

PLANS FOR CONSTRUCTION

FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS

FEDERAL PROJECT NO. CML-5942(293)

FMFCD CONTRACT NO. BQ-20

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

Paul Nerland
County Administrative Officer

APPROVED

Steven E. White, Director
Department of Public Works and Planning

DocuSigned by:
Scott Mozier
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Scott Mozier, Public Works Director
City of Fresno

APPROVED
Digitally signed by
Anthony Zaragoza
Date: 2024.01.09
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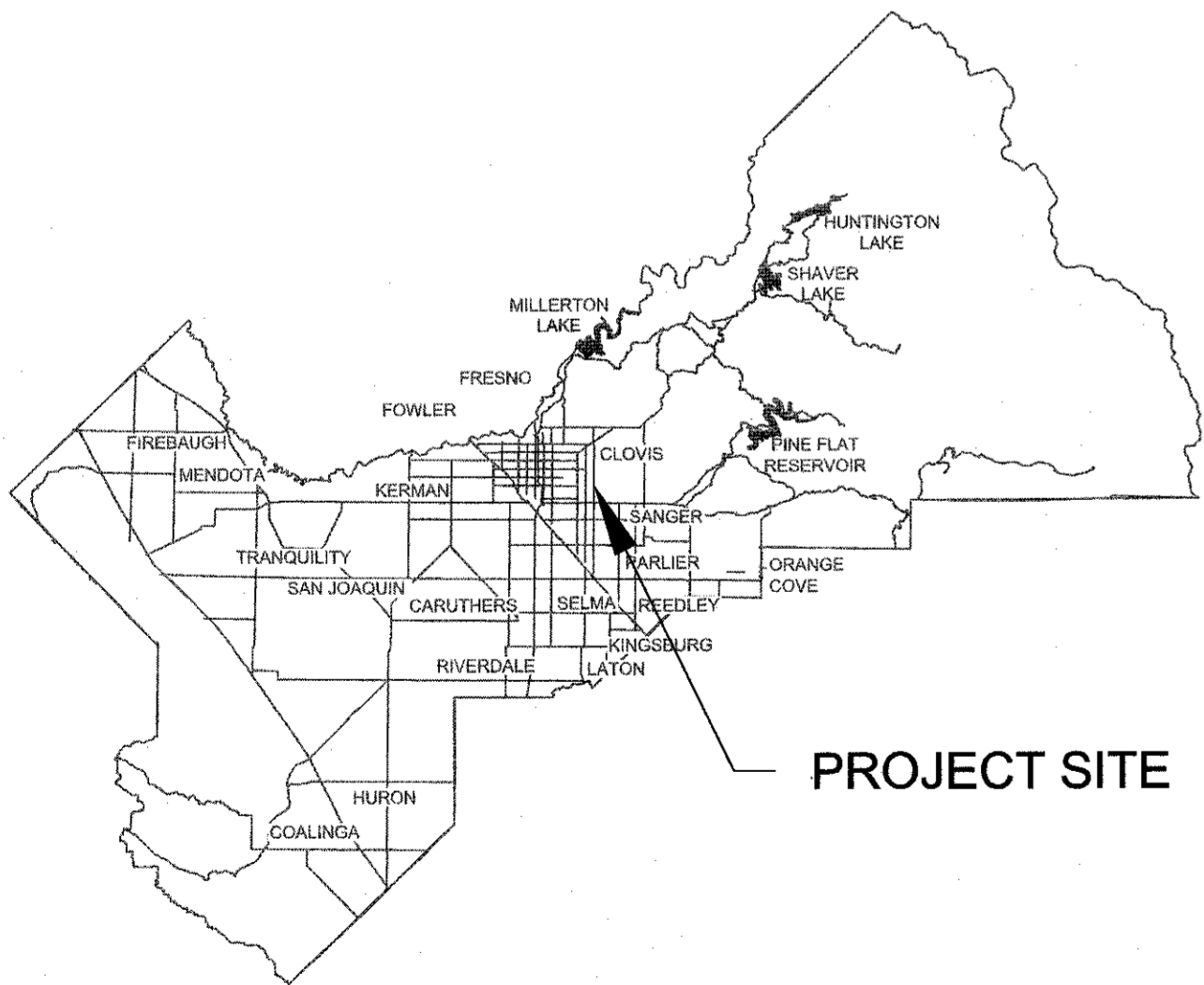
Fresno Metropolitan Flood Control District

CALIFORNIA CONTRACTOR'S LICENSES REQUIRED FOR THIS PROJECT

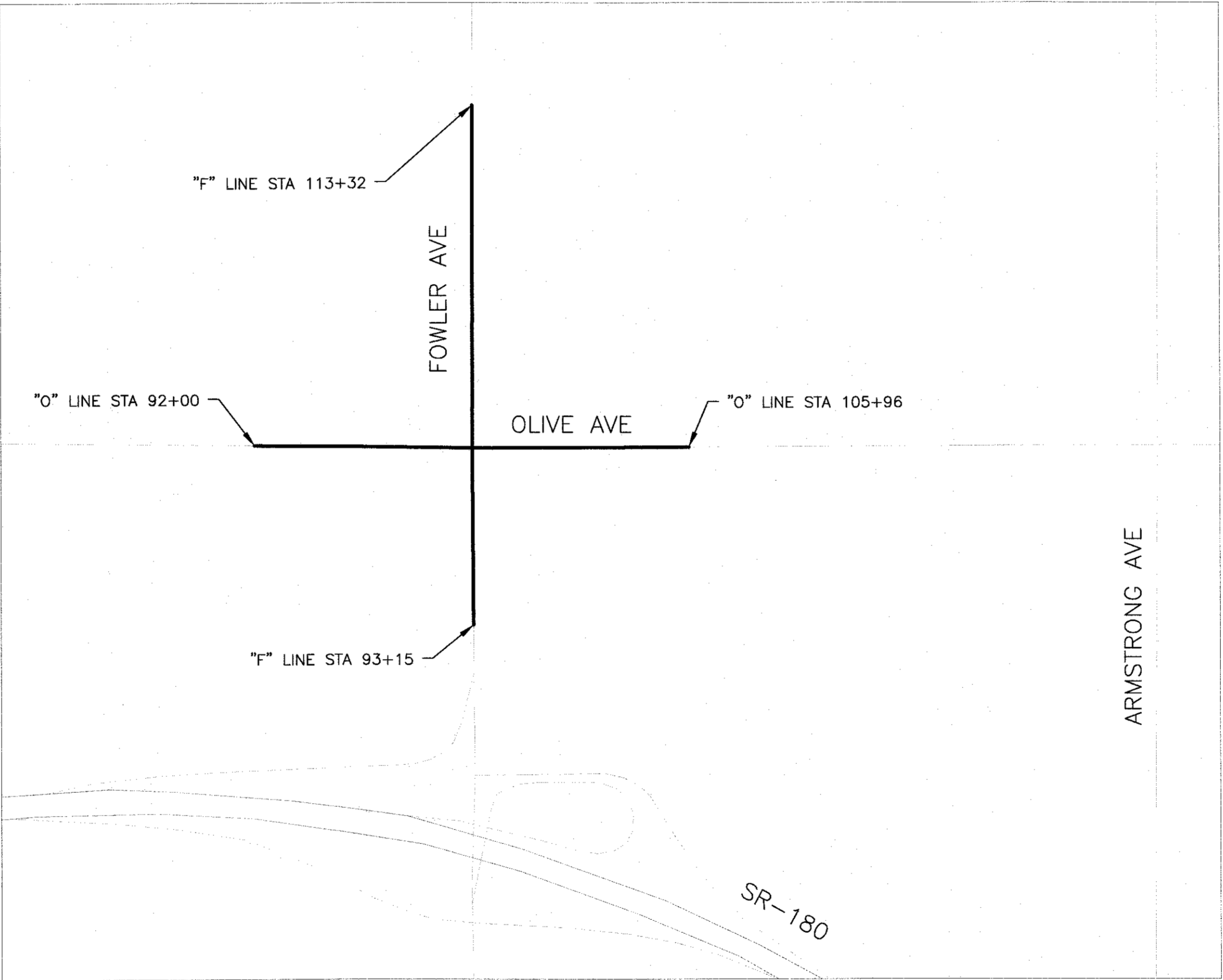
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C-12, EARTHWORK AND PAVING					
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11302	D0600	N/A	23/24	1	32
CONTRACT NO. 23-04-C					

RECORD DRAWING

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



PROJECT SITE



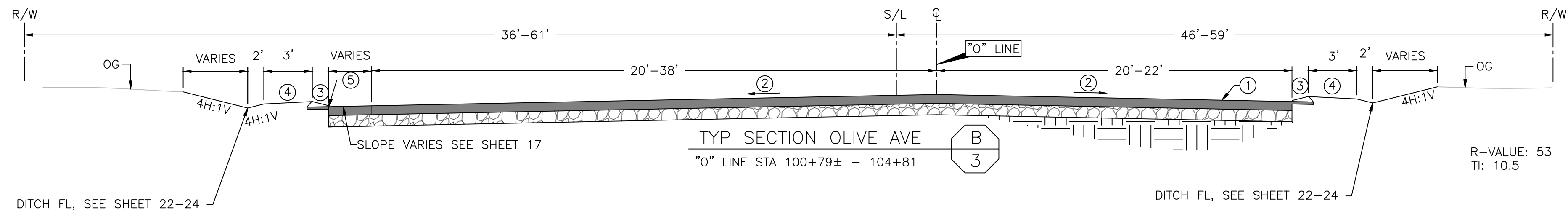
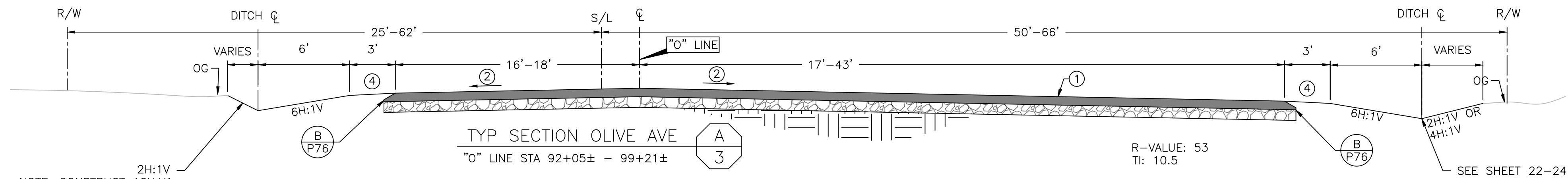
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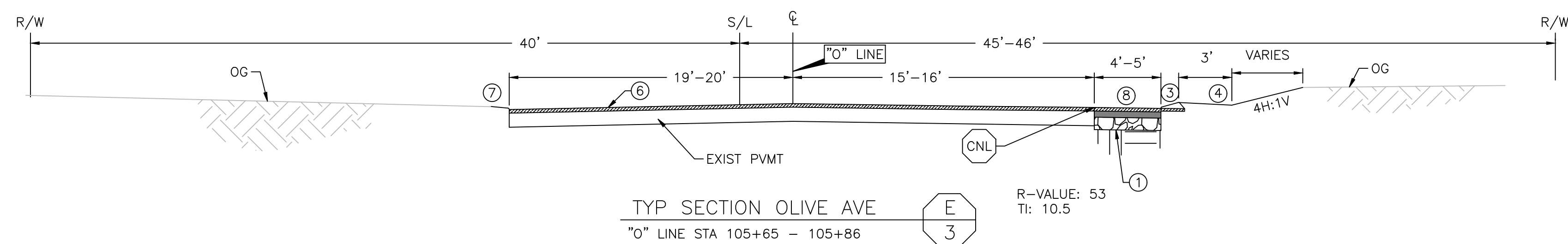
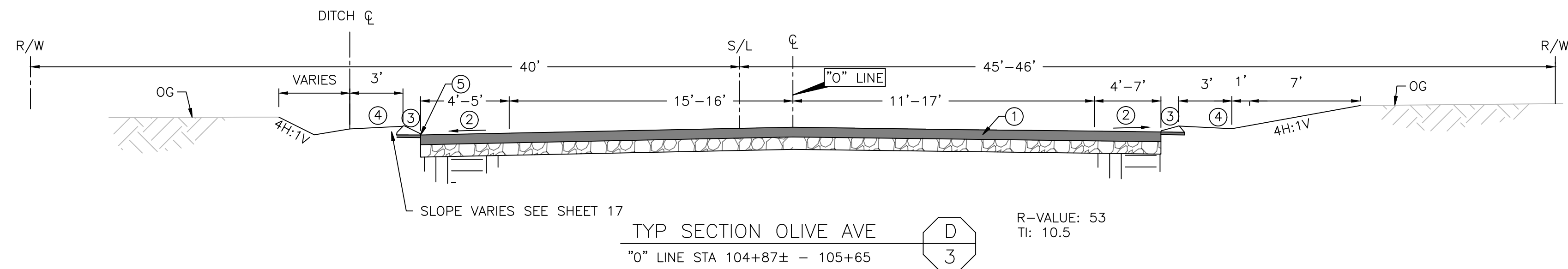
DEPARTMENT OF PUBLIC WORKS AND PLANNING




DIVISION	DESIGN	CONST	RMO	RESC
SIGNATURE	MHA	MSS	Ad	
DATE	1/8/2024	1/8/2024	1/8/2024	

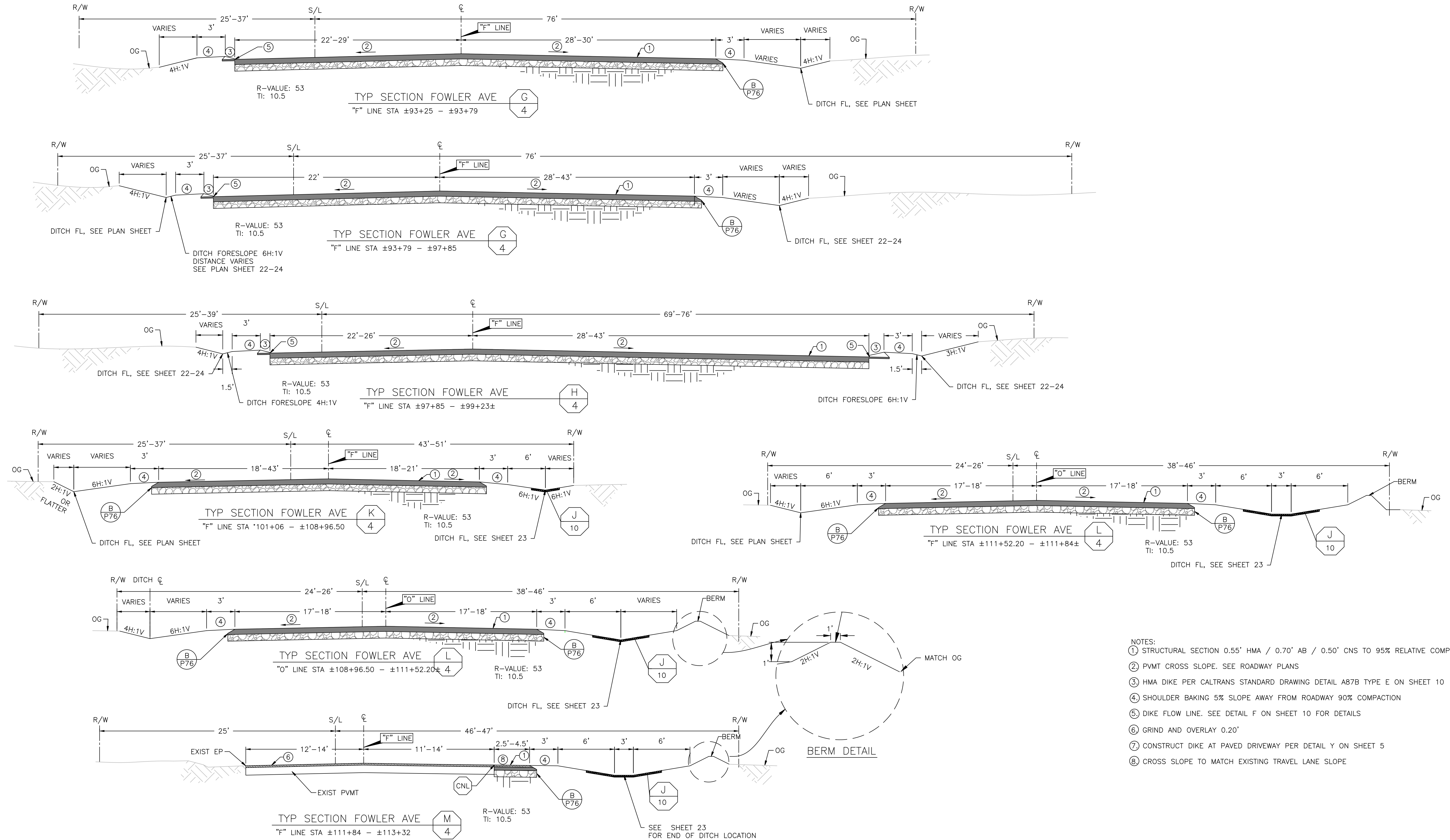
2015 CALTRANS STANDARD PLANS LIST				GENERAL LEGEND																																																																																																																																																																																																																																																																																																																																																																																																																																																											
<div>■ INDICATES APPLICABLE PLAN</div> <div><div><div>■ A20A</div><div>PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS</div></div><div><div>■ A20B</div><div>PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS</div></div><div><div>□ A20C</div><div>PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS</div></div><div><div>■ A20D</div><div>PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS</div></div><div><div>■ A24A</div><div>PAVEMENT MARKINGS ARROWS</div></div><div><div>□ A24B</div><div>PAVEMENT MARKINGS ARROWS AND SYMBOLS</div></div><div><div>□ A24C</div><div>PAVEMENT MARKINGS SYMBOLS AND NUMERALS</div></div><div><div>■ A24D</div><div>PAVEMENT MARKINGS WORDS</div></div><div><div>■ A24E</div><div>PAVEMENT MARKINGS WORDS, LIMIT AND YIELD LINES</div></div><div><div>□ A24F</div><div>PAVEMENT MARKINGS CROSSWALKS</div></div><div><div>□ A62A</div><div>EXCAVATION AND BACKFILL MISCELLANEOUS DETAILS</div></div><div><div>□ A62B</div><div>LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE 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LANE</td></tr><tr><td>APCH</td><td>APPROACH</td><td>EASE</td><td>EASEMENT</td><td>MIN</td><td>MINIMUM</td><td>SEC</td><td>SECTION</td></tr><tr><td>APPROX</td><td>APPROXIMATE ± ()</td><td>EB</td><td>END OF BRIDGE</td><td>MISC</td><td>MISCELLANEOUS</td><td>SDWK</td><td>SIDEWALK</td></tr><tr><td>AS</td><td>AGGREGATE SUBBASE</td><td>E/B</td><td>EAST BOUND</td><td>MOD</td><td>MODIFY (IED)</td><td>SH</td><td>STATE HIGHWAY</td></tr><tr><td>ASSY</td><td>ASSEMBLY</td><td>EC</td><td>END HORIZONTAL CURVE</td><td>MON</td><td>MONUMENT</td><td>SHLDR</td><td>SHOULDER</td></tr><tr><td>AV</td><td>AIR RELEASE VALVE</td><td>ECR</td><td>END CURB RETURN</td><td>MP</td><td>MILE POST</td><td>SHT</td><td>SHEET</td></tr><tr><td>AVE</td><td>AVENUE</td><td>ED</td><td>END DIKE</td><td>MTL</td><td>MATERIAL</td><td>S/L</td><td>SECTION LINE</td></tr><tr><td>BB</td><td>BEGINNING OF BRIDGE</td><td>ELEV</td><td>ELEVATION</td><td>N/A</td><td>NOT APPLICABLE</td><td>SP</td><td>STANDPIPE</td></tr><tr><td>BC</td><td>BEGIN HORIZONTAL CURVE</td><td>(ELEV)</td><td>EXISTING ELEVATION</td><td>NBL</td><td>NORTH BOUND LANE</td><td>SQ</td><td>SQUARE</td></tr><tr><td>BCM</td><td>BRASS CAP MONUMENT</td><td>EMB</td><td>EMBANKMENT</td><td>NO (#)</td><td>NUMBER</td><td>SQ FT</td><td>SQUARE FOOT (FEET)</td></tr><tr><td>BCR</td><td>BEGIN CURB RETURN</td><td>EP</td><td>EDGE OF PAVEMENT</td><td>NS</td><td>NATIVE SOIL</td><td>SQ IN</td><td>SQUARE INCH</td></tr><tr><td>BEG</td><td>BEGIN(ING)</td><td>EQ</td><td>EQUAL</td><td>OC</td><td>ON CENTER</td><td>ST</td><td>STREET</td></tr><tr><td>BKF</td><td>BACKFILL</td><td>ES</td><td>EDGE OF SHOULDER</td><td>OD</td><td>OUTSIDE DIAMETER</td><td>STA</td><td>STATION</td></tr><tr><td>BLDG</td><td>BUILDING</td><td>ETL</td><td>EDGE OF TRAVEL LANE</td><td>OG</td><td>ORIGINAL GROUND</td><td>STD</td><td>STANDARD</td></tr><tr><td>BLVD</td><td>BOULEVARD</td><td>EVC</td><td>END VERTICAL CURVE</td><td>O/S</td><td>OFFSET</td><td>STRUC</td><td>STRUCTURAL</td></tr><tr><td>BM</td><td>BENCH MARK</td><td>EW</td><td>ENDWALL</td><td>PB</td><td>PULL BOX</td><td>SURF</td><td>SURFACING</td></tr><tr><td>BR</td><td>BRIDGE</td><td>EXC</td><td>EXCAVATION</td><td>PE</td><td>POLYETHYLENE</td><td>STP</td><td>STEEL PIPE</td></tr><tr><td>BVC</td><td>BEGIN VERTICAL CURVE</td><td>EXIST / (E)</td><td>EXISTING</td><td>PCC</td><td>PORTLAND CEMENT CONCRETE</td><td>SWR</td><td>SEWER</td></tr><tr><td>BW</td><td>BARBED WIRE</td><td>EXP JT</td><td>EXPANSION JOINT</td><td>PERM</td><td>PERMEABLE</td><td>TAN OFF</td><td>TANGENT OFFSET</td></tr><tr><td>CC</td><td>CENTER TO CENTER</td><td>FCBCM</td><td>FRESNO COUNTY BCM</td><td>PG</td><td>PROFILE GRADE</td><td>TBM</td><td>TEMPORARY BM</td></tr><tr><td>CF</td><td>CUBIC FOOT (FEET)</td><td>FG</td><td>FINISHED GRADE</td><td>PI</td><td>POINT OF INTERSECTION</td><td>TBR</td><td>TIMBER</td></tr><tr><td>CFS</td><td>CUBIC FEET PER SECOND</td><td>FH</td><td>FIRE HYDRANT</td><td>PL</td><td>PLATE</td><td>TC</td><td>TEMPORARY CONST PERMIT</td></tr><tr><td>C & G</td><td>CURB AND GUTTER</td><td>FL</td><td>FLOW LINE</td><td>P/L</td><td>PROPERTY LINE</td><td>TFC</td><td>TOP FACE OF CURB</td></tr><tr><td>CHNL</td><td>CHANNEL</td><td>FO</td><td>FIBER OPTIC</td><td>PM</td><td>POST MILE</td><td>TOP</td><td>TOP OF PAVEMENT</td></tr><tr><td>CI</td><td>CITY</td><td>FT</td><td>FOOT (FEET)</td><td>POC</td><td>POINT ON CURVE</td><td>TOT</td><td>TOTAL</td></tr><tr><td>CIDH</td><td>CAST-IN DRILLED HOLE</td><td>GAL</td><td>GALLON (S)</td><td>POT</td><td>POINT ON TANGENT</td><td>TP</td><td>TELEPHONE POLE</td></tr><tr><td>CIP</td><td>CAST IRON PIPE</td><td>GV</td><td>GAS VALVE</td><td>PP</td><td>POWER POLE</td><td>TCB</td><td>TRAFFIC CONTROL BOX</td></tr><tr><td>CIPCP</td><td>CAST-IN-PLACE CONCRETE PIPE</td><td>GB</td><td>GRADE BREAK</td><td>PRC</td><td>POINT OF REVERSE CURVATURE</td><td>TRANS</td><td>TRANSVERSE</td></tr><tr><td>C/L (C)</td><td>CENTER LINE</td><td>GP</td><td>GRADING PLANE</td><td>PROT</td><td>PROTECT</td><td>TS</td><td>TRAFFIC SIGNAL</td></tr><tr><td>CL</td><td>CHAIN LINK</td><td>GRUB</td><td>GRUBBING</td><td>PSI</td><td>POUNDS PER SQUARE INCH</td><td>TYP</td><td>TYPICAL</td></tr><tr><td>CLR</td><td>CLEAR (ING), CLEARANCE</td><td>GW</td><td>GUY WIRE</td><td>PT</td><td>PEDESTAL TELEPHONE</td><td>TYP SEC</td><td>TYPICAL SECTION</td></tr><tr><td>CMP</td><td>CORRUGATED METAL PIPE</td><td>HORIZ</td><td>HORIZONTAL</td><td>PNT</td><td>POINT</td><td>UC</td><td>UNDERCROSSING</td></tr><tr><td>CNL</td><td>CUT NEAT LINE</td><td>HP</td><td>HINGE POINT</td><td>PULV</td><td>PULVERIZED</td><td>UG</td><td>UNDERGROUND</td></tr><tr><td>CNS</td><td>COMPACTED NATIVE SOIL</td><td>HS</td><td>HIGH STRENGTH</td><td>PVC</td><td>POLYVINYL CHLORIDE</td><td>UD</td><td>UNDERDRAIN</td></tr><tr><td>CO</td><td>COUNTY</td><td>HW</td><td>HEAD WALL</td><td>PVMT</td><td>PAVEMENT</td><td>UDR</td><td>UNDERDRAIN RISER</td></tr><tr><td>COMM</td><td>COMMERCIAL</td><td>HWM</td><td>HIGH WATER MARK</td><td>R</td><td>RADIUS</td><td>UP</td><td>UNDERPASS</td></tr><tr><td>CONC</td><td>CONCRETE</td><td>HWY</td><td>HIGHWAY</td><td>RCB</td><td>REINFORCED CONCRETE BOX</td><td>VAR</td><td>VARIES (ABLE)</td></tr><tr><td>CONST</td><td>CONSTRUCT (ION)</td><td>IB</td><td>IMPORTED BORROW</td><td>RCP</td><td>REINFORCED CONCRETE PIPE</td><td>VC</td><td>VERTICAL CURVE</td></tr><tr><td>CONT</td><td>CONTINUOUS</td><td>ID</td><td>INSIDE DIAMETER</td><td>RD</td><td>ROAD</td><td>VCP</td><td>VITRIFIED CLAY PIPE</td></tr><tr><td>CP</td><td>CONCRETE PIPE</td><td>IP</td><td>IRON PIPE</td><td>R & D</td><td>REMOVE AND DISPOSE</td><td>VERT</td><td>VERTICAL</td></tr><tr><td>CR</td><td>CURB RAMP</td><td>IRR</td><td>IRRIGATION</td><td>REINF</td><td>REINFORCED (MENT) (ING)</td><td>VG</td><td>VALLEY GUTTER</td></tr><tr><td>CS</td><td>COTTON SPINDLE</td><td>IV</td><td>IRRIGATION VALVE</td><td>REL</td><td>RELOCATE</td><td>VP</td><td>VENT PIPE</td></tr><tr><td>CSP</td><td>CORRUGATED STEEL PIPE</td><td>JP</td><td>JOINT POLE</td><td>REM</td><td>REMOVE</td><td>W/B</td><td>WEST BOUND</td></tr><tr><td>CSPA</td><td>CORRUGATED STEEL PIPE ARCH</td><td>JT</td><td>JOINT</td><td>RET</td><td>RETAINING</td><td>WM</td><td>WATER METER</td></tr><tr><td>CA TV</td><td>CABLE TELEVISION</td><td>L LINE</td><td>LAYOUT LINE</td><td>RG</td><td>RUBBER GASKET</td><td>WP</td><td>WEAKENED PLANE</td></tr><tr><td>CULV</td><td>CULVERT</td><td>LBS</td><td>POUNDS</td><td>RLG</td><td>ROCK LINED GUTTER</td><td>WR</td><td>WHEELCHAIR RAMP</td></tr><tr><td>CY (CU YD)</td><td>CUBIC YARD(S)</td><td>LF</td><td>LINEAR FOOT</td><td>RR</td><td>RAILROAD</td><td>WV</td><td>WATER VALVE</td></tr><tr><td></td><td></td><td>LOC</td><td>LOCATION</td><td>RT</td><td>RIGHT</td><td>WW</td><td>WINGWALL</td></tr></table>												AADS	AMERICAN AVE DISPOSAL SITE	DI	DRAINAGE INLET	LP	LIMIT OF PAYMENT	RTE	ROUTE	AB	AGGREGATE BASE	DIA	DIAMETER	LT	LEFT	R/W	RIGHT OF WAY	AC	ASPHALT CONCRETE	DIR	DIRECTION	MAX	MAXIMUM	R/W-P	PROPOSED RIGHT OF WAY	AHD	AHEAD	DIP	DUCTILE IRON PIPE	MB	METAL BEAM	S	SLOPE	ALIGN	ALIGNMENT	DIST	DISTANCE	MBGR	METAL BEAM GUARD RAILING	SH	STATE HIGHWAY	ALY	ALLEY	DWY	DRIVEWAY	MH	MANHOLE	SALV	SALVAGE	AP	ANGLE POINT	EA	EACH	MI	MILE (S)	SBL	SOUTH BOUND LANE	APCH	APPROACH	EASE	EASEMENT	MIN	MINIMUM	SEC	SECTION	APPROX	APPROXIMATE ± ()	EB	END OF BRIDGE	MISC	MISCELLANEOUS	SDWK	SIDEWALK	AS	AGGREGATE SUBBASE	E/B	EAST BOUND	MOD	MODIFY (IED)	SH	STATE HIGHWAY	ASSY	ASSEMBLY	EC	END HORIZONTAL CURVE	MON	MONUMENT	SHLDR	SHOULDER	AV	AIR RELEASE VALVE	ECR	END CURB RETURN	MP	MILE POST	SHT	SHEET	AVE	AVENUE	ED	END DIKE	MTL	MATERIAL	S/L	SECTION LINE	BB	BEGINNING OF BRIDGE	ELEV	ELEVATION	N/A	NOT APPLICABLE	SP	STANDPIPE	BC	BEGIN HORIZONTAL CURVE	(ELEV)	EXISTING ELEVATION	NBL	NORTH BOUND LANE	SQ	SQUARE	BCM	BRASS CAP MONUMENT	EMB	EMBANKMENT	NO (#)	NUMBER	SQ FT	SQUARE FOOT (FEET)	BCR	BEGIN CURB RETURN	EP	EDGE OF PAVEMENT	NS	NATIVE SOIL	SQ IN	SQUARE INCH	BEG	BEGIN(ING)	EQ	EQUAL	OC	ON CENTER	ST	STREET	BKF	BACKFILL	ES	EDGE OF SHOULDER	OD	OUTSIDE DIAMETER	STA	STATION	BLDG	BUILDING	ETL	EDGE OF TRAVEL LANE	OG	ORIGINAL GROUND	STD	STANDARD	BLVD	BOULEVARD	EVC	END VERTICAL CURVE	O/S	OFFSET	STRUC	STRUCTURAL	BM	BENCH MARK	EW	ENDWALL	PB	PULL BOX	SURF	SURFACING	BR	BRIDGE	EXC	EXCAVATION	PE	POLYETHYLENE	STP	STEEL PIPE	BVC	BEGIN VERTICAL CURVE	EXIST / (E)	EXISTING	PCC	PORTLAND CEMENT CONCRETE	SWR	SEWER	BW	BARBED WIRE	EXP JT	EXPANSION JOINT	PERM	PERMEABLE	TAN OFF	TANGENT OFFSET	CC	CENTER TO CENTER	FCBCM	FRESNO COUNTY BCM	PG	PROFILE GRADE	TBM	TEMPORARY BM	CF	CUBIC FOOT (FEET)	FG	FINISHED GRADE	PI	POINT OF INTERSECTION	TBR	TIMBER	CFS	CUBIC FEET PER SECOND	FH	FIRE HYDRANT	PL	PLATE	TC	TEMPORARY CONST PERMIT	C & G	CURB AND GUTTER	FL	FLOW LINE	P/L	PROPERTY LINE	TFC	TOP FACE OF CURB	CHNL	CHANNEL	FO	FIBER OPTIC	PM	POST MILE	TOP	TOP OF PAVEMENT	CI	CITY	FT	FOOT (FEET)	POC	POINT ON CURVE	TOT	TOTAL	CIDH	CAST-IN DRILLED HOLE	GAL	GALLON (S)	POT	POINT ON TANGENT	TP	TELEPHONE POLE	CIP	CAST IRON PIPE	GV	GAS VALVE	PP	POWER POLE	TCB	TRAFFIC CONTROL BOX	CIPCP	CAST-IN-PLACE CONCRETE PIPE	GB	GRADE BREAK	PRC	POINT OF REVERSE CURVATURE	TRANS	TRANSVERSE	C/L (C)	CENTER LINE	GP	GRADING PLANE	PROT	PROTECT	TS	TRAFFIC SIGNAL	CL	CHAIN LINK	GRUB	GRUBBING	PSI	POUNDS PER SQUARE INCH	TYP	TYPICAL	CLR	CLEAR (ING), CLEARANCE	GW	GUY WIRE	PT	PEDESTAL TELEPHONE	TYP SEC	TYPICAL SECTION	CMP	CORRUGATED METAL PIPE	HORIZ	HORIZONTAL	PNT	POINT	UC	UNDERCROSSING	CNL	CUT NEAT LINE	HP	HINGE POINT	PULV	PULVERIZED	UG	UNDERGROUND	CNS	COMPACTED NATIVE SOIL	HS	HIGH STRENGTH	PVC	POLYVINYL CHLORIDE	UD	UNDERDRAIN	CO	COUNTY	HW	HEAD WALL	PVMT	PAVEMENT	UDR	UNDERDRAIN RISER	COMM	COMMERCIAL	HWM	HIGH WATER MARK	R	RADIUS	UP	UNDERPASS	CONC	CONCRETE	HWY	HIGHWAY	RCB	REINFORCED CONCRETE BOX	VAR	VARIES (ABLE)	CONST	CONSTRUCT (ION)	IB	IMPORTED BORROW	RCP	REINFORCED CONCRETE PIPE	VC	VERTICAL CURVE	CONT	CONTINUOUS	ID	INSIDE DIAMETER	RD	ROAD	VCP	VITRIFIED CLAY PIPE	CP	CONCRETE PIPE	IP	IRON PIPE	R & D	REMOVE AND DISPOSE	VERT	VERTICAL	CR	CURB RAMP	IRR	IRRIGATION	REINF	REINFORCED (MENT) (ING)	VG	VALLEY GUTTER	CS	COTTON SPINDLE	IV	IRRIGATION VALVE	REL	RELOCATE	VP	VENT PIPE	CSP	CORRUGATED STEEL PIPE	JP	JOINT POLE	REM	REMOVE	W/B	WEST BOUND	CSPA	CORRUGATED STEEL PIPE ARCH	JT	JOINT	RET	RETAINING	WM	WATER METER	CA TV	CABLE TELEVISION	L LINE	LAYOUT LINE	RG	RUBBER GASKET	WP	WEAKENED PLANE	CULV	CULVERT	LBS	POUNDS	RLG	ROCK LINED GUTTER	WR	WHEELCHAIR RAMP	CY (CU YD)	CUBIC YARD(S)	LF	LINEAR FOOT	RR	RAILROAD	WV	WATER VALVE			LOC	LOCATION	RT	RIGHT	WW	WINGWALL
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<div>GENERAL NOTES</div> <div><div>1.</div><div>THE DIMENSIONS SHOWN ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE CALTRANS STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS THERETO.</div></div> <div><div>2.</div><div>PROJECT WILL BE CONSTRUCTED IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS - 2015 EDITION</div></div> <div><div>3.</div><div>SAW-CUT AND DEMOLITION AREAS ARE TO BE VERIFIED BY THE ENGINEER PRIOR TO DEMOLITION. ANY ADDITIONAL DEMOLITION SHALL BE APPROVED BY THE ENGINEER.</div></div> <div><div>4.</div><div>THE CONTRACTOR SHALL COORDINATE WITH ANY UTILITY COMPANIES THAT REQUIRE THEIR FACILITIES TO BE ADJUSTED TO GRADE. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING THE SITE AND IDENTIFYING ANY UTILITIES THAT MAY REQUIRE ADJUSTMENT. ANY UNFORESEEN DELAY SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY IN WRITING.</div></div> <div><div>5.</div><div>THE CONTRACTOR SHALL RECONSTRUCT EACH SITE WITHIN 7 WORKING DAYS AFTER DEMOLITION.</div></div> <div><div>6.</div><div>APPLY TACK COAT TO EXISTING AC PRIOR TO PAVING, INCLUDING VERTICAL JOINTS.</div></div> <div><div>7.</div><div>ALL STORM DRAINAGE FACILITIES ARE TO BE COMPLETED PRIOR TO START OF STREET WORK AND IN ACCORDANCE WITH FRESNO METROPOLITAN FLOOD CONTROL DISTRICT STANDARD SPECIFICATIONS AND STANDARD PLANS, APRIL 1, 2011 EDITION, AND REVISIONS THEREOF.</div></div> <div><div>8.</div><div>CONTRACTOR WILL NOTIFY F.M.F.C.D. CONSTRUCTION MANAGER, AT (559) 456-3292, 48 HOURS PRIOR TO CONSTRUCTION RELATING TO OR CONNECTING ANY STORM DRAIN FACILITY.</div></div> <div><div>9.</div><div>BASIS OF VERTICAL CONTROL: CITY OF FRESNO BENCHMARK 646, A BRASS CAP MONUMENT ON A CONCRETE IRRIGATION STRUCTURE, IN THE SOUTHWEST QUADRANT OF OLIVE AVENUE AND FOWLER AVENUE, HAS AN NGVD29 ELEVATION OF 335.069 FEET PER CITY OF FRESNO BENCHMARK RECORDS.</div></div> <div><div>10.</div><div>BASIS OF BEARINGS: THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 13 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IS ASSUMED TO BEAR N00°23'17"W.</div></div> <div><div>11.</div><div>ORIGINAL SURVEY WAS PERFORMED IN JULY 2019 AND UPDATED DECEMBER 2020.</div></div>				<div>CONSTRUCTION SYMBOLS</div> <table><tr><td><div>A</div></td><td>TYPE "A" CURB</td><td><div>SM</div></td><td>SURVEY MONUMENT</td></tr><tr><td><div>B3</div></td><td>TYPE "B3" CURB</td><td><div>CC</div></td><td>CONCRETE COLLAR</td></tr><tr><td><div>FA</div></td><td>TYPE "FA" CURB</td><td><div>GM</div></td><td>GRADE MATCH</td></tr><tr><td><div>CE</div></td><td>FA CURB EXTENSION</td><td><div>SC</div></td><td>SAW CUT</td></tr><tr><td><div>CNL</div></td><td>CUT NEAT LINE</td><td><div>OD</div></td><td>OVERSIDE DRAIN</td></tr><tr><td><div>RD</div></td><td>RESIDENTIAL SIDEWALK</td><td><div>S</div></td><td>MISC TRAFFIC SIGN</td></tr><tr><td><div>AS</div></td><td>ADJACENT RES SIDEWALK</td><td><div>SS</div></td><td>STOP SIGN</td></tr><tr><td><div>HW</div></td><td>CONCRETE HOUSEWALK</td><td><div>"L"</div></td><td>DENOTES LENGTH IN FEET</td></tr><tr><td><div>VG</div></td><td>VALLEY GUTTER</td><td><div></div></td><td>SECTION CORNER</td></tr><tr><td><div>MB</div></td><td>MAIL BOX</td><td><div>MA</div></td><td>PLACE AC , MISC AREA</td></tr><tr><td><div>W</div></td><td>CONCRETE DRIVEWAY</td><td><div></div></td><td>DIRECTION OF FLOW</td></tr><tr><td><div>W</div></td><td>S° AC DRIVEWAY</td><td><div></div></td><td>GRADE TO FLOW</td></tr><tr><td><div>W</div></td><td>S° DIRT DRIVEWAY</td><td><div></div></td><td>CHAIN LINK FENCE</td></tr><tr><td><div>W</div></td><td>MODIFY CONC DRIVEWAY</td><td><div></div></td><td>WIRE FENCE</td></tr><tr><td><div>"W"</div></td><td>DENOTES WIDTH</td><td><div>L</div></td><td>DAYLIGHT LIMIT</td></tr><tr><td><div>"D"</div></td><td>DENOTES MATCH DISTANCE</td><td><div></div></td><td>GP AND LP ROADWAY EXC</td></tr><tr><td><div>"S""</div></td><td>DENOTES SKEW ANGLE</td><td><div>X</div></td><td>REFERENCE TO STATE STANDARD PLAN DETAIL</td></tr><tr><td><div>DI</div></td><td>DRAINAGE INLET</td><td><div>X</div></td><td>REFERENCE TO DWG. 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<div>UTILITY NOTES</div> <div><div>1.</div><div>LOCATIONS OF EXISTING UNDERGROUND FACILITIES ARE APPROXIMATE. EXACT LOCATIONS AND DEPTHS ARE UNKNOWN. FIELD LOCATE PRIOR TO THE START OF CONSTRUCTION.</div></div> <div><div>2.</div><div>ALL EXISTING WATER MAIN VALVES (CAP & LID) SHALL BE ADJUSTED TO GRADE BY THE CONTRACTOR. FOR COORDINATION WITH WATER DIVISION, CALL 559-621-5360.</div></div> <div><div>3.</div><div>ALL SEWER MANHOLES AFFECTED BY THIS PROJECT SHALL BE ADJUSTED TO FINISH GRADE AS NECESSARY AND INCLUDED IN THIS WORK. CONTRACTOR SHALL COORDINATE WITH CITY OF FRESNO'S WASTEWATER MANAGEMENT DIVISION AT 559-621-1270 PRIOR TO ADJUSTING MANHOLE LIDS.</div></div> <div><div>**CALL UNDERGROUND SERVICE ALERT (USA) 811**</div></div>																<div>UTILITY SYMBOLS</div> <table><tr><td colspan="8">PROPOSED</td><td colspan="8">EXISTING</td></tr><tr><td><div>SD</div></td><td>NEW MH-STORM DRAIN</td><td><div></div></td><td>IRR UG PIPE FLOW</td><td><div></div></td><td>STAND PIPE</td><td><div></div></td><td>STREET LIGHT POLE</td><td><div></div></td><td>EXISTING SIGNAL POLE</td><td><div></div></td><td>TELEPHONE POLE</td><td><div></div></td><td>UG WATER LINE</td><td><div></div></td><td>OVERHEAD ELEC LINE</td></tr><tr><td><div></div></td><td>FMFCD TYPE "D" INLET</td><td><div></div></td><td>IRR UG PIPE CAPPED</td><td><div></div></td><td>IRR UG PIPE SCREW GATE</td><td><div></div></td><td>STORM DRAIN DROP INLET</td><td><div></div></td><td>STORM DRAIN GRATE</td><td><div></div></td><td>POWER POLE</td><td><div></div></td><td>TEMPORARY UG CONDUIT</td><td><div></div></td><td></td></tr><tr><td><div></div></td><td>FMFCD DOUBLE TYPE "D" INLET</td><td><div></div></td><td>IRR TOP GATE VALVE</td><td><div></div></td><td>IRR PIPE 12" VERTICAL</td><td><div></div></td><td>DOWN DRAIN</td><td><div></div></td><td>WARNING SIGN</td><td><div></div></td><td>JOINT TRANSFORMER POLE</td><td><div></div></td><td>MH-STORM DRAIN</td><td><div></div></td><td></td></tr><tr><td><div></div></td><td>UG STORM DRAIN LINE</td><td><div></div></td><td>IRR PIPE 12" VERTICAL</td><td><div></div></td><td>VENT PIPE</td><td><div></div></td><td>WARNING SIGN</td><td><div></div></td><td>WARNING SIGN</td><td><div></div></td><td>TRANSFORMER POLE</td><td><div></div></td><td>FMFCD TYPE "E" INLET</td><td><div></div></td><td></td></tr><tr><td><div></div></td><td>TEMPORARY "E" INLET</td><td><div></div></td><td>IRR VALVE - 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- NOTES:
- STRUCTURAL SECTION 0.55' HMA / 0.70' AB / 0.50' CNS TO 95% RELATIVE COMPACTION
 - PVMT CROSS SLOPE. SEE ROADWAY PLANS
 - HMA DIKE PER CALTRANS STANDARD DRAWING DETAIL A87B TYPE E ON SHEET 10
 - SHOULDER BAKING 5% SLOPE AWAY FROM ROADWAY 90% COMPACTION
 - DIKE FLOW LINE. SEE DETAIL F ON SHEET 10 FOR DETAILS
 - GRIND AND OVERLAY 0.20'
 - CONSTRUCT DIKE AT PAVED DRIVEWAY PER DETAIL Y ON SHEET 5
 - CROSS SLOPE TO MATCH EXISTING TRAVEL LANE SLOPE

