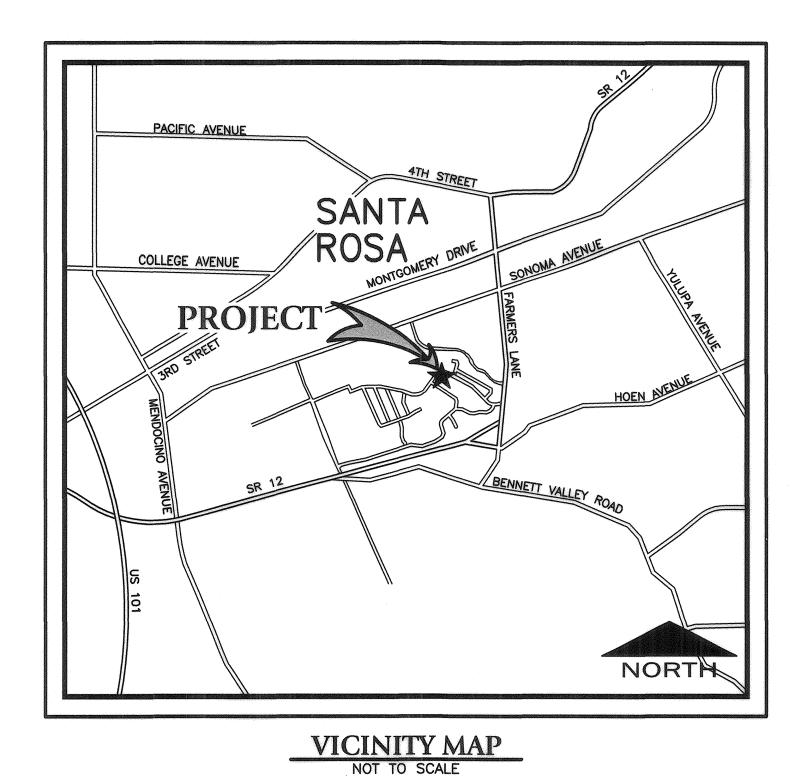
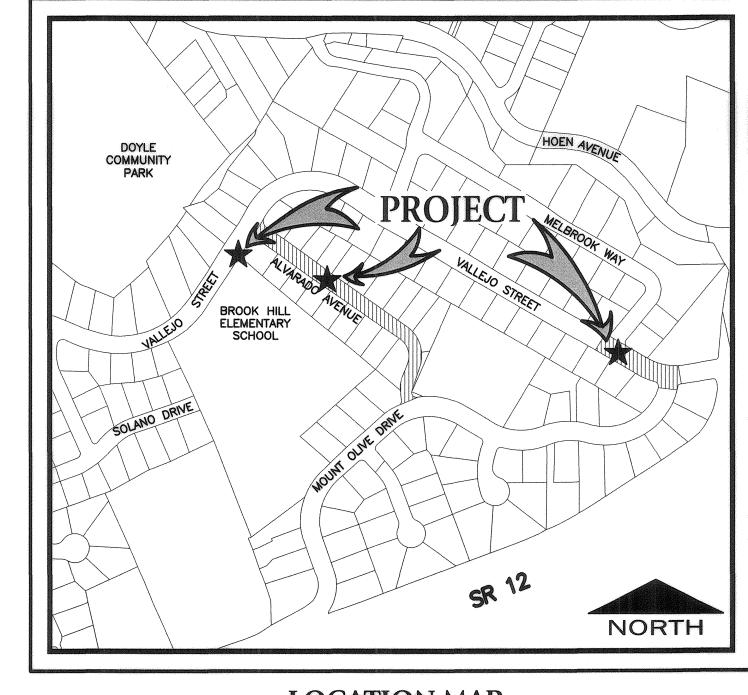


# ALVARADO AVE AND VALLEJO ST WATER AND SEWER IMPROVEMENTS

CONTRACT NO. C02004





LOCATION MAP

NOT TO SCALE

### INDEX OF SHEETS

- ALVARADO AVENUE CROSS SECTIONS STA 9+75 STA 18+25

- LEGEND, ABBREVIATIONS AND SITE AERIAL
- STRUCTURAL NOTES
- STRUCTURAL DETAILS
- JUNCTION STRUCTURE RECORD PLAN INFORMATION
- PROJECT LOCATION & VALLEJO STREET PAVING LIMITS APPROXIMATE LOCATION OF UNDERGROUND UTILITIES

BEFORE EXCAVATING CALL U.S.A. UNDERGROUND SERVICE ALERT TWO WORKING DAYS BEFORE ALL PLANNED WORK OPERATIONS

FINAL PAY ITEM(S) BID ITEM(S) NAME AND QUANTITY

ROADWAY EXCAVATION 750 CY

RECORD PLAN DATA					
PROJECT START: PROJECT END:	WATER SERVICE TYPE: MANUFACTURER:				
GEN. CONTRACTOR:	FIRE HYDRANT TYPE:				
SUPERINTENDENT:	MANUFACTURER:				
UNDERGROUND CONTRACTOR:	INSPECTOR: CONSTRUCTION				
FOREMAN:	MANAGER:				
SEWER PIPE TYPE:	RECORD PLANS BY:				
MANUFACTURER:	ADDITIONAL INFO:				
SEWER FITTINGS MANUFACTURER:					
M.H. MANUFACTURER:					
WATER PIPE TYPE:					
MANUFACTURER:					
WATER VALVE MANUFACTURER:					

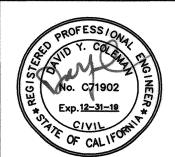
CONTRACT NO. C02004 SHEET 1 OF 16 FILE NO. 2017-0043

	AGGREGATE BASE	MAX	MAXIMUM
	ASPHALT CONCRETE ASBESTOS CEMENT PIPE	MBGR MFR	METAL BEAM GUARD RAIL MANUFACTURE
	ALGEBRAIC DIFFERENCE AMERICANS WITH DISABILITIES ACT	MG MH	MILLION GALLONS MANHOLE
Γ	ADAPTER AGGREGATE	MIN MISC	MINIMUM MISCELLANEOUS
Л	ALUMINUM	MJ	MECHANICAL JOINT
	ANGLE POINT ASSESSORS PARCEL NUMBER	MON MSL	MONUMENT MEAN SEA LEVEL
ROX	APPROXIMATE	N	NORTH
	AIR RELEASE VALVE AVENUE	NO NA	NUMBER NOT APPLICABLE
3	BEGIN HORIZONTAL CURVE BUILDING	NIC NPT	NOT IN CONTRACT NATIONAL PIPE THREAD
í	BOULEVARD	oc	ON CENTER
	BENCHMARK BLOWOFF	OD OH	OUTSIDE DIAMETER OVERHEAD
	BUTTERFLY VALVE BEGIN VERTICAL CURVE	OZ PA	OUNCE PLANTER AREA
	BOTTOM OF WALL	PC	POINT OF CURVATURE
	BRELJE & RACE COMBINATION AIR & VACUUM RELEASE VALVE	PCC PCC	POINT OF COMPOUND CURVATURE PORTLAND CEMENT CONCRETE
	CATCH BASIN CALIFORNIA BUILDING CODE	PD PE	PLANTER DRAIN PLAIN END
	CONTROLLED DENSITY FILL	PG	PAD GRADE
	CHECK CAST-IN-PLACE PIPE	PIV ®	POST INDICATOR VALVE PROPERTY LINE
	CENTERLINE CENTERLINE	PN POC	PAVING NOTCH POINT OF CONNECTION
	CLASS	POC	POINT ON CURVE
	CLEAR CORRUGATED METAL PIPE	POS POT	PRIVATE OPEN SPACE POINT ON TANGENT
A	CORRUGATED METAL PIPE ARCH CLEANOUT	PP PRC	POWER POLE POINT OF REVERSE CURVATURE
<b>K</b>	COAXIAL CABLE	PRV	PRESSURE REDUCING VALVE
C D	CONCRETE CONDUIT	PSI PSV	POUND PER SQUARE INCH PRESSURE SUSTAINING VALVE
3	CLEANOUT TO GRADE CONTROL POINT	PT PUE	POINT OF TANGENCY PUBLIC UTILITY EASEMENT
3	COUPLING	PVC	POLYVINYL CHLORIDE
	CURB RETURN CORRUGATED STEEL PIPE	PVI PVMT	POINT OF VERTICAL INTERSECTION PAVEMENT
	CENTER CUBIC YARDS	PWE R	PUBLIC WATER EASEMENT RADIUS
	CENTER TO CENTER	RC	RELATIVE COMPACTION
	CURB AND GUTTER DOUBLE	RCB RCP	REINFORCED CONCRETE BOX REINFORCED CONCRETE PIPE
	DOUBLE CHECK DETECTOR CHECK DOUBLE DETECTOR CHECK	RD RD	ROAD ROOF DRAIN
	DETECTOR	RED	REDUCER
	DROP INLET DIAMETER	REF RPBP	REFERENCE REDUCED PRESSURE BACKFLOW PREVE
	DUCTILE IRON PIPE DRIVE	RSC RT	REMOTE SUPERVISORY CONTROL RIGHT
	DOWNSTREAM	RT	RING TIGHT
	DRAWING DRIVEWAY	RW R/W	RECLAIMED WATER RIGHT OF WAY
	EAST END HORIZONTAL CURVE	S S	SOUTH SLOPE
	ECCENTRIC	S.A.D.	SEE ARCHITECTURAL DRAWINGS
•	EFFLUENT (SEWER) EXISTING GROUND	SCADA SCH	SCHEDULE
;	ELEVATION ELECTRICAL	SD SDCB	STORM DRAIN STORM DRAIN CATCH BASIN
,	ELBOW	SDCO SDDI	STORM DRAIN CLEANOUT STORM DRAIN DROP INLET
Γ	EDGE OF PAVEMENT EASEMENT	SDE	STORM DRAIN EASEMENT
	END VERTICAL CURVE EACH WAY	SDMH SE	STORM DRAIN MANHOLE SEWER EASEMENT
Т	EXISTING EXISTING	SF SOF	SQUARE FEET SLIP ON FLANGE
	FACE OF CURB	SO	SIDE OPENING (SD)
	FLANGED COUPLING ADAPTER FIRE DEPARTMENT CONNECTION	SPEC SS	SPECIFICATION STAINLESS STEEL
	FLARED END SECTION FINISHED FLOOR	SS SSCO	SANITARY SEWER SANITARY SEWER CLEANOUT
	FINISHED GRADE	SSMH	SANITARY SEWER MANHOLE
	FIRE HYDRANT FLOWLINE	ST STA	STREET STATION
	FLOWLINE	STD STL	STANDARD
)	FLANGE FLOWLINE OF SIDE OPENING	SVC	STEEL SERVICE
3	FLEXIBLE FORCE MAIN (PRESSURE)	SWE SY	SIDEWALK EASEMENT SQUARE YARDS
	FIBERGLASS REINFORCED PLASTIC	S/W	SIDEWALK
	FEET FOOTING	T TAN	TANGENT TANGENT
′	GALVANIZED GRADE BREAK	TB TC	TOP OF BOX TOP OF CURB
	GALLONS PER MINUTE	TCE	TEMPORARY CONSTRUCTION EASEMENT TOP OF DIKE
	GROUND GALVANIZED STEEL PIPE	TD TEL	TELEPHONE
	GAS VALVE GATE VALVE	TEMP TF	TEMPORARY TOP OF FOUNDATION
	HOSE BIBB	TG THD	TOP OF GRATE THREADED
	HEADER BOARD HOT DIPPED GALVANIZED	TW	TOP OF WALL
E	HIGH DENSITY POLYETHYLENE HIGH POINT	TYP UFFG	TYPICAL UNDER FLOOR FINISHED GRADE
	HIGH PRESSURE GAS	UNO	UNLESS NOTED OTHERWISE VERTICAL CURVE
	HIGHWAY IRRIGATION CONTROL VALVE	W	WEST
	INSIDE DIAMETER INVERT	W WM	WATER WATER METER
	IRON PIPE	WNF WS	WELD NECK FLANGE WATER SERVICE
	IRON PIPE SIZE IRRIGATION	WT	WEIGHT
	INTERNATIONAL SIGN ASSOCIATION JOINT POLE	WV	WATER VALVE DEGREES
	JOINT TRENCH	•	MINUTES
	ARC LENGTH LENGTH	<b></b> Δ	SECONDS DELTA
	LINEAL FEET	රී	AND
	LIP OF GARAGE LOW POINT	<b>@</b> # #_	AT NUMBER
	LEFT	Ħ	POUNDS

LEGEND		
LINES		
EXISTING BOUNDARY		
UTILITY & TOPOGRAPHY	EXISTING	PROPOSED
DROP INLET	graving B The The	D
DROP INLET WITH SIDE OPENINGS		
STORM DRAIN, MANHOLE & CATCH BASIN	24°SD SDMH	24"SD SDMH
SEWER MAIN, MANHOLE & CLEAN OUT	CO SSMH	STD STD 500 CO SSMH
SEWER LATERAL & CLEANOUT	Communication of the second of	STD 513 CO
IRRIGATION CONTROL VALVE BOX & SERVICE	PR	STD. O. S.L
FIRE HYDRANT & SERVICE ASSEMBLY	FH	857 PH FH
WATER MAIN, GATE VALVE, CROSS & ELBOW	January W.	STD   B77 B IGV
WATER MAIN, BLOWOFF, TEE, GATE VALVE, CROSS & BEND	D-W-W-W-	STD STD 1 861 877 9 IGV
SINGLE WATER SERVICE (SEE PLANS FOR SIZE)		STD 863 & 889
DUAL WATER SERVICE (SEE PLANS FOR SIZE)		STD 864
TEMPORARY BLOWOFF, REDUCER & TIE-IN	3" BO STD 859	3" BO STD 859
END CAP OR PLUG		Ew
GAS MAIN, VALVE & SERVICE	ev.;	cv∂—c——c——
ELECTRICAL MANHOLE	$\left(\frac{1}{2}\right)^{n} = 1$	E
TELEPHONE MANHOLE	ramanina manananananananananananananananananan	
PACIFIC BELL TELEPHONE PULL BOX/VAULT	The state of the s	TEL
ELECTRICAL CONDUIT & BOX	The second secon	E
STREET LIGHT CONDUIT & BOX	Signature of the second	SL SL-
STREET LIGHT	Commence of the Commence of th	$\longrightarrow$
TRAFFIC SIGNAL		
TRAFFIC SIGNAL PULL BOX	¥ [ <u>]3</u> ]	TS
JOINT POLE & GUY ANCHOR	$\sum_{i=1}^{n-1} a_{int} a_{int$	<b></b>
OVERHEAD UTILITY	consequences and the Committee of the consequences of the conseque	—— он ——
STREET ADDRESS	500 "STREET NAME"	
STREET SIGN	war was distributed in the state of the stat	
FENCE	management of accommonweal of accommonweal	xx
PARKING METER	Ø	<b>(P</b> )
SURVEY CONTROL POINT	A. A	Δ
SURVEY MONUMENT		0
AC DIKE	usa de frances de la frances de la frances de la frança de	
CURB & GUTTER		
TREE PROTECTION		можением ТР негозиванием
ABANDON EXISTING UTILITY		rancamiorimanon fa fa faminimanamion
TREE TO BE SAVED/PROTECTED		
TREE TO BE REMOVED		$\boxtimes$

### GENERAL NOTES

- ALL WORKMANSHIP, MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CITY OF SANTA ROSA STANDARD PLANS, THE CONSTRUCTION SPECIFICATIONS
  FOR PUBLIC IMPROVEMENTS, THE SPECIAL PROVISIONS FOR THIS PROJECT AND THE STATE STANDARD SPECIFICATIONS AND STANDARD PLANS. THE
  CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING ALL STANDARDS PERTAINING TO THIS PROJECT.
- 2. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA) AT 811 NO LESS THAN 2 WORKING DAYS PRIOR TO ANY EXCAVATION FOR MARK OUTS OF EXISTING UNDERGROUND FACILITIES IN ACCORDANCE WITH SECTION 8-1.10 OF THE SPECIAL PROVISIONS.
- 3. THE LOCATIONS OF UNDERGROUND UTILITIES AND OTHER OBSTACLES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL POTHOLE AND DETERMINE THE EXACT LOCATION OF ALL POTENTIAL CONFLICTS IN ACCORDANCE WITH U.S.A. LAWS AND THESE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS. IF ANY UNMARKED UTILITIES ARE ENCOUNTERED, OR IF UNABLE TO LOCATE A MARKED UTILITY AFTER POT HOLING, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF THAT UTILITY AND THE CITY ENGINEER.
- 4. THE CONTRACTOR SHALL PROTECT AND PRESERVE CITY MONUMENTS. THE CONTRACTOR SHALL COORDINATE WITH THE CITY ENGINEER 10 WORKING DAYS IN ADVANCE FOR REFERENCING OF EXISTING MONUMENTS TO BE DISTURBED. THE CONTRACTOR SHALL RECONSTRUCT DISTURBED MONUMENTS IN ACCORDANCE
- 5. OVERHEAD UTILITY SERVICE DROPS ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL INVESTIGATE THE SITE AND BE AWARE OF LIMITED CLEARANCES UNDER OVERHEAD UTILITY LINES AND LOW HANGING TREE BRANCHES. THE CONTRACTOR'S TRUCKS AND EXCAVATION EQUIPMENT SHALL BE SIZED SO THAT OVERHEAD WIRES AND TREE BRANCHES ARE NOT DAMAGED.
- 6. THE CONTRACTOR SHALL ONLY REMOVE EXISTING TREES OR SHRUBS AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 7. FOR CLARITY OF EXISTING SUBSURFACE CONDITIONS, NOT ALL CROSSWALKS, STOP BARS, OR EXISTING PAVEMENT MARKINGS ARE SHOWN ON THE PLANS. TRAFFIC STRIPES, RAISED PAVEMENT MARKERS AND PAVEMENT MARKINGS DAMAGED DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED PER CITY OF SANTA ROSA TRAFFIC STANDARDS PART III, TRAFFIC MARKINGS. PATCHING OF DAMAGED MARKINGS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE ENGINEER. ALL DAMAGED RAISED PAVEMENT (NON-REFLECTIVE) MARKERS MUST BE CERAMIC.



