

ABBREVIATIONS

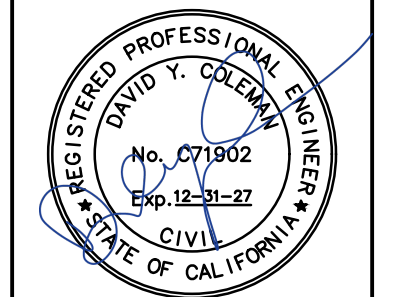
AB	AGGREGATE BASE	MG	MILLION GALLONS
AC	ASPHALT CONCRETE	MH	MANHOLE
ACP	ASBESTOS CEMENT PIPE	MIN	MINIMUM
AD	ALGEBRAIC DIFFERENCE	MISC	MISCELLANEOUS
ADA	AMERICANS WITH DISABILITIES ACT	MJ	MECHANICAL JOINT
ADPT	ADAPTER	MSL	MEAN SEA LEVEL
AGG	AGGREGATE	N	NORTH
ALUM	ALUMINUM	NO.	NUMBER
AP	ANGLE POINT	NA	NOT APPLICABLE
APN	ASSESSORS' PARCEL NUMBER	NIC	NOT IN CONTRACT
APPROX	APPROXIMATE	NPT	NATIONAL PIPE THREAD
ARV	AIR RELEASE VALVE	OC	ON CENTER
AVE	AVENUE	OD	OUTSIDE DIAMETER
BC	BEGIN HORIZONTAL CURVE	OH	OVERHEAD
BLDG	BUILDING	OHW	ORDINARY HIGH WATER
BLVD	BOULEVARD	OZ	OUNCE
BM	BENCHMARK	PA	PLANTER AREA
BO	BLOWOFF	PC	POINT OF CURVATURE
BV	BUTTERFLY VALVE	PCC	POINT OF COMPOUND CURVATURE
BVC	BEGIN VERTICAL CURVE	PCC	PORTLAND CEMENT CONCRETE
BSW	BACK OF SIDEWALK	PD	PLANTER DRAIN
BT	BOTTOM OF TAPER	PE	PLAIN END
B&R	BRELIE & RACE	PG	PAD GRADE
CAV	COMBINATION AIR AND VACUUM RELEASE VALVE	PIV	POST INDICATOR VALVE
CB	CATCH BASIN	R	PROPERTY LINE
CBC	CALIFORNIA BUILDING CODE	PN	PAVING NOTCH
CDF	CONTROLLED DENSITY FILL	POC	POINT OF CONNECTION
CHK	CHECK	POC	POINT ON CURVE
CHP	CAST-IN-PLACE PIPE	POS	PRIVATE OPEN SPACE
CL	CENTERLINE	POT	POINT ON TANGENT
CL	CENTERLINE	PP	POWER POLE
CL	CLEAR	PRC	POINT OF REVERSE CURVATURE
CLR	CORRUGATED METAL PIPE	PRV	PRESSURE REDUCING VALVE
CMP	CORRUGATED METAL PIPE ARCH	PSI	POUND PER SQUARE INCH
CO	CLEANOUT	PSV	PRESSURE SUSTAINING VALVE
COAX	COAXIAL CABLE	PT	POINT OF TANGENCY
CONC	CONCRETE	PUE	PUBLIC UTILITY EASEMENT
COND	CONDUIT	PVC	POLYVINYL CHLORIDE
COTG	CLEANOUT TO GRADE	PVI	POINT OF VERTICAL INTERSECTION
CP	CONTROL POINT	PVMT	PAVEMENT
CPLG	COUPLING	PWE	PUBLIC WATER EASEMENT
CR	CURB RETURN	R	RADIUS
CSP	CORRUGATED STEEL PIPE	RAW	RAW WATER
CTR	CENTER	RC	RELATIVE COMPACTION
CY	CUBIC YARDS	RCB	REINFORCED CONCRETE BOX
C/G	CENTER TO CENTER	RCP	REINFORCED CONCRETE PIPE
C&G	CURB AND GUTTER	RD	ROAD
DBL	DOUBLE	RD	ROOF DRAIN
DCDC	DOUBLE CHECK DETECTOR CHECK	RED	REDUCER
DDC	DOUBLE DETECTOR CHECK	REF	REFERENCE
DET	DETECTOR	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
DI	DROP INLET	RSC	REMOTE SUPERVISORY CONTROL
DIA	DIAMETER	RT	RIGHT
DIP	DUCTILE IRON PIPE	RT	RING TIGHT
DR	DRIVE	RW	RECYCLED WATER
DS	DOWNSPOUT	RWL	RAIN WATER LEADER
DS	DOWNSTREAM	R/W	RIGHT OF WAY
DWG	DRAWING	S	SOUTH
D/W	DRIVEWAY	S.A.D.	SLOPE
E	EAST	SCADA	SEE ARCHITECTURAL DRAWINGS SUPERVISORY CONTROL AND DATA ACQUISITION
EC	END HORIZONTAL CURVE	SCH	SCHEDULE
ECC	ECCENTRIC	SD	STORM DRAIN
EFFL	EFFLUENT (SEWER)	SDBC	STORM DRAIN CATCH BASIN
EG	EXISTING GROUND	SDDC	STORM DRAIN CLEANOUT
EL	ELEVATION	SDDI	STORM DRAIN DROP INLET
ELEC	ELECTRICAL	SDE	STORM DRAIN EASEMENT
ELL	ELBOW	SDMH	STORM DRAIN MANHOLE
EP	EDGE OF PAVEMENT	SE	SEWER EASEMENT
ESMT	EASEMENT	S.E.D.	SEE ELECTRICAL DRAWINGS
EVC	END VERTICAL CURVE	SF	SQUARE FEET
EW	EACH WAY	SG	SUBGRADE
EX	EXISTING	S.L.D.	SEE LANDSCAPE DRAWINGS
EXIST	EXISTING	SOF	SLIP ON FLANGE
FBE	FUSION-BONDED EPOXY	SO	SIDE OPENING (SD)
FC	FACE OF CURB	S.P.D.	SEE PLUMBING DRAWINGS
FCA	FLANGED COUPLING ADAPTER	SPEC	SPECIFICATION
FDC	FIRE DEPARTMENT CONNECTION	SS	STAINLESS STEEL
FES	FLARED END SECTION	SS	SANITARY SEWER
FF	FINISHED FLOOR	SSCO	SANITARY SEWER CLEANOUT
FG	FINISHED GRADE	S.S.D.	SEE STRUCTURAL DRAWINGS
FH	FIRE HYDRANT	SSMH	SANITARY SEWER MANHOLE
F	FLOWLINE	ST	STREET
FL	FLOWLINE	STA	STATION
FLG	FLANGE	STD	STANDARD
FLSO	FLOWLINE OF SIDE OPENING	STL	STEEL
FLEX	FLEXIBLE	SVC	SERVICE
FM	FORCE MAIN (PRESSURE)	SWE	SIDEWALK EASEMENT
FO	FIBER OPTIC CABLE	SY	SQUARE YARDS
FRP	FIBERGLASS REINFORCED PLASTIC	S/W	SIDEWALK
FT	FEET	T	TANGENT
FTG	FOOTING	TAN	TANGENT
GALV	GALVANIZED	TB	TOP OF BOX
GB	GRADE BREAK	TC	TOP OF CURB
GPM	GALLONS PER MINUTE	TCE	TEMPORARY CONSTRUCTION EASEMENT
GRD	GROUND	TD	TOP OF DIKE
GSP	GALVANIZED STEEL PIPE	TEL	TELEPHONE
GV	GAS VALVE	TEMP	TEMPORARY
GV	GATE VALVE	TF	TOP OF FOUNDATION
HB	HOSE BIBB	TG	TOP OF GRATE
HB	HEADER BOARD	THD	THREADED
HDS	HOT DIPPED GALVANIZED	TS	TOP OF SLAB
HDPE	HIGH DENSITY POLYETHYLENE	TT	TOP OF TAPER
HP	HIGH POINT	TW	TOP OF WALL
HPG	HIGH PRESSURE GAS	TY	TYPICAL
HWY	HIGHWAY	UFFG	UNDER FLOOR FINISHED GRADE
ICV	IRRIGATION CONTROL VALVE	UNO	UNLESS NOTED OTHERWISE
ID	INSIDE DIAMETER	VC	VERTICAL CURVE
INV	INVERT	W	WEST
IP	IRON PIPE	W	WATER
IPS	IRON PIPE SIZE	WM	WATER METER
IRR	IRRIGATION	WNF	WELD NECK FLANGE
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY	WS	WATER SERVICE
JP	JOINT POLE	WT	WEIGHT
JT	JOINT TRENCH	WV	WATER VALVE
L	ARC LENGTH	'	DEGREES
L	LENGTH	"	MINUTES
LF	LINEAL FEET	+	SECONDS
LG	LIP OF GARAGE	Δ	DELTA
LG	LIP OF GUTTER	&	AND
LP	LOW POINT	⊙	AT
LT	LEFT	#	NUMBER
MAX	MAXIMUM	#	POUNDS
MBGR	METAL BEAM GUARD RAIL	%	PERCENT
MFR	MANUFACTURE		

LEGEND

UTILITY & TOPOGRAPHY	EXISTING	PROPOSED
DROP INLET		
DROP INLET WITH SIDE OPENINGS		
STORM DRAIN, MANHOLE & CATCH BASIN		
SEWER MAIN, MANHOLE & CLEAN OUT		
SEWER LATERAL & CLEANOUT		
IRRIGATION CONTROL VALVE BOX & SERVICE		
FIRE HYDRANT & SERVICE ASSEMBLY		
WATER MAIN, GATE VALVE, CROSS & ELBOW		
WATER MAIN, BLOWOFF, TEE, GATE VALVE, CROSS & BEND		
SINGLE WATER SERVICE (SEE PLANS FOR SIZE)		
DUAL WATER SERVICE (SEE PLANS FOR SIZE)		
TEMPORARY BLOWOFF, REDUCER & TIE-IN		
END CAP OR PLUG		
GAS MAIN, VALVE & SERVICE		
ELECTRICAL MANHOLE		
TELEPHONE MANHOLE		
PACIFIC BELL TELEPHONE PULL BOX/VAULT		
ELECTRICAL CONDUIT & BOX		
STREET LIGHT CONDUIT & BOX		
STREET LIGHT		
TRAFFIC SIGNAL		
TRAFFIC SIGNAL PULL BOX		
JOINT POLE & GUY ANCHOR		
OVERHEAD UTILITY		
STREET ADDRESS		
STREET SIGN		
FENCE		
PARKING METER		
SURVEY CONTROL POINT		
SURVEY MONUMENT		
AC DIKE		
CURB & GUTTER		
TREE PROTECTION		
ABANDON EXISTING UTILITY		
TREE TO BE SAVED/PROTECTED		
TREE TO BE REMOVED		
APPROXIMATE GROUND WATER DEPTH (6/22/20)		

GENERAL NOTES

- ALL WORKMANSHIP, MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CITY OF SANTA ROSA STANDARD PLANS, THE CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, THE GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR THIS PROJECT, AND THE STATE STANDARD SPECIFICATIONS AND STANDARD PLANS. THE CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING ALL STANDARDS PERTAINING TO THIS PROJECT.
- THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT USA NORTH AT 811 NO LESS THAN 2 WORKING DAYS PRIOR TO ANY EXCAVATION FOR MARK OUTS OF EXISTING UNDERGROUND FACILITIES IN ACCORDANCE WITH SECTION 7.13 OF THE GENERAL CONDITIONS.
- THE LOCATIONS OF UNDERGROUND UTILITIES AND OTHER OBSTACLES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL 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.
- 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 WITH CITY STANDARD 280.
- 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.
- ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF AS GENERATED AND AT NO TIME SHALL THE CONTRACTOR PLACE EXCAVATED MATERIAL AT THE WORK SITE.
- THE CONTRACTOR SHALL ONLY REMOVE EXISTING TREES OR SHRUBS AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 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 ENGINEERING. ALL DAMAGED RAISED PAVEMENT (NON-REFLECTIVE) MARKERS MUST BE CERAMIC.
- WORK WITHIN THE LIMITS OF THE STREAM (TOP OF BANK TO TOP OF BANK) SHALL ONLY BE ALLOWED BETWEEN JUNE 15TH AND OCTOBER 15TH OR AS REQUIRED BY PROJECT PERMITS. WORK SHALL BE PERFORMED IN ISOLATION FROM THE STREAM. STREAM DIVERSION AND DEWATERING SHALL ONLY OCCUR BETWEEN AUGUST 1ST AND OCTOBER 15TH.



City of Santa Rosa

Brelje & Race
CONSULTING ENGINEERS
1000 Redwood Blvd., Suite 1200, Santa Rosa, CA 95401-7015-1522

NO.	DATE	REVISION	BY

SCALE: AS SHOWN DATE: APRIL 2026

DWN BY: DDS CHK BY: DDS

APPROVED: Deputy Director - Engineering

By: Christa Siegenthaler Date: _____

City of Santa Rosa

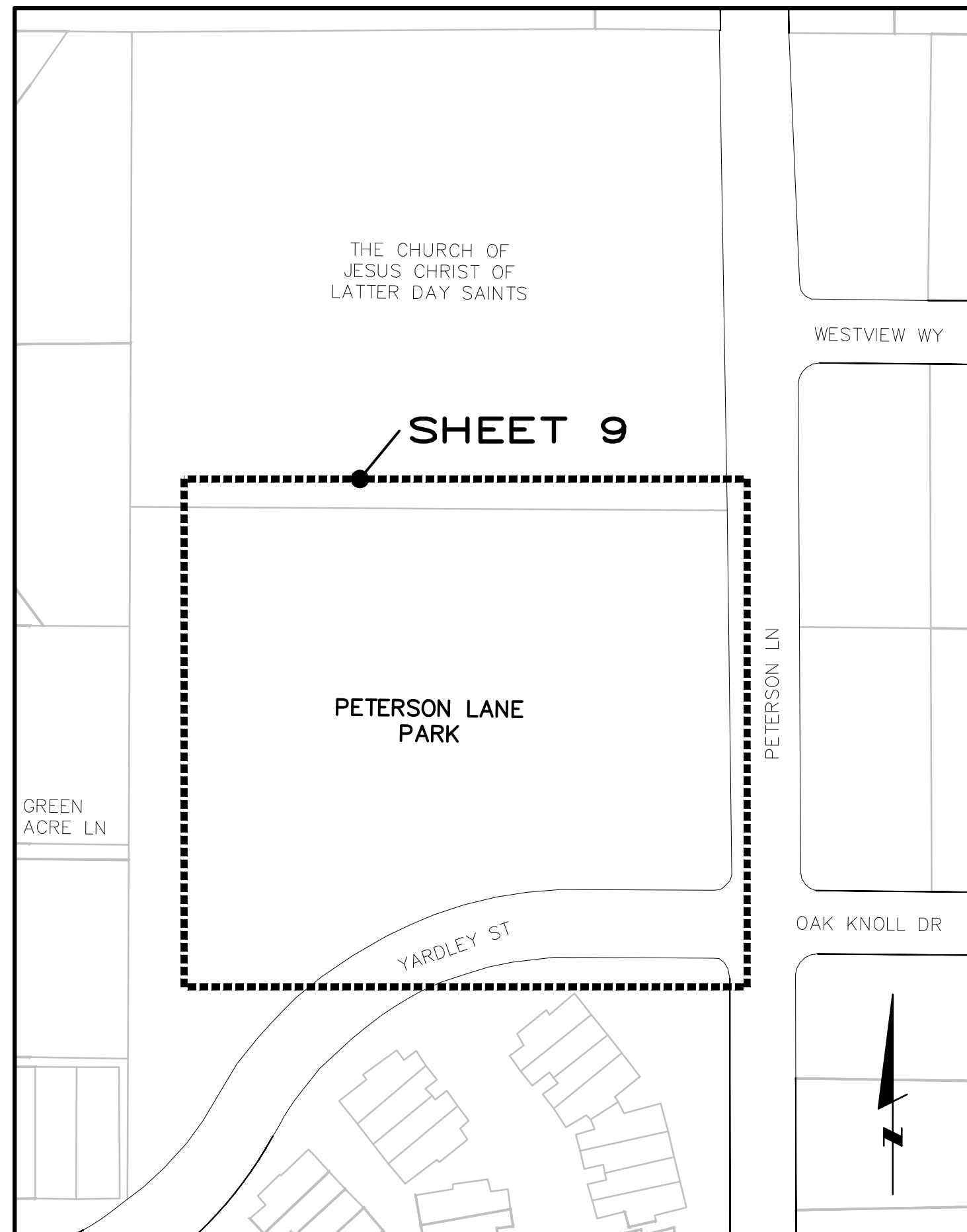
FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK

ABBREVIATIONS, LEGEND & NOTES

CONTRACT NO. C02117

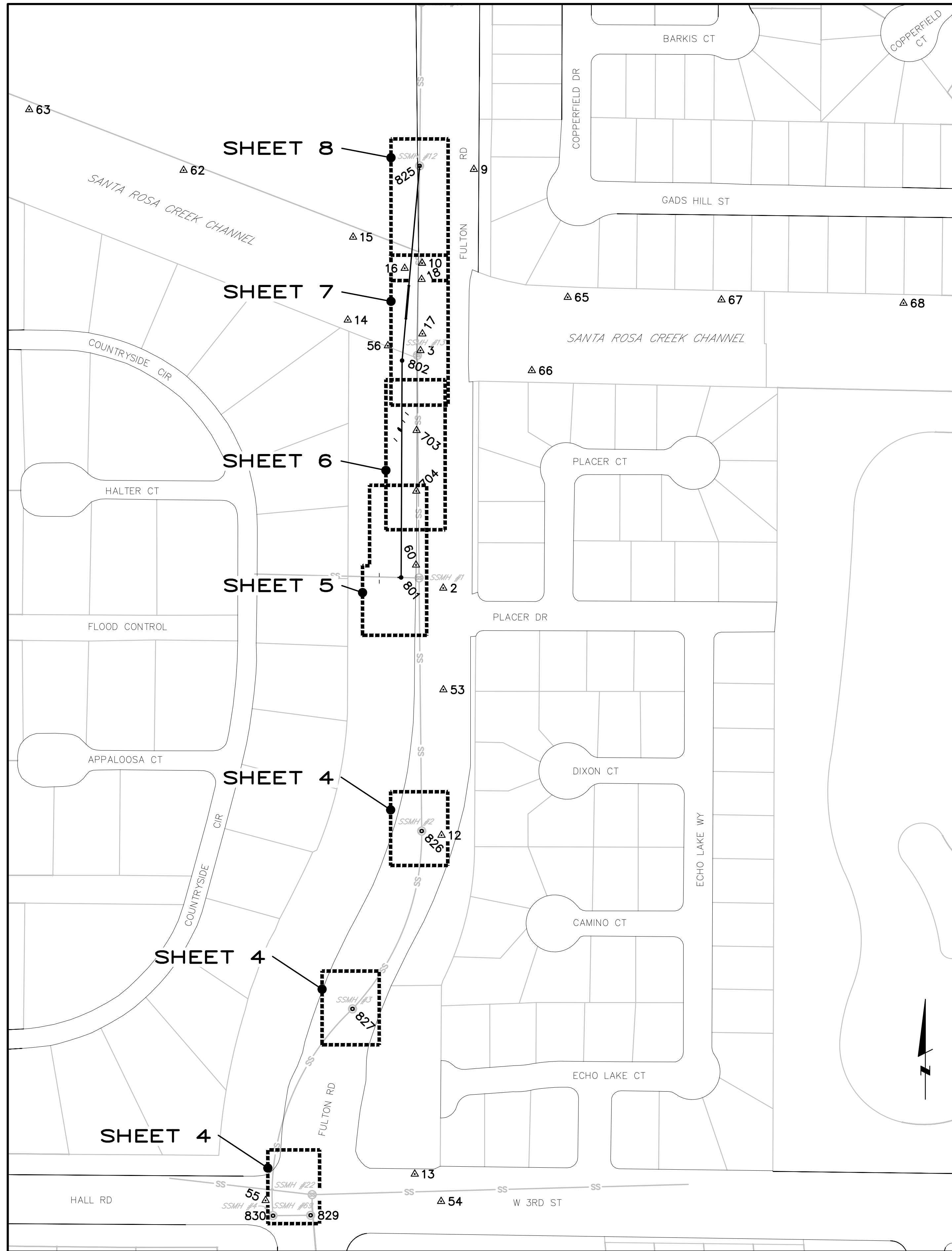
SHEET 2 OF 20

FILE NO. 2025-0001



SHEET 9 LAYOUT

NOT TO SCALE



SHEET LAYOUT AND SURVEY CONTROL DATA

NOT TO SCALE

CONTROL POINT COORDINATE TABLE

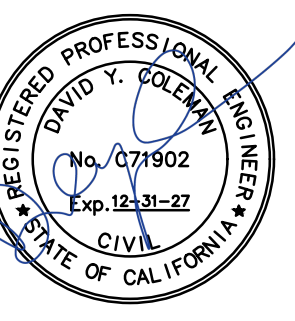
NO	NORTHING	EASTING	ELEVATION	TYPE
1	1923748.824	6341203.857	EL 103.89	CP FND SCRIB X
2	1923236.961	6341237.242	EL 100.27	CP CUT X
3	1923611.136	6341201.293	EL 103.69	CP FND SCRIB X
7	1924835.177	6341209.283	EL 94.90	FND L&T
8	1924370.771	6341293.896	EL 97.06	FND CUT X
9	1923896.496	6341285.480	EL 102.53	FND CUT X
10	1923748.755	6341203.900	EL 103.90	SET CUT X
12	1922847.748	6341234.507	EL 97.61	SET CUT X
13	1922314.102	6341192.333	EL 95.77	SET CUT X
14	1923659.228	6341086.775	EL 97.24	SET SPIKE 120 PENNY
15	1923789.819	6341095.193	EL 96.52	SET PK NAIL
16	1923740.643	6341176.489	EL 91.88	SET CUT X
17	1923637.393	6341204.359	EL 88.77	SET PUNCH IN ROCK
18	1923723.178	6341203.154	EL 90.98	SET CUT X
19	1923965.325	6340311.971	EL 95.06	SET 120 PENNY SPIKE
52	1924930.399	6341245.876	EL 94.02	FND B.D. G-263
53	1923076.873	6341237.490	EL 97.32	FND B.D. CSR
54	1922271.145	6341233.861	EL 96.02	FND B.D. CSR
55	1922272.564	6340957.303	EL 96.18	FND B.D. G-267
56	1923618.714	6341149.993	EL 96.39	FND 3" B.D. SCWA
57	1923950.858	6340306.941	EL 94.88	FND 3" B.D. SCWA
60	1923273.405	6341194.311	EL 99.74	SET CUT X
62	1923895.074	6340828.139	EL 95.82	SET PK NAIL
63	1923990.514	6340584.854	EL 94.99	SET PK NAIL
64	1924093.150	6340328.349	EL 94.35	SET PK NAIL
65	1923694.998	6341433.340	EL 97.25	SET PK NAIL
66	1923579.546	6341376.761	EL 98.53	SET SPIKE 120 PENNY
67	1923690.995	6341675.560	EL 98.28	SET PK NAIL
68	1923685.708	6341962.425	EL 99.39	SET PK NAIL
69	1923680.720	6342196.155	EL 100.27	SET PK NAIL
703	1923485.285	6341195.186	EL 102.75	SET CUT X
704	1923389.808	6341194.758	EL 101.39	SET CUT X

BASIS OF BEARINGS

BETWEEN CONTROL POINT #11 AND CONTROL POINT #14
AS SHOWN ON THIS SHEET
BEARING: N67°12'10"W
DISTANCE: 124.26'

SEWER STRUCTURE COORDINATE TABLE

NO	NORTHING	EASTING	TYPE
801	1923253.715	6341170.872	SSMH
802	1923595.278	6341172.372	SSMH
825	1923901.965	6341199.952	EX SSMH 12
826	1922854.376	6341203.312	EX SSMH 2
827	1922574.272	6341094.301	EX SSMH 3
829	1922249.217	6341028.347	EX SSMH 69
830	1922248.492	6340969.090	EX SSMH 4

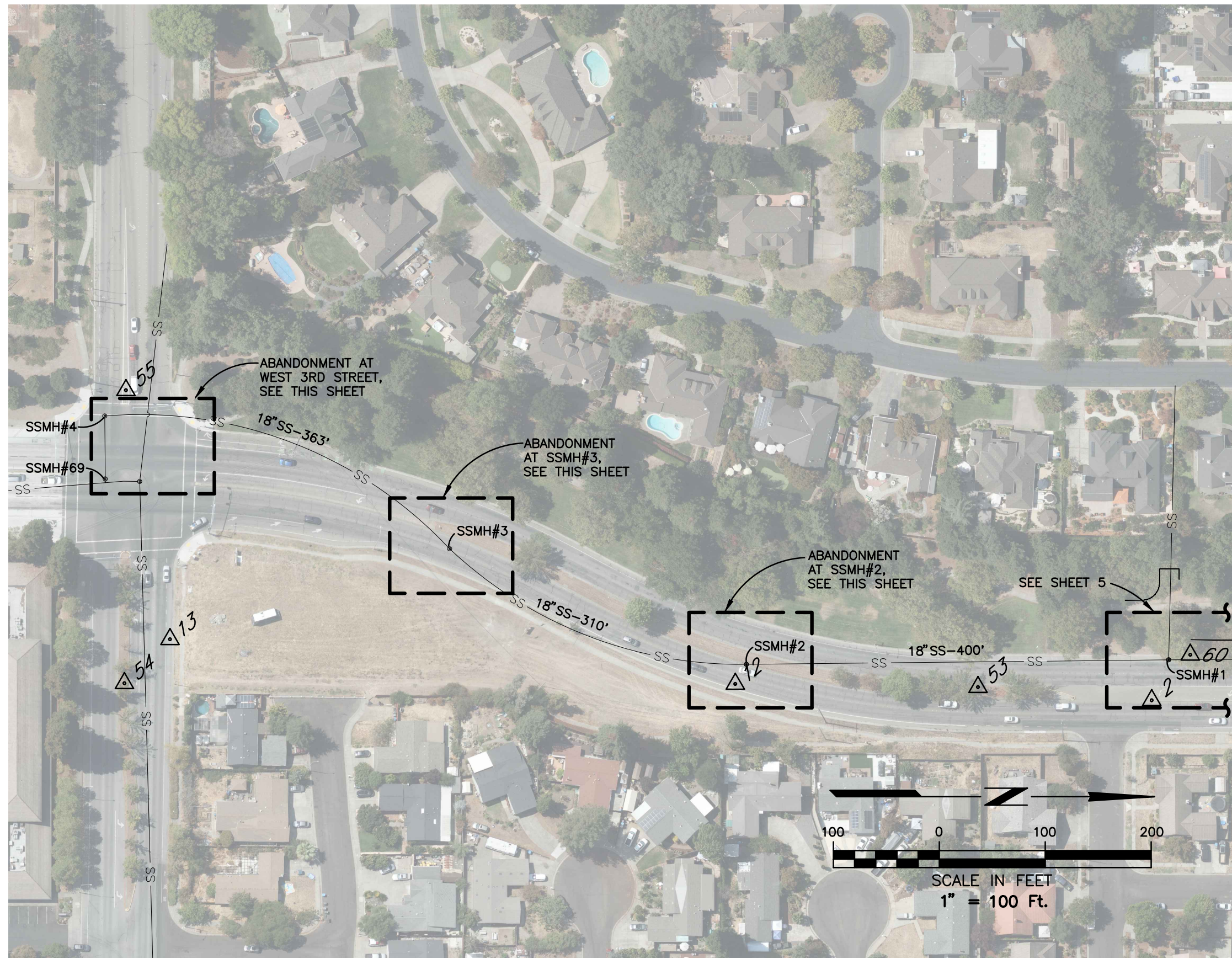


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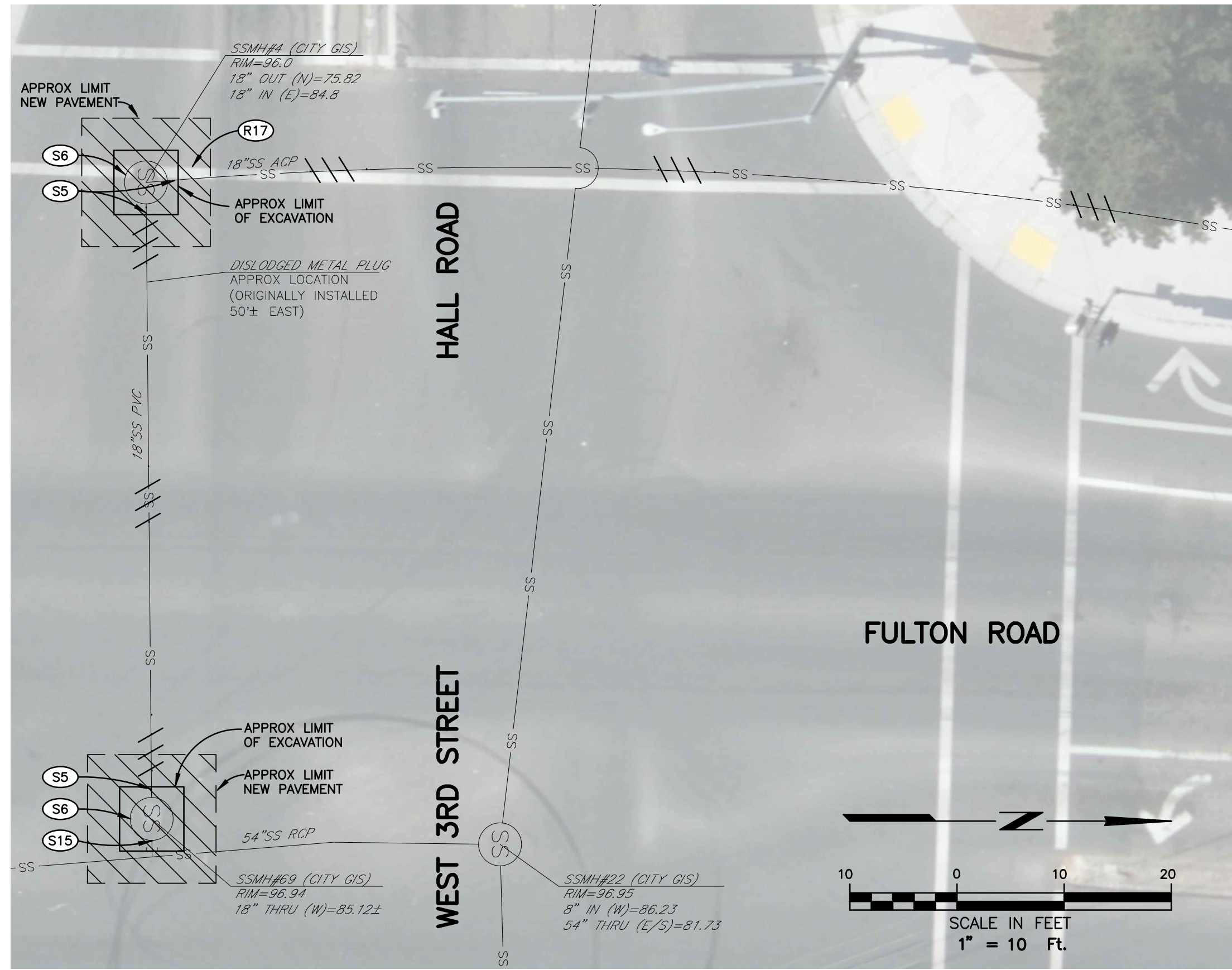
SCALE: AS SHOWN
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DWN BY: PIT
CHK BY: DDS
APPROVED: Deputy Director - Engineering
By: Christa Siegenthaler Date: _____