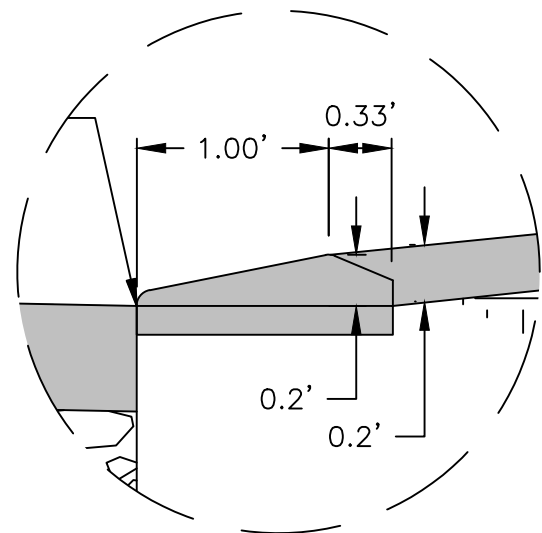


	DATE	RECORD DRAWING		SCALE		 SUPERVISING ENGINEER 1/2/24 DATE		PROJECT			DEPARTMENT OF PUBLIC WORKS AND PLANNING		
DESIGNED: D. KWAN	1/2/24	RESIDENT ENGINEER	DATE	NOT TO SCALE				FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS			CONSTRUCTION DETAIL		
DRAWN: E. CARMONA	1/2/24							ROAD NO. D0600 BRIDGE NO. N/A			DRAWING NO. 11302 SHEET NO. 3 TOTAL 32		
CHECKED: S. ARTAL	1/2/24												
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.													

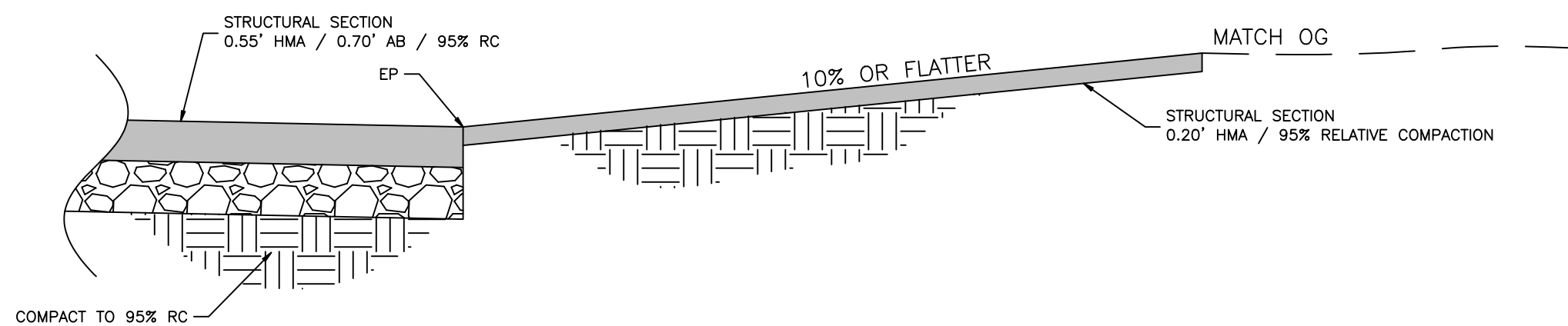
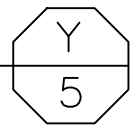


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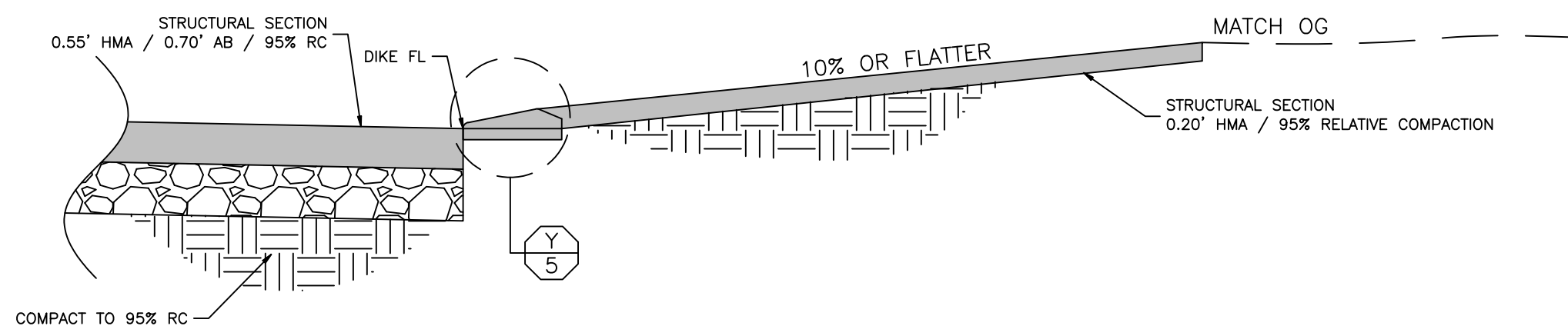
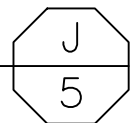
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DRAWN: E. CARMONA		1/2/24	RESIDENT ENGINEER		NOT TO SCALE		FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS		CONSTRUCTION DETAIL	
CHECKED: S. ARTAL		1/2/24					ROAD NO. D0600		DRAWING NO. 11302	
							BRIDGE NO. N/A		SHEET NO. 4	
									TOTAL 32	