ABBREVIATIONS, ALVARADO WATER AND S

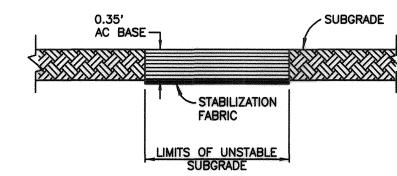
CONTRACT NO. CO2004

SHEET 2 OF 16

NOTES:
1. CONFIRM PLACEMENT OF LINE VALVE WITH ENGINEER.

### NEW FIRE HYDRANT ON EXISTING MAIN

NOT TO SCALE



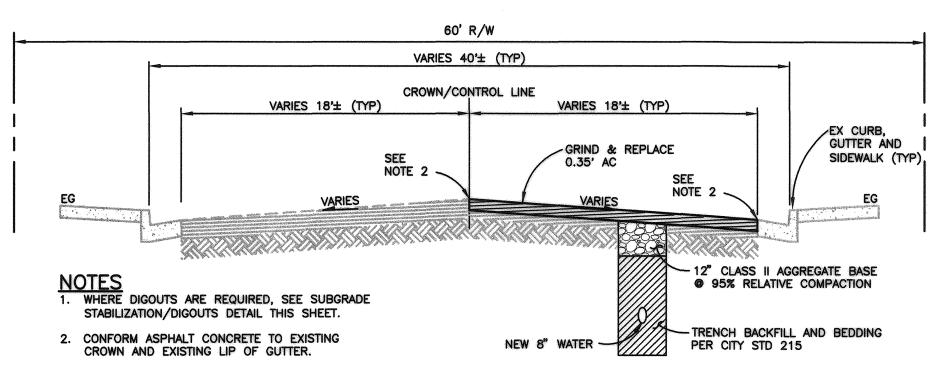
NOTES

1. SUBGRADE STABILIZATION/DIGOUTS ARE NOT SHOWN ON THE PLAN SHEETS. EXACT LOCATIONS SHALL BE MARKED IN THE FIELD BY THE ENGINEER.

2. SUBGRADE STABILIZATION/DIGOUTS SHALL BE PERFORMED AFTER ROADWAY EXCAVATION IS COMPLETE AND PRIOR TO PLACING AC BASE AND STABILIZATION FABRIC.

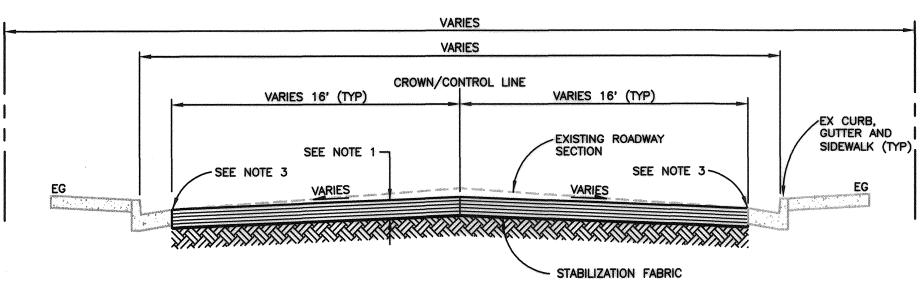
## SUBGRADE STABILIZATION/DIGOUTS

NOT TO SCALE



### VALLEJO STREET MODIFIED TRENCH PAVING STA 21+48 TO STA 23+42 TYPICAL SECTION

NOT TO SCALE



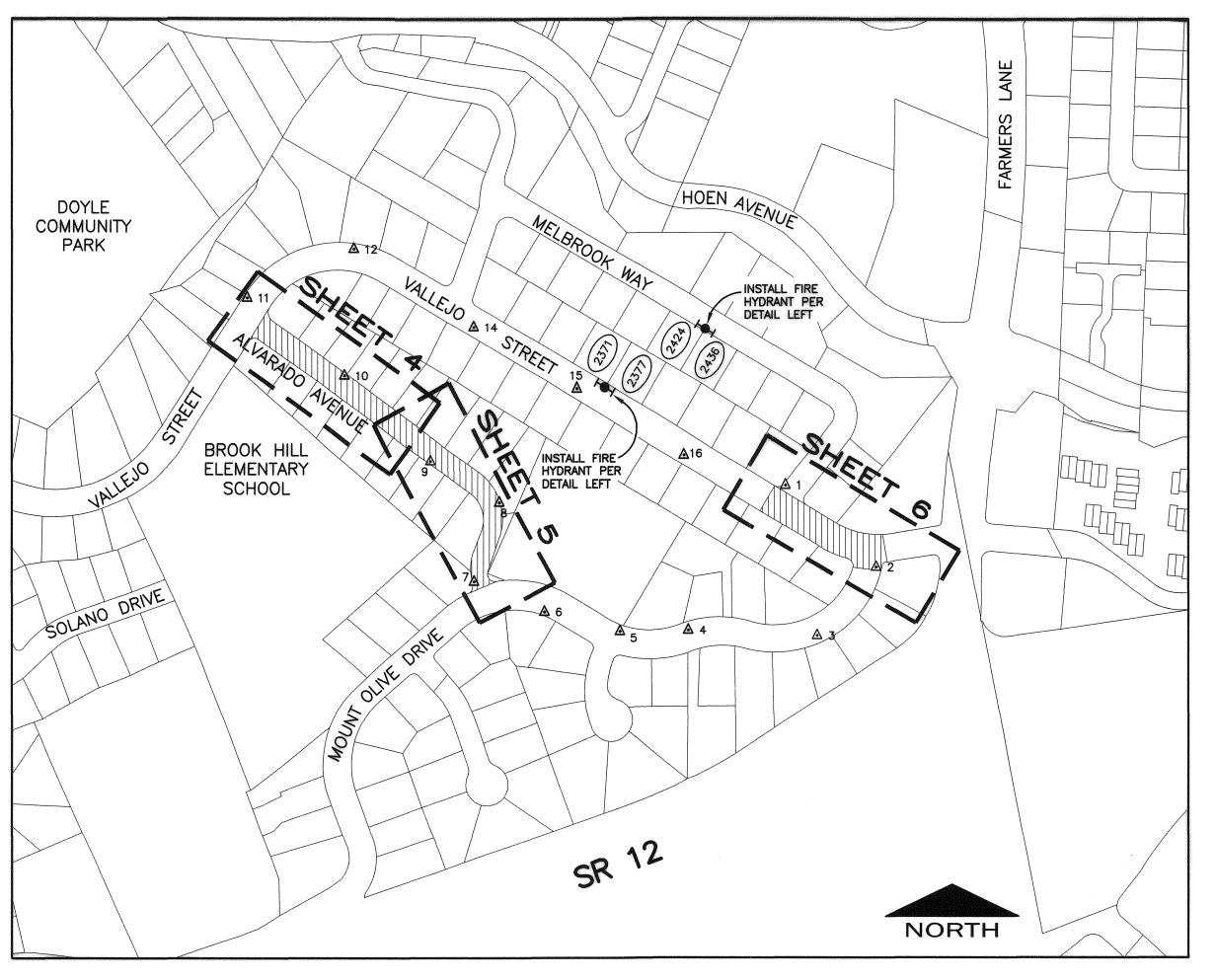
NOTES

1. AC THICKNESS SHALL BE PLACED IN TWO LIFTS AS FOLLOWS:
STA 10+24 TO 18+33 ALVARADO AVE: 0.20' AC SURFACE OVER 0.35' AC BASE.
STA 20+20 to 21+48 VALLEJO ST: 0.20' AC SURFACE OVER 0.55' AC BASE.
MELBROOK WAY: 0.20' AC OVER 0.35' AC BASE.

- 2. WHERE DIGOUTS ARE REQUIRED, SEE SUBGRADE STABILIZATION/DIGOUTS DETAIL THIS SHEET.
- 3. ALL EXISTING MISCELLANEOUS ASPHALT CONCRETE SHALL BE REMOVED FROM LIP OF GUTTER PRIOR TO CONFORMING NEW ASPHALT CONCRETE TO EXISTING LIP OF GUTTER.

### ROAD RECONSTRUCTION TYPICAL SECTION

NOT TO SCALE



PLAN & PROFILE KEY MAP AND SURVEY CONTROL

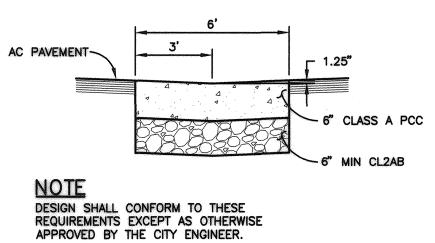
### CONTROL POINT COORDINATE TABLE

l:				
NO.	NORTHING	EASTING	ELEV	DESCRIPTION
1	1922098.661	6364411.139	197.35	SET CUT X
2	1921924.347	6364602.562	197.81	SET CUT X
3	1921778.499	6364478.227	204.69	SET PK NAIL
4	1921790.216	6364206.567	213.00	SET PK NAIL
5	1921788.108	6364062.893	222.00	SET CUT X
6	1921829.859	6363903.606	220.18	SET CUT X
7	1921894.860	6363755.717	214.33	SET CUT X
8	1922063.331	6363808.564	213.75	SET CUT X
9	1922149.083	6363663.631	201.87	SET CUT X
10	1922324.312	6363482.064	193.45	SET CUT X
11	1922488.741	6363277.079	191.14	SET CUT X
12	1922591.914	6363501.649	192.48	SET CUT X
14	1922425.982	6363754.740	194.21	SET CUT X
15	1922297.022	6363971.660	195.19	SET CUT X
16	1922161.690	6364197.480	196.24	SET CUT X

### **BENCHMARK**

B-186 FARMERS LANE AND HOEN AVENUE; CITY DISK IN WELL MONUMENT AT CL INTERSECTION.
(COORDINATE MONUMENT G-281) 12/85 EL 198.917 (NGVD 29)

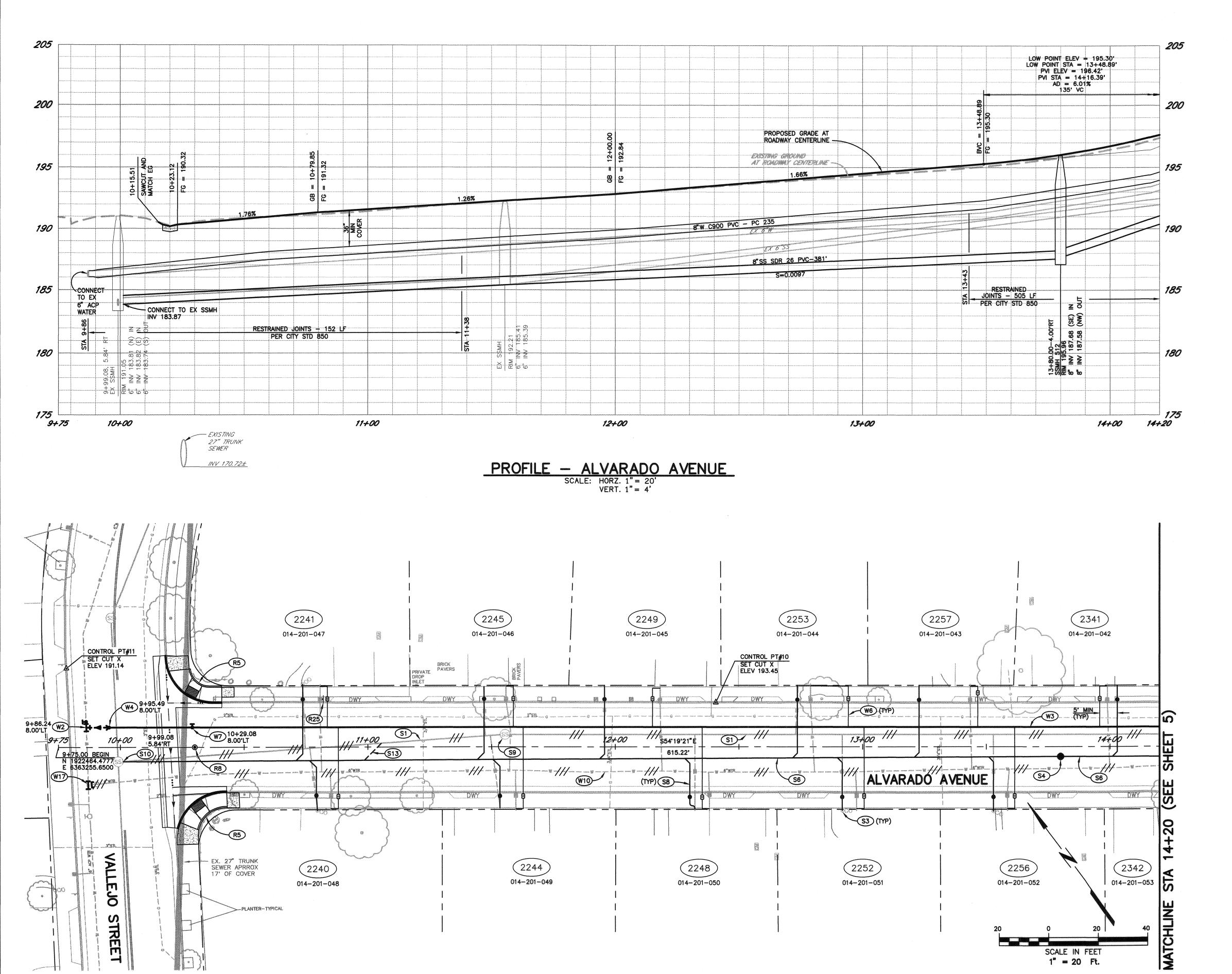
BASIS OF BEARINGS ARE NAD 83, EPOCH 2010