City of Santa Rosa
FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK
SHEET LAYOUT & SURVEY CONTROL

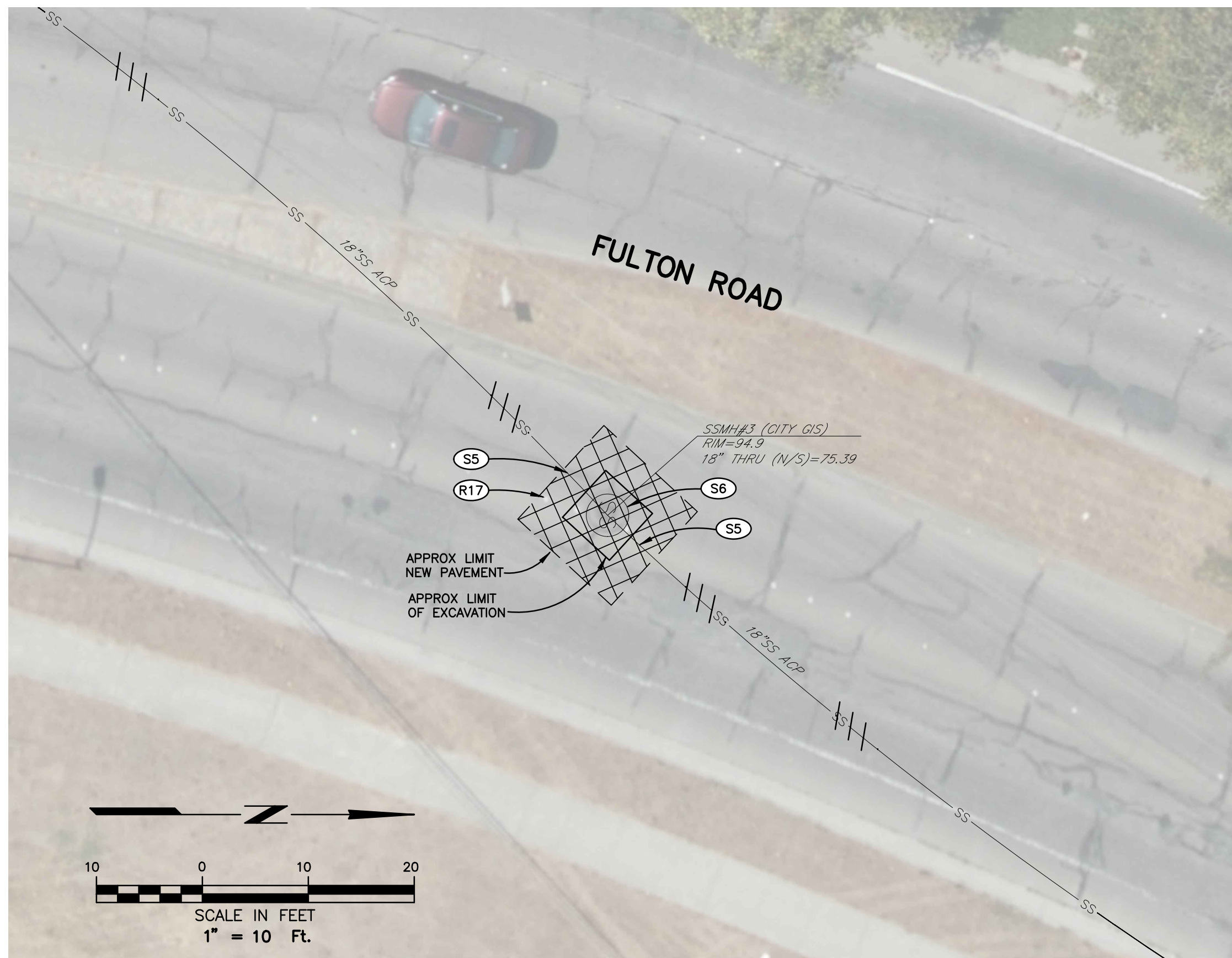
CONTRACT NO. C02117
SHEET 3 OF 20
FILE NO. 2025-0001



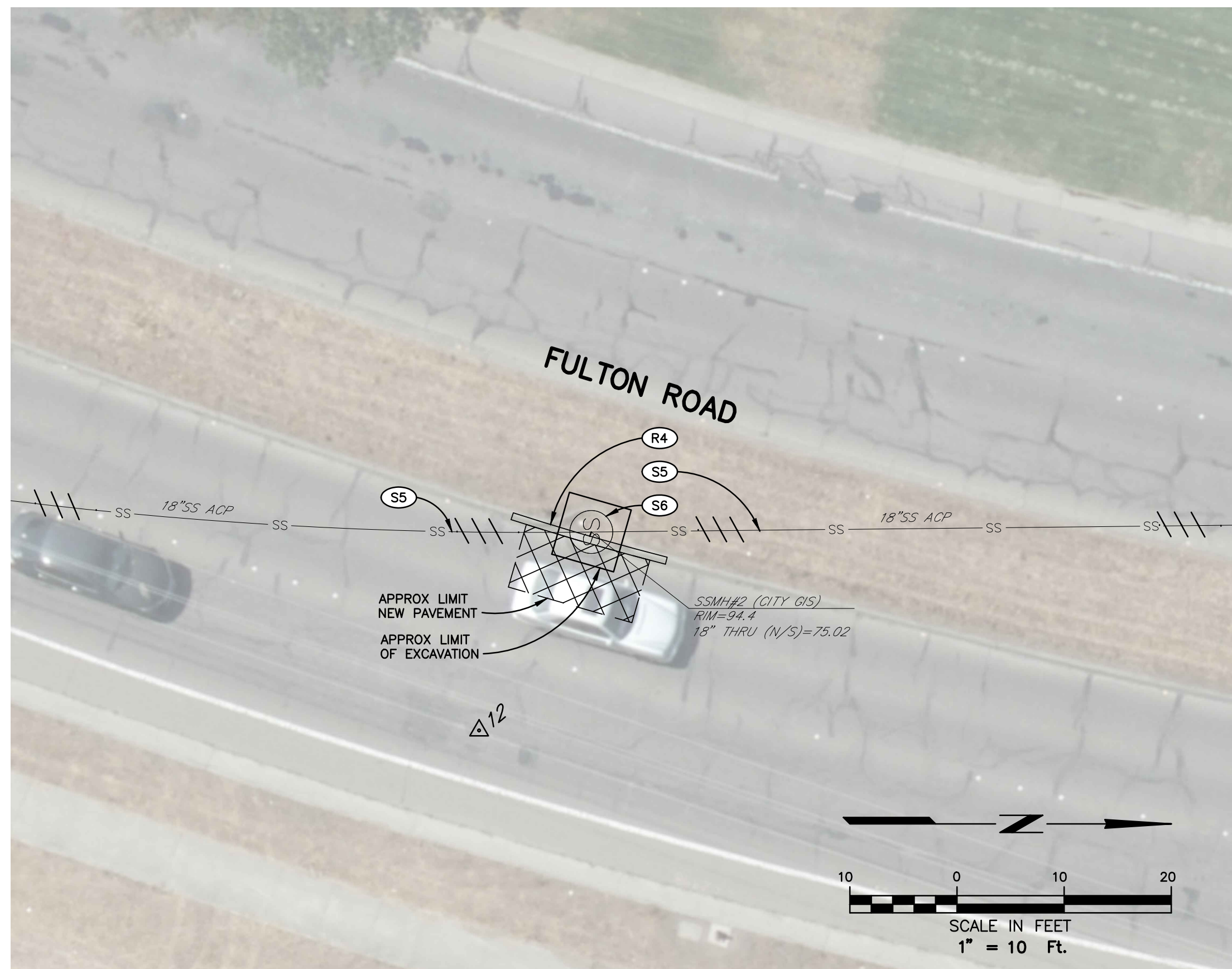
SEWER ABANDONMENT KEY MAP



ABANDONMENT AT WEST 3RD STREET



ABANDONMENT AT SSMH#3



ABANDONMENT AT SSMH#2

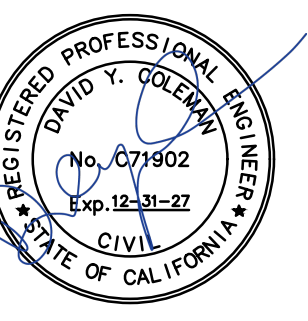
SHEET NOTES

(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

- (S5) PLUG EXISTING SANITARY SEWER MAIN AND ABANDON PER ABANDONMENT DETAILS SHEET 10.
- (S6) ABANDON EXISTING SANITARY SEWER MANHOLE PER ABANDONMENT DETAILS SHEET 10.
- (S15) ABANDON TRUNK SEWER OVERFLOW AT SSMH 69 PER DETAIL SHEET 10.
- (R4) INSTALL APPROXIMATE 15 LF OF TYPE A STREET MEDIAN CURB PER CITY STD 242 TYPE A, DOWEL INTO EXISTING CURB, #5 DOWELS AT 16" OC, 8" MINIMUM EMBEDMENT, EPOXY SET.
- (R17) RESTORE PAVEMENT STRIPING AND MARKERS.

LEGEND

- LIMITS OF PAVEMENT REPLACEMENT AT SSMH REMOVAL 0.17' AC SURFACE OVER 0.25' AC LEVELING COURSE OVER 1.16' AC BASE.
- LIMITS OF PAVEMENT REPLACEMENT AT SSMH REMOVAL 0.45' AC SURFACE OVER 1.33' CL2AB



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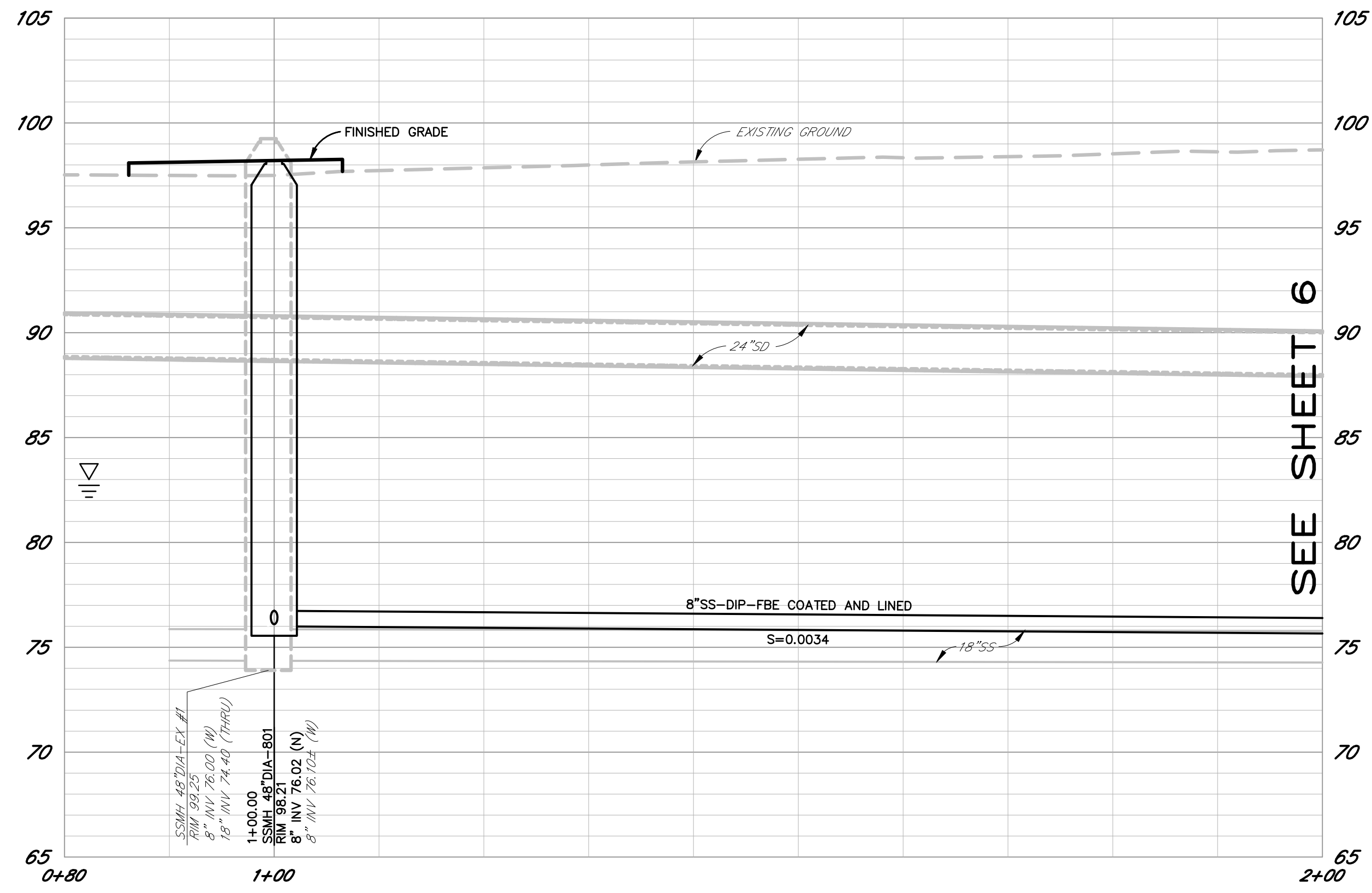
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City of Santa Rosa
FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK
SEWER ABANDONMENT PLAN

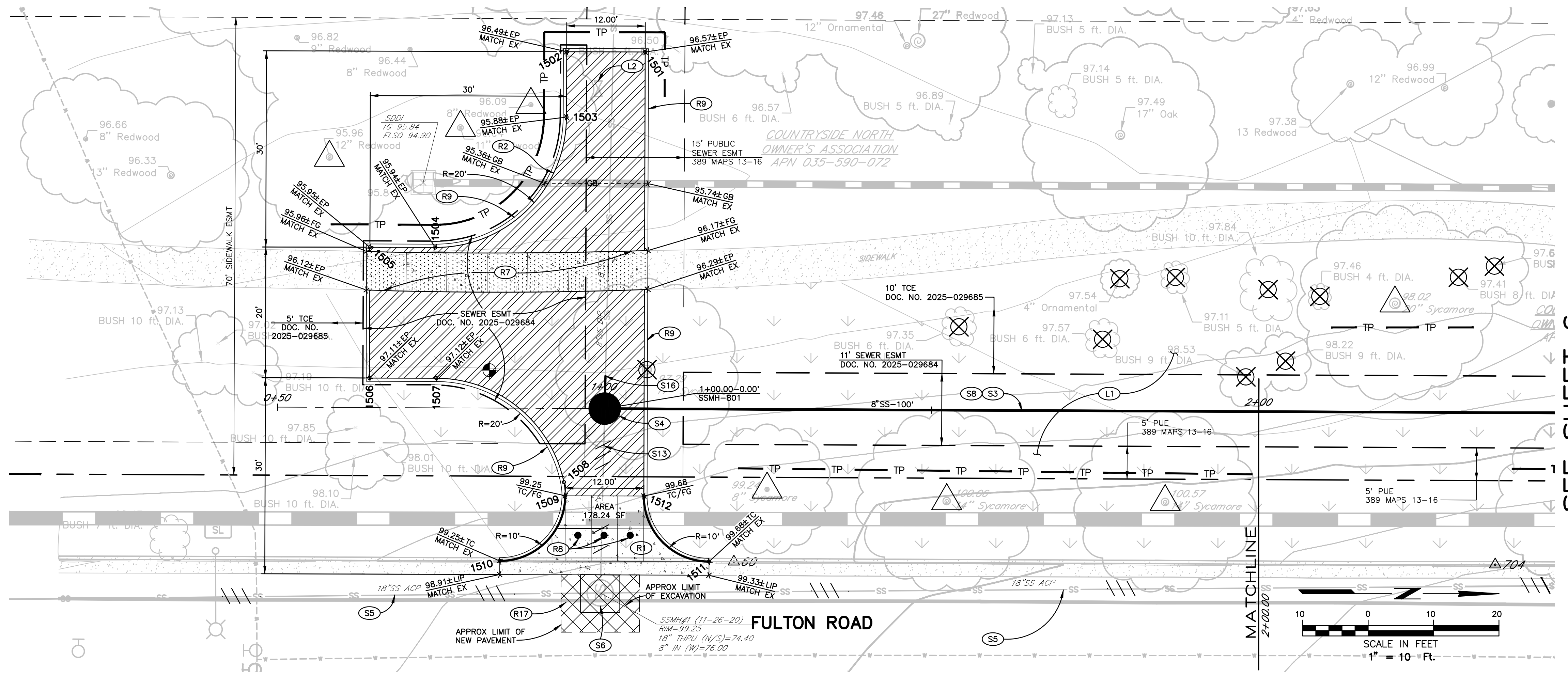
CONTRACT NO. C02117
 SHEET 4 OF 20
 FILE NO. 2025-0001

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04-01-26 mchbr \455A\dwg\4554_00\4554.00_BASE.dwg TAB: 5-P&P



PROFILE
SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'



PLAN

SHEET NOTES

(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

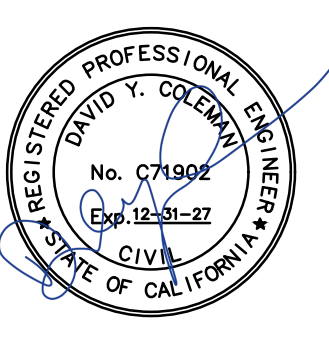
- (S3) INSTALL 8" DIP SANITARY SEWER MAIN, FBE COATED AND LINED PER CITY STDs.
- (S4) INSTALL 48" SANITARY SEWER MANHOLE PER CITY STD 500.
- (S5) PLUG EXISTING SANITARY SEWER MAIN AND ABANDON PER ABANDONMENT DETAILS SHEET 10.
- (S6) ABANDON EXISTING SANITARY SEWER MANHOLE PER ABANDONMENT DETAILS SHEET 10.
- (S8) SUPPORT TRENCH WITH POSITIVE SHORING SYSTEM.
- (S13) PLUG EXISTING SANITARY SEWER MAIN AND ABANDON PER CITY STD 507.
- (S16) CONNECT EXISTING SANITARY SEWER MAIN TO 8" STUB FROM NEW SANITARY SEWER MANHOLE WITH COUPLER PER NOTE 10 OF CITY STD 500.
- (R1) CONSTRUCT CONCRETE DRIVEWAY APRON SIMILAR TO CITY STD 250C, NO DEPRESSION AT CENTERLINE OF DRIVEWAY.
- (R2) CONSTRUCT AC HAMMERHEAD TURN AROUND TO THE LAYOUT AND GRADES SHOWN ON PLAN.
- (R7) REMOVE EXISTING SIDEWALK TO NEAREST SCORE MARK AND REPLACE WITH VEHICULAR SIDEWALK SIMILAR TO CITY STD 237 AND WITH VEHICULAR CONCRETE STRUCTURAL SECTION AS INDICATED IN LEGEND ON THIS SHEET. AT END SEGMENTS, CONFORM TO EXISTING SIDEWALK IN A MANNER WHICH CREATES A UNIFORM GRADIENT AND DOES NOT IMPEDE DRAINAGE. DOWEL INTO EXISTING SIDEWALK, #5 DOWELS AT 16" OC, 8" MINIMUM EMBEDMENT, EPOXY SET.
- (R8) INSTALL REMOVABLE BOLLARD, PER DETAIL ON SHEET 10.
- (R9) CONSTRUCT CONCRETE MOW STRIP PER DETAIL ON SHEET 10.
- (R17) RESTORE PAVEMENT STRIPING AND MARKERS.
- (L1) REFER TO LANDSCAPE PLANS, SHEETS 14-20, FOR PLANTING AND IRRIGATION RESTORATION.
- (L2) ASSESS FUNCTION OF EXISTING IRRIGATION VALVE AND RELOCATE AS REQUIRED.

LEGEND

- TREE TO BE REMOVED
- TREE TO BE SAVED
- APPROX GEOTECHNICAL BORING LOCATION
- APPROX GROUNDWATER DEPTH AT TIME OF DRILLING (6/22/2020)
- LIMITS OF PAVEMENT REPLACEMENT AT SSMH REMOVAL
0.45' AC SURFACE OVER 1.33' CL2AB
- HAMMERHEAD ASPHALT PAVING LIMITS
0.33' AC SURFACING OVER 1.00' CLASS II AB
- APPROXIMATE LIMITS OF VEHICULAR CONCRETE 6" CLASS A
PCC OVER 6" CL2AB. WEAKENED PLANE, SCORE MARKS,
AND EXPANSION JOINTS SHALL BE PER CITY STD 235.

LAYOUT COORDINATE TABLE

NO	NORTHING	EASTING	TYPE
1501	1923259.848	6341116.345	EP/AP
1502	1923247.848	6341116.308	EP/AP
1503	1923247.817	6341126.308	EP/BC
1504	1923227.755	6341146.245	EP/EC
1505	1923217.755	6341146.214	EP/AP
1506	1923217.692	6341166.214	EP/AP
1507	1923227.911	6341166.246	EP/BC
1508	1923247.423	6341182.140	EP/PCC
1509	1923247.636	6341184.224	TC/FG
1510	1923237.605	6341194.193	TC/EC
1511	1923269.605	6341194.293	TC/BC
1512	1923259.636	6341184.261	TC/EC/FG



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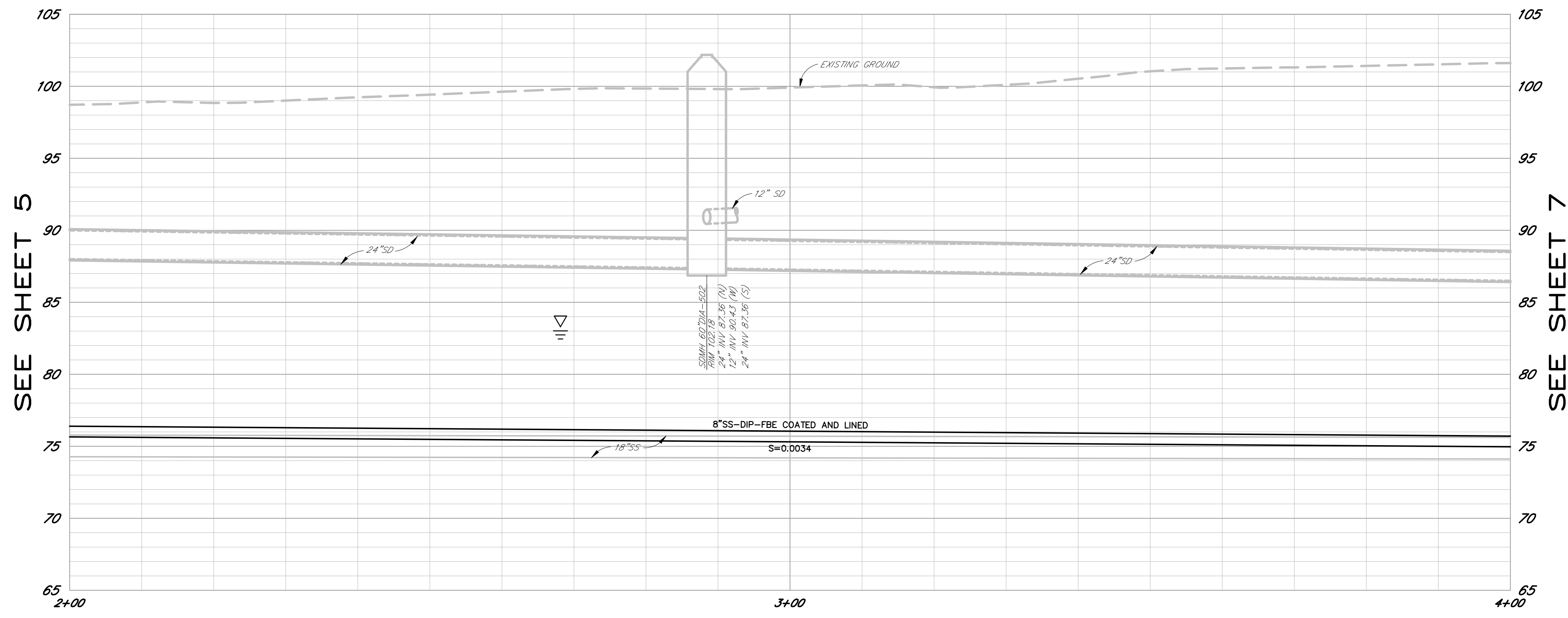
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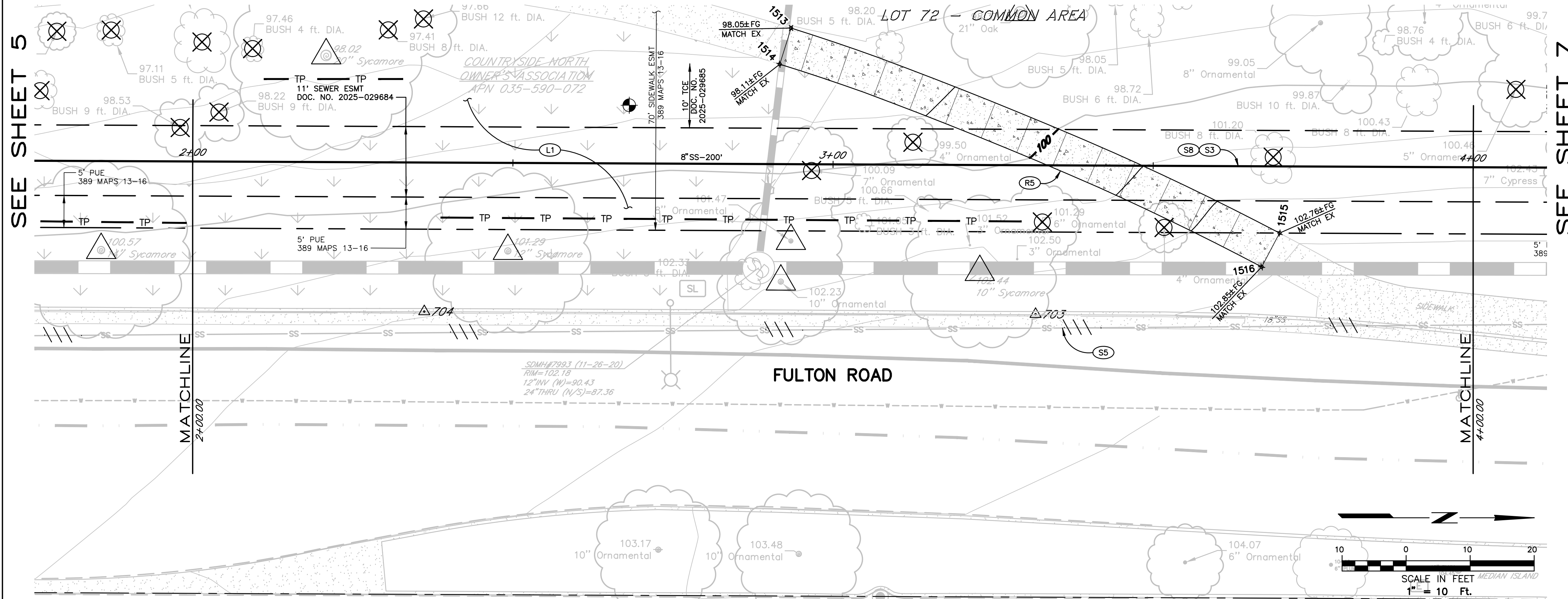
City of Santa Rosa
FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK
PLAN & PROFILE
STA.1+00-STA.2+00

CONTRACT NO.
C02117
SHEET 5 OF 20
FILE NO. 2025-0001

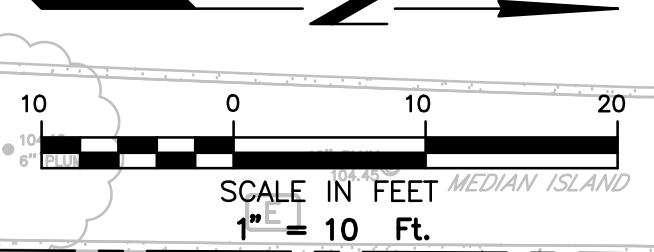
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PROFILE
SCALE: HORZ. 1" = 10'
VERT. 1" = 5'



PLAN



SHEET NOTES

(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

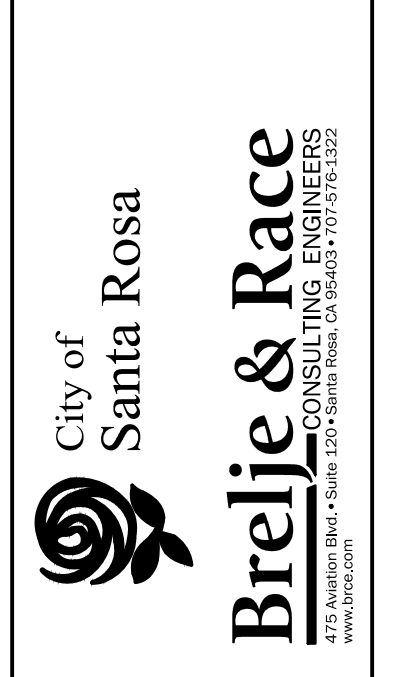
- (S3) INSTALL 8" DIP SANITARY SEWER MAIN, FBE COATED AND LINED PER CITY STDS.
- (S5) PLUG EXISTING SANITARY SEWER MAIN AND ABANDON PER ABANDONMENT DETAILS SHEET 10.
- (S8) SUPPORT TRENCH WITH POSITIVE SHORING SYSTEM.
- (R5) REMOVE AND REPLACE EXISTING SIDEWALK AS REQUIRED PER CITY STD 237, TO THE NEAREST EXISTING SCOREMARK, DOWEL INTO EXISTING SIDEWALK, #4 DOWELS AT 12" OC, 8" INTO EXISTING SIDEWALK.
- (L1) REFER TO LANDSCAPE PLANS, SHEETS 14-20, FOR PLANTING AND IRRIGATION RESTORATION.

