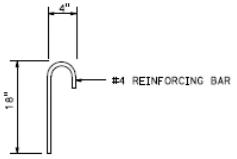
TEMPORARY REINFORCED SILT FENCE (TYPE 2)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

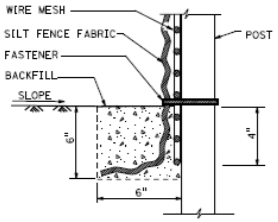
LICENSED LANDSCAPE ARCHITECT

October 30, 2015
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ANCHOR



SECTION

TRENCH DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

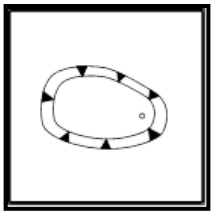
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY REINFORCED SILT FENCE)

NO SCALE

T60

Sediment/Desilting Basin

SC-2



Standard Symbol

Definition and Purpose

A sediment/desilting basin is a temporary basin formed by excavating and/or constructing an embankment so that sediment-laden runoff is temporarily detained under quiescent conditions, allowing sediment to settle out before the runoff is discharged (refer to Figures 1 through 4).

Appropriate Applications

Sediment basins shall be designed in accordance with the State of California NPDES General Permit for Storm Water Discharges Associated with Construction Activities (CGP). If there is insufficient area to construct a sediment basin in accordance with the CGP requirements, then the alternate desilting design standards specified herein may be used as approved by the RE.

Sediment/Desilting Basins should be considered for use:

- On construction projects with disturbed areas during the wetter months, typically October through May.
- Where sediment-laden water may enter the drainage system or watercourses.
- At drainage outlets of disturbed soil areas with areas between 5 and 10 ac.

Limitations

Alternative BMPs must be thoroughly investigated for erosion control before selecting temporary sediment/desilting basins.

Requires large surface areas to permit settling of sediment.

Size may be limited by availability of right-of-way.

Not appropriate for drainage areas greater than 75 ac.

Not to be located in live streams.

For safety reasons, basins should have protective fencing.

Not to be used as a standalone BMP, requires proper BMP implementation upstream and downstream of its location.

Standards and Specifications

General Requirements

Sediment basins should be designed in accordance with the methods referenced in the State of California NPDES General Permit for Storm Water Discharges Associated with Construction Activities (CGP).

Areas under embankments, structural works, and sediment basin must be cleared, stripped of vegetation in accordance with Standard Specifications Section 16 – "Temporary Facilities."

Earthwork should be in accordance with Standard Specifications Section 19 – "Earthwork." Contractor is specifically directed to Standard Specifications Sections 19 5, "Compaction," and 19 6, "Embankment Construction."

Chain link fencing should be provided around each sediment basin to prevent unauthorized entry to the basin or if safety is a concern. Fencing should be in accordance with Standard Specifications Section 80 – "Fences."

This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.

The outflow from the basins must have outlet protection to prevent erosion and scouring of the embankment and channel. See BMP SS-10, "Outlet Protection/Velocity Dissipation Devices."

Avoid dewatering of groundwater to the sediment basin during the wetter months. Insignificant quantities of accumulated precipitation may be dewatered to the sediment basin unless precipitation is forecasted within 24 hours. Refer to NS-2 "Dewatering Operations."

Other Considerations

Basin should be located: (1) by excavating a suitable area or where a low embankment can be constructed across a swale, (2) where post-construction (permanent) detention basins will be constructed, (3) where failure would not cause loss of life or property damage, (4) where the basins can be maintained on a year-round basis to provide access for maintenance, including sediment removal and sediment stockpiling in a protected area, and to maintain the basin to provide the required capacity.

Construct sediment basins prior to the rainy season and construction activities.

Sediment basins, regardless of size and storage volume, should include features to accommodate overflow or bypass flows that exceed the design storm event. The calculated basin volume and proposed location should be submitted to the RE for approval at least 3 days prior to the basin construction.

Construct an emergency spillway to accommodate flows not carried by the principal spillway. Spillway should consist of an open channel (earthen or vegetated) over undisturbed material (not fill) or constructed of a non-erodible rock slope protection.

The spillway control section, which is a level portion of the spillway channel at the highest elevation in the channel, should be a minimum of 20 ft in length.

Limit the contributing area to the sediment basin to only the runoff from disturbed soil areas. Use temporary concentrated flow conveyance controls to divert runoff from undisturbed areas away from the sediment basin.

A forebay, constructed upstream of the basin may be provided to allow debris and larger particles to settle out of suspension before entering the basin.

Basin inlets should be located to maximize travel distance to the basin outlet and resulting sediment deposition benefits.

Rock or vegetation should be used to protect the basin inlet and slopes against erosion.

The outlet structure should be placed on a firm, smooth foundation with the base securely anchored with concrete or other means to prevent floatation.

Discharge from the basin should be accomplished through a water quality outlet. An example is shown in Figure 3. The principal outlet should consist of a corrugated metal, high density polyethylene (HDPE), or reinforced concrete riser pipe with dewatering holes and an anti-vortex device and trash rack attached to the top of the riser, to prevent floating debris from flowing out of the basin or obstructing the system. This principal structure should be designed to accommodate the inflow design storm.

A rock pile or rock-filled gabions can serve as alternatives to the debris screen, although the designer should be aware of the potential for extra maintenance involved should the pore spaces in the rock pile clog.

Proper hydraulic design of the outlet is critical to achieving the desired performance of the basin. The water quality outlet should be designed to drain the basin within 24 to 96 hours (also referred to as “drawdown time”). (The 24-hour limit is specified to provide adequate settling time; the 96-hour limit is specified to avoid vector control concerns). Local agencies may have more stringent drawdown time requirements.

The two most common outlet problems that occur are: (1) the capacity of the outlet is too great resulting in only partial filling of the basin and drawdown time less than designed for; and (2) the outlet clogs because it is not adequately protected against trash and debris. To avoid these problems, the following outlet types are recommended for use: (1) a single orifice outlet with or without the protection of a riser pipe, and (2) perforated riser. Design guidance for single orifice and perforated riser outlets are as follows:

Flow Control Using a Single Orifice at the Bottom of the Basin (Figure 1)

The outlet control orifice should be sized using the following equation:

$$a = \frac{2A(H-Ho)^{0.5}}{3600CT(2g)^{0.5}} = \frac{(7x10^{-5})A(H-Ho)^{0.5}}{CT} \qquad \text{(Eq. 2)}$$

Where:

a = area of orifice (ft^2) (1 ft^2 =0.0929m^2)

A = surface area of the basin at mid elevation (ft^2)

C = orifice coefficient

T = drawdown time of full basin (hrs)

G = gravity (32.2 ft/s^2)

H = elevation when the basin is full (ft)

Ho = final elevation when basin is empty (ft)

With a drawdown time of 40 hours, the equation becomes:

$$a = \frac{(1.75x10^{-6})A(H-Ho)^{0.5}}{C} \qquad \text{(Eq. 3)}$$

Flow Control Using Multiple Orifices (See Figure 2)

$$a_t = \frac{2A(h_{\max})}{CT(2g[h_{\max} - h_{centroid\ of\ orifices}])^{0.5}} \qquad \text{(Eq. 4)}$$

With terms as described above except:

a_t = total area of orifices

h_{max} = maximum height from lowest orifice to the maximum water surface (ft)

$h_{centroid\ of\ orifices}$ = height from the lowest orifice to the centroid of the orifice configuration (ft)

Allocate the orifices evenly on two rows; separate the holes by 3x hole diameter vertically, and by 120 degrees horizontally (refer to Figure 3).

Because basins are not maintained for infiltration, water loss by infiltration should be disregarded when designing the hydraulic capacity of the outlet structure.

Care must be taken in the selection of "C"; 0.60 is most often recommended and used. However, based on actual tests, GKY (1989), "Outlet Hydraulics of Extended Detention Facilities for Northern Virginia Planning District Commission", recommends the following:

C = 0.66 for thin materials; where the thickness is equal to or less than the orifice diameter, or

C = 0.80 when the material is thicker than the orifice diameter

The Contractor should verify that the outlet is properly designed to handle the design and peak flows.

If rock is used for energy dissipation or to prevent erosion, it must comply with Highway Design Manual Chapter 860.

Attach riser pipe (watertight connection) to a horizontal pipe (barrel), which extends through the embankment to toe of fill. Provide anti-seep collars on the barrel.

Cleanout level should be clearly marked on the riser pipe.

Basins with an impounding levee greater than 5 ft tall, measured from the lowest point to the impounding area to the highest point of the levee, and basins capable of impounding more than 35,300 cubic feet, should be designed by a professional Civil Engineer registered with the state of California. The design must be submitted to the RE for approval at least 7 days prior to the basin construction. The design should include maintenance requirements, including sediment and vegetation removal, to ensure continuous function of the basin outlet and bypass structures.

Maintenance and Inspection

Inspect sediment basins before and after rainfall events and weekly year round. During extended rainfall events, inspect at least every 24 hours.

Examine basin banks for seepage and structural soundness.

Check inlet and outlet structures and spillway for any damage or obstructions. Repair damage and remove obstructions as needed.

Remove standing water from the basin within 72 hours after accumulation.

Check inlet and outlet area for erosion and stabilize if required.

Remove accumulated sediment when its volume reaches one-third the volume of the sediment storage. Properly dispose of sediment and debris removed from the basin.

Check fencing for damage and repair.

SWPPP or WPCP

Sediment/Desilting Basin must be discussed in Section 500.3.3 of the SWPPP or Section 30.2.2 of the WPCP.

Other

The drawings on subsequent pages were sourced from CASQA.

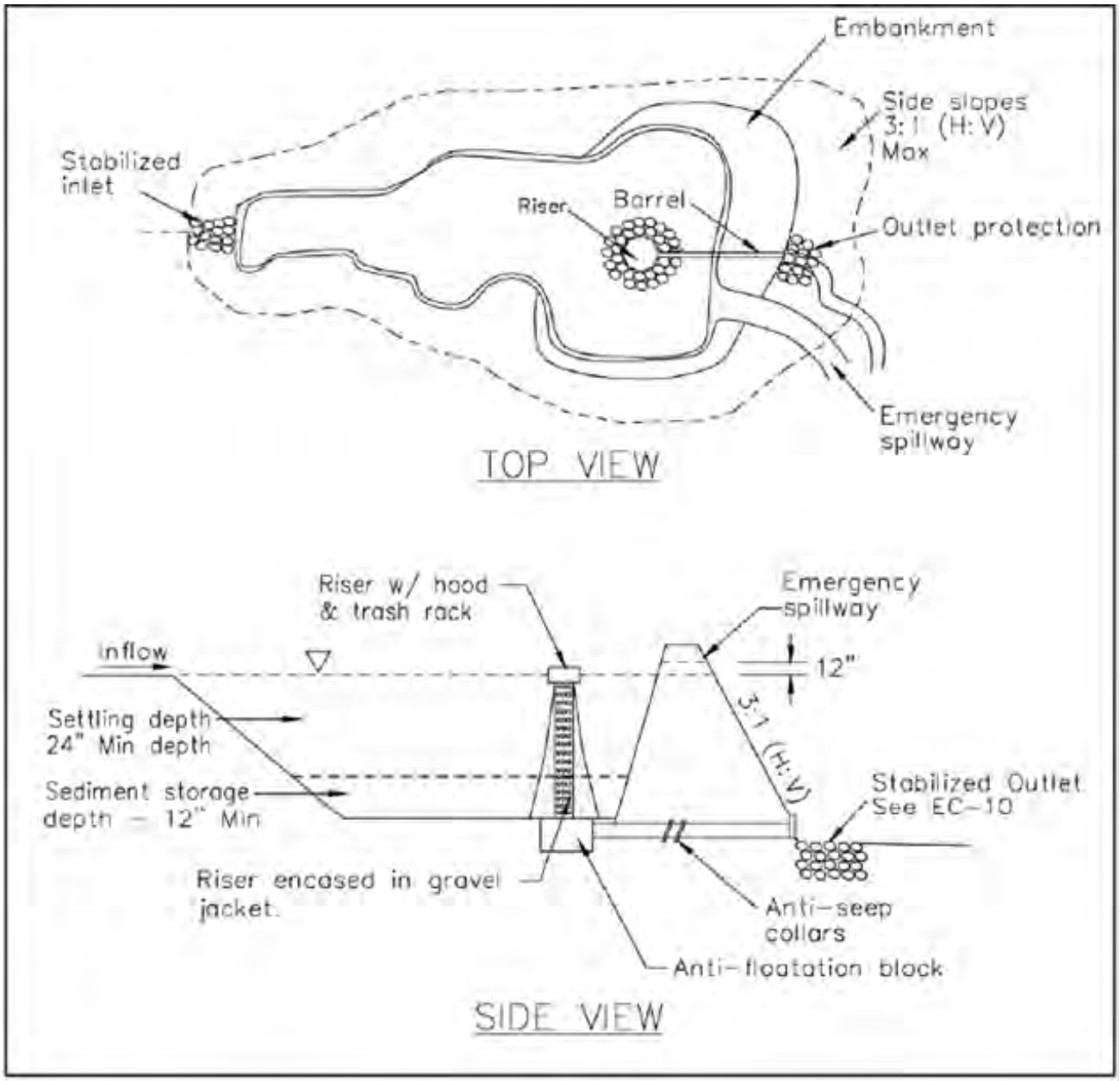


FIGURE 1: TYPICAL TEMPORARY SEDIMENT BASIN
MULTIPLE ORIFICE DESIGN
NOT TO SCALE

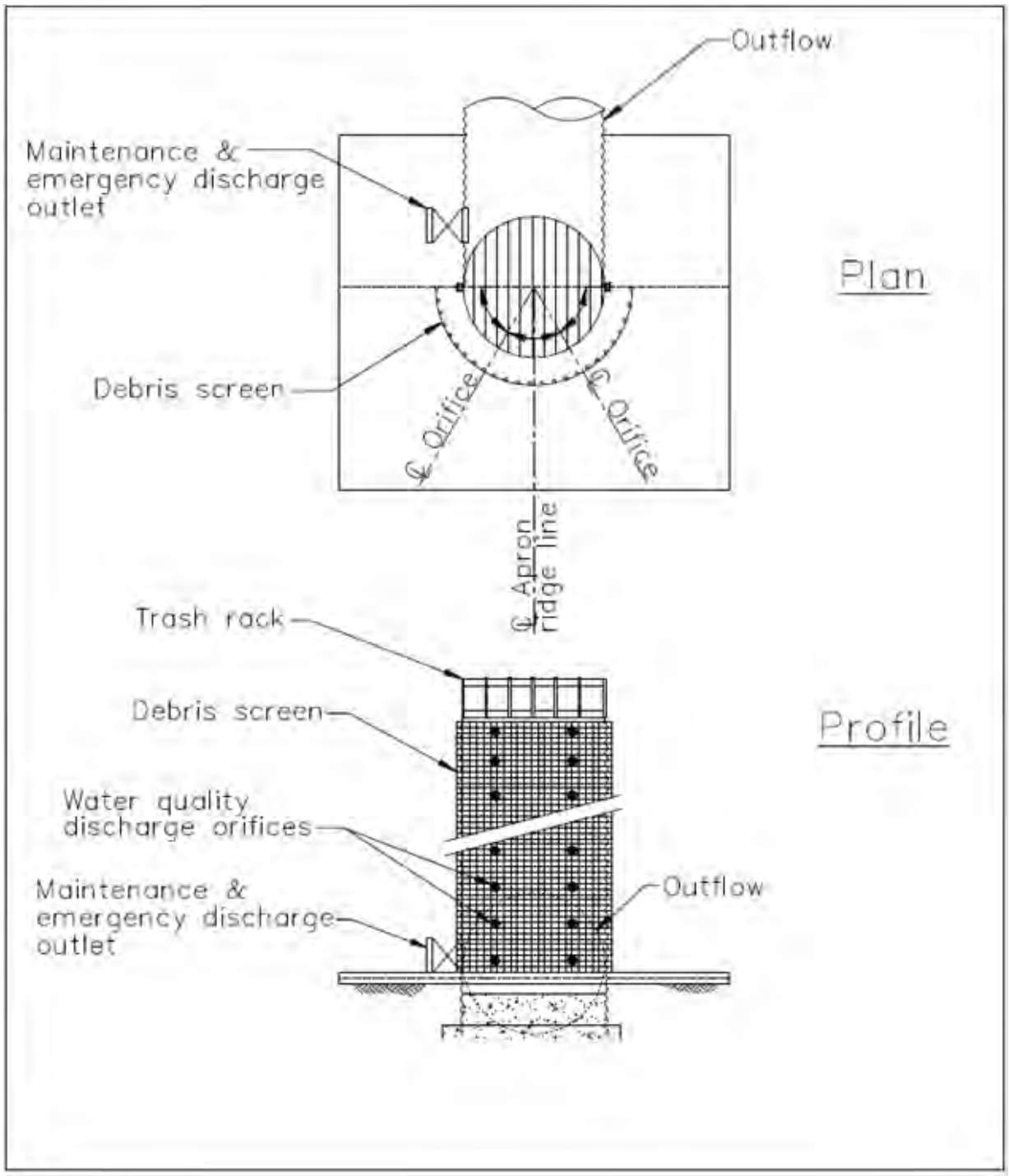


FIGURE 2: MULTIPLE ORIFICE OUTLET RISER
NOT TO SCALE

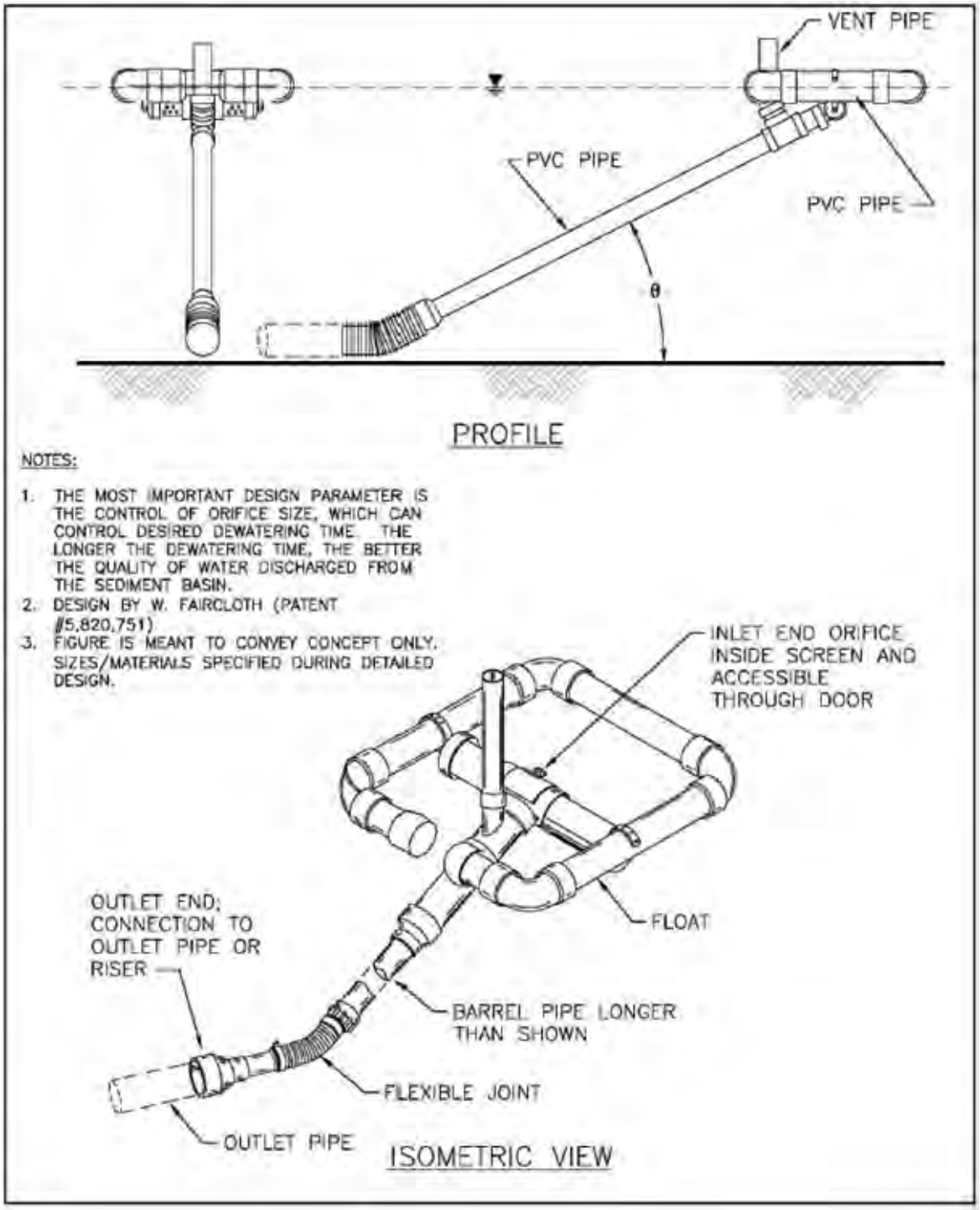


FIGURE 3: TYPICAL SKIMMER
NOT TO SCALE

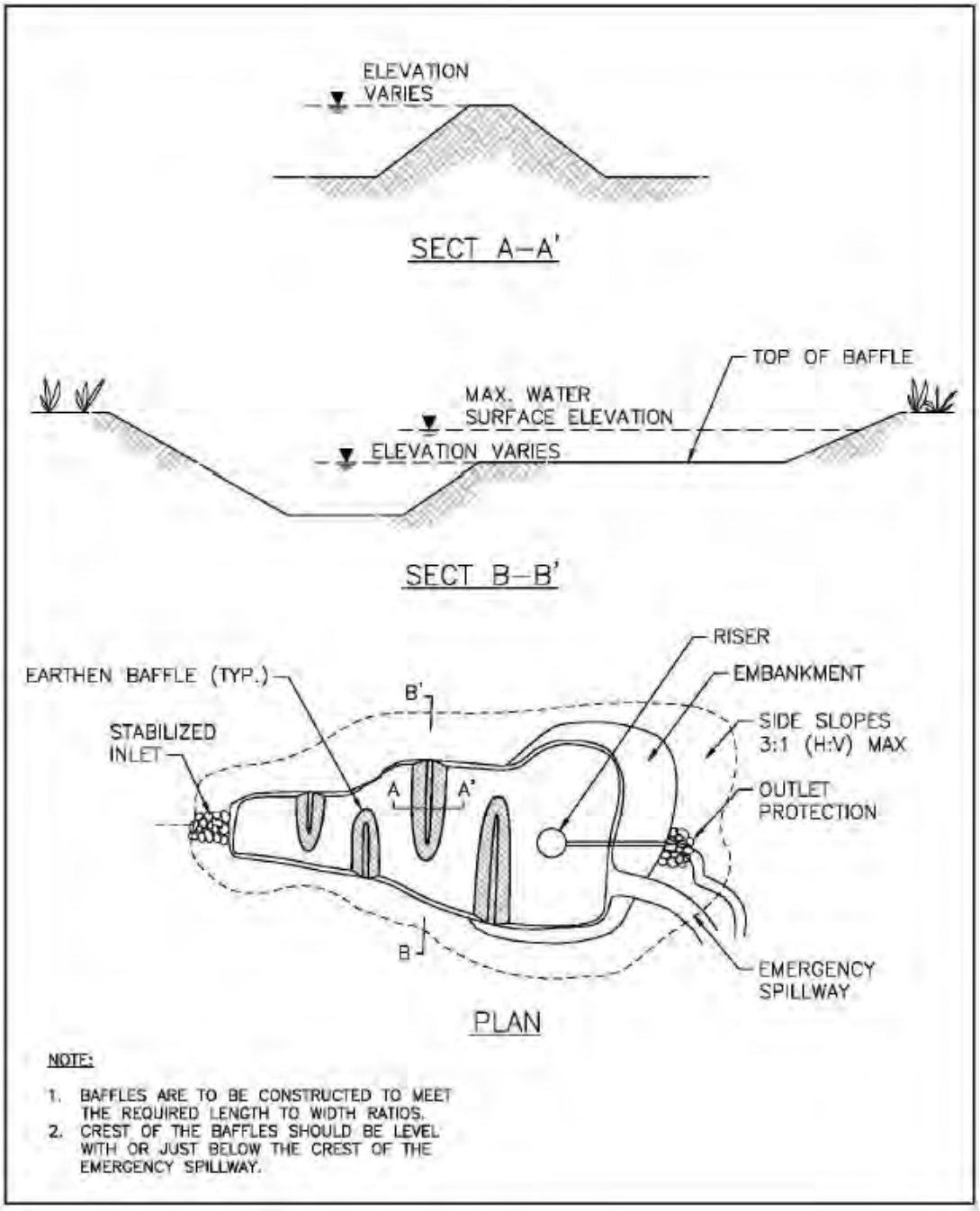
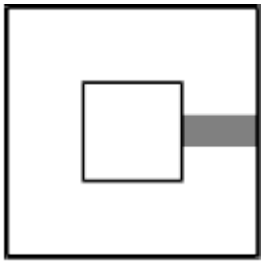


FIGURE 4: TYPICAL TEMPORARY SEDIMENT BASIN WITH BAFFLES
NOT TO SCALE

Temporary Sediment Trap/Curb Cutback

SC-3



Standard Symbol

Definition and Purpose

A sediment trap/curb cutback is a temporary containment area that allows sediment in collected storm water to settle out during infiltration or before the runoff is discharged through a stabilized spillway. Sediment traps are formed by excavating or constructing an earthen embankment.

Curb cutback is implemented when the construction project utilizes the removed section of pavement and uses the depression of the curb as a temporary containment to collect sediment before reaching a storm drain.

Appropriate Applications

Sediment traps may be used on construction projects where the drainage area is less than 5 ac. Traps should be placed where sediment-laden stormwater enters a storm drain or watercourse.

As a supplemental control, sediment traps provide additional protection for a water body or for reducing sediment before it enters a drainage system.

Limitations

Requires large surface areas to permit infiltration and settling of sediment.

Size may be limited by availability of right-of-way.

Not appropriate for drainage areas greater than 5 ac.

Only removes large and medium sized particles and requires upstream erosion control.

Sediment traps may appear attractive and dangerous to children, requiring protective fencing.

Sediment traps should not to be located in live streams.

Curb cutback typically does not allow for a large storage area and therefore requires frequent maintenance to prevent sediment laden discharges.

Standards and Specifications

General Requirements

Areas under embankments, structural works, and sediment traps must be cleared and stripped of vegetation in accordance with Standard Specifications Section 17-2 – "Clearing and Grubbing."

Earthwork must be in accordance with Standard Specifications Section 19 – "Earthwork". Contractor is specifically directed to Standard Specifications Sections 19 5 and 19 6 entitled, "Compaction" and "Embankment Construction," respectively.

Fencing, in accordance with Standard Specifications Section 80 – "Fences," should be provided to prevent unauthorized entry.

Remove and dispose of deposited solids from sediment traps under Standard Specifications Section 14-10 – "Solid Waste Disposal and Recycling," unless another method is authorized.

This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.

The outflow from sediment traps may be provided with outlet protection to prevent erosion and scouring of the embankment and channel. See BMP SS-10, "Outlet Protection/Velocity Dissipation Devices."

For curb cutback, excavate soil from behind the curb, sidewalk, or roadway at least 3-4 inches down from the top of the hardscape and bring the soil back at a minimum 3-4 feet back from the hardscape. Site conditions might allow for increase in capacity.

Other Considerations

The sediment trap should be situated according to the following criteria: (1) by excavating a suitable area or where a low embankment can be constructed across a swale, (2) where failure would not cause loss of life or property damage, and (3) to provide access for maintenance, including sediment removal and sediment stockpiling in a protected area.

Sediment traps should be sized to accommodate a settling zone and sediment storage zone with recommended minimum volumes of 67 yd3/ac and 33 yd3/ac of contributing drainage area, respectively, based on 0.5 inch

of runoff volume over a 24-hour period. Multiple traps and/or additional volume may be required to accommodate site specific rainfall and soil conditions.

Use rock or vegetation to protect the trap outlets against erosion.

Traps with an impounding levee greater than 4.5 ft tall, measured from the lowest point to the impounding area to the highest point of the levee, and traps capable of impounding more than 35,000 cubic feet, must be designed by a Civil Engineer registered with the state of California. The design must be submitted to the RE for approval at least 7 days prior to the basin construction. The design should include maintenance requirements to ensure continuous function of the trap outlet and bypass structures.

Maintenance and Inspection

Inspect sediment traps/curbs before, during and after rainfall events and weekly year-round. During extended rainfall events, inspect sediment traps at least every 24 hours.

If captured runoff has not completely infiltrated within 96 hours, then the sediment trap must be dewatered.

Inspect trap banks for embankment seepage and structural soundness.

Inspect outlet structure and rock spillway for any damage or obstructions. Repair damage and remove obstructions as needed or as directed by the RE.

Inspect outlet area for erosion and stabilize if required, or as directed by the RE.

Remove accumulated sediment when the volume has reached one-third the original trap volume.

Inspect fencing for damage and repair as needed or as directed by the RE.

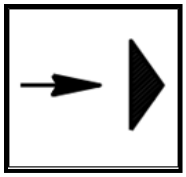
Temporary Sediment Trap/ Curb Cutback locations must be shown in the WPCDs along with other BMPs.

SWPPP or WPCP

Temporary Sediment Trap/ Curb Cutback must be discussed in Section 500.3.3 of the SWPPP or Section 30.2.2 of the WPCP.

Check Dams

SC-4



Standard Symbol

Definition and Purpose

Temporary check dams reduce scour and channel erosion by reducing flow velocity and encouraging sediment settlement. A check dam is a small device constructed of rock, gravel bags, compost socks, fiber rolls, or other proprietary product placed across a natural or man-made channel or drainage ditch.

Appropriate Applications

Check dams may be installed:

- In small open channels that drain 10 ac or less.
- In steep channels where storm water runoff velocities exceed 5 ft/sec.
- During the establishment of grass linings in drainage ditches or channels.
- In temporary ditches where the short length of service does not warrant establishment of erosion-resistant linings.

This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.

Limitations

Not to be used in live streams.

Not appropriate in channels that drain areas greater than 10 ac.

Not to be placed in channels that are already grass lined unless erosion is expected, as installation may damage vegetation.

Require extensive maintenance following high velocity flows.

Promotes sediment trapping, which can be re-suspended during subsequent storms or removal of the check dam.

Not to be constructed from straw bales or silt fence.

Standards and Specifications

General Requirements

Remove obstructions, rocks, clods, and debris greater than 1 inch in diameter from the ground before installing temporary check dams.

If check dams are used in combination with Rolled Erosion Control Product (RECP) or blanket, install the RECP or blanket first.

Place a temporary check dam perpendicular to the centerline of the ditch or drainage line.

Install the check dam with enough spillway depth to prevent flanking of a concentrated flow around its ends.

Type 1 or Type 2 check dams are appropriate for unlined ditches. Type 2 check dams are appropriate if the ditch is concrete lined.

Fiber Roll (Type 1) Check Dam

Refer to SC-5 “Fiber Rolls.”

Secure the fiber rolls with rope and notched wood stakes.

Drive the stakes into the soil until the notch is even with the top of the fiber roll.

Lace rope between the stakes and over the fiber roll. Knot the rope at each stake.

Tighten by driving the stakes further into the soil and forcing the fiber roll against the surface of the ditch or drainage line.

Gravel Filled Bag (Type 2) Check Dam

Bag Material:

Bags are a geosynthetic material, either polypropylene, polyethylene or polyamide woven fabric, minimum unit weight 4 ounces per yd2, mullen burst strength exceeding 300 psi in conformance with the requirements in ASTM designation D3786, and ultraviolet stability exceeding 70% in conformance with the requirements in ASTM designation D4355.

Bag Size:

Each gravel-filled bag shave a length of 24 in to 32 in, width of 16 in to 20 in, and thickness of 3 in. Alternative bag sizes must be submitted to the RE for approval prior to deployment.

Gravel:

Fill material is between 3/8 and 3/4 inch in diameter, and must be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags should be secured such that gravel does not escape. Gravel-filled bags are between 30 and 50 lb in weight. Fill material is subject to approval by the RE.

Place a Type 2 temporary check dam as a single layer of gravel-filled bags, placed end-to-end to eliminate gaps.

If you need to increase the height of the dam, add more layers of gravel-filled bags. Stack the bags in the upper row to overlap the joints in the lower row. Stabilize the rows by adding more rows of bags in the lower layers.

Tightly abut bags and stack gravel bags using a pyramid approach. Gravel bags should not be stacked any higher than 3 ft.

Upper rows of gravel bags should overlap joints in lower rows.

Other Considerations

Check dams should be placed at a distance and height to allow small pools to form behind them. Install the first check dam approximately 15 ft from the outfall device and at regular intervals based on slope gradient and soil type.

For multiple check dam installation, backwater from downstream check dam should reach the toe of the upstream dam.

High flows (typically a 2-year storm or larger) should safely flow over the check dam without an increase in upstream flooding or damage to the check dam.

Where grass is used to line ditches, check dams should be removed when grass has matured sufficiently to protect the ditch or swale from erosion.

Check dam materials should consist of biodegradable materials whenever feasible.

Rock check dams might be more applicable if concentrated flows might be a potential.

Maintenance and Inspection

Check dams must be inspected at a minimum weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

Replace missing rock, bags, fiber rolls, etc. that have degraded or become damaged.

Remove sediment when depth reaches one-third of the check dam height.

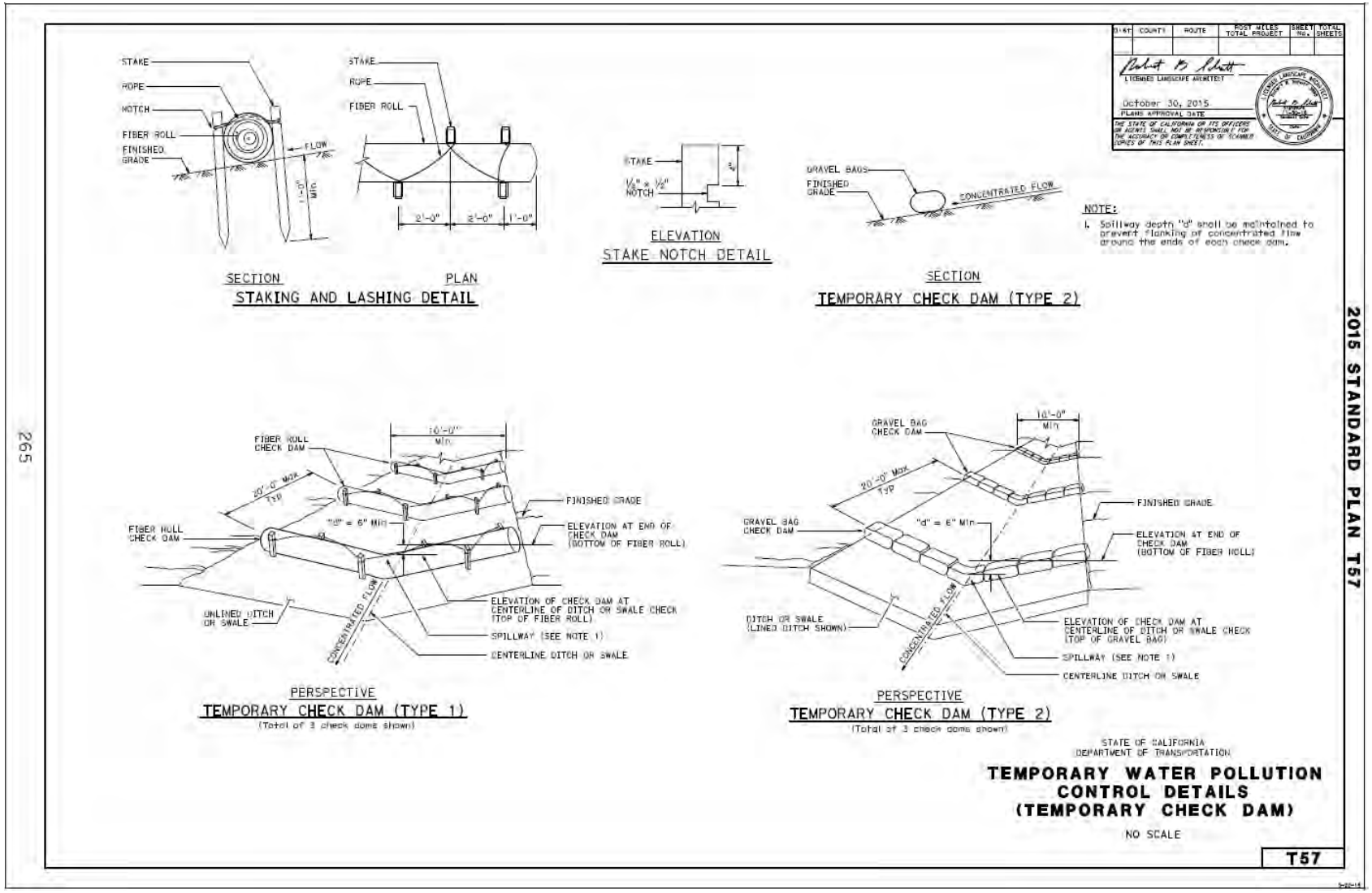
Remove accumulated sediment prior to permanent seeding or soil stabilization.

Remove check dam and accumulated sediment when check dams are no longer needed or when directed by the RE.

Removed sediment can be incorporated in the project at locations designated by the RE or disposed of outside the highway right of way in conformance with the Standard Specifications.

SWPPP or WPCP

Temporary Check Dams must be discussed in Section 500.3.3 of the SWPPP or Section 30.2.2 of the WPCP.


STAKE
ROPE
NOTCH
FIBER ROLL
FINISHED GRADE
FLOW
1'-0" Min
2'-0"
2'-0"
1'-0"
SECTION
PLAN
STAKING AND LASHING DETAIL
STAKE
1/2" x 1/2" NOTCH
ELEVATION
STAKE NOTCH DETAIL
GRAVEL BAGS
FINISHED GRADE
CONCENTRATED FLOW
SECTION
TEMPORARY CHECK DAM (TYPE 2)
NOTE:
1. Spillway depth "d" shall be maintained to prevent flanking of concentrated flow around the ends of each check dam.
DIST
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
LICENSED LANDSCAPE ARCHITECT
October 30, 2015
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
2015 STANDARD PLAN T57
265
FIBER ROLL CHECK DAM
10'-0" Min
20'-0" Max Typ
"d" = 6" Min
FINISHED GRADE
ELEVATION AT END OF CHECK DAM (BOTTOM OF FIBER ROLL)
UNLINED DITCH OR SWALE
CONCENTRATED FLOW
ELEVATION OF CHECK DAM AT CENTERLINE OF DITCH OR SWALE CHECK (TOP OF FIBER ROLL)
SPILLWAY (SEE NOTE 1)
CENTERLINE DITCH OR SWALE
PERSPECTIVE
TEMPORARY CHECK DAM (TYPE 1)
(Total of 3 check dams shown)
GRAVEL BAG CHECK DAM
10'-0" Min
20'-0" Max Typ
"d" = 6" Min
FINISHED GRADE
ELEVATION AT END OF CHECK DAM (BOTTOM OF FIBER ROLL)
DITCH OR SWALE (LINED DITCH SHOWN)
CONCENTRATED FLOW
ELEVATION OF CHECK DAM AT CENTERLINE OF DITCH OR SWALE CHECK (TOP OF GRAVEL BAG)
SPILLWAY (SEE NOTE 1)
CENTERLINE DITCH OR SWALE
PERSPECTIVE
TEMPORARY CHECK DAM (TYPE 2)
(Total of 3 check dams shown)
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CHECK DAM)
NO SCALE
T57

Fiber Rolls

SC-5

Standard Symbol

Definition and Purpose

A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff. Fiber rolls may also be used for drainage inlet protection and as check dams under certain situations.

Appropriate Applications

This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.

Fiber rolls may be applied as both temporary and permanent sediment controls.

Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Below the toe of exposed and erodible slopes.

Fiber rolls may be used as check dams in unlined ditches or as temporary drainage inlet protection Down-slope of exposed soil areas.

Around temporary stockpiles.

Along the perimeter of a project.

Limitations

Runoff and erosion may occur if fiber roll is not adequately trenched in.

Fiber rolls at the toe of slopes greater than 5:1 (H:V) may require the use of a large sediment barrier as specified in Standard Specifications Section 13-10.03D Temporary Large Sediment Barrier or installations achieving the same protection (i.e., stacked smaller diameter fiber rolls, etc.).

Difficult to move once saturated.

Fiber rolls could be transported by high flows if not properly staked and trenched in.

Fiber rolls have limited sediment capture zone.

Do not use fiber rolls on slopes subject to creep, slumping, or landslide.

Plastic netting should not be used when regulatory permits prohibit their use or if there is a potential for plastic netting to endanger wildlife.

Plastic netting is only allowed where fiber rolls will be for short duration and will be removed.

Standards and Specifications

Materials

Fiber rolls must be premanufactured and filled with weed-free rice or wheat straw, wood excelsior, or coconut fiber. Fiber roll must be covered with biodegradable jute, sisal, or coir fiber netting secured tightly at each end.

Fiber rolls must have a minimum functional longevity of 1 year.

Fiber rolls must be:

- 8 to 10 inches in diameter and at least 1.1 lb/ft
- 10 to 12 inches in diameter and at least 3 lb/ft

Large sediment barriers are a subset of fiber rolls. Large sediment barriers must be:

- 18 to 22 inches in diameter
- At least 8 ft in length
- At least 6.5 lb/ft

Fiber rolls used within the jurisdiction of the Lahontan RWQCB must be made entirely of biodegradable materials if the project is near an ESA area, they are intended to be left in place after construction is completed or there are regulatory permits prohibiting the use of non-photo/biodegradable fiber rolls.

Submit a Certificate of Compliance for fiber rolls.

Rope to fasten fiber rolls must be 1/4 inch in diameter and biodegradable, such as sisal or manila.

Wood stakes must be untreated fir, redwood, cedar, or pine and cut from sound timber. The ends must be pointed for driving into the ground. Notched stakes must be at least 1 by 2 by 24 inches in size. Stakes without notches must be at least 1 by 1 by 24 inches.

Typical Fiber Roll Installation

Before installing fiber roll, remove obstructions from the ground, including rocks, clods, and debris greater than 1 inch in diameter.

For any 20-foot section of fiber roll, prevent the fiber roll from varying more than 5 percent from level.

Use the following spacing unless otherwise noted on the project plans or special provisions:

- 10 feet apart for slopes steeper than 2:1 (H:V)
- 15 feet apart for slopes from 2:1 to 4:1 (H:V)
- 20 feet apart for slopes from 4:1 to 10:1 (H:V)
- 50 feet apart for slopes flatter than 10:1 (H:V)

For Type 1 installations:

- Place in a furrow that is from 2 to 4 inches deep.
- Fasten with wood stakes every 4 feet along the length of the fiber roll.
- Fasten the ends of the fiber roll by placing a stake 6 inches from the end of the roll.
- Drive the stakes into the soil so the top of the stake is less than 2 inches above the top of the fiber roll.

For Type 2 installations:

- Fasten with notched wood stakes and rope.
- Drive stakes into the soil until the notch is even with the top of the fiber roll.
- Lace the rope between stakes and over the fiber roll. Knot the rope at each stake.
- Tighten the fiber roll to the surface of the slope by driving the stakes further into the soil.

If more than one fiber roll is placed in a row, the rolls should be overlapped; not abutted. Stagger overlapping joints in adjacent rows by 5 to 10 feet.

Typical Large Sediment Barrier Installation

Place a single row of fiber rolls end-to-end, approximately parallel with the slope contour. For any 20-foot section of fiber roll, do not allow the fiber roll to vary by more than 5 percent from level.

Place the fiber rolls in a furrow that is from 6 to 8 inches deep.

Secure the fiber rolls with wood stakes 4 feet apart.

Place a stake 18 inches from each end of each fiber roll.

Drive the stakes into the soil such that the top of the stakes are less than 2 inches above the top of the fiber rolls.

Angle the last 6 feet upslope at the downhill end of the run.

Removal

For permanent installations, do not remove fiber rolls. Fiber rolls will degrade over time, while underlying soils are stabilized by other BMPs.

For temporary installations, remove fiber rolls, collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground.

Maintenance and Inspection

Remove sediment from behind the fiber roll if sediment is 1/3 of fiber roll height above ground.

Repair or adjust the fiber roll if rills or other evidence of concentrated runoff occur beneath the fiber roll.

Repair or replace the fiber roll if they become split, torn, or unraveled.

Add stakes if the fiber roll slumps or sags.

Replace broken or split wood stakes.

Remove sediment deposits, trash, and debris from fiber roll as needed. If removed sediment is deposited within project limits, it must be stabilized and not exposed to erosion by wind or water.

Perform maintenance as needed or as required by the RE or CGP or LTCGP requirements.

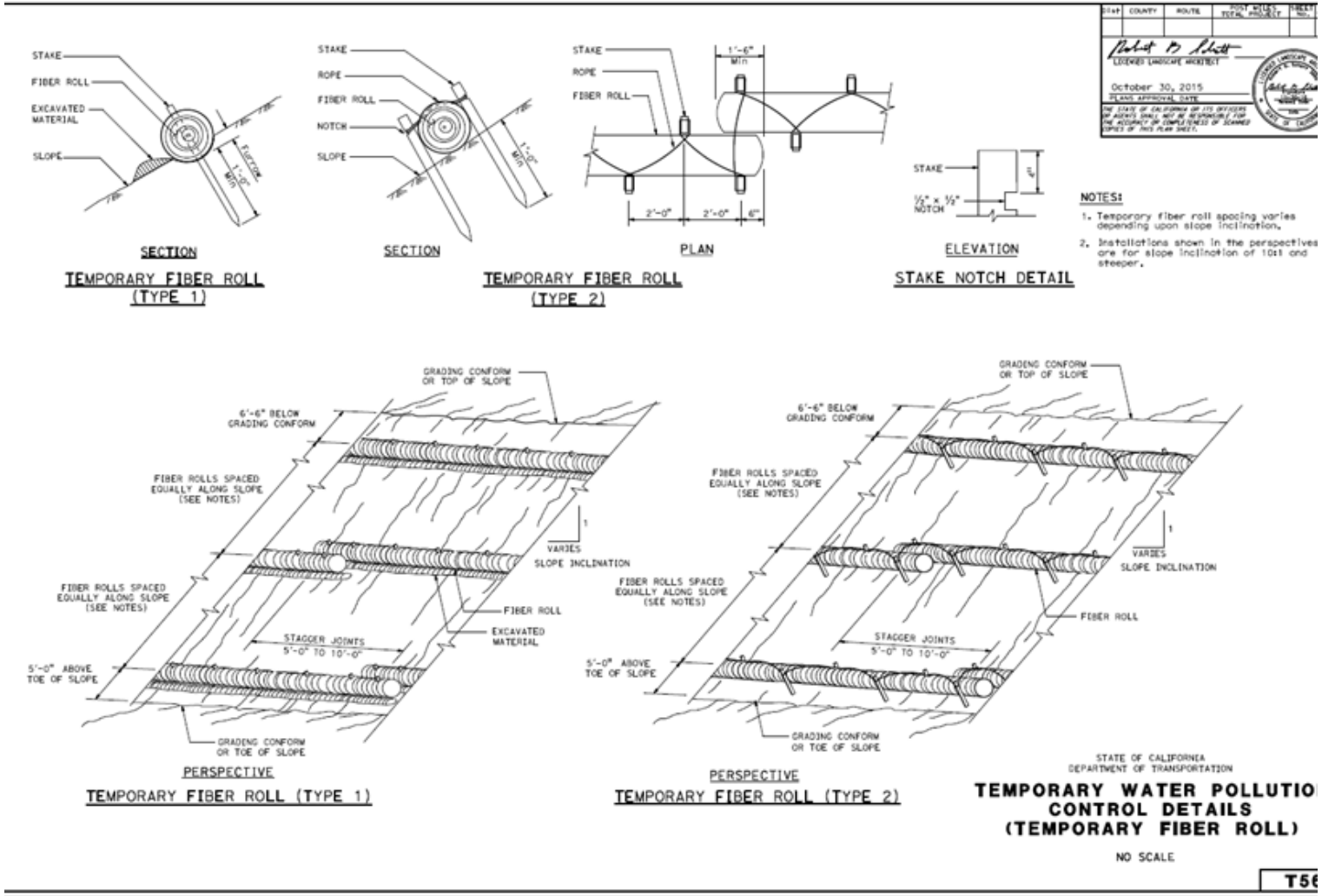
Inspect fiber rolls before and following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.