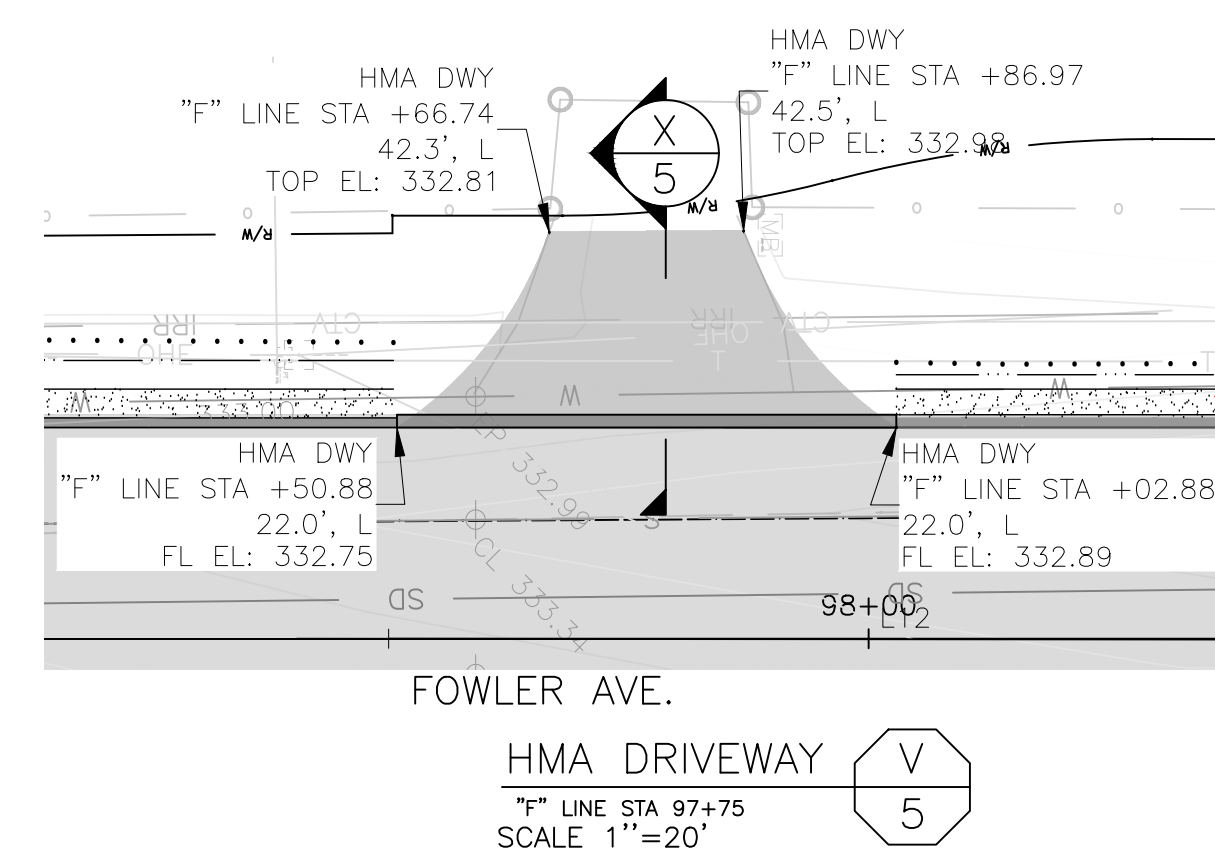
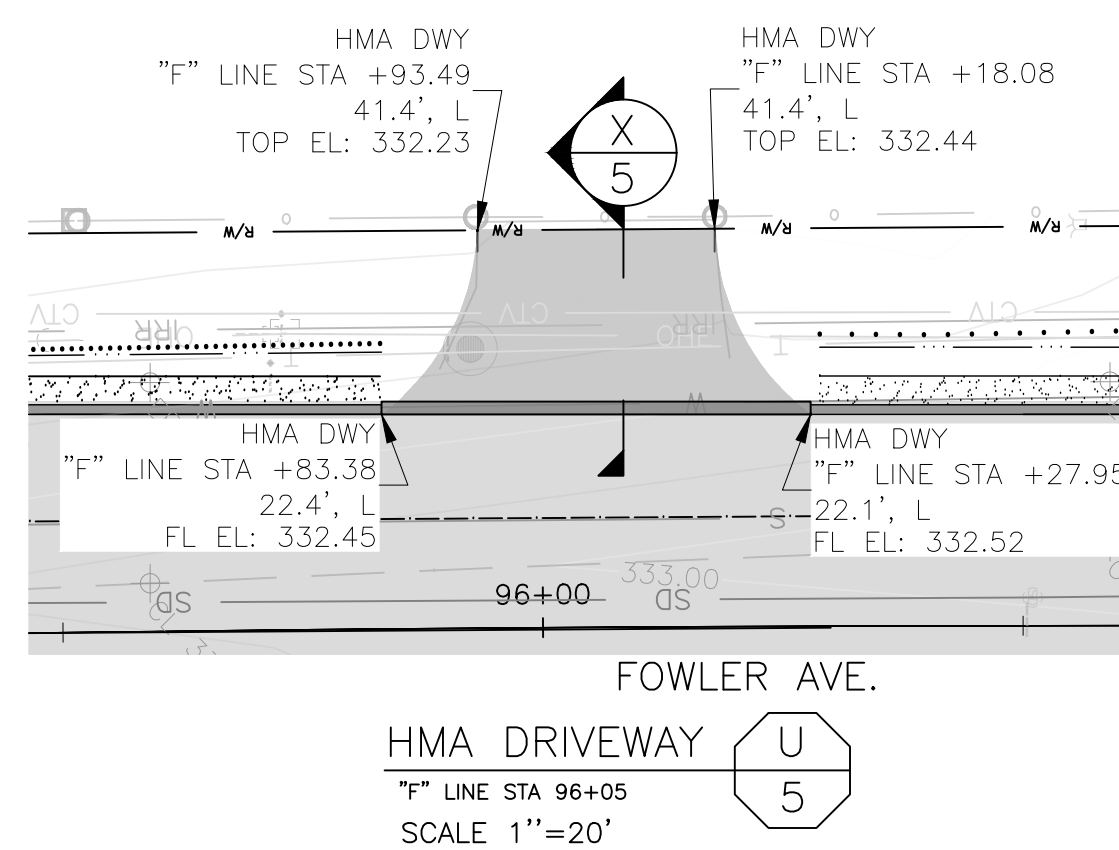
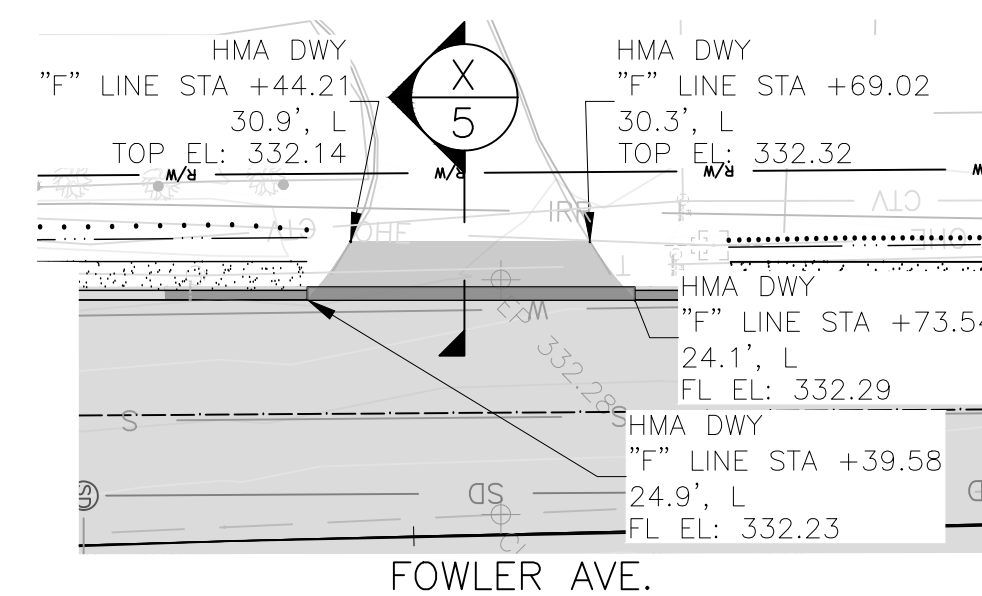
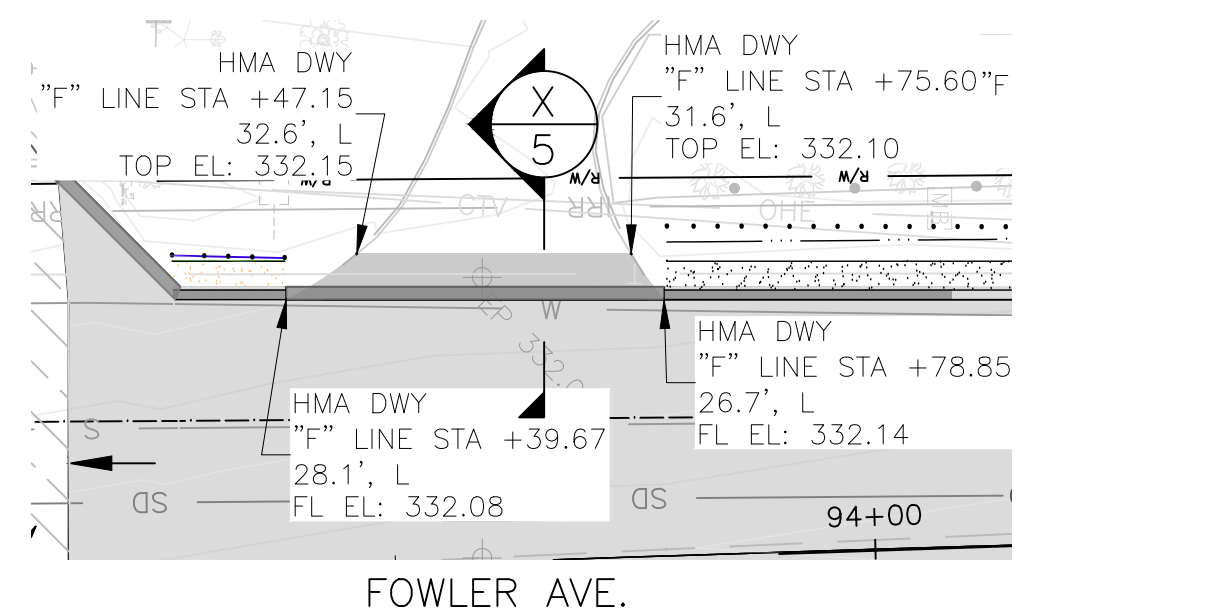
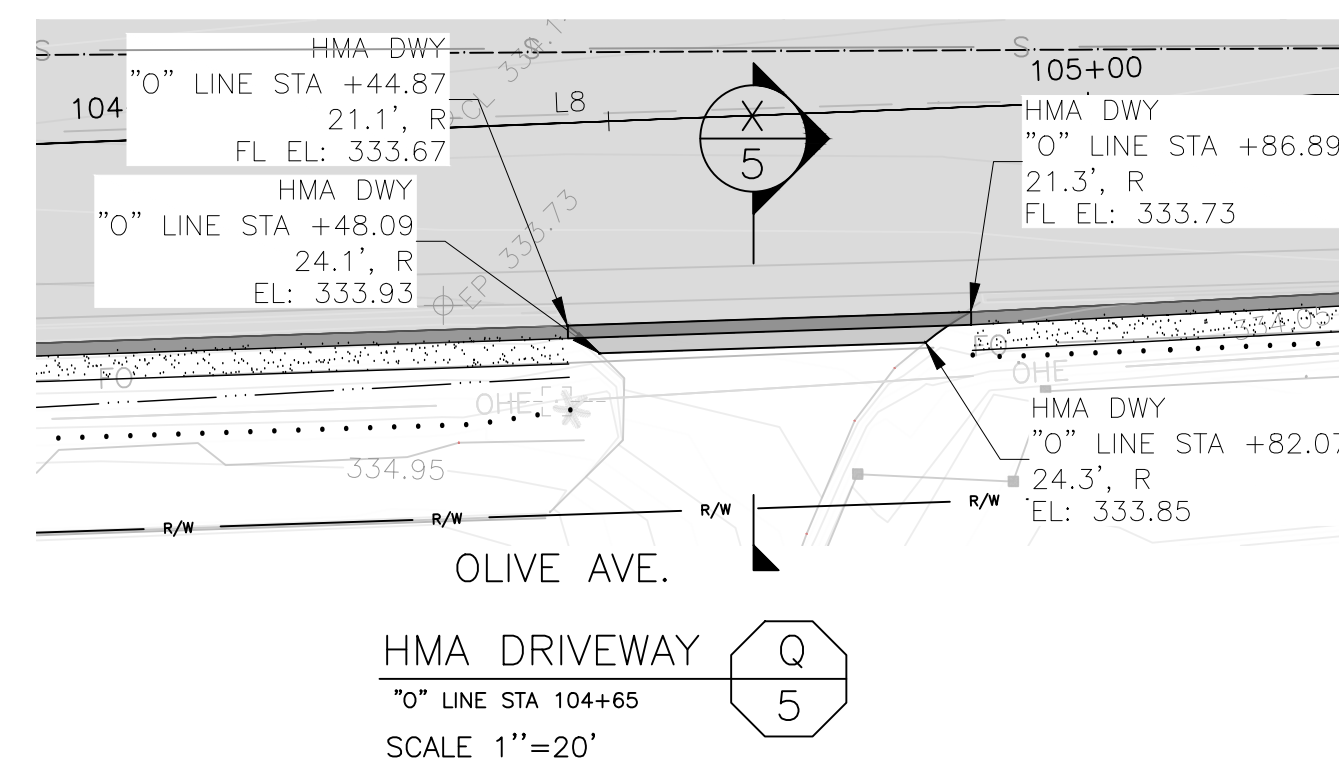
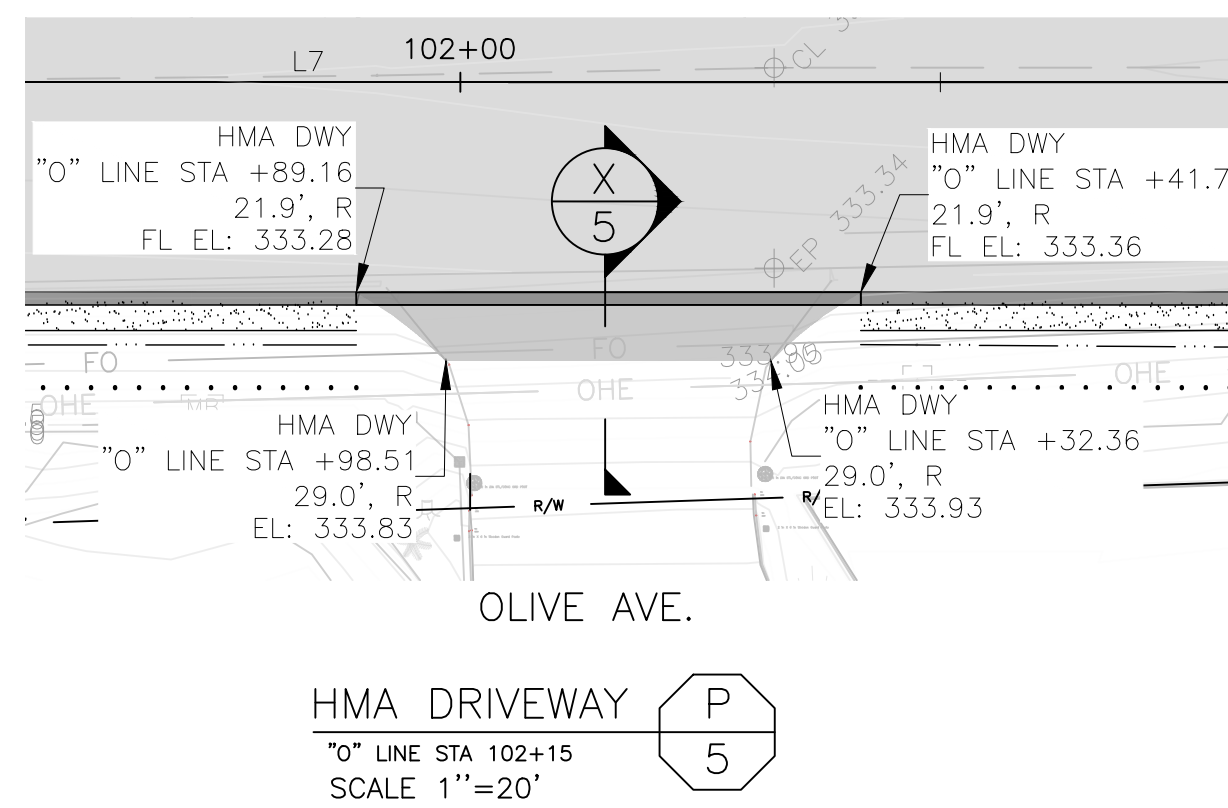
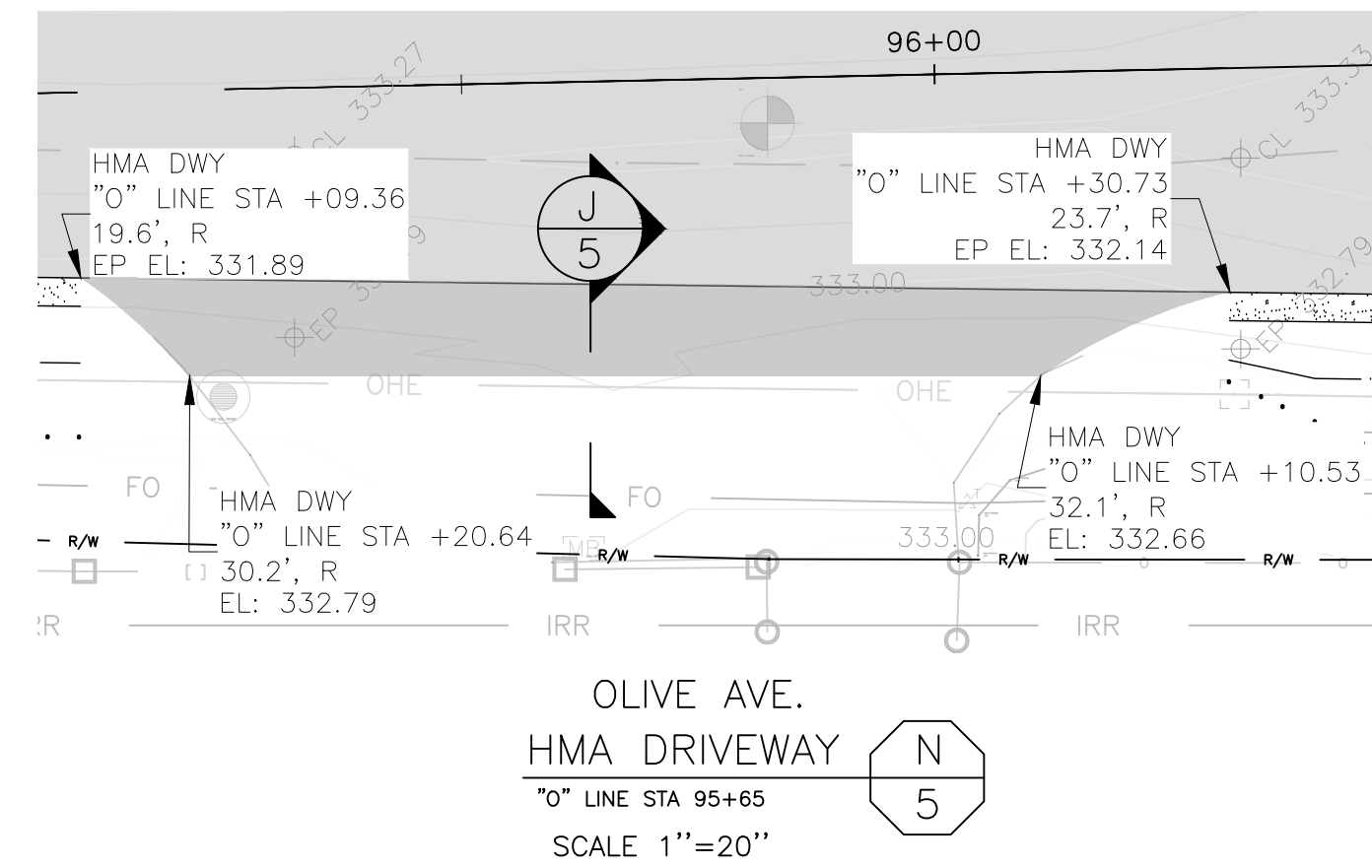
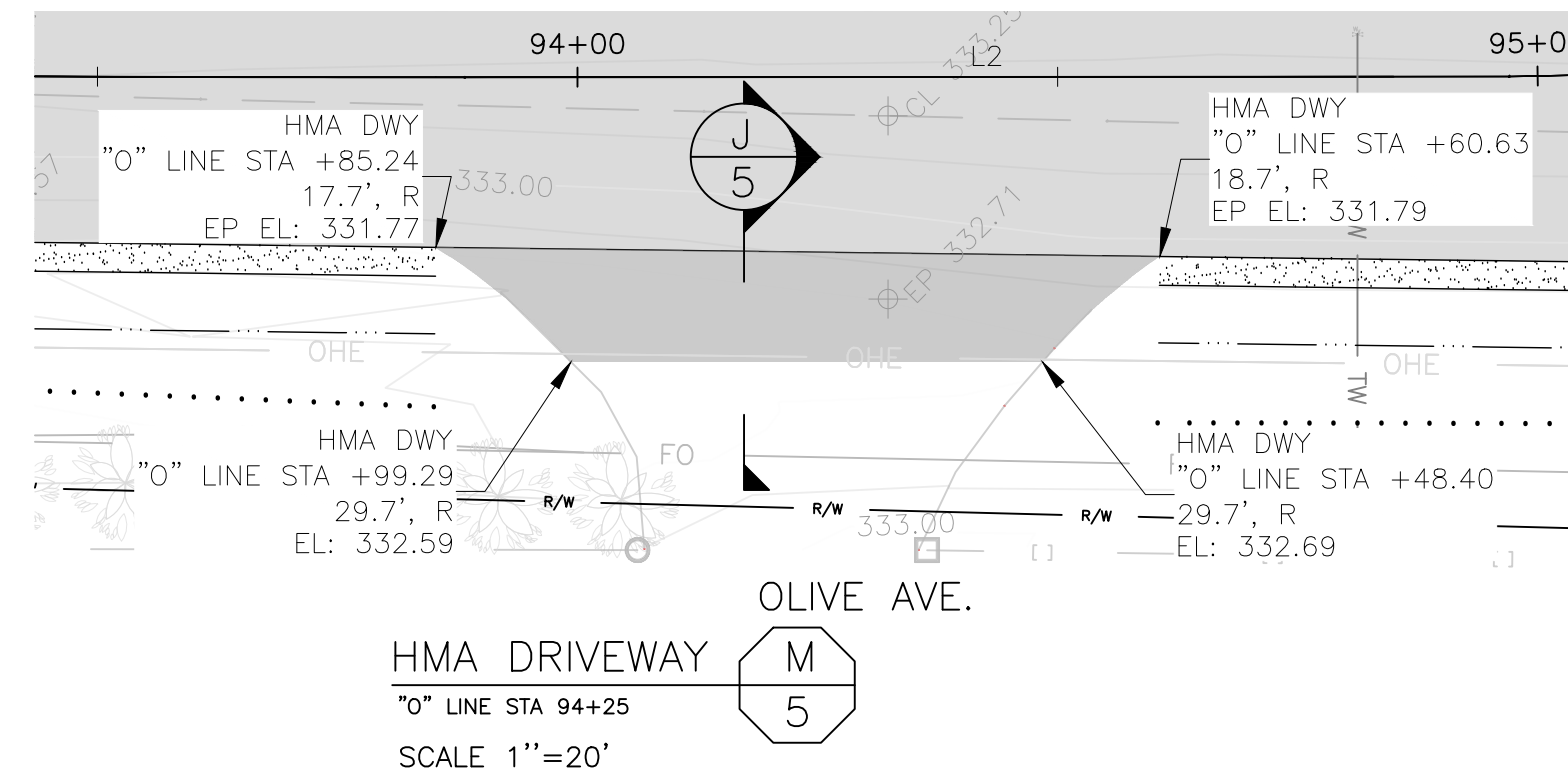
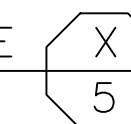
DRIVEWAY DIKE
NOT TO SCALE



DRIVEWAY SECTION NO DIKE
NOT TO SCALE



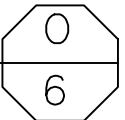
DRIVEWAY SECTION WITH DIKE
NOT TO SCALE



DESIGNED: D. KWAN		DATE		RECORD DRAWING		SCALE		PROJECT		DEPARTMENT OF PUBLIC WORKS AND PLANNING	
DRAWN: E. CARMONA		1/2/24		RESIDENT ENGINEER				FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENT PROJECT		CONSTRUCTION DETAILS	
CHECKED: S. ARTAL		1/2/24						ROAD NO. D0600		DRAWING NO. 11302	
								BRIDGE NO. N/A		SHEET NO. 5	
										TOTAL 32	

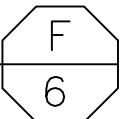
CENTERLINE OLIVE AVE: LINE TABLE					CENTERLINE OLIVE AVE: CURVE TABLE						
Line #	BEGIN NORTHING / EASTING	END NORTHING / EASTING	LENGTH	DIRECTION	Curve #	BEGIN NORTHING / EASTING	END NORTHING / EASTING	LENGTH	RADIUS	Δ	DEGREE OF CURVATURE (ARC)
L1	9990.08 / 11815.96	9988.93 / 11871.55	55.60'	S88° 48' 37"E	C1	9988.93 / 11871.55	9987.10 / 12054.18	182.64'	8500.00'	1°13'52"	0°40'27"
L2	9987.10 / 12054.18	9987.18 / 12162.99	108.81'	N89° 57' 31"E							
L3	9987.18 / 12162.99	9993.65 / 12469.58	306.66'	N88° 47' 28"E							
L4	9993.65 / 12469.58	9993.65 / 12607.36	137.78'	N90° 00' 00"E							
L5	9993.65 / 12607.36	9988.04 / 12665.59	58.50'	S84° 30' 02"E							
L6	9988.04 / 12665.59	9987.53 / 12725.29	59.70'	S89° 30' 20"E							
L7	9987.53 / 12725.29	9987.53 / 12992.77	267.48'	N90° 00' 00"E							
L8	9987.53 / 12992.77	9994.68 / 13172.92	180.29'	N87° 43' 30"E							
L9	9994.68 / 13172.92	9998.35 / 13315.40	142.53'	N88° 31' 41"E							
L10	9998.35 / 13315.40	10001.87 / 13565.38	250.00'	N89° 11' 33"E							

"O" LINE DATA



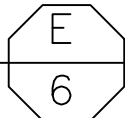
CENTERLINE FOWLER AVE: LINE TABLE					CENTERLINE FOWLER AVE: CURVE TABLE						
Line #	BEGIN NORTHING / EASTING	END NORTHING / EASTING	LENGTH	DIRECTION	Curve #	BEGIN NORTHING / EASTING	END NORTHING / EASTING	LENGTH	RADIUS	Δ	DEGREE OF CURVATURE (ARC)
L11	9116.74 / 12676.84	9304.17 / 12669.23	187.58'	N2° 19' 28"W	C2	9304.17 / 12669.23	9648.65 / 12662.24	344.58'	8493.23'	2°19'28"	0°40'29"
L12	9648.65 / 12662.24	9935.37 / 12662.24	286.72'	N0° 00' 00"W	C3	10191.63 / 12669.24	10593.07 / 12659.60	401.60'	8365.00'	2°45'03"	0°41'06"
L13	9935.37 / 12662.24	9988.04 / 12665.59	52.77'	N3° 38' 29"E	C4	10693.30 / 12654.79	11171.33 / 12643.31	478.22'	9960.96'	2°45'03"	0°34'31"
L14	9988.04 / 12665.59	10059.33 / 12669.24	71.38'	N2° 55' 48"E							
L15	10059.33 / 12669.24	10191.63 / 12669.24	132.30'	N0° 00' 00"E							
L16	10593.07 / 12659.60	10693.30 / 12654.79	100.34'	N2° 45' 03"W							
L17	11171.33 / 12643.31	11372.50 / 12643.31	201.16'	N0° 00' 00"E							

"F" LINE DATA



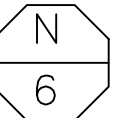
OLIVE SECTION LINE TABLE				
Line #	BEGIN NORTHING / EASTING	END NORTHING / EASTING	LENGTH	DIRECTION
L18	10000.00 / 10000.00	9997.21 / 12648.28	2648.28'	S89° 56' 23"E
L19	9997.21 / 12648.28	10010.85 / 15300.30	2652.06'	N89° 42' 19"E

OLIVE SECTION LINE DATA

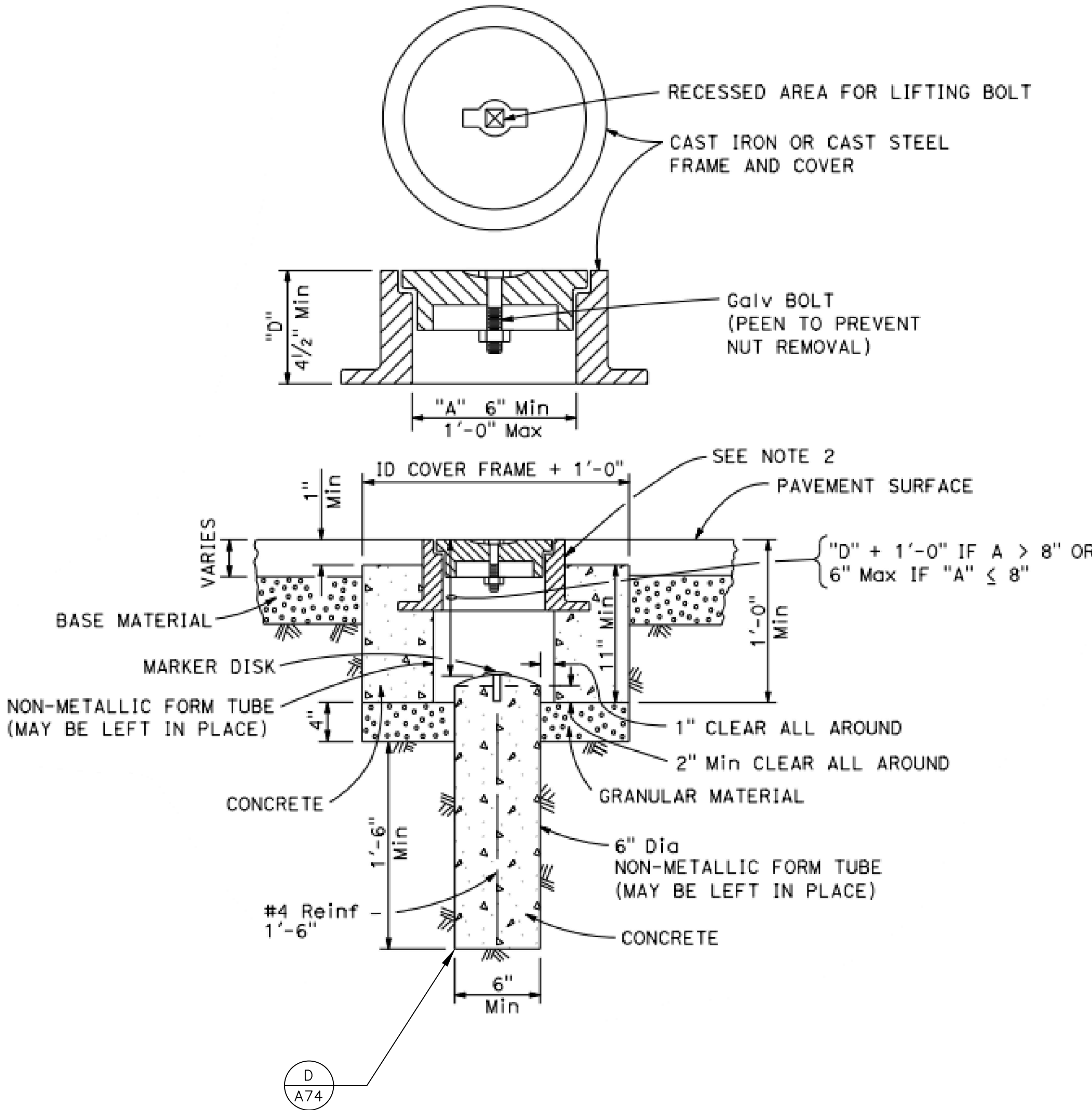


FOWLER SECTION LINE TABLE				
Line #	BEGIN NORTHING / EASTING	END NORTHING / EASTING	LENGTH	DIRECTION
L20	7429.98 / 12665.57	9997.21 / 12648.28	2567.29'	N0° 23' 10"W
L21	9997.21 / 12648.28	12705.59 / 12630.41	2708.44'	N0° 22' 40"W

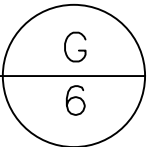
FOWLER SECTION LINE DATA

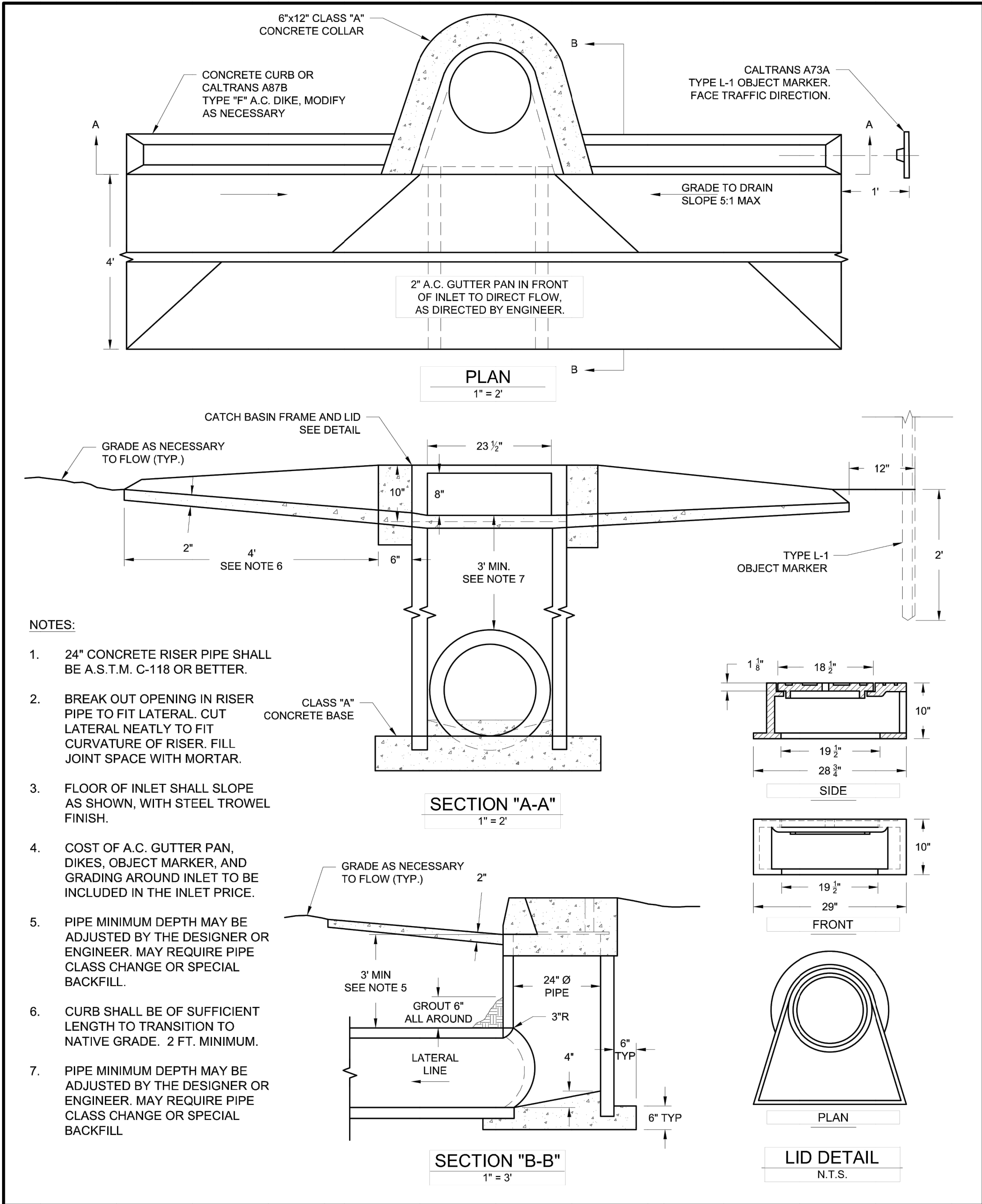


- NOTES:**
- 1.The configuration of the cast iron or cast steel frame and cover may vary from that shown.
 - 2.Frame shall be embedded in the concrete a minimum of 3".






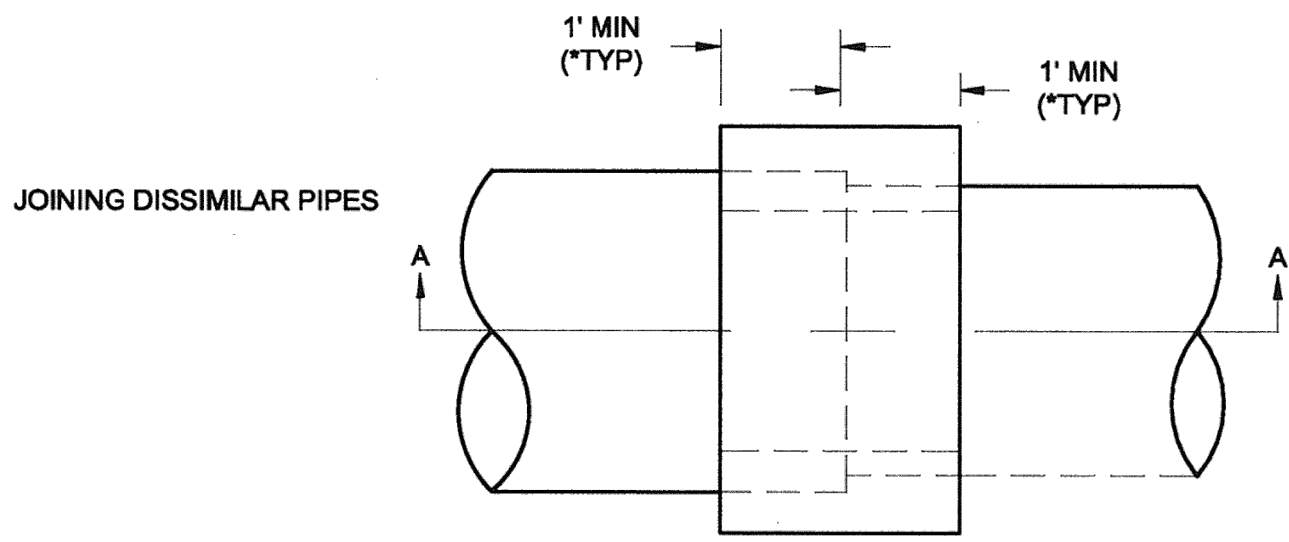
SURVEY MONUMENT DETAIL
SEE SHEET 20
NOT TO SCALE



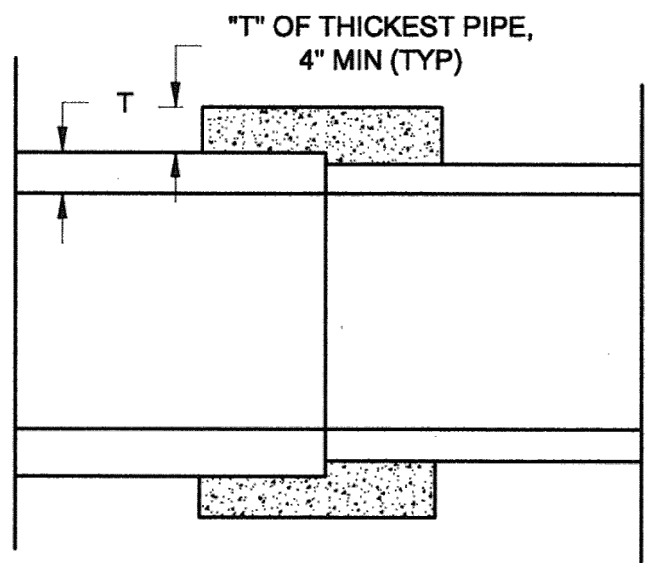


REVISIONS			FRESNO METROPOLITAN FLOOD CONTROL DISTRICT		TYPE "E" INLET TEMPORARY, WITH CURB FACE OPENING	
MARK	DATE	DESCRIPTION				
ADOPTED	4/1/2011		APPROVED BY:		SCALE AS SHOWN	DRAWING No. A-7 SHEET 1 OF 1
			DISTRICT ENGINEER	DATE		

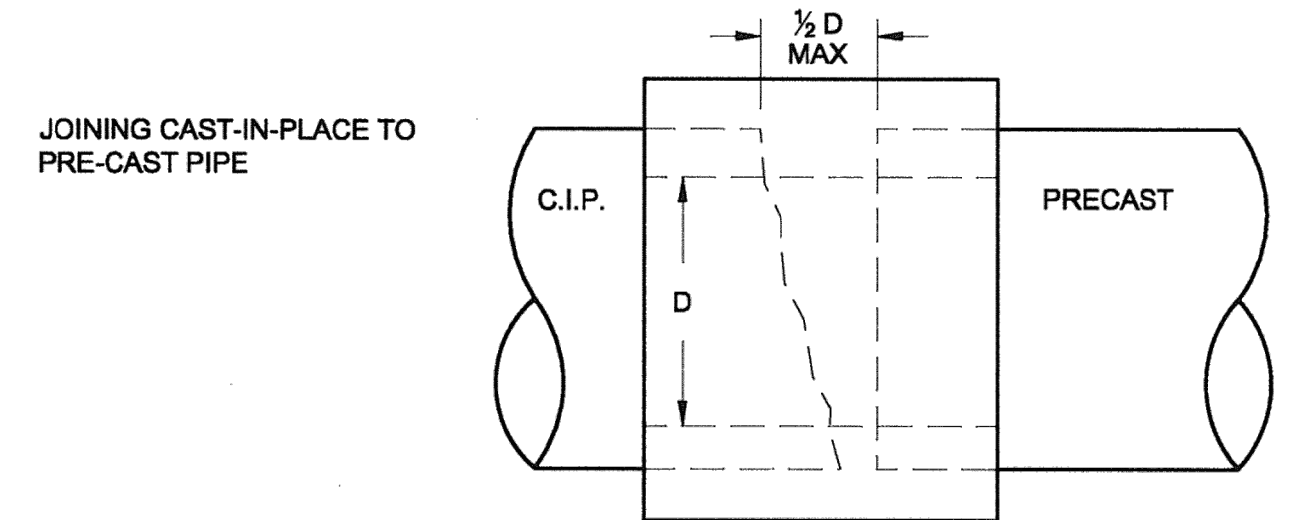
		DATE		RECORD DRAWING		SCALE		 SUPERVISING ENGINEER		 1/2/24 DATE		PROJECT				DEPARTMENT OF PUBLIC WORKS AND PLANNING							
DESIGNED: D. KWAN		1/2/24		RESIDENT ENGINEER		DATE						FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS				DRAINAGE DETAILS							
DRAWN: E. CARMONA		1/2/24																					
CHECKED: S. ARTAL		1/2/24																					
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.																							
ROAD NO.		D0600		BRIDGE NO.		N/A						DRAWING NO.		11302		SHEET NO.		7		TOTAL		32	



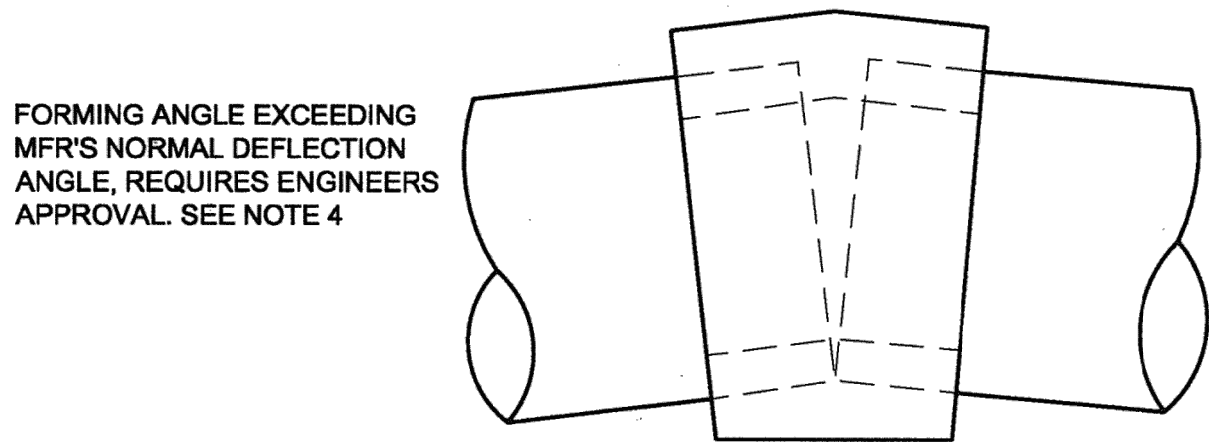
N.T.S.