LEGEND

- TREE TO BE REMOVED
- TREE TO BE SAVED
- APPROX GEOTECHNICAL BORING LOCATION
- APPROX GROUNDWATER DEPTH AT TIME OF DRILLING (6/22/2020)

LAYOUT COORDINATE TABLE

NO	NORTHING	EASTING	TYPE
1513	1923447.104	6341150.521	MATCH EG
1514	1923445.335	6341156.162	MATCH EG
1515	1923523.392	6341182.515	MATCH EG
1516	1923520.604	6341187.797	MATCH EG

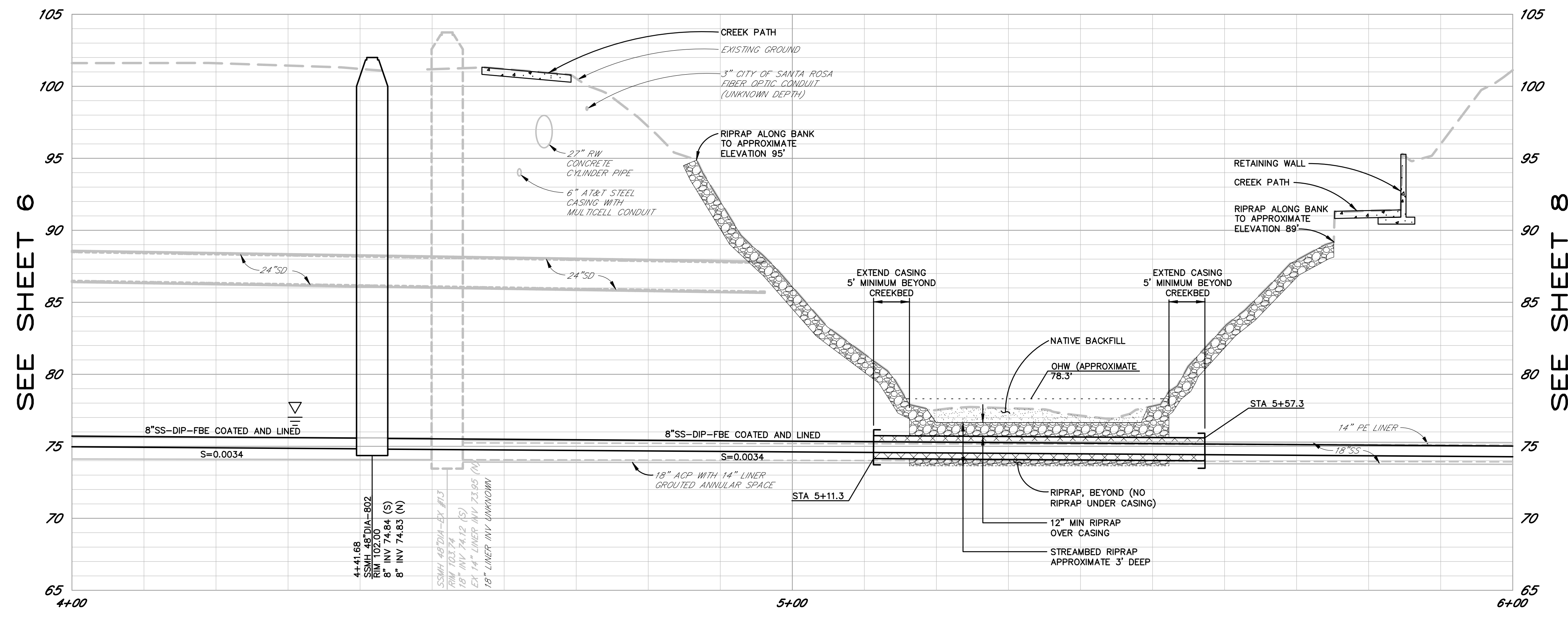


NO.	DATE	REVISION	BY

SCALE: AS SHOWN
DATE: APRIL 2026
DWN BY: BKU
CHK BY: DDS
APPROVED: Deputy Director - Engineering
By: Christa Siegenthaler Date: _____

City of Santa Rosa
FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK
PLAN & PROFILE
STA. 2+00-STA. 4+00

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PROFILE
SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

SHEET NOTES

- (ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)
- (S3) INSTALL 8" DIP SANITARY SEWER MAIN, FBE COATED AND LINED PER CITY STDs.
 - (S4) INSTALL 48" SANITARY SEWER MANHOLE PER CITY STD 500.
 - (S5) PLUG EXISTING SANITARY SEWER MAIN AND ABANDON PER ABANDONMENT DETAILS SHEET 10.
 - (S6) ABANDON EXISTING SANITARY SEWER MANHOLE PER ABANDONMENT DETAILS SHEET 10.
 - (S8) SUPPORT TRENCH WITH POSITIVE SHORING SYSTEM.
 - (S12) PROVIDE AND MAINTAIN STREAM DIVERSION FACILITIES IN ACCORDANCE WITH THE SPECIFICATIONS.
 - (S14) INSTALL SEWER MAIN INSIDE APPROXIMATELY 46' LONG, 18" DIAMETER PVC CASING. INSTALL CASING SPACERS TO SUPPORT SEWER MAIN EVERY 6'-8". GROUT CASING ANNULAR SPACE AND INSTALL CASING END SEALS PER SPECIFICATIONS.
 - (S17) CONTRACTOR TO OBTAIN REVOCABLE LICENSE FROM SONOMA WATER FOR WORK OUTSIDE OF SEWER EASEMENT WITHIN CREEK BANKS.
 - (R3) REMOVE AND REPLACE EXISTING RETAINING WALL AND CONCRETE PATH AS REQUIRED, SEE STRUCTURAL DRAWINGS.
 - (R5) REMOVE AND REPLACE EXISTING SIDEWALK AS REQUIRED PER CITY STD 237, TO THE NEAREST EXISTING SCOREMARK, DOWEL INTO EXISTING SIDEWALK, #4 DOWELS AT 12" OC, 8" INTO EXISTING SIDEWALK.
 - (R10) REMOVE EXISTING ASPHALT PATH AS REQUIRED AND REPLACE IN ACCORDANCE WITH THE LEGEND THIS SHEET.
 - (R11) REMOVE EXISTING BOLLARDS. REPLACE WITH REMOVABLE BOLLARD PER DETAIL SHEET 10.
 - (R12) REMOVE EXISTING FENCING AS REQUIRED. INSTALL REPLACEMENT FENCING IN ACCORDANCE WITH THE SPECIFICATIONS.
 - (R13) REMOVE AND REPLACE HANDRAIL, SEE STRUCTURAL DRAWINGS.
 - (R14) REMOVE AND REPLACE CURB CUT PER CITY STD 250A.
 - (R15) INSTALL APPROXIMATE 33 LF OF CURB AND GUTTER PER CITY STD 241. DOWEL INTO EXISTING CURB, #5 DOWELS AND 16" ON CENTER, 8" MINIMUM EMBEDMENT, EPOXY SET.
 - (R16) ADJUST EXISTING WATER BOX TO GRADE.
 - (R18) PROTECT EXISTING STORM DRAIN AND OUTLET IN PLACE. PLACE RIPRAP TO PROTECT DOWNHILL SLOPE WITHOUT OBSTRUCTING OUTLET.
 - (L1) REFER TO LANDSCAPE PLANS, SHEETS 14-20, FOR PLANTING AND IRRIGATION RESTORATION.

LEGEND

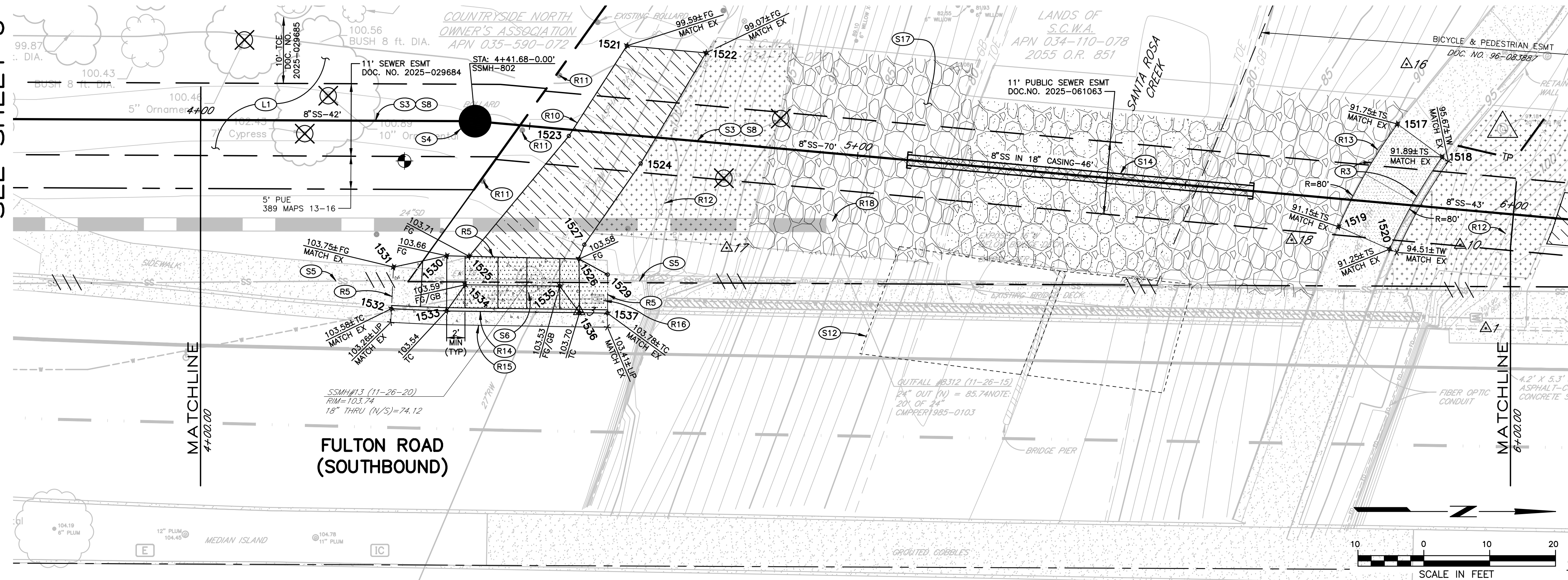
- TREE TO BE REMOVED
- APPROX GEOTECHNICAL BORING LOCATION
- APPROX GROUNDWATER DEPTH AT TIME OF DRILLING (6/22/2020)
- CASING PIPE, SEE SHEET NOTE S14.
- RIPRAP IN ACCORDANCE WITH CREEK SCOUR PROTECTION SPECIFICATIONS
- NATIVE BACKFILL IN ACCORDANCE WITH CREEK SCOUR PROTECTION SPECIFICATIONS
- ASPHALT PATH REPLACEMENT LIMITS 0.25' AC SURFACING OVER 0.50' CLASS II AB
- APPLY NATIVE HERBACEOUS SEED MIX IN ACCORDANCE WITH THE EROSION CONTROL SPECIFICATIONS
- APPROXIMATE LIMITS OF VEHICULAR SIDEWALK 6" CLASS A PCC OVER 6" CL2AB, WEAKENED PLANE, SCORE MARKS, AND EXPANSION JOINTS SHALL BE PER CITY STD 235.
- CONCRETE PATH AND RETAINING WALL, SEE STRUCTURAL DRAWINGS

LAYOUT COORDINATE TABLE

NO	NORTHING	EASTING	TYPE
1517	1923735.415	6341172.865	EW MATCH EX
1518	1923742.192	6341177.850	EW MATCH EG
1519	1923726.472	6341188.451	EW MATCH EG
1520	1923734.198	6341191.859	EW MATCH EG
1521	1923618.377	6341160.991	EP MATCH EX
1522	1923630.401	6341162.070	EP MATCH EX
1523	1923609.579	6341174.673	EP ANG PT
1524	1923620.476	6341178.853	EP ANG PT
1525	1923594.415	6341192.949	EP BSW
1526	1923611.110	6341193.347	EP BSW
1527	1923611.920	6341191.185	EP ANG PT
1529	1923615.474	6341195.722	EW ANG PT
1530	1923591.036	6341192.869	EW ANG PT
1531	1923582.944	6341194.569	EW MATCH EX
1532	1923582.627	6341200.908	TC MATCH EX
1533	1923591.012	6341201.235	TC/TT
1534	1923593.800	6341197.270	FG ANG PT
1535	1923608.178	6341197.454	FG ANG PT
1536	1923611.201	6341201.492	TC/TT
1537	1923615.426	6341201.562	TC MATCH EX

SEE SHEET 6

SEE SHEET 8



PLAN



City of Santa Rosa
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NO.	DATE	REVISION	BY

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By: Christa Siegenthaler Date: _____

City of Santa Rosa
FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK
PLAN & PROFILE
STA. 4+00-STA. 6+00

CONTRACT NO. C02117
SHEET 7 OF 20
FILE NO. 2025-0001



MITIGATION LEGEND

(A) ZONE A: RIPARIAN TREE AREA
AREA: APPROX 1,127 SF

REMOVE NON-NATIVE SPECIES (ZONE A)

COMMON NAME	SCIENTIFIC NAME
GLOSSY PRIVET	LIGUSTRUM SINENSE
BULL THISTLE	CIRSIUM VULGARE
BRISTLY OX-TONGUE	HELMINTHOTHeca ECHIOIDES
FAT HEN	ATRIPLEX PROSTRATA
BIRD'S-FOOT TREFOIL	LOTUS CORNICULATUS
BERMUDA GRASS	CYNODON DACTYLON
DALLIS GRASS	PASPALUM DILATUM
WALL COTONEASTER	COTONEASTER HORIZONTALIS
HIMALAYAN BLACKBERRY	RUBUS ARMENIACUS

REPLACE WITH NATIVE SPECIES (ZONE A)

COMMON NAME	SCIENTIFIC NAME	SIZE	MIN SPACING
BOX ELDER	ACER NEGUNDO VAR. CALIFORNICUM	TREE POT	15'
OREGON ASH	FRAXINUS LATIFOLIA	TREE POT	15'

(B) ZONE B: HERBACEOUS SHRUB AREA
AREA: APPROX 6,910 SF

REMOVE NON-NATIVE SPECIES (ZONE B)

COMMON NAME	SCIENTIFIC NAME
ENGLISH IVY	HEDERA HELIX
FAT-HEN	ATRIPLEX PROSTRATA
STINKING IRIS	IRIS FOETIDISSIMA
DALLIS GRASS	PASPALUM DILATUM
GLOSSY PRIVET	LIGUSTRUM SINENSE
HIMALAYAN BLACKBERRY	RUBUS ARMENIACUS

REPLACE WITH NATIVE SPECIES (ZONE B)

COMMON NAME	SCIENTIFIC NAME	SIZE	MIN SPACING
BOX ELDER	ACER NEGUNDO	TREE POT	15'
CALIFORNIA BUCKEYE	AESCULUS CALIFORNICA	TREE POT 4	20'
COYOTE BRUSH	BACCHARIS PILULARIS	1 GALLON	5'
TOYLON	HETEROMELES ARBUTIFOLIA	1 GALLON	8'
TWINBERRY	LONICERA INVOLUCRATA	1 GALLON	6'
CALIFORNIA ROSE	ROSA CALIFORNICA	1 GALLON	6'
CALIFORNIA BLACKBERRY	RUBUS URSINUS	1 GALLON	5'
ELDERBERRY	SAMBUCUS MEXICANA	1 GALLON	8'
YERBA BUENA	SATUREJA DOUGLASII	1 GALLON	3'
SNOWBERRY	SYMPHORICARPOS ALBUS	1 GALLON	4'
BASKET SEDGE	CAREX BARBARAE	1 PLUG	1.5'
CALIFORNIA GRAPE	VITIS CARLIFORNICA	1 PLUG	6'
COMMON TULE	SCHOENOPLECTUS ACUTUS	1 PLUG	2'
GRAY RUSH	JUNCUS PATENS	1 PLUG	2'
ELK COVER	ARALIA CALIFORNICA	1 GALLON	5'

(C) ZONE C: OAK WOODLAND AREA
AREA: APPROX 3,724 SF

REMOVE NON-NATIVE SPECIES (ZONE C)

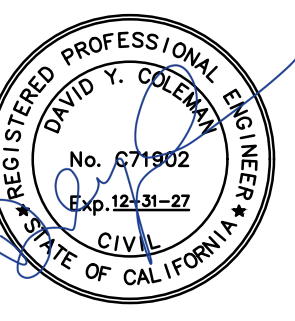
COMMON NAME	SCIENTIFIC NAME
GLOSSY PRIVET	LIGUSTRUM SINENSE

REPLACE WITH NATIVE SPECIES (ZONE C)

COMMON NAME	SCIENTIFIC NAME	SIZE	QTY	MIN SPACING
COAST LIVE OAK	QUERCUS AGRIFOLIA	TREE POT 4	6	25'
BLUE OAK	QUERCUS DOUGLASII	TEE POT 4	2	25'
CREeping MAHONIA	MAHONIA REPENS	1 GALLON	N/A	3'
YERBA BUENA	SATUREJA DOUGLASII	1 GALLON	N/A	3'
BLUE GRAMA GRASS	BOUTELOUA GRACILIS	1 PLUG	N/A	1.5'
CALIFORNIA BROME	BROMUS CARINATUS	SEED/1 PLUG	N/A	1.5'
TUFTED HAIR GRASS	DESCHAMPSIA CESPITOSA	SEED/1 PLUG	N/A	1.5'
BLUE WILD RYE	ELYMUS GLACUSUS	SEED/1 PLUG	N/A	1.5'
CALIFORNIA MEADOW BARELY	HORDEUM BRACHYANTHERUM	SEED/1 PLUG	N/A	1.5'
CALIFORNIA FESCUE	FESTUCA CALIFORNICA	SEED/1 PLUG	N/A	1.5'
GRAY RUSH	JUNCUS PATENS	SEED/1 PLUG	N/A	2'
PURPLE NEEDLEGRASS	NASELLA PULCHRA	SEED/1 PLUG	N/A	1.5'

NOTES

PLANTING WITHIN CREEK BANKS SHALL BE IN ACCORDANCE WITH THE PETERSON PARK OFF-SITE RIPARIAN RESTORATION AND MONITORING PLAN, DATED JANUARY 9, 2026.

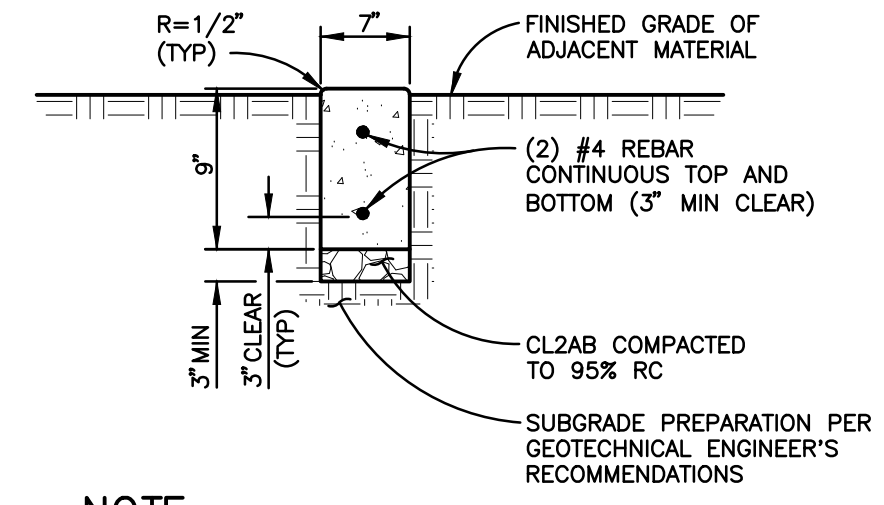
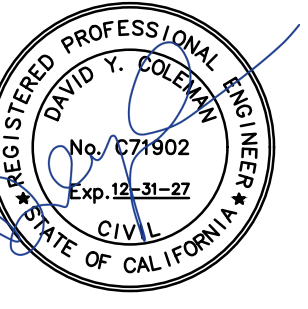


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NO.	DATE	REVISION	BY

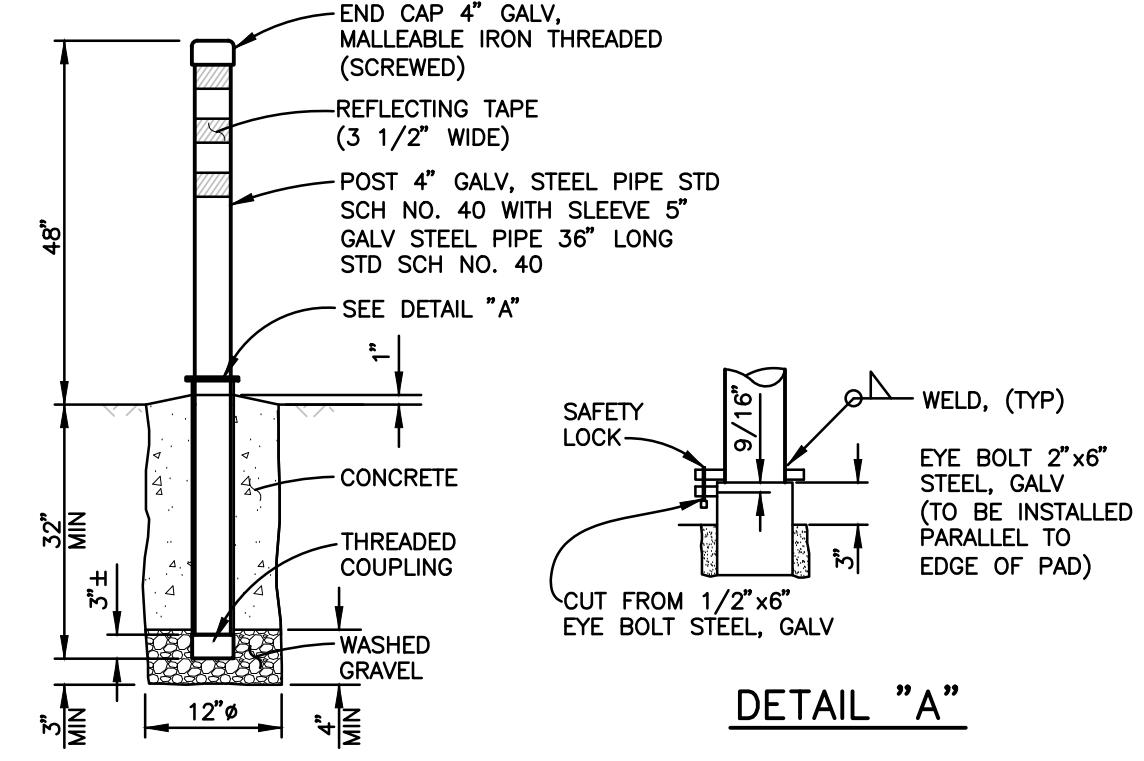
SCALE: AS SHOWN
DATE: APRIL 2026
DWN BY: BKU
CHK BY: DDS
APPROVED: Deputy Director - Engineering
By: Christa Siegenthaler
Date: _____

City of Santa Rosa
**FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK**
MITIGATION PLANTING PLAN

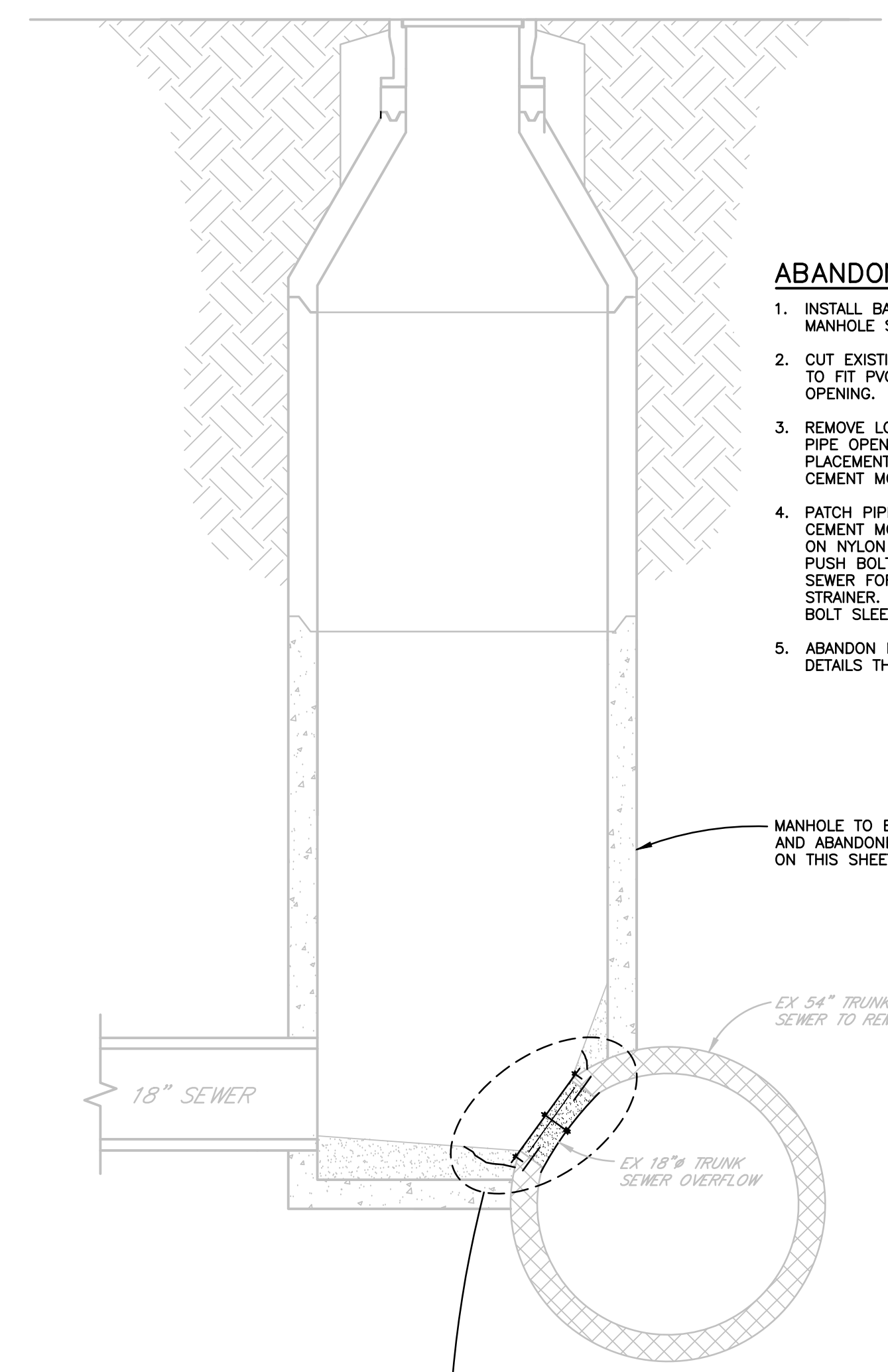


NOTE
 1. 1/2"x1" TOOLED CONTROL JOINTS AT 5' ON CENTER, EXPANSION JOINTS AT 20' ON CENTER.