Maintain fiber rolls to provide an adequate sediment holding capacity and runoff velocity reduction.

Fiber roll placement must be shown on the WPCDs.

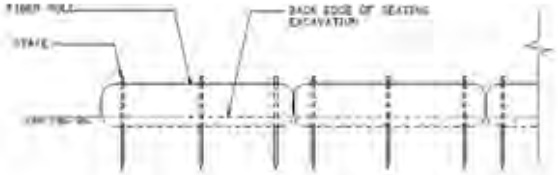
SWPPP or WPCP

Fiber rolls must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.


STAKE
FIBER ROLL
EXCAVATED MATERIAL
SLOPE
SECTION
TEMPORARY FIBER ROLL (TYPE 1)
ROPE
NOTCH
SECTION
STAKE
ROPE
FIBER ROLL
1'-6" Min
2'-0"
2'-0"
6"
PLAN
TEMPORARY FIBER ROLL (TYPE 2)
½" x ½" NOTCH
ELEVATION
STAKE NOTCH DETAIL
October 30, 2015
PLANS APPROVAL DATE
NOTES:
1. Temporary fiber roll spacing varies depending upon slope inclination.
2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.
GRADING CONFORM OR TOP OF SLOPE
6'-6" BELOW GRADING CONFORM
FIBER ROLLS SPACED EQUALLY ALONG SLOPE (SEE NOTES)
VARIES
SLOPE INCLINATION
FIBER ROLL
EXCAVATED MATERIAL
STAGGER JOINTS 5'-0" TO 10'-0"
5'-0" ABOVE TOE OF SLOPE
GRADING CONFORM OR TOE OF SLOPE
PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)
PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY FIBER ROLL)
NO SCALE

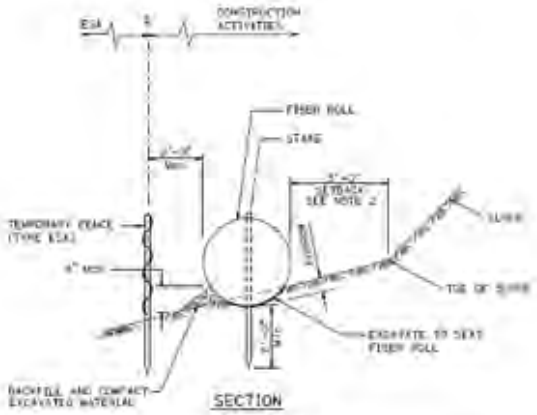
NOTES:

1. Temporary fence (Type ESA) shown for reference purposes only.
2. Offset dimension may vary depending on field conditions or as designated.



FRONT ELEVATION

TEMPORARY LARGE SEDIMENT BARRIER



SECTION

PLACEMENT DETAIL
FOR TEMPORARY FENCE (TYPE ESA)
USED WITH TEMPORARY LARGE SEDIMENT BARRIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

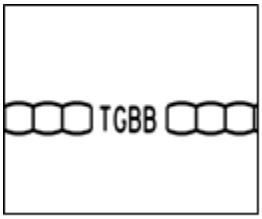
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY LARGE SEDIMENT BARRIER

NO SCALE

T66

Gravel Bag/Earthen Berm

SC-6



Standard Symbol

Definition and Purpose

A gravel bag berm consists of a single row of gravel bags that are installed end to end to form a barrier across a slope to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide some sediment removal. Gravel bags can be used where flows are moderately concentrated, such as ditches, swales, and storm drain inlets (see SC-10 "Drainage Inlet Protection") to divert and/or detain flows.

Earthen berms are linear sediment barriers designed to intercept sheet flows. Water gets impounded upstream of the earthen berm, allowing sediment to settle out and releasing runoff as sheet flow, preventing erosion.

Appropriate Applications

BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.

Along streams and channels.

Below the toe of exposed and erodible slopes.

Down slope of exposed soil areas.

Around stockpiles.

Across channels to serve as a barrier for utility trenches or provide a temporary channel crossing for construction equipment, to reduce stream impacts.

Parallel to a roadway to keep sediment off paved areas.

At the top of slopes to divert roadway runoff away from disturbed slopes.

Along the perimeter of a site.

To divert or direct flow or create a temporary sediment basin.

During construction activities in stream beds when the contributing drainage area is less than 5 ac.

When extended construction period limits the use of either silt fences or straw bale barriers.

When site conditions or construction sequencing require adjustments or relocation of the barrier to meet changing field conditions and needs during construction.

At grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Limitations

Degraded gravel bags may rupture when removed, spilling contents.

Installation can be labor intensive.

Limited durability for long term projects.

When used to detain concentrated flows, maintenance requirements increase.

Earthen berms should not be used to intercept flows with moderate to high velocities that may erode the earthen berm.

Earthen berms are susceptible to erosion from concentrated flows.

Standards and Specifications

Materials

Bag Material

The gravel bag material must comply with Section 96-1.02F Gravel-Filled Bag of the Standard Specifications.

Bag Size

Each gravel-filled bag should have a length of 24 to 32 inches, width of 16 to 20 inches, and thickness of 3 inches. Alternative bag sizes must be submitted to the RE for approval prior to deployment.

Gravel

Fill material should be between 3/8 and 3/4 inch in diameter, and be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags must be secured such that gravel

does not escape. Gravel-filled bags are between 30 and 50 lb in weight. Fill material is subject to approval by the RE.

Earthen berms must comply with Standard Specifications Section 13-10.03I

Installation

When used as a linear control for sediment removal:

- Install along a level contour.
- Place gravel-filled bags end-to-end to eliminate gaps in a gravel bag berm.
- Angle the last 6 feet upslope at the downhill end of the run.
- Stack the bags such that the upper row overlaps the joints in the lower row.
- Add layers of gravel-filled bags to increase the height of a temporary gravel bag berm if needed. Stack the bags in the upper row to overlap the joints in the lower row. Stabilize the rows by adding rows of bags in the lower layers.

Generally, gravel bag barriers can be used in conjunction with temporary soil stabilization controls up slope.

Construct gravel bag barriers with a set-back from the toe of a slope. Where it is determined to be not practicable due to specific site conditions, the gravel bag barrier may be constructed at the toe of the slope, but be constructed as far from the toe of the slope as practicable.

Refer to SC-4 “Check Dams” when used for concentrated flows.

Submit a certificate of compliance for gravel-filled bag material.

Earthen berms are constructed with either native soil or an alternative selected material.

Earthen berms must be at least 8 inches in height and 36 inches in width.

Earthen berms must be compacted by manual or mechanical methods.

Maintenance and Inspection

Gravel bag/earthen berms must be inspected in accordance with CGP requirements for the associated project type and risk level or with LTCGP. At a minimum, BMPs must be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

Reshape or replace gravel bags as needed, or as directed by the RE.

Repair washouts or other damages as needed, or as directed by the RE.

Inspect gravel bag/earthen berms for sediment accumulations and remove sediment when accumulation reaches one-third of the berm height. Removed sediment can be incorporated in the project at locations designated by the RE or disposed of outside the highway right of way in conformance with the Standard Specifications.

Remove gravel bag berms when no longer needed. Remove sediment accumulations and clean, re-grade, and stabilize the area.

If using earthen berm, ensure soil remains compacted through the duration of the berm

Maintain earthen berms to provide sediment-holding capacity and to reduce concentrated flow velocities.

Repair the berm if rills or other evidence of concentrated runoff over it.

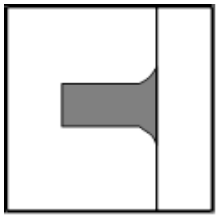
Gravel Bag/Earthen Berm placement must be shown on the WPCDs and reflect site conditions.

SWPPP or WPCP

Gravel Bag/Earthen Berm must be discussed in Section 500.3 SWPPP or Section 30.2 of the WPCP.

Street Sweeping

SC-7



Standard Symbol

Definition and Purpose

Practices to remove tracked sediment to prevent the sediment from entering a storm drain or receiving waters.

Appropriate Applications

These practices are implemented anywhere sediment is tracked from the project site onto public or private paved roads, typically at jobsite entrances and exits.

Limitations

Sweeping and vacuuming may not be effective when soil is wet or muddy.

Standards and Specifications

General Requirements

Sweep by hand or mechanical methods, such as vacuuming. Kick brooms or sweeper attachments may not be used.

At least one street sweeper in good working order must be at the job site at all times when street sweeping work is required.

Use one of the following types of street sweepers:

- Mechanical sweeper followed by a vacuum-assisted sweeper;
- Vacuum-assisted, dry, waterless, sweeper; or
- Regenerative-air sweeper.

Submit the number and type of street sweepers that will be used on the project for each activity at least 5 business days before starting the activities listed above. Keep and submit street sweeping activity records including sweeping times, locations, and the quantity of material collected.

Sweep paved roads at construction entrance and exit locations and onsite paved areas:

- During clearing and grubbing, earthwork, trenching, and pavement-structure construction activities.
- When vehicles are entering and leaving the job site.
- After soil-disturbing activities.
- After observing off-site tracking of material.

Sweep within 1 hour if sediment or debris is observed during the activities described above that require sweeping.

Sweep within 24 hours if sediment or debris is observed during activities that do not require sweeping.

Keep dust to a minimum during street sweeping activities. Use water for dust control or a vacuum whenever dust generation is excessive or sediment pickup is ineffective. Refer to WE-1 for "Wind Erosion Control" BMPs.

Remove collected material, including sediment, from paved shoulders, drainage inlets, curbs and dikes, and other drainage areas.

After sweeping is finished, collected material may be stockpiled. If not mixed with debris, trash or potentially hazardous objects, consider incorporating the removed sediment back into the project if approved by the RE. Otherwise, dispose of stockpiled material at least once per week according to Standard Specifications Section 14-10.

Street sweeping does not void the requirements for residue collection included in other work activities, such as grooving, grinding, or asphalt concrete planing.

Maintenance and Inspection

Inspect potential sediment tracking locations daily.

Monitor and inspect tracking control BMPs such as TC-1, "Temporary Construction Entrance/Exit," to reduce sediment accumulation on roads.

Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.

Adjust brooms frequently; maximize efficiency of sweeping operations.

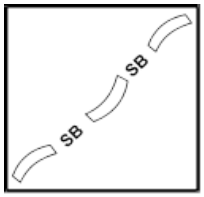
Sweeper material must be disposed in compliance with waste regulations.

SWPPP or WPCP

Street Sweeping must be discussed in Section 500.3.4 and 600.2 of the SWPPP or Section 30.2.3 of the WPCP.

Sandbag Barrier

SC-8



Standard Symbol

Definition and Purpose

A sandbag barrier is a temporary linear sediment barrier consisting of stacked sandbags, designed to intercept and slow the flow of sediment-laden sheet flow runoff. Sandbag barriers allow sediment to settle from runoff before water leaves the construction site.

Appropriate Applications

Along the perimeter of a site.

Along streams and channels.

Below the toe of exposed and erodible slopes.

Down slope of exposed soil areas.

Around stockpiles.

Across channels to serve as a barrier for utility trenches or provide a temporary channel crossing for construction equipment, to reduce stream impacts.

Parallel to a roadway to keep sediment off paved areas.

At the top of slopes to divert roadway runoff away from disturbed slopes.

To divert or direct flow or create a temporary sediment/desilting basin.

During construction activities in stream beds when the contributing drainage area is less than 5 ac.

When extended construction, period limits the use of either silt fences or straw bale barriers.

Along the perimeter of vehicle and equipment fueling and maintenance areas or chemical storage areas.

To capture and detain non-stormwater flows until proper cleaning operations occur.

When site conditions or construction sequencing require adjustments or relocation of the barrier to meet changing field conditions and needs during construction.

To temporarily close or continue broken, damaged or incomplete curbs.

Limitations

Limit the drainage area upstream of the barrier to 5 ac.

Degraded sandbags may rupture when removed, spilling sand.

Installation can be labor intensive.

Limited durability for long-term projects.

When used to detain concentrated flows, maintenance requirements increase.

Consider using gravel bags whenever possible since they often do not require as much maintenance or impact wildlife when used near ESAs.

Standards and Specifications

Materials

Sandbag Material

Sandbag can be woven polypropylene, polyethylene or polyamide fabric, minimum unit weight four ounces per square yard, mullen burst strength exceeding 300 psi in conformance with the requirements in ASTM designation D3786, and ultraviolet stability exceeding 70% in conformance with the requirements in ASTM designation D4355. Use of burlap is not acceptable.

Sandbag Size

Each sand-filled bag should have a length of 18 in, width of 12 in, thickness of 3 in, and mass of approximately 33 lb. Bag dimensions are nominal, and may vary based on locally available materials. Alternative bag sizes must be submitted to the RE for approval prior to deployment.

Fill Material

All sandbag fill material can be non-cohesive, Class 1 or Class 2 permeable material free from clay and deleterious material, conforming to the provisions in Standard Specifications Section 47-2.02D “Permeable Material”. The requirements for the Durability Index and Sand Equivalent do not apply. Fill material is subject to approval by the RE.

Installation

When used as a linear sediment control:

- Install along a level contour.
- Turn ends of sandbag row up slope to prevent flow around the ends.
- Generally, sandbag barriers may be used in conjunction with temporary soil stabilization controls up slope to provide effective erosion and sediment control.

Construct sandbag barriers with a set-back of at least 3 ft from the toe of a slope. Where it is determined to be not practical due to specific site conditions, the sandbag barrier may be constructed at the toe of the slope, but should be constructed as far from the toe of the slope as practicable.

Maintenance and Inspection

Inspect sandbag barriers before and after each rainfall event, and weekly year round.

Reshape or replace sandbags as needed, or as directed by the RE.

Repair washouts or other damages as needed, or as directed by the RE.

Inspect sandbag barriers for sediment accumulations and remove sediments when accumulation reaches one-third the barrier height. Removed sediment can be incorporated in the project at locations designated by the RE or disposed of outside the highway right of way in conformance with the Standard Specifications 14-10.

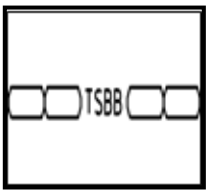
Remove sandbags when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilized the area.

SWPPP or WPCP

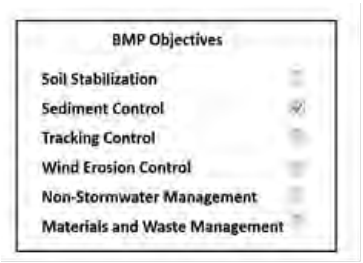
Sandbag Barrier must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.

Straw Bale Barrier

SC-9



Standard Symbol



Definition and Purpose

A straw bale barrier is a temporary linear sediment barrier consisting of straw bales, designed to intercept and slow sediment-laden sheet flow runoff. Straw bale barriers allow sediment to settle from runoff before water leaves the construction site.

Appropriate Applications

Along the perimeter of a site.

Along streams and channels.

Below the toe of exposed and erodible slopes.

Down slope of exposed soil areas.

Around stockpiles.

Across minor swales or ditches with small catchments.

Around above grade type temporary concrete washouts (see WM-8, “Concrete Waste Management”).

Parallel to a roadway to keep sediment off paved areas.

Limitations

Installation can be labor intensive.

Straw bale barriers are maintenance intensive.

Degraded straw bales may fall apart when removed or left in place for extended periods.

Can't be used on paved surfaces.

Not to be used for drain inlet protection.

Not to be used in areas of concentrated flow.

Can be an attractive food source for some animals.

May introduce undesirable non-native plants to the area.

Standards and Specifications

Materials

Straw must conform to the provisions in Standard Specifications Section 21-2.02H, "Straw."

Each straw bale should be a minimum of 14 in wide, 18 in high, 36 in long and shave a minimum weight of 50 lb.

The straw bale must be composed entirely of vegetative matter, except for the binding material.

Bales can be bound by either wire, nylon, or polypropylene string placed horizontally. Jute and cotton binding may not be used. Baling wire should be at least 16 gauge. Nylon or polypropylene string should have a diameter of approximately 0.08 in with a breaking strength of 80 lbs.

Wood or metal posts should be used as stakes. Posts for straw bale barriers must comply with Standard Specifications Section 16-2.03 "High-Visibility Fences."

Installation

Place a single row of straw bales end-to-end and parallel with the slope contour. For any 20-foot section of straw bale barrier, do not allow it to vary by more than 5% from level.

Place straw bales in a trench or key them into the slope. Place the bales such that the binding wire or string does not come in contact with the soil. Use wood or metal posts as stakes.

Secure each straw bale with two posts. The first post in each bale must be driven toward the previously laid bale to force the bales together. Drive the posts into the soil such that the top of the post is less than 2 in. above the top of the straw bale. The post must extend a minimum of 2 ft in the ground below the bottom of the straw bales.

Angle the last 6 feet upslope at the downhill end of the run.

See page 5 of this BMP for installation detail.

Other Considerations

Construct straw bale barriers with a set-back of at least 3 ft from the toe of a slope. Where it is determined to be not practical due to specific site conditions, the straw bale barrier may be constructed at the toe of the slope, but be constructed as far from the toe of the slope as practical.

This BMP may be implemented on a project-by-project basis in addition to other BMPs when determined necessary and feasible by the RE.

Straw bale barriers may be used in combination with a silt fence (see SC-2 "Silt Fence") for additional sediment control.

Maintenance and Inspection

At a minimum, BMPs must be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

Inspect straw bale barriers for sediment accumulations and remove sediment when depth reaches one-third the barrier height. Removed sediment should be disposed of outside the highway right-of-way in conformance with the Standard Specifications.

Replace or repair damaged bales as needed or as directed by the RE.

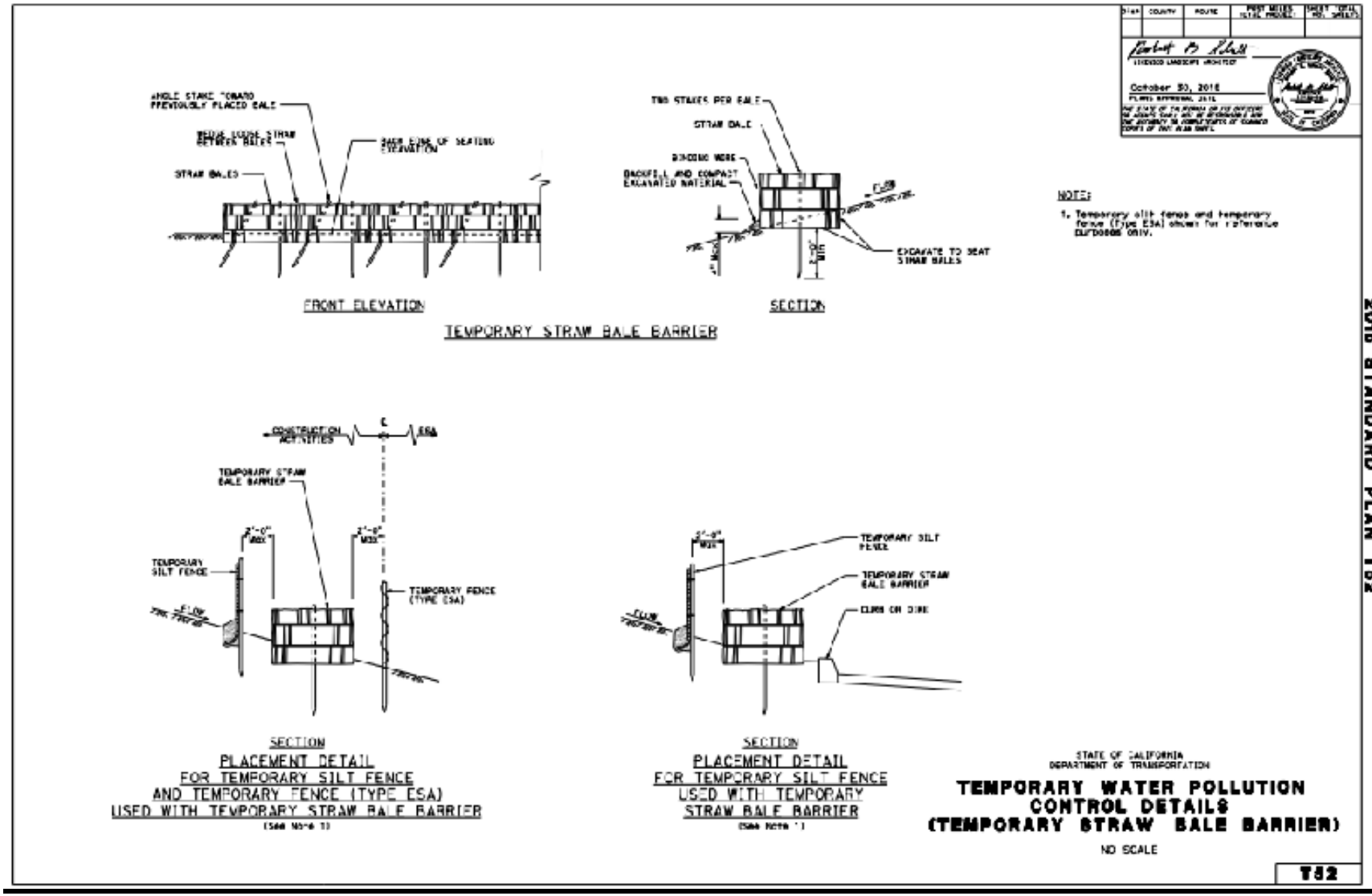
Repair washouts or other damages as needed or as directed by the RE.

Remove straw bales when no longer needed. Remove sediment accumulation, and clean, re-grade, and stabilized the area.

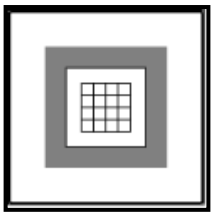
Straw Bale Barrier placement must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

Straw Bale Barrier must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.


ANGLE STAKE TOWARD PREVIOUSLY PLACED BALE
STRAW BALES
FRONT ELEVATION
TWO STAKES PER BALE
STRAW BALE
BINDING WIRE
BACKFILL AND COMPACT EXCAVATED MATERIAL
EXCAVATE TO SEAT STRAW BALES
SECTION
TEMPORARY STRAW BALE BARRIER
NOTES:
1. Temporary silt fence and temporary fence (Type ESA) shown for reference only.
TEMPORARY STRAW BALE BARRIER
TEMPORARY SILT FENCE
TEMPORARY FENCE (TYPE ESA)
SECTION
PLACEMENT DETAIL
FOR TEMPORARY SILT FENCE
AND TEMPORARY FENCE (TYPE ESA)
USED WITH TEMPORARY STRAW BALE BARRIER
TEMPORARY SILT FENCE
TEMPORARY STRAW BALE BARRIER
CURB OR DIKE
SECTION
PLACEMENT DETAIL
FOR TEMPORARY SILT FENCE
USED WITH TEMPORARY
STRAW BALE BARRIER
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION
CONTROL DETAILS
(TEMPORARY STRAW BALE BARRIER)
NO SCALE
T52
2015 STANDARD PLAN T52

Temporary Drainage Inlet Protection SC-10



Standard Symbol

Definition and Purpose

Temporary drainage inlet protection consists of devices used at storm drain inlets that detain and/or filter sediment-laden runoff prior to discharge into storm drainage systems. This is achieved by allowing sediment to settle and/or filtering sediment upstream of a linear sediment barrier.

Appropriate Applications

Where ponding will not encroach into highway traffic.

Where sediment laden surface runoff may enter an inlet.

Where disturbed drainage areas have not yet been permanently stabilized.

Where the drainage area is 1 ac or less.

Used year-round.

Limitations

Requires an adequate area for water to pond without encroaching upon traveled way and should not present an obstacle to oncoming traffic.

May require other methods of temporary protection to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.

Sediment removal may be difficult in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are expected, use other on-site sediment trapping techniques, such as SC-4 “Check Dams,” in conjunction with temporary drainage inlet protection.

Frequent maintenance is required.

Silt fence inlet protection is appropriate in open areas that are subject to sheet flow and for flows not exceeding 0.5 cfs.

Gravel bag barriers for inlet protection are applicable when sheet flows or concentrated flows exceed 0.5 cfs, and it is necessary to allow for overtopping to prevent flooding.

Fiber rolls and foam barriers are not appropriate for locations where they cannot be properly anchored to the surface.

Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected and overflow capability is needed.

For drainage areas larger than 1 ac, runoff should be routed to a sediment trapping device designed for larger flows. See BMPs SC-2, "Sediment/Desilting Basin," and SC-3 "Sediment Trap/Curb Cutback."

Standards and Specifications

General Requirements

Refer to Standard Specifications Section 13-6.03C for "Temporary Drainage Inlet Protection" and 13-6.03F for "Rigid Plastic Barriers."

Identify existing and/or planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed, and which method or combination of methods to use. Update inlet protection as site conditions change.

Use a linear sediment barrier to redirect runoff and control ponding in order to prevent ponding from encroaching on the traveled way or overtopping the curb or dike.

Prior to installation, clear the area around each inlet of obstructions, including rocks, clods, and debris greater than 1-in. in diameter.

Install linear sediment barriers upstream of the inlet and parallel with the curb, dike, or flow line to keep sediment from entering the inlet.

Remove accumulated sediment according to Maintenance and Inspection recommendations. Accumulated sediment may be disposed of outside the highway right-of-way in conformance with the Standard Specifications Section 14-10.

Type 1: Silt Fence

This method should be used for drain inlets requiring protection in areas where finished grade is established and erosion control seeding has been applied or is pending. The silt fence (Type 1) protection is illustrated on Page 6. Do not place filter fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced.

Type 2 - Excavated Drop Inlet Sediment Trap

This method may be used for drainage inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas are subject to grading. The excavated drop inlet sediment trap (Type 2) is illustrated on Page 7. Similar to constructing a temporary silt fence; see BMP SC-1, "Silt Fence." Size the excavated trap to provide a minimum storage capacity calculated at the rate of 67 yd3/ac of drainage area.

Type 3A: Gravel Bag Berm for Combined Inlets

This method may be used for drain inlets surrounded by AC or paved surfaces. The gravel bag berm for combined inlets (Type 3A) is illustrated on Pages 8-9. Flow from a severe storm must not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with BMP SC-6, "Gravel Bag Berm." Gravel bags are used due to their high permeability.

Type 3B: Gravel Bag Berm for Grate Inlets

This method may be used for drainage inlets surrounded by AC or paved surfaces. The gravel bag berm for grate inlets (Type 3B) is illustrated on Page 10. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Place gravel bags in accordance with BMP SC-6, "Gravel Bag Berm." Gravel bags are used due to their high permeability.

Type 4A – Flexible Sediment Barrier for Grate Inlets

This method may be used for drainage inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas subject to grading. Flexible Sediment Barrier for Grate Inlets (Type 4A) is placed around the inlet and keyed and anchored to the surface. Flexible Sediment Barriers are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. Place fiber rolls over the erosion control blanket. RE or appropriate licensed professional approval is required.

Type 4B – Flexible Sediment Barrier for Combined Inlets

This method may be used for drainage inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas subject to grading. Flexible Sediment Barrier for Combined Inlets (Type 4B) is placed in rows upstream of the inlet and along the curb or dike. The barriers are keyed and anchored to the surface. Flexible Sediment Barriers are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. Place the barrier to provide a tight joint with the curb or dike. Cut the cover fabric or jacket to ensure a tight fit. RE and Construction Storm Coordinator approval is required.

Type 5 – Sediment Filter Bag

This method may be used in areas with vehicle and equipment traffic that could damage aboveground inlet protection devices. The Sediment Filter Bags are installed as follows: (1) Remove the drainage inlet grate, (2) Place the sediment filter bag in the opening, and (3) Replace the grate to secure the sediment filter bag in place.

Type 6A – Catch Basin with Grate

Catch Basin with Grate (Type 6A) is shown on page 16. Cover grate inlet with rigid plastic barrier and secure on each end with gravel-filled bags. If using a rigid sediment barrier and the grated inlet does not have a curb opening, placed the barrier using a gasket to prevent runoff from flowing under the barrier. Secure the barrier to the pavement with nails and adhesive, gavel-filled bags, or a combination of both.

Type 6B – Curb Inlet without Grate

Curb Inlet without Grate (Type 6B) is shown on page 16. Place the flexible sediment barrier across the curb inlet opening and secure with gravel-filled bags.

Maintenance and Inspection

General Requirements

Inspect all drainage inlet protection devices before and after every rainfall event and weekly year round. During extended rainfall events, inspect inlet protection devices at least once every 24 hours.

Inspect the storm drain inlet after severe storms to check for bypassed material.

Remove all drainage inlet protection devices within thirty days after the site is stabilized, or when the inlet protection is no longer needed.

- Bring the disturbed area to final grade and smooth and compact it. Appropriately stabilize all bare areas around the inlet.
- Clean and re-grade area around the inlet and clean the inside of the storm drain inlet as it must be free of sediment and debris at the time of final inspection.

Type 1 - Filter Fabric Fence

Make sure the stakes are securely driven in the ground and are structurally sound (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.

Replace or clean the fabric when the fabric becomes clogged with sediment. Make sure the fabric does not have any holes or tears. Repair or replace fabric as needed or as directed by the RE.

At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height.

Type 2 – Excavated Drop Inlet Sediment Trap

Remove sediment from basin when the volume of the basin has been reduced by one-half.

Type 3A - Gravel Bag Berm for Combined Inlets

Inspect bags for holes, gashes, and snags.

Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 3B - Gravel Bag Berm for Grate Inlets

Inspect bags for holes, gashes, and snags.

Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 4A Flexible Sediment Barrier for Grate Inlets

Check flexible sediment barrier for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 4B Flexible Sediment Barrier for Combined Inlets

Check flexible sediment barrier for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 5 Sediment Filter Bag

Change sediment filter bag carefully ensuring not to spill captured sediment into the drainage inlet.

Type 6A Catch Basin with Grate

Check barrier and gravel-filled bags for proper arrangement and displacement. Routinely remove accumulated sediment

Type 6B Curb Inlet without Grate

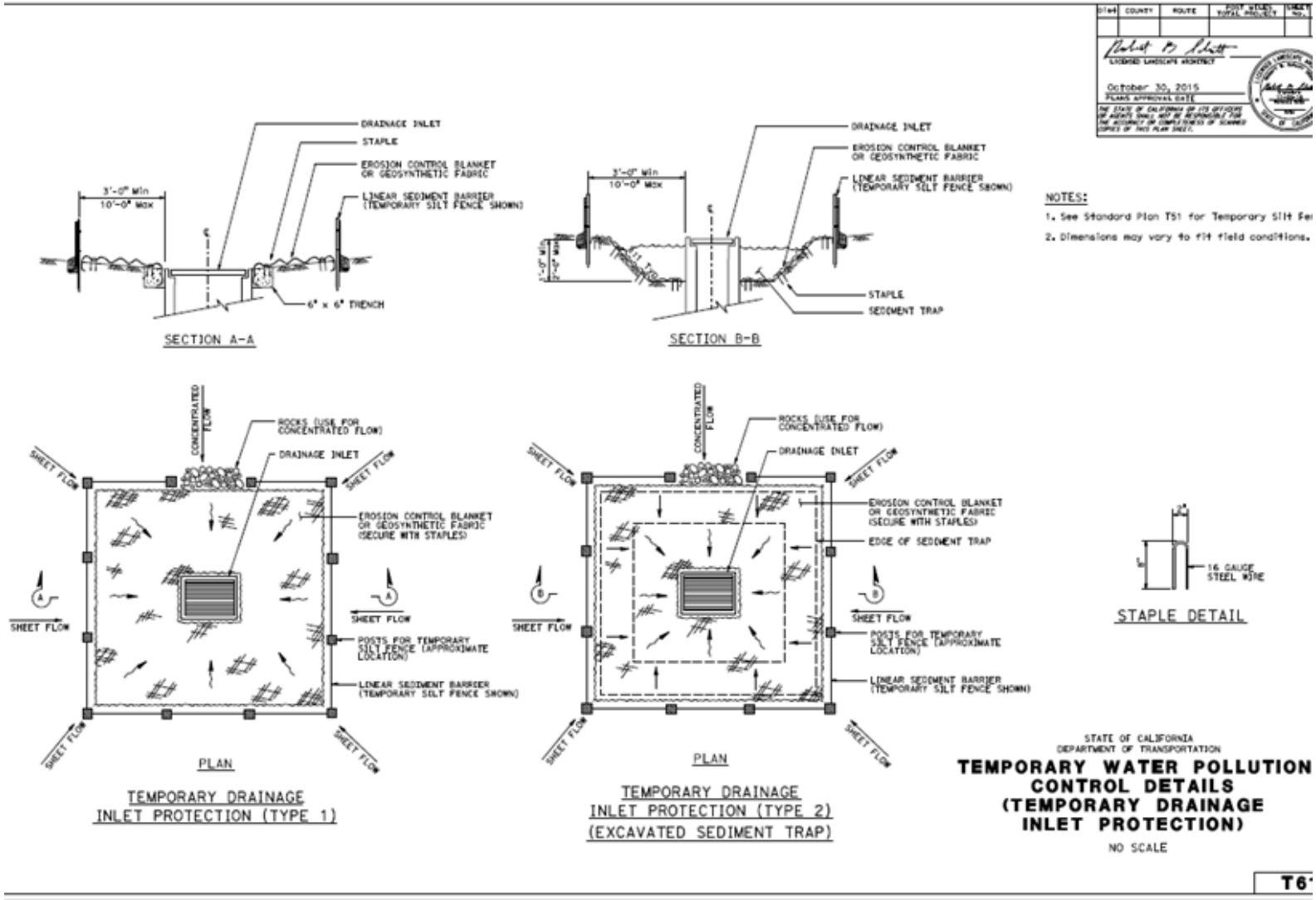
Check barrier and gravel-filled bags for proper arrangement and displacement.

Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

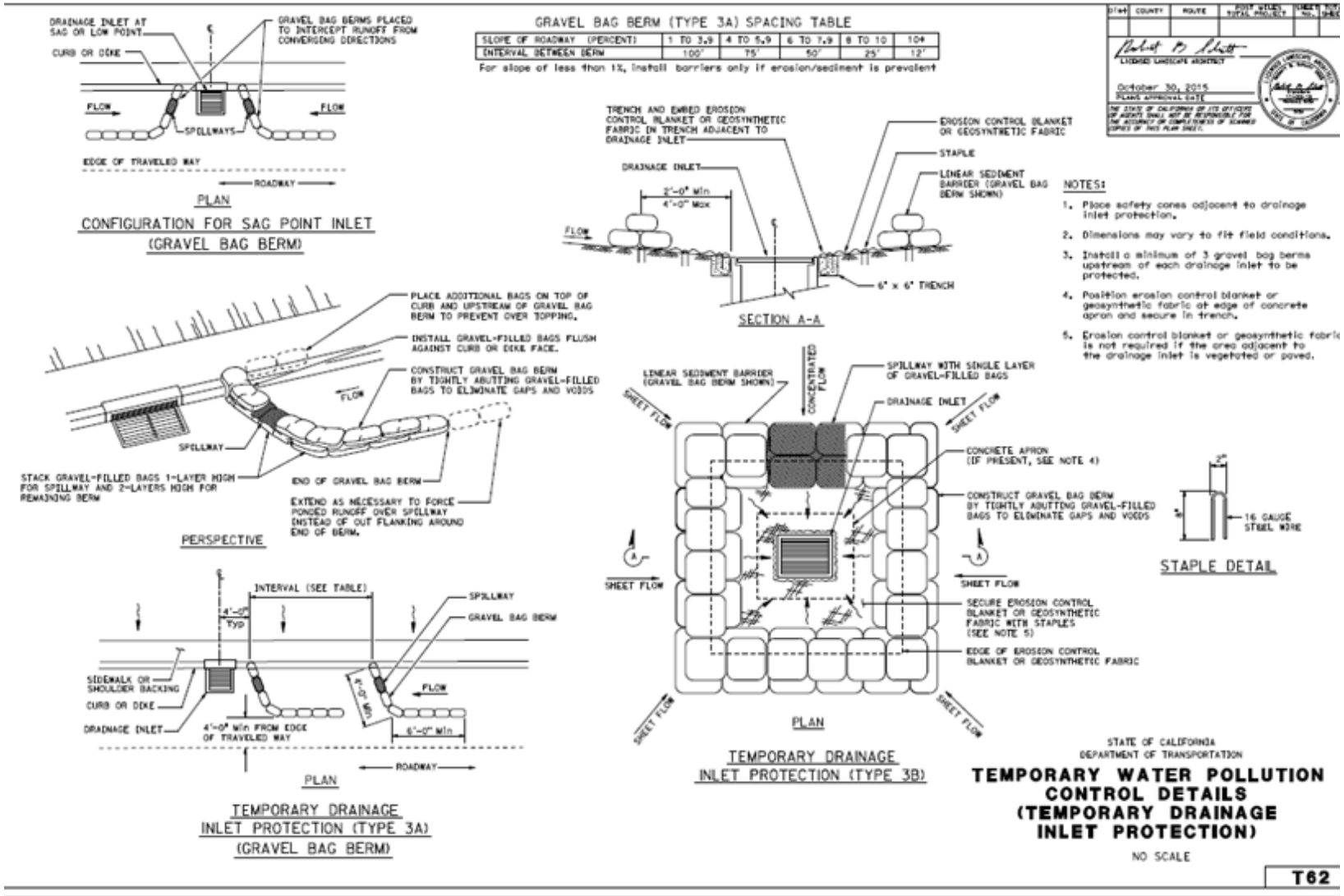
SWPPP or WPCP

Temporary Drainage Inlet Protection must be discussed in Section 500.3.2 of SWPPP and/or Section 30.2.2 of the WPCP. Temporary Drainage Inlet Protection placement type must be shown on the WPCDs and reflect site temporary conditions.

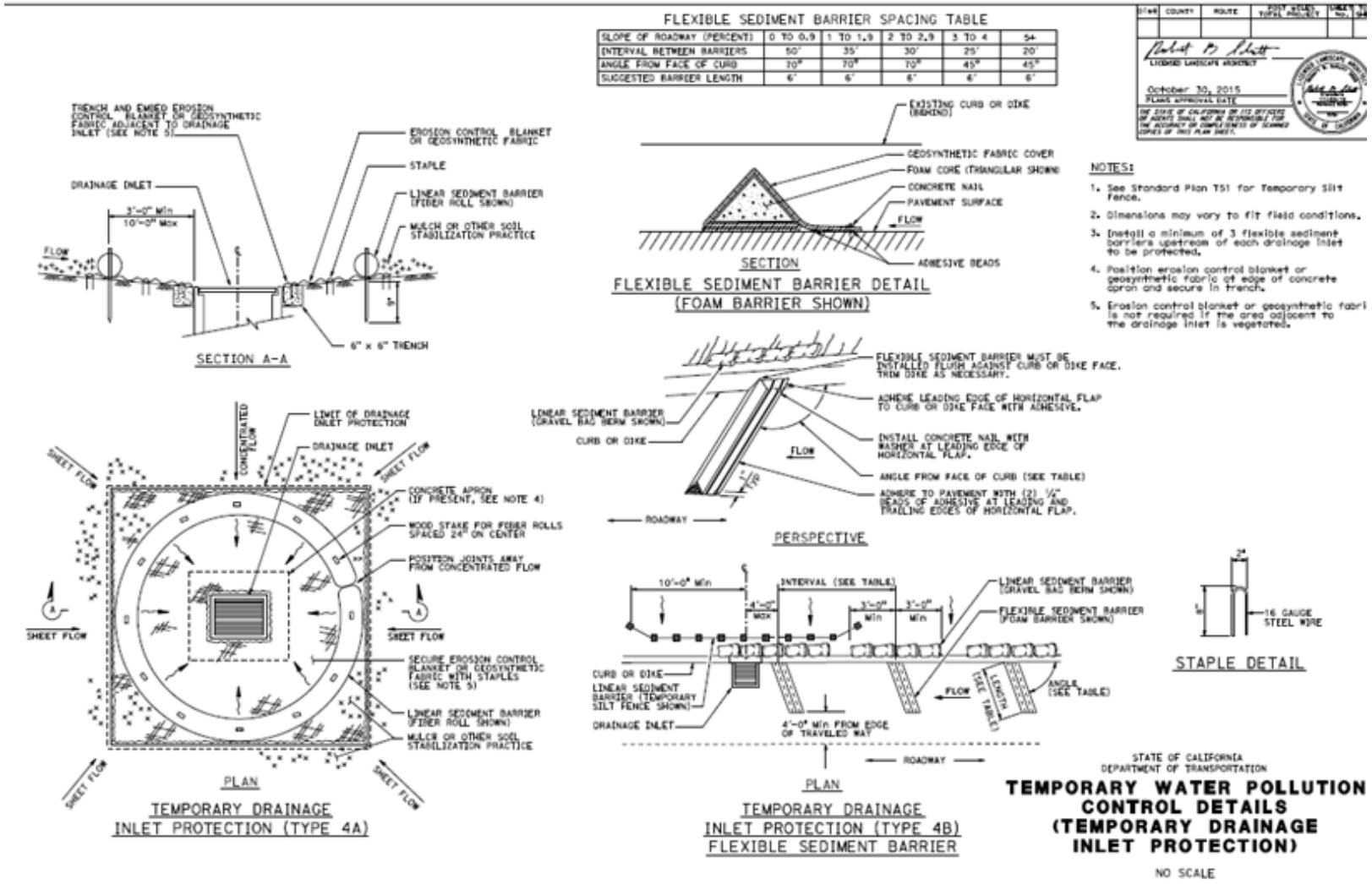
Temporary Drainage Inlet Protection SC-10



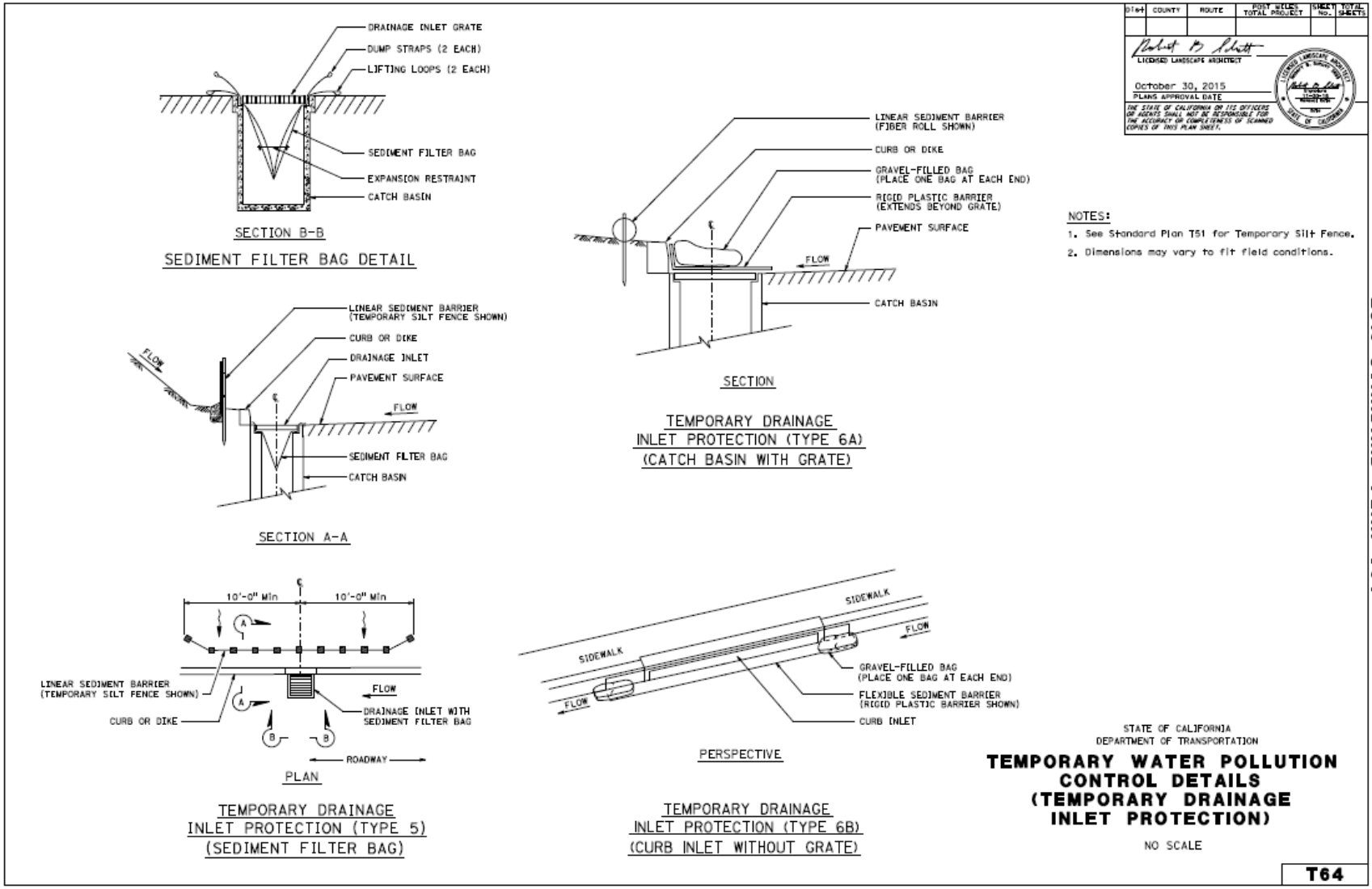
Temporary Drainage Inlet Protection SC-10



Temporary Drainage Inlet Protection SC-10



Temporary Drainage Inlet Protection SC-10



Compost Socks

SC-11

Standard Symbol

Definition and Purpose

Compost socks are a mesh sock containing compost that act as three dimensional, biodegradable structures that intercept and filter sheet flow. Compost socks can filter runoff, retain sediment, and reduce sheet flow velocities. Compost socks may be used as either a temporary or permanent sediment control measure.

Appropriate Applications

Compost socks may be applied as both temporary and permanent sediment controls.

Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Along the perimeter of a project.

As check dams in unlined ditches.

Down-slope of exposed soil areas.

At operational storm drains as a form of inlet protection.

Around temporary stockpiles.

Limitations

Compost can potentially leach nutrients into runoff and negatively affect water quality. Compost should not be used directly upstream from a nutrient-impaired water body.

Compost socks are susceptible to damage by traffic. Compost socks may be used around heavy machinery, but frequent disturbance decreases sock performance.

Standards and Specifications

General Requirements

Compost socks must comply with Standard Specifications 21-2.02Q and 21-2.03Q.

Compost for compost socks must comply with Standard Specifications Section 21-2.02K, except the particle size must be for coarse compost.

Compost sock installation is illustrated in Standard Plan H51.

Compost socks consist of a 12-inch diameter mesh tube that is filled with compost. The mesh tube must be composed of a natural biodegradable product such as cotton, jute, sisal, burlap, or coir. The mesh tube must be clean, evenly woven, and free of encrusted concrete or other contaminating materials, cuts, tears, broken or missing yarns, and thin, open, or weak places.

Compost socks must have a functional longevity of one year.

Installation

Before installing compost sock, remove obstructions from the ground including rocks, clods, and debris greater than 1 inch in diameter.

For any 20-foot section of compost sock, prevent the compost sock from varying more than 5 percent from level.

Use the following spacing unless otherwise noted on the project plans or special provisions:

- 10 feet apart for slopes steeper than 2:1 (H:V)
- 15 feet apart for slopes from 2:1 to 4:1 (H:V)
- 20 feet apart for slopes from 4:1 to 10:1 (H:V)
- 50 feet apart for slopes flatter than 10:1 (H:V)

Place mesh tube, secure the end, and fill uniformly with compost. Secure the remaining end.