SECTION "A-A"
TYPICAL ALL JOINTS
N.T.S.







N.T.S.

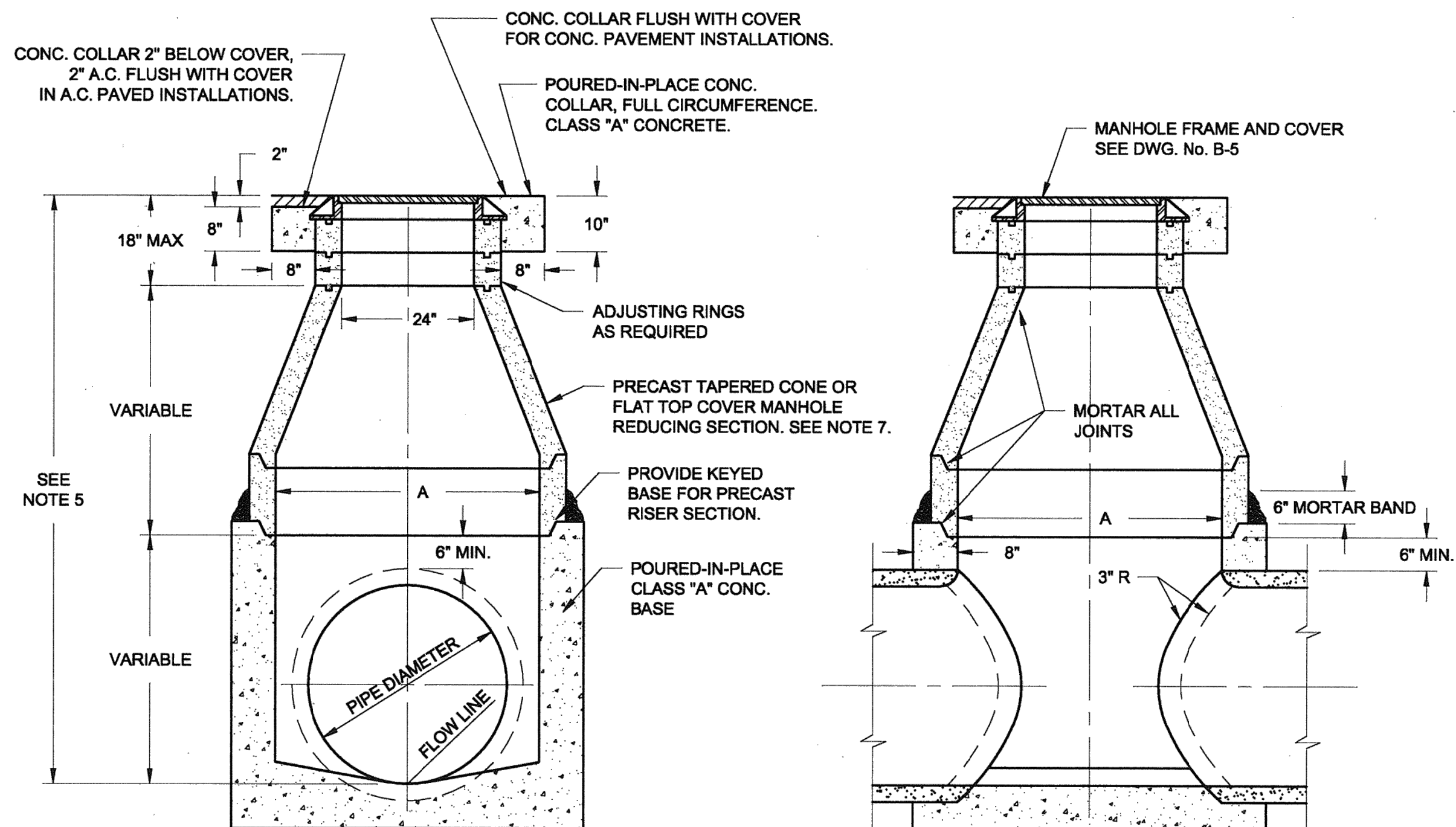


N.T.S.

- NOTES:
1. CONCRETE COLLAR SHALL BE CLASS A CONCRETE.
 2. INSIDE OF COLLAR SHALL MATCH PIPE DIAMETER, SMOOTH STEEL TROWEL FINISH.
 3. ALLOW CONCRETE TO HARDEN BEFORE BACKFILLING.
 4. WHEN FORMING ANGLES ENGINEER MAY REQUIRE CHAMFERING OF PIPE ENDS.

REVISIONS			FRESNO METROPOLITAN FLOOD CONTROL DISTRICT	CONSTRUCTION JOINT CONCRETE FIELD COLLAR
MARK	DATE	DESCRIPTION		
			APPROVED BY:  DISTRICT ENGINEER	SCALE AS SHOWN
ADOPTED	4/1/2011		DATE 4-1-11	DRAWING No. <u>G-3</u> SHEET <u>1</u> OF <u>1</u>

		DATE	RECORD DRAWING		SCALE		 SUPERVISING ENGINEER		PROJECT			DEPARTMENT OF PUBLIC WORKS AND PLANNING			
DESIGNED: D. KWAN		1/2/24	RESIDENT ENGINEER		DATE				FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS			DRAINAGE DETAILS			
DRAWN: E. CARMONA		1/2/24													
CHECKED: S. ARTAL		1/2/24			NOT TO SCALE										
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.															
ROAD NO. D0600			BRIDGE NO. N/A						DRAWING NO. 11302			SHEET NO. 8		TOTAL 32	



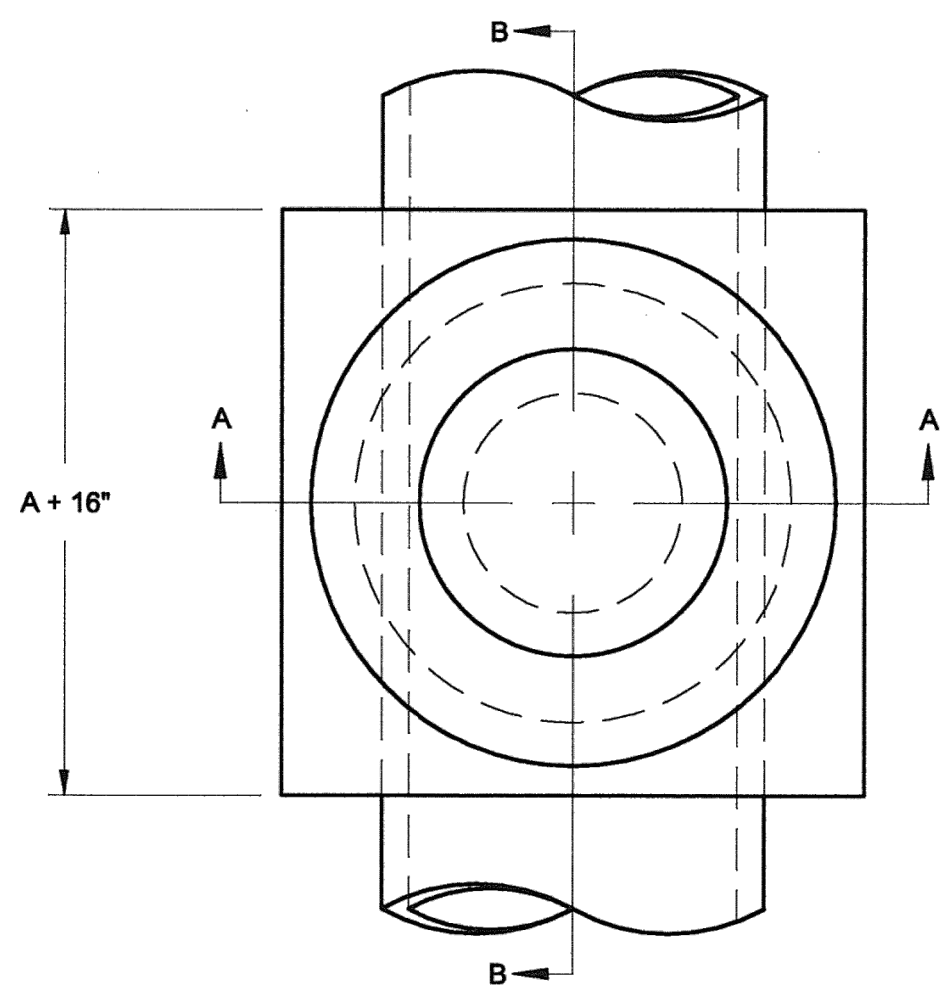
SECTION "A-A"
N.T.S.

SECTION "B-B"
N.T.S.

STANDARD MANHOLE
CASE I A = 48"
CASE II A = 60"
CASE III A = 72"

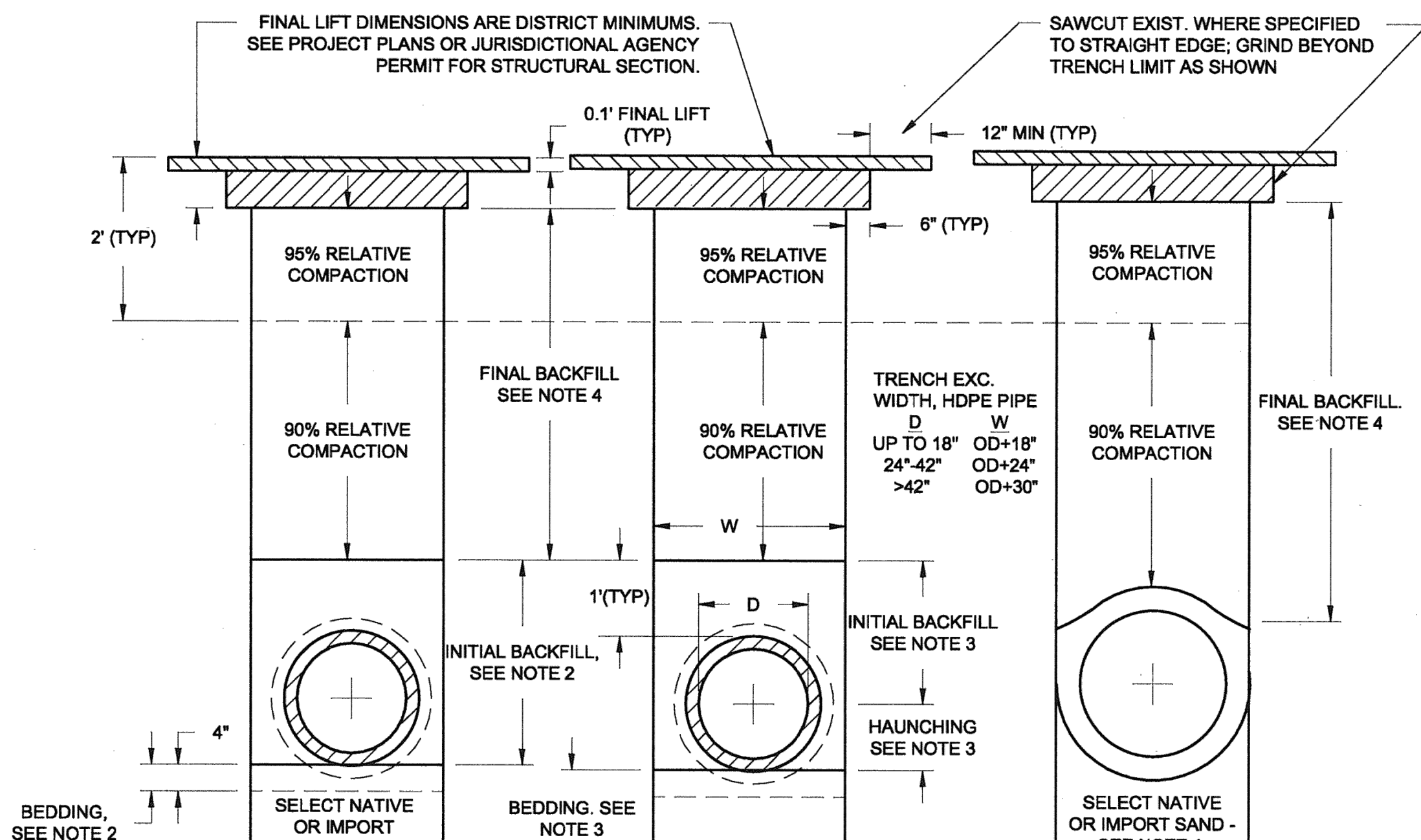
NOTES:

1. PRECAST PIPE, ADJUSTING RINGS AND TAPERED OR FLAT TOP SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH A.S.T.M. C-478, USING TYPE II CEMENT.
2. THE JOINT BETWEEN THE PRECAST RISER AND POURED-IN-PLACE CONCRETE RISER AND BASE, AND ALL JOINTS BETWEEN PRECAST SECTIONS INCLUDING GRADE RINGS SHALL BE MORTARED.
3. PROVIDE 6" MORTAR BAND AROUND EXTERIOR OF RISER-TO-BASE JOINT.
4. INTERIOR OF THE MANHOLE SHALL HAVE A SMOOTH TROWELED SURFACE.
5. IF THE DISTANCE BETWEEN THE FLOW LINE OF THE MANHOLE AND THE FINISH GRADE OF THE LID IS GREATER THAN OR EQUAL TO 12 FEET, THE MANHOLE IS TO BE CONSTRUCTED WITH STEPS, AS SHOWN ON DRAWING No. B-4.
6. MANHOLES SHALL BE CONSTRUCTED PER SECTION 23 OF THE FMFCD STANDARD SPECIFICATIONS.
7. WHERE GATE VALVE OR STEPS ARE SHOWN ON THE PLANS TO BE INSTALLED, USE ECCENTRIC REDUCING SECTION PER DRAWING No. B-4 OR G-5, SHT 2.



PLAN
N.T.S.

REVISIONS			FRESNO METROPOLITAN FLOOD CONTROL DISTRICT		TYPE "A" MANHOLE CASE I, II & III	
MARK	DATE	DESCRIPTION				
ADOPTED	4/1/2011		APPROVED BY:		SCALE AS SHOWN	DRAWING No. B-1 SHEET 1 OF 3

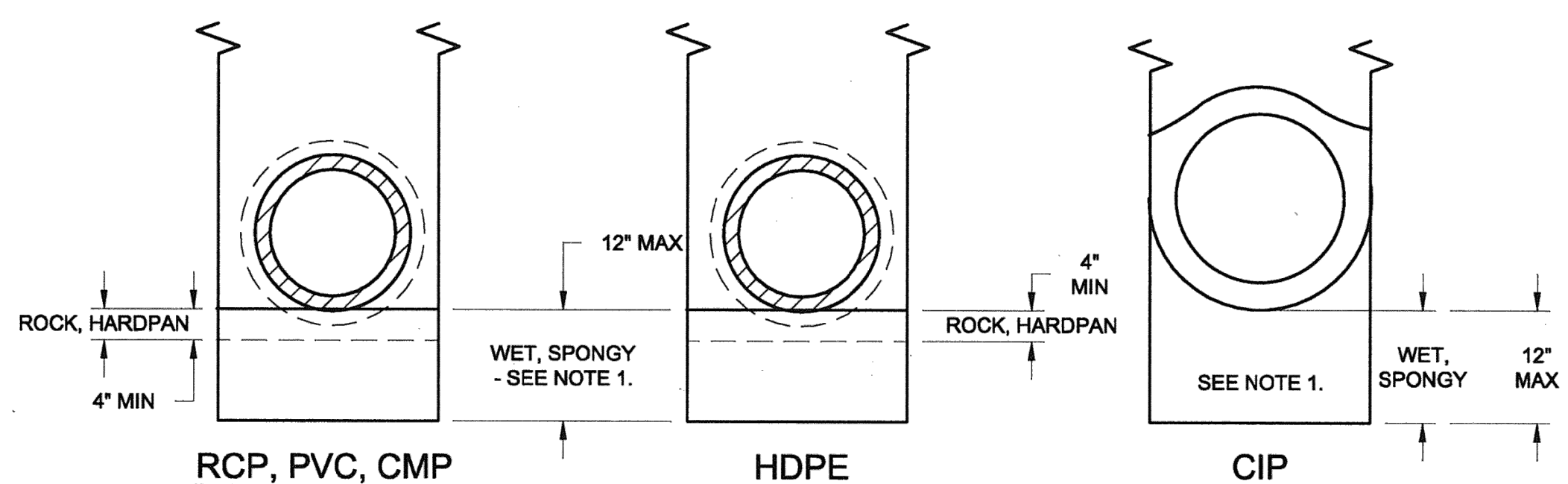


RCP, PVC, CMP

HDPE

CIP

BEDDING, BACKFILL REQUIREMENTS



RCP, PVC, CMP

HDPE

CIP

OVER-EXCAVATION REQUIREMENTS, UNSUITABLE-UNSTABLE TRENCH BOTTOM*
*REFER SECTION 14-3, FMFCD STANDARD SPECIFICATIONS

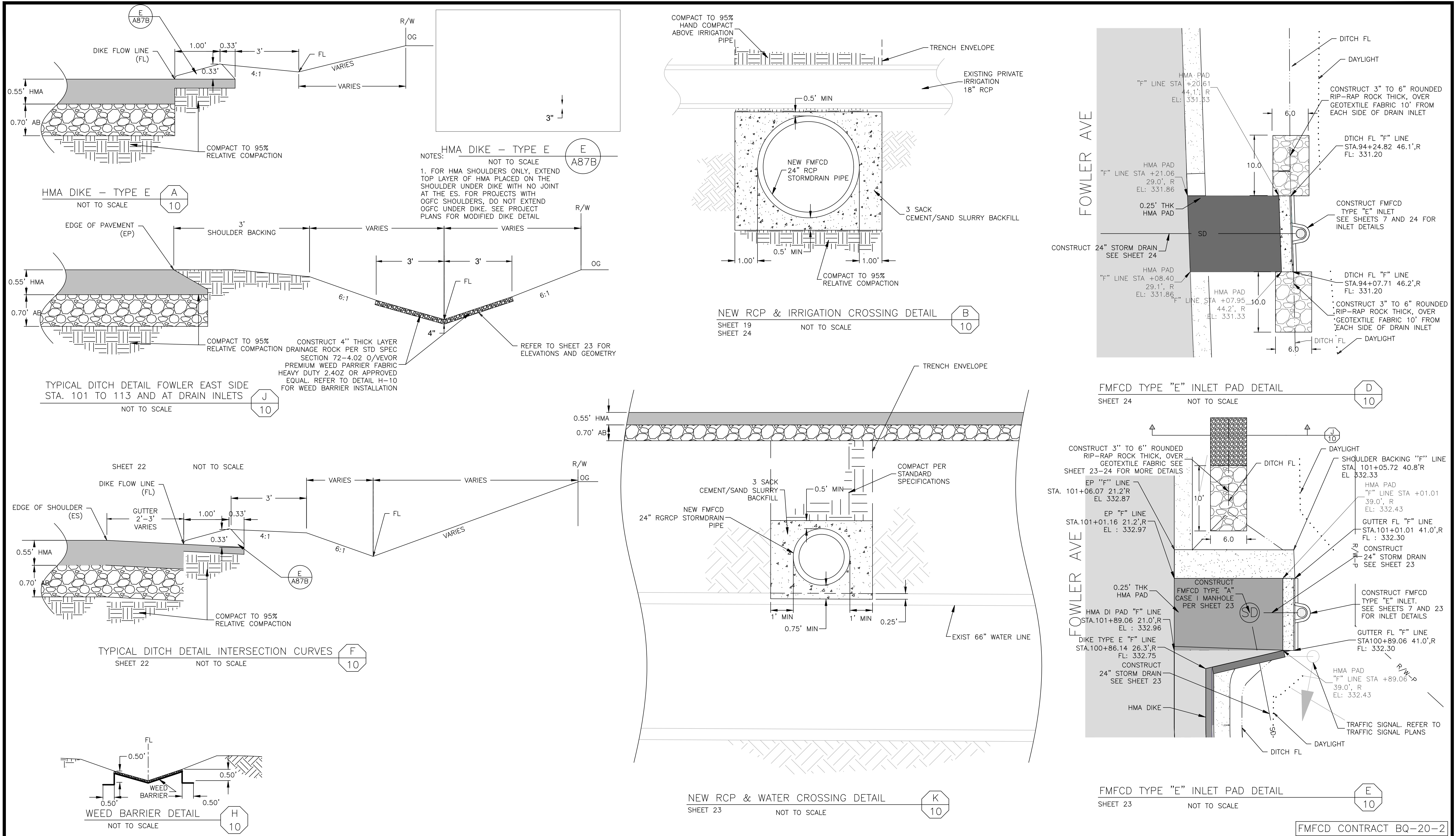
NOTE:
- REFER TO DETAILS B & K ON SHEET 10 FOR SLURRY CONCRETE BACKFILL CONDITION WHERE APPLICABLE




NOTES:

1. *WHERE WET, SPONGY, OTHER UNSUITABLE MATERIAL ENCOUNTERED, OVER-EXCAVATE 12" AND BACKFILL AS SHOWN.
2. BEDDING AND INITIAL BACKFILL FOR RCP, PVC, CMP PIPE SHALL BE SELECT NATIVE SANDY MATERIAL, 8-INCH LIFTS, 90% COMPACTION. REFER TO FMFCD STANDARD SPECIFICATIONS.
3. BEDDING, HAUNCHING AND INITIAL BACKFILL HDPE PIPE SHALL BE CL. IA, IB, II, OR III PER A.S.T.M. D2321, 6-INCH LIFTS, 90% COMPACTION. REFER TO FMFCD STANDARD SPECIFICATIONS.
4. FINAL BACKFILL SHALL BE SELECT NATIVE MATERIAL, 8-INCH LIFTS UNLESS OTHERWISE APPROVED BY THE ENGINEER, 90% COMPACTION, EXCEPT TOP 2 FT. TO BE 95% COMPACTION.




REVISIONS			FRESNO METROPOLITAN FLOOD CONTROL DISTRICT		TRENCH EXCAVATION, BACKFILL, SURFACE RESTORATION	
MARK	DATE	DESCRIPTION				
ADOPTED	4/1/2011		APPROVED BY:		SCALE AS SHOWN	DRAWING No. G-1 SHEET 1 OF 1

DESIGNED: D. KWAN	DATE 1/2/24	RECORD DRAWING	SCALE		PROJECT	DEPARTMENT OF PUBLIC WORKS AND PLANNING
DRAWN: E. CARMONA	1/2/24	RESIDENT ENGINEER	NOT TO SCALE		FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS	DRAINAGE DETAILS
CHECKED: S. ARTAL	1/2/24				ROAD NO. D0600	DRAWING NO. 11302
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.					BRIDGE NO. N/A	SHEET NO. 9
						TOTAL 32



	DATE	RECORD DRAWING		SCALE		 SUPERVISING ENGINEER	1/2/24 DATE		PROJECT			DEPARTMENT OF PUBLIC WORKS AND PLANNING									
DESIGNED: D. KWAN	1/2/24	RESIDENT ENGINEER	DATE	NOT TO SCALE	FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS				DRAINAGE DETAILS												
DRAWN: E. CARMONA	1/2/24																				
CHECKED: S. ARTAL	1/2/24																				
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.												ROAD NO.	D0600	BRIDGE NO.	N/A	DRAWING NO.	11302	SHEET NO.	10	TOTAL	32



- ① FLANGED OUTLET, HEIGHT AS REQUIRED TO CLEAR EXISTING UTILITIES LOCATED BETWEEN WATER MAIN AND THE ABOVE GRADE AIR VALVE, SEE NOTE 4.
- ② VALVE BOX INSTALLATION FOR BURIED VALVE, PER DETAIL  E
- ③ INSTALL CONCRETE COLLAR IN NON-TRAFFIC AREAS
- ④ FLANGED OR FLG x MJ GATE VALVE
- ⑤ 90° FLANGED OR RESTRAINED MJ ELBOW WHERE VENT PIPING CROSSES EXISTING UTILITIES, OUTLET ELEVATION MAY REQUIRE ADJUSTMENT BASED ON UTILITY POTHOLING
- ⑥ INSULATING FLANGE KIT  3/50
- ⑦ 3'-4" x 3'-4" x 6" THICK CONCRETE PAD W/ #4 @ 12" EACH WAY, SEE NOTE 2 & 3
- ⑧ AIR VALVE ENCLOSURE FOR ARVB ASSEMBLY PER DETAIL  L11
- ⑨ COMBINATION AIR RELEASE VACUUM BREAKER (ARVB) VALVE. SEE SIZING TABLE
- ⑩ FLOOR AND SLAB PENETRATION, EXTEND COATING FOR BURIED SURFACE ABOVE GRADE, PIPE O.D. + 1". FILL ANNULUS WITH SAND
- ⑪ CONCRETE ANCHOR BLOCK, 24" SQ. MIN BEARING AREA
- ⑫ DIP WITH RESTRAINED JOINTS AND CEMENT MORTAR LINING W/ POLYETHYLENE ENCASEMENT
- ⑬ RIGID GROOVED COUPLING
- ⑭ REMOVE AND REPLACE EXISTING SIDEWALK
- ⑮ EXISTING FACE OF CURB
- ⑯ EXISTING SIDEWALK OR PLANTER



1. CLOSURE SHALL NOT ENCRUCH ON TO PRIVATE PROPERTY, ADA PATH OF TRAVEL, OR VEHICLE TRAFFIC WHEN OPEN.
2. PROVIDE 4' MINIMUM SIDEWALK CLEARANCE ADJACENT TO AR/VB FOR ADA ACCESSIBILITY REQUIREMENTS.
3. ALL SURFACES SHALL BE ABRASIVE BLASTED (SSPC SP-5 WHITE METAL BLAST) AND POWDER COATED WITH 2-3 MILS ZINC RICH PRIMER WITH 4-5 MILS ANTI-GRAFFITI CHEMISTRY TOP COAT (DFT 6-8 MILS).
4. VALVE ASSEMBLY AND METAL HOUSING SHALL BE LOCATED IN MEDIAN ISLANDS, LANDSCAPE AREAS, OR OUTSIDE OF SIDEWALK AREA WHERE POSSIBLE. VALVE ASSEMBLY MUST BE IN PUBLIC RIGHT-OF-WAY OR PUBLIC UTILITY EASEMENT.
5. ENCLOSURE SHALL INCLUDE PROVISIONS FOR A RECESSED LOCK.
6. ENCLOSURE SHALL MOUNT SECURELY TO CONCRETE PAD USING INTEGRAL BOLT TABS. ONE ANCHOR IN EACH CORNER (4 TOTAL)



BASED ON 2000 P.S.F. SOIL BEARING CAPACITY AND 125 P.S.I. STATIC PRESSURE - SPECIAL DESIGN REQUIRED FOR SOIL LESS THAN 2000 P.S.F. CONCRETE TO HAVE ULTIMATE STRENGTH OF 2500 P.S.I. @ 28 DAYS.

TABLE MUST BE RECALCULATED FOR EACH PROJECT BASED ON ASAE STANDARD S376-1

THRUST BLOCKS



* FOR THIS CONDITION NEED ONLY RESTRAIN THE BRANCH OUTLET OF THE TEE.