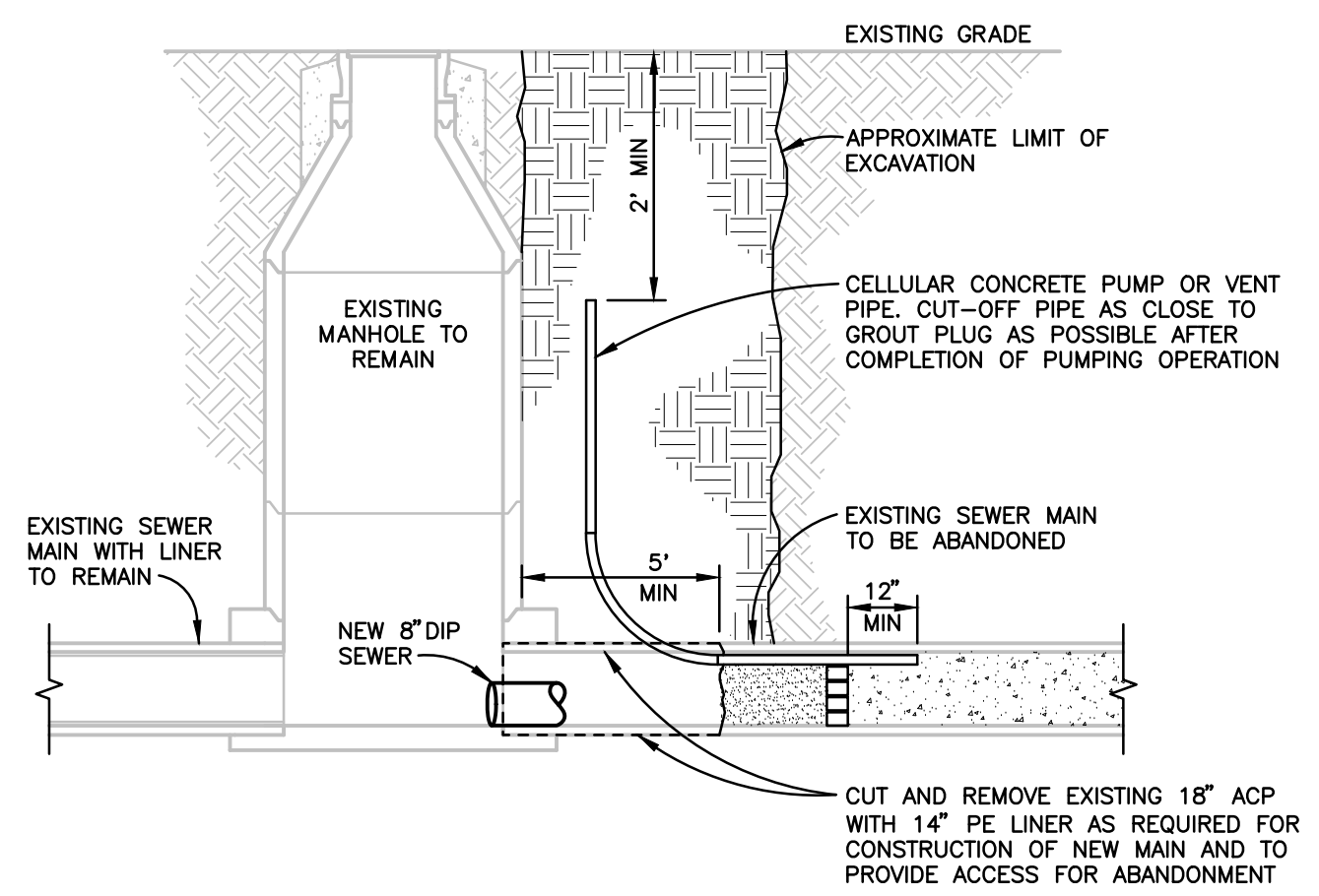
CONCRETE MOW STRIP
 NOT TO SCALE



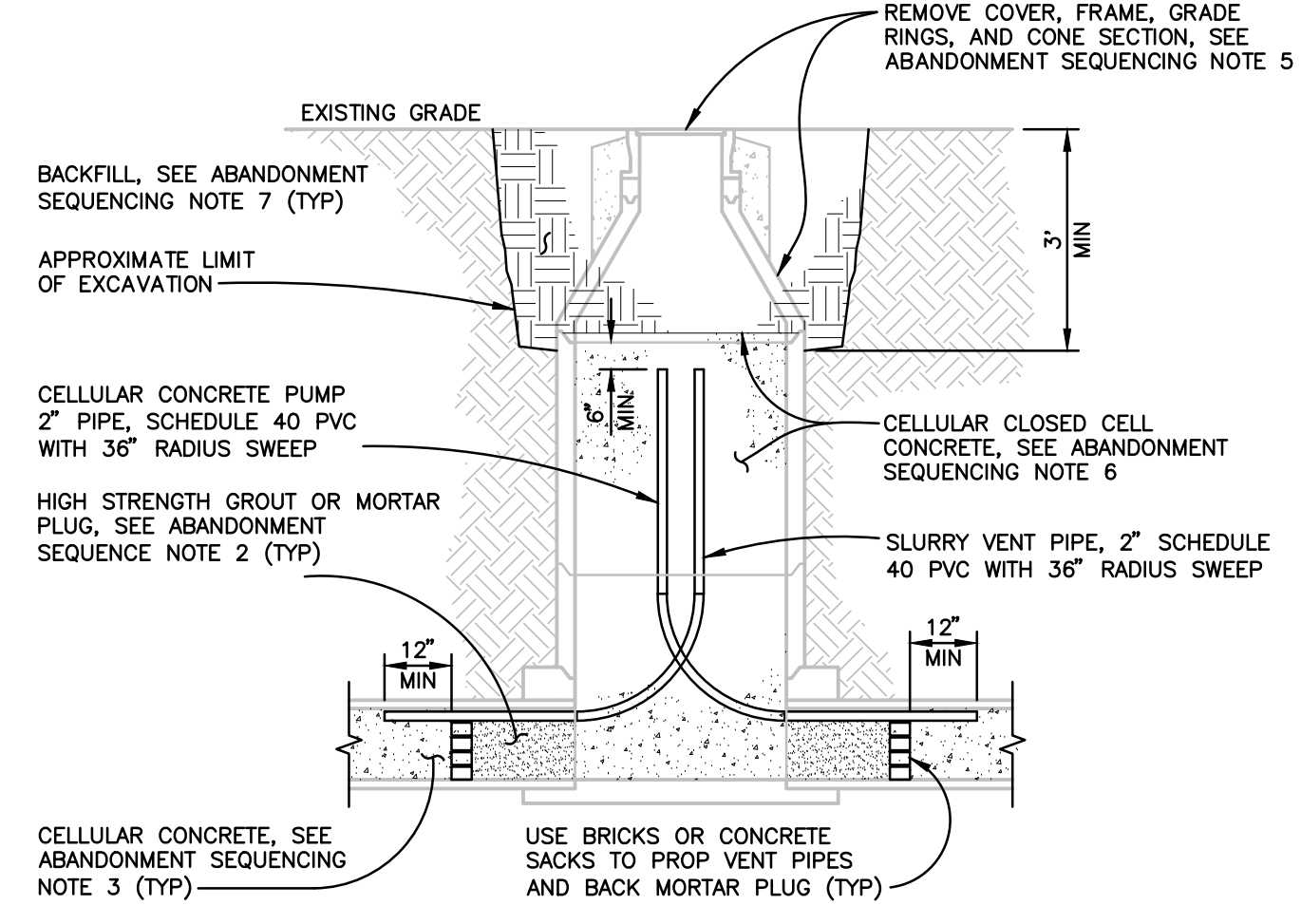
REMOVEABLE BOLLARD
 NOT TO SCALE



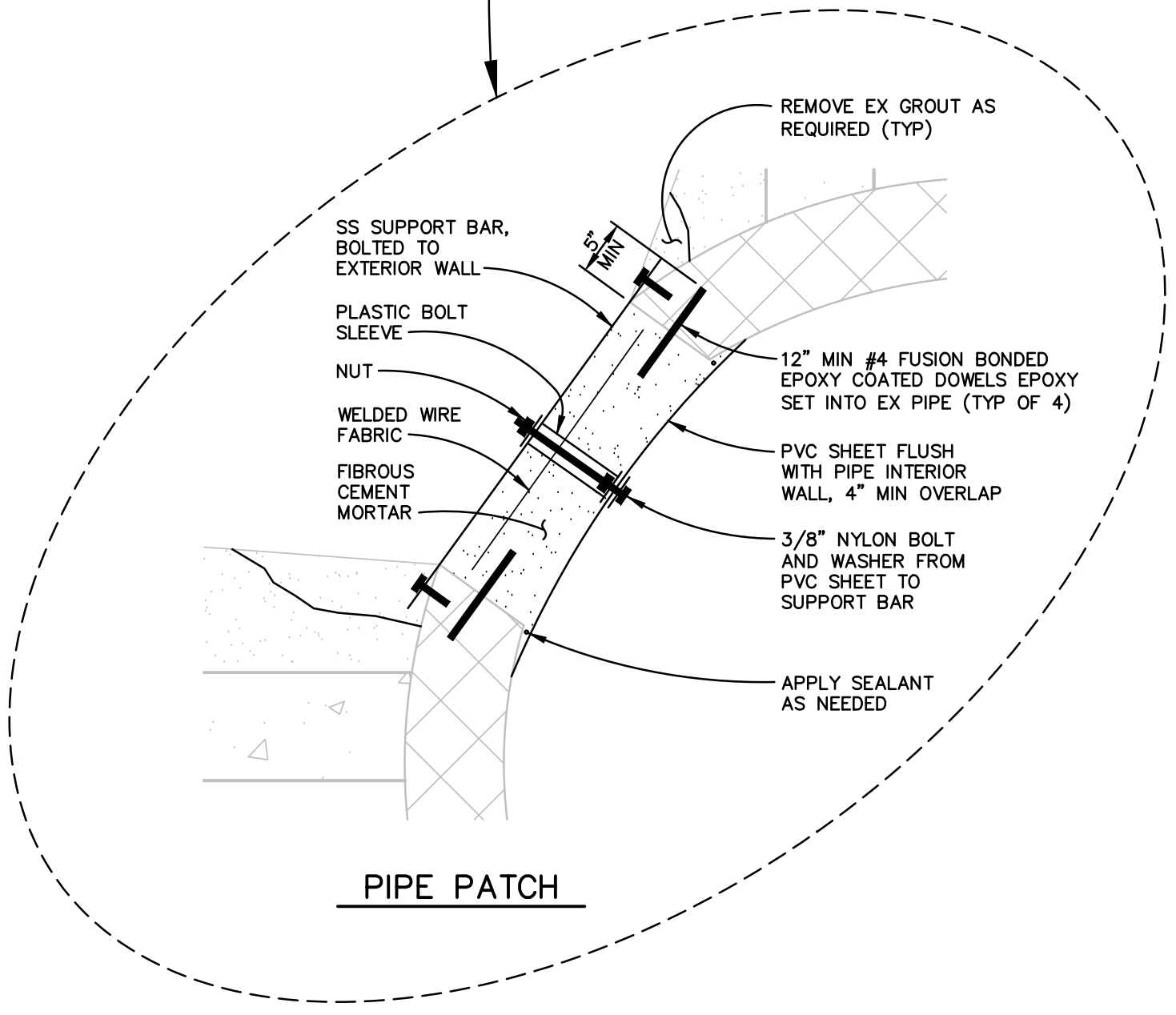
- ABANDONMENT NOTES**
1. INSTALL BASKET STRAINER AT DOWNSTREAM MANHOLE SSMH 23.
 2. CUT EXISTING PIPE OPENING AS REQUIRED TO FIT PVC SHEET INTO AND THROUGH OPENING.
 3. REMOVE LOOSE MATERIAL, CLEAN AND PREP PIPE OPENING SURFACE PRIOR TO PLACEMENT OF DOWELS AND FIBROUS CEMENT MORTAR.
 4. PATCH PIPE AS INDICATED. AFTER FIBROUS CEMENT MORTAR HAS CURED, REMOVE NUT ON NYLON BOLT AT SUPPORT BAR AND PUSH BOLT AND PVC SHEET INTO TRUNK SEWER FOR CAPTURE WITH BASKET STRAINER. GROUT REMAINING SPACE IN BOLT SLEEVE.
 5. ABANDON MANHOLE PER ABANDONMENT DETAILS THIS SHEET.



ABANDONMENT AT MANHOLE TO REMAIN
 TYPICAL AT EX SSMH 12



ABANDONMENT AT MANHOLE
 TYPICAL AT EX SSMH 1, 2, 3, 4, 13, 69



SSMH 69 TRUNK SEWER OVERFLOW ABANDONMENT
 NOT TO SCALE

- ABANDONMENT NOTES**
1. REMOVE ACCUMULATED SLUDGE AND DISCHARGE GROUNDWATER TO SANITARY SEWER COLLECTION SYSTEM WHILE PUMPING CELLULAR CLOSED CELL CONCRETE, IF NECESSARY.
 2. REMOVE ALL INSIDE AND OUTSIDE SEWER DROPS AND PLUG SIDE SEWERS AND LATERALS PER CITY STD 507. INSTALL PUMP CONNECTION POINT IF SIDE SEWER OR LATERAL IS TO BE ABANDONED WITH CELLULAR CONCRETE AS INDICATED PER PLAN.
 3. PROVIDE THRUST RESTRAINT FOR PUMP AND VENT PIPES AS NECESSARY.
 4. CELLULAR CONCRETE SHALL BE A LOW STRENGTH MIXTURE OF HYDRAULIC CEMENT, WATER, AND CLOSED CELL PREFORMED-FOAM.
 5. SURFACE RESTORATION AND BACKFILL SHALL BE PER CITY STD 215 TO MATCH EXISTING ADJACENT SURFACING.

- ABANDONMENT SEQUENCING**
1. COMPLETE INSTALLATION OF NEW SEWER MAIN. REMOVE ALL CONNECTIONS BETWEEN EXISTING AND NEW SEWER PRIOR TO BEGINNING ANY ABANDONMENT OPERATIONS.
 2. INSTALL VENT PIPES AND MORTAR PLUGS AT EACH MANHOLE OR PIPE END TO BE ABANDONED. ALLOW MORTAR PLUGS TO CURE FOR A MINIMUM OF 48 HRS.
 3. STARTING AT MOST DOWNSTREAM PUMP CONNECTION POINT AND PROGRESSING UPSTREAM ONE PUMP CONNECTION AT A TIME, PUMP CELLULAR CONCRETE INTO THE PUMP CONNECTION AT EACH MANHOLE TO BE ABANDONED BEGINNING AT THE DOWNSTREAM END. COMPLETELY FILL THE PIPE BEING ABANDONED AND BRING THE HYDRAULIC GRADE LINE OF THE CELLULAR CONCRETE TO A LEVEL APPROXIMATELY 12" ABOVE THE UPPER END (VENT PIPE SIDE) OF THE FILLED PIPE CROWN.
 4. REPLACE MANHOLE LIDS AND ALLOW CELLULAR CONCRETE MATERIAL TO CURE FOR A MINIMUM OF 12 HOURS.
 5. REMOVE MANHOLE COVER, FRAME, GRADE RINGS, CONE SECTION, AND MANHOLE BARRELS TO A DEPTH OF 3' BELOW EXISTING GRADE.
 6. FILL REMAINING MANHOLE BARREL WITH CELLULAR CONCRETE AND ALLOW MATERIAL TO CURE FOR A MINIMUM OF 12 HOURS.
 7. FILL REMAINING VOID WITH NATIVE MATERIAL COMPACTED TO 90% RELATIVE COMPACTION AND RESTORE SURFACING TO MATCH EXISTING ADJACENT SURFACING.

ABANDONMENT AT SSMH 4

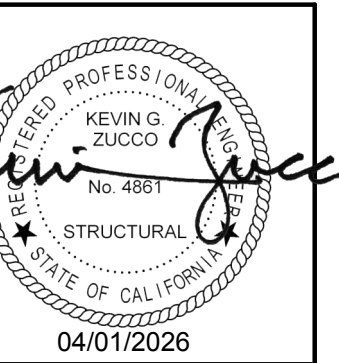
A METAL PLUG PREVIOUSLY INSTALLED BETWEEN SSMH 69 AND SSMH 4 HAS DISLODGED AND MOVED TOWARDS SSMH 4. IF IT IS POSSIBLE TO ACCESS THE PLUG FROM SSMH 4, THE PLUG SHALL BE REMOVED AND ABANDONMENT PERFORMED AS DESCRIBED IN THIS DETAIL. IF PLUG CANNOT BE REMOVED, INSTALL MORTAR PLUG WITH PUMP PIPE AND VENT PIPE AT EACH END OF THE 18" PIPE IN SSMH 4 AND SSMH 69. PUMP CELLULAR CONCRETE INTO THE PIPE FROM BOTH ENDS TO COMPLETELY FILL THE PIPE ON EITHER SIDE OF THE METAL PLUG.

ABANDONMENT DETAILS
 NOT TO SCALE

NO.	DATE	REVISION	BY

SCALE: AS SHOWN
 DATE: APRIL 2026
 DWN BY: DDS
 CHK BY: DDS
 APPROVED: Deputy Director - Engineering
 By: Christa Siegenthaler
 Date: _____

04-01-26 mcher \455A\dwg\4554_00\4554.00 DETAIL.dwg TAB: 10-DETAIL



SPECIAL INSPECTION BY OWNERS TESTING AGENCY

D

SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY AN APPROVED AGENCY IN ACCORDANCE WITH CBC CHAPTER 17 AND THE STATEMENT OF SPECIAL INSPECTIONS AS REQUIRED BY CBC SECTIONS 1704.2.3 AND 1704.3 FOR BUILDING STRUCTURAL ELEMENTS SUMMARIZED AS FOLLOWS:

- CONCRETE CONSTRUCTION PER CBC SECTIONS 1705.3, AND TABLE 1705.3 INCLUDING FORMWORK, REINFORCING STEEL, CAST-IN-PLACE BOLTS, MIX DESIGNS, CONCRETE SAMPLES, AND PLACEMENT FOR ALL CONCRETE. REINFORCING DOWELS FROM FOOTINGS TO RETAINING WALLS SHALL BE INSPECTED PRIOR TO PLACEMENT OF FOOTING CONCRETE AND WALL GROUT OR CONCRETE. CONTINUOUS OR ISOLATED SPREAD FOOTINGS WITH DESIGN STRENGTH NO GREATER THAN 2500 PSI, NON-STRUCTURAL SLABS ON GRADE, AND EXTERIOR FLATWORK DO NOT REQUIRE SPECIAL INSPECTION PER CBC SECTION 1705.3.
- SOILS PER CBC SECTION 1705.6, TABLE 1705.6, AND THE APPROVED SOILS REPORT INCLUDING SUBGRADE PREPARATION, FOUNDATION BEARING MATERIALS AND DEPTH OF EXCAVATIONS, AND VERIFICATION, PLACEMENT AND TESTING OF CONTROLLED FILL.
- SPECIAL CASES PER CBC SECTION 1705.1.1 AND PRODUCT ICC REPORTS FOR ALL STRUCTURAL MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THE CBC OR REFERENCED STANDARDS INCLUDING POST-INSTALLED ANCHOR BOLTS IN CONCRETE.

EXISTING CONSTRUCTION NOTES

E

- ORIGINAL CONSTRUCTION DRAWINGS WERE NOT AVAILABLE FOR REVIEW AT THE TIME THESE DOCUMENTS WERE PREPARED. EXISTING BUILDING CONDITIONS SHOWN ARE ASSUMED BASED ON INFORMATION PROVIDED BY OTHERS AND ASSUMPTIONS BASED ON PROBABLE CONSTRUCTION METHODS. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL VERIFY ALL EXISTING JOB CONDITIONS. REVIEW THE PLANS AND VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL DISCREPANCIES AND EXCEPTIONS BEFORE PROCEEDING WITH ANY WORK.
- ALL WORK NOT INDICATED AS EXISTING (E) SHALL BE ASSUMED TO BE NEW (N).
- ANY REMOVAL, CUTTING, DRILLING, ETC OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE. SMALL TOOLS SHALL BE USED IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE STRUCTURE. IF STRUCTURAL MEMBERS OR MECHANICAL, ELECTRICAL, OR ARCHITECTURAL ELEMENTS NOT INDICATED FOR REMOVAL INTERFERE WITH THE NEW WORK, THE ARCHITECT/ENGINEER SHALL BE IMMEDIATELY NOTIFIED AND PRIOR APPROVAL SHALL BE OBTAINED BEFORE REMOVAL OF THE MEMBERS.
- DO NOT OVER CUT EXISTING WOOD, CONCRETE, MASONRY OR OTHER WORK TO REMAIN. CUTS SHALL BE MADE NEATLY TO A CORNER, THEN ALTERNATE MEANS SHALL BE USED TO REMOVE REMAINING MATERIAL. CONTRACTOR IS RESPONSIBLE FOR REPAIR/REPLACEMENT OF OVER CUT MATERIAL AS DIRECTED BY THE ARCHITECT AND/OR ENGINEER.
- EXISTING DAMAGED STRUCTURAL MEMBERS WHICH ARE UNCOVERED SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND REPAIR.
- EXISTING CONCRETE SURFACE ABUTTING NEW CONCRETE SHALL BE ROUGHENED TO 1/4" AMPLITUDE AND THOROUGHLY CLEANED OF DUST, LOOSE AGGREGATE, LAITANCE, ETC.

MATERIAL DATA

F

(INFORMATION SHOWN IS FOR STRUCTURAL DESIGN REFERENCE ONLY. SEE THE PROJECT SPECIFICATIONS FOR ALL MATERIAL SPECIFICATIONS.)

CONCRETE 28-DAY MINIMUM DESIGN STRENGTH:
F_c = 3,000 PSI RETAINING WALLS

REINFORCING STEEL:
ASTM A615 GRADE 60 OR A706 GRADE 60 (F_y = 60,000 PSI)

FASTENERS:
MACHINE BOLTS SHALL BE ASTM A307 GRADE A
HIGH STRENGTH BOLTS SHALL BE ASTM F3125 GRADE A325 OR F1852 UNO
ANCHOR RODS SHALL BE ASTM F1554 GR 36 UNO
ARC-WELDING ELECTRODES SHALL BE E70

FOR METAL CONNECTOR DESIGNATION REFER TO SIMPSON STRONG-TIE PER SPECIFICATIONS.

SHEET INDEX	
11	GENERAL STRUCTURAL NOTES AND SPECIFICATIONS
12	TYPICAL CONCRETE DETAILS
13	RETAINING WALL PLAN & DETAILS

DESIGN CRITERIA

A

DESIGN CRITERIA: 2025 CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2 (CBC)
RISK CATEGORY: II
WIND DATA: ULTIMATE WIND SPEED (3 SEC GUST) IN MPH: 81
WIND EXPOSURE: C
SEISMIC IMPORTANCE FACTOR, I_w: 1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS:
S_w = 1.95; S₁ = 0.88
SITE CLASS: D
SPECTRAL RESPONSE COEFFICIENTS: S_{DS} = 1.42; S_{D1} = 1.13
SEISMIC DESIGN CATEGORY: D

EARTHQUAKE DATA:

SCOPE: RETAINING WALL REPLACEMENT TO ACCOMMODATE SEWER REALIGNMENT

GENERAL NOTES

B

- REFER TO SHEET 12 FOR STANDARD DETAILS OF CONSTRUCTION. REFER TO THE PROJECT SPECIFICATIONS FOR MATERIALS AND METHODS.
 - CIVIL DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY. SEE CIVIL DRAWINGS (SCD) FOR ALL ACTUAL DIMENSIONS. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE CIVIL/STRUCTURAL SO CLARIFICATION CAN BE MADE PRIOR TO COMMENCING WORK.
 - STRUCTURAL DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
 - DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
 - REFER TO CIVIL DRAWINGS FOR SIDEWALK SLABS AND DIMENSIONS.
 - COORDINATION OF MECHANICAL, ELECTRICAL, PLUMBING, AND SITE UTILITY SYSTEMS WITH THE STRUCTURAL SYSTEM IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. USE DETAILS ON SHEET S1.1 AND S4.1. AT CONDITIONS WHERE THESE DETAILS DO NOT APPEAR TO APPLY, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. AT CONDITIONS WHERE FIELD MODIFICATIONS OF MECHANICAL, ELECTRICAL, PLUMBING, OR SITE UTILITIES AFFECT STRUCTURAL SYSTEMS, NOTIFY STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
 - SHORING AND BRACING DESIGN, MATERIALS AND INSTALLATION SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, AND SHALL BE ADEQUATE FOR ALL LOADS. LEAVE IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY AND UNTIL FINAL STRUCTURAL CONSTRUCTION IS COMPLETED.
 - SPECIAL INSPECTIONS ARE REQUIRED PER D11 AND THE TESTING AND INSPECTION FORM.
 - VEHICULAR TRAFFIC, HEAVY EQUIPMENT AND MATERIAL STAGING SHALL NOT BE ALLOWED ADJACENT TO ANY RETAINING WALL, NEW OR EXISTING WITHIN A HORIZONTAL DISTANCE EQUAL TO THE WALL HEIGHT MEASURED FROM THE BOTTOM OF FOOTING OR 5'-0" WHICHEVER IS GREATER, UNLESS APPROVED BY THE STRUCTURAL ENGINEER OR NOTED OTHERWISE. WITHIN THIS ZONE, ONLY HAND-OPERATED EQUIPMENT ("WHACKERS", VIBRATORY PLATES, OR PNEUMATIC COMPACTORS) SHALL BE USED TO COMPACT THE BACKFILL SOILS.
 - STRUCTURAL OBSERVATION PER CBC SECTION 1704.6 IS NOT REQUIRED. NOTIFY ZFA FOR GENERAL ON SITE REVIEW OF:
 - MINIMUM FOOTING SIZE AND REINFORCING STEEL.
 - RETAINING WALLS AND REINFORCING.
- NOTIFY ZFA FOR REVIEW PRIOR TO COVERING ABOVE LISTED WORK. PROVIDE 2 WORKING DAYS MINIMUM SCHEDULING NOTICE PRIOR TO REVIEW DATE.

FOUNDATION NOTES

C

- ALLOWABLE (ASD) FOUNDATION DESIGN PRESSURES ARE:

SHALLOW FOOTINGS FOR RET WALLS :
DEAD LOAD + LIVE LOAD = 2,400 PSF
DEAD LOAD + LIVE LOAD + LATERAL = 3,200 PSF
EQUIVALENT FLUID PRESSURE: 49 PCF (BASED ON IMPORT FILL)
SLIDING RESISTANCE: PASSIVE PRESSURE 350 PCF; FRICTION 0.35
- ALL SOILS WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE GEOTECHNICAL REPORT NOTED BELOW, AND CHAPTER 18 OF THE CBC. ALL FOUNDATIONS SHALL BEAR ON FIRM, UNDISTURBED, NATIVE SOILS OR ENGINEERED FILL AT OR EXCEEDING DEPTHS SHOWN ON THE DRAWINGS. ENGINEERED FILL TO BE COMPACTED PER GEOTECHNICAL REPORT. INCREASE FILL AND OR FOOTING DEPTH AS REQUIRED BY GEOTECHNICAL ENGINEER. ALL FOOTING EXCAVATIONS SHALL BE AS NEAT AS PRACTICABLE. MAXIMUM OVER EXCAVATION IN WIDTH SHALL BE LESS THAN 12 INCHES OR 25% OF FOOTING WIDTH, WHICH EVER IS LESS. 6 INCHES MAXIMUM PER SIDE. LARGER OVER-EXCAVATIONS IN WIDTH SHALL BE FILLED WITH ADDITIONAL REINFORCED CONCRETE AS DIRECTED BY THE ENGINEER, OR FORMWORK SHALL BE PROVIDED. OVER-EXCAVATIONS IN DEPTH MAY BE FILLED WITH LEAN CONCRETE OR COMPACTED APPROVED BACKFILL. ALL LOOSE SOILS SHALL BE REMOVED FROM EXCAVATIONS PRIOR TO PLACEMENT OF REINFORCING OR CONCRETE. GEOTECHNICAL REPORT BY:

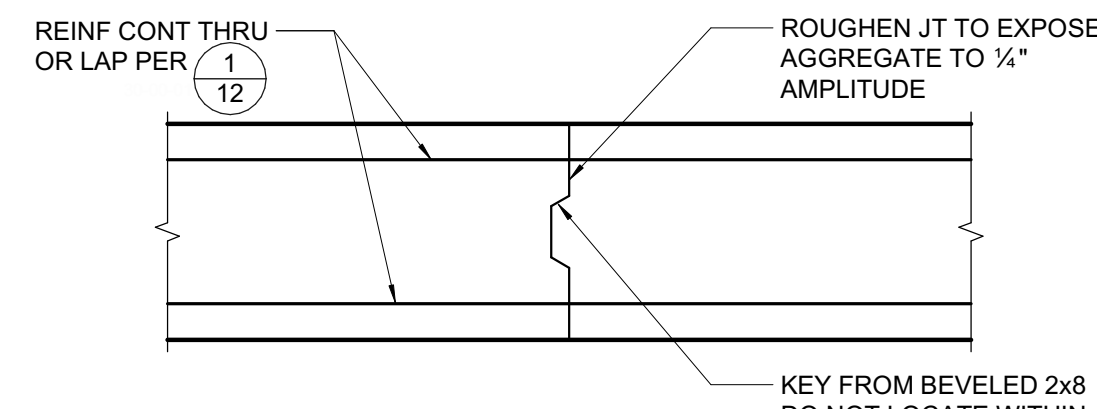
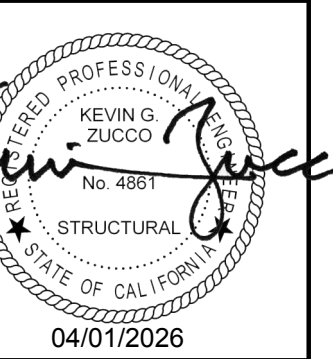
RGH CONSULTANTS
REPORT DATED JANUARY 8, 2026
- WHERE BOTTOM OF ADJACENT FOOTINGS ARE DIFFERENT PROVIDE STEPPED FOOTING PER 5/12.
- PROVIDE CONTROL JOINTS PER 10/12 (OR CONSTRUCTION/DOWEL JOINTS AT CONTRACTOR'S OPTION) AS SHOWN ON PLAN AND AS REQUIRED TO MEET A MAXIMUM SPACING IN FEET OF 3 TIMES THE SLAB DEPTH IN INCHES (FOR EXAMPLE 3x4" = 12'-0" MAX) AND 15'-0" MAX. INSTALL JOINTS TO DIVIDE SLAB INTO RECTANGULAR AREAS WITH LOW DIMENSION LESS THAN 1.5 x SHORT DIMENSION. INSTALL JOINTS AT FACE OF STUDS OF WALL WHERE POSSIBLE. SUBMIT JOINT LAYOUT PLAN FOR REVIEW PRIOR TO PLACEMENT.
- DO NOT UNDERCUT EXISTING FOUNDATIONS. NOTIFY ENGINEER FOR REVIEW AND POSSIBLE REVISIONS, IF EXISTING FOUNDATION CONDITIONS ARE NOT AS SHOWN.
- TOP OF FOOTING ELEVATIONS TO BE DETERMINED BY THE CONTRACTOR BASED ON INFORMATION FROM THE CIVIL DRAWINGS, GEOTECHNICAL REPORT, LANDSCAPE, ETC.