VALLEY GUTTER NOT TO SCALE

AVE AND VALLEJO ST SEWER IMPROVEMENTS TYPICAL SECTIONS, KEY & SURVEY CONTROL

CONTRACT NO. C02004 SHEET 3 OF 16



### CONSTRUCTION NOTES

(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

- R5 INSTALL CASE "C" CURB RAMP PER CALTRANS STANDARD PLAN A88A AND DETAIL SHEET 9.
- REPLACE CITY MONUMENT PER CITY STANDARD 280. NOTIFY CITY SURVEY DEPARTMENT BEFORE CONSTRUCTION FOR CORNER RECORD SURVEY.
- R25 EXISTING SW24-3 (CA) SIGN TO BE RELOCATED.
- REMOVE EXISTING SANITARY SEWER MAIN WHERE ENCOUNTERED DURING EXCAVATION FOR NEW SEWER OR WATER. ABANDON PER CITY STANDARD 507 WHERE EXISTING SEWER EXTENDS BEYOND EXCAVATION LIMITS.
- S3 REMOVE EXISTING CLEANOUTS AT ALL LOCATIONS WHERE FOUND AND AS DIRECTED BY THE ENGINEER PRIOR TO CONNECTING EXISTING LATERAL.
- S4 INSTALL NEW 48" SANITARY SEWER MANHOLE PER CITY STANDARD 500.
- S6 INSTALL 8" SANITARY SEWER MAIN PER CITY STANDARDS.
- S8 INSTALL 4" PVC SANITARY SEWER LATERAL PER CITY STANDARD 513A. REMOVE OR ABANDON EXISTING LATERAL PER CITY STANDARD 507.
- (S9) REMOVE EXISTING SANITARY SEWER MANHOLE PER CITY STD 508.
- (\$10) CONNECT TO EXISTING SEWER MANHOLE PER CITY STANDARDS.
- INSTALL TEMPORARY 6-INCH SEWER BYPASS TIE-IN BEFORE CONTINUING WORK UPSTREAM. TIE-IN TO CONSIST OF 8X8X6 INCH WYE. 6-INCH PVC INTERCONNECT, 45-DEGREE ELBOW AND RUBBER COUPLING WITH STEEL SHEAR BAND. AFTER SEWER CONSTRUCTION IS COMPLETE REMOVE BYPASS AND REPAIR NEW MAIN. FIELD VERIFY LOCATION WITH COURSING OF NEW PIPING AND PROTECTION OF EXISTING SEWER UPSTREAM OF BYPASS CONNECTION.
- W2 CUT-IN 6"X6"X6" TEE WITH 6" GATE VALVE, 8"X6" REDUCER AND PIPE AS NEEDED. CONNECT TO EXISTING 6" MAIN AS SHOWN IN A SINGLE OPERATION UNDER CITY INSPECTION.
- W3 INSTALL 8" PVC WATER MAIN PER CITY STANDARDS.
- W4 INSTALL TEMPORARY BLOWOFF PER CITY STANDARDS.
- W6 INSTALL 1" HDPE WATER SERVICE PLUMBED FOR 5/8"x3/4" METER PER CITY
- STANDARD 863A.
- W7 INSTALL 8" GATE VALVE PER CITY STANDARD 877.
- W10) REMOVE OR ABANDON EXISTING WATER COMPONENTS PER CITY STANDARDS.
- W17) REMOVE EXISTING TEE AND INSTALL PIPE AND COUPLERS PER CITY STANDARDS.

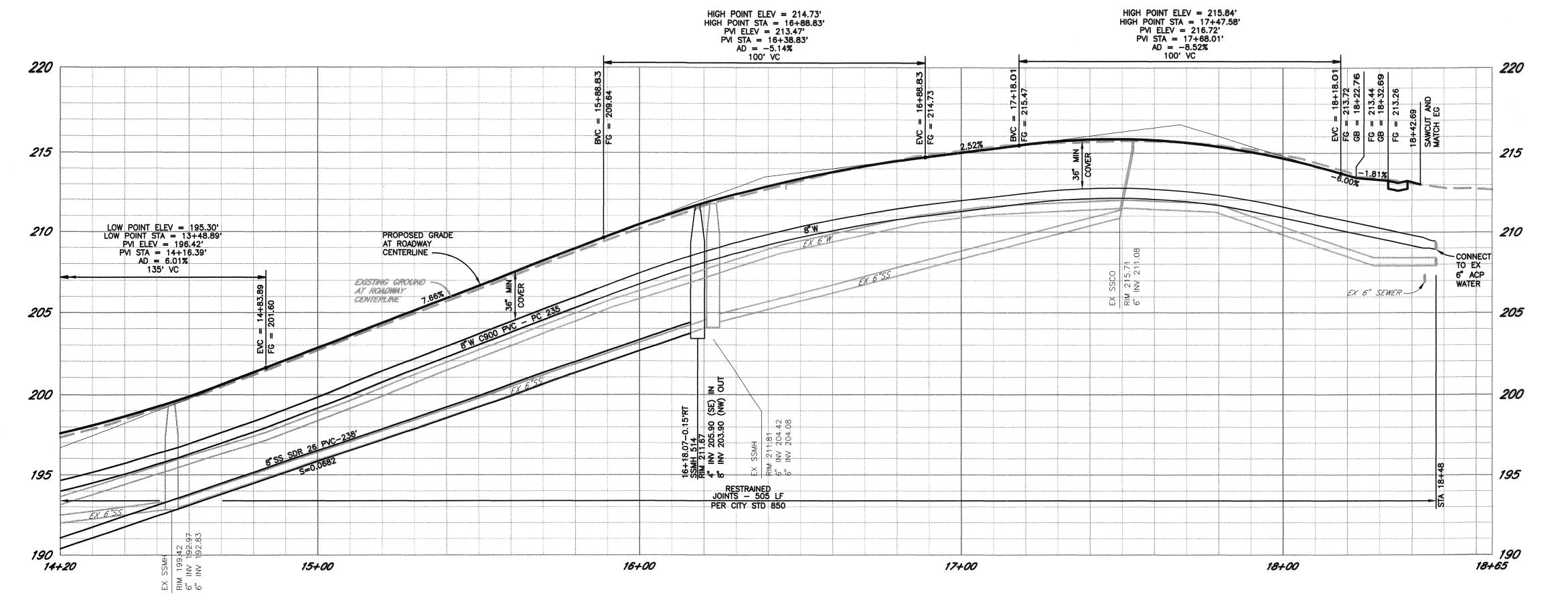
NOTE:
STATIONS AND LOCATIONS OF WATER VALVES
BLOW-OFFS, TEES, ELBOWS ETC. ARE SHOWN
FOR GENERAL LOCATION AS EXISTING FIELD
CONDITIONS MAY REQUIRE ADJUSTMENT IN
THE FIELD AS DIRECTED BY THE ENGINEER

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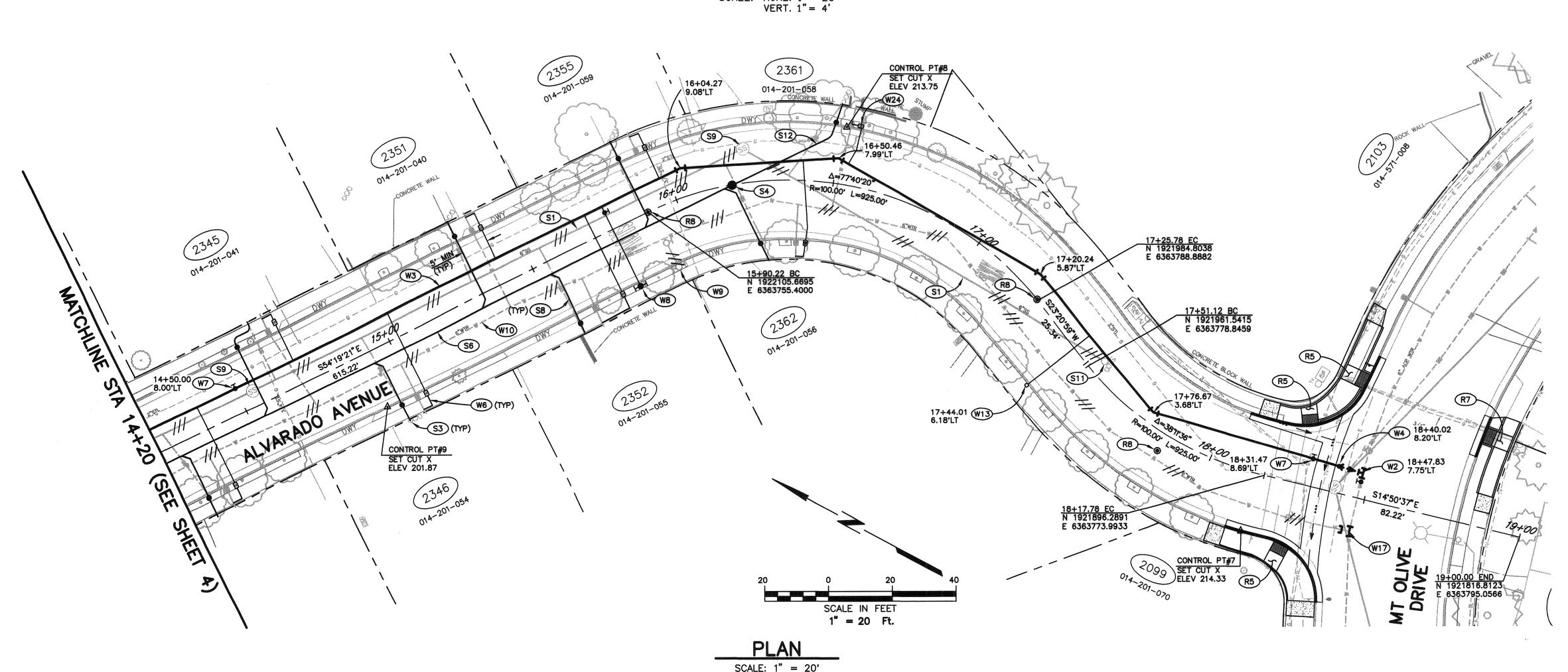
ALVARADO AVE AND VALLE
WATER AND SEWER IMPROVE
PLAN & PROFILE
ALVARADO AVENUE

CONTRACT NO. CO2004

SHEET 4 OF 16



### PROFILE — ALVARADO AVENUE SCALE: HORZ. 1" = 20"



### CONSTRUCTION NOTES

(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

- R5 INSTALL CASE "C" CURB RAMP PER CALTRANS STANDARD PLAN A88A AND
- DETAIL SHEET 9.

  R7 INSTALL CASE "F" CURB RAMP PER DETAIL CALTRANS STANDARD A88A AND DETAIL SHEET 9.
- DETAIL SHEET 9.

  R8 REPLACE CITY MONUMENT PER CITY STANDARD 280. NOTIFY CITY SURVEY
  DEPARTMENT REFORE CONSTRUCTION FOR CORNER RECORD SURVEY
- DEPARTMENT BEFORE CONSTRUCTION FOR CORNER RECORD SURVEY.
- S1 REMOVE EXISTING SANITARY SEWER MAIN WHERE ENCOUNTERED DURING EXCAVATION FOR NEW SEWER OR WATER. ABANDON PER CITY STANDARD 507 WHERE EXISTING SEWER EXTENDS BEYOND EXCAVATION LIMITS.
- REMOVE EXISTING CLEANOUTS AT ALL LOCATIONS WHERE FOUND AND AS DIRECTED BY THE ENGINEER PRIOR TO CONNECTING EXISTING LATERAL.
- S4 INSTALL NEW 48" SANITARY SEWER MANHOLE PER CITY STANDARD 500.
- S6 INSTALL 8" SANITARY SEWER MAIN PER CITY STANDARDS.
- S8 INSTALL 4" PVC SANITARY SEWER LATERAL PER CITY STANDARD 513A. REMOVE OR ABANDON EXISTING LATERAL PER CITY STANDARD 507.
- (S9) REMOVE EXISTING SANITARY SEWER MANHOLE PER CITY STD 508.
- (S11) REMOVE EXISTING MAINLINE CLEANOUT.
- INSTALL 4" SANITARY SEWER LATERAL WITH TRACER WIRE SERVING 2361
  ALVARADO AVENUE WITH LONG RADIUS SWEEP AND CONNECT DIRECTLY TO
  MANHOLE. NEW SEWER LATERAL TO BE INSTALLED MIN 12" BELOW THE NEW
- W2 CUT-IN 6"X6"X6" TEE WITH 6" GATE VALVE, 8"X6" REDUCER AND PIPE AS NEEDED. CONNECT TO EXISTING 6" MAIN AS SHOWN IN A SINGLE OPERATION UNDER CITY INSPECTION.
- W3 INSTALL 8" PVC WATER MAIN PER CITY STANDARDS.
- W4 INSTALL TEMPORARY BLOWOFF PER CITY STANDARDS.
- W6 INSTALL 1" HDPE WATER SERVICE PLUMBED FOR 5/8"x3/4" METER PER CITY STANDARD 863A.
- W7) INSTALL 8" GATE VALVE PER CITY STANDARD 877.
- W8 INSTALL RESIDENTIAL FIRE HYDRANT PER CITY STANDARD 857. REPLACE CONCRETE AS REQUIRED.
- M9 ABANDON EXISTING FIRE HYDRANT SERVICE PER CITY STANDARDS. REMOVE AND SALVAGE EXISTING HYDRANT. REPLACE CONCRETE AS REQUIRED.
- (W13) INICTALL COMPINATION AID AND VACCUM DELEASE VALVE AT HIGHEST DOING

W10 REMOVE OR ABANDON EXISTING WATER COMPONENTS PER CITY STANDARDS.

- W13 INSTALL COMBINATION AIR AND VACCUM RELEASE VALVE AT HIGHEST POINT OF WATER MAIN PER CITY STANDARD 883. FINAL LOCATION TO BE DETERMINED IN THE FIELD.
- REMOVE EXISTING TEE AND INSTALL PIPE AND COUPLERS PER CITY STANDARDS.

NOTE: STATIONS AND LOCATIONS OF WATER VALVES BLOW-OFFS, TEES, ELBOWS ETC. ARE SHOWN FOR GENERAL LOCATION AS EXISTING FIELD CONDITIONS MAY REQUIRE ADJUSTMENT IN THE FIELD AS DIRECTED BY THE ENGINEER

W24 INSTALL WATER METER BOX IN PLANTER STRIP PARALLEL TO CURB AND TIE IN TO THE EXISTING HOUSE SERVICE AT THE FRONT OF SIDEWALK.

PROFESS / ON APPLY OF CALL FOR THE PROFESS / ON APPLY OF CALL FOR THE PROFESS / ON APPLY OF CALL FOR THE PROFESS / ON APPLY OF CALL FOR THE PROFESS

Santa Rosa

Le & Race

Consulting Engineers

Brell

475 Aviation Blvd. - Suite 1

APPROVED: Deputy Director – Engineering

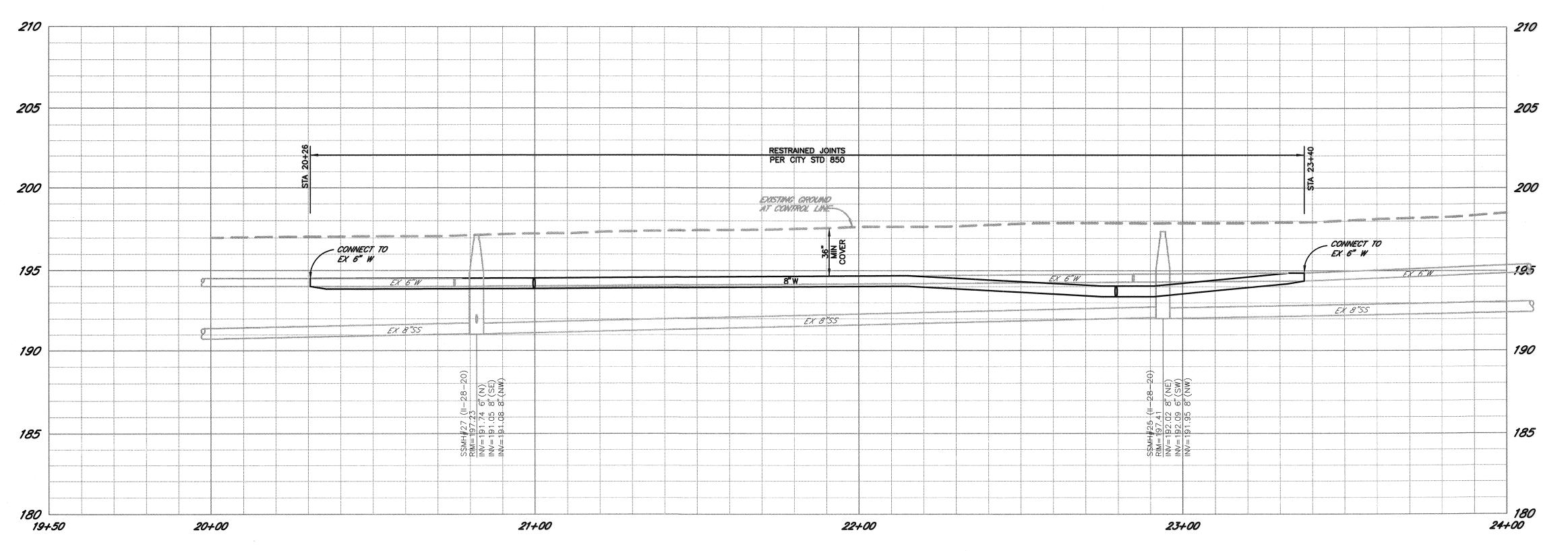
APPROVED: Deputy Director – Engineering

Solution Control Con

ALVARADO AVE AND VALLEJO ST
WATER AND SEWER IMPROVEMENTS

CONTRACT NO. CO2004

SHEET 5 OF 16 FILE NO. 2017-0043

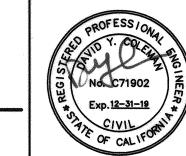


### CONSTRUCTION NOTES

(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

INSTALL CASE "C" CURB RAMP PER CALTRANS STANDARD PLAN A88A AND DETAIL SHEET 10.