RESTRAINED LENGTHS, "L" (IN FEET)

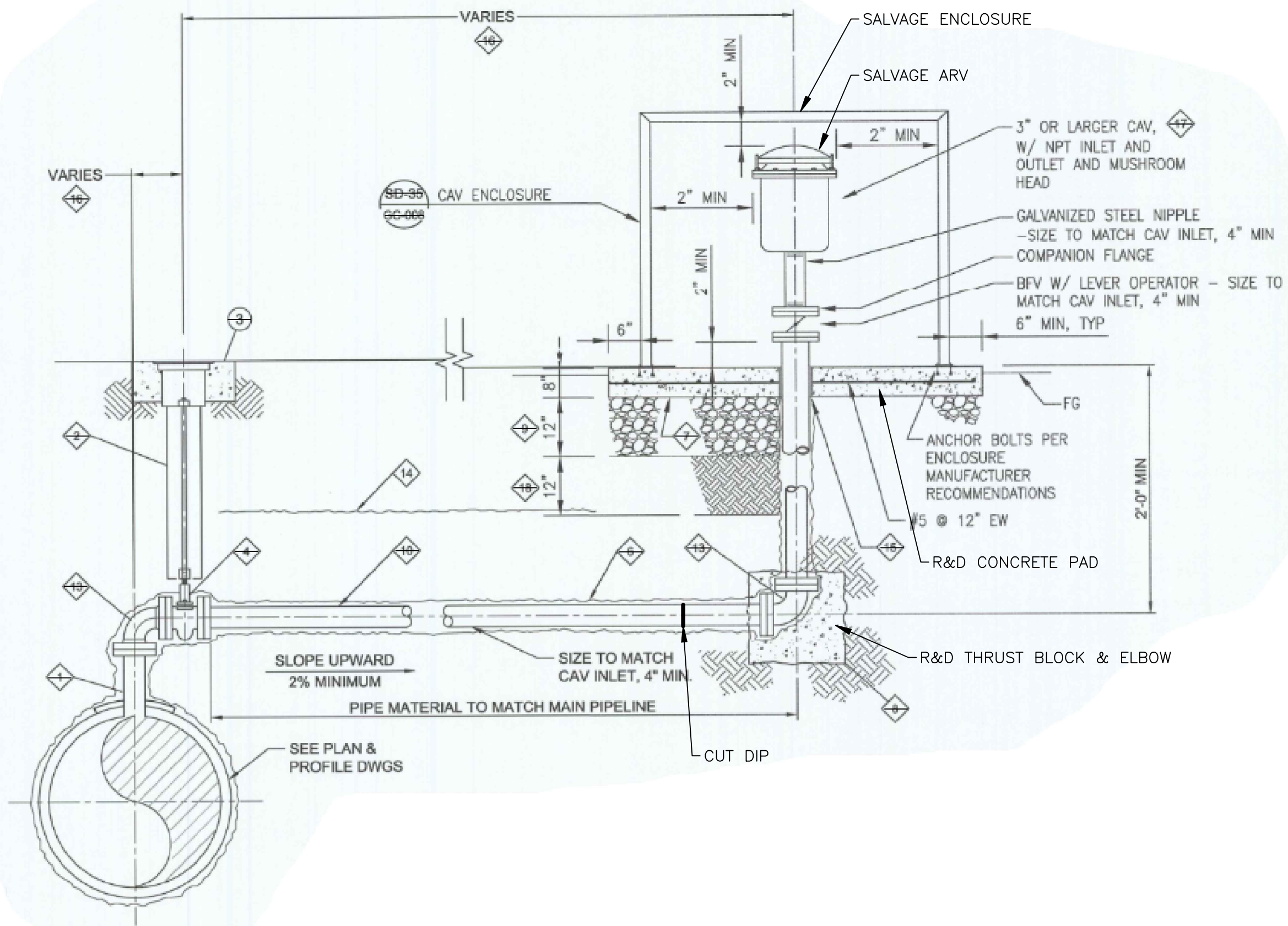
SPECIFICATIONS:

1. RESTRAIN THE TWO MECHANICAL JOINTS ON THE RUN SIDES OF THE TEE WHEN LESS THAN A FULL 18' LENGTH OF PIPE IS INSTALLED ON EACH SIDE OF THE RUN.
2. ALL JOINTS WITHIN THE LENGTH 2" ON THE BRANCH MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS ON PUSH-ON PIPE PER CITY SPECIFICATION.
3. FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION 22 OF GENERAL CONDITIONS.

REF. & REV.
MAR 2006

CITY OF FRESNO
W-34

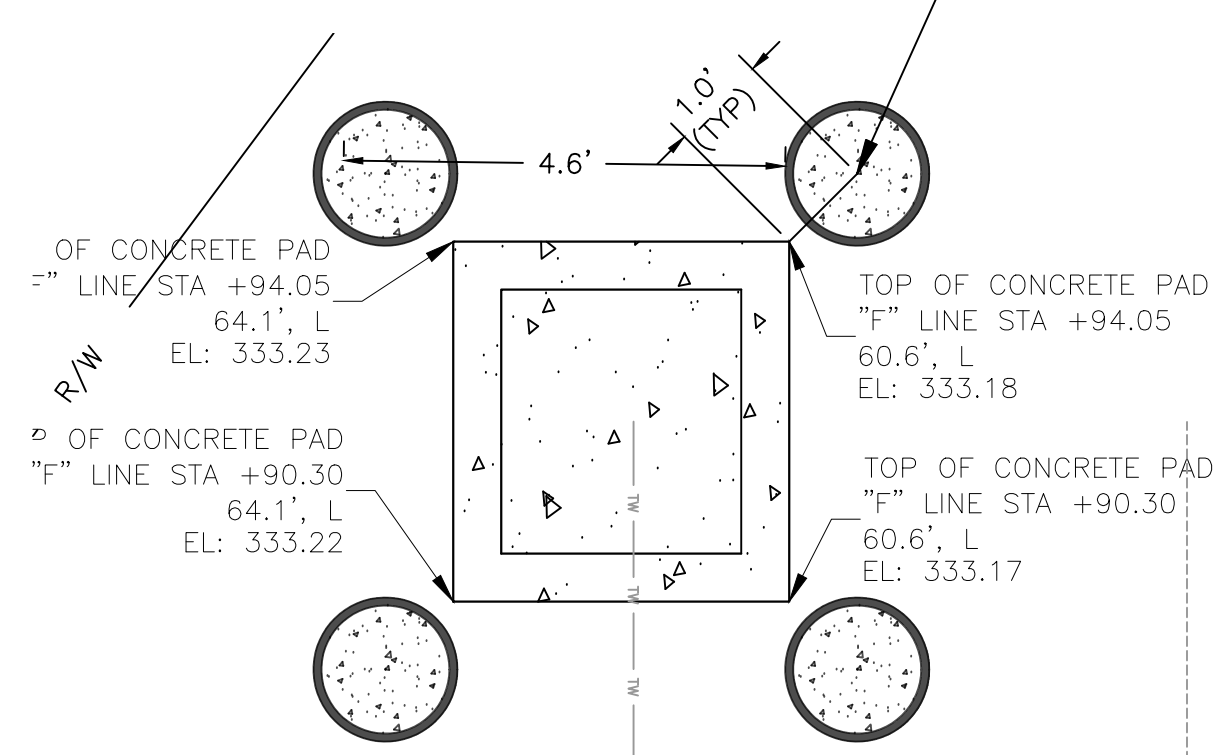
	DATE	RECORD DRAWING		SCALE	 SUPERVISING ENGINEER	 No. C76724 Exp. 12/31/24 CIVIL STATE OF CALIFORNIA	PROJECT			DEPARTMENT OF PUBLIC WORKS AND PLANNING		
DESIGNED: D. KWAN	1/2/24	RESIDENT ENGINEER	DATE	NOT TO SCALE			FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS			WATER UTILITY RELOCATION DETAILS		
DRAWN: E. CARMONA	1/2/24						ROAD NO. D0600			BRIDGE NO.	N/A	
CHECKED: S. ARTAL	1/2/24						DRAWING NO. 11302			SHEET NO.	11	
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.							TOTAL		32			



EAST ARV ASSEMBLY
(NEAR STA. 99+)

M
12

- KEY NOTES:**
1. FLG OUTLET
 2. VALVE BOX INSTALLATION FOR BURIED VALVE.
 3. VALVE LID AND PAVING RING PER CITY STD DWG W-7
 4. FLANGED RESILIENT WEDGE GATE VALVE.
 5. 30\"/>
 6. COATING AROUND PIPE, VALVES AND FLANGES. MATCH MAIN.
 7. FLOOR AND SLAB PENETRATION. EXTEND COATING FOR BURIED SERVICE ABOVE GRADE
 8. CONCRETE ANCHOR BLOCK, 24\"/>
 9. DRAIN ROCK.
 10. DIP WITH RESTRAINED JOINTS AND POLYETHYLENE ENCASEMENT OR WSP WITH LINING AND COATING PER SECTION 09970. MATCH MAIN PIPE MATERIAL. SIZE PER PLANS, 4\"/>
 11. 36\"/>
 12. 4\"/>
 13. 90\"/>
 14. WARNING TAPE.
 15. SLEEVE THROUGH CONC PAD, PIPE OD +1\"/>
 16. STATION LOCATIONS SHOWN ON DRAWINGS ARE APPROX. INSTALL AT HIGH POINT AND COORDINATE POINT NEAREST TO THE STATION SHOWN.
 17. CONTRACTOR MAY OPT TO INCREASE SIZE OF CAV'S FOR UNIFORMITY.
 18. NATIVE MATERIAL COMPACTED TO 95% RELATIVE COMPACTION.

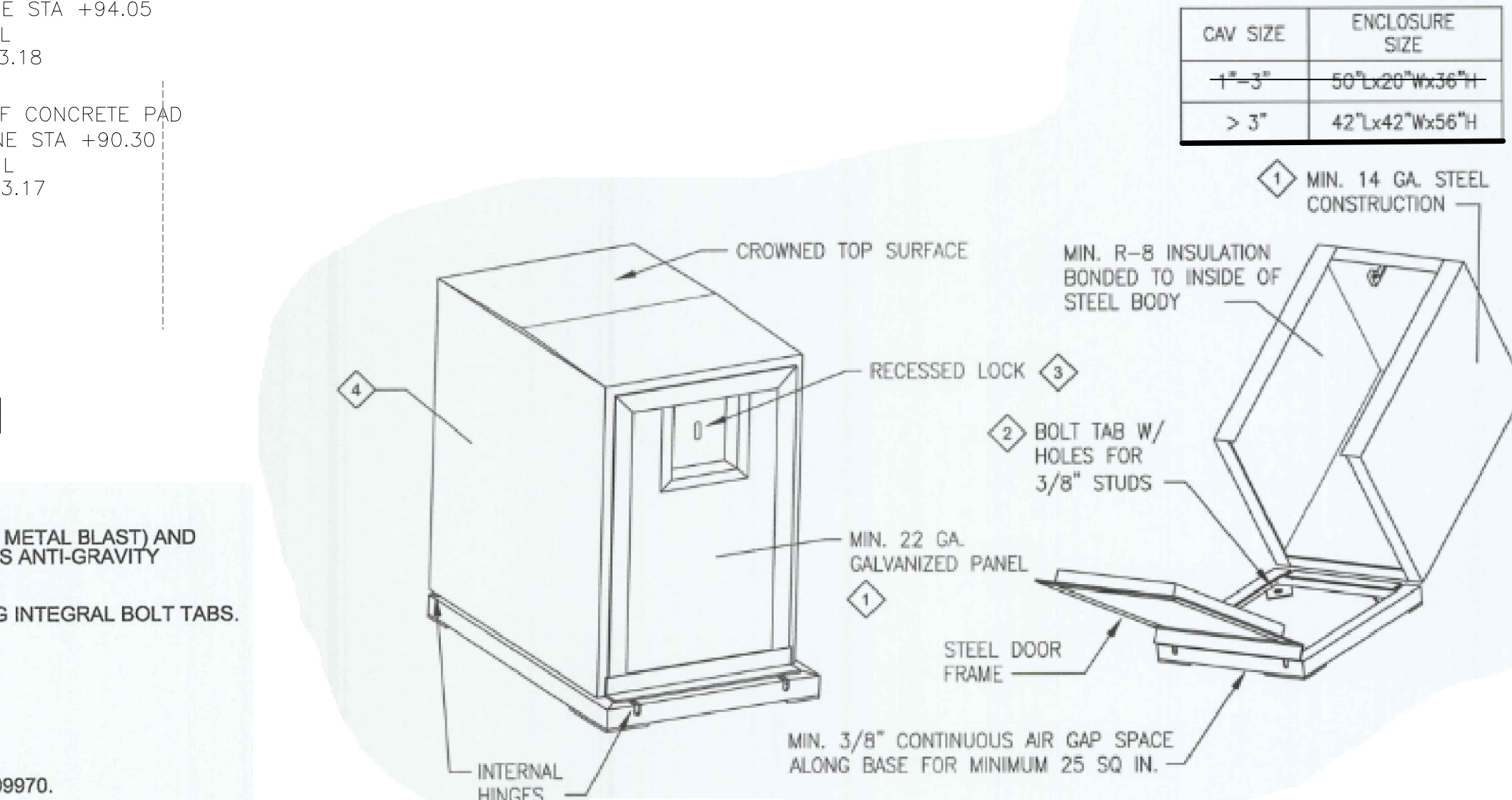
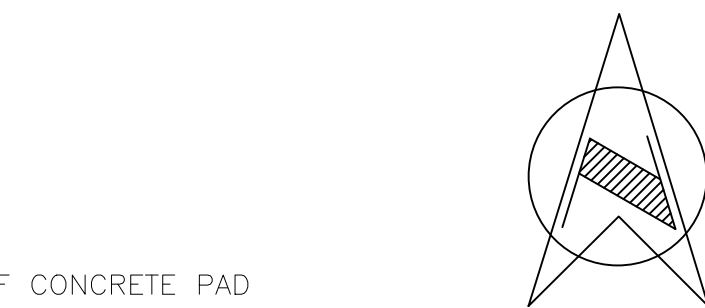


ARV ENCLOSURE PAD

P
12

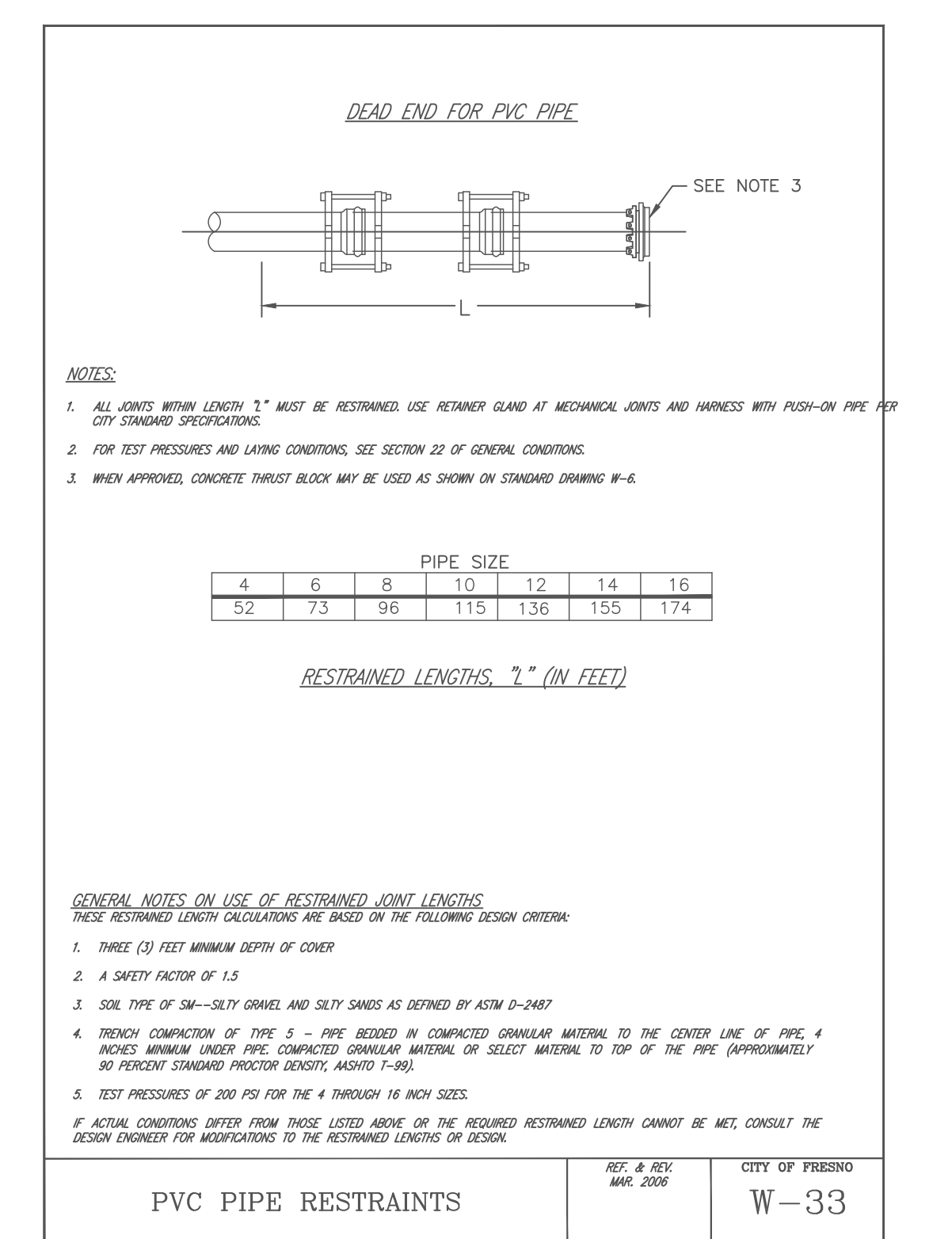
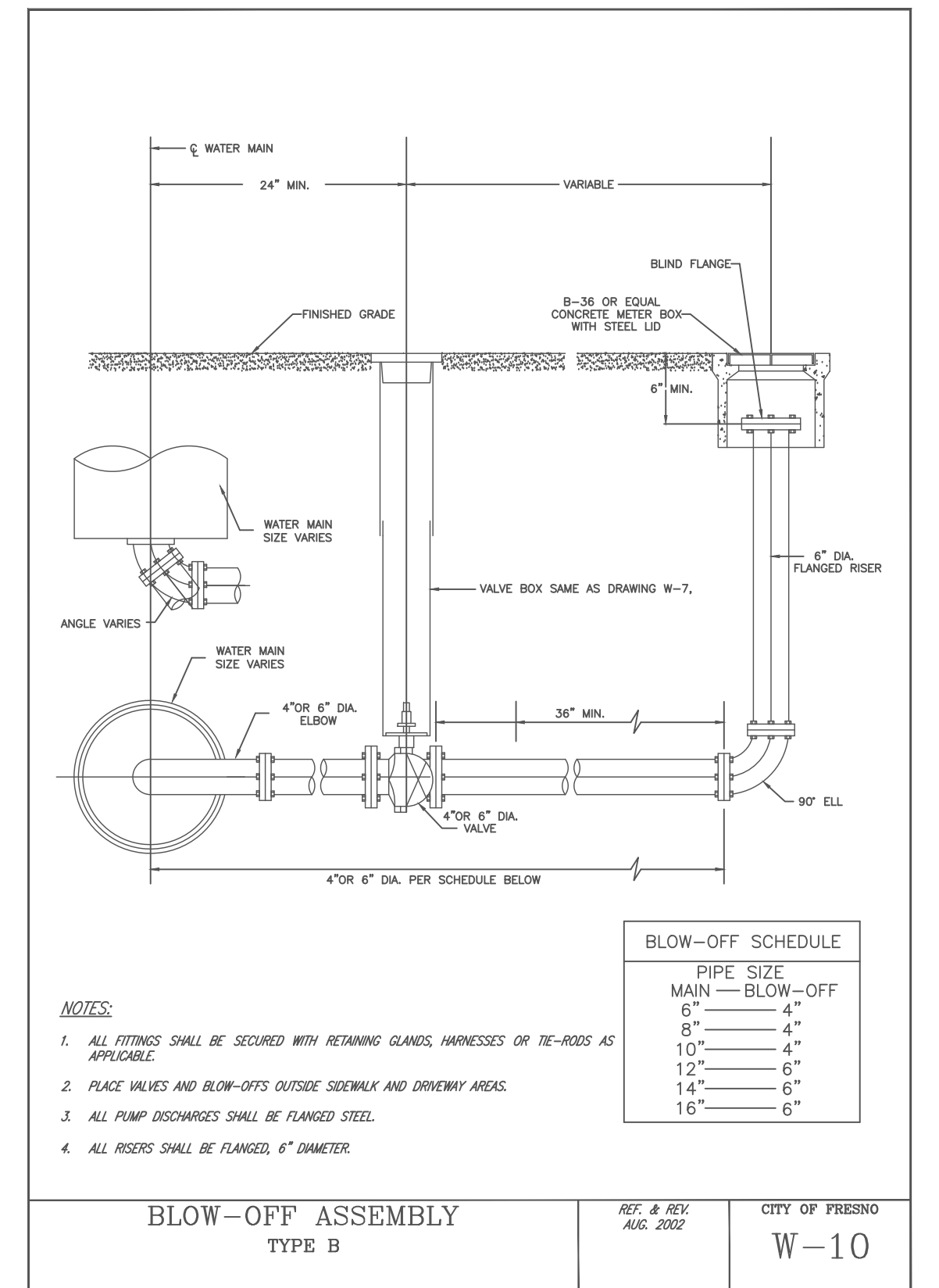
- KEY NOTES:**
1. ALL SURFACES SHALL BE ABRASIVE BLASTED (SSPC SP-5 WHITE METAL BLAST) AND POWDER COATED WITH 2-3 MILS ZINC RICH PRIMER WITH 4-5 MILS ANTI-GRAVITY CHEMISTRY TOP COAT (DFT 6-8 MILS).
 2. ENCLOSURE SHALL MOUNT SECURELY TO CONCRETE PAD USING INTEGRAL BOLT TABS.
 3. ENCLOSURE SHALL INCLUDE A RECESSED LOCK.
 4. SIZE BOX APPROPRIATELY PER TABLE.
 5. PETROLEUM OR WAX TAPE COATING AS SPECIFIED IN SECTION 09970.

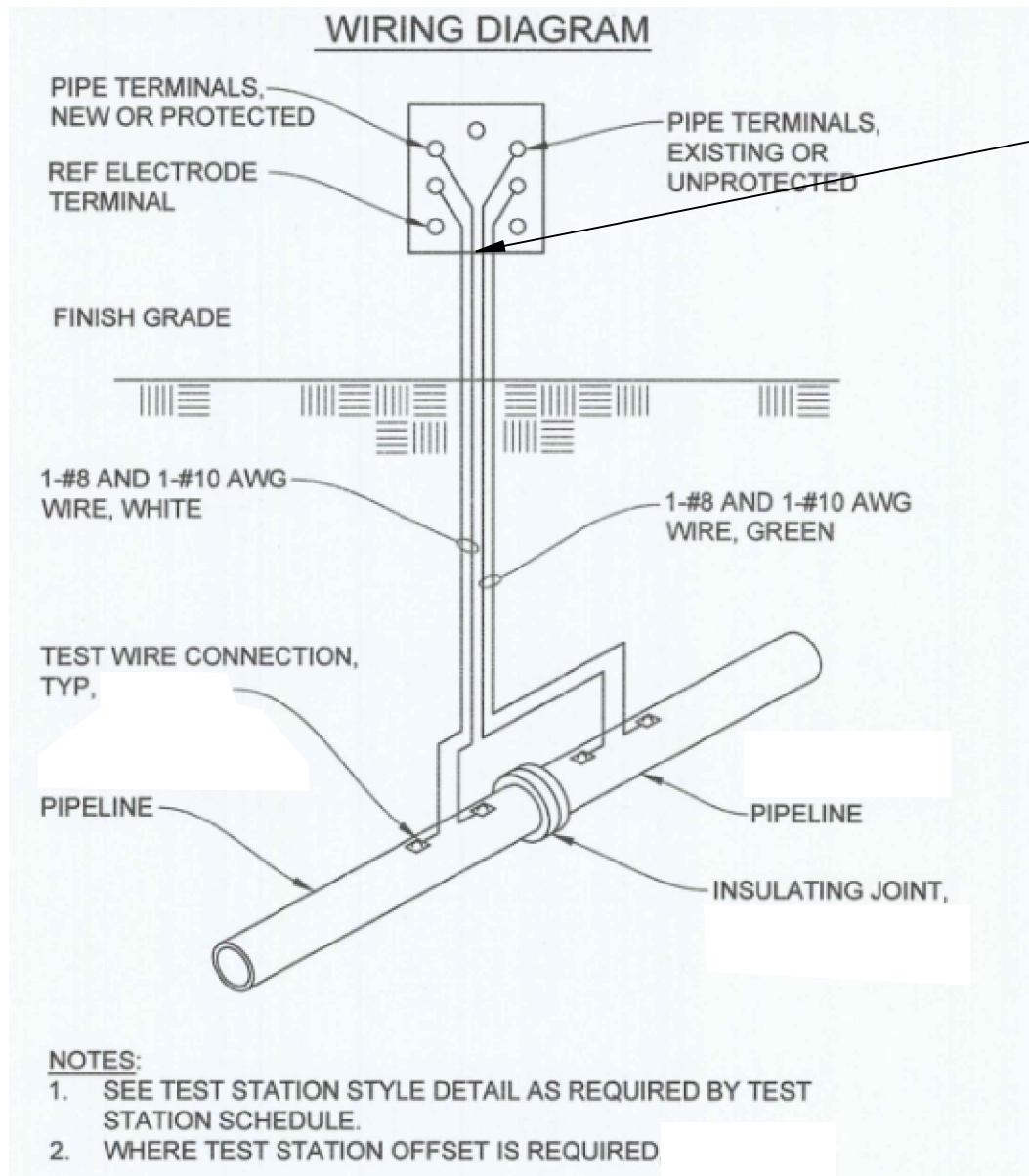
SEE DETAIL O SHEET 11 FOR BOLLARD DETAIL (TYP)



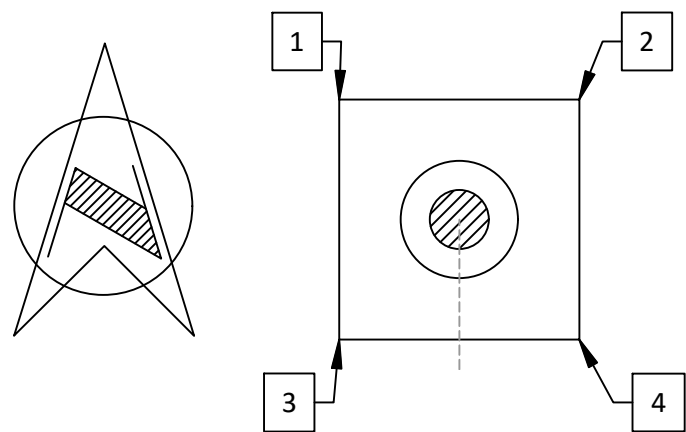
ENCLOSURE DETAIL

Q
12





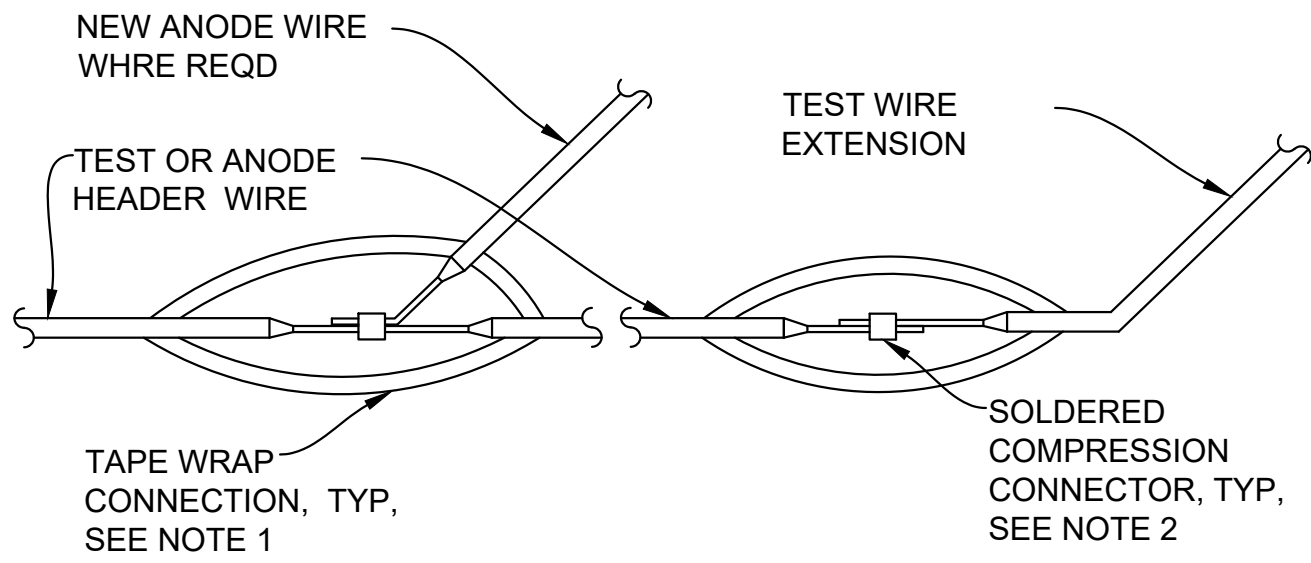
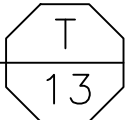
TYPE I TEST STATION WIRING DIAGRAM



TEST STATION TOP OF CONCRETE ELEVATIONS				
STATION	1	2	3	4
"O" LINE STA 98+48.76	332.73	332.73	332.70	332.70
"O" LINE STA 98+84.57	332.78	332.78	332.75	332.75
"F" LINE STA 100+92.17	333.13	333.10	333.12	333.09

NOTE: SEE SHEET 25

TYPE I TEST STATION CONCRETE ELEVATIONS



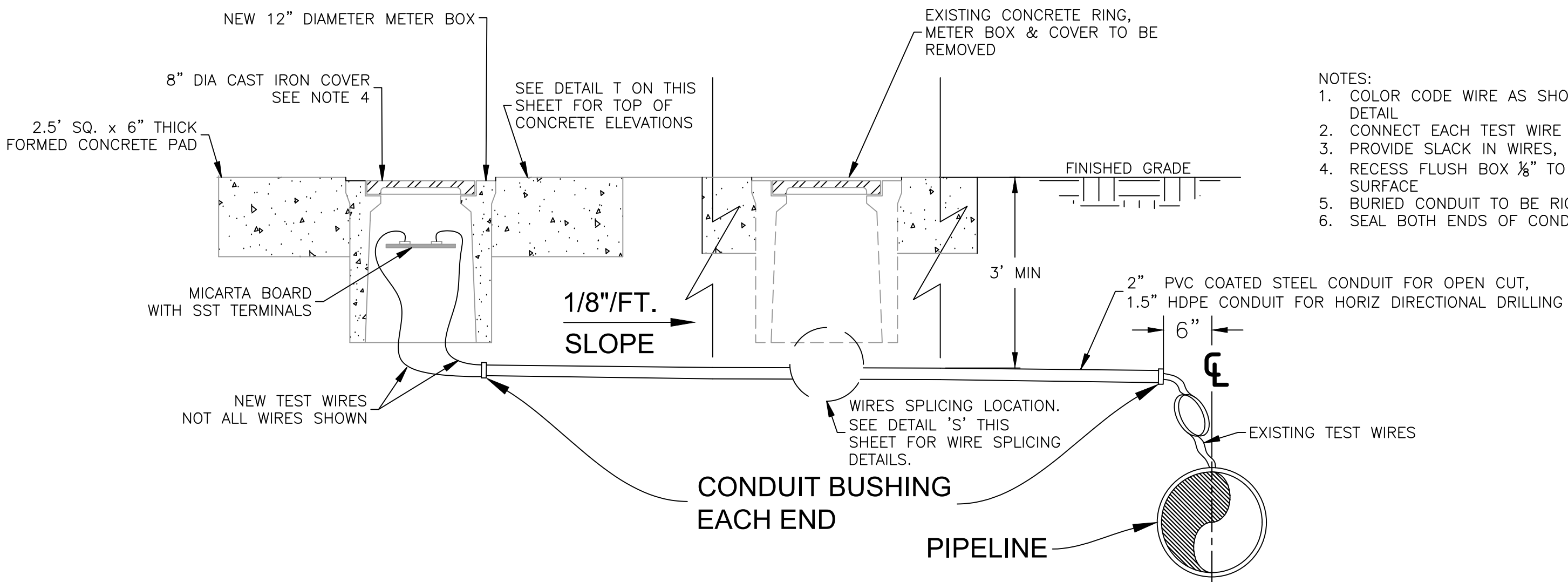
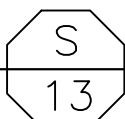
WIRE TAP SPLICE