ABBREVIATIONS			
AB	ANCHOR BOLT	GALV	GALVANIZED
ABV	ABOVE	GB	GRADE BEAM
AC	AIR CONDITIONING	GLB	GLUE LAMINATED BEAM
ADJ	ADJACENT	GR	GRADE
ADDL	ADDITIONAL	HD	HOLD DOWN
ALT	ALTERNATE	HDS	HOT DIP GALVANIZED
ALUM	ALUMINUM	HDR	HEADER
ARCH	ARCHITECT	HGR	HANGER
@	AT	HK	HOOK
BLDG	BUILDING	HORIZ	HORIZONTAL
BLKBLKG	BLOCK/BLOCKING	HS	HIGH STRENGTH
BLW	BELOW	HSB	HIGH STRENGTH BOLT
BM	BEAM	HSPB	HIGH STRENGTH POST
BN	BOUNDARY NAIL	HST	HIGH STRENGTH TIE
BOT	BOTTOM	HSS	HOLLOW STRUCTURAL SECTION
BRG	BEARING	HSH	HORIZONTAL SLOTTED HOLE
BTWN	BETWEEN	HSS	HOLLOW STRUCTURAL SECTION
BU	BUILT UP	HT	HEIGHT
BYND	BEYOND	ID	INSIDE DIAMETER
C	AMERICAN STANDARD CHANNEL	IJ	ISHAPED WOOD BUILT UP TRUSS
CANT	CANTILEVER	INT	INTERIOR
CB	CARRIAGE BOLT	INT	INTERIOR
CFS	COLD FORMED STEEL	IP	JOINT
CIP	CAST IN PLACE	JT	JOINT
CGL	CERTIFIED GLUED LUMBER	JP	JOIST
CL	CONTROL JOINT	KP	KING POST
C	CENTERLINE	L	STEEL ANGLE
CJP	COMPLETE JOINT PENETRATION	Lb or #	POUND(S)
CLG	CEILING	LGMF	LIGHT GAGE METAL FRAMING
CLR	CLEAR	LGMF	LIGHT GAGE METAL FRAMING CONTRACTOR
COL	COLUMN	LLH	LIVE LOAD
COLL	COLLECTOR	LLV	LONG LEG HORIZONTAL CONNECTION
CONC	CONCRETE	LOC	LOCATION
CONN	CONNECTION	LS	LAG SCREW
CONT	CONTINUOUS	LSL	LAMINATED STRAND LUMBER
COORD	COORDINATE/COORDINATION	LVL	LAMINATED VENEER LUMBER
CMU	CONCRETE MASONRY UNIT	MAX	MAXIMUM
CSK	COUNTERSINK	MB	MACHINE BOLT
CW	CUT WASHER	MBM	METAL BUILDING MANUFACTURER
DBA	DEFORMED BAR ANCHOR	MC	MISCELLANEOUS CHANNEL
DBL	DOUBLE	MECH	MECHANICAL
DCW	DEMAND CRITICAL WELD	MEZZ	MEZANINE
DF	DOUGLAS FIR	MF	MOMENT FRAME
DIA or Ø	DIAMETER	MFR	MANUFACTURER
DIAG	DIAGONAL	MN	MINIMUM
DIM	DIMENSION	MISC	MISCELLANEOUS
DJ	DOWEL JOINT	MIW	MALLEABLE IRON WASHER
DL	DEAD LOAD	MTL	METAL
DN	DOWN	MTL	METAL
DO	DITTO	NEW	NEW
DWG	DRAWING	NI	NOT IN CONTRACT
DWL	DOWEL	NO of #	NUMBER
EA	EACH	NS	NEAR SIDE
EE	EACH END	NSS	NON-SHRINK GROUT
EF	EACH FACE	NTS	NOT TO SCALE
ELEC	ELECTRICAL	O	OVER
ELEV	ELEVATOR/ELEVATION	OC	ON CENTER
EMBED	EMBEDMENT	OD	OUTSIDE DIAMETER
EQ	EQUAL	OH	OPPOSITE HAND
EQUIP	EQUIPMENT	OPNG	OPENING
ES	EACH SIDE	OPP	OPPOSITE
EW	EACH WAY	OPS	OVERSIZING
EX	EXISTING	OW	OTHERWISE
EXT	EXTERIOR	OWT	OPEN WEB TRUSS
EXP	EXPANSION	PA	PLATE or PROPERTY LINE
FIN	FINISH	PDP	POWDER DRIVEN PINS
FG	FINISH GRADE	PEN	PANEL EDGE NAIL
FLI	FERRULE LOOP INSERT	PERP	PERPENDICULAR
FLR	FLOOR	PES	PANEL EDGE SCREWS
FN	FACE NAIL	PJP	PARTIAL JOINT PENETRATION
FOC	FACE OF CONCRETE	PJP	PARTIAL JOINT PENETRATION
FOM	FACE OF MASONRY	PLF	POUNDS PER LINEAR FOOT
FOS	FACE OF STUD	PNL	PANEL
FRMG	FRAMING	PSF	POUNDS PER SQUARE FOOT
FRNG	FRAMING	PSI	POUNDS PER SQUARE INCH
FS	FAR SIDE	PTB	PANEL TIE BAR
FTG	FOOTING		
GA	GAGE or GAUGE		

NO.	DATE	REVISION	BY

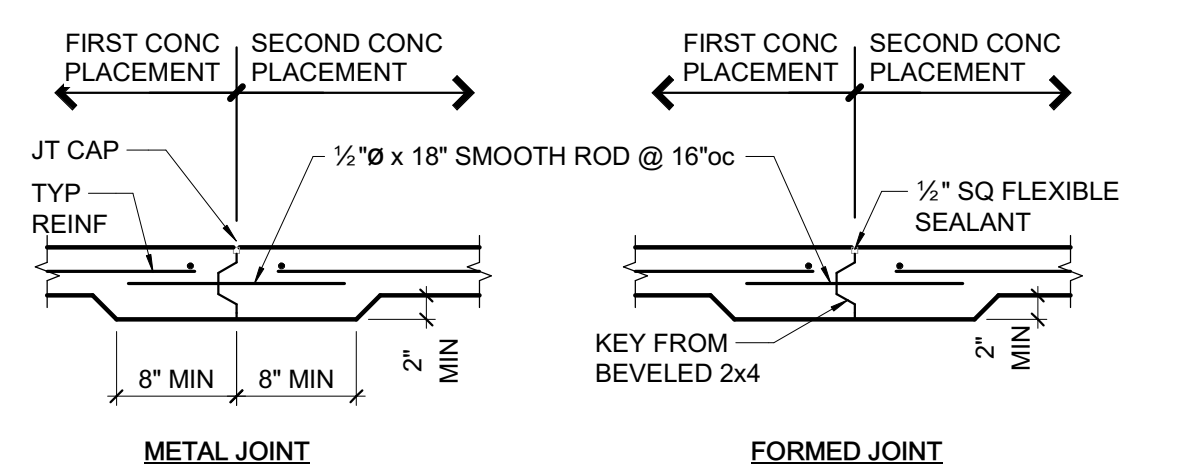
SCALE:	DATE: APRIL 2026
ENGINEER: JG	PM: CSB
APPROVED: Deputy Director - Engineering	Date
By: Christa Siegenthaler	

City of Santa Rosa FULTON ROAD SEWER IMPROVEMENTS WEST 3RD ST TO SANTA ROSA CREEK	CONTRACT NO. C02117
GENERAL STRUCTURAL NOTES AND SPECIFICATIONS	SHEET 11 OF 20
	FILE NO. 2025-0001

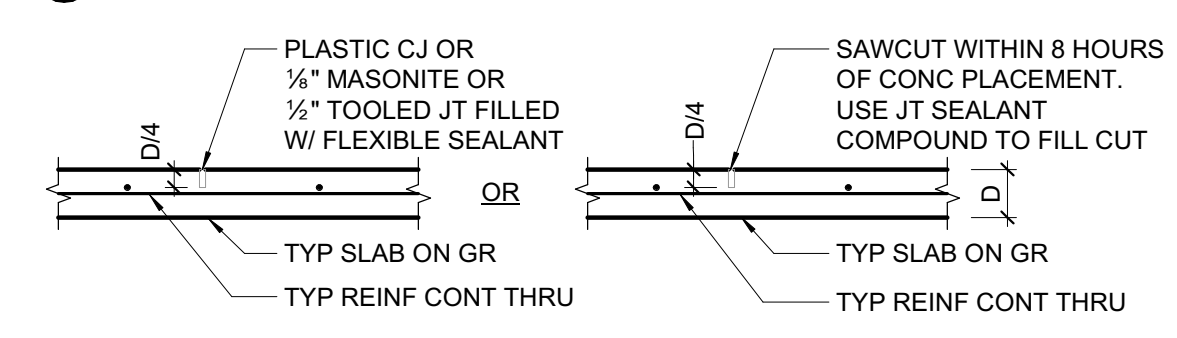


NOTE:
LOCATION OF JOINTS TO BE SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE

7 FOOTING CONSTRUCTION JOINT
3/4" = 1'-0"



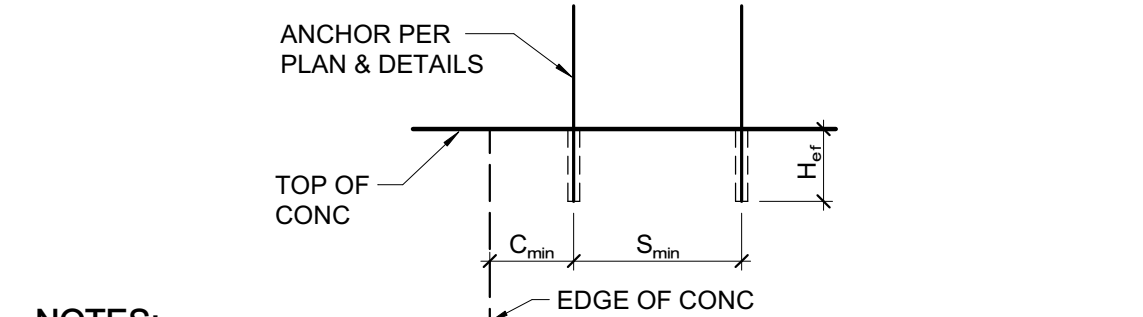
A CONSTRUCTION/DOWEL JOINT



B CONTROL JOINT

10 SLAB ON GRADE JOINTS
3/4" = 1'-0"

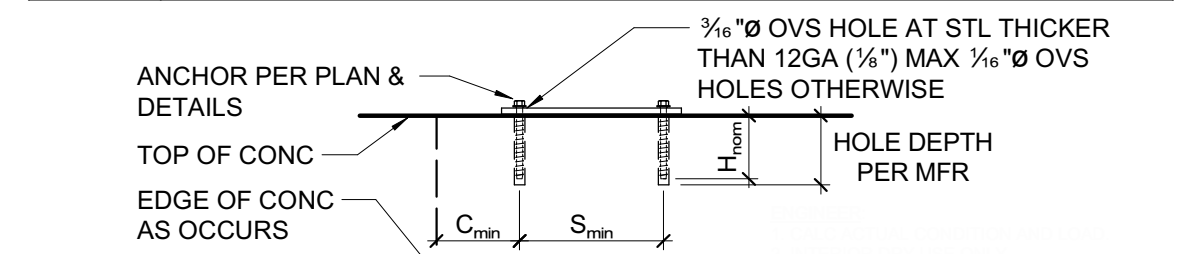
ADHESIVE ANCHOR IN 2500 PSI MIN CONCRETE						
ADHESIVE TYPE	ANCHOR		MIN EMBED UNO H _{ef}	MIN EDGE DISTANCE C _{min}	MIN SPCG S _{min}	MIN CONC DEPTH H _{min}
	THRD ROD	REBAR				
SIMPSON SET-XP (ICC-ESR 2508)	3/8"Ø	#3	3"	1 1/2"	3"	H _{ef} + 2 1/2"
	1/2"Ø	#4	3 1/2"	1 1/2"	3"	H _{ef} + 3 1/2"
	5/8"Ø	#5	4"	1 1/2"	3"	H _{ef} + 3 1/2"
	3/4"Ø	#6	5"	1 1/2"	3"	H _{ef} + 4 1/2"
	1"Ø	#8	6"	1 1/2"	3"	H _{ef} + 4"
HILTI HIT-HY 200R (ICC-ESR 3187)	3/8"Ø	N/A	3"	1 1/2"	1 1/2"	H _{ef} + 1 1/4"
	N/A	#3	3"	1 1/2"	1 1/2"	
	1/2"Ø	N/A	4"	1 1/2"	2 1/2"	H _{ef} + 1 1/2"
	N/A	#4	4"	1 1/2"	2 1/2"	
	5/8"Ø	N/A	5"	1 1/2"	3 1/4"	H _{ef} + 1 1/2"
	N/A	#5	5"	1 1/2"	3 1/4"	
	3/4"Ø	N/A	6"	1 1/2"	3 3/4"	H _{ef} + 1 1/2"
	N/A	#6	6"	1 1/2"	3 3/4"	
	1"Ø	N/A	7"	1 1/2"	4 3/8"	H _{ef} + 2"
	N/A	#7	7"	1 1/2"	4 3/8"	
1 1/4"Ø	N/A	8"	1 1/2"	5"	H _{ef} + 2 1/4"	
N/A	#8	8"	1 1/2"	5"		
1 1/2"Ø	N/A	9"	1 1/2"	5 1/2"	H _{ef} + 2 1/4"	
N/A	#9	9"	1 1/2"	5 1/2"		
1 3/4"Ø	N/A	10"	1 1/2"	6 1/4"	H _{ef} + 2 3/4"	
N/A	#10	10"	1 1/2"	6 1/4"		



- NOTES:**
- INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT.
 - CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING, AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
 - HOLES TO BE DRILLED W/ ROTARY DRILL ONLY. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
 - SPECIAL INSPECTION IS REQUIRED PER SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORTS. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND ADHESIVE INJECTION.

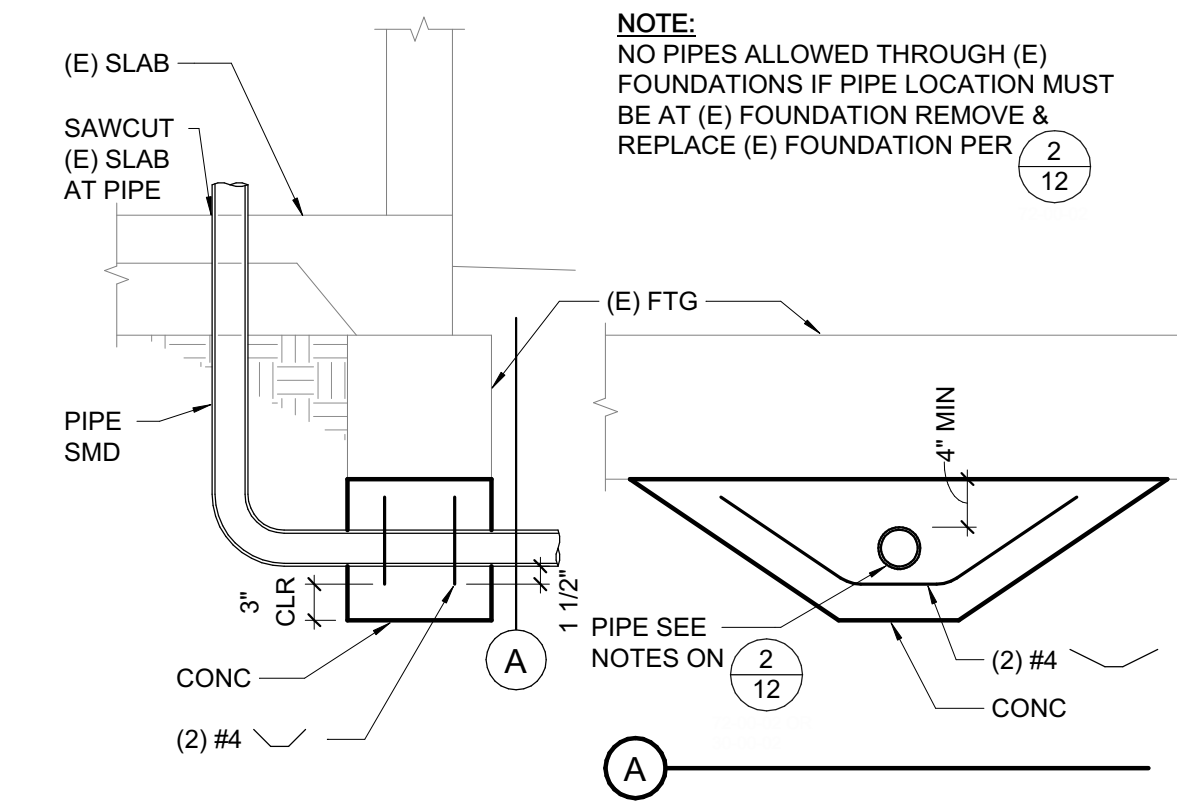
8 ADHESIVE ANCHOR IN CONCRETE
3/4" = 1'-0"

SCREW ANCHOR IN 2500 PSI MIN CONCRETE							
ANCHOR TYPE	ANCHOR AND PILOT HOLE DIA	MINIMUM EMBEDMENT H _{top}	MINIMUM EDGE DIST C _{min}	MINIMUM SPCG S _{min}	MINIMUM CONCRETE THICKNESS H _{min}	MINIMUM INSTALL TORQUE (FT-LB)	MAXIMUM INSTALL TORQUE (FT-LB)
SIMPSON TITEN HD (ICC-ESR 2713)	1/2"	1 1/2"	1 1/2"	1 1/2"	3 1/4"	10	24
	3/8"	2 1/2"	1 1/2"	3"	4"	10	50
	1/2"	3 1/4"	1 1/2"	3"	5"	10	65
	3/4"	4"	1 1/2"	3"	6"	10	100
HILTI KH-EZ (ICC-ESR 3027)	1/2"	1 1/2"	1 1/2"	1 1/2"	3 1/4"	10	18
	3/8"	2 1/2"	1 1/2"	3"	4"	10	40
	1/2"	3"	1 1/2"	3"	4 1/4"	10	45
	3/4"	3 1/4"	1 1/2"	4"	5"	10	85
	1"	4"	1 1/2"	4"	6"	20	95

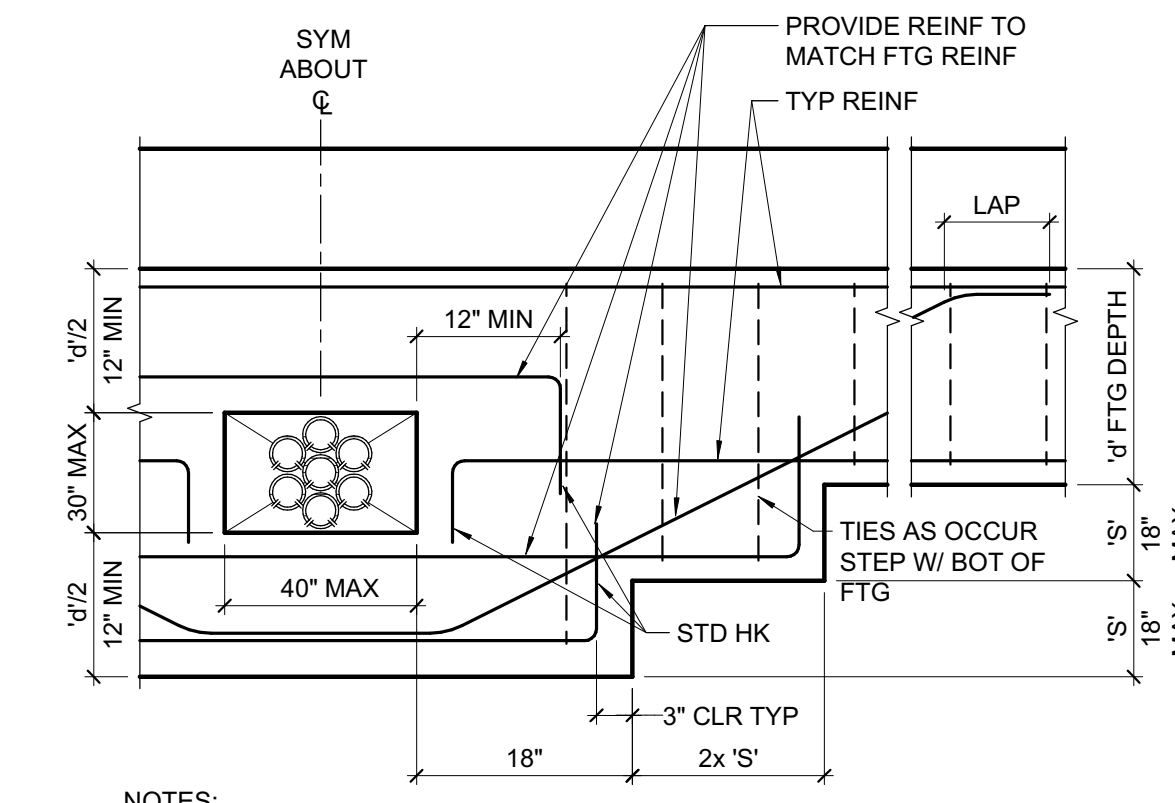


- NOTES:**
- INSTALL SCREW ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT INSTRUCTIONS. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705 OF THE CBC AND THE REQUIREMENTS OF THE ICC REPORTS. INSTALLED ANCHORS SHALL BRING CONNECTED PLIES INTO FIRM CONTACT, MEETING THE INSTALL TORQUE BUT NOT EXCEEDING THE MAXIMUM INSTALL TORQUE.
 - CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
 - HOLES TO BE DRILLED W/ ROTARY DRILL ONLY. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
 - THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND TIGHTENING TORQUE.

11 SCREW ANCHOR IN CONCRETE
3/4" = 1'-0"

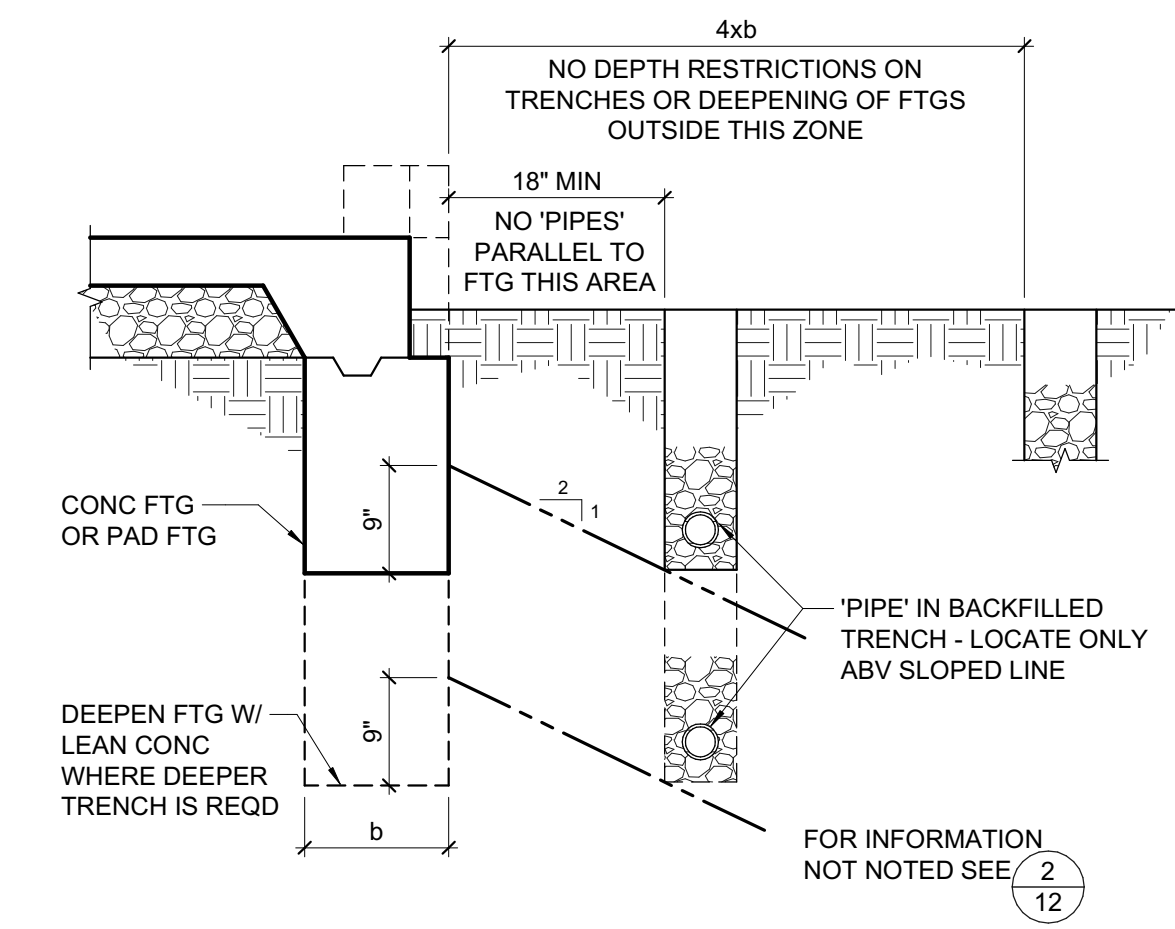


9 NEW PIPE AT EXISTING FOUNDATION
3/4" = 1'-0"

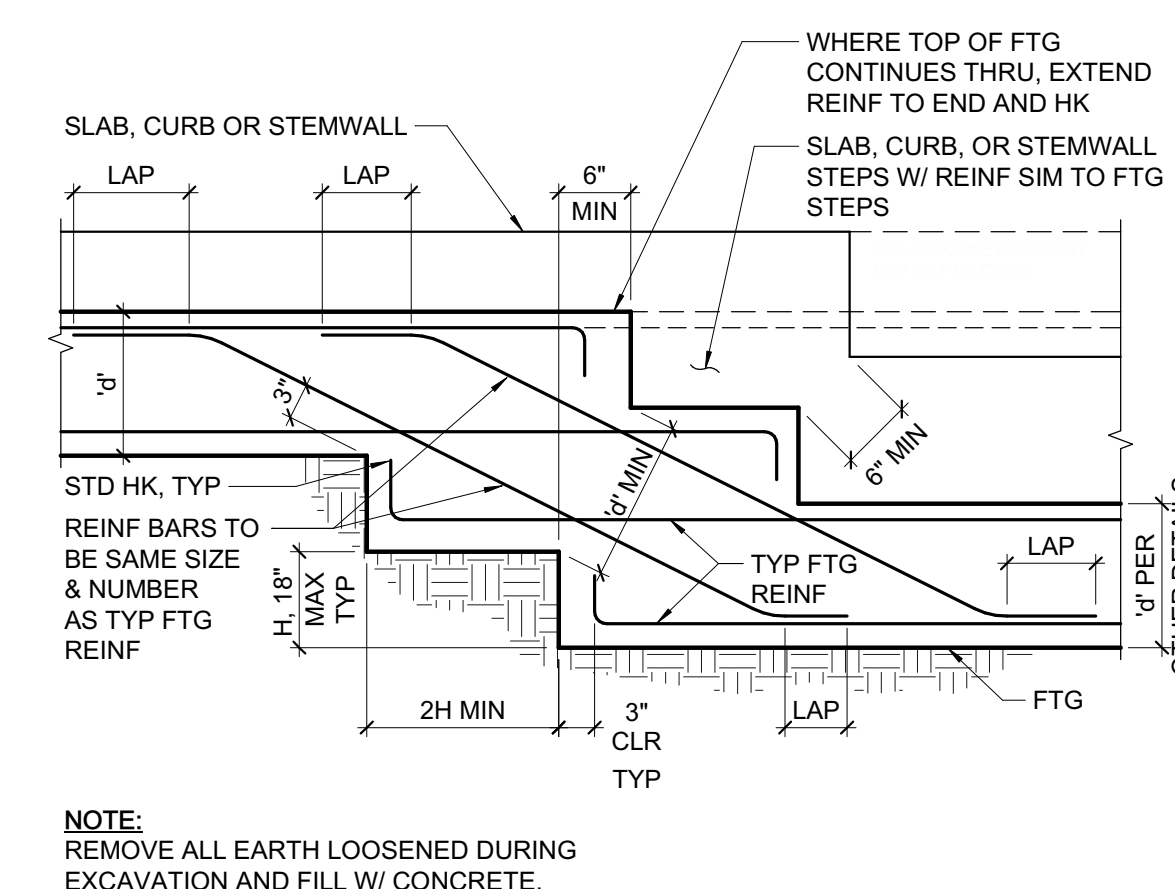


- NOTES:**
- DO NOT LOCATE BLOCKOUT WITHIN 48" OF SHEAR WALL HOLD DOWN, IN FRAME FOUNDATIONS OR COLUMN PAD FOOTINGS.
 - MINIMUM DISTANCE BETWEEN BLOCKOUTS OR OTHER PIPES TO BE 48".