- W1 UPON SATISFACTORY COMPLETION OF WATER MAIN TESTING, MAKE WATER MAIN TIE IN (3 LOCATIONS) AS A SINGLE OPERATION UNDER AUTHORIZED CITY INSPECTION. INSTALL FITTINGS AND DUCTILE IRON PIPE AS NECESSARY TO MAKE GRADE OR ALIGNMENT TRANSITION. RESTRAIN ALL JOINTS.
- W3 INSTALL 8" PVC WATER MAIN PER CITY STANDARDS.
- W4 INSTALL TEMPORARY BLOWOFF PER CITY STANDARDS.
- W6 INSTALL 1" HDPE WATER SERVICE PLUMBED FOR 5/8"x3/4" METER PER CITY STANDARD 863A.
- W7 INSTALL 8" GATE VALVE PER CITY STANDARD 877.
- W8 INSTALL RESIDENTIAL FIRE HYDRANT PER CITY STANDARD 857. REPLACE CONCRETE AS REQUIRED.
- W9 ABANDON EXISTING FIRE HYDRANT SERVICE PER CITY STANDARDS. REMOVE AND SALVAGE EXISTING HYDRANT. REPLACE CONCRETE AS REQUIRED.
- W10 REMOVE OR ABANDON EXISTING WATER COMPONENTS PER CITY STANDARDS.
- W11 INSTALL 8"x6" REDUCER.
- W12 INSTALL 8" DUCTILE IRON WATER MAIN PER CITY STANDARDS.
- UPON INSTALLATION AND ACTIVATION OF NEW WATER MAIN ALONG VALLEJO STREET, INSTALL MELBROOK WATER MAIN. UPON SATISFACTORY COMPLETION OF WATER MAIN TIE TO NEW 8" GATE VALVE ON VALLEJO STREET AND EXISTING MAIN ON MELBROOK WAY AS A SINGLE OPERATION.
- W15 UPON INSTALLATION AND ACTIVATION OF NEW WATER MAIN ALONG VALLEJO STREET, INSTALL FIRE HYDRANT AND LATERAL TO NEW 8" GATE VALVE ON VALLEJO STREET PER CITY STD 857.
- W22 INSTALL TEMPORARY BLIND FLANGE ON NEW 8" GATE VALVE.
- SD1) REMOVE OR ABANDON AS REQUIRED EXISTING 12" CMP STORM DRAIN PER CITY STD 507
- SD2) REMOVE EXISTING CATCH BASIN PER CITY STD 508.



Santa Rosa elje & Race

IO. DATE REVISION BY

CHK BY: JIN

CHK BY: JIN

Ity Director — Engineering

Date — [6]

SCALE: AS SHOWN

DWN BY: JLP

APPROVED: Deputy Dire

City of Santa Rosa

DO AVE AND VALLEJO ST

ND SEWER IMPROVEMENT

I & PROFILE VALLEJO

STREET

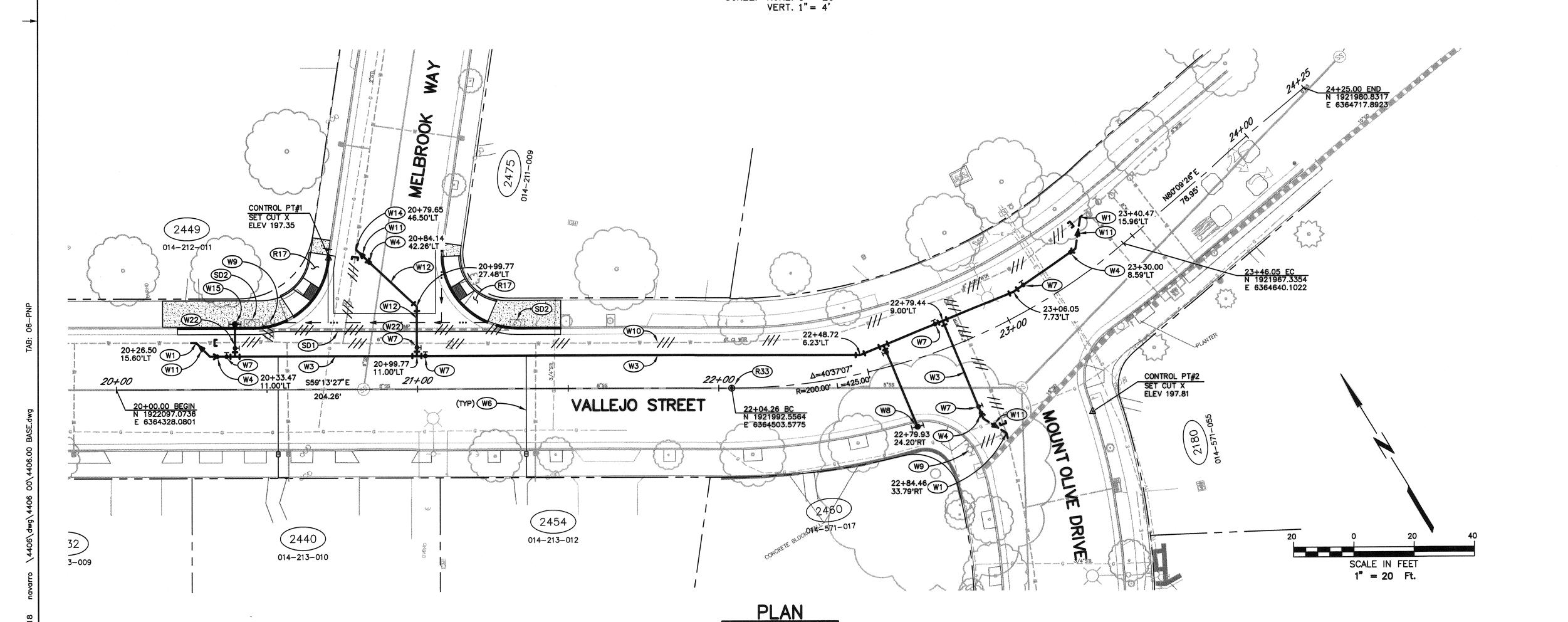
CONTRACT NO. CO2004

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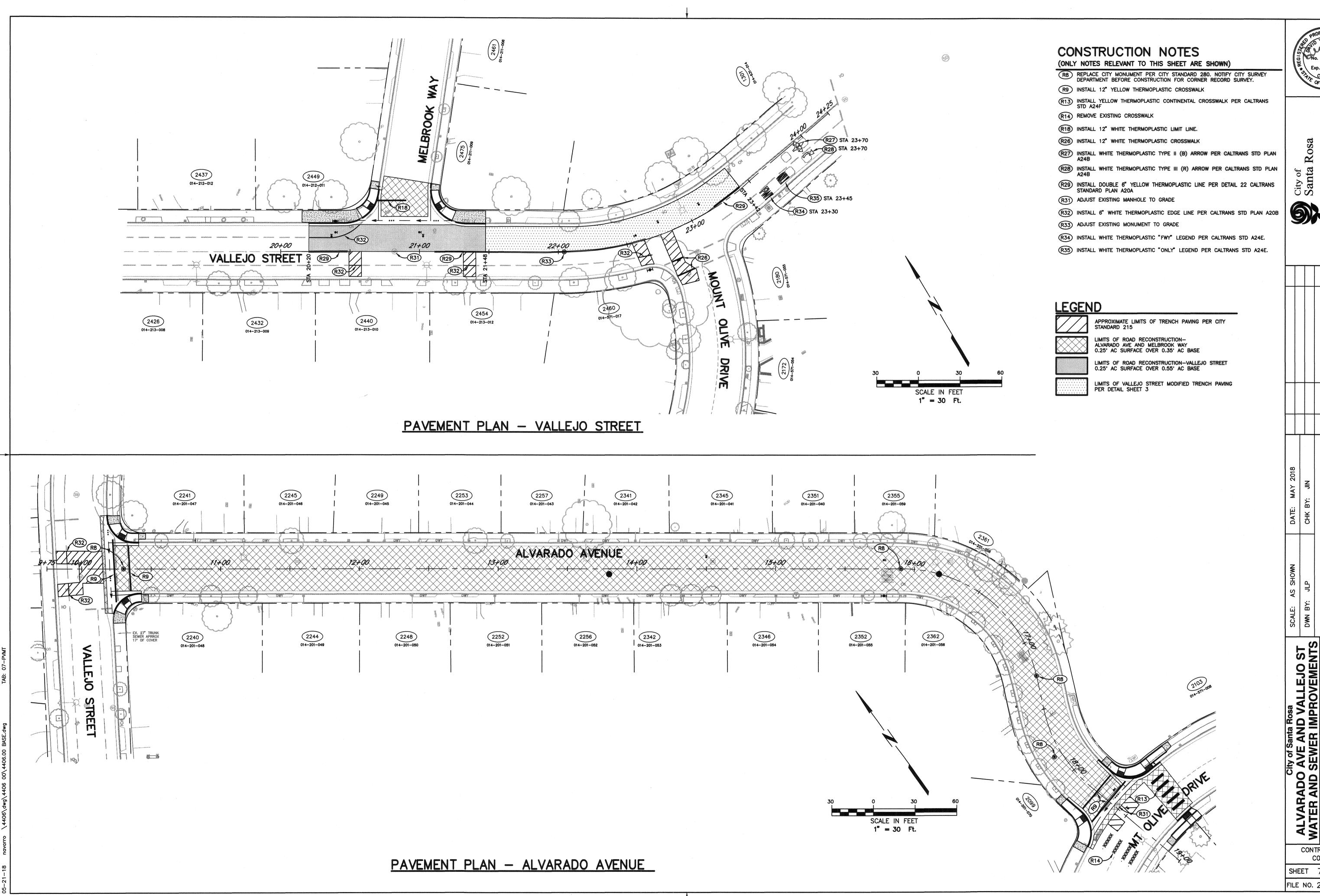
SHEET 6 OF 16

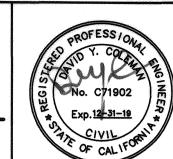
FILE NO. 2017-0043

NOTE:
STATIONS AND LOCATIONS OF WATER VALVES
BLOW-OFFS, TEES, ELBOWS ETC. ARE SHOWN
FOR GENERAL LOCATION AS EXISTING FIELD
CONDITIONS MAY REQUIRE ADJUSTMENT IN
THE FIELD AS DIRECTED BY THE ENGINEER



