

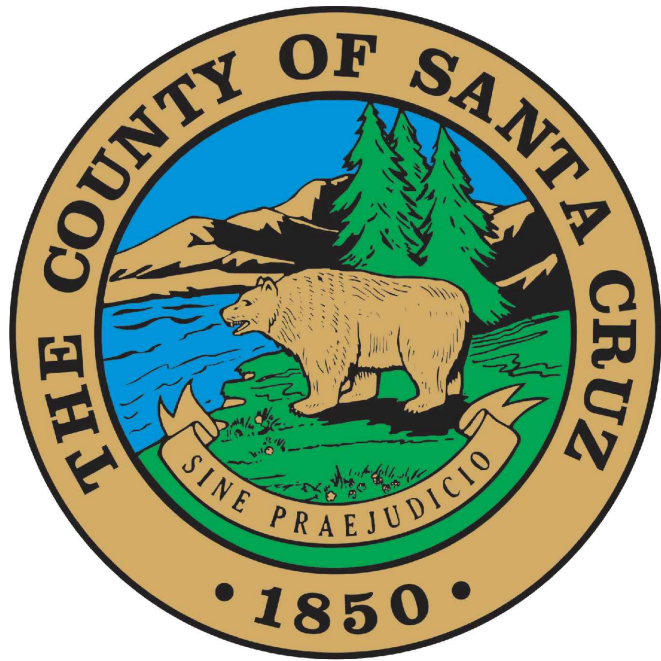
Attachment 1

Conceptual Project Plan Set



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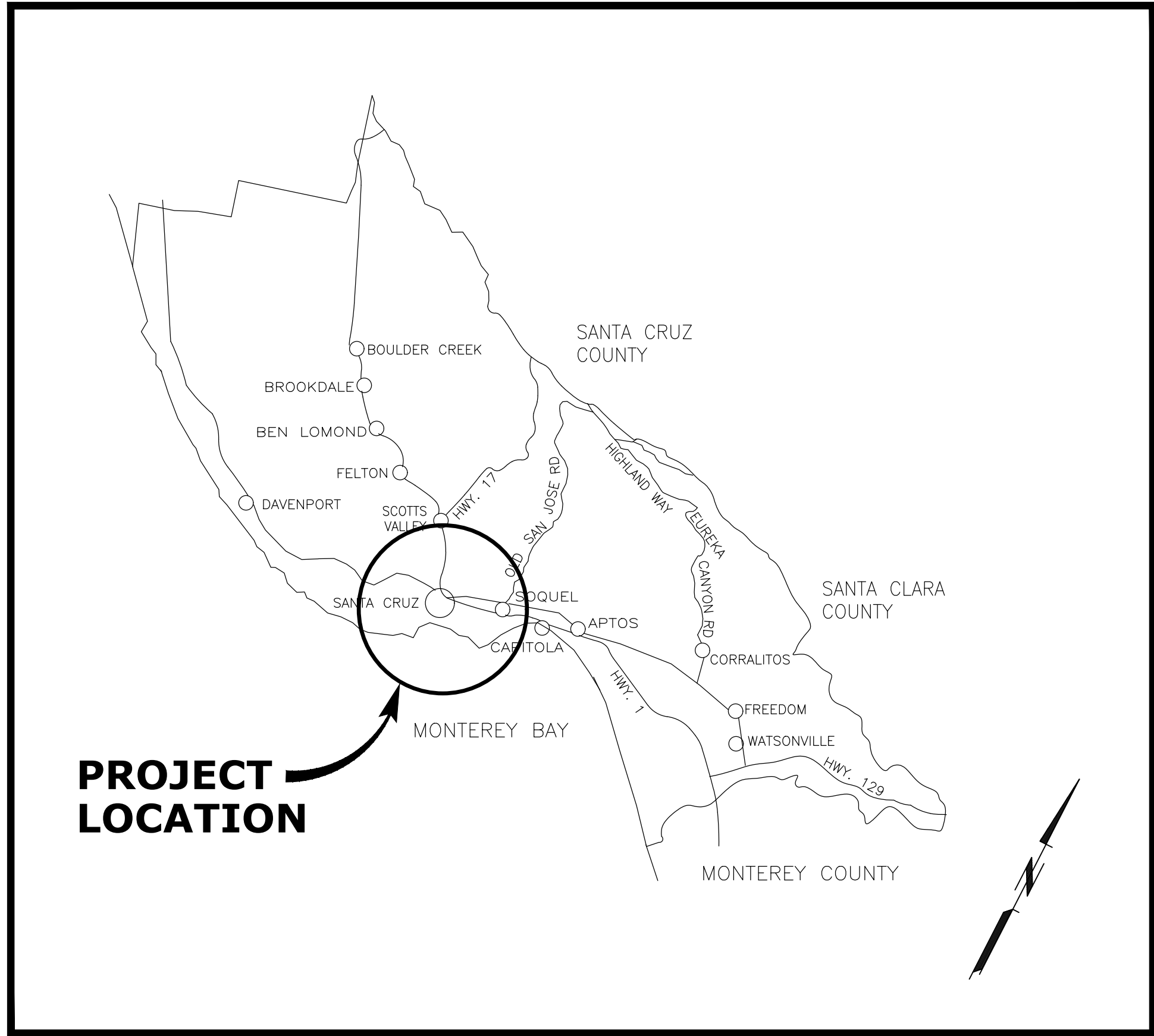
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SANTA CRUZ COUNTY SANITATION DISTRICT, ARANA TRUNK LINE SEWER

NOVEMBER 2020

60% SUBMITTAL



VICINITY MAP
SCALE: NTS



3400 DOUGLAS BLVD, SUITE 190
ROSEVILLE, CA 95661
P 916.238.6431

INDEX OF DRAWINGS

GENERAL

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Design Civil Engineer

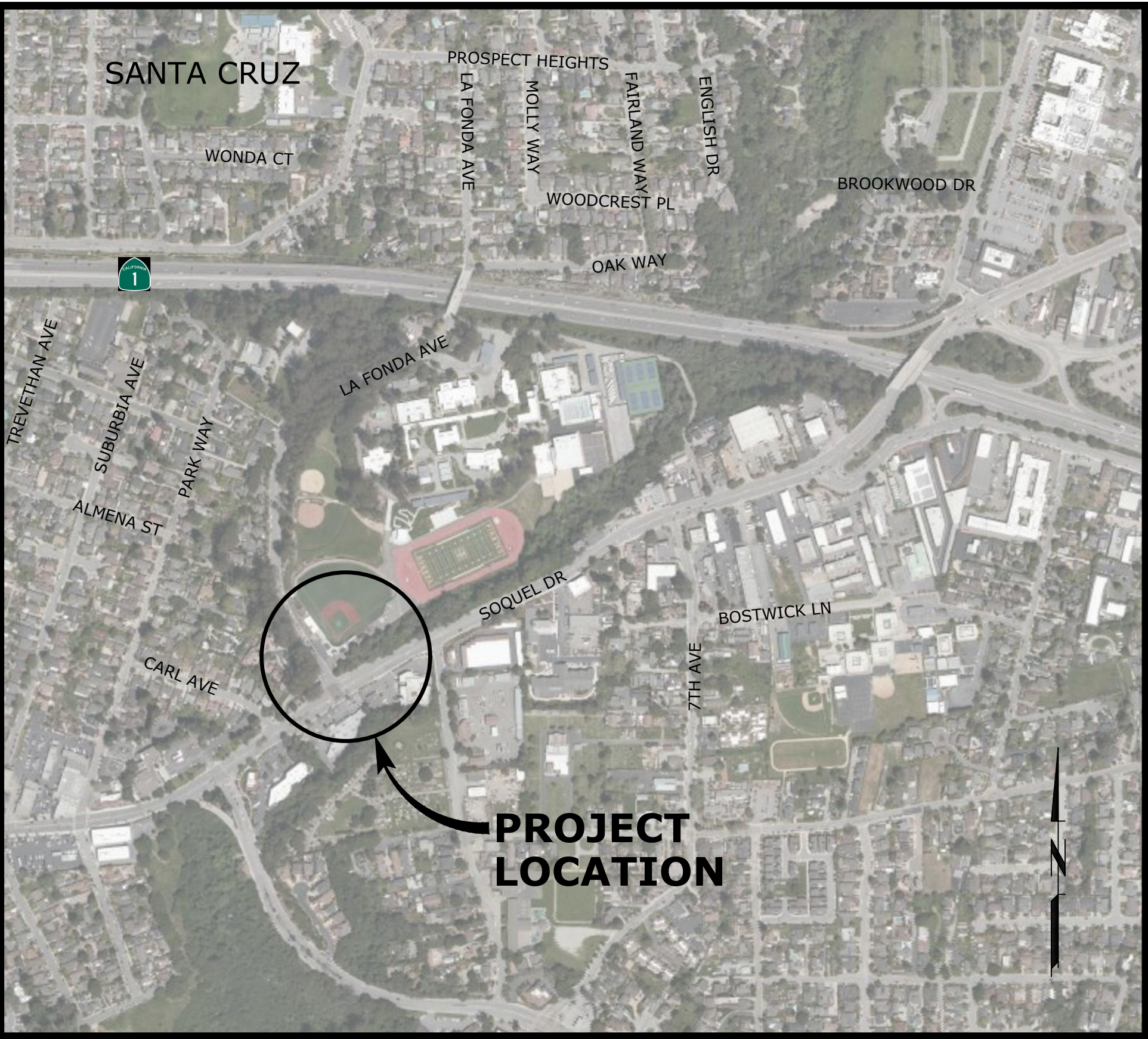
Senior Civil Engineer

Assistant District Engineer

District Engineer

Chairperson of the Board

Plans Approval Date



LOCATION MAP
SCALE: 1"=500'