For Type 1 installations:

- Place in a furrow that is from 2 to 4 inches deep.
- Fasten with wood stakes every 4 feet along the length of the compost sock.
- Fasten the ends of the compost sock by placing a stake 6 inches from the end of the sock.
- Drive the stakes into the soil so the top of the stake is less than 2 inches above the top of the compost sock.

For Type 2 installations:

- Fasten with notched wood stakes and rope.

- Drive stakes into the soil until the notch is even with the top of the compost sock.
- Lace the rope between stakes and over the compost sock. Knot the rope at each stake.
- Tighten the fiber roll to the surface of the slope by driving the stakes further into the soil.

If more than one compost sock is placed in a row, the socks should be overlapped; not abutted. Stagger overlapping joints in adjacent rows by 5 to 10 feet.

Removal

For permanent installations: do not remove compost socks. Compost socks will degrade over time.

For temporary installations: remove sock, rope and stakes if ordered by the RE. Cut sock and empty contents in place.

Other Considerations

Compost may be pre-seeded before placement into the mesh tube to assist in establishing vegetation. Once established, vegetation root systems provide additional soil stability and runoff filtration.

Permanent compost sock applications are particularly advantageous below embankments, especially adjacent streams, by limiting re-entry and the disturbance to sensitive areas.

Organic material in compost is important for pollutant removal and vegetation establishment. Organic content of the compost should range from 30 to 65% depending on site conditions.

Maintenance and Inspection

Inspect compost socks before and after each rainfall event, and weekly year round.

Remove sediment from behind the compost sock if sediment is 1/3 of compost sock height above ground.

Repair or adjust the compost sock if rills or other evidence of concentrated runoff occur beneath the sock.

Repair or replace compost socks if they become split, torn, or unraveled.

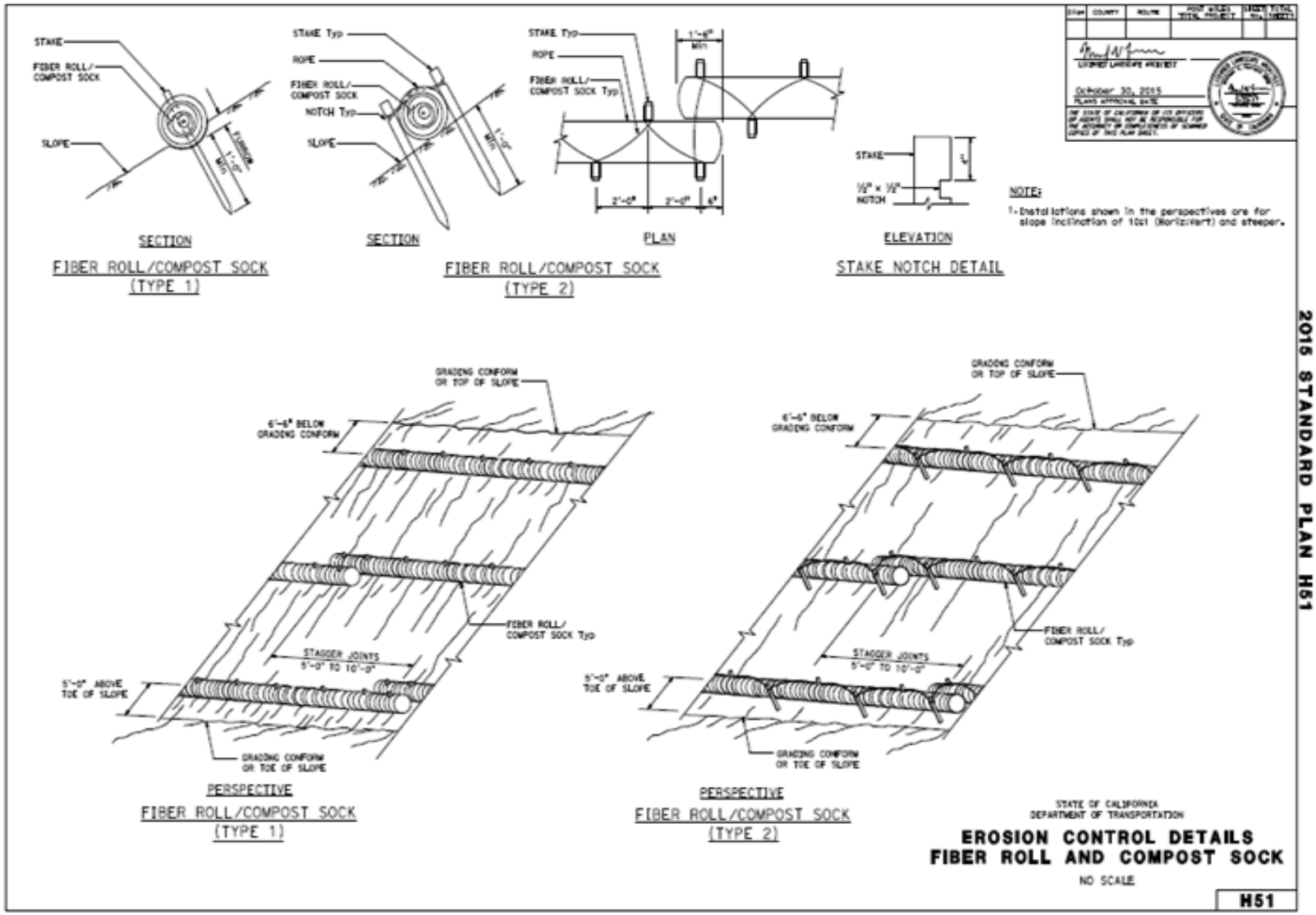
Add stakes if the compost sock slumps or sags.

Replace broken or split wood stakes.

Maintain compost socks to provide an adequate sediment holding capacity and runoff velocity reduction.

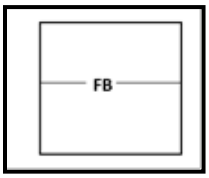
SWPPP or WPCP

Compost Socks must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.


STAKE
FIBER ROLL/ COMPOST SOCK
SLOPE
SECTION
FIBER ROLL/COMPOST SOCK (TYPE 1)
STAKE Typ
ROPE
FIBER ROLL/ COMPOST SOCK
NOTCH Typ
SLOPE
SECTION
STAKE Typ
ROPE
FIBER ROLL/ COMPOST SOCK Typ
PLAN
FIBER ROLL/COMPOST SOCK (TYPE 2)
STAKE
½" x ½" NOTCH
ELEVATION
STAKE NOTCH DETAIL
NOTE:
1. Installations shown in the perspectives are for slope inclination of 10:1 (Horiz:Vert) and steeper.
October 30, 2015
GRADING CONFORM OR TOP OF SLOPE
6'-0" BELOW GRADING CONFORM
FIBER ROLL/ COMPOST SOCK Typ
STAGGER JOINTS 5'-0" TO 10'-0"
5'-0" ABOVE TOE OF SLOPE
GRADING CONFORM OR TOE OF SLOPE
PERSPECTIVE
FIBER ROLL/COMPOST SOCK (TYPE 1)
PERSPECTIVE
FIBER ROLL/COMPOST SOCK (TYPE 2)
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
EROSION CONTROL DETAILS
FIBER ROLL AND COMPOST SOCK
NO SCALE
H51
2015 STANDARD PLAN H51

Flexible Sediment Barrier

SC-12



Standard Symbol

Definition and Purpose

Flexible sediment barriers are synthetic alternatives to fiber rolls, compost socks, and straw bale barriers. Flexible sediment barriers consist of a geosynthetic fabric with a urethane foam-filled core and a fabric apron that helps to prevent undermining and scour. These synthetic linear sediment barriers are generally more robust sediment controls than standard fiber rolls, and may be appropriate for continuous use in stormwater collection areas.

Appropriate Applications

Along the perimeter of a project.

As check dams in ditches, channels, or other stormwater collection areas.

Down-slope of exposed soil areas.

At operational storm drains as a form of inlet protection.

Around temporary stockpiles.

On either paved surfaces or soil.

As a linear sediment control for SC-10 “Temporary Drain Inlet Protection.”

Limitations

Frequent maintenance is required if sediment-laden discharges are upstream of the BMP to maintain it operational.

Standards and Specifications

General Requirements

Flexible sediment barriers must comply with Standard Specifications Sections 13-10.02I and 13-10.03H.

Flexible sediment barriers consist of:

- A urethane foam-filled core.
- Geosynthetic fabric cover and flap.
- Triangular, circular, or square cross section.
- Vertical height of at least 5 inches after installation.
- Horizontal flap at least 8 inches in width.
- Length of at least 4 feet per unit.
- Ability to interlock separate units into a long barrier such that water will not flow between units.

Geosynthetic fabric for flexible sediment barriers covers must have:

- Minimum grab break load of 200 lbs., per ASTM D4632.
- Minimum apparent elongation of 15%, per ASTM D4632.
- Average water flow rate of 100-150 gallons per minute per square foot, per ASTM D4491.
- Minimum permittivity of 0.05 1/sec, per ASTM D4491.
- Maximum apparent opening size of the 40 U.S. standard sieve size, per ASTM D4751.
- Minimum ultraviolet radiation resistance of 70% retained grab breaking load at 500 hours of exposure, per ASTM D4355.

Submit a certificate of compliance for flexible sediment barriers.

Installation

Remove obstructions, including rocks, clods, and debris greater than 1 inch in diameter, from the ground.

Secure flexible sediment barriers to pavement with:

1-inch concrete nails, 1-inch washers, and solvent-free adhesive,

Gravel-filled bags, or

A combination of both of the above methods.

Secure flexible sediment barriers to soil with 6-inch nails and 1-inch washers.

Secure connection points of two adjacent sections of flexible sediment barriers with 2 nails.

Do not pierce the foam core of the barrier with nails.

Maintenance and Inspection

Inspect flexible sediment barriers before and after each rainfall event, and weekly year round.

Maintain a flexible sediment barriers to provide sediment-holding capacity and to reduce concentrated flow velocities.

Repair or adjust the flexible sediment barriers if rills or other evidence of concentrated runoff occur beneath it.

Repair or replace split, torn, or unraveled material. Add or replace posts, stakes, or fasteners as needed to prevent sagging or slumping.

Reattach any flexible sediment barriers that detaches from the pavement.

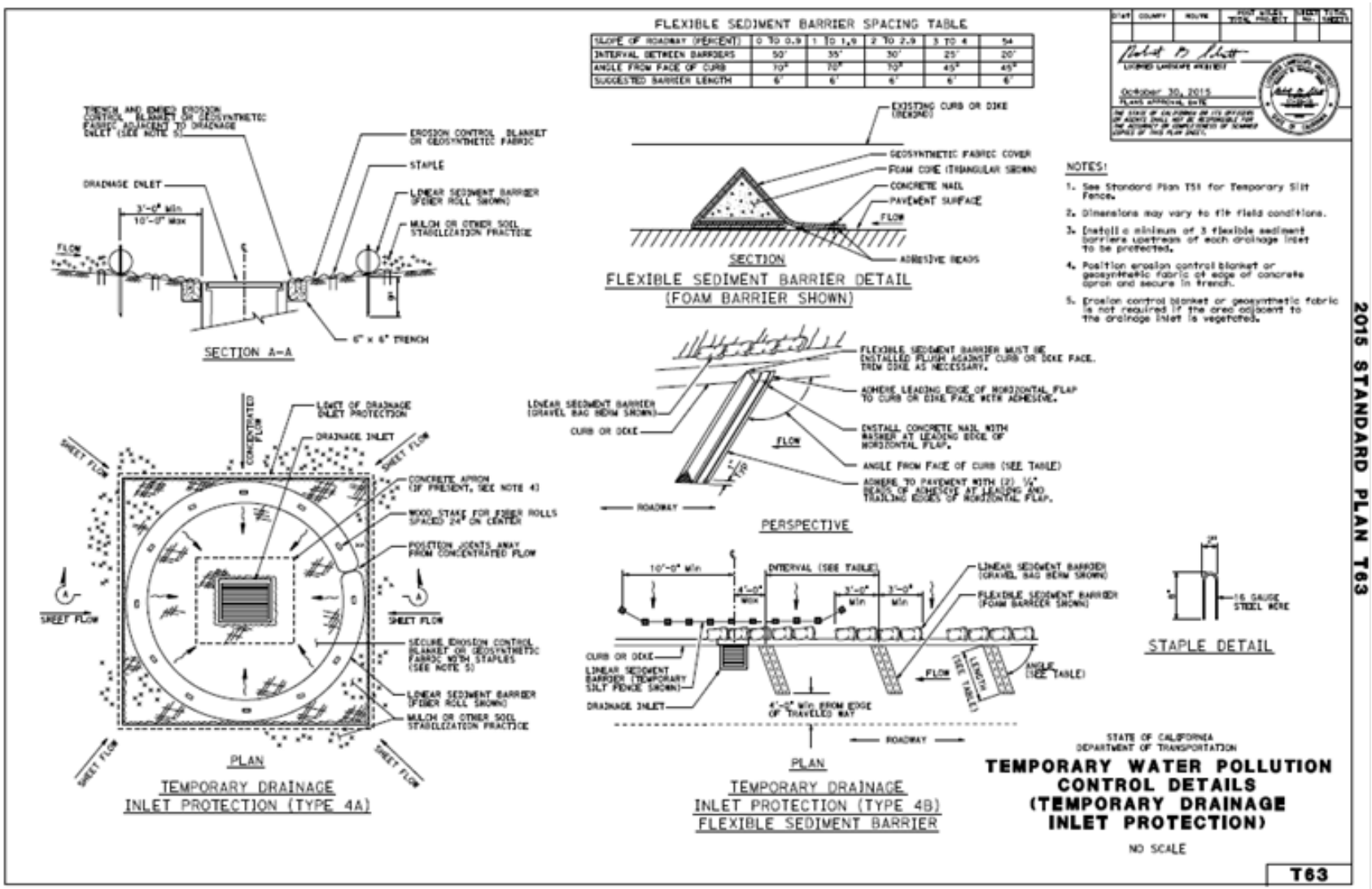
Remove sediment deposits if the sediment exceeds 1/3 of the height above the ground behind a foam barrier.

SWPPP or WPCP

Remove Flexible sediment barriers must be discussed in Section 500.3 of the SWPPP or Section 30.2 of the WPCP.

Flexible Sediment Barrier

SC-12



Section 5

Wind Erosion Control BMP

5.1 Wind Erosion Control

Wind erosion control consists of applying water or other dust palliatives as necessary to prevent or alleviate dust nuisance. Wind erosion control BMPs are shown in Table 5-1.

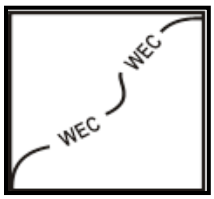
Table 5-1. Wind Erosion Control BMPs

ID	BMP Name
WE-1	Wind Erosion Control

Other BMPs that are sometimes applied to disturbed soil areas to control wind erosion are BMPs SS-3 through SS-7, shown in Section 3 of this Manual; BMP TC-2, shown in Section 6; and BMP NS-7, shown in the Section 7. The remainder of this Section describe the working details for the Wind Erosion Control BMP.

Wind Erosion Control

WE-1



Standard Symbol

Definition and Purpose

Wind erosion control consists of applying water or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. Dust control must be applied in accordance with Caltrans standard practices. Covering of small stockpiles or areas is an alternative to applying water or other dust palliatives; see SS-7 for "Temporary Cover and Rolled Erosion Control Products"

Must comply with local agencies such as Air Quality Management District's requiring dust control plans or dust control permits as well as any Air Clean Act requirements.

Appropriate Applications

This practice is generally implemented on all exposed soils subject to wind erosion.

Limitations

Effectiveness depends on soil, temperature, humidity and wind velocity.

Chemically treated subgrades could cause soil to become water repellant, preventing infiltration or the long-term re-vegetation of the site.

Standards and Specifications

Standard Specification Section 10-5 contains general requirements for "Dust Control."

Effective dust control is accomplished by applying dust palliatives, temporary Soil Stabilization BMPs, Tracking Controls and managing stockpiles.

"Dust Palliatives" are covered under Section 18 of the Standard Specifications. Acceptable dust palliatives include water, dust control binders, and dust suppressants. Dust control binders must comply with specifications for tackifier. Dust suppressants include petroleum-based organic product, nonpetroleum-based organic product, hygroscopic product, and synthetic polymer emulsion.

If a dust suppressant or tackifier is used, submit a Dust Treatment Plan. Submit a certificate of compliance for dust suppressants, tackifiers, and fibers.

Identify and stabilize key access points with the use of Tracking Control BMPs.

Minimize the impact of dust by anticipating the direction of prevailing winds.

Temporary soil stabilization BMPs, such as SS-3 "Hydraulic Mulch", SS-4 "Hydroseed, SS-5 "Soil Binders, also provide wind erosion control benefits.

Ensure proper implementation of BMPs WM-3, "Stockpile Management," and SC-7, "Street Sweeping," as these BMPs provide wind erosion control benefits.

Ensure that water is applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles to ensure even distribution.

All distribution equipment should be equipped with a positive means of shutoff.

Chemical dust suppression products could have environmental water quality impacts. Depending on the product and the time of application, water quality sampling for non-visible pollutants should be assessed when a storm even is forecasted.

For chemical or petroleum based organics stabilization, there are many products available. These products should not create any adverse effects on stormwater, plant life, groundwater and should meet all applicable regulatory requirements including inspection, documentation, monitoring and reporting requirements.

Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.

If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the RWQCB requirements. Non-potable water must not be conveyed in tanks or drain pipes that will be used to convey potable water and there must be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances must be marked "NON-POTABLE WATER - DO NOT DRINK."

Appendix B of this Manual includes additional information on selecting temporary soil stabilization products that could be used for Wind Erosion Control.

Maintenance and Inspection

Check areas where wind erosion controls have been implemented daily for erosion and visible dust.

Most water-based dust control measures require frequent application. Obtain vendor or independent information on longevity of chemical dust suppression.

SWPPP or WPCP

Wind Erosion Control must be discussed in Section 500.3.5 of the SWPPP or Section 30.2.4 of the WPCP.

Section 6

Tracking Control BMP

6.1 Tracking Control

Tracking control consists of preventing or reducing vehicle tracking from entering a storm drain or watercourse. Tracking control BMPs are shown in Table 6-1.

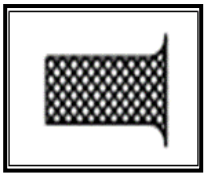
Table 6-1. Tracking Control BMPs

ID	BMP Name
TC-1	Temporary Construction Entrance/Exit
TC-2	Temporary Construction Roadway
TC-3	Entrance/Outlet Tire Wash

The remainder of this section describe the working details for the tracking control BMPs.

Temporary Construction Entrance/Exit

TC-1



Standard Symbol

Definition and Purpose

A temporary construction entrance/exit is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Appropriate Applications

Where dirt or mud can be tracked onto public roads.

Adjacent to water bodies.

Where poor soils are encountered.

Where dust is a problem during dry weather conditions.

Limitations

Site conditions will dictate design and need.

Limit the points of entrance/exit to the construction site.

Limit speed of vehicles to control dust.

Standards and Specifications

General Requirements

Temporary construction entrance/exit must comply with Standard Specification Section 13-7.03 Temporary Construction Roadways and Entrances.

Corrugated steel panels must be pressed or shop welded. They should have a slot or hook for coupling the panels together.

Class 8 RSP fabric shall be used to line temporary construction entrance/exit. Do not drive on the fabric until the rock is spread. Repair damaged fabric by placing new fabric over the damaged area with at least an 18-inch overlap on all edges.

Type A rock should be used for a Type 1 temporary construction entrance/exit. Type A rock must comply with Section 13-7.03B (2) of the Standard Specifications.

Type B rock should be used for a Type 2 temporary construction entrance/exit. Type B rock must comply with Section 13-7.03B (2) of the Standard Specifications.

Submit details for alternative construction entrances at least 5 business days before installation. This may include alternatives for the sump and corrugated steel panels or to eliminate the sump.

Installation

Prepare the location for the temporary construction entrance/exit as follows:

- Remove vegetation and clear debris.
- Grade the ground to a uniform plane.
- Remove sharp objects that could damage the fabric.
- Compact the top 1.5 feet of soil to at least 90 percent relative compaction.

Construct the temporary construction entrance/exit as follows (standard plans attached below):

- Place the fabric along the length of the construction entrance/exit.
- Overlap fabric ends by at least 12 inches.
- Cover the fabric with rock within 24 hours.
- Spread rock over the fabric in the direction of traffic.
- Keep a 6-inch layer of rock over the fabric to prevent damage from the spreading equipment.

For a Type 2 temporary construction entrance/exit, place rock under the corrugated steel panels. Use at least 6 corrugated steel panels for each entrance. Couple the panels together to prevent movement.

If a sump is used, install it within 20 ft of the temporary construction entrance/exit.

Other Considerations

Implement BMP SC-7, “Street Sweeping” as required under Section 13-4.03F and 13-7 of the Standard Specifications.

Require all employees, subcontractors, and suppliers to utilize the temporary construction entrance/exit. If the construction entrance/exit has metal plates as part of the BMP, all vehicles must be required to utilize them.

Route runoff from temporary construction entrances/exits through a sediment-trapping device before discharge.

Design a temporary construction entrance/exit to support the heaviest vehicles and equipment that will use it.

The use of asphalt concrete (AC) grindings is not allowed (high potential for leaching hydrocarbons) unless it complies with Section 6.8 of the 2016 Caltrans SWMP. Designate combination or single purpose entrances and exits to the construction site to maintain smooth flow of traffic.

Maintenance and Inspection

Inspect before and after each rainfall event, and weekly year-round.

Inspect immediate site access roads daily, implement SC-7, "Street Sweeping" as needed.

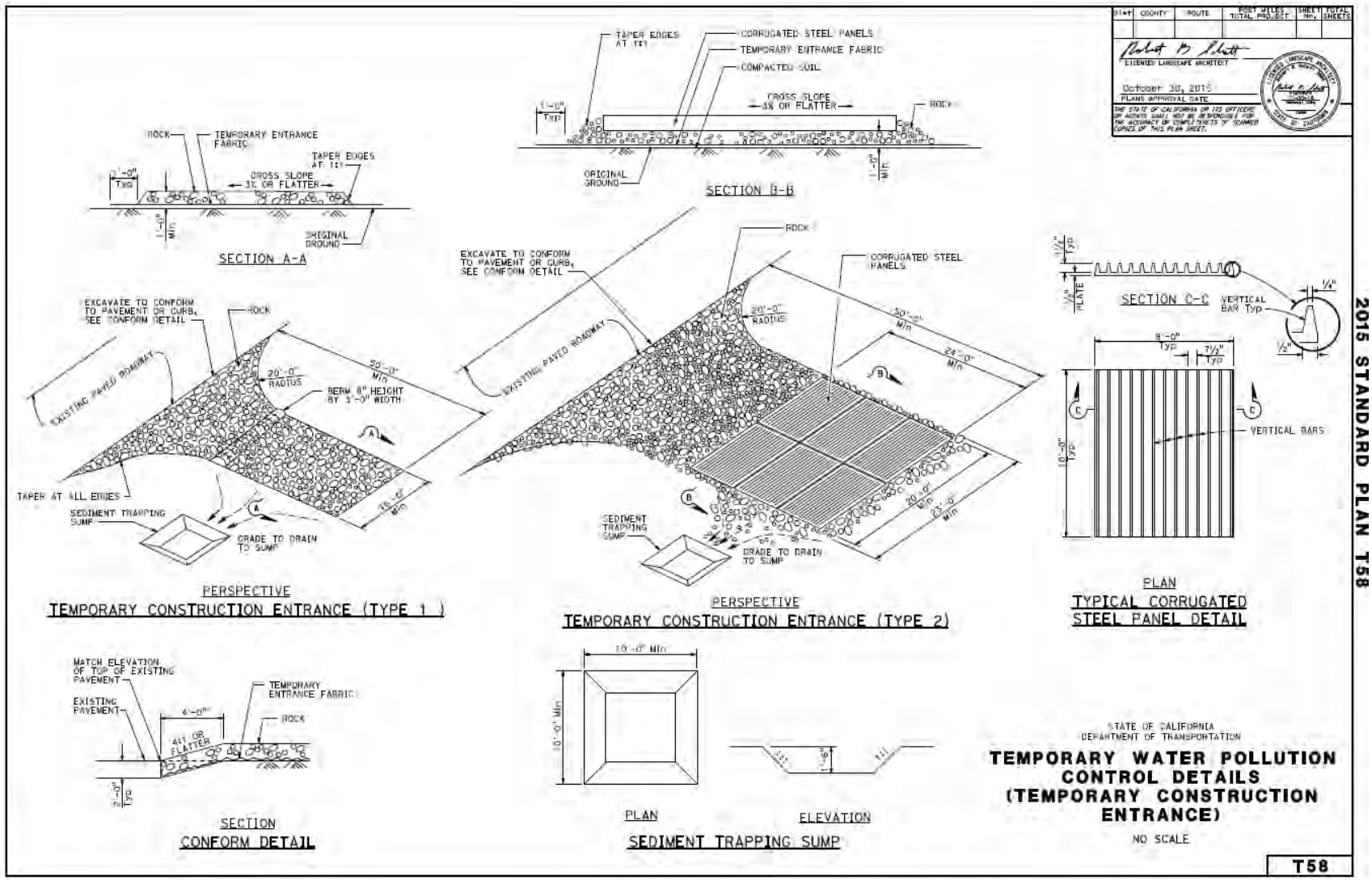
Remove aggregate, separate, and dispose of sediment if temporary construction entrance is clogged with sediment.

Keep all temporary construction entrance/exit ditches clear.

SWPPP or WPCP

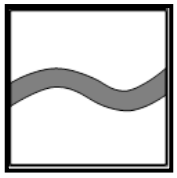
Tracking Control BMPs are to be included and discussed in section 500.3.4 or Section 600.2 for SWPPP and Section 30.2.3 of the WPCP.

Temporary Construction Entrance/Exit TC-1



Temporary Construction Roadway

TC-2



Standard Symbol

Definition and Purpose

A temporary construction roadway is a stabilized access road. It is designed for the control of dust and erosion created by vehicular tracking.

Appropriate Applications

Use construction roadways and short-term detour roads:

- Where mud tracking is a problem during wet weather.
- Where dust is a problem during dry weather.
- When road is adjacent to water bodies.
- Where poor soils are encountered.
- Where there are steep grades and additional traction is needed.

Limitations

Materials will likely need to be removed prior to final grading and stabilization.

Site conditions will dictate design and need.

May not be applicable to very short duration projects.

Limit speed of vehicles to control dust.

Standards and Specifications

General Requirements

Refer to Standard Specification Section 13-7.03 for temporary roadway standards.

Class 10 RSP fabric must be used to line temporary construction roadways. Do not drive on the fabric until the rock is spread. Repair damaged fabric by placing new fabric over the damaged area with at least an 18-inch overlap on all edges.

Type A or Type B rock may be used for temporary construction roadways. Type A and B rock must comply with Standard Specifications Section 13-7.03B(2). Coordinate materials with those used for stabilized construction entrance. Refer to TC-1, "Temporary Construction Entrance/Exit."

The use of cold mix asphalt, AC grindings, or blast furnace slag for stabilized construction roadway is not allowed (high potential to leach hydrocarbons) unless it complies with Section 6.8 of the 2016 Caltrans SWMP.

Installation

Prepare the location for the temporary roadway as follows:

- Remove vegetation and clear debris.
- Grade the ground to a uniform plane.
- Grade the ground surface to drain in a way that prevents runoff from leaving the construction site.
- Remove sharp objects that could damage the fabric.
- Compact the top 1.5 feet of soil to at least 90% relative compaction.

Construct the temporary construction roadway as follows (standard plans attached below):

- Place the fabric along the length of the roadway.
- Overlap fabric ends by at least 12 inches.
- Cover the fabric with rock within 24 hours.
- Spread rock over the fabric in the direction of traffic.
- Keep a 6-inch layer of rock over the fabric to prevent damage from the spreading equipment.

Other Considerations

Design stabilized access to support the heaviest vehicles and equipment that will use it.

Implement TC-1 "Temporary Construction Entrance/Exit" and TC-3 "Entrance/Outlet Tire Wash" in combination with temporary construction roadway for maximum tracking control.

Maintenance and Inspection

Inspect before and after each rainfall event, and weekly year-round.

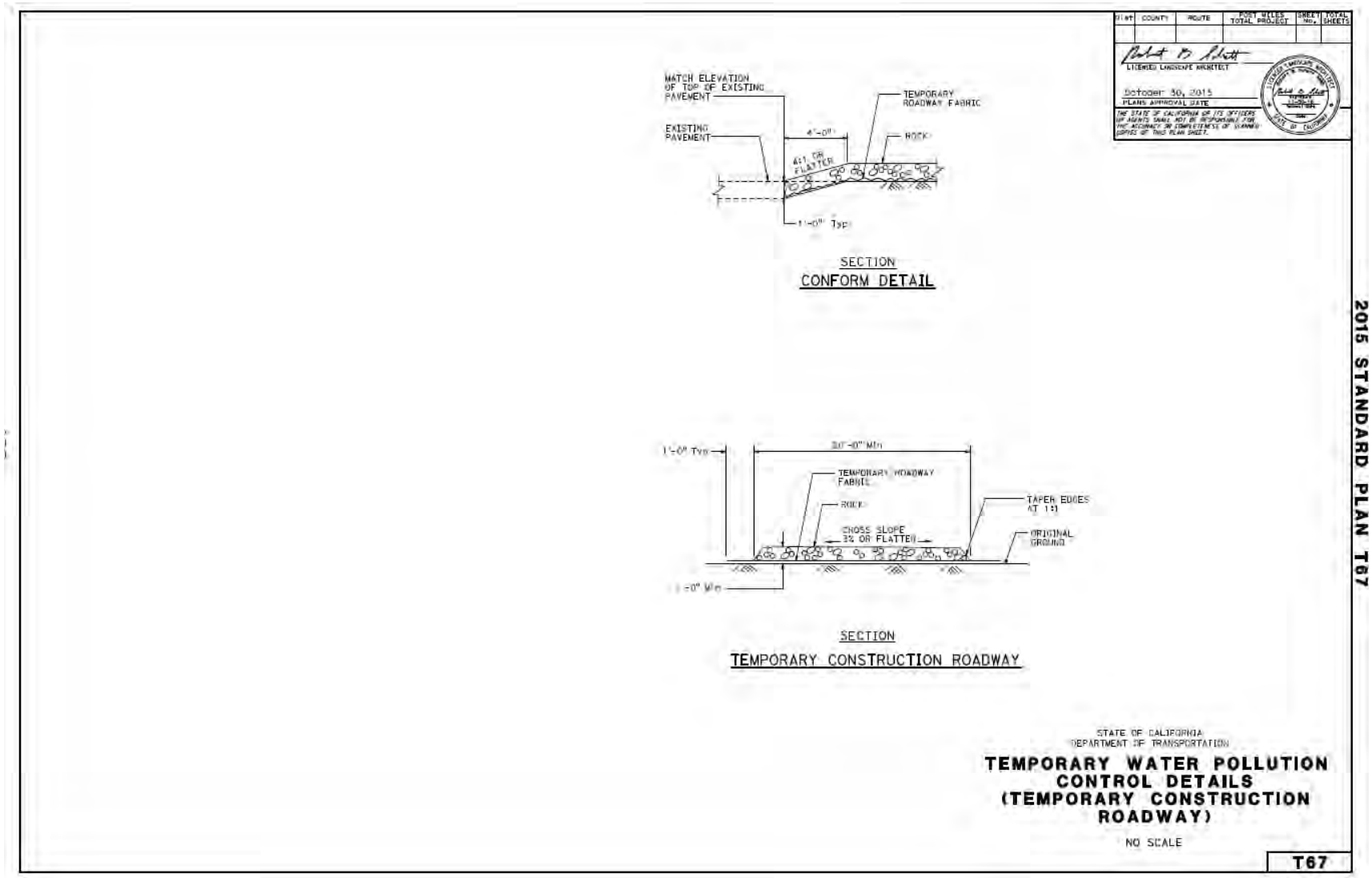
Inspect immediate site access roads daily, implement SC-7, "Street Sweeping" as needed.

Keep all temporary roadway ditches clear.

When no longer required, remove stabilized construction roadway and re-grade, re-vegetate and repair slopes.

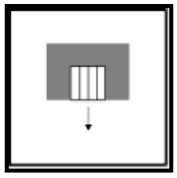
SWPPP or WPCP

Tracking Control BMPs are to be included and discussed in Section 500.3.4 or Section 600.2 SWPPP or Section 30.2.3 of the WPCP.


MATCH ELEVATION OF TOP OF EXISTING PAVEMENT
EXISTING PAVEMENT
4'-0"
4:1 OR FLATTER
TEMPORARY ROADWAY FABRIC
ROCK
1'-0" Typ.
SECTION
CONFORM DETAIL
1'-0" Typ.
30'-0" Min.
TEMPORARY ROADWAY FABRIC
ROCK
CROSS SLOPE 3% OR FLATTER
TAPER EDGES AT 1:1
ORIGINAL GROUND
1'-0" Min.
SECTION
TEMPORARY CONSTRUCTION ROADWAY
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET NO.
TOTAL SHEETS
LICENSED LANDSCAPE ARCHITECT
October 30, 2015
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
2015 STANDARD PLAN T67
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CONSTRUCTION ROADWAY)
NO SCALE
T67

Temporary Entrance/Outlet Tire Wash

TC-3



Standard Symbol

Definition and Purpose

A tire wash is an area located at stabilized construction access points to remove sediment from tires and undercarriages, and to prevent sediment from being transported onto public roadways.

Appropriate Applications

Tire washes may be used on construction sites where construction vehicles may track dirt and mud onto public roads.

This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.

Limitations

Requires a supply of wash water and way to collect or capture tire wash area runoff.

Requires a turnout or doublewide exit to prevent entering vehicles from driving through the wash area.

Standards and Specifications

Require all employees, subcontractors, and others that leave the site with mud-caked tires and/or undercarriages to use the wash facility.

Incorporate with a temporary construction entrance/exit. See TC-1, “Temporary Construction Entrance/Exit.”

Construct on level ground when possible, on a pad of Type A or Type B rock. Either Class 8 or 10 RSP fabric should be placed below the rock.

Wash rack must be designed and constructed/manufactured for anticipated traffic loads.

Vehicle wash water is non-stormwater that requires management and disposal. See NS-8, "Vehicle and Equipment Cleaning."

Provide a drainage ditch that will convey the runoff from the wash area to a sediment trapping device or similar device. The drainage ditch should be of sufficient grade, width, and depth to carry the wash runoff.

Implement BMP SC-7, "Street Sweeping" as needed.

Refer to TC-1, "Temporary Construction Entrance/Exit," for details regarding design and installation of construction entrance and exits to the project site.

Maintenance and Inspection

Inspect before, daily during extended rain events, after each rain event, and weekly year round.

Inspect immediate site access roads daily, implement SC-7, "Street Sweeping" as needed.

Remove accumulated sediment in wash rack and/or sediment trap to maintain system capacity and performance.

Inspect routinely for damage and repair as needed. Document non-stormwater (sediment trapping device or similar device) in appropriate inspection form.

SWPPP or WPCP

Temporary Entrance/Outlet Tire Wash is to be included and discussed in section 500.3.4 or Section 600.2 for a SWPPP or Section 30.2.3 of the WPCP.

Section 7

Non-Storm Water Management BMP

7.1 Non-Storm Water Management

Non-stormwater management (BMPs) are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with stormwater. These practices involve day-to-day operations of the construction site and are usually under the control of the Contractor. These BMPs are also referred to as “good housekeeping practices”, which involve keeping a clean, orderly construction site.

Table 7-1 lists the non-stormwater management BMPs. It is important to note that all these BMPs have been approved by Caltrans for statewide use and they must be implemented depending on the conditions/applicability of deployment described as part of the BMP.

Table 7-1. Non-Stormwater Management BMPs

ID	BMP Name
NS-1	Water Conservation Practices
NS-2	Dewatering Operations
NS-3	Paving, Sealing, Sawcutting and Grinding Operations
NS-4	Temporary Stream Crossing
NS-5	Clear Water Diversion
NS-6	Illegal Connection and Illicit Discharge Detection and Reporting
NS-7	Potable Water/Irrigation
NS-8	Vehicle and Equipment Cleaning
NS-9	Vehicle and Equipment Fueling
NS-10	Vehicle and Equipment Maintenance
NS-11	Pile Driving Operations
NS-12	Concrete Curing
NS-13	Material and Equipment Use Over Water
NS-14	Concrete Finishing
NS-15	Structure Demolition/Removal Over or Adjacent to Water

The remainder of this Section describe the working details for each of the non-stormwater management BMPs.

Water Conservation Practices

NS-1

Standard Symbol

Definition and Purpose

Water conservation practices are construction methods that minimize the use of water onsite or use water in a manner that avoids causing runoff, erosion and/or the discharge of pollutants to the storm drain system or receiving waters. Proper utilization of this BMP reduces or prevents non-stormwater discharges.

Appropriate Applications

Water conservation practices are implemented on all construction sites wherever water is used.

Limitations

If not implemented correctly, discharges may trigger reporting and monitoring requirements and delay construction work.

Standards and Specifications

Keep water equipment in good working condition.

Ensure tracking controls are implemented in, near and around water truck filling areas.

Repair water leaks promptly.

Authorization is required for activities that could potentially discharge water into a storm drain system or receiving waters.

Avoid using water to clean construction areas. Do not wash paved areas with water. Paved areas and roadways should be swept and vacuumed in accordance with SC-7 “Street Sweeping.”

Apply water for dust control in accordance with Standard Specifications Section 10-4 Water Usage and BMP WE-1, “Wind Erosion Control.”

Direct construction water runoff to areas where it can infiltrate into the ground or be collected and reused.

Manage run-on to minimize contact with job site.

Retain water spilled while filling water trucks within the designated water truck filling areas. Prevent tracking from water trucks and other equipment.

Report discharges to the RE and the WPC Manager immediately.

Maintenance and Inspection

Inspect water equipment areas at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

Inspect non-stormwater BMPs daily when non-stormwater operations are ongoing.

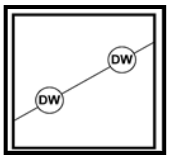
Repair water equipment as needed.

SWPPP or WPCP

Water Conservation Practices must be discussed in Section 500.3.5 of the SWPPP or Section 30.3.1 of the WPCP.

Dewatering Operations

NS-2



Standard Symbol

Definition and Purpose

Dewatering Operations are practices that manage the discharge of pollutants when non-stormwater and accumulated precipitation (stormwater) must be removed from a work location so that construction work may be accomplished.

Appropriate Applications

These practices are implemented for the collection and discharge of non-stormwater and stormwater (accumulated rain water) from excavations or temporary containment facilities. Non-stormwater includes, but is not limited to, groundwater, dewatering of piles, water from cofferdams, water diversions, and water used during construction activities that must be removed from a work area.

Practices identified in this section are also appropriate for implementation when managing the removal of accumulated precipitation (stormwater) from depressed areas at a construction site.

Stormwater mixed with non-stormwater should be managed as non-stormwater.

Limitations

Dewatering operations for non-stormwater will require, and must comply with, applicable local permits, project-specific permits, and regulations.

Site conditions will dictate design and use of dewatering operations.

Avoid dewatering discharges where possible by infiltrating, reusing the water for dust control, etc.

Standards and Specifications

General Requirements

Dewatering shall be conducted in accordance with the Caltrans Field Guide to Construction Site Dewatering Manual and Standard Specification Section 13-4.03G.

A dewatering and discharge work plan shall be submitted at least 15 days before the start of dewatering activities detailing the location of dewatering and discharge activities, quantity of water, equipment, and discharge point. The dewatering and discharge work plan must conform to Standard Specifications Section 13-4.01C.

Dewatering discharges must not cause erosion, scour, or sedimentation that could impact natural bedding materials.

Discharge the water within the project limits. Dispose of the water if it cannot be discharged within project limits due to site constraints or contamination.

Do not discharge stormwater or non-stormwater that has an odor, discoloration other than sediment, an oily sheen, or foam on the surface. Immediately notify the RE upon discovering any such condition.

The RWQCB may require a separate NPDES permit for a dewatering operation. These permits will have specific testing, monitoring, and discharge requirements.

Discharges must comply with regional and watershed-specific discharge requirements.

Additional permits or permissions from other agencies may be required for dewatering cofferdams or diversions.

Dewatering records shall be kept with the SWPPP or WPCP and maintained for a minimum of 3 years after the construction project is terminated.

The controls discussed in this BMP address sediment only. If the presence of polluted water with hazardous substances is identified in the contract, the contractor shall implement dewatering pollution controls as required by the contract documents. If the quality of water to be removed by dewatering is not identified as polluted in the contract documents, but is later determined by observation or testing to be polluted, the contractor shall notify the RE and comply with Standard Specifications Section 4-1.06, “Differing Site Conditions.”

Sediment Treatment

A variety of methods can be used to treat water during dewatering operations from the construction site. The size of particles present in the sediment and/or RWQCB Dewatering Permit or receiving water limitations on sediment are key considerations for selecting sediment treatment option(s); in some cases, the use of multiple devices may be appropriate.

Refer to the Sediment Treatment Options described in Appendix B of the Field Guide to Construction Site Dewatering to determine the optimal method to achieve sediment removal.

Refer to the applicable project dewatering and/or stormwater permit for monitoring and sampling forms and requirements.

Maintenance and Inspection

Inspect dewatering operation areas at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

Accumulated sediment removed during the maintenance of a dewatering device may be disposed of outside the right-of-way in conformance with Standard Specifications Section 14-10 Solid Waste Disposal and Recycling.

Accumulated sediment that is commingled with other pollutants must be disposed of in accordance with all applicable laws and regulations.

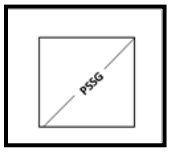
The WPC Manager must take immediate action to prevent non-stormwater discharges from being discharged.

SWPPP or WPCP

Dewatering Operations must be discussed in Section 500.4.1 of SWPPP and specific sample collection, collection and parameters in Section 700.2.3.1 if required by a specific RWQCB Dewatering Permit or Section 30.3.1 of the WPCP.

Paving, Sealing, Sawcutting, and Grinding Operations

NS-3



Standard Symbol

BMP Objectives	
Soil Stabilization	
Sediment Control	
Tracking Control	
Wind Erosion Control	
Non-Stormwater Management	✓
Materials and Waste Management	✓

Definition and Purpose

Procedures and practices for conducting paving, sealing, sawcutting, and grinding activities to minimize the transport of pollutants to the storm drain system or receiving water body.

Appropriate Applications

These procedures are implemented where operations such as paving, surfacing, resurfacing, grinding, coring, grooving, sealing and sawcutting generate spoils, residue, or process water that may pollute storm water runoff or discharge to the storm drain system or receiving water body.

Limitations

Activities related to paving, sealing, sawcutting, grooving, and grinding operations should be limited when precipitation is forecasted to prevent the triggering for visible and non-visible pollutant monitoring.

Discharges of freshly paved surfaces can raise pH and trigger permit violations.

Paving, Sealing, Sawcutting, and Grinding Operations

NS-3

Standards and Specifications

General Requirements

Refer to Standard Specifications Section 13-4.03E (7) Paving, Sealing, Sawcutting, Grooving, and Grinding Activities.

Do not allow the following materials to enter storm drain system and receiving waters: cementitious material, asphaltic material, aggregate or screenings, sawcutting, grooving, and grinding residue, pavement chunks, shoulder backing, methacrylate resin, and sandblasting residue. This list is not exhaustive.

Drainage inlets shall be protected and linear sediment barriers (such as silt fences, gravel bag berms, or fiber rolls) shall be used to protect receiving waters during operations related to paving, sealing, sawcutting, or grinding.

Drainage inlets and manholes shall be protected during application of seal coat, tack coat, slurry seal, and/or fog seal. Refer to SE-10, "Temporary Drainage Inlet Protection."

Whenever precipitation is forecasted, limit paving, sawcutting, and grinding to places where runoff can be captured. Grinding or grooving of pavement shall not be conducted when precipitation is forecasted unless runoff can be captured.

Seal coat, tack coat, slurry seal, or fog seal shall not be applied when precipitation is forecasted during the application or curing period.

Slurry shall be removed with a vacuum immediately after it is produced and shall be prevented from running off the pavement or into lanes open to traffic.

The residue from grooving and grinding activities shall be collected with a vacuum attachment on the grinding machine and shall be prevented from flowing across the pavement. See also WM-8, "Concrete Waste Management," and WM-10, "Liquid Waste Management."

Material removed from existing roadways may be stockpiled, if allowed, away from drainage inlets and receiving waters in accordance with BMP WM-3, "Stockpile Management" and Standard Specification 13-4.03C(3) Stockpile Management.

Drip pans or absorbent materials shall be placed under paving equipment when not in use. Refer to WM-4, "Spill Prevention and Control." Equipment shall be cleaned in accordance with NS-8, "Vehicle and Equipment Cleaning."

Do not coat asphalt trucks and equipment with substances that contain soap, foaming agents, or toxic chemicals.

Asphalt Concrete and Concrete Pavement Handling

Prevent sand and gravel from entering streets, storm drains, and receiving waters.

Substances used to coat asphalt transport trucks, asphalt trucks, and asphalt spreading equipment shall not contain soap, foaming agents, or toxic chemicals.

Asphalt spoils must be recycled or disposed of in accordance with WM-5, "Solid Waste Management," and/or WM-6, "Hazardous Waste Management."

AC and PCC grindings, pieces, or chunks approved by the RE for reuse in embankments or shoulder backing shall not be at risk of entering storm drain systems or receiving waters.

Temporarily protect inlets and receiving waters until the structure is stabilized or permanent controls are in place.

The reuse of AC or PCC grindings, pieces, or chunks as road base must be placed at least five feet above the seasonal high groundwater elevation with the approval of the RE. Shoulder backing containing Recycled Asphalt Pavement (RAP) shall not be placed within 100 feet measured horizontally from a culvert, watercourse, or bridge and must comply with the 2016 SWMP.

During chip seal application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter storm drains or receiving waters. Temporarily protect inlets and receiving waters until stabilized.

Clean asphalt-coated equipment off-site whenever possible. When cleaning dry, hardened asphalt from equipment, manage hardened asphalt debris in accordance with WM-5, "Solid Waste Management," and/or WM-6, "Hazardous Waste Management," and NS-8 "Vehicle and Equipment Cleaning" whichever is applicable.

Allow aggregate rinse to settle. Then, either allow rinse water to dry in a temporary pit as described in WM-8, "Concrete Waste Management," or dispose in accordance with WM-5, "Solid Waste Management."

Thermoplastic Striping and Pavement Markers

Contractor shall not pre-heat, transfer, or load thermoplastic within 50 feet of drainage inlets or receiving waters.

Do not unload, transfer, or load bituminous material for pavement markers within 50 feet of drainage inlets or receiving waters.

All thermoplastic striper and pre-heater equipment shutoff valves shall be inspected to ensure that they are working properly to prevent thermoplastic from leaking.

The pre-heater shall be filled carefully to prevent splashing or spilling of hot thermoplastic. Leave six inches of space at the top of the pre-heater container when filling thermoplastic to allow room for material to move when the vehicle is deadheaded.

Melting tanks shall be loaded with care, a minimum of six inches of freeboard in case of splashing when vehicle is deadheaded. When servicing or filling melting tanks, ensure all pressure is released before removing lids to avoid spills.

Immediately remove drips, overspray, improper markings, paint, and thermoplastic tracked by traffic with an authorized method.

Collect and dispose of bituminous material from the roadway after removal of markers in accordance with WM-5, "Solid Waste Management."

Clean truck beds daily of loose debris and melted thermoplastic. When possible, recycle thermoplastic material. Thermoplastic waste shall be disposed of in accordance with BMP WM-5, "Solid Waste Management" and/or WM-6, "Hazardous Waste Management, as applicable.

Maintenance and Inspection

Inspect and maintain machinery and BMPs regularly to minimize leaks and drips.

Ensure that employees and subcontractors are implementing appropriate measures during paving operations.

