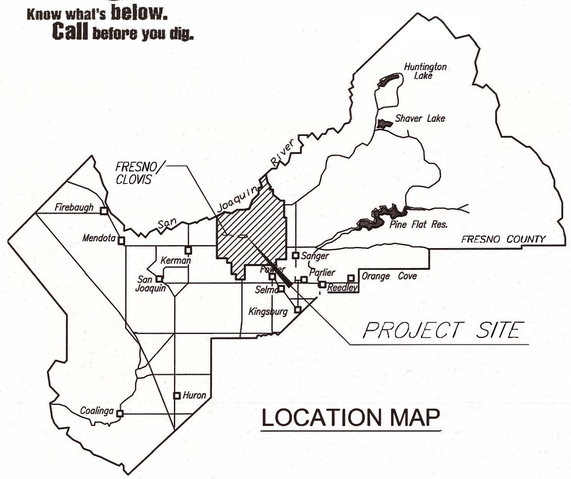
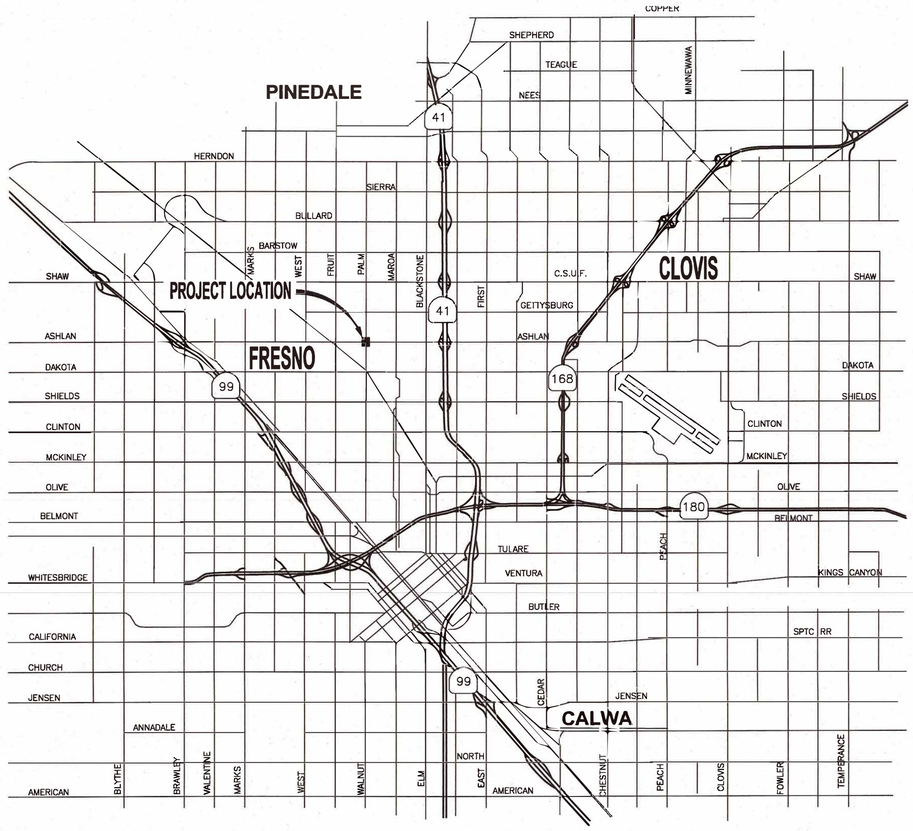
PLANS FOR CONSTRUCTION

ASHLAN AVENUE / PALM AVENUE
TRAFFIC SIGNAL AND ROAD IMPROVEMENTS
HSIPL 5942 (294)

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



LOCATION MAP



VICINITY MAP
NOT TO SCALE

INDEX OF SHEETS

Brian Pacheco	Chairman	1st District
Sal Quintero	Vice Chairman	3rd District
Steve Brandau		2nd District
Ernest Buddy Mendes		4th District
Nathan Magsig		5th District

Paul Nerland
County Administrative Officer

APPROVED _____ 9/9/22
Steven E. White, Director — Date
Department of Public Works and Planning

REGISTERED PROFESSIONAL ENGINEER
WILLIAM J. WASHBURN
No. 60322
CIVIL
STATE OF CALIFORNIA

9/07/2022
SUPERVISING ENGINEER — DATE

CALIFORNIA CONTRACTOR'S LICENSES REQUIRED FOR THIS PROJECT					
CLASS A, GENERAL ENGINEERING					
C-10, ELECTRICAL CONTRACTOR					
DRAWING NO.	ROAD NO.	BRIDGE NO.	FISCAL YR.	SHEET NO.	TOTAL
11316	S0200/E0700	N/A	2022/2023	1	11
CONTRACT NO. 22-09-C					

RECORD DRAWING		
CONTRACTOR		
NAME		
ADDRESS		
CITY	STATE	ZIP
PHONE		
DATE AWARDED		
DATE STARTED		
DATE COMPLETED		
RESIDENT ENGINEER		
NAME	SIGNATURE	
NAME	SIGNATURE	

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

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ABBREVIATIONS

AC	ASPHALTIC CONCRETE	IN	INCHES
AB	AGGREGATE BASE	JT	JOINT
AGG	AGGREGATE	LG	LONG/ LIP OF GUTTER
AP	ANGLE POINT	LIP	LIP OF GUTTER
APPROX	APPROXIMATE	L	LEFT
BC	BEGIN CURVE	LSH	LEVEL SWITCH HIGH
BF	BLIND FLANGE	LSL	LEVEL SWITCH LOW
BFV	BUTTERFLY VALVE	LWL	LOW WATER LEVEL
BLDG	BUILDING	MATL	MATERIAL
BOT	BOTTOM	MAX	MAXIMUM
BVCE	BEGIN VERTICAL CURVE ELEVATION	MCC	MOTOR CONTROL CENTER
BVCS	BEGIN VERTICAL CURVE STATION	MECH	MECHANICAL
BW	BACK OF WALK	MFR	MANUFACTURER
C	CONCRETE	MGD	MILLION GALLONS PER DAY
CFS	CUBIC FEET PER SECOND	MH	MANHOLE
C&G	CURB AND GUTTER	MIN	MINIMUM
CI	CAST IRON	N	NORTH
CISP	CAST IRON SOIL PIPE	NO	NUMBER
CJ	CONSTRUCTION JOINT	NOM	NOMINAL
CL	CLASS	NPT	NATIONAL PIPE THREAD
℄	CENTER LINE	NTS	NOT TO SCALE
CLR	CLEAR	OC	ON CENTER
CMP	CORRUGATED METAL PIPE	OD	OUTSIDE DIAMETER
CNS	COMPACTED NATIVE SUBGRADE	OG	ORIGINAL GROUND
CO	CLEANOUT	P	PAVEMENT
CONC	CONCRETE	PCC	POINT OF COMPOUND CURVE
CONST	CONSTRUCTION	PCC	PORTLAND CEMENT CONCRETE
COORD	COORDINATE	PE	PLAIN END
COR	CORNER	PL	PROPERTY LINE
CORP	CORPORATION	PP	POWER POLE
CPLG	COUPLING	PRC	POINT OF REVERSING CURVE
CTR	CENTER	PROP	PROPOSED
CU	COPPER TUBING	REL	RELATIVE
DBL	DOUBLE	PRV	PRESSURE REDUCING VALVE
DI	DRAIN INLET	PSI	POUNDS PER SQUARE INCH
DIA	DIAMETER	PT	POINT/ POINT OF TANGENCY
DIM	DIMESION	PVC	POLYVINYL CHLORIDE
DIP	DUCTILE IRON PIPE	PVI	POINT OF VERTICAL
DN	DOWN	PVM'T	PAVEMENT
DWG	DRAWING	PWR	POWER
E	EAST	R	RIGHT
EA	EACH	RAD	RADIUS, RADIAL
EC	END CURVE	RCP	REINFORCED CONCRETE PIPE
ECC	ECCENTRIC	RDC	REDUCE
EF	EACH FACE	RDCR	REDUCER
EL	ELEVATION	REINF	REINFORCED
ELB	ELBOW	REQD	REQUIRED
ELEC	ELECTRIC	R/W	RIGHT OF WAY
EP	EDGE OF PAVEMENT	RT	RIGHT
ES	EDGE OF SURFACING	RW	RETAINING WALL
EVCS	END VERTICAL CURVE STATION	S	SOUTH,SEWER
EVCE	END VERTICAL CURVE ELEVATION	SCH	SCHEDULE
EW	EACH WAY	SD	STORM DRAIN
EXIST	EXISTING	SHT	SHEET
FC	FACE OF CURB	SHLDR	SHOULDER
FD	FLOOR DRAIN	SIM	SIMILAR
FDN	FOUNDATION	SL	SLOPE
FF	FINISHED FLOOR	SPEC	SPECIFICATION
FG	FINISHED GRADE	SQ	SQUARE
FH	FIRE HYDRANT	SS	SANITARY SEWER
FIG	FIGURE	SST	STAINLESS STEEL
FIN	FINISH	STA	STATION
FL	FLOWLINE	STD	STANDARD
FLR	FLOOR	STL	STEEL
FLG	FLANGE	STR	STRAIGHT
FLEX	FLEXIBLE	STRUC	STRUCTURE
FOC	FACE OF CONCRETE	SW	SWALE
FT	FEET, FOOT	T&B	TOP & BOTTOM
FTG	FOOTING	TC	TOP OF CURB, CONCRETE
GA	GAUGE	TF	TOP OF FOOTING
GAL	GALLON	TG	TOP OF GRATE
GALV	GALVANIZED	TP	TOP OF PAVEMENT
GB	GRADE BREAK	TW	TOP OF WALL
GM	GAS METER	THK	THICK
GPM	GALLONS PER MINUTE	TRANS	TRANSFORMER
GR	GRADE	TYP	TYPICAL
GRTG	GRATING	UON	UNLESS OTHERWISE NOTED
GRVD	GROOVED	VCP	VITRIFIED CLAY PIPE
GV	GAS VALVE	W	WEST, WIDTH
GW	GUY WIRE	W/	WITH
H	HORIZONTAL	WM	WATER METER
HB	HOSE BIBB	WTR	WATER
HGT	HEIGHT	WV	WATER VALVE
HMA	HOT-MIX ASPHALT	WWF	WELDED WIRE FABRIC
HORIZ	HORIZONTAL	XMTR	TRANSMITTER
HP	HINGE POINT/ HORSEPOWER	V	VERTICAL
HR	HANDRAIL	VB	VALVE BOX
HWL	HIGHWATER LEVEL	VC	VERTICAL CURVE
ID	INSIDE DIAMETER	VG	VALLEY GUTTER
IE/INV	INVERT ELEVATION		

LEGEND - PROPOSED

PROPOSED CONCRETE

E
–

DETAIL NUMBER
SHEET NUMBER WHERE DETAIL CAN BE FOUND

STA 16+75.24, 392.00' L

OFFSET CALLOUT
STATION CALLOUT

38

PAVEMENT MARKING DETAIL

LEGEND - EXISTING

W — EXIST WATER MAIN

SS — EXIST SANITARY SEWER PIPE

PP — EXIST POWER POLE

T — EXIST TELEPHONE LINE

E — EXIST ELECTRICAL LINE

G — EXIST BURIED GAS PIPE

TV — EXIST BURIED CABLE TV

E — EXIST OVERHEAD ELECT

T — EXIST TELEPHONE PEDESTAL, PULLBOX, CABINET OR VAULT

TV — EXIST TELEVISION PEDESTAL, PULLBOX, CABINET OR VAULT

EXIST TELEPHONE POLE W/ GUY WIRE

EXIST STREET LIGHT

S — EXIST STORM DRAIN/ SEWER MANHOLE

X — EXIST CHAIN LINK FENCE

SD — EXIST STORM DRAIN PIPELINE

WV — EXIST FIRE HYDRANT

EXIST WATER VALVE

EP 600.30 — EXIST TOPO POINT

WM — EXIST WATER METER

GM — EXIST GAS METER

CO — EXIST SEWER CLEANOUT

EXIST CONCRETE

EXIST R.O.W.

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

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 17, TOWNSHIP 13 SOUTH, RANGE 20 EAST, MOUNT DIABLO BASE AND MERIDIAN, BEARS S89°15'W PER MAP OF PALM AVENUE-FIG GARDEN ANNEX NO 2, RECORDED IN BOOK 13 OF PLATS, AT PAGE 84, FRESNO COUNTY RECORDS.