PROFILE - VALLEJO STREET

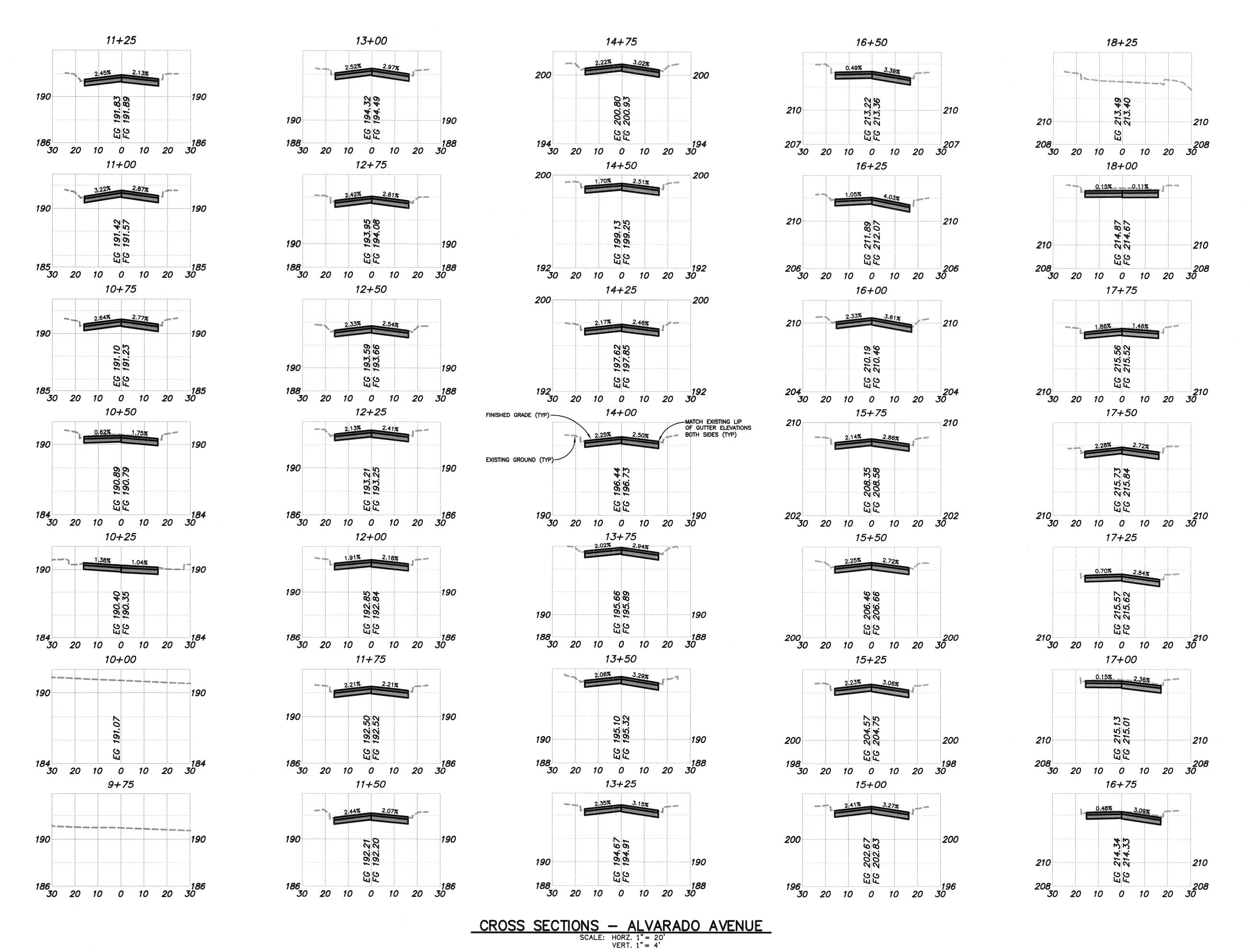




PAVEMENT & MARKING PLAN

CONTRACT NO. CO2004

SHEET 7 OF 16

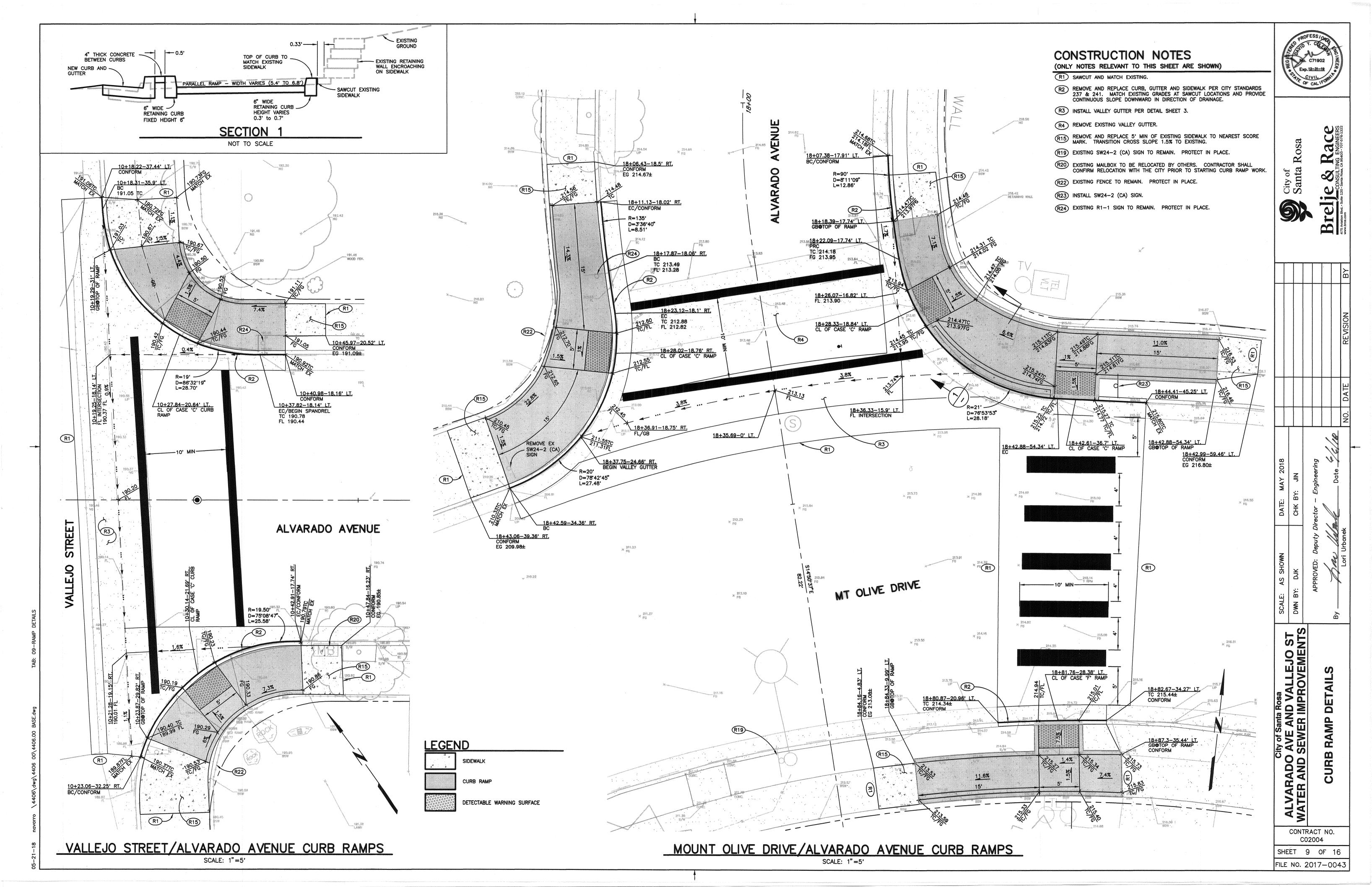


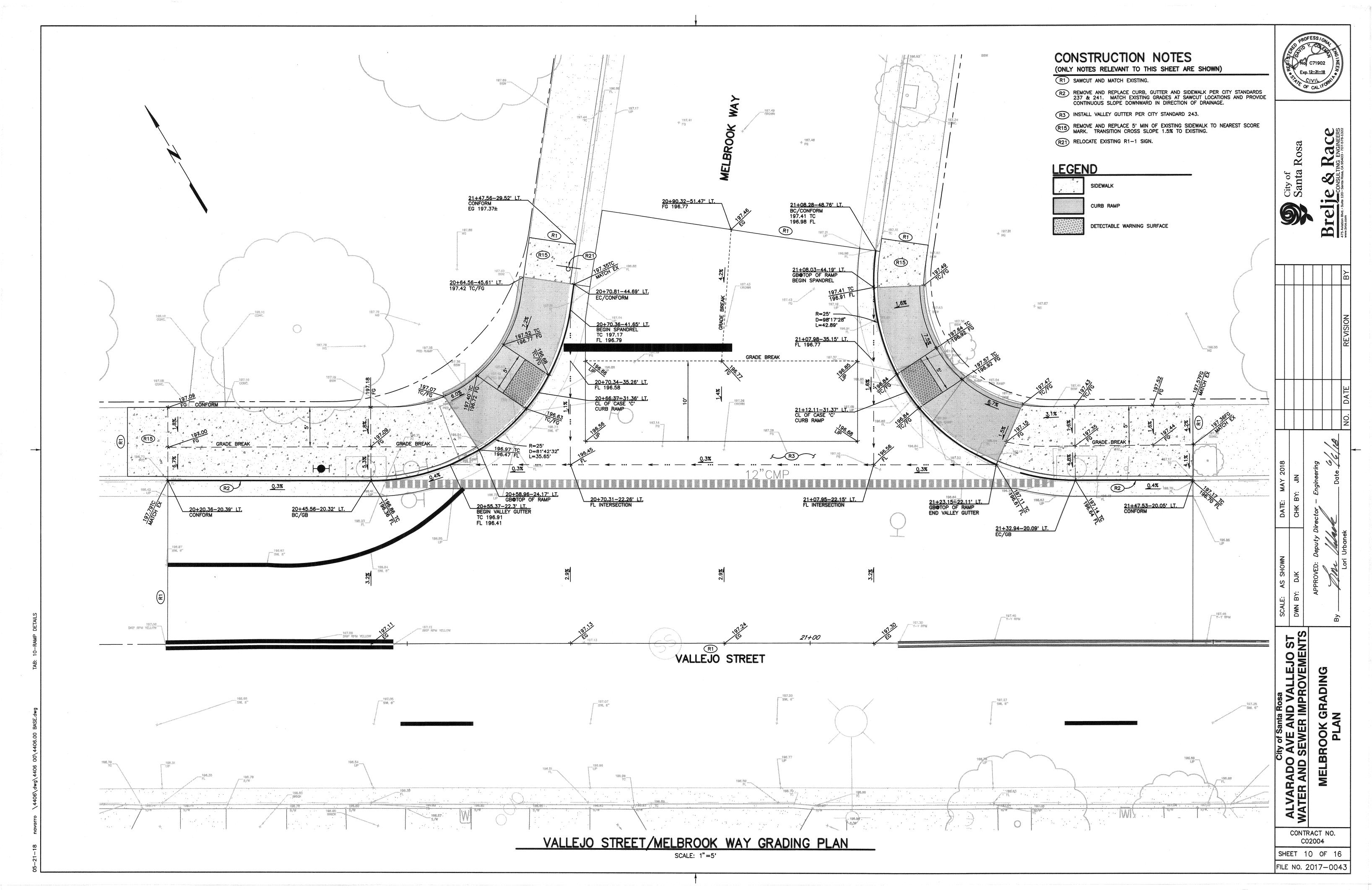
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ALVARADO AVE AND VALLEJO ST WATER AND SEWER IMPROVEMENTS ALVARADO AVENUE CROSS SECTIONS

CONTRACT NO.

C02004 SHEET 8 OF 16





### ARREVIATIONS

ΛB	AGGREGATE BASE	FFDC	FIRE DEPARTMENT CONNECTION	PT	POINT
ABAN	ABANDONED	FES	FLARED END SECTION	PVC	POLYVINYL CHLORIDE
ABS	ACRYLONITRILE-BUTADIENE-STYRENE	FG	FINISHED GRADE	PVMT	PAVEMENT
NC	ASPHALT CONCRETE	FH	FIRE HYDRANT		
			FIRE HTURANT	R	RADIUS
ACP .	ASBESTOS CONCRETE PIPE	ቪ	FLOWLINE	RC	RELATIVE COMPACTION
ADD'L	ADDITIONAL	FSW	FRONT OF SIDEWALK	REF	REFERENCE
NG	ANGLE			REINF	REINFORCING
۱P	ANGLE POINT	FT	FOOT or FEET	REQ'D	REQUIRED
<b>\PN</b>	ASSESSORS PARCEL NUMBER	FTG	FOOTING	RCP	REINFORCED CONCRETE PIPE
APPROX	APPROXIMATELY	GALV	GALVANIZED		
		GB	GRADE BREAK	RD	ROAD
ARV	AIR RELIEF VALVE	GV	GATE VALVE	ROW	RIGHT OF WAY
SNS	ADVANCED STREET NAME SIGN	HC	HANDICAPPED	RPM	RAISED PAVEMENT MARKER
<b>VE</b>	AVENUE	HD	HEAVY DUTY	RT	RIGHT
NVG	AVERAGE	HDPE	HIGH DENSITY POLYETHYLENE	S	SLOPE
C	BEGIN CURVE	HORIZ	HORIZONTAL	(S)	SOUTH
FP	BACK FLOW PREVENTER			SD	STORM DRAIN
LDG	BUILDING	HP	HIGH POINT	SDMH	STORM DRAIN MANHOLE
LVD	BOULEVARD	HPS	HIGH PRESSURE SODIUM	SF	SQUARE FEET
M	BENCH MARK	HT	HEIGHT	SG	•
0	BLOW OFF	IC	INTERCONNECT		SUBGRADE
		ID	INSIDE DIAMETER	SHT	SHEET
OC.	BACK OF CURB	INV	INVERT ELEVATION	SIG	SIGNAL
RC	BEGIN REVERSE CURVE	IP	IRON PIPE	SIM	SIMILAR
SW	BACK OF SIDEWALK	irr	IRRIGATION	SL	STREET LIGHT
W	BOTTOM OF WALL	JB	JUNCTION BOX	SPEC	SPECIFICATION
VC	BEGIN VERTICAL CURVE			SQ	SQUARE
<u> </u>	CONDUIT	JP	JOINT POLE	SS	SANITARY SEWER
B	CATCH BASIN	JT	JOINT TRENCH	SSCO	SANITARY SEWER CLEANOUT
.&G	CURB AND GUTTER	KV	KILOVOLT		
DF	CONTROLLED DENSITY FILL	L	LENGTH	SSMH	SANITARY SEWER MANHOLE
		LAT	LATERAL	ST	STREET
IP .	CAST IRON PIPE	LF	LINEAL FOOT	STA	STATION
	CENTERLINE	LG	LIP OF GUTTER	STD	STANDARD
:L	CLASS	LL	LANE LINE	SVC	SERVICE
CLR	CLEAR	LMA	LUMINAIRE MAST ARM	SW	SIDEWALK
				SWL	SOLID WHITE LINE
MP	CORRUGATED METAL PIPE	LN	LANE	TEL	TELEPHONE
MU	CONCRETE MASONRY UNIT	LP	LOW POINT	TAN	TANGENT
O	CLEANOUT	LT	LEFT	TBM	
ONC	CONCRETE	LUM	LUMINAIRE		TEMPORARY BENCHMARK
ONST	CONSTRUCTION	MAX	MAXIMUM	TC	TOP OF CONCRETE
ONT	CONTINUOUS	MB	MAIL BOX	TCC	TOP OF CURB ELEVATION
P P	CONTROL POINT	MH	MAN HOLE	TCE	TEMPORARY CONSTRUCTION EASEN
 T	COURT	MIN	MINIMUM	THK	THICK
TB	CEMENT TREATED BASE	MISC	MISCELLANEOUS	TG	TOP OF GRATE
				TW	TOP OF WALL
TR	CENTER	MON	MONUMENT	TP	TOP OF PIPE
ΣΥ	CUBIC YARD	(N)	NORTH	TS	TRAFFIC SIGNAL
CV	DETECTOR CHECK VALVE	N/A	NOT AVAILABLE/APPLICABLE	TWLTL	
1	DROP INLET	NIC	NOT IN CONTRACT		TWO WAY LEFT TURN LANE
)IP	DUCTILE IRON PIPE	NO	NUMBER	TYP	TYPICAL
Н	DETECTOR HANDHOLE	NTS	NOT TO SCALE	UC	UTILITY CHASE
lΑ	DIAMETER	OC	ON CENTER	UG	UNDERGROUND
LC	DETECTOR LOOP CONDUIT	OD	OUTSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
R	DRIVE	OH	OVERHEAD	V	VOLT
WG	DRAWING			VC	VERTICAL CURVE
		PB	PULL BOX	VCP	VITRIFIED CLAY PIPE
WR	DASHED WHITE PAVEMENT MARKER	PCC	PORTLAND CEMENT CONCRETE	VERT	VERTICAL
WY	DRIVEWAY	PEC	PHOTO ELECTRIC CONTROL	VERT	VALLEY GUTTER
Υ	DOUBLE YELLOW	PED	PEDESTRIAN		
YR	DASHED YELLOW RAISED PAVEMENT MARKER	PI	POINT OF INTERSECTION	VLT	VAULT
Ξ)	EAST	PIV	POST INDICATOR VALVE	W	WATT OR WALK
Χ	EXISTING			(W)	WEST
A	EACH	P	PROPERTY LINE	W/	WITH
c	END OF CURVE	POC	POINT ON CURVE	W/O	WITHOUT
G	EXISTING GROUND	POCC	POINT OF COMPOUND CURVE	WBD	WALL BACK DRAIN
LEC	ELECTRICAL	POVC	POINT ON VERTICAL CURVE	WM	WATER METER
		PVI	POINT OF VERTICAL INTERSECTION	WS	WATER METER WATER SERVICE
LEV	ELEVATION	PP	POWER POLE		
P	EDGE OF PAVEMENT	PPB	PEDESTESTRIAN PUSH BUTTON	WSS	WATER SAMPLING STATION
Q	EQUAL			WTR	WATER
SMT	EASEMENT	PR	PAIR	WV	WATER VALVE
VC	END VERTICAL CURVE	PRV	PRESSURE REDUCING VALVE	WWF	WELDED WIRE FABRIC
A	FIRE ALARM	PSD	PERFORATED SUBDRAIN	WY	WAY
	FACE OF CURB	PUE	PUBLIC UTILITY EASEMENT	YD	YARD

		LEGEND	OF SYMBOLS		
DESCRIPTION	EXISTING	NEW	DESCRIPTION	EXISTING	NEW
WATER MAIN, PERMANENT BLOWOFF, TEE, GATE VALVE, CROSS AND BEND	890—w———————————————————————————————————	80 STD. 877	GAS MAIN & GAS SERVICE & GAS VALVE	— с— <u>Б</u>	
FIRE HYDRANT & SERVICE ASSEMBLY	HOIFH WWW	HO-IFH STD. 857	ELECTRICAL MH / TELEPHONE MH		
SINGLE WATER SERVICE		Std. 863 & 889	PACIFIC BELL TELEPHONE PULL BOX / VAULT	[[Z.	
(SEE PLANS FOR SIZE)		- (2)	STREET LIGHT/ELECTRICAL CONDUIT & BOXES	SL —— SL —— E—— E	
WATER MAIN, GATE VALVE, CROSS, & ELBOW	—W——M—————————————————————————————————	GV Std. 877	TRAFFIC SIGNAL PULL BOX		( <del>T</del> S)
TEMPORARY BLOWOFF, REDUCER, AND TIE—IN		3" BO —W—-II > Std. 859	STREET LIGHT & TRAFFIC SIGNAL		•—————————————————————————————————————
RRIGATION CONTROL VALVE BOX & SERVICE	hed	[IRR]	JOINT POLE AND GUY ANCHOR  OVERHEAD UTILITIES	ф	
SEWER MAIN, MANHOLE & CLEAN OUT	80—SS—SSMH	Std. 505 SSMH Std. 500	SURVEY CONTROL POINT & SURVEY MONUMENT	Δ •	Δ ⊚
	eo 1	Std. 513	STREET SIGN & STREET ADDRESS	500	500
SEWER LATERAL & CLEANOUT	<b>6</b> 5	3.0. 313	FENCE & PARKING METER	s	*—
STORM DRAIN, MANHOLE & CATCH BASIN	SDMH (E) 24" SD	SDMH  24° SD CB	SECTION:		Letter Sheet
END CAP OR PLUG					



BENNETT VALLEY TRUNK THROUGH BROOK HILL SCHOOL - BURIED MH-44 NOT TO SCALE



441 College Avenue Santa Rosa, CA 95401 Phone: (707)578-8185 Fax: (707) 578-7153 Internet: www.mkmassociates.com

CONTRACT NO. CO2004

**SHEET 11 OF** 16 FILE NO. 2017-0043

### **GENERAL**

- 1. All work shall be in conformance with the Caltrans Bridge Design Manual and the City of Santa Rosa Standards, and any applicable
- 2. All conditions and dimensions shown on the plans shall be verified by the Contractor, any discrepancies that require clarification or revisions shall be brought to the attention of the Engineer before commencing with the work.
- 3. Contractor shall provide the requirements of all structural detail callouts denoted as "TYPICAL" or "TYP" at specifically noted conditions and at all like conditions throughout the project, unless otherwise noted. All details on detail sheets titled as "TYPICAL", and not directly referenced on plans, shall be incorporated at occurring locations throughout the project. Requirements of details not denoted or titled as "TYPICAL" shall be provided at the specific location shown on the plan and adjacent areas as applicable. Requirements of details denoted as "SIMILAR" or "SIM" shall be provided with differences as indicated or implied on referenced details and plans.
- 4. Details may be depicted diagrammatically. For example, roof pitches, floor/roof/wall thicknesses, framing members, etc., may differ in scale from actual proposed conditions. Details shall be understood in context with other drawings conveying structural and architectural
- 5. Structural design or review of temporary shoring, additional reinforcing, bracing, formwork, scaffolding, erection methods, etc. required for proper construction of the project shall be the
- responsibility of the Contractor. 6. Shop drawings are an aid for field placement and are superseded by the structural drawings. It shall be the responsibility of the General Contractor to make certain that all construction is in full agreement with the latest approved contract documents.
- 7. Dimensions, unless otherwise shown, are to centerline of columns and beams, or to the face of concrete surfaces and rough framing. 8. All referenced publications shall be the latest edition, unless
- 9. The contract structural drawings and specifications represent the finished structure, and, except where specifically shown, do not indicate the method or means of construction. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, safety and sequence.