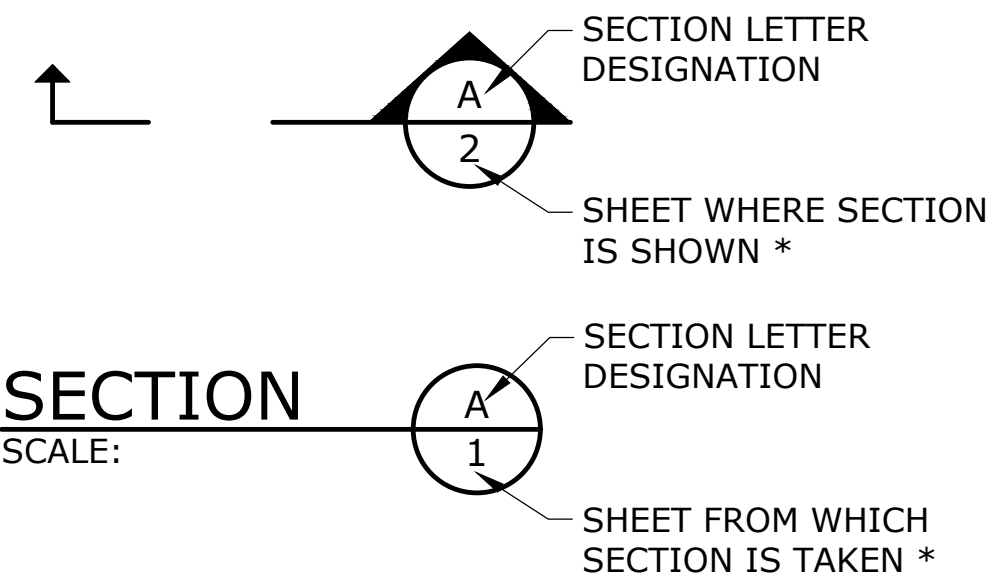
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PIPE & FITTING SYMBOLS

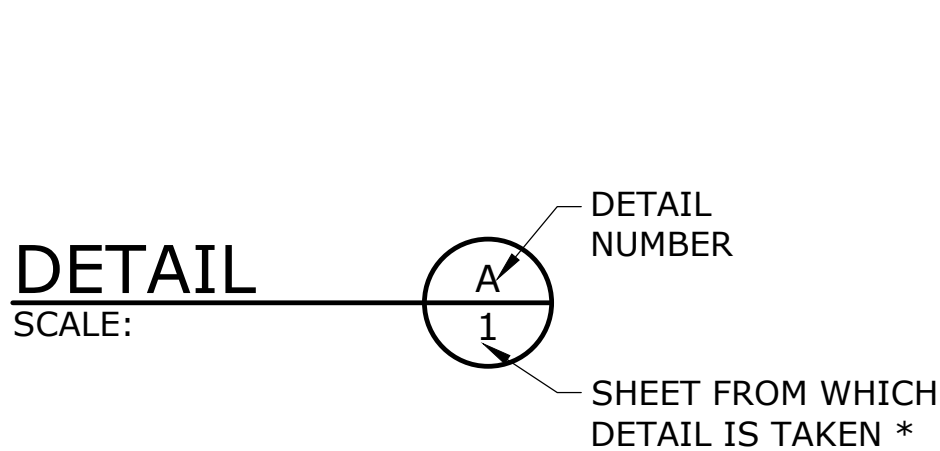
PLANT	SCHEMATIC	
		WELDED JOINT
		FLANGED JOINT
		GROOVED END JOINT
		MECHANICAL JOINT
		PUSH-ON JOINT (RUBBER GASKET)
		FLANGED COUPLING ADAPTER
		DOUBLE BALL FLEXIBLE EXTENSION COUPLING
		FLEXIBLE COUPLING W/ THRUST RING
		90° BEND UP
		90° BEND DOWN
		TEE UP
		TEE DOWN
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		UNION
		BLIND FLANGE
		CAP
		LONG SLEEVE
		FLEXIBLE COUPLING
		FITTING (45°)

SECTION AND DETAIL DESIGNATIONS

SECTION DESIGNATIONS



DETAIL DESIGNATIONS



* NOTE: IF PLAN AND SECTION FOR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED WITH A DASH.

VALVE SYMBOLS

PLANT	SCHEMATIC	
		BUTTERFLY VALVE
		GATE VALVE
		GLOBE VALVE
		BALL VALVE
		BALANCING VALVE
		PLUG VALVE (TOP)
		PLUG VALVE (SIDE)
		3-WAY PLUG VALVE
		CHECK VALVE
		SWING CHECK VALVE
		DOUBLE CHECK ASSEMBLY
		BALL SWING CHECK
		SILENT CHECK VALVE
		PRESSURE REDUCING VALVE
		ALTITUDE CONTROL VALVE
		SOLENOID VALVE
		RELIEF VALVE
		NEEDLE VALVE
		HOSE VALVE
		REDUCED PRESSURE BACKFLOW PREVENTER W/ GATE VALVES
		HOSE BIBB

MISCELLANEOUS PIPING SYMBOLS

	STRAINER
	SIGHT GLASS
	PRESSURE GAUGE W/ COCK
	PRESSURE SWITCH W/ COCK
	METER
	SLIP-ON JOINT PIPE
	RESTRAINED JOINT PIPE

TOPOGRAPHIC LEGEND

	EXISTING	PROPOSED
WATERLINE		
ELECTRICITY		
GAS		
TELEPHONE/TELEMETRY		
CABLE TELEVISION		
SANITARY SEWER LINE		
SANITARY SEWER FORCE MAIN		
STORM DRAIN		
CULVERT		
ABANDON PIPE		
DRAINAGE DITCH		
BARBWIRE FENCE		
CHAIN LINK FENCE		
TEMPORARY SILT FENCE		
GUARDRAIL		
ROCK WALL		
TREE/BUSH LINE		
CENTERLINE		
EASEMENT/PROPERTY LINE		
RIGHT-OF-WAY		
EDGE OF PAVEMENT/AC		
EDGE OF GRAVEL		
CURB		
SIDEWALK		
STRUCTURE OR FACILITY		
CONTOUR MINOR		
CONTOUR MAJOR		
MANHOLE		
CLEAN-OUT		
CATCH BASIN/FIELD INLET		
THRUST BLOCK		
VALVE		
AIR INJECTION ASSEMBLY		
BLOW-OFF ASSEMBLY		
AIR RELEASE ASSEMBLY		
FIRE HYDRANT ASSEMBLY		
WATER METER		
PULL BOX/JUNCTION BOX		
UTILITY POLE		
GUY WIRE		
LIGHT POST		
MAILBOX		
SIGN		
BENCHMARK		
TREE DECIDUOUS		
TREE CONIFEROUS		
TREE TO BE REMOVED		
SURFACE ELEVATION		

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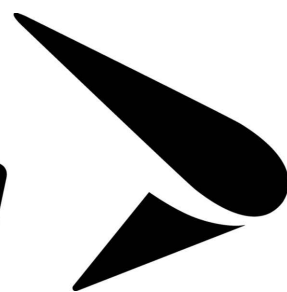
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ARANA TRUNK
LINE SEWER PROJECT