BASIS OF VERTICAL CONTROL

CITY OF FRESNO TBM NO. 325, A CHISELED SQUARE ON TOP OF CURB, SOUTH SIDE OF ASHLAN AVENUE, 188 FEET WEST OF RIGHT OF WAY LINE OF HARRISON AVENUE PER "DEPARTMENT OF PUBLIC UTILITIES PLANS FOR THE CONSTRUCTION OF SEWER REPLACEMENT AND REHABILITATION IN ASHLAN AVENUE."
ELEVATION = 313.458 USGS DATUM (PROJECT ELEVATION AS STATED ON ABOVE REFERENCED SEWER PLANS)

TYPICAL HATCHING FOR DETAILS

HMA, TYPE A (1/2" MAXIMUM AGGREGATE)

AGGREGATE BASE CLASS II

COMPACTED
BACKFILL/SUBGRADE

TYPICAL NOTES

GENERAL:

EXISTING UTILITIES AND SURFACE FEATURES ARE SHOWN BASED ON AVAILABLE INFORMATION. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY TO VERIFY THE EXACT LOCATION, SIZE, TYPE, AND ELEVATION OF ALL EXISTING UTILITIES AND SURFACE FEATURES PRIOR TO CONSTRUCTION AND SHALL INFORM THE ENGINEER OF RECORD OF ANY CONFLICTS.

THE CONTRACTOR SHALL NOTIFY "UTILITY SERVICE ALERT" AT 811 AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING WORK.

ALL EXISTING IMPROVEMENTS AND UTILITIES THAT ARE DAMAGED, REMOVED, UNDERCUT, OR OTHERWISE ALTERED SHALL BE REPAIRED OR REPLACED IN KIND AT THE EXPENSE OF THE CONTRACTOR. ANY SURVEY MONUMENT WITHIN THE AREA OF CONSTRUCTION SHALL BE PRESERVED OR RESET BY A REGISTERED LAND SURVEYOR.

THE ENGINEER WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED CHANGES OR USES TO THESE PLANS. ALL CHANGES SHALL BE IN WRITING AND MUST BE REVIEWED BY THE ENGINEER OF RECORD. ANY DISCREPANCY BETWEEN THE PLANS, DETAILS, OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY AND ALL ENCROACHMENT OR OTHER PERMITS FROM THE APPROPRIATE AUTHORITIES HAVING JURISDICTION OVER THE PROJECT, PRIOR TO THE START OF WORK. THIS PLAN DOES NOT AUTHORIZE THE WORK TO COMMENCE PRIOR TO THE ISSUANCE OF A PERMIT BY APPROPRIATE AUTHORITIES HAVING JURISDICTION OVER THE PROJECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL AT ALL TIMES DURING CONSTRUCTION ALONGSIDE OR WITHIN PUBLIC RIGHTS OF WAY. ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL NOTIFY AND COORDINATE ALL RELATED WORK WITH THE AFFECTED AGENCIES IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER TRAFFIC CONTROL DURING ALL PHASES OF CONSTRUCTION. SUITABLE ACCESS AT PROPERTIES, DRIVEWAYS, RESIDENCES, ETC., SHALL BE PROVIDED AT ALL TIMES.

AREAS AFFECTED OUTSIDE THE CONSTRUCTION LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS. RESTORATION MAY INCLUDE, BUT NOT LIMITED TO, 1) REPLACE PAVEMENT, CONCRETE CURB/GUTTER AND SIDEWALK, 2) RESEED GRASS AREAS, 3) REPAIR DRIVEWAYS, 4) REESTABLISH DRAINAGE DITCHES AND DRAINAGE PATTERNS, 5) REINSTATE OR REPLACE STORM DRAIN PIPES, 6) REPAIR LANDSCAPING AND IRRIGATION SYSTEMS, 7) REMOVE AND REPLACE MAILBOXES, 8) RELOCATE OR REPAIR SIGNS, ETC.

ALL MANHOLE FRAMES, UTILITY BOXES, VAULT COVERS, ETC. (SHOWN OR NOT SHOWN), WITHIN PROJECT BOUNDARIES, SHALL BE RAISED OR LOWERED BY THE CONTRACTOR TO MATCH FINAL PAVEMENT GRADES UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL NOTIFY EACH RESIDENCE WITHIN A 300' RADIUS OF THE INTERSECTION A MINIMUM OF SEVEN CALENDAR DAYS PRIOR TO BEGINNING THE PROJECT CLEARING AND GRUBBING.

CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL PER CONTRACT SPECIFICATIONS.

MAXIMUM SLOPES AND CROSS SLOPES ON RAMPS, SIDEWALKS, AND OTHER PEDESTRIAN PATHWAYS ARE BASED ON THE AMERICANS WITH DISABILITIES ACT (ADA). ADA DOES NOT ALLOW FOR CONSTRUCTION TOLERANCES IN EXCESS OF THE MAXIMUM SLOPE. CONTRACTOR SHALL FORM ALL CONCRETE AND CONSTRUCT ALL PEDESTRIAN PATHWAYS IN SUCH A MANNER THAT THE TOLERANCE WILL RESULT IN A SLOPE LESS THAN THE MAXIMUM. ANY CONCRETE OR PAVEMENT CONSTRUCTED BY THE CONTRACTOR EXCEEDING THE MAXIMUM SLOPE CALLED FOR ON THE PLANS WILL BE REMOVED, DISPOSED OF, AND RECONSTRUCTED AT THE CONTRACTOR'S EXPENSE.

GRADING AND STORM DRAINAGE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT A DUST NUISANCE FROM ORIGINATING AT THE SITE AS A RESULT OF CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL DETERMINE WHICH SPECIFIC CONTROL MEASURES ARE REQUIRED BY CONTACTING THE SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN THE EVENT OR DISCOVERY OF POOR SOILS OR DISCREPANCIES IN THE EXISTING CONDITIONS THAT HAVE BEEN NOTED ON THE PLANS.

THE CONTRACTOR SHALL CONSTRUCT IMPROVEMENTS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CALIFORNIA ELECTRICAL CODE AND COUNTY/CITY STANDARDS WITH RESPECT TO ADA COMPLIANCE AND ACCESS.

UNLESS NOTED OTHERWISE; ALL DISTURBED AND FILL EARTH SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. ALL FILL (NATIVE OR IMPORT) SHALL BE FREE OF DELETERIOUS MATERIAL, DEBRIS, LARGE ROCKS, WOOD, AND VEGETATION. ENGINEERED FILL MATERIAL SHALL BE MOISTURE CONDITIONED AND IS TO BE PLACED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS. EARTHWORK IN PAVEMENT AND STRUCTURE AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES BELOW EXISTING GRADE OR THE BOTTOM OF FOUNDATION SUBGRADE (WHICHEVER IS DEEPEST), MOISTURE CONDITIONED, AND COMPACTED TO 95% RELATIVE COMPACTION.

PAVEMENT SHALL BE SLOPED A MINIMUM OF 1%. ALL CUT AND FILL SLOPES SHALL NOT EXCEED 3H:1V AND SHALL BE AT LEAST 2% MINIMUM, UNLESS NOTED OTHERWISE.

FINISHED GRADE AROUND STRUCTURES SHALL SLOPE AWAY AT A MINIMUM OF 5% FOR 10 FEET.

ADJACENT FINISHED GRADE SURFACES WITH AN ELEVATION DIFFERENTIAL OF 12 INCHES OR MORE SHALL BE RETAINED BY AN ENGINEERED RETAINING WALL.

NO SURFACE DRAINAGE SHALL BE ALLOWED TO CROSS PROPERTY LINES.

UTILITIES:

THE CONTRACTOR SHALL NOTIFY THE AGENCIES HAVING JURISDICTION AT LEAST 48 HOURS PRIOR TO PERFORMING ANY POTHOLING OR OTHER FIELD INVESTIGATION WORK.

UNLESS DIRECTED OTHERWISE BY THE OWNER, THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS, INCLUDING ALL FIELD INVESTIGATION AND POTHOLED INFORMATION.

T-2

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: WJW	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 40'

0 20 40 60 80

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER — WILLIAM J. WASHBURN — No. 60322 — CIVIL — STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

GENERAL LEGEND

DRAWING NO. 11316 SHEET NO. 2 TOTAL 11

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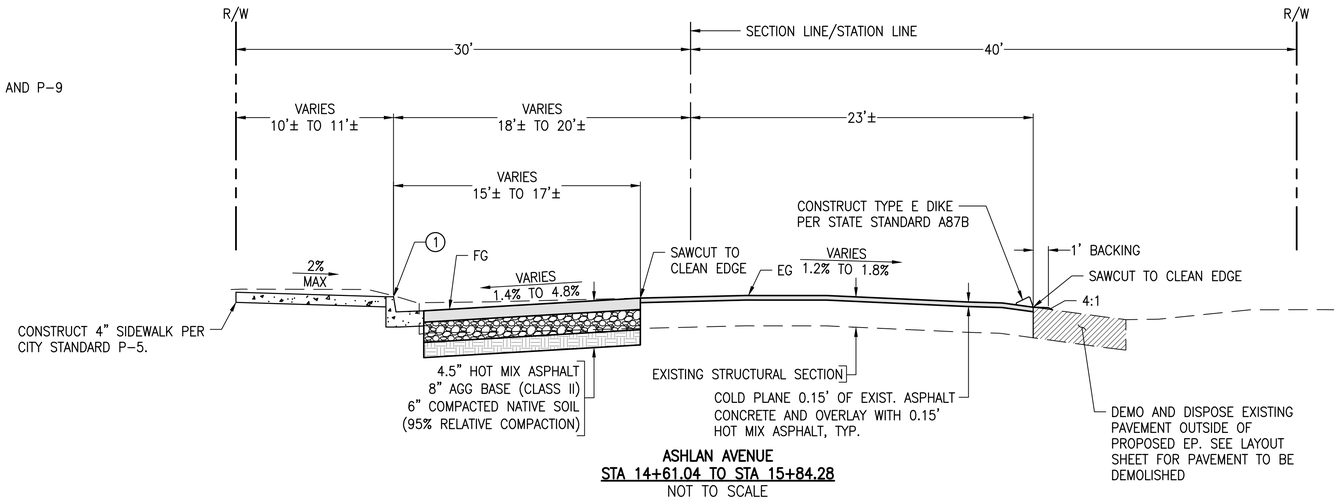
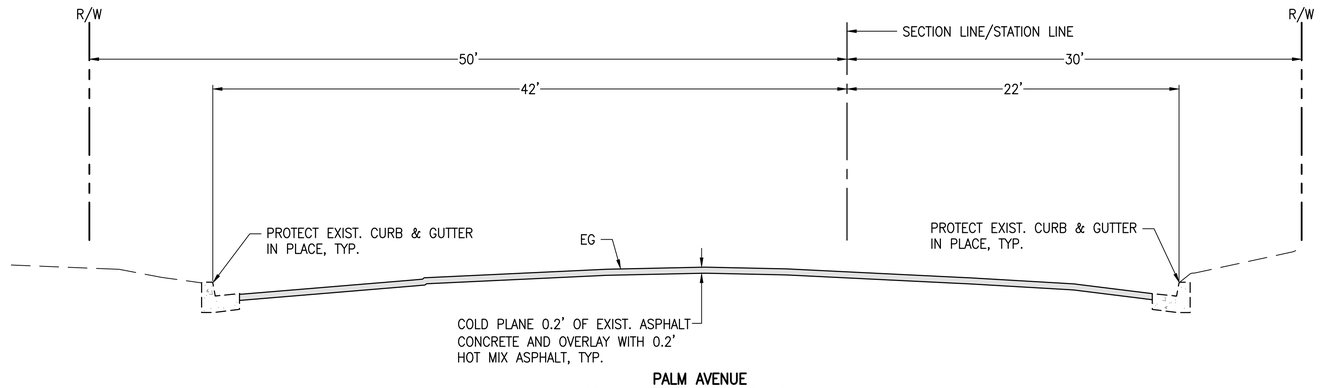
LEGEND: (APPLIES TO THIS SHEET ONLY)

- HOT MIX ASPHALT
- AGGREGATE BASE CLASS II (95% RELATIVE COMPACTION)
- COMPACTED NATIVE SOIL (95% RELATIVE COMPACTION)
- EG EXISTING GRADE
- R/W RIGHT-OF-WAY LINE
- FG FINISHED GRADE
- (1) CONSTRUCT CURB, GUTTER AND SIDEWALK PER CITY STANDARD P-5 AND P-9



ASHLAN AVENUE
STA 14+61.04 TO STA 15+84.28
NOT TO SCALE



PALM AVENUE
STA 29+48.87 TO STA 30+37.93
STA 31+47.11 TO STA 32+38.37
NOT TO SCALE

X-1

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: WJW	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 40'

0 20 40 60 80

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER — WILLIAM J. WASHBURN — No. 60322 — CIVIL — STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL SECTIONS