5100 170226S3 1/1/14

### STRUCTURAL OBSERVATION

otherwise noted

- 1. MKM & Associates is to perform structural observations for: A. Reinforcing and embeds. Contractor shall coordinate all required site reviews with his schedule
- and shall not cover up any work until it has been reviewed. Contractor shall provide at least four working days notice to MKM & Associates prior to all reviews. 2. Structural observation is limited to the periodic visual observation of
- the structural system for general conformance to the approved plans and specifications at applicable construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for inspections required by the local jurisdiction or special inspections required on these drawings and specifications.
- 3. Job site visits by the Engineer are solely for the purpose of determining if the work of the Contractor is proceeding in accordance with the structural contract documents. This limited site observation should not be construed as exhaustive or continuous to check the quality or quantity of the work, but rather periodic in an effort to guard the Owner against defects or deficiencies in the work of the Contractor.

5106 170226S3 12/31/14

### CONCRETE AND REINFORCEMENT

MATERIALS

A. Concrete shall meet the following requirements: 28-Day Max Max Ratio Strength Slump Agg H20/Cement Admixtures

4000 psi 4"±1" 1-1/2" 0.48

- 1. All concrete shall be sampled and tested by a gualified technician in accordance with ACI 318-11, 5.6. Exception: When approved by the Building Official, special inspection or testing is not required when the total augntity of a given class of concrete is less than 50 cubic yards.
- Portland cement shall conform to ASTM C150. Type II. Concrete cementitious material shall contain no more than 30%, by weight, of fly ash (ASTM C618, Type C or F) and/or slag (ASTM C989).
- 4. Provide mix design to Engineer for review prior to ordering. 5. Above table assumes no admixtures. Admixture dosage requirements depend on job conditions at the time of concrete placement.
- B. Reinforcing steel shall conform to ASTM A615, (including supplement S1), grade 60 for #5 bars and larger and grade 40 for #4 bars and smaller. Steel shall be kept clean and free of
- C. Reinforcing to be welded shall be ASTM A706, grade 60 1. Electrodes for welding reinforcing shall be as specified below SMAW: E90XX low hydrogen D. Smooth dowels shall be new plain billet steel conforming to ASTM
- A615 (including supplement S1), grade 40 for 1/2" diameter, arade 60 for 5/8" diameter and larger. E. Welded wire fabric shall conform with ASTM A185. and shall be
- lapped 9" minimum at splices.
- F. High-strength, non-shrink grout shall be Master Builders Construction Grout".
- G. Mechanical anchors installed in concrete where specified on the plans shall be ICC-ES approved. Anchors shall be installed per the manufacturer's recommendations unless otherwise noted See plans for restrictions. Acceptable anchors: Kwik Bolt TZ by Hilti (ICC ESR-1917)
- Titen HD by Simpson (ICC ESR-2713)
- INSTALLATION A. Minimum reinforcing steel cover requirements:
  - Cast against and exposed to earth: 3" Exposed to earth or weather: 2" 3. Not exposed to earth or weather:
- Slabs. walls: 3/4" Beams and columns: 1-1/2"
- B. Minimum clear distance between bars shall be 1-1/2 times the bar diameter. 1-1/3 times the maximum aggregate size, or 1-1/2 inch, whichever is areatest.
- C. Reinforcing bars shall be in lengths as long as practicable. All reinforcing bends shall be "cold bent". All reinforcing bars shall end in a standard hook unless detailed otherwise.
- D. Reinforcing, anchor bolts and inserts shall be rigidly held in place prior to placing concrete. See typical details for notes on reinforcing steel.
- When concrete is placed against previously hardened concrete where slab or wall control joints are not present, the interface shall be clean and free of laitance. The surface shall be cleaned and roughened by removing the entire surface and exposing clean aggregate solidly embedded in a mortar matrix. In the event that the contact surface becomes coated with earth, sawdust, etc., after being cleaned, the surface shall be recleaned prior to concrete placement. All construction joints shall be wetted and standing water removed immediately before new
- concrete is placed. G. Construction joints in concrete shall be clean with exposed aggregate solidly embedded. The contractor shall obtain the Architect's/Engineer's approval of construction joint locations not indicated on structural drawings.
- H. Expansion anchor bolts and powder driven fasteners (PDF) shall not be installed until concrete has reached design strength. PDF shall not be used in curbs U.O.N.
- J. Consolidate all concrete by vibration, spading, rodding or forking. Thoroughly work concrete around reinforcement and embedded tems. Eliminate all air and stone pockets which may cause honeycombing, pitting or planes of weakness.
- K. Welding and preheating of reinforcing shall conform to AWS D1.4 latest edition. Special inspection is required per CBC Section

### CONCRETE AND REINFORCEMENT (CONTINUED)

- A. Exposed surfaces of concrete shall be properly cured in a moist condition at a temperature above 50 degrees Fahrenheit. Exposed concrete shall be thoroughly wetted as necessary to maintain surface in a moist condition. See ACI 308 latest edition.
- B. Cold weather requirements:
- . See ACI 306 for curing. 2. Cover concrete with insulating blankets and monitor temperatures during curing to maintain 36 degrees Fahrenheit or less temperature differential between surface concrete and
- internal concrete. C. Hot weather requirements: See ACI 305 for curing.
- Continuous moist curing should begin immediately following the final finishing operations to prevent surface drying. D. Formwork shall be wetted at least twice daily to maintain a
- moist condition for seven (7) days after placement of concrete. E. Exposed surfaces of concrete shall be covered with evaporation retardent per manufacturer's specifications.
- For final curing of concrete cast and finished flat, cure by one of the following methods for a minimum of seven (7) days
  - 1. Plastic Membrane: Completely cover concrete with a white polyethylene sheet (4 mil. or thicker). The film shall meet the requirements of ASTM C171. Lap all joints a minimum of six (6) inches and seal with tape, mastic, glue or by weighting down to prevent damage from wind. Coverings shall remain in place during the required curing period and torn pieces shall be replaced promptly. If needed lift up a section at a time and spray water under coverings to keep the slab moist during the curing period.
  - Note: Plastic membrane curing shall not be used for curing colored floors or where appearance is of critical importance. Water Curing: Flatwork may be continuously water—cured with a fog spray or flooded for a period of seven (7) days minimum (including holidays and weekends). Care shall be taken to avoid the formation of "dry spots" during the initial seven day cure period.
- 3. Burlap: Cover concrete with wet burlap as soon as it can be placed without marking the surface. Keep the burlap continuously wet and in place during the curing period Reinforced Paper: Reinforced paper should comply with ASTM
- C171. Paper sheets shall have one white surface. See plastic membrane curing notes for additional information. Alternate Method: Cure concrete for a minimum of five consecutive days per FINAL
- CURING section above and then apply a cure/sealer. 1. Cure/Sealer: Verify that other finishes will not be affected by cure/sealer compound. Cure/sealer shall be a high-solids-type with a maximum moisture loss of 0.55kg/m<sup>2</sup> at a coverage of 200 ft<sup>2</sup>/gal. Upon completion of finishing, apply an approved cure/sealer to flatwork per manufacturer's instructions.

4. CONCRETE FORMWORK A. RESPONSIBILITY

- The design, construction, and safety of all formwork shall be the responsibility of the General Contractor. All forms, shores, backshores, falsework, bracing, and other temporary supports shall be engineered to support all loads imposed including the wet weight of concrete, construction equipment, live loads, lateral loads due to wind and wet concrete imbalance. The Contractor shall also be responsible for determining when temporary supports, shores, backshores, and other bracing may be safely removed.
- B. DESIGN The design of all concrete formwork, formwork removal, shoring. and backshoring requirements shall be performed by a registered professional engineer in the state where the project is located and employed by the Contractor.
- CONCRETE CRACKING A. Some minor cracking of slabs and wall panels should be anticipated. Cracks in the concrete can be the result of many circumstances, some of which are quality of aggregate, weather conditions, concrete shrinkage, finishing, joint type and installation, cement content, water 5206 170226S3 2/4/14

### SPECIAL INSPECTION

- GENERAL A. In addition to the inspections required by Section 110 of the CBC, the Owner shall employ a Special Inspector during construction on the types of work indicated below. All special inspection to be performed in accordance with Section 1704 of the CBC.
- B. Inspections: Special inspections that are required by the building codes, local building departments, or these plans to be performed by the firm noted in "SCOPE OF WORK" below.
- SPECIAL INSPECTOR DUTIES A. After due notice from the Contractor, provide qualified personnel as necessary.
  - B. Perform inspections as follows: 1) Perform specified reviews, inspections, sampling and testing
  - of materials as indicated below. 2) Verify conformance of all special inspected work with the approved plans.
  - 3) Verify that the work complies with specified standards and methods of construction. 4) Ascertain compliance of materials with requirements of the
- approved plans. C. Promptly notify Architect (Designer), Engineer and Contractor of observation irregularities or deficiencies within one working day. If irregularities or deficiencies are uncorrected, the Special Inspector to notify the Architect (Designer), Engineer and the governing
- D. Promptly submit written report of each test and inspection with a copy each to the Architect (Designer), Engineer, Owner, Contractor, Governing Agency and other designated persons within three working days. Each report to include:
- 1) Date Issued. Project title and number.
- Testing laboratory name, address and telephone number. Name and signature of laboratory test or inspection.
- Date and time of sampling, test or inspection. Type of inspection or test.
- Location of sample or test in the project. Test results. Report to indicate compliance or noncompliance with approved details and plans.
- E. In addition to the above required reports, the Special Inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of his knowledge, in conformance with the approved plans and the applicable provisions of the California Building Code
- SCOPE OF WORK (By: Special Inspector Company/Firm) A. <u>Grading</u>, <u>Excavation</u> and <u>Fill</u>
  - During earthwork excavations, grading and filling operations. By: City of Santa Rosa Compaction testing of fills.
- B. Reinforcing Steel Bv: Kleinfelder's Inspection of all reinforcing steel prior to closing of forms and prior to concrete delivery.
- EXCEPTION: Slab on grade. : Kleinfelder's During the taking of compression test specimens, and placing of
- all reinforced concrete and pneumatically placed concrete. By: City of Santa Rosa Slump tests.
- D. <u>AC Paving</u>
  By: City of Santa Rosa
- Compaction testing of AC paving.

5250 170226S3 1/1/17

### ADHESIVE CONNECTIONS

- 1. Installation of adhesive, anchors and dowels shall be in accordance with the manufacturer's specifications and these notes. Where requirements of the manufacturer or these notes conflict the more restrictive provisions govern.
- 2. Adhesive Systems A. The following adhesive anchor systems are acceptable for use in concrete
- Hilti, Inc.: Hilti Hit-RE 500-SD (ESR-2322) Simpson Strong-Tie Co. Inc.: SET-XP (ESR-2508) Any other adhesive shall have documentation, including ICC ES Report, submitted to the Engineer for approval prior to drilling holes. 3. Holes for adhesive connections in concrete may be drilled with a
- drilled with an electric rotary drill only. Hole diameter shall be per manufacturer's specifications. 4. Holes for adhesive connections shall be thoroughly cleaned with the

roto-hammer. Holes for adhesive connections in masonry shall be

- following procedure: A. Blow out all dust and loose material with compressed air and
- extension nozzle. B. Clean hole surfaces with a plastic wire bottle brush which is slightly larger than the hole diameter. Blow out hole with compressed air.
- D. Repeat procedure as required until all surfaces are clean and no residual dust remains on surfaces of hole. 5. Items embedded in adhesive shall be clean and free of any rust,
- petroleum based products or deleterious materials per adhesive manufacturer's recommendations. 6. Adhesive shall be installed to the end of the hole with a gun nozzle or other approved procedure prior to installation of anchor. 7. Adhesive connections shall have periodic special inspection per CBC
- Section 1704 unless otherwise noted. Holdown anchors and other tension ties shall have continuous special inspection. The Special Inspector shall verify:
- A. Holes are correct diameter and depth. B. Holes are clean.
- C. Proper adhesive is used.
- D. Adhesive is correctly mixed and installed per manufacturer's recommendations. Threaded rods or dowels are clean and correct diameter.
- Threaded rods or dowels are embedded to specified depths. G. Expiration date on adhesive products has not passed. H. In lieu of the special inspection procedures noted above, an in—situ load test (pull test) may be performed per table below:
  - Anchor Diameter <u>Test Load</u> <u>Test Duration</u> 6.6 K 15 seconds 5/8" 10.5 K 15 seconds 3/4" 15.5 K 15 seconds 7/8 21.4 K 15 seconds 15 seconds 28 K
- 8. Anchor shall not be moved or loaded before curing time is reached. 5122 170226S3 1/24/14