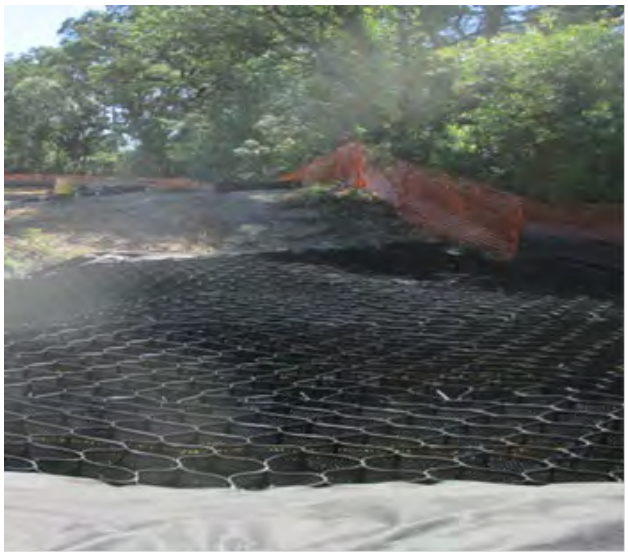
If project operations trigger the IGP (industrial operations located within project limits regardless of whether the facility is within or outside Caltrans' right-of-way and outside Caltrans' right-of-way but within project limits), ensure that any run-on or run-off from IGP activities does not have potential to create pollution onto Caltrans right-of-way. Refer to 2016 SWMP Section 7.2 for additional guidance.

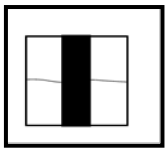
SWPPP or WPCP

Paving, Sealing, Sawcutting and Grinding Operations must be discussed in Section 500.4 of the SWPPP or Section 30.3.1 of the WPCP.

Temporary Stream Crossing

NS-4





Standard Symbol

Definition and Purpose

A temporary stream crossing is a structure placed across a stream or water body that allows vehicles to cross during construction and minimize, reduce, or manage erosion and downstream sedimentation caused by the vehicles.

Appropriate Applications

Where appropriate regulatory permits have been secured and requirements strictly followed.

Where construction equipment or vehicles need to frequently cross a waterway.

When alternate access routes impose significant constraints.

When crossing perennial streams or waterways causes significant erosion.

Where construction activities will not last longer than one year.

Limitations

Typically, stream crossings require regulatory permits such as RWQCB 401 Certification, U.S. Army Corps of Engineers 404 permit and approval by California Department of Fish and Wildlife.

If numerical-based water quality standards are mentioned in any of these regulatory permits, monitoring and water quality sampling may be required and must comply with Standard Specification 13-1.01C (4) Water Quality Monitoring or the contract special provisions. If monitoring related to these numerical-based water quality standards is not addressed in the contract documents, contact the RE.

Ensure that project specific requirements from regulatory permits for the installation, removal or restoration of creek banks are fully implemented.

Will usually disturb the waterway during installation and removal.

Installation may require dewatering or temporary diversion of the stream. See NS-2, “Dewatering Operations” and NS-5, “Clear Water Diversion.”

May become a constriction in the waterway, which can obstruct flood flow and cause flow backups or washouts. If improperly designed, flow backups can increase the pollutant load through washouts and scouring.

Use of natural or other gravel in the stream for construction of Cellular Confinement System (CCS) ford crossing will be contingent upon approval by fisheries agencies.

Ford crossings may degrade water quality due to contact with vehicles and equipment.

CCS should not be used in excessively high or fast flows.

Upon completion of construction activities, CCS blocks must be removed from stream.

Standards and Specifications

General Requirements

Location of the temporary stream crossing shall address:

Site selection where erosion potential is low.

Areas where the side slopes from highway runoff will not spill into the side slopes of the crossing.

The following types of temporary stream crossings shall be considered:

- Culverts - Used on perennial and intermittent streams.
- Fords - Appropriate during the dry season in arid areas. Used on dry washes and ephemeral streams, and low flow perennial streams. CCS, a type of ford crossing is also appropriate for use in streams.
- Bridges - Appropriate for streams with high flow velocities, steep gradients and/or where temporary restrictions in the channel are not allowed.

Design and installation requires knowledge of stream flows and soil strength. Designs shall be prepared under direction of, and approved by, a registered civil and/or structural engineer. Both hydraulic and construction loading requirements shall be considered with the following:

- Comply with the requirements for culvert and bridge crossings, as contained in the Caltrans Highway Design Manual, particularly if the temporary stream crossing will remain during high flow periods.
- Provide stability in the crossing and adjacent areas to withstand the design flow. The design flow and safety factor shall be selected based on careful evaluation of the risks due to over topping, flow backups, or washout.

- Avoid using oil, AC or other potentially hazardous waste materials for the temporary traveled surface over the stream crossing.

Construction Considerations

Stabilize construction roadways, adjacent work area and stream bed against erosion.

Construct during dry periods to minimize stream disturbance and reduce costs.

Construct at or near the natural elevation of the stream bed to prevent potential flooding upstream of the crossing.

Install temporary sediment control BMPs in accordance with sediment control BMPs presented in Section 4 to minimize embankment scour due to f flow conditions.

Vehicles and equipment shall not be driven, operated, fueled, cleaned, maintained, or stored in the wet or dry portions of a water body where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as authorized by the construction project regulatory permits, as necessary to complete the work.

Temporary water body crossings and encroachments shall be constructed to minimize scour. Cobbles used for temporary water body crossings or encroachments shall be clean, rounded river cobble.

The exterior of vehicles and equipment that will encroach on the water body within the project shall be maintained free of grease, oil, fuel, and residues.

Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. Precautions shall be taken to avoid damage to vegetation. Disturbed vegetation shall be replaced with the appropriate soil stabilization measures. Appropriate use of ESA fencing should be conducted and maintain in accordance with SS-2 “Preservation of Existing Vegetation.”

Riparian vegetation, when removed pursuant to the provisions of the work, shall be cut off no lower than ground level to promote rapid re-growth. Access roads and work areas built over riparian vegetation shall be covered by a sufficient layer of clean river run cobble to prevent damage to the underlying soil and root structure. The cobble shall be removed upon completion of project activities.

Any temporary artificial obstruction placed within flowing water shall only be built from material, such as clean gravel, that will cause little or no siltation.

Drip pans shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than one hour.

Specific Considerations

Culverts are relatively easy to construct and able to support heavy equipment loads.

Fords are the least expensive of the crossings, with maximum load limits.

Temporary fords are not appropriate if construction will continue through a period of high flows if thunderstorms are likely, or if the stream is perennial.

CCS crossing structures consist of clean, washed gravel and cellular confinement system blocks. CCS are appropriate for streams that would benefit from an influx of gravel; for example, salmonid streams, streams or rivers below reservoirs, and urban, channelized streams. Many urban stream systems are gravel-deprived due to human influences, such as dams, gravel mines, and concrete channels.

CCS allow designers to use either angular or naturally-occurring, rounded gravel, because the cells provide the necessary structure and stability. In fact, natural gravel is optimal for this technique, because of the habitat improvement it will provide after removal of the CCS.

A gravel depth of 6 to 12 inches for a CCS structure is sufficient to support most construction equipment.

An advantage of a CCS crossing structure is that relatively little rock or gravel is needed, because the CCS provides the stability.

Bridges are generally more expensive to design and construct, but provide the least disturbance of the stream bed and constriction of the waterway flows.

Maintenance and Inspection

Periodic removal of debris behind fords, in culverts, and under bridges.

Replacement of lost protective aggregate from inlets and outlets of culverts.

Removal of temporary crossing promptly when it is no longer needed.

Inspection shall, at a minimum, occur weekly and after each significant rainfall, and include:

- Checking for blockage in the channel, debris buildup in culverts or behind fords, and under bridges.
- Checking for erosion of abutments, channel scour, riprap displacement, or piping in the soil.
- Checking for structural weakening of the temporary crossing, such as cracks, and undermining of foundations and abutments.

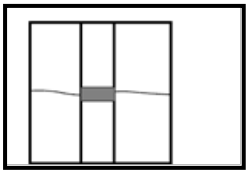
The WPC Manager or QSP must ensure that stream crossings do not create potential for sediment laden discharge or other materials onto the waterbody.

SWPPP or WPCP

Temporary Stream Crossing must be discussed in Section 500.4 of the SWPPP or Section 30.3 of the WPCP.

Clear Water Diversion

NS-5



Standard Symbol

Definition and Purpose

Clear water diversion consists of a system of structures and measures that intercept surface water runoff upstream of a project site, transport it around the work area, and discharge it downstream with minimal water quality degradation from either the project construction operations or the construction of the diversion. Clear water diversions are used to reduce sediment pollution from construction work occurring in or adjacent to water.

Isolation techniques are clear water diversion methods that isolate near shore work from a waterbody. Structures commonly used as part of this system include diversion ditches, berms, dikes, slope drains, rock, gravel bags, wood, sheet piles, aqua barriers, cofferdams, filter fabric or turbidity curtains, drainage and interceptor swales, pipes, or flumes.

Appropriate Applications

A clear water diversion is typically implemented where appropriate permits have been secured and work must be performed in a live stream or water body. Work in jurisdictional waters typically require the following, at a minimum, Clean Water Act Section 404, Clean Water Act Section 401 (RWQCB Water Quality Certification), and Fish and Game Code Section 1600 permits.

Clear water diversions are appropriate for isolating construction activities occurring within or near a water body such as streambank stabilization, or culvert, bridge, pier or abutment installation. They may also be used in combination with other methods, such as clear water bypasses and/or pumps.

Implement SS-12 “Streambank Stabilization” to minimize impacts to streambanks.

Where working areas encroach on live streams, barriers adequate to prevent the flow of muddy water into streams should be constructed and maintained between working areas and streams. During construction of the barriers, muddying of streams should be held to a minimum.

Channel diversions are appropriate for small stream where there is adequate right of way to create a temporary channel around a construction work area, and geosynthetics or rock can be used to handle the shear stresses associated with the expected flows.

Berms are appropriate for small perennial, intermittent, or ephemeral streams with temporary culverts or pipe diversions. Berms may also be used to shift flows to one side or the other within a channel.

Gravel bag berms (SC-6 “Gravel Bag Berms”) are appropriate for smaller streams where the hydraulic forces and water pressure can be adequately addressed with the weight of gravel-filled bags and plastic sheeting. This method results in a cofferdam-like isolation from the receiving water.

Cofferdams are appropriate for small streams and lakes to confine flows to one side, create a dry work area, or to berm entire small streams. Typically, this terminology is used in association with structures at Caltrans, though some inflatable cofferdams may be used for smaller applications.

Pumped diversions are suitable for short-term projects in intermittent and low flow streams. Excavation of a temporary bypass channel, or passing the flow through a pipe (called a “flume”) is appropriate for the diversion of streams less than 20 ft wide, with flow rates less than 100 cfs.

Piped diversions are appropriate for short-term projects with little base flow.

Water quality monitoring must typically be performed before and during in-water work, including the installation, operation, and removal of clear water diversions. Follow the requirements outlined in the Standard Specification or special provisions.

Limitations

Diversion/encroachment activities will usually disturb the waterway during installation and removal of diversion structures.

Specific permit requirements or mitigation measures, such as those required by the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, Federal Emergency Management Agency (FEMA), Regional Water Quality Control Board (RWQCB), etc. may be included in contract documents because of clear water diversion/encroachment activities.

Diversion/encroachment activities may constrict the waterway, obstruct flood flows and cause flooding or washouts. Diversion structures should not be installed without identifying potential impacts to the stream channel.

Diversion or isolation activities should not completely dam streamflow.

The designer should consider the size, depth of water, and risks for temporary stream diversion. Use this BMP and specification for small streams and low risk projects.

Coffer dams and more elaborate systems should be designed by engineering services staff with the appropriate structural background or by the contractor. The design decision and design parameters should be coordinated by the PDT, so that all permitting and highway design requirements are met.

Dewatering and removal may require additional sediment control or water treatment (See NS-2, "Dewatering Operations").

Heavy equipment driven in wet portions of a water body to accomplish work should be completely clean of petroleum residue, and water levels should be below the gearboxes of the equipment in use, or lubricants and fuels are sealed such that inundation by water should not result in leaks.

Mechanical equipment operated in the water shall not be submerged to a point above any axle of said mechanical equipment.

Excavation equipment buckets may reach out into the water to remove or place fill materials. Only the bucket of the crane/ excavator/backhoe may operate in a water body. The main body of the crane/excavator/backhoe shall not enter the water body, except as necessary to cross the stream to access the work site.

Stationary equipment such as motors and pumps, located within or adjacent to a water body, shall be positioned over drip pans.

Equipment shall not be parked below the high-water mark unless allowed by a regulatory agency permit or approval.

Drip pans shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than one hour.

Where possible, avoid or minimize diversion/encroachment impacts by scheduling construction during periods of low flow or when the stream is dry. See also the project special provisions for scheduling requirements.

Scheduling shall also consider seasonal releases of water from dams, fish migration and spawning seasons, and water demands due to crop irrigation.

Materials and equipment should be moved from diversion work area prior to forecasted rain events to prevent non-storm water discharges.

Standards and Specifications

General Requirements

Most small stream diversions can be designed by the district and coordinated with the HQ OHSD. In many cases the diversion can be located on the plan sheet referencing the non-standard specification for Temporary Creek Diversion.

Many projects will have multiple culverts, so it may be appropriate to develop a table of the lump sum costs for each system, this should be provided to the RE to help review the Temporary Creek Diversion System Plan, to help them determine if all needed items are included.

The types of diversion for small to medium sized streams may include:

- Pumped systems
- Temporary culverts
- Inflatable coffer dams (Consult HQ OHSD for specification)

For larger (large rivers, lakes, bays, and ocean areas) temporary creek diversions that have a higher risk to worker safety and a more extensive design is required to address the forces for the depth and flow of the water, the district's structures representative should be consulted for the design (e.g., larger rivers where coffer dams are required). The engineer must consult and follow the Caltrans Engineering Services Shoring Guidance and consult with Construction as the owner of the specification.

- Diversion can be constructed from timber, soil, or steel. But in most cases are designed and constructed with steel sheet piles. Refer to 19-3.03C Cofferdams (sheet piles).
- Guidance: Caltrans Shoring Guide (Engineering Services)
  Dewatering: Field Guide to Construction Site Dewatering, NS-2 "Dewatering Operations," and Section 13-4.03G of the Standard Specifications for use with coffer dams or other large in-water work.
- May need to treat or control seepage water prior to discharge, consult appropriate requirements for treatment design needs.

When any artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall, at all times, be allowed to pass downstream to maintain aquatic life downstream.

Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations.

Disturbed vegetation shall be replaced with the appropriate soil stabilization measures and in accordance with the project's special provisions.

Riparian vegetation, when removed pursuant to the provisions of the work, shall be cut off no lower than ground level to promote rapid re-growth. Access roads and work areas built over riparian vegetation shall be covered by a sufficient layer of clean river run rock to prevent damage to the underlying soil and root structure. The rock shall be removed upon completion of project activities.

Construct diversion structures with materials free of potential pollutants such as soil, silt, sand, clay, grease, or oil.

Clear water diversions incorporating clean washed gravel may be appropriate for use in salmon spawning streams.

Coordination with a variety of functional units at the Department may be required to implement this BMP.

Design Considerations

Does the construction of the temporary diversion system cause more environmental damage to the riparian, wetland, or 100-year floodplain area, than to construct the project without the diversion BMP? This is a consideration for all projects, but is usually appropriate for short term construction projects for temporary or ephemeral streams, where scheduling of the project when the stream is dry, may be more effective than the construction of a large diversion system in a sensitive environmental area, where construction equipment could disturb fragile vegetation, roots, sensitive species, soil structure, and root systems.

Stream hydrology considerations include: Stream channel geometry, tributary watershed area, stream bed material, and predicted flow rates during construction. Follow methods in HDM Section 810 for the appropriate methods and rates for sizing the temporary diversion system.

Sizing the temporary diversion. In the past many temporary diversion system guidance documents required mandatory minimum return storms for sizing the systems, for example the 2-year, 5-year, or 10-year, 24-hour return period. This can result in temporary diversion system as large as the drainage system they are replacing and result in large impacts to the stream riparian zone, with large disturbed soil areas. Overly conservative approaches for the hydrology sizing to protect the environment can inadvertently cause other impacts to the environment for its construction. Each project should be sized for the appropriate risks and should be based on regulatory restrictions.

In coordination with District Hydraulics, consider the consequences for diversion exceedance including; public and work safety, environment, legal, regulatory permit requirements, costs, space, and schedule.

Hydrology Sizing Methods

The sizing of clear water diversion systems varies by the time of year, local hydrology, and duration of the diversion. If there is a prescriptive storm size in a permit document, then design to the required event size. A 2-year, 24-hour storm event has been used by many as a default event, but more recent studies have shown that this may oversize the system and cause more disturbance in the sensitive stream zone than is necessary.

Diversion structures must be adequately designed to accommodate fluctuations in water depth or flow volume due to tides, storms, flash floods, etc. Careful analysis of the local hydrology history and risk analysis is required to minimize the diversion impacts.

Temporary Diversions/Encroachments

Construct diversion channels in accordance with SS-9, “Earth Dikes/Drainage Swales, and Ditches.”

In high flow velocity areas, stabilize slopes of embankments and diversion ditches using an appropriate liner, in accordance with SS-12 “Streambank Stabilization,” and SS-7, “Plastic Covers & Rolled Erosion Control Products,” or use rock slope protection, as described in Standard Specifications Section 72 2, “Rock Slope Protection.”

Where appropriate, use natural streambed materials such as large cobbles and boulders for temporary embankment/slope protection, or other temporary soil stabilization methods.

Provide for velocity dissipation at transitions in the diversion, such as the point where the stream is diverted to the channel and the point where the diverted stream is returned to its natural channel. See also SS-10, "Outlet Protection/Velocity Dissipation Devices."

Temporary Dry Construction Areas

When dewatering behind temporary structures to create a temporary dry construction area, such as cofferdams, pass pumped water through a sediment settling device, such as a portable tank, settling basin, or Active Treatment System if necessary, before returning water to the water body; see NS-2, "Dewatering Operations" and Standard Specification 13-8 "Temporary Active Treatment System."

If the presence of polluted water or sediment is identified in the contract, the contractor shall implement dewatering pollution controls as required by the contract documents. If the quality of water or sediment to be removed while dewatering is not identified as polluted in the contract documents, but is later determined by observation or testing to be polluted, the contractor shall notify the RE and comply with Standard Specifications Section 4-1.06 "Differing Site Conditions."

Any substance used to assemble or maintain diversion structures, such as form oil, shall be non-toxic and non-hazardous.

Any material used to minimize seepage underneath diversion structures, such as grout, shall be non toxic, non hazardous, and as close to a neutral pH as possible.

Instream Construction Sediment Control

Instream Construction Sediment Control

There are three different options currently available for reducing turbidity while working in a stream or river. The stream can be:

- Isolated from the area in which work is occurring by means of a water barrier.
- The stream can be diverted around the work site through a pipe or temporary channel.
- One can employ construction practices that minimize sediment suspension.
- The highest hazard for sedimentation from instream construction generally occurs when the sediment control structure is being installed and when it is being removed. Generally, the best time to install the stream isolation or diversion structure is when the stream flow is low. Conversely, the optimum time to remove in-stream diversion or isolation structures may be during the rising limb of a storm hydrograph. A probable "worst time" to release high TSS into a stream system with diminishing aquatic habitat might be when the stream flow is very low; summer low flow, for example. During these times, the flow may be low while the biological activity in the stream is very high. On the other hand, the addition of short-term spike in TSS or sediment during a big storm discharge might have a relatively low impact on the aquatic habitat or turbidity because the stream is already turbid, and the stream energy is capable of transporting both suspended solids, and large quantities of bedload through the system.

Techniques to Minimize Total Suspended Solids (TSS)

Padding - Padding laid in the stream below the work site may trap some solids that are deposited in the stream during construction. After work is done, the padding is removed from the stream, and placed on the bank to assist in revegetation.

Clean, washed gravel - Using clean, washed gravel decreases solid suspension, as there are fewer small particles deposited in the stream.

Excavation using a large bucket - Each time a bucket of soil is placed in the stream a portion is suspended. Approximately the same amount is suspended whether a small amount of soil is placed in the stream, or a large amount. Therefore, using a large excavator bucket instead of a small one, will reduce the total amount of soil that washes downstream.

Use of dozer for backfilling - Using a dozer for backfilling instead of a backhoe follows the same principles – the fewer times soil is deposited in the stream, the less soil will be suspended.

Partial dewatering with a pump - Partially dewatering a stream with a pump reduces the amount of water, and thus the amount of water that can suspend sediment.

Washing Fines

Partial Washing fines is an “in-channel” sediment control method, which uses water, either from a water truck or hydrant, to wash any stream fines that were brought to the surface of the channel bed during restoration, back into the interstitial spaces of the gravel and cobbles. This technique is useful in both intermittent or ephemeral stream channels with gravelly to cobbely substrate and may be useful in perennial streams just prior to removing isolation structures.

The purpose of this technique is to reduce or eliminate the discharge of sediment from the channel bottom during the first seasonal flows, or “first flush.” Sediment should not be allowed into stream channels; however, occasionally in-channel restoration work will involve moving or otherwise disturbing fines (sand and silt-sized particles) that are already in the stream, usually below bank-full discharge elevation. Subsequent re-watering (resumption of flows) of the channel can result in a plume of turbidity and sedimentation.

This technique washes the fines back into the channel bed. Bedload materials, including gravel cobbles, boulders and those fines, are naturally mobilized during higher storm flows. This technique is intended to delay the discharge until the fines would naturally be mobilized.

This technique should be used when construction work is required in channels. It is especially useful in intermittent or ephemeral streams in which work is performed “in the dry,” and which subsequently become re-watered.

Prior to using this technique consider the following:

- The stream must have sufficient gravel and cobble substrate composition.
- The use of this technique requires consideration of time of year and timing of expected stream flows.

- The optimum time for the use of this technique is in the fall, prior to winter flows.
- Consultation with, and approval from the Department of Fish and Wildlife and the Regional Water Quality Control Board may be required.

The following items should be considered when preparing project plans and specifications when this technique is used:

- Apply sufficient water to wash fines, but not cause further erosion or runoff.
- Apply water slowly and evenly to prevent runoff and erosion.
- Consult with Department of Fish and Wildlife and the Regional Water Quality Control Board for specific water quality requirements of applied water (e.g., chlorine).

Isolation Techniques

Isolation techniques are methods that isolate near shore work from a waterbody. Techniques include sheet pile enclosures, inflatable cofferdams like Aqua Dam, berms or gravel bag berms (see SC-6, “Gravel Bag Berm") with impermeable membrane or plastic sheeting, gravel bags, cofferdams, and K-rail.

Filter Fabric Isolation Technique

A filter fabric isolation structure is a temporary structure built into a waterway to enclose a construction area and reduce sediment pollution from construction work in or adjacent to water. This structure is composed of filter fabric, gravel-filled bags, and steel t-posts.

Filter fabric may be used for construction activities such as streambank stabilization, or culvert, bridge, pier or abutment installation. It may also be used in combination with other methods, such as clean water bypasses and/or pumps.

This method involves placement of gravel bags or continuous berms to “key-in” the fabric, and subsequently staking the fabric in place.

If spawning gravel (gravel between 1 and 4 inches) is used, all other components of the isolation can be removed from the stream, and the gravel can be spread out and left as salmon spawning habitat if permitted in the project’s 404 permit. Whether spawning gravel or other types of gravel are used, only clean washed gravel should be used as infill for the gravel bags or continuous berm.

This is a method that should be used in relatively calm water, and can be used in smaller streams.

Prior to using this technique consider the following:

- Do not use if the installation, maintenance and removal of the structures will disturb sensitive aquatic species of concern.
- Not appropriate for projects where dewatering is necessary.
- Not appropriate to completely dam streamflow.

The following items should be considered when preparing project plans and specifications when this technique is used:

- For the filter fabric isolation method, a non-woven or heavy-duty fabric (refer to Standard Specifications Section 96-1.02B) is recommended over standard silt fence. Using rolled geotextiles allows non-standard widths to be used.
- Anchor filter fabric with gravel-filled bags filled with clean, washed gravel. Do not use sand. If a bag should split open, the gravel can be left in the stream if permitted under the project's 404 permit, where it can provide aquatic habitat benefits.
- Another anchor alternative is a continuous berm, made with the Continuous Berm Machine. This is a gravel-filled bag that can be made in very long segments. The length of the berms is usually limited to 20 ft for ease of handling.
- Place the fabric on the bottom of the stream, and place either a bag of clean, washed gravel or a continuous berm over the bottom of the fabric, such that a bag-width of fabric lies on the stream bottom. The bag should be placed on what will be the outside of the isolation area.
- Pull the fabric up, and place a metal t-post immediately behind the fabric, on the inside of the isolation area; attach the fabric to the post with three diagonal nylon ties.
- Continue placing fabric as described above until the entire work area has been isolated, staking the fabric at least every 6 ft.
- During construction, inspect daily during the workweek.
- Schedule additional inspections during storm events.
- Immediately repair any gaps, holes or scour.
- Remove sediment buildup.
- Ensure pipe diversion is properly anchored to prevent shifting or leaking during use.
- Remove BMP upon completion of construction activity. Recycle or re-use if applicable.
- Re-vegetate areas disturbed by BMP removal if needed.

Turbidity Curtain Isolation Technique

A turbidity curtain is a fabric barrier used to isolate the near shore work area. The barriers are intended to confine the suspended sediment. The curtain is a floating barrier, and thus does not prevent water from entering the isolated area; rather, it prevents suspended sediment from getting out.

Turbidity curtains should be used where sediment discharge to a stream is unavoidable. They are used when construction activities adjoin quiescent waters, such as lakes, ponds, lagoons, bays, and slow flowing rivers. The curtains are designed to deflect and contain sediment within a limited area and provide sufficient retention time so that the soil particles will fall out of suspension.

Prior to using this technique consider the following:

- Turbidity curtains should not be used in flowing water; they are best suited for use in quiescent ponds, lakes, lagoons, bays, and very slow-moving rivers.
- Turbidity curtains should not be placed across the entire width of a channel.
- Removing sediment that has been deflected and settled out by the curtain may create a discharge problem through the re-suspension of particles and by accidental dumping by the removal equipment.
- Turbidity curtains may require a higher level of maintenance, adjustments, and relocation when deployed in comparison to structural isolation methods. However, turbidity curtains consist of

flexible materials and may be repositioned and reconfigured as the limits of construction activity change.

The following items should be considered when preparing project plans and specifications when this technique is used:

- Turbidity curtains should be oriented parallel to the direction of flow wherever possible to avoid exerting excessive pressure on the fabric.
- The curtain should extend the entire depth of the watercourse in calm-water situations.
- In wave conditions, the curtain should extend to within 1 ft of the bottom of the watercourse, such that the curtain does not stir up sediment by hitting the bottom repeatedly. If it is desirable for the curtain to reach the bottom in an active-water situation, a pervious filter fabric may be used for the bottom 1 ft.
- The top of the curtain should consist of flexible flotation buoys, and the bottom shall be held down by a load line incorporated into the curtain fabric. The fabric shall be a brightly colored impervious mesh.
- The curtain shall be held in place by anchors placed at least every 100 ft, or as recommended by the manufacturer based on site-specific conditions, such as flow rate, wind speeds, currents, tidal influence, and wave action.
- First place the anchors, then tow the fabric out in a furled condition, and connect to the anchors. The anchors should be connected to the flotation devices, and not to the bottom of the curtain. Once in place, cut the furling lines, and allow the bottom of the curtain to sink. A second set of anchors may be required in tidally-influenced waters to secure the curtain against both the flood and ebb tides.
- Sediment that has been deflected and settled out by the curtain may be removed if so directed by the on-site inspector or the RE. Consideration must be given to the probable outcome of the removal procedure. It must be asked if it will create more of a sediment problem through re-suspension of the particles or by accidental dumping of material during removal. It is recommended that the soil particles trapped by the turbidity curtain only be removed if there has been a significant change in the original contours of the affected area in the watercourse.
- Particles should always be allowed to settle for a minimum of 6 to 12 hours prior to their removal or prior to removal of the turbidity curtain.
- The curtain should be inspected daily for holes or other problems, and any repairs needed should be made promptly.
- Allow sediment to settle for 6 to 12 hours prior to removal of sediment or curtain. This means that after removing sediment, wait an additional 6 to 12 hours before removing the curtain.
- To remove, install furling lines along the curtain, detach from anchors, and tow out of the water. Water quality monitoring is typically required before removing the turbidity curtain to verify that the entrained water, sediment, and other potential contaminants, such as sulfides, would not violate a water quality standard when released.

K-rail River Isolation

This is temporary sediment control, or stream isolation method that uses K-rails to form the sediment deposition area, or to isolate the in-stream or near-bank construction area.

Barriers are placed end-to-end in a pre-designed configuration and gravel-filled bags are used at the toe of the barrier and also at their abutting ends to seal and prevent movement of sediment beneath or through the barrier walls.

The K-rail isolation can be used in streams with higher water velocities than many other isolation techniques.

Prior to using this technique consider the following:

- The K-rail method does not allow for full dewatering.

The following items should be considered when preparing project plans and specifications when this technique is used:

- To create a floor for the K-rail, move large rocks and obstructions. Place washed gravel and gravel-filled bags to create a level surface for K-rail to sit.
- Place the bottom two K-rails adjacent to each other, and parallel to the direction of flow; fill the center portion with gravel bags. Then place the third K-rail on top of the bottom two; there should be sufficient gravel bags between the bottom K-rails such that the top one is supported by the gravel. Place plastic sheeting around the K-rails, and secure at the bottom with gravel bags.
- Further support can be added by pinning and cabling the K-rails together. Also, large riprap and boulders can be used to support either side of the K-rail, especially where there is strong current.
- The barrier should be inspected at least once daily, and any damage, movement or other problems should be addressed immediately.
- Sediment should be allowed to settle for at least 6 to 12 hours prior to removal of sediment, and for 6 to 12 hours prior to removal of the barrier.

Stream Diversions

Stream diversions consist of a system of structures and measures that intercept an existing stream upstream of the project and, transports it around the work area, and discharges it downstream. The selection of which stream diversion technique to use depends upon the type of work involved, physical characteristics of the site, and the volume of water flowing through the project.

Pumped diversions are appropriate in areas where de-watering is necessary.

Dam-type diversions may serve as temporary access to the site.

Where work areas require isolation from flows.

Prior to using this technique consider the following:

- Pumped diversions have limited flow capacity.
- Pumped diversion require frequent monitoring of pumps.
- Large flows during storm events can overtop dams.
- Flow diversion and re-direction with small dams involves in-stream disturbance and mobilization of sediment.

The following items should be considered when preparing project plans and specifications when this technique is used:

- Installation guidelines will vary based on existing site conditions and type of diversion used.
- Diversions shall be sized to convey design flood flows.
- Pump capacity must be sufficient for design flow; the upper limit is approximately 10 cfs (the capacity of two 8 inch pumps).
- Adequate energy dissipation must be provided at the outlet to minimize erosion.
- Dam materials used to create dams upstream and downstream of diversion should be erosion resistant; materials such as steel plate, sheetpile, sandbags, continuous berms, inflatable water bladders, etc. would be acceptable.
- When constructing a diversion channel, begin excavation of the channel at the proposed downstream end, and work upstream. Once the watercourse to be diverted is reached, and the excavated channel is stable, breach the upstream end, and allow water to flow down the new channel. Once flow has been established in the diversion channel, install the diversion weir in the main channel; this will force all water to be diverted from the main channel.
- Inspect diversion/encroachment structures before and after significant storms, and at least once per week while in service. Inspect daily during the construction.
- Pumped diversions require frequent monitoring of pumps.
- Inspect embankments and diversion channels before and after significant storms, and at least once per week while in service for damage to the linings, accumulating debris, sediment buildup, and adequacy of the slope protection. Remove debris and repair linings and slope protection as required. Repair holes, gaps, or scour.
- Upon completion of work, the diversion or isolation structure should be removed and flow should be re-directed through the new culvert or back into the original stream channel. Recycle or re-use if applicable.

SWPPP or WPCP

Clear Water Diversion must be discussed in Section 500.4 of the SWPPP or Section 30.3 of the WPCP.

Illegal Connection and Illicit Discharge Detection and Reporting

NS-6

Standard Symbol

Definition and Purpose

Procedures and practices designed for construction contractors to recognize illegal connections, illicit discharges or illegally dumped or discharged materials on a construction site and report incidents to the RE.

Appropriate Applications

Illegal connection and Illicit discharge detection and reporting is applicable anytime an illegal connection or illicit discharge is discovered, or illegally dumped material is found on the construction site.

This BMP applies to all construction projects.

Limitations

Illegal connection and Illicit discharge or dumping, for the purposes of this BMP, refer to discharges and dumping caused by parties other than the contractor.

Procedures and practices presented in this BMP are general. Contractor shall use extreme caution, immediately notify the RE when illicit connections or illegal dumping or discharges are discovered, and take no further action unless directed by the RE.

If pre-existing hazardous materials or wastes are known to exist onsite, the contractor's responsibility will be detailed in separate special provisions. Onsite area should be clearly marked and described in the SWPPP or WPCP.

Illegal Connection and Illicit Discharge Detection and Reporting

NS-6

Standards and Specifications

Inspection

Inspect site before beginning the job for evidence of Illegal connections or illicit dumping or discharges.

Illegal Connection and Illicit Discharge Detection and Reporting

Solids Look for debris or trash piles. Solid waste dumping often occurs on roadways with light traffic loads or in areas not easily visible from the traveled way.

Liquids – signs of illegal liquid dumping or discharge can include:

- Visible signs of staining or unusual colors to the pavement or surrounding adjacent soils.
- Pungent odors coming from the drainage systems.
- Discoloration or oily substances in the water or stains and residues detained within ditches, channels or drain boxes.
- Abnormal water flow during the dry weather season.

Urban Areas - Evidence of illegal connections or illicit discharges is typically detected at storm drain outfall locations or at manholes. Signs of an illegal connection or illicit discharge can include:

- Abnormal water flow during the dry weather season.
- Unusual flows in subdrain systems used for dewatering.
- Pungent odors coming from the drainage systems.
- Discoloration or oily substances in the water or stains and residues detained within ditches, channels or drain boxes.
- Excessive sediment deposits, particularly adjacent to or near active off-site construction projects.

Rural Areas - Illegal connections or illicit discharges involving irrigation drainage ditches are detected by visual inspections. Signs of an illicit discharge can include:

- Abnormal water flow during the dry weather season.
- Non-standard drainage junction structures.
- Broken concrete or other disturbances at or near junction structures.

Reporting

Notify the RE of any illegal connections and illicit dumping or discharge incidents at the time of discovery. Do not take further action unless ordered.

The RE will notify the District Construction Stormwater Coordinator, who should coordinate with the NPDES Coordinator for reporting.

Inspection, Cleanup, and Removal

Notify the RE of any illegal connections and illegal dumping or illicit discharge incidents at the time of discovery. Do not take further action unless ordered.

The contractor is not responsible for investigation and clean-up of illegal connections or dumping or illicit discharges not generated by the contractor. Caltrans may direct the contractor to clean up non-hazardous dumped or discharged material on the construction site. Assume that unlabeled or unidentifiable material is hazardous.

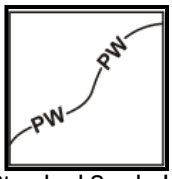
Inspect the entire project site at least weekly to check for illegal connections or illicit discharges.

SWPPP or WPCP

Illegal Connection and Illicit Discharge Detection and Reporting must be discussed in Section 500.4.1 of the SWPPP or Section 30.3 of the WPCP.

Potable Water/Irrigation

NS-7



Standard Symbol

Definition and Purpose

Potable Water/Irrigation management consists of practices and procedures to manage the discharge of potential pollutants generated during discharges from irrigation water lines, landscape irrigation, lawn or garden watering, planned and unplanned discharges from potable water sources, water line flushing, and hydrant flushing.

Appropriate Applications

Implement this BMP whenever the above activities or discharges occur at or enter a construction site.

Limitations

None identified.

Standards and Specifications

Inspect irrigated areas within the construction limits for excess watering. Adjust watering times and schedules to ensure that the appropriate amount of water is being used and to minimize runoff. Consider factors such as soil structure, grade, relative compaction, time of year, and type of plant material in determining the proper amounts of water for a specific area.

Take precautions to prevent irrigation water from eroding soil, wetting vehicles and pavement, or otherwise causing sediment, hydrocarbons, and other non-visible pollutants that accumulate on those surfaces to discharge into a storm drain system or receiving waterbody.

When possible, discharges from water line flushing or temporary Active Treatment Systems (see Appendix C "Temporary Active Treatment System) should be reused for landscaping purposes.

Resident Engineer (RE) approval is required prior to commencing any washing activities that could discharge to the storm drain or receiving waterbody.

Where possible, direct water from off-site sources around or through a construction site in a way that minimizes contact with the construction site.

Perform pressure tests on the irrigation system supply lines to test for leaks, which could result in erosion or runoff if breached.

Shut off the water source to broken lines, sprinklers, or valves as soon as possible to prevent excess water flow.

Protect downstream storm water drainage systems and receiving waters from water pumped or bailed from trenches excavated to repair water lines.

Maintenance and Inspection

Repair broken water lines as soon as possible or as directed by the RE.

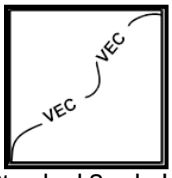
Inspect irrigated areas regularly for signs of erosion and/or discharge.

SWPPP or WPCP

Potable Water/Irrigation must be discussed in Section 500.4 of the SWPPP and/or Section 30.3 of the WPCP.

Vehicle and Equipment Cleaning

NS-8



Standard Symbol

Definition and Purpose

Vehicle and equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to storm drain systems or to watercourses.

Appropriate Applications

These procedures are applied on all construction sites where vehicle and equipment cleaning is performed.

Limitations

This BMP may be limited or disallowed under regulatory agency permits, particularly near Environmentally Sensitive Areas (ESAs).

Generates non-stormwater that requires management, and, in some cases, the disposal of hazardous waste.

Standards and Specifications

General Requirements

Limit vehicle and equipment cleaning or washing at the job site except for the safety and protection of the equipment and as needed to comply with regulatory agency permits and approvals.

Cleaning of vehicles and equipment with soap, solvents or steam shall not occur on the job site unless the RE has been notified in advance and the resulting wastes are fully contained in accordance with Standard Specifications Section 14-11 or 13-4.03D (5), whichever is applicable. Do not use diesel to clean vehicles and minimize the use of solvents.

Vehicle and equipment wash water shall be contained for percolation or evaporative drying away from storm drain inlets or receiving waters and should not be discharged within the highway right-of-way. Apply other appropriate BMPs as applicable.

All vehicles/equipment that regularly enter and leave the construction site must be cleaned off-site.

Resulting wastes and by-products shall not be discharged or buried within the highway right-of-way, and must be captured and recycled or disposed according to the requirements of WM-10, "Liquid Waste Management" or WM-6, "Hazardous Waste Management," depending on the waste characteristics.

Implementation

When vehicle/equipment washing/cleaning must occur onsite, and the operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area shall have the following characteristics, and shall be arranged with the WPC Manager, QSD, or QSP as well as the Construction Storm Water Coordinator:

- Located away from storm drain inlets, drainage facilities, or watercourses.
- Paved with concrete or asphalt and bermed to contain wash waters and to prevent run-on and runoff.
- Configured with a sump to allow collection and disposal of wash water.
- Wash waters shall not be discharged to storm drains or watercourses.
- Used only when necessary.

When cleaning vehicles/equipment with water:

- Use as little water as possible. High pressure sprayers may use less water than a hose, and shall be considered.
- Use positive shutoff valve to minimize water usage.
- Facility wash racks shall discharge to a sanitary sewer, recycle system or other approved discharge system and shall not discharge to the storm drainage system or watercourses.

Maintenance and Inspection

The control measure shall be inspected at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

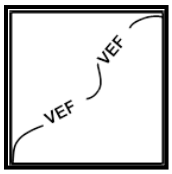
Inspect wash area and sump regularly. Remove liquids and sediment as needed or as directed by the RE.

SWPPP or WPCP

Vehicle Equipment Cleaning must be discussed in Section 500.4.2 of the SWPPP or Section 30.3 of the WPCP.

Vehicle and Equipment Fueling

NS-9



Standard Symbol

Definition and Purpose

Vehicle and equipment fueling procedures and practices are designed to minimize or eliminate the discharge of fuel spills and leaks into storm drain systems or to receiving waters.

Appropriate Applications

These procedures are applied on all construction sites where vehicle and equipment fueling takes place.

Limitations

This BMP may be limited or disallowed under regulatory agency permits, particularly near Environmentally Sensitive Areas (ESAs).

Onsite vehicle and equipment fueling should only be used where it's impractical to send vehicles and equipment off-site for fueling.

Standards and Specifications

When fueling must occur onsite, the contractor shall select and designate an area or areas to be used, subject to approval of the RE.

Dedicated fueling areas shall be protected from stormwater run-on and runoff, and shall be located at least 50 feet from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.

Protect fueling areas with berms or dikes to prevent run-on, runoff, and to contain spills.

For long-term projects, consider constructing roofs or using portable tents over maintenance and fueling areas.

Absorbent spill clean-up materials and spill kits shall be available in fueling areas and on fueling trucks and used on small spills instead of hosing down or burying techniques. Affected absorbent material and spill kits should be removed promptly and disposed of properly after use.

Drip pans or absorbent pads shall be readily available during vehicle and equipment fueling.

Vehicle and equipment fueling areas shall not be left unattended during fueling activities.

Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut-off to control drips.

Use vapor recovery nozzles to help control drips as well as air pollution where required by the Air Quality Management Districts.

Ensure the nozzle is secured upright when not in use.

Fuel tanks shall not be "topped-off."

Federal, state, and local requirements shall be observed for any stationary above ground storage tanks. Refer to WM-1, “Material Delivery and Storage” for specifics as to what needs to be included for BMP protection and documented in the SWPPP or WPCP.

Portable fuel canisters should be kept in a flammable cabinet when not in use.

Maintenance and Inspection

Vehicles and equipment shall be inspected on each day of use for leaks. Leaks shall be repaired immediately or problem vehicles or equipment shall be removed from the project site.

Fueling areas and storage tanks shall be inspected at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

Immediately cleanup spills and properly dispose of contaminated soil and cleanup materials.

SWPPP or WPCP

Vehicle and Equipment Fueling must be discussed in Section 500.4.2 of the SWPPP or Section 30.3 of the WPCP.

Vehicle and Equipment Maintenance NS-10

Standard Symbol

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of pollutants to the storm drain systems or to receiving waters from vehicle and equipment maintenance activities.

Appropriate Applications

These procedures apply on all construction projects where an onsite uncovered yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Limitations

This BMP may be limited or disallowed under regulatory agency permits, particularly near Environmentally Sensitive Areas (ESAs).

Onsite vehicle and equipment maintenance should only be used where it's impractical to send vehicles and equipment off-site for fueling.

Standards and Specifications

When maintenance must occur onsite, the contractor shall select and designate an area to be used, subject to approval of the RE and implement appropriate controls for the activities to be performed.

Dedicated maintenance areas shall be on level ground and protected from storm water run-on and runoff, and shall be located at least 50 ft from downstream drainage facilities and receiving waters.

Protect maintenance areas with berms or dikes to prevent run-on, runoff, and to contain spills.

For long-term projects, consider constructing roofs or using portable tents over maintenance areas.

Absorbent spill clean-up materials and spill kits shall be available in maintenance areas and used on small spills instead of hosing down or burying techniques. Affected absorbent material and spill kits should be removed promptly and disposed of properly after use.

Drip pans or absorbent pads shall be placed under vehicles and equipment when performing maintenance work that involves fluids. Vehicles and equipment maintenance areas shall not be left unattended during maintenance activities.

Drip pans or plastic sheeting shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than one hour.

Properly dispose or recycle used batteries and tires as well as any other vehicle or equipment parts.

Substances used to coat asphalt transport trucks and asphalt-spreading equipment shall be non-toxic.

Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.

Do not dump fuels and lubricants onto the ground.

Do not place used oil in a dumpster or pour into a storm drain or watercourse.

Do not bury used tires.

Repair fluid and oil leaks immediately.

Provide spill containment dikes or secondary containment around stored oil and chemical drums. Refer to WM-1, "Material Delivery and Storage" for details.

Maintenance and Inspection

Vehicles and equipment shall be inspected on each day of use for leaks. Leaks shall be repaired immediately or removed from the project site.

Maintenance areas and storage tanks shall be inspected regularly.

Maintain waste fluid containers in leak proof condition.

Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.

Inspection and Maintenance of these areas must be properly documented and the WPC Manager must ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

Vehicle and Equipment Maintenance must be discussed in Section 500.4 of the SWPPP or Section 30.3 of the WPCP.

Pile Driving Operations

NS-11

Standard Symbol

Definition and Purpose

The construction and retrofit of bridges and retaining walls often include driving piles for foundation support and shoring operations. Driven piles are typically constructed of concrete, steel, or timber. Driven sheet piles are used for shoring and cofferdam construction. Proper control and use of equipment, materials, and waste products from pile driving operations will reduce the discharge of potential pollutants to the storm drain system or receiving waters.

Appropriate Applications

These procedures apply to construction sites near or adjacent to surface waters or groundwater where permanent and temporary pile driving operations (impact and vibratory) take place, including operations using pile shells for construction of cast-in-steel-shell and cast-in-drilled-hole piles.

Limitations

None identified.

Standards and Specifications

Have spill kits and cleanup materials available at all locations of pile driving. Refer to WM-4 "Spill Prevention and Control."

Place drip pans, absorbent pads, or plastic sheeting with absorbent material under vehicles and equipment performing pile driving activities. Refer to NS-9 "Vehicle and Equipment Fueling" and NS-10 "Vehicle and Equipment Maintenance."

Protect pile driving equipment, including hammers and other hydraulic attachments, by parking them on plywood and covering it with plastic sheeting when precipitation is forecasted.

When not in use, store pile driving equipment on level ground away from concentrated flows of storm water, drainage courses, and inlets.

Use less hazardous vegetable oil instead of hydraulic fluid, when practicable.

Keep equipment that is in use in streambeds; or on docks, barges, or other structures over water bodies, leak free. The storage or use of equipment in streambeds or other bodies of water shall comply with all applicable regulatory permits. Refer to NS-13, "Material and Equipment Use Over Water."

Implement other BMPs as applicable, such as NS-2 "Dewatering Operations," WM-5 "Solid Waste Management," WM-6 "Hazardous Waste Management," and WM-10 "Liquid Waste Management."

Maintenance and Inspection

Inspect pile driving areas and equipment for leaks and spills daily when they are in operation or within or next to water.

Inspect pile driving areas and equipment for leaks and spills at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

Inspect equipment routinely and repair equipment as needed (e.g., worn or damaged hoses, fittings, gaskets).

Inspection and Maintenance of these areas must be properly documented and the WPC Manager must ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

Pile Driving Operations must be discussed in Section 500.4 and 600.2 of the SWPPP or Section 30 of the WPCP.

Concrete Curing

NS-12

Standard Symbol

BMP Objectives	
Soil Stabilization	
Sediment Control	
Tracking Control	
Wind Erosion Control	
Non-Stormwater Management	
Materials and Waste Management	

Definition and Purpose

Concrete curing is used in the construction of structures such as bridges, retaining walls, and pump houses. Concrete curing includes the use of both chemical and water methods. Proper procedures to minimize any potential for runoff during concrete curing must take place.

Appropriate Applications

All concrete elements of a structure (e.g., footings, columns, abutments, stems, soffit, deck) are subject to curing requirements.

Limitations

None identified.

Standards and Specifications

Chemical Curing

Avoid over-spray of curing compounds.

Minimize the drift of chemical cure as much as possible by applying the curing compound close to the concrete surface. Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.

Use proper storage and handling techniques for concrete curing compounds. Refer to WM-1, "Material Delivery and Storage."