3 FOUNDATION BLOCKOUT
3/4" = 1'-0"



4 TRENCHING ADJACENT TO FOOTING
3/4" = 1'-0"



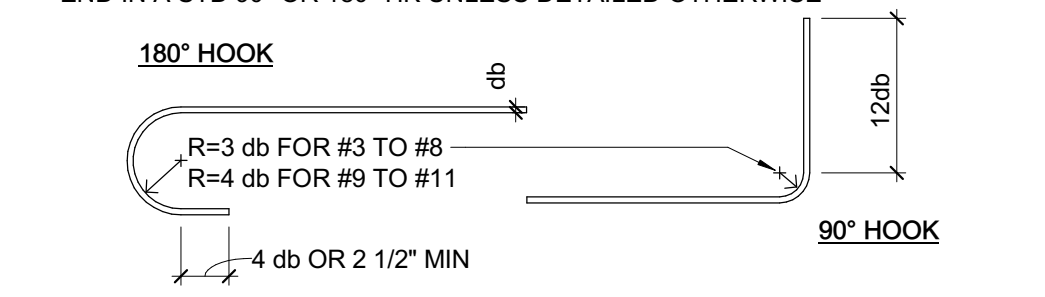
5 STEPPED FOOTING
3/4" = 1'-0"

MINIMUM BAR LAPS FOR REINFORCING STEEL CONCRETE STRENGTH: 3000 PSI OR GREATER - (STAGGER SPLICES)					
SIZE	LAP LENGTH	SIZE	LAP LENGTH	SIZE	LAP LENGTH
#3	17"	#6	34"	#9	86"
#4	24"	#7	56"	#10	105"
#5	34"*	#8	70"	#11	126"

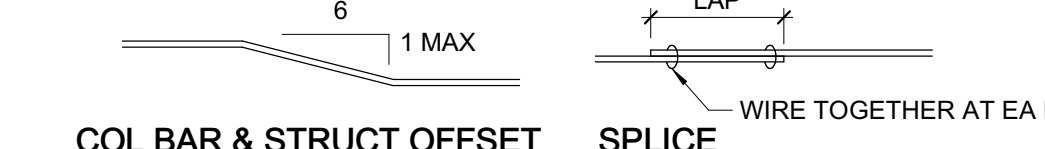
(CLASS B TOP BAR)
BAR SPCG SHALL NOT BE LESS THAN 4x BAR DIA OR 4".
* WHERE COVER NOT LESS THAN 1 1/2", #5 LAP LENGTH = 28"

CONC COVER FOR REINF STL 'CLR'

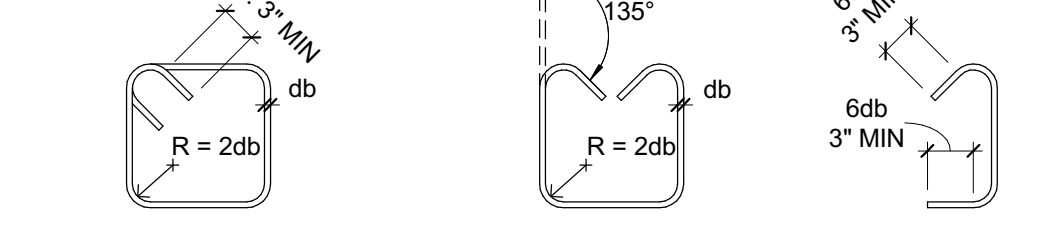
- CAST AGAINST EARTH OR GR 3"
- EXPOSED TO EARTH (FORMED) OR WEATHER
#5 & SMALLER 1 1/2"
#6 & LARGER 2"
- NOT EXPOSED TO EARTH OR WEATHER
#5 & SMALLER 1"
#6 & LARGER, & ALL BM STIRRUPS, COL TIES & SPIRALS 1 1/2"
- ALL REINF BARS SHALL EXTEND AS FAR AS POSSIBLE & END IN A STD 90° OR 180° HK UNLESS DETAILED OTHERWISE



STANDARD HOOKS & BENDS



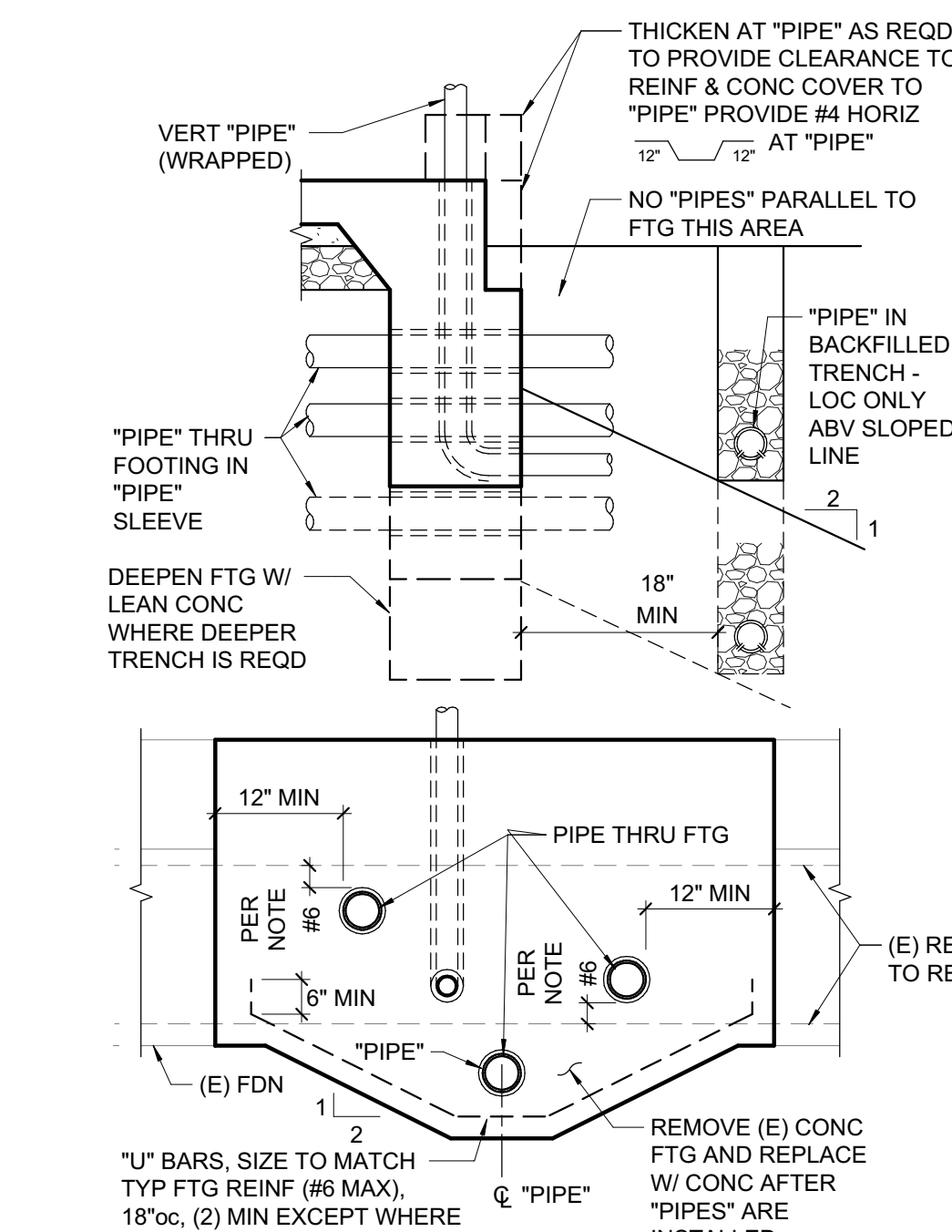
COL BAR & STRUCT OFFSET **SPLICE**



135° STIRRUP TIES #3, #4, #5 **STIRRUP #3, #4, #5** **CROSTIE #3, #4, #5**

1 TYPICAL REINFORCING DETAIL (f_c = 3000psi MIN)
3/4" = 1'-0"

- NOTES:**
- "PIPE" = ANY PENETRATION THROUGH OR EMBEDDED IN FOUNDATION STRUCTURE
 - "PIPE" EMBEDDED IN CONG TO BE PROVIDED W/ FLEXIBLE COUPLINGS AT ENTRY/EXIT POINTS.
 - SLEEVES SHALL BE PVC. ID TO BE 2" LARGER THAN PIPE OD.
 - NO "PIPE" TO RUN PARALLEL IN FOOTINGS, STEM OR CURB.
 - PVC CONDUIT ("PIPE") EMBEDDED IN CURB/STEM MAY BE WIRE TIED TO HORIZ REINF.
 - WRAPPED PIPES SHALL HAVE 1 1/2" CLEAR FROM WRAPPING TO REINF. SLEEVED PIPES SHALL HAVE 1 1/2" MINIMUM CLEAR TO REINF. WRAP W/ 1/2" FOAM SHEET (8) LAYERS MINIMUM. CONCRETE COVER TO BE 1" MINIMUM.
 - CLEARANCE BETWEEN "PIPES" TO BE 3" MIN TYP.
 - NOTIFY ENGINEER FOR REPAIRS IF (E) REINF STEEL IS DAMAGED IN CONG REMOVAL.
 - ALL PIPES THROUGH FOOTINGS TO BE WRAPPED OR SLEEVED



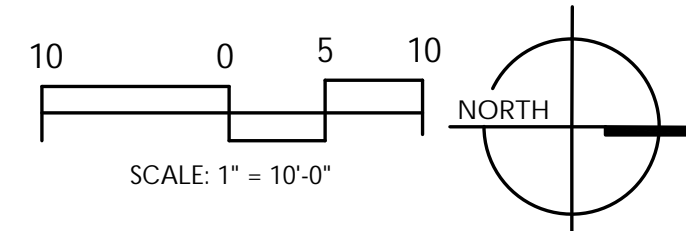
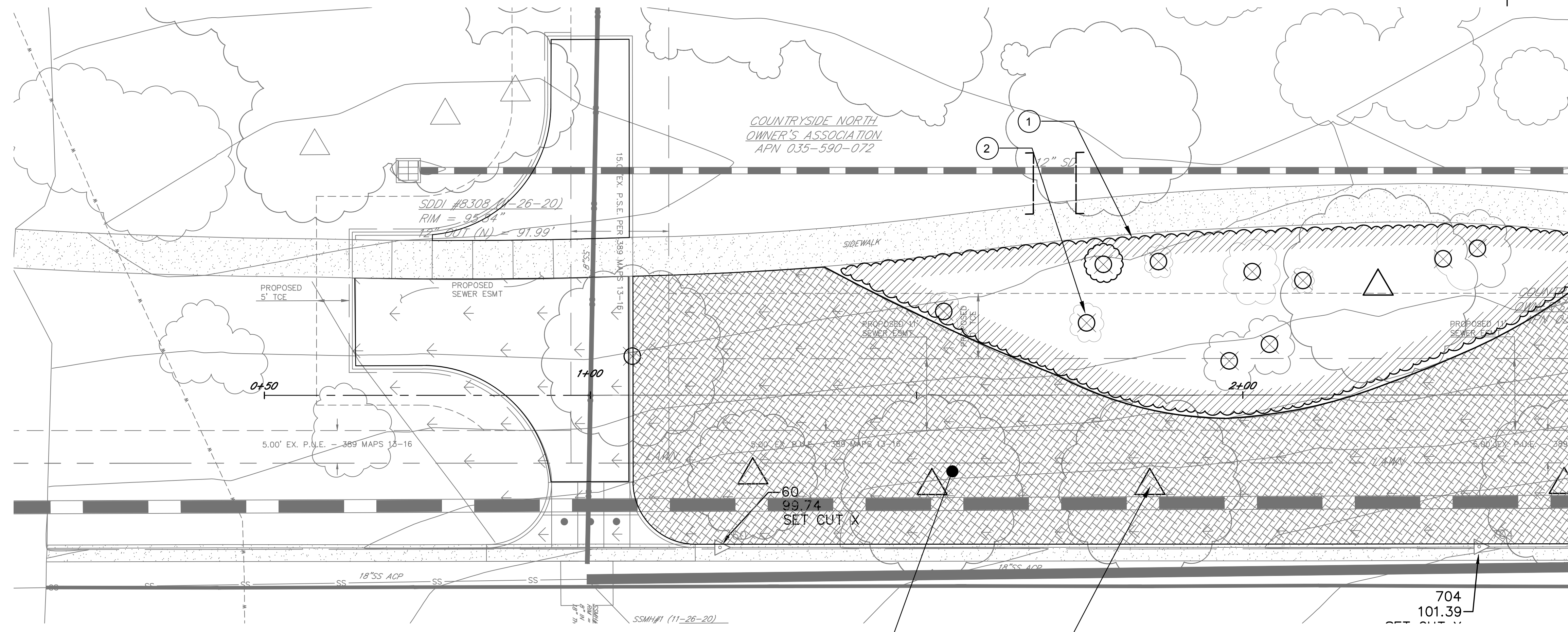
2 PIPES THRU FOOTING
3/4" = 1'-0"

NO	DATE	REVISION	BY

DATE:	APRIL 2026
ENGINEER:	JG
PM:	CSB
APPROVED:	Deputy Director - Engineering
By:	Christa Siegenthaler

City of Santa Rosa	FULTON ROAD SEWER IMPROVEMENTS	WEST 3RD ST TO SANTA ROSA CREEK
CONTRACT NO.	C02117	
SHEET	12	OF 20
FILE NO.	2025-0001	

TYPICAL CONCRETE DETAILS



KEY NOTES:

- 1 EXISTING GROUNDCOVER TO BE REMOVED (I.E. ENGLISH IVY).
- 2 REMOVE TREES AND SHRUBS AS INDICATED.
- 3 TREES TO REMAIN. SEE CIVIL PLANS.
- 4 EXISTING TURF TO BE REMOVED.

NOTE:

EXISTING MATURE TREES HAVE ANY EXTENSIVE NETWORK OF SHALLOW ROOTS OUT TO THE CANOPY. CONTRACTOR WILL NEED TO UTILIZE LESS IMPACTFUL MEANS (I.E. HAND TOOLS) TO REMOVE TURF AS THE WORK MOVES IN TOWARD TRUNK AND ROOT CROWN OF THE TREES.

1 EXISTING PLANT DEMOLITION AND REMOVAL



City of Santa Rosa
Brelje & Race
 CONSULTING ENGINEERS
 1000 S. BROADWAY, SUITE 100, SANTA ROSA, CA 95402
 www.brreco.com

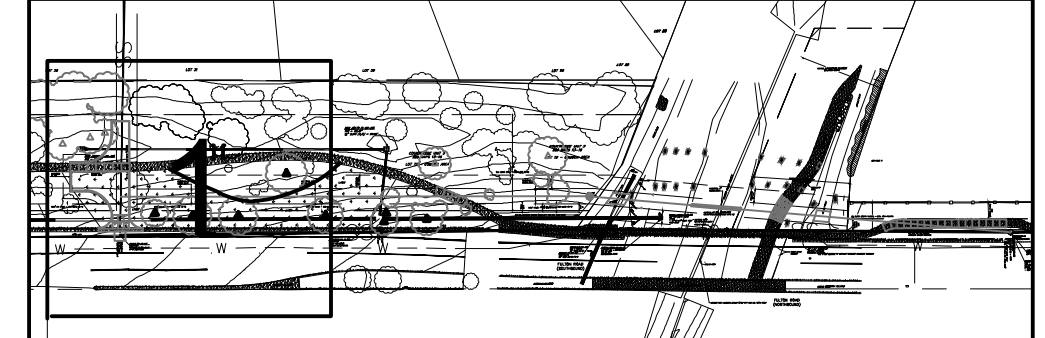
NO.	DATE	REVISION	BY

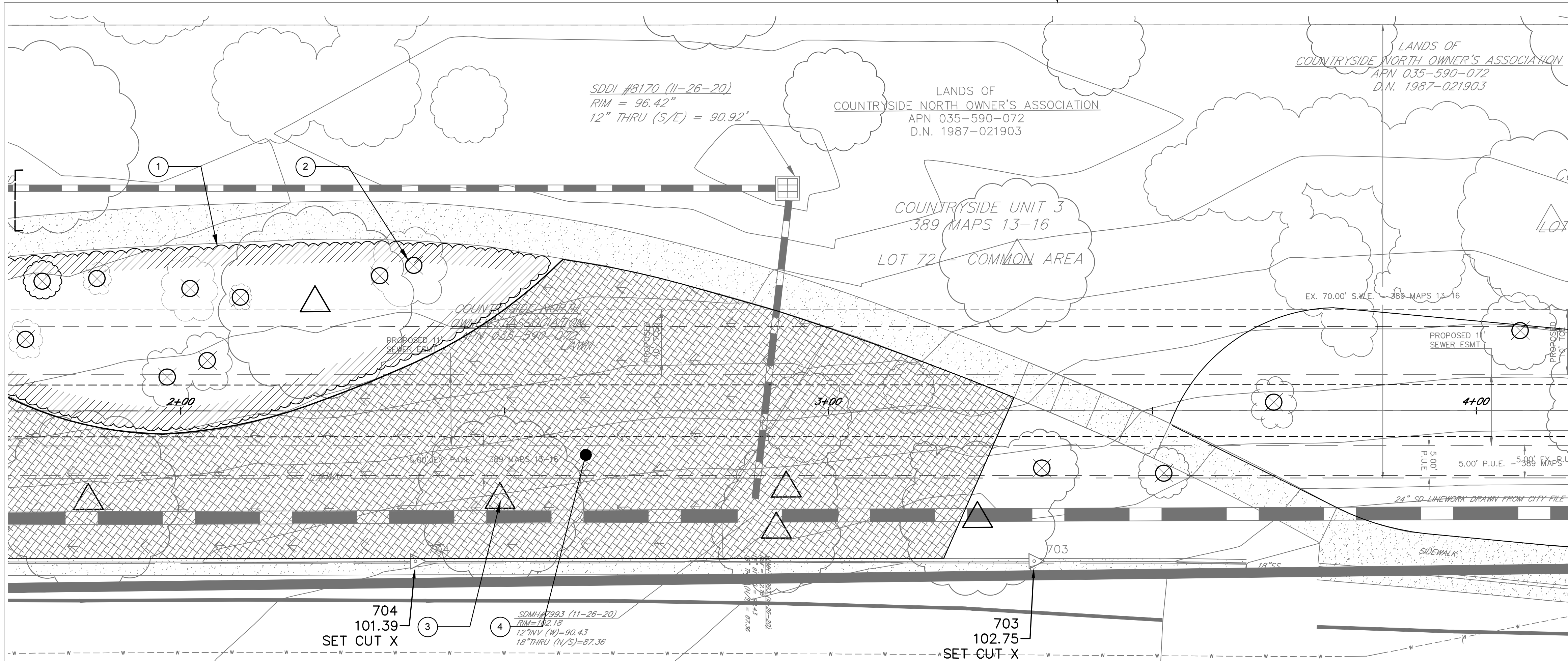
SCALE: AS SHOWN
 DATE: APRIL 2026
 DWN BY: CHK BY:
 APPROVED: Deputy Director - Engineering
 By: Christa Siegenthaler Date: _____

City of Santa Rosa
 FULTON RD SEWER IMPROVEMENTS
 WEST 3RD ST TO SANTA ROSA CREEK
 EXISTING PLANTING DEMOLITION
 AND REMOVAL 1

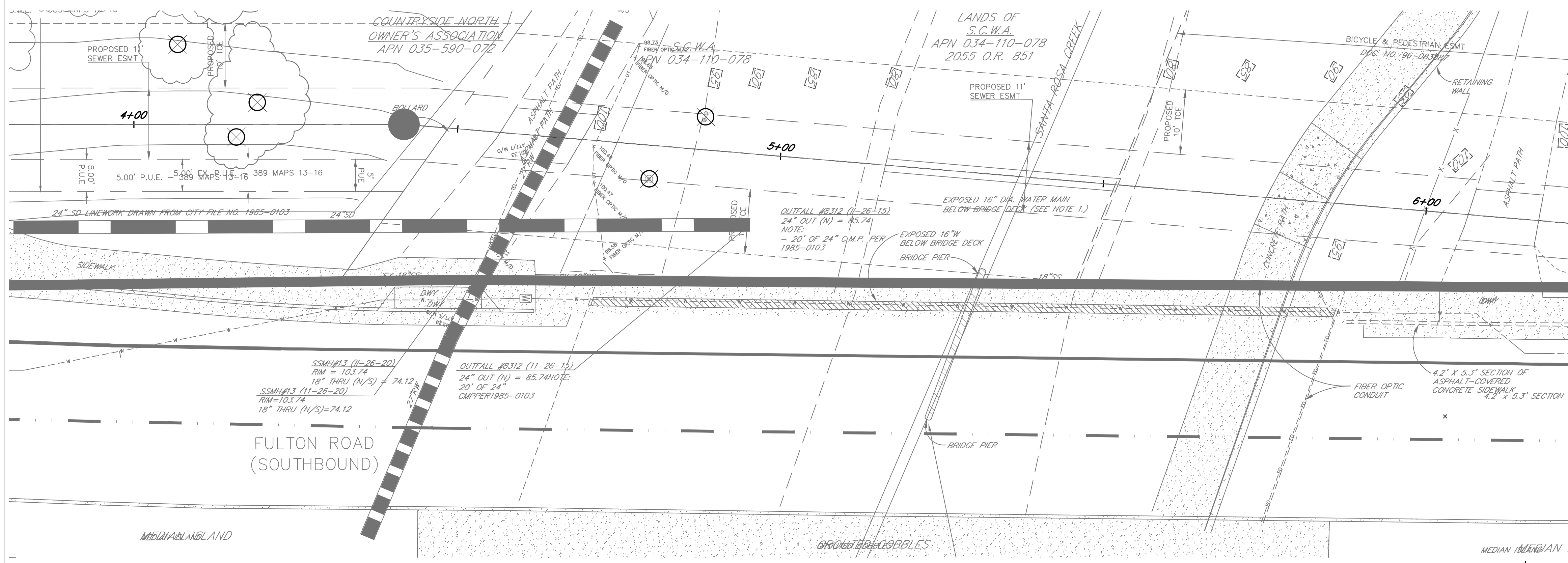
CONTRACT NO. C02117
 SHEET 14 OF 20
 FILE NO. 2025-0001

SHEET KEY:



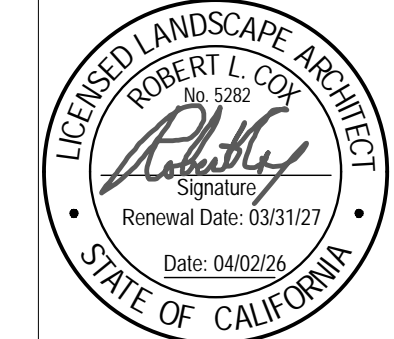
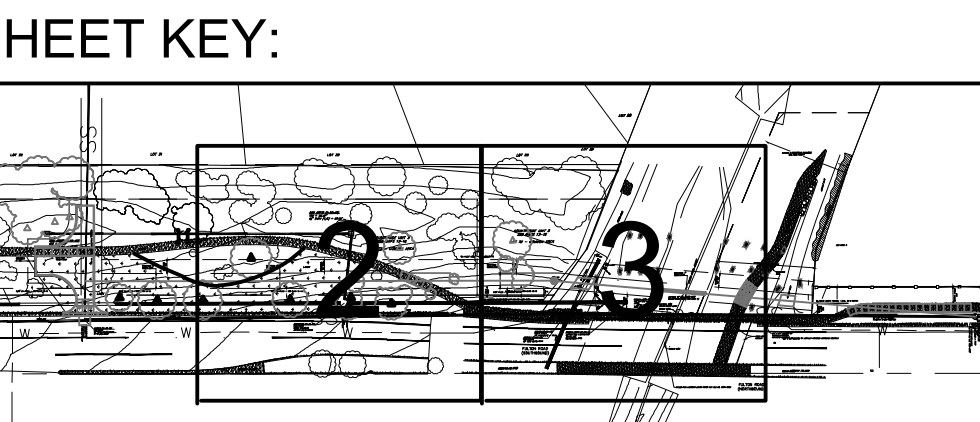


2 EXISTING PLANT DEMOLITION AND REMOVAL



3 EXISTING PLANT DEMOLITION AND REMOVAL

- KEY NOTES:**
- 1 EXISTING GROUNDCOVER TO BE REMOVED (I.E. ENGLISH IVY).
 - 2 REMOVE TREES AND SHRUBS AS INDICATED.
 - 3 TREES TO REMAIN. SEE CIVIL PLANS.
 - 4 EXISTING TURF TO BE REMOVED.



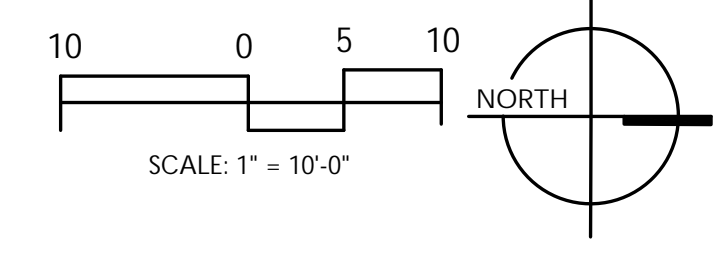
City of Santa Rosa
Brelje & Race
 CONSULTING ENGINEERS
 1000 Main Street, Suite 200, Santa Rosa, CA 95401
 www.breljeandrace.com

NO.	DATE	REVISION	BY

SCALE: AS SHOWN
 DATE: APRIL 2026
 DWN BY: _____
 CHK BY: _____
 APPROVED: Deputy Director - Engineering
 By: Christa Siegenthaler Date: _____

City of Santa Rosa
 FULTON RD SEWER IMPROVEMENTS
 WEST 3RD ST TO SANTA ROSA CREEK
 EXISTING PLANTING DEMOLITION
 AND REMOVAL 2

CONTRACT NO.
 C02117
 SHEET 15 OF 20
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PLANTING LEGEND

Symbol	Botanical Name	Common Name	Size	Quantity	Water Use
Shrubs and Groundcover:					
	Arctostaphylos Dr. Hurd	Manzanita	5 Gal.	7	Low
	Cotoneaster dammeri	Bearberry	5 gal.	23	Low
	Muhlenbergia lindeimeri	Lindheimer's Muhly	1 gal.	117	Low
	Festuca rubra Festuca Idahoensis Festuca occidentalis	Native Mow Free Fescue Blend Turf	Sod	9000 sf	Low

PLANTING NOTES:

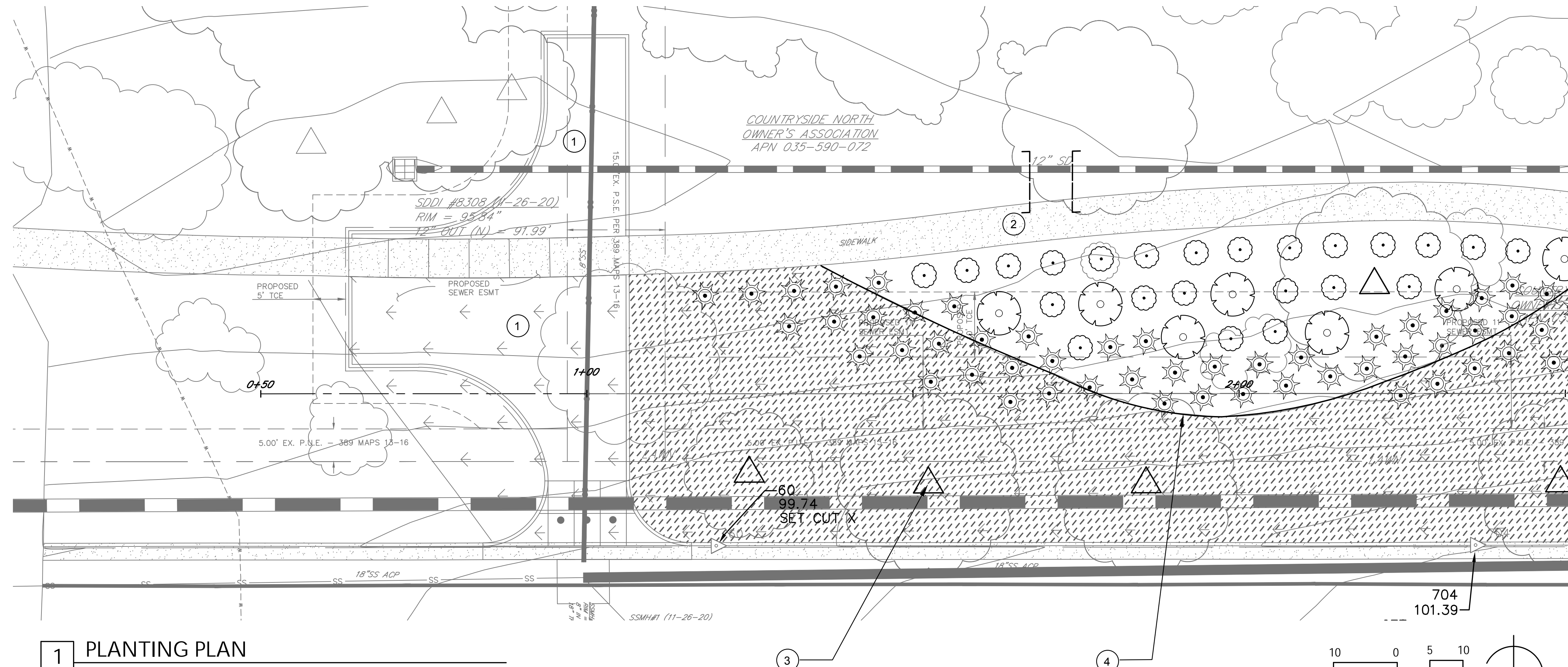
1. PLANT MATERIAL INCLUDES ALL TREES, SHRUBS, AND TURF USED FOR THIS PROJECT.
2. ALL PLANTS SHALL BE HEALTHY REPRESENTATIVES, TYPICAL OF THEIR SPECIES OR VARIETY AND EXHIBIT NORMAL GROWTH AND STRUCTURE.
3. PLANTING PLAN IS DIAGRAMMATIC AND PLANT LOCATIONS ARE APPROXIMATE UNLESS NOTED.
4. THE TOTAL NUMBER OF PLANT SYMBOLS OR TOTAL AREA OF PLANTS REPRESENTED BY SYMBOLS SHALL TAKE PRECEDENCE OVER QUANTITIES DESCRIBED IN THE PLANT LEGEND. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IF A SIGNIFICANT DISCREPANCY IS APPARENT.
5. STAKE TREES PER DETAIL AND REMOVE NURSERY STAKES AND TIES AT TIME OF PLANTING.
6. PLANT SHALL BE GROUPED IN THE SAME HYDROZONES AS INDICATED BY THE IRRIGATION PLANS. ANY DEVIATION SHOULD BE APPROVED BY THE LANDSCAPE ARCHITECT.
7. PLANT INSTALLED AS A PART OF THE WORK ARE SUBJECT TO BEING MAINTAINED IN A HEALTHY CONDITION FROM THE TIME OF PLANTING THROUGH THE MAINTENANCE PERIOD.
8. AN ORGANIC MULCH LAYER OF 3" IN DEPTH SHALL BE MAINTAINED OVER THE (SHRUB/GROUNDCOVER) PLANTING AREA THROUGHOUT THE INSTALLATION MAINTENANCE PERIOD.
9. PRUNING OF NEW PLANT MATERIAL IS GENERALLY NOT REQUIRED BUT MAY BE PERFORMED TO CORRECT FOR MINOR DAMAGE OR OUTLYING STEMS OR BRANCHES. CENTRAL AND PRIMARY LEADERS OF PLANT MATERIAL SHALL NOT BE PRUNED.
10. IN ADDITION TO SPECIFIC CONDITIONS OF PLANTING FOR EACH PLANT SPECIMEN A MINIMUM OF 8" OF NON-MECHANICALLY COMPACTED, PREPARED PLANTING SOIL SHALL BE INCORPORATED OVER THE PLANTING AREA.
11. FINAL PLANTING SOIL AMENDMENTS SHALL BE DETERMINED BY AN AGRONOMICAL SOIL ANALYSIS OF SAMPLES PROVIDED FROM THE PROJECT SITE AT THE TIME OF PLANTING.

KEY NOTES:

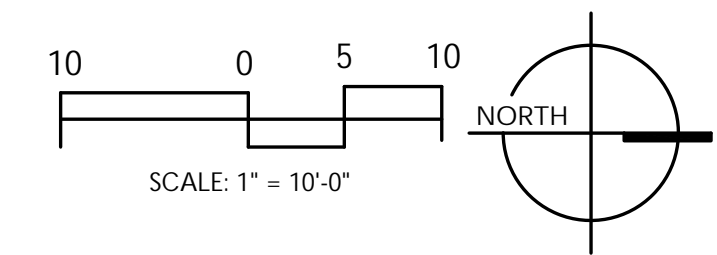
- 1 PAVED VEHICLE TURNAROUND. SEE CIVIL CIVIL PLANS.
- 2 EXISTING WALK TO REMAIN. SEE CIVIL PLANS
- 3 TREES TO REMAIN. SEE CIVIL PLANS.
- 4 PLACE LANDSCAPE EDGING TO SEPARATE GROUNDCOVER / MULCH FROM NEW TURF. SEE DETAIL 9 SHEET 20.