INLINE SPLICE

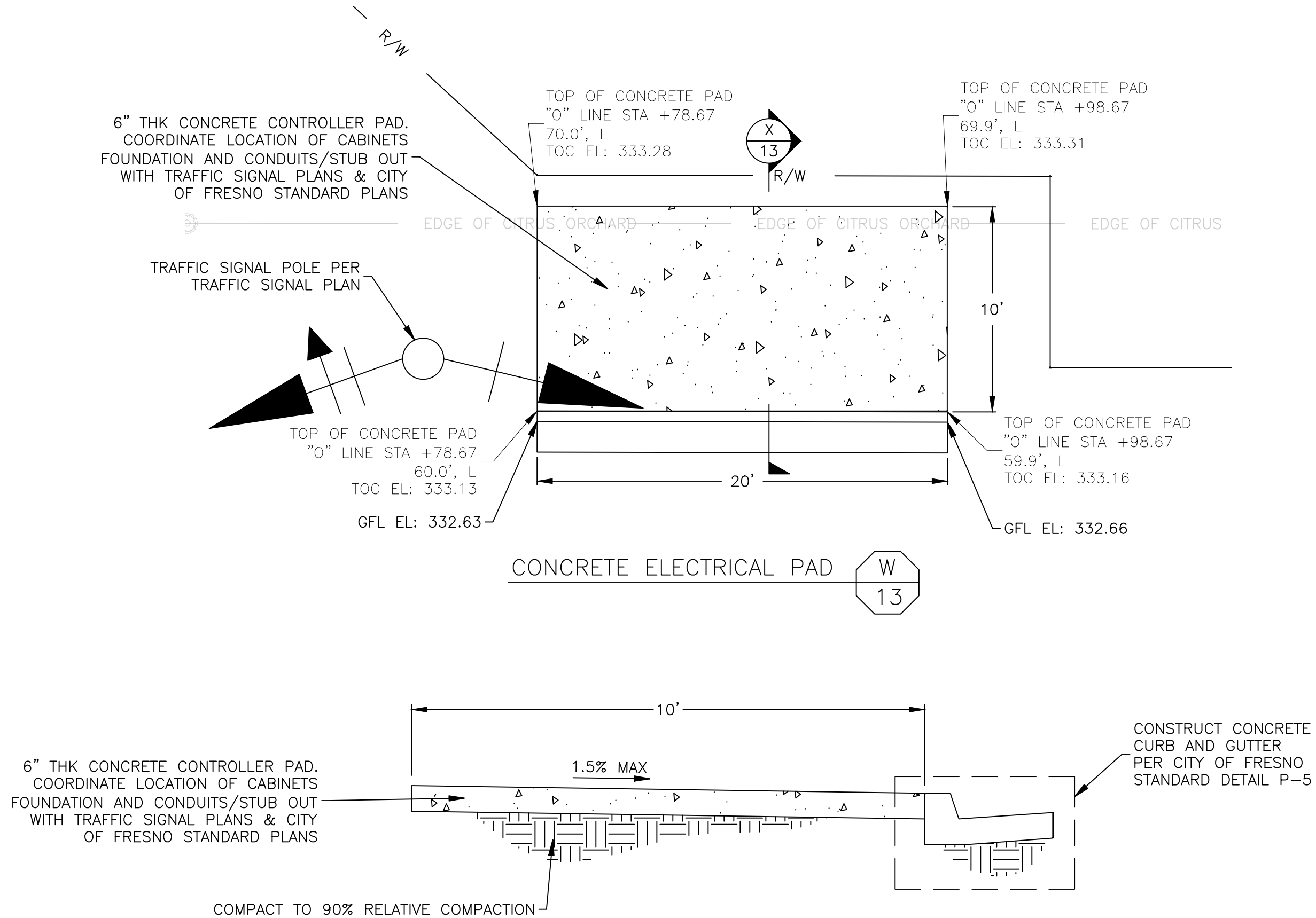
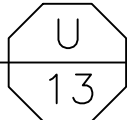
- NOTES:**
- FILL VOIDS AND IRREGULARITIES WITH INSULATING PUTTY, WRAP CONNECTION WITH TWO LAYERS OF SCOTCH 130C SELF VULCANIZING RUBBER TAPE AND TWO LAYERS OF SCOTCH 88 VINYL ELECTRICAL TAPE
 - SPLICE WIRES BY MECHANICALLY SECURING AND SOLDERING WITH ROSIN PASTE FLUX, COMPRESSION CONNECTORS WITHOUT SOLDERED WIRE CONNECTIONS SHALL NOT BE ALLOWED.
 - CONTRACTOR TO PRESERVE PIPE IDENTIFICATION ASSOCIATED WITH EACH ORIGINAL WIRE AND MATCH WIRE COLOR CODE. APPLY PIPE IDENTIFICATION TO NEW WIRE EXTENSION WITHIN TEST STATION AT NEW LOCATION.

GALVANIC ANODE AND TEST STATION WIRE SPLICES

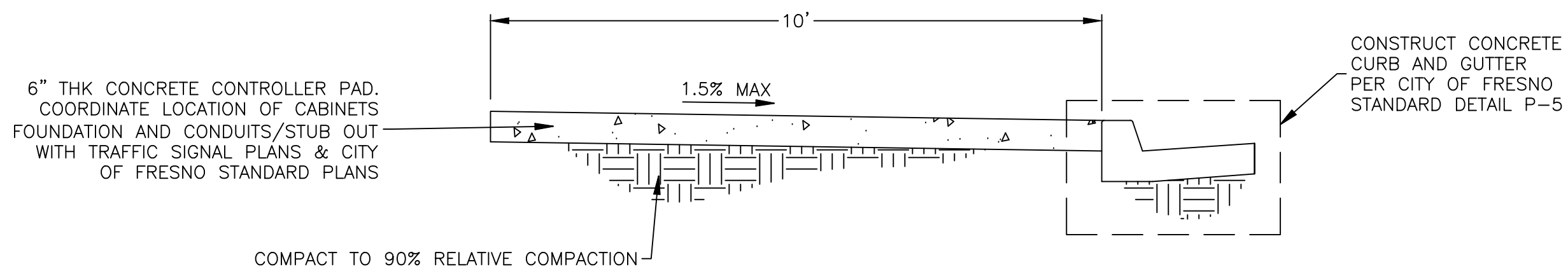
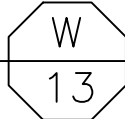
SCALE: NTS



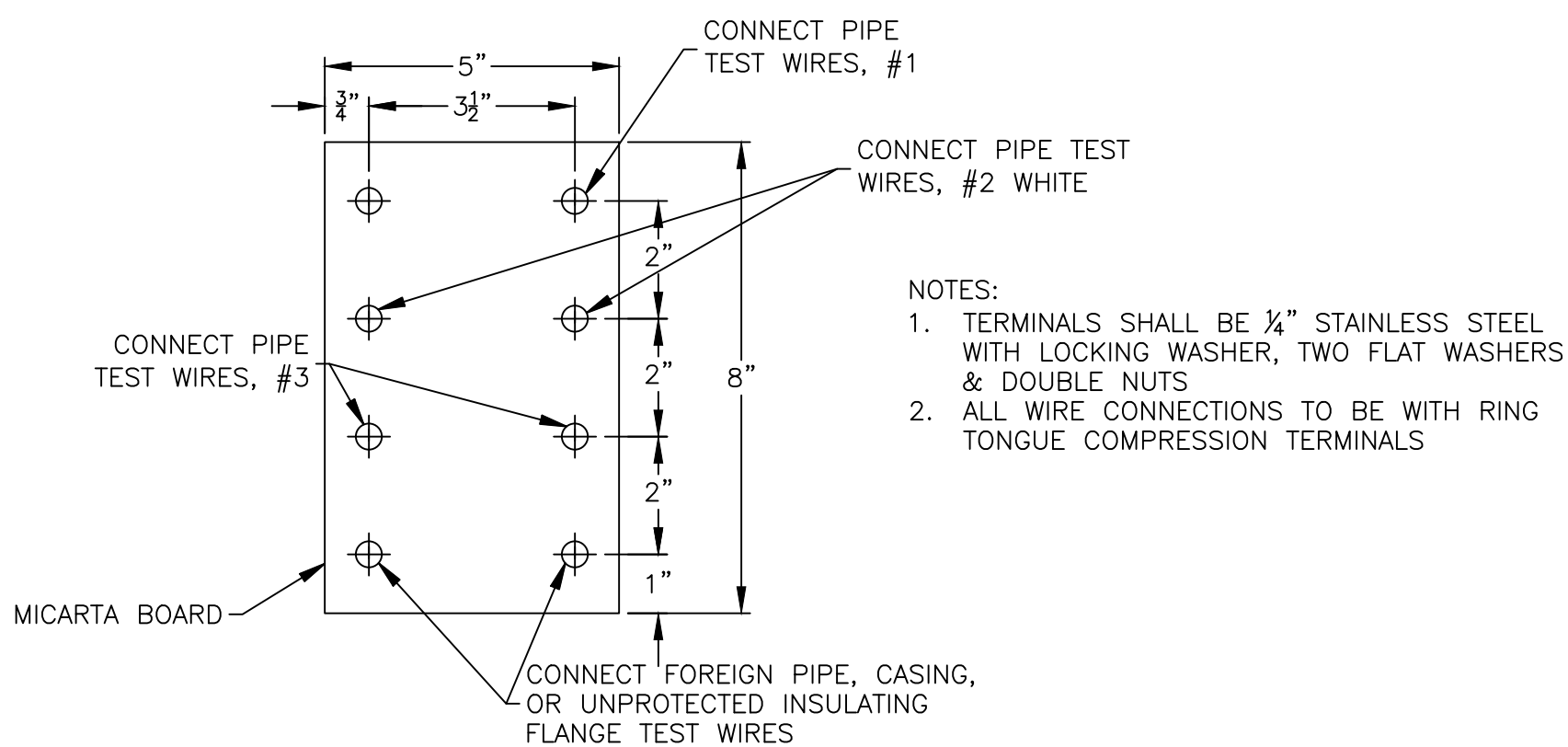
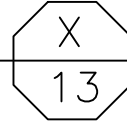
FLUSH STYLE TEST BOX STATION



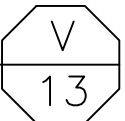
CONCRETE ELECTRICAL PAD



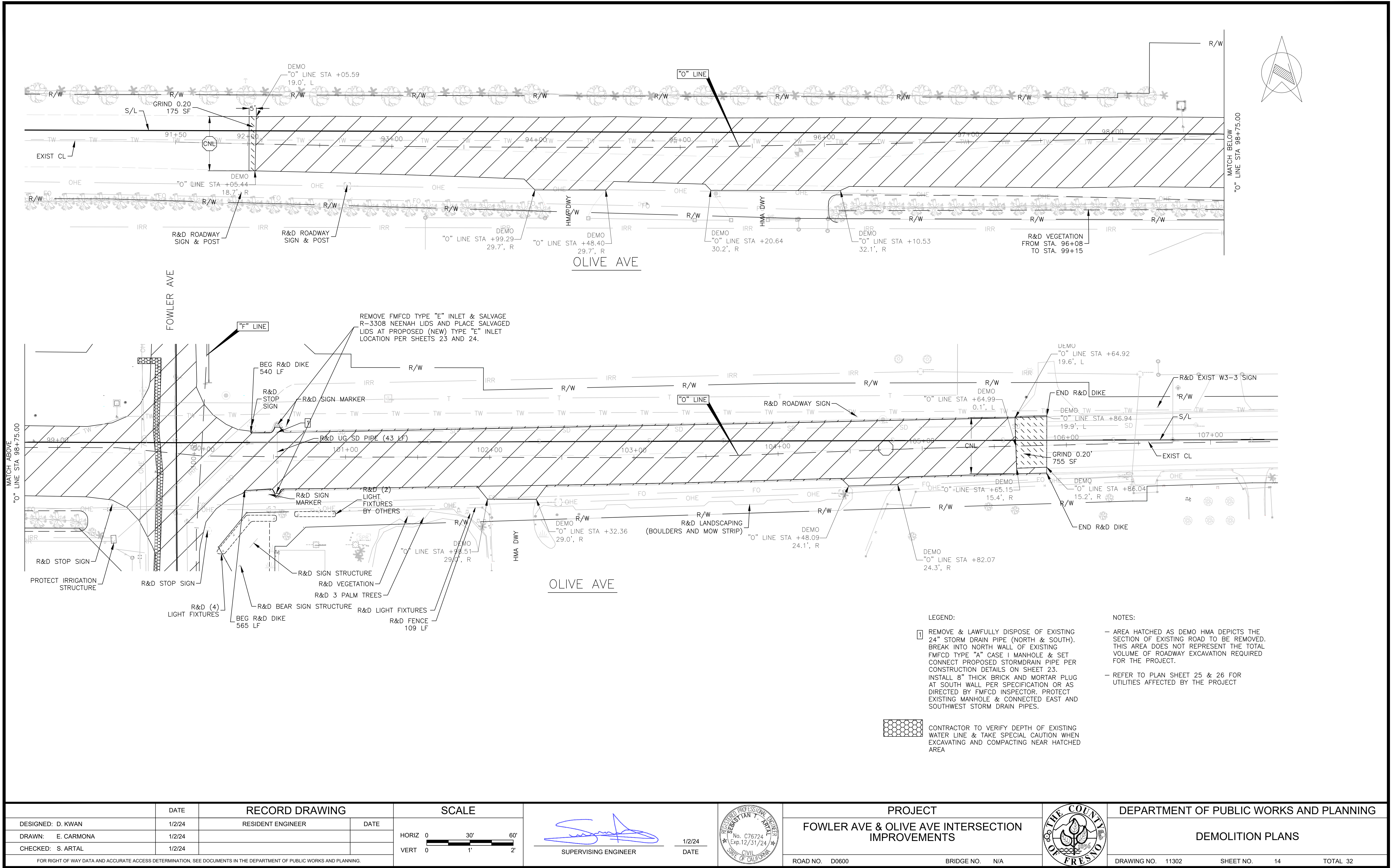
CONCRETE ELECTRICAL PAD SECTION

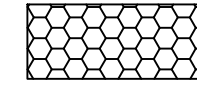
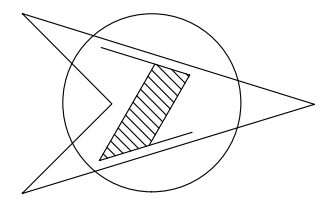


FLUSH STYLE TERMINAL BOARD







DESIGNED: D. KWAN		DATE		RECORD DRAWING		SCALE		PROJECT		DEPARTMENT OF PUBLIC WORKS AND PLANNING	
DRAWN: E. CARMONA		1/2/24		RESIDENT ENGINEER		NOT TO SCALE		FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS		TEST STATION & CONCRETE PAD DETAILS	
CHECKED: S. ARTAL		1/2/24						ROAD NO. D0600 BRIDGE NO. N/A		DRAWING NO. 11302 SHEET NO. 13 TOTAL 32	

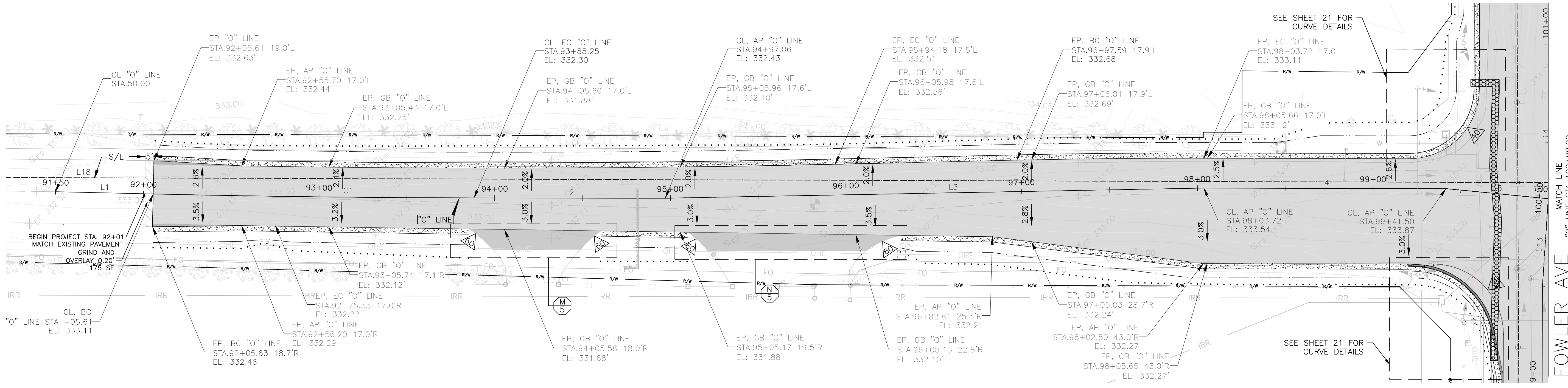




NOTES:

CONTRACTOR TO VERIFY DEPTH OF EXISTING
WATER LINE & TAKE SPECIAL CAUTION WHEN
EXCAVATING AND COMPACTING NEAR HATCHED
AREA

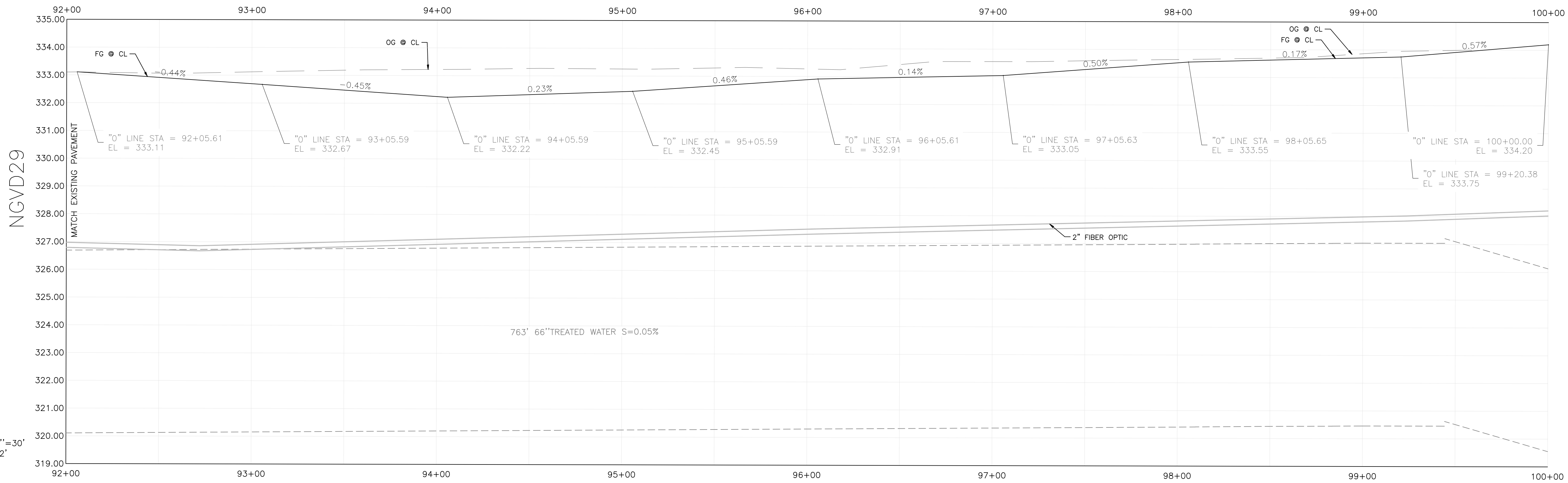
		DATE	RECORD DRAWING		SCALE				PROJECT				DEPARTMENT OF PUBLIC WORKS AND PLANNING				
DESIGNED: D. KWAN		1/2/24	RESIDENT ENGINEER						FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS				DEMOLITION PLANS				
DRAWN: E. CARMONA		1/2/24			HORIZ 0 30' 60'		1/2/24				ROAD NO. D0600		BRIDGE NO. N/A		DRAWING NO. 11302		
CHECKED: S. ARTAL		1/2/24			VERT 0 1' 2'		DATE								SHEET NO. 15		
															TOTAL 32		
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.																	



OLIVE AVE

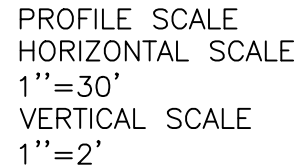
- LEGEND:
- CONTRACTOR TO VERIFY DEPTH OF EXISTING WATER LINE & TAKE SPECIAL CAUTION WHEN EXCAVATING AND COMPACTING NEAR HATCHED AREA
 - SHOULDER BACKING 90% RELATIVE COMPACTION
 - DAYLIGHT
 - DITCH FL





- NOTES:
- SEE SHEETS 25 & 26 FOR UTILITIES AFFECTED BY NEW IMPROVEMENTS
 - SEE SHEETS 22-24 FOR DRAINAGE PLANS
 - SEE SHEET 6 FOR ROAD CENTERLINE INFORMATION

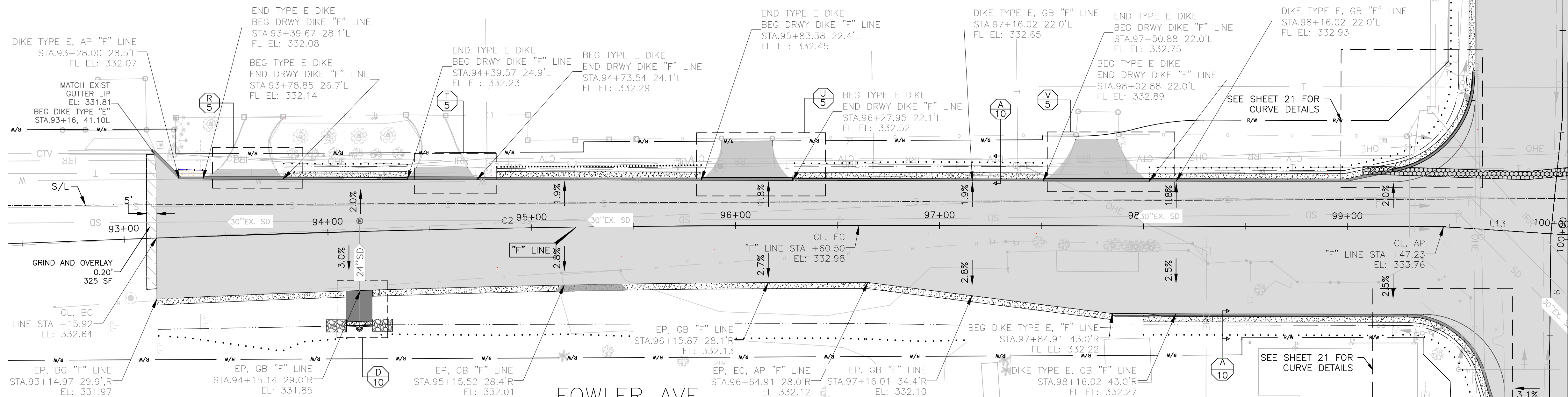


PROFILE SCALE
HORIZONTAL SCALE 1"=30'
VERTICAL SCALE 1"=2'

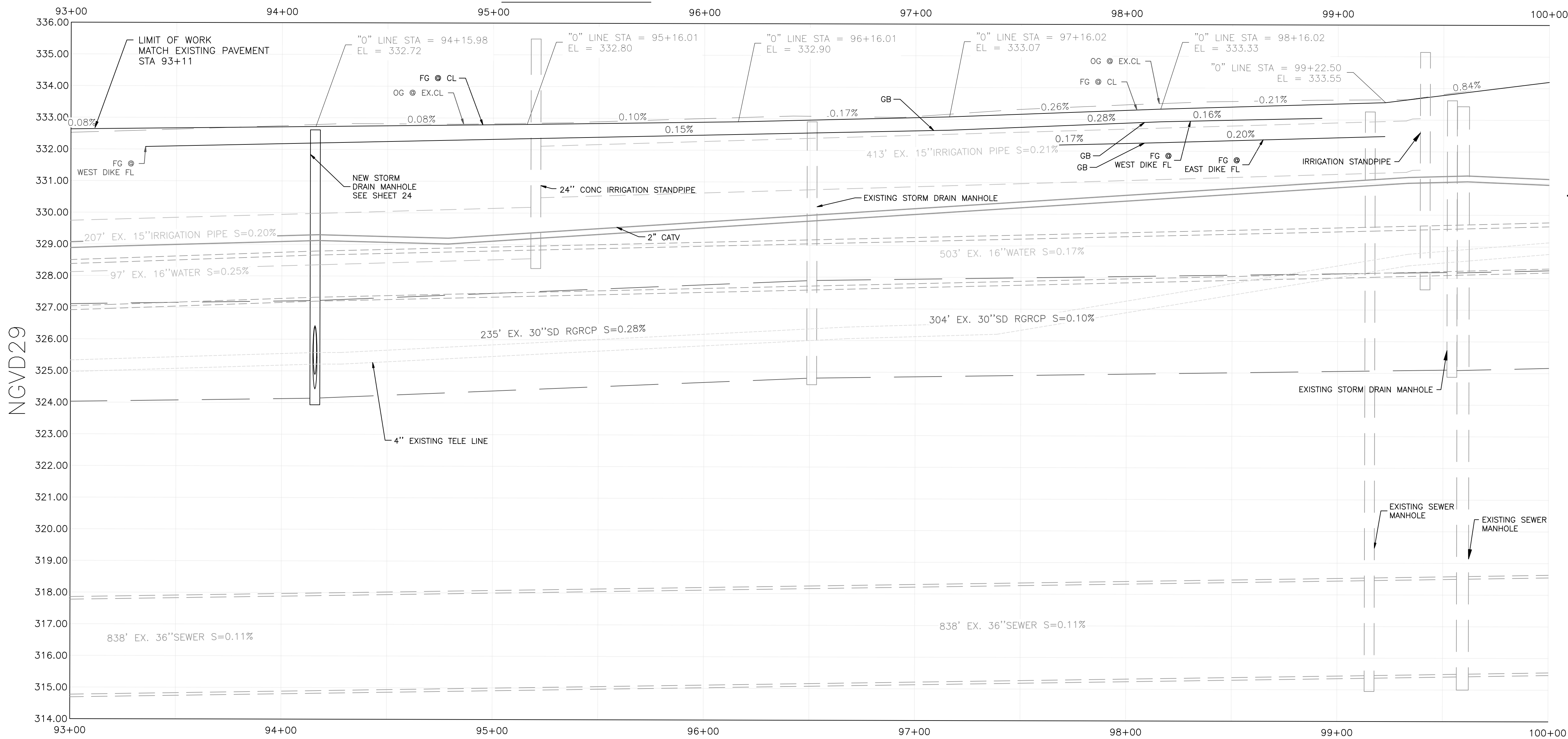
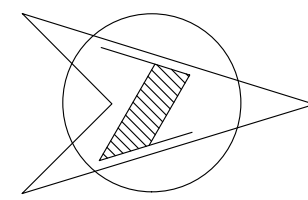
DESIGNED: D. KWAN		DATE	1/2/24	RECORD DRAWING		SCALE		PROJECT		DEPARTMENT OF PUBLIC WORKS AND PLANNING	
DRAWN: E. CARMONA		DATE	1/2/24	RESIDENT ENGINEER		HORIZ 0 30' 60'		FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENT PROJECT		ROADWAY PLANS	
CHECKED: S. ARTAL		DATE	1/2/24			SUPERVISING ENGINEER		ROAD NO. D0600		DRAWING NO. 11302	
								BRIDGE NO. N/A		SHEET NO. 16	
										TOTAL 32	



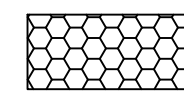
	DATE	RECORD DRAWING		SCALE			PROJECT			DEPARTMENT OF PUBLIC WORKS AND PLANNING				
DESIGNED: D. KWAN	1/2/24	RESIDENT ENGINEER	DATE	<div>HORIZ </div>			1/2/24	DATE		FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENT PROJECT		ROADWAY PLANS		
DRAWN: E. CARMONA	1/2/24													
CHECKED: S. ARTAL	1/2/24													
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.														



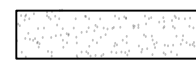
OLIVE AVE



LEGEND:



CONTRACTOR TO VERIFY DEPTH OF EXISTING WATER LINE & TAKE SPECIAL CAUTION WHEN EXCAVATING AND COMPACTING NEAR HATCHED AREA



DAYLIGHT






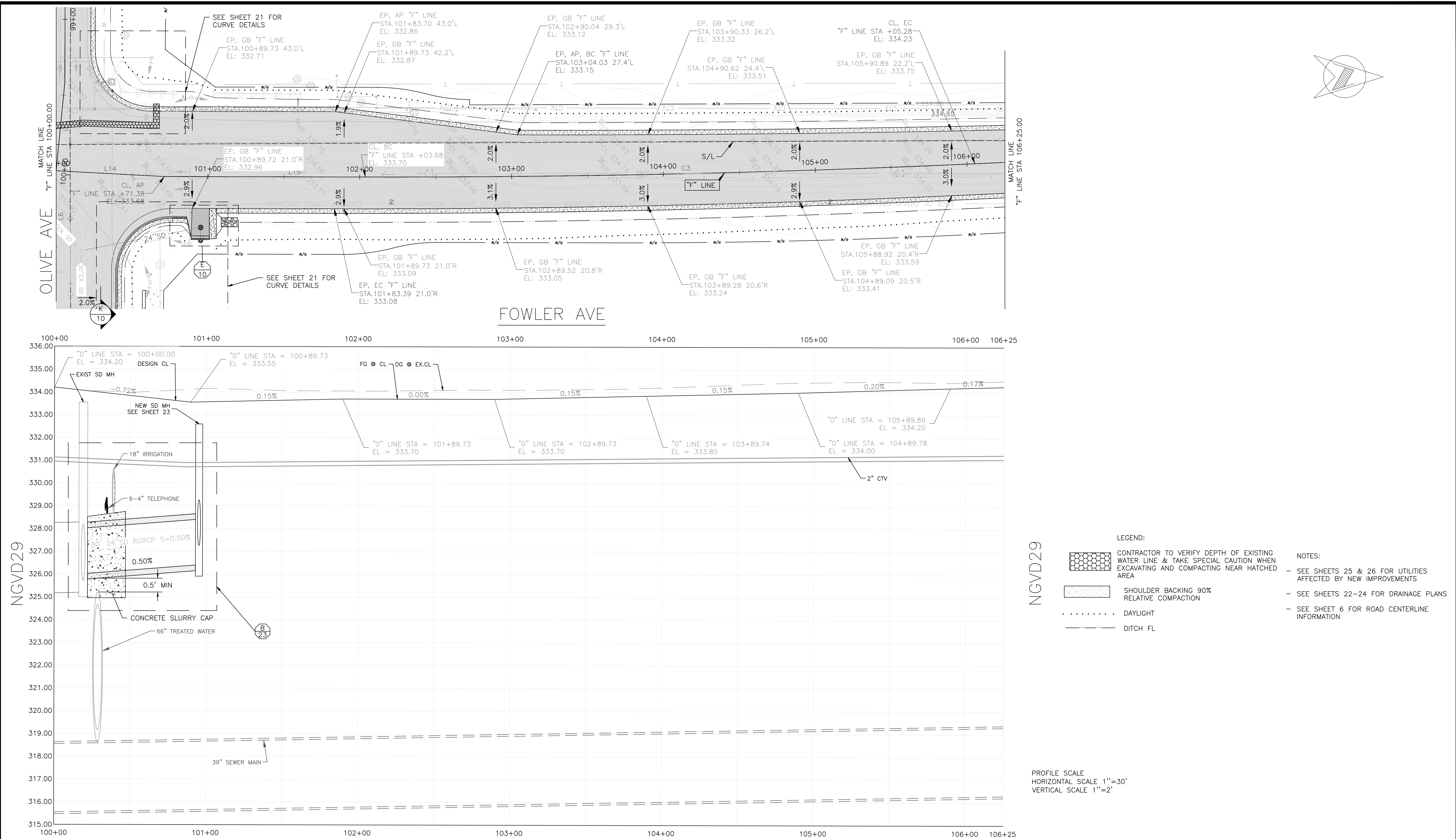
DITCH FL





NOTES:

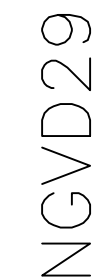
- SEE SHEETS 25 & 26 FOR UTILITIES AFFECTED BY NEW IMPROVEMENTS
- SEE SHEETS 22-24 FOR DRAINAGE PLANS
- SEE SHEET 6 FOR ROAD CENTERLINE INFORMATION

PROFILE SCALE
HORIZONTAL SCALE 1"=30'
VERTICAL SCALE 1"=2'

		DATE		RECORD DRAWING		SCALE		 SUPERVISING ENGINEER DATE 1/2/24				PROJECT FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENT PROJECT				DEPARTMENT OF PUBLIC WORKS AND PLANNING			
DESIGNED: D. KWAN		1/2/24		RESIDENT ENGINEER		DATE										ROADWAY PLANS			
DRAWN: E. CARMONA		1/2/24																	
CHECKED: S. ARTAL		1/2/24																DRAWING NO. 11302	
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.																			