Protect drain inlets prior to the application of curing compounds. Refer to SC-10, "Temporary Drainage Inlet Protection."

Implement WM-4, "Spill Prevention and Control.

Water Curing for Bridge Decks, Retaining Walls, and Other Structures

Direct cure water away from inlets and receiving waters to collection areas for removal as approved by the RE and in accordance with all applicable permits.

Collect cure water and transport or dispose of water in accordance with all applicable permits

Utilize wet blankets or a similar method that maintains moisture while minimizing the use and possible discharge of water.

Maintenance and Inspection

Ensure that employees and subcontractors implement appropriate measures for storage, handling, and use of curing compounds.

Inspect any temporary diversion devices, lined channels, or swales for washouts, erosion, runoff or debris. Replace lining and remove debris as necessary.

Inspect cure containers and spraying equipment for leaks. Also, inspect concrete curing areas daily when there are ongoing operations.

The WPC Manager or QSP must ensure no concrete curing activities occur when rain is forecasted that could lead to a discharge.

SWPPP or WPCP

Concrete Curing must be discussed in Section 500.4 of the SWPPP or Section 30.3 of the WPCP.

Material and Equipment Use Over Water

NS-13

Standard Symbol

Definition and Purpose

Procedures for the proper use, storage, and disposal of materials and equipment on barges, boats, temporary construction pads, or similar locations that minimize or eliminate the discharge of potential pollutants into storm drain inlets or receiving waters.

Appropriate Applications

These procedures shall be implemented for construction materials and wastes (solid and liquid) and any other materials that may be detrimental if released. Applies where materials and equipment are used on barges, boats, docks, and other platforms over or adjacent to a watercourse.

Limitations

Specific requirements may be included in the contract documents and permit documents associated with regulatory agencies such as the Regional Water Quality Control Board (RWQCB), U.S. Army Corps of Engineers, and California Department of Fish and Wildlife.

Standards and Specifications

Measures to prevent the discharge of potential pollutants into storm drain inlets or receiving waters while operating equipment or using materials over water are considered BMPs by the regulatory agencies and should be documented in the SWPPP.

Material and Equipment Use Over Water

NS-13

Implement this BMP in accordance with all necessary permits required for construction within or near receiving waters, such as RWQCB, U.S. Army Corps of Engineers, Department of Fish and Wildlife and other local permitting agencies.

Place drip pans and absorbent materials under equipment and vehicles and ensure that an adequate supply of spill cleanup materials is onsite in accordance with a spill response plan, if applicable. Ensure that staff are trained regarding the deployment of the spill response plan.

Drip pans shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is expected to be idle for more than one hour.

Install watertight curbs or toe boards to contain spills and prevent materials, tools, and debris from falling off the barge, platform, dock, etc.

Secure all materials to prevent discharges to receiving waters via wind.

Discharges to receiving waters shall be reported to the RE and the WPC Manager immediately upon discovery.

Maintain vehicles and equipment in accordance with NS-10, "Vehicle and Equipment Maintenance." If a leaking line cannot be repaired, remove equipment from over the water and repair immediately.

Collect and contain demolished material in accordance with NS-15, "Structure Demolition/Removal Over or Adjacent to Water."

Refer to WM-1, "Material Delivery and Storage" and WM-4, "Spill Prevention and Control."

Ensure the timely and proper removal of accumulated wastes over water. Refer to WM-5, "Solid Waste Management" and WM-6, "Hazardous Waste Management."

Maintenance and Inspection

Inspect vehicles and equipment for leaks and spills daily when they are in operation, make necessary repairs.

Ensure that employees and subcontractors implement appropriate measures for storage and use of materials and equipment.

Inspect and maintain all associated BMPs and perimeter controls to ensure continuous protection of the watercourse.

Inspect materials and equipment for leaks and spills at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

Inspect equipment routinely and repair equipment as needed (e.g., worn or damaged hoses, fittings, gaskets).

Inspection and Maintenance of these areas must be properly documented and ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

Material and Equipment Use Over Water must be discussed in Section 500.4.1 of the SWPPP or Section 30.3.1 of the WPCP.

Concrete Finishing

NS-14

Standard Symbol

Definition and Purpose

Concrete finishing methods are used for bridge deck rehabilitation, paint removal, curing compound removal, and final surface finish appearances. Methods include sand blasting, shot blasting, grinding, or high-pressure water blasting. Proper procedures minimize the impact that concrete finishing methods may have on runoff.

Appropriate Applications

These procedures apply to all construction locations where concrete finishing operations are performed.

Limitations

Specific permit requirements may be included in the contract documents for certain concrete finishing operations.

Standards and Specifications

General Requirements

Follow containment requirements stated in the project special provisions.

Collect and properly dispose of water and solid waste from high-pressure water blasting operations.

Collect and properly dispose of water from water blasting operations, sand and solid waste from sandblasting operations.

Protect drainage inlets within 50 feet of the sandblasting prior to beginning sandblasting operations. Refer to SC-10, “Temporary Drainage Inlet Protection.”

Implement SC-7, “Street Sweeping” within the sand blasting and surrounding area.

Minimize the drift of dust and blast material as much as possible by keeping the blasting nozzle close to the surface.

Discharges to waterways shall be reported to the RE by the WPC Manager immediately upon discovery.

Other Considerations

Direct water from blasting operations away from inlets and receiving waters to collection areas for removal (e.g., dewatering) as approved in advance by the RE and in accordance with applicable permits.

When blast residue contains a potentially hazardous waste, refer to WM-6, “Hazardous Waste Management.”

Implement WM-8, “Concrete Waste Management” in combination with this BMP.

Maintenance and Inspection

At a minimum, inspect containment structures, if any, for damage or voids prior to use each day and prior to a likely forecasted rain event.

At the end of each work shift, remove and contain the liquid and solid wastes from containment structures, if any, and from the general work area.

Inspect concrete finishing areas at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

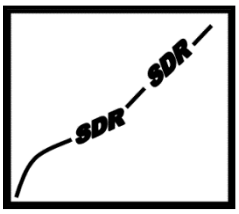
Inspection and Maintenance of these areas must be properly documented and ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

Concrete Finishing must be discussed in Section 500.4 of the SWPPP or Section 30.3.1 of the WPCP.

Structure Demolition/Removal Over or Adjacent to Water

NS-15



Standard Symbol

BMP Objectives	
Soil Stabilization	
Sediment Control	
Tracking Control	
Wind Erosion Control	
Non-Stormwater Management	
Materials and Waste Management	

Definition and Purpose

Procedures to protect water bodies from debris and wastes associated with structure demolition or removal over or adjacent to receiving waters.

Appropriate Applications

Full bridge demolition and removal projects.

Partial bridge removal (e.g., barrier rail, edge of deck) associated with bridge widening projects.

Projects that involve concrete channel removal.

Any other project with structure removal that could potentially affect water quality.

Limitations

Specific requirements may be included in the contract documents and permit documents associated with regulatory agencies such as the Regional Water Quality Control Board, U.S. Army Corps of Engineers, and California Department of Fish and Wildlife.

Structure Demolition/Removal Over or Adjacent to Water

NS-15

Standards and Specifications

General Requirements

A plan summarizing material containment, collection, and handling may be required to be submitted and fully implemented with the SWPPP.

Do not allow demolished material to enter storm drain systems and receiving waters. Use covers and platforms authorized by the RE to collect debris.

Collect and contain all demolished material within the containment system including process water and visible dust produced during demolition and cleaning operations daily. Handle debris according to Standard Specifications Section 13-4.03D.

Implement in combination with NS-13, "Material and Equipment Use Over Water" and WM-04 "Spill Prevention and Control," for handling of materials and equipment.

Routinely sweep and vacuum work area to remove excess dust and debris in accordance with SC-07, "Street Sweeping."

Use inlet protection in accordance with SC-10, "Temporary Drainage Inlet Protection," to protect storm drain inlets.

Refer to NS-5, "Clear Water Diversion" to direct water away from work areas.

Stockpile accumulated debris and waste generated during demolition away from drainage inlets and receiving waters and in accordance with WM-3, "Stockpile Management."

For structures containing hazardous materials (e.g., lead paint or asbestos) refer to WM-6, "Hazardous Waste Management." For demolition work involving soil excavation around lead-painted structures, refer to WM 7, "Contaminated Soil Management."

Discharges to drainage inlets and receiving waters shall be reported to the RE and WPC Manager immediately upon discovery. A written discharge notification must follow.

Keep adequate spill kit material onsite in accordance with a spill response plan, if applicable. Ensure that staff are trained regarding the deployment of the spill response plan.

Ensure safe passage of wildlife, refer to Standard Specifications 83-3 Concrete Barriers.

Other Considerations

Use attachments on construction equipment, such as backhoes and debris baskets, or barges to catch debris from demolition operations. Use plastic bibs to prevent hydraulic fuel leaks.

Install perimeter controls and secondary containment to prevent leaks and spills from entering receiving waters. Perimeter controls and secondary containment may include sealed plywood and/or plastic sheeting,

plastic liners and/or tarps, netting, silt fences, drip pans, containment booms and berms, and absorbent material.

Maintenance and Inspection

Contractor must inspect demolition areas and containment systems over or adjacent to receiving waters daily when operations are ongoing.

Any debris-catching devices and containment systems shall be emptied daily. Collected debris shall be removed and stored away from the drainage inlets and receiving waters and protected from run-on and runoff.

Inspect demolition and containment systems over or adjacent to for leaks and spills at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

Inspection and Maintenance of these areas must be properly documented and ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

Structure Demolition/Removal Over or Adjacent to Water must be discussed in Section 500.4.1 of the SWPPP or Section 30 of the WPCP.

Section 8

Waste Management and Materials Pollution Control BMPs

8.1 Waste Management and Materials Pollution Control

Waste management and materials pollution control BMPs, like non- stormwater management BMPs, are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with stormwater. These BMPs also involve day-to-day operations of the construction site and are under the control of the Contractor, and are additional "good housekeeping practices," which involve keeping a clean, orderly construction site.

Waste Management BMPs

Waste management consists of implementing procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project to prevent the release of waste materials into stormwater discharges.

Materials Pollution Control BMPs

Materials pollution control (also called materials handling) consists of implementing procedural and structural BMPs for handling, storing, and using construction materials to prevent the release of those materials into stormwater discharges. The objective is to reduce the opportunity for rainfall to come in contact with these materials. These controls must be implemented for all applicable activities, material usage and site conditions.

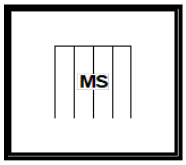
Table 8-1 lists the waste management and materials pollution control BMPs.

Table 8-1. Waste Management and Materials Pollution Control BMPs	
ID	BMP Name
WM-1	Material Delivery and Storage
WM-2	Material Use
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-6	Hazardous Waste Management
WM-7	Contaminated Soil Management
WM-8	Concrete Waste Management
WM-9	Sanitary and Septic Waste Management
WM-10	Liquid Waste Management

The remainder of this section shows the working details for each of the waste management and materials pollution control BMPs.

Material Delivery and Storage

WM-1



Standard Symbol

Definition and Purpose

Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to receiving waters.

Appropriate Applications

These procedures are implemented at all construction sites with delivery and storage of the following:

- Hazardous chemicals such as:
  - Acids
  - Lime
  - Glues
  - Adhesives
  - Paints
  - Solvents
  - Curing compounds
- Soil stabilizers and binders
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease
- Asphalt and concrete components
- Pesticides and herbicides
- Other materials that may be detrimental if released to the environment

Limitations

Space limitation may preclude indoor storage.

Storage sheds must meet building & fire code requirements and be leak free.

Standards and Specifications

General Requirements

Train employees and subcontractors on the proper material delivery and storage practices.

Temporary storage area shall be located away from vehicular traffic.

Safety Data Sheets (SDS) shall be supplied to the RE for all materials stored. Can be done at any time but at least 5 days prior to material being used or stored onsite.

Must comply with Caltrans Standard Specification 13-4, "Job Site Management", and 14-11, "Hazardous Waste and Contamination."

Material Storage Areas and Practices

Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall be placed in temporary containment facilities for proper storage.

Each temporary containment facility shall have a permanent cover and side wind protection or be covered during non-working days and whenever a storm event is forecasted.

A temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 24-hour, 25-year storm event, plus the greater of ten percent of the aggregate volume of all containers or 100 percent of the capacity of the largest container within its boundary, whichever is greater.

A temporary containment facility shall be impervious to the materials stored therein for a minimum contact time of 72 hours.

A temporary containment facility shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids shall be sent to an approved disposal site.

Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.

Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.

Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.

Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain, bagged and boxed materials shall be covered during non-working days and prior to rain events.

Stockpiles shall be protected in accordance with WM-3, "Stockpile Management."

Have proper storage instructions posted at all times in an open and conspicuous location and include it as an informal training component of the tailgates and ongoing WPC training.

Do not store hazardous chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet, under cover in secondary containment.

Keep ample supply of appropriate spill clean up material near storage areas.

Also, see WM-6, "Hazardous Waste Management," for storing of hazardous materials.

Material Delivery Practices

Keep an accurate, up-to-date inventory of material delivered and stored on-site.

Employees trained in emergency spill clean-up procedures shall be present when dangerous materials or liquid chemicals are unloaded.

Spill Clean-up

Contain and clean up any spill immediately.

If significant residual materials remain on the ground after construction is complete, properly remove and dispose any hazardous materials or contaminated soil.

See WM-4, "Spill Prevention and Control," for spills of chemicals and/or hazardous materials.

Maintenance and Inspection

Storage areas shall be kept clean, well-organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.

Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.

Inspect storage areas before, during and after rainfall events, and at least weekly during other times. Collect and place into drums any spills or accumulated rainwater and dispose of properly.

Material Delivery and Storage areas must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

Material delivery and storage must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.

Standard Symbol

Definition and Purpose

These are procedures and practices for use of construction materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to receiving waters.

Appropriate Applications

This BMP applies to all construction projects. These procedures apply when the following materials are used or prepared on site:

- Hazardous chemicals such as:
  - Acids
  - Lime
  - Glues
  - Adhesives
  - Paints
  - Solvents
  - Curing compounds
- Soil stabilizers and binders
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease
- Asphalt and concrete components
- Pesticides and herbicides
- Other materials that may be detrimental if released to the environment

Limitations

Safer alternative building and construction products may not be available or suitable in every instance.

Standards and Specifications

Safety Data Sheets (SDS) shall be supplied to the RE for all materials.

Latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry and are no longer hazardous, may be disposed of with other construction debris.

Do not remove the original product label, it contains important safety and disposal information. Use the entire product before disposing of the container.

Mix paint indoors, or in a containment area. Never clean paintbrushes or rinse paint containers into a street, gutter, storm drain or near a water body. Dispose of any paint thinners, residue and sludge(s), that cannot be recycled, as hazardous waste.

For water-based paint, clean brushes to the extent practical, and rinse to a drain leading to a sanitary sewer where permitted, or into a concrete washout pit. For oil-based paints, clean brushes to the extent practical and filter and reuse thinners and solvents.

Use recycled and less hazardous products when practical. Recycle residual paints, solvents, non-treated lumber, and other materials.

Use materials only where and when needed to complete the construction activity. Use safer alternative materials as much as possible.

Do not over-apply fertilizers and pesticides. Prepare only the amount needed. Strictly follow the recommended usage instructions.

Application of herbicides and pesticides shall be performed by a licensed applicator. Document the location, chemicals applied, applicants name and qualifications.

Contractors are required to complete the “Report of Chemical Spray Forms” when spraying herbicides and pesticides.

Keep an ample supply of spill clean-up material near use areas. Train employees in spill clean-up procedures.

Avoid exposing applied materials to rainfall and runoff unless sufficient time has been allowed for them to dry.

Maintenance and Inspection

Inspect storage areas before, during and after rainfall events, and at least weekly during other times. Collect and place into drums any spills or accumulated rainwater and dispose of properly.

Spot check employees and subcontractors throughout the job, include appropriate practices as part of the informal tailgate training.

SWPPP or WPCP

Material Use must be discussed in Section 500.4 of the SWPPP or Section 30.3 of the WPCP.

Stockpile Management

WM-3

Standard Symbol

Definition and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and storm water pollution from stockpiles of soil, and paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate subbase or pre-mixed aggregate, asphalt binder (so called “cold mix” asphalt) and pressure treated wood.

Appropriate Applications

Implemented in all projects that stockpile soil and other materials.

Limitations

Use of plastic cover might be restricted depending on the location of the site and regulatory permits.

Standards and Specifications

Stockpiles must comply with Standard Specification 13-4.03C (3) Stockpile Management.

Protection of stockpiles is a year-round requirement.

Locate stockpiles a minimum of 50 ft. away from concentrated flows of storm water, drainage courses, and inlets.

Utilize run-on and run-off BMPs to ensure stockpile materials are protected and do not have the potential to discharge material.

Implement wind erosion control practices as appropriate on all stockpiled material. For specific information see WE-1, “Wind Erosion Control.”

Stockpiles of contaminated soil shall be managed in accordance with WM-7, "Contaminated Soil Management."

Bagged materials should be placed on pallets and under cover.

Protection of Inactive Stockpiles

Inactive stockpiles of the identified materials shall be protected further as follows:

- Soil stockpiles:
  - soil stockpiles shall be covered or protected with soil stabilization measures and a temporary perimeter sediment barrier at all times. If no longer needed, they should be removed and disposed of properly.
- Stockpiles of portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, or aggregate subbase:
  - the stockpiles shall be covered or protected with a temporary perimeter sediment barrier at all times. If no longer needed, they should be removed and disposed of properly.
- Stockpiles of "cold mix":
  - Cold mix stockpiles shall be placed on and covered with plastic or comparable material at all times and surround by a berm.
- Stockpiles/Storage of pressure treated wood with copper, chromium, and arsenic or ammonical, copper, zinc, and arsenate:
  - Treated wood shall be covered with plastic or comparable material and placed on pallets.

Protection of Active Stockpiles

Active stockpiles shall be protected further as follows:

- All stockpiles shall be covered, stabilized, or protected with a temporary linear sediment barrier prior to the onset of precipitation.
- Stockpiles of "cold mix" shall be placed on and covered with plastic or comparable material prior to the onset of precipitation.
- All Stockpiles should be removed from the site and disposed of properly.

Maintenance and Inspection

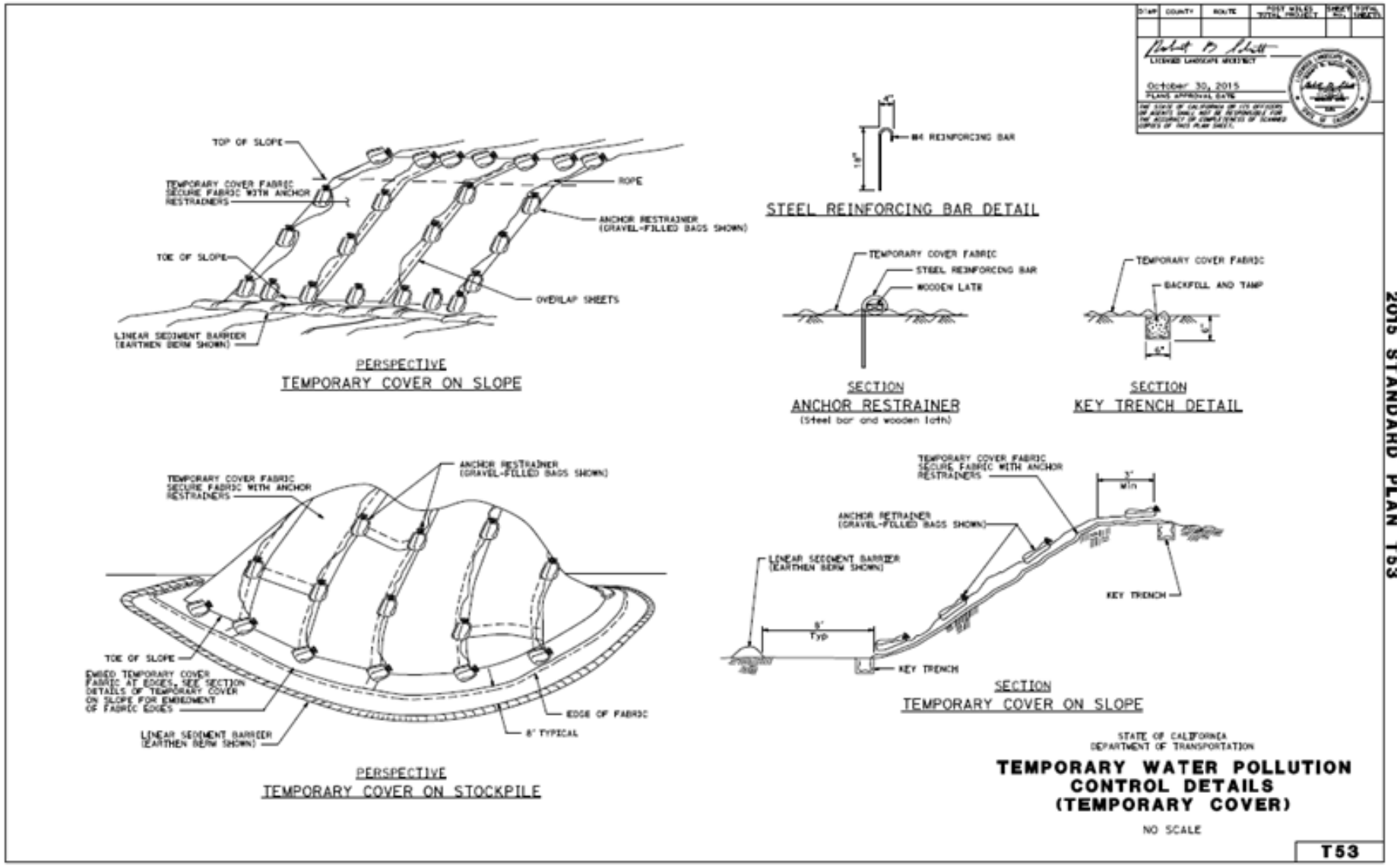
Inspect Stockpile Management areas before, during and after rainfall events, and at least weekly during other times.

Repair and/or replace perimeter controls and covers to keep Stockpile Management functioning properly.

Stockpile Management areas must be shown on the WPCDs and reflect site conditions.

SWPPP or WPCP

Stockpile Management must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.


TOP OF SLOPE
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
ROPE
ANCHOR RESTRAINER (GRAVEL-FILLED BAGS SHOWN)
TOE OF SLOPE
OVERLAP SHEETS
LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
PERSPECTIVE
TEMPORARY COVER ON SLOPE
#4 REINFORCING BAR
STEEL REINFORCING BAR DETAIL
TEMPORARY COVER FABRIC
STEEL REINFORCING BAR
WOODEN LATH
SECTION
ANCHOR RESTRAINER
(Steel bar and wooden lath)
TEMPORARY COVER FABRIC
BACKFILL AND TAMP
SECTION
KEY TRENCH DETAIL
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
ANCHOR RESTRAINER (GRAVEL-FILLED BAGS SHOWN)
TOE OF SLOPE
EMBED TEMPORARY COVER FABRIC AT EDGES, SEE SECTION DETAILS OF TEMPORARY COVER ON SLOPE FOR EMBEDMENT OF FABRIC EDGES
EDGE OF FABRIC
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LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
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ANCHOR RETRAINER (GRAVEL-FILLED BAGS SHOWN)
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KEY TRENCH
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KEY TRENCH
SECTION
TEMPORARY COVER ON SLOPE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY COVER)
NO SCALE
T53
2015 STANDARD PLAN T53

Spill Prevention and Control

WM-4

Standard Symbol

Definition and Purpose

These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to the drainage system or watercourses.

Appropriate Applications

This best management practice (BMP) applies to all construction projects. Spill control procedures are implemented anytime chemicals and/or hazardous substances are stored. Substances may include, but are not limited to:

- Soil stabilizers/binders.
- Dust Palliatives.
- Herbicides.
- Growth inhibitors.
- Fertilizers.
- Deicing/anti-icing chemicals.
- Fuels.
- Lubricants.
- Other petroleum distillates.

To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes shall be contained and cleaned up immediately.

Limitations

This BMP only applies to spills caused by the contractor. Other spills or discharges observed or discovered must be reported to the RE.

Procedures and practices presented in this BMP are general. Contractor shall identify appropriate practices for the specific materials used or stored on-site and follow the appropriate Safety Data Sheets (SDS).

Standards and Specifications

Must comply with Caltrans Standard Specifications 13-4.03B Spill Prevention and Control.

To the extent that it doesn't compromise clean-up activities, spills shall be covered and protected from stormwater run-on.

Spills shall not be buried or washed with water. Potable water has chlorine and therefore should not be allowed to be discharged off the project site.

Used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose shall be stored and properly disposed of.

Water used for cleaning and decontamination shall not be allowed to enter storm drains or watercourses and shall be collected and disposed of in accordance with WM-10, "Liquid Waste Management."

Water overflow or minor water spillage shall be contained and shall not be allowed to discharge into drainage facilities or watercourses.

Proper storage, clean-up and spill reporting instruction for hazardous materials stored or used on the project site shall be posted at all times in an open, conspicuous and accessible location.

Waste storage areas shall be kept clean, well-organized and equipped with ample clean-up supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers and liners shall be repaired or replaced as needed to maintain proper function.

Education

Educate employees and subcontractors on what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.

Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

Establish a continuing education program to indoctrinate new employees.

The WPC Manager shall oversee and enforce proper spill prevention and control measures.

The list of reportable quantities can be found at https://www.bnl.gov/esh/env/compliance/docs/SaraTitleList.pdf.

Cleanup and Storage Procedures

Minor Spills:

- Minor spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the discovery of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Remove the absorbent materials promptly and dispose of properly.
- The practice commonly followed for a minor spill is:
    - Contain the spread of the spill.
    - Recover spilled materials.
    - Clean the area and/or properly dispose of contaminated materials.

Semi-Significant Spills:

- Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Clean-up spills immediately:

- Notify the WPC Manager immediately. The WPC Manager shall notify the RE and prepare the proper notifications as required.

Contain spread of the spill.

- If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials.
- If the spill occurs in dirt areas, immediately contain the spill. Dig up and properly dispose of contaminated soil.
- If the spill occurs during rain, cover spill with tarps to prevent contaminating runoff.

Significant/Hazardous Spills:

- For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps shall be taken:
    - Notify the RE immediately and follow up with a written report.
    - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper county officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
    - Notify the Governor's Office of Emergency Services Warning Center, (800) 852-7550 or 1-916-845-8911.
    - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor shall notify the National Response Center at (800) 424-8802.
    - Notification shall first be made by telephone and followed up with a written report. The reporting form is located at http://www.caloes.ca.gov/FireRescueSite/Documents/304%20-%20Written%20Report%20Form.pdf.

- The services of a spills contractor or a Haz-Mat team shall be obtained immediately. Construction personnel shall not attempt to clean up the spill until the appropriate and qualified staff have arrived at the job site.
- Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, RWQCB, etc.

Maintenance and Inspection

Verify weekly that spill control clean-up materials are located near material storage, unloading, and use areas.

Update spill prevention and control plans and stock appropriate clean-up materials when changes occur in the types of chemicals used or stored onsite.

Improper clean-up might trigger need for water quality or soil testing. The WPC Manager should be proactive in ensuring controls are in place and adequate to contain and prevent further issues.

SWPPP or WPCP

Spill Prevention and Control must be discussed in Section 500.4 of the SWPPP or Section 30.3.2 of the WPCP.

Standard Symbol

Definition and Purpose

Solid waste management procedures and practices are designed to minimize or eliminate the discharge of pollutants to the drainage system or to water bodies as a result of the creation, stockpiling, or removal of construction site wastes.

Appropriate Applications

Solid waste management procedures and practices are implemented on all construction projects that generate solid wastes.

Solid wastes include but are not limited to:

- Construction wastes including brick, mortar, timber, steel and metal scraps, sawdust, pipe and electrical cuttings, non-hazardous equipment parts, styrofoam and other materials used to transport and package construction materials.
- Highway planting wastes, including vegetative material, plant containers, and packaging materials.
- Litter, including food containers, beverage cans, coffee cups, paper bags, plastic wrappers, and smoking materials, including litter generated by the public.

Limitations

None identified.

Standards and Specifications

Education

The WPC Manager shall oversee and enforce proper solid waste procedures and practices.

Instruct employees and subcontractors on identification of solid waste and hazardous waste.

Educate employees and subcontractors on solid waste storage and disposal procedures.

Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgate sessions).

Require that employees and subcontractors follow solid waste handling and storage procedures.

Prohibit littering by employees, subcontractors, and visitors.

Wherever possible, minimize production of solid waste materials.

Must comply with Standard specification 14-10 Solid Waste Disposal and Recycling and 13-4 Job Site Handling.

Collection, Storage, and Disposal

Dumpsters of sufficient size and number shall be provided to contain the solid waste generated by the project and be properly serviced. Must ensure that containers are watertight and have a cover.

Littering on the project site shall be prohibited.

To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines shall be a priority.

Trash receptacles shall be provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.

Construction debris and litter from work areas within the construction limits of the project site shall be collected and placed in watertight dumpsters at least weekly regardless of whether the litter was generated by the Contractor, the public, or others. Collected litter and debris shall not be placed in or next to drain inlets, storm water drainage systems or watercourses.

Full dumpsters shall be removed from the project site and the contents shall be disposed of outside the highway right-of-way in conformance with the provisions in the Standard Specifications Section 14-10 Solid Waste Disposal and Recycling.

Litter stored in collection areas and containers shall be handled and disposed of by trash hauling contractors.

Construction material visible to the public shall be stored or stacked in an orderly manner to the satisfaction of the RE.

Stormwater run-on shall be prevented from contacting stored solid waste by berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.

Solid waste storage areas shall be located at least 50 ft. from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.

Except during fair weather, construction and highway planting waste not stored in watertight dumpsters shall be securely covered from wind and rain by covering the waste with tarps or plastic sheeting.

Dumpster washout on the project site is not allowed.

Notify trash hauling contractors that only watertight dumpsters are acceptable for use on-site.

Plan for additional containers during the demolition phase of construction.

Plan for more frequent pickup during the demolition phase of construction.

Construction waste shall be stored in a designated area and shown in the WPCDs.

Segregate potentially hazardous waste from non-hazardous construction site waste.

Keep the site clean of litter debris.

Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.

Dispose of non-hazardous waste in accordance with Standard Specification 14-10 Solid Waste Disposal and Recycling.

For disposal of hazardous waste, see BMP WM-6, “Hazardous Waste Management.” Have hazardous waste hauled to an appropriate disposal and/or recycling facility.

Salvage or recycle useful vegetation debris, packaging and/or surplus building materials when practical. For example, trees and shrubs from land clearing can be converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

Maintenance and Inspection

The WPC Manager shall monitor onsite solid waste storage and disposal procedures.

Specific locations for Solid Waste Storage or Containment must be shown in the WPCDs and must be inspected and maintained regularly.

SWPPP or WPCP

Solid Waste Management must be discussed in Section 500.4 of the SWPPP or Section 30.3.2 of the WPCP.

Standard Symbol

BMP Objectives

- Soil Stabilization
- Sediment Control
- Tracking Control
- Wind Erosion Control
- Non-Stormwater Management
- Materials and Waste Management

Definition and Purpose

These are procedures and practices to minimize or eliminate the discharge of pollutants from construction site hazardous waste to the storm drain systems or to watercourses.

Appropriate Applications

This best management practice (BMP) applies to all construction projects.

Hazardous waste management practices are implemented on construction projects that generate waste from the use of:

- Petroleum Products
- Asphalt Products
- Concrete Curing Compounds
- Pesticides
- Palliatives
- Acids
- Paints
- Stains
- Solvents
- Septic Wastes
- Wood Preservatives
- Roofing Tar, or
- Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302.

Limitations

Nothing in this BMP relieves the Contractor from responsibility for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.

This BMP does not cover aerially deposited lead (ADL) soils. For ADL soils refer to WM-7, "Contaminated Soil Management," and the project special provisions.

Standards and Specifications

Education

Educate employees and subcontractors on hazardous waste storage and disposal procedures.

Educate employees and subcontractors on potential dangers to humans and the environment from hazardous wastes.

Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.

Instruct employees and subcontractors in identification of hazardous and solid waste.

Hold regular meetings to discuss and reinforce hazardous waste management procedures (incorporate into regular safety meetings and tailgate sessions).

The WPC Manager must oversee and enforce proper hazardous waste management procedures and practices.

Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.

Storage Procedures

Wastes shall be stored in sealed containers constructed of a suitable material and shall be labeled as required by Title 22 CCR, Division 4.5 and 49 CFR Parts 172,173, 177 and 178, 179.

All hazardous waste shall be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.

Waste containers shall be stored in temporary containment facilities that shall comply with the following requirements:

- Temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 24-hour, 25-year storm event, plus the greater of ten percent of the aggregate volume of all containers or 100 percent of the capacity of the largest tank within its boundary, whichever is greater.
- Temporary containment facility shall be impervious to the materials stored there for a minimum contact time of 72 hours.
- Temporary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks accumulated rainwater and spills shall be placed into drums after each rainfall. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids shall be sent to an approved disposal site.
- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.

- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- Temporary containment facilities shall be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs. A storage facility having a solid cover and sides is preferred to a temporary tarp. Storage facilities shall be equipped with adequate ventilation.

Drums shall not be overfilled and wastes shall not be mixed.

Unless watertight, containers of dry waste shall be stored on pallets.

Paint brushes and equipment for water and oil based paints shall be cleaned within a contained area and shall not be allowed to contaminate site soils, watercourses or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused shall be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths shall be disposed of as solid waste.

Ensure that adequate hazardous waste storage volume is available.

Ensure that hazardous waste collection containers are conveniently located.

Designate hazardous waste storage areas on site away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.

Minimize production or generation of hazardous materials and hazardous waste on the job site.

Use containment berms in fueling and maintenance areas and where the potential for spills is high.

Segregate potentially hazardous waste from non-hazardous construction site debris.

Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.

Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.

Place hazardous waste containers in secondary containment.

Do not allow potentially hazardous waste materials to accumulate on the ground.

Do not mix wastes.

Disposal Procedures

Waste shall be disposed of outside the highway right of way within 90 days of being generated, or as directed by the RE. In no case, shall hazardous waste storage exceed requirements in Title 22 CCR, Section 66262.34.

Waste shall be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.

An ELAP accredited laboratory shall sample waste and analyze it to determine the appropriate disposal facility.

Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for solid waste construction debris.

Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.

Recycle any useful material such as used oil or water-based paint when practical.

Attention is directed to "Hazardous Material", "Contaminated Material", and "Aerially Deposited Lead" of the contract documents regarding the handling and disposal of hazardous materials.

Maintenance and Inspection

The WPC Manager or QSP shall monitor on-site hazardous waste storage and disposal procedures.

Waste storage areas shall be kept clean, well-organized, and equipped with ample clean up supplies as appropriate for the materials being stored.

Storage areas shall be inspected in conformance with the provisions in the contract documents. At a minimum, storage areas must be inspected before, daily during extended storm event, after every storm event and weekly year-round. Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.

Hazardous spills shall be cleaned up and reported in conformance with the applicable Safety Data Sheet (SDS) and the instructions posted at the project site.

The National Response Center, at (800) 424-8802, shall be notified of spills of Federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302.

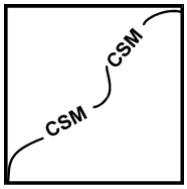
Copy of the hazardous waste manifests shall be provided to the RE.

SWPPP or WPCP

Hazardous Waste Management must be discussed in Section 500.4 of the SWPPP or Section 30.3 of the WPCP.

Contaminated Soil Management

WM-7



Standard Symbol

Definition and Purpose

These are procedures and practices to minimize or eliminate the discharges of pollutants to the drainage system or to receiving waters from contaminated soil.

Appropriate Applications

Contaminated soil management is implemented on construction projects where soil contamination may have occurred due to spills, illicit discharges, and leaks from underground storage tanks.

It may also apply to highway widening projects in older areas where median and shoulder soils may have been contaminated by aerially deposited lead (ADL).

Limitations

The procedures and practices presented in this best management practice (BMP) are general. The contractor shall identify appropriate practices and procedures consistent with the plans and specifications for the specific contaminants known to exist or discovered on site.

Standards and Specifications

Identifying Contaminated Areas

Contaminated soils are often identified during project planning and development with known locations identified in the plans and specifications. The contractor shall review applicable reports and examine applicable call-outs in the plans and specifications.

The contractor may discover contaminated soils not identified in the plans and specifications by observing:

Spills and leaks, discoloration, odors or abandoned underground tanks or pipes.

Spills and leaks caused by the contractor are the contractor's responsibility for removal, testing, and disposal.

If unanticipated asbestos or hazardous substances are discovered, that were not released by the contractor, the contractor shall stop work in that area and immediately notify the RE. The contractor shall not resume work in the area until directed to do so.

Education

Prior to performing any excavation work at the locations containing material classified as hazardous, employees and subcontractors shall complete a safety training program which meets 29 CFR 1910.120 and 8 CCR 5192 covering the potential hazards as identified.

Educate employees and subcontractors in identification of contaminated soil and on contaminated soil handling, containment and disposal procedures.

Hold regular meetings to discuss and reinforce contaminated soil handling, containment and disposal procedures (incorporate into regular safety meetings and tailgates).

Handling Procedures for Material with Aerially Deposited Lead (ADL)

Materials from areas designated as containing (ADL) may, if allowed by the contract special provisions, be excavated, transported, and used in the construction of embankments and/or backfill.

Must comply with Standard specification requirements outlined in Section 14-11 Hazardous Waste and Contamination.

Must comply with the DTSC ADL agreement for specific requirements regarding handling, stockpiling and hauling of material.

Excavation, transportation, and placement operations shall result in no visible dust.

Use caution to prevent spillage of lead containing material during transport.

Monitor the air quality during excavation of soils contaminated with lead.

Handling Procedures for Contaminated Soils

Contaminated soil shall be disposed of properly in compliance with the specifications and all applicable regulations. in Title 22, CCR, Division 4.5 and section 14-11 of the specifications.

If required by the specifications test contaminated soils at a SWRCB ELAP certified laboratory.

If the soil is contaminated, work with the local regulatory agencies to develop options for treatment and/or disposal.

Avoid temporary stockpiling of contaminated soils or hazardous material.

If temporary stockpiling is allowed by the specifications.

Place plastic sheeting or tarps underneath material and cover the stockpile with plastic sheeting or tarps if required by the specifications.

Install a berm around the stockpile to prevent run-on or run-off from leaving the area.

Do not stockpile in or near storm drains or receiving water.

Install berms or run-on controls to prevent stormwater from commingling with contaminated areas.

Contaminated material and hazardous material on exteriors of transport vehicles shall be removed and placed either into the current transport vehicle or the excavation prior to the vehicle leaving the exclusion zone.

Monitor the air quality during excavation operations if required.

Procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work, including registration for transporting vehicles carrying the contaminated material and the hazardous material.

Collect water from decontamination procedures and treat and/or dispose of it at an appropriate disposal site.

Collect non-reusable protective equipment, once used by any personnel, and dispose of at an appropriate disposal site.

Install temporary security fence to surround and secure the exclusion zone. Remove fencing when no longer needed.

Excavation, transport, and disposal of contaminated material and hazardous material shall be in accordance with the rules and regulations of the following agencies (the specifications of these agencies supersede the procedures outlined in this BMP):

- United States Department of Transportation (USDOT).
- United States Environmental Protection Agency (USEPA).
- California Environmental Protection Agency (CAL-EPA).
- California Division of Occupation Safety and Health Administration (CAL-OSHA).
- Local regulatory agencies.

Procedures for Underground Storage Tank Removals

If an unknown underground storage tank is discovered, the contractor shall stop work in that area and immediately notify the RE. The contractor shall not resume work in the area until directed to do so.

If tank removal operations are required by the contract, follow the contract requirements for obtaining permits and approval from the federal, state, and local agencies, which have jurisdiction over such work.

If tank removal operations are required by the contract, the underground storage tank, any liquid and/or sludge found within the tank, and all contaminated substances and hazardous substances removed during the tank removal shall be transported to disposal facilities as required by the contract Specifications.

Water Control

Take all necessary precautions and preventive measures to prevent the flow of water, including ground water, from mixing with contaminated or hazardous materials or entering contaminated soil excavations. Such preventative measures may consist of, but are not limited to: berms, cofferdams, grout curtains, freeze walls, and seal course concrete or any combination thereof.

If water does enter an excavation and becomes contaminated, such water, when necessary to proceed with the work, shall be dewatered consistent with NS-2, “Dewatering Operations” and the Caltrans Field Guide to Construction Site Dewatering Manual, and in compliance with the specifications.

Maintenance and Inspection

The WPC Manager shall monitor on-site contaminated soil storage and disposal procedures.

Monitor the air quality during excavation operations if required

Manage contaminated soils and hazardous substances/waste under the appropriate federal, state, and local requirements.

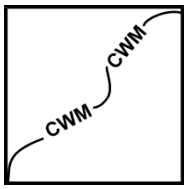
Inspect stockpiles, hazardous waste receptacles and storage areas regularly.

SWPPP or WPCP

Contaminated Soil Management must be discussed in Section 500.4 of the SWPPP or Section 30.3.2 of the WPCP.

Concrete Waste Management

WM-8



Standard Symbol

Definition and Purpose

These are procedures and practices that are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.

Appropriate Applications

Concrete waste management procedures and practices are implemented on construction projects where concrete is used as a construction material or where concrete dust and debris result from demolition activities.

Where slurries containing portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from sawcutting, coring, grinding, grooving, and hydro-concrete demolition.

Where concrete trucks and other concrete-coated equipment are washed on site, when approved by the Resident Engineer (RE). See also NS-8, “Vehicle and Equipment Cleaning."

Where mortar-mixing stations exist.

Limitations

None identified.

Standards and Specifications

Education

Educate employees, subcontractors, and suppliers on the concrete waste management techniques described herein.

The WPC Manager shall oversee and enforce concrete waste management procedures.

Concrete Demolition Wastes

Stockpile concrete demolition wastes in accordance with BMP WM-3, "Stockpile Management."

Disposal of hardened PCC and AC waste shall be in conformance with Standard Specifications Section 14-10 Solid Waste Disposal and Recycling.

Concrete Slurry Waste Management and Disposal

PCC and AC waste shall not be allowed to enter storm drainage systems or watercourses.

A sign shall be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators to utilize the proper facilities.

The WPCM must ensure that onsite concrete working tasks are being monitored, such as saw cutting, coring, grinding and grooving to ensure proper methods are implemented.

Residue from saw cutting, coring and grinding operations shall be picked up by means of a vacuum device. Residue shall not be allowed to flow across the pavement and shall not be left on the surface of the pavement. See also NS-3, "Paving and Grinding Operations."

Vacuumed slurry residue shall be disposed in accordance with WM-5, "Solid Waste Management" and Standard Specifications Section 7-1.13. Slurry residue shall be temporarily stored in a facility as described in "Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures" below), or within an impermeable containment vessel or bin.

Collect and dispose of all residues from grooving and grinding operations in accordance with Standard Specifications Section 14-10 Solid Waste Disposal and Recycling and Standard Specifications 14-11 Hazardous Waste and Contamination.

Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures

Temporary concrete washout facilities shall be located a minimum of 50 ft. from storm drain inlets, open drainage facilities, and watercourses, unless determined infeasible by the RE. Each facility shall be located away from construction traffic or access areas to prevent disturbance or tracking.

A sign shall be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities. The sign shall be installed as shown on the plans and in conformance with the provisions in Standard Specifications Section 56 2, Overhead Sign Structure.

Temporary concrete washout facilities shall be constructed above grade or below grade at the option of the Contractor. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.

Temporary washout facilities shall have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.

Perform washout of concrete mixers, delivery trucks, and other delivery systems in designated areas only.

Wash concrete only from mixer chutes into approved concrete washout facility. Washout may be collected in an impermeable bag or other impermeable containment devices for disposal.

Pump excess concrete in concrete pump bin back into concrete mixer truck.

Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed offsite.

Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of in conformance with the provisions in Standard Specifications Section 7-1.13 or 15 3.02.

Temporary Concrete Washout Facility Type "Above Grade"

Temporary concrete washout facility Type "Above Grade" shall be constructed as shown on Page 6 or 7, with a recommended minimum length and minimum width of10 ft, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval from the RE.

Straw bales, wood stakes, and sandbag materials shall conform to the provisions in SC-9, "Straw Bale Barrier."

Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material. Liner seams shall be installed in accordance with manufacturers' recommendations.

Portable delineators shall conform to the provisions in Standard Specifications Section 12 3.04, "Portable Delineators." The delineator bases shall be cemented to the pavement in the same manner as provided for cementing pavement markers to pavement. Portable delineators shall be applied only to a clean, dry surface.

Temporary Concrete Washout Facility (Type Below Grade)

Temporary concrete washout facility Type "Below Grade" shall be constructed as shown on page 6, with a recommended minimum length and minimum width of 10 ft. The quantity and volume shall be sufficient to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval of the RE. Lath and flagging shall be commercial type.

Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material. Liner seams shall be installed in accordance with manufacturers' recommendations.

The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.

Temporary washout facilities shall implement BMPs to prevent run-on and run-off from the facility.

Removal of Temporary Concrete Washout Facilities

When temporary concrete washout facilities are no longer required for the work, as determined by the RE, the hardened concrete shall be removed and disposed of. Disposal of PCC dried residues, slurries or liquid waste shall be disposed of outside the highway right-of-way in conformance with provisions of Standard Specifications Section 7-1-13. Materials used to construct temporary concrete washout facilities shall become

the property of the Contractor, shall be removed from the site of the work, and shall be disposed of outside the highway right-of-way.

Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and repaired in conformance with the provisions in Standard Specifications Section 15 1.02, "Preservation of Property."

Maintenance and Inspection

Inspect Concrete Waste Management areas before, during and after rainfall events, and at least weekly during other times.

The WPC Manager shall monitor concrete working tasks, such as sawcutting, coring, grinding and grooving daily to ensure proper methods are employed or as directed by the RE.

Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 4 inches for above grade facilities and 12 inches for below grade facilities.

Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and returning the facilities to a functional condition.

Hardened concrete materials shall be removed and disposed of in conformance with the provisions in Standard Specifications Section 7-1.13 or 15 3.02.