SYMBOLS AND LEGEND

PROJECT NO.: 19-2666 SCALE: AS SHOWN DATE: November 2020

SHEET

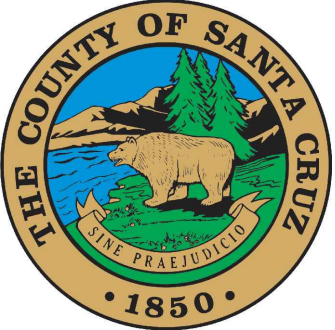
G-2

2 of X

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@ AASHTO AB ABAN(D) ABS ABV AC ACP ADJ ADJC AFF AFG AHR AL ALT AMP ANSI APPROX APPVD APWA ARCH ARV ASCE ASSN ASSY ASTM ATM AUTO AUX AVE AVG AWWA B&S BC BD BETW BF BFD BFILL BFV BHP BKGD BLDG BLK BLVD BM BMP BO BOC BS BSMT BT BTU BV BW C C TO C CALTRANS CARV CATV CB CCP CCW CDOT CFM CFS CHAN CHEM CHFR CHKV CI CIP CIPC CISP CJ CL OR C/L CL2 CLG CLJ CLR CLSM	AT AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS ANCHOR BOLT ABANDON(ED) ACRYLONITRILE BUTADIENE STYRENE ABOVE / ALCOHOL BY VOLUME ASPHALTIC CONCRETE ASPHALTIC CONCRETE PAVING ADJUSTABLE ADJACENT ABOVE FINISHED FLOOR ABOVE FINISHED GRADE ANCHOR ALUMINUM ALTERNATE AMPERE AMERICAN NATIONAL STANDARDS INSTITUTE APPROXIMATE APPROVED AMERICAN PUBLIC WORKS ASSOCIATION ARCHITECTURAL AIR RELEASE VALVE AMERICAN SOCIETY OF CIVIL ENGINEERS ASSOCIATION ASSEMBLY AMERICAN SOCIETY FOR TESTING & MATERIALS ATMOSPHERE AUTOMATIC AUXILIARY AVENUE AVERAGE AMERICAN WATER WORKS ASSOCIATION BELL & SPIGOT BOLT CIRCLE BOARD BETWEEN BOTH FACE BACKFLOW PREVENTION DEVICE BACKFILL BUTTERFLY VALVE BRAKE HORSEPOWER BACKGROUND BUILDING BLOCK BOULEVARD BENCHMARK / BEAM BEST MANAGEMENT PRACTICES BLOW-OFF BACK OF CURB BOTH SIDES BASEMENT BOTTOM FACE BRITISH THERMAL UNIT BALL VALVE BOTH WAYS CELSIUS CENTER TO CENTER CALIFORNIA DEPARTMENT OF TRANSPORTATION COMBINATION AIR RELEASE VALVE CABLE TELEVISION CATCH BASIN CONCRETE CYLINDER PIPE COUNTER CLOCKWISE COLORADO DEPARTMENT OF TRANSPORTATION CUBIC FEET PER MINUTE CUBIC FEET PER SECOND CHANNEL CHEMICAL CHAMFER CHECK VALVE CAST IRON CAST IRON PIPE CAST IN PLACE CONCRETE CAST IRON SOIL PIPE CONSTRUCTION JOINT CENTER LINE CHLORINE CEILING CONTROL JOINT CLEAR CONTROLLED LOW STRENGTH MATERIAL	CMP CMU CND CO COL COMB CONC CONN CONST CONT CONTR COORD COP CORP CORR CP CPLG CPVC CR CS CSP CT CTR CU CULV CV CW CY CYL D DC DEFL DEQ DET DI DIA DIM DIR DIST DN DR DS DWG DWL DWV DWY E / ELEC EA ECC EF EL ELB ENCL EOP EQ EQL SP EQUIP ESMT EW EXC EXIST EXP EXP BT EXP JT EXT F F TO F FAB FB FCA FCO FD FDN FEXT FF FGL FH FIN FIPT FITG FL FLEX FLG FLJ FLR FM	CORRUGATED METAL PIPE CONCRETE MASONRY UNIT CONDUIT ANCHOR COLUMN COMBINATION CONCRETE CONNECTION CONSTRUCTION CONTINUOUS / CONTINUATION CONTRACT(OR) COORDINATE COPPER CORPORATION CORRUGATED CONTROL POINT COUPLING CHLORINATED POLYVINYL CHLORIDE CRUSHED ROCK COMBINED SEWER CONCRETE SEWER PIPE COURT CENTER CUBIC CULVERT CONTROL VALVE CLOCKWISE / COLD WATER CUBIC YARDS CYLINDER LOCK DRAIN DIRECT CURRENT DEFLECTION DEPARTMENT OF ENVIRONMENTAL QUALITY DETAIL DUCTILE IRON DIAMETER DIMENSION DIRECTION DISTANCE DOWN DRIVE DOWNSPOUT DRAWING DOWEL DRAIN WASTE AND VENT DRAINWAY ELECTRICAL EACH ECCENTRIC EACH FACE ELEVATION ELBOW ENCLOSURE EDGE OF PAVEMENT EQUAL EQUALLY SPACED EQUIPMENT EASEMENT EACH WAY EXCAVATE EXISTING EXPANSION EXPANSION BOLT EXPANSION JOINT EXTERIOR FAHRENHEIT FACE TO FACE FABRICATE FLAT BAR FLANGED COUPLING ADAPTER FLOOR CLEANOUT FLOOR DRAIN FOUNDATION FIRE EXTINGUISHER FAR FACE FIBERGLASS FIRE HYDRANT FINISH(ED) FEMALE IRON PIPE THREAD FITTING FLOOR LINE FLEXIBLE FLANGE FLOW LINE FLOOR FORCE MAIN	FO FOC FOF FOM FOS FPM FPS FRP FT FTG FUT FXTR G GA GAL GALV GC GFA GI GIP GJ GL GLV GND GPD GPH GPM GPS GR GR LN GRTG GV GRVL GYP HB HC HDPE HDR HDWE HGR HGT HH HM HMAC HNDRL HOA HOR HORIZ HP HPG HPT HR HSB HV HVAC HWL HWY HYD HYDR I&C IAW ID IE IF IMPVT IN INCC INFL INJ INSTL INSUL INTER INTR INV IP IPT IR IRRIG ITD JT JUNC KPL KVA	FIBER OPTIC FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY FACE OF STUDS FEET PER MINUTE FEET PER SECOND FIBERGLASS REINFORCED PLASTIC FEET / FOOT FOOTING FUTURE FIXTURE GAS GAUGE GALLON GALVANIZED GROOVED COUPLING GROOVED FLANGE ADAPTER GALVANIZED IRON GALVANIZED IRON PIPE GRIP JOINT GLASS GLOBE VALVE GROUND GALLONS PER DAY GALLONS PER HOUR GALLONS PER MINUTE GALLONS PER SECOND GRADE GRADE LINE GRATING GATE VALVE GRAVEL GYPSUM HOSE BIBB HOLLOW CORE HIGH DENSITY POLYETHYLENE HEADER HARDWARE HANGER HEIGHT HANDHOLD HOLLOW METAL HOT MIX ASPHALT CONCRETE HANDRAIL HAND-OFF-AUTO HAND-OFF-REMOTE HORIZONTAL HIGH PRESSURE / HORSEPOWER HIGH PRESSURE GAS HIGH POINT HOUR HIGH STRENGTH BOLT HOSE VALVE HEATING, VENTILATION, AIR CONDITIONING HIGH WATER LINE HIGHWAY HYDRANT HYDRAULIC INSTRUMENTATION & CONTROL IN ACCORDANCE WITH INSIDE DIAMETER INVERT ELEVATION INSIDE FACE IMPROVEMENT INCH INCLUDE(D)(ING) INFLUENT INJECTION INSTALLATION / INSTALL INSULATION INTERCEPTOR INTERIOR INVERT IRON PIPE IRON PIPE THREAD IRON ROD IRRIGATION IDAHO TRANSPORTATION DEPARTMENT JOINT JUNCTION KICK PLATE KILOVOLT AMPERE	KW KWY L LAB LAV LB LF LIN LN LOC LONG LP LPT LRG LS LT LVL LWL MAN MAT MAX MCC MCP MECH MET MFR MGD MH MIN MIPT MISC MJ MON MOT MP MSL MTD NA NAVD NC NF NIC NO / NO. NOM NORM NRS NTS O TO O OAR OC OD ODOT OF OPNG OPP ORIG OSHA OVHD P&ID PC PCC PCVC PE PERF PERM PERP PG PH PI PIVC PL OR P/L PLBG PNL POC POLY PP PRC PRCST PREP	KILOWATT KEYWAY LENGTH LABORATORY LAVATORY POUND LINEAR FOOT LINEAL LANE LOCATION LONGITUDINAL LOW PRESSURE LOW POINT LARGE LONG SLEEVE / LUMP SUM LEFT LEVEL LOW WATER LINE MANUAL MATERIAL MAXIMUM MOTOR CONTROL CENTER MASTER CONTROL PANEL MECHANICAL METAL MANUFACTURER MILLION GALLONS PER DAY MANHOLE MINIMUM MALE IRON PIPE THREAD MISCELLANEOUS MECHANICAL JOINT MONUMENT / MONOLITHIC MOTOR MILEPOST MEAN SEAL LEVEL MOUNTED NOT APPLICABLE NORTH AMERICAN VERTICAL DATUM NORMALLY CLOSED NEAR FACE NOT IN CONTRACT NORMALLY OPEN / NUMBER NOMINAL NORMAL NON-RISING STEM NOT TO SCALE OUT TO OUT OREGON ADMINISTRATIVE RULES ON CENTER OUTSIDE DIAMETER OREGON DEPARTMENT OF TRANSPORTATION OVERFLOW / OUTSIDE FACE OPENING OPPOSITE ORIGINAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OVERHEAD PROCESS & INSTRUMENTATION DIAGRAM POINT OF CURVE POINT OF COMPOUND CURVE POINT OF CURVATURE ON VERTICAL CURVE PLAIN END PERFORATED PERMANENT PERPENDICULAR PRESSURE GAUGE PIPE HANGER POINT OF INTERSECTION POINT OF INTERSECTION ON VERTICAL CURVE PROPERTY LINE / PLATE / PLASTIC PLUMBING PANEL POINT OF CURVATURE POLYETHYLENE POWER POLE POINT OF REVERSE CURVATURE PRECAST PREPARATION	PRESS PRKG PROP PRV PS PSIG PSL PSP PT PTVC PV PVC PVM PWR QTY RAD RC RCP RD RDCR REF REINF REQ'D RESTR RFCA RM RND RO R/W RBPBD RPM RR RST RT SALV SAN SC SCHED SD SDL SDR SECT SHLDR SHT SIM SLP SLV SOLN SP SPCL SPEC(S) SPG SPL SPRT SQ SQ FT SQ IN SQ YD SS SST ST STA STD STL STOR STR STRUCT SUBMG SUCTION SV S/W SWD SWGR SYMM SYS T OR TEL T&B TAN TB TBM TC TCE	PRESSURE PARKING PROPERTY PRESSURE REDUCING VALVE PUMP STATION POUNDS PER SQUARE INCH GAUGE PIPE SLEEVE PIPE SUPPORT POINT OF TANGENCY POINT OF TANGENCY ON VERTICAL CURVE PLUG VALVE POLYVINYL CHLORIDE PAVEMENT POWER QUANTITY RADIUS REINFORCED CONCRETE REINFORCED CONCRETE PIPE ROAD / ROOF DRAIN REDUCER REFERENCE REINFORCE(D)(ING)(MENT) REQUIRED RESTRAINED RESTRAINED FLANGE COUPLING ADAPTER ROOM ROUND ROUGH OPENING RIGHT-OF-WAY REDUCED PRESSURE BACKFLOW PREVENTION DEVICE REVOLUTIONS PER MINUTE RAILROAD REINFORCED STEEL RIGHT SALVAGE SANITARY SOLID CORE SCHEDULE STORM DRAIN SADDLE STANDARD DIMENSION RATIO SECTION SHOULDER SHEET SIMILAR SLOPE SLEEVE SOLUTION SOIL PIPE / SEWER PIPE SPECIAL SPECIFICATION(S) SPACING SPOOL SUPPORT SQUARE SQUARE FOOT SQUARE INCH SQUARE YARD SANITARY SEWER STAINLESS STEEL STREET STATION STANDARD STEEL STORAGE STRAIGHT STRUCTURE / STRUCTURAL SUBMERGED SUCTION SOLENOID VALVE SIDEWALK SIDEWATER DEPTH SWITCH GEAR SYMMETRICAL SYSTEM TELEPHONE TOP & BOTTOM TANGENCY THRUST BLOCK TEMPORARY BENCHMARK TOP OF CONCRETE / TOP OF CURB TEMPORARY CONSTRUCTION EASEMENT	TDH TEMP T&G THK THRD THRU TP TRANS TSP TST TW TYP UG UH UN UON USGS V VAC VB VBOX VC VERT VFD VOL VCP VTR W W/ W/IN W/O W/W WD WF WH WI WM WP WS WSDOT WT WTP WTRT WWF WWTF WWTP X SECT XFMR YD YH YR ZN	TOTAL DYNAMIC HEAD TEMPERATURE / TEMPORARY TONGUE & GROOVE THICK / THICKNESS THREAD (ED) THROUGH TEST PIT / TOP OF PAVEMENT / TURNING POINT TRANSITION TRI-SODIUM PHOSPHATE TOP OF STEEL TOP OF WALL TYPICAL UNDERGROUND UNIT HEATER UNION UNLESS OTHERWISE NOTED UNITED STATES GEOLOGIC SURVEY VENT / VOLT VACUUM VACUUM BREAKER VALVE BOX VERTICAL CURVE VERTICAL VARIABLE FREQUENCY DRIVE VOLUME VITRIFIED CLAY PIPE VENT THROUGH ROOF WATER WITH WITHIN WITHOUT WALL TO WALL WOOD WIDE FLANGE WATER HEATER WROUGHT IRON WATER METER WORKING POINT / WATERPROOFING WATER SERVICE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION WEIGHT WATER TREATMENT PLANT WATERTIGHT WELDED WIRE FABRIC WASTEWATER TREATMENT FACILITY WASTEWATER TREATMENT PLANT CROSS SECTION TRANSFORMER YARD DRAIN / YARD YARD HYDRANT YEAR ZINC
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				NOTICE 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE		DSN DESIGNED BAW DRAWN CHK CHECKED		PRELIMINARY ONLY DO NOT USE FOR CONSTRUCTION November 2020 Murraysmith www.murraysmith.us		  ARANA TRUNK LINE SEWER PROJECT				ABBREVIATIONS				SHEET G-3 3 of X					
NO.		DATE		BY		REVISION						PROJECT NO.:		19-2666		SCALE:		AS SHOWN		DATE:		November 2020	