		DATE	RECORD DRAWING		SCALE		 1/2/24 DATE				PROJECT				DEPARTMENT OF PUBLIC WORKS AND PLANNING			
DESIGNED: D. KWAN		1/2/24	RESIDENT ENGINEER		DATE	FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENT PROJECT					ROADWAY PLANS							
DRAWN: E. CARMONA		1/2/24																
CHECKED: S. ARTAL		1/2/24										ROAD NO. D0600		BRIDGE NO. N/A	DRAWING NO. 11302		SHEET NO. 19	TOTAL 32
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.																		



	DATE	RECORD DRAWING	
DESIGNED: D. KWAN	1/2/24	RESIDENT ENGINEER	DATE
DRAWN: E. CARMONA	1/2/24		
CHECKED: S. ARTAL	1/2/24		
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.			

SCALE

30' 60'

A graphic scale bar with alternating black and white segments. The first segment is labeled '30'' and the second segment is labeled '60''.

1/2/24
DATE

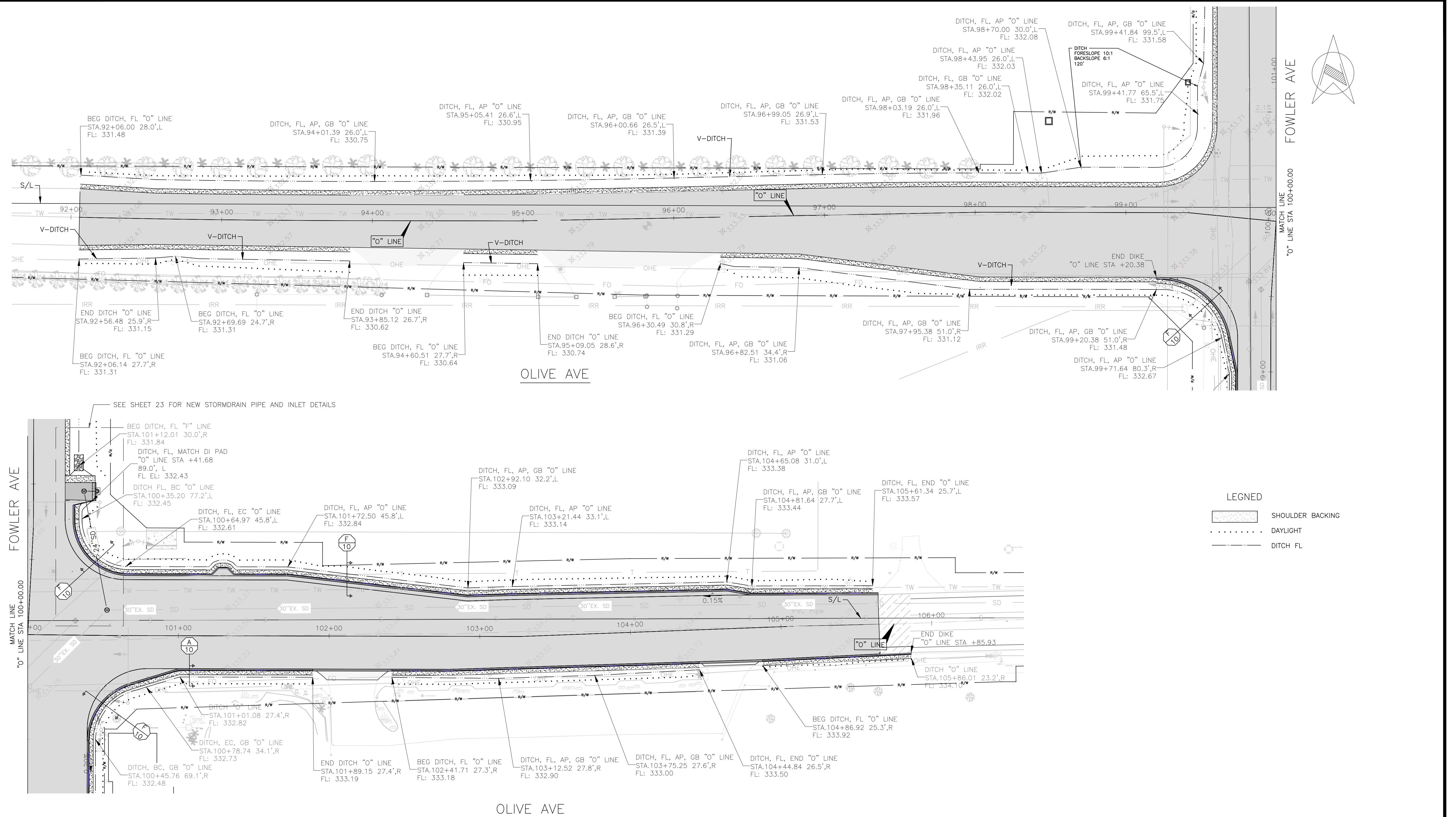





ROAD NO. D0600 BRIDGE NO. N/A

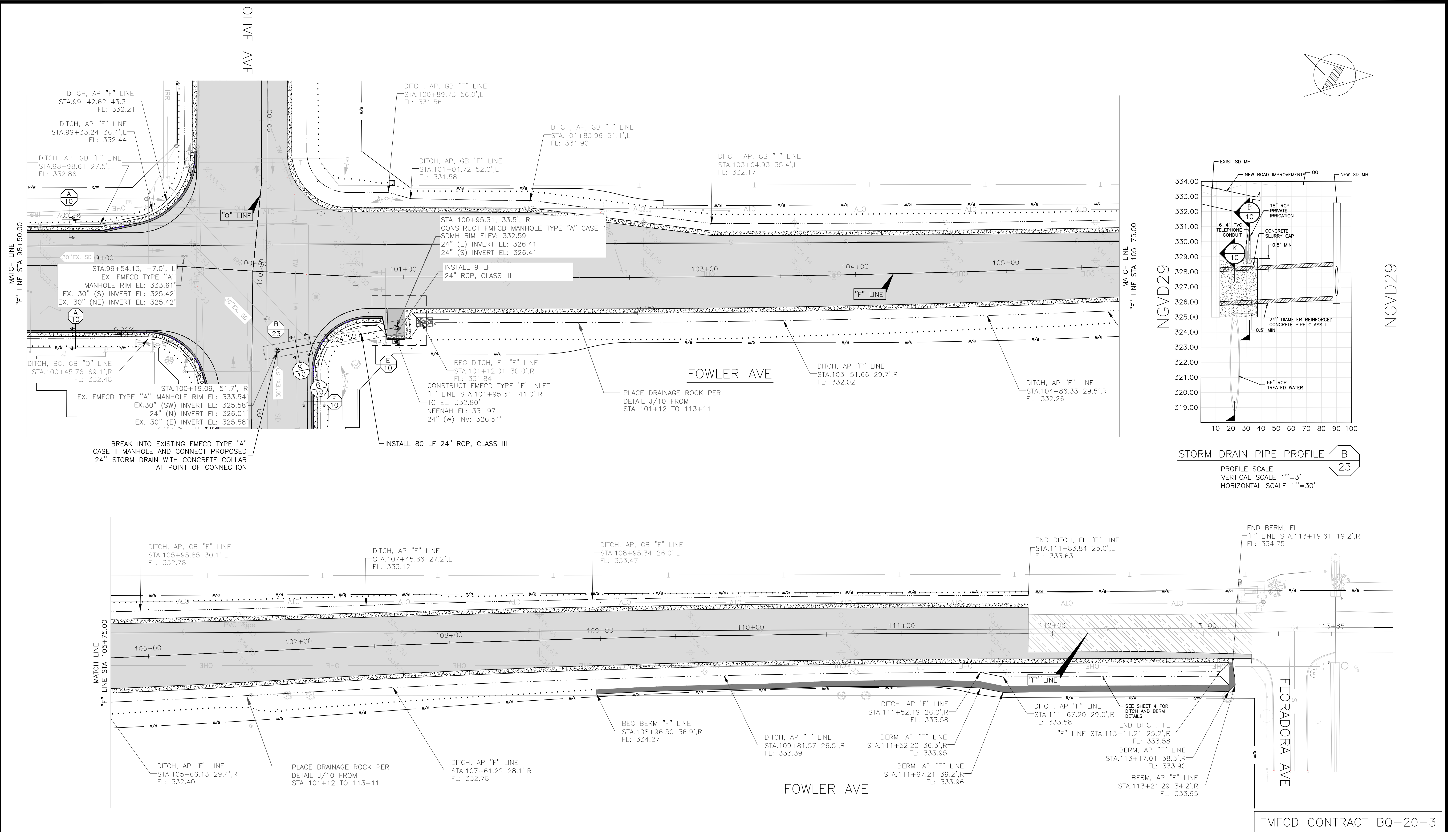




ROADWAY PLANS

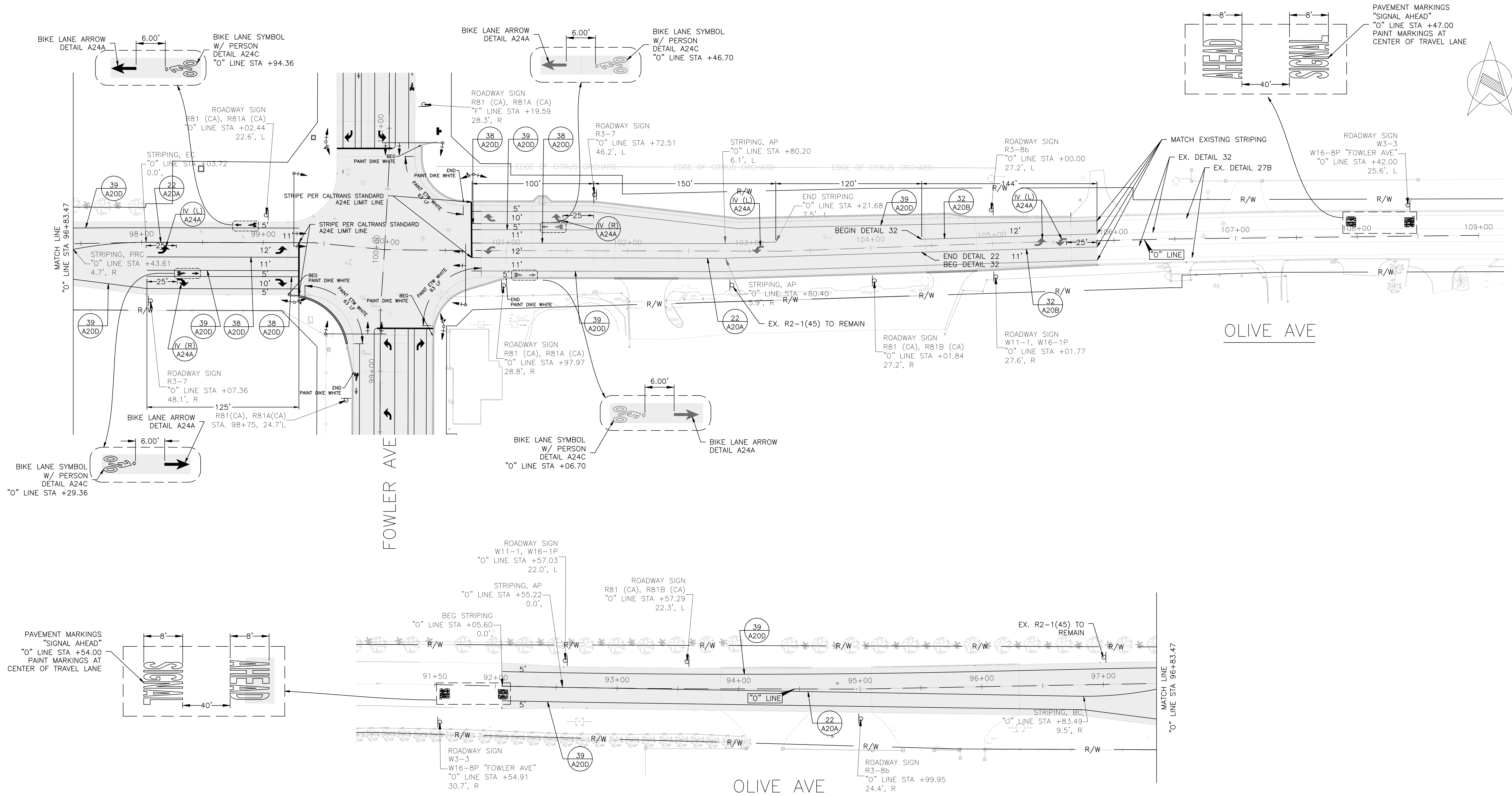
DRAWING NO. 11302 SHEET NO. 20 TOTAL 32






		DATE	RECORD DRAWING		SCALE		<div> SUPERVISING ENGINEER</div> <div>1/2/24 DATE</div>		<div> SEBASTIAN T. ARTAL No. C76724 Exp. 12/31/24 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA CIVIL</div>		PROJECT		<div> THE COUNTY OF FRESNO</div>		DEPARTMENT OF PUBLIC WORKS AND PLANNING								
DESIGNED: D. KWAN		1/2/24	RESIDENT ENGINEER		DATE	FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS					STREET DRAINAGE PLANS OLIVE AVENUE												
DRAWN: E. CARMONA		1/2/24				ROAD NO. D0600					BRIDGE NO. N/A				DRAWING NO. 11302		SHEET NO. 22		TOTAL 32				
CHECKED: S. ARTAL		1/2/24																					
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.																							



	DATE	RECORD DRAWING		SCALE				PROJECT		DEPARTMENT OF PUBLIC WORKS AND PLANNING	
DESIGNED: D. KWAN	1/2/24	RESIDENT ENGINEER	DATE	HORIZ 0 30' 60'		 SUPERVISING ENGINEER		FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS			
DRAWN: E. CARMONA	1/2/24					1/2/24 DATE		ROAD NO. D0600 BRIDGE NO. N/A		STREET DRAINAGE PLANS FOWLER AVENUE (NORTH OF OLIVE AVENUE)	
CHECKED: S. ARTAL	1/2/24									DRAWING NO. 11302 SHEET NO. 23 TOTAL 32	
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.											

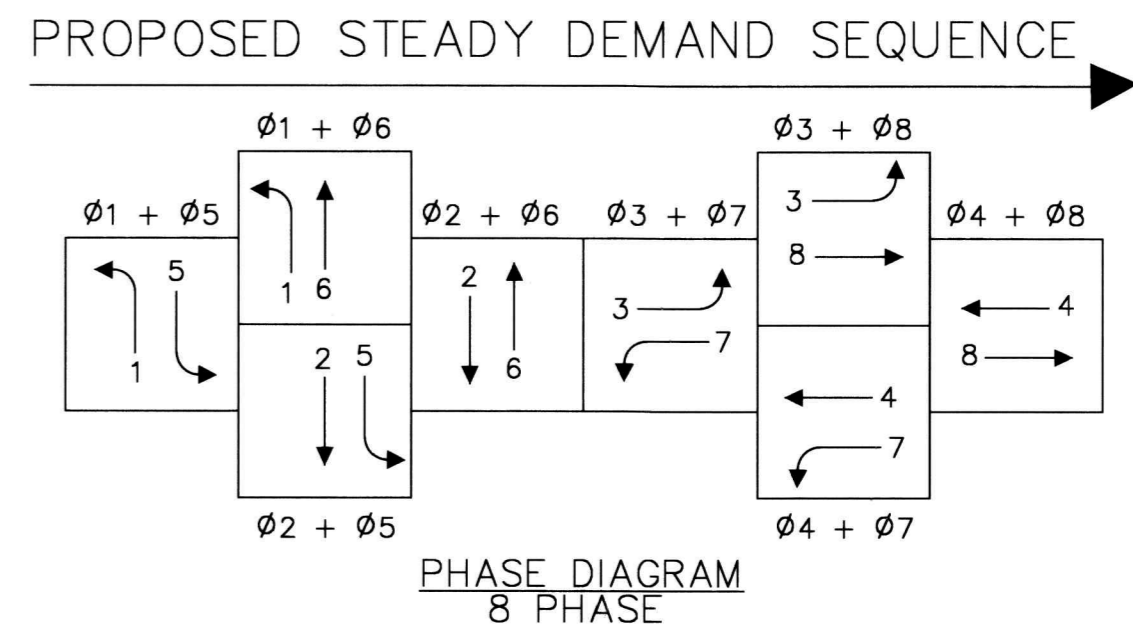


		DATE		RECORD DRAWING		SCALE		 _____ SUPERVISING ENGINEER		 _____ DATE		PROJECT				DEPARTMENT OF PUBLIC WORKS AND PLANNING					
DESIGNED: D. KWAN		1/2/24		RESIDENT ENGINEER		DATE						FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS				ROADWAY STRIPING PLANS					
DRAWN: E. CARMONA		1/2/24																			
CHECKED: S. ARTAL		1/2/24						HORIZ 0 30' 60'				ROAD NO. D0600		BRIDGE NO. N/A		DRAWING NO. 11302		SHEET NO. 27		TOTAL 32	
						VERT 0 1' 2'															
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.																					



TRAFFIC SIGNAL CONSTRUCTION NOTES:

1. ANY EXISTING STREET LIGHT OR TRAFFIC SIGNAL PULLBOX IN THE SCOPE OF WORK OR ACCESSED BY CONTRACTOR SHALL BE CLEANED COMPLETELY OF ALL DIRT AND DEBRIS, GROUTED AND DUCT SEALED IN ALL CONDUIT.
2. ANY EXISTING BROKEN PULL BOXES WITHIN THE PROJECT SHALL BE REPLACED BY CONTRACTOR.
3. ANY EXISTING PULL BOX ADJUSTED TO GRADE MUST ACCEPT A CITY APPROVED LOCKING LID AND THE CONDUITS MUST ALSO BE ADJUSTED TO MEET THE LATEST CITY STANDARDS.
4. ANY EXISTING CONDUIT SHOWN TO REMAIN WITHIN AN UPGRADED PULL BOX SHALL BE ADJUSTED AND MODIFIED TO MEET CITY STD.









EMERGENCY VEHICLE PREEMPTION

$$\begin{aligned} \text{EVA} &= \phi_2 + \phi_5 \\ \text{EVB} &= \phi_4 + \phi_7 \\ \text{EVC} &= \phi_1 + \phi_6 \\ \text{EVD} &= \phi_3 + \phi_8 \end{aligned}$$

SCALE 1"=20'

20' 40'

LEGEND:

- CIRCULAR LOOP DETECTOR (TYPE E) PER CITY OF FRESNO STANDARD E-14. LOOP SEALANT SHALL BE STATE APPROVED ELASTOMERIC SEALANT OR HOT MELT RUBBERIZED SEALANT.
-  TYPE D LOOP (BIKE LOOPS) CONFIGURATION TO BE INSTALLED. PLACE BICYCLE LOOP DETECTOR SYMBOL PER CITY OF FRESNO STANDARD E-14.
-  BIKE LOOP DETECTOR (3'X3') WITH BIKE SYMBOL TO BE INSTALLED PER CITY OF FRESNO STANDARD E-13.
-  EMERGENCY VEHICLE PREEMPTION DETECTOR UNIT.
DESIGNATES CHANNEL
-  VEHICLE SIGNAL HEAD
- ☐ PULL BOX—NO. 5(E) UNLESS OTHERWISE INDICATED OR NOTED
- (T) TRAFFIC RATED PULL BOX.
- PROPOSED CURRENT STRIPING
- EP — PROPOSED EDGE OF PAVEMENT
-  I.T.S WIRELESS EQUIPMENT, FURNISHED AND INSTALLED PER COF STANDARD I.T.S-27A AND ITS-27B.
-  PANORAMIC IP CAMERA, FURNISHED AND INSTALLED PER COF STANDARD I.T.S-18B

CONSTRUCTION NOTES (THIS SHEET ONLY):

- 1 FURNISH AND INSTALL 332L CABINET AND 2070LX WITH THE 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 SPECIFICATIONS and Caltrans TEEs 2020. 2070LX PART NUMBER SHALL BE 2070-F6330601S10. 2070LX AND ALL APPURTENANCES SHALL BE FULLY COMPATIBLE WITH THE CITY OF FRESNO'S EXISTING SYSTEM AND SOFTWARE WITHOUT ADDITIONAL MODIFICATIONS OR COSTS. ON FOUNDATION PER CALTRANS STANDARD PLAN ES-3C AND MODIFIED PER CITY STANDARD E-37. FRONT DOOR SHALL FACE EAST. COORDINATE WITH CMD, AND THEN CALL CITY TRAFFIC SIGNAL SUPERVISOR 48 HOURS BEFORE DELIVERY FOR TESTING. MODIFY CABINET PER CITY STANDARDS E-34A AND E-34B.
- 2 FURNISH AND INSTALL SERVICE CABINET 26-100 PER CITY STANDARDS E-15 AND E-17. THE CONTRACTOR SHALL COORDINATE ALL CONNECTION TIMELINES WITH PG&E, AS REQUIRED UPON PHASING INTERSECTION. TESCO ADDRESS IS: 6002 E. OLIVE AVE. T/S
- 3 FURNISH AND INSTALL ITS COMMUNICATION EQUIPMENT AND CABINET 336L PER CITY STANDARDS ITS-20A, ITS-21B, ITS-21C, ITS-21D. FRONT DOOR SHALL FACE EAST.
- 4 FURNISH AND INSTALL PHOTO ELECTRIC CELL (PEC) PER CITY STANDARDS ON TOP OF SIGNAL STANDARD (C)
- 5 #6(E) PULLBOX TO BE INSCRIBED "ITS".
- 6 PULLBOX TO BE INSCRIBED "ELECTRICAL".
- 7 PG&E POINT OF CONNECTION, REFERENCE PG&E RULE 16 FOR CONNECTION REQUIREMENTS. PROJECT PROGRESS AND ELECTRICAL REQUIREMENTS SHALL ALSO BE RELAYED TO PG&E IN ORDER TO KEEP PROJECT ON SCHEDULE.

BENCHMARK:

CITY OF FRESNO BENCHMARK 646, A BRASS CAP MONUMENT ON A CONCRETE IRRIGATION STRUCTURE, IN THE SOUTHWEST QUADRANT OF OLIVE AVENUE AND FOWLER AVENUE, HAS AN NGVD29 ELEVATION OF 335.069 FEET PER CITY OF FRESNO BENCHMARK RECORDS.

CITY OF FRESNO TSSL SUPERVISOR

CITY OF FRESNO TRAFFIC OPERATIONS CENTER, TOC

- 8 FURNISH AND INSTALL PG&E NO. 2 PULL BOX (17"x30"x28") PER PG&E REQUIREMENTS. PULLBOX TO BE INSCRIBED "PG&E".
- 9 CONTRACTOR SHALL BE AWARE AND MITIGATE OVERHEAD LINES THAT ARE FOUND ON THE WEST AND SOUTH ALIGNMENT OF THIS INTERSECTION. OVERHEAD ELECTRICAL LINES EXIST WITHIN THE LIMITS OF CONSTRUCTION, MAINTAIN PROPER CLEARANCE. CONTACT P.G.&E. TO VERIFY WIRE LOCATION.
- 10 CONTRACTOR SHALL AVOID IRRIGATION PIPE (1" MIN.) AND UNDERGROUND STRUCTURES WHEN DIGGING FOUNDATION FOR TRAFFIC SIGNAL POLE.
- 11 FURNISH AND INSTALL WIRELESS ITS EQUIPMENT PER CITY OF FRESNO STANDARD DRAWINGS ITS-27A AND ITS-27B.
- 12 FURNISH AND INSTALL IP CAMERA PER CITY OF FRESNO STANDARD DRAWINGS ITS-18B
- 13 FURNISH AND INSTALL WIRELESS ITS EQUIPMENT PER CITY OF FRESNO STANDARD DRAWING ITS-27A AND ITS-27B ON WEST BOUND SIGNAL MAST ARM AT INTERSECTION OF N. CLOVIS AVE. AND E. OLIVE AVE. TO ESTABLISH COMMUNICATION. SEE SHEET 31 FOR DETAILS.

12-20-2023
DATE

12-21-2023
DATE

Background Service Alert
CALL
"811"

CITY OF FRESNO

TRAFFIC SIGNAL IMPROVEMENTS AT
OLIVE AVE. AND FOWLER AVE.

TRAFFIC SIGNAL PLAN

DEPARTMENT OF PUBLIC WORKS

REVIEWED:			
OFFICE ENG.	<u>ST</u>	CITY ENG.	<u>AM</u>
DR. BY:	<u>EWJ</u>	SHEET NO.	<u>29</u>
CH. BY:	<u> </u>	OF	<u>31</u> SHEETS
DATE:	<u> </u>		
SCALE:	<u>Scale</u>	4-E-3709	

W00945 FOWLER AND OLIVE

1. WORK SHALL BE DONE IN ACCORDANCE WITH THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS, 2015 EDITION, THE LATEST CALTRANS ADOPTED EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRANSVERSE AND LONGITUDINAL SECTIONS, 2015 EDITION, THE LATEST EDITION OF THE CITY OF FRESNO STANDARD SPECIFICATIONS AND DRAWINGS, SIGNAL POLES/STANDARDS FOR 113 KM/H WIND VELOCITY, 1"-A, AND TYPE 15 SHALL BE PER THE STATE STANDARD PLANS AND SPECIFICATIONS, DATED JULY 1997.
2. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THE STANDARD PLANS AND SPECIFICATIONS.
3. SCHEDULING OF WORK SHALL CONFORM TO THE PROVISIONS IN SECTION 8-1.02, "SCHEDULING OF WORK" OF THE STATE STANDARD SPECIFICATIONS. PARTICULAR ATTENTION SHALL BE DIRECTED TO "NO ABOVE GROUNDWORK, 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. THE INSTALLATION ACROSS ROADWAYS SHALL BE BY JACKING AND/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. TRAFFIC SIGNAL AND LIGHTING FACILITIES, INCLUDING CABINETS, STANDARDS, PULL BOXES, CONDUITS AND LOOP DETECTORS, ARE SHOWN IN THE 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. WITH EXCEPTION TO A FEDERALLY FUNDED PROJECT, ALL SALVAGED EQUIPMENT SHALL BE RETURNED TO THE CITY CORPORATION YARD AT 3191 W. BELMONT AVENUE, FRESNO. THE CONTRACTOR SHALL NOTIFY THE CITY BY CONTACTING 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" (5C), UNLESS OTHERWISE NOTED ON THE PLANS. PULL BOXES SHALL NOT BE INSTALLED IN CURB RAMPS OR 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 BE KEYS TO THE CITY OF FRESNO KEY. CONDUIT RUN SHALL NOT EXCEED 200' WITHOUT A PULL BOX. CONTRACTOR SHALL TIGHTEN DOWN ALL LOCKING LIDS TO A MINIMUM TORQUE SPEC OF 25 FT-POUNDS.
10. 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 LOCKING LID INSTALLED (SEE NOTE ABOVE). 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 CONDUITORS. STREET CONDUITS SHALL HAVE LAY IN STYLE LOGS THAT ARE CAST INTEGRAL WITH THE CONCRETE.
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 CONDUITORS HAVE BEEN INSTALLED.
16. SEALANT FOR FILLING THE SAWCUT LOGS SLOTS SHALL BE HOT-MELT RUBBERIZED ASPHALT SEALANT PER STATE OF CALIFORNIA SPECIFICATIONS OR LOOP SEALANT SHALL BE ELASTOMERIC SEALANT 3M, BLACK 5000, OR APPROVED EQUAL.
17. PEDESTRIAN PUSH BUTTONS SHALL HAVE 27-DIAMETER ACTUATORS AND COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
18. VEHICLE AND PEDESTRIAN SIGNAL SECTIONS SHALL UTILIZE LIGHT EMITTING DIODE (LED) SIGNAL MODULES IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. VEHICLE SIGNAL SECTIONS SHALL HAVE 12" DIAMETER LENSES WITH BACKPLATES AND TUNNEL VISORS. ALL VEHICLE AND PEDESTRIAN SIGNAL SECTIONS SHALL HAVE METAL AND RUBBER WASHERS INSTALLED ON THE INSIDE OF THE HEAD.
19. SAFETY LUMINAIRE SHALL BE LED PER CITY OF FRESNO SPECIFICATIONS (SECTION 23-1.23) FOR SAFETY LUMINAIRE REQUIREMENTS.
20. PEDESTRIAN SIGNAL UNITS SHALL BE FULL SYMBOL, MUTICOM COMPLIANT, LED "COUNTERDOWN" TYPE WITH 9 INCH NUMBERS; GELCORE MODEL PST-CFF-01A-18 OR APPROVED EQUAL. SIGNAL ALIGNMENT SHALL BE AS DIRECTED BY THE ENGINEER.
21. THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE OPTION (GTY) 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 C STREET, FRESNO, CA 93706 AND NOTIFY THE CITY TRAFFIC SIGNAL SHOP, (559) 621-1312, AT LEAST TWO (2) WORKING DAYS PRIOR TO DELIVERY.
22. CONTRACTOR SHALL SCHEDULE WITH CONSTRUCTION MANAGEMENT (559) 621-5600 ALL EQUIPMENT DELIVERIES THAT REQUIRE TESTING BY THE CITY TSSB. SIGNAL AND JUNC. EQUIPMENT SHALL BE DELIVERED BY THE CONTRACTOR ONLY AT A PREARRANGED TIME AND DAY.
23. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW OVERSIZED STREET SIGNAL 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.
24. SIGNS SHALL BE TYPE III OR FLOW REFLECTIVE SHEETING PER ASTM D4958-09. ALL SIGNS SHALL BE COVERED WITH A TRANSLUCENT ANTI-GRAFFITI FLOORGLASS OR FILM THAT DOES NOT IMPAIR THE REFLECTIVITY OF THE SIGN.
25. 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.
26. TONEABLE CONDUIT SHALL BE CHECKED FOR CONTINUITY AND BONDED TO EARTH GROUND.
27. CONDUITS EXITING THE CONTROLLER FOUNDATION AND ENTERING INTO THE CONTROLLER CABINET SHALL BE ALIGNED TO ENTER WITHIN THE TEES SPICED CABINETS WITHOUT ANY MODIFICATIONS TO THE CABINET BASE.
28. LUMINAIRE SIGNALS SHALL MATCH EXISTING SURFACES AFTER SIGNAL FACILITIES ARE REMOVED AND/OR RELOCATED.
29. ALL LUMINAIRE CIRCUITS SHALL BE FUSED. THE FUSE SHALL BE LOCATED IN THE LUMINAIRE HOUSING AT EACH POLE (5 AMP KTK FUSE IN TROM BEB TYPE FUSE HOLDER).
30. THE CONTRACTOR SHALL FURNISH AND INSTALL POLE NUMBERS WHEN PG&E INDICATES THE NUMBER. POLE NUMBERS SHALL BE SHOWN ON THE AS BUILT DRAWINGS.
31. ACCESSIBLE PEDESTRIAN SIGNALS (APS) WILL NOT BE INSTALLED AND ARE NOT PART OF THIS PROJECT.
32. ALL TRAFFIC SIGNAL AND STREET LIGHT MATERIALS SHALL BE APPROVED BY THE CITY OF FRESNO TSSB DIVISION PRIOR TO ORDERING OF MATERIALS. ALL MATERIALS NOT APPROVED PRIOR TO ORDERING SHALL BE SUBJECT TO REJECTION AT NO COST TO THE CITY OF FRESNO.
33. 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 INSTALLED IN CONDUITS.
34. ANY BROKEN PULL BOX DAMAGED BY CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.
35. ANY PULL BOX ADJUSTED TO GRADE MUST BE ABLE TO ACCEPT A CITY OF FRESNO APPROVED LOCKING LID AND THE CONDUITS MUST BE ADJUSTED TO MEET THE CITY STANDARD.
36. ALL VEHICLE AND PEDESTRIAN SIGNAL SECTIONS SHALL BE TERMINATED USING AN INSULATED SPADER TERMINAL PROPERLY SIZED FOR THE SIZE OF THE SOLDER. THE CONTRACTOR SHALL FURNISH AND INSTALL THE PROPER TOOLING AND TINED SOLDER PRIOR TO INSTALLATION.
37. THE CONTRACTOR SHALL PROVIDE TSSB WITH ONE (1) PDF COPY AND TWO (2) FULL SIZE SETS OF AS-BUILT DRAWINGS PRIOR TO REQUESTING A PRE-TURN ON INSPECTION.

1. WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF FRESNO STANDARD SPECIFICATIONS, DRAWING, TECHNICAL SPECIFICATIONS AND THE SPECIAL PROVISIONS.
2. IF ITS FACTS, INCLUDING THE CABINETS, CAMERA STANDARDS, VAULTS, CONDUITS, ARE SHOWN IN THEIR APPROXIMATE LOCATION, THE CONTRACTOR SHALL MARK FINAL LOCATIONS IN THE FIELD AND NOTIFY THE ENGINEER AT LEAST 2 WORKING DAYS PRIOR TO COMMUNING WORK TO VERIFY MARKED LOCATIONS.
3. CONTRACTOR SHALL ARRANGE WITH UTILITY COMPANIES FOR ALL REQUIRED UTILITY RELOCATIONS, INCLUDING OVERHEAD CONFLICTS.
4. ALL UTILITY CABLES SHALL BE PROTECTED FROM ALL POTENTIAL SOURCES OF DAMAGE SUCH AS PEDESTRIANS, VEHICLES, CONSTRUCTION EQUIPMENT AND MATERIALS OR ANY OTHER POTENTIAL SOURCE OF DAMAGE SUCH AS, BUT NOT LIMITED TO, PROTRUSIONS OF CONCRETE, STEEL, AND GLASS.
5. FIBER OPTIC CABLE IDENTIFICATION LABELS SHALL BE RESTORED OR REPLACED IF LABELS ARE DAMAGED OR REMOVED DURING REMOVAL, RELOCATION, OR REPLACEMENT OF CABLES IN VAULTS OR CABINETS TO THE SATISFACTION OF THE ENGINEER.
6. CONTRACTOR SHALL FURNISH AND INSTALL C115 CABLE IN 332 CABBINET PER CITY OF FRESNO STANDARD E-349 AS NOTED ON THE PLANS.
7. ALL COMMUNICATION SYSTEM SHALL BE OPERATIONAL AND RESTORED IN KIND, UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL MAINTAIN 2 FEET LOU MINIMUM EXCESS OF IP CAMERA CABLES IN THE #6 JULL BOX.
9. CONTRACTOR SHALL USE RED TAPE FOR ITS CAMERA AND BLUE TAPE FOR WIRELESS ANTENNA CABLE.
10. PRIOR TO ANY EXCAVATION AND/OR BORING, CONTRACTOR SHALL POTHOLE ALL UTILITY CROSSINGS TO VERIFY SIZE, DEPTH AND TYPE OF PIPE, MAINTAIN MINIMUM CLEARANCES AND EXISTING UTILITIES PER APPLICABLE CITY OF FRESNO STANDARD SPECIFICATIONS, DRAWING E-8, AND E-9.
11. SURFACE INTERIOR AND EXTERIOR FINISH OF ALUMINUM COMMUNICATION CABINET MUST COMPLY WITH MIL-A-8625 TYPE II, CLASS I COATING (REF: SECTION 86-30.1 OF THE 2010 STATE STANDARD SPECIFICATIONS).
12. POLE HANDHOLE SHALL BE WELDED IN PLACE AFTER ALL PROVIDED WORK ON EXISTING POLE IS COMPLETED AND INSPECTED. CONTRACTOR SHALL PROTECT CONDUCTORS FROM DAMAGE DURING WELDING.
13. CONTRACTOR SHALL PROVIDE A LOCK AND KEY TO THE CONTROLLER TO THE NETWORK SWITCH IN THE COMMUNICATION CABINET SHALL BE REPLACED WITH NEW OUTDOOR SHIELDED CAT5E CABLE, UNLESS OTHERWISE NOTED ON THE INTERSECTION PLANS.
14. ANY DEFECTIVE EXISTING LOOP MODULES SHALL BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR. ALL PROPOSED LOOP MODULES (222 TWO CHANNEL) AS NOTED ON THE PLANS SHALL BE INSTALLED PER CITY STANDARDS AND SPECIFICATIONS.
15. ALL IP CAMERA SHALL BE PANORAMIC, UNLESS OTHERWISE NOTED ON PLANS.
16. REMOVE UN-USED ITS EQUIPMENT IN TRAFFIC SIGNAL (332) CABINET AS DIRECTED BY THE ENGINEER.


1. THE CONTRACTOR SHALL BE OBLIGATED TO FAMILIARIZE THEMSELVES WITH THE CURRENT SIGNAL POLES IN THE FIELD PRIOR TO CONSTRUCTION.
2. RADIO AND ANTENNA SHALL BE MOUNTED BEHIND THE SIGNAL HEAD FOR THE LEAST AMOUNT OF WIND LOADING.
3. SHIELDED, OUTDOOR RATED CATSE CABLE LENGTH SHALL NOT EXCEED 300 FEET. SEE CITY STANDARDS ITS-27A AND IT-27B FOR FURTHER DETAILS.
4. A LOW LOSS 50 OHM COAX CABLE SHALL BE USED TO CONNECT THE ANTENNA TO THE ACCESS POINT UNIT.
5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE ANY VISUAL OBSTACLES THAT MAY OBSTRUCT LINE OF SITE PRIOR TO INSTALLATION, SUCH AS TREES, GRADE SEPARATIONS, ETC.
6. A SEPARATION OF AT LEAST 2 FEET BETWEEN ANTENNAS IS REQUIRED.
7. TERMINATIONS OF OUTDOOR RATED SHIELDED CABLE WITH SHIELDING GROUNDING, CONTRACTOR SHALL USE RJ-45 SHIELDED MODULAR CONNECTOR WITH INTERNAL GROUND.
8. CATSE CONNECTION TO ACCESS POINT WILL BE MADE USING THE WATERPROOF CONNECTOR SUPPLIED WITH THE ACCESS POINT.
9. ALL ANTENNAS SHALL BE ORIENTED IN THE VERTICAL POLARIZATION POSITION WHEN INSTALLED.
10. CONTRACTOR SHALL TRIM AND DISPOSE OF BRANCHES FROM ALL TREES THAT MAY OBSTRUCT LINE OF SIGHT OF WIRELESS ITS PRIOR TO INSTALLATION AS DIRECTED BY THE ENGINEER.
11. RADIO RSSI BETWEEN ADJACENT INTERSECTIONS SHALL BE BETWEEN -60 DBM AND -40 DBM FOR ALL RADIOS INSTALLED ON THIS PROJECT. OPTIMAL RSSI IS -55 DBM. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS AT ADJACENT INTERSECTIONS IF NECESSARY.
12. RADIO CQ VALUES SHALL BE A MINIMUM OF 75% PER MANUFACTURER RECOMMENDATION, CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS AT ADJACENT INTERSECTIONS IF NECESSARY

1. TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT, TOLL FREE, AT 1-800-223-2260 OR 811.
2. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF AN OWNER'S WRITTEN AUTHORIZATION AND/OR SIGNED USE AGREEMENT PRIOR TO THE START OF WORK FOR ANY TEMPORARY WORK AREA, STANDING AREA, OR EQUIPMENT STORAGE. FACILITIES TO BE USED FOR THIS PROJECT, AT THE COMPLETION OF WORK, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF A WRITTEN RELEASE LETTER STATING THAT ALL TEMPORARY USES FACILITIES HAVE BEEN RESTORED BACK TO THE OWNER'S SATISFACTION.
3. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES AND PROVIDE PROTECTION PRIOR TO AND DURING CONSTRUCTION.
4. IN THE EVENT SERVED ELECTRICAL LINES EXIST WITHIN THE LIMITS OF CONSTRUCTION, MAINTAIN PROPER CLEARANCE CONTACT P.G. & E TO VERIFY WIRE LOCATION.
5. ANY PULL BOX EXCESS, ADJUSTED, MODIFIED OR FALLS WITHIN THE SCOPE OF WORK SHALL BE CLEANED TO EXPOSED DRAIN HOLE, GROUTED, AND DUCT SEALED.
6. CONTRACTOR SHALL REMOVE AND REPLACE ALL AFFECTED CONCRETE AND/OR ASPHALT PAVING IMPROVEMENTS DURING CONSTRUCTION TO EXISTING CONDITIONS PER CITY STANDARDS AND TO THE SATISFACTION OF THE CITY INSPECTOR AND/OR AS DIRECTED BY ENGINEER. REPLACEMENT AND/OR SAWCUT OF CONCRETE SHALL BE TO THE NEAREST EXISTING CONCRETE JOINTS.
7. REMOVE AND DISPOSE OF ALL AFFECTED EXISTING CONCRETE CURB & GUTTER AND/OR CONCRETE CURB AND/OR HANDICAP RAMP AND/OR CONCRETE SIDEWALK AND/OR AC OR CONCRETE PAVEMENT.
8. INSTALL CONDUITS UNDER SIDEWALK AND/OR AS SHOWN ON PLAN BY DIRECTIONAL BORING PER PROJECT SPECIFICATIONS.
9. CONTRACTOR SHALL CONTACT PG&E PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES FOR A DISCONNECT/RECONNECT OF POWER SERVICE.
10. ALL FACILITIES SUCH AS ELECTRIC, WATER AND OTHER UTILITY MANHOLES, WATER VALVE BOXES INCLUDING CAP AND LID, ETC., WHETHER EXISTING OR NEWLY INSTALLED BY THIS PROJECT SHALL BE ADJUSTED TO FINAL GRADE AS NECESSARY BY THE CONTRACTOR. ALL ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE OF THE WORK BY THE CITY.
11. CONTRACTOR SHALL COORDINATE HIS SCHEDULE WITH ALL UTILITY COMPANIES AFFECTED BY THIS WORK. NO COMPENSATION SHALL BE MADE FOR SUCH COORDINATION WITH UTILITY COMPANIES.
12. CONTRACTOR SHALL REPLACE AND/OR REPAIR ALL DAMAGED FACILITIES AFFECTED DURING CONSTRUCTION TO EXISTING ADJACENT IMPROVEMENTS TO THE SATISFACTION OF THE CITY INSPECTOR.

LED = LED INTERSECTION SAFETY LIGHT LUMINAIRE TO BE FURNISHED AND INSTALLED TO 150W HPS LUMINAIRE REQUIREMENTS. REFERENCE SECTION 23-1.23.

Underground Service Alert

CALL
"811"
(USA NORTH)
TWO WORKING DAYS
BEFORE YOU DIG



PW FILE NO.	12735
PROJ. ID.	PW00945
FUND NO.	31578
ORG. NO.	189901

TRAFFIC SIGNAL GENERAL NOTES, DETAILS AND SCHEDULES

REVIEWED: OFFICE ENG. ST CITY ENG. 12m

DR. BY: EWJ SHEET NO. 30
CH. BY: _____ OF 31 SHEETS
DATE: _____
SCALE: _____ 4-E-3710
Scale

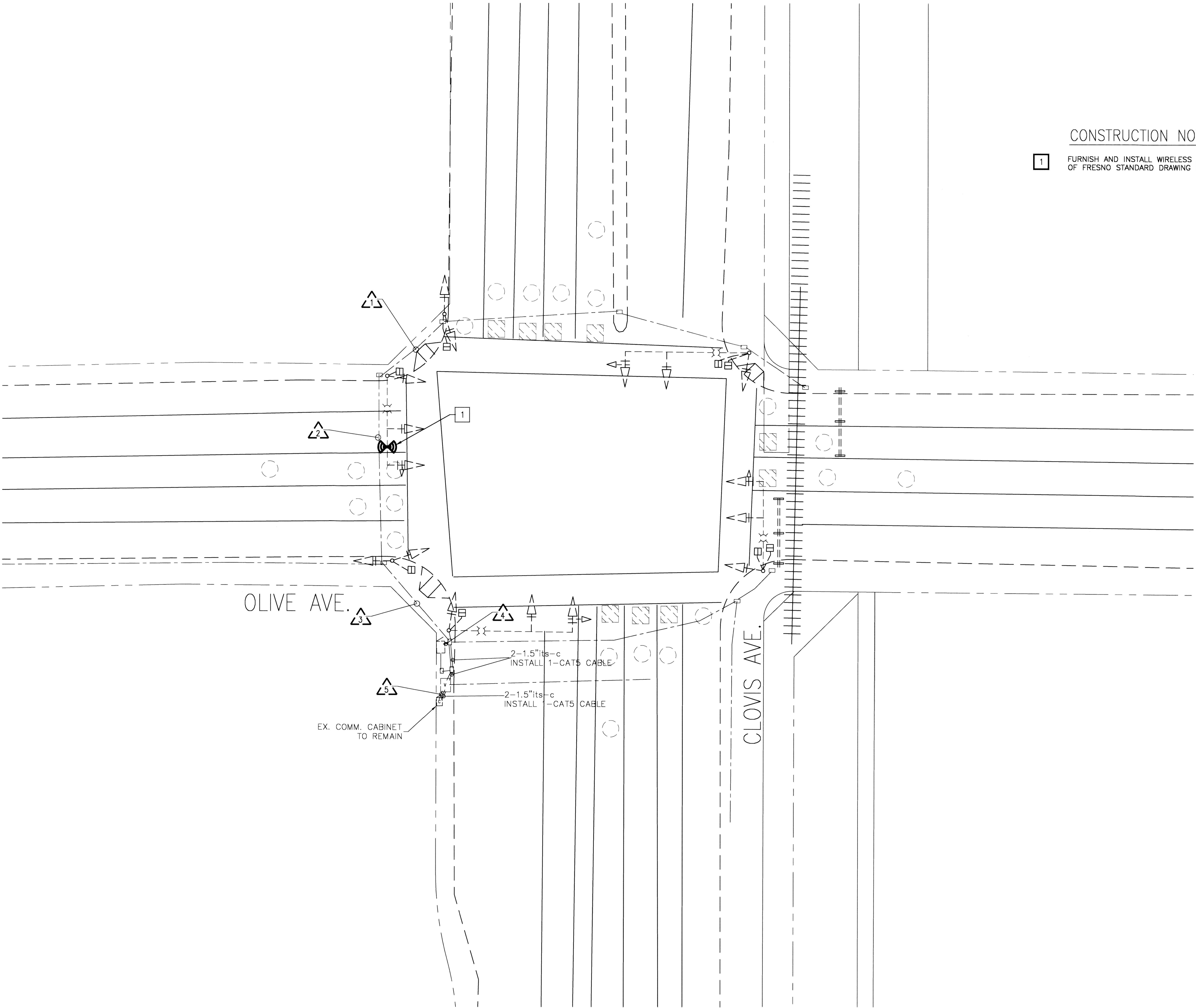
CLOVIS/OLIVE CONDUCTOR SCHEDULE						
AWG OR CABLE	CONDUIT		CONDUIT		CONDUIT	
	1 4"	2 4"	3 4"	4 4"	5 4"	6 1.5"
7 COND. * 5 COND. CABLE	3	4	5	7	5	—
* 3 COND. CABLE	1	2	2	4	—	—
TYPE C D.L.C. LOOP DETECTOR	8	10	18	18	—	—
SAFETY LIGHTS #8 *	2	2	2	2	—	—
#10 AWG *	—	—	—	—	—	3
CAT 5e (SHIELDED)	—	1(1)	1(1)	—	—	—
CONDUIT FILL %	19%	23%	27%	18%	—	—
ALL CONDUITS AND CONDUCTORS ARE EXISTING, UNLESS OTHERWISE NOTED.						
* NUMBER INDICATIONS ARE THE NUMBER OF CABLES WITHIN CONDUIT.						
# ADDITIONAL CONDUCTORS SHALL BE INSTALLED.						

NOTES:

- ANY PULL BOX ACCESSED, ADJUSTED, MODIFIED OR FALLS WITHIN THE SCOPE OF WORK SHALL BE CLEANED TO EXPOSED DRAIN HOLE, GROUTED, AND DUCT SEALED.
- CONTRACTOR SHALL REMOVE AND REPLACE ALL AFFECTED CONCRETE AND/OR ASPHALT PAVING IMPROVEMENTS DURING CONSTRUCTION TO EXISTING CONDITIONS PER CITY STANDARDS AND TO THE SATISFACTION OF THE CITY INSPECTOR AND/OR AS DIRECTED BY ENGINEER. REPLACEMENT AND/OR SAWCUT OF CONCRETE SHALL BE TO THE NEAREST EXISTING CONCRETE JOINTS.
- REMOVE AND DISPOSE OF ALL AFFECTED EXISTING CONCRETE CURB & GUTTER AND/OR CONCRETE CURB AND/OR HANDICAP RAMP AND/OR CONCRETE SIDEWALK AND/OR AC OR CONCRETE PAVEMENT.
- INSTALL CONDUITS UNDER SIDEWALK AND/OR AS SHOWN ON PLAN BY DIRECTIONAL BORING PER PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT PG&E PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES FOR A DISCONNECT/RECONNECT OF POWER SERVICE.

CONSTRUCTION NOTES

- 1
- FURNISH AND INSTALL WIRELESS ANTENNA ON SIGNAL MAST ARM PER CITY OF FRESNO STANDARD DRAWING ITS-27A, ITS-27B AND SPECIFICATIONS.



LEGEND:

-
- I.T.S WIRELESS EQUIPMENT, FURNISHED AND INSTALLED PER COF STANDARD I.T.S-27A AND ITS-27B.

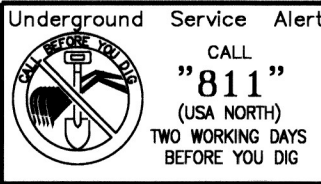
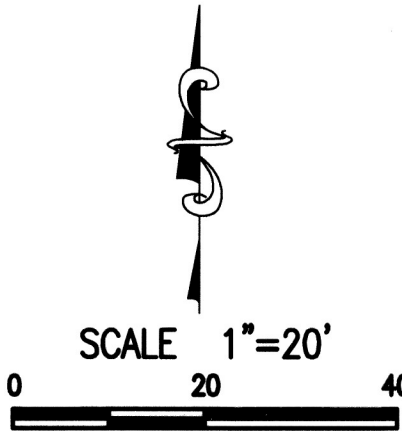


PW FILE NO. 12725
PROJ. ID. PW00945
FUND NO. 31578
ORG. NO. 189601

REF. & REV.

CITY OF FRESNO
TRAFFIC SIGNAL IMPROVEMENTS AT
OLIVE AVE. AND FOWLER AVE.
CLOVIS AND OLIVE DETAIL PLAN

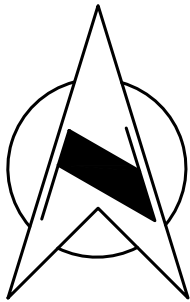
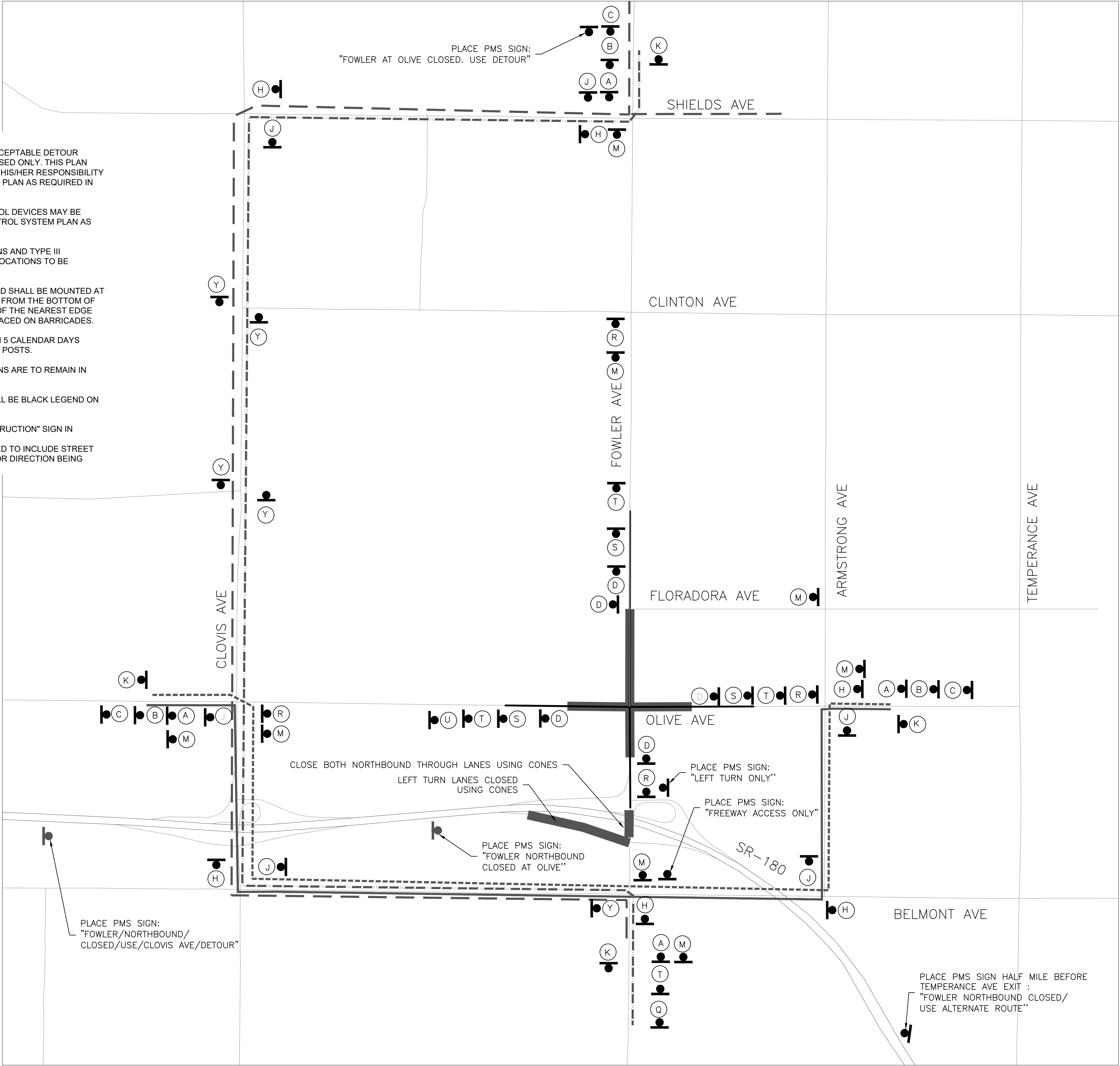
REVIEWED:
OFFICE ENG.
DR. BY: SHEET NO. 31
CH. BY: OF 31 SHEETS
DATE:
SCALE: 4-E-3711



NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW ACCEPTABLE DETOUR ROUTES WHEN THE INTERSECTION IS CLOSED ONLY. THIS PLAN DOES NOT RELIEVE THE CONTRACTOR OF HIS/HER RESPONSIBILITY TO PROVIDE A TRAFFIC CONTROL SYSTEM PLAN AS REQUIRED IN THE SPECIFICATIONS AND CA MUTCD.
2. ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE REQUIRED AS PART OF THE TRAFFIC CONTROL SYSTEM PLAN AS DETERMINED BY THE ENGINEER.
3. LOCATIONS OF CONSTRUCTION AREA SIGNS AND TYPE III BARRICADES ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
4. SIGNS ERECTED ON THE SIDE OF THE ROAD SHALL BE MOUNTED AT A HEIGHT OF AT LEAST 7 FEET MEASURED FROM THE BOTTOM OF THE SIGN PLATE TO THE TOP ELEVATION OF THE NEAREST EDGE OF THE PAVEMENT EXCEPT FOR SIGNS PLACED ON BARRICADES.
5. SIGNS THAT WILL BE IN PLACE MORE THAN 5 CALENDAR DAYS SHALL BE INSTALLED ON METAL OR WOOD POSTS.
6. ALL EXISTING STOP AND STOP AHEAD SIGNS ARE TO REMAIN IN PLACE DURING CONSTRUCTION.
7. ALL SIGNS, EXCEPT R11-2 AND R11-4, SHALL BE BLACK LEGEND ON ORANGE BACKGROUND.
8. INCLUDE "BUSINESS OPEN DURING CONSTRUCTION" SIGN IN TRAFFIC CONTROL SYSTEM PLAN.
9. DETOUR SIGNAGE AT INTERSECTIONS NEED TO INCLUDE STREET NAME PLAQUE AND DIRECTION PLAQUE FOR DIRECTION BEING DETOURED.

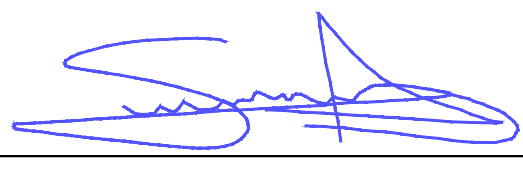


- DETOUR ROUTE EASTBOUND
- - - - - DETOUR ROUTE WESTBOUND
- . - . - . DETOUR ROUTE NORTHBOUND
- - - - - DETOUR ROUTE SOUTHBOUND



TEMPORARY WORK ZONE SIGNS

	SIGN	CA MUTCD CODE	PANEL SIZE (INCHES)	DESCRIPTION	POST LENGTH (FEET)
■	A	W20-2	36 X 36	DETOUR AHEAD	12
		W16-2aP	24 X 12	500 FT	
■	B	W20-2	36 X 36	DETOUR AHEAD	12
		W16-2aP	24 X 12	1000 FT	
■	C	W20-2	36 X 36	DETOUR AHEAD	12
		W16-2aP	24 X 12	1500 FT	
■	D	R11-2	48 X 30	ROAD CLOSED	TYPE III BARRICADE
□	E	R11-4	60 X 30	ROAD CLOSED TO THRU TRAFFIC	TYPE III BARRICADE
		M4-10L	48 X 18	DETOUR LEFT	TYPE III BARRICADE
□	F	R11-4	60 X 30	ROAD CLOSED TO THRU TRAFFIC	TYPE III BARRICADE
		M4-10R	48 X 18	DETOUR RIGHT	TYPE III BARRICADE
□	G	M4-8	21 X 9	DETOUR	12
■	H	M4-10L	48 X 18	DETOUR LEFT	12
■	J	M4-10R	48 X 18	DETOUR RIGHT	12
■	K	M4-8a	24 X 18	END DETOUR	12
□	L	G20-2	36 X 18	END ROAD WORK	12
■	M	W20-1	36 X 36	ROAD WORK AHEAD	12
□	N	W20-1	36 X 36	ROAD WORK AHEAD	12
		W16-2aP	24 X 12	500 FT	
□	P	W20-1	36 X 36	ROAD WORK AHEAD	12
		W16-2aP	24 X 12	1000 FT	
■	Q	W20-1	36 X 36	ROAD WORK AHEAD	12
		W16-2aP	24 X 12	1500 FT	
■	R	W20-3	36 X 36	ROAD CLOSED AHEAD	12
■	S	W20-3	36 X 36	ROAD CLOSED AHEAD	12
		W16-2aP	24 X 12	500 FT	
■	T	W20-3	36 X 36	ROAD CLOSED AHEAD	12
		W16-2aP	24 X 12	1000 FT	
■	U	W20-3	36 X 36	ROAD CLOSED AHEAD	12
		W16-2aP	24 X 12	1500 FT	
□	V	C9A (CA)	36 X 36	FLAGGER AHEAD	12
□	W	C30 (CA)	30 X 30	LANE CLOSED	12
□	X	W3-4	36 X 36	PREPARE TO STOP	12
■	Y	SC3-1 (CA)	48 X 18	DETOUR STRAIGHT	12
□	Z	G7-1 (CA)	VAR X 18	STREET NAME	12
□	A1	G7-2 (CA)	VAR X 18	ADVANCE STREET NAME	12
□	A2	W21-1A	36 X 36	WORKERS AHEAD	12

■ - INDICATES APPLICABLE SIGN

DESIGNED: D. KWAN	DATE: 1/2/24	RECORD DRAWING		SCALE		 SUPERVISING ENGINEER	 No. 076724 Exp. 12/31/24 STATE OF CALIFORNIA CIVIL ENGINEER	PROJECT			DEPARTMENT OF PUBLIC WORKS AND PLANNING			
DRAWN: E. CARMONA	DATE: 1/2/24			NOT TO SCALE				FOWLER AVE & OLIVE AVE INTERSECTION IMPROVEMENTS			DETOUR ROUTE PLAN			
CHECKED: S. ARTAL	DATE: 1/2/24							ROAD NO. D0600			BRIDGE NO. N/A		DRAWING NO. 11302	
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.													SHEET NO. 32	
											TOTAL 32			