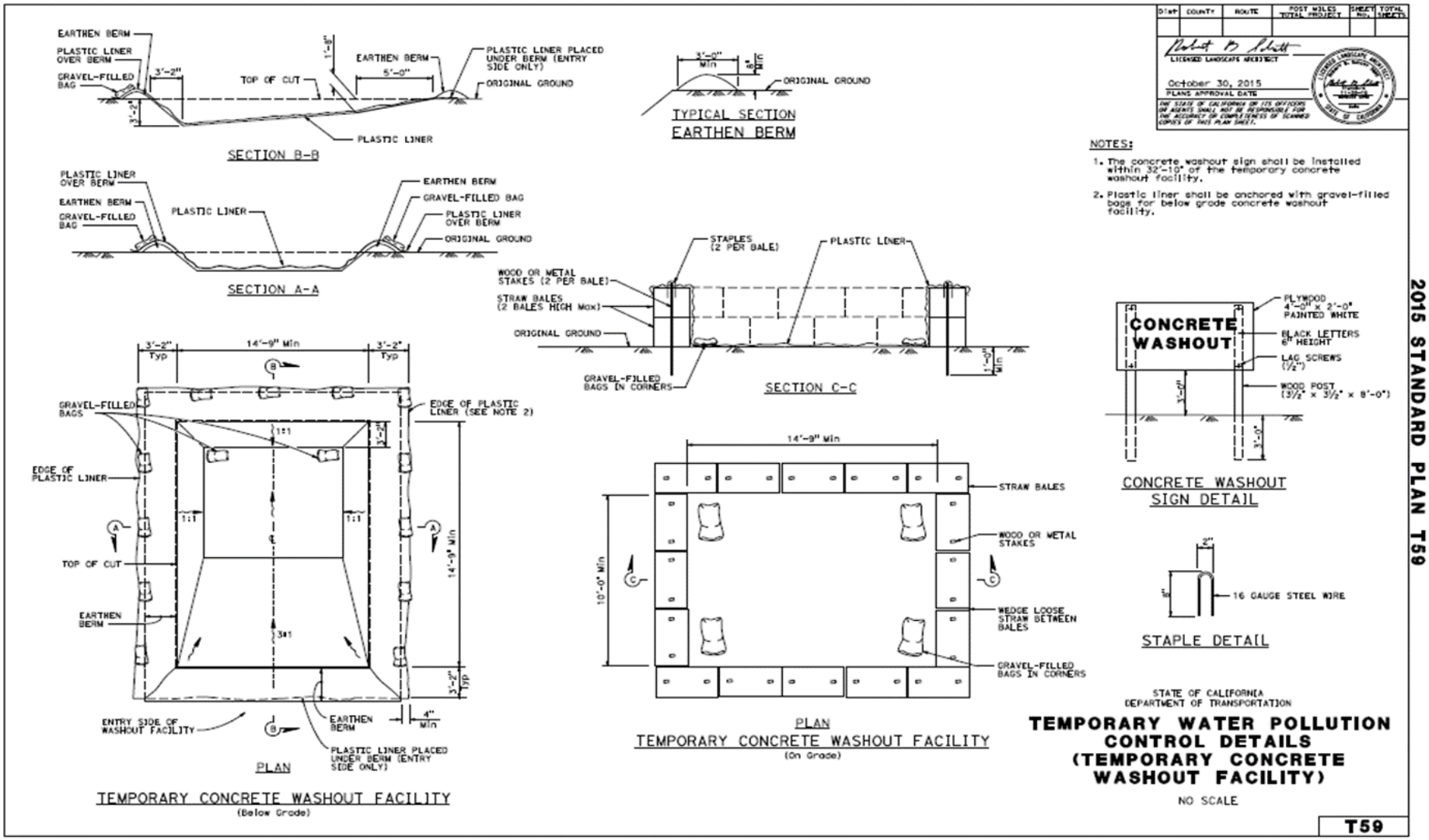
Existing facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.

Temporary concrete washout facilities shall be inspected for damage (i.e. tears in polyethylene liner, missing sandbags, etc.). Damaged facilities shall be repaired.

Inspection and Maintenance of these areas must be properly documented and ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

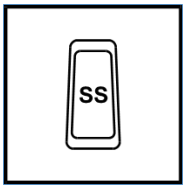
SWPPP or WPCP

Concrete Waste Management must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.


EARTHEN BERM
PLASTIC LINER OVER BERM
GRAVEL-FILLED BAG
3'-2"
TOP OF CUT
1'-8"
EARTHEN BERM
5'-0"
PLASTIC LINER PLACED UNDER BERM (ENTRY SIDE ONLY)
ORIGINAL GROUND
PLASTIC LINER
SECTION B-B
3'-0" Min
ORIGINAL GROUND
TYPICAL SECTION
EARTHEN BERM
PLASTIC LINER OVER BERM
EARTHEN BERM
GRAVEL-FILLED BAG
PLASTIC LINER
EARTHEN BERM
GRAVEL-FILLED BAG
PLASTIC LINER OVER BERM
ORIGINAL GROUND
SECTION A-A
STAPLES (2 PER BALE)
PLASTIC LINER
WOOD OR METAL STAKES (2 PER BALE)
STRAW BALES (2 BALES HIGH Max)
ORIGINAL GROUND
GRAVEL-FILLED BAGS IN CORNERS
SECTION C-C
NOTES:
1. The concrete washout sign shall be installed within 32'-10" of the temporary concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.
CONCRETE WASHOUT
PLYWOOD 4'-0" x 2'-0" PAINTED WHITE
BLACK LETTERS 6" HEIGHT
LAG SCREWS (1/2")
WOOD POST (3 1/2" x 3 1/2" x 8'-0")
CONCRETE WASHOUT SIGN DETAIL
2"
16 GAUGE STEEL WIRE
STAPLE DETAIL
3'-2" Typ
14'-9" Min
3'-2" Typ
GRAVEL-FILLED BAGS
EDGE OF PLASTIC LINER (SEE NOTE 2)
EDGE OF PLASTIC LINER
1:1
3:1
TOP OF CUT
EARTHEN BERM
14'-9" Min
3'-2" Typ
ENTRY SIDE OF WASHOUT FACILITY
EARTHEN BERM
4" Min
PLASTIC LINER PLACED UNDER BERM (ENTRY SIDE ONLY)
PLAN
TEMPORARY CONCRETE WASHOUT FACILITY
(Below Grade)
14'-9" Min
STRAW BALES
WOOD OR METAL STAKES
10'-0" Min
WEDGE LOOSE STRAW BETWEEN BALES
GRAVEL-FILLED BAGS IN CORNERS
PLAN
TEMPORARY CONCRETE WASHOUT FACILITY
(On Grade)
October 30, 2015
PLANS APPROVAL DATE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CONCRETE WASHOUT FACILITY)
NO SCALE
T59
2015 STANDARD PLAN T59

Sanitary and Septic Waste Management

WM-9



Standard Symbol

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of construction site sanitary and septic waste materials to the storm drain system or to receiving waters.

Appropriate Applications

Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary and septic waste systems.

Limitations

None identified.

Standards and Specifications

Education

Educate employees, subcontractors, and suppliers on sanitary and septic waste storage and disposal procedures.

Educate employees, subcontractors, and suppliers of potential dangers to humans and the environment from sanitary/septic wastes.

Instruct employees, subcontractors, and suppliers in identification of sanitary/septic waste.

Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgates).

Establish a continuing education program to indoctrinate new employees.

Storage and Disposal Procedures

Temporary sanitary facilities shall be located away from drainage facilities, receiving waters, and from traffic circulation.

When subjected to high winds or risk for overtopping, temporary systems must be properly secured.

Wastewater shall not be discharged or buried within the highway right-of-way.

Sanitary and septic systems that discharge directly into sanitary sewer systems, where permissible, shall comply with the local health agency, city, county, and sewer district requirements.

If using an on-site disposal system, such as a septic system, comply with local health agency requirements.

Properly connect temporary sanitary facilities that discharge to the sanitary sewer system to avoid illicit discharges.

Ensure that sanitary and septic facilities are maintained in good working order by a licensed service.

Use only reputable, licensed sanitary/septic waste haulers.

Maintenance and Inspection

Inspect onsite sanitary and septic waste storage and disposal procedures at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

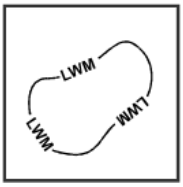
Locations for portable Santiary Systems must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

Sanitary and Septic Waste Management must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.

Liquid Waste Management

WM-10



Standard Symbol

Definition and Purpose

Procedures and practices to prevent discharge of pollutants to the storm drain system or to receiving waters as a result of the creation, collection, and disposal of non-hazardous liquid wastes.

Appropriate Applications

Liquid waste management is applicable to construction projects that generate any of the following non-hazardous byproducts, residuals, or wastes:

- Drilling slurries and drilling fluids.
- Grease-free and oil-free wastewater and rinse water.
- Dredgings.
- Other non-storm water liquid discharges not permitted by separate permits.

Limitations

Disposal of some liquid wastes may be subject to specific laws and regulations, or to requirements of other permits secured for the construction project (e.g., NPDES permits, Army Corps permits, Coastal Commission permits, etc.).

Does not apply to dewatering operations (see NS-2, “Dewatering Operations”), solid waste management (see WM-5, “Solid Waste Management”), hazardous wastes (see WM-6, “Hazardous Waste Management”), or concrete slurry residue (see WM-8, “Concrete Waste Management”).

Does not apply to non-stormwater discharges permitted by any NPDES permit held by the pertinent Caltrans District, unless the discharge is determined by Caltrans to be a source of pollutants. Typical permitted non-stormwater discharges can include: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated pumped ground water; discharges from potable water sources; foundation

drains; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; flows from riparian habitats and wetlands; and, discharges or flows from emergency firefighting activities. See 2016 SWMP for complete list of permitted non-stormwater discharges.

Standards and Specifications

General Practices

Must comply with Standard Specification 13-4.03 Spill Prevention and Control.

The WPC Manager shall oversee and enforce proper liquid waste management procedures and practices.

Instruct employees and subcontractors how to safely differentiate between non-hazardous liquid waste and potential or known hazardous liquid waste.

Instruct employees, subcontractors, and suppliers that it is unacceptable for any liquid waste to enter any storm drainage structure, waterway, or receiving water.

Educate employees and subcontractors on liquid waste generating activities, and liquid waste storage and disposal procedures.

Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgates).

Verify which non-stormwater discharges are permitted by the Caltrans NPDES permit; different regions might have different requirements not outlined in this permit. Some listed discharges may be prohibited if Caltrans determines the discharge to be a source of pollutants.

Apply the NS-8, “Vehicle and Equipment Cleaning” BMP for managing wash water and rinse water from vehicle and equipment cleaning operations.

Containing Liquid Wastes

Drilling residue and drilling fluids shall not be allowed to enter storm drains and receiving waters and shall be disposed of outside the highway right of way in conformance with the provisions in Standard Specifications.

If an appropriate location is available, as determined by the RE, drilling residue and drilling fluids that are exempt under California Code of Regulations (CCR) Title 23 §2511(g) may be dried by infiltration and evaporation in a containment facility constructed in conformance with the provisions concerning the Temporary Concrete Washout Facilities detailed in WM-08, “Concrete Waste Management.”

Liquid wastes generated as part of an operational procedure, such as water-laden dredged material and drilling mud, shall be contained and not allowed to flow into drainage channels or receiving waters prior to treatment.

Contain liquid wastes in a controlled area, such as a holding pit, sediment basin, roll-off bin, or portable tank.

Containment devices must be structurally sound and leak free.

Containment devices must be of sufficient quantity or volume to completely contain the liquid wastes generated.

Take precautions to avoid spills or accidental releases of contained liquid wastes. Apply the education measures and spill response procedures outlined in WM-4, "Spill Prevention and Control."

Do not locate containment areas or devices where accidental release of the contained liquid can threaten health or safety, or discharge to water bodies, channels, or storm drains.

Capturing Liquid Wastes

Capture all liquid wastes running off a surface, which has the potential to affect the storm drainage system, such as wash water and rinse water from cleaning walls or pavement.

Do not allow liquid wastes to flow or discharge uncontrolled. Use temporary dikes or berms to intercept flows and direct them to a containment area or device for capture.

If the liquid waste is sediment laden, use a sediment trap SC-3, "Sediment Trap/Curb Cutback" for capturing and treating the liquid waste stream, or capture in a containment device and allow sediment to settle.

Disposing of Liquid Wastes

Typical method is to dewater the contained liquid waste, using procedures such as described in NS-2, "Dewatering Operations", and SC-2, "Sediment/Desilting Basin"; and dispose of resulting solids per WM-5, "Solid Waste Management."

Method of disposal for some liquid wastes may be prescribed in Water Quality Reports, NPDES permits, Environmental Impact Reports, 401 Water Quality Certifications or 404 permits, local agency discharge permits, etc., and may be defined elsewhere in the special provisions.

Liquid wastes, such as from dredged material, may require testing and certification whether it is hazardous or not before a disposal method can be determined.

For disposal of hazardous waste, see WM-6, "Hazardous Waste Management."

If necessary, further treat liquid wastes prior to disposal. Treatment may include, though is not limited to, sedimentation, filtration, and chemical neutralization.

Maintenance and Inspection

Inspect onsite sanitary and septic waste storage and disposal procedures at least weekly, prior to a forecasted rain event, daily during extended rain events and post-storm events.

Locations for portable Santiary Systems must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

Sanitary and Septic Waste Management must be discussed in Section 500.4.2 of the SWPPP or Section 30.3.2 of the WPCP.

Appendix A

Definition of Terms

Active Areas. An area where soil disturbing activities have occurred at least once within 14 days.

Areas of Construction. All areas subject to land surface disturbance activities related to the project including, but not limited to, project staging areas, immediate access areas and storage areas.

Active Treatment System (ATS). A treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment.

Air Deposition. Airborne particulates from construction activities.

Best Available Technology Economically Achievable (BAT). As defined by USEPA, BAT is a technology-based standard established by the CWA as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT). As defined by USEPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Management Practices (BMPs). BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Caltrans Permit. The Caltrans Statewide NPDES Permit for discharges from Caltrans properties, facilities, and activities (Order No. 2012-011-DWQ, NPDES No. CAS000003), issues by the SWRCB.

Construction Activity. Includes clearing, grading, or excavation and Contractor activities that result in soil disturbance.

Construction Site. The area involved in a construction project as a whole.

Construction Site BMPs. Temporary control practices (BMPs) that are required only temporarily to address a short-term stormwater contamination threat as a result of construction activities. For example, silt fences are located near the base of newly graded slopes that have substantial area of exposed soil. Then, during rainfall, the silt fences allow capture of sediment from erosion of the slopes.

Contractor. Party responsible for carrying out the contract per plans and specifications. The Standard Specifications and contract special provisions contain stormwater protection requirements the Contractor must address.

Contractor-Support Facilities. Contractor-support facilities include: Staging areas, storage yards for equipment and materials, mobile operations, batch plants for Portland Cement Concrete and Hot Mix Asphalt, crushing plants for rock and aggregate, other facilities installed for Contractor convenience such as haul roads.

Debris. Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

Direct Discharge. When surface runoff directly enters the surface water body without first flowing through a municipal separate storm sewer system (MS4).

Discharge. Any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid or solid substance.

Disturbed Soil Areas (DSAs). Areas of exposed, erodible soil, including stockpiles, that are within the construction limits and that result from construction activities.

Drainage Area. The area of land that drains water, sediment, pollutants, and dissolved materials to a common outlet.

Effluent. Any discharge of water by a discharger either to the receiving water or beyond the property boundary controlled by the discharger.

Environmental Protection Agency (EPA). Agency that issued the regulations to control pollutants in stormwater runoff discharges (The Clean Water Act and NPDES permit requirements).

Erosion. The process, by which soil particles are detached and transported by the actions of wind, water, or gravity.

Erosion Control BMPs. Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Exempt Construction Activities. Activities exempt from the CGP, including routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility; and emergency construction activities required to protect public health and safety. Local permits may not exempt these activities.

Existing vegetation. Any vegetated area that has not already been cleared and grubbed.

Final Stabilization. All soil disturbing activities at each individual parcel within the site have been completed in a manner consistent with the requirements in this General Permit.

Forecasted Storm Event. A storm that produces or is forecasted to produce at least 0.10 inch of precipitation within a 24-hour period.

General Permit. The Construction General Permit for Storm Water Discharges Associated with Construction Activity (Order No. 2009-000-DWQ, NPDES Permit CAS000002) and amendments (Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ) issued by the SWRCB.

Good Housekeeping. A common practice related to the storage, use, or cleanup of materials, performed in a manner that minimizes the discharge of pollutants.

Good Housekeeping BMPs. BMPs designed to reduce or eliminate the addition of pollutants to construction site runoff through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions. Grading Phase (part of the Grading and Land Development Phase) includes reconfiguring the topography and slope including; alluvium removals; canyon cleanouts; rock undercuts; keyway excavations; land form grading; and stockpiling of select material for capping operations.

Illegal Connection. Discarding or disposal within the Caltrans right-of-way, properties or facilities, either intentionally or unintentionally, of trash or other wastes in non-designated areas that may contribute to stormwater pollution.

Illegal Dumping. An engineered conveyance that is connected to an MS4 without authorization by local, state, or federal statutes, ordinances, codes or regulations.

Illicit Discharge. Any discharge to an MS4 that is prohibited under local, state, or federal statutes, ordinances, codes or regulations. It includes all non-stormwater discharges except conditionally exempt non-stormwater discharges.

Inactive Construction Area. Any area not considered to be an active construction area. Active construction areas become inactive construction areas whenever construction activities are expected to be discontinued for a period of 14 days or longer.

Indirect Discharge. When surface runoff enters the surface water body through an MS4 stormwater conveyance system or unlisted tributary before reaching the surface water.

National Pollutant Discharge Elimination System (NPDES) Permit. A permit issued pursuant to the CWA that requires the discharge of pollutants to waters of the United States from stormwater be controlled.

Non-Storm Water Discharges. Non-Storm Water Discharges are discharges that do not originate from forecasted storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

Non-Visible Pollutants. Pollutants associated with a specific site or activity that can have a negative impact on water quality, but cannot be seen though observation (ex: chlorine). Such pollutants being discharged are not authorized.

pH. Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6 and 9, with neutral being 7. Extremes of pH can have deleterious effects on aquatic systems.

Pollution. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water. An alteration of the quality of the water of the state by waste to a degree, which unreasonably affects either the waters for beneficial uses or facilities that serve these beneficial uses.

Post-Construction BMPs. Structural and non-structural controls which detain, retain, or filter the release of pollutants to receiving waters after final stabilization is attained.

Qualified SWPPP Developer (QSD). Individual who is authorized to develop and revise SWPPPs.

Qualified SWPPP Practitioner (QSP). Individual assigned responsibility for non-storm water and storm water visual observations, sampling and analysis, and responsibility to ensure full compliance with the permit and implementation of all elements of the SWPPP, including the preparation of the annual compliance evaluation and the elimination of all unauthorized discharges.

Receiving Waters. All surface water bodies within the permit area.

Regional Water Quality Control Board (RWQCB). California agencies that implement and enforce CWA Section 402(p) NPDES permit requirements, and are issuers and administrators of these permits as delegated by USEPA. There are nine regional boards working with the SWRCB.

Resident Engineer (RE). The Caltrans representative charged with administration of construction contracts. The RE decides questions regarding acceptability of material furnished and work performed. The RE has "contractual authority" to direct the Contractor and impose sanctions if the Contractor fails to take prompt and appropriate action to correct deficiencies. The following contractual sanctions can be imposed by the RE: (a) withholding payments (or portions of payments), (b) suspending work, (c) bringing in a separate Contractor to complete work items (the Contractor is billed for such costs), (d) assessing liquidated damages including passing along fines for permit violations, (e) initiating cancellation of the construction contract.

Routine Maintenance. Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Runoff Control BMPs. Measures used to divert run-on from off-site and runoff within the site.

Runoff Effect. The effect that a particular soil stabilization product has on the production of stormwater runoff. Runoff from an area protected by a particular product may be compared to the amount of runoff measured for bare soil

Run-on. Discharges that originate off-site and flow onto the property of a separate project site.

Sediment. Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation. Process of deposition of suspended matter carried by water, wastewater, or other liquids, by gravity. It is usually accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

Sediment Control BMPs. Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. They include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (e.g., silt fence, sediment basin, fiber rolls, etc.).

Sheet Flow. Flow of water that occurs overland in areas where there are no defined channels where the water spreads out over a large area at a uniform depth.

Soil Amendment. Any material that is added to the soil to change its chemical properties, engineering properties, or erosion resistance that could become mobilized by storm water.

State Water Resources Control Board (SWRCB). California agency that implements and enforces CWA Section 402(p) NPDES permit requirements, is issuer and administrator of these permits as delegated by EPA. Works with the nine Regional Water Quality Control Boards.

Storm Drain System. Streets, gutters, inlets, conduits, natural or artificial drains, channels and watercourses, or other facilities that are owned, operated, maintained and used for the purpose of collecting, storing, transporting, or disposing of stormwater.

Stormwater. Rainfall runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

Stormwater Pollution Prevention Plan (SWPPP). A plan required by the CGP or the LTCGP that includes site map(s), an identification of construction/contractor activities that could cause pollutants in the stormwater, and a description of measures or practices to control these pollutants. It must be prepared and authorized before construction begins. A SWPPP prepared in accordance with the Special Provisions and the Handbooks will satisfy Standard Specifications Section 13 Water Pollution Control

Temporary Construction Site BMPs. Construction Site BMPs that are required only temporarily to address a short-term stormwater contamination threat. For example, silt fences are located near the base of newly graded slopes that have a substantial area of exposed soil. Then, during rainfall, the silt fences filter and collect sediment from runoff flowing off the slope.

Water Pollution Control Manager (WPC Manager). The person responsible for the implementation of the SWPPPP or WPCP, whichever is applicable for the project. The WPC Manager must be a QSP whenever the project requires a WPCP. The WPC Manager must be a QSD whenever the project requires a SWPPP.

Water Pollution Control Program (WPCP). A WPCP is a plan to identify water quality management practices to be implemented that must be prepared for all construction projects that do not require preparation of a SWPPP. For Caltrans projects disturbing more than one acre, a SWPPP satisfies the requirement for a WPCP.

Waters of the United States. Generally, refers to surface waters, as defined by the federal Environmental Water quality objectives are defined in the California Water Code as limits or levels of water quality constituents or characteristics, which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

Appendix B: Selection of Temporary Soil Stabilization Controls

Appendix C: Active Treatment Systems

APPENDIX J
WATER POLLUTION CONTROL PLAN

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

Back of Cover Sheet

Back of Cover Sheet

WATER POLLUTION CONTROL PLAN (WPCP)

for

Project Name

City of Goleta Project Number:

City Project Number

Prepared for:

City of Goleta
130 Cremona Drive, Suite B
Goleta, CA 93117
City's Project Engineer Name

Project Engineer's Telephone Number

Submitted by:

Address 1

Address 2

Contact Name

Contact Telephone Number

Project Site Address:

Job Site Address or Location Description

Job Site Telephone Number

Contractor's Water Pollution Control Manager:

Site Manager Name

Contact Telephone Number

WPCP Prepared by:

WPCP Company Name

WPCP Address 1

WPCP Address 2

WPCP Contact Name

WPCP Contact Telephone Number

WPCP Preparation Date

Date

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30.1.1 Soil Stabilization BMPs .....
30.1.2 Sediment Control BMPs.....
30.1.3 Tracking Control BMPs .....
30.1.4 Wind Erosion Control BMPs .....
30.2 Construction Site Management .....
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30.2.2 Waste Management and Materials Pollution Control BMPs.....
30.3 Water Pollution Control Drawings (WPCDs).....
30.4 Construction BMP Maintenance, Inspection, and Repair .....
30.5 Training.....

WPCP Attachments

Attachment A .....Water Pollution Control Drawings

Section 10
WPCP Certification and Approval

10.1 Contractor's Certification

CONTRACTOR'S CERTIFICATION OF WPCP

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature	Date
Name and Title	Telephone Number

Section 20
Project Information

1. Introduction and Project Description:

   Provide a brief description of the project.

   Describe the type(s) of work that will be performed.

   Provide a breif description of the project location, including descriptive items such as freeway and street names.

   Describe proximity to receiving waters to which the project will discharge, including surface waters, drainage channels, and drainage systems.

   Identify drainage system owners (municipality and/or agency)

2. Unique Site Features:

   Provide a brief description of any unique site features (water bodies, wetlands, environmentally sensitive area, endangered or protected species, etc.)

   Describe significant or high-risk activities that may impact stormwater quality. Include any unique features or activities within or adjacent to water bodies (such as dredging, re-use of aerially deposited lead material, and/or large excavations.)

3. Potential Pollutant Sources:

   Review the contract documents and associated environmental documents to determine the known site contaminants and list them in this section.

Section 30
Pollution Sources and Control Measures

30.1 Soil Stabilization (Erosion Control) and Sediment Control

30.1.1 Soil Stabilization (Erosion Control) BMPs

The following soil stabilization BMP implementation table indicates the BMPs that shall be implemented to control erosion on the construction site. Implementation and locations of temporary soil stabilization BMPs are shown on the WPCDs in Attachment A and described in this section. The BMP working details can also be found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

TEMPORARY SOIL STABILIZATION (EROSION CONTROL) BMPS				
BMP Name	**Minimum Require-ment**	**BMP Used**		**If not used, state reason**
		Yes	No	
EC-1 Scheduling	☒	☐	☐	
EC-2 Preservation of Existing Vegetation	☒	☐	☐	
EC-3 Hydraulic Mulch	☐	☐	☐	
EC-4 Hydroseeding	☐	☐	☐	
EC-5 Soil Binders	☐	☐	☐	
EC-6 Straw Mulch	☐	☐	☐	
EC-7 Geotextiles & Mats	☐	☐	☐	
EC-8 Wood Mulching	☐	☐	☐	
EC-9 Earth Dikes and Drainage Swales	☐	☐	☐	
EC-10 Velocity Dissipation Devices	☐	☐	☐	
EC-11 Slope Drains	☐	☐	☐	
EC-12 Streambank Stabilization	☐	☐	☐	
EC-13 Polyacrylamide	☐	☐	☐	

ALTERNATIVE SOIL STABILIZATION BMPs USED		
☐ Yes ☐ No		
BMP Name	**BMP Description**	**If used, state reason**

30.1.2 Sediment Control BMPs

The following sediment control BMP implementation table indicates the BMPs that shall be implemented to control sediment on the construction site. Implementation and locations of temporary sediment control BMPs are shown on the WPCDs in Attachment A and described in this section. The BMP working details can also be found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

TEMPORARY SEDIMENT CONTROL BMPS				
BMP Name	**Minimum Require-ment**	**BMP Used**		**If not used, state reason**
		Yes	No	
SE-1 Silt Fence	☐	☐	☐	
SE-2 Sediment Basin	☐	☐	☐	
SE-3 Sediment Trap	☐	☐	☐	
SE-4 Check Dam	☐	☐	☐	
SE-5 Fiber Rolls	☐	☐	☐	
SE-6 Gravel Bag Berm	☐	☐	☐	
SE-7 Street Sweeping and Vacuuming	☒	☐	☐	
SE-8 Sandbag Barrier	☐	☐	☐	
SE-9 Straw Bale Barrier	☐	☐	☐	
SE-10 Storm Drain Inlet Protection	☒	☐	☐	
SE-11 Chemical Treatment	☐	☐	☐	

ALTERNATIVE SEDIMENT CONTROL BMPs USED		
☐ Yes ☐ No		
BMP Name	**BMP Description**	**If used, state reason**

30.1.3 Tracking Control BMPs

The following tracking control BMP implementation table indicates the BMPs that shall be implemented to reduce sediment tracking from the construction site onto private or public roads. Implementation and locations of tracking control BMPs are shown on the WPCDs in Attachment A and described in this section. The BMP working details can also be found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

TEMPORARY TRACKING CONTROL BMPS				
BMP Name	**Minimum Require-ment**	**BMP Used**		**If not used, state reason**
		Yes	No	
SE-7 Street Sweeping and Vacuuming	☒	☐	☐	
TC-1 Temporary Construction Entrance	☐	☐	☐	
TC-2 Stabilized Construction Roadway	☐	☐	☐	
TC-3 Temporary Entrance / Outlet Tire Wash	☐	☐	☐	

ALTERNATIVE TRACKING CONTROL BMPs USED		
☐ **Yes** ☐ **No**		
BMP Name	**BMP Description**	**If used, state reason**

30.1.4 Wind Erosion Control BMPs

The following wind erosion control BMP implementation table indicates the BMPs that shall be implemented to control wind erosion on the construction site. Implementation and locations of wind erosion control BMPs are shown on the WPCDs in Attachment A and/or described in this section. The BMP working details can be found in Attachment A. The following list of BMPs and narrative explain how the selected BMPs shall be incorporated into the project.

TEMPORARY WIND EROSION CONTROL BMPS				
BMP Name	**Minimum Require-ment**	**BMP Used**		**If not used, state reason**
		Yes	No	
WE-1 Wind Erosion Control	☐	☐	☐	
TC-1 Temporary Construction Entrance	☐	☐	☐	
TC-2 Stabilized Construction Roadway	☐	☐	☐	
All Soil Stabilization Measures Included in Section 30.1.1	☐	☐	☐	

ALTERNATIVE WIND EROSION BMPs USED		
☐ **Yes** ☐ **No**		
BMP Name	**BMP Description**	**If used, state reason**

30.2 Construction Site Management

30.2.1 Non-Stormwater Management BMPs

The following BMP implementation table indicates the BMPs that have been selected to control non-stormwater pollution on the construction site. Implementation and locations of non-stormwater control BMPs are shown on the WPCDs in Attachment A and described in this section. The BMP working details that will be adhered to are found in Attachment A of this WPCP.

TEMPORARY NON-STORMWATER POLLUTION CONTROL BMPS

BMP Name	Minimum Requirement	BMP Used		If not used, state reason
		Yes	No	
NS-1 Water Conservation Practices	☒	☐	☐	
NS-2 Dewatering Operations	☐	☐	☐	
NS-3 Paving and Grinding Operations	☐	☐	☐	
NS-4 Temporary Stream Crossing	☐	☐	☐	
NS-5 Clear Water Diversion	☐	☐	☐	
NS-6 Illicit Connection/Discharge	☒	☐	☐	
NS-7 Potable Water/Irrigation	☐	☐	☐	
NS-8 Vehicle and Equipment Cleaning	☐	☐	☐	
NS-9 Vehicle and Equipment Fueling	☐	☐	☐	
NS-10 Vehicle and Equipment Maintenance	☐	☐	☐	
NS-11 Pile Driving Operations	☐	☐	☐	
NS-12 Concrete Curing	☐	☐	☐	
NS-13 Concrete Finishing	☐	☐	☐	
NS-14 Material and Equipment Use	☐	☐	☐	
NS-15 Demolition Adjacent to Water	☐	☐	☐	

NS-16 Temporary Batch Plants	☐	☐	☐	

ALTERNATIVE NON-STORMWATER POLLUTION CONTROL BMPs USED		
☐ Yes ☐ No		
BMP Name	**BMP Description**	**If used, state reason**

30.2.2 Waste Management and Materials Pollution Control BMPs

The following BMP implementation table indicates the BMPs that have been selected to control construction site wastes and materials. Implementation and locations of materials handling and waste management BMPs are shown on the WPCDs in Attachment A. The BMP working details that will be adhered to are found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

TEMPORARY WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPS				
BMP Name	**Minimum Require-ment**	**BMP Used**		**If not used, state reason**
		Yes	No	
WM-1 Material Delivery and Storage	☒	☐	☐	
WM-2 Material Use	☒	☐	☐	
WM-3 Stockpile Management	☒	☐	☐	
WM-4 Spill Prevention and Control	☒	☐	☐	
WM-5 Solid Waste Management	☒	☐	☐	
WM-6 Hazardous Waste Management	☐	☐	☐	
WM-7 Contaminated Soil Management	☐	☐	☐	
WM-8 Concrete Waste Management	☐	☐	☐	
WM-9 Sanitary/ Septic Waste Management	☐	☐	☐	
WM-10 Liquid Waste Management	☐	☐	☐	

ALTERNATIVE WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs USED		
☐ Yes ☐ No		
BMP Name	**BMP Description**	**If used, state reason**

30.3 Water Pollution Control Drawings (WPCDs)

The WPCDs are included as Attachment A to this Water Pollution Control Program.

30.4 Construction BMP Maintenance, Inspection, and Repair

Site inspections shall be conducted by the Contractor's WPCM at the following minimum frequencies:

- Prior to a forecast storm.
- After a rain event that causes runoff from the construction site.
- At 24-hour intervals during extended rain events.
- Weekly during the rainy season.
- Every 2 weeks during the non-rainy season; and
- At any other time(s) or intervals of time specified in the Contract Special Provisions.

A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs.

30.5 Water Pollution Control Manager

The Water Pollution Control Manager (WPCM) assigned to this project is:

Insert WPCM's Name

Insert WPCM's Telephone Number

Insert Contractor's Company Name

The WPCM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved WPCP. The WPCM will be available at all times throughout duration of the project. Duties of the Contractor's WPCM include but are not limited to:

- Ensuring full compliance with the WPCP; and
- Implementing all elements of the WPCP.

The WPCM shall have the authority to mobilize crews in order to make immediate repairs to the water pollution control measures.

APPENDIX K

POST CONSTRUCTION WASTE & RECYCLING SUMMARY

FOR

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

Back of Cover Sheet

CITY OF GOLETA

Public Works Department

Construction and Demolition Debris Recycling Program

Waste Reduction and Recycling Plan Guidance Document

March 2019

Getting Started with your Construction and Demolition Debris Recycling Program and the Post Construction Waste Reduction & Recycling Summary Report (WRRS)

Step 1 – Determine whether your project is subject to this requirement

The following regulated projects must complete and submit a Certificate of Implementation and a Waste Reduction and Recycling Summary Report:

1. All Commercial additions or alterations;
2. All Residential additions or alterations that add floor space/increase size.
3. All Demolition of any structure requiring a permit.
4. All New Construction (pursuant to the California Green Building Code)

Step 2 – Complete a Certificate Of Implementation:

- Submit to City for permit file.

Step 3 – Complete and submit a Post-Construction Waste Reduction & Recycling Summary Report (WRRS)

- Submit the Post-Construction WRRS report to the City for review. Package to include WRRS form, weight tickets, etc.
- WRRS shall be submitted at least five (5) days prior to final inspection and issuance of certificate of occupancy or temporary certificate of occupancy.
- A final Certificate of Occupancy cannot be issued until these requirements have been satisfied.

Certificate of Implementation
City's Implementation of State Law:
Construction and Demolition (C&D) Debris Recycling Program
State of California Green Building Code (CalGreen)

The California Green Building Code: Effective January 1, 2017, the 2016 CalGreen requires that all Commercial additions or alterations, all Residential additions or alterations that add floor space/increase size, all Demolition of any structure requiring a permit and all New Construction (pursuant to the California Green Building Code) are required to divert 65% of the construction materials generated during construction of the project. The City has therefore implemented a mandatory Construction and Demolition (C&D) Debris Recycling Program to divert at least 65% of these highly recoverable materials from the landfill in accordance with CalGreen. This Program shall as defined above.

_____ _____
Property Address Project Number (e.g. CDP, APR, OC, Permit)

_____ _____
Owner/Developer Name Phone#

E-mail address:_____

Proposed Solid Waste Hauler: _____
*** A change in hauler is permitted as long as applicant notifies City in writing.**

AFFIDAVIT OF PROJECT TYPE: (check one or more)
□ **The project involves new construction.** □ **The project involves commercial addition/alteration**.
□ **The project involves demolition.** □ **The project involves residential addition/alteration**.

For all projects: A Summary Report shall be submitted to the City detailing how a 65% or greater diversion **was met** to comply with CalGreen. Sign both the Affidavit and Certification below.

_____ _____ _____
Signature Printed Name Date
□ Property Owner/ Authorized Agent (circle which)
□ Licensed Contractor, License No._____

CERTIFICATION OF IMPLEMENTATION: C&D DEBRIS RECYCLING PROGRAM

This is to certify a C&D Recycling Program for the above-referenced address will be implemented to divert a minimum of 65% and a Summary Report (detailing how the diversion was met) shall be submitted to the City upon project completion, prior to obtaining a Certificate of Occupancy.

I declare that I have read and understand the requirements of the City's C&D Debris Recycling Program and that the foregoing is true and correct.

_____ _____ _____
Signature Printed Name Date

□ Property Owner/ Authorized Agent (circle which)
□ Licensed Contractor, License No. _____

Post-Construction
Waste Reduction & Recycling Summary Report (WRRS)

Pursuant to the California Green Building Code this form must be completed for the following types of projects:

- All Commercial additions or alterations;
- All Residential additions or alterations that add floor space/increase size.
- All Demolition of any structure requiring a permit.
- All New Construction

NOTE: Completed WRRS Reports shall be submitted to the City of Goleta Public Counter 5 days prior to Final Inspection and issuance of Certificate of Occupancy or Temporary Certificate of Occupancy. If you have questions, please call: 805-961-7575.

Building Permit#: _____ Date: _____

Project Address (Include floor, suite, etc.): _____

Contact Name: _____ Title: _____

Company Name: _____

Contact Mailing Address: _____

Phone: _____ Fax: _____

Email: _____

1. Type of Project: ☐New Construction ☐Addition/Alteration ☐Demolition
2. Type of Building: ☐Commercial ☐Single Family Residence ☐Apartment/Condominium
3. Tenant Improvement: ☐Yes ☐No
4. Size of Project: _____ sq. ft. Construction Valuation $ _____
5. Project Completion Date: _____
6. Briefly state how solid waste material was handled on your job site to ensure salvage/reuse or recycling.

_____

_____

_____

Please do not write below this line

Plan approve by: _____ Title: _____

Signature: _____ Date: _____

Post-Construction Waste Reduction & Recycling Summary Report

Diversion Requirement: Reduce quantity of materials disposed at landfills by 65% or more.

Column A: List estimated quantities of waste for each material type (in tons). To convert material quantities to tons, use the Materials Conversion Worksheet provided in your packet.
Columns B, C, D: List estimated quantities reused, recycled, or disposed.
Column E: State the name of all vendors or facilities to be used to reuse, recycle or dispose of material listed. See example below for cases where more than one facility will be used for a particular material type.
Column Totals: Add up all quantities listed in Column A. Do the same for Columns B, C and D.

Building Permit#: _____ Project Address: _____

Waste Reduction & Recycling Summary REPORT (WRRS Report)

Material Handling Methods - Indicate quantities (in tons only) for each material listed.					
Material Type	A Total Tons Generated (A=B+C+D)	B Quantity Salvaged or Reused	C Recycling	D Estimated Disposal	E Anticipated Material Destination(s) (R): Recycled; (D): Disposal
Example: Cardboard	2 tons		1.5	.5	(R) MarBorg (D) Tajiguas Landfill
Asphalt & Concrete					
Brick/Masonry/Tile					
Building Materials (doors, windows, fixtures, etc.)					
Carpet					
Carpet padding/Foam					
Cardboard					
Ceiling tile (acoustic)					
Dirt					
Drywall (used)					
Drywall (new, unpainted sheets or scrap)					
Landscape Debris (brush, trees, stumps, etc.)					
Scrap metal					
Unpainted Wood and Pallets					
Garbage/Trash					
Other					
Recycled mixed debris					
Column Totals					

7. To determine if the required 65% project waste reduction will be met, complete the following with the column totals:

(B _____ + C _____) / A _____ = _____ x 100 = _____ %

8. Is the percentage listed in #7 greater than or equal to 65%? ☐YES ☐NO - If "NO" please explain why:

_____

_____

9. Print Name: _____ Signature: _____ Date: ____/____/____

For Reference Only
MATERIALS CONVERSION WORKSHEET - SEPARATED MATERIALS[1]
(Total Tons Generated)

This worksheet lists materials typically generated from a construction or demolition project and provides formulas for converting common units (i.e. cubic yards, square feet and board feet) to tons. It can be used for preparing your WMP Report, which require that quantities be provided in tons. Step 1 - For your WMP, enter estimated quantity for each applicable material in Column I, based on units of cubic yards (cy), cubic foot (cu ft),square feet (sq ft), or board foot (bd ft). For your Summary Report, use the actual quantities, based on weight tags, gate receipts, or other documents. Step 2 - Multiply by Tons/Unit figure listed in Worksheet Column II. Enter the result for each material in Column III. Step 3 - Enter quantities for each separated material from Column C on the Worksheet into the corresponding section of Column A of your WMP Report.

Material Category		Column I Volume	Units	x	Column II Tons/unit	=	Column III Tons
Asphalt/Concrete	Asphalt (broken)		cy	x	.7	=	
	Concrete (broken)		cy	x	.9	=	
	Concrete (solid slab)		cy	x	1.2975	=	
Brick/Masonry/Tile	Brick (broken)		cy	x	.7	=	
	Brick (whole, palletized)		cy	x	1.512	=	
	Masonry Block (broken)		cy	x	.6	=	
	Tile		sq ft	x	.00175		
Building Materials (doors, windows, cabinets, etc.)			cy	x	.15	=	
Cardboard (flat)			cy	x	.05	=	
Carpet	(by square foot)		sq ft	x	.0005	=	
	(by cubic yard)		cy	x	.3	=	
Carpet Padding/Foam			sq ft	x	.000125	=	
Ceiling Tiles	(whole - palletized)		sq ft	x	.0003	=	
	(loose)		cy	x	.0875	=	
[2]Dirt			cu ft	x	.3852	=	
Drywall (new or used)	1/2“ (by square foot)		sq ft	x	.0008	=	
	5/8” (by square foot)		sq ft	x	.00105	=	
Drywall (demo/used)	(by cubic yard)		cy	x	.25	=	
Garbage/Trash			cy	x	.175	=	
Landscape Debris (brush trees, etc.)			cy	x	.15	=	
Scrap Metal			cy	x	.453	=	
Unpainted Wood & Pallets	(by board food)		bd ft	x	.001375	=	
	(by cubic yard)		cy	x	.15	=	
[3]Other				x		=	

cy = cubic yards cu ft= cubic foot sq ft = square foot bd ft = board foot

Total Tons =

[1] For additional conversion factors go to https://www2.calrecycle.ca.gov/Search/?q=conversion+factors

Sources:
[1]: City of Oakland PWD
[2] CalRecycle (factor averaged between 5 different types of dirt and converted to tons for consistency)
[3] For additional conversion factors go to https://www2.calrecycle.ca.gov/Search/?q=conversion+factors

ATTACHMENT 3

Construction Contract with Alfaro Communications Construction, Inc.

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PUBLIC WORKS CONTRACT
BETWEEN THE CITY OF GOLETA
AND
ALFARO COMMUNICATIONS CONSTRUCTION, INC.

This Public Works Contract (herein referred to as "CONTRACT") is made and entered into by and between the **CITY OF GOLETA**, a municipal corporation (herein referred to as "CITY"), and **ALFARO COMMMUNICATIONS CONSTRUCTION, INC.**, a California Corporation (hereinafter referred to as "CONTRACTOR").

SECTION A. RECITALS

1. Pursuant to the Notice Inviting Sealed Bids for the Citywide Traffic Signal Upgrade Project (CIP 9083), bids were received, publicly opened, and declared on the date specified in the notice.

2. On _____, Goleta's City Council declared CONTRACTOR to be the lowest responsible bidder and accepted the bid of CONTRACTOR and the City Council approved this CONTRACT and authorized the City Manager to execute the CONTRACT with CONTRACTOR for furnishing labor, equipment, and material for the Citywide Traffic Signal Upgrade Project (CIP 9083) in the City of Goleta.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants herein contained, it is agreed:

SECTION B. TERMS

1. **GENERAL SCOPE OF WORK: CITY agrees to engage CONTRACTOR and CONTRACTOR** agrees to furnish all necessary labor, tools, materials, appliances, and equipment for and do the work for the Citywide Traffic Signal Upgrade Project (CIP 9083) in the City of Goleta. The work shall be performed in accordance with the Plans and Specifications (and as generally described in the "Notice Inviting Sealed Bids," attached as Exhibit A) and in accordance with bid prices set forth in CONTRACTOR'S Bid Proposal (attached as Exhibit B) and in accordance with the instructions of the City Engineer, or City's Manager's designee.

2. **INCORPORATED DOCUMENTS TO BE CONSIDERED COMPLEMENTARY:** The contract documents for the aforesaid project, a complete set of which is on file with the Goleta City Clerk's Office, shall consist of the Notice Inviting Bids, Instructions to Bidders, Bid Proposal, Standard Specifications, Special Provisions, and all referenced specifications, details, standard drawings, and appendices; together with this CONTRACT and all required bonds, insurance certificates, permits, notices and affidavits; and also, including any and all addenda or supplemental agreements clarifying, amending, or extending the work

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contemplated as may be required to insure its completion in an acceptable manner. All of the provisions of said contract documents are made a part hereof as though fully set forth herein. This contract is intended to require a complete and finished piece of work and anything necessary to complete the work properly and in accordance with the law and lawful governmental regulations shall be performed by CONTRACTOR whether set out specifically in the contract or not. Should it be ascertained that any inconsistency exists between the aforesaid documents and this written CONTRACT, the provisions of this CONTRACT, and the Standard Specifications, in that order, shall control. Collectively, these contract documents constitute the complete CONTRACT between CITY and CONTRACTOR and supersede any previous agreements or understandings.

3. **COMPENSATION:** CONTRACTOR agrees to receive and accept the prices set forth in its Bid Proposal as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. Said compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid contract documents; and also including those arising from actions of the elements, unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work.

4. **TIME OF PERFORMANCE:** CONTRACTOR agrees to complete the work within the timeframe specified in the Contract Documents from the date of the notice to proceed. By signing this CONTRACT, CONTRACTOR represents to CITY that the contract time is reasonable for completion of the work and that CONTRACTOR will complete such work within the contract time. In accordance with Government Code Section 53069.85, CONTRACTOR agrees to forfeit and pay CITY as liquidated damages, not as a penalty, the sum of $4,200 per day for each and every day of unauthorized delay beyond the completion date, which amount shall be deducted from any payments due or to become due the CONTRACTOR.

5. **PREVAILING WAGES:**

   A. Pursuant to Labor Code Sections §§1720 *et seq.*, including but not limited to sections 1771, 1774 and 1775, and as specified in Title 8, California Code of Regulations, Section 16000 et seq., CONTRACTOR must pay its workers prevailing wages. It is CONTRACTOR's responsibility to interpret and

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implement any prevailing wage requirements and CONTRACTOR agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.

B. In accordance with Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are available upon request from CITY's Engineering Division or the website for State of California Prevailing wage determination at http://www.dir.ca.gov/DLSR/PWD. CONTRACTOR must post a copy of the prevailing rate of per diem wages at the job site.

C. CITY directs CONTRACTOR's attention to Labor Code Sections 1777.5, 1777.6 and 3098 concerning the employment of apprentices by CONTRACTOR or any subcontractor.

D. Labor Code Section 1777.5 requires CONTRACTOR or subcontractor employing tradesmen in any apprenticeship occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate must also fix the ratio of apprentices to journeymen that will be used in the performance of the contract. The ratio of apprentices to journeymen in such cases will not be less than one to five except:

(1) When employment in the area of coverage by the joint apprenticeship committee has exceeded an average of 15 percent in the 90 days before the request for certificate, or

(2) When the number of apprentices in training in the area exceeds a ratio of one to five, or

(3) When the trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis state-wide or locally, or

(4) When assignment of an apprentice to any work performed under a public works contract would create a condition that would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large, or the specific task to which the apprentice is to be assigned is of a nature that training cannot be provided by a journeyman.

Pursuant to Labor Code § 1776, CONTRACTOR shall comply with all Department of Industrial Relations registration requirements.

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E. CONTRACTOR is required to make contributions to funds established for the administration of apprenticeship programs if CONTRACTOR employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.

F. CONTRACTOR and any subcontractor must comply with Labor Code Sections 1777.5 and 1777.6 in the employment of apprentices.

G. Information relative to apprenticeship standards, wage schedules and other requirements may be obtained from the Director of Industrial Relations (DIR), ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

H. CONTRACTOR and its subcontractors must keep an accurate certified payroll records showing the name, occupation, and the actual per diem wages paid to each worker employed in connection with this CONTRACT. The record will be kept open at all reasonable hours to the inspection of the body awarding the contract and to the Division of Labor Law Enforcement. If requested by CITY, CONTRACTOR must provide copies of the records at its cost.

6. **LEGAL HOURS OF WORK:** CONTRACTOR agrees to comply with the provisions of California Labor Code Section 1813 concerning penalties for workers who work excess hours. Except as provided by Labor Code Section 1815, the CONTRACTOR shall, as a penalty to the CITY, forfeit twenty five dollars ($25) for each worker employed in the execution of the Contract by the CONTRACTOR or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Division 2, Part 7, Chapter 1, Article 3 (commencing at Section 1810) of the California Labor Code.

7. **TRAVEL AND SUBSISTENCE PAY**: CONTRACTOR agrees to pay travel and subsistence pay to each worker needed to execute the work required by this CONTRACT as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Labor Code Section 1773.8.

8. **CONTRACTOR'S LIABILITY:** The CITY and its officers, agents and employees (“Indemnitees”) shall not be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof, or for any of the

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materials or other things used or employed in performing the work; or for injury or damage to any person or persons, either workers or employees of CONTRACTOR, of its subcontractors or the public, or for damage to adjoining or other property from any cause whatsoever arising out of or in connection with the performance of the work. CONTRACTOR shall be responsible for any damage or injury to any person or property resulting from defects or obstructions or from any cause whatsoever.