DRAWING NO. 11316 SHEET NO. 3 TOTAL 11

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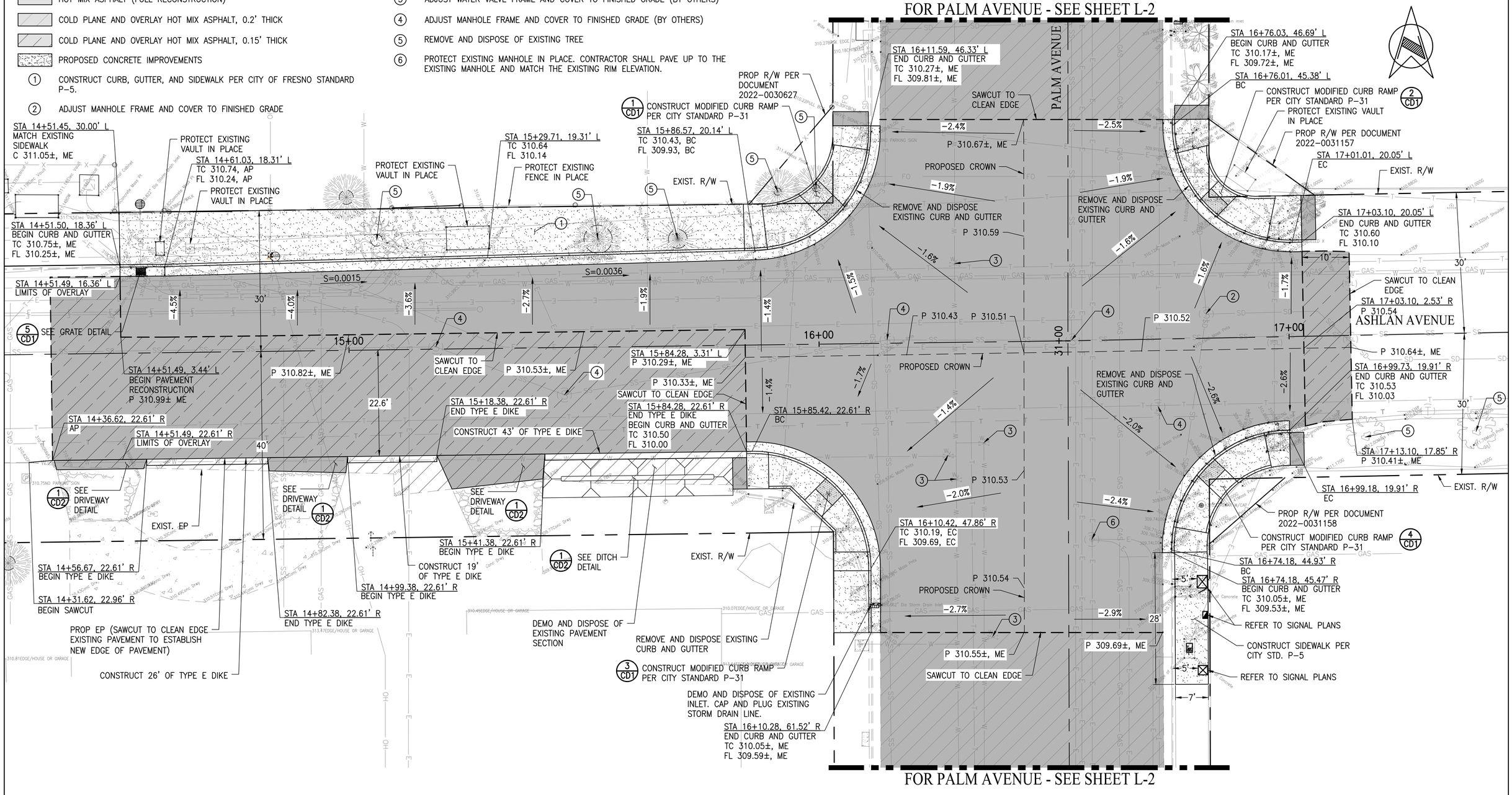
LEGEND AND KEY NOTES (APPLIES TO THIS SHEET ONLY)

- HOT MIX ASPHALT (FULL RECONSTRUCTION)
- COLD PLANE AND OVERLAY HOT MIX ASPHALT, 0.2' THICK
- COLD PLANE AND OVERLAY HOT MIX ASPHALT, 0.15' THICK
- PROPOSED CONCRETE IMPROVEMENTS
- (1) CONSTRUCT CURB, GUTTER, AND SIDEWALK PER CITY OF FRESNO STANDARD P-5.
- (2) ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE
- (3) ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE (BY OTHERS)
- (4) ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE (BY OTHERS)
- (5) REMOVE AND DISPOSE OF EXISTING TREE
- (6) PROTECT EXISTING MANHOLE IN PLACE. CONTRACTOR SHALL PAVE UP TO THE EXISTING MANHOLE AND MATCH THE EXISTING RIM ELEVATION.



L-1

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: WJW	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 10'

0 5 10 15 20

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER — WILLIAM J. WASHBURN — No. 60322 — CIVIL — STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STREET IMPROVEMENT PLANS - ASHLAN AVENUE

DRAWING NO. 11316 SHEET NO. 4 TOTAL 11

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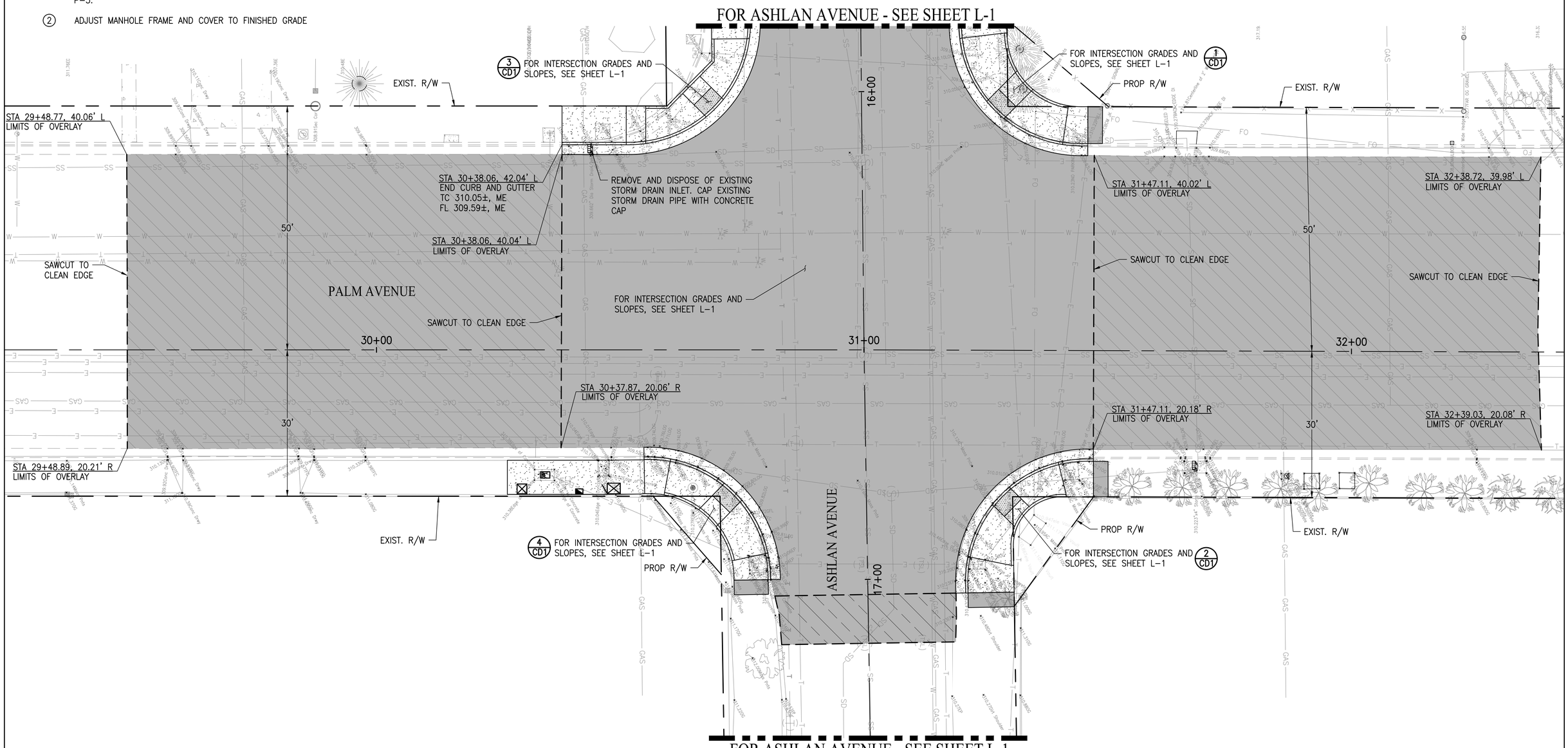
LEGEND AND KEY NOTES (APPLIES TO THIS SHEET ONLY)

- HOT MIX ASPHALT (FULL RECONSTRUCTION)
- COLD PLANE AND OVERLAY HOT MIX ASPHALT, 0.2' THICK
- COLD PLANE AND OVERLAY HOT MIX ASPHALT, 0.15' THICK
- PROPOSED CONCRETE IMPROVEMENTS
- (1) CONSTRUCT CURB, GUTTER, AND SIDEWALK PER CITY OF FRESNO STANDARD P-5.
- (2) ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE
- (3) ADJUST WATER VALVE FRAME AND COVER TO FINISHED GRADE (BY OTHERS)
- (4) ADJUST MANHOLE FRAME AND COVER TO FINISHED GRADE (BY OTHERS)
- (5) REMOVE AND DISPOSE OF EXISTING TREE
- (6) PROTECT EXISTING MANHOLE IN PLACE. CONTRACTOR SHALL PAVE UP TO THE EXISTING MANHOLE AND MATCH THE EXISTING RIM ELEVATION.



L-2

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: WJW	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 10'

0 5 10 15 20

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER — WILLIAM J. WASHBURN — No. 60322 — CIVIL — STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STREET IMPROVEMENT PLANS - PALM AVENUE

DRAWING NO. 11316 SHEET NO. 5 TOTAL 11

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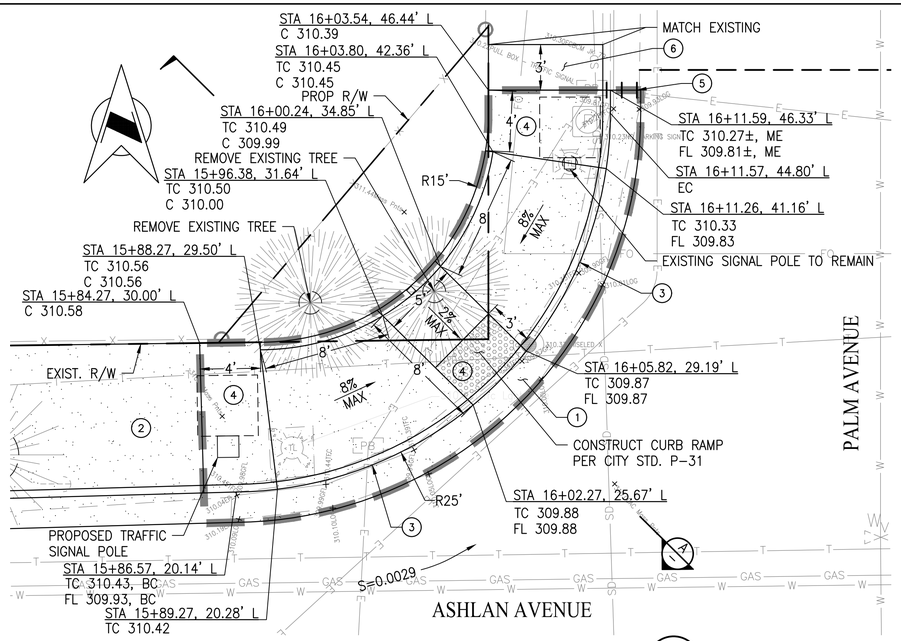
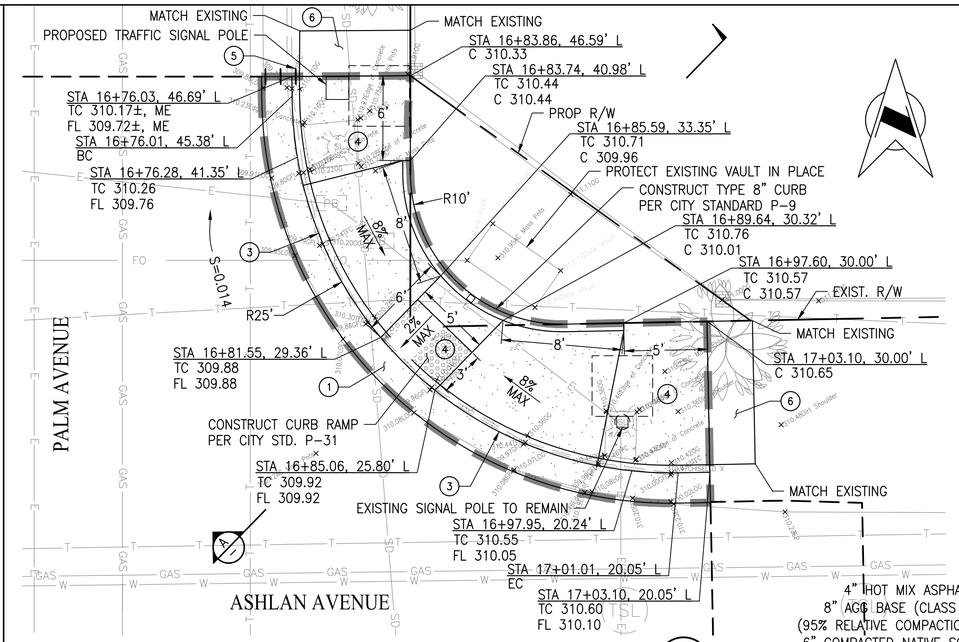