GENERAL NOTES:

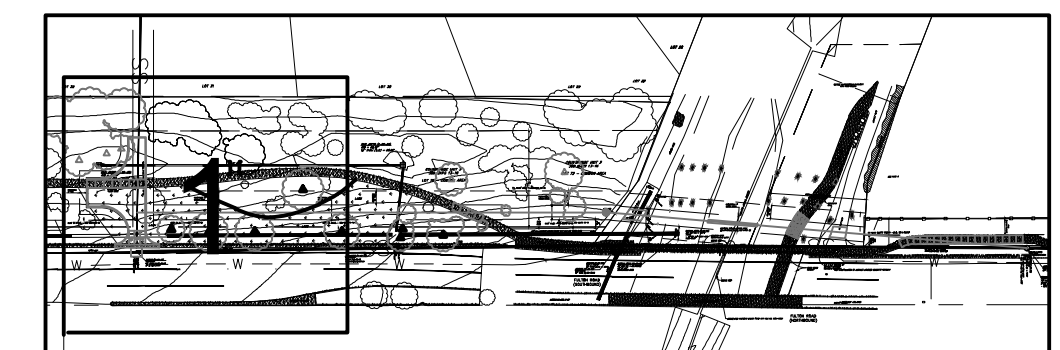
1. FOR ALL PAVING REFER TO CIVIL PLANS FOR LAYOUT AND INSTALLATION.
2. REFER TO CIVIL DRAWINGS FOR GRADING INFORMATION
3. GRADE ALL PLANTING AREAS SO THAT WATER DRAINS AWAY FROM STRUCTURES AND IS DIRECTED TO APPLICABLE DRAINAGE INLETS.
4. CONCENTRATION OF WATER FLOWS IN PLANTING AREAS SHOULD BE AVOIDED EXCEPT AT POINT OF DRAINAGE INLET AS SHOWN ON THE CIVIL DRAWINGS.
5. PLACE EROSION CONTROL MATERIALS FOR ALL SLOPES IN EXCESS OF 2:1.
6. REFER TO IRRIGATION PLANS FOR INSTALLATION OF IRRIGATION PIPING AND EQUIPMENT. CONTRACTOR SHOULD COORDINATE WORK OF ALL TRADES SO THAT SLEEVES, WIRING, OR IRRIGATION EQUIPMENT IS PLACED PRIOR TO PLANTING.
7. REFER TO PLANTING PLAN FOR TREE AND SHRUB DEPTHS. FINISHED GRADES IN PLANTERS SHOULD ACCOMMODATE CORRECT EXPOSURE OF PLANT CROWN AND FULL DEPTH OF ORGANIC MULCH (3").
8. NEW TURF:
NEW TURF SHOULD BE PLACED SIMILAR IN PATTERN TO THE REMOVED EXISTING TURF. TURF SHOULD BE PLACED AROUND LARGE EXPOSED SURFACE ROOTS AND PLACED AS CLOSE TO THE TRUNKS OF THE EXISTING TREES AS PRACTICAL.



1 PLANTING PLAN



SHEET KEY:

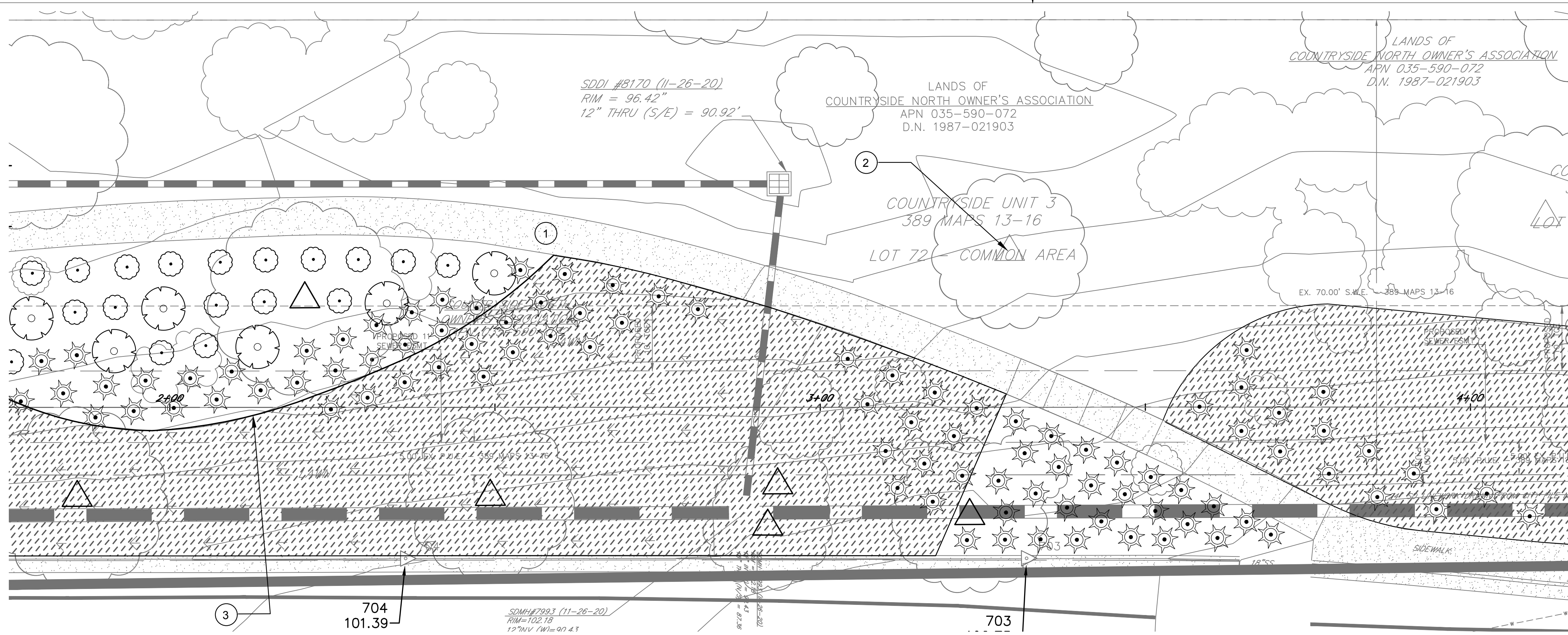


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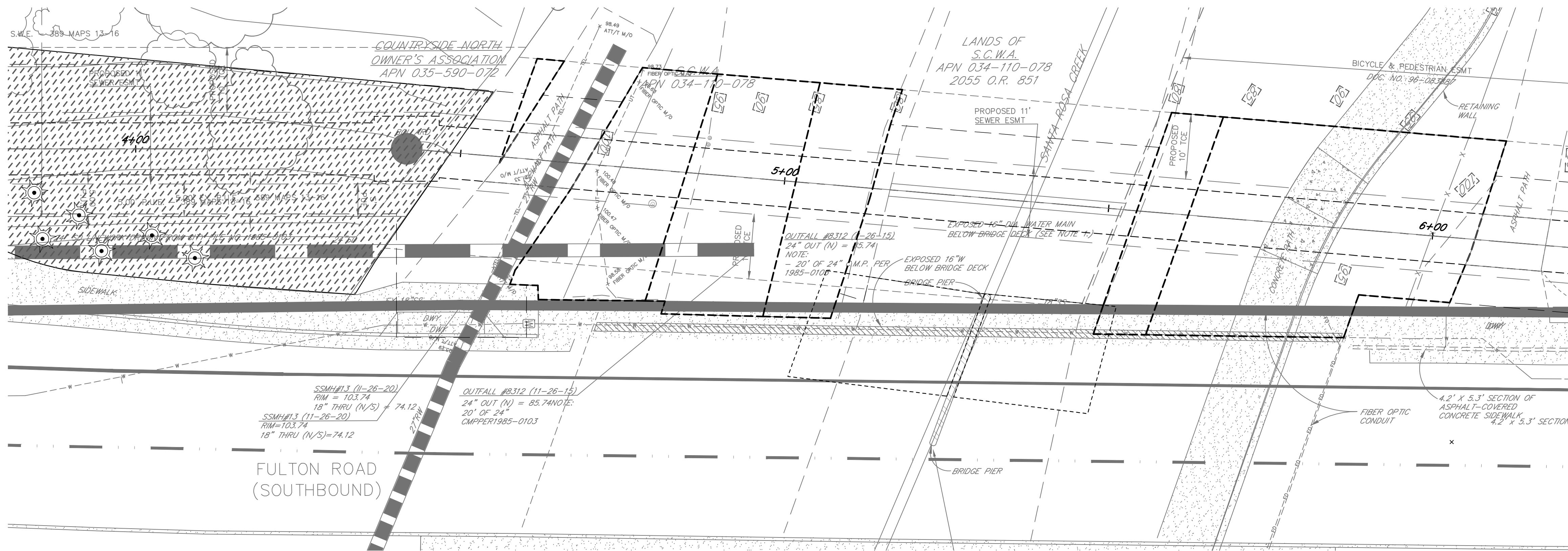
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 DWN BY:
 CHK BY:
 APPROVED: Deputy Director - Engineering
 By: Christa Siegenthaler
 Date: _____

City of Santa Rosa
 FULTON RD SEWER IMPROVEMENTS
 WEST 3RD ST TO SANTA ROSA CREEK
 PLANTING PLAN 1

CONTRACT NO. C02117
 SHEET 16 OF 20
 FILE NO. 2025-0001



2 PLANTING PLAN



3 PLANTING PLAN

KEY NOTES:

- 1 EXISTING WALK TO REMAIN. SEE CIVIL PLANS
- 2 TREES TO REMAIN. SEE CIVIL PLANS.
- 3 PLACE LANDSCAPE EDGING TO SEPARATE GROUND COVER / MULCH FROM NEW TURF. SEE DETAIL 9 SHEET 20.

PLANTING LEGEND

Symbol	Botanical Name	Common Name	Size
	Arctostaphylos Dr. Hurd	Manzanita	5 Gal.
	Cotoneaster dammeri	Bearberry	5 gal.
	Muhlenbergia lindheimeri	Lindheimer's Muhly	1 gal.
	Festuca rubra Festuca Idahoensis Festuca occidentalis	Native Mow Free Fescue Blend	Sod

Shrubs and Groundcover:



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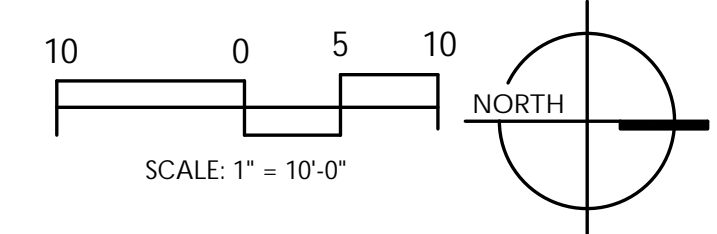
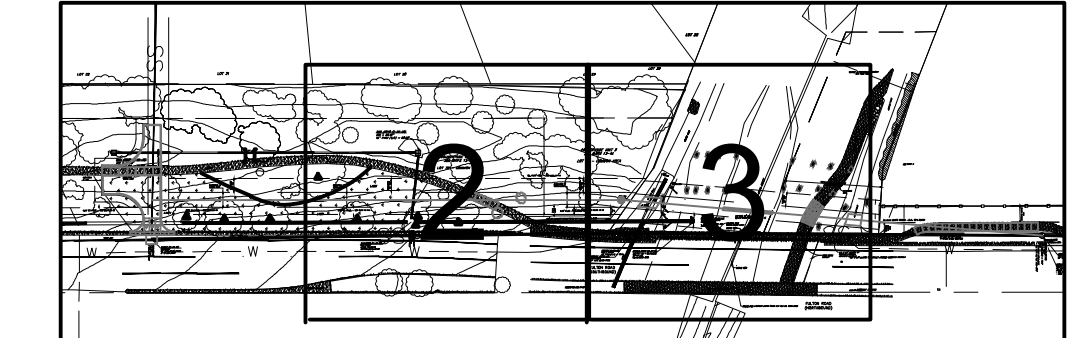
NO.	DATE	REVISION	BY

SCALE: AS SHOWN DATE: APRIL 2026
 DWN BY: CHK BY:
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City of Santa Rosa
 FULTON RD SEWER IMPROVEMENTS
 WEST 3RD ST TO SANTA ROSA CREEK
 PLANTING PLAN 2

CONTRACT NO. C02117
 SHEET 17 OF 20
 FILE NO. 2025-0001

SHEET KEY:

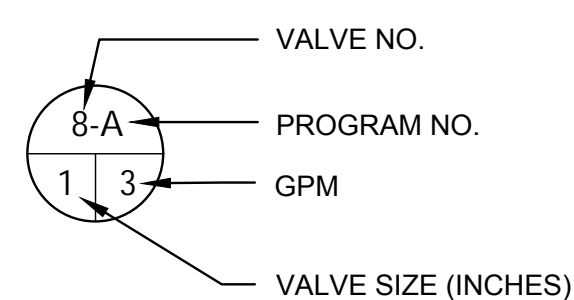


IRRIGATION LEGEND:

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	NOZZLE	FLOW	P.S.I.	RADIUS	NOTES
HEADERS AND EMITTER								
	ROTOR	HUNTER	I-20-06-PRB	RED	GPM	45	25'	SEE DETAIL 6
				RED	GPM			
				RED	GPM			
	PC EMITTER	RAINBIRD	XBCV-10PC		1.0 GPH	30	N/A	SEE DETAIL 4
EQUIPMENT								
	AUTOMATIC CONTROL VALVE	GRISWOLD	MODEL 2000					SEE DETAIL 1
	2" SHUT-OFF VALVE	APOLLO	94ALF					SEE DETAIL 3
	PVC SCH 40 LATERAL							SEE DETAIL 2
	PVC SLEEVE [2X PIPE SIZE]							SEE DETAIL 2
	BLANK DRIPLINE TUBING							SEE DETAIL 4
	DRIP FLUSH VALVE							SEE DETAIL 5

Pipe Size	Max. Flow Rates	Ft / Sec.	PSI Loss / 100 Ft.
3/4 inch	8 GPM	4.8	5
1 inch	13 GPM	4.8	3.9
1 1/4 inch	23 GPM	4.9	2.9
1 1/2 inch	31 GPM	4.9	2.4
2"	52 GPM	5.0	1.9

REMOTE CONTROL VALVE KEY:

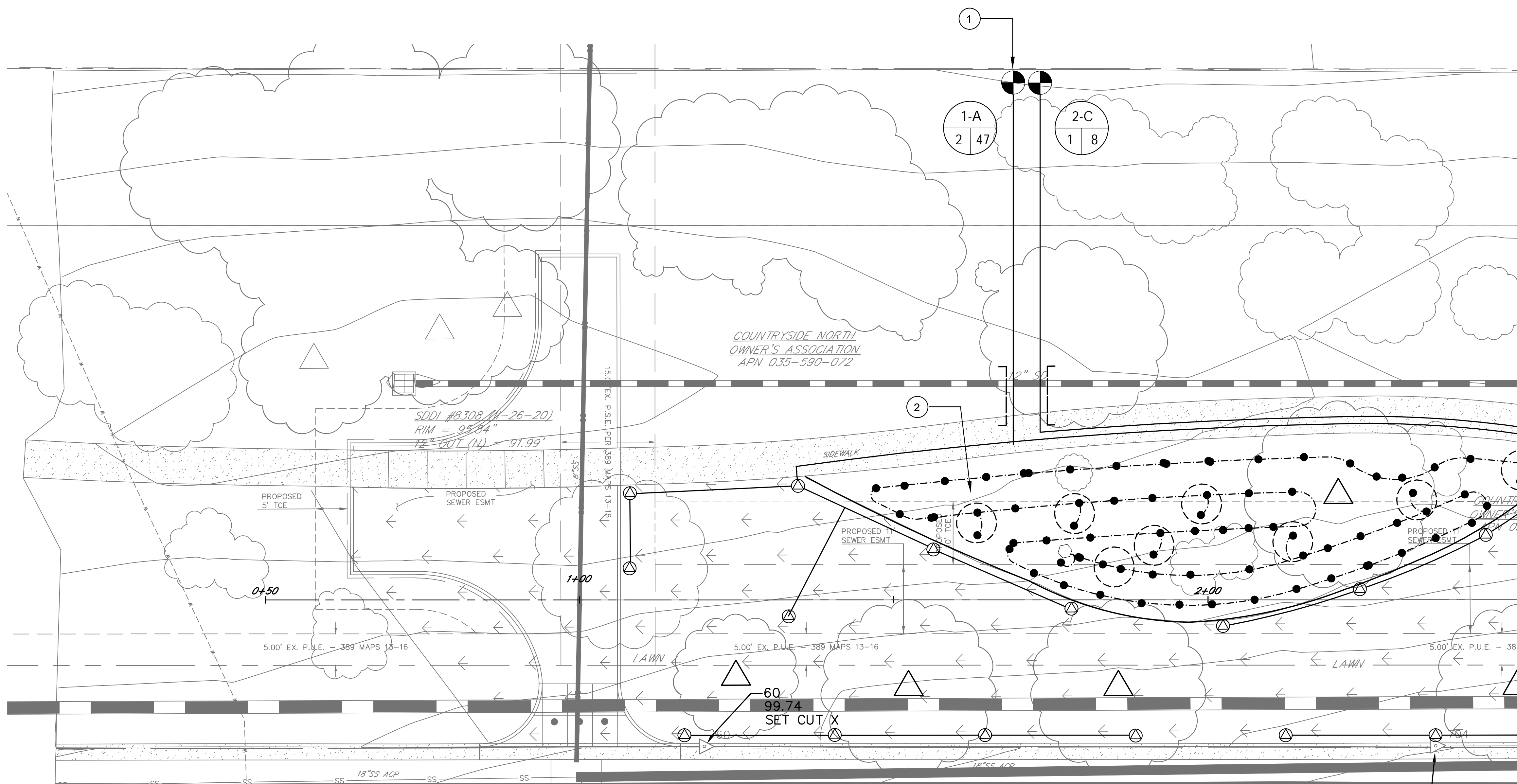


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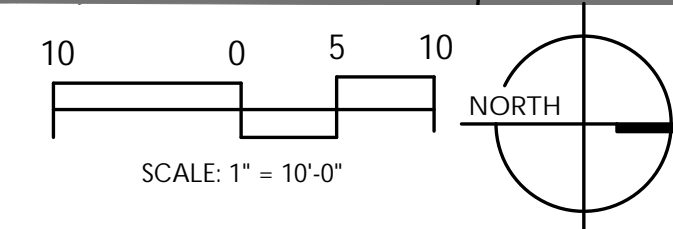
- IRRIGATION POINT OF CONNECTION. REPLACE AND USE EXISTING VALVE LOCATION. PRESSURE NEEDED FOR IRRIGATION SYSTEM: 60 P.S.I. MIN.
- OUTLINE OF LARGE SHRUBS TO BE WATERED WITH (2) EMITTERS PER PLANT.

IRRIGATION NOTES:

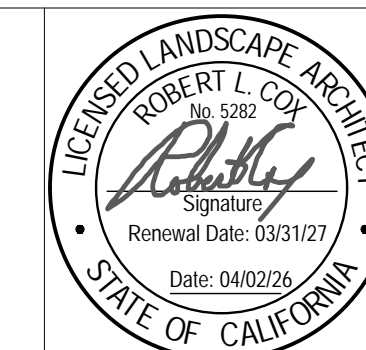
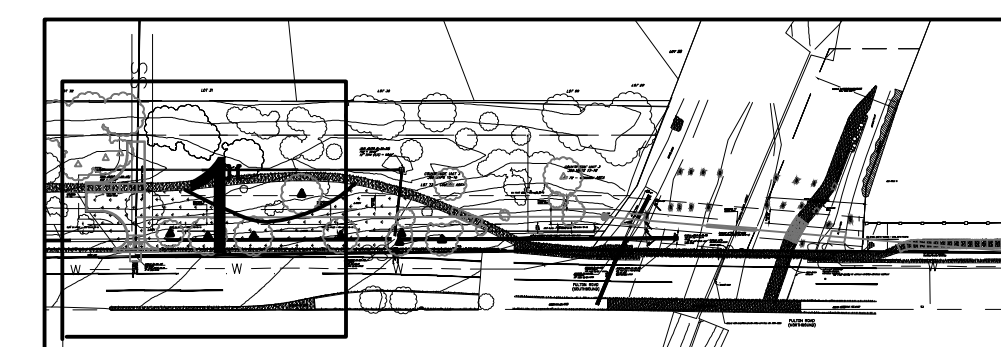
- IRRIGATION LAYOUT IS DIAGRAMMATIC. ACTUAL LAYOUT TO CONFORM TO EXISTING FIELD CONDITIONS.
- INSTALL ALL IRRIGATION LINES AND ANY EQUIPMENT INSIDE PLANTING AREAS WHEREVER POSSIBLE. (ITEMS SHOWN OUTSIDE SUCH AREAS FOR CLARITY ONLY.)
- MAINTAIN AS-BUILT DRAWINGS AT ALL TIMES. ACCURATE SITE REVIEWS AND ASSESSMENT OF THE INSTALLED SYSTEM CANNOT BE MADE WITHOUT THIS INFORMATION.
- REVIEW AND VERIFY AREAS RECEIVING IRRIGATION SYSTEM REGARDING ACCURACY OF SIZE AND CONFIGURATION. CONTRACTOR SHALL NOTIFY OWNER OR THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES THAT WOULD PROVE DETRIMENTAL TO THE COVERAGE AND EFFICIENCY OF THE SYSTEM.
- PIPING AND CONDUIT PENETRATIONS THROUGH WALLS AND INSTALLATIONS AND IRRIGATION EQUIPMENT UNDER PAVING MUST BE COORDINATED WITH THE GENERAL CONTRACTOR.
- PIPING AND WIRING MUST BE INSTALLED IN SLEEVES UNDER PAVEMENT. USE SEPARATE SLEEVES FOR PIPE AND WIRING.
- THE IRRIGATION SYSTEM MUST BE FLUSHED PRIOR TO OPERATION.
- INSTALL DRIP AND LOW-FLOW COMPONENTS ONLY ON VALVES THAT HAVE PRESSURE REDUCING EQUIPMENT AS PART OF THE VALVE ASSEMBLY.
- COVER ALL DRIP LINES WITH SOIL AS INDICATED ON DRAWINGS.
- THE DESIGNED IS BASED ON THE OPERATING PRESSURES AS NOTED ON THE DRAWINGS. CONTRACTOR MUST NOTIFY OWNER IF THE ACTUAL PRESSURE IS DIFFERENT FROM WHAT IS INDICATED.
- TEST LINES FOR LEAKS PRIOR TO BURIAL AND FINAL CONNECTIONS.
- INSTALL VALVE BOXES PRIOR TO PLACING ANY VALVE INTO SERVICE.
- INSTALL EQUIPMENT PLUMB AND LEVEL AND ADJACENT TO AREAS PROVIDING REASONABLE ACCESS SUCH AS SIDEWALKS, DRIVES, OR CLEAR MULCHED AREAS.



1 IRRIGATION PLAN



SHEET KEY:



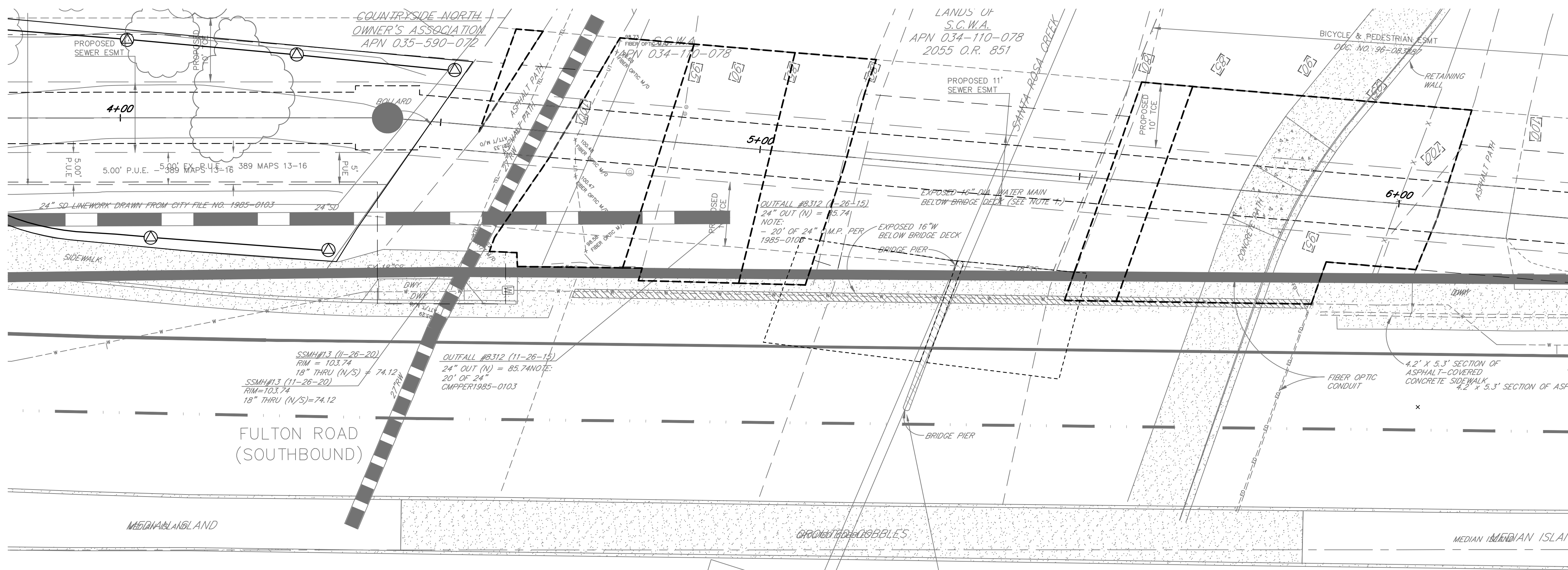
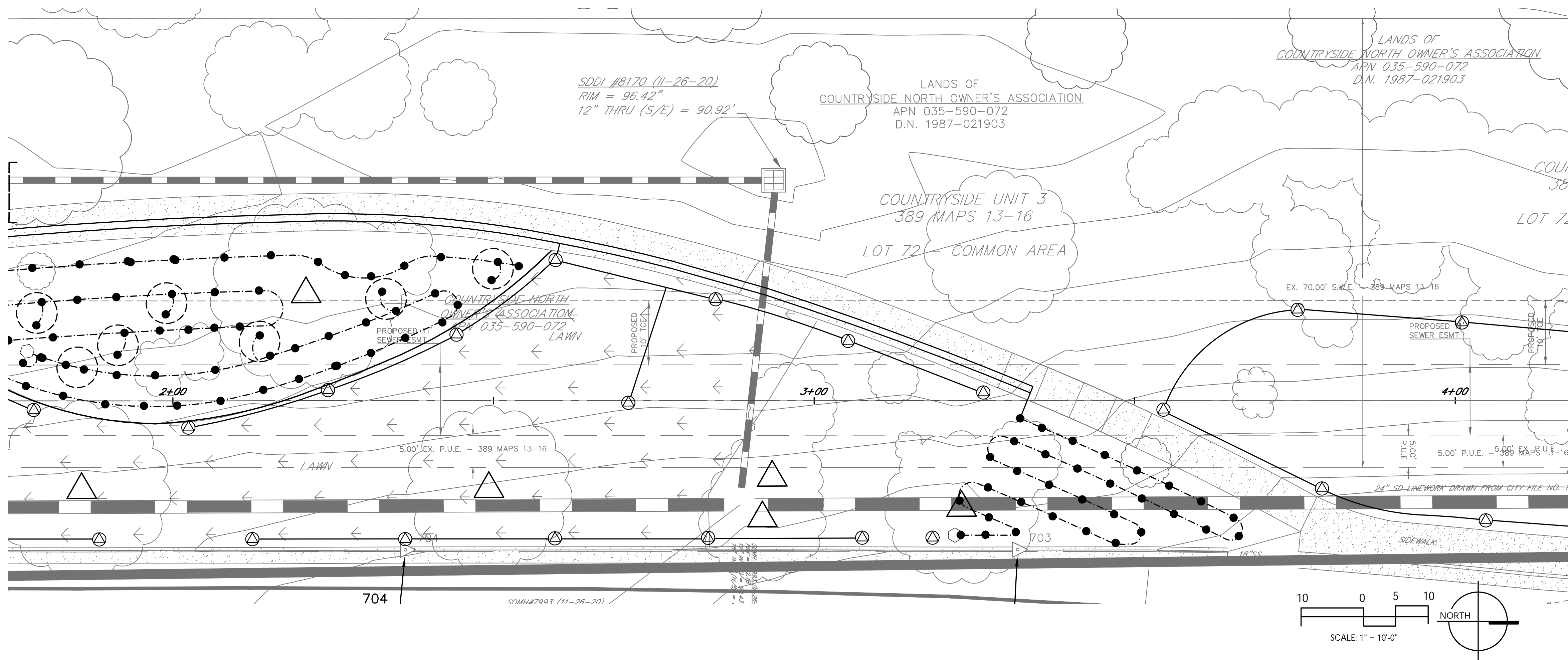
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 1000 B Street, Suite 100, Santa Rosa, CA 95404
 www.breijeandrace.com

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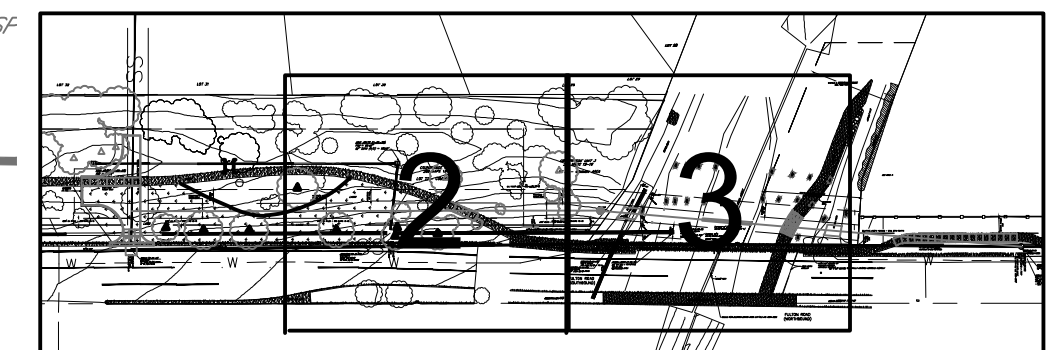
SCALE: AS SHOWN	DATE: APRIL 2026
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APPROVED: Deputy Director - Engineering	
By: Christa Siegenthaler	Date: _____

