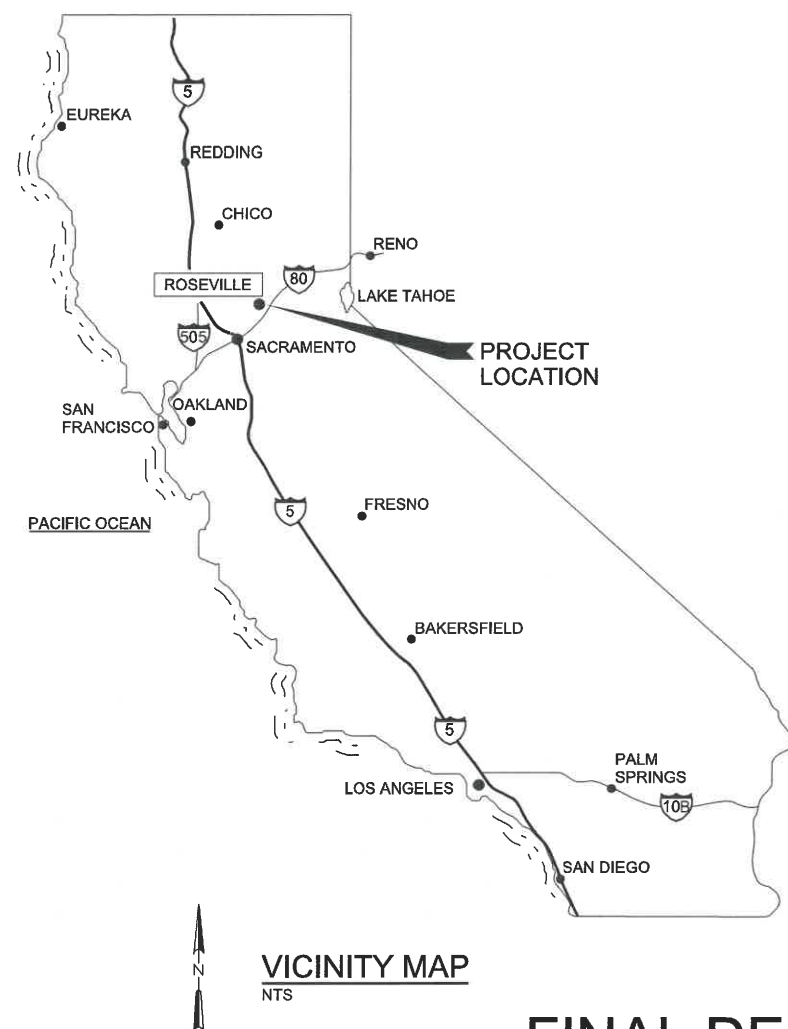


CITY OF ROSEVILLE

CONTRACT DOCUMENTS FOR DESIGN-ASSIST AND CONSTRUCTION OF WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) 4501 WESTPARK DRIVE ROSEVILLE, CA 95747 VOLUME 4 OF 4 : DRAWINGS



APPROVAL
RECOMMENDED BY:

Janice Gainey
JANICE GAINNEY, P.E.
SENIOR ENGINEER
DEPARTMENT OF ENVIRONMENTAL UTILITIES
CITY OF ROSEVILLE

DATE: 11/15/19

APPROVED BY:

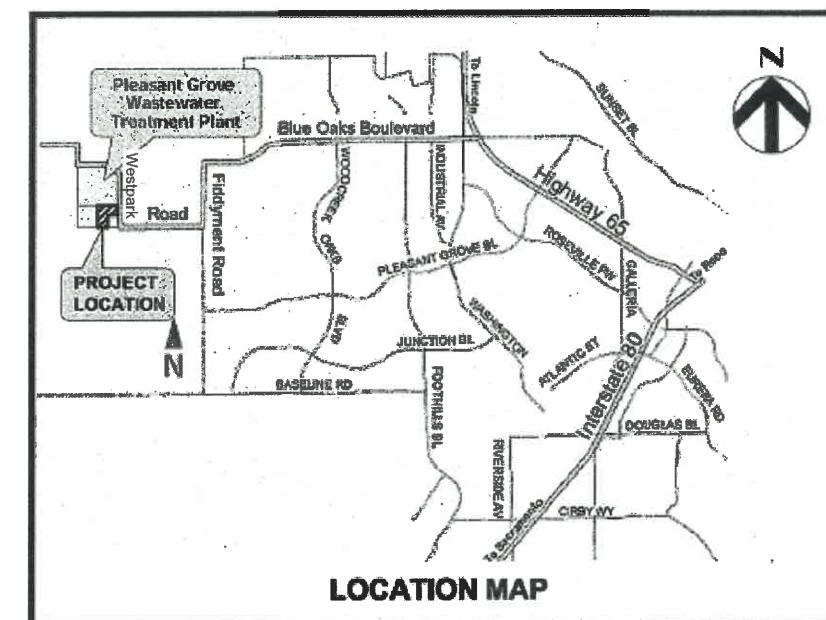
Sean Bigley
SEAN BIGLEY
ACTING WATER UTILITY MANAGER
DEPARTMENT OF ENVIRONMENTAL UTILITIES
CITY OF ROSEVILLE

DATE: 11/15/19

SUBMITTED BY:

Michael J. Fisher
MICHAEL J. FISHER, P.E.
SENIOR CIVIL ENGINEER
WATER WORKS ENGINEERS, LLC.

DATE: 11/15/2019



NOVEMBER 2019
FINAL DESIGN SUBMITTAL - NOT FOR CONSTRUCTION



WATERWORKS
ENGINEERS

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CONSTRUCTION



DESIGNED
M FISHER

DRAWN
J MARTIN

CHECKED
S KADER

APPROVED
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CITY OF ROSEVILLE
CALIFORNIA

WATERWORKS
ENGINEERS

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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)

ROSEVILLE, CALIFORNIA

GENERAL

INDEX TO DRAWINGS

DATE
NOVEMBER 2019

PROJECT NUMBER
17-083

DRAWING NUMBER
WD00-G-002

SHEET NUMBER
2

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT ITS EXPENSE, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
2. DEVIATION FROM THESE PLANS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
3. IN THE EVENT OF A CONFLICT BETWEEN THE AGREEMENT, ITS EXHIBITS, OR THE CONSTRUCTION DOCUMENTS (PLANS AND SPECIFICATIONS) THE AGREEMENT CONTROLS, FOLLOWED BY ITS EXHIBITS.
4. ALL PIPE LENGTHS AND DISTANCES BETWEEN STRUCTURES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE ALONG A HORIZONTAL PLANE UNLESS OTHERWISE STATED OR SHOWN.
5. ELEVATIONS FOR THE PROPOSED PIPELINE ARE TO THE INVERT OF THE PIPE AS SHOWN ON PROFILE.
6. MINOR CHANGES IN THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE PIPELINES MAY BE PROPOSED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL TO FACILITATE CONSTRUCTION AND AVOID FIELD CONFLICTS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS OR MARKERS DURING CONSTRUCTION.
8. LOCATIONS OF EXISTING SHOWN UTILITIES ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE SIZE, DEPTH, ORIENTATION, MATERIAL AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND SUBMIT THIS INFORMATION TO THE ENGINEER. THE CONTRACTOR SHALL TAKE WHATEVER STEPS ARE NECESSARY TO PROVIDE FOR THE PROTECTION OF EXISTING UTILITIES. THE ENGINEER HAS ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER OR CITY OF ROSEVILLE ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BY CALLING "UNDERGROUND SERVICE ALERT" ("USA") 1-800-227-2600 TWO (2) DAYS MINIMUM TO FOURTEEN (14) DAYS MAXIMUM BEFORE BEGINNING ANY EXCAVATION. THE CONTRACTOR SHALL CONTACT ANY UTILITY COMPANY WHOSE UTILITIES ARE NOT LOCATED BY "USA" FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR TO EXISTING CONDITIONS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL COORDINATE WORK WITH CONFLICTING UTILITIES AND PROVIDE FOR REMOVAL, RELOCATION AND REPLACEMENT AS NECESSARY FOR INSTALLATION OF THE PROPOSED UTILITIES. UTILITY COORDINATION SHALL BE INCLUDED IN THE PROJECT SCHEDULE AND IT IS THE EXPLICIT RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE PROJECT SCHEDULE INCLUDES THE NECESSARY RELOCATION. THE CONTRACTOR SHALL NOT BE PAID ADDITIONALLY FOR THIS COORDINATION OR ANY RELOCATION.
9. BURIED TELEPHONE, GAS AND CATV CABLES (FIBER OPTICS AND CONVENTIONAL) ARE KNOWN TO VARY IN DEPTH AND LOCATION DUE TO INSTALLATION TECHNIQUES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANY TO DETERMINE SPECIFIC UTILITY LOCATIONS AND NOTIFYING THE ENGINEER OF THE EXACT LOCATION (HORIZ & VERT) OF THE UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH LOCATING. COORDINATION FOR RELOCATION OR REPAIR OF BURIED CABLES AND GAS ALONG THE PIPELINE ALIGNMENT.
10. EXISTING OVERHEAD ELECTRIC AND TELEPHONE TRANSMISSION LINES IN THE PROJECT AREA MAY BE NOT SHOWN ON DRAWINGS. EXTREME CAUTION SHALL BE USED WHEN WORKING IN THE VICINITY OF OVERHEAD UTILITIES SO AS TO PREVENT INJURY TO WORKERS OR DAMAGE TO THE UTILITIES.
11. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
12. THE CONTRACTOR SHALL NOTIFY ROSEVILLE ELECTRIC PRIOR TO EXCAVATING CLOSER THAN TEN FEET TO AN EXISTING UTILITY POLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY ADDITIONAL SUPPORT OF EXISTING POWER POLES AS REQUIRED FOR TRENCH EXCAVATION. ALL COSTS OF SUCH WORK SHALL BE PAID BY THE CONTRACTOR.
13. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY AND PERMANENT SIGNS AS REQUIRED BY THE CITY OF ROSEVILLE, IN ACCORDANCE WITH TRAFFIC CONTROL PLANS PROVIDED BY THE CONTRACTOR AND APPROVED BY THE AGENCY OR JURISDICTION.
14. THE CONTRACTOR SHALL INSTALL PROJECT DESCRIPTION TEMPORARY SIGNS AS REQUIRED BY PERMIT CONDITIONS. CONTRACT DOCUMENTS, ENGINEER OR CITY OF ROSEVILLE.
15. MINIMUM PIPE COVER FOR ALL UTILITIES SHALL BE AS SHOWN ON THE PLANS BUT NO LESS THAN 3 FEET UNLESS LESS COVER IS SPECIFICALLY APPROVED BY THE ENGINEER OR SHOWN ON PLANS.
16. THE CONTRACTOR SHALL REMOVE AND REINSTALL ALL EXISTING FENCE AS REQUIRED FOR FACILITIES INSTALLATION. ANY ADDITIONAL FENCE MATERIALS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PRIVATE PROPERTY OWNERS OR CITY OF ROSEVILLE. REPLACED FENCE SHALL MATCH EXISTING FENCE TYPE.
17. CARE SHALL BE TAKEN TO PROTECT EXISTING PLANTS, SHRUBS, TREES, LAWN, LANDSCAPE AREAS AND IRRIGATION SYSTEMS. ANY ITEMS REMOVED OR DAMAGED SHALL BE REPLACED. ALL ITEMS WHICH REQUIRE REMOVAL OR ARE DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPLACED TO ORIGINAL CONDITION AND TO THE APPROVAL OF THE ENGINEER AND AT CONTRACTOR COST.

GENERAL NOTES CONT:

18. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL DEVELOP AND SUBMIT TO THE ENGINEER AN EXCAVATION AND SHORING PLAN. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SHEETING, SHORING AND BRACING REQUIRED FOR THE INSTALLATION OF THE UTILITY. ALL EXCAVATIONS SHALL BE KEPT WITHIN THE BOUNDARIES OF DESIGNATED EASEMENTS.
19. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL DEVELOP AND SUBMIT TO THE ENGINEER, A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL COMPLY WITH THE APPROVED TRAFFIC CONTROL PLAN AT ALL TIMES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND TO PROVIDE FOR THE PROPER AND CONTINUOUS SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. THE USE OF FLAGGERS, BARRICADES AND CONSTRUCTION SIGNING SHALL COMPLY WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CMUTCD), LATEST EDITION.
20. ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, FENCING, ETC., SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE AT AN APPROVED DISPOSAL SITE.
21. THE CONTRACTOR SHALL MAINTAIN A SAFE MEANS FOR VEHICULAR AND PEDESTRIAN INGRESS/EGRESS AT ALL TIMES.
22. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING.
23. ALL CONSTRUCTION ACTIVITY SHALL BE LIMITED TO STREET RIGHTS-OF-WAY, CITY OF ROSEVILLE PROPERTY, AND TEMPORARY CONSTRUCTION EASEMENTS OR LICENSE AREA AS SHOWN ON PLANS.
24. THE CONTRACTOR SHALL RESTORE ALL ACCESS ROADS AND STREETS WITHIN THE CONSTRUCTION LIMITS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH THE EXCEPTION OF IMPROVEMENTS AS SHOWN ON THE CONTRACT DRAWINGS.
25. ALL TRENCHING AND BACKFILL SHALL BE IN ACCORDANCE WITH CITY OF ROSEVILLE STANDARDS AND AS MODIFIED IN THE CONSTRUCTION DETAILS ELSEWHERE IN THE PLANS AND TECHNICAL SPECIFICATIONS. TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED. ALL TRENCHES SHALL BE CLOSED OR COVERED SECURELY WITH STEEL TRENCH PLATES AT THE END OF THE WORK DAY.
26. FOR ALL TRENCHING EXCAVATIONS 5 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE DIVISION OF INDUSTRIAL RELATIONS PRIOR TO BEGINNING ANY EXCAVATION. A COPY OF THIS PERMIT SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
27. THE CONTRACTOR SHALL ONLY ACCESS THE CONSTRUCTION AREAS VIA ROUTES DESIGNATED AS "CONSTRUCTION ACCESS" ON THE PLANS. ACCESS TO CONSTRUCTION AREAS VIA ALTERNATE ROUTES IS PROHIBITED, UNLESS CONTRACTOR RECEIVES APPROVAL FROM PROPERTY OWNER IN WRITING. CONTRACTOR SHALL PROVIDE CITY OF ROSEVILLE A COPY OF THE SIGNED AGREEMENT BEFORE USING THE ALTERNATE ACCESS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CITY / STATE / COUNTY / ENVIRONMENTAL PERMITTING FOR ALT ENTRANCES.
28. THE CONTRACTOR SHALL CONDUCT ALL WORK WITHIN THE AREAS DESIGNATED AS "CONSTRUCTION LIMITS" ON THE PLANS.
29. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
30. STRUCTURES NOTED IN THE PLANS AS EXISTING SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND ANY DISCREPANCIES NOTED SHALL BE REPORTED TO THE ENGINEER.
31. TYPICAL DETAILS AND SCHEDULES INDICATED MAY NOT BE SPECIFICALLY REFERENCED ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHERE EACH TYPICAL DETAIL OR SCHEDULE APPLIES. IF LOCATIONS ARE FOUND WHERE NO TYPICAL DETAIL, TYPICAL SCHEDULE, OR SPECIFIC DETAIL APPLIES, THE ENGINEER SHALL BE NOTIFIED.
32. OBSERVATION VISITS (SITE VISITS) BY REPRESENTATIVES OF CITY OF ROSEVILLE DO NOT INCLUDE INSPECTION OF CONSTRUCTION MEANS AND METHODS. SITE VISITS DURING CONSTRUCTION ARE NOT CONTINUOUS AND DETAILED INSPECTION SERVICES ARE TO BE PERFORMED BY OTHERS. OBSERVATIONS ARE PERFORMED SOLELY FOR THE PURPOSE OF DETERMINING IF THE CONTRACTOR UNDERSTANDS DESIGN INTENT SHOWN IN THE CONTRACT DRAWINGS. OBSERVATIONS DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND ARE NOT TO BE CONSTRUED AS SUPERVISION, THE VERIFICATION OF CONSTRUCTION, OR ACCEPTANCE OF THE WORK.
33. ALL SPECIFICATIONS AND CODES NOTED SHALL BE THE LATEST APPROVED EDITIONS AND REVISIONS BY THE AGENCY HAVING JURISDICTION OVER THIS PROJECT.
34. DISPOSAL OF ALL EXISTING MATERIALS NOTED TO BE DEMOLISHED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
35. CONSTRUCTION AT THE SITE MUST COMPLY WITH APPLICABLE PROVISIONS OF THE CALIFORNIA FIRE CODE CHAPTER 33 "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" AND STANDARD DETAIL AND SPECIFICATION SI-7.
36. CONTRACTOR SHALL MONITOR, RECORD AND REPORT GROUND WATER / STORM WATER DISCHARGE FOR ALL DISCHARGE PER SPEC 01140.

GENERAL NOTES CONT:

37. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF ROSEVILLE STANDARD SPECIFICATIONS, DESIGN & CONSTRUCTION STANDARDS, AND THE SPECIAL PROVISIONS.
38. THE CITY OF ROSEVILLE IS A MEMBER OF THE UNDERGROUND SERVICE ALERT (USA) ONE-CALL SYSTEM.
39. THE CONTRACTOR SHALL MARK IN THE WHITE PAINT ALL AREAS TO BE EXCAVATED PRIOR TO CONTACTING USA. ANY AREAS NOT MARKED WILL NOT BE SUBJECT TO USA, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM EXCAVATION.
40. THE CONTRACTOR SHALL TAKE EXTREME CARE TO PROTECT EXISTING SITE AND ADJACENT IMPROVEMENTS FROM THE DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ALL CRACKS AND/OR DAMAGE MADE TO PRE-EXISTING PUBLIC IMPROVEMENTS ALONG THE FRONTAGE OF THE PROJECT SITE AND ANY DAMAGE OF PRE-EXISTING FACILITIES RESULTING FROM CONSTRUCTION, TO CURRENT CITY STANDARDS AND AT THEIR OWN EXPENSE. THE EXTENT OF THE REPAIRS SHALL BE DETERMINED BY THE DEVELOPMENT SERVICES CONSTRUCTION INSPECTOR AND SHALL BE COMPLETED PRIOR TO THE CITY'S ACCEPTANCE OF THE IMPROVEMENTS.
41. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING WATER, SEWER AND/OR DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE PROPOSED IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
42. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS ON THE JOB SITE. CONTRACTOR SHALL NOTIFY ENGINEER WHERE THE WORK MIGHT CAUSE SURVEY MONUMENTS TO BECOME DISTURBED OR DESTROYED. CONTRACTOR SHALL PROVIDE A LICENSED LAND SURVEYOR TO SET REFERENCES AND RESTORE SURVEY MONUMENTS IN ACCORDANCE WITH COUNTY AND CITY STANDARDS.
43. CONTRACTOR SHALL COORDINATE AND NOTIFY THE CONSTRUCTION MANAGER WHEN WORK IS READY FOR INSPECTIONS. PRESENCE OR ABSENCE OF INSPECTOR WILL NOT RELIEVE CONTRACTOR OF FULL RESPONSIBILITY FOR PROPER PERFORMANCE ON WORK.
44. CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL MATERIALS THAT ARE TO BE REMOVED FROM THE SITE INCLUDING, SURPLUS EXCAVATION MATERIALS AND DEBRIS. CONTRACTOR SHALL MAINTAIN THE SITE IN A SAFE, NEAT AND ORDERLY CONDITION. CONTRACTOR SHALL DELIVER MATERIALS OR EQUIPMENT TO BE SALVAGED AND RETURNED TO THE OWNER AT THE LOCATION TO BE DETERMINED BY THE ENGINEER.
45. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS AND SECURITY, INCLUDING PROTECTION OF PUBLIC AND PRIVATE PROPERTY ADJACENT TO THE PROJECT SITE DURING THE CONSTRUCTION OF THE PROJECT.
46. ALL EXISTING FACILITIES NOT DESIGNATED FOR REMOVAL/DEMOLITION DURING CONSTRUCTION OF NEW FACILITIES TO BE PROTECTED IN PLACE RE REPLACED IN KIND AT THE CONTRACTORS OWNERS EXPENSE.
47. ALL PAVEMENT, INCLUDING ASPHALT CONCRETE (AC) AND PORTLAND CEMENT (PCC) PAVING SHALL BE SAW CUT TO A NEAT STRAIGHT LINE AND THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING. THE EXPOSED BASE MATERIAL SHALL BE GRADED, RECOMPACTED AND RESEALED PRIOR TO PAVING.
48. COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES RELATING TO SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR COMPLIANCE. THIS SHALL INCLUDE, BUT NOT LIMITED TO, SHORING OF TRENCHES, AND VENTILATION OF CONFINED SPACES.
49. CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE COMMENCING WORK.
50. WHEN EXCAVATION IS REQUIRED AROUND EXISTING UTILITIES THOSE UTILITIES SHALL BE SUPPORTED USING STEEL BEAMS OR OTHER SUITABLE SUPPORTS.
51. ALL CONCRETE TO BE USED IN CURBS AND SIDEWALKS SHALL BE MINOR CONCRETE AS DEFINED IN THE CORDCS.
52. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN THAT SHALL BE APPROVED BY ENGINEERING DIVISION BEFORE START OF WORK IN RIGHT-OF-WAY AND SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MUTCD WITH ALL APPLICABLE CALIFORNIA SUPPLEMENTS 7 AMENDMENTS. AT LEAST ONE LANE IN EACH DIRECTION SHALL REMAIN OPEN TO TRAFFIC UNLESS OTHERWISE SHOWN ON THE PLANS. TRAFFIC CONTROL HOURS ARE SUBJECT TO LIMITATION BY THE CITY. TRAFFIC CONTROL WITH LANE CLOSURES THAT AFFECT TRAFFIC FLOW MAY REQUIRE NIGHT WORK. IF, AS A PART OF TRAFFIC CONTROL MEASURES, A ROADWAY CLOSURE HAS BEEN APPROVED, THE CONTRACTOR SHALL NOTIFY ENGINEERING DIVISION 72 HOURS IN ADVANCE OF SETTING UP THIS CLOSURE.

GENERAL NOTES CONT:

53. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL POLLUTION CONTROL RULES, REGULATIONS, ORDINANCES AND STATUTES WHICH APPLY TO ANY WORK PERFORMED PURSUANT TO THE CONTRACT, INCLUDING ANY WATER POLLUTION CONTROL RULES, REGULATIONS AND STATUTES SPECIFIED BY THE MOST CURRENT STATE OF CALIFORNIA NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATES WITH CONSTRUCTION ACTIVITY. (REFER TO GENERAL CONDITIONS SECTION 5. FOR ADDITIONAL REQUIREMENTS). IN THE EVENT OF ANY VIOLATIONS THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL FINES, CITATIONS, PENALTIES AND ALL OTHER JUDGEMENTS THAT SHALL BE IMPOSED.
54. THE CONTRACT DOCUMENTS SHALL CONSTITUTE THESE PLANS, THE TECHNICAL SPECIFICATIONS, THE GENERAL CONDITIONS, THE SUPPLEMENTARY CONDITIONS, AND ALL REFERENCE DOCUMENTS INCLUDING THE MOST RECENT VERSION OF THE CITY OF ROSEVILLE DESIGN AND CONSTRUCTION STANDARDS.

**FOR PROPOSAL
PURPOSES ONLY,
NOT FOR
CONSTRUCTION**



DESIGNED	M FISHER
DRAWN	J MARTIN
CHECKED	S KADER
APPROVED	M FISHER



WATERWORKS
E N G I N E E R S

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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL
NOTES

DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-003
SHEET NUMBER	3

ABBREVIATIONS

A	AIR	CFS	CUBIC FEET PER SECOND	ESA	ENVIRONMENTALLY SENSITIVE AREA	HSS	HIGH PRESSURE STREAM, HOLLOW	OPNG	OPENING	SE	SOUTHEAST
@	AT	CJ	CONSTRUCTION JOINT,	EVC	END OF VERTICAL CURVE	HWY	HIGHWAY	OPP	OPPOSITE	SEC	SECONDARY
AB	ANCHOR BOLT, AGGREGATE BASE		CONTRACTION JOINT	EVCe	END VERTICAL CURVE ELEVATION	HYD	HYDRANT	OSHA	OCCUPATIONAL SAFETY & HEALTH ADMIN.	SECT	SECTION
AC	ASPHALTIC CONCRETE, ASBESTOS CEMENT	CL	CENTERLINE	EVCS	END VERTICAL CURVE STATION			OZ	OUNCE	SHC	SODIUM HYPOCHLORITE
ACI	AMERICAN CONCRETE INSTITUTE	CL2	CHLORINE	EVMWD	ELSINORE VALLEY MWD	IA	INSTRUMENT AIR			SH	SHEET
ACU	AIR CONDITIONING UNIT	CLDIP	CEMENT-LINED DUCTILE IRON PIPE	EW	EACH WAY	I&C	INSTRUMENTATION & CONTROL	PA	PROCESS AIR	SIM	SIMILAR
ADD	ADDITIONAL	CLG	CEILING	EWEF	EACH WAY, EACH FACE	ID	INSIDE DIAMETER	PC	POINT OF CURVE	SL	SLUDGE
ADH AB	ADHESIVE ANCHOR BOLT	CLR	CLEAR, CLEARANCE	EXP	EXPOSED, EXPANSION	IF	INSIDE FACE, INTERMEDIATE PRESSURE	PE	PLAIN END, POLYETHYLENE, PERMANENT	SLG	SLUDGE
ADJ	ADJACENT, ADJUSTABLE	CLSM	CONTROLLED LOW STRENGTH MATERIAL	EXP JT	EXPANSION JOINT		FEEDWATER		EASEMENT	SLMH	SLUDGE MANHOLE
AE	ANALYZER ELEMENT	CML, CSP	CONCRETE MORTAR LINED AND COATED	EXST	EXISTING	IMLR	INTERNAL MIXED LIQUOR RETURN	PENT	PENETRATION	SLP	SLOPE
AFF	ABOVE FINISH FLOOR		STEEL PIPE			IN	INCH	PI	POINT OF INTERSECTION	SMP	SAMPLE
AFG	ABOVE FINISH GRADE	CMLS	CEMENT MORTAR LINED STEEL PIPE			INFL	INFLUENT	PJF	PREMOLDED JOINT FILLER	SOLN	SOLUTION
AHP	AIR: HIGH PRESSURE	CMP	CORRUGATED METAL PIPE	FA	FOUL AIR	INSTM	INSTRUMENTATION	PL	PLATE, PROPERTY LINE	SOW	SLIP ON WELD
AIR	COMPRESSED AIR	CMU	CONCRETE MASONRY UNIT	FB	FLAT BAR	INSJL	INSULATE, INSULATION	PLC	PROGRAMMABLE LOGIC CONTROLLER	SP	SPACE OR SPACES
AISC	AMERICAN INSTITUTE OF STEEL	CO	CLEANOUT	FBE	FUSION BONDED EPOXY	INV	INVERT	PLYWD	PLYWOOD	SPD	SUMP PUMP DRAIN
	CONSTRUCTION	COL	COLUMN	FC	FLEXIBLE COUPLING	IP	IRON PIPE	PNL	PANEL	SPEC	SPECIFICATIONS
AIT	ANALYZER INDICATOR/TRANSMITTER	COM	COMMUNICATION	FCA	FLANGED COUPLING ADAPTER	IR	IRON ROD	POB	POINT OF BEGINNING	SPLY	SUPPLY
AL, ALUM	ALUMINUM	COMB	COMBINED	FCO	FLOOR CLEAN OUT	IRR	IRRIGATION	POC	POINT OF CONNECTION	SQ FT	SQUARE FOOT
ALP	AIR LOW PRESSURE	CONC	CONCRETE	FDA	FLOOR DRAIN W/INTEGRAL TRAP	IS	INTERMEDIATE PRESSURE STREAM	POE	POINT OF ENDING, PLAIN ONE END	SQ IN	SQUARE INCH
ALTN	ALTERNATE	CONN	CONNECTION	FDN	FOUNDATION	IW	INJECTION WATER	PP, P&P	PLAN AND PROFILE, POWER POLE	SS	SANITARY SEWER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	CONT	CONTINUOUS, CONTINUATION	FES	FLARED END SECTION			PPM	PARTS PER MILLION	SSH	SAFETY SHOWER
APPROX	APPROXIMATE	COORD	COORDINATE	FEXT	FIRE EXTINGUISHER	JT	JOINT	PRC	POINT OF REVERSE CURVE	SSMH	SANITARY SEWER MANHOLE
APVD	APPROVED	CPLG	COUPLING	FF	FINISH FLOOR			PRCST	PRECAST	ST	SAMPLE TAP, STEAM TURBINE
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	CT	COPPER TUBING	FG	FINISH GRADE, FUEL GAS	KIP	THOUSAND POUNDS	PREFAB	PREFABRICATED	SST	STAINLESS STEEL
AR	AERATION	CTRD, CTD	CENTERED	FHY	FIRE HYDRANT	KW	KILOWATT	PRESS	PRESSURE	STA	STATION
ARCH, A	ARCHITECTURAL	CTR	CENTER	FI	FLOW INDICATOR			PRC	POINT OF REVERSE CURVE	STD	STANDARD
ARV	AIR RELEASE VALVE	CU	COPPER	FIG	FIGURE	L	LEFT, ANGLE, LENGTH	PRI	PRIMARY	STIF	STIFFENER
ASTM	AMERICAN SOCIETY FOR TESTING AND	CU FT	CUBIC FOOT	FIL	FILTRATE	LAE	LABORATORY	PROP	PROPERTY	STL	STEEL, STEEL PIPE
	MATERIALS	CU IN	CUBIC INCH	FL	FLOOR, FLOW LINE	LATL	LATERAL	PR	PRESSURE	STLS	STEEL PIPE (SPECIAL)
AUTO	AUTOMATIC	CU YD	CUBIC YARD	FLG	FLANGE	LB	POUNDS	PS	PUMP STATION	STR	STRAIGHT
AUX	AUXILIARY	CULV	CULVERT	FLH	FLAT HEAD	LB/CU FT	POUNDS PER CUBIC FOOT	PSF	POUNDS PER SQUARE FOOT	STRL	STRUCTURAL
AV	AIR/VACUUM ASSEMBLY	CWTP	CIRCULATING WATER	FLL	FLOW LINE	LE	LEVEL ELEMENT	PSI	POUNDS PER SQUARE INCH	STRUCT	STRUCTURE
AVE	AVENUE	CWTP	CHAPARRAL WATER TREATMENT PLANT	FM	FLOW METER	LF	LINEAR FEET	PSIG	POUNDS PER SQUARE INCH, GAUGE	SUEFL	SUBFLOOR
AWG	AMERICAN WIRE GAGE	CV	CHECK VALVE	FNSH	FINISH	LIT	LEVEL INDICATOR/TRANSMITTER	PT	POINT OF TANGENCY	SUP	SUPERNATANT, SUPPLY
AWWA	AMERICAN WATER WORKS ASSOCIATION	°C	CELSIUS	FO	FUEL OIL	LONG	LONGITUDINAL	P.U.E.	PUBLIC UTILITY EASEMENT	SUSP	SUSPEND
				FOC	FACE OF CONCRETE	LP	LOW POINT	PV	PLUG VALVE	SW	SOUTHWEST, SERVICE WATER
B	BORING	DBA	DEFORMED BAR ANCHOR	FRP	FIBERGLASS REINFORCED PLASTIC	LR	LONG RADIUS	PVC	POLYVINYL C-ILORIDE PLASTIC, POINT OF	SYMM	SYMMETRICAL
BAV	BALL VALVE	DBL	DOUBLE	FS	FINISHED SURFACE, FLOW SWITCH	LS	LOW PRESSURE STREAM		VERTICAL CURVE		
BC	BEGIN CURVE, BOTTOM OF CURB	DEC	DECANT	FT	FOOT OR FEET	LT	LEVEL TRANSMITTER	PVCGS	POLYVINYL C-ILORIDE PLASTIC-GRAVITY	T	TANGENT, TELEPHONE LINE, TOP
BD	BLOW DOWN	DET	DETAIL	FTG	FOOTING	LSH	LEVEL SWITCH HIGH		SEWER TYPE	T&B	TOP AND BOTTOM
BF	BLIND FLANGE, BOTTOM FACE	DF	DOUGLAS FIR/LARCH	FWD	FORWARD	LSL	LEVEL SWITCH LOW	PVCW	POLYVINYL C-ILORIDE PLASTIC-	T&G	TONGUE AND GROOVE
BFD	BUTTERFLY VALVE DAMPER	DI	DROP INLET, DUCTILE IRON	°F	DEGREE FAHRENHEIT	LVC	LENGTH VERTICAL CURVE		WATER DISTRIBUTION SERVICE TYPE	T, T	THICKNESS
BFV	BUTTERFLY VALVE	DIA	DIAMETER			LWL	LOW WATER LEVEL	PVMT	PAVEMENT	TBC	TUBING
BLDG	BUILDING	DIAG	DIAGONAL	G	GAS			PVI	POINT OF VERTICAL INTERSECTION	TDH	TOTAL DYNAMIC HEAD
BLK	BLACK	DICL	DUCTILE IRON CEMENT LINED	GA	GAGE			PVT	POINT OF VERTICAL TANGENCY, PRIVATE	TECH	TECHNICAL
BLM	BUREAU OF LAND MANAGEMENT	DIL	DILUTE	GAC	GRANULAR ACTIVATED CARBON	MAX	MAXIMUM	PW	POTABLE WATER, PROCESS WATER	TEL	TELEPHONE
BM	BENCH MARK, BEAM	DIM	DIMENSION	GAL	GALLON	MCC	MOTOR CONTROL CENTER			TEMP	TEMPORARY, TEMPERATURE
BO	BLOW OFF	DIMJ	DUCTILE IRON MECHANICAL JOINT	GALV	GALVANIZED	MCJ	MASONRY CONTROL JOINT	R, RAD	RADIUS	TF	TOP FACE
BOC	BACK OF CURB	DIP	DUCTILE IRON PIPE	GB	GRADE BREAK	MECH	MECHANICAL	RBW	RECLAIMED BACKWASH	TG	TOP OF GRATE
BOG	BACK OF GUTTER	DIPPL	DUCTILE IRON PIPE, POLYETHYLENE LINED	GC	GROOVED COUPLING	MFR	MANUFACTURER	RC	REINFORCED CONCRETE	THK	THICK
BOO	BOTTOM OF OPENING	DIR	DIRECTION	GCO	GRADE CLEAN OUT	MGD	MILLION GALLONS PER DAY	RCP	REINFORCED CONCRETE PIPE	THK	TANK
BOT	BOTTOM	DIST	DISTANCE	GCF	GROOVED COUPLING FITTING	MIN	MINIMUM, MINUTE	RDCR	REDUCER	TOC	TOP OF CURB, TOP OF CONCRETE
BRG	BEARING	DN	DOWN	GD	GENERAL DRAINAGE	MISC	MISCELLANEOUS	REF	REFER, REFERENCE	TOW	TOP OF WALL
BVC	BEGINNING OF VERTICAL CURVE	DR	DRAIN	GE	GROOVED END	MJ	MECHANICAL JOINT	REINF	REINFORCED, REINFORCING, REINFORCE	TOW	TOP OF FOOTING
BVCE	BEGIN VERTICAL CURVE ELEVATION	do	DITTO	GL	GLASS	MPH	MILES PER HOUR	REQD	REQUIRED	TP	TURNING POINT, TEST PIT
BVCS	BEGIN VERTICAL CURVE STATION	DPT	DIFFERENTIAL PRESSURE TRANSMITTER	GPD	GALLONS PER DAY	MSE	MECHANICALLY STABILIZED EARTH	RJ	RESTRAINED JOINT	TRANS	TRANSITION
BWD	BACKWASH DISPOSAL	DWG	DRAWING	GPH	GALLONS PER HOUR	MSNRY	MASONRY	RLS	RUBBER LINED STEEL	TRANSV	TRANSVERSE
BWI	BACKWASH IN			GRTG	GRATING	MSP	MILL STEEL PIPE, MANUAL OF STANDARD	RM	ROOM	TST	TOP OF STEEL
BWO	BACKWASH OUT	EA	EACH	GSP	GALVANIZED STEEL PIPE	MTL	MATERIAL	RFCA	RESTRAINED FLANGED COUPLING ADAPTER	TT	THRUST TIE
BYP	BYPASS	EC	END CURVE	GT	GAS TURBINE	MWS	MAXIMUM WATER SURFACE	RMJ	RESTRAINED MECHANICAL JOINT	TURB	TURBIDITY
		ECC	ECCENTRIC	GV	GATE VALVE			RO	ROUGH OPENING, REVERSE OSMOSIS	TW	TOP OF WALL
C to C, CC	CENTER TO CENTER	EE	ELECTRICAL	GVL	GRAVEL	N	NORTH	RP	RADIUS POINT	TWS	TRACER WIRE STATION
C	CHANNEL (BEAM)	EF	EACH FACE, EXHAUST FAN	GW	GROUND WATER	NC	NORMALLY CLOSED	R/R	REMOVE AND REPLACE	TYP	TYPICAL
CAV/ARV	COMBINATION AIR ADMISSION/	EFL	EFFLUENT			NE	NORTHEAST	RST	REINFORCING STEEL		
CARV	AIR RELEASE VALVE	EG	EXISTING GRADE	HD	HUB DRAIN	NEMA	NATIONAL ELECTRICAL	RT	RIGHT	UBC	UNIFORM BUILDING CODE
CATH	COMBINATION AIR RELEASE VALVE	EJ	EXPANSION JOINT	HDPE	HIGH DENSITY POLYETHYLENE PIPE		MANUFACTURERS ASSOCIATION	RTN	RETURN WATER	UD	UNDERDRAIN
	CATHODIC PROTECTION	EL	ELEVATION	HDR	HEADER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	RV	ROOF VENT	UG	UNDERGROUND
CATV	CABLE TELEVISION	ELB, ELL	ELBOW	HDW	HARDWARE	NH	AMMONIA	RW	RAW WATER	UH	UNIT HEATER
CB	CATCH BASIN	ELC	ELECTRICAL LOAD CENTER	HF	HIGH PRESSURE FEEDWATER	NIC	NOT IN CONTRACT	R/W	RIGHT-OF-WAY	UNK	UNKNOWN
CCP	CONCRETE CYLINDER PIPE	ELEC	ELECTRIC, ELECTRICAL	HGL	HYDRAULIC GRADE LINE	NO	NUMBER, NUMBERING			UNO	UNLESS NOTED OTHERWISE
CCS	CENTRAL CONTROL SYSTEM	EM	EMISSION MEASUREMENT	HGT	HEIGHT	NTS	NOT TO SCALE	S	I-BEAM, SOUTH SLOPE		
CE	CONDENSATE	EMR	EMERGENCY	HM	HOLLOW METAL	NW	NORTHWEST	S =	SLOPE EQUALS	V	VENT, VOLT, VALVE
CF	CUBIC FEET	ENGR	ENGINEER	HORIZ	HORIZONTAL			SA	SERVICE AIR	VAC	VACUUM
CFM	CUBIC FEET PER MINUTE	EO	EMERGENCY OVERFLOW	HP	HORSEPOWER	OC	ON CENTER	SAT	SUSPENDED ACOUSTIC TILE	VAR	VENT ACID RESISTANT
CHEM	CHEMICAL	EP	EDGE OF PAVEMENT	HPT	HIGH POINT	OD	OUTSIDE DIAMETER, OVERFLOW DRAIN	SC	SCUM	WSP	VERTICAL CURVE
CI	CAST IRON	EQ	EQUALIZATION	HR	HANDRAIL	OF	OUTSIDE FACE, OVERFLOW	SCFH	STANDARD CUBIC FEET PER HOUR	VERT	VERTICAL
CIGC	CAST IRON GROOVED COUPLING	EQ SP	EQUALLY SPACED	HSS	HIGH PRESSURE STREAM, HOLLOW	OFR	OVERFLOW RETURN	SCFM	STANDARD CUBIC FEET PER MINUTE	VFD	VARIABLE FREQUENCY DRIVE
CIMJ	CAST IRON MECHANICAL JOINT	EQPT	EQUIPMENT		STRUCTURE STEEL	OG	ORIGINAL GROUND	SCH	SCHEDULE	VPI	VERTICAL POINT OF INTERSECTION
CIP	CAST IRON PIPE	ERW	EFFLUENT REUSE WATER	HV	HOSE VALVE	OHE	OVERHEAD ELECTRIC	SD	STORM DRAIN	VPS	VEENER PLASTER SYSTEM
CIRJ	CAST IRON RESTRAINED JOINT	ESC	EROSION SEDIMENT CONTROL	HWL	HIGH WATER LEVEL	OMRF	ORDINARY MOMENT RESISTING FRAME	SCH	SCHEDULE		
CISP	CAST IRON SOIL PIPE	EMR	EMERGENCY	HR	HANDRAIL	O TO O	OUT TO OUT	SDS	SECONDARY DIGESTED SLUDGE	XMFR	TRANSFORMER

NOTES

1. FOR ELECTRICAL AND INSTRUMENTATION ABBREVIATIONS, SEE ELECTRICAL AND INSTRUMENTATION DRAWINGS.

2. CONTACT THE ENGINEER FOR ABBREVIATIONS NOT LISTED.
3. THIS IS A STANDARD LEGEND SHEET. THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.

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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)

ROSEVILLE, CALIFORNIA

GENERAL

ABBREVIATIONS

DATE
NOVEMBER 2019

PROJECT NUMBER
17-083

DRAWING NUMBER
WD00-G-004

SHEET NUMBER
4

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CONSTRUCTION

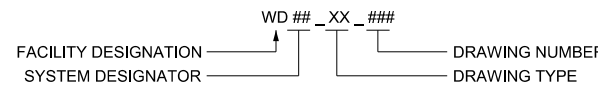
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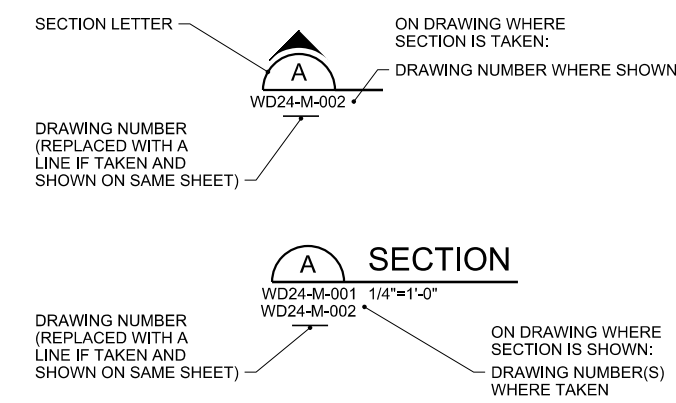
ABBREVIATION	DRAWING TYPE
G	GENERAL
C	CIVIL
GS	GENERAL STRUCTURAL
S	STRUCTURAL
SM	STRUCTURAL/MECHANICAL
GA	GENERAL ARCHITECTURAL
A	ARCHITECTURAL
AS	ARCHITECTURAL/STRUCTURAL
GM	GENERAL MECHANICAL
M	MECHANICAL
GH	GENERAL HVAC
H	HVAC
GE	GENERAL ELECTRICAL
E	ELECTRICAL
GI	GENERAL INSTRUMENTATION
I	INSTRUMENTATION
GN	GENERAL PIPING AND INSTRUMENTATION
N	PIPING AND INSTRUMENT DIAGRAM

DRAWING NUMBER FORMAT

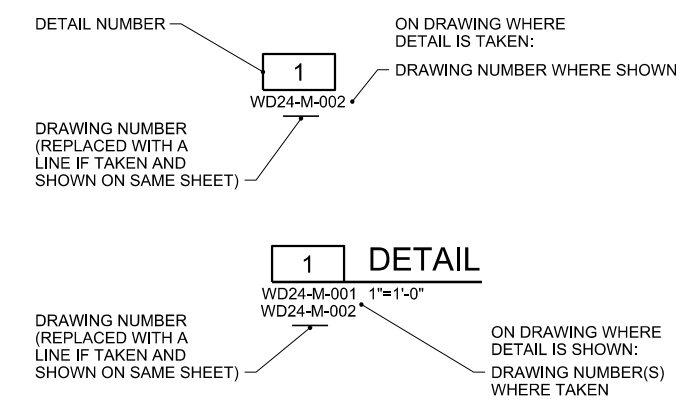


* SEE DEVICE TAGGING STANDARD FOR TABLE OF APPROVED DESIGNATIONS

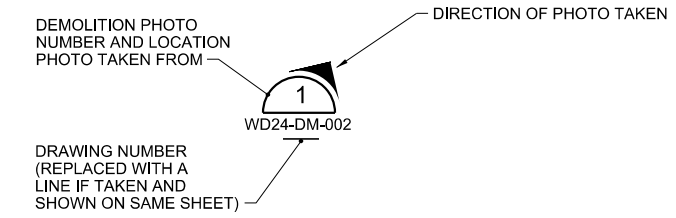
SECTION



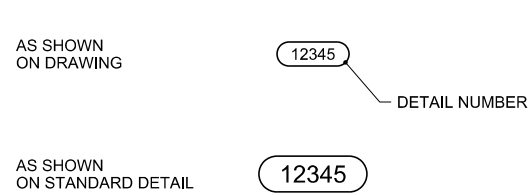
DETAIL



DEMOLITION PHOTO



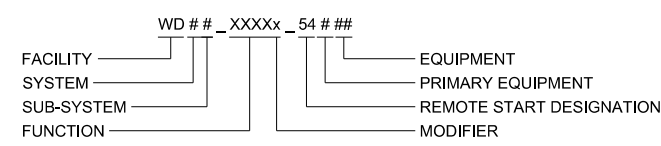
STANDARD DETAIL



NOTES:

1. STANDARD DETAIL CALLOUTS ARE SHOWN TO INDICATE DETAIL REQUIRED AT SPECIFIC LOCATIONS. DETAILS ARE NOT CALLED OUT AT ALL LOCATIONS. WHERE A STANDARD DETAIL CALLOUT IS NOT SHOWN, THE CONTRACTOR SHALL USE THE STANDARD DETAIL MOST APPLICABLE AND CONSISTENT WITH OTHER WORK UNDER THIS CONTRACT.

EQUIPMENT, VALVE AND DEVICE DESIGNATIONS

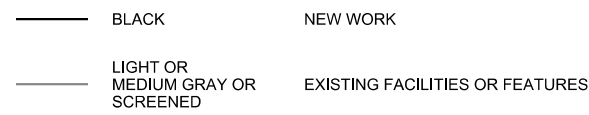


NOTES:

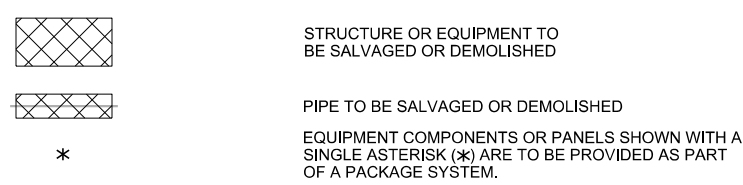
1. SEE CITY OF ROSEVILLE DEVICE TAGGING STANDARDS FOR COMPLETE DESIGNATION DESCRIPTIONS.

2. COORDINATE WITH ENGINEER FOR EQUIPMENT, VALVES, AND DEVICE DESIGNATIONS NOT SHOWN ON THE DRAWINGS.

LINE TYPE APPEARANCE



GENERAL SYMBOLOGY



FOR PROPOSAL PURPOSES ONLY, NOT FOR CONSTRUCTION



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WATERWORKS

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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)

ROSEVILLE, CALIFORNIA

GENERAL

GENERAL DESIGNATIONS

DATE
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WD00-G-005

SHEET NUMBER
5

CIVIL LEGEND SPOT ELEVATION CONTOUR LINE CUT SLOPE (HORIZ:VERT) EMBANKMENT - FILL SLOPE (HORIZ:VERT) DRAINAGEWAY OR DITCH DIRECTION OF FLOW CENTER LINE, BUILDING, ROAD PROPERTY LINE RIGHT OF WAY, EASEMENT OR SETBACK STAGING OR WORK AREA LIMITS STRUCTURE, BUILDING OR FACILITY LOCATION POINT COORDINATES STRUCTURE, BUILDING OR FACILITY RETAINING WALL CONCRETE CURB ARCHITECTURAL FENCE GUARD RAIL/BARRICADE CHAIN LINK FENCE WITH 3 STRAND BARBED WIRE TOPPING ARCHITECTURAL FENCE CHAIN LINK FENCE BARBED WIRE SINGLE SWING GATE DOUBLE SWING GATE SLIDING GATE CULVERT FIRE HYDRANT WALL BRUSH/TREE LINE TREE DEMOLITION ABANDON IN PLACE AUTOMATIC AIR RELEASE VALVE MANUAL AIR RELEASE VALVE WATER SURFACE GRADE BREAK

ARCHITECTURAL LEGEND

	INDICATES PAIR OF DOORS
	EXTERIOR OR INTERIOR WALL ELEVATION
	ROOM DESIGNATION
	DOOR DESIGNATION
	LOUVER DESIGNATION
	WINDOW DESIGNATION
	FIRE EXTINGUISHER
	DOOR, HATCH, OR WINDOW HINGE LOCATION
	WALL TYPE DESIGNATION
	NFPA SIGN
	SIGN DESIGNATION

MATERIAL SYMBOLS

	CONCRETE
	CMU PLAN
	CMU SECTION
	GYPSUM WALLBOARD
	RIGID INSULATION
	BATT INSULATION
	PLYWOOD
	METAL STUD WALL
	WOOD SECTION
	STEEL
	ACOUSTICAL TILE
	CARPET

DOOR SCHEDULE						
DOOR NUMBER	DOOR DIMENSION	LITES	SILL DETAIL	EXIT DEVICE	WALL	CLOSURE
1	5'-8" x 7'-2"	G	8110, TYPE B	R	CMU	R
2	3'-0" x 7'-2"	G	8110, TYPE B	NR	CMU	R
3	3'-0" x 7'-2"	G	8111	R	CMU	NR
4	5'-8" x 7'-10"	-	8110, TYPE B	R	CMU	R

1. INSTALL DOORS AND FRAMES IN ACCORDANCE WITH THE STEEL DOOR INSTITUTE'S RECOMMENDATIONS. PROVIDE TRIM AND JOINT SEALANT AROUND FRAMES TO INSURE A WEATHERTIGHT BARRIER.
2. SEE SPEC SECTION 08700 - DOOR HARDWARE FOR ALL DOOR HARDWARE INCLUDING EXIT DEVICES AND PRIVACY LATCHES. PROVIDE CLOSERS ONLY ON EXTERIOR DOORS.
3. R = REQUIRED, NR = NOT REQUIRED, NP = NOT PERMITTED, G = HALF GLASS, N = NARROW LITE

1. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TO NOMINAL SURFACE OF MASONRY, FACE OF STUDS AND FACE OF CONCRETE WALLS.
2. REPETITIVE FEATURES ARE NOT DRAWN IN THEIR ENTIRETY AND SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
3. CONTRACTOR SHALL VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS CONTRACT, OR BY OTHERS.
4. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER CATEGORIES OF DRAWINGS FOR ADDITIONAL NOTES.
5. VERIFY SIZE AND LOCATION OF, AND PROVIDE: ALL OPENINGS THROUGH FLOORS AND WALLS, ACCESS DOORS, FURRING, CURBS, ANCHORS AND INSERTS. PROVIDE ALL BASES, BLOCKING REQUIRED FOR ACCESSORIES, MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT.

1. THE NON-RESIDENTIAL PROVISIONS OF THE 2016 CALGREEN CODE OUTLINE PLANNING, DESIGN AND DEVELOPMENT METHODS THAT INCLUDE ENVIRONMENTAL RESPONSIBLE SITE SELECTION, BUILDING DESIGN, BUILDING SITTING AND DEVELOPMENT TO PROTECT, RESTORE AND ENHANCE THE ENVIRONMENTAL QUALITY OF THE SITE AND RESPECT THE INTEGRITY OF ADJACENT PROPERTIES; ESTABLISHES THE MEANS OF CONSERVING WATER USED INDOORS, OUTDOORS AND IN WASTEWATER CONVEYANCE; OUTLINES MEANS OF ACHIEVING MATERIAL CONSERVATION AND RESOURCE EFFICIENCY; AND OUTLINES MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS.
2. SWPPP: DEVELOP A SWPPP COMPLIANT WITH STATE STORM WATER NPDES CONSTRUCTION PERMIT OR LOCAL ORDINANCE, WHICHEVER IS STRICTER PER CALGREEN 5.106.1.
3. GRADING AND PAVING: SITE GRADING AND DRAINAGE SYSTEM SHALL SLOPE AWAY FROM THE BUILDING PER THE CONSTRUCTION DRAWINGS AND CALGREEN 5.106.10.
4. WEATHER PROTECTION: PROVIDE A WEATHER-RESISTANT EXTERIOR WALL AND FOUNDATION ENVELOPE AS SHOWN IN THE CONSTRUCTION DRAWINGS AND AS REQUIRED BY CALIFORNIA BUILDING CODE SECTION 1403.2 AND CALIFORNIA ENERGY CODE SECTION 150, MANUFACTURER'S INSTALLATION INSTRUCTIONS OR LOCAL ORDINANCE, WHICHEVER IS MORE STRINGENT PER CALGREEN 5.407.1.
5. CONSTRUCTION WASTE MANAGEMENT: RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF NONHAZARDOUS CONSTRUCTION AND DEMOLITION DEBRIS OR MEET LOCAL ORDINANCE, WHICHEVER IS MORE STRINGENT PER CALGREEN 5.408.1.
6. CONSTRUCTION WASTE MANAGEMENT PLAN: WHERE A LOCAL JURISDICTION DOES NOT HAVE A CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE THAT IS MORE STRINGENT, SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN PER CALGREEN 5.408.1.1.
7. WASTE MANAGEMENT COMPANY: UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH THE CONSTRUCTION WASTE MANAGEMENT. THE OWNER OR CONTRACTOR SHALL MAKE THE DETERMINATION IF THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE DIVERTED BY A WASTE MANAGEMENT COMPANY PER CALGREEN 5.408.1.2.
8. DOCUMENTATION: PROVIDE TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE WITH CALGREEN SECTION 5.408.1.1 THROUGH 5.408.1.3. THE WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE ACCESSIBLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY PER CALGREEN 5.408.1.4.
9. EXCAVATED SOIL AND LAND CLEARING DEBRIS: 100 PERCENT OF TREES, STUMPS, ROCKS AND ASSOCIATED VEGETATION AND SOILS FROM LAND CLEARING SHALL BE REUSED OR RECYCLED PER CALGREEN 5.408.3.
10. TESTING AND ADJUSTING: TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED FOR NEW BUILDINGS LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN ADDITION OR ALTERATION SUBJECT TO CALGREEN SECTION 303.1 PER CALGREEN SECTION 5.410.4.
11. SYSTEMS: DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS, SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT HVAC AND LIGHTING AND CONTROLS PER CALGREEN 5.410.4.2.
12. PROCEDURES: PERFORM TESTING AND ADJUSTING PROCESS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, MANUFACTURER'S SPECIFICATIONS AND CALGREEN 5.410.4.3.
13. REPORTING: AFTER COMPLETION OF TESTING, ADJUSTING, AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THE SERVICES PER CALGREEN 5.410.4.4.
14. O & M MANUAL: PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH THE PROJECT SPECIFICATIONS, OSHA REQUIREMENTS IN CCR, TITLE 8 SECTION 5142, AND CALGREEN 5.410.4.5. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.

15. COVERING OF DUCT OPENING AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION: AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM PER CALGREEN 5.504.3.
16. ADHESIVES, SEALANTS, CAULKS: ADHESIVES AND SEALANTS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS PER CALGREEN 5.504.4.1:
 - a. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS, AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN CALGREEN TABLES 5.504.4.1 AND 5.504.4.2.
 - b. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN ONE POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.
17. PAINTS AND COATINGS: ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH CALGREEN TABLE 5.504.4.2 UNLESS MORE STRINGENT LOCAL LIMITS APPLY PER CALGREEN 5.504.4.3.
18. AEROSOL PAINTS AND COATINGS: AEROSOL PAINTS AND COATINGS SHALL MEET THE PWMIR LIMITS FOR ROC IN SECTION 94522(A)(3) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES IN SECTIONS 94522(C)(2) AND (D)(2) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520 PER CALGREEN 5.504.4.3.1.
19. VERIFICATION: VERIFICATION OF POLLUTANT CONTROL SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE MANUFACTURER'S PRODUCT SPECIFICATION OR FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS PER CALGREEN 5.504.4.3.2.
20. INDOOR MOISTURE CONTROL: BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF CBC, CCR, TITLE 24, PART 2, SECTIONS 1203 (VENTILATION) AND CHAPTER 14 (EXTERIOR WALLS) PER CALGREEN 5.505.1.
21. OUTSIDE AIR DELIVERY: FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS, MEET THE MINIMUM REQUIREMENTS OF SECTION 120.1 OF THE 2013 CEC, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8 PER CALGREEN 5.506.1.
22. CFCS: INSTALL HVAC AND REFRIGERATION EQUIPMENT THAT DOES NOT CONTAIN CFCS PER CALGREEN 5.508.1.1.

GENERAL

ARCHITECTURAL LEGEND

MATERIAL SYMBOLS AND

GENERAL ARCHITECTURAL NOTES

DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-007
SHEET NUMBER	7

DESIGN CRITERIA:

1. APPLICABLE CODE: 2016 CALIFORNIA BUILDING CODE (2015 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF CALIFORNIA).
2. REFER TO THE SPECIFICATIONS FOR ADDITIONAL AND SPECIFIC STRUCTURAL LOADINGS AND REQUIREMENTS.
3. ROOF LOAD:
- MINIMUM LIVE LOAD 20 psf
4. FLOOR LOAD:
- LIGHT MANUFACTURING 125 psf
 - STAIRS AND EXITS 100 psf
5. WIND LOAD:
- BASIC WIND SPEED (ASCE 7-10) 115 mph
 - EXPOSURE CATEGORY C
 - DESIGN METHOD DIRECTIONAL PROCEDURE
6. SEISMIC LOAD:
- RISK CATEGORY IV
 - IMPORTANCE FACTOR I_e 1.5
 - S_{ds} 0.538 S_{os} 0.491
 - S_{d1} 0.260 S_{d1} 0.326
 - SITE CLASS D
 - SEISMIC DESIGN CATEGORY D
7. LATERAL FORCE RESISTING SYSTEM:
- FACILITY 20 TREATMENT BUILDING
 - SPECIAL REINFORCED MASONRY SHEAR WALLS
 - $V = C_s W$
 - $C_s = 0.148$
 - $R = 5$
 - ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE
 - FACILITY 40 PARTIALLY BURIED CONCRETE TANK
 - $R_c = 1.0$
 - $R_t = 3.25$
 - $V = \text{SQRT}[(P_1 + P_2 + P_3)^2 + P_4^2 + P_{EG}^2]$
 - ANALYSIS PROCEDURE = AWWA D110-13, ACI 350.3-06, and ASCE 7-10

GENERAL INFORMATION:

1. ALL CONSTRUCTION SHALL CONFORM TO THE 2016 EDITION OF THE BUILDING CODE.
2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE KEYED IN EACH LOCATION. CONSULT THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
3. VERIFY ALL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH THE ARCHITECTURAL, MECHANICAL, HVAC AND ELECTRICAL DRAWINGS.
4. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS AND OPENINGS SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, HVAC AND PLUMBING DRAWINGS. COORDINATE ALL OPENINGS AND EQUIPMENT PADS WITH OTHER DISCIPLINES AND EQUIPMENT SUPPLIERS PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS.
5. NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, DUCTS, ETC UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

FOUNDATIONS:

1. IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT #11801.103 BY BAJADA GEOSCIENCES INC., FOUNDATIONS HAVE BEEN DESIGNED FOR THE FOLLOWING VALUES:
- ALLOWABLE BEARING CAPACITY:
 - PRESTRESSED CONCRETE TANK 4,000 psf
 - ALL OTHER FACILITIES 2,000 psf
 - MINIMUM FOOTING EMBEDMENT 18 INCHES
 - LATERAL EARTH PRESSURES (DRAINED):
 - ACTIVE 40 pcf
 - AT-REST 55 pcf
 - LATERAL EARTH PRESSURE (UNDRAINED):
 - ACTIVE 81 pcf
 - AT-REST 90 pcf
 - PASSIVE RESISTANCE 350 pcf
 - SLIDING FRICTION COEFFICIENT:
 - NATIVE SOILS 0.30
 - AT THE PRESTRESSED CONC TANK 0.40
2. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100% OF ITS SPECIFIED COMPRESSIVE STRENGTH.
3. GRADE TO DRAIN AWAY FROM STRUCTURES A MINIMUM GRADE OF 5% FOR A MINIMUM OF 10'-0" FROM STRUCTURE PERIMETER.
4. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AT LEAST 48 BUSINESS HOURS NOTICE FOLLOWING EXCAVATION FOR FOUNDATIONS AND PRIOR TO THE PLACEMENT OF FORMWORK, REINFORCING STEEL AND CONCRETE.

FORMWORK, SHORING AND BRACING:

1. THE STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. THE DESIGN SHOWN DOES NOT INCLUDE THE NECESSARY COMPONENTS OR EQUIPMENT FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. THE CONTACTOR IS RESPONSIBLE FOR ALL WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN. CONSTRUCTION OF SHORING AND BRACING OF FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347 "GUIDE TO FORMWORK FOR CONCRETE".

CONCRETE:

1. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AND 5,000 PSI AS SPECIFIED IN SECTION 03300 - CAST-IN-PLACE CONCRETE. NONSTRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI
2. THE CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGNS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO USE.
3. HORIZONTAL CONSTRUCTION JOINTS SHALL BE PREPARED TO EXPOSE CLEAN, SOLIDLY EMBEDDED AGGREGATE OVER THE ENTIRE JOINT INTERFACE.
4. PLACEMENT OF PIPES, CONDUITS OR OTHER EMBEDDED ITEMS IN THE CONCRETE SHALL BE IN ACCORDANCE WITH THESE DRAWINGS OR SHALL BE APPROVED BY THE ENGINEER.
5. NO ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.
6. CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
7. THE REQUIREMENTS FOR CONCRETE MIXES, PLACING, TESTING AND CURING ARE CONTAINED IN THE PROJECT SPECIFICATIONS.
8. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE II, AGGREGATE SHALL CONFORM TO ASTM C33.
9. CONTINUOUS WATERSTOP, AS SPECIFIED, SHALL BE INSTALLED IN ALL EXPANSION, CONTRACTION, CONTROL AND CONSTRUCTION JOINTS IN WALLS AND SLABS OF WATER HOLDING BASINS, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
10. THE CONCRETE JOINTS IN SLABS AND WALLS, AS SHOWN, ARE MINIMUM REQUIREMENTS. CONTRACTOR MAY SUBMIT ALTERNATE CONSTRUCTION JOINT LAYOUT DRAWINGS, SUBJECT TO SPECIFIED REQUIREMENTS, TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AT LEAST 48 BUSINESS HOURS NOTICE PRIOR TO THE PLACEMENT OF CONCRETE TO ALLOW SUFFICIENT TIME FOR INSPECTIONS AND SCHEDULING OF TESTING SERVICES.

CONCRETE REINFORCING:

1. CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE: CAST AGAINST EARTH = 3", CONCRETE SURFACES OF WATER BEARING STRUCTURES = 2", ALL OTHER CONCRETE SURFACES: #5 BAR OR SMALLER = 1 1/2", #6 BAR OR LARGER = 2".
2. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAIL 3303. WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE AS SHOWN ON THE DRAWINGS AND REFERENCED TO THIS DETAIL. TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.
3. PROVIDE A MINIMUM OF TWO VERTICAL WALL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL AS SHOWN. VERTICAL WALL BARS SHALL BE LAPPED WITH DOWELS FROM BASE SLABS AND EXTENDED INTO THE TOP FACE OF ROOF SLABS AND LAPPED WITH TOP SLAB REINFORCEMENT.
4. ALL BENDS, UNLESS OTHERWISE SHOWN, SHALL BE 90 DEGREE ACI 318 STANDARD HOOKS.
5. ALL REINFORCING BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:
- | CONCRETE DESIGN STRENGTH = 4,000 PSI # | | GRADE 60 REINFORCED STEEL | | | | | | |
|--|--|---------------------------|-------|-------|--------|-------|--------|-------|
| BAR SIZE | | #4 | #5 | #6 | #7 | #8 | #9 | #10 |
| LAP SPLICE LENGTH | | | | | | | | |
| TOP BAR * | | 2'-8" | 3'-4" | 4'-0" | 5'-10" | 6'-8" | 7'-7" | 8'-6" |
| OTHER BAR | | 2'-1" | 2'-7" | 3'-1" | 4'-6" | 5'-2" | 5'-10" | 6'-7" |
- * TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
- # WHERE 3,000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16%.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS AND CODE OF STANDARD PRACTICE.
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATION:
- HOLLOW STRUCTURAL SECTIONS: A500 GRADE B MINIMUM $F_y = 46$ ksi
 - PIPE: A53 GRADE B MINIMUM $F_y = 35$ ksi
 - WIDE FLANGE SECTIONS: A992 MINIMUM $F_y = 50$ ksi
 - PLATES, ANGLES, AND CHANNELS: A36 MINIMUM $F_y = 36$ ksi
3. OPENINGS SHALL NOT BE PLACED IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS.
4. STRUCTURAL STEEL SHALL BE FREE OF EXCESSIVE RUST, MILL SCALE OR GREASE.
5. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND SHALL CONFORM TO THE REQUIREMENTS OF CBC SECTION 2204 AND THE AMERICAN WELDING SOCIETY (AWS), LATEST EDITION, AS FOLLOWS:
- D1.1, STRUCTURAL WELDING CODE – STEEL
 - D1.2, STRUCTURAL WELDING CODE – ALUMINUM
 - D1.6, STRUCTURAL WELDING CODE – STAINLESS STEEL
6. WELDING ELECTRODES SHALL BE THE FOLLOWING TYPES: E70XX.
7. ALL FILLET WELDS SHALL BE AISC MINIMUM AND BUTT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.
8. ALL BOLTS SHALL BE HIGH-STRENGTH ASTM A325X UNLESS NOTED OTHERWISE. ASTM F1852 HIGH-STRENGTH BOLTS SHALL BE USED FOR TWIST-OFF BOLTS. ALL HIGH-STRENGTH BOLTED CONNECTIONS SHALL BE ASSUMED TO BE SNUG-TIGHTENED JOINTS. SLIP CRITICAL CONNECTIONS SHALL BE NOTED AS A325X-SC, UNLESS NOTED OTHERWISE.
9. DISTANCE FROM EDGE OF PLATE TO CENTER OF BOLT SHALL BE 1 1/2" UNO.
10. INSTALLATION AND INSPECTION OF HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST AISC SPECIFICATION, SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS (RCSC).
11. THE STRUCTURAL STEEL FABRICATOR/CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR ENGINEERS REVIEW AND APPROVAL PRIOR TO FABRICATION.

FOR PROPOSAL
PURPOSES ONLY,
NOT FOR
CONSTRUCTION



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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)

ROSEVILLE, CALIFORNIA

GENERAL

STRUCTURAL NOTES

DATE
NOVEMBER 2019

PROJECT NUMBER
17-083

DRAWING NUMBER
WD00-G-008

SHEET NUMBER
8

PREFABRICATED OPEN WEB METAL JOISTS:

1. JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE AISC AND THE STEEL JOIST INSTITUTE.
2. DESIGN OPEN WEB STEEL JOISTS FOR THE FOLLOWING LOADS:
- ROOF LIVE LOAD 20 psf
 - SUPERIMPOSED ROOF DEAD LOAD 15 psf
 - FASCIA 200 lb CONCENTRATION AT OVERHANGS
 - MECH/ELEC/PIPING 300 lb POINT LOAD AT ANY PANEL POINT (BTM CHORD)
 - NET WIND UPLIFT, TYPICAL JOIST 18 psf OUTWARD
 - ROOF OVERHANGS 27 psf OUTWARD
 - AXIAL TOP CHORD DRAG FORCE 2.41 k (ASD, TENSION AND COMPRESSION)
3. LOADS INDICATED ABOVE ARE MINIMUM DESIGN LOADS AND SHALL NOT BE CONSTRUED TO BE ALL LOADS APPLICABLE TO THE DESIGN OF THE OPEN WEB METAL JOISTS. DEAD LOADS INFERRED BY THE DRAWINGS WHICH WOULD BE INCLUDED IN COMMON PRACTICE, INCLUDING EQUIPMENT LOADS AND CONSTRUCTION LOADS, SHALL BE INCLUDED IN THE DESIGN.
4. VERIFY AND COORDINATE EQUIPMENT WEIGHTS, LOCATIONS, AND ATTACHMENT REQUIREMENTS PRIOR TO JOIST FABRICATION. EQUIPMENT SUPPLIER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE VERTICAL AND LATERAL SUPPORT OF THEIR EQUIPMENT. JOIST MANUFACTURER SHALL PROVIDE ADDITIONAL DIAGONAL WEB MEMBERS AT CONCENTRATED LOAD LOCATIONS.
5. WIND ANALYSIS FOR THE JOISTS SHALL USE THE PROVISIONS OF THE 2016 CBC AND ASCE 7-10 FOR COMPONENTS AND CLADDING.
6. JOIST SIZES AND CHORD SIZES INDICATED ON THE PLANS ARE MINIMUM ONLY. DESIGN BY THE JOIST MANUFACTURER MAY RESULT IN A LARGER SIZE. JOISTS SHALL HAVE DOUBLE ANGLE CHORDS.
7. PROVIDE CALCULATIONS, PRODUCT DATA, MATERIAL PROPERTIES, CONNECTION DETAILS, ETC. FOR ALL TYPES OF JOISTS. CALCULATIONS SHALL BE STAMPED AND SIGNED BY AN ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT.
8. JOIST BRIDGING, BOTTOM CHORD BRACING, AND OTHER ACCESSORIES SHALL BE PER THE MANUFACTURER'S STANDARDS AND AS INDICATED ON THE DRAWINGS. BRACING SHALL EXTEND TO WALLS.
9. JOIST ENDS SHALL BE DESIGNED WITH A SLOPED SEAT FOR THE LEVEL BEARING SURFACE.

MASONRY:

1. SOLID GROUT ALL CELLS UNLESS INDICATED OTHERWISE.
2. MORTAR SHALL CONFORM TO ASTM C270, TYPE S, HYDRATED AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 1,900 PSI.
3. GROUT SHALL CONFORM TO ASTM C476 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI CONTAINING NO MASONRY CEMENT.
4. CONCRETE BLOCK UNITS SHALL BE MEDIUM WEIGHT AND CONFORM TO ASTM C90 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 1,900 PSI. LINEAR SHRINKAGE SHALL NOT EXCEED 0.065 PERCENT.
5. PLACE COURSES IN RUNNING BOND PATTERN, UNLESS SPECIFICALLY INDICATED OTHERWISE.
6. REINFORCING STEEL FOR MASONRY SHALL CONFORM TO ASTM A615, GRADE 60 FOR DEFORMED BARS. LAP VERTICAL REINFORCING 48 BAR DIAMETERS WITH DOWELS AT BUILDING WALLS. LAP ALL OTHER VERTICAL BARS 72 BAR DIAMETERS. LAP VERTICAL BARS IN CANTILEVER WALLS 72 BAR DIAMETERS. STAGGER ADJACENT LAP SPLICES BY 24 INCHES, WHEN SEPARATED BY 3 INCHES OR LESS. REFERENCE STANDARD DETAIL 4002 - REINFORCED CMU WALL.
7. HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AROUND WALL CORNERS AND THROUGH WALL INTERSECTIONS AND HOOKED AT WALL ENDS AS SHOWN IN THE DETAILS.
8. VERTICAL REINFORCING SHALL BE PLACED AT CORNERS, EACH SIDE OF OPENINGS, END WALLS (INCLUDING EACH SIDE OF CONTROL JOINTS), AT A MAXIMUM SPACING INDICATED IN THE DRAWINGS, AND CONTINUOUS FROM FOUNDATION TO TOP OF WALL.
9. CMU REINFORCING AT WALL INTERSECTIONS AND CORNERS SHALL BE AS INDICATED IN STANDARD DETAIL 4001 - CMU WALL CORNERS, UNLESS INDICATED OTHERWISE.
10. CMU REINFORCING AT ALL WALL ENDS, JAMBS AND DOOR OPENINGS, WINDOW LINTELS, LOUVERS AND PENETRATIONS SHALL BE INDICATED IN STANDARD DETAIL 4004 - CMU OPENINGS GREATER THAN 3'-0" OR STANDARD DETAIL 4003 - CMU OPENINGS LESS THAN 3'-0", UNLESS INDICATED OTHERWISE.
11. CMU WALL CONTROL JOINTS SHALL BE LOCATED WHERE SHOWN ON THE DRAWINGS, AND SHALL RUN CONTINUOUS FROM THE TOP OF FOUNDATION TO TOP OF WALL OR PARAPET. ALL HORIZONTAL NON-STRUCTURAL BARS SHALL BE TERMINATED IN A STANDARD HOOK EACH SIDE OF JOINT. STRUCTURAL BARS SHALL BE CONTINUOUS THROUGH CONTROL JOINTS.

COLD-FORMED STEEL:

1. ALL MEMBERS AND ACCESSORIES SHALL BE ASTM A570 OR A446, WITH MINIMUM YIELD OF 33ksi FOR 18ga & 20ga, 50ksi FOR 14ga & 16ga, HAVING SECTION PROPERTIES AND GAUGE AS NOTED ON THE DRAWINGS.
2. FRAMING HARDWARE NOTED IS SIMPSON STRONG-TIE AND SHALL BE INSTALLED WITH CONNECTIONS SPECIFIED FOR EACH SPECIFIC DEVICE BY THE MANUFACTURER'S CURRENT CATALOG. EQUIVALENT DEVICES APPROVED BY THE ENGINEER MAY BE SUBSTITUTED.
3. INSTALLATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AS MODIFIED BY NOTES ON THE DRAWINGS.
- STAINLESS STEEL:**
1. STAINLESS STEEL MEMBERS SHALL CONFORM TO ASTM SPECIFICATIONS:
- PLATES: A240
 - BARS AND SHAPES: A276
 - FASTENERS AND FITTINGS: A320
 - DEFORMED AND PLAIN BARS: A955
2. ALL COMPONENTS SHALL BE STAINLESS STEEL TYPE 316, UNLESS SHOWN OTHERWISE.
3. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWS D1.6. WELDERS SHALL HOLD VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY WITHIN THE LAST 12 MONTHS.
4. ALL FILLET WELDS SHALL BE AWS MINIMUM AND BUTT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP), UNLESS INDICATED OTHERWISE.
5. WELDERS SHALL SUBMIT PRE-QUALIFIED WELDS AND WELDING PROCEDURES FOR REVIEW AND TO BE AVAILABLE ON PREMISES FOR REVIEW.
6. OPENINGS SHALL NOT BE PLACED IN STAINLESS STEEL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS.
7. THE STAINLESS STEEL FABRICATOR/CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF ALL STAINLESS STEEL FOR ENGINEER'S REVIEW AND APPROVAL PRIOR TO FABRICATION.

ALUMINUM:

1. ALUMINUM CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE ALUMINUM CONSTRUCTION MANUAL OF THE ALUMINUM ASSOCIATION.
2. UNLESS OTHERWISE INDICATED, STRUCTURAL ALUMINUM MEMBERS SHALL BE ALLOY 6061-T6.
3. WHERE ALUMINUM IS IN CONTACT WITH CONCRETE OR MASONRY SURFACES, CONTACT SURFACES SHALL BE COATED WITH HEAVY ALKALI-RESISTANT BITUMINOUS PAINT.
4. GRATING AND CHECKERED PLATE SHALL BE ALUMINUM, UNLESS NOTED OTHERWISE. PROVIDE FULLY BANDED ALUMINUM GRATING WITH NON-SKID SURFACE OVER AREAS INDICATED ON THE DRAWINGS. MATERIAL SHALL BE 6061-T6 OR 6063-T6 PROVIDED WITH AN ANODIZED FINISH AND MEET THE STRENGTH AND DEFLECTION REQUIREMENTS.
5. THE ALUMINUM FABRICATOR/CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF ALL ALUMINUM MEMBERS AND GRATING FOR ENGINEERS REVIEW AND APPROVAL PRIOR TO FABRICATION.

ADHESIVE ANCHORS:

1. THE ADHESIVE ANCHOR SYSTEM USED FOR POST-INSTALLED ANCHORAGE TO CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY PUBLISHED ACI 308.4, ACCEPTANCE CRITERIA FOR QUALIFICATION OF POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE AND COMMENTARY. THE ANCHOR SYSTEM SHALL BE ONE OF THE FOLLOWING:
- HILTI HIT-HY 200.
 - SIMPSON SET-XP.
2. ADHESIVE ANCHORS SHALL BE SUPPLIED AS AN ENTIRE SYSTEM INCLUDING, BUT NOT LIMITED TO, THE NEW ADHESIVE CARTRIDGE, A CLEAN MIXING NOZZLE, EXTENSION TUBE, A DISPENSING GUN, AND ALL MANUFACTURER RECOMMENDED SUPPLIES FOR PROPERLY CLEANING THE DRILLED HOLE.
3. ALL-THREAD ROD TO BE USED IN ADHESIVE ANCHOR ASSEMBLIES SHALL CONFORM TO ASTM A36, A193 (GR B7), A307, OR F1554. STAINLESS STEEL ANCHOR RODS SHALL BE TYPE 316. NUTS, WASHERS, AND OTHER HARDWARE USED WITH AN ALL-THREAD SHALL HAVE A MATERIAL OR ALLOY DESIGNATION THAT MATCHES THE ALL-THREAD MATERIAL / ALLOY.
4. REINFORCING BARS SHALL BE ASTM A615 OR A706.
5. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT THE TIME OF ADHESIVE ANCHOR INSTALLATION. CONCRETE SHALL HAVE A MINIMUM AGE OF 21 DAYS AT THE TIME OF ADHESIVE ANCHOR INSTALLATION.
6. CONCRETE TEMPERATURE AT THE TIME OF ADHESIVE ANCHOR INSTALLATION SHALL BE AT LEAST 50°F.
7. EMBEDMENT DEPTH AND ANCHOR PROJECTION FROM THE CONCRETE SURFACE SHALL BE AS SHOWN ON THE DRAWINGS FOR THE PARTICULAR ANCHOR OR GROUP OF ANCHORS BEING INSTALLED. ABSENT ANY INFORMATION, THE MINIMUM EMBEDMENT DEPTH SHALL BE 12d WHERE "d" IS THE ANCHOR DIAMETER.
8. ADHESIVE ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS IN ACCORDANCE WITH THE SPECIFICATIONS. POST-INSTALLED ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
9. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM. THESE ANCHORS ARE DESIGNATED WITH A (CERT) AFTER THE ANCHOR CALL-OUT.
10. THE INSTALLER'S QUALIFICATIONS SHALL BE SUBMITTED AND APPROVED IN ACCORDANCE WITH SECTION 05051 OF THE SPECIFICATIONS.
11. 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.
12. SPECIAL INSPECTION IS REQUIRED PER CBC SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORT. THE SPECIAL INSPECTOR MUST BE PERIODICALLY ON THE JOBSITE DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE, ANCHOR SPACING, AND CONCRETE THICKNESS.
13. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED FOR THAT PURPOSE BY THE BUILDING OFFICIAL.

EXPANSION ANCHORS:

1. EXPANSION ANCHORS SHALL BE STAINLESS STEEL HILTI KWIK BOLT TZ OR SIMPSON STRONG-BOLT 2, UNLESS NOTED OTHERWISE. INSTALL ANCHORS IN CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS AND ICC REPORT.
2. SPECIAL INSPECTION IS REQUIRED PER CBC SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORT.
3. CONTRACTOR SHALL VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESSES ARE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS PRIOR TO INSTALLING ANCHORS.
4. 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.
5. THE SPECIAL INSPECTOR MUST BE PRESENT ON THE JOB SITE DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE, ANCHOR SPACING, AND CONCRETE THICKNESS.

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CONSTRUCTION



DESIGNED J. KELLOGG	DRAWN J. MARTIN	CHECKED S. KADER	APPROVED M. FISHER
			
			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL STRUCTURAL NOTES			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-009			
SHEET NUMBER 9			

DEFERRED SUBMITTALS:

1. PER 2016 CBC 107.3.4.1 THE FOLLOWING ITEMS, DRAWINGS AND CALCULATIONS, SHALL BE STAMPED BY AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT. ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW AND APPROVAL. FOLLOWING APPROVAL BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, THE CONTRACTOR SHALL SUBMIT THE ITEMS TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE STRUCTURE. THE CONTRACTOR SHALL NOT START FABRICATION OR ERECTION PRIOR TO REVIEW AND APPROVAL BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL TIME AND EFFORT REQUIRED TO OBTAIN A BUILDING OFFICIAL REVIEW/PERMIT FOR THE FOLLOWING PREFABRICATED STRUCTURAL COMPONENTS:
- HANDRAIL AND GUARDRAIL
 - PIPE SUPPORT SYSTEM
 - OPEN WEB STEEL JOISTS
 - ANCHORAGE OF EQUIPMENT OVER 400 POUNDS

STRUCTURAL OBSERVATION:

1. STRUCTURAL OBSERVATION SHALL BE IN ACCORDANCE WITH THE 2016 CBC SECTION 1704.6 TOGETHER WITH LOCAL AND STATE AMENDMENTS.
2. THE OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR ANY REQUIRED SPECIAL INSPECTIONS OR INSPECTIONS BY THE BUILDING OFFICIAL.
3. ONSITE STRUCTURAL OBSERVATION SHALL BE PERFORMED AT LEAST ONCE A MONTH, PLUS AT COMPLETION, FOR EACH SEISMIC FORCE OR WIND FORCE RESISTING SYSTEM IDENTIFIED, INCLUDING FOUNDATIONS AND CONNECTIONS.
4. AT THE CONCLUSION OF CONSTRUCTION, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.
5. STRUCTURAL OBSERVATION SHALL INCLUDE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM FOR EACH STRUCTURE CONTAINED IN THE WORK. THE CONTRACTOR SHALL SCHEDULE AND FACILITATE STRUCTURAL OBSERVATION INCLUDING THE FOLLOWING:
- FOUNDATION REINFORCING STEEL, WATERSTOPS, EMBEDS, AND SIMILAR ITEMS PRIOR TO CONCRETE PLACEMENT.
 - WALL TO FOUNDATION CONNECTIONS PRIOR TO FORM CLOSURE FOR ALL MATERIALS.
 - ELEVATED CONCRETE SLABS PRIOR TO CONCRETE PLACEMENT.
 - MASONRY WALL REINFORCING STEEL PRIOR TO GROUTING AND PRIOR TO CLOSING OF CLEANOUTS.
 - SYSTEM CONNECTION EMBEDS PRIOR TO GROUT OR CONCRETE PLACEMENTS.
 - CONCRETE WALL TO ROOF CONNECTIONS PRIOR TO FORM CLOSURE OR OTHER COVER.
 - STEEL DECK CONNECTIONS PRIOR TO INSTALLATION OF ROOFING.

STATEMENT OF SPECIAL INSPECTIONS:

1. SPECIAL INSPECTION IS IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 110 OF THE CBC. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE TYPES OF WORK INDICATED BELOW.
2. SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT QUALIFIED PERSON WHO IS ACCEPTABLE TO THE ENGINEER AND BUILDING DEPARTMENT. THE INSPECTORS FOR EACH SYSTEM AND MATERIAL WILL BE ICC CERTIFIED OR OTHERWISE APPROVED BY THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONTRACT DOCUMENTS AND SUBMIT RECORDS OF INSPECTION.
3. INSPECTION RECORDS AND TESTING REPORTS SHALL BE SUBMITTED TO THE ENGINEER, OWNER, AND BUILDING OFFICIAL WITHIN ONE WEEK OF INSPECTION OR WITHIN ONE WEEK OF TEST COMPLETION.
4. AT THE CONCLUSION OF CONSTRUCTION, A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF DISCREPANCIES SHALL BE SUBMITTED.
5. PERIODIC SPECIAL INSPECTION IS DEFINED AS SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED
6. SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 OF THE CBC FOR THE FOLLOWING ITEMS:
- SOILS (BY CONTRACTOR PER SPECIFICATION SECTION 02300)
 - CONCRETE CONSTRUCTION
 - MASONRY CONSTRUCTION
 - STEEL CONSTRUCTION
 - OPEN-WEB STEEL JOISTS

REQUIRED VERIFICATION AND SPECIAL INSPECTION OF SOILS					
VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	REFERENCED STANDARD	2016 CBC REFERENCE
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X	SECTION 02300 - EARTHWORK	1705.6, 1804
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	X	SECTION 02300 - EARTHWORK	1705.6
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	-	X	SECTION 02300 - EARTHWORK	1705.6
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	-	SECTION 02300 - EARTHWORK	1705.6
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	X	SECTION 02300 - EARTHWORK	1705.6

REQUIRED SPECIAL INSPECTION OF CONCRETE CONSTRUCTION					
VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	REFERENCED STANDARD	2016 CBC REFERENCE
1.	INSPECTION OF REINF STEEL AND PLACEMENT	-	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
3.	INSPECTION OF ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
4.a.	INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	-	ACI 318: 17.8.2.4	-
4.b.	INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	-	X	ACI 318: 17.8.2	-
5.	VERIFYING USE OF REQUIRED DESIGN MIX	-	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM: C172, C31 ACI318: 26.4, 26.12	1908.10
7.	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9.	INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES	X	-	ACI 318: 26.10	-
11.	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS	-	X	ACI 318: 26.11.2	-
12.	INSPECTION FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 26.11.1.2(b)	-

REQUIRED SPECIAL INSPECTION OF MASONRY CONSTRUCTION, LEVEL C, RISK CATEGORY IV					
INSPECTION TASK		CONTINUOUS	PERIODIC	REFERENCE STANDARD: ACI 530/ASCE 5	REFERENCE STANDARD: ACI 530.1/ASCE 6
1.	VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	-	X	-	Art. 1.5
2.	VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
2a.	PROPORTIONS OF SITE-PREPARED MORTAR AND GROUT	-	X	-	Art. 2.1, 2.6 A
2b.	GRADE, TYPE, AND SIZE OF REINF AND ANCHOR BOLTS	-	X	Sec. 1.16	Art. 2.4, 3.4
2c.	PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS	-	X	-	Art. 3.3 B
2d.	PLACEMENT OF REINF AND CONNECTORS	X	-	Sec. 1.16	Art. 3.2 E, 3.4, 3.6 A
2e.	GROUT SPACE PRIOR TO GROUTING	X	-	-	Art. 3.2 D, 3.2 F
2f.	PLACEMENT OF GROUT	X	-	-	Art. 3.5
2g.	SIZE AND LOCATION OF STRUCTURAL ELEMENTS	-	X	-	Art. 3.3 F
2h.	TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	X	-	Sec. 1.16.4.3, 1.17.1	-
2i.	WELDING AND REINFORCING BARS	X	-	Sec. 2.1.7.7.2, 3.3.3.4 (c), 8.3.3.4 (b)	-
2j.	PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER OR HOT WEATHER	-	X	-	Art. 1.8 C, 1.8 D
3.	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	X	-	-	Art. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4
REQUIRED MINIMUM TESTS:					
1.	VERIFICATION OF fm PRIOR TO CONSTRUCTION	-	X	-	Art. 1.4 B
2.	VERIFICATION OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR, GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT AS DELIVERED TO THE PROJECT SITE				
3.	VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT	-	X	-	Art. 1.5 B.1.b.3

REQUIRED SPECIAL INSPECTION OF OPEN-WEB STEEL JOISTS			
VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC
1.a.	END CONNECTIONS - WELDED OR BOLTED	-	X
1.b.	BRIDGING - HORIZONTAL OR DIAGONAL	-	X
1.b.1	STANDARD BRIDGING	-	X
1.b.2	BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1	-	X

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STATEMENT OF SPECIAL INSPECTIONS CONTINUED:

REQUIRED SPECIAL INSPECTION OF STEEL CONSTRUCTION (ANSI/AISC 360-10)		
QUALITY CONTROL (QC) INSPECTION TASKS SHALL BE PERFORMED BY THE FABRICATOR'S OR ERECTOR'S QUALITY CONTROL INSPECTOR (QCI). QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT. QA INSPECTION OF ERECTED STEEL SYSTEMS SHALL BE MADE AT THE PROJECT SITE. THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL REVIEW THE MATERIAL TEST REPORTS AND CERTIFICATIONS FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. O = OBSERVE THESE ITEMS ON A RANDOM BASIS. P = PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.		
INSPECTION TASKS PRIOR TO WELDING	QC	QA
1. WELDING PROCEDURE SPECIFICATIONS AVAILABLE	P	P
2. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
3. MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
4. WELDER IDENTIFICATION SYSTEM	O	O
5. FIT-UP OF GROOVE WELDS	O	O
JOINT PREPARATION		
DIMENSIONS		
CLEANLINESS		
TACKING		
BACKING TYPE		
6. CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
7. FIT-UP OF FILLET WELDS	O	O
DIMENSIONS		
CLEANLINESS		
TACKING		
8. CHECK WELDING EQUIPMENT	O	-
INSPECTION TASKS DURING WELDING	QC	QA
1. USE OF QUALIFIED WELDERS	O	O
2. CONTROL AND HANDLING OF WELDING	O	O
PACKAGING		
EXPOSURE CONTROL		
3. NO WELDING OVER CRACKED TACK WELDS	O	O
4. ENVIRONMENTAL CONDITIONS	O	O
WIND SPEED WITHIN LIMITS		
PRECIPITATION AND TEMPERATURE		
5. WPS FOLLOWED		
SETTINGS ON WELDING EQUIPMENT	O	O
TRAVEL SPEED		
SELECTED WELDING MATERIALS		
SHIELDING GAS TYPE/FLOW RATE		
PREHEAT APPLIED		
INTERPASS TEMPERATURE MAINTAINED	O	O
PROPER POSITION		
6. WELDING TECHNIQUES		
INTERPASS AND FINAL CLEANING		
EACH PASS WITHIN PROFILE LIMITATIONS	O	O
EACH PASS MEETS QUALITY REQUIREMENTS		
INSPECTION TASKS AFTER WELDING	QC	QA
1. WELDS CLEANED	O	O
2. SIZE, LENGTH AND LOCATION OF WELDS	P	P
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA	P	P
CRACK PROHIBITION		
WELD/BASE METAL FUSION		
CRATER CROSS SECTION		
WELD PROFILES		
WELD SIZE		
UNDERCUT		
POROSITY		
4. ARC STRIKES	P	P
5. k-AREA	P	P
6. BACKING AND WELD TABS REMOVED	P	P
7. REPAIR ACTIVITIES	P	P

8. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P
INSPECTION TASKS PRIOR TO BOLTING	QC	QA
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE	O	O
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O
INSPECTION TASKS DURING BOLTING	QC	QA
1. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
4. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O
INSPECTION TASKS AFTER BOLTING	QC	QA
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P

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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL
STRUCTURAL LEGEND
SPECIAL INSPECTION TABLES

DATE
NOVEMBER 2019

PROJECT NUMBER
17-083

DRAWING NUMBER
WD00-G-011

SHEET NUMBER
11

1 PIPING SYMBOLS			2 PUMPS			3 ACTUATORS			4 MISC FITTING SYMBOLS			5 PIPING DESIGNATIONS			6																																																																																																																																																																																																																			
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NOTES: - ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS AND THE PIPING SCHEDULE. - SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS. GENERAL PIPING NOTES: - LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS. MINIMUM COVER SHALL BE 36 INCHES UNLESS OTHERWISE SHOWN. - SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE. - LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED. - APPROPRIATE STANDARD WALL PIPE DETAIL SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL, AS NOTED ON DRAWINGS OR APPROVED BY ENGINEER. - ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, BLOCKS, OR ANCHORS, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED. - SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. ALL OF THE VARIOUS APPLICATIONS ARE NOT NECESSARILY USED IN THE PROJECT. - ALL PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, GROOVED END, OR SCREWED PIPING, SHALL BE PROVIDED WITH TRUST PROTECTION AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED. SEE THRUST DETAILS AND NOTES ON DRAWINGS. - NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS ARE ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT. - THE CONTRACTOR FOR THIS PROJECT IS RESPONSIBLE FOR COORDINATING AND PERFORMING THE CONNECTION OF THE PIPING AND ASSOCIATED APPURTENANCES INSTALLED UNDER THIS CONTRACT TO BOTH THE EXISTING PIPING AND FACILITIES. - PRIOR TO SUBMITTING PIPING DRAWINGS FOR ANY NEW PIPE THAT IS TO CONNECT TO OR CROSS AN EXISTING PIPE OR STRUCTURE, THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPE OR STRUCTURE TO VERIFY ITS EXACT LOCATION, SIZE, MATERIALS, AND INVERT ELEVATIONS. - COMPONENTS SHOWN WITH A DOUBLE ASTERISK (**) ARE PART OF A PACKAGE SYSTEM. SEE EQUIPMENT SPECIFICATIONS.			DESIGNED J.RESS DRAWN C.WORRALL CHECKED S.KADER APPROVED M.FISHER CITY OF ROSEVILLE CALIFORNIA WATERWORKS ENGINEERS 2280 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-785-2888 CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA GENERAL MECHANICAL LEGEND DATE NOVEMBER 2019 PROJECT NUMBER 17-083 DRAWING NUMBER WD00-G-012 SHEET NUMBER 12 FOR PROPOSAL PURPOSES ONLY, NOT FOR CONSTRUCTION PROFESSIONAL ENGINEER JOSEPH A. RESS No. C66413 CIVIL STATE OF CALIFORNIA 11-14-19		
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PIPE SCHEDULE:

FLOW STREAM I.D.	DESCRIPTION	SERVICE	EXPOSURE	SIZE RANGE	MATERIAL	JOINT TYPE	TEST PRESSURE	LINING	COATING SYSTEM	NOTES
CD	Condensate Drain	Water	All	All	PVC3	SLV	None	None	None	
DFR	Diesel Fuel Return	Fuel	All	All	BSP	THD	150 psi	None	No. 300	
DFS	Diesel Fuel Supply	Fuel	All	All	BSP	THD	150 psi	None	No. 300	
DR	Drain	Water	Buried	All	PVC3	SLV	Gravity	None	None	
			Exposed	<2"	PVC1	SLV	Gravity	None	None	
				2-3"	PVC3					
				>3"	DIP	FLG		CM	No. 300	
LDP	Leak Detection, Perforate	Water	All	All	HDPE2	PO	Gravity	None	None	
LDS	Leak Detection, Solid Wall	Water	All	All	HDPE1	PO	Gravity	None	None	
OF	Overflow	Water	All	All	WSSTP	WLD/FLG	None	None	None	Type 304
PD	Pumped Drain	Water	All	2"	PVC1	SLV	25 psi	None	None	
				>2"	WSP	WLD			No. 300	
PW	Potable Water	Water	Buried	<4"	COP	SLD	150 psi	None	PE Wrap	
				>=4"	DIP	PRJ/RMJ		CM	Asphaltic	Note 1
			Exposed	<4"	COP	SLD		None	None	
				>=4"	WST	PRJ		Fusion Epoxy	Fusion Epoxy	
			Submerged	All	WSST	WLD/FLG		None	None	
RW	Recycled Water	Water	All	All	PVC1	SLV	50 psi	None	Purple Pipe	
SA	Sample	Water	All	All	COP	SLD	150 psi	None	None	
SD	Storm Drain	Water	All	All	HDPE1	PO	Gravity	None	None	
SHC	Sodium Hypochlorite 12.5	Chemical	All	1/2"x2"	CHE	COMP	150 psi	None	None	Note 2
				1/2", 1", 2"	CPVC	SLV	150 psi	None	None	
SS	Sanitary Sewer	Sewage	All	All	VCP	PO	Gravity	None	None	Note 3
SS	Sanitary Sewer	Sewage	All	All	DIP	PRJ	Gravity	None	None	Note 3
UD	Underdrain	Water	All	All	HDPE3	PO	Gravity	None	None	
V	Vent	Air/Water	All	All	PVC3	SLV	None	None	None	
VTR	Vent Through Roof	Air	All	All	CPVC	SLV	None	None	None	
WDP	Wall Drain, Perforated	Water	All	All	HDPE2	PO	Gravity	None	None	
WDS	Wall Drain, Solid Wall	Water	All	All	HDPE1	PO	Gravity	None	None	

1. Buried PW piping 4-inches and larger shown as ductile iron with proprietary joints and mechanical joint fittings. At Contractor's option, buried PW piping 4-inches and larger may be cement lined and coated welded steel pipe (WSP) in lieu of ductile iron pipe. If WSP is selected, wall thimbles shown at structures as MxFLG shall be changed to FLGxFLG.
2. Provide rigid CPVC piping for sodium hypochlorite tank fill and discharge piping up to transition to tubing, as shown on the Drawings.
3. SS to be VCP or DIP at contractor's option, unless explicitly called out as DIP.

GENERAL NOTES:

1. This schedule is provided for the convenience of the CONTRACTOR. Some flow streams may be shown on the drawings, but not listed here.
2. Pipe Materials:

BSP – Black Steel Pipe

CHE – Chemical Tubing and Pipe System

COP – Copper Pipe

CPVC – Solvent Welded CPVC Pipe

DIP – Ductile Iron Pipe

HDPE1 – High Density Polyethylene Dual Wall Solid Drainage Pipe

HDPE2 – High Density Polyethylene Dual Wall Perforated Drainage Pipe

PVC1 – Solvent Welded Polyvinyl Chloride Pipe

PVC2 – PVC Pressure Pipe

PVC3 – Polyvinyl Chloride Drain, Waste and Vent Pipe

PVC4 – PVC Sewer Pipe

SSTP – Stainless Steel Pipe

SSTT – Stainless Steel Tubing

WSP – Welded Steel Pipe

WSSTP – Welded Stainless Steel Pipe

VCP - Vetrified Clay Pipe

4. Lining Systems:

CM – Cement Mortar

5. Coating Systems as specified in Section 09900.

5. Pipe colors shall be per City of Roseville Process Control Standards.
3. Joint Types

FLG – Flanged

GRV – Grooved End

MJ – Mechanical Joint

PO – Push On

PRJ – Proprietary Restrained Mechanical Joint

RMJ – Restrained Mechanical Joint

S – Swagelok stainless steel compression type

SLV – Solvent Welded Socket

SLD – Soldered Socket

THR – Threaded

WLD – Butt Welded
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CONSTRUCTION
-
- FILENAME: WD5400G013.dgn

PLOT DATE: 11/7/2019 1:57:37 PM

HEATING, VENTILATING AND
AIR CONDITIONING SYMBOLS

	WALL REGISTER OR GRILLE (SUPPLY) WSG, WSR, HTR
	CEILING DIFFUSER OR REGISTER (SUPPLY) CD, RCD, SD
	CEILING REGISTER OR GRILLE (RETURN AND EXHAUST) CG, CR, PCR
	WALL REGISTER OR GRILLE (RETURN AND EXHAUST) EG
	FLOOR GRILLE (SUPPLY AND RETURN) FG
	TURNING VANES
	90° TAKEOFF
	SOUND ATTENUATED DUCT
	FIRE DAMPER
	SPLITTER DAMPER
	MANUAL OPPOSED-BLADE DAMPER
	MANUAL BUTTERFLY DAMPER
	MOTORIZED DAMPER
	SMOKE DAMPER
	FLEXIBLE CONNECTION
	FLEXIBLE DUCTWORK
	INCLINED RISE IN DUCT
	INCLINED DROP IN DUCT
	SUPPLY DUCT (SECTION)
	INTAKE, RETURN, OR EXHAUST DUCT (SECTION)
	THERMOSTAT
	IONIZATION SMOKE DETECTOR
	STATIC PRESSURE SENSOR
	ENVIRONMENT CONTROL PANEL
	VIBRATION ELIMINATOR
	200 SCFM
	MOTORIZED VALVE
	WALL LOUVER (SUPPLY OR EXHAUST)
	MOTORIZED WALL LOUVER (SUPPLY OR EXHAUST)

BUILDING SERVICES SYMBOLS

	HOSE RACK (TYPE AS INDICATED)
	EYEWASH
	SAFETY SHOWER
	EYEWASH WITH SAFETY SHOWER
	X = F - FLOOR CLEANOUT D - DECK CLEANOUT W - WALL CLEANOUT
	HUB DRAIN Y-T WITH TRAP Y-P WITH PRIMED TRAP
	FLOOR DRAIN X - NO. IN SPECS Y - T WITH TRAP Y - P WITH PRIMED TRAP
	OVERFLOW DRAIN
	ROOF DRAIN
	AREA DRAIN X = NO. IN SPECS Y = T WITH TRAP Y = P WITH PRIMED TRAP
	OVERFLOW NOZZLE

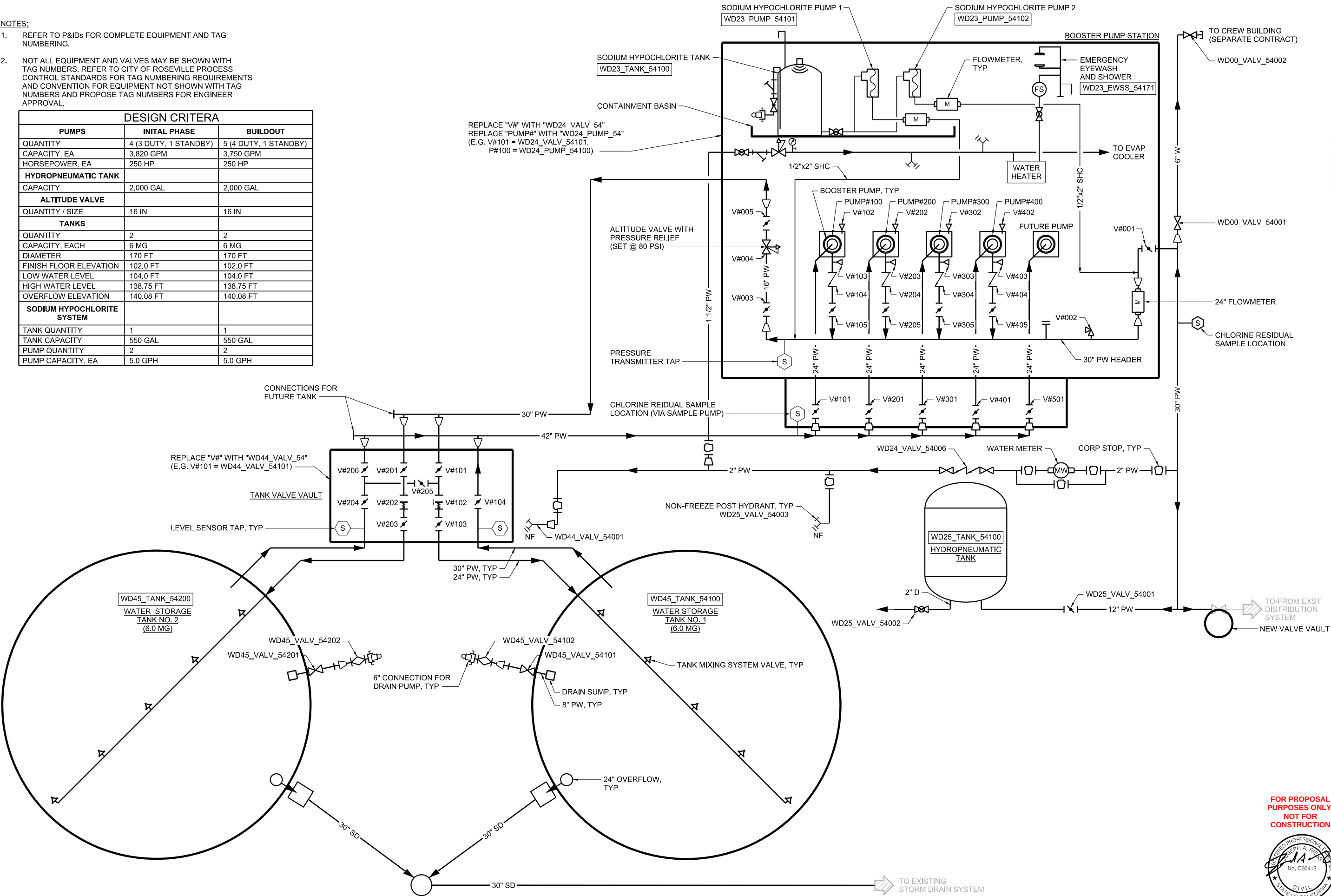
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CONSTRUCTION



DESIGNED J. RIESS	DRAWN J. MARTIN	CHECKED S. KADER	APPROVED M. FISHER
WATERWORKS ENGINEERS 2280 Douglas Blvd. Suite 105 • Roseville, CA 95661 • 916-785-2888			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL BUILDING SERVICES LEGEND			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-014			
SHEET NUMBER 14			

- NOTES:
1. REFER TO P&IDs FOR COMPLETE EQUIPMENT AND TAG NUMBERING.
2. NOT ALL EQUIPMENT AND VALVES MAY BE SHOWN WITH TAG NUMBERS. REFER TO CITY OF ROSEVILLE PROCESS CONTROL STANDARDS FOR TAG NUMBERING REQUIREMENTS AND CONVENTION FOR EQUIPMENT NOT SHOWN WITH TAG NUMBERS AND PROPOSE TAG NUMBERS FOR ENGINEER APPROVAL.

DESIGN CRITERIA		
PUMPS	INITAL PHASE	BUILDOUT
QUANTITY	4 (3 DUTY, 1 STANDBY)	5 (4 DUTY, 1 STANDBY)
CAPACITY, EA	3,820 GPM	3,750 GPM
HORSEPOWER, EA	250 HP	250 HP
HYDROPNEUMATIC TANK		
CAPACITY	2,000 GAL	2,000 GAL
ALTITUDE VALVE		
QUANTITY / SIZE	16 IN	16 IN
TANKS		
QUANTITY	2	2
CAPACITY, EACH	6 MG	6 MG
DIAMETER	170 FT	170 FT
FINISH FLOOR ELEVATION	102.0 FT	102.0 FT
LOW WATER LEVEL	104.0 FT	104.0 FT
HIGH WATER LEVEL	138.75 FT	138.75 FT
OVERFLOW ELEVATION	140.08 FT	140.08 FT
SODIUM HYPOCHLORITE SYSTEM		
TANK QUANTITY	1	1
TANK CAPACITY	550 GAL	550 GAL
PUMP QUANTITY	2	2
PUMP CAPACITY, EA	5.0 GPH	5.0 GPH



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CONSTRUCTION



DESIGNED
J. RIOS

DRAWN
J. RIOS

CHECKED
S. KADER

APPROVED
M. FISHER

CITY OF ROSEVILLE
CALIFORNIA

WATERWORKS
ENGINEERS

2280 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-765-2888

CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)

ROSEVILLE, CALIFORNIA

GENERAL

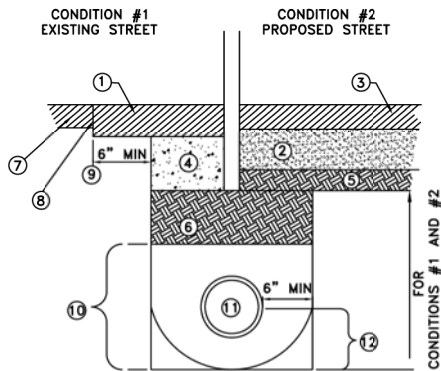
PROCESS FLOW DIAGRAM
AND DESIGN CRITERIA

DATE
NOVEMBER 2019

PROJECT NUMBER
17-083

DRAWING NUMBER
WD00-G-015

SHEET NUMBER
15



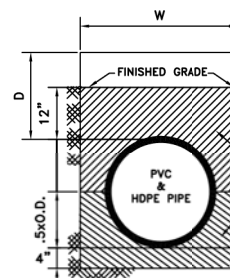
NOTES:

- ASPHALT CONCRETE PATCH, 6 INCHES THICK OR THAT OF EXISTING, WHICHEVER IS MORE.
- AGGREGATE BASE OR AGGREGATE BASE AND SUBBASE SECTION PER APPROVED PLAN. 95% RELATIVE COMPACTION.
- ASPHALT CONCRETE PAVEMENT SECTION PER APPROVED PLANS.
- 24 INCHES OF TWO SACK CONCRETE SLURRY PER CALTRANS STANDARD SPEC 19-3.062
- SIX INCHES OF SUBGRADE, PROCESSED TO 95% RELATIVE COMPACTION.
- NATIVE BACKFILL MATERIAL, 90% RELATIVE COMPACTION.
- EXISTING STREET PAVEMENT.
- TACK COAT ON ALL VERTICAL PAVEMENT SAWCUTS.
- TYPICAL EACH SIDE OF TRENCH IN EXISTING STREET.
- FOR PIPE EMBEDMENT SEE TB-2 FOR PLASTIC STORM DRAIN, W-1 FOR WATER PIPE, SS-1 FOR SANITARY SEWER PIPE, OF THESE CONSTRUCTION STANDARDS.
- PIPE
- FOR REINFORCED CONCRETE PIPE EMBEDMENT: PLACE 1/2 INCH CRUSHED ROCK UP TO SPRING LINE WITH MINIMUM OF FOUR (4) INCHES OF 1/2 INCH CRUSHED ROCK BEDDING. MAINTAIN MINIMUM OF SIX (6) INCHES OF CLEARANCE BETWEEN THE PIPE AND THE TRENCH WALL.
- ALTERNATE TRENCH BOTTOM. THE DIAMETER OF THE ALTERNATE ROUNDED TRENCH BOTTOM SHALL EQUAL THE WIDTH OF THE TRENCH.

NOTE: IN CONDITION #1, TRENCH CUT FEE MAY APPLY PER CITY ORDINANCE.

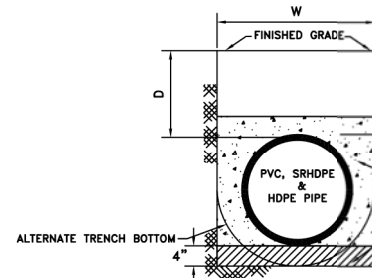
RHON HERNDON
RHON HERNDON
PUBLIC WORKS DIRECTOR

CITY OF ROSEVILLE DEPARTMENT OF PUBLIC WORKS	
UTILITY TRENCH PAVING BACKFILL AND EMBEDMENT	
SCALE: NONE REVISED: JANUARY 1, 2010 DRAWN BY: J MCKINNEY APPROVED BY: RHON HERNDON	TB-1



DETAIL A
SRHDPE, PVC & HDPE
PIPE ONLY (NONRIGID)

IMPORTED MATERIAL: LESS THAN 10% PASSING No. 8 SIEVE; 100% PASSING 1/2" SIEVE FOR ALL PIPE (3/8" CRUSHED ROCK) OR 85 TO 90% PASSING 1/2" SIEVE AND 100% PASSING 3/4" SIEVE. (1/2" CRUSHED ROCK)



DETAIL B
SRHDPE, PVC & HDPE
PIPE ONLY (NONRIGID)

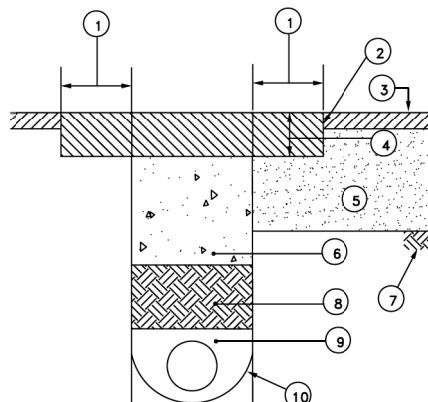
SLURRY BACKFILL PER CAL TRANS SEC. 19-3.062
IMPORTED MATERIAL: LESS THAN 10% PASSING No. 8 SIEVE; 100% PASSING 1/2" SIEVE FOR ALL PIPE (3/8" CRUSHED ROCK) OR 85 TO 90% PASSING 1/2" SIEVE AND 100% PASSING 3/4" SIEVE. (1/2" CRUSHED ROCK)

NOTES:

- TRENCH WIDTH:
PIPE SIZE 30" AND UNDER OVER 30"
TRENCH WIDTH = W
O.D. + 16"
O.D. x 1.25 + 12"
- HIGH DENSITY POLYETHYLENE (HDPE) STORM DRAIN PIPE SHALL BE TYPE "S" AS DESCRIBED IN SECTION 64 OF THE CALTRANS STANDARD SPECIFICATIONS. PIPE INSTALLATION AND PIPE CONFIGURATION SHALL BE AS SHOWN ON THIS DRAWING AND AS DESCRIBED IN THESE GENERAL NOTES. JOINTS SHALL BE SEALED WITH A RUBBER GASKET. GASKETS SHALL MEET THE REQUIREMENT OF ASTM F-477.
- FILL HEIGHTS "D" FOR NONRIGID (PVS & HDPE) DRAIN PIPE SHALL BE A MINIMUM OF 36 INCH AND A MAXIMUM OF 15 FEET, AND (SRHDPE) SHALL HAVE A MINIMUM OF ONE FOOT (IN ADDITION TO THE ROADWAY STRUCTURAL SECTION) AND A MAXIMUM OF 30 FEET FROM THE TOP OF PIPE FINISH GRADE. (SEE DETAILS A & B FOR TRENCH BACKFILL REQUIREMENTS. CONTRACTOR MAY USE EITHER DETAIL A OR B.)
- PIPE MATERIAL CHANGES BETWEEN STRUCTURES ARE PROHIBITED. OUTFALL/INLET RUNS AND STUBS INTO FUTURE SITES SHALL BE RCP. (SEE SECTION 101-6 D.I.C. AND 101-8 D.4. FOR CONCRETE PIPE APPLICATION.)
- REFER TO TB-1 FOR TREATMENT OF THE TOP PORTION OF THE TRENCH WITHIN THE CITY STREET.
- THE DIAMETER OF THE ALTERNATE, ROUNDED TRENCH BOTTOM SHALL BE EQUAL TO THE WIDTH OF THE TRENCH.

RHON HERNDON
RHON HERNDON
PUBLIC WORKS DIRECTOR

CITY OF ROSEVILLE DEPARTMENT OF PUBLIC WORKS	
HDPE, SRHDPE PVC STORM DRAIN PIPE ONLY (NONRIGID) BEDDING AND BACKFILL	
SCALE: NONE REVISED: JANUARY 1, 2010 DRAWN BY: J MCKINNEY APPROVED BY: RHON HERNDON	TB-2



NOTES:

- 18 INCH KEY OUTSIDE TRENCH LINE
- COAT ALL EXISTING VERTICAL FACES WITH ASPHALTIC EMULSION (TACK) PRIOR TO PAVING
- EXISTING AC PAVING
- PATCH SHALL BE THICKNESS OF EXISTING SECTION PLUS 2 1/2 INCHES. PER CITY TRENCH CUT ORDINANCE (6 INCH MINIMUM THICKNESS).
- AGGREGATE BASE/SUBBASE: RECOMPACT DISTURBED SURFACE AREAS TO 95%.
- TWO FEET OF TWO SACK CONCRETE SLURRY PER CALTRANS STANDARD SPECIFICATION 19-3.062
- NATIVE SOIL
- NATIVE SOIL TO BE PROCESSED TO 90% RELATIVE COMPACTION.
- FOR PIPE EMBEDMENT, SEE THE FOLLOWING CONDITIONS:
a. TB-2 FOR PLASTIC STORM DRAIN PIPE
b. W-1 FOR WATER PIPE
c. SS-1 FOR WASTE WATER PIPE
d. FOR REINFORCED CONCRETE PIPE, PLACE 1/2 CRUSHED ROCK UP TO SPRING LINE WITH A MINIMUM OF FOUR INCHES OF BEDDING BELOW PIPE. MAINTAIN A MINIMUM OF SIX INCHES OF CLEARANCE BETWEEN THE PIPE AND THE TRENCH WALL.
- ALTERNATE TRENCH BOTTOM. THE DIAMETER OF THE ALTERNATE, ROUNDED TRENCH BOTTOM SHALL EQUAL THE WIDTH OF THE TRENCH.

NOTE: THIS DETAIL APPLIES TO UTILITY TRENCHES IN WHICH TRENCH CUT FEES WERE NOT PAID BY THE APPLICANT, OR AS SPECIFIED BY THE ENGINEER.

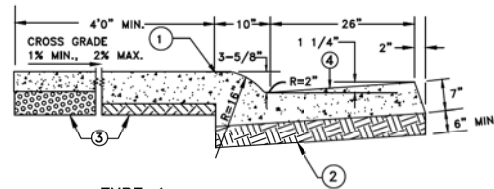
RHON HERNDON
RHON HERNDON
PUBLIC WORKS DIRECTOR

CITY OF ROSEVILLE DEPARTMENT OF PUBLIC WORKS	
DEEP CUT "T" PATCH RECONSTRUCTION	
SCALE: NONE REVISED: JANUARY 1, 2010 DRAWN BY: J MCKINNEY APPROVED BY: RHON HERNDON	TB-3

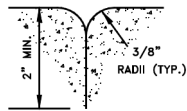
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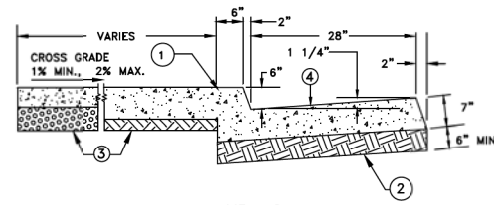
DESIGNED M. FISHER	DRAWN J. MARTIN	CHECKED S. KADER	APPROVED M. FISHER
CITY OF ROSEVILLE CALIFORNIA			
WATERWORKS ENGINEERS 2200 Douglas Blvd, Suite 105 Roseville, CA 95661 • 916-793-2888			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL STANDARD DETAILS 1			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-020			
SHEET NUMBER 16			



TYPE 1
ROLLED CURB & GUTTER



TOOL JOINT
(TYP.)
SEE SECTION 71-4.C.3.
(CONSTRUCTION STANDARDS)



TYPE 2
VERTICAL CURB & GUTTER
(OPTION 1)

LEGEND:

1. SCORE MARK, 1/8" DEEP
2. SUBGRADE PROCESSED TO 95% RELATIVE COMPACTION.
3. ALL SIDEWALK HAS OPTION OF 4" CONCRETE ON 4" AGGREGATE BASE, IN LIEU OF 6" CONCRETE ON NATIVE.
4. GUTTER PAN CROSS SLOPE NOT TO EXCEED 5% MAX, OR BE LESS THAN 4%.

NOTES:

- A. ALL CONCRETE SHALL BE "MINOR CONCRETE" AS DEFINED IN SECTION 71-5B OF THESE STANDARDS.
- B. SEE SECTION 71-4 C OF THE CITY CONSTRUCTION STANDARDS FOR FINISH AND JOINTS.
- C. ALL ADJOINING SIDEWALK, CURB AND GUTTER SHALL BE POURED MONOLITHIC.

MARC STOUT
CITY ENGINEER

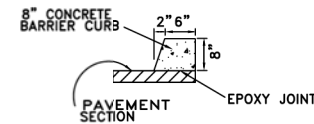


DEVELOPMENT SERVICES
DEPARTMENT

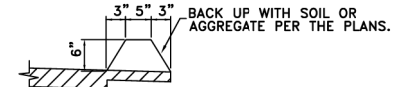
TYPE 1 AND 2 CURB AND
GUTTER WITH SIDEWALK

SCALE: NONE
REVISED: JANUARY 1, 2016
DRAWN BY: J HENDRIX
APPROVED BY: MARC STOUT

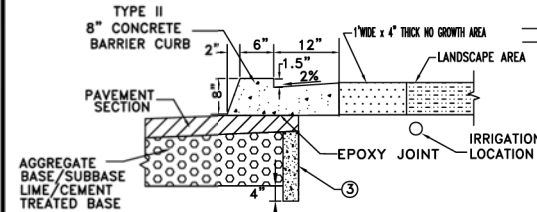
ST-17



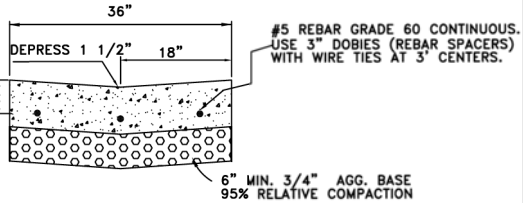
TYPE 1 BARRIER CURB
(ADJACENT TO UNIRRIGATED AREAS)



STATE "TYPE A" HIGH DIKE
(ASPHALT CONCRETE DIKE)



TYPE 2 BARRIER CURB
(ADJACENT TO IRRIGATED AREAS)



36 INCH VALLEY GUTTER
(ALLEYS ONLY)

RHON HERNDON
PUBLIC WORKS DIRECTOR



DEPARTMENT OF
PUBLIC WORKS

BARRIER CURBS
AND
VALLEY GUTTERS

SCALE: NONE
REVISED: JANUARY 1, 2013
DRAWN BY: J MCKINNEY
APPROVED BY: RHON HERNDON

ST-18

NOTES:

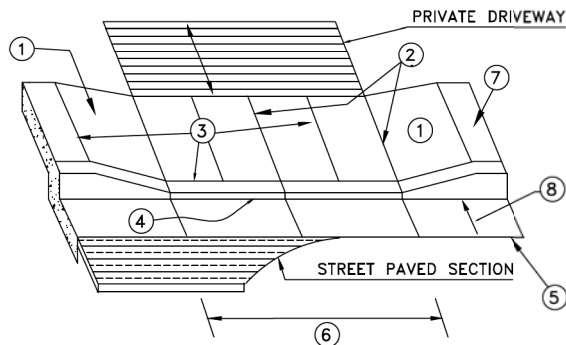
1. ALL CONCRETE SHALL BE "MINOR CONCRETE" AS DEFINED IN SECTION 71-5B OF THESE STANDARDS UNLESS OTHERWISE NOTED.
2. TOOL JOINTS" SEE DETAIL ST-17.
3. 4" THICK CONCRETE SLURRY CUTOFF WALL REQUIRED ADJACENT TO TURFED MEDIANS, AS ALLOWED PER THE CITY'S WATER EFFICIENT LANDSCAPE ORDINANCE.

LEGEND:

1. THE MAX. GRADE IS 5% IF LONGITUDINAL STREET GRADE ALLOWS. THE MAX. TRANSITION TO OBTAIN 5% IS 15 FEET. OTHERWISE, A MAX. GRADE OF 8.33% SHALL BE OBTAINED BETWEEN 15 AND 25 FEET. 25 FEET IS THE MAX. TRANSITION REQUIRED/ALLOWED, REGARDLESS OF LONGITUDINAL STREET GRADE.
2. "TOOL JOINT" SEE DETAIL ST-17.
3. SCORE MARKS EVERY 4 FEET FOR 4 FOOT SIDEWALK AND 5 FEET FOR 5 FOOT SIDEWALK ETC.
4. 1 INCH HIGH LIP AT 45 DEGREE BATTER.
5. "TYPE 2"(ST-17) CURB AND GUTTER.
6. DRIVEWAY WIDTH PER THE APPROVED PLAN. (MIN. 25', MAX 40' FOR COMMERCIAL 32' FOR RESIDENTIAL)
7. ADJACENT SIDEWALK.
8. GUTTER PAN CROSS SLOPE NOT TO EXCEED 5% MAX.

NOTES:

- A. SIDEWALK CROSS GRADE THROUGH THE ENTIRE DRIVEWAY SHALL BE 1% MINIMUM, 2% MAXIMUM.
- B. FOR COMMERCIAL DRIVEWAY: SIDEWALK, APRON AND GUTTER PAN SHALL BE 8" THICK WITH NO. 4, GRADE 60 REBAR ON 18" CENTERS EACH WAY. USE 3" DOBIES (REBAR SPACERS) AT 3' INTERVALS. FOR RESIDENTIAL: WALK, APRON AND GUTTER PAN SHALL BE 7" THICK NONREINFORCED. FOR COMMERCIAL AND RESIDENTIAL SIDEWALK, APRON AND GUTTER PAN SHALL BE PLACED MONOLITHICALLY. ALL CONCRETE SHALL BE "MINOR CONCRETE" AS DEFINED IN SECTION 71-5B OF THESE STANDARDS.
- C. BASE FOR CONCRETE SHALL BE NATIVE SOIL OR CLASS 2, 3/4 INCH AGGREGATE BASE, EITHER PROCESSED 6 INCHES THICK TO 95% RELATIVE COMPACTION.
- D. SEE SECTION 71-4 C.6. OF THE CONSTRUCTION STANDARDS FOR AC PATCH ADJACENT TO GUTTER LIP.
- E. FROM 8 TO 20 FEET BACK OF SIDEWALK, RAISE PRIVATE PAVING/LANDSCAPING TO A MINIMUM HEIGHT OF THE HIGHEST TOP OF CURB ELEVATION AT THE DRIVEWAY.



MARC STOUT
CITY ENGINEER



DEVELOPMENT SERVICES
DEPARTMENT

"TYPE S"
DRIVEWAY APRON

SCALE: NONE
REVISED: JANUARY 1, 2016
DRAWN BY: J HENDRIX
APPROVED BY: MARC STOUT

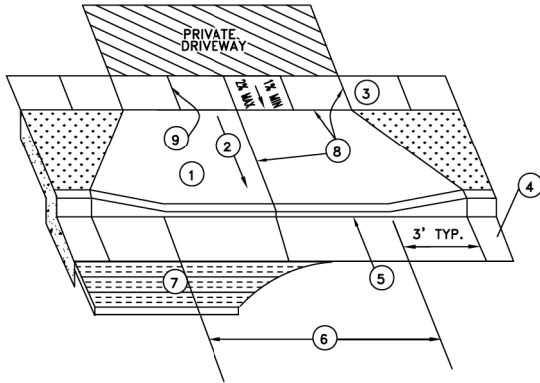
ST-20

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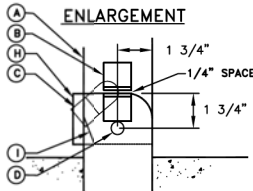
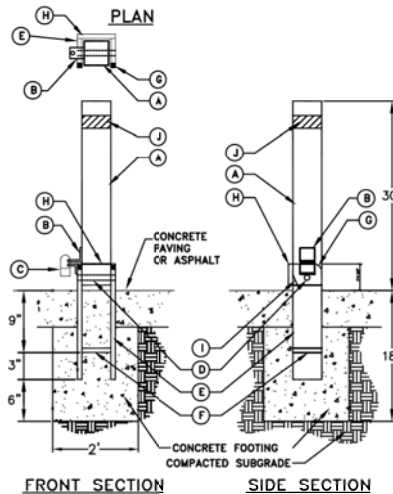
NOTES:

1. FOR COMMERCIAL DRIVEWAY: SIDEWALK, APRON AND GUTTER PAN SHALL BE 8 INCHES THICK WITH NO. 4, GRADE 60 REBAR ON 18 INCH CENTERS EACH WAY. USE 3 INCH DOBIES (REBAR SPACERS) AT 3 FOOT INTERVALS. FOR RESIDENTIAL: WALK, APRON AND GUTTER PAN SHALL BE 7 INCHES THICK, NONREINFORCED. FOR COMMERCIAL AND RESIDENTIAL, SIDEWALK, APRON AND GUTTER PAN SHALL BE PLACED MONOLITHICALLY. ALL CONCRETE SHALL BE "MINOR CONCRETE" AS DEFINED IN SECTION 71-5B OF THESE STANDARDS.
2. STRAIGHT GRADE FROM SIDEWALK TO LIP AT FLOWLINE.
3. ADJACENT SIDEWALK: IF EXISTING SIDEWALK EXCEEDS 2% CROSS GRADE, REPLACE 5 FEET ADDITIONAL EXISTING AND TRANSITION TO ACCOMMODATE 2% MAXIMUM CROSS GRADE IN SIDEWALK WITHIN DRIVEWAY.
4. "TYPE 2"(ST-17) CURB AND GUTTER: IF EXISTING IS NOT "TYPE 2" SECTION, MATCH THE EXISTING GUTTER PAN UNLESS OTHERWISE REQUIRED PER THE APPROVED PLAN.
5. 1 INCH HIGH LIP AT 45 DEGREE BATTER.
6. DRIVEWAY WIDTH PER THE APPROVED PLAN. MINIMUM 25' MAXIMUM OF 40' FOR COMMERCIAL, 32' FOR RESIDENTIAL.
7. SEE SECTION 71-4 C.6. OF THE CONSTRUCTION STANDARDS FOR AC PATCH ADJACENT TO GUTTER LIP.
8. "TOOL JOINT" SEE DETAIL ST-17.
9. SCORE MARKS EVERY FOUR FEET FOR FOUR FOOT SIDEWALK AND FIVE FEET FOR FIVE FOOT SIDEWALK, ETC.
10. SUBGRADE BASE FOR CONCRETE WITHIN CITY RIGHT-OF-WAY SHALL BE 6 INCHES OF NATIVE SOIL, OR CLASS II, 3/4 INCH AGGREGATE BASE, BOTH AT 95% RELATIVE COMPACTION.



RH Herndon
RHON HERNDON
PUBLIC WORKS DIRECTOR

	DEPARTMENT OF PUBLIC WORKS
"TYPE D" DRIVEWAY APRON	
SCALE: NONE REVISED: JANUARY 1, 2013 DRAWN BY: J MCKINNEY APPROVED BY: RHON HERNDON	ST-21



RH Herndon
RHON HERNDON
PUBLIC WORKS DIRECTOR

	DEPARTMENT OF PUBLIC WORKS
BOLLARD	
SCALE: NONE REVISED: JANUARY 1, 2013 DRAWN BY: J MCKINNEY APPROVED BY: RHON HERNDON	ST-38

LEGEND

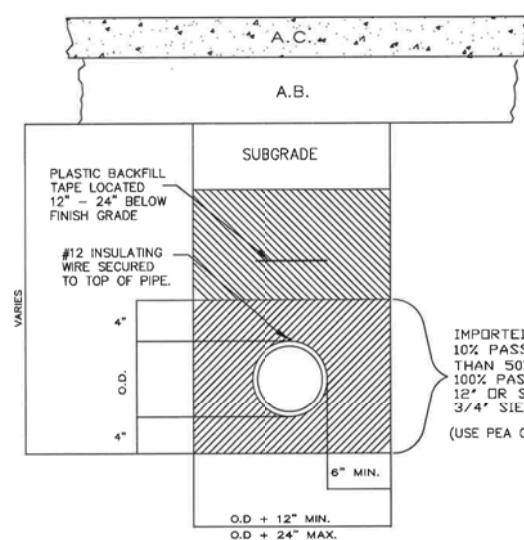
- 3 1/2" O.D. 1/4" WALL STEEL TUBE WITH CAP WELDED ON TOP, 3/4" HOLES FOR SWIVEL ROD. EASE ALL EDGES OF STEEL TUBE.
- 1 1/2" X 1 1/2" ANGLE IRON (2) WELDED TO TUBE AND BASE. PLACE 1/2" HOLE DRILLED 1/4" FROM END OF ANGLE IRON. ANGLE IRON ON BASE SIZE AS NECESSARY TO EQUAL LENGTH OF ANGLE IRON ON TUBE.
- PADLOCK, TO BE PROVIDED BY CITY.
- 5/8" DIA. STEEL SWIVEL ROD, WELD SWIVEL ROD TO SIDE PLATES.
- 3/8" X 16" X 4" STEEL BASE PLATE WITH 1 1/2" RADIUS CORNERS. EASE ALL EDGES.
- 3/8" STEEL BRACE. FILET WELD BOTH SIDES TO BASE PLATES.
- 1 1/2" RADIUS CORNERS, TYP.
- 4" X 4" X 3/8" STEEL BACK PLATE WELDED TO BASE PLATE.
- FISH MOUTH GRIND AT BOTTOM BACK CORNER OF TUBE.
- PLACE 2" WHITE REFLECTIVE TAPE.

NOTES

1. ALL TUBING SHALL BE BLACK STEEL PIPE.
2. ALL JOINTS SHALL BE WELDED IN ACCORDANCE WITH CA STATE STANDARD SPECIFICATIONS FOR WELDING STRUCTURAL STEEL AND GROUND SMOOTH.
3. ALL PARTS (EXCEPT PADLOCK) SHALL BE PAINTED WITH TWO COATS ZINC CHROMATE PRIMER AND TWO COATS EXTERIOR ENAMEL. COLOR: YELLOW.
4. BOLLARD SHALL BE INSTALLED SUCH THAT IT LAYS FLAT WHEN FOLDED.
5. CONCRETE SHALL BE "MINOR CONCRETE" AS DEFINED IN SECTION 71-5B OF THESE STANDARDS.

FOR PROPOSAL
PURPOSES ONLY,
NOT FOR
CONSTRUCTION





- TRENCH BACKFILL REQUIREMENTS:
1. PROPOSED STREETS - REFER TO DETAIL TB-1 OF SECTION 31 FOR BACKFILL REQUIREMENTS ABOVE THE PIPE ZONE.
 2. EXISTING STREETS - REFER TO DETAILS TB-1 AND TB-3 OF SECTION 31 FOR BACKFILL REQUIREMENTS ABOVE THE PIPE ZONE.

NOTES:

BACKFILL SHALL BE MECHANICALLY CONSOLIDATED OR SHOVEL SLICED UNDER THE HAUNCHES OF THE PIPE.

IN ROCKY OR UNYIELDING SOIL, THE TRENCH SHALL BE EXCAVATED A MINIMUM OF 12" BELOW THE PIPE AND THE TRENCH WIDTH SHALL BE INCREASED BY 12".

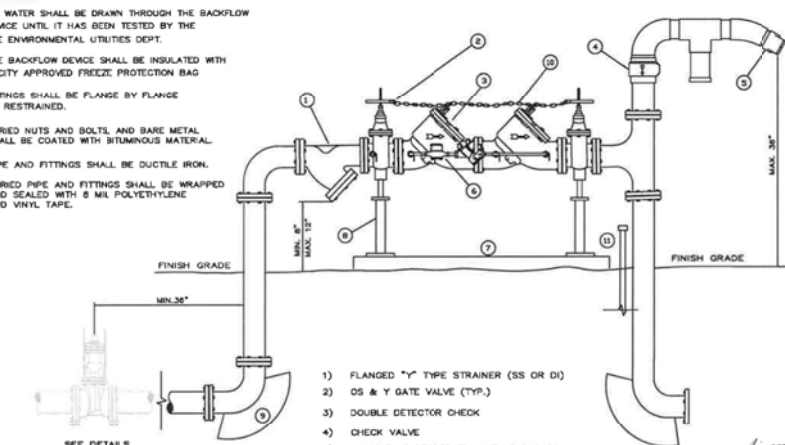
ONE 12" WIDE STRIP OF BACKFILL TAPE SHALL BE USED FOR EVERY 12" PIPE DIAMETER OR FRACTION THERE OF.

CITY OF ROSEVILLE
ENVIRONMENTAL UTILITIES
DEPARTMENT

**WATER MAIN
TRENCH AND BACKFILL**

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

W-1



- 1) FLANGED "Y" TYPE STRAINER (SS OR DI)
- 2) OS & Y GATE VALVE (TYP.)
- 3) DOUBLE DETECTOR CHECK
- 4) CHECK VALVE
- 5) SIAMENSE 45 DEGREE FDC WITH END CAPS
- 6) WATER METER
- 7) 3 1/2" THICK REINFORCED CONCRETE SLAB.
- 8) SUPPORTS 2-TYP. SHALL BE BOLTED DOWN WITH A MINIMUM OF TWO BOLTS EACH
- 9) THRUST BLOCK (TYP.)
- 10) 1/4" NON CASE HARDENED CHAIN WITH BREAKAWAY LOCK BETWEEN VALVES.
- 11) VALVE TAMPER SWITCH CONDUIT TO BUILDING FIRE CONTROL ROOM

CITY OF ROSEVILLE
ENVIRONMENTAL UTILITIES
DEPARTMENT

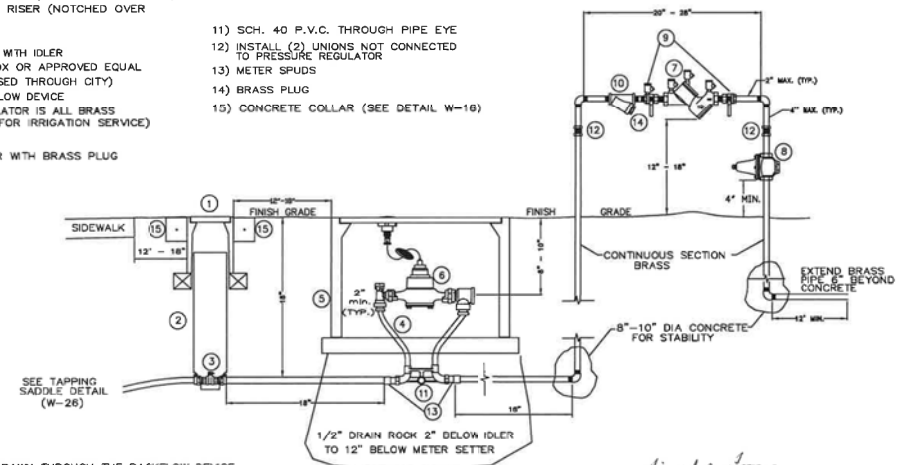
**FIRE PROTECTION
ASSEMBLY**

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

W-2

- 1) CONCRETE VALVE BOX (G-5 PER DETAIL W-16)
- 2) 6" CONTINUOUS RISER (NOTCHED OVER PIPE AT BASE)
- 3) CURB STOP
- 4) METER RESETER WITH IDLER
- 5) N-16 UTILITY BOX OR APPROVED EQUAL
- 6) METER (PURCHASED THROUGH CITY)
- 7) R.P. TYPE BACKFLOW DEVICE
- 8) PRESSURE REGULATOR IS ALL BRASS (NOT REQUIRED FOR IRRIGATION SERVICE)
- 9) BALL VALVES
- 10) BRASS STRAINER WITH BRASS PLUG

- 11) SCH. 40 P.V.C. THROUGH PIPE EYE
- 12) INSTALL (2) UNIONS NOT CONNECTED TO PRESSURE REGULATOR
- 13) METER SPUDS
- 14) BRASS PLUG
- 15) CONCRETE COLLAR (SEE DETAIL W-16)



NOTES:

NO WATER SHALL BE DRAWN THROUGH THE BACKFLOW DEVICE UNTIL IT HAS BEEN TESTED BY THE ENVIRONMENTAL UTILITIES DEPT.

ALL FITTINGS AND PIPING SHALL BE BRASS BEGINNING AT CURB STOP

IF USED FOR IRRIGATION DO NOT INCLUDE PRESSURE REGULATOR.

INSTALL CONCRETE BLOCKING (4" X 4" X 15 1/2" SOLID SLUMP BLOCK) UNDER PERIMETER OF UTILITY BOXES.

WATER METERS SHALL BE PURCHASED THROUGH THE CITY. PURCHASE INCLUDES INSTALLATION.

THE BACKFLOW DEVICE SHALL BE INSULATED WITH A CITY APPROVED FREEZE PROTECTION BAG.

BURIED PIPE AND FITTINGS SHALL BE WRAPPED WITH 8 MIL POLYETHYLENE OR APPROVED EQUAL.

CITY OF ROSEVILLE
ENVIRONMENTAL UTILITIES
DEPARTMENT

**COMMERCIAL 3/4" & 1"
SERVICE LINE**

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

W-6

FOR PROPOSAL
PURPOSES ONLY,
NOT FOR
CONSTRUCTION



DESIGNED: M. FISHER
DRAWN: J. MARTIN
CHECKED: S. KADER
APPROVED: M. FISHER

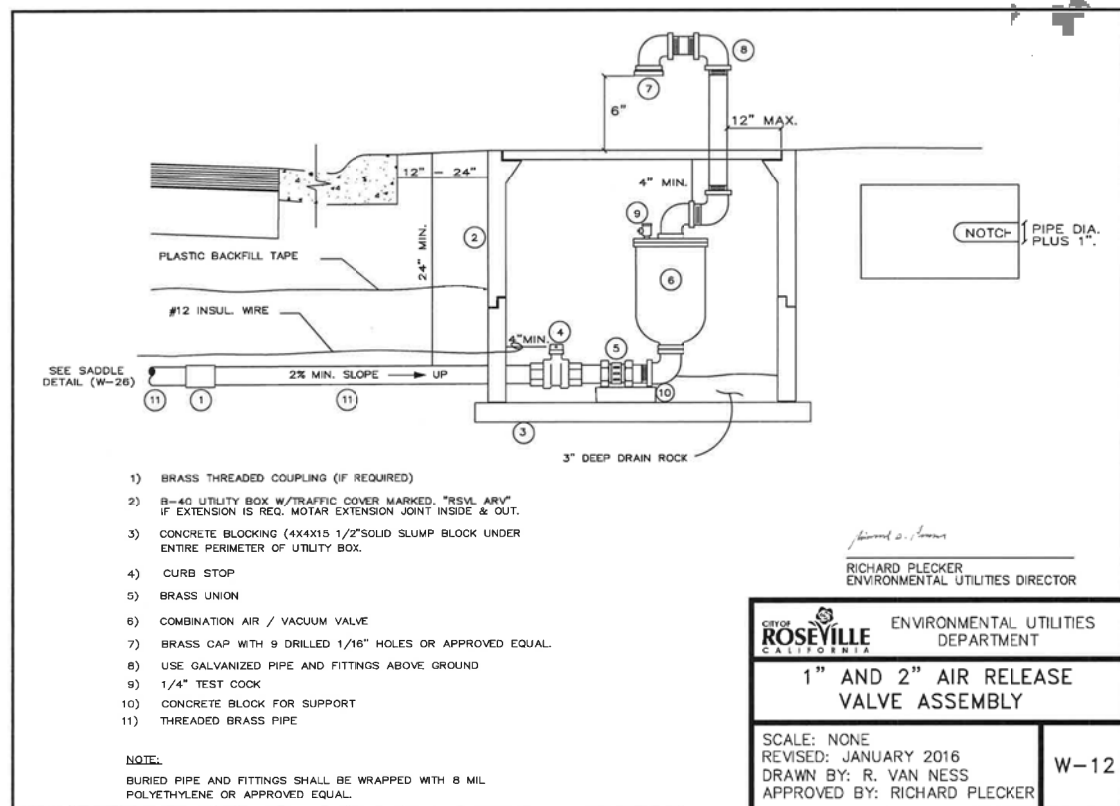
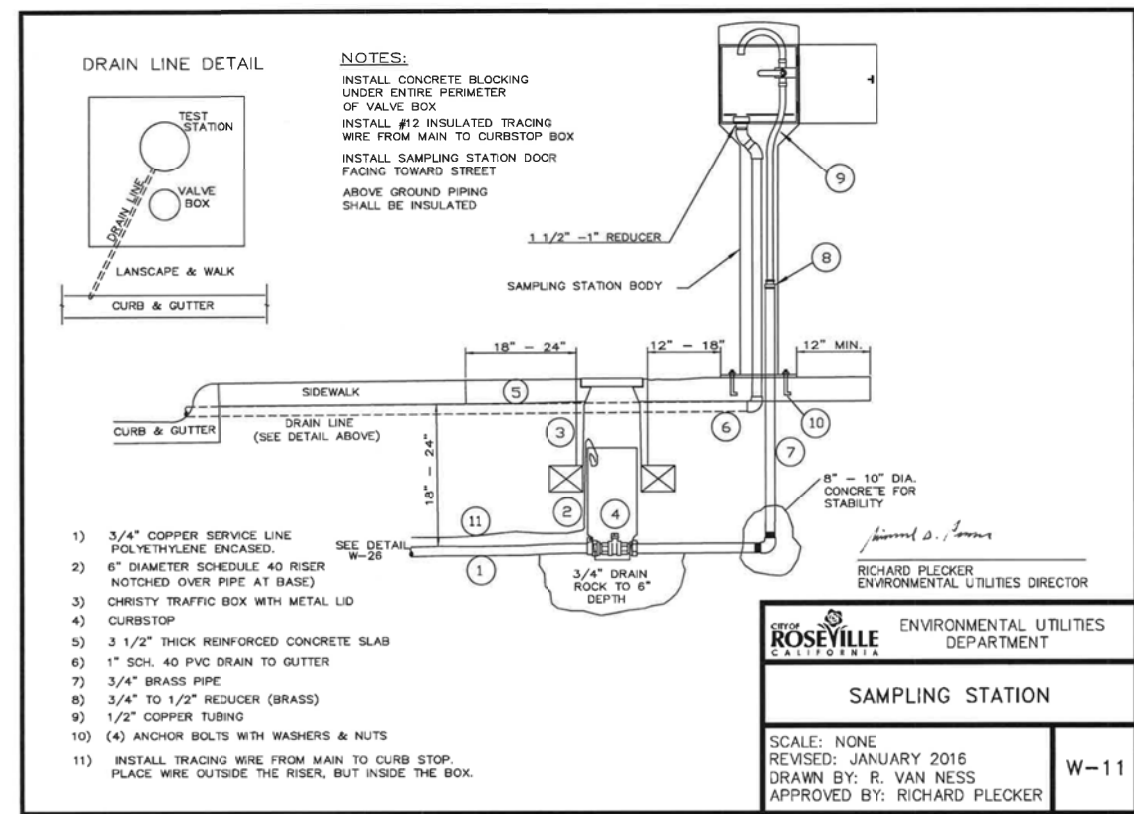
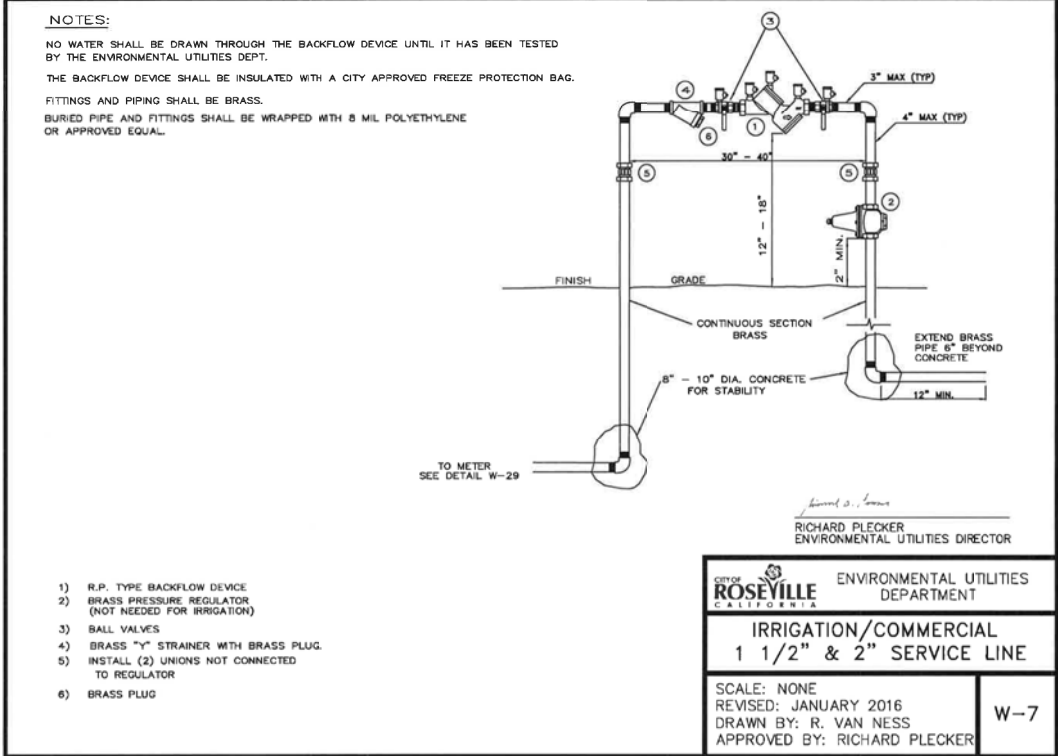
CITY OF ROSEVILLE
CALIFORNIA

WATERWORKS
ENGINEERS
2200 Douglas Blvd, Suite 105
Roseville, CA 95661 • 916-789-2888

CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

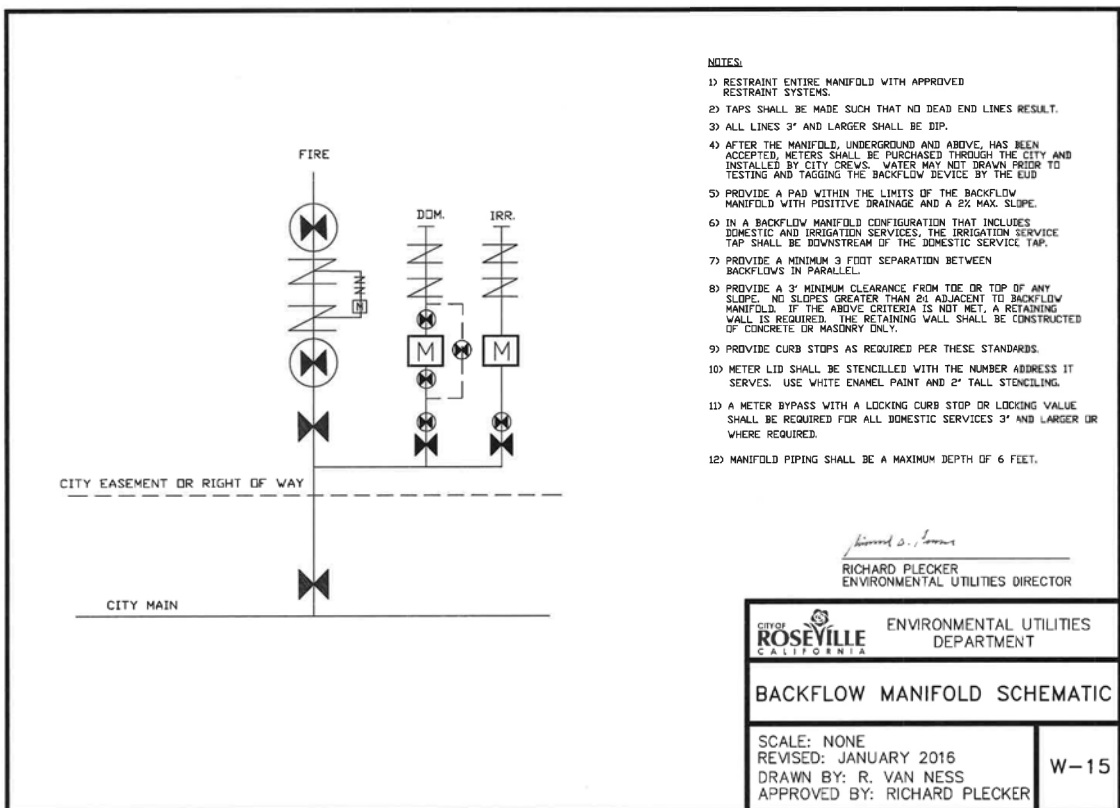
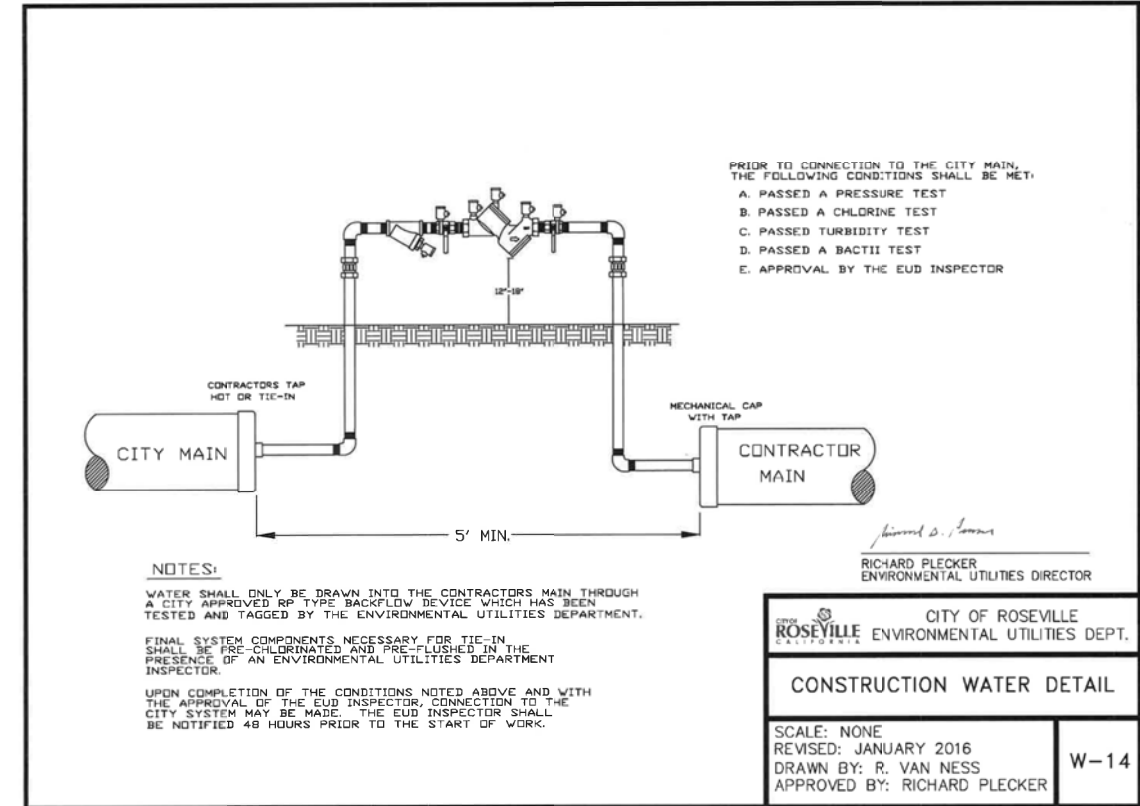
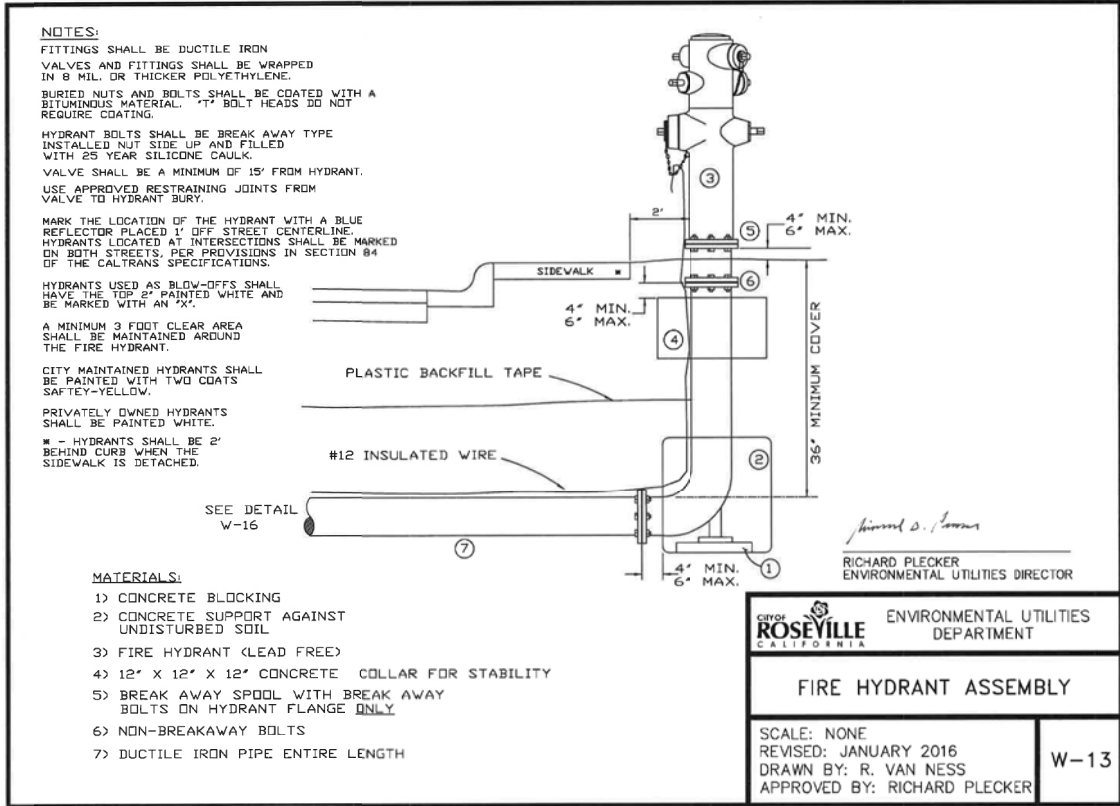
GENERAL
STANDARD DETAILS 4

DATE: NOVEMBER 2019
PROJECT NUMBER: 17-083
DRAWING NUMBER: WG00-G-023
SHEET NUMBER: 19



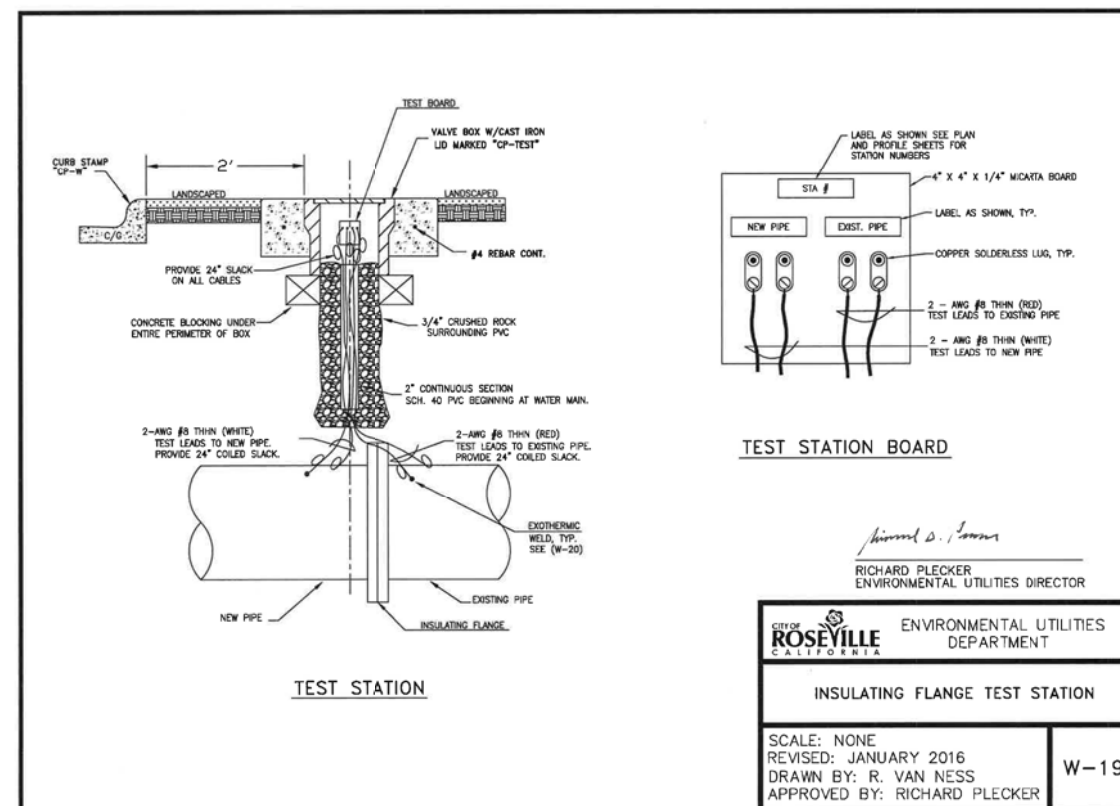
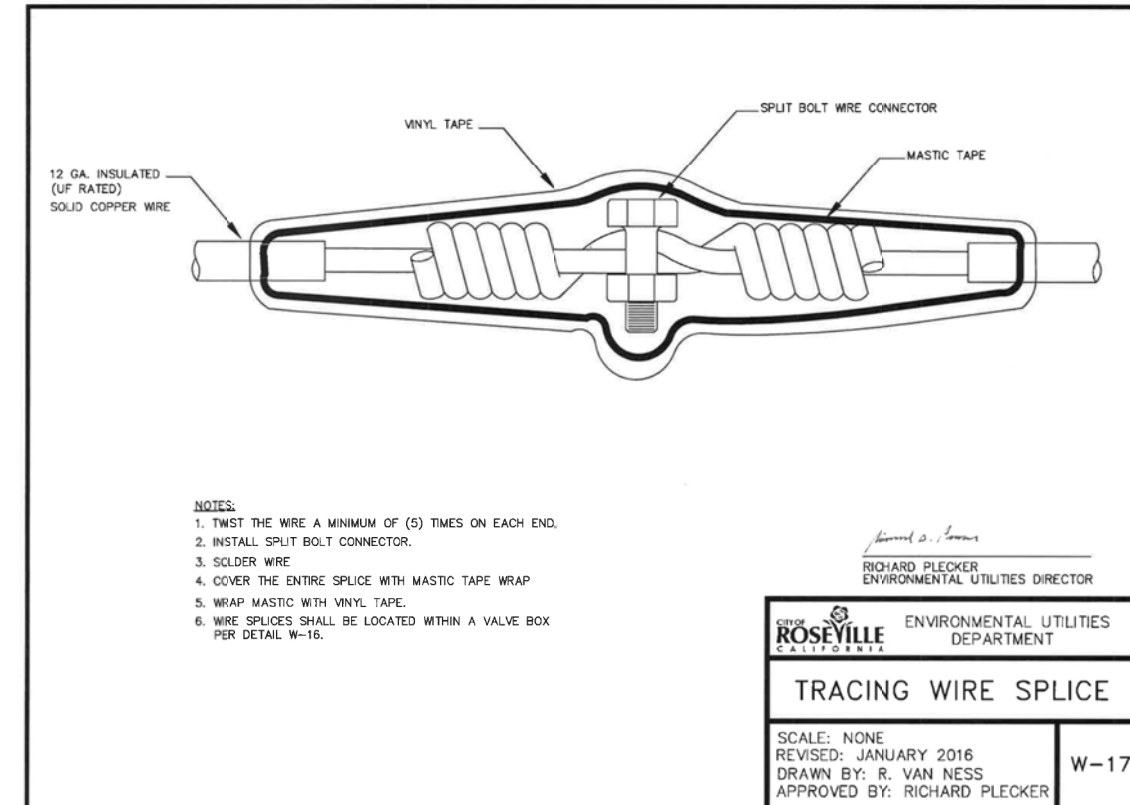
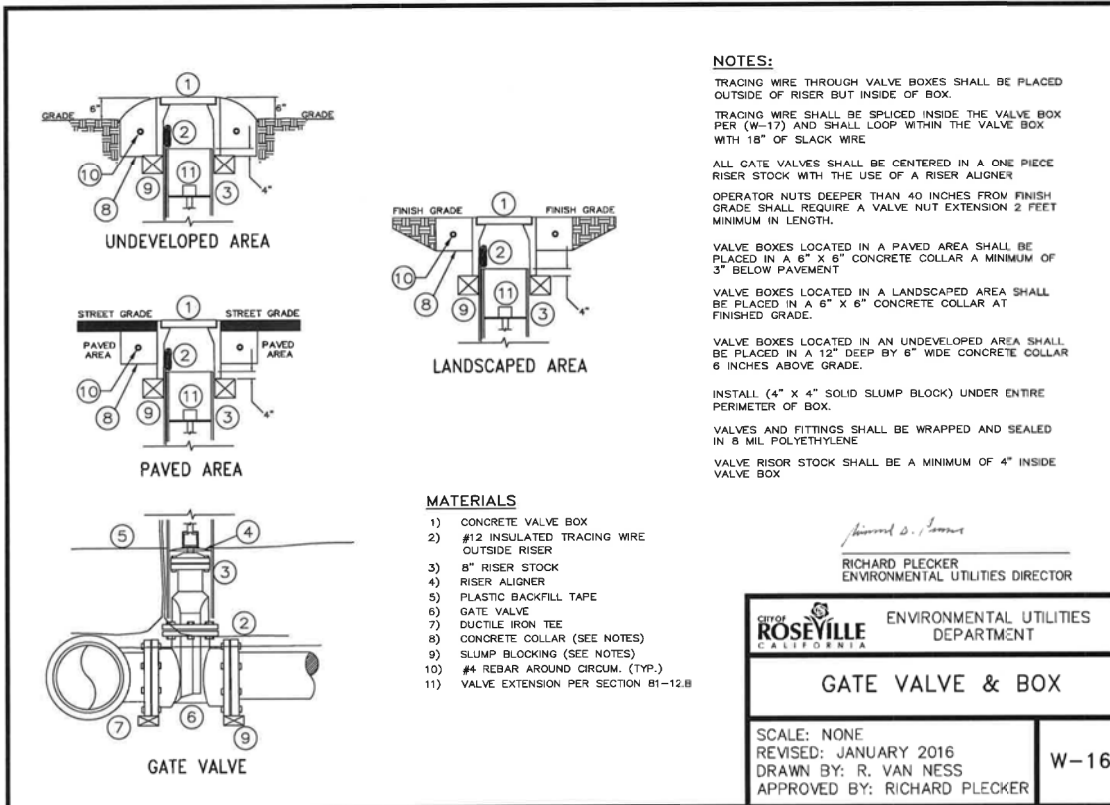
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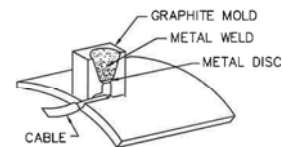
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CONSTRUCTION



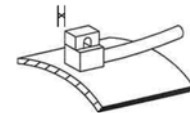
1) FILE TO BARE METAL & CLEAN OVER SURFACE



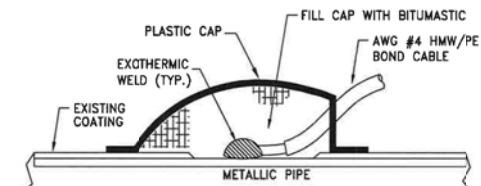
2) STRIP INSULATION FROM WIRE AND ATTACH SLEEVE



3) HOLD MOLD FIRMLY WITH OPENING AWAY FROM OPERATOR, IGNITE WITH FLINT GUN



4) REMOVE SLAG FROM CONNECTION, COVER CONNECTION WITH COMPATIBLE COATING AND CAP OVER ALL EXPOSED METAL



Richard D. Plecker
RICHARD PLECKER
ENVIRONMENTAL UTILITIES DIRECTOR

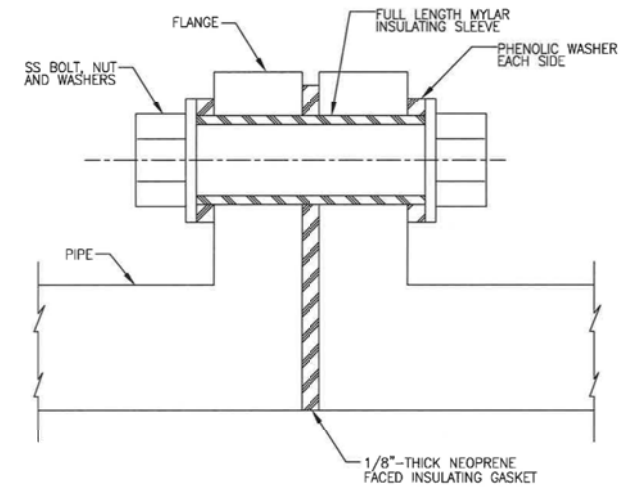
CITY OF ROSEVILLE
CALIFORNIA
ENVIRONMENTAL UTILITIES
DEPARTMENT

EXOTHERMIC WELD

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

W-20

NOTE:
EACH JOINT SHALL HAVE TWO
SEPARATE WELD WIRES.



Richard D. Plecker
RICHARD PLECKER
ENVIRONMENTAL UTILITIES DIRECTOR

CITY OF ROSEVILLE
CALIFORNIA
ENVIRONMENTAL UTILITIES
DEPARTMENT

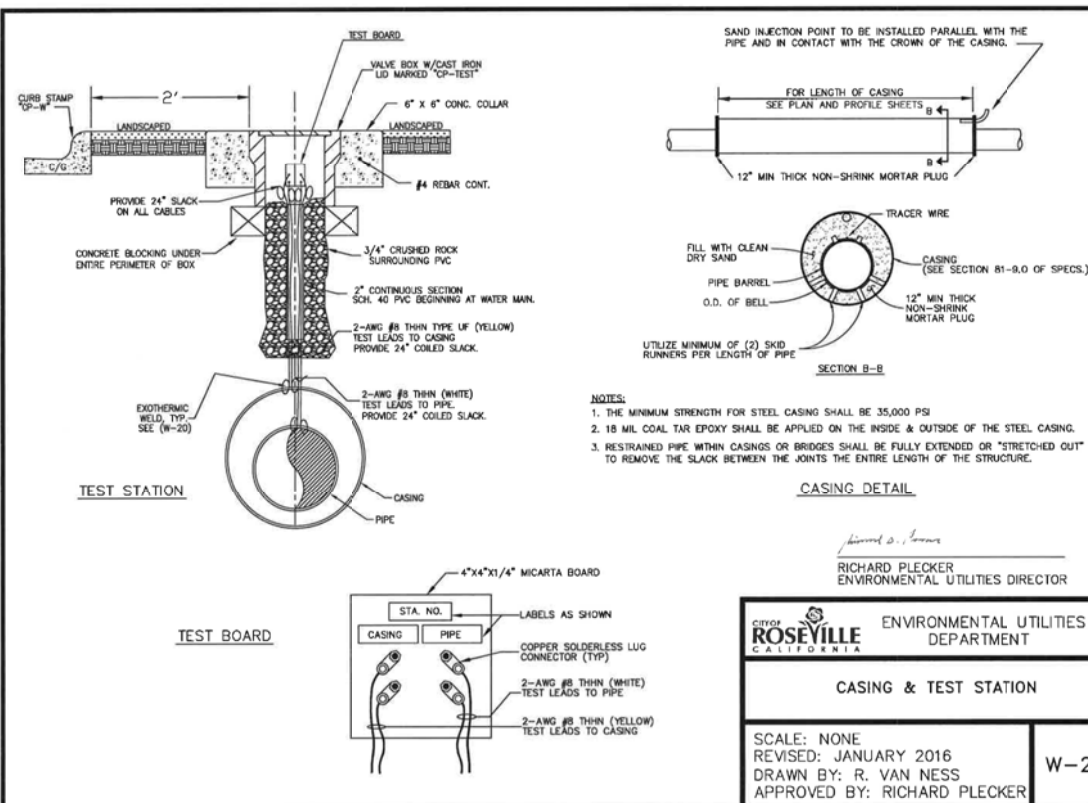
INSULATED FLANGE

SCALE: NONE
REVISED: JANUARY 2015
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

W-21

NOTES:

1. DIELECTRIC FLANGE KITS SHALL BE MANUFACTURED BY F.H. MALONEY CP., CALPICO OR APPROVED EQUAL
2. PROVIDE AN INSULATING FLANGE TEST STATION FOR THE INSULATED FLANGE.



Richard D. Plecker
RICHARD PLECKER
ENVIRONMENTAL UTILITIES DIRECTOR

CITY OF ROSEVILLE
CALIFORNIA
ENVIRONMENTAL UTILITIES
DEPARTMENT

CASING & TEST STATION

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

W-22

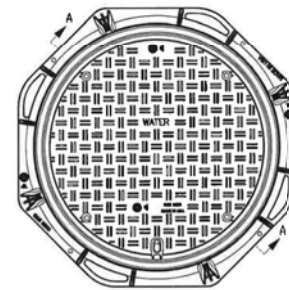
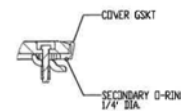
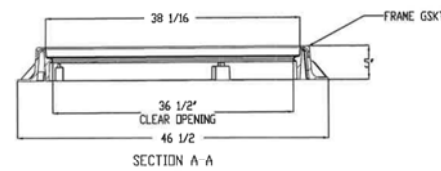
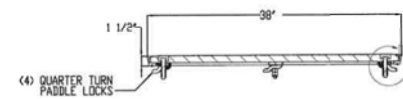
- NOTES:
1. THE MINIMUM STRENGTH FOR STEEL CASING SHALL BE 35,000 PSI
 2. 18 MIL COAL TAR EPOXY SHALL BE APPLIED ON THE INSIDE & OUTSIDE OF THE STEEL CASING.
 3. RESTRAINED PIPE WITHIN CASINGS OR BRIDGES SHALL BE FULLY EXTENDED OR "STRETCHED OUT" TO REMOVE THE SLACK BETWEEN THE JOINTS THE ENTIRE LENGTH OF THE STRUCTURE.

CASING DETAIL

FOR PROPOSAL
PURPOSES ONLY,
NOT FOR
CONSTRUCTION



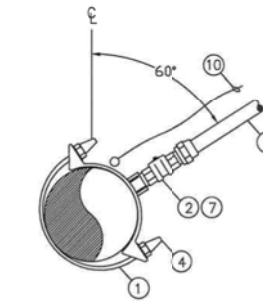
Cover and Frame Assembly



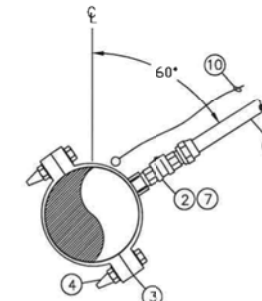
Richard Plecker
Environmental Utilities Director

CITY OF ROSEVILLE ENVIRONMENTAL UTILITIES DEPARTMENT	
36" MANHOLE RING AND COVER	
SCALE: NONE REVISED: JANUARY 2016 DRAWN BY: R. VAN NESS APPROVED BY: RICHARD PLECKER	W-25

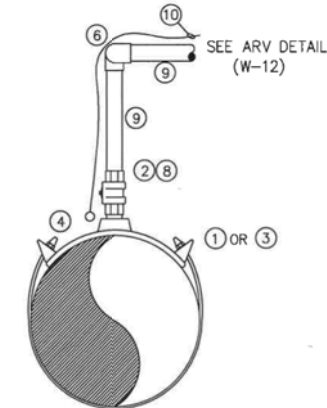
NOTES:
TO CONFORM TO AASHTO M306-05, H-20 AND H-25 EN/24 D4000.



DOUBLE STRAP
DUCTILE IRON PIPE SADDLE



PVC PIPE SADDLE



ARV SADDLE

MATERIALS:

- 1) DOUBLE STRAP BRASS SADDLE FOR DUCTILE IRON MAIN
- 2) INSULATING CORPORATION STOP OR NON INSULATED CORPORATION STOP WITH NYLON BUSHING
- 3) BRASS SADDLE FOR PVC MAIN
- 4) ZINC CAPS ON ALL BOLTS (ONLY WITH NON-INSULATED CORPORATION STOP)
- 5) COPPER SERVICE
- 6) SWING JOINT (2 - 90° BRASS FITTINGS)
- 7) CORP STOP W/COMPRESSION COUPLING
- 8) CORP STOP W/THREADED COUPLING
- 9) THREADED BRASS PIPE
- 10) TRACING WIRE (FOR COMMERCIAL SERVICES ONLY)

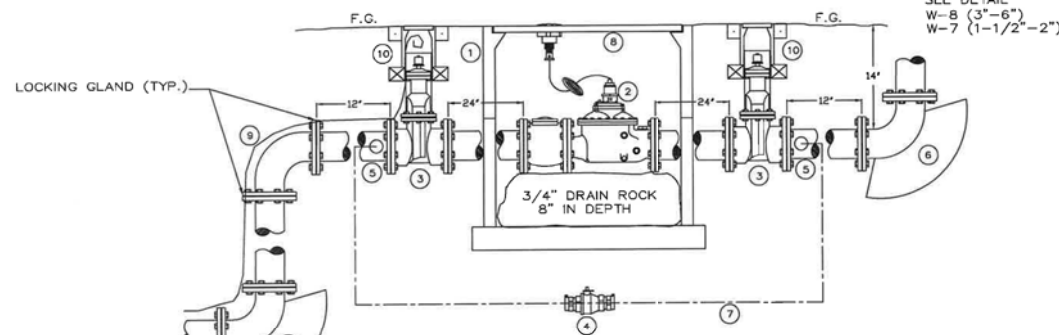
NOTES:

WRAP CORPORATION STOP AND COPPER SERVICE A MINIMUM OF 3' WITH AN APPROVED DIELECTRIC TAPE AND POLYKEN PRIMER PER MANUFACTURER'S RECOMMENDATIONS.
SADDLES SHALL BE WRAPPED IN 8 MIL POLYETHYLENE AND BACKFILLED WITH SAND.
TRACING WIRE SHALL BE REQUIRED ON ARV, HYDRANT RUNS, BLOW OFFS, SERVICES WITHOUT CONTINUOUS COPPER PIPE, AND OTHER MAJOR APPURTENANCES.

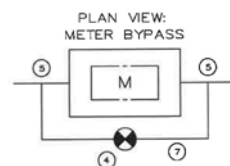
Richard Plecker
Environmental Utilities Director

CITY OF ROSEVILLE ENVIRONMENTAL UTILITIES DEPARTMENT	
SADDLE DETAIL	
SCALE: NONE REVISED: JANUARY 2016 DRAWN BY: R. VAN NESS APPROVED BY: RICHARD PLECKER	W-26

NOTES:
PIPE SHALL BE DUCTILE IRON FOR 3" AND LARGER. PIPE SHALL BE BRASS FOR 2" AND SMALLER.
INSTALL CONCRETE BLOCKING (4" X 4" SOLID SLUMP BLOCK) UNDER ENTIRE PERIMETER OF THE UTILITY BOX.
PIPE AND FITTINGS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE
USE CITY APPROVED RESTRAINED JOINTS OR FLANGED SPOOLS
WATER METER SHALL BE PURCHASED THROUGH THE CITY. PURCHASE INCLUDES INSTALLATION.
USE TURBO METER FOR IRRIGATION & COMPOUND METER FOR COMMERCIAL SERVICE.



SEE DETAIL
W-15 & W-16 (3"-6")
W-15 & W-26 (1-1/2"-2")



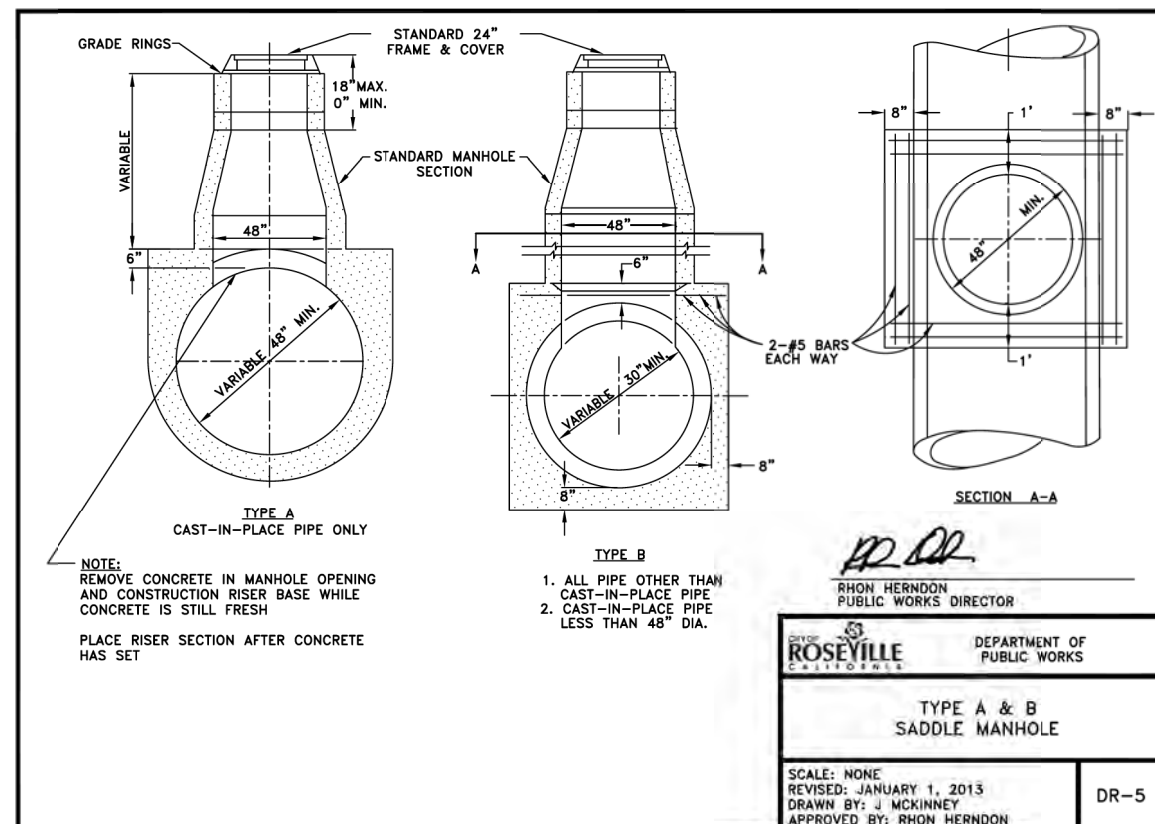
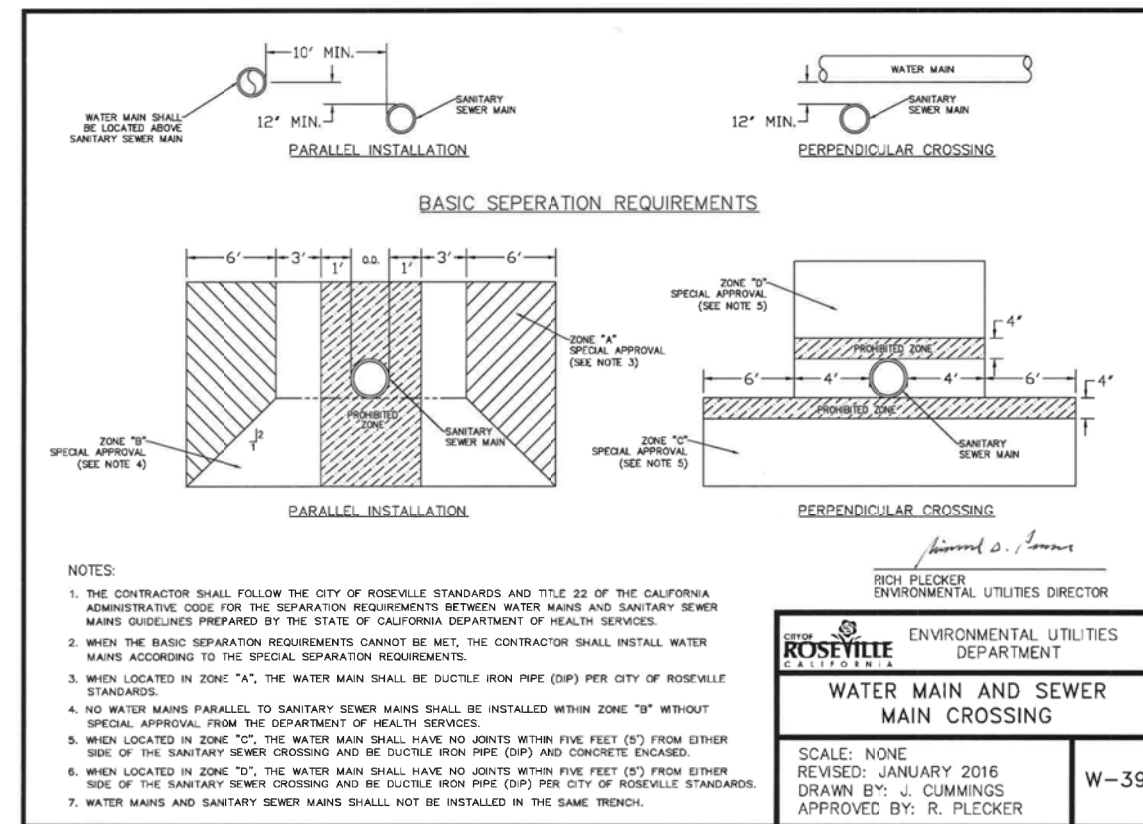
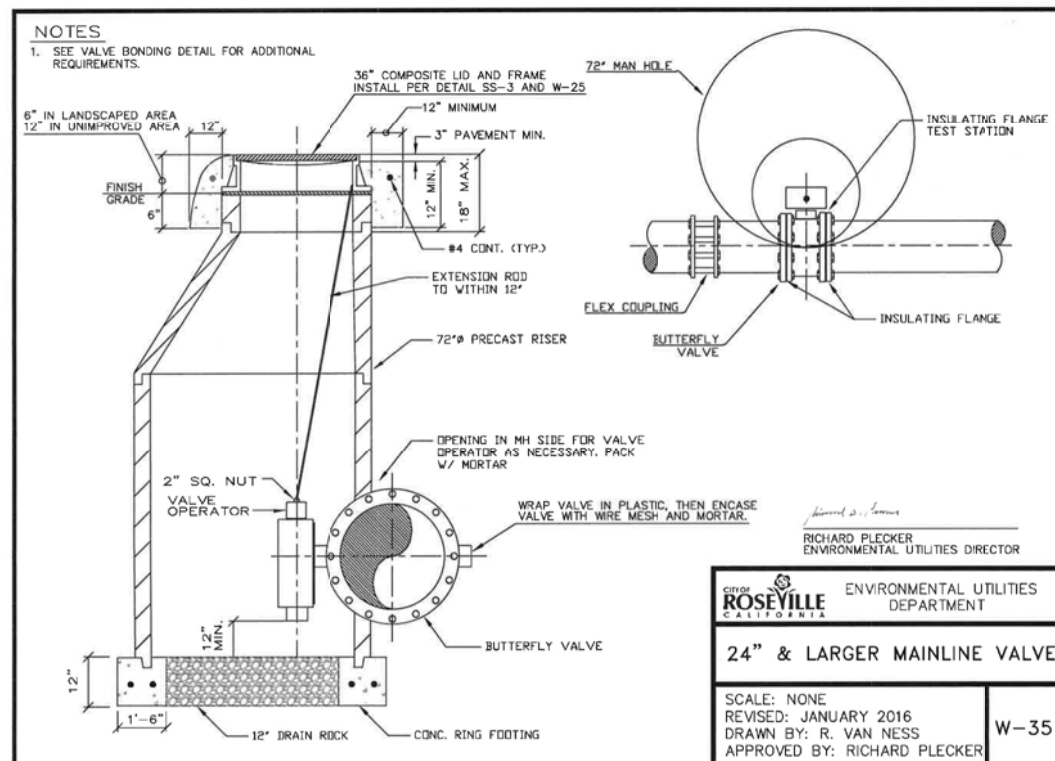
- MATERIALS:
- 1) REFER TO TABLE 1 FOR UTILITY BOX SIZING, OR B-48 BOX WITH EXTENSION
 - 2) METER WITH STRAINER (PURCHASED THROUGH CITY)
INSTALL IDLER SPOOL DURING INSTALLATION OF METER BOX.
 - 3) RESILIENT SEAT GATE VALVE (3"-6") OR LOCKING CURB STOP FOR 1-1/2" TO 2" SERVICES
 - 4) 2" LOCKING CURB STOP IN G-5 BOX FOR 3"-6" SERVICES OR 3/4" LOCKING CURB STOP FOR 1 1/2"-2" SERVICES. SEE W-16
 - 5) 2" DOUBLE STRAP BRASS SADDLE FOR DUCTILE IRON MAIN WITH 2" MIPT BY COMPRESSION ADAPTER
 - 6) THRUST BLOCKS (TYP.)
 - 7) 3/4" or 2" BYPASS PIPE MATERIAL TO BE SOFT COPPER TYPE AND FITTINGS TO BE BRASS COMPRESSION TYPE.
 - 8) METAL TRAFFIC LID WELD MARKED "RSL WATER"
 - 9) TRACING WIRE
 - 10) SEE W-16 FOR VALVE BOX AND RISER DETAIL

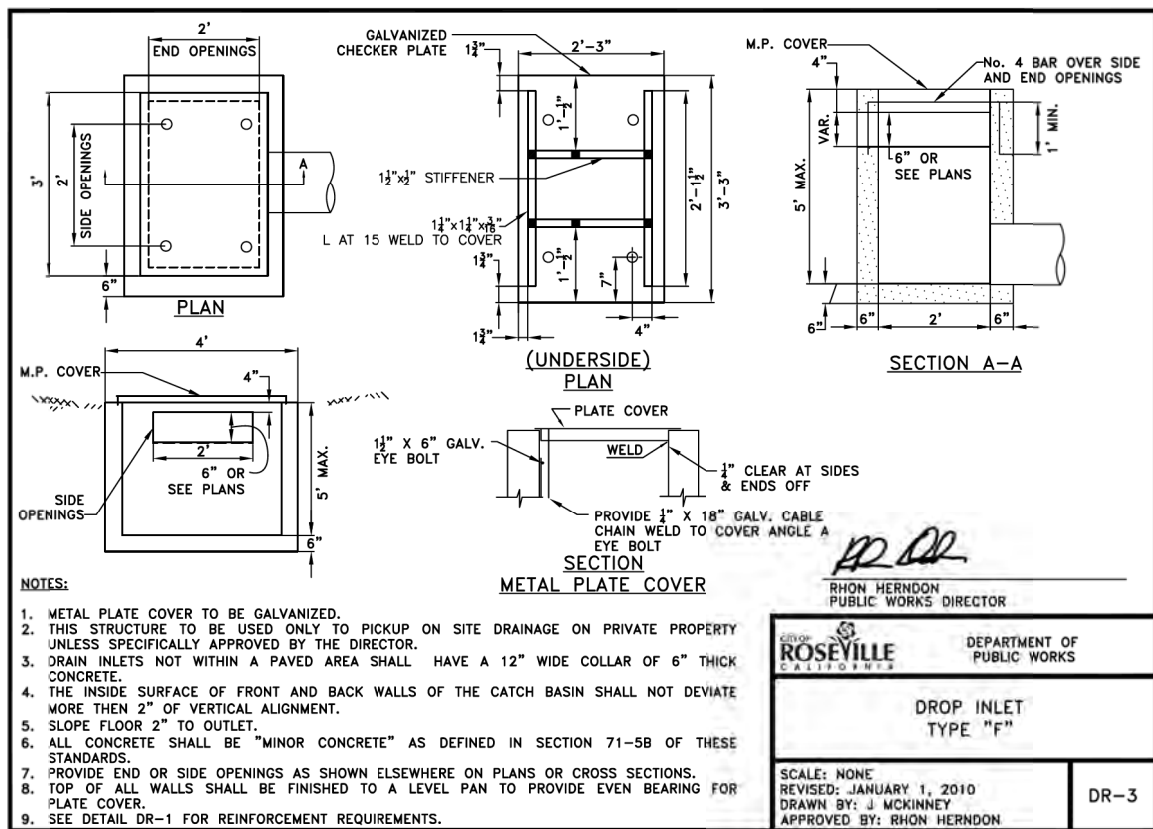
Richard Plecker
Environmental Utilities Director

CITY OF ROSEVILLE ENVIRONMENTAL UTILITIES DEPARTMENT	
1-1/2", 2", 3", 4", 6" COMPOUND & TURBO METER WITH BYPASS	
SCALE: NONE REVISED: JANUARY 2016 DRAWN BY: R. VAN NESS APPROVED BY: RICHARD PLECKER	W-29

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CONSTRUCTION







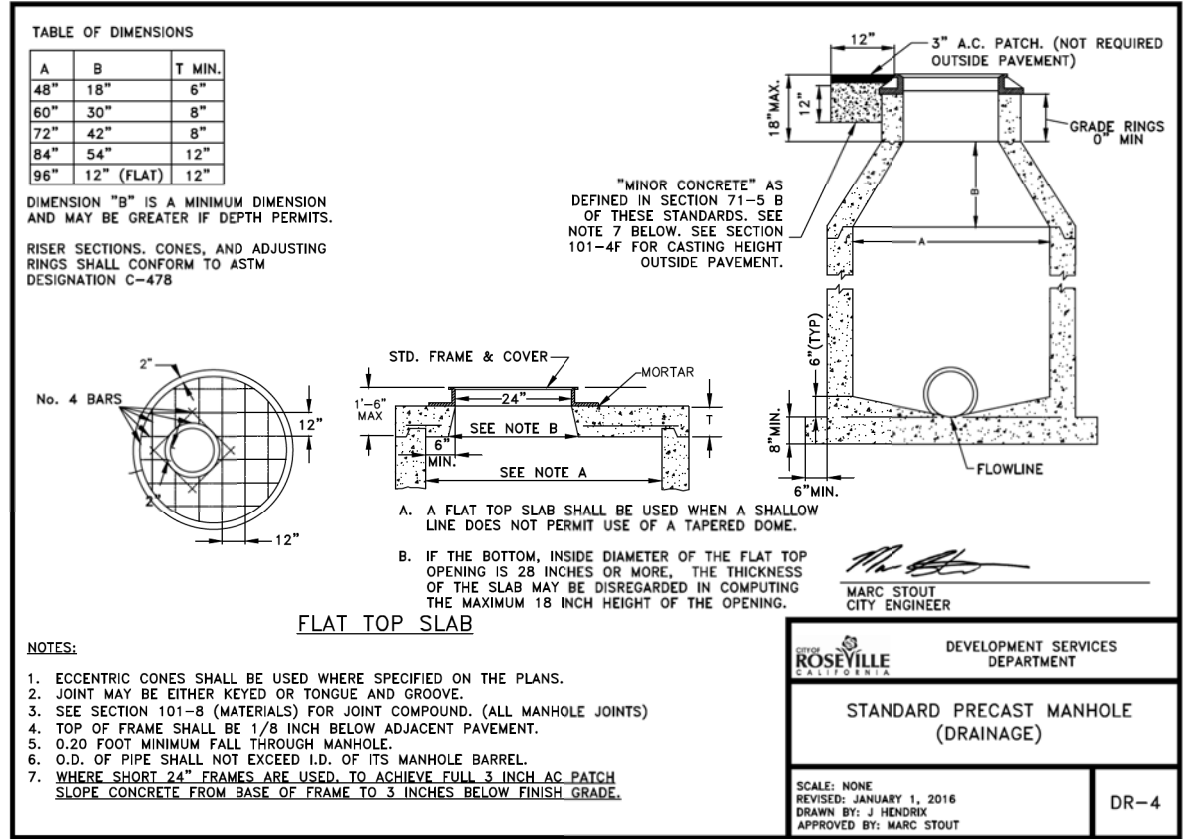
- NOTES:
1. METAL PLATE COVER TO BE GALVANIZED.
 2. THIS STRUCTURE TO BE USED ONLY TO PICKUP ON SITE DRAINAGE ON PRIVATE PROPERTY UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR.
 3. DRAIN INLETS NOT WITHIN A PAVED AREA SHALL HAVE A 12" WIDE COLLAR OF 6" THICK CONCRETE.
 4. THE INSIDE SURFACE OF FRONT AND BACK WALLS OF THE CATCH BASIN SHALL NOT DEVIATE MORE THEN 2" OF VERTICAL ALIGNMENT.
 5. SLOPE FLOOR 2" TO OUTLET.
 6. ALL CONCRETE SHALL BE "MINOR CONCRETE" AS DEFINED IN SECTION 71-5B OF THESE STANDARDS.
 7. PROVIDE END OR SIDE OPENINGS AS SHOWN ELSEWHERE ON PLANS OR CROSS SECTIONS.
 8. TOP OF ALL WALLS SHALL BE FINISHED TO A LEVEL PAN TO PROVIDE EVEN BEARING FOR PLATE COVER.
 9. SEE DETAIL DR-1 FOR REINFORCEMENT REQUIREMENTS.

ROSEVILLE CALIFORNIA DEPARTMENT OF PUBLIC WORKS

DROP INLET TYPE "F"

SCALE: NONE
REVISED: JANUARY 1, 2010
DRAWN BY: J MCKINNEY
APPROVED BY: RHON HERNDON

DR-3



- NOTES:
1. ECCENTRIC CONES SHALL BE USED WHERE SPECIFIED ON THE PLANS.
 2. JOINT MAY BE EITHER KEYED OR TONGUE AND GROOVE.
 3. SEE SECTION 101-8 (MATERIALS) FOR JOINT COMPOUND. (ALL MANHOLE JOINTS)
 4. TOP OF FRAME SHALL BE 1/8 INCH BELOW ADJACENT PAVEMENT.
 5. 0.20 FOOT MINIMUM FALL THROUGH MANHOLE.
 6. O.D. OF PIPE SHALL NOT EXCEED I.D. OF ITS MANHOLE BARREL.
 7. WHERE SHORT 24" FRAMES ARE USED TO ACHIEVE FULL 3 INCH AC PATCH SLOPE CONCRETE FROM BASE OF FRAME TO 3 INCHES BELOW FINISH GRADE.

ROSEVILLE CALIFORNIA DEVELOPMENT SERVICES DEPARTMENT

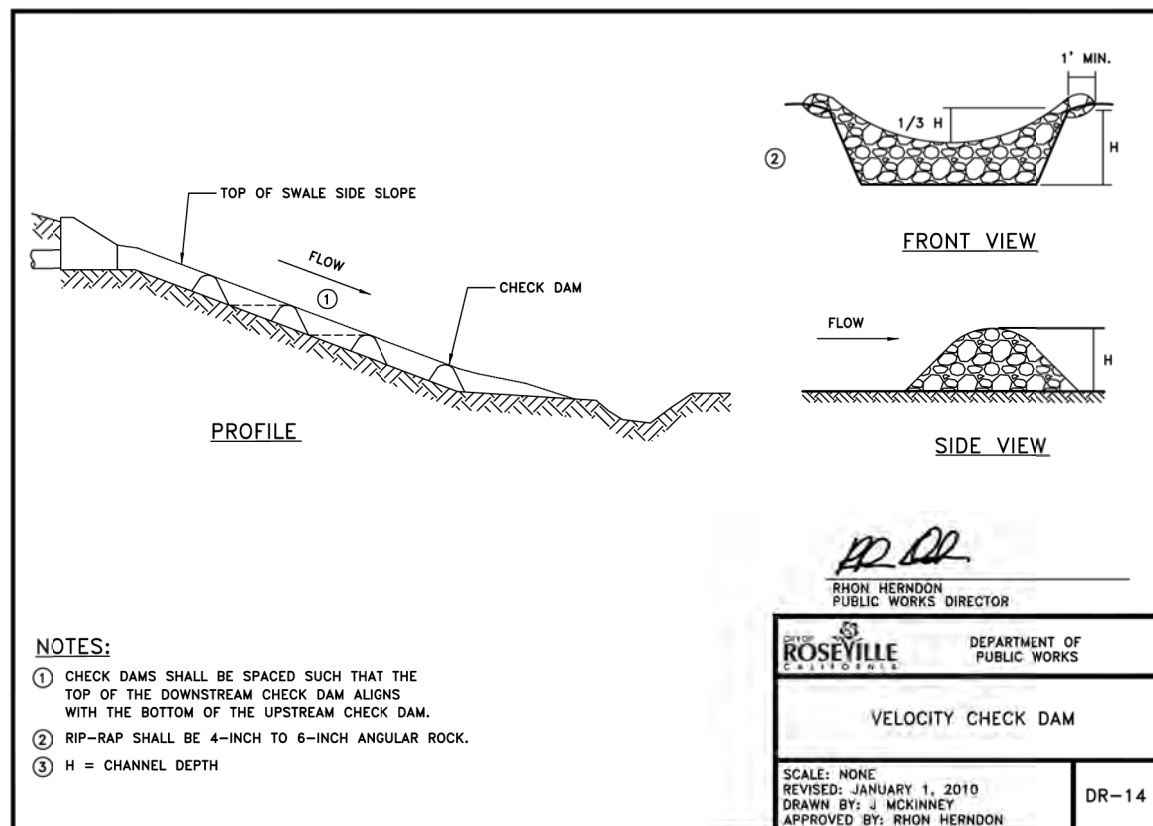
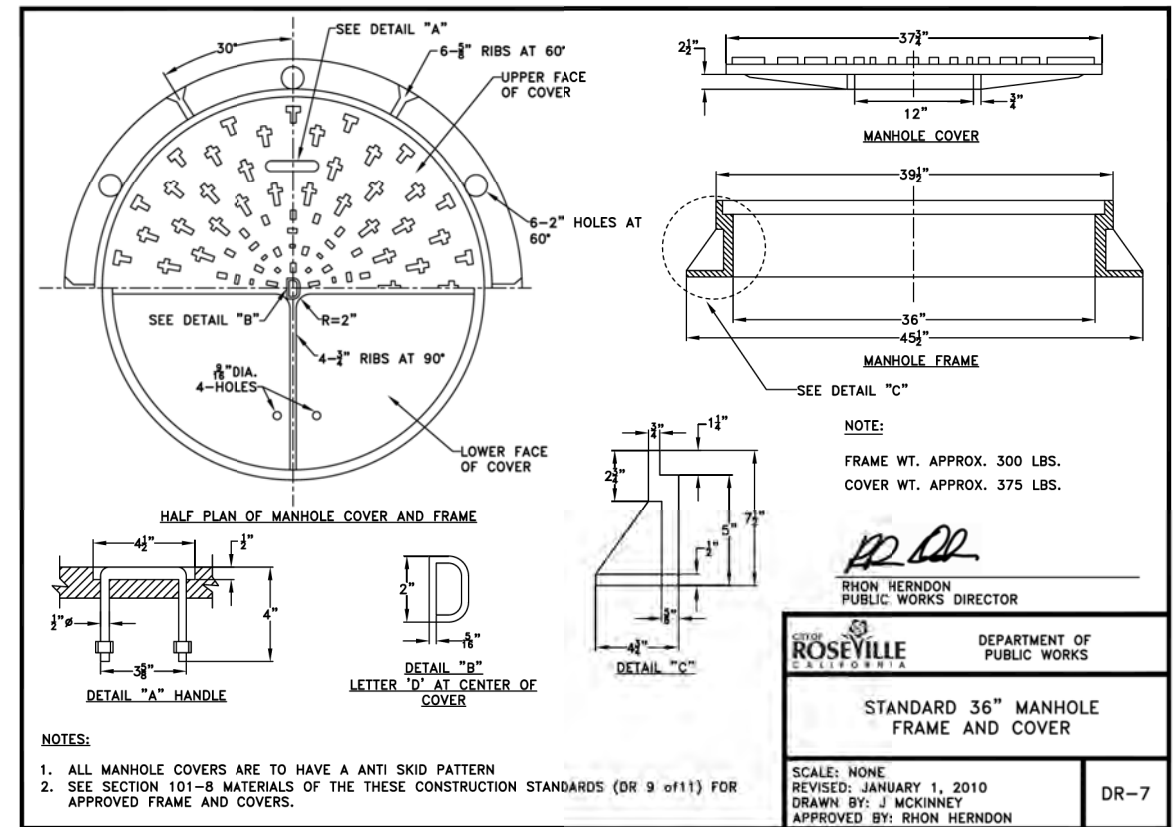
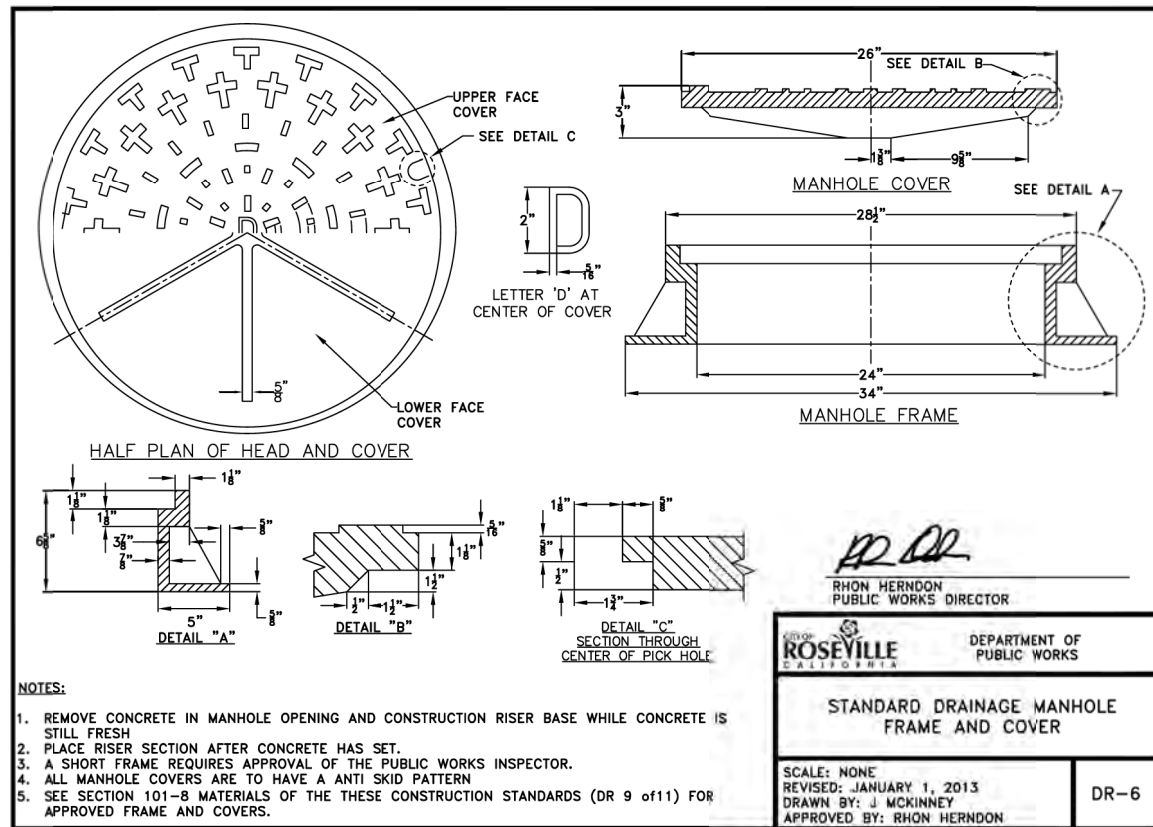
STANDARD PRECAST MANHOLE (DRAINAGE)

SCALE: NONE
REVISED: JANUARY 1, 2016
DRAWN BY: J HENDRIX
APPROVED BY: MARC STOUT

DR-4

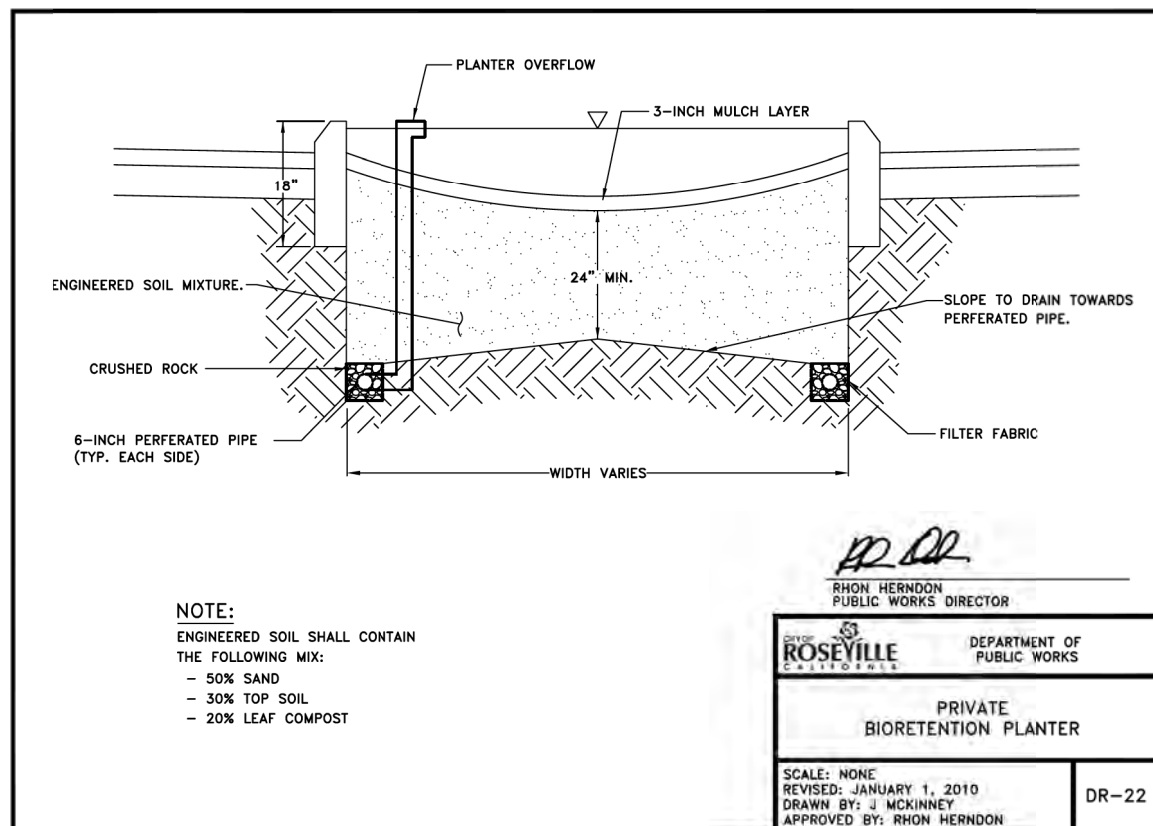
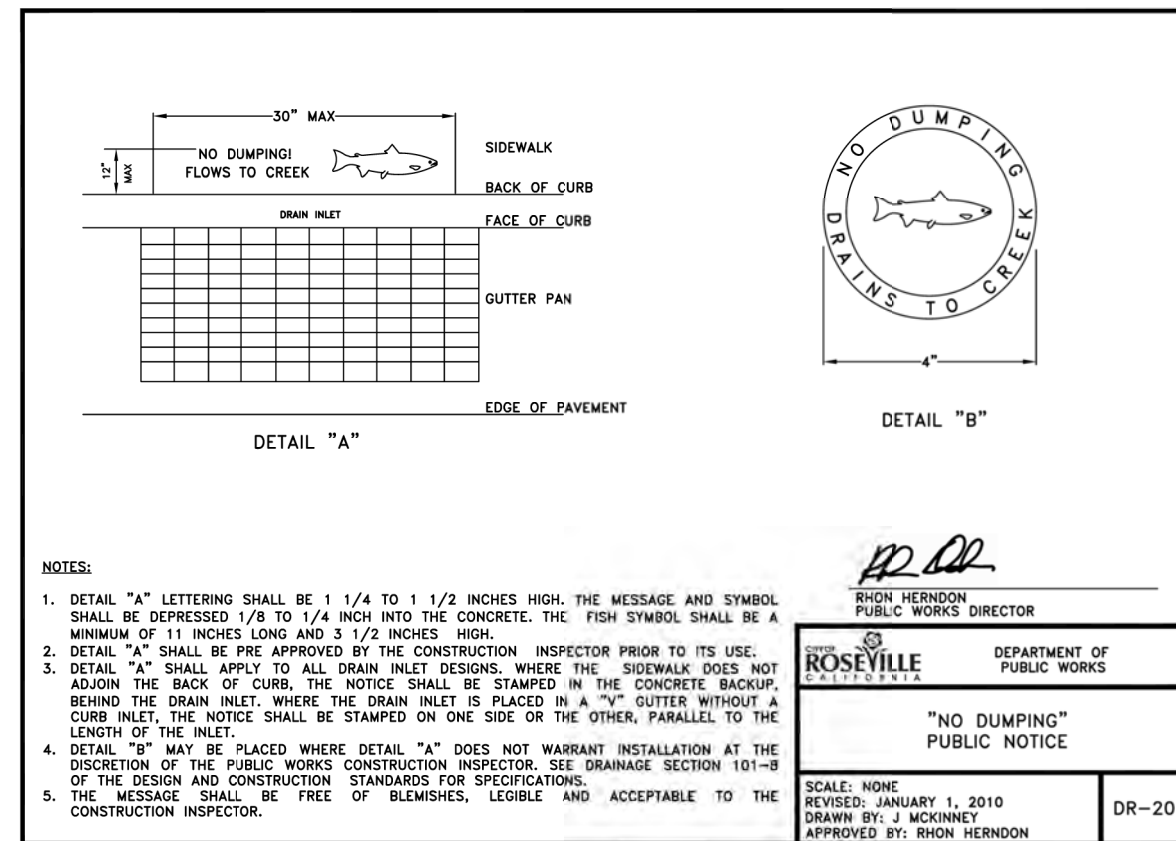
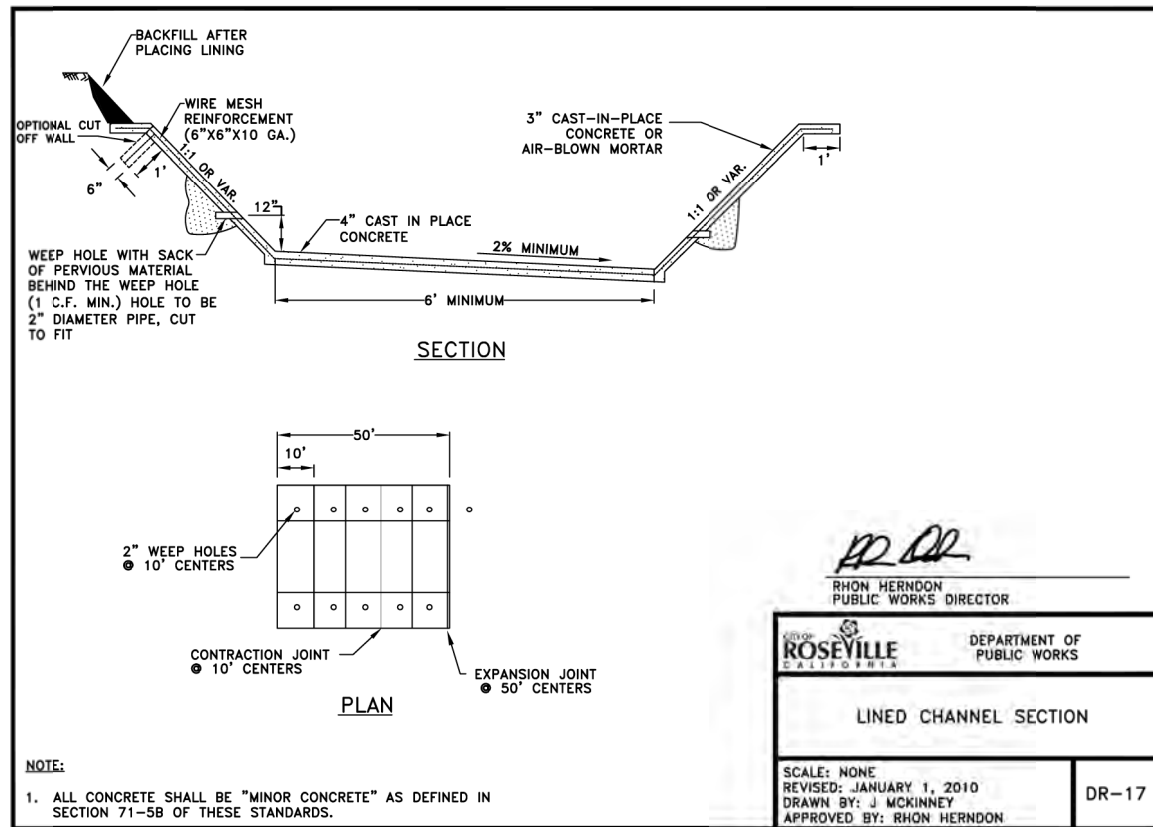
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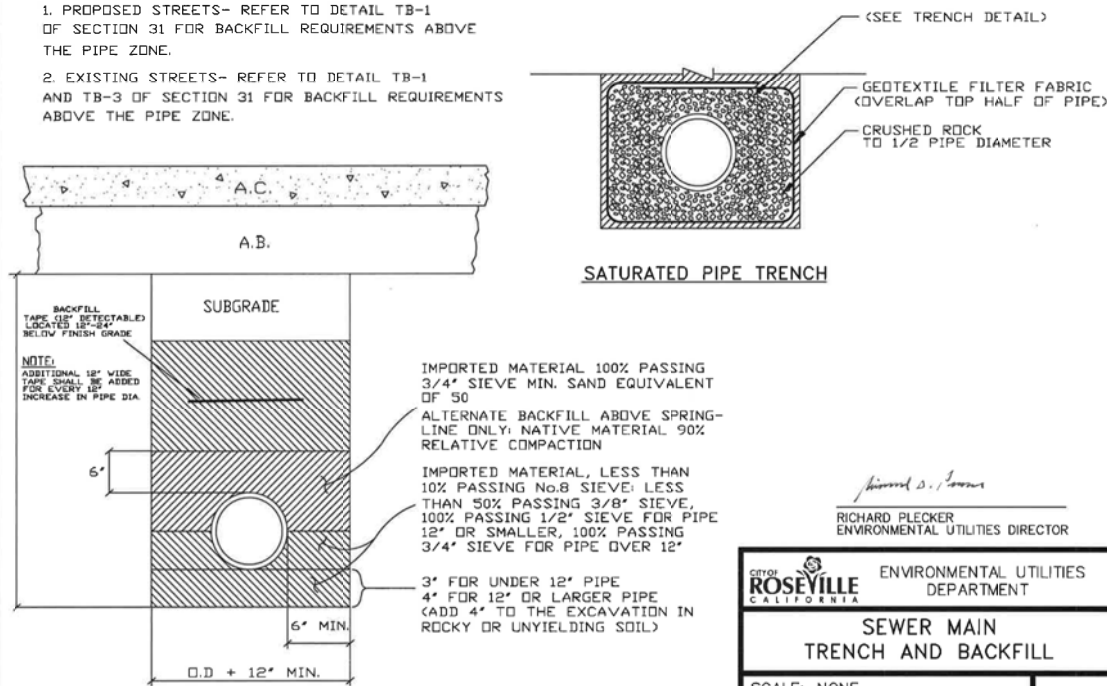


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CONSTRUCTION



TRENCH BACKFILL REQUIREMENTS:

1. PROPOSED STREETS- REFER TO DETAIL TB-1 OF SECTION 31 FOR BACKFILL REQUIREMENTS ABOVE THE PIPE ZONE.
2. EXISTING STREETS- REFER TO DETAIL TB-1 AND TB-3 OF SECTION 31 FOR BACKFILL REQUIREMENTS ABOVE THE PIPE ZONE.



NOTE: BACKFILL SHALL BE MECHANICALLY CONSOLIDATED OR SHOVEL SLICED UNDER THE HAUNCHES OF THE PIPE

RICHARD PLECKER
ENVIRONMENTAL UTILITIES DIRECTOR

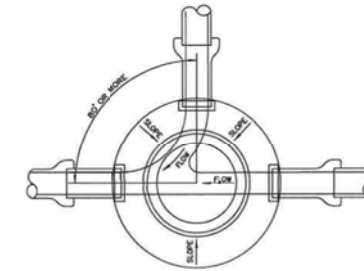
CITY OF ROSEVILLE
CALIFORNIA

ENVIRONMENTAL UTILITIES
DEPARTMENT

SEWER MAIN
TRENCH AND BACKFILL

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

SS-1



NOTES

MANHOLE LIDS SHALL BE SEALED WITH AN APPROVED RUBBER GASKET.
JOINTS SHALL BE MORTARED INSIDE AND OUT.

UNUSED CHANNELS SHALL BE COMPLETELY FILLED WITH GROUT.

STUBS SHALL BE PLUGGED AND END MARKED ABOVE FINISHED GRADE WITH A REDWOOD 4 BY 4 POST PAINTED GREEN

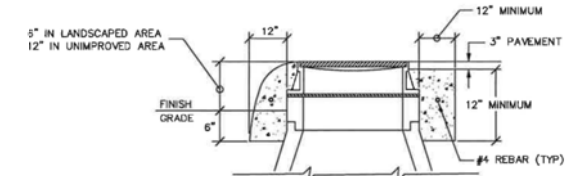
IF AN ECCENTRIC CONE IS USED, PLACE SUCH THAT THE OPENING IS OVER THE UPSTREAM INVERT.

NO CAULDER OR REPAIR COUPLINGS SHALL BE USED ON NEW CONSTRUCTION

FLOW LINES SHALL HAVE A 1/10 DROP OR AS INDICATED ON PLANS

MANHOLES WITH DROPS SHALL BE EPOXY COATED. THE COATING SHALL BE APPLIED PER SEC. 91-10K OF THESE STANDARDS.

* 60" & 72" MANHOLES SHALL USE A 35" COMPOSITE LID AND FRAME.



Richard D. Lerner

RICHARD PLECKER
ENVIRONMENTAL UTILITIES DIRECTOR

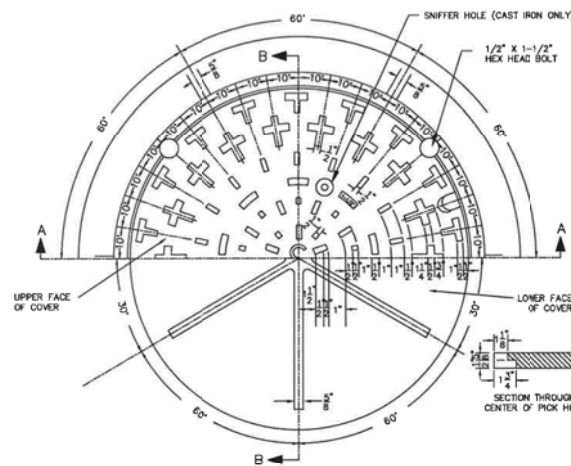
CITY OF ROSEVILLE
CALIFORNIA

ENVIRONMENTAL UTILITIES
DEPARTMENT

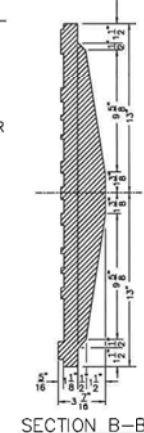
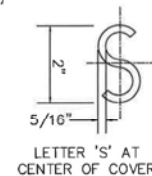
SEWER MANHOLE
STANDARD 48 INCH

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

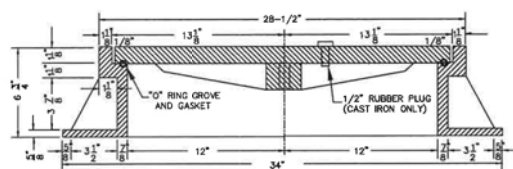
SS-2



HALF PLAN OF HEAD AND COVER



SECTION B-B



SECTION A-A

NOTE: SEE SECTION 91-16.E.3 FOR APPROVED LIST OF SEWER MANHOLE FRAME AND COVER

RICHARD PLECKER
ENVIRONMENTAL UTILITIES DIRECTOR

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CALIFORNIA

ENVIRONMENTAL UTILITIES
DEPARTMENT

STANDARD SEWER MANHOLE
FRAME AND COVER

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

SS-3

FOR PROPOSAL
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NOT FOR
CONSTRUCTION



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APPROVED
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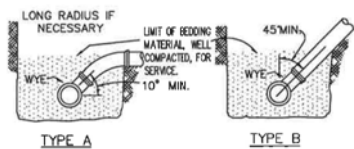
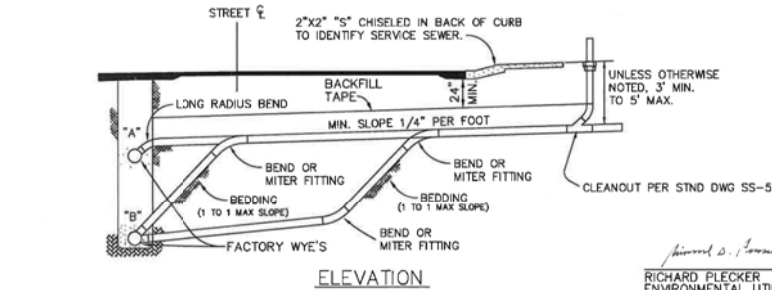
CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL
STANDARD DETAILS 14

DATE
NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-G-033
SHEET NUMBER
29

GENERAL NOTES:

1. ALL SERVICE LINES SHALL BE 4" FOR RESIDENTIAL AND 6" FOR COMMERCIAL, UNLESS OTHERWISE NOTED.
2. SERVICES SHALL HAVE SAME BEDDING AND BACKFILL AS LATERAL SEWER.
3. CONTRACTOR SHALL USE THE MOST APPROPRIATE TYPE CONNECTION (A OR B) FOR THE PARTICULAR SITUATION ENCOUNTERED.
4. SERVICE SEWER SHALL HAVE MINIMUM 3'-0" COVER AT PROPERTY LINE WHENEVER LATERAL DEPTH AND SERVICE SEWER SLOPE OF 1/4" PER FOOT (MINIMUM) PERMIT. SEE NOTE 10.
5. WHEN THE LATERAL SEWER DEPTH IS SUCH THAT MINIMUM COVER AT PROPERTY LINE CANNOT BE MET, THE MINIMUM SLOPE OF 1/4" PER FOOT SHALL GOVERN THE COVER.
6. MIN. SPECIFIED COVER AT THE PROPERTY LINE SHALL BE MEASURED FROM EXISTING GROUND SURFACE OR EDGE OF ADJACENT ROADWAY, WHICHEVER IS LOWER.
7. A SPECIFIC ELEVATION AT THE PROPERTY LINE, WHEN SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER, SHALL GOVERN.
8. MITER FITTING SHALL BE MAX. 45°.
9. MINIMUM DEPTH OF COVER SHALL BE INCREASED TO 4'-6" WHERE A WATER MAIN IS TO BE INSTALLED AT BACK OF SIDEWALK AS PART OF THE SUBDIVISION IMPROVEMENTS. IN SUCH CASES, THE SERVICE SHALL BE EXTENDED TO A MINIMUM OF 7' BACK OF SIDEWALK, CLEANOUT TO GRADE SHALL REMAIN WITHIN 3' OF BACK OF SIDEWALK.
10. SEWER SERVICES ORIGINATING FROM SEWER MAINS 14 FT AND GREATER IN DEPTH SHALL HAVE THE CROTCH OF THE VCP "WYE" FITTING FILLED WITH CONCRETE.
11. UNDERGROUND CONTRACTOR SHALL END SEWER SERVICE 2-3' UPSTREAM OF SEWER CLEANOUT. SEE STANDARD DETAIL SS-5.



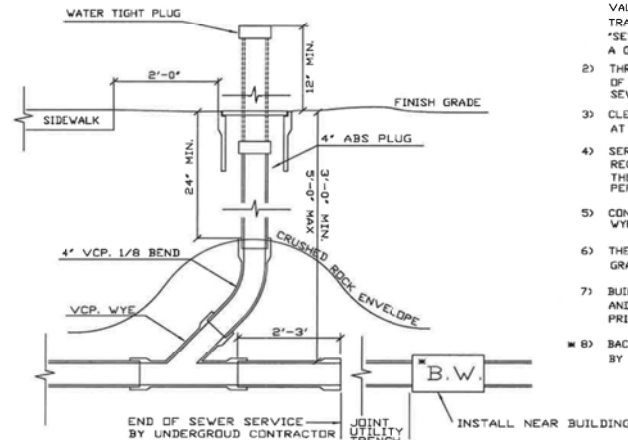
CONNECTION DETAILS

CITY OF ROSEVILLE
ENVIRONMENTAL UTILITIES DEPARTMENT

SEWER SERVICE

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

SS-4



NOTES:

- 1) INSTALL ROUND NON-TRAFFIC TYPE CONCRETE VALVE BOX & COVER MARKED "SEWER" IN A NON - TRAFFIC AREA. INSTALL METAL LID MARKED "SEWER" IN AREAS WITH POTENTIAL TRAFFIC. A GS BOX SHALL BE INSTALLED IN TRAFFIC AREAS.
- 2) THREE FOOT VCP STUB SHALL BE INSTALLED UPSTREAM OF CLEANOUT. 8" VCP SHALL BE INSTALLED WHERE SEWER SERVICE ENTERS OVER JOINT UTILITY TRENCH
- 3) CLEANOUT BOX TO BE FREE OF ALL DIRT AND READY AT TIME OF PRE-FINAL INSPECTION.
- 4) SERVICES OVER 100' LONG AND COMMERCIAL SERVICES REQUIRE A MIN. 6" CLEANOUT WITH 6" FITTINGS. THE CLEANOUT BOX SHALL BE CONSTRUCTED PER W-16.
- 5) CONNECTION TO MAIN SHALL BE WITH A FACTORY WYE OR AT A MANHOLE.
- 6) THE CLEANOUT RISER SHALL BE INSTALLED 12" ABOVE GRADE PRIOR TO BUILDING CONSTRUCTION.
- 7) BUILDING CONTRACTOR SHALL SET BOX TO FINISH GRADE AND INSTALL AN ABS PLUG SET 6" BELOW THE SURFACE PRIOR TO BUILDING PRE-FINAL.
- 8) BACKWATER VALVE IF REQUIRED SHALL BE INSTALLED BY THE BUILDING CONTRACTOR

- 9) 8" VCP SHALL BE INSTALLED WHERE SEWER SERVICE ENTERS OVER JOINT UTILITY TRENCH.
- 10) TREES ARE TO BE PLACED 7 1/2' FROM CLEAN OUT.
- 11) INSTALL A CITY CLEANOUT AT A MINIMUM 5' FROM COMMERCIAL BUILDINGS.

CITY OF ROSEVILLE
ENVIRONMENTAL UTILITIES DEPARTMENT

SEWER SERVICE CLEANOUT

SCALE: NONE
REVISED: JANUARY 2016
DRAWN BY: R. VAN NESS
APPROVED BY: RICHARD PLECKER

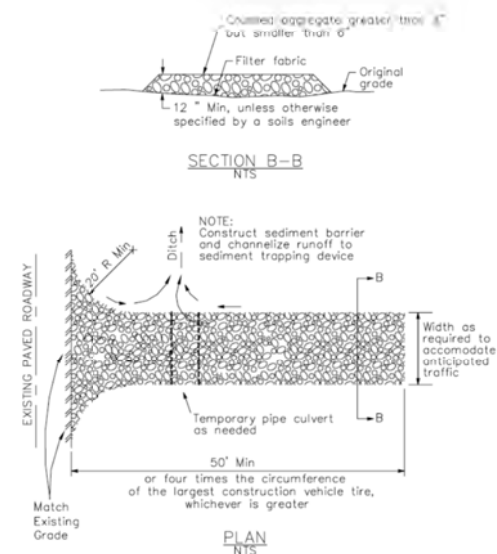
SS-5

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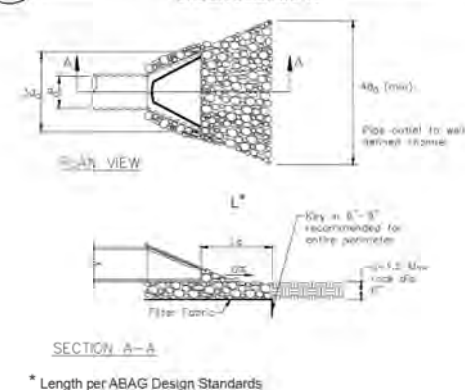
3 Stabilized Construction Entrance/Exit

CASQA Detail TC-1



4 Velocity Dissipation Devices

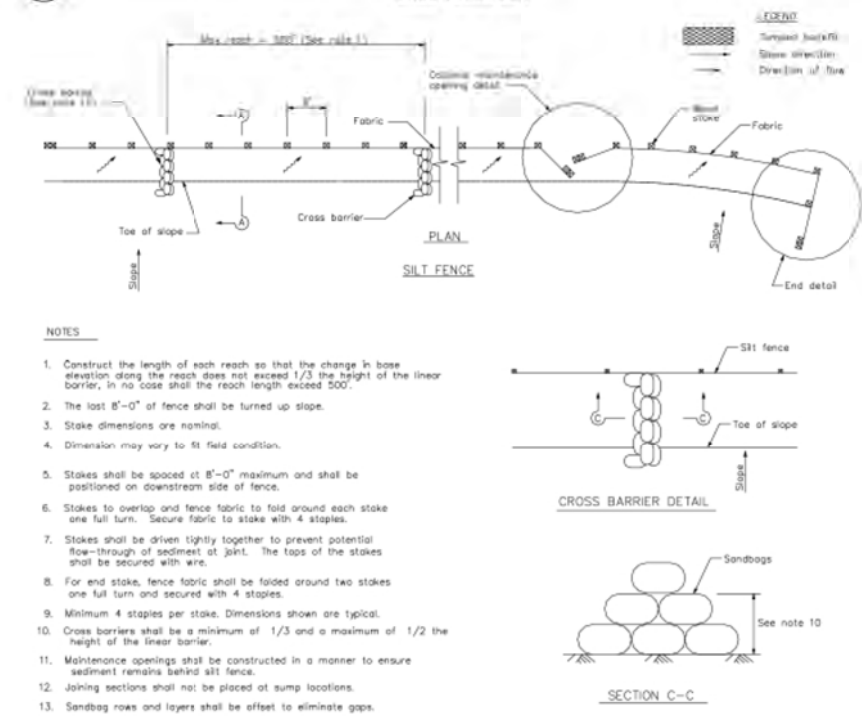
CASQA Detail EC-10



Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003.
Available from: www.cabmphandbooks.com

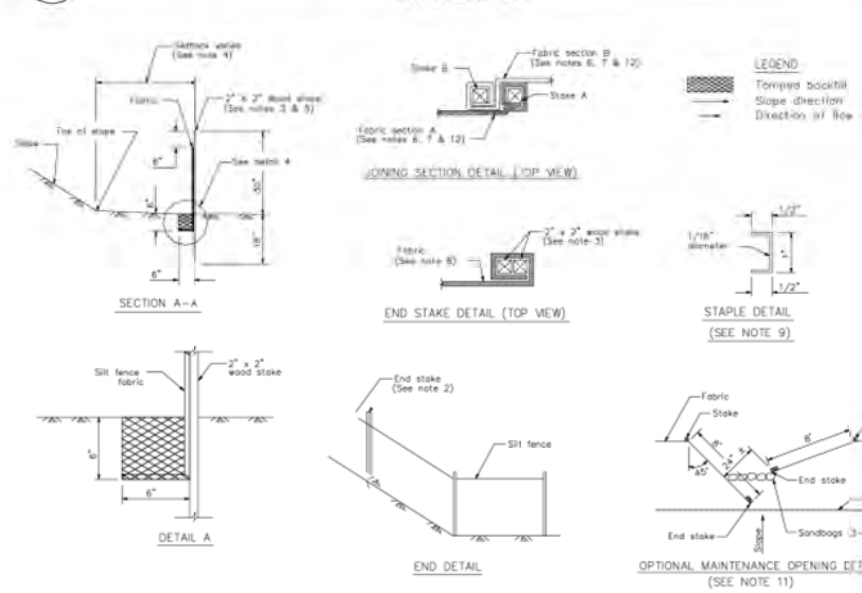
1 Silt Fence

CASQA Detail SE-1



2 Silt Fence

CASQA Detail SE-1



STANDARD BEST MANAGEMENT PRACTICE NOTES

- Solid and Demolition Waste Management:** Provide designated waste collection areas and containers on site away from streets, gutters, storm drains, and waterways, and arrange for regular disposal. Waste containers must be watertight and covered at all times except when waste is deposited. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C-3) or latest.
- Hazardous Waste Management:** Provide proper handling and disposal of hazardous wastes by a licensed hazardous waste material handler. Hazardous wastes shall be stored and properly labeled in sealed containers constructed of suitable materials. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-5 to C-6) or latest.
- Spill Prevention and Control:** Provide proper storage areas for liquid and solid materials, including chemicals and hazardous substances, away from streets, gutters, storm drains, and waterways. Spill control materials must be kept on site where readily accessible. Spills must be cleaned up immediately and contaminated soil disposed properly. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-7 to C-8, C-13 to C-14) or latest.
- Vehicle and Construction Equipment Service and Storage:** An area shall be designated for the maintenance, where on-site maintenance is required, and storage of equipment that is protected from stormwater run-on and runoff. Measures shall be provided to capture any waste oils, lubricants, or other potential pollutants and these wastes shall be properly disposed of off site. Fueling and major maintenance/repair, and washing shall be conducted off-site whenever feasible. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C-9) or latest.
- Material Delivery, Handling and Storage:** In general, materials should not be stockpiled on site. Where temporary stockpiles are necessary and approved by the County, they shall be covered with secured plastic sheeting or tarp and located in designated areas near construction entrances and away from drainage paths and waterways. Barriers shall be provided around storage areas where materials are potentially in contact with runoff. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-11 to C-12) or latest.
- Handling and Disposal of Concrete and Cement:** When concrete trucks and equipment are washed on-site, concrete wastewater shall be contained in designated containers or in a temporary lined and watertight pit where waste concrete can harden for later removal. If possible have concrete contractor remove concrete wash water from site. In no case shall fresh concrete be washed into the road right-of-way. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-15 to C-16) or latest.
- Pavement Construction Management:** Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent run-on and runoff pollution and properly disposing of wastes. Avoid paving in the wet season and reschedule paving when rain is in the forecast. Residue from saw-cutting shall be vacuumed for proper disposal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-17 to C-18) or latest.
- Contaminated Soil and Water Management:** Inspections to identify contaminated soils should occur prior to construction and at regular intervals during construction. Remediating contaminated soil should occur promptly after identification and be specific to the contaminant identified, which may include hazardous waste removal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-19 to C-20) or latest.
- Sanitary/Septic Water Management:** Temporary sanitary facilities should be located away from drainage paths, waterways, and traffic areas. Only licensed sanitary and septic waste haulers should be used. Secondary containment should be provided for all sanitary facilities. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C-21) or latest.
- Inspection & Maintenance:** Areas of material and equipment storage sites and temporary sanitary facilities must be inspected weekly. Problem areas shall be identified and appropriate additional and/or alternative control measures implemented immediately, within 24 hours of the problem being identified.

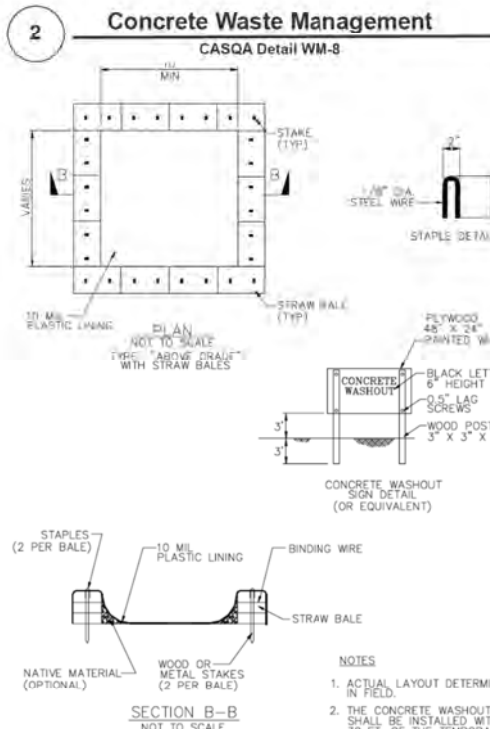
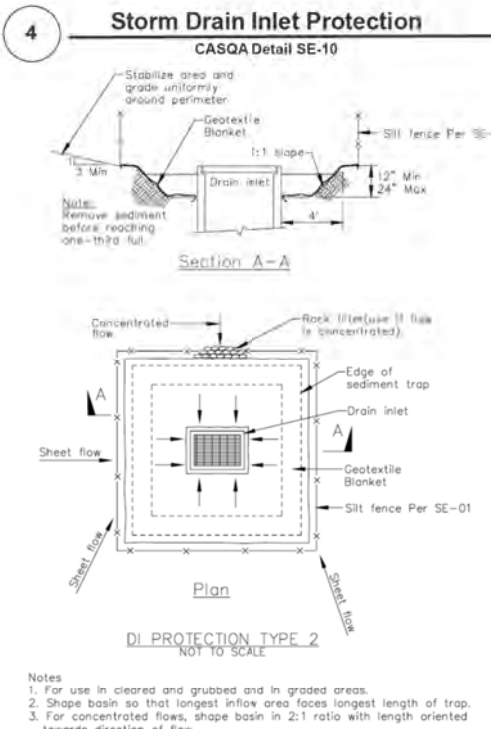
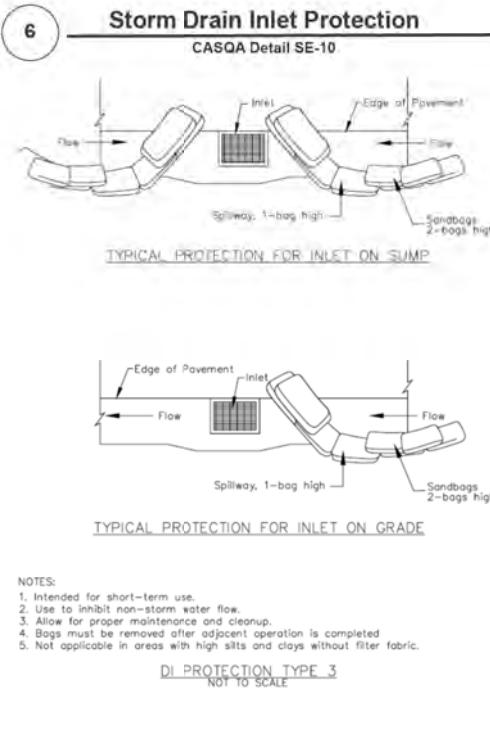
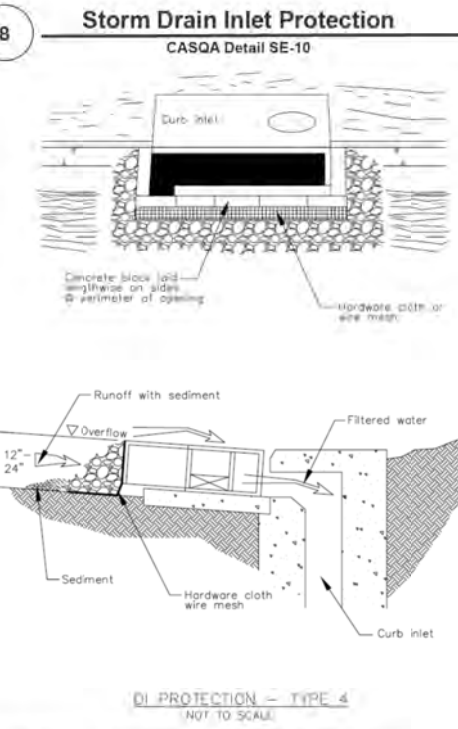
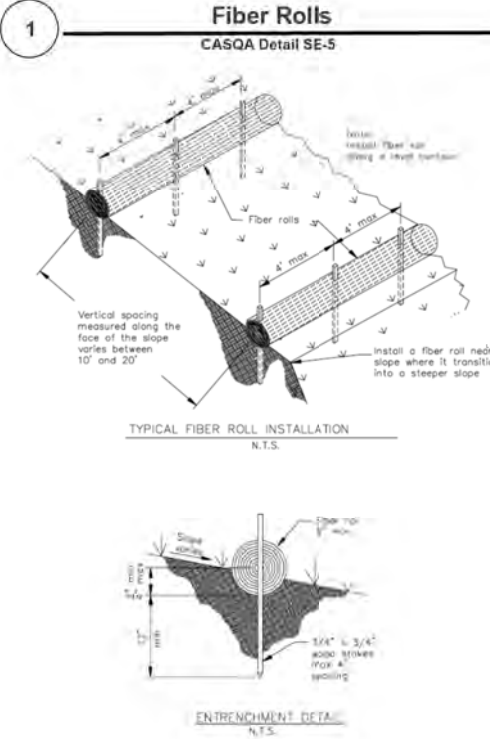
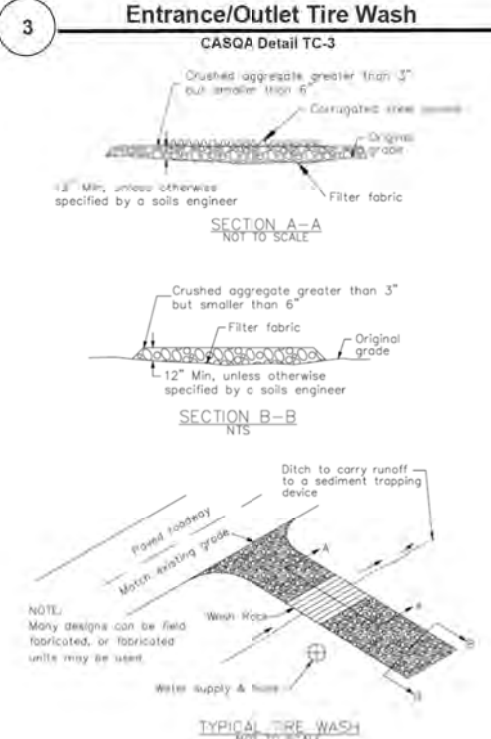
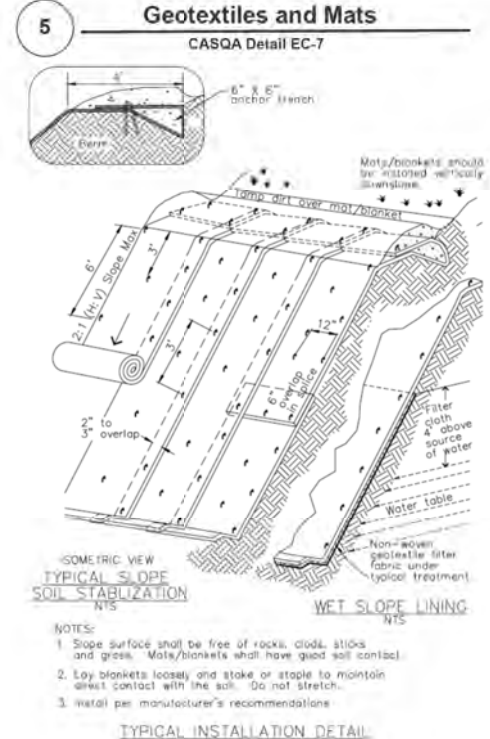
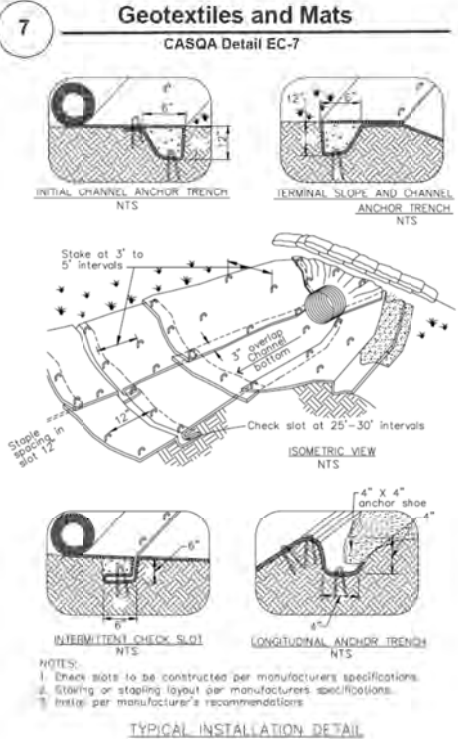
STANDARD EROSION CONTROL NOTES

- Sediment Control Management:**
 - Tracking Prevention & Clean Up:** Activities shall be organized and measures taken as needed to prevent or minimize tracking of soil onto the public street system. A gravel or proprietary device construction entrance/exit is required for all sites. Clean up of tracked material shall be provided by means of a street sweeper prior to an approaching rain event, or at least once at the end of each workday that material is tracked, or more frequently as determined by the County Inspector. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-31 to B-33) or latest.
 - Storm Drain Inlet and Catch Basin Inlet Protection:** All inlets within the vicinity of the project and within the project limits shall be protected with gravel bags placed around inlets or other inlet protection. At locations where exposed soils are present, staked fiber rolls or staked silt fences can be used. Inlet filters are not allowed due to clogging and subsequent flooding. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-49 to B-51) or latest.
 - Storm Water Runoff:** No storm water runoff shall be allowed to drain in to the existing and/or proposed underground storm drain system or other above ground watercourses until appropriate erosion control measures are fully installed.
 - Dust Control:** The contractor shall provide dust control in graded areas as required by providing wet suppression or chemical stabilization of exposed soils, providing for rapid clean up of sediments deposited on paved roads, furnishing construction road entrances and vehicle wash down areas, and limiting the amount of areas disturbed by clearing and earth moving operations by scheduling these activities in phases.
 - Stockpiling:** Excavated soils shall not be placed in streets or on paved areas. Borrow and temporary stockpiles shall be protected with appropriate erosion control measures (tarps, straw bales, silt fences, etc.) to ensure silt does not leave the site or enter the storm drain system or neighboring watercourse.
- Erosion Control:** During the rainy season, all disturbed areas must include an effective combination of erosion and sediment control. It is required that temporary erosion control measures are applied to all disturbed soil areas prior to a rain event. During the non-rainy season, erosion control measures must be applied sufficient to control wind erosion at the site.
- Inspection & Maintenance:** Disturbed areas of the Project's site, locations where vehicles enter or exit the site, and all erosion and sediment controls that are identified as part of the Erosion Control Plans must be inspected by the Contractor before, during, and after storm events, and at least weekly during seasonal wet periods. Problem areas shall be identified and appropriate additional and/or alternative control measures implemented immediately, within 24 hours of the problem being identified.
- Project Completion:** Prior to project completion and signoff by the County Inspector, all disturbed areas shall be reseeded, planted, or landscaped to minimize the potential for erosion on the subject site.
- It shall be the Owner's/Contractor's responsibility to maintain control of the entire construction operation and to keep the entire site in compliance with the erosion control plan.**
- Erosion and sediment control best management practices shall be operable year round or until vegetation is fully established on landscaped surfaces.**

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CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL STANDARD DETAILS 16			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-035			
SHEET NUMBER 31			

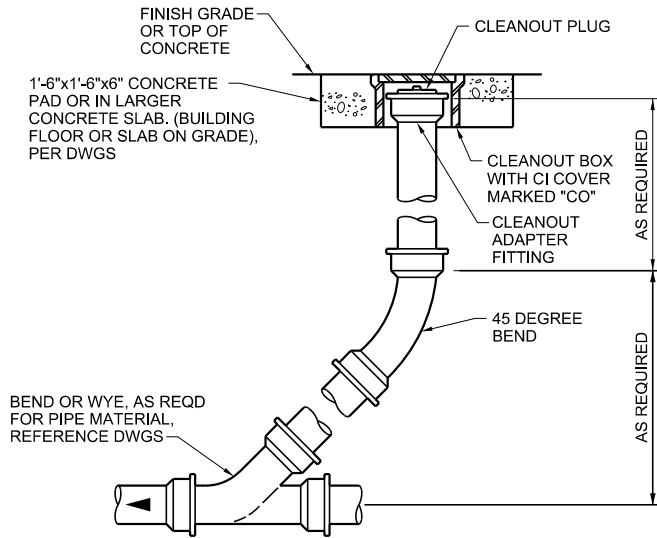


Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003. Available from www.cabmphandbooks.com.

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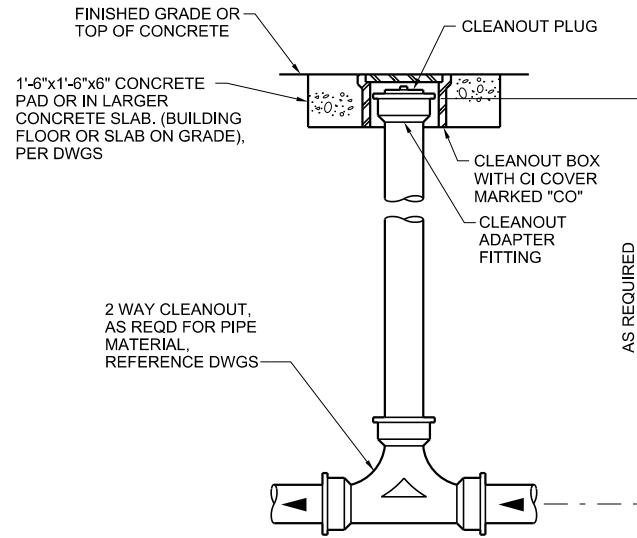


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CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL STANDARD DETAILS 17			
DATE NOVEMBER 2019		PROJECT NUMBER 17-083	
DRAWING NUMBER WD00-G-036		SHEET NUMBER 32	



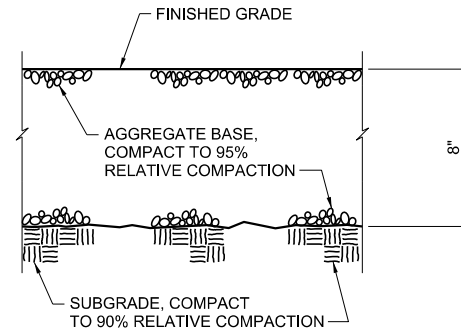
DRAIN LINE CLEANOUT
NTS

2130



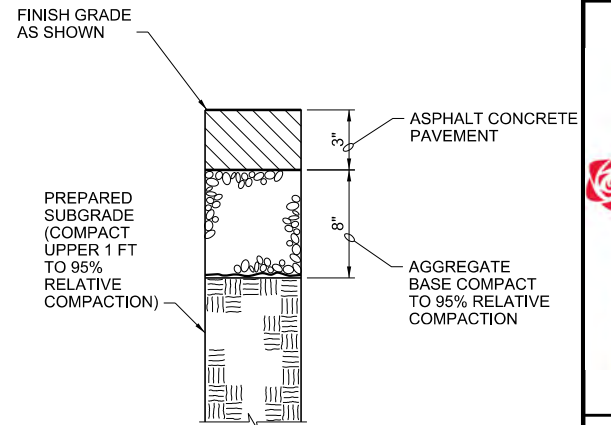
TWO WAY DRAIN LINE CLEANOUT
NTS

2132



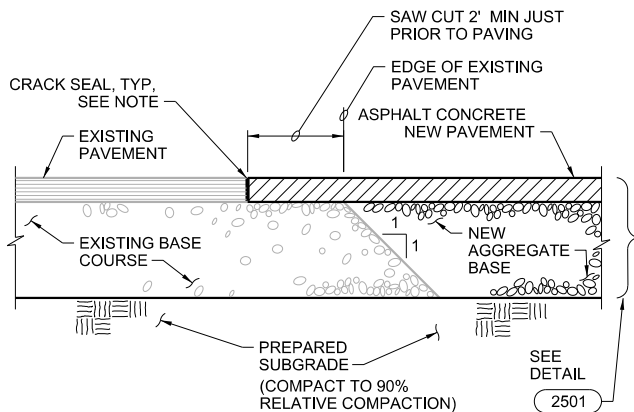
GRAVEL ROAD SURFACING
NTS

2500



ASPHALT CONCRETE PAVEMENT
NTS

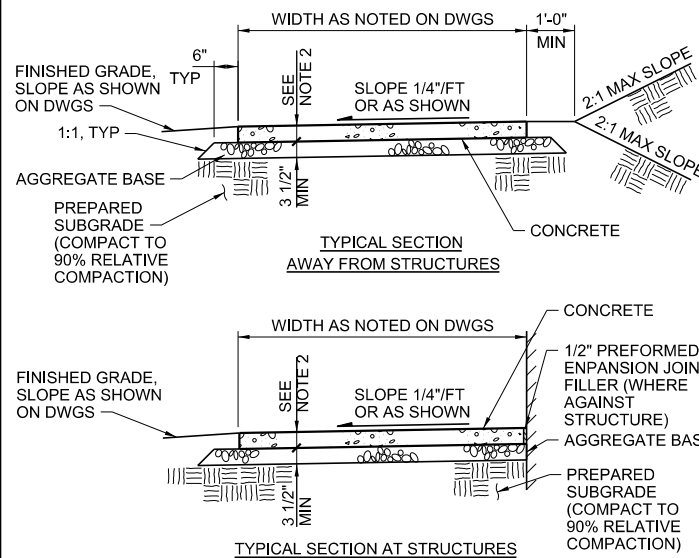
2501



- NOTES:**
1. PAINT EDGE OF EXISTING ASPHALT WITH TACK COAT PRIOR TO PAVING. CRACK SEAL JOINT AFTER PAVING OPERATION HAS BEEN COMPLETED.

PAVEMENT CONNECTION
NTS

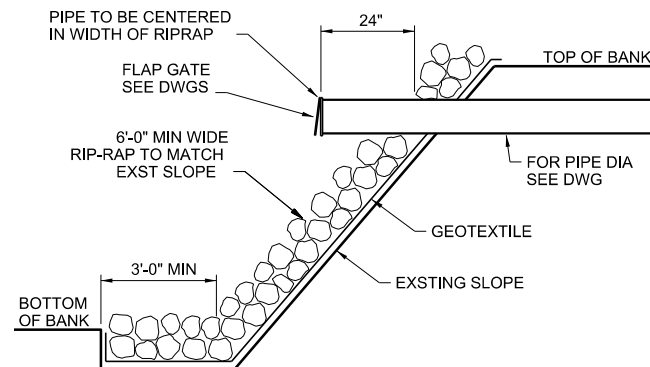
2502



- NOTES:**
1. SIDEWALKS 8 FEET AND WIDER SHALL HAVE A LONGITUDINAL CONTRACTION JOINT AT THE MIDPOINT. PROVIDE LATERAL CONTRACTION JOINTS AT EQUAL SPACING, NO MORE THAN 5'-0" BETWEEN JOINTS.
 2. CONCRETE DEPTH FOR STANDARD SIDEWALKS SHALL BE 4" MINIMUM, THICKNESS IN DRIVEWAY SHALL BE 6" MINIMUM.

CONCRETE SIDEWALK
NTS

2503



- NOTE:**
1. ROCK SLOPE PROTECTION SHALL CONFORM TO SECTION 72-2 OF THE CALTRANS STANDARD SPECIFICATIONS
 2. ROCK SLOPE PROTECTION SHALL BE GRADED FOR 1/4- TON, METHOD "B" PLACEMENT

**PIPE OUTLET W/
ROCK SLOPE PROTECTION**
NTS

2510

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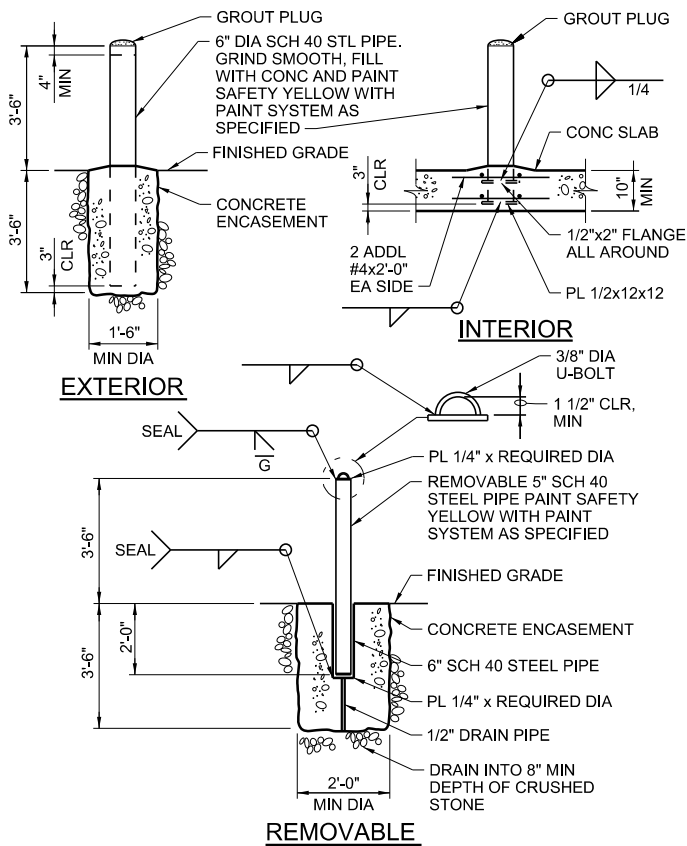


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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

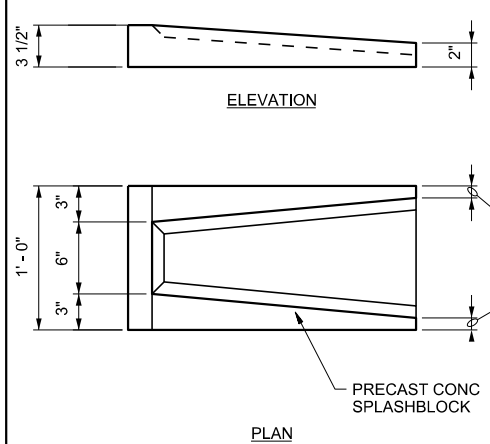
GENERAL
STANDARD DETAILS 18

DATE
NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-G-037
SHEET NUMBER 33



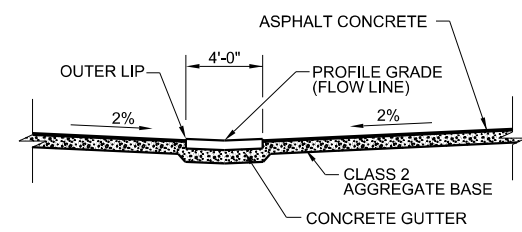
GUARD POST
NTS

2600

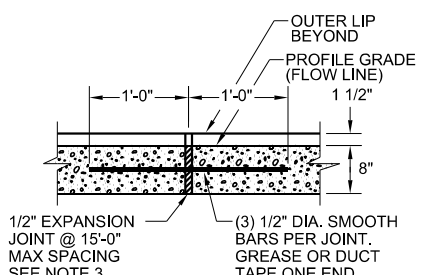


SPLASH BLOCK
NTS

2601



TYP. CROSS SECTION

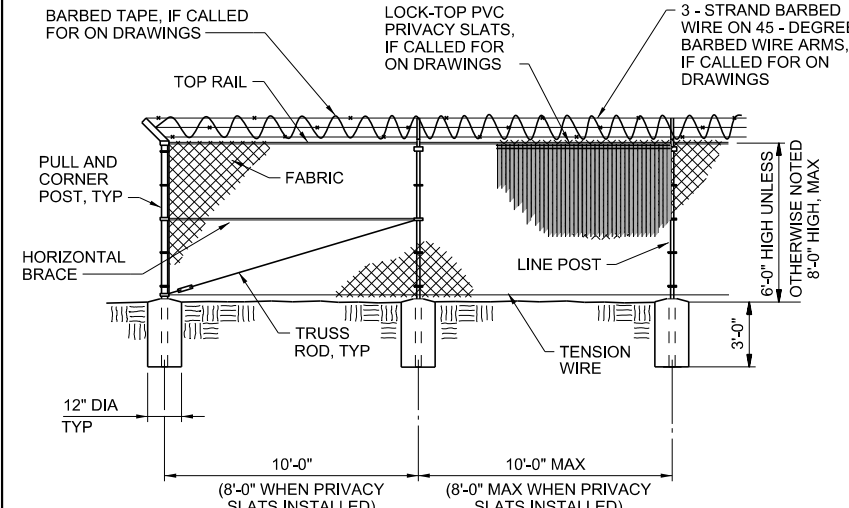


EXPANSION JOINT DETAIL

- NOTES**
1. ALL WORK AND MATERIALS SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
 2. SURFACING AND BASE THICKNESS SHALL BE DETERMINED IN ACCORDANCE WITH PROJECT SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
 3. 1/2-INCH, PRE-MOLDED EXPANSION JOINT MATERIAL SHALL BE HELD FIRMLY IN PLACE PRIOR TO PLACING CONCRETE.

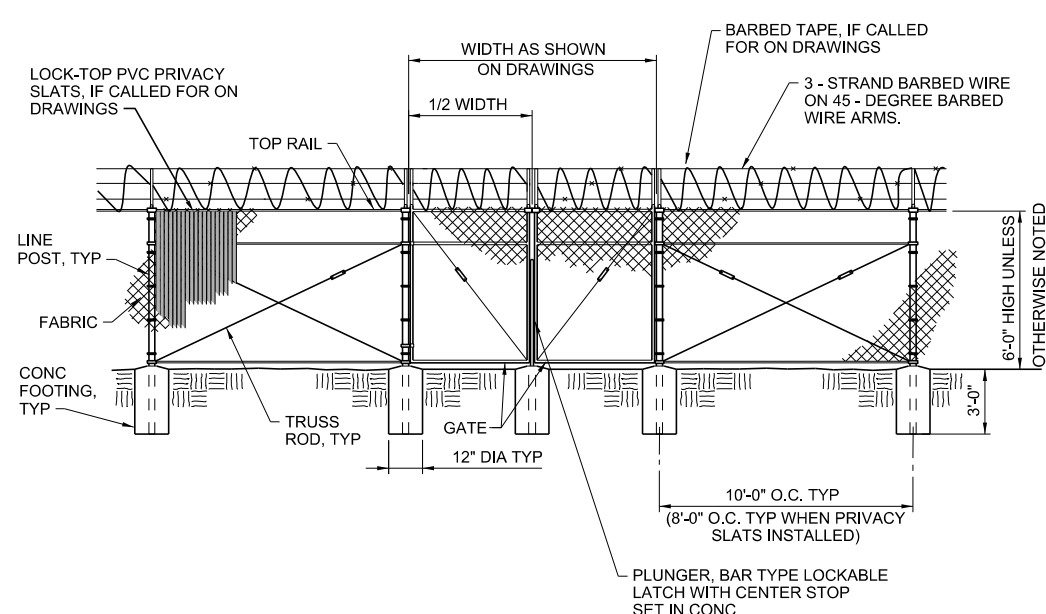
TYPICAL CONCRETE SWALE
NTS

2720



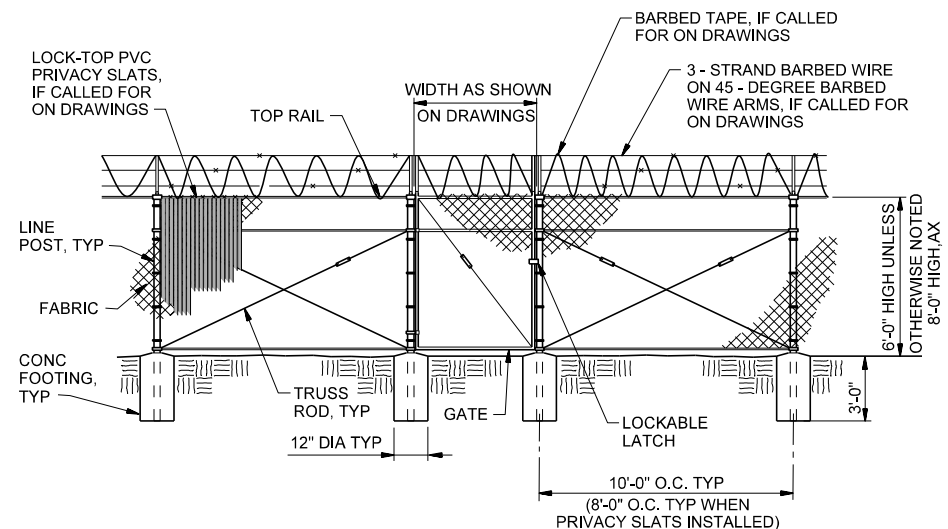
CHAINLINK FENCE
NTS

2800



CHAINLINK DOUBLE-LEAF GATE
NTS

2801



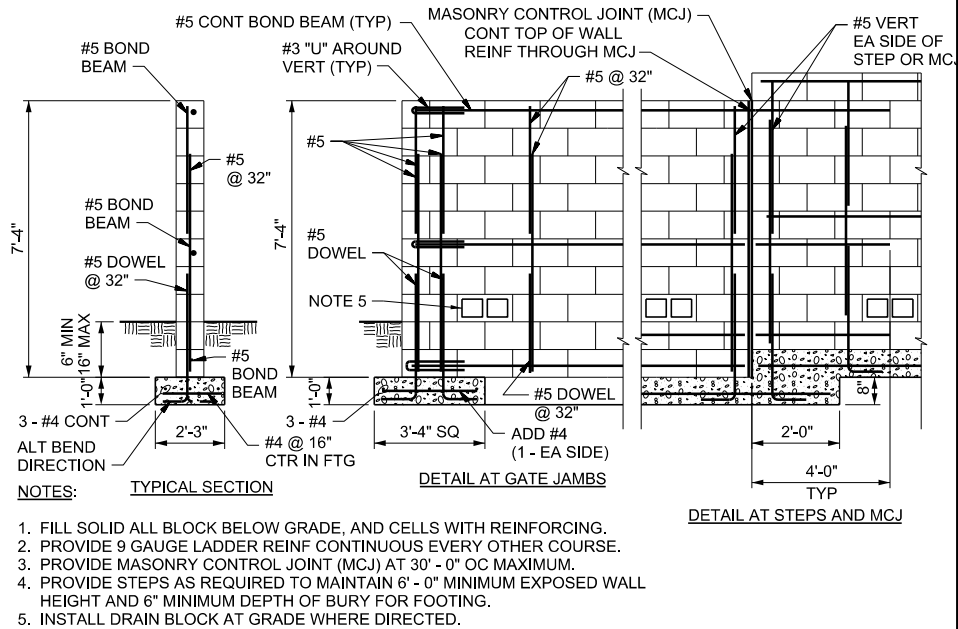
CHAINLINK SINGLE-LEAF GATE
NTS

2802

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