ABBR	REVIATIONS	FIN GR FHMS	Flat H	ead	OPT O.S.B.	Optional Oriented Strand	
∠ or L	Angle	FHWS	Machir Flat H	ne Screw lead		Board	
<b>©</b> A.B.	At Anchor Bolt(s)			Screw	PHSMS	Pan Head Sheet	
ABV	Above	F.J. F.N.	Floor Face		PARL	Metal Screw Parallel	L
AC	Asphaltic	F.N. F.O.C.	Face		PERP	Perpendicular	
ADDL	Concrete Additional		Concr	ete	P.D.F.	Powder Driven	
ADJ	Adjacent	F.O.P.		of Post	חבטב	Fastener Danfanatad	
AFF	Above Finish	F.O.S.		of Stud of Heart	PERF P	Perforated Plate	
ALT	Floor Alternate		Center	•	P PLY	Plywood	
APA	American	FRMG F.S.	Framii Far—S		P.P. P.L.F.	Partial Penetration Pounds Per	
	Plywood Association	FT.S.		/ Feet		Lineal Foot	
APRX	Approximate	FTG	Footin		P.S.I.	Pounds Per Square Inch	
ASTM	American Society for	GA	Gauge	or Gage	P.S.F.	Pounds Per	
	Testing and	GALV G.I.	Galvar		P.T.	Square Foot Preservative Treated	
A.T.R.	Materials All—Threaded	G.I. GLB		nized Iron aminated	P-T	Post-Tension(ed) (ing)	No.
A.1.IV.	Rod	CD DM	Beam	Dann	(#)	Quantity	
AYC	Alaska Yellow	GR.BM. G.T.		Beam Truss	(II)	(Number of items)	
	Cedar	GYP BD		m Board	<b>D</b>	Radius	
BFF	Below Finish Floor	H.D.G.	Hot-D	pped	R R.C.	Relative Compaction	
BLDG	Building	HDD	Galvar		REINF RET	Reinforcing Retaining	
BLK	Block(ing)	HDR HGR	Heade Hange		REQD	Required	
BLW BM	Below Beam	HORIZ	Horizo	ntal	REV	Revision	
BOT	Bottom	H.S. HSS	High :	Strength	R.O. RHMS	Rough Opening Round Head	
BRG BTWN	Bearing Between	1100	Struct	ural		Machine Screw	
		НТ	Sectio Height	n (Tube)	RHWS	Round Head Wood Screw	
CANT CBC	Cantilever California	п	neighi	•	RWD	Redwood	
CDC	Building Code	IBC		ational	S.A.D.	See Architectural	H
Ç.J. E	Control Joint Centerline	ICC		ng Code ational	J.A.D.	Drawings	
ČLG	Ceiling	100 50		Council	S.C.D. SCHED	See Civil Drawings Schedule	L
CLR C.M.U.	Clear	ICC-ES		valuation e, Inc.	S.S.D.	See Structural	
C.M.O.	Concrete Masonry Unit	I.C.F.		ted Concrete	SCL	Drawings	
COL	Column	I.D.	Form( Inside	s) Diameter	SCL	Structural Composite Lumber	l
COLL	Collector Combination	I.F.	Inside			(See CARPENTRY	
CONC	Concrete	INFO INT	Inform Interio			Notes)	
COND CONN	Condition Connection				SHT	Sheet	l
CONST	Construction	JST JT	Joist Joint		SHTG SMF	Sheathing Sheet Metal Flashing	
CONT C.P.	Continuous Complete				SIM	Similar	
	Penetration	K KD	KIP(S) Kiln D	(1000 lbs)	SP SPECS	Space(s) Specifications	
CSK	Countersink	K.P.	King I		SQ	Square	
d	Penny	LBS or #	Pound	6	S.S. STAG	Select Structural Staggered	
DBL	(Nail size) Double	LG UF	Long		STD	Standard	
DET	Detail	L.L.	Live L		STIF SST	Stiffener Stainless Steel	
D.F.	Douglas Fir Diameter	L.L.H. L.L.V.		.eg Horizontal Leg Vertical	STL	Steel	
DIAG	Diagonal	LOC	Locati	on(s)	STRL SIP	Structural Structural Insulated	L
DIM	Dimension Dead Load	MAX	Maxim	um	SIF	Panel	
DL D.T.	Drag Truss	M.B.	Machi	ne Bolt(s)	S.W.	Structural Sheathed Wall	
DWG	Drawing	мвм		Building acturer	SYMM	Symmetrical	
<u>(</u> E)	Existing	MFR	Manuf	acturer factured)	T&B	Top & Bottom	T
EA E.B.	Each Expansion Bolt	МКМ	MKM .	& Associates	T&G	Tongue & Groove	
E.E.	Each End	MIW MIN	Malleab	le Iron Washer	THK THRD	Thick or Thickness Threaded	Γ
E.F. ELEC	Each Face Electrical	MISC		am laneous	T.N.	Toenail	
EL or ELEV	Elevation	MTL	Metal		T–U	Tilt—Up (Concrete Panel)	
EMB E.N.	Embed(ment) Edge Nail	(N)	New		TYP	Typical	
ENGR	Engineer	Ν/Α N.I.C.		pplicable Contract	U.O.N.	Unless Otherwise	ľ
E.O.R.	Engineer of	NO. or #	Numb	er		Noted	
EQ	Record Equal or	N.S.	Non-s	shrink ear-Side)	U.R.M.	Unreinforced Masonry	1
	Equivalent	N.T.S.		Scale	VERT	Vertical	1
E.S. E.W.	Each Side Each Way	0/	Over	(On)	V.I.F.	Verify In Field	
EXT	Exterior	0.C.	On Ce	enter e Diameter	W/	With	
FDN	Foundation	0.D. 0.F.		e Diameter e Face	WD WP	Wood Waterproof	
FLR	Floor	0.H.	Oppos	ite Hand	W.PT.	Work Point	
FF EL	Finish Floor Elevation	OPNG OPP	Openir Oppos		WT WWF	Weight Welded Wire Fabric	1
CVLIE			• •				$\vdash$
SIME	BOLS LEGEN	に (SOME	SYMBO	LS MAY NOT BE	APPLICAB	LE 10 PROJECT)	
~\A6	SHEATHED WAL	L -	RF.	+8'-1"	- FIFVA	TION ABOVE 0'-0"	
	/ \	0'-6"		*			
1/ \	<u> </u>				SAND	OVER	1

SAND OVER
VAPOR BARRIER OVER
FREE-DRAINING --- SHEATHED WALL ABOVE. CRUSHED ROCK OVER SEE OTHER PLANS UNDISTURBED OR NATIVE SOIL BUILDING GRID SYSTEM COMPACTED SOIL DETAIL REFERENCE (DETAIL NUMBER OVER SHEET NUMBER) wood sheathing WALL ELEVATION REFERENCE FRAMING MEMBER WITH OR SECTION REFERENCE EDGE NAILING (DETAIL NUMBER OVER REVISION AREA SHEET NUMBER) 5 (4) VARIOUS KEYNOTE REVISION NUMBER SYMBOLS, SEE KEYNOTE LEGEND BEARING WALL BELOW ON SAME SHEET (SHADED) NON-BEARING WALL - STRAP/TIEDOWN SIZE BELOW (UNSHADED) DETAIL REFERENCE WALL ABOVE (DASHED) -SIZE OF POST BELOW WHERE APPLIES CONCRETE SLAB CONSTRUCTION JOINT POST WITH HOLDOWN (PLAN VIEW) CONCRETE SLAB \_\_\_\_\_ CONTROL JOINT POST ABOVE WITH STRAP CONDITION CONTINUES
BEYOND AREA DEPICTED (PLAN VIEW) WOOD MEMBER (CONTINUOUS) WOOD MEMBER (BLOCKING)

STRUCTURAL STEEL

POST-TENSIONED TENDON

POST-TENSIONED TENDON FIXED END ("DEAD-END")-

STRESSING END ("LIVE-END")

SE 6 スロ City of Santa Rosa
EJO ST TRUNK
STRUCTURE MOD STRUC VALL

2/28/2018

uctural engineering

441 College Avenue

Santa Rosa, CA 95401 Phone: (707)578-8185 Fax: (707) 578-7153

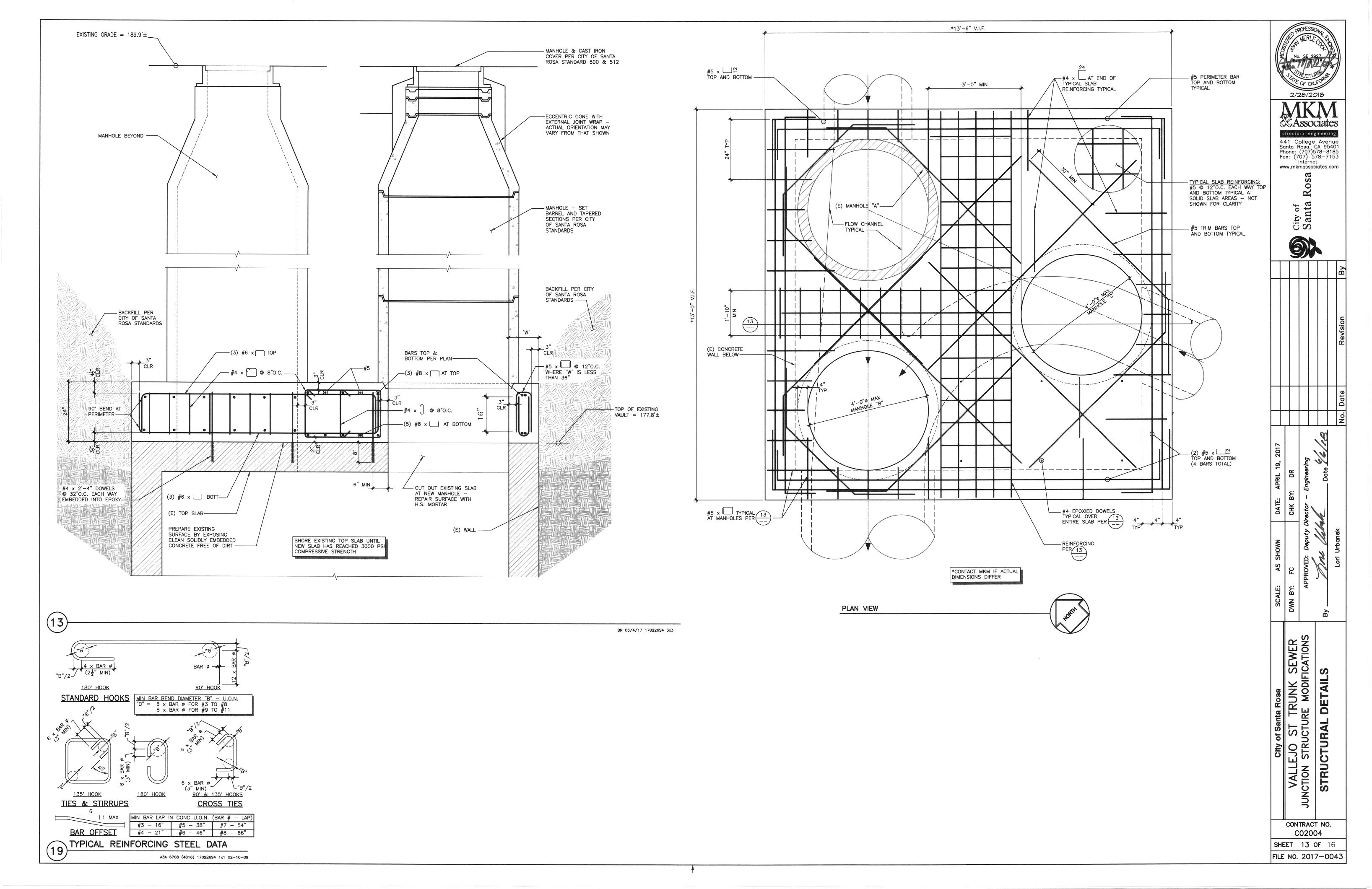
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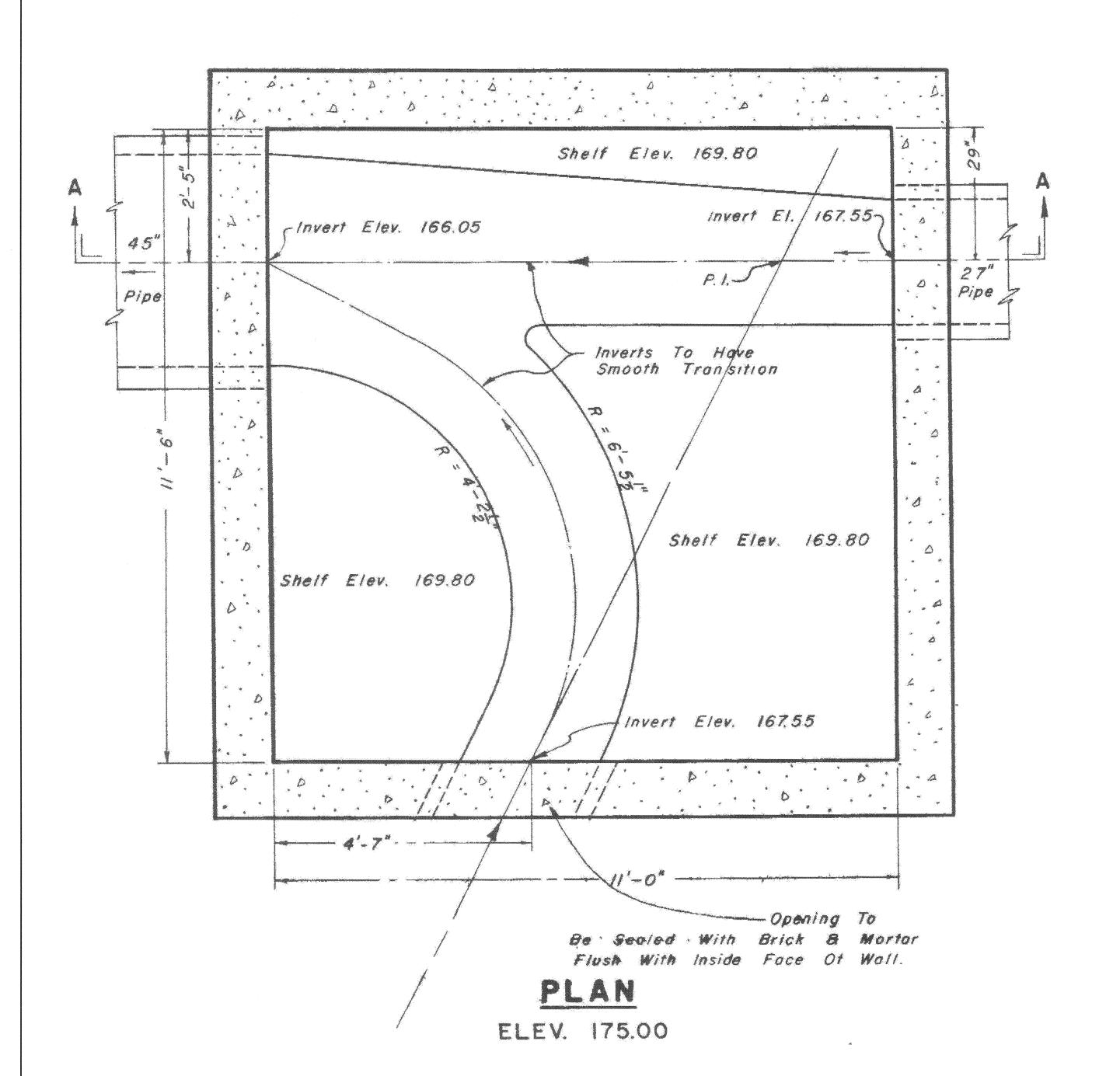
www.mkmassociates.com