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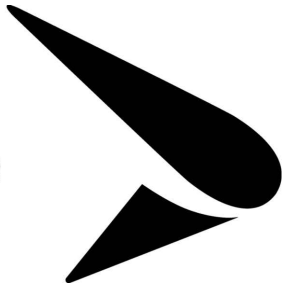
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ARANA TRUNK
LINE SEWER PROJECT

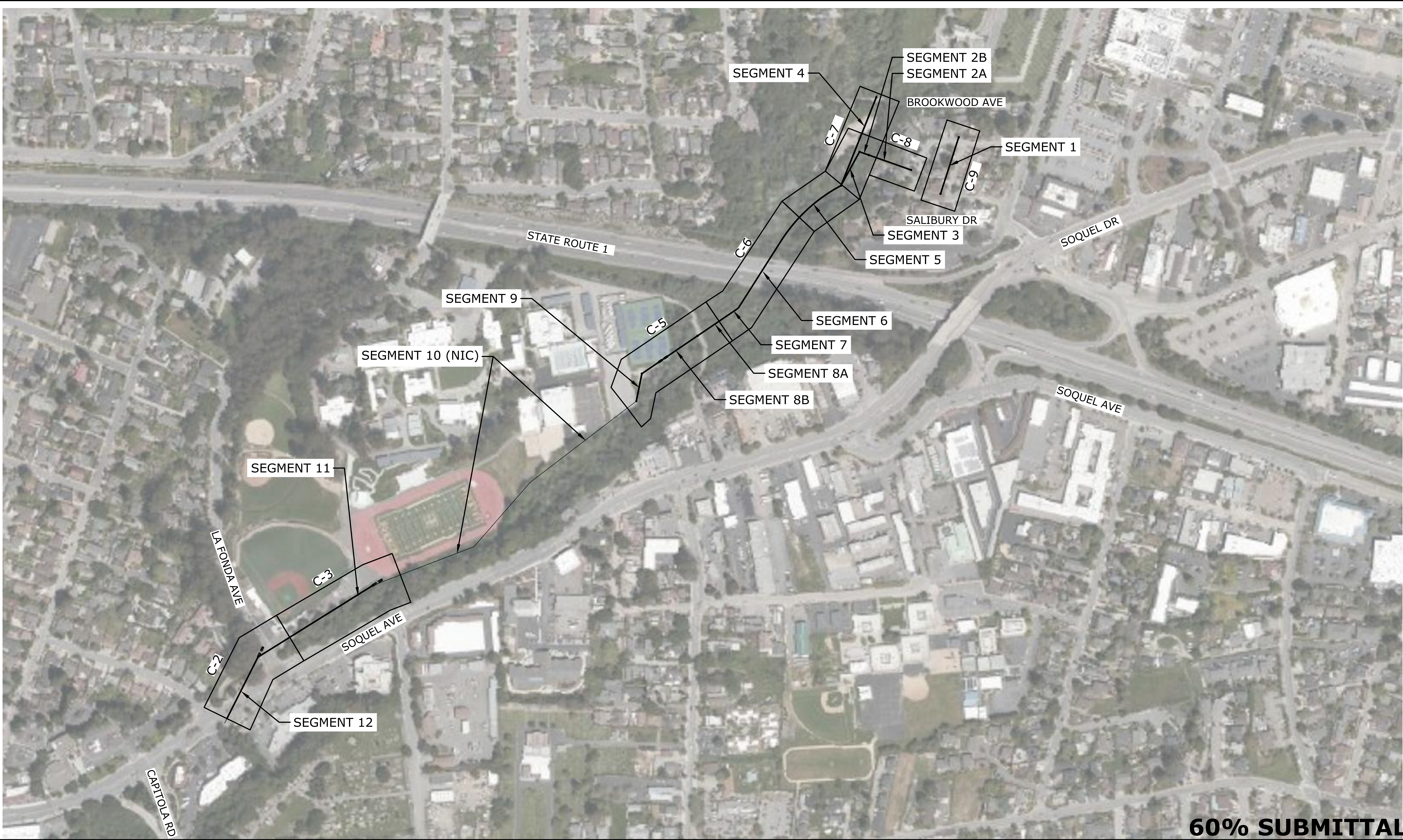
GENERAL NOTES			
PROJECT NO.:	19-2666	SCALE:	AS SHOWN
DATE:	November 2020		

SHEET

G-4

4 of X

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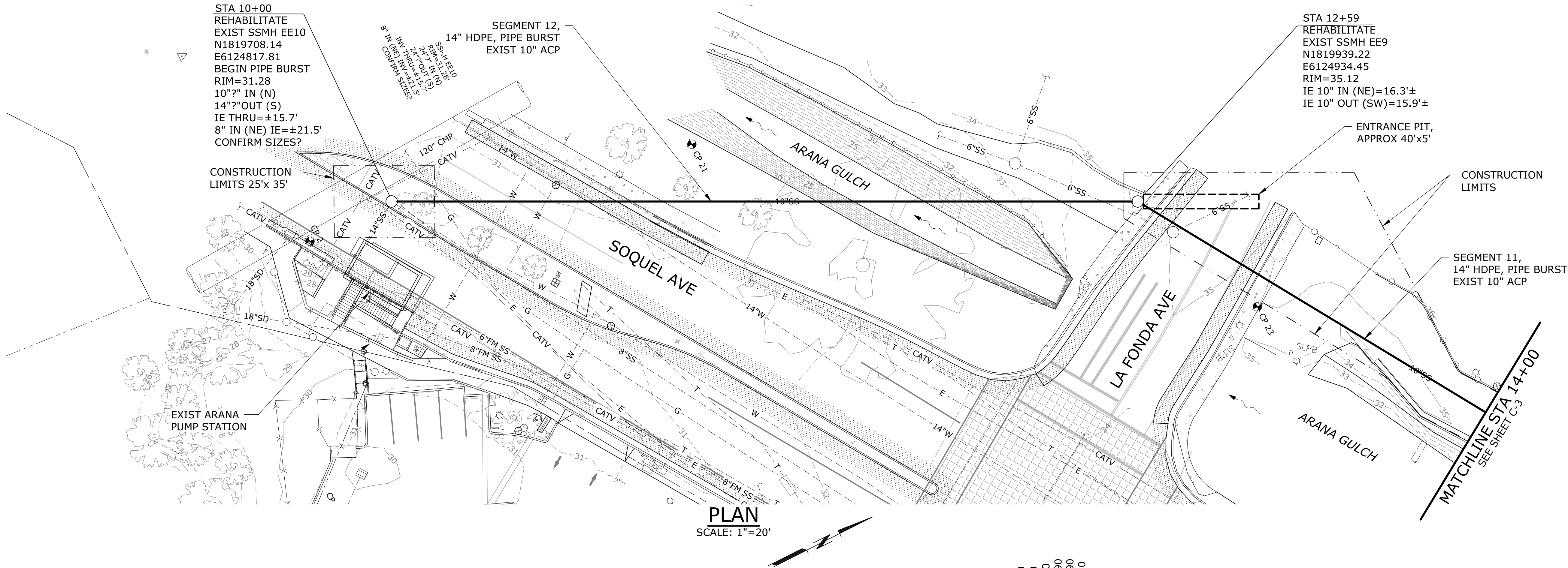