CONTRACTOR will indemnify Indemnities against and will hold and save Indemnitees harmless from any and all actions, claims, damages to persons or property, penalties, obligations or liabilities that may be asserted or claimed by any person, firm, entity, corporation, political subdivision, or other organization arising out of or in connection with the work, operation, or activities of CONTRACTOR, its agents, employees, subcontractors or invitees provided for herein, whether or not there is concurrent passive negligence on the part of CITY. In connection therewith:

a. CONTRACTOR will defend any action or actions filed in connection with any such claims, damages, penalties, obligations or liabilities and will pay all costs and expenses, including attorneys' fees, expert fees and costs incurred in connection therewith.

b. CONTRACTOR will promptly pay any judgment rendered against CONTRACTOR or Indemnitees covering such claims, damages, penalties, obligations and liabilities arising out of or in connection with such work, operations or activities of CONTRACTOR hereunder, and CONTRACTOR agrees to save and hold the Indemnitees harmless therefrom.

c. In the event Indemnitees are made a party to any action or proceeding filed or prosecuted against CONTRACTOR for damages or other claims arising out of or in connection with the work, operation or activities hereunder, CONTRACTOR agrees to pay to Indemnitees and any all costs and expenses incurred by Indemnitees in such action or proceeding together with reasonable attorneys' fees.

CONTRACTOR'S obligations under this section apply regardless of whether or not such claim, charge, damage, demand, action, proceeding, loss, stop notice, cost, expense, judgment, civil fine or penalty, or liability was caused in part or contributed to by an Indemnitee. However, without affecting the rights of CITY under any provision of this CONTRACT, Contractor shall not be required to

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indemnify and hold harmless CITY for liability attributable to the active negligence of CITY, provided such active negligence is determined by agreement between the parties or by the findings of a court of competent jurisdiction. In instances where CITY is shown to have been actively negligent and where CITY active negligence accounts for only a percentage of the liability involved, the obligation of Contractor will be for that entire portion or percentage of liability not attributable to the active negligence of City.

So much of the money due to CONTRACTOR under and by virtue of the contract as shall be considered necessary by CITY may be retained by CITY until disposition has been made of such actions or claims for damages as aforesaid.

It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California. This indemnity provision shall survive the termination of the CONTRACT and is in addition to any other rights or remedies which Indemnitees may have under the law.

This indemnity is effective without reference to the existence or applicability of any insurance coverage which may have been required under this CONTRACT or any additional insured endorsements which may extend to Indemnitees.

CONTRACTOR, on behalf of itself and all parties claiming under or through it, hereby waives all rights of subrogation and contribution against the Indemnitees, while acting within the scope of their duties, from all claims, losses and liabilities arising out of or incident to activities or operations performed by or on behalf of the CONTRACTOR regardless of any prior, concurrent, or subsequent passive negligence by the Indemnitees.

9. **THIRD-PARTY CLAIMS:** In accordance with Public Contracts Code Section 9201, CITY will promptly inform CONTRACTOR regarding third-party claims against CONTRACTOR, but in no event later than ten (10) business days after CITY receives such claims. Such notification will be in writing and forwarded in accordance with the “Notice” section of this CONTRACT. As more specifically detailed in the contract documents, CONTRACTOR agrees to indemnify and defend the City against any third-party claim.

10. **WORKERS COMPENSATION:** In accordance with California Labor Code Sections 1860 and 3700, CONTRACTOR and each of its subcontractors will be required to secure the payment of compensation to its employees. In accordance with the provisions of California Labor Code Section 1861, CONTRACTOR, by signing this contract, certifies as follows: “I am aware of the provisions of Section

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3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

11. **INSURANCE:** With respect to performance of work under this CONTRACT, CONTRACTOR shall maintain and shall require all of its subcontractors to maintain insurance as required in the Standard Specifications.

12. **ASSIGNMENT:** This CONTRACT is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported assignment or delegation of any of the rights of obligations of either party without the prior written consent of the other shall be void and of no force and effect.

13. **INDEPENDENT CONTRACTOR:** CONTRACTOR is and shall at all times remain as to the CITY, a wholly independent contractor. Neither the CITY nor any of its agents shall have control of the conduct of CONTRACTOR or any of CONTRACTOR'S employees, except as herein set forth. CONTRACTOR shall not at any time or in any manner represent that it or any of its agents or employees are in any manner agents or employees of CITY.

14. **TAXES:** CONTRACTOR is responsible for paying all retail sales and use, transportation, export, import, special or other taxes and duties applicable to, and assessable against any work, materials, equipment, services, processes and operations incidental to or involved in this contract. CONTRACTOR is responsible for ascertaining and arranging to pay them. The prices established in the contract shall include compensation for any taxes CONTRACTOR is required to pay by laws and regulations in effect at the bid opening date.

15. **LICENSES:** CONTRACTOR represents and warrants to CITY that it has all licenses, permits, qualifications, insurance, and approvals of whatsoever nature which are legally required of CONTRACTOR to practice its profession. CONTRACTOR represents and warrants to CITY that CONTRACTOR shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this CONTRACT any licenses, permits, insurance, and approvals which are legally required of CONTRACTOR to practice its profession. CONTRACTOR shall maintain a City of Goleta business license, if required under CITY ordinance.

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16. **RECORDS:** CONTRACTOR shall maintain accounts and records, including personnel, property, and financial records, adequate to identify and account for all costs pertaining to this CONTRACT and such other records as may be deemed necessary by CITY or any authorized representative, and will be retained for three years after the expiration of this CONTRACT. All such records shall be made available for inspection or audit by CITY at any time during regular business hours.

17. **SEVERABILITY:** If any portion of these contract documents are declared by a court of competent jurisdiction to be invalid or unenforceable, then such portion will be deemed modified to the extent necessary in the opinion of the court to render such portion enforceable and, as so modified, such portion and the balance of this CONTRACT will continue in full force and effect provided that it does not frustrate the mutual intent of the parties herein.

18. **WHOLE AGREEMENT:** This CONTRACT supersedes any and all other agreements either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described herein. Each party to this contract acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any other agreement, statements or promise not contained in this contract shall not be valid or binding. Any modifications of this contract will be effective only if signed by the party to be charged.

19. **AUTHORITY:** CONTRACTOR affirms that the signatures, titles, and seals set forth hereinafter in execution of this CONTRACT represent all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest herein. Each party warrants that the individuals who have signed this CONTRACT have the legal power, right, and authority to make this CONTRACT and to bind each respective party. This CONTRACT may be modified by written amendment. CITY's City Manager may execute any such amendment on CITY's behalf.

20. **NOTICES:** All notices permitted or required under this CONTRACT shall be in writing, and shall be deemed made when delivered to the applicable party's representative as provided in this CONTRACT. Additionally, such notices may be given to the respective parties at the following addresses, or at such other addresses as the parties may provide in writing for this purpose.

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Such notices shall be deemed made when personally delivered or when mailed forty-eight (48) hours after deposit in the U.S. mail, first-class postage prepaid, and addressed to the party at its applicable address. Courtesy copies of notices may be sent via electronic mail, provided that the original notice is deposited in the U.S. mail or personally delivered as specified in this Section.

CITY OF GOLETA
130 Cremona Drive, Suite B
Goleta, CA 93117
Attn: City Manager

CONTRACTOR
Alfaro Communications Construction, Inc.
15614 S. Atlantic Avenue
Compton, CA 90221
Attn: Haidi Daafi

21. **DISPUTES:** Disputes arising from this contract will be determined in accordance with the contract documents.

22. **NONDISCRIMINATION:** The CITY reaffirms its ongoing commitment to equality in the conduct of City business, and prohibits any policy, plan, program, custom or practice, including harassment, in the conduct of City business. No discrimination or discriminatory practice shall occur in either employment of persons for, or completion of, the work contemplated by this CONTRACT, when such discrimination is based on race, color, national origin, or ancestry; religion; sex; gender, gender identity, gender expression, or gender transitioning status; physical disability, mental disability, medical condition, or genetic information; marital or domestic partner status; citizenship status; age; sexual orientation; exercising a legally protected right to an employment leave of absence; status as a victim of domestic violence, sexual assault, or stalking; reproductive health decision-making, or any other classification protected under state or federal law. Among other possible violations of law, a violation of this section exposes CONTRACTOR to the penalties provided for in Labor Code Section 1735.

23. **PAPER PRODUCTS AND PRINTING REQUIREMENTS:** To the extent this contract provides paper products, and printing and writing paper for the City, CONTRACTOR must meet quality standards and criteria specified in SB 1383, Sections 22150-22154 of the Public Contract Code and 16 Code of Federal Regulations (CFR) Section 260.12 by:

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a. If fitness and quality are equal, provide recycled products, instead of nonrecycled products whenever recycled products are available at the same or a lesser total cost than nonrecycled items.
b. Provide paper products and printing and writing paper that meet Federal Trade Commission recyclability standard as defined in 16 CFR Section 260.12.
c. Certify in writing, under penalty of perjury, the minimum percentage of postconsumer material in the paper products and printing and writing paper offered or sold to the City. This certification requirement may be waived if the percentage of postconsumer material in the paper products, printing and writing paper, or both can be verified by a product label, catalog, invoice, or a manufacturer or vendor internet website.
d. Certify in writing, on invoices or receipts provided, that the paper products and printing and writing paper offered or sold to the City is eligible to be labeled with an unqualified recyclable label as defined in 16 CFR Section 260.12.
e. Comply with any other requirements in Goleta Municipal Code Section 8.10.900(B).

24. ORGANIC WASTE USE REQUIREMENTS: To the extent this contract provides landscaping maintenance, renovation, and construction services, CONTRACTOR must:

a. Use compost and SB 1383 eligible mulch, as practicable, produced from recovered organic waste, for all landscaping renovations, construction, or maintenance performed for the City, whenever available, and capable of meeting quality standards and criteria specified. SB 1383 eligible mulch used for land application must comply with 14 CCR Section 18993.1 - 18993.4, and must meet or exceed the physical contamination, maximum metal concentration and pathogen density standards specified in 14 CCR Sections 17852(a)(24.5)(A)(1) through (3).
b. Keep and provide records of procurement of recovered organic waste products (either through purchase or acquisition) to the City's Designated Representative, upon completion of projects. Information to be provided must include:
    i. General description of how and where the product was used and if applicable, applied;

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ii. Source of product, including name, physical location, and contact information for each entity, operation, or facility from whom the recovered organic waste products were procured;
iii. Type of product;
iv. Quantity of each product; and,
v. Invoice or other record demonstrating purchase or procurement.

c. Comply with all requirements in Goleta Municipal Code Section 8.10.900(A).

25. NO THIRD-PARTY BENEFICIARY: This CONTRACT and every provision herein is for the exclusive benefit of CONTRACTOR and CITY and not for the benefit of any other party. There will be no incidental or other beneficiaries of any of the CONTRACTOR's or the CITY's obligations under this Contract.

26. TIME IS OF ESSENCE: Time is of the essence for each and every provision of the Contract Documents.

27. ACCEPTANCE OF FACSIMILE OR ELECTRONIC SIGNATURES: The Parties agree that this CONTRACT, agreements ancillary to this CONTRACT, and related documents to be entered into in connection with this CONTRACT will be considered signed when the signature of a party is delivered by facsimile transmission or scanned and delivered via electronic mail. Such facsimile or electronic mail copies will be treated in all respects as having the same effect as an original signature.

28. GOVERNING LAW: This CONTRACT shall be governed by the laws of the State of California, and exclusive venue for any action involving this CONTRACT will be in Santa Barbara County.

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IN WITNESS WHEREOF, the parties hereto have executed this CONTRACT with all the formalities required by law on the respective dates set forth opposite their signatures.

This CONTRACT is executed on this _____ day of _____, at Goleta, California, and effective as of _____ _____, 20____.

CITY OF GOLETA:

_____
Robert Nisbet, City Manager

ATTEST:

_____
Deborah Lopez, City Clerk

APPROVED AS TO FORM:
ISAAC ROSEN, CITY ATTORNEY

Signed by:
Scott Shapses
4365248AE5424CE...
Scott Shapses, Deputy City Attorney

CONTRACTOR:

DocuSigned by:
Hugo Alfaro
68836BA009BB42A...
Hugo Alfaro, Treasurer

Signed by:
Mayra Martinez
1125D0FB4C8840F...
Mayra Martinez, Vice President, Secretary

State of California License No.

912727

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Department of Industrial Relations Registration No.

_____

Business Phone No.

(310) 669-8949

CONTRACTOR'S Emergency Phone No. at which contractor can be reached at any time

(310) 669-8949

_____

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EXHIBIT A
NOTICE INVITING SEALED BIDS

Docusign Envelope ID: 103DA610-2DC9-4ACA-A817-476684D1599A

NOTICE TO CONTRACTORS
INVITING SEALED BIDS
FOR THE
CITWIDE TRAFFIC SIGNAL UPGRADE PROJECT

City Project Number: 9083

PUBLIC NOTICE IS HEREBY GIVEN that the City of Goleta ("CITY"), invites sealed bids for the above stated project and will receive such bids via electronic transmission on the City of Goleta Planet Bids portal site until ~~**August 25, 2025**~~ **August 26, 2025, at 3:00 PM** Late proposals will be rejected. No exceptions.

Copies of the Contract Documents and the Proposal Forms for bidding the project, may be obtained from the PlanetBids Website: https://pbsystem.planetbids.com. Proposals which do not acknowledge addendums to the project documents will be rejected.

All communications relative to this project shall be conducted through PlanetBids. Questions about alleged patent ambiguity of the plans, specifications, or estimate must be asked before bid opening. After bid opening, the CITY does not consider these questions as bid protests.

A **pre-bid meeting will be held at N/A**.

It is required that the Bidders have fully inspected the Project site in all particulars and become thoroughly familiar with the terms and conditions of the Bid Plans and Special Provisions and local conditions affecting the performance and costs of the Work prior to bidding and it is recommended that this be done prior to attending this meeting.

Pursuant to California Labor Code Section 1773, the City has ascertained the General Prevailing Rate of Wages in the County in which the work is to be done to be as determined by the Director of Industrial Relations of the State of California. Contractor is hereby made aware that information regarding prevailing wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: https://www.dir.ca.gov/OPRL/2024-1/PWD/Southern.html. The Contractor is required to post a copy of the applicable wage rates at the job site. Attention is directed to Section 7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC of the State Standard Specifications.

The California Air Resources Board ("CARB") implemented amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulations ("Regulation") which are effective on January 1, 2024 and apply broadly to all self-propelled off road diesel vehicles 25 horsepower or greater and other forms of equipment used in California. A copy of the Regulation is available at https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/off-

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roaddiesel/appa-1.pdf. Bidders are required to comply with all CARB and Regulation requirements, including, without limitation, all applicable sections of the Regulation, as codified in Title 13 of the California Code of Regulations section 2449 *et seq.* throughout the term of the Project. Bidders must provide, with their Bid, copies of Bidder's and all listed subcontractors the most recent, valid Certificate of Reported Compliance ("CRC") issued by CARB. Failure to provide valid CRCs as required herein may render the Bid non-responsive.

Bidders must be registered on the City of Goleta's PlanetBids portal in order to receive addendum notifications and to submit a bid. Go to PlanetBids for bid results and awards. It is the responsibility of the bidder to submit the bid with sufficient time to be received by PlanetBids prior to the bid opening date and time. Allow time for technical difficulties, uploading, and unexpected delays. **Late or incomplete bids will not be accepted.**

Bid must be accompanied by a bid security in the form of a money order, a certified cashier's check, or bidder's bond executed by an admitted surety, made payable to CITY. The bid security shall be an amount equal to ten percent (10%) of the total annual bid amount included with their proposals as required by California law.

Note: All bids must be accompanied by a scanned copy of the bid security uploaded to PlanetBids. The original security of the three (3) lowest bidders must be mailed or submitted to the office of the City Clerk at 130 Cremona Drive, Suite B, Goleta, California 93117, in a sealed envelope and be received or postmarked within three (3) City working days after the bid due date and time for the bid to be considered. The sealed envelope should be plainly marked on the outside, "SEALED BID SECURITY FOR CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT."

The Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations (DIR) per California Labor Code Section 1771.4, including prevailing wage rates and apprenticeship employment standards. Affirmative action to ensure against discrimination in employment practices on the basis of race, color, national origin, ancestry, sex, or religion will also be required. The CITY hereby affirmatively ensures that all business enterprises will be afforded full opportunity to submit bids in response to this notice and will not be discriminated against on the basis of race, color, national origin, ancestry, sex, or religion in any consideration leading to the award of contract.

In accordance with the California Public Contract Code 20103.5 when federal funds are involved in local agency contracts, no bid shall be invalidated by the failure of the bidder to be licensed in California at the time of bid opening. However, at the time of award, the selected contractor shall be properly licensed in accordance with the laws of the State and the City of Goleta. Contractor shall possess a valid **Class A - General Engineering Contractor** license prior to award of Contract. Said license shall be maintained during the contract period. It is the Bidder's and Contractor's responsibility to

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obtain the correct Contractor's licenses. Bidders shall be skilled and regularly engage in the general class or type of work called for under this contract.

The successful Bidder will be required to furnish a Performance Bond and a Payment Bond each in an amount equal to 100% of the Contract Price. Each bond shall be in the forms set forth herein, shall be secured from a surety company that meets all State of California bonding requirements, as defined in Code of Civil Procedure Section 995.120, and that is a California admitted surety insurer.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the DIR. No Bid will be accepted, nor any contract entered into without proof of the contractor's and subcontractors' current registration with the DIR to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the DIR for the duration of the Project. Failure to provide proof of the contractor's current registration pursuant to Labor Code Section 1725.5 may result in rejection of the bid as non-responsive.

The Contractor Company, including the Responsible Managing Officer (RMO) for the Contractor Company, shall demonstrate a minimum of five (5) years' experience successfully performing projects of substantially similar type, magnitude, and character of the work bid. The CITY reserves the right to reject all bids, reject any bid that is not responsive to the invitation, or to waive any minor irregularity and to take all bids under advisement for a period of up to ninety (90) working days. Failure to provide proof of the Contractor's current registration pursuant to Section 1725.5 of the Labor Code may result in rejection of the bid as non-responsive. Failure to comply with enforcement provisions pursuant to Section 1771.4 of the Labor Code may result in a determination that the Bidder is not responsible.

Bids shall remain open and valid for a period of one hundred twenty (120) calendar days after the Bid Deadline.

Pursuant to Public Contract Code section 22300, the successful bidder may substitute certain securities for funds withheld by CITY to ensure performance under the Contract or, in the alternative, request the CITY to make payment of retention to an escrow agent.

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 8:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially, and caller anonymity will be respected.

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Any protest to an intended award of this contract shall be made in writing addressed to the City Clerk prior to the award. Any protest may be considered and acted on by the City Council at the time noticed for award of the contract. To request a copy of the notice of agenda for award, please contact the City Clerk cityclerkgroup@cityofgoleta.org or register on the CITY's website (www.cityofgoleta.org).

CITY OF GOLETA

Deborah S. Lopez, City Clerk

Published:

Santa Barbara Independent: July 17, 2025, and July 24, 2025

END OF NOTICE TO CONTRACTORS

Docusign Envelope ID: 103DA610-2DC9-4ACA-A817-476684D1599A

EXHIBIT B
BID PROPOSAL

Docusign Envelope ID: 103DA610-2DC9-4ACA-A817-476684D1599A

CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

BIDDING SHEET

The cost of all labor, material and equipment necessary for the completion of the work itemized, even though not shown or specified, shall be included in the unit or lump sum prices for the various items shown herein.

The City further reserves the right to reject any or all bids, to waive any informality or irregularity in any bid or the bidding procedure, and to delete any items of work in the award of contract. The City's decision on the bid amount is final.

Bidders must bid on all items in the Bid Schedule including the Supplemental and/or Alternative Bid Items in order for their bids to be complete. The award of contract will be based on the criteria outlined in Section 14 of the Bidding Instructions.

In the case of unit basis items, the amount set forth under the "Item Total" column (total base bid in words) shall be the product of the unit price bid and the estimated quantity for the item.

Bids on lump sum items are item totals. If a unit price of a lump sum item is entered and it differs from the item total, the item total prevails.

Entries are to be expressed in dollars or decimal fractions of a dollar. Symbols such as commas and dollar signs are ignored and have no significance in establishing unit price or item total.

Unit prices and item totals are interpreted by the number of digits and decimal placement. Do not round item totals or the total bid.

In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price prevails, except as provided in (a) or (b), as follows:

(a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount of the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;

(b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage-wise the unit price or item total in the City's Final Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise, if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

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CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT

CONTRACTOR: Alfaro Communications Construction,Inc

SCHEDULE OF BASE BID ITEMS

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
1	(P)	MOBILIZATION/DEMOBILIZATION, BONDS AND INSURANCE	LS	1	$ 267,280.-	$ 267,280.-
2	(P)	DEVELOPMENT, PLACEMENT, AND MAINTENANCE OF WATER POLLUTION CONTROL PLAN	LS	1	9,360.-	9,360.-
3	(P)	TRAFFIC CONTROL, TRAFFIC CONTROL PLAN, AND TRAFFIC CONTROL MAINTENANCE	LS	1	$ 117,000.-	$ 117,000.-
4	(P)	CLEARING AND GRUBBING	LS	1	$ 141,960.-	$ 141,960.-
5	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT ELLWOOD SCHOOL	LS	1	$ 67,718.04	$ 67,718.04
6	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT ENTRANCE RD	LS	1	$ 71,710.60	$ 71,710.60
7	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS ROAD AT ALAMEDA AVE	LS	1	$ 61,763.52	$ 61,763.52
8	(P)	TRAFFIC SIGNAL - HOLLISTER AVE AND PACIFIC OAKS ROAD	LS	1	$ 71,526.13	$ 71,526.13
9	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS AT GLEN ANNIE ROAD	LS	1	$ 75,734.62	$ 75,734.62
10	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT VILLAGE WAY	LS	1	$ 5,705.44	$ 5,705.44
11	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT GLEN ANNIE ROAD	LS	1	$ 20,980.44	$ 20,980.44
12	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT STORKE ROAD	LS	1	$ 6,133.01	$ 6,133.01

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ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
13	(P)	TRAFFIC SIGNAL - STORKE ROAD AT MARKETPLACE	LS	1	$ 46,973.29	$ 46,973.29
14	(P)	TRAFFIC SIGNAL - STORKE ROAD AT PHELPS ROAD	LS	1	$ 76,346.66	$ 76,346.66
15	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT COROMAR DRIVE	LS	1	$ 61,763.52	$ 61,763.52
16	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT LOS CARNEROS ROAD	LS	1	$ 68,689.01	$ 68,689.61
17	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT CASTILIAN DRIVE	LS	1	$ 73,686.86	$ 73,686.86
18	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT KARL STORZ DRIVE	LS	1	$ 71,823.57	$ 71,823.57
19	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT CALLE KORAL	LS	1	$ 58,214.52	$ 58,214.52
20	(P)	TRAFFIC SIGNAL - LOS CARNEROS AT DISCOVERY DRIVE	LS	1	$ 58,214.52	$ 58,214.52
21	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT SUMIDA GARDENS LANE	LS	1	$ 20,980.44	$ 20,980.44
22	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT PATTERSON AVENUE	LS	1	$ 20,980.44	$ 20,980.44
23	(P)	TRAFFIC SIGNAL - FAIRVIEW AVENUE AT CALLE REAL	LS	1	$ 61,763.52	$ 61,763.52
24	(P)	TRAFFIC SIGNAL - CALLE REAL AT ENCINA LANE	LS	1	$ 20,980.44	$ 20,980.44
25	(P)	TRAFFIC SIGNAL - CALLE REAL AT CALLE REAL SHOPPING CENTER	LS	1	$ 26,616.07	$ 26,616.07

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ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
26	(P)	TRAFFIC SIGNAL - CALLE REAL AT KELLOGG AVENUE	LS	1	$ 20,980.44	$ 20,980.44
27	(P)	TRAFFIC SIGNAL - CALLE REAL AT MARAVILLA	LS	1	$ 4,407.00	$ 4,407.00
28	(P)	TRAFFIC SIGNAL - PATTERSON AVENUE AT OVERPASS ROAD	LS	1	$ 61,763.52	$ 61,763.52
29	(P)	TRAFFIC SIGNAL - FAIRVIEW AVENUE AT ENCINA ROAD	LS	1	$ 62,688.73	$ 62,688.73
30	(P)	TRAFFIC SIGNAL - FAIRVIEW AVENUE AT BERKELEY ROAD	LS	1	$ 61,763.52	$ 61,763.52
31	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS ROAD AT FAIRVIEW AVENUE	LS	1	$ 89,542.70	$ 89,542.70
32	(P)	TRAFFIC SIGNAL - CATHEDRAL OAKS ROAD AT CAMBRIDGE DRIVE	LS	1	$ 78,866.32	$ 78,866.32
33	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT FAIRVIEW AVENUE	LS	1	$ 4,467.-	$ 4,467.-
34	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT NECATRINE AVENUE/PINE AVENUE	LS	1	$ 19,178.64	$ 19,178.64
35	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT RUTHERFORD STREET	LS	1	$ 14,379.56	$ 14,379.56

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ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
36	(P)	TRAFFIC SIGNAL - HOLLISTER AVENUE AT KINMAN AVENUE	LS	1	$ 4,407.-	$ 4,407.-
37	(P)	PORTABLE CHANGEABLE MESSAGE SIGNS	EA	12	$ 2,574.-	$ 30,888.-
		SUBTOTAL ITEMS 1-37 ~~36~~ (BASEBID)				$ 2,037,177.09

* **NOTES:**
(P) DENOTES PARTIAL PAYMENT

ALTERNATIVE A

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
~~37~~ 38	(P)	PUSH BUTTON - HOLLISTER AVENUE AT ELLWOOD SCHOOL	LS	1	$ 22,527.96	$ 22,527.96
~~38~~ 39	(P)	PUSH BUTTON - CATHEDRAL OAKS ROAD AT ALAMEDA AVE	LS	1	$ 16,573.44	$ 16,573.44
~~39~~ 40	(P)	PUSH BUTTON - CATHEDRAL OAKS AT GLEN ANNIE ROAD	LS	1	$ 17,645.94	$ 17,645.94
~~40~~ 41	(P)	PUSH BUTTON - HOLLISTER AVENUE AT VILLAGE WAY	LS	1	$ 16,573.44	$ 16,573.44
~~41~~ 42	(P)	PUSH BUTTON - HOLLISTER AVENUE AT GLEN ANNIE ROAD	LS	1	$ 16,573.44	$ 16,573.44
~~42~~ 43	(P)	PUSH BUTTON - HOLLISTER AVENUE AT STORKE ROAD	LS	1	$ 6,347.51	$ 6,347.51
~~43~~ 44	(P)	PUSH BUTTON - STORKE ROAD AT MARKETPLACE	LS	1	$ 18,356.65	$ 18,356.65
~~44~~ 45	(P)	PUSH BUTTON - STORKE ROAD AT PHELPS ROAD	LS	1	$ 38,995.58	$ 38,995.58
~~45~~ 46	(P)	PUSH BUTTON - HOLLISTER AVENUE AT COROMAR DRIVE	LS	1	$ 18,718.44	$ 18,718.44
~~46~~ 47	(P)	PUSH BUTTON - HOLLISTER AVENUE AT LOS CARNEROS ROAD	LS	1	$ 25,643.93	$ 25,643.93
~~47~~ 48	(P)	PUSH BUTTON - LOS CARNEROS AT CASTILIAN DRIVE	LS	1	$ 28,496.78	$ 28,496.78

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ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
~~48~~ 49	(P)	PUSH BUTTON - LOS CARNEROS AT KARL STORZ DRIVE	LS		26,633.49	26,633.49
~~49~~ 50	(P)	PUSH BUTTON - LOS CARNEROS AT CALLE KORAL	LS	1	$16,573.44	$16,573.44
~~50~~ 51	(P)	PUSH BUTTON - LOS CARNEROS AT DISCOVERY DRIVE	LS	1	$16,573.44	$16,573.44
~~51~~ 52	(P)	PUSH BUTTON - HOLLISTER AVENUE AT SUMIDA GARDENS LANE	LS	1	$23,339.94	$23,339.94
~~52~~ 53	(P)	PUSH BUTTON - HOLLISTER AVENUE AT PATTERSON AVENUE	LS	1	$23,339.94	$23,339.94
~~53~~ 54	(P)	PUSH BUTTON - FAIRVIEW AVENUE AT CALLE REAL	LS	1	$25,484.94	$25,484.94
~~54~~ 55	(P)	PUSH BUTTON - CALLE REAL AT ENCINA LANE	LS	1	$17,645.94	$17,645.94
~~55~~ 56	(P)	PUSH BUTTON - CALLE REAL AT CALLE REAL SHOPPING CENTER	LS	1	$23,281.57	$23,281.57
~~56~~ 57	(P)	PUSH BUTTON - CALLE REAL AT KELLOGG AVENUE	LS	1	$18,718.44	$18,718.44
58	(P)	PUSH BUTTON - PATTERSON AVENUE AT OVERPASS ROAD	LS	1	$17,645.94	$17,645.94
59	(P)	PUSH BUTTON - FAIRVIEW AVENUE AT ENCINA ROAD	LS	1	$24,050.65	$24,050.65
60	(P)	PUSH BUTTON - FAIRVIEW AVENUE AT BERKELEY ROAD	LS	1	$16,755.05	$16,755.05
61	(P)	PUSH BUTTON - CATHEDRAL OAKS ROAD AT FAIRVIEW AVENUE	LS	1	$16,759.34	$16,759.34

Docusign Envelope ID: 103DA610-2DC9-4ACA-A817-476684D1599A

ITEM NO.	*	ITEM	UNIT	EST. QUANT.	UNIT PRICE	AMOUNT
62	(P)	PUSH BUTTON - CATHEDRAL OAKS ROAD AT CAMBRIDGE DRIVE	LS	1	$ 16,759.34	$ 16,759.34
63	(P)	PUSH BUTTON - HOLLISTER AVENUE AT FAIRVIEW AVENUE	LS	1	$ 16,759.34	$ 16,759.34
64	(P)	PUSH BUTTON - HOLLISTER AVENUE AT NECATRINE AVENUE/PINE AVENUE	LS	1	$ 13,604.76	$ 13,604.76
65	(P)	PUSH BUTTON - HOLLISTER AVENUE AT RUTHERFORD STREET	LS	1	$ 13,604.76	$ 13,604.76
66	(P)	PUSH BUTTON - HOLLISTER AVENUE AT KINMAN AVENUE	LS	1	$ 16,759.34	$ 16,759.34
		SUBTOTAL ITEMS 38-66 ~~37-66~~ (ALTERNATIVE BID A)				$ 570,742.77

* **NOTES:**
(P) DENOTES PARTIAL PAYMENT

BASE BID: ENTER SUBTOTAL OF BID ITEMS #1 TO #37 ~~#36~~	$ 2,037,177.09
SUBTOTAL ITEMS #38 TO #66 ~~37-66~~ (ALTERNATIVE BID A)	$ 570,742.77
TOTAL OF BASE BID PLUS ALTERNATIVE BID A	$ 2,607,919.86

NOTES:

1) The City of Goleta shall determine the lowest responsible, responsive bidder based on the lowest total of the Base Bid plus the Alternative Bid A.

2) The City of Goleta, if it chooses to award, shall award the contract to the lowest responsible, responsive bidder based on the lowest total of the Base Bid plus the Alternative Bid A. Depending on budget constraints, the actual project may, at the City's discretion, include items from only the Base Bid plus Alternative Bid A.

3) The Contractor must submit pricing for all Base Bid items and Alternative Bid A. No response or a response of zero on any bid items will be deemed a non-responsive bid.

ATTACHMENT 4

Professional Services Agreement with Willdan Engineering, Inc.

Docusign Envelope ID: 51FAC8F3-87A0-48AE-813D-38F2264E5BFE

AGREEMENT FOR PROFESSIONAL SERVICES BETWEEN THE CITY OF GOLETA AND WILLDAN ENGINEERING, INC.

This AGREEMENT FOR PROFESSIONAL SERVICES (herein referred to as "AGREEMENT") is made and entered into this _____ day of _____ , 20____, by and between the **CITY OF GOLETA**, a municipal corporation (herein referred to as "CITY"), and **WILLDAN ENGINEERING, INC.,** a California Corporation (herein referred to as "CONSULTANT").

SECTION A. RECITALS

1. The CITY has a need for professional Construction Management services for the 9083 Citywide Traffic Signal Upgrade Project; and

2. The CITY does not have the personnel able and/or available to perform the services required under this AGREEMENT, and therefore, the CITY desires to contract for professional services to accomplish this work; and

3. The CITY procured these services in compliance with Goleta Municipal Code Section 3.05.260; and

4. The City Council, on this _____ day of _____, 20___, approved this AGREEMENT and authorized the City Manager to execute the AGREEMENT.

SECTION B. TERMS

1. RETENTION AS CONSULTANT

CITY hereby retains CONSULTANT, and CONSULTANT hereby accepts such engagement, to perform the services described in Section 2. CONSULTANT warrants it has the qualifications, experience, and facilities to properly and timely perform said services.

2. DESCRIPTION OF SERVICES

The services to be performed by CONSULTANT are as follows:

Professional Construction Management Services in conjunction with the Citywide Traffic Signal Upgrade Project. Services are more

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particularly set forth in the Scope of Work, attached as Exhibit “A,” and incorporated herein.

3. COMPENSATION AND PAYMENT

(a) Maximum and Rate. The total compensation payable to CONSULTANT by CITY for the services under this AGREEMENT **SHALL NOT EXCEED** the sum of $186,904 (herein "not to exceed amount"), and shall be earned as the work progresses on the following basis:

> Hourly at the hourly rates and with reimbursement to CONSULTANT for those expenses set forth in CONSULTANT's Schedule of Fees marked Exhibit "B," attached and incorporated herein. The rates and expenses set forth in that exhibit shall be binding upon CONSULTANT until December 31, 2027, after which any change in said rates and expenses must be approved in writing by CITY's Project Manager as described in Section 5 (CITY is to be given 60 days notice of any rate increase request), provided the not to exceed amount is the total compensation due CONSULTANT for all work described under this AGREEMENT.

(b) Payment. CONSULTANT shall provide CITY with written verification of the actual compensation earned, which written verification shall be in a form satisfactory to CITY's Project Manager, as described in Section 5. Invoices shall be made no more frequently than on a monthly basis, and describe the work performed (including a list of hours worked by personnel classification). All payments shall be made within 30 days after CITY’s approval of the invoice.

4. EXTRA SERVICES

CITY shall pay CONSULTANT for those CITY authorized extra services, not reasonably included within the services described in Section 2, as mutually agreed to writing in advance of the incurrence of extra services by CONSULTANT. Unless CITY and CONSULTANT have agreed in writing before the performance of extra services, no liability and no right to claim compensation for such extra services or expenses shall exist. The applicable hourly rates for extra services shall be at the hourly rates set forth in Exhibit B, if one is included as part of this agreement. Any compensation for extra services shall be part of the total compensation and shall not increase the not to exceed amount identified in Section 3.

5. CITY PROJECT MANAGER AND SERVICES BY CITY

The services to be performed by CONSULTANT shall be accomplished under the general direction of, and coordinate with, CITY's "Project Manager", as that staff person is designated by CITY from time to time, and who presently is Michael Winnewisser. Project Manager shall have the authority to act on behalf of

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the CITY in administering this AGREEMENT but shall not be authorized to extend the term of the AGREEMENT or increase the not to exceed amount.

6. TERM, PROGRESS AND COMPLETION

The term of this AGREEMENT is from the date first written above to December 31, 2027, unless term of this AGREEMENT is extended, or the AGREEMENT is terminated as provided for herein.

CONSULTANT shall not commence work on the services to be performed until (i) CONSULTANT furnishes proof of insurance as required by Section 10 below, and (ii) CITY gives written authorization to proceed with the work provided by CITY's Project Manager. All services shall be completed according to the schedule for delivery of services attached as Exhibit “C” and incorporated herein.

7. OWNERSHIP OF DOCUMENTS

All drawings, designs, data, photographs, reports and other documentation (other than CONSULTANT's drafts, notes and internal memorandum), including duplication of same prepared by CONSULTANT in the performance of these services, are the property of CITY. CITY shall be entitled to immediate possession of the same upon completion of the work under this AGREEMENT, or at any earlier or later time when requested by CITY. CITY agrees to hold CONSULTANT harmless from all damages, claims, expenses, and losses arising out of any reuse of the plans and specifications for purposes other than those described in this AGREEMENT, unless written authorization of CONSULTANT is first obtained.

8. PERSONAL SERVICES/NO ASSIGNMENT/SUBCONTRACTOR

This AGREEMENT is for professional services which are personal to CITY. Michael Bustos is deemed to be specially experienced and is a key member of CONSULTANT's firm, and shall be directly involved in the performance of this work. This key person shall communicate with, and periodically report to, CITY on the progress of the work. Should any such individual be removed from assisting in this contracted work for any reason, CITY may terminate this AGREEMENT. This AGREEMENT may not be assigned or subcontracted without the City Manager’s prior written consent.

9. HOLD HARMLESS AND INDEMNITY

(a) Hold Harmless for CONSULTANT's Damages. CONSULTANT holds CITY, its elected officials, officers, agents, and employees, harmless from all of CONSULTANT's claims, demands, lawsuits, judgments, damages, losses, injuries or liability to CONSULTANT, to CONSULTANT's employees, to CONSULTANT’s contractors or subcontractors, or to the owners of CONSULTANT's firm, which damages, losses, injuries or liability occur during the work required under this AGREEMENT, or occur while CONSULTANT is on CITY

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property, or which are connected, directly or indirectly, with CONSULTANT's performance of any activity or work required under this AGREEMENT.

(b) Defense and Indemnity of Third-Party Claims/Liability. CONSULTANT shall investigate, defend, and indemnify CITY, its elected officials, officers, agents, and employees, from any claims, lawsuits, demands, judgments, and all liability including, but not limited to, monetary or property damage, lost profit, personal injury, wrongful death, general liability, automobile, infringement of copyright/patent/trademark, or professional errors and omissions arising out of, directly or indirectly, an error, negligence, or omission of CONSULTANT or any of CONSULTANT's officers, agents, employees, representatives, subconsultants, or subcontractors, or the willful misconduct of CONSULTANT or any of CONSULTANT's officers, agents, employees, representatives, subconsultants, or subcontractors, in performing the services described in, or normally associated with, this type of contracted work. The duty to defend shall include any suits or actions concerning any activity, product or work required under this AGREEMENT, and also include the payment of all court costs, attorney fees, expert witness costs, investigation costs, claims adjusting costs and any other costs required for and related thereto.

(c) No Waiver. CITY does not waive, nor shall be deemed to have waived, any indemnity, defense or hold harmless rights under this section because of the acceptance by CITY, or the deposit with CITY, of any insurance certificates or policies described in Section 10.

10. INSURANCE

CONSULTANT shall, at CONSULTANT's sole cost and expense, provide insurance as described herein. All insurance is to be placed with insurers authorized to do business in the State of California with an A.M. Best and Company rating of A- or better, Class VII or better, or as otherwise approved by CITY.

Insurance shall include the following (or broader) coverage:

a) Insurance Services Office Commercial Liability coverage "occurrence" form CG 00 01 or its exact equivalent with an edition date prior to 2004 and with minimum limits of $1,000,000 per occurrence and $2,000,000 general aggregate.

b) Insurance Services Office form number CA 00 01 or equivalent covering Automobile Liability, including hired and non-owned automobile liability with a minimum limit of $1,000,000 per accident. If the Service Provider owns no vehicles, this requirement may be satisfied by a non-owned and hired auto endorsement to Service Provider's commercial general liability policy.

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c) Workers' Compensation insurance complying with California worker's compensation laws, including statutory limits for workers' compensation and an Employer's Liability limit of $1,000,000 per accident or disease.

d) Professional liability insurance that covers the services to be performed in connection with this agreement, in the minimum amount of $1,000,000 per claim.

Liability insurance policies required to be provided by CONSULTANT hereunder shall contain or be endorsed to contain the following provisions:

a) Except for professional liability insurance, CITY, its employees, officials, agents and member agencies shall be covered as additional insureds. Coverage shall apply to any and all liability arising out of the work performed or related to the contract. Additional insured status under the general liability requirement shall be provided on Insurance Services Office Form CG 20 10, with an edition date prior to 2004, or its equivalent. Additional insured status for completed operations shall be provided either in the additional insured form or through another endorsement such as CG 20 37, or its equivalent.

b) General and automobile liability insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability. Coverage will not be limited to CITY's vicarious liability.

c) Professional liability insurance policies inception date, continuity date, or retroactive date must be before the effective date of this agreement. CONSULTANT agrees to maintain continuous coverage through a period no less than three years after completion of the services required by this agreement.

d) Except for professional liability insurance, liability coverage shall be primary and non-contributing with any insurance maintained by CITY.

e) Evidence of coverage (including the workers' compensation and employer's liability policies) shall provide that coverage shall not be suspended, voided, canceled or reduced in coverage or in limits except after 30 days' prior written notice has been given to CITY. Such provision shall not include any limitation of liability of the insurer for failure to provide such notice.

f) No liability insurance coverage provided to comply with this AGREEMENT shall prohibit CONSULTANT, or CONSULTANT's

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employees, or agents, from waiving the right of recovery prior to a loss. CONSULTANT waives its right of recovery against CITY.

g) CONSULTANT agrees to deposit with CITY within fifteen days of Notice to Proceed of the Contract certificates of insurance and required endorsements.

h) There shall be no recourse against CITY for payment of premiums or other amounts with respect to the insurance required to be provided by CONSULTANT hereunder. Any failure, actual or alleged, on the part of CITY to monitor compliance with these requirements will not be deemed as a waiver of any rights on the part of CITY. CITY has no additional obligations by virtue of requiring the insurance set forth herein. In the event any policy of insurance required under this AGREEMENT does not comply with these requirements or is canceled and not replaced, CITY has the right but not the duty to obtain the insurance it deems necessary and any premium paid by CITY will be promptly reimbursed by CONSULTANT or CITY will withhold amounts sufficient to pay premium from CONSULTANT payments.

i) CONSULTANT agrees to provide immediate notice to CITY of any claim or loss against CONSULTANT arising out of the work performed under this AGREEMENT. CITY assumes no obligation or liability by such notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve CITY.

11. RELATIONSHIP OF CONSULTANT TO CITY

The relationship of the CONSULTANT to CITY shall be that of an independent contractor and that in no event shall CONSULTANT be considered an officer, agent, servant or employee of CITY. CONSULTANT shall be solely responsible for any workers compensation insurance, withholding taxes, unemployment insurance, and any other employer obligations associated with the described work.

12. CORRECTIONS

In addition to the above indemnification obligations, CONSULTANT shall correct, at its expense, all errors in the work that may be disclosed during CITY's review of CONSULTANT's report or plans. Should CONSULTANT fail to make such correction in a reasonably timely manner, such correction shall be made by CITY, and the cost thereof shall be charged to CONSULTANT or withheld from any funds due to CONSULTANT hereunder.

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13. TERMINATION BY CITY

CITY, by notifying CONSULTANT in writing, may upon 10 calendar days notice, terminate without cause any portion or all of the services agreed to be performed under this AGREEMENT. If termination is for cause, no notice period need be given. In the event of termination, CONSULTANT shall have the right and obligation to immediately assemble work in progress for the purpose of closing out the job. All compensation for actual work performed and charges outstanding at the time of termination shall be payable by CITY to CONSULTANT within 30 days following submission of a final statement by CONSULTANT unless termination is for cause. In such event, CONSULTANT shall be compensated only to the extent required by law.

14. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE

The acceptance by CONSULTANT of the final payment made under this AGREEMENT shall operate as and be a release of CITY from all claims and liabilities for compensation to CONSULTANT for anything done, furnished, or relating to CONSULTANT'S work or services. Acceptance of payment shall be any negotiation of CITY's check or the failure to make a written extra compensation claim within 10 calendar days of the receipt of that check. However, approval or payment by CITY shall not constitute, nor be deemed, a release of the responsibility and liability of CONSULTANT, its employees, subcontractors, agents and CONSULTANTs for the accuracy and competency of the information provided and/or work performed; nor shall such approval or payment be deemed to be an assumption of such responsibility or liability by CITY for any defect or error in the work prepared by CONSULTANT, its employees, subcontractors, agents and consultants.

15. AUDIT OF RECORDS

At any time during normal business hours and as often as it may deem necessary, CONSULTANT shall make available to a representative of CITY for examination of all its records with respect to all matters covered by this AGREEMENT and will permit CITY to audit, examine and/or reproduce such records. CONSULTANT will retain such financial records, time sheets, work progress reports, invoices, bills and project records for at least two years after termination or final payment under this AGREEMENT.

16. WAIVER; REMEDIES CUMULATIVE

Failure by a party to insist upon the strict performance of any of the provisions of this AGREEMENT by the other party, irrespective of the length of time for which such failure continues, shall not constitute a waiver of such party's right to demand strict compliance by such other party in the future. No waiver by a party of a default or breach of the other party shall be effective or binding upon such party unless made in writing by such party, and no such waiver shall be

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implied from any omissions by a party to take any action with respect to such default or breach. No express written waiver of a specified default or breach shall affect any other default or breach, or cover any other period of time, other than any default or breach and/or period of time specified. All of the remedies permitted or available to a party under this AGREEMENT, or at law or in equity, shall be cumulative and alternative, and invocation of any such right or remedy shall not constitute a waiver or election of remedies with respect to any other permitted or available right of remedy.

17. CONFLICT OF INTEREST

CONSULTANT is unaware of any CITY employee or official that has a financial interest in CONSULTANT'S business. During the term of this AGREEMENT and/or as a result of being awarded this AGREEMENT, CONSULTANT shall not offer, encourage or accept any financial interest in CONSULTANT'S business by any CITY employee or official.

18. CONSTRUCTION OF LANGUAGE OF AGREEMENT

The provisions of this AGREEMENT shall be construed as a whole according to its common meaning of purpose of providing a public benefit and not strictly for or against any party. It shall be construed consistent with the provisions hereof, in order to achieve the objectives and purposes of the parties. Wherever required by the context, the singular shall include the plural and vice versa, and the masculine gender shall include the feminine or neutral genders or vice versa.

19. MITIGATION OF DAMAGES

In all situations arising out of this AGREEMENT, the parties shall attempt to avoid and minimize the damages resulting from the conduct of the other party.

20. GOVERNING LAW

This AGREEMENT, and the rights and obligations of the parties, shall be governed and interpreted in accordance with the laws of the State of California. Should litigation occur, venue shall be in Superior Court of Santa Barbara County.

21. NONDISCRIMINATION

The City reaffirms its ongoing commitment to equality in the conduct of City business, and prohibits any policy, plan, program, custom or practice, including harassment, in the conduct of City business. No discrimination or discriminatory practice shall occur in either employment of persons for, or completion of, the work contemplated by this Agreement, when such discrimination is based on race, color, national origin, or ancestry; religion; sex; gender, gender identity, gender expression, or gender transitioning status; physical disability, mental disability, medical condition, or genetic information; marital or domestic partner status;

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citizenship status; age; sexual orientation; exercising a legally protected right to an employment leave of absence; status as a victim of domestic violence, sexual assault, or stalking; reproductive health decision-making, or any other classification protected under state or federal law. Among other possible violations of law, a violation of this section exposes CONSULTANT to the penalties provided for in Labor Code Section 1735.

22. TAXPAYER IDENTIFICATION NUMBER

CONSULTANT shall provide CITY with a complete Request for Taxpayer Identification Number and Certification, Form W-9 (Rev. October 2018), as issued by the Internal Revenue Service.

23. NON-APPROPRIATION OF FUNDS

Payments due and payable to CONSULTANT for current services are within the current budget and within an available, unexhausted and unencumbered appropriation of CITY funds. In the event CITY has not appropriated sufficient funds for payment of CONSULTANT services beyond the current fiscal year, this AGREEMENT shall cover only those costs incurred up to the conclusion of the current fiscal year.

24. MODIFICATION OF AGREEMENT

The tasks described in this AGREEMENT and all other terms of this AGREEMENT may be modified only upon mutual written consent of CITY and CONSULTANT.