City of Santa Rosa
 FULTON RD SEWER IMPROVEMENTS
 WEST 3RD ST TO SANTA ROSA CREEK
 IRRIGATION PLAN 1

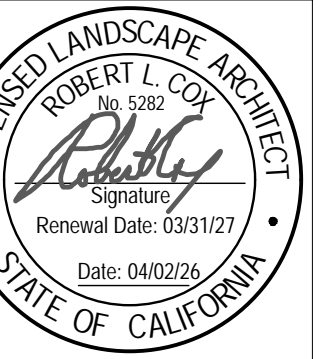
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 SHEET 18 OF 20
 FILE NO. 2025-0001



SHEET KEY:



1 IRRIGATION PLAN

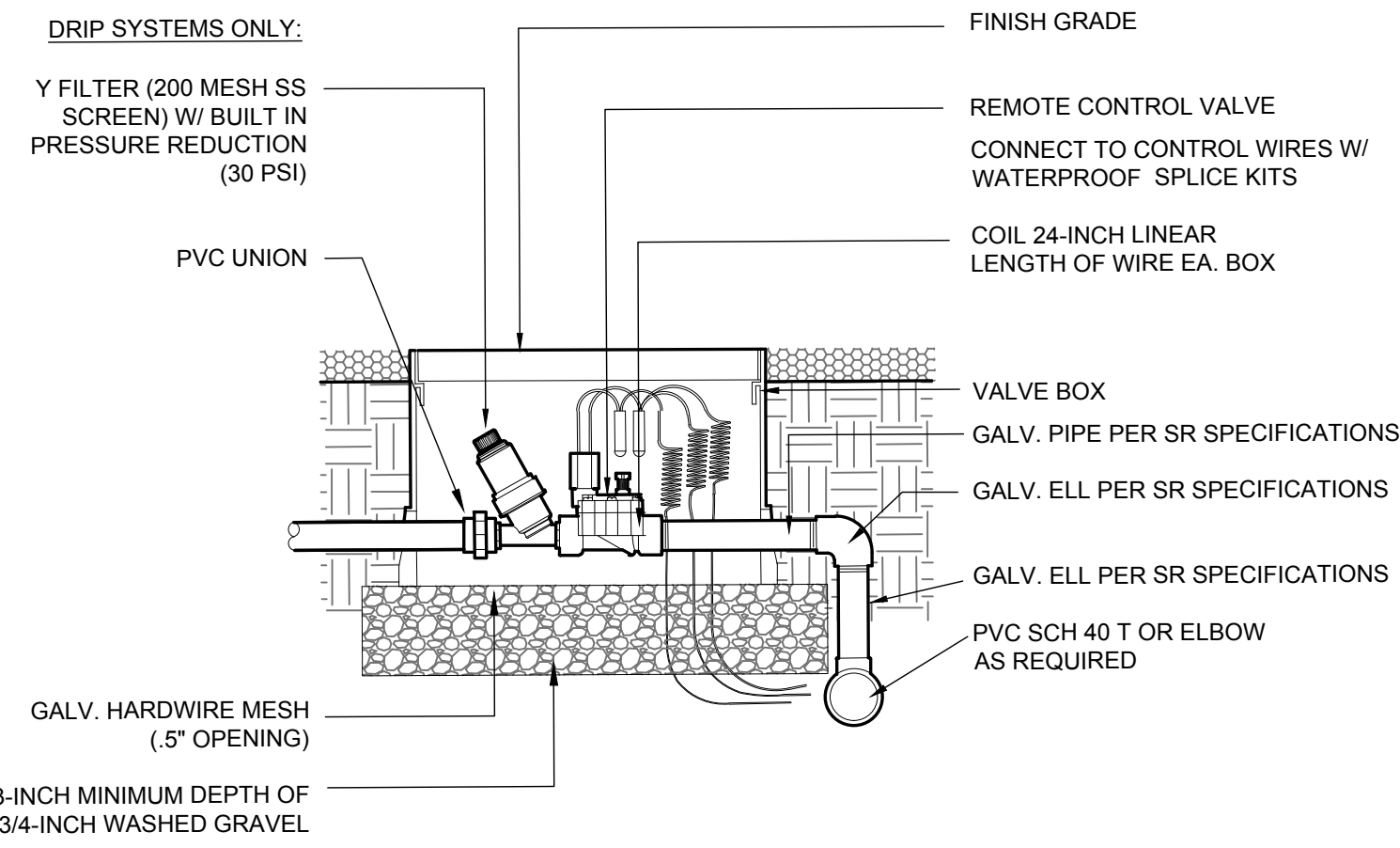


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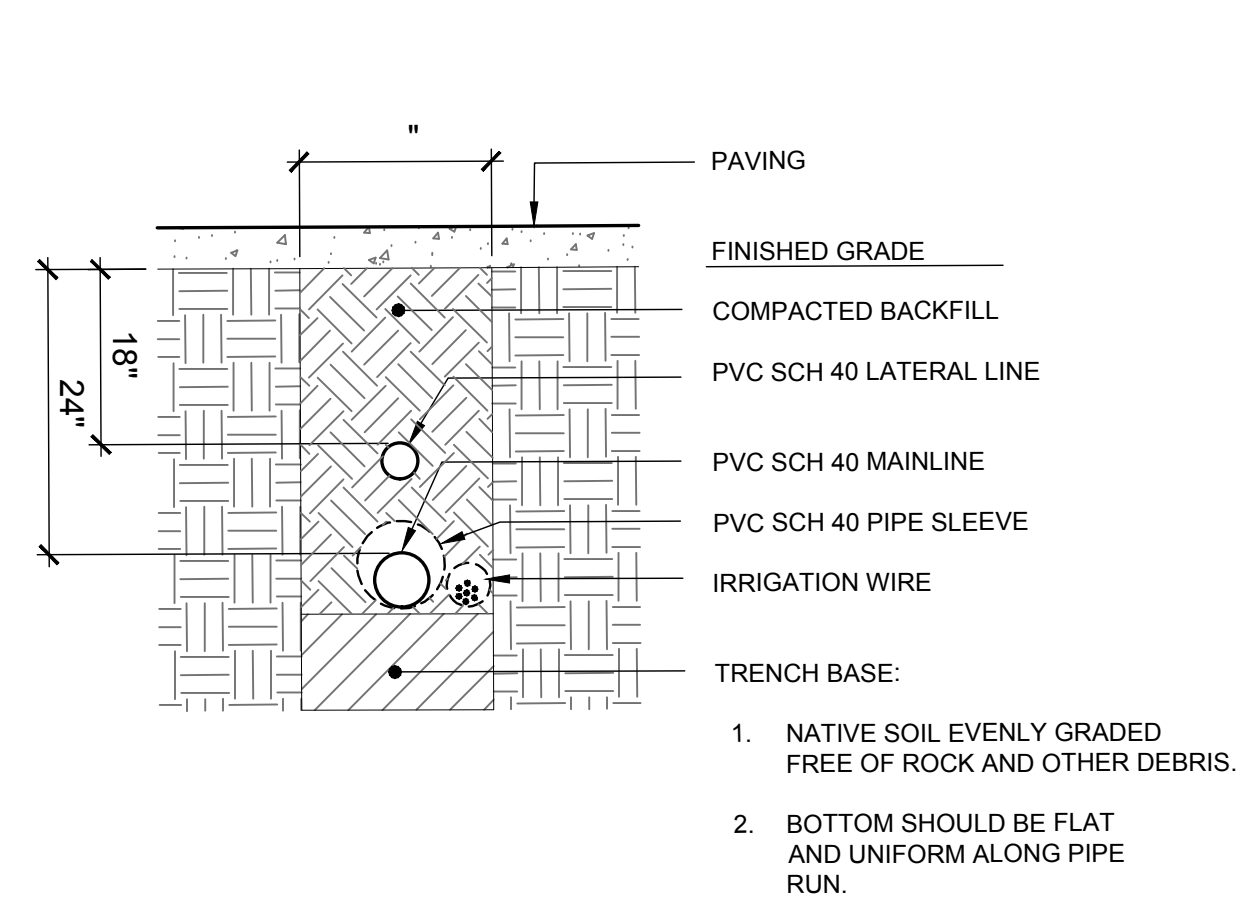
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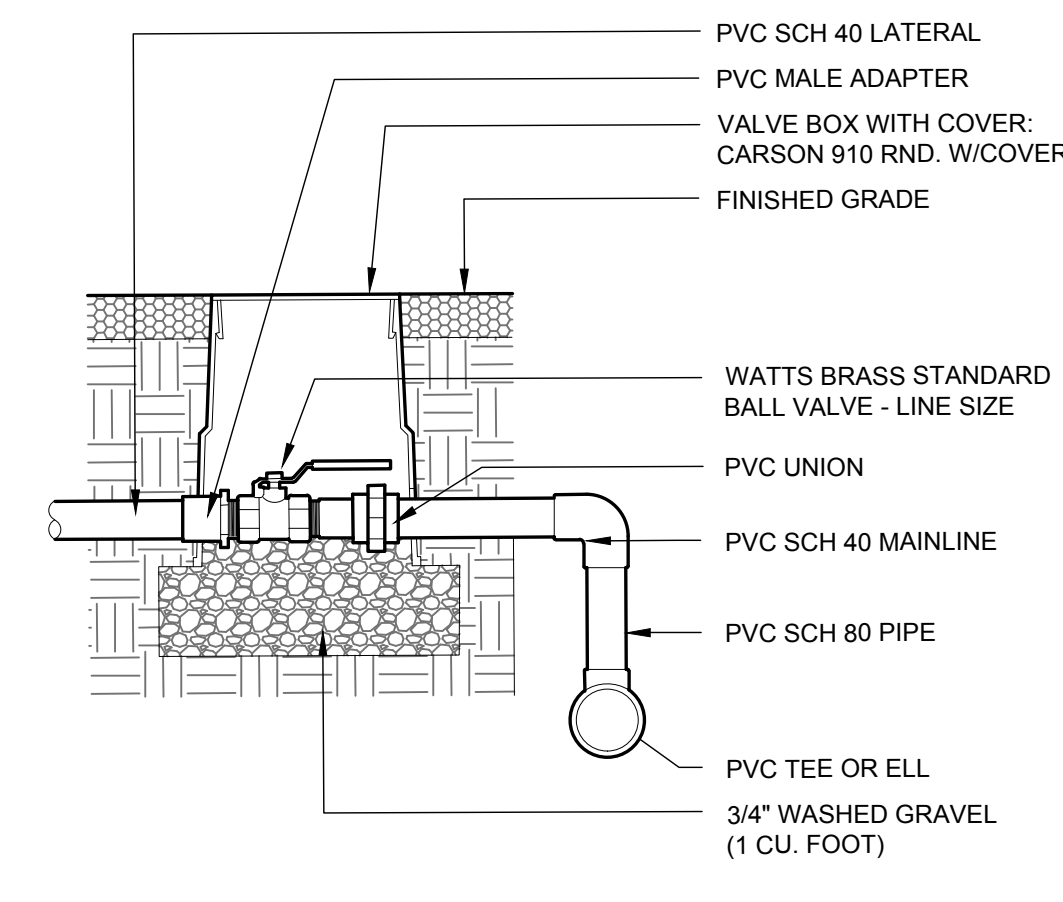
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 IRRIGATION PLAN 2



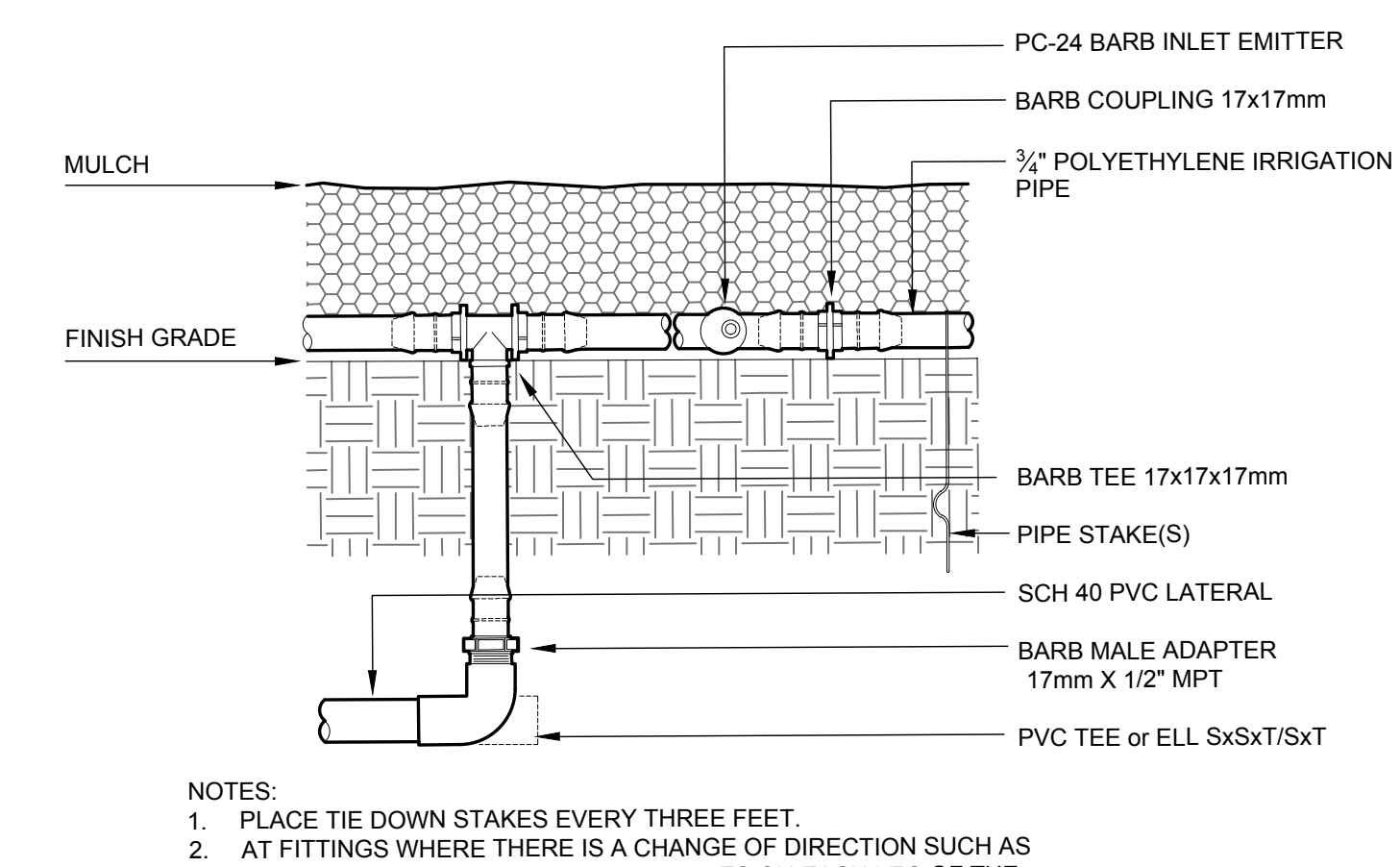
1 REMOTE CONTROL VALVE SCALE: NTS



2 IRRIGATION PIPE TRENCHING SCALE: NTS

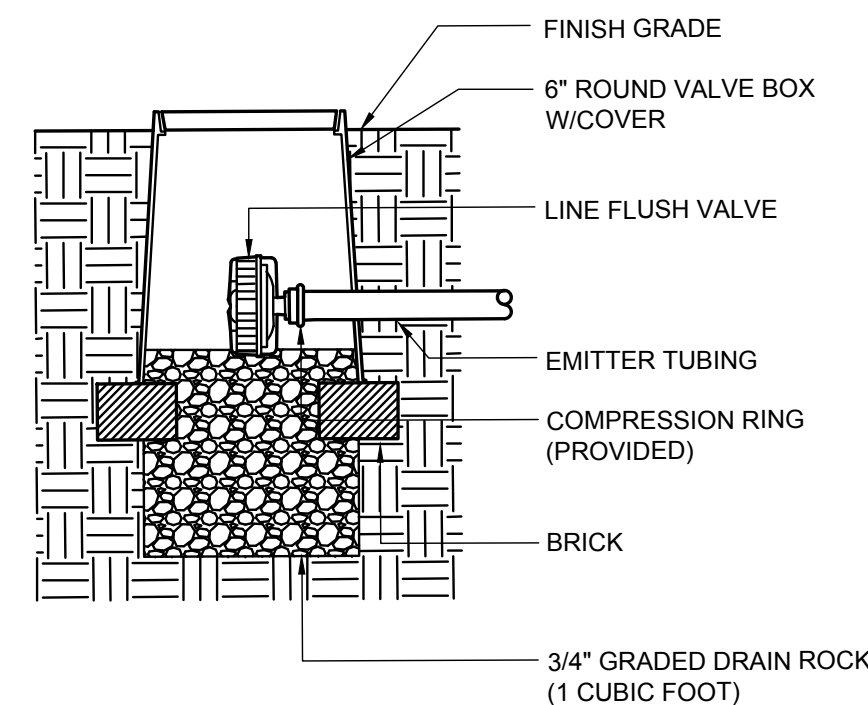


3 BALL SHUT-OFF VALVE SCALE: NTS

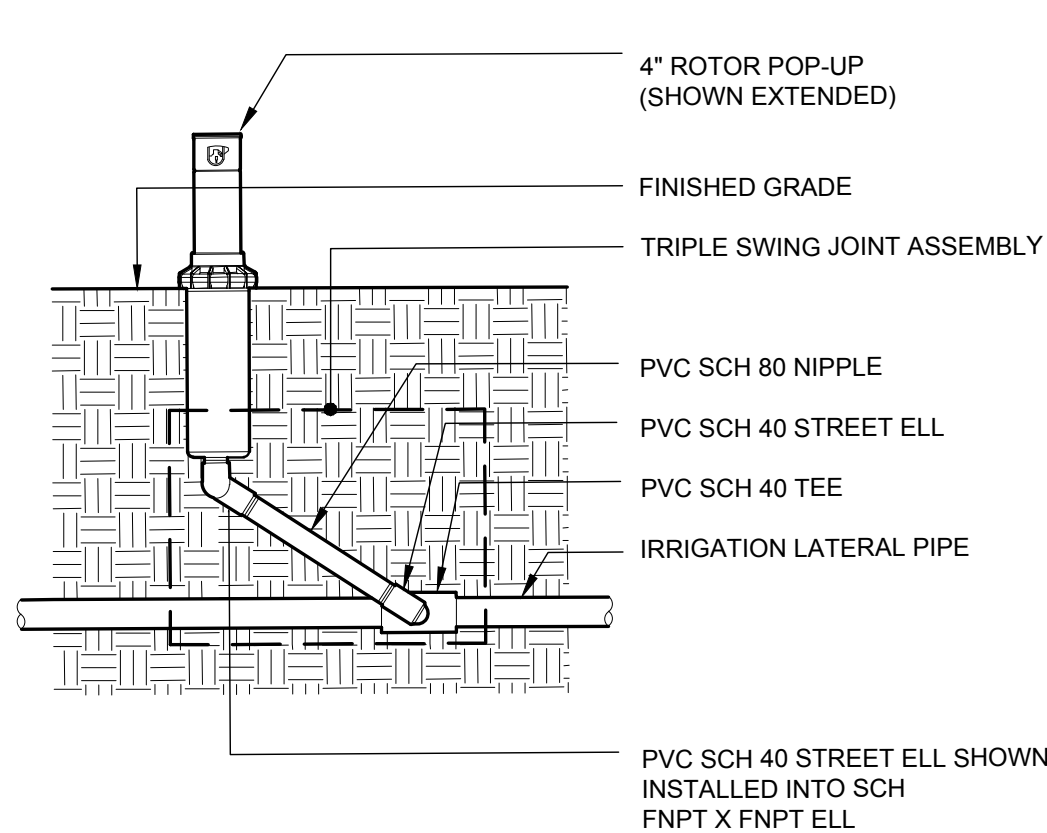


4 INDIVIDUAL DRIP EMITTERS SCALE: NTS

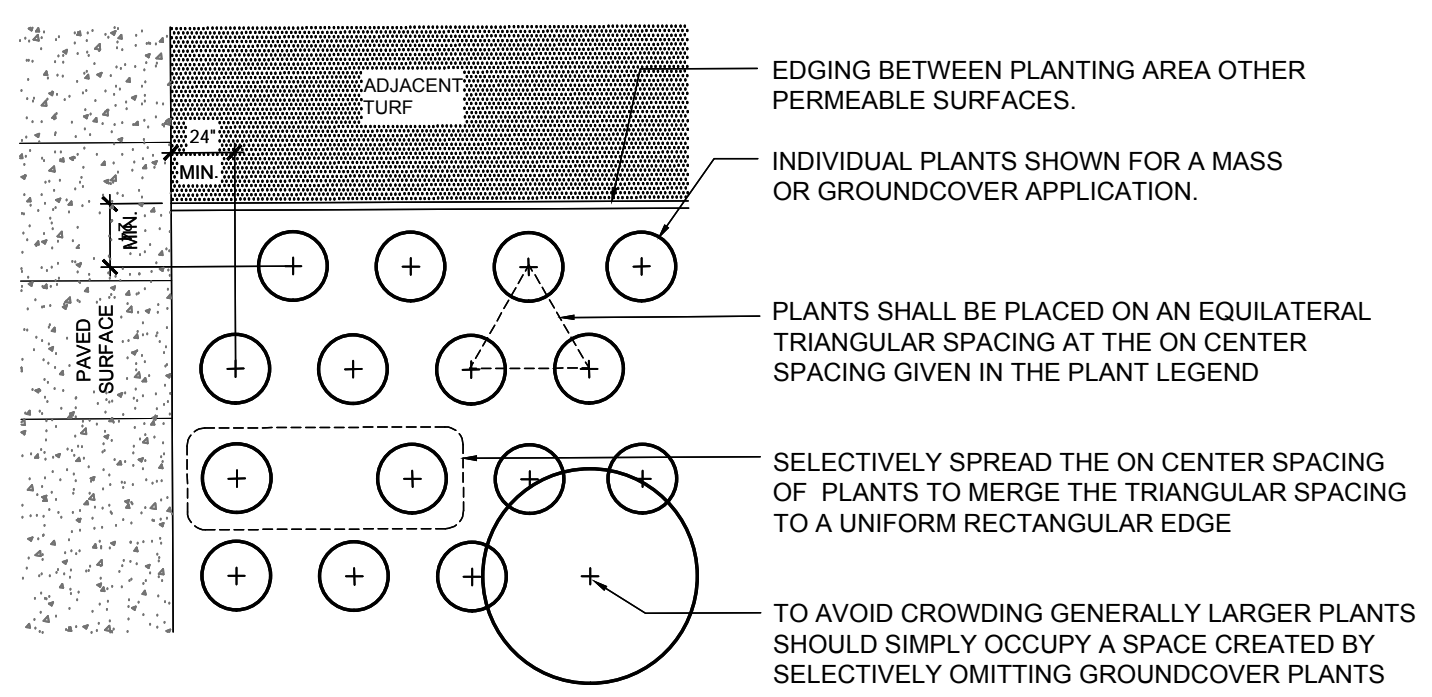
NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.



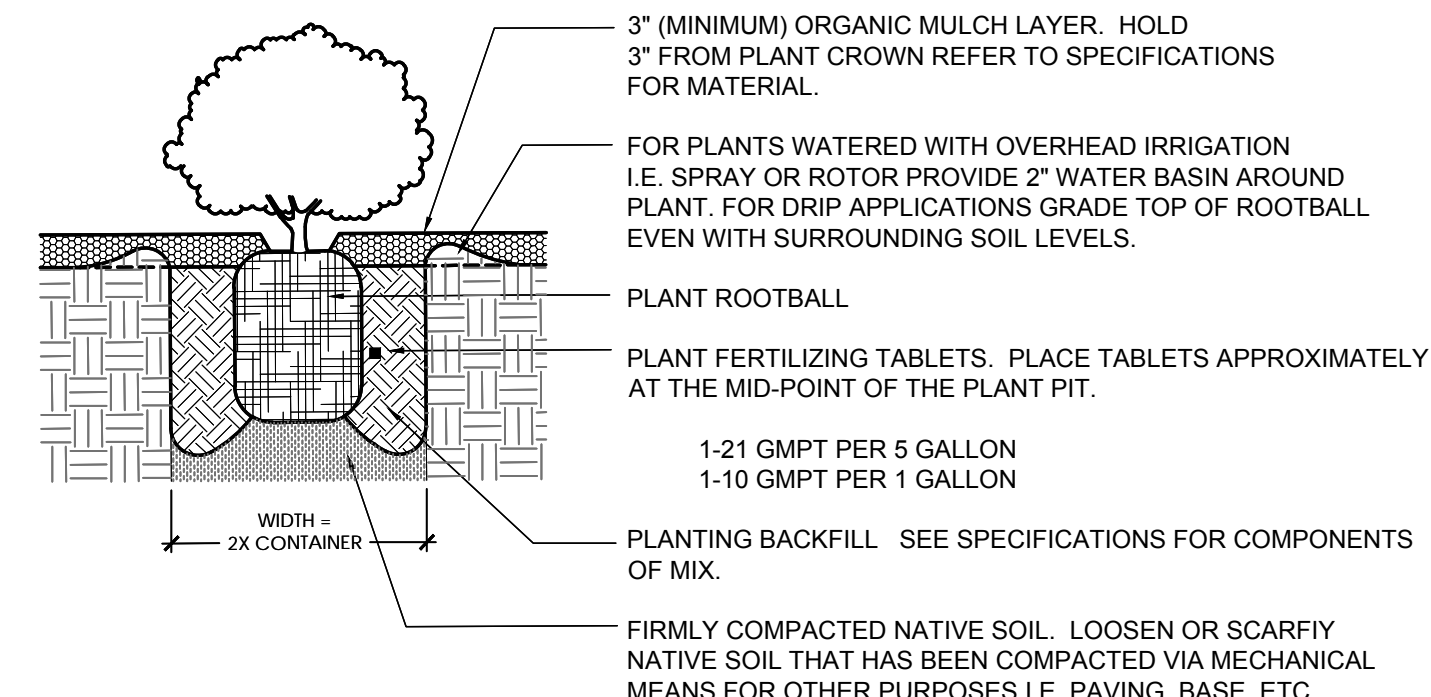
5 FLUSH VALVE SCALE: NTS



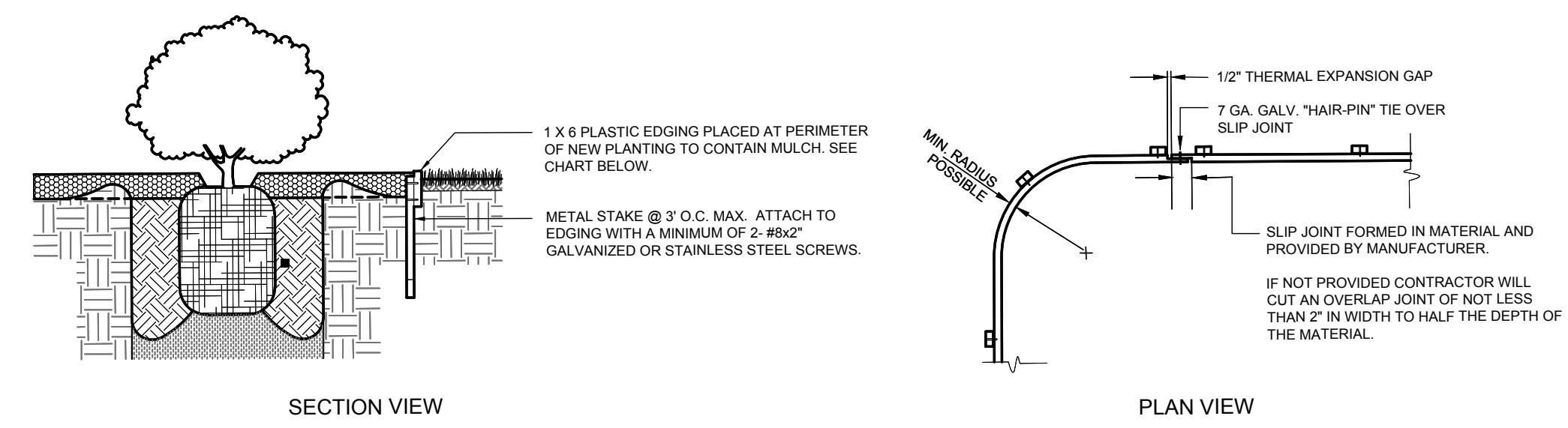
6 SPRAY HEAD SCALE: NTS



7 PLANT SPACING DIAGRAM SCALE: NTS



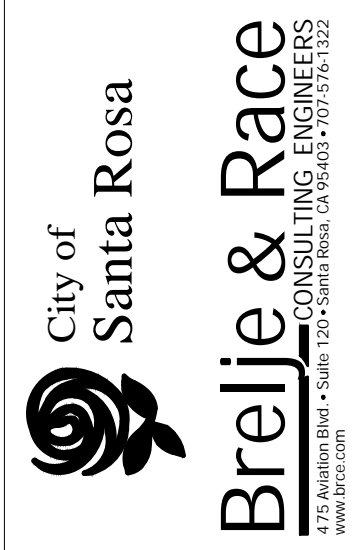
8 SHRUB PLANTING SCALE: NTS



HDR. SIZE	ACTUAL DIMENSIONS	MINIMUM RADIUS POSSIBLE	MAXIMUM CROWN POSSIBLE	THERMAL EXPANSION GAP AT SLIP JOINT	SLIP JOINT HAIRPIN DIMENSIONS
1X6	5 3/8" x 1 1/16" x 20'	24"	9' / 20'	1/2" - 3/4"	3/4" ID x 13"

NOTES:
1) DO NOT SCREW THROUGH SLIP JOINT. TIE WITH WIRE WRAP AS INDICATED.
2) USE COARSE WOOD WORKING TOOLS FOR CUTTING AND DRILLING.
3) USE PLATED SCREWS OR RING SHANK NAILS TO JOIN BOARD TO STAKE
4) IF SLIP JOINT NOT PROVIDED BY MANUFACTURER CONTRACTOR WILL CUT AN OVERLAPPING JOINT OF ABOUT 2" WIDTH TO HALF THE DEPTH OF THE MATERIAL.

9 TYPICAL LANDSCAPE EDGING SCALE: NTS



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City of Santa Rosa
FULTON RD SEWER IMPROVEMENTS
WEST 3RD ST TO SANTA ROSA CREEK

IRRIGATION DETAILS