**ARANA TRUNK
LINE SEWER PROJECT**

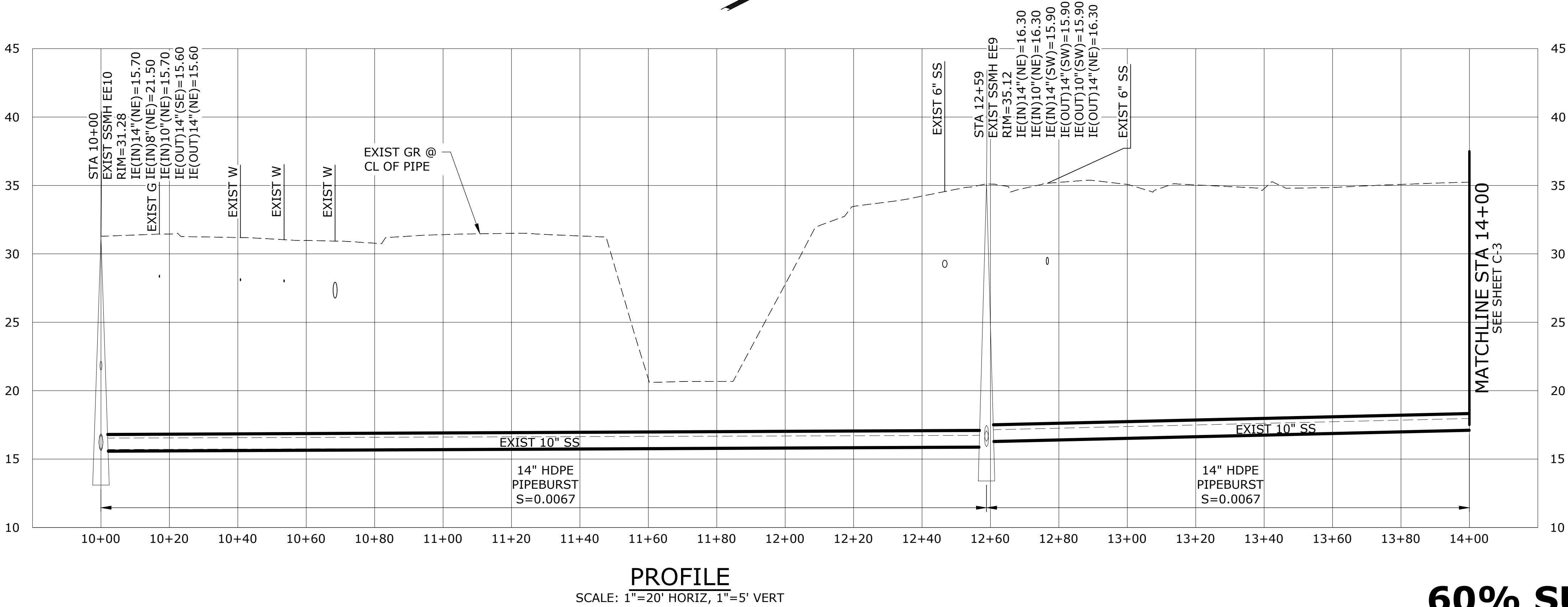
KEY MAP			
PROJECT NO.:	19-2666	SCALE:	AS SHOWN
DATE:	November 2020		

SHEET
C-1
5 of X

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NOTES:
1. EXISTING UTILITIES ASSUMED 3FT BELOW GRADE
UNLESS NOTED OTHERWISE. CONTRACTOR TO FIELD
VERIFY.



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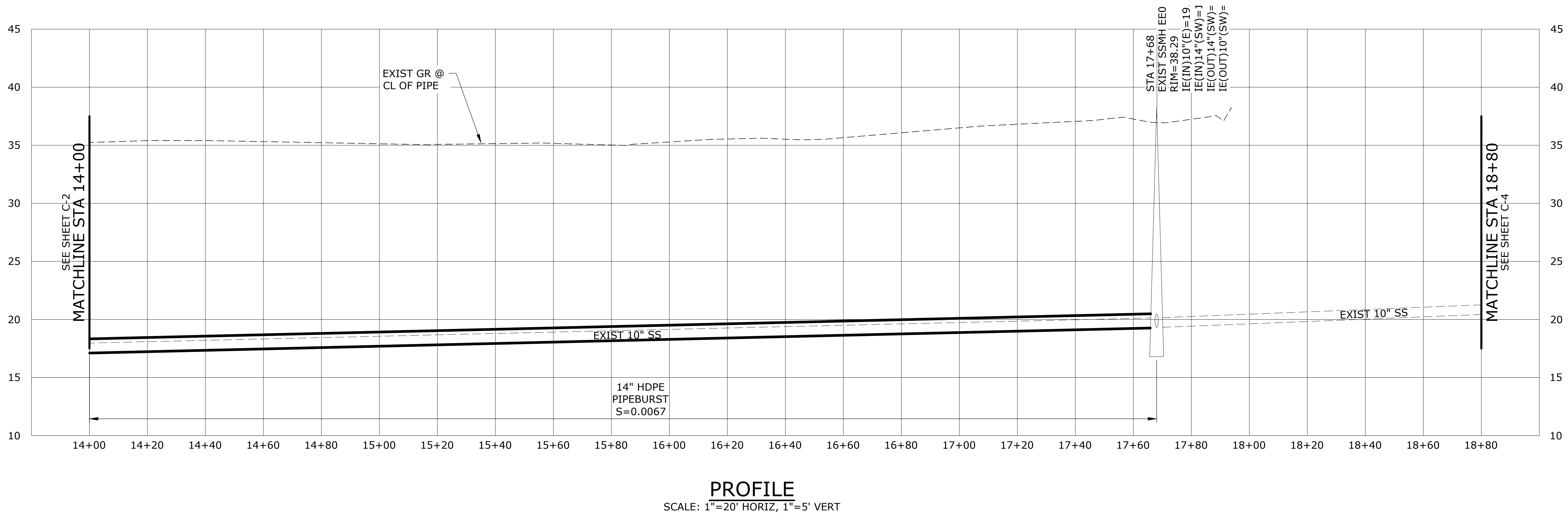
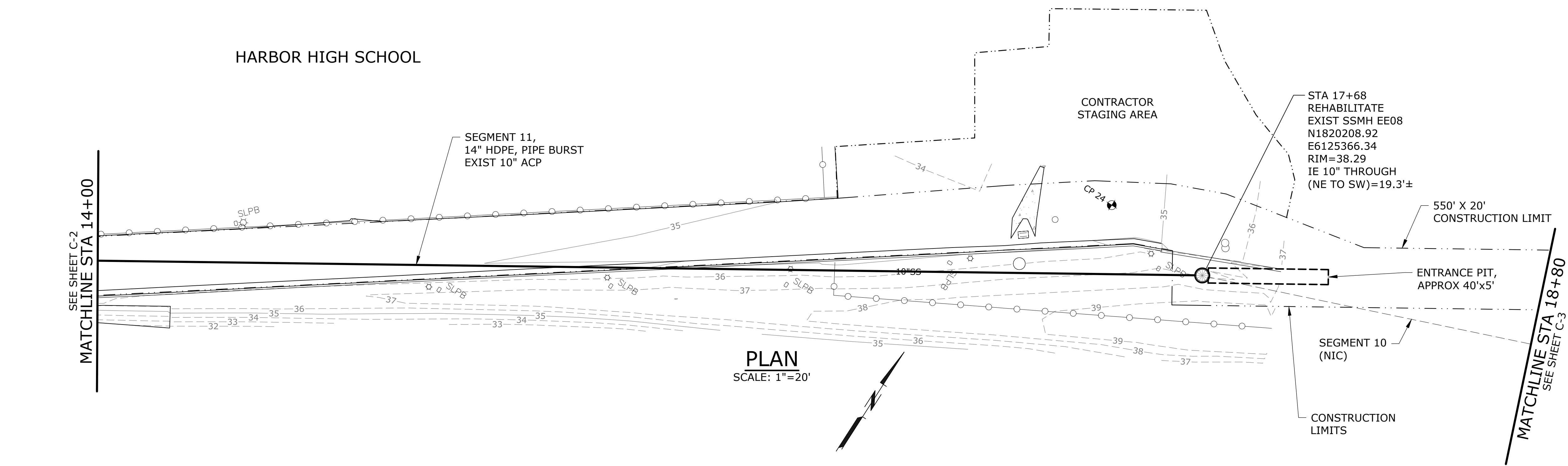


ARANA TRUNK
LINE SEWER PROJECT

PROJECT NO.:	19-2666	SCALE:	AS SHOWN	DATE:	November 2020
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SHEET
C-2
6 of X

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ARANA TRUNK
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PLAN AND PROFILE
STA 14+00 TO STA 18+80

PROJECT NO.: 19-2666 SCALE: AS SHOWN DATE: November 2020

SHEET

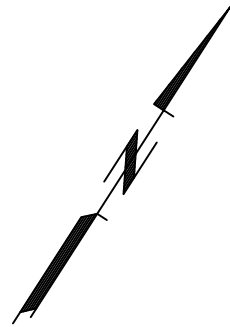
C-3

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PLAN
SCALE: 1"=20'