25. USE OF THE TERM "CITY"

Reference to "CITY" in this AGREEMENT includes City Manager or any authorized representative acting on behalf of CITY.

26. PERMITS AND LICENSES

CONSULTANT, at its sole expense, shall obtain and maintain during the term of this AGREEMENT, all appropriate permits, licenses, and certificates that may be required in connection with the performance of services under this AGREEMENT.

27. CAPTIONS

The captions or headings in this AGREEMENT are for convenience only and in no other way define, limit or describe the scope or intent of any provision or section of the AGREEMENT.

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28. AUTHORIZATION

Each party has expressly authorized the execution of this AGREEMENT on its behalf and bind said party and its respective administrators, officers, directors, shareholders, divisions, subsidiaries, agents, employees, successors, assigns, principals, partners, joint venturers, insurance carriers and any others who may claim through it to this AGREEMENT.

29. ENTIRE AGREEMENT BETWEEN PARTIES

Except for CONSULTANT'S proposals and submitted representations for obtaining this AGREEMENT, this AGREEMENT supersedes any other agreements, either oral or in writing, between the parties hereto with respect to the rendering of services, and contains all of the covenants and agreements between the parties with respect to said services.

30. PARTIAL INVALIDITY

If any provision in this AGREEMENT is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will nevertheless continue in full force without being impaired or invalidated in any way.

31. NOTICES

Any notice required to be given hereunder shall be deemed to have been given by depositing said notice in the United States mail, postage prepaid, and addressed as follows:

TO CITY:
Attention: Robert Nisbet, City Manager
City of Goleta
130 Cremona Drive, Suite B
Goleta, CA 93117

TO CONSULTANT:
Attention: Michael Bustos, Project Manager
Willdan Engineering, Inc.
374 Poli Street, Suite 101
Ventura, CA 93001

32. COUNTERPARTS AND ELECTRONIC/FACSIMILE SIGNATURES

This Agreement may be executed in several counterparts, which may be facsimile or electronic copies. Each counterpart is fully effective as an original, and together constitutes one and the same instrument.

In concurrence and witness whereof, this AGREEMENT has been executed by the parties effective on the date and year first above written.

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CITY OF GOLETA

Robert Nisbet, City Manager

CONSULTANT

DocuSigned by:
Vanessa Munoz
A6A4BAC2520248...

Vanessa Munoz, President

ATTEST

Deborah Lopez, City Clerk

Signed by:
Kate Nguyen
4780502085488...

Kate Nguyen, Secretary

APPROVED AS TO FORM:
ISAAC ROSEN, CITY ATTORNEY

Signed by:
Scott Shapses
4218ABBBC914E3...

Scott Shapses, Deputy City Attorney

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EXHIBIT A
SCOPE OF WORK

Docusign Envelope ID: 51FAC8F3-87A0-48AE-813D-38F2264E5BFE

distribution units, Opticom EVP system, radar detection, 48 SMFO fiber cable, 12 SMFO drop cable, fiber patch panels, fusion splicing, ATMS system with monitors and computer, and system integration.

References

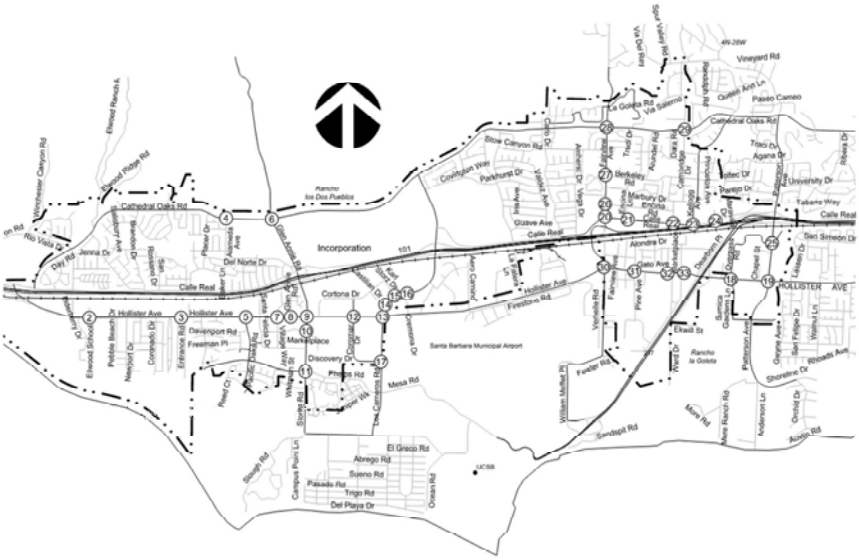
Public Agency:	**City of Inglewood**
Address:	One West Manchester Boulevard, Inglewood, CA 90301
Contact:	**Peter Puglese, Principal Traffic Engineer**
Phone/Email:	(908) 578-4226, ppuglese@cityofinglewood.org
Public Agency:	**City of Ridgecrest**
Address:	100 West California Avenue, Ridgecrest, CA 93555
Contact:	**Travis Reed, City Engineer/Public Works Director/Deputy City Manager**
Phone/Email:	(661) 478-1965, treed@ridgecrest-ca.gov
Public Agency:	**City of South Pasadena**
Address:	1414 Mission Street, South Pasadena, CA 90241
Contact:	**Ted Gerber, Public Works Director**
Phone/Email:	(626) 403-7240, tgerber@southpasadenaca.gov
Public Agency:	**City of Bellflower**
Address:	16600 Civic Center Drive, Bellflower, CA 90706
Contact:	**Len Gorecki, Assistant City Manager/Director of Public Works**
Phone/Email:	(562) 804-1424, ext. 2217, lgorecki@bellflower.org

Tab E – Scope Understanding

Project Understanding

Willdan understands that the City of Goleta is seeking construction management services for the Citywide Traffic Signal Upgrade Project. We understand that the services requested will include constructability review, construction management, field inspection, public outreach, biological monitoring, labor compliance, and material testing.

The City's Project is a traffic signal improvements project with various proposed improvements, consisting of signal controller replacements, dilemma zone detection, modified phasing, pedestrian push button posts and assemblies, and improved signal gear hardware, such as retroreflective backplates and signal heads. Major work components include installation of 2070 controllers, vehicle heads with 12" signal indications, yellow retroreflective backplates, mounting brackets, Accessible Pedestrian Signals (APS) pedestrian push buttons, installation of Advance Dilemma Zone Detector units and integration of Dilemma Zone operations and settings with City's existing traffic management system, and implementation of Leading Pedestrian Interval (LPI). The Engineer's Estimate of construction cost is just under $2.9 million. The Project is anticipated to begin construction in late 2024 or early 2025 and the construction contract is anticipated to specified for 40 working days.



Project Locations Map

The proposed Project includes traffic signal improvements at 32 signalized intersections on various City streets as shown in the image above from the Project Plans.

The City was awarded a Highway Safety Improvement Program (HSIP) Cycle 10 grant to fund a project that consisted of traffic upgrades. This State-only funding will serve to modernize the City's traffic signal systems through safety and operational improvement based on the three following countermeasures:

- Improve signal Hardware – lenses, back plates with retroflective boards, mounting size, and number.
- Provide advanced dilemma zone detection for high-speed approach
- Modify signal phasing to implement a leading pedestrian interval

The City's RFP includes a very detailed scope of services, consisting of four primary tasks: Services Prior to Construction, Construction Management Services, Services During Construction Closeout, and Quality Control Plan. Based on this scope of services, Willdan will provide full time construction engineering services. Our Team will be managing the construction contract to ensure conformance with the City of Goleta Standard Specifications, Caltrans Standard Specifications, Special Provisions, Permits, Local Assistance Procedures Manual, OSHA Regulations, and CAMUTCD. The detailed scope of work, including Willdan's recommended additional tasks, is provided below and on the following pages.

Task 1 – Services Prior to Construction

~~1. Review the Final Contract Documents set for constructability and provide comments to the City.~~

a. Construction Management Team will provide a thorough review of the construction sequence necessary to complete the improvements included in the construction contract.

b. Construction Management Team will conduct a thorough review of the construction plans, specifications, and estimate.

~~c. Assistant Construction Manager will perform bid quantity takeoffs and compare to the Bid Schedule and estimate.~~

~~d. Construction Management Team will provide a list of items that may be overlapping, extra, or candidates for removal.~~

~~e. Construction Management Team will ensure that the proper permit requirements are noted in the project specifications.~~

~~f. Resident Engineer will prepare and submit an itemized list of findings and outline recommendations to reconcile issues discovered and generally to expedite the project.~~

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~~2. Construction Management Team will participate in Contract Documents review meeting with the City, Design Engineer, and the Contractor.~~

3. Assist City with review/approval of low bid.
   a. Assistant Construction Manager will review the three lowest bids.
   b. Assistant Construction Manager will verify eligibility of the apparent low bidder and its subcontractors to receive contract awards by confirming current, active license status with the State of California Contractors License Board and non-appearance on the Federal List of Parties Excluded (debarment list).
   c. Assistant Construction Manager will check references of lowest, responsive bidder and verify low bidder's qualifications.
   d. Clerical Staff will prepare the bid summary and document any irregularities in the bids.
   e. Resident Engineer will prepare a bid analysis memo and provide to the City.

Task 2 – Construction Management Services

1. Resident Engineer and Construction Manager will review and assist with development of the baseline schedule submitted by the contractor and accept when satisfactory.
2. Inspector will photograph continuous property frontages along the street alignment once prior to construction and once immediately following construction.
3. Inspector will ensure contractor distributes public construction notices and places construction and information signs.
4. Construction Manager will evaluate and coordinate review of traffic control plans with the City, Caltrans, County of Santa Barbara, and applicable affected organizations.
5. Construction Manager will provide coordination of public outreach and construction activities between the Contractor, design consultant, City Public Works, City Council representatives, Caltrans, County, and external utility representatives.
6. Construction Manager will provide notification and coordination of project issues with all involved and appropriate City departments, public and private agencies, City residents, and the general public.
7. Construction Manager will utilize the City's Sharepoint and Construction Management Integrated Software (CMIS) for construction management of the project.
8. Construction Manager will compare the progress of work with the baseline or progress schedules, and issue nonconforming reports if unapproved slippages occur.
9. Inspectors will monitor the construction activities to ensure the project is built as designed and specified.
10. Construction Manager will conduct Monthly Critical Path Method (CPM) Schedule and As Built meetings with the Contractor and subcontractors.
11. Inspector will monitor compliance with the Clean Air Act and the Clean Water Act (National Pollutant Discharge Elimination System – NPDES best management practices). Also, monitor the contractor's compliance with approved SWPPP. While Wildan provides weekly, pre-event, and post-event BMP reports for quality assurance purposes, official QSP reporting shall be provided by others.
12. At the end of each month, Construction Manager will assist the City with review and processing Pay Estimates/Applications.
13. Inspector will provide complete measurements and calculations documentation to administer progress payments.
14. Construction Manager will provide a monthly progress report.
15. KMP Strategies will provide as-needed public outreach services. Given the type of project, having a short duration and locations spread throughout the City, it is not anticipated that a robust public outreach program will be necessary.

Task 2.1 – Construction Contract Administration

1. Resident Engineer will schedule the preconstruction meeting in coordination with City staff, and invite contractor, design consultant, required City staff, utility companies and regulating agencies.
2. Resident Engineer will prepare agenda to be presented at the preconstruction conference.
3. Resident Engineer will organize and conduct the preconstruction meeting. Meet with the City's Project Manager to review the draft meeting agenda. Incorporate any comments into the agenda before distribution.
   - Keep meeting notes that show subjects discussed, direction given, and response received.
   - Confirm the authority and responsibility of all parties involved. Establish lines of communication.
   - Discuss unusual working conditions and permit requirements.
4. Assistant Construction Manager will prepare and distribute pre-construction meeting minutes.
5. Construction Manager will establish and conduct periodic construction progress meetings to:
   a. Resolve all old business issues to maximum extent possible
   b. Address all items of new business as presented by any party
   c. Review project schedule and address any deviations
   d. Review submittal log in terms of items needed and resubmittals required and review RFI, RFC, CCO, NCR, and NOPC logs
   e. List status of construction items recently undertaken or ongoing
   f. List planned construction items for next two weeks (three-week look ahead schedule)
   g. Review safety and SWPPP issues
6. Assistant Construction Manager will prepare minutes for weekly construction progress meeting.
7. Construction Manager will conduct special site meetings, when necessary, with contractor, design consultant, and City staff to review job progress, scheduling, and coordination.
8. Assistant Construction Manager will log, process, and review submittals and shop drawings as needed. Route submittals as needed for design engineer's approval to allow for responses within the specified turnaround time.
9. Assistant Construction Manager will log and route RFIs. Field-related RFIs will be answered by the Construction Manager.
10. Construction Manager will prepare RFI responses or potential solutions for the city's review.
11. Construction Manager will provide responses to RFIs within the turn- around time specified in the contract documents.
12. Construction Manager will prepare weekly statement of working days and submit to contractor and City.
13. Construction Manager will review for approval contractor's progress payment requests; negotiate differences over amount with contractor; and process payments through City's Project Manager.
14. Construction Manager will prepare correspondence necessary to maintain control over the construction contract.
15. Labor Compliance Manager and Specialist will review certified payroll forms for compliance with State and Federal regulations governing the payment of prevailing wages.
16. Labor Compliance Specialist will notify the City contact if the contractor is in non-compliance with prevailing wage requirements and use of subcontractors on the project.
17. Labor Compliance Specialist will verify applicable wage rates and disseminate classification sheets to all interested parties.
18. Labor Compliance Specialist will instruct, direct, and monitor prime (general) contractor and all subcontractors on labor compliance and prevailing wage requirements, including submission of certified payrolls and "eCPR" data online to the California Department of Industrial Relations (DIR).
19. Labor Compliance Specialist will verify that the Public Works Contract Award Information (DAS-140) and Request for Dispatch of an Apprentice (DAS-142) forms are submitted to appropriate apprenticeship committees by all contractors employing workers in apprenticeable crafts/trades.
20. Labor Compliance Specialist will receive and review construction management/labor compliance documentation from construction observers or inspectors and compare with contractor-submitted documents. Monitor contractor-submitted payroll documentation on a continuous basis.
21. Labor Compliance Specialist will verify with State Division of Apprenticeship Standards that any worker listed on a certified payroll who receives less than the published hourly journeyman rate is registered in an approved apprenticeship program and is in possession of a formal certification.
22. Labor Compliance Specialist will verify that any payroll deductions are acceptable under State prevailing wage law and authorized by the affected employees.
23. Labor Compliance Specialist will follow up with subcontractors by telephone, email, and/or certified mail regarding required document submittals and payroll discrepancies and deficiencies. Provide detailed description of alleged deficiencies; outline corrective action to be taken; and enforce regulatory deadlines for compliance.
24. Labor Compliance Specialist will receive, pursue, and document labor complaints; prepare violation reports to oversight agencies as required; recommend special action to be taken if contractor or any subcontractor continuously fails to comply with requests and requirements.
25. Labor Compliance Specialist will coordinate with Construction Manager and City staff the withholding of progress and/or retention payments for contractor or any subcontractor that fails to abide by labor compliance requirements.
26. Labor Compliance Manager will submit complete labor compliance file to the City for retention.

Task 2.2 – Change Order Management

1. Construction Manager will review project progress, proposed change orders and notification with the design engineer via the City project manager.
2. Resident Engineer will assist with the review and evaluation of change order work.

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3. Construction Manager will perform quantity, time, and cost analyses required for negotiation of contract changes.
4. Construction Manager will negotiate and prepare change orders, including memorandum of explanation and cost estimates, to substantiate change order and send to City for review.
5. Construction Manager will monitor and perform immediate and thorough analysis of validity of all potential claims that arise.
6. Construction Manager will maintain all data for change orders and record information with regard to time of dispute, time of notification by contractor, and action taken by inspector.
7. Construction Manager will prepare and route Change Orders on the city's form, as required, and in a timely manner. Evaluate the merit of proposed change orders, and provide justification of recommendation to the City.
8. Construction Manager will evaluate time extension requests, review for merit of impact to critical path work, and prepare Time Impact Analysis as needed.
9. Construction Manager and Inspectors will maintain records of disputed work. Review and provide recommendations for resolution of claims and disputes.
10. Construction Manager and Inspectors will investigate and inspect site conditions that differ from those described in the Contract Documents.

Task 2.3 – Field Inspection

1. Inspector will prepare and maintain detailed daily diary inspector reports on construction progress.
2. Inspector will document manpower, equipment and materials used on site, separate activities, hours and resources by pay item.
3. Throughout construction, Inspectors will check site safety, signage, and contractor's traffic control, and document findings. Provide timely notification to the contractor of any nonconforming situations.
4. Throughout construction, Inspector will check for public safety and compliance to the approved traffic control plan, and document findings. Immediately notify the contractor of any nonconforming situations.
5. Construction Manager and Inspector will monitor materials documentation and testing results and enforce corrections.
6. Inspector will respond to basic public inquiries. Refer more complicated inquiries to appropriate City staff.
7. Inspectors will verify stormwater controls are in place and in good condition, and document findings.
8. Inspectors will verify layout, operations and intent of work with the contractor.
9. Inspector will maintain a photographic record of key elements of each major operation of work each day, with increased detail in situations of potential changes or claims.
10. Inspector will examine all material to be used for contract compliance and document findings. Issue a written Nonconforming Report for any rejected materials and have it removed from the job.
11. Inspectors will document delays, including the cause and time of day. Keep accurate record of any work delays, including construction manager personnel and equipment, city personnel and equipment, and contractor personnel and equipment.
12. Inspectors will monitor compliance with Cal OSHA requirements and compliance with all local, state, and federal regulations. Although Willdan will monitor the activities, it is the contractor's sole responsibility to provide workers with a safe working environment.
13. Construction Manager and Inspectors will note approval or rejection of material and work. Any rejected work shall be documented by a Nonconformance Report issued to the Contractor and copied to the City's project manager.
14. UMT will perform quality assurance compaction/material testing (max. density) for aggregate base and subgrade for conduit backfill.
15. UMT will provide a field technician for the sampling and compressive strength testing for pedestrian push button post foundations.
16. South Environmental will conduct biological monitoring as needed. Based on the type of project being constructed, the fact that all traffic signal modification location are in developed and previously disturbed areas, and the there is little to no excavation anticipated for the project, it is not anticipated that there will be much need for biological monitoring.

Task 3 – Services During Construction Closeout

Task 3.1 – Substantial and Final Completion Services

1. Construction Manager and Inspectors will review project for acceptance of workmanship and materials.
2. Construction Manager and Inspectors will compile a punch list of deficiencies for each project location and manage the punch list until all work items are complete.
3. Inspector will Notify the contractor and re-inspect when the contractor is ready. Working days are in effect until all contract items are complete.
4. Resident Engineer will draft and submit recommendation for acceptance to City following Project Completion.

Task 3.2 – Record Compilation and Submittal

1. Inspector will review submittal of any as-built drawings made by the Contractor during construction.
2. Construction Manager will verify that as-builts have been accurately updated prior to approval of monthly pay applications.
3. Construction Manager and Inspector will compile and review record drawings, make changes, or have changes made as required.
4. Construction Manager will submit as-builts to the City for review and acceptance by the City.

Task 3.3 – Obtaining Warranty and Lien Release Information from Contractor

1. Construction Manager will coordinate with Contractor to obtain all warranty, and lien release information, and other closeout item specified.
2. Construction Manager will assist City with stop notices and release of retention.

Task 3.4 – Final Electronic Submittals

1. Resident Engineer will finalize and deliver all construction files and supplies to City for their records.
2. Resident Engineer will deliver project files in accordance with the Caltrans file system and stored within CMIS.

Task 4 – Quality Control Plan

1. Resident Engineer will prepare and implement quality control plan for the entirety of the scoped services.
2. Resident Engineer will assume responsibility for accuracy, completeness, and timeliness of all meeting minutes, change orders, progress payments, labor compliance documentation, and reports.
3. Resident Engineer will assume responsibility for review and management of subcontracted work.

Task 5 – Project Closeout

1. Inspector will perform final inspections, verify as-built plans, and verify completion of punch list items.
2. Resident Engineer will oversee compilation and submission of closeout documents.

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Tab F – Scope Approach

Project Approach

Willdan manages traffic signal modification projects for many of our clients. In undertaking citywide projects such as the City's upcoming project, it is important to hold weekly meetings with the Contractor and closely review and discuss their look ahead schedule. With there being so many intersections included in the project, at locations spread throughout the City, it is important to understand how many crews will be working simultaneously and where they intend to work each day. This is important so that the Inspector(s) can schedule their day to ensure that each crew is checked on and important activities are monitored at appropriate times. This will also be critical for monitoring of the various items that liquidated damages may apply to. Given the number of intersections included in the project, and the limited number of working days specified, there may be days when a second inspector is needed in order to ensure adequate observation to monitor compliance with the Contract Documents.

Traffic signal modification projects can be very disruptive and inconveniencing to traffic on days when the signal is switched over to the new controller, so public outreach, including advance communication, social media updates, project website updates, timely responses to comments or complaints from the public, and reminders that the intent of the project is to improve the community are very important to maintaining good public relations.

Managing and Minimizing the City's Risk Exposure

Throughout construction, our team will maintain a project-first philosophy with the contractor. When this is achieved, construction is easy, straight forward, and accomplished with a minimum of issues. We are a team – right is right and wrong is wrong for all parties. When this is established, it creates a fair environment for all, and project success is achieved. Most contractors will avoid combative arguments and approach projects with a collaborative, team mindset when they know they will be treated fairly, in turn leading to open, transparent communication, and often less change orders.

Our professionals are adept at anticipating issues before they arise through continual review of project plans, specifications, contractors' schedules, and contract documents. Potential problems are brought to the attention of the City's Project Manager and/or the contractor, along with constructive recommendations for solutions, so that costly delays and negative impacts to the public and the project are mitigated. Our staff of veteran construction managers and inspectors have extensive knowledge and experience to quickly understand project field conditions and issues and mitigate those issues with practical, cost-efficient solutions that protect the City's liability exposure while preserving the integrity of the design.

When dispute do arise, Willdan maintains a professional approach centered around the contractual requirements. Regarding Contractor delay claims, our construction managers are well versed in reviewing and analyzing critical path method schedules and time impact analysis submittals and preparing recommendations for these issues.

Our approach to issue resolution is to:

- Obtain and document the facts surrounding the issue
- Develop reasonable solutions in conjunction with the contractor and City project manager
- Respond quickly and effectively so that job progress and quality do not suffer

Through close communication with the City's project staff, timely corrective action is taken to alleviate potential adverse impacts of work progress, costly change orders, and construction claims.

Administrative Communication Protocol Controls

Willdan recognizes that effective, ongoing, cooperative communication between all parties over the course of any project is essential to successful completion. This communication starts with a project kick-off meeting where the objectives and expectations of the City for the project are clearly articulated and understood by Willdan. In addition, agreed-upon methods and scheduling of formal reporting are established with identification of individuals to be involved in the project's decision-making process. This sets forth accountability and responsibility for informing and facilitating the project.

As the project progresses, communication continues through regular correspondence, teleconference discussions, and meetings with City staff to obtain direction on issues that may arise and keep City staff apprised of the project status. Clear and concise progress updates are provided. Emails and teleconferences are utilized whenever possible and appropriate to minimize City staff time spent in meetings. In order to ensure effective communication during meetings throughout the construction process, Willdan utilizes Cisco WebEx Teams to conduct virtual meetings, unless our client prefers another virtual meeting platform. Willdan also provides tablets or laptops and mobile hot spot hardware to our staff in the field to maintain communication with all parties.

Standard communication protocols with the construction team are established at the preconstruction meeting, where lines of project communications will be discussed such that Willdan serves as the hub for all project correspondence. All information from both parties to the construction agreement will be funneled through Willdan's Construction Manager, thus providing a single point of contact for project communications. Establishing this single point of contact for communications aids to mitigate potential mixed messages being sent.

The Contractor's Project Manager will communicate directly with the Construction Manager. For any communications requiring input from another team member, the Construction Manager will disseminate the information to the appropriate parties for response, comment, or approval. After receiving the necessary information, the Construction Manager will communicate the response back to the Contractor. Similarly, communications and direction from the City to the Contractor will be funneled through the Construction Manager.

Administrative Management Coordination with the City

To meet and often exceed the expectations of our clients, Willdan fosters and instills a corporate culture of Customer-First among our staff and in our day-to-day work environment. Looking out for our customer's best interests is at the forefront of everything we do. Our customer-focused philosophy is particularly evident when dealing with complex situations and difficult to resolve challenges. Willdan's corporate goal is to exceed the City of Goleta's expectations.

Willdan uses a proprietary Construction Management System that incorporates the use of Word, BlueBeam Revu, and Excel. Willdan has a license with Virtual Project Manager for online management of the submittal, RFIs, and daily inspector reports. Thus, Willdan is familiar with cloud-based construction management softwares and will be able to utilize the City's CMIS system.

Budget and Scope Creep Management

Construction costs are proactively managed and tracked against available budgets by our Construction Managers. This starts with an initial quantity takeoff from the construction plans, serving as an independent audit of the project quantities as they correlate to the bid schedule quantities. Early identification of potential quantity busts and continual monitoring of quantities throughout construction is key to maintaining cost with established budgets. Our team creates and maintains change order logs and final cost projection spreadsheets on a weekly basis to document and track all quantity adjustments, approved change orders, pending change orders, and potential change orders. The City's Project Manager is kept abreast of the project budget status throughout construction so that adjustments can be made to the scope of the project, or proper procedures can be followed to request additional funding, if needed to stay within the allowable contingencies. Willdan's team also focuses on quickly processing RFIs and change order requests and providing direction to the Contractor as needed to keep them moving and avoid costly delays.

Quality Control/Quality Assurance

Willdan will perform Quality Assurance and Quality Control of this project through a diligent review of all work and documentation. Quality Assurance and Quality Control will begin with the pre-construction meeting, at which time the scope of the project and control requirements will be reviewed with the General Contractor. Once construction begins, the next step in the Quality Control process will be the verification of materials and components to be installed. Once the material and components arrive onsite, Willdan Inspectors will spot-check these materials and components to verify they match the construction documents. The Inspectors will maintain a detailed record of samples, tests, material releases, and certificate of compliance for the project.

Willdan adopted Caltrans' Construction Manual as our in-house quality standard and has incorporated Caltrans' prescribed standards and procedures into our everyday inspection routine. Willdan Inspectors closely monitor projects to ensure compliance with all contract requirements. Willdan's inspectors have knowledge of basic soil dynamics and are highly cognizant of the crucial role of soils compaction in construction. They are also familiar with the need for general material testing for asphalt and concrete. The basic goal of the quality assurance plan is to provide quality work delivered on time and within budget.

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Unique Aspects of the Project

Long Lead Time Materials

Traffic signal controllers have recently had lead times on the order of 15 weeks after release of order. To complete the project at the earliest date possible, it will be critical to obtain submittals from the Contractor as soon as possible, provide timely review of submittals, and ensure the Contractor releases their order upon receipt of approved submittals. The Construction Management Team will follow up with the Contractor routinely to get updates on estimated ship dates and estimated delivery dates for all materials. Since the construction contract only has a 40 working day duration, the Notice to Proceed date will need to be established based on a confirmed delivery date for the long lead time materials.

Tech Support Scheduling

A critical component of this signal upgrade project will be tech support by outside vendors who will be contracted with the Contractor. These vendors are very busy and it is not uncommon for their schedules to be booked 1-2 months out. Therefore, it will be essential that the Contractor contact their vendors early and lock in dates for tech support. Willdan typically recommends that Contractors schedule multiple dates for tech support, such that they have backup dates in place should they miss their target date for some reason. It is easier to cancel a tech support date that is not needed than it is to change or add another tech support date in a timely manner.

State Funding Compliance

Willdan is thoroughly familiar with regulations pertaining to federal, state, county, and local funds. This knowledge is critical to accomplishing projects funded by federal or state programs that have special permitting and reporting requirements. We have worked extensively for and with the California Public Utilities Commission, all Caltrans Districts, Caltrans Division of Structures, and the U.S. Army Corps of Engineers. We are very familiar with projects within Caltrans's right-of-way and their environmental and design procedures and requirements. We have processed numerous permits and approvals through Caltrans, FHWA, CPUC, FRA, CTC, CCC, CDFW, RWQCB, etc. Not only are we familiar with the funding, permitting, and procedural requirements for these agencies, but we also have excellent working relationships with the essential staff involved in local agency programs—enabling us to facilitate the processing of permit applications and plan reviews, when required.

Willdan has coordinated, prepared, and submitted all necessary documentation to Caltrans/FHWA to assist local agencies in securing state and federal authorization and obligation of funds (E-76) or allocation letters for projects. Willdan has prepared funding applications, award packages, invoices, reports of expenditure, checklists, and other required documentation. In the last ten years, Willdan has provided state and federal funding administration services for over 50 projects.

With numerous completed projects and more than a dozen in progress, Willdan has assisted cities at various stages of state- and federal-funded projects – from the initiating request to final invoicing. Although each program may encompass different components and requirements, the general process remains the same – following the Caltrans Local Assistance Procedures Manual (LAPM) and Local Assistance Program Guidelines (LAPG). Our staff stays apprised of revisions to procedures and forms in the LAPM and LAPG through Local Programs Procedures and Division of Local Assistance Office Bulletins. Our staff maintains quality relationships with Caltrans' District Local Assistance.

Willdan has successfully participated in over a dozen Caltrans audits (project reviews) over the past five years, and we have an excellent working relationship with the Caltrans Office of Local Assistance. Our management team will be available to assist the City with any audits and record requests made by Caltrans and FHWA personnel. Willdan's Resident Engineer will represent the City throughout the auditing process and has a thorough understanding of the requirements of Chapters 16 and 19 of the LAPM. Willdan's management team will ensure that the project's files are kept in accordance with Caltrans requirements and can clearly demonstrate to all concerned that project supervision and control were maintained throughout the project.

The City has at least three CIP Projects scheduled to be in construction concurrent with the subject Project. Depending on schedules and locations of the concurrent work, coordination with other contractors may be needed.

Electronic submittals will be managed through the City's web-based System Construction Management Enterprise (CMIS).

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EXHIBIT B
SCHEDULE OF FEES

Docusign Envelope ID: 51FAC8F3-87A0-48AE-813D-38F2264E5BFE

City of Goleta

FEE PROPOSAL
FOR
Construction Management and Inspection Services for
Citywide Traffic Signal Upgrade Project
9/16/2024 (Revised September 5, 2025)

TASK / CLASSIFICATION	Project Manager/ Resident Engineer	Construction Manager	Labor Compliance Manager	Assistant Construction Manager	Public Works Observer[3]	Labor Compliance Specialist	Clerical	Material Testing[4]	Biological Monitoring[4]	Public Outreach[4]	Sub Markup	TOTAL LABOR	TOTAL SUBCONTRACTED WORK	MISC. EXPENSE	TOTAL COST
	Mike Bustos	*Matthew Villegas*	*Jane Freij*	*Mario Cisneros*	*Mark Nunez/ Carlos Villegas*	*Chelsea Villegas*	*TBD*	*Subconsultant*	*Subconsultant*	*Subconsultant*	*15%*				
HOURLY RATE:	**$243**	**$185**	**$183**	**$160**	**$169**	**$146**	**$99**	**Union Material Testing**	**South Environmental**	**KMP Strategies**	**LS**				
TASK 1 - SERVICES PRIOR TO CONSTRUCTION	8	12	8	8	16		6				$0	$10,206	$0	$0	$10,206
TASK 2 - CONSTRUCTION MANAGEMENT										$11,000	$1,650	$0	$12,650	$0	$12,650
TASK 2.1 - CONSTRUCTION CONTRACT ADMINISTRATION	80	80	2			32					$0	$39,278	$0	$0	$39,278
TASK 2.2 - CHANGE ORDER MANAGEMENT	12	12		6							$0	$6,096	$0	$0	$6,096
TASK 2.3 - FIELD INSPECTION					320			$13,750	$5,500		$2,888	$54,080	$22,138	$0	$76,218
TASK 3.1 - SUBSTANTIAL AND FINAL COMPLETION SERVICES	16	16		12							$0	$8,768	$0	$0	$8,768
TASK 3.2 - RECORD COMPILATION AND SUBMITTAL	12	16		16							$0	$8,436	$0	$0	$8,436
TASK 3.3 - OBTAINING WARRANTY AND LIEN RELEASE INFORMATION	4	12		4							$0	$3,832	$0	$0	$3,832
TASK 3.4 - FINAL ELECTRONIC SUBMITTALS	12	4		20			4				$0	$7,252	$0	$0	$7,252
TASK 4 - QUALITY CONTROL PLAN	20	16		4							$0	$8,460	$0	$0	$8,460
TASK 5 - PROJECT CLOSEOUT	4	20		4			4				$0	$5,708	$0	$0	$5,708
TOTALS[1]	*168*	*188*	*10*	*74*	*336*	*32*	*14*	*13,750*	*5,500*	*11,000*	*$4,538*	*$152,116*	*$34,788*	*$0*	**$186,904**

[1]This not-to-exceed fee is based on an assumed 40-working day construction duration with inspection services assumed at no more than 8 hours per day, Monday through Friday. Additional services needed beyond the contract specified date of completion will be provided on a time-and-material basis at Willdan's standard hourly rates. Overtime inspection services are not included, but will be billed at 1.5 times normal hourly rate if required and may require adjustment to the approved budget. Work performed by support staff with titles not explicitly listed herein will be charged in accordance with Willdan's standard hourly rates.

[2]Mileage expenses are included in the hourly rates noted and will not be billed separately.

[3]This proposal assumes prevailing wage inspection is required. For prevailing wage classifications, hourly rates will be increased when the predetermined increases stipulated by the State of California Department of Industrial Relations take effect. Hourly rate increases will be equivalent to the % increase in wages mandated by the State of California. This proposal is based on Determination SC-23-63-2-2025-1D issued on August 22, 2025.

[4]The Contractor's construction schedule is not available at the time of proposal submission, so a budgetary allowance for this task has been provided in this proposal.

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WILLDAN

WILLDAN ENGINEERING

Schedule of Hourly Rates

Effective July 1, 2025 to June 30, 2026

DESIGN ENGINEERING	
Technical Aide I	$81
Technical Aide II	$103
Technical Aide III	$120
CAD Operator I	$128
CAD Operator II	$148
CAD Operator III	$165
GIS Analyst I	$168
GIS Analyst II	$184
GIS Analyst III	$191
Environmental Analyst I	$144
Environmental Analyst II	$161
Environmental Analyst III	$171
Environmental Specialist	$185
Designer I	$173
Designer II	$179
Senior Designer I	$188
Senior Designer II	$197
Design Manager	$196
Senior Design Manager	$206
Project Manager I	$186
Project Manager II	$207
Project Manager III	$217
Project Manager IV	$234
Principal Project Manager	$238
Program Manager I	$197
Program Manager II	$209
Program Manager III	$228
Assistant Engineer I	$141
Assistant Engineer II	$157
Assistant Engineer III	$166
Assistant Engineer IV	$175
Associate Engineer I	$184
Associate Engineer II	$192
Associate Engineer III	$196
Senior Engineer I	$199
Senior Engineer II	$204
Senior Engineer III	$207
Senior Engineer IV	$211
Supervising Engineer	$219
Traffic Engineer I	$219
Traffic Engineer II	$234
City Engineer I	$234
City Engineer II	$238
Deputy Director	$243
Director	$249
Principal Engineer	$270

BUILDING AND SAFETY	
Code Enforcement Technician	$106
Code Enforcement Officer	$121
Senior Code Enforcement Officer	$143
Supervisor Code Enforcement	$173
Fire Plans Examiner	$173
Senior Fire Plans Examiner	$189
Fire Inspector	$159
Senior Fire Inspector	$173
Fire Marshal	$204
Plans Examiner Aide	$114
Plans Examiner	$173
Senior Plans Examiner	$189
Assistant Construction Permit Specialist	$121
Construction Permit Specialist	$128
Senior Construction Permit Specialist	$150
Supervising Construction Permit Specialist	$159
Assistant Building Inspector	$143
Building Inspector	$159
Senior Building Inspector	$173
Supervising Building Inspector	$189
Inspector of Record	$202
Deputy Building Official	$205
Building Official	$210
Plan Check Engineer	$205
Supervising Plan Check Engineer	$215
Principal Project Manager	$238
Deputy Director	$243
Director	$249

PLANNING	
CDBG Technician	$86
CDBG Specialists	$103
CDBG Analyst	$122
CDBG Coordinator	$152
CDBG Manager	$183
Housing Program Coordinator	$151
Planning Technician	$130
Assistant Planner	$162
Associate Planner	$176
Senior Planner	$200
Principal Planner	$208
Planning Manager	$221
Deputy Director	$243
Director	$249

CONSTRUCTION MANAGEMENT	
Labor Compliance Specialist	$146
Labor Compliance Manager	$183
Utility Coordinator	$167
Office Engineer I	$147
Office Engineer II	$167
Assistant Construction Manager	$160
Construction Manager	$185
Senior Construction Manager	$201
Resident Engineer I	$208
Resident Engineer II	$216
Project Manager IV	$234
Deputy Director	$243
Director	$249

INSPECTION SERVICES	
Public Works Observer **	$131
Public Works Observer ***	$169
Senior Public Works Observer**	$143
Senior Public Works Observer ***	$169

MAPPING AND EXPERT SERVICES	
Survey Analyst I	$147
Survey Analyst II	$169
Senior Survey Analyst	$187
Supervisor - Survey & Mapping	$203
Principal Project Manager	$238

LANDSCAPE ARCHITECTURE	
Assistant Landscape Architect	$153
Associate Landscape Architect	$176
Senior Landscape Architect	$193
Principal Landscape Architect	$204
Principal Project Manager	$238

ADMINISTRATIVE	
Administrative Assistant I	$99
Administrative Assistant II	$120
Administrative Assistant III	$140
Project Accountant I	$112
Project Accountant II	$132
Project Controller I	$140
Project Controller II	$158

** For Non-Prevailing Wage Project *** For Prevailing Wage Project

Mileage/Field Vehicle usage will be charged at the rate in accordance with the current FTR mileage reimbursement rate, subject to negotiation.

Additional billing classifications may be added to the above listing during the year as new positions are created. Consultation in connection with litigation and court appearances will be quoted separately. The above schedule is for straight time. Overtime will be charged at 1.5 times, and Sundays and holidays, 2.0 times the standard rates. Blueprinting, reproduction, messenger services, and printing will be invoiced at cost plus fifteen percent (15%). A sub consultant management fee of fifteen percent (15%) will be added to the direct cost of all sub consultant services to provide for the cost of administration, consultation, and coordination. Valid July 1, 2025 thru June 30, 2026, thereafter, the rates may be raised once per year to the value between the 12-month % change of the Consumer Price Index for the Los Angeles/Orange County/Sacramento/San Francisco/San Jose area and five percent. For prevailing wage classifications, the increase will be per the prevailing wage increase set by the California Department of Industrial Relations.

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EXHIBIT C
PROJECT SCHEDULE

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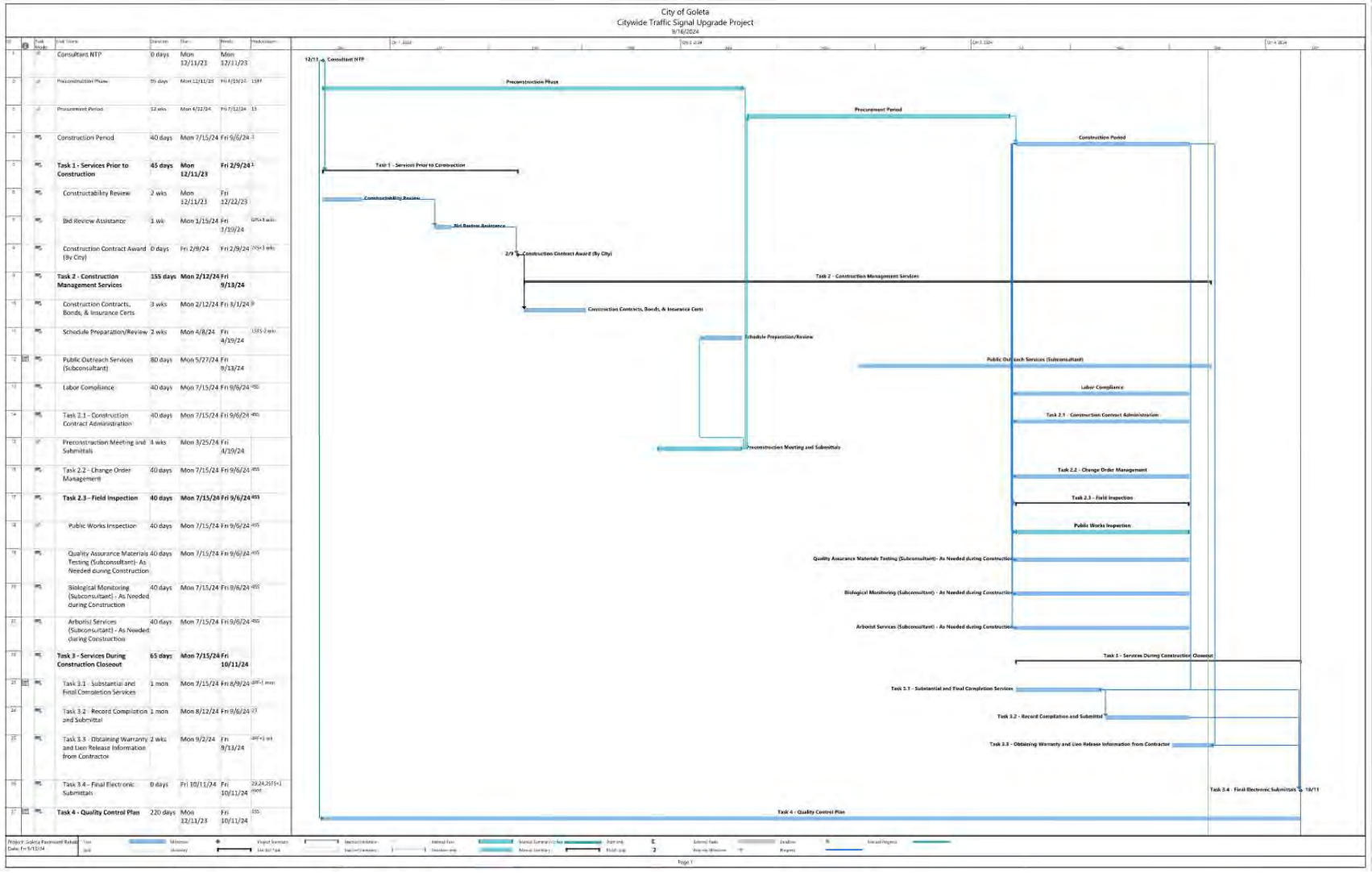
Tab G – Project Schedule



ATTACHMENT 5

Resolution No. 25-__ entitled “A resolution of the City Council of the City of Goleta, California, finding the Citywide Traffic Signal Upgrade Project Categorically Exempt from the California Environmental Quality Act (CEQA) Pursuant to State CEQA Guidelines Section 15301”

RESOLUTION NO. 25-XX

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GOLETA, CALIFORNIA, FINDING THE CITYWIDE TRAFFIC SIGNAL UPGRADE PROJECT CATEGORICALLY EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PURSUANT TO STATE CEQA GUIDELINES SECTION 15301.

WHEREAS, the Citywide Traffic Signal Upgrade Project ("Project") will replace existing outdated signal controllers, conduits, conductors, and related hardware; install accessible pedestrian push-buttons with countdown timers; retrofit signal heads with 12-inch LED lenses and retro-reflective backplates; add advanced dilemma-zone detection; implement leading pedestrian interval; and

WHEREAS, on July 18, 2023, the City Council awarded a Professional Design Services Agreement to Kimley-Horn & Associates, Inc. in the not-to-exceed amount of $430,000 to prepare plans, specifications, and estimates for the Project; and

WHEREAS, on August 20, 2024, the City Council authorized staff to advertise for construction bids for the Project; and

WHEREAS, in accordance with CEQA, the City has determined that the Project is categorically exempt from environmental review pursuant to State CEQA Guidelines Section 15301, Class 1 (Existing Facilities), because the work consists of minor alteration of existing streets, signals, and appurtenant facilities with negligible expansion of existing or former use; and

WHEREAS, all other legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GOLETA, AS FOLLOWS:

SECTION 1. Recitals. The City Council hereby finds and determines that the foregoing recitals, which are incorporated herein by reference, are true and correct.

SECTION 2. The City Council finds, in light of the whole record, that the Citywide Traffic Signal Upgrade Project is categorically exempt from environmental review pursuant to State CEQA Guidelines Section 15301 (Class 1). The Project qualifies for the Class 1 exemption because it involves repairs and minor alterations to existing public facilities, including streets, with negligible or no expansion of existing or former use, and does

not include the addition of any automobile lanes or expansion of the roadway. The Project consists of transit improvements related to pedestrian crossings (e.g., replacement of existing outdated signal controllers, conduits, conductors; installation of accessible pedestrian push-buttons with countdown timer; retrofitting signal heads; advanced dilemma-zone detection, and leading pedestrian intervals), and thus falls within the scope of the Class 1 exemption. (See State CEQA Guidelines, §15301(c).)Thus, no further environmental review is required.

In addition, none of the exceptions set forth in State CEQA Guidelines Section 15300.2 apply. None of the exceptions to the exemption under CEQA Guideline 515300.2 apply: there is no possibility of a significant cumulative impact as staff does not anticipate that other projects of the same type will take place at the Project site or the surrounding area. The Property does not present any unusual circumstances that might result in significant impacts. The Project area is developed and does not contain any environmentally sensitive areas. The Project would not damage any scenic resources, including trees, historic buildings, rock outcroppings or similar resources, within a highway officially designated as a state scenic highway because the Project involves functional updates to existing traffic signal facilities that will not result in an expanded footprint. The Project is not located on a hazardous waste site or any other site included on a list compiled pursuant to Government Code section 65962.5 and the proposed Project will not cause a substantial adverse change in the significance of a historical resource because there are no historical resources near the proposed project such that project impacts would not have any substantial adverse changes in the significance of a historical resource.

The City Council hereby directs staff to prepare, execute, and file a Notice of Exemption with the County Clerk and the State Clearinghouse within five (5) working days of the Project's approval and adoption of this Resolution.

SECTION 3. Action. The City Council hereby approves the categorical exemption for the Citywide Traffic Signal Upgrade Project and directs staff to file the Resolution.

SECTION 4. Reliance on Record. Each and every one of the recommendations in this Resolution is based on the competent and substantial evidence, both oral and written, contained in the entire record relating to the Citywide Traffic Signal Upgrade Project. The findings and determinations constitute the independent findings and determinations of the City Council in all respects and are fully and completely supported by substantial evidence in the record as a whole.

SECTION 5. The documents and materials associated with this Resolution that constitute the record of proceedings on which these findings are based are located at City Hall, 130 Cremona Drive Goleta,

CA 93117. The Planning and Environmental Services Director is the custodian of the record of proceedings.

SECTION 6. Summaries of Information. All summaries of information in the findings, which precede this section, are based on the substantial evidence in the record. The absence of any particular fact from any such summary is not an indication that a particular finding is not based in part on that fact

SECTION 7. This Resolution will remain effective until superseded by a subsequent resolution.

SECTION 8. The City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

PASSED, APPROVED AND ADOPTED this 21st day of October 2025.

_____
PAULA PEROTTE, MAYOR

ATTEST:

_____
DEBORAH S. LOPEZ
CITY CLERK

APPROVED AS TO FORM:

_____
ISAAC ROSEN
CITY ATTORNEY

STATE OF CALIFORNIA)
COUNTY OF SANTA BARBARA) ss.
CITY OF GOLETA)

I, DEBORAH S. LOPEZ, City Clerk of the City of Goleta, California, DO HEREBY CERTIFY that the foregoing Resolution No. 25-__ was duly adopted by the City Council of the City of Goleta at a regular meeting held on the ___ day of _____, 2025 by the following vote of the Council:

AYES:

NOES:

ABSENT:

(SEAL)

_____
DEBORAH S. LOPEZ
CITY CLERK