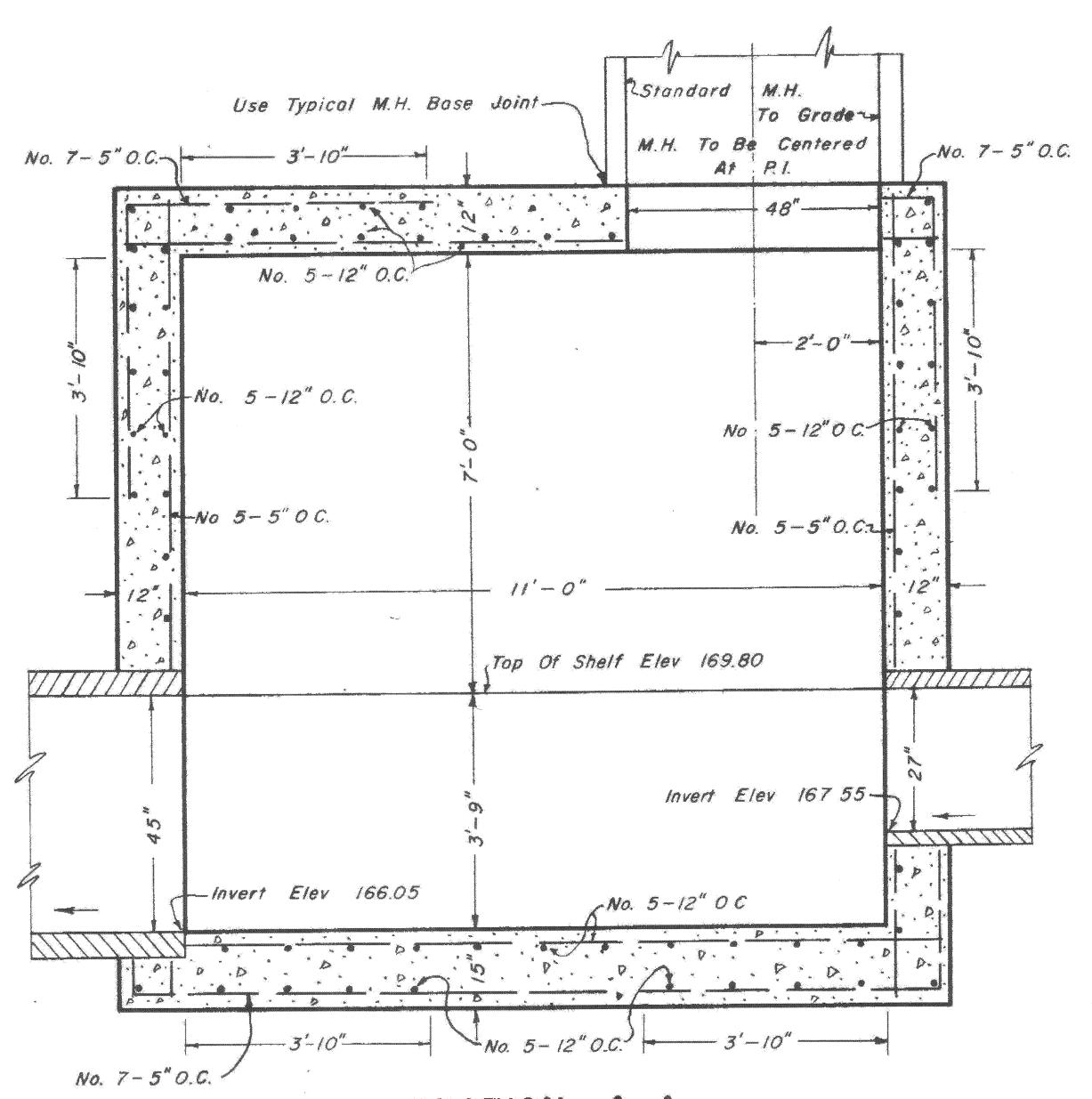
of of nta

CONTRACT NO. C02004

**SHEET 12 OF** 16 FILE NO. 2017-0043



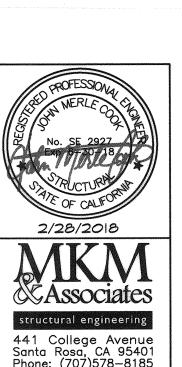




SECTION A-A

MANHOLE NO. 49

Scale:  $\frac{1^{11}}{2} = 1^{1}$ 

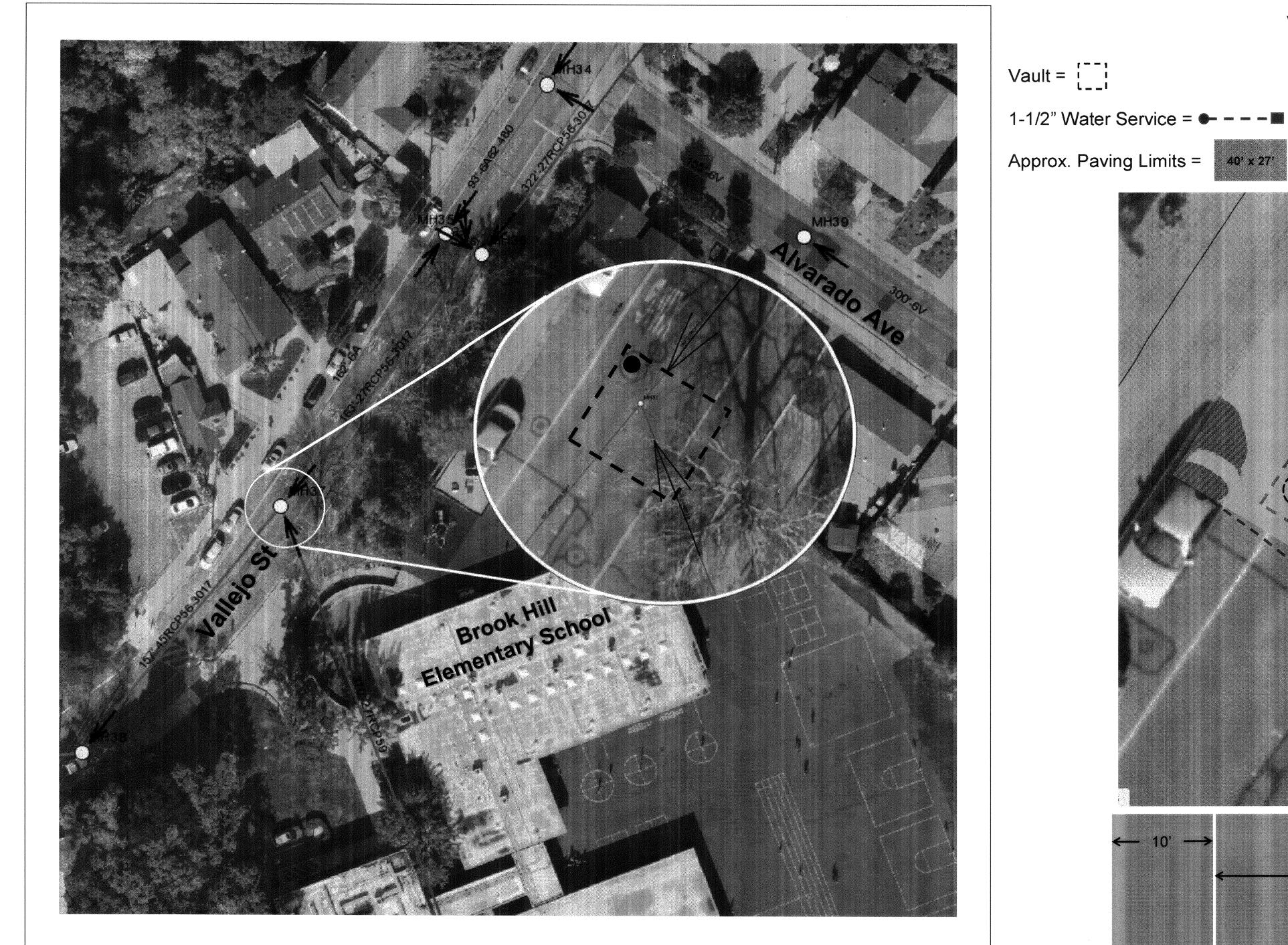


441 College Avenue Santa Rosa, CA 95401 Phone: (707)578-8185 Fax: (707) 578-7153 Internet: www.mkmassociates.com City of Santa

JO ST TRUNK SEWER
STRUCTURE MODIFICATIONS
ON STRUCTURE

CONTRACT NO. CO2004

SHEET 14 OF 16
FILE NO. 2017-0043



# Vallejo Street Paving limits Not to Scale

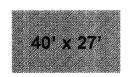
Existing Manhole =

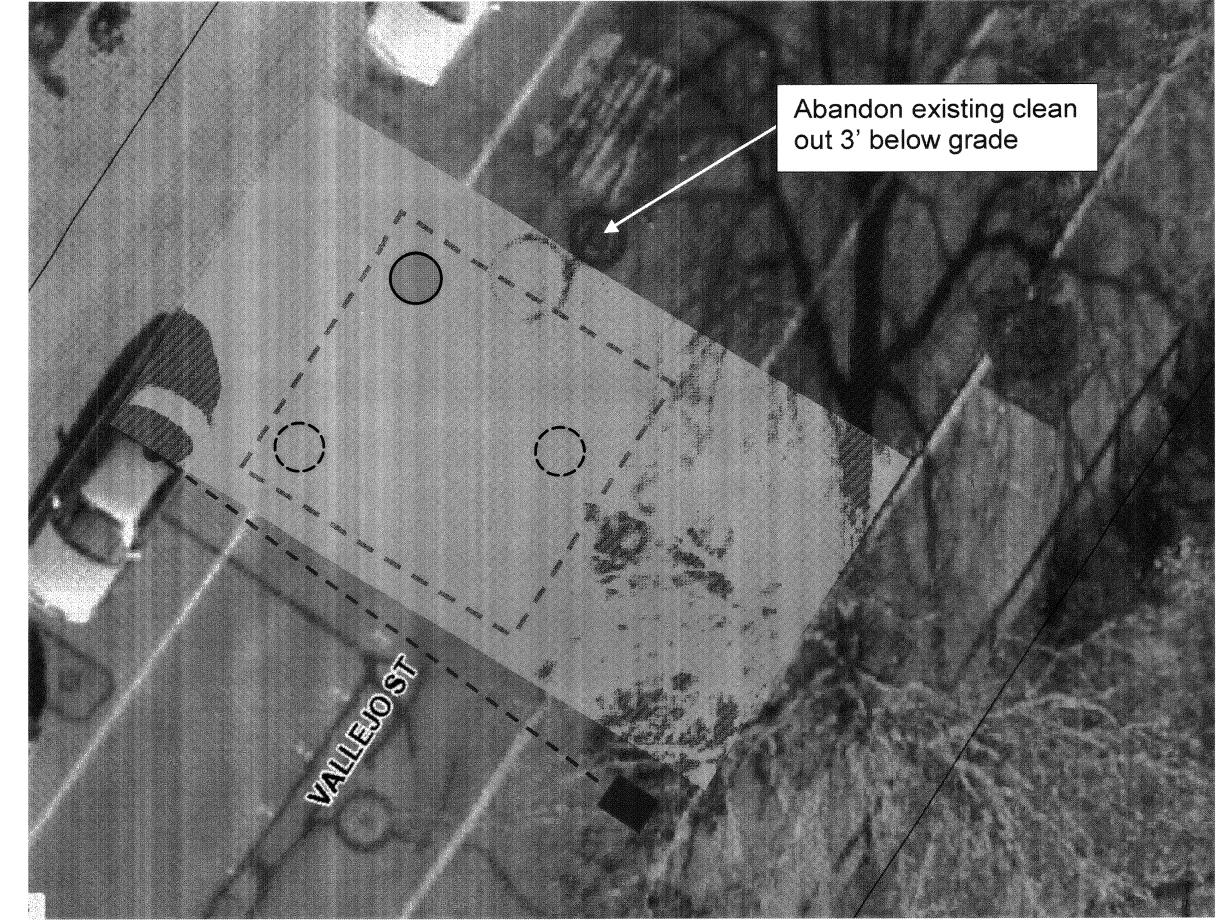


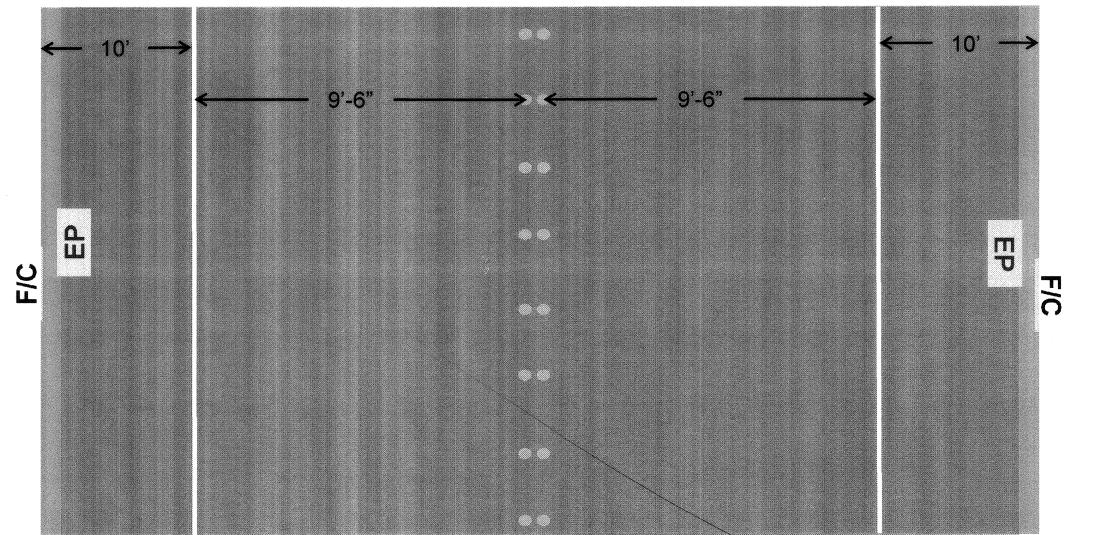
New Manhole = (\_)



Approx. Paving Limits = 40' x 27'

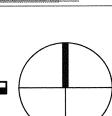






VALLEJO STREET PAVING LIMITS

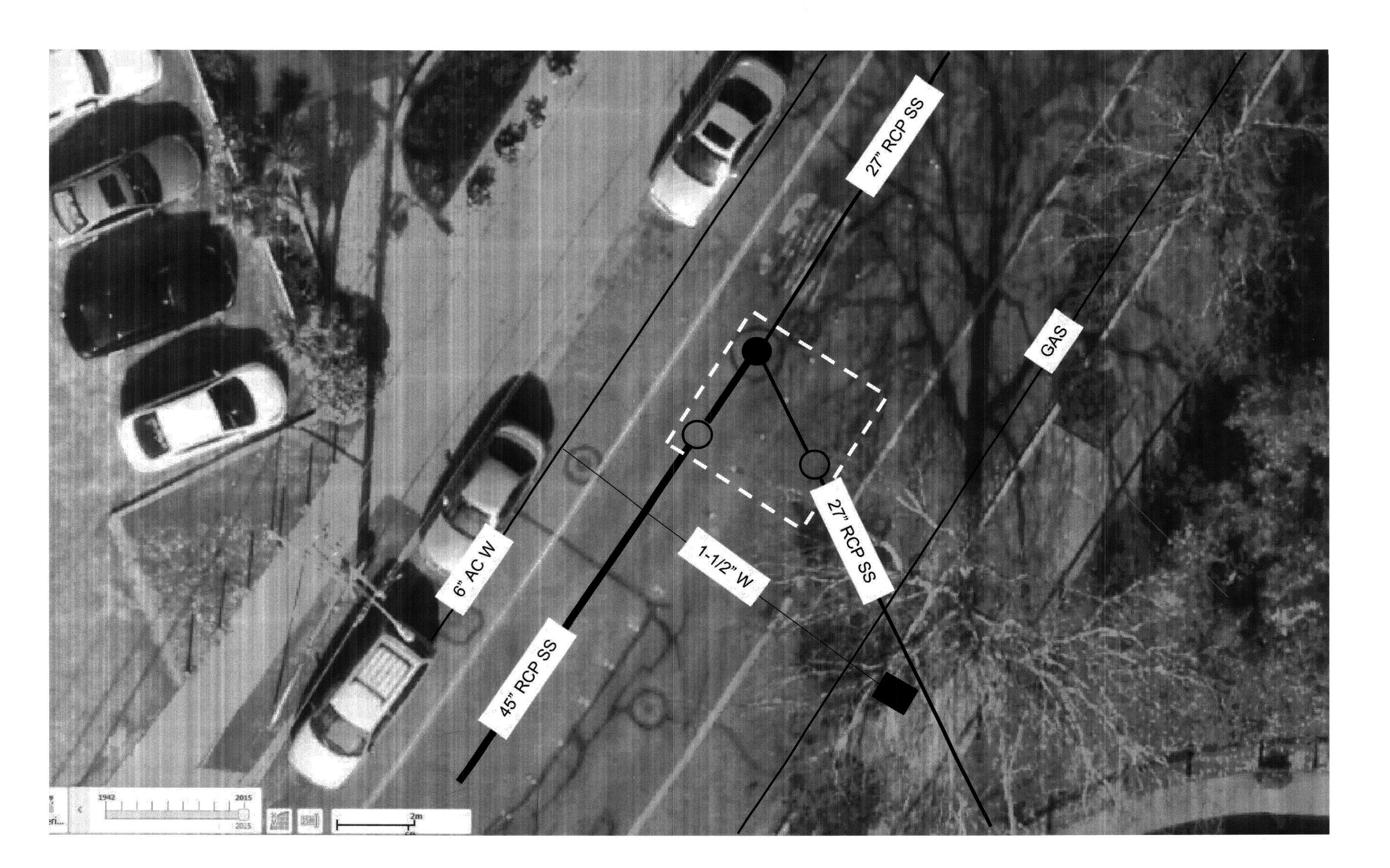
NOT TO SCALE



PROJECT LOCATION AERIAL VIEW, VALLEJO ST. PAVING LIMITS VALLEJO ST TRUNK SEWER JUNCTION STRUCTURE MODIFICATIONS CONTRACT NO. CO2004 **SHEET 15 OF** 16

FILE NO. 2017-0043

PROJECT LOCATION AERIAL VIEW
NOT TO SCALE



441 College Avenue Santa Rosa, CA 95401 Phone: (707)578-8185 Fax: (707) 578-7153 Internet: www.mkmassociates.com

DATE: APRIL 19, 2017	NACONO DA	CHK BY: DR	Director – Enaineerina		Date 6/18		
		CHK	9	- P	Helpall	J. L1.	Lori Urbanek
CALE: AS SHOWN		N BY: FC	APPROVED: Deputy	1	Mark	-	

APPROXIMATE LOCATION OF UNDERGROUND UTILITIES

NOT TO SCALE

CONTRACT NO. CO2004

VALLEJO ST TRUNK SEWER
JUNCTION STRUCTURE MODIFICATIONS
APPROXIMATE LOCATION OF
UNDERGROUND UTILITIES

**SHEET 16 OF** 16 FILE NO. 2017-0043