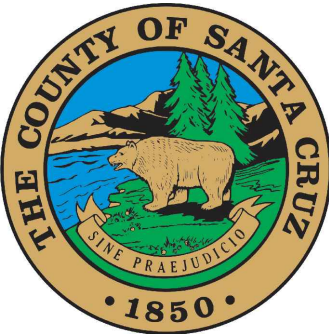
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ARANA TRUNK
LINE SEWER PROJECT

PLAN AND PROFILE
STA 18+80 TO STA 23+60

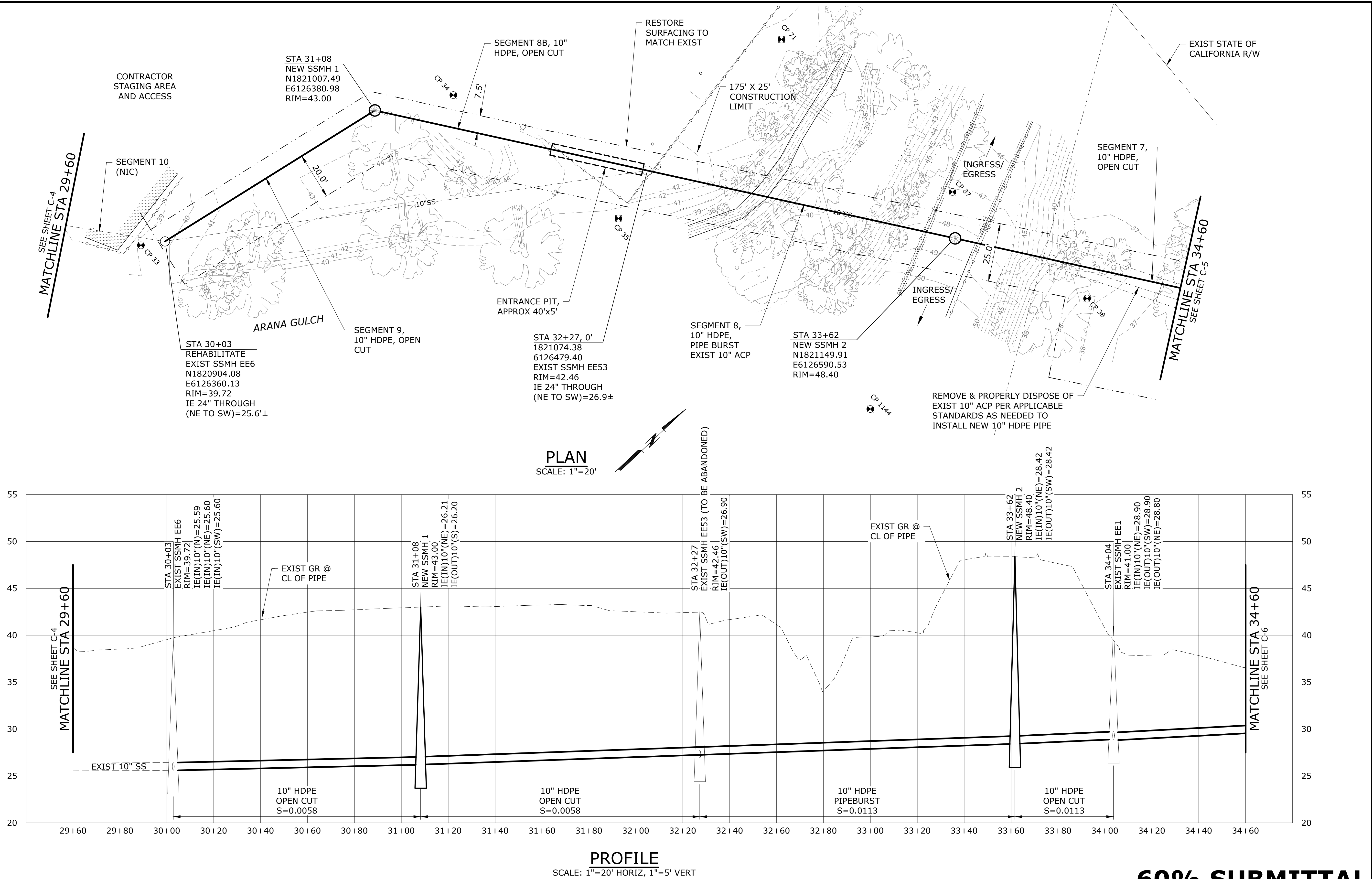
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SHEET