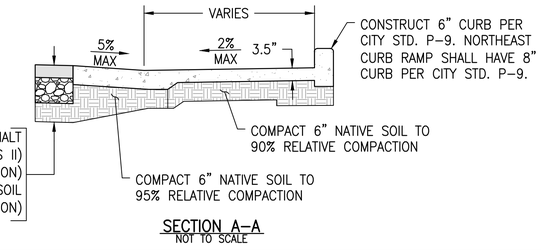
NORTHWEST CORNER CURB RAMP 1
SCALE: 1" = 5'



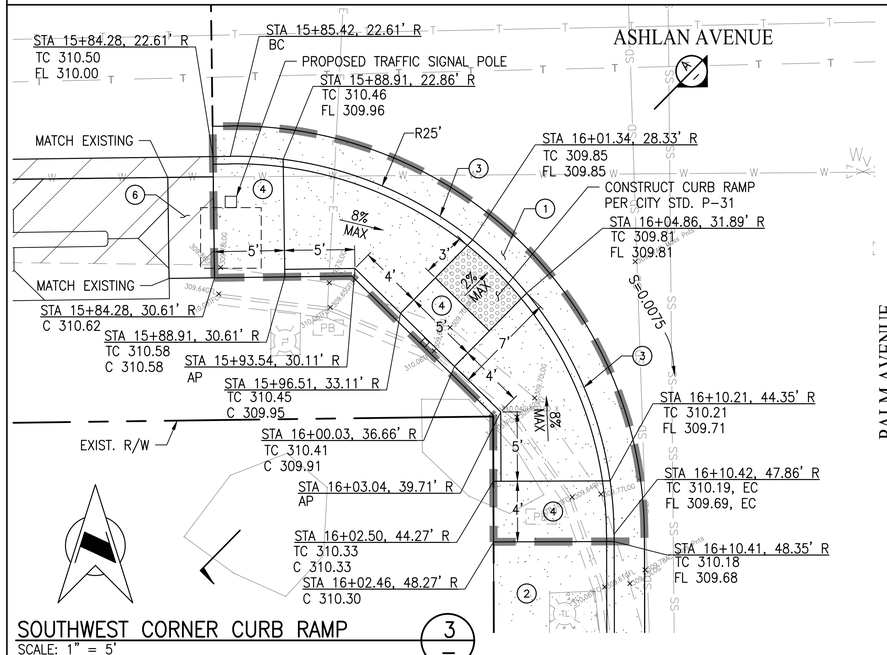
NORTHEAST CORNER CURB RAMP 2
SCALE: 1" = 5'

LEGEND (APPLIES TO THIS SHEET ONLY)

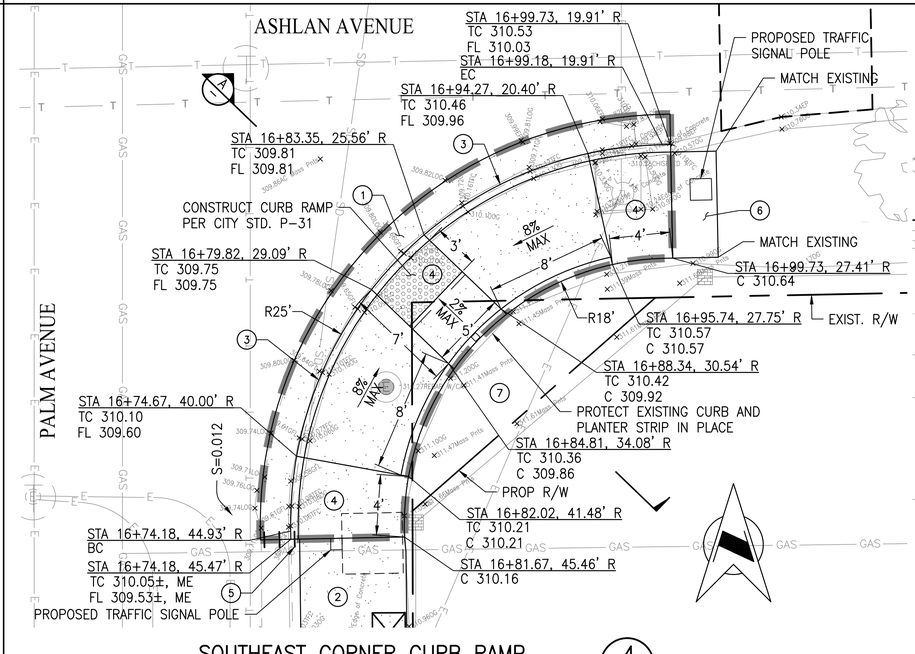
- ME — MATCH EXISTING GRADE
- AC SAWCUT LINE
- FURNISH & INSTALL IN-LINE PATTERN DETECTABLE WARNING SURFACE PER CITY STD. P-32, TYP.
- LIMITS OF CURB RAMP
- (1) GUTTER PAN IN FRONT OF RAMP SHALL NOT EXCEED 5% IN THE PATH OF TRAVEL
- (2) CONSTRUCT SIDEWALK PER CITY STD. P-5
- (3) CONSTRUCT DEPRESSED CURB, CURB SHALL HAVE SMOOTH TRANSITION
- (4) PROVIDE 4'x4' MIN. ADA LANDING, SLOPES SHALL NOT EXCEED 1.5% IN ANY DIRECTION.
- (5) #4 DOWELS DRILLED, EPOXY & CENTERED IN EXISTING CONCRETE, SPACED 12" O.C., TYP.
- (6) PROVIDE 3' HOT MIX ASPHALT TRANSITION
  2" HOT MIX ASPHALT
  6" COMPACTED NATIVE SOIL (95% RELATIVE COMPACTION)
- (7) REMOVE & DISPOSE OF EXISTING CONCRETE PLANTER



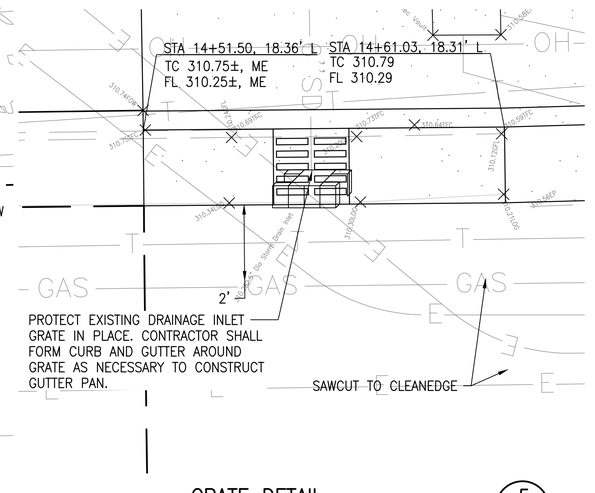
SECTION A-A
NOT TO SCALE



SOUTHWEST CORNER CURB RAMP 3
SCALE: 1" = 5'



SOUTHEAST CORNER CURB RAMP 4
SCALE: 1" = 5'



GRATE DETAIL 5
SCALE: 1" = 2'

CD-1

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: WJW	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 5'
0 2.5 5 7.5 10

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER — WILLIAM J. WASHBURN — No. 60322 — CIVIL — STATE OF CALIFORNIA

PROJECT
ASHLAN AVE. / PALM AVE.
TRAFFIC SIGNAL INSTALLATION
ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO

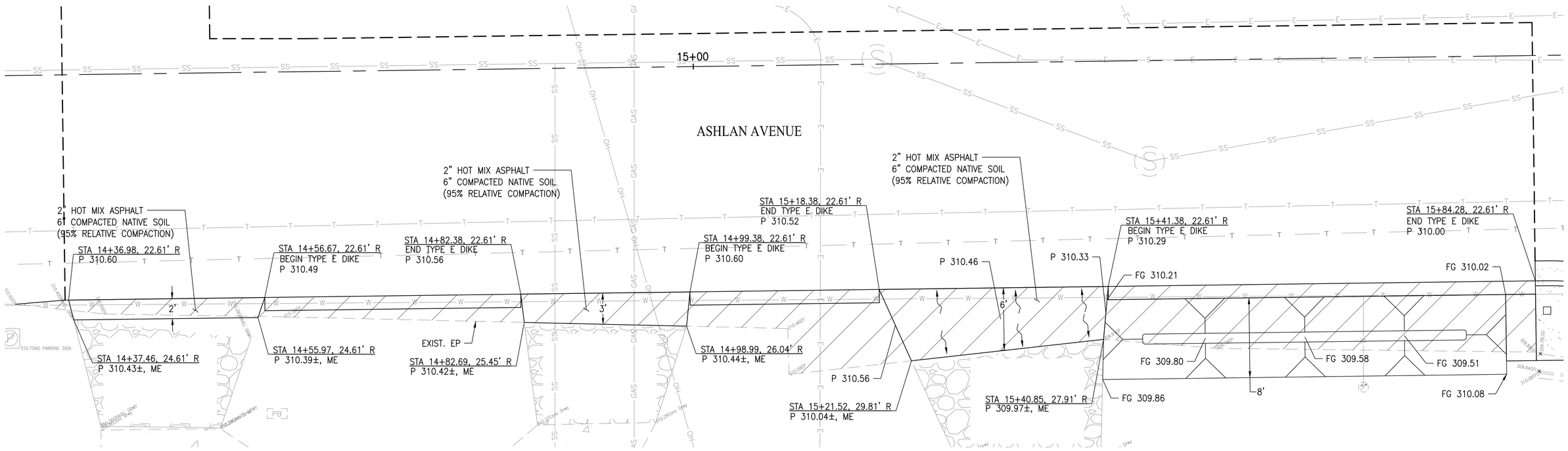
DEPARTMENT OF PUBLIC WORKS AND PLANNING
CONSTRUCTION DETAILS
DRAWING NO. 11316 SHEET NO. 6 TOTAL 11

S:\2021\21-056\Acad\Planset\21-056.01 Construction Details.dwg 9-13-22 11:59 AM

LEGEND (APPLIES TO THIS SHEET ONLY)

ME MATCH EXISTING GRADE

2" HOT MIX ASPHALT



DRIVE APPROACHES (1)
SCALE: 1" = 5'

CD-2

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: WJW	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 5'

0 2.5 5 7.5 10

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER WILLIAM J. WASHBURN No. 60322 CIVIL STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. 11316 SHEET NO. 7 TOTAL 11

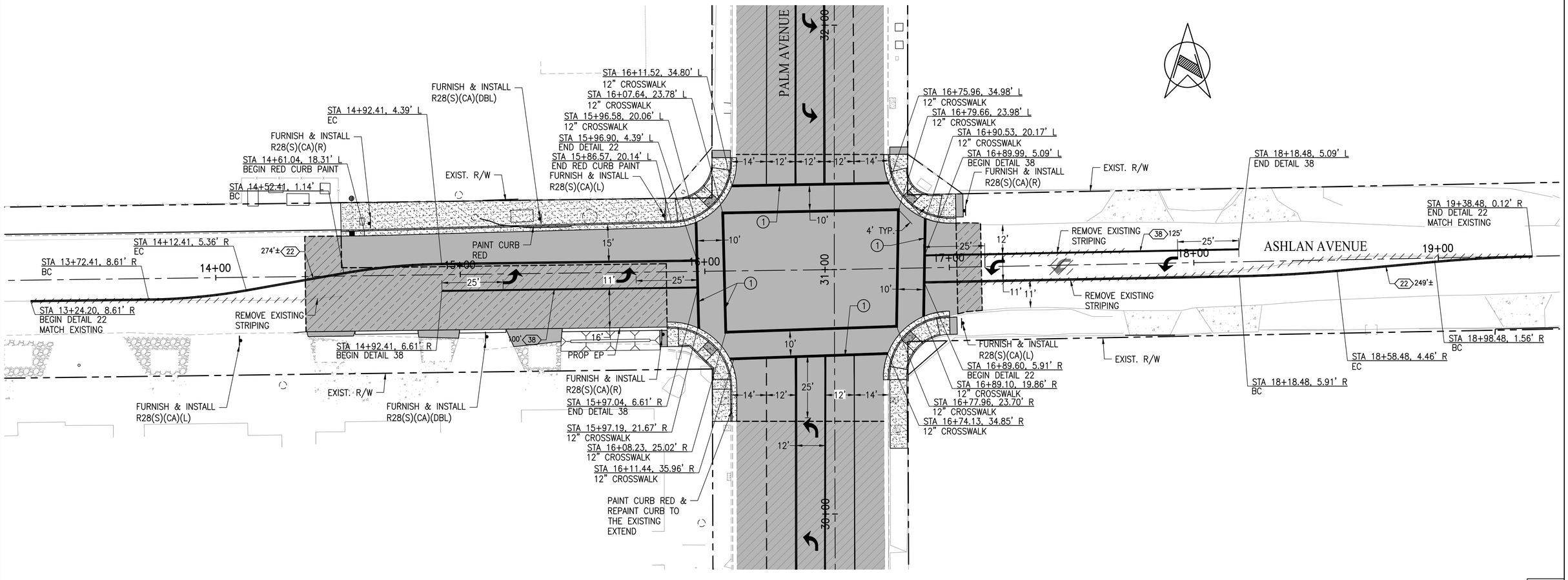
S:\2021\21-056\Acad\Planset\21-056.01 Construction Details_Drive Approaches.dwg 9-15-22 08:08 AM

LEGEND AND KEYNOTES (APPLIES TO THIS SHEET ONLY)

- ⟨#⟩ PAVEMENT DELINEATION DETAIL TO BE INSTALLED PER STATE STD. PLANS
- ⟨4"⟩ 4" WHITE STRIPE WITH REFLECTIVE TYPE 'C' MARKERS 24' O.C.
- (1) INSTALL 12" CROSSWALK STRIPING PER STATE STD. PLAN A24F (YELLOW, UNLESS NOTED OTHERWISE ON PLANS). CROSSWALK WIDTH SHALL BE 12' OUTSIDE EDGE TO OUTSIDE EDGE.
- ME MATCH EXISTING STRIPING
- INSTALL TYPE IV (L) OR (R) ARROW AS SHOWN ON PLAN PER STATE STD. PLAN A24A
- /// REMOVE EXISTING STRIPING
- FURNISH AND INSTALL SIGN AND POST

NOTES TO CONTRACTOR:

1. WORK SHALL BE DONE IN ACCORDANCE WITH THE 2015 EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS, INCLUDING ALL REVISIONS WITH EXCEPTION TO RSP A20A, RSP A20B, RSP A20C, AND RSP A20D, DETAIL 1 THROUGH 32 SHALL USE 4" WIDE STRIPE, THE LATEST CALTRANS ADOPTED EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA–MUTCD), AND THE LATEST EDITION OF THE CITY OF FRESNO STANDARD SPECIFICATIONS, DRAWINGS, AND SPECIAL PROVISIONS.
2. THESE PLANS ARE ACCURATE FOR SIGNING AND STRIPING ONLY.
3. ALL SIGNS SHALL BE TYPE III OR IV RETROREFLECTIVE SHEETING PER ASTM D4956–09. ALL SIGNS SHALL BE COVERED WITH A TRANSLUCENT ANTI–GRAFFITI FLUOROPOLYMER FILM THAT DOES NOT IMPAIR THE REFLECTIVITY OF THE SIGN.
4. WITH THE EXCEPTION OF BIKE LANE SYMBOLS, ALL STRIPING SHALL BE THERMOPLASTIC.
5. ALL CROSSWALKS SHALL BE 12 FEET WIDE, OUTSIDE EDGE TO OUTSIDE EDGE.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW TYPE K–1 (CA) MARKERS ON ALL MEDIAN ISLAND NOSES, UNLESS OTHERWISE NOTED ON THE PLAN.
7. THE CONTRACTOR SHALL INSTALL DETAIL 26 (RETRO–REFLECTIVE PAVEMENT MARKERS) ALONG ALL RAISED MEDIANS, AS PER 2014 CALIFORNIA MUTCD.
8. SIGNS SHALL BE INSTALLED PER CITY STANDARD DRAWING P–88, UNLESS OTHERWISE NOTED ON THE PLANS.
9. ALL R28(S)(CA) SIGNS SHALL BE "TOW–AWAY/NO STOPPING ANY TIME" SIGNS PER CITY STANDARD DRAWING P–91.
10. THE CONTRACTOR IS RESPONSIBLE TO RECORD AND DOCUMENT AS NECESSARY EXISTING STRIPING, PAVEMENT MARKERS AND MARKINGS, BLUE DOT MARKERS FOR FIRE HYDRANTS IN ORDER TO REPLACE THE STRIPING, PAVEMENT MARKERS AND MARKINGS IN KIND.
11. ALL SALVAGED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
12. EXISTING STRIPING, SYMBOLS, LEGENDS, AND MARKINGS TO BE REMOVED SHALL BE DONE BY WET SANDBLASTING. DRY SANDBLASTING MAY BE USED IN SELECTED AREAS ONLY WITH THE PERMISSION OF THE CITY TRAFFIC ENGINEER AND WITH THE APPROVAL OF THE AIR POLLUTION CONTROL DISTRICT. ALTERNATE METHODS OF REMOVAL REQUIRE APPROVAL OF THE CITY TRAFFIC ENGINEER. AFTER REMOVAL, SLURRY SEAL SHALL BE APPLIED TO THE AFFECTED AREAS.
13. ANY STREET LIGHT OR TRAFFIC SIGNAL PULL BOX IN THE SCOPE OF WORK OR ACCESSED BY THE CONTRACTOR SHALL BE CLEANED COMPLETELY, GROUTED, AND DUCT SEALED.
14. ANY BROKEN PULL BOXES WITHIN THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR.
15. ANY PULL BOXES ADJUSTED TO GRADE MUST ACCEPT A CITY APPROVAL LOCKING LID. CONDUITS MUST ALL BE REPLACED.
16. TRAFFIC SIGNAL LOOPS DAMAGED BY CONSTRUCTION SHALL BE REPLACED AT CONTRACTORS EXPENSE.
17. CONTRACTOR TO PAINT ALL RAISED MEDIAN NOSES YELLOW (2 COATS).



PD-1

	DATE	RECORD DRAWING		
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE	
DRAWN: AM	9/07/22			
CHECKED: WJW	9/07/22			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 20'

0 10 20 30 40

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER — WILLIAM J. WASBURN — No. 60322 — CIVIL — STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STRIPING AND SIGN PLAN - ASHLAN AVENUE

DRAWING NO. 11316 SHEET NO. 8 TOTAL 11

S:\2021\21-056\Acad\Planset\21-056.01 Signage and Striping.dwg 9-13-22 11:02 AM

LEGEND AND KEYNOTES (APPLIES TO THIS SHEET ONLY)

- ◇(#) — PAVEMENT DELINEATION DETAIL TO BE INSTALLED PER STATE STD. PLANS
- ◇(4") — 4" WHITE STRIPE WITH REFLECTIVE TYPE 'C' MARKERS 24' O.C.
- (1) — INSTALL 12" CROSSWALK STRIPING PER STATE STD. PLAN A24F (YELLOW, UNLESS NOTED OTHERWISE ON PLANS). CROSSWALK WIDTH SHALL BE 12' OUTSIDE EDGE TO OUTSIDE EDGE.
- ME — MATCH EXISTING STRIPING
- INSTALL TYPE IV (L) OR (R) ARROW AS SHOWN ON PLAN PER STATE STD. PLAN A24A
- /// — REMOVE EXISTING STRIPING
- FURNISH AND INSTALL SIGN AND POST

NOTES TO CONTRACTOR:

1. WORK SHALL BE DONE IN ACCORDANCE WITH THE 2015 EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS, INCLUDING ALL REVISIONS WITH EXCEPTION TO RSP A20A, RSP A20B, RSP A20C, AND RSP A20D, DETAIL 1 THROUGH 32 SHALL USE 4" WIDE STRIPE, THE LATEST CALTRANS ADOPTED EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA–MUTCD), AND THE LATEST EDITION OF THE CITY OF FRESNO STANDARD SPECIFICATIONS, DRAWINGS, AND SPECIAL PROVISIONS.
2. THESE PLANS ARE ACCURATE FOR SIGNING AND STRIPING ONLY.
3. ALL SIGNS SHALL BE TYPE III OR IV RETROREFLECTIVE SHEETING PER ASTM D4956–09. ALL SIGNS SHALL BE COVERED WITH A TRANSLUCENT ANTI–GRAFFITI FLUOROPOLYMER FILM THAT DOES NOT IMPAIR THE REFLECTIVITY OF THE SIGN.
4. WITH THE EXCEPTION OF BIKE LANE SYMBOLS, ALL STRIPING SHALL BE THERMOPLASTIC.
5. ALL CROSSWALKS SHALL BE 12 FEET WIDE, OUTSIDE EDGE TO OUTSIDE EDGE.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW TYPE K–1 (CA) MARKERS ON ALL MEDIAN ISLAND NOSES, UNLESS OTHERWISE NOTED ON THE PLAN.
7. THE CONTRACTOR SHALL INSTALL DETAIL 26 (RETRO–REFLECTIVE PAVEMENT MARKERS) ALONG ALL RAISED MEDIANS, AS PER 2014 CALIFORNIA MUTCD.
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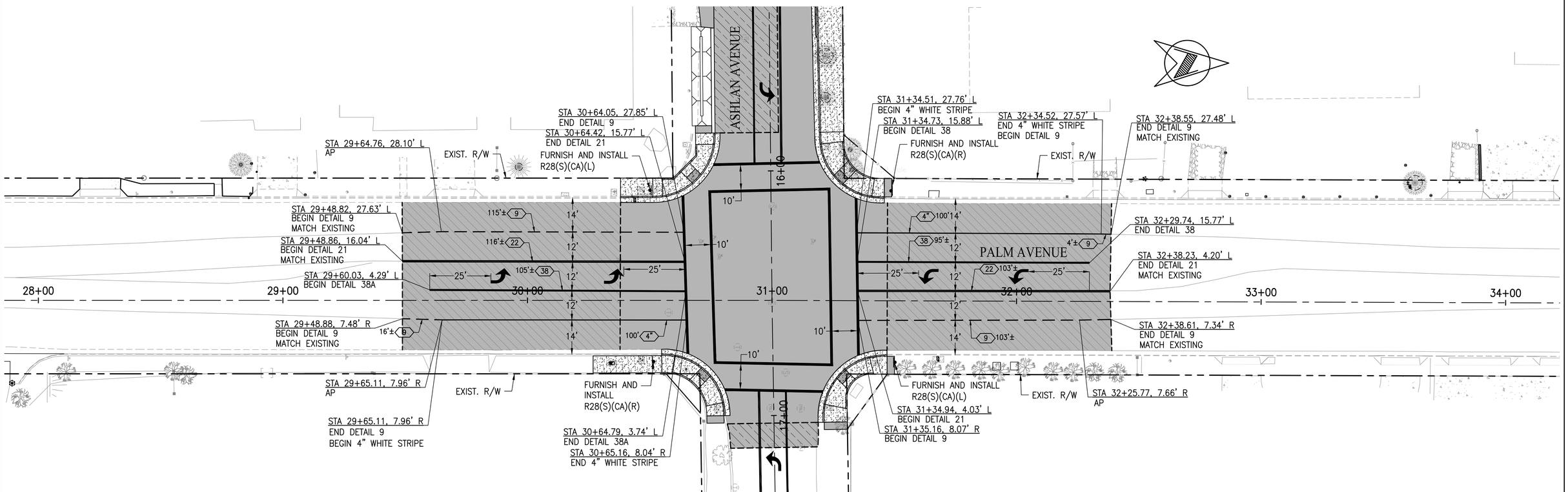
10. THE CONTRACTOR IS RESPONSIBLE TO RECORD AND DOCUMENT AS NECESSARY EXISTING STRIPING, PAVEMENT MARKERS AND MARKINGS, BLUE DOT MARKERS FOR FIRE HYDRANTS IN ORDER TO REPLACE THE STRIPING, PAVEMENT MARKERS AND MARKINGS IN KIND.
11. ALL SALVAGED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
12. EXISTING STRIPING, SYMBOLS, LEGENDS, AND MARKINGS TO BE REMOVED SHALL BE DONE BY WET SANDBLASTING. DRY SANDBLASTING MAY BE USED IN SELECTED AREAS ONLY WITH THE PERMISSION OF THE CITY TRAFFIC ENGINEER AND WITH THE APPROVAL OF THE AIR POLLUTION CONTROL DISTRICT. ALTERNATE METHODS OF REMOVAL REQUIRE APPROVAL OF THE CITY TRAFFIC ENGINEER. AFTER REMOVAL, SLURRY SEAL SHALL BE APPLIED TO THE AFFECTED AREAS.
13. ANY STREET LIGHT OR TRAFFIC SIGNAL PULL BOX IN THE SCOPE OF WORK OR ACCESSED BY THE CONTRACTOR SHALL BE CLEANED COMPLETELY, GROUTED, AND DUCT SEALED.
14. ANY BROKEN PULL BOXES WITHIN THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR.
15. ANY PULL BOXES ADJUSTED TO GRADE MUST ACCEPT A CITY APPROVAL LOCKING LID. CONDUITS MUST ALL BE REPLACED.
16. TRAFFIC SIGNAL LOOPS DAMAGED BY CONSTRUCTION SHALL BE REPLACED AT CONTRACTORS EXPENSE.
17. CONTRACTOR TO PAINT ALL RAISED MEDIAN NOSES YELLOW (2 COATS).



PD-2

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: WJW	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 20'

0 10 20 30 40

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER WILLIAM J. WAGHORN No. 60322 CIVIL STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STRIPING AND SIGN PLAN - PALM AVENUE

DRAWING NO. 11316 SHEET NO. 9 TOTAL 11

S:\2021\21-056\Acad\Planset\21-056.01 Signage and Striping - PD-2.dwg 9-13-22 11:03 AM

LEGEND (THIS SHEET ONLY)

- EXISTING TRAFFIC SIGNAL CONDUIT
- EXISTING ITS CONDUIT
- SERVICE OR STREET LIGHTING CONDUIT
- TRAFFIC SIGNAL CONDUIT
- ITS CONDUIT
- EXISTING LOOP DETECTORS
- CALTRANS TYPE E LOOP DETECTOR
- CALTRANS TYPE D LOOP DETECTOR (5 TURNS). ARROW INDICATES DIRECTION OF TRAVEL. INSTALL A BICYCLE LOOP DETECTOR PAVEMENT MARKING PER CITY STANDARD DRAWING E-14 WHERE REQUIRED AND AS SHOWN ON SHEET E-1.
- 3'X3' BIKE LOOP DETECTOR (5 TURNS) PER CITY STANDARD DRAWING E-13. ARROW INDICATES DIRECTION OF TRAVEL. INSTALL A BICYCLE LOOP DETECTOR PAVEMENT MARKING PER CITY STANDARD DRAWING E-13 WHERE REQUIRED AND AS SHOWN ON SHEET E-1.
- PULL BOX. (No. 5(E) UNLESS OTHERWISE NOTED) WITH 1-FOOT-WIDE FULL-DEPTH CONCRETE COLLAR.

FOR OTHER SYMBOLS REFER TO STATE STANDARD DRAWINGS.

- EXISTING PULL BOX
- BICYCLE LOOP DETECTOR PAVEMENT MARKING PER CITY STANDARD DRAWING E-14. INSTALL WHERE REQUIRED AS SHOWN ON SHEET E-1.
- AB — ABANDON IN ACCORDANCE WITH STATE STANDARDS. IF APPLIED TO CONDUIT, CONDUCTORS SHALL BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR.
- RC — EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR.
- RS — REMOVE AND SALVAGE EQUIPMENT.
- CC — CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED.
- BC — INSTALL PULL BOX IN EXISTING CONDUIT RUN.
- 5(E)(T) — No. 5 TRAFFIC RATED PULL BOX TO A DEPTH EQUAL TO A No. 5(E) PULL BOX.
- p.o.s. — EXISTING POINT OF SERVICE.
- PEC — PHOTOELECTRIC UNIT
- ITS WIRELESS EQUIPMENT
- I.P. CAMERA
- R/W — RIGHT OF WAY

CONSTRUCTION NOTES (THIS SHEET ONLY)

1. REMOVE AND SALVAGE EXISTING CONTROLLER AND CABINET AFTER NEW CONTROLLER IS OPERATIONAL.
2. REMOVE AND SALVAGE EXISTING SERVICE PEDESTAL AFTER NEW PEDESTAL IS OPERATIONAL. CONTRACTOR SHALL COORDINATE WITH PG&E TO REMOVE METER AND SET METER IN NEW PEDESTAL.
3. FURNISH AND INSTALL WIRELESS ITS EQUIPMENT (ONE POINT WITH TWO ANTENNAS) ON TRAFFIC SIGNAL MAST ARM WITH CABLE TO ITS CABINET PER CITY OF FRESNO STANDARD DRAWINGS ITS-27A AND ITS-27B. RADIO RSSI, CCQ & BANDWIDTH TO ADJACENT RADIO SHALL MEET MINIMUM REQUIREMENTS PER GENERAL NOTES ON SHEET E-2.
4. FURNISH AND INSTALL I.P. CAMERA ON TRAFFIC SIGNAL POLE PER CITY OF FRESNO STANDARD DRAWING ITS-18B.
5. ABANDON ALL EXISTING LOOP DETECTORS.
6. DISCONNECT DLC FROM EXISTING LOOP DETECTORS PRIOR TO ABANDONING AND/OR GRINDING.
7. [CC] CONDUIT AT THE BASE OF SIGNAL POLE.
8. FURNISH AND INSTALL NEW 2070LX NAZTEC CONTROLLER AND NEW TYPE 332L CABINET (MODIFIED PER CITY STANDARD DRAWINGS E-34A AND E-34B) ON NEW FOUNDATION. 2070LX SHALL BE EQUIPPED WITH 2070-1C CPU MODULE WITH V76.15Z FIRMWARE, 2070-2E+ FIELD I/O MODULE, 2070-3B FRONT PANEL ASSEMBLY, 2070-4A POWER SUPPLY MODULE, AND 2070-7A ASYNC/SYNC SERIAL COMM MODULE PER CITY OF FRESNO STANDARD SPECIFICATION AND CALTRANS TEES 2020. 2070LX AND ALL APPURTENANCES SHALL BE FULLY COMPATIBLE WITH THE CITY OF FRESNO'S EXISTING SYSTEM AND SOFTWARE WITHOUT ADDITIONAL MODIFICATIONS. FURNISH AND INSTALL ANY AND ALL EQUIPMENT NECESSARY FOR PROPER OPERATION OF TRAFFIC SIGNALS AND CABINET AS DESCRIBED IN SECTION 23-2 OF THE CITY OF FRESNO STANDARD SPECIFICATIONS. FRONT DOOR OF CABINET SHALL FACE SOUTH. MAINTAIN MINIMUM 4' A.D.A. CLEARANCE.
9. FURNISH & INSTALL TYPE 26-100 LBS SERVICE CABINET & FOUNDATION PER CITY OF FRESNO STANDARD DRAWINGS E-15 AND E-17. DOOR OF CABINET SHALL FACE WEST. MAINTAIN MINIMUM 4' A.D.A. CLEARANCE. CONTRACTOR SHALL COORDINATE WITH PG&E TO SET METER.
10. FURNISH AND INSTALL MODEL 336 ITS CABINET & ITS EQUIPMENT PER CITY STANDARD DRAWINGS ITS-20A, ITS-21B, ITS-21C, AND ITS-21D COMPLETE TO CITY OF FRESNO SPECIFICATIONS & REQUIREMENTS.
11. FURNISH AND INSTALL 5(E) PULL BOX IMMEDIATELY NORTH OF EXISTING SERVICE PEDESTAL. INTERCEPT EXISTING SERVICE CONDUIT. PULL BOX LID SHALL BE INSCRIBED "ELECTRICAL".
12. CONTRACTOR SHALL COORDINATE DISCONNECT/RECONNECT WITH PG&E.
13. INSTALL INTERMEDIATE PULL BOX AT MAXIMUM 200' SPACING BETWEEN PULL BOXES.
14. REMOVE AND DISPOSE OF EXISTING ITS VAULT. [CC] CONDUIT TO MAINTAIN CONTINUITY.
15. INSTALL 6(E) PULL BOX IN EXISTING ITS CONDUIT. PULL BACK SIC CABLE FROM SOUTHEAST CORNER AT ASHLAN AVENUE AND COIL IN PULL BOX.

SPECIAL NOTES

WHERE UNDERGROUND AND SURFACE STRUCTURES ARE SHOWN ON THE PLANS, THE LOCATIONS ARE BELIEVED TO BE REASONABLY CORRECT BUT ARE NOT GUARANTEED. SUCH STRUCTURES ARE SHOWN FOR THE INFORMATION OF THE CONTRACTOR, BUT INFORMATION SO GIVEN IS NOT TO BE CONSTRUED AS A REPRESENTATION THAT SUCH STRUCTURES WILL BE FOUND WHERE SHOWN, OR THAT THEY REPRESENT ALL THE STRUCTURES THAT MAY BE ENCOUNTERED.

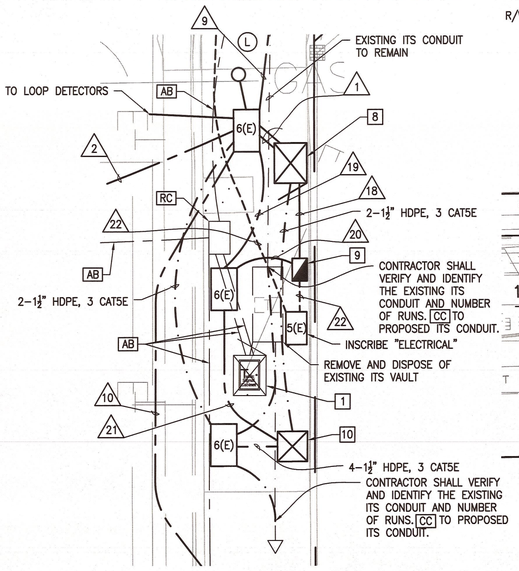
CONTRACTOR SHALL DETERMINE PRESENCE OF EXISTING FACILITIES AND SHALL NOTIFY THE ENGINEER OF POTENTIAL CONFLICTS.

CITY OF FRESNO TRAFFIC ENGINEERING — DATE 9/15/22

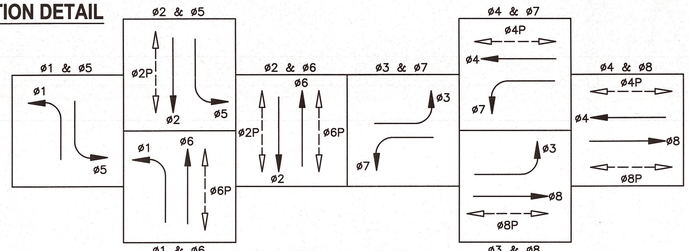
Christopher Salazar

CITY OF FRESNO TRAFFIC OPERATIONS CENTER — DATE 9-15-22

TRAFFIC SIGNALS & STREET LIGHTING SUPERVISOR — DATE



CONTROLLER LOCATION DETAIL
NTS



PROPOSED PHASE DIAGRAM
STEADY DEMAND SEQUENCE
FLASHING: ALL PHASES RED

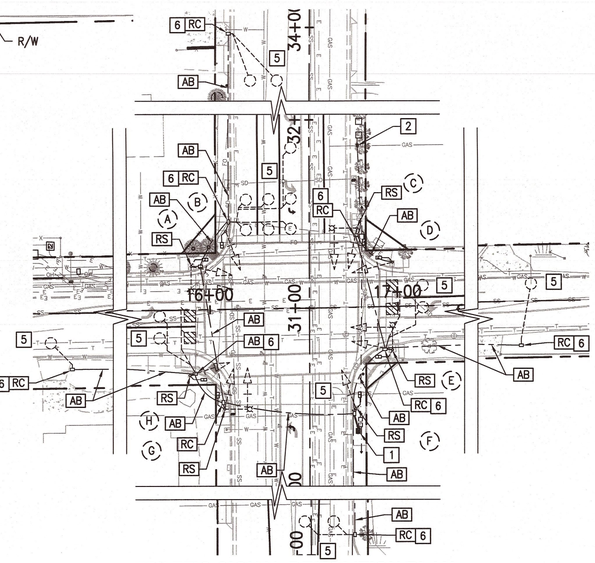
EMERGENCY VEHICLE PREEMPTION
EVA = ø2+ø5
EVB = ø4+ø7
EVC = ø1+ø6
EVD = ø3+ø8

SCALE: 1" = 20'

0 20' 40'

PG&E POLE NUMBER SCHEDULE

POLE LOCATION	POLE NUMBER
(I)	24095
(J)	24096
(K)	24097
(M)	24098



TRAFFIC SIGNAL DEMOLITION PLAN
SCALE: 1" = 40'

E-1

THIS PLAN IS ACCURATE FOR TRAFFIC SIGNALS AND LIGHTING ONLY.

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED:	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

HORIZ. SCALE: 1" = 20'

0 10 20 30 40

John Rowland — SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER — JOHN ROWLAND — NO. C52753 — CIVIL — STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TRAFFIC SIGNAL PLAN
ASHLAN AVENUE AND PALM AVENUE

DRAWING NO. 11316 SHEET NO. 10 TOTAL 11

Know what's below. Call before you dig.

S:\2021\21-056\Acad\Planset\21-056.01 Electrical Sheets.dwg 9-13-22 11:04 AM

CONDUCTOR SCHEDULE

AWG OR CABLE	POLE	PHASE	CONDUIT RUN NUMBER AND SIZE																					
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
			2–4"	4"	4"	4"	4"	4"	4"	4"	4"	2"	2"	2"	2"	1"	1"	1"	1"	1.5"	2"	2"	2"	2"
VEH 7CSC *	Ⓘ	4, 7 4P	1/1	1/1	1/1	1/1																		
	Ⓑ	1, 2 2P	1/1	1/1	1/1	1/1	1/1																	
	Ⓙ	1, 6 6P	1/1						1/1	1/1	1/1													
	Ⓓ	3, 4 4P	1/1						1/1	1/1														
	Ⓚ	3, 8 8P	1/1								1/1													
	Ⓛ	5, 6 6P	1/1																					
* PED 5CSC	Ⓜ	2, 5 2P	1/1	1/1																				
	Ⓝ	7, 8 8P	1/1	1/1	1/1	1/1																		
TOTAL			8/8	4/4	3/3	2/2	1/1		1/1	2/2	3/3													
* PPB 3CSC	Ⓘ	2P & 4P	1	1	1	1																		
	Ⓙ	4P & 6P	1						1	1	1													
	Ⓚ	6P & 8P	1								1													
	Ⓜ	2P & 8P	1	1																				
TOTAL			4	2	1	1			1	1	2													
TYPE C DLC *	LOOP DETECT.	PED. PUSH BUTTON Ø / *														6,8 / 2	2,8 / 2	2,4 / 2	4,6 / 2					
		Ø1	2																					
		Ø2	5	5	5	5	5							2										
		Ø3	2	2	2																			
		Ø4	3							3	3				1									
		Ø5	2	2	2	2	2																	
		Ø6	5									2												
		Ø7	2							2	2													
		Ø8	3	3	3								1											
TOTAL DLC			24	12	12	7	7			5	5	2	1	2	1	2	2	2	2					
#2	SERVICE																							3
#4	SIGNAL POWER																			2				
#8	SAFETY LIGHTING			2	2	2			2	2	2										2	2		
#8	GROUNDING WIRE		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
#12	ITS POWER																					3	3	
#12	PHOTOELECTRIC CONTROL										3										3	3		
SHIELDED CAT5E				2	1	1					1													
EMERGENCY VEHICLE PREEMPTION			4	2	1	1			1	1	2													
% CONDUIT FILL			18%	20%	16%	11%	6%	1%	5%	10%	14%	6%	4%	6%	4%	22%	22%	22%	22%	14%	8%	10%	4%	13%

* NUMBER INDICATIONS ARE THE NUMBER OF CABLES WITHIN CONDUIT.

1. ALL CABLES ARE NEW UNLESS OTHERWISE NOTED.

GENERAL NOTES (SHEETS E-1 AND E-2 ONLY)

1. WORK SHALL BE DONE IN ACCORDANCE WITH THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS, 2010 EDITION, THE LATEST CALTRANS ADOPTED EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA–MUTCD), AND THE LATEST EDITION OF THE CITY OF FRESNO STANDARD SPECIFICATIONS AND DRAWINGS. SIGNAL POLES/STANDARDS FOR 113 KM/H WIND VELOCITY AND TYPE 1–A POLES SHALL BE PER THE STATE STANDARD PLANS AND SPECIFICATIONS, DATED JULY 1997.
2. THESE PLANS ARE ACCURATE FOR ELECTRICAL WORK ONLY.
3. SCHEDULING OF WORK SHALL CONFORM TO THE PROVISIONS IN SECTION 86–1.07, "SCHEDULING OF WORK" OF THE STATE STANDARD SPECIFICATIONS. PARTICULAR ATTENTION SHALL BE DIRECTED TO "NO ABOVE GROUND WORK, EXCEPT SERVICE EQUIPMENT, SHALL BE PERFORMED UNTIL THE CONTRACTOR HAS ALL MATERIALS ON HAND TO COMPLETE THAT PARTICULAR SIGNAL LOCATION OR LIGHTING CIRCUIT".
4. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UTILITIES WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS, AND SHALL PROVIDE PROTECTION PRIOR TO, DURING, AND AFTER TRENCHING, JACKING AND/OR BORING. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA), BY CALLING 811, AT LEAST TWO (2) WORKING DAYS BEFORE BEGINNING WORK.
5. CONDUIT INSTALLATION ACROSS ROADWAYS SHALL BE BY JACKING OR DIRECTIONAL DRILLING METHODS UNLESS OTHERWISE NOTED ON THE PLANS.
6. CONTRACTOR SHALL ARRANGE WITH UTILITY COMPANIES FOR ALL REQUIRED UTILITY RELOCATIONS, INCLUDING OVERHEAD CONFLICTS.
7. ALL TRAFFIC SIGNAL AND LIGHTING FACILITIES, INCLUDING CABINETS, STANDARDS, PULL BOXES, CONDUITS, AND LOOP DETECTORS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. AFTER ALL UNDERGROUND UTILITIES ARE MARKED, THE CONTRACTOR SHALL MARK FINAL LOCATIONS IN THE FIELD AND NOTIFY THE ENGINEER AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING WORK TO VERIFY THE MARKED LOCATIONS.
8. ALL SALVAGED EQUIPMENT SHALL BE RETURNED TO THE CITY CORPORATION YARD, 3191 W. BELMONT AVENUE, FRESNO. THE CONTRACTOR SHALL NOTIFY THE CITY BY CONTACTING THE TRAFFIC SIGNAL SHOP AT (559) 621–1312 AT LEAST TWO (2) WORKING DAYS PRIOR TO DELIVERY. CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR SAFELY UNLOADING EQUIPMENT.
9. PULL BOXES SHALL BE NO. 5(E) UNLESS OTHERWISE NOTED ON THE PLANS. PULL BOXES SHALL NOT BE INSTALLED IN CURB RAMPS. VANDAL–RESISTANT LOCKING LIDS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT FINAL INSPECTION OF THE TRAFFIC SIGNAL. CONTRACTOR SHALL PROVIDE TEMPORARY LIDS DURING CONSTRUCTION. LOCKING LIDS SHALL BE GALVANIZED STEEL DIAMOND PLATE, MINIMUM THICKNESS 3/16", WITH MINIMUM TWO (2) CLAMPING JAWS AND SHALL BE KEYED TO THE CITY OF FRESNO KEY. CONDUIT RUNS SHALL NOT EXCEED 200' WITHOUT AN INTERMEDIATE PULL BOX. CONTRACTOR SHALL TIGHTEN DOWN ALL LOCKING LIDS TO A MINIMUM TORQUE SPEC OF 25 FOOT POUNDS.
10. ALL PULL BOXES INSTALLED IN NON–CONCRETE AREAS SHALL BE SURROUNDED BY A ONE– (1) FOOT–WIDE CONCRETE COLLAR TO A DEPTH EQUAL TO THE PULL BOX AND EXTENSION PER CITY OF FRESNO SPECIFICATIONS, AND SHALL HAVE A VANDAL RESISTANT (SEE NOTE ABOVE) LOCKING LID INSTALLED. ALL CONDUIT ENTRIES INTO ADVANCE DETECTION, INTERMEDIATE DETECTION, AND STREET LIGHTING PULL BOXES INSTALLED IN NON–CONCRETE AREAS SHALL ENTER THE PULL BOX FROM THE BOTTOM USING 90 DEGREE ELBOWS AND EXTENDING 3 TO 5 INCHES ABOVE THE FINISHED GROUT.
11. ALL CONDUITS SHALL HAVE BUSHINGS INSTALLED PRIOR TO INSTALLING CONDUCTORS. STEEL CONDUITS SHALL HAVE LAY IN STYLE LUGS THAT ARE CAST INTEGRAL WITH THE BUSHING.
12. CONDUIT BENDS OF 90 DEGREES ARE PROHIBITED UNLESS OTHERWISE NOTED OR WRITTEN PERMISSION IS GIVEN BY THE CITY OF FRESNO ENGINEER.
13. ALL NEUTRAL CONDUCTORS SHALL BE WHITE IN COLOR THROUGHOUT THEIR ENTIRE LENGTH.
14. TRAFFIC SIGNAL CABLE SHALL NOT BE SPLICED BETWEEN THE CONTROLLER CABINET AND THE TERMINAL COMPARTMENTS MOUNTED ON THE POLES. DETECTOR CABLES SHALL NOT BE SPLICED BETWEEN THE CONTROLLER CABINET AND THE PULL BOX ADJACENT TO THE DETECTOR LEAD–IN.
15. SEAL CONDUIT WITH AN APPROVED DUCT SEAL AFTER ALL CONDUCTORS HAVE BEEN INSTALLED.
16. SEALANT FOR FILLING THE LOOP DETECTOR SAWCUT SLOTS SHALL BE HOT–MELT RUBBERIZED ASPHALT SEALANT PER STATE OF CALIFORNIA SPECIFICATIONS OR LOOP SEALANT SHALL BE ELASTOMERIC SEALANT 3M, BLACK 5000.

THIS PLAN IS ACCURATE FOR TRAFFIC SIGNALS AND LIGHTING ONLY.

GENERAL NOTES (SHEETS E-1 AND E-2 ONLY)

15. PEDESTRIAN PUSH BUTTONS SHALL HAVE 2" DIAMETER ACTUATORS AND COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
16. ALL VEHICLE SIGNAL SECTIONS SHALL UTILIZE LIGHT EMITTING DIODE (LED) SIGNAL MODULES IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. VEHICLE SIGNAL SECTIONS SHALL HAVE 12" (300 mm) DIAMETER LENSES WITH BACKPLATES AND TUNNEL VISORS. ALL VEHICLE SIGNAL SECTIONS SHALL HAVE METAL AND RUBBER WASHERS INSTALLED ON THE INSIDE OF THE HEAD.
17. SAFETY LUMINAIRE SHALL BE LED (EQUAL TO 150W HPS), SEE UPDATED CITY OF FRESNO SPECIFICATIONS FOR SAFETY LUMINAIRE REQUIREMENTS.
18. PEDESTRIAN SIGNAL UNITS SHALL BE FULL SYMBOL, MUTCD COMPLIANT, LED "COUNTDOWN" TYPE WITH 9 INCH NUMERALS; GELCORE MODEL PS7–CFF1–01A–18, OR APPROVED EQUAL. SIGNAL ALIGNMENT SHALL BE AS DIRECTED BY THE ENGINEER.
19. THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE OPTICOM (GTT) EMERGENCY VEHICLE PREEMPTION (EVP) SYSTEM (721 TWO DIRECTION DETECTION, SINGLE CHANNEL) IN ACCORDANCE WITH THE CITY STANDARD SPECIFICATIONS. EVP DETECTOR UNITS SHALL BE INSTALLED ON SIGNAL MAST ARMS AS SHOWN ON THE PLAN, CENTERED OVER THE NUMBER ONE THROUGH LANE, WITH BRACKETS APPROVED BY THE TRAFFIC SIGNAL SUPERVISOR. THE CONTRACTOR SHALL DELIVER THE MODEL 762 DISCRIMINATORS TO THE CITY CORPORATION YARD AT 2101 "G" STREET, FRESNO, AND NOTIFY THE CITY TRAFFIC SIGNAL SHOP, (559) 621–1312, AT LEAST TWO (2) WORKING DAYS PRIOR TO DELIVERY.
20. CONTRACTOR SHALL SCHEDULE WITH CONSTRUCTION MANAGEMENT ALL EQUIPMENT DELIVERIES THAT REQUIRE TESTING BY THE CITY'S TSSL SHOP. EQUIPMENT SHALL BE DELIVERED BY THE CONTRACTOR ONLY AT A PREARRANGED TIME AND DAY.
21. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW OVERSIZED STREET NAME SIGNS ON SIGNAL STANDARDS, AS SHOWN ON THE PLAN, PER CITY STANDARD DRAWING P–90. FURNISH AND INSTALL NEW MOUNTING BRACKETS AS NECESSARY. SUBMITTALS SHALL BE APPROVED BY THE CITY PRIOR TO ORDERING.
22. ALL SIGNS SHALL BE 3M–3930HIP TYPE III & IV SERIES REFLECTIVE SHEETING AND BE COVERED WITH 1160A PREMIUM OVERLAY ANTI–GRAFFITI FILM OR AVERY DENNISON T6500 SERIES REFLECTIVE SHEETING AND SHALL BE COVERED WITH AVERY DENNISON OL1000 ANTI–GRAFFITI OVERLAY FILM.
23. THE CONTRACTOR SHALL CONTACT THE CITY OF FRESNO TRAFFIC OPERATIONS CENTER SUPERVISOR AT (559) 621–8669 TO OBTAIN I.T.S. EQUIPMENT SPECIFICATIONS PRIOR TO THE COMMENCEMENT OF WORK.
24. TONEABLE CONDUIT SHALL BE CHECKED FOR CONTINUITY AND BONDED TO EARTH GROUND.
25. CONDUITS EXITING THE CONTROLLER FOUNDATION AND ENTERING INTO THE CONTROLLER CABINET SHALL BE ALIGNED TO ENTER WITHIN THE TEES–SPECIFIED CABINETS WITHOUT ANY MODIFICATIONS TO THE CABINET BASE.
26. ALL RESURFACING SHALL MATCH EXISTING SURFACES AFTER SIGNAL FACILITIES ARE REMOVED AND/OR RELOCATED.
27. ALL LUMINAIRE CIRCUITS SHALL BE FUSED. THE FUSE SHALL BE LOCATED IN LUMINAIRE HOUSING AT EACH POLE (5 AMP KTK FUSE IN TRON HEB TYPE FUSE HOLDER).
28. THE CONTRACTOR SHALL FURNISH AND INSTALL POLE NUMBERS.
29. THE CONTRACTOR SHALL FURNISH AND INSTALL AN ACCESSIBLE (AUDIBLE) PEDESTRIAN SIGNAL (APS) SYSTEM (2–WIRE POLARA iNAVIGATOR OR APPROVED EQUAL) IN CONFORMANCE WITH THE CITY'S STANDARD SPECIFICATIONS. THE APS SHALL PROVIDE BOTH A VIBRATING ARROW BUTTON AND AUDIBLE SOUNDS DURING THE "WALK" INTERVAL, AS WELL AS LOCATING TONE DURING THE PEDESTRIAN CLEARANCE AND DON'T WALK INTERVALS. THE APS SYSTEM SHALL MEET CURRENT ADA AND CA–MUTCD REQUIREMENTS. ALL PEDESTRIAN PUSH BUTTONS SHALL HAVE A FOUR–FOOT ACCESSIBLE PATH IN FRONT OF THE BUTTON. THE APS ICCU–C (INTELLIGENT CENTRAL CONTROL UNIT) SHALL BE SUPPLIED AND PLACED IN CABINET INPUT FILE I–12/I–13 WITH THE CARD EDGE PLUGGED INTO I–13. THE POWER SUPPLY PIGTAIL SHALL BE CUT TO LENGTH TO ELIMINATE EXCESS CABLE, WITH POWER OBTAINED FROM THE PDA T1 TERMINAL STRIP, TERMINALS 1, 3 & 5. CONTRACTOR SHALL PROVIDE TSSL THE LATEST MEANS OF PROGRAMMING THE APS SYSTEM AND DIGITAL COPIES OF AUDIO FILES. THE MEANS OF PROGRAMMING THE APS SYSTEM MUST MEET THE REQUIREMENTS OF THE MANUFACTURER'S APPROVED AND TESTED DEVICES LIST. THE CONTRACTOR OR VENDOR REPRESENTATIVE SHALL INSTALL THE INITIAL PROGRAMMING WITH THE SUBMITTED UNIT WITH TSSL PRESENT. UPON COMPLETION CONTRACTOR WILL PROVIDE TSSL PROGRAMMING UNIT.
30. CAT 5e CABLES SHALL BE SHIELDED.
31. ITS CAMERAS SHALL BE PANORAMIC.
32. I.T.S. EQUIPMENT SHALL BE PER CITY OF FRESNO STANDARDS.
33. THE CONTRACTOR SHALL BE OBLIGATED TO FAMILIARIZE SELF WITH CURRENT SIGNAL POLES IN FIELD PRIOR TO CONSTRUCTION.
34. ANY STREET LIGHT OR TRAFFIC SIGNAL PULL BOX IN THE SCOPE OF WORK OR ACCESSED BY THE CONTRACTOR SHALL BE CLEANED COMPLETELY, GROUTED, AND DUCT SEAL INSTALLED IN ALL CONDUIT.
35. ANY BROKEN PULL BOXES AND PULL BOX LIDS WITHIN THE PROJECT LIMITS SHALL BE REPLACED BY THE CONTRACTOR.
36. ANY PULL BOX ADJUSTED TO GRADE MUST ACCEPT A CITY–APPROVED LOCKING LID AND THE CONDUIT MUST ALSO BE ADJUSTED TO MEET THE LATEST CITY STANDARD.
37. ALL ITS FACILITIES, INCLUDING CABINETS, CAMERA STANDARDS, VAULTS, CONDUITS ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL MARK FINAL LOCATIONS IN THE FIELD AND NOTIFY THE ENGINEER AT LEAST 2 WORKING DAYS PRIOR TO COMMENCING WORK TO VERIFY MARKED LOCATIONS.
38. CONTRACTOR SHALL MAINTAIN ONLY A 2 FOOT COIL OF IP VIEWING DEVICE CABLE IN #6 PULL BOX.
39. CONTRACTOR SHALL UTILIZE RED TAPE TO IDENTIFY ITS CAMERA CAT5E CABLE AND BLUE TAPE FOR WIRELESS ANTENNA CAT5E CABLE.
40. RADIO AND ONE ANTENNA SHALL BE MOUNTED BEHIND SIGNAL HEAD WHERE POSSIBLE TO REDUCE WIND LOADING.
41. SHIELDED, OUTDOOR RATED CAT5E CABLE LENGTH SHALL NOT EXCEED 300 FEET, SEE CITY OF FRESNO STANDARD ITS–27A AND ITS–27B FOR FURTHER DETAILS.
42. A LOW LOSS 50 ohm COAX CABLE SHALL BE USED TO CONNECT THE ANTENNA TO ACCESS POINT.
43. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY VISUAL OBSTACLES THAT MAY OBSTRUCT LINE OF SIGHT PRIOR TO INSTALLATION. (TREES, FREEWAY OVERPASS, ETC.)
44. A SEPARATION OF AT LEAST 2' BETWEEN ANTENNAS IS REQUIRED.
45. CAT5E AND COAXIAL CONNECTION TO ACCESS POINT AND ANTENNAS SHALL BE MADE USING WATERPROOF CONNECTORS.
46. ALL ANTENNAS SHALL BE ORIENTED IN THE VERTICAL POLARIZATION POSITION WHEN INSTALLED.
47. CONTRACTOR SHALL COORDINATE WITH CITY TO CONFIGURE THE IP ADDRESS, SSID, CHANNEL, AND ALL OTHER REQUIRED CONFIGURATIONS.
48. CONFIRM THAT ALL ANTENNAS ARE PROPERLY MOUNTED AND ALIGNED.
49. RADIO RSSI VALUES SHALL BE BETWEEN –60 AND –40dBm. OPTIMAL RSSI IS –55dBm. CCQ VALUES SHALL BE A MINIMUM OF 75% PER MANUFACTURER'S RECOMMENDATION. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS AND ANTENNA RE–ALIGNMENTS AT ADJACENT INTERSECTIONS IF NECESSARY.
50. RADIO BANDWITH SHALL BE MINIMUM OF 54Mbps BETWEEN RADIOS.
51. ALL STREET LIGHTING AND TRAFFIC SIGNAL MATERIALS (LUMINAIRES AND POLES) SHALL BE APPROVED IN WRITING BY CITY OF FRESNO TRAFFIC SIGNALS & STREET LIGHTS (TSSL) DIVISION PRIOR TO ORDERING OF MATERIAL. ALL MATERIAL NOT APPROVED PRIOR TO ORDERING SHALL BE SUBJECT TO REJECTION AT NO COST TO THE CITY.

EQUIPMENT SCHEDULE

LOCATION	POLE TYPE	MAST ARM LENGTH		SIGNAL MOUNTING			BACK–PLATE	PPB		LUMINAIRE*	POLE LOCATION**		SNS	NOTES:
		SIGNAL	LUMINAIRE	POST	MAST–ARM	PED		ø	ARROW		STATION	OFFSET		
Ⓘ	19–4–113	25'	12'	SV–1–T	MAT MAS (F=11')	SP–1–T	3	–	–	LED	15+86.06	23.14L	N AVE Palm 4200	EVB, R3–4, AND I.P. CAMERA.
Ⓑ	1–A (10') (E)	–	–	TV–2–T	–	sp–1–t (E)	2	–	–	–	–	–	–	EXISTING 1–A POLE TO REMAIN. REMOVE AND SALVAGE EXISTING TV–1–T AND PEDESTRIAN SIGNAL. INSTALL COUNTDOWN SIGNAL. REMOVE AND SALVAGE EXISTING PPB; INSTALL KNOCKOUT SEAL.
Ⓙ	24–4–113	35'	12'	SV–1–T	MAT MAS (F=18')	SP–1–T	3	–	–	LED	16+79.02	45.86L	E AVE Ashlan 300	EVC, R3–4.
Ⓓ	1–A (10') (E)	–	–	TV–2–T	–	sp–1–t (E)	2	–	–	–	–	–	–	EXISTING 1–A POLE AND COUNTDOWN PEDESTRIAN SIGNAL TO REMAIN. REMOVE AND SALVAGE EXISTING TV–1–T MOUNTING. REMOVE AND SALVAGE EXISTING PPB; INSTALL KNOCKOUT SEAL.
Ⓚ	17–3–113	20'	12'	SV–1–T	MAT MAS (F=9')	SP–1–T	3	–	–	LED	17+01.68	22.91R	N AVE Palm 4100	EVD, R3–4, PEC, AND WIRELESS ANTENNA.
Ⓛ	1–A (10')	–	–	TV–2–T	–	SP–1–T	2	–	–	–	16+77.18	45.84R	–	
Ⓜ	24–4–113	35'	12'	SV–1–T	MAT MAS (F=18')	SP–1–T	3	–	–	LED	16+07.30	59.94R	E AVE Ashlan 200	EVA, R3–4, AND I.P. CAMERA.
Ⓝ	1–A (10')	–	–	TV–2–T	–	SP–1–T	2	–	–	–	15+85.42	25.61R	–	
Ⓞ	PPB	–	–	–	–	–	–	4P / 2P	← / →	–	–	–	–	MOUNT PPB POST ON RETAINING CURB.
Ⓟ	PPB	–	–	–	–	–	–	4P / 6P	← / →	–	–	–	–	MOUNT PPB POST ON RETAINING CURB.
Ⓠ	PPB	–	–	–	–	–	–	6P / 8P	← / →	–	–	–	–	MOUNT PPB POST ON RETAINING CURB.
Ⓡ	PPB	–	–	–	–	–	–	2P / 8P	← / →	–	–	–	–	MOUNT PPB POST ON RETAINING CURB.

NOTES:

1. ALL EQUIPMENT IS NEW UNLESS OTHERWISE NOTED. (E) INDICATES EXISTING EQUIPMENT.
2. CONTRACTOR TO VERIFY OVERHEAD AND UNDERGROUND UTILITY CLEARANCE PRIOR TO ORDERING EQUIPMENT. ARRANGE FOR UTILITY RELOCATION OR MODIFY EQUIPMENT SIZE/LOCATION AS NECESSARY WITH APPROVAL OF ENGINEER.
3. ALL SIGNAL POLES, 1–A POLES, PPB POSTS AND FOUNDATIONS SHALL BE PER 1997 STATE STANDARDS.
4. ALL BACKPLATES SHALL HAVE 2–INCH MINIMUM YELLOW RETROREFLECTIVE STRIP ALONG PERIMETER OF SIGNAL BACKPLATE TO PROJECT A RECTANGULAR APPEARANCE AT NIGHT.
5. STREET NAME SIGNS SHALL BE INSTALLED PER CITY OF FRESNO STANDARD DRAWING P–90.

* LED INTERSECTION SAFETY LIGHT LUMINAIRES INSTALLED SHALL BE CREE XSPMD–D–HT–3ME–12L–40K7–UL–SV–N–J FULL POWER, RATED: 95W, 11800 LUMEN, 4000K, CRI70, B1–U0–G2. SKU XSPMD–D–HT–3ME–12L–40K7–UL–SV–N–J–11.

** POLE LOCATIONS ARE PROVIDED FOR GUIDANCE ONLY. CONTRACTOR SHALL VERIFY UTILITY CLEARANCE AND REVISE LOCATION IF REQUIRED. NEW LOCATION SUBJECT TO ENGINEER'S APPROVAL. ALL STATION OFFSETS ARE REFERENCED FROM THE ASHLAN STATION LINE.

E-2

	DATE	RECORD DRAWING	
DESIGNED: AM	9/07/22	RESIDENT ENGINEER	DATE
DRAWN: AM	9/07/22		
CHECKED: JR	9/07/22		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 9/07/2022 DATE

REGISTERED PROFESSIONAL ENGINEER JOHN ROWLAND NO. C52753 CIVIL STATE OF CALIFORNIA

PROJECT

ASHLAN AVE. / PALM AVE.

TRAFFIC SIGNAL INSTALLATION

ROAD NO. 50200/E0700 BRIDGE NO. N/A

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

SCHEDULE AND NOTES
ASHLAN AVENUE AND PALM AVENUE

DRAWING NO. 11316 SHEET NO. 11 TOTAL 11

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