C-4

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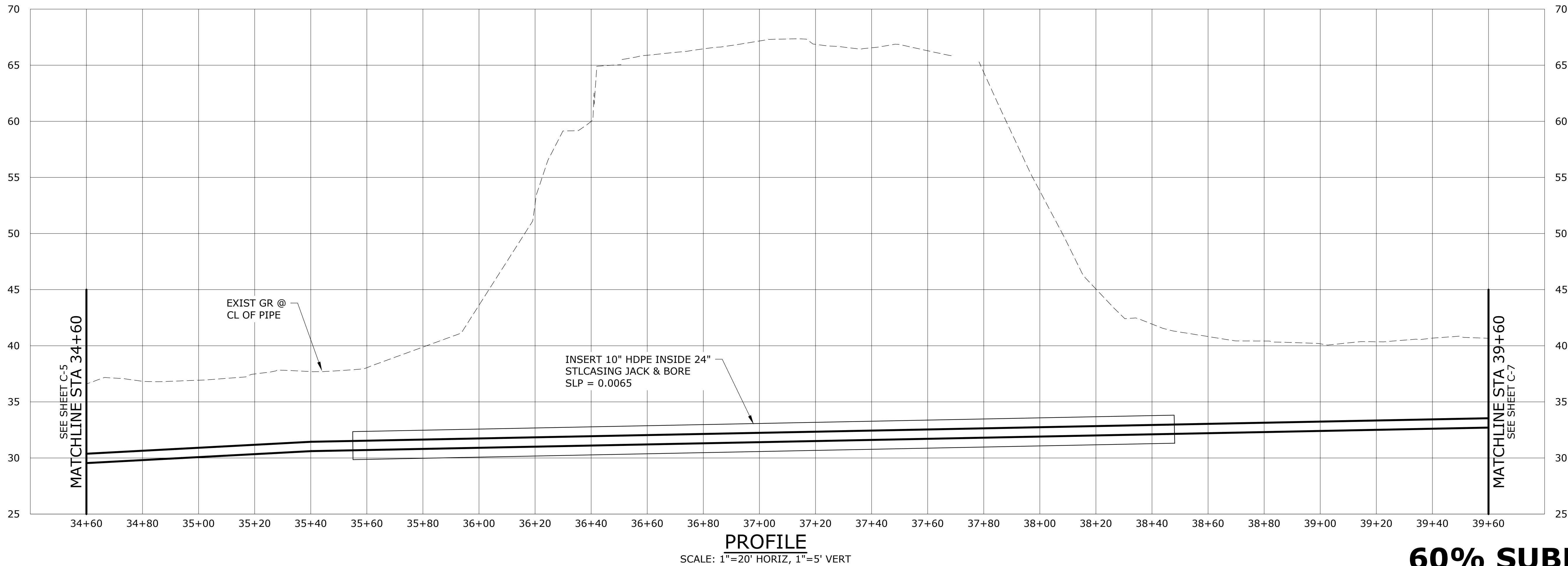
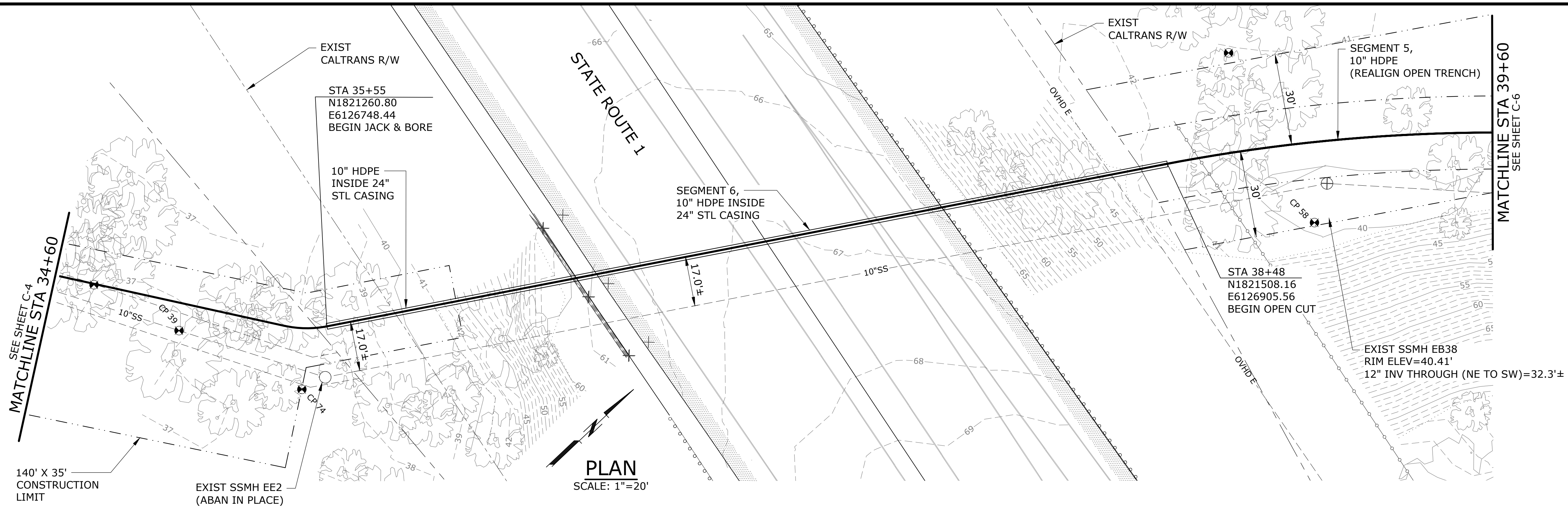
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NOTICE
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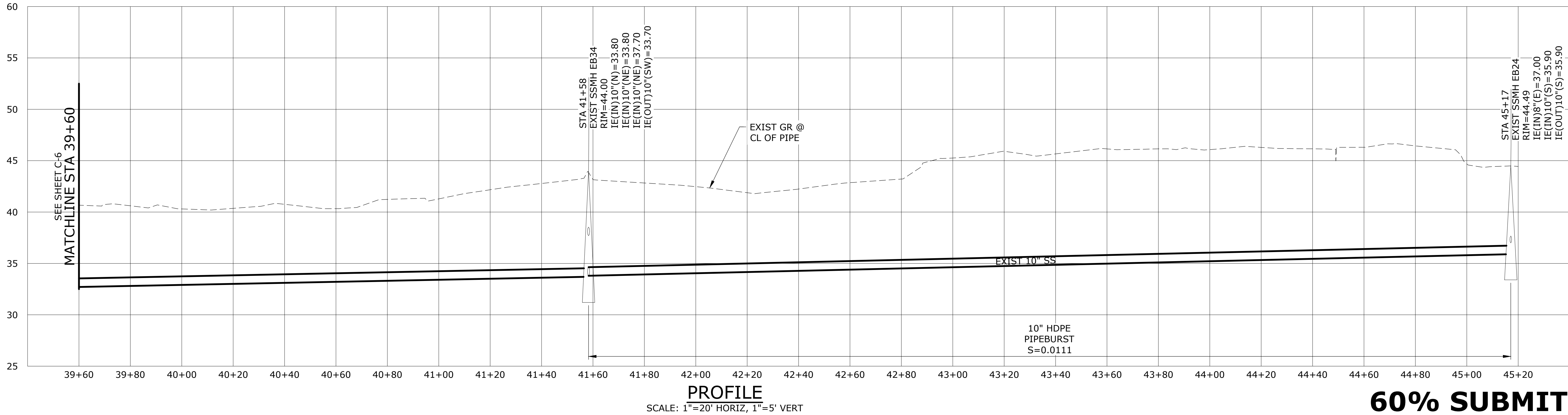
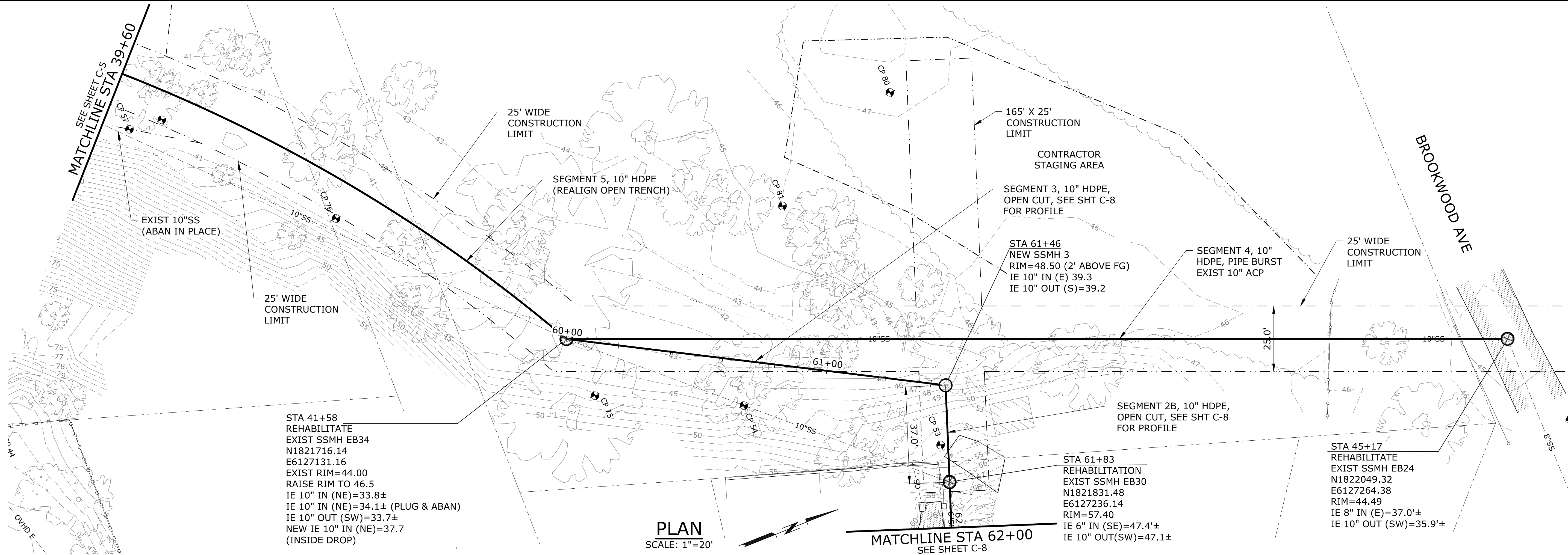


ARANA TRUNK
LINE SEWER PROJECT

PLAN AND PROFILE STA 34+60 TO STA 39+60			
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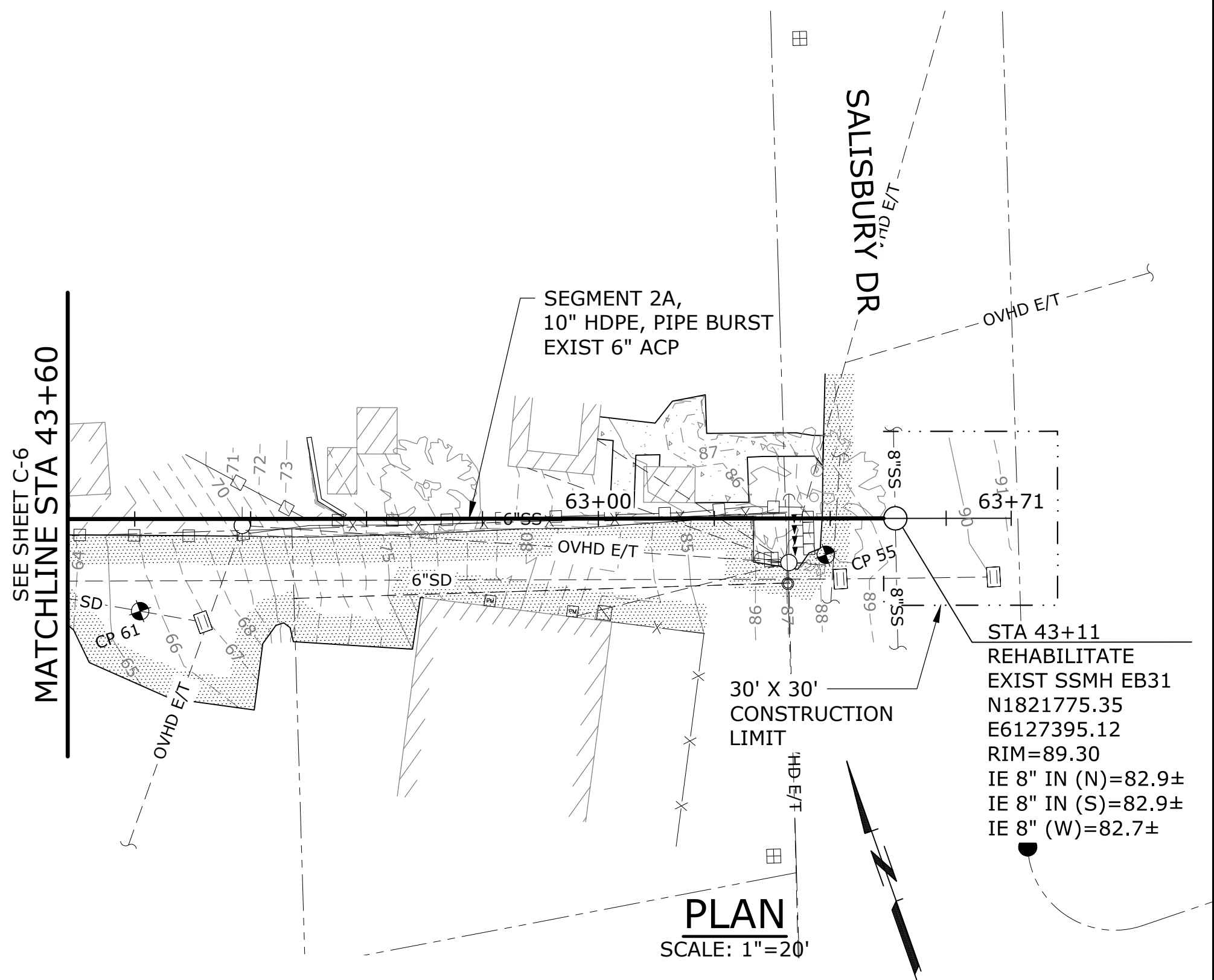
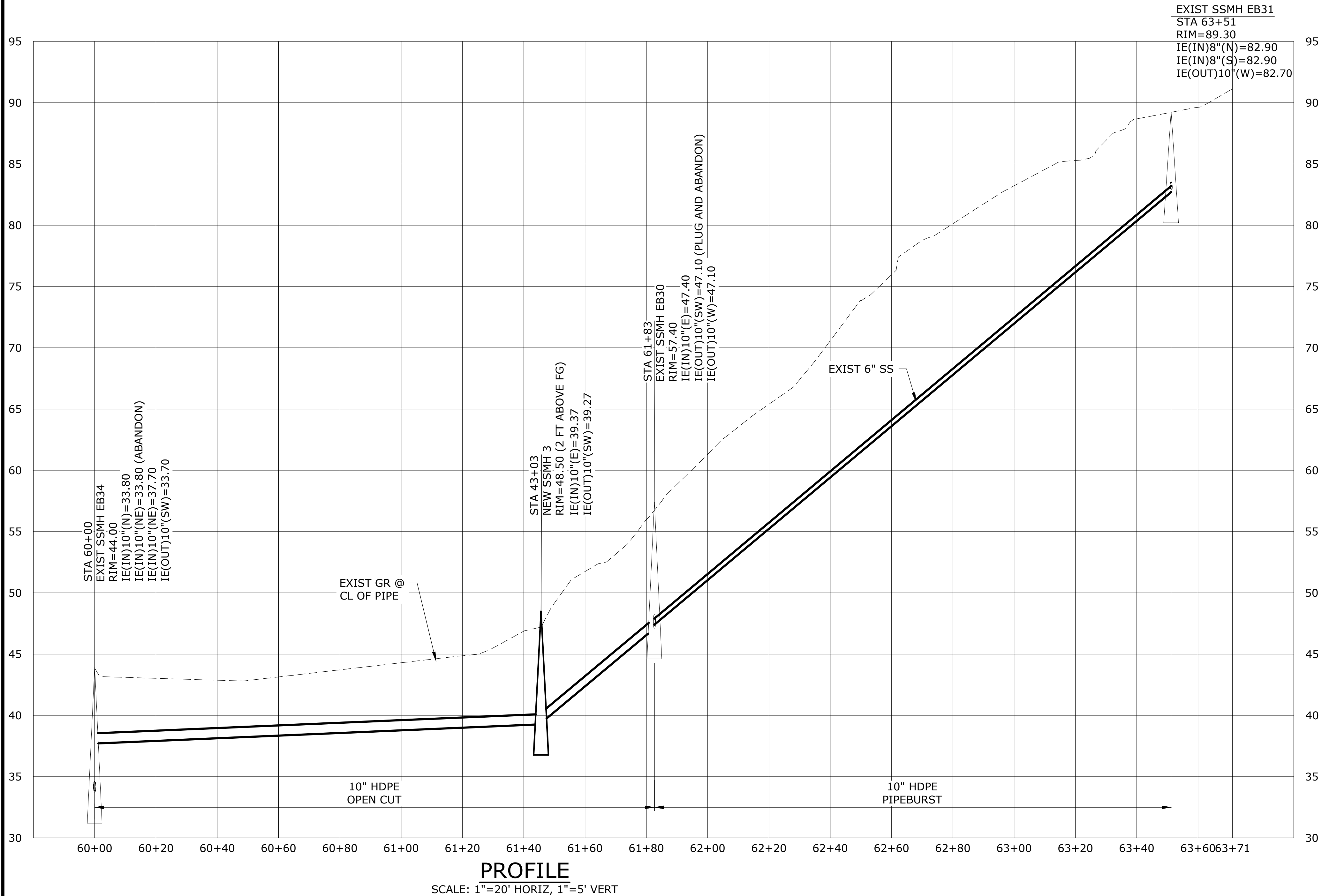
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PLAN AND PROFILE			
STA 39+60 TO STA 43+60			
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ARANA TRUNK
LINE SEWER PROJECT

PLAN AND PROFILE STA 43+60 TO STA 45+30			
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NOTES:

- 1. LOCATIONS OF EXISTING SIDE SEWERS ARE BASED ON CCTV AND WERE NOT SURVEYED. CONTRACTOR TO FIELD VERIFY LOCATION.
- 2. REMOVE AND DISPOSE OF EXISTING 6" VCP PIPE. REPLACE PIPE BEDDING AND INSTALL NEW 8" HDPE PIPE BEDDING, MATCHING EXISTING INVERTS AT SSMH EB35 AND SSMH EB32.



PLAN
SCALE: 1"=20'

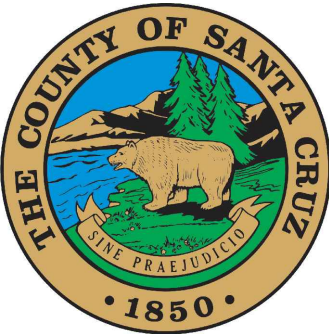
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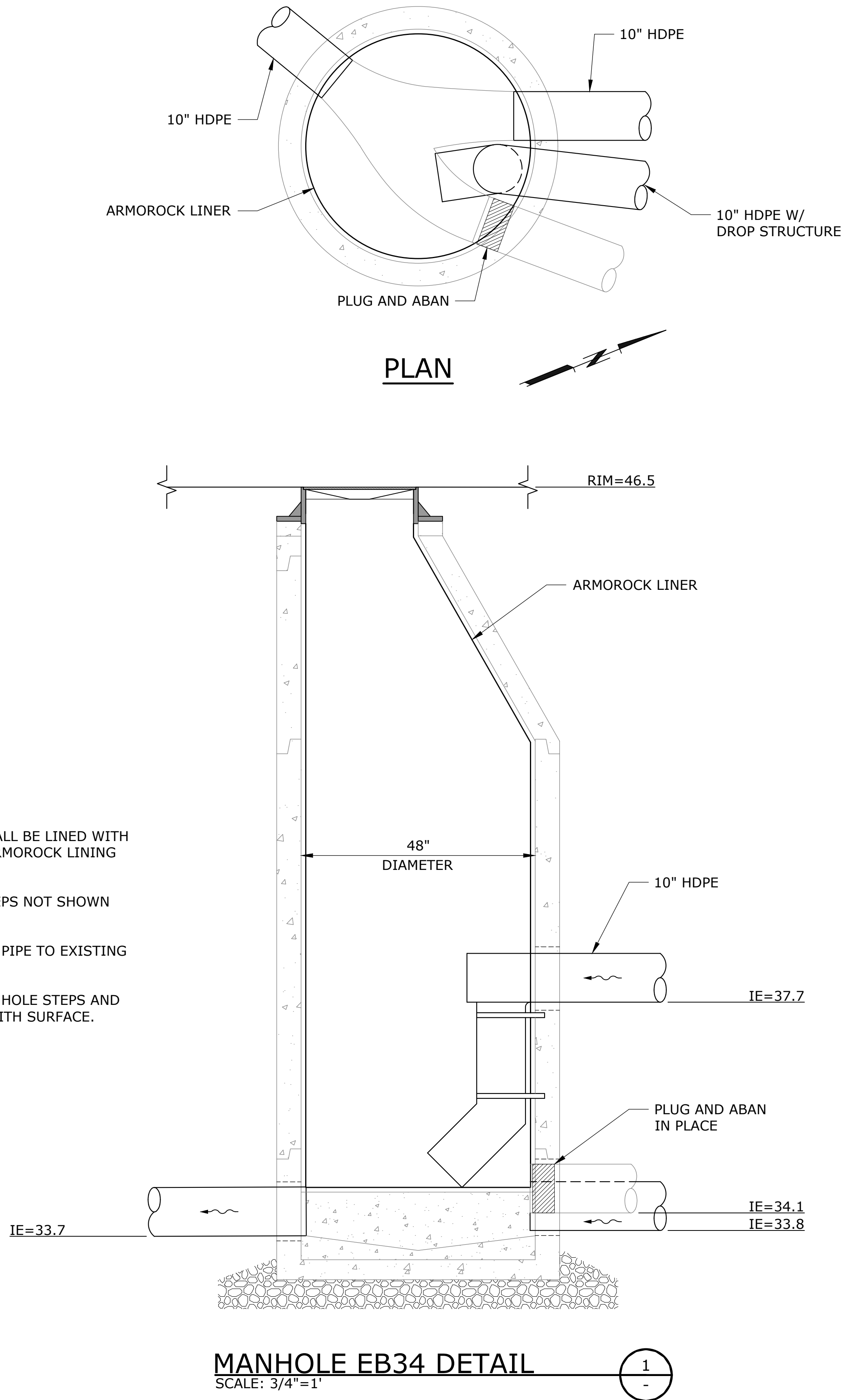


ARANA TRUNK
LINE SEWER PROJECT

PLAN AND PROFILE STA TO STA			
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NOTES:

1. MANHOLE SHALL BE LINED WITH AN INTERNAL ARMOROCK LINING SYSTEM.
2. MANHOLE STEPS NOT SHOWN FOR CLARITY.
3. ANGLE DROP PIPE TO EXISTING CHANNEL.
4. REMOVE MANHOLE STEPS AND GRIND FLUSH WITH SURFACE.

MANHOLE EB34 DETAIL

SCALE: 3/4"=1'

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NOTICE

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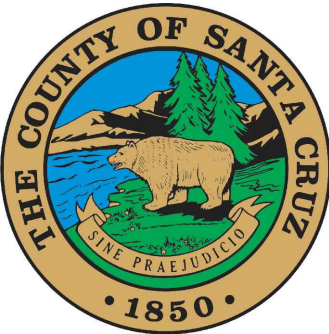
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**ARANA TRUNK
LINE SEWER PROJECT**

CIVIL - SITE DETAILS 1

PROJECT NO.: 19-2666 SCALE: AS SHOWN DATE: November 2020

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NO.	DATE	BY	REVISION						PROJECT NO.:	19-2666	SCALE:	AS SHOWN	DATE:	November 2020

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NO.	DATE	BY	REVISION						PROJECT NO.:	19-2666	SCALE:	AS SHOWN	DATE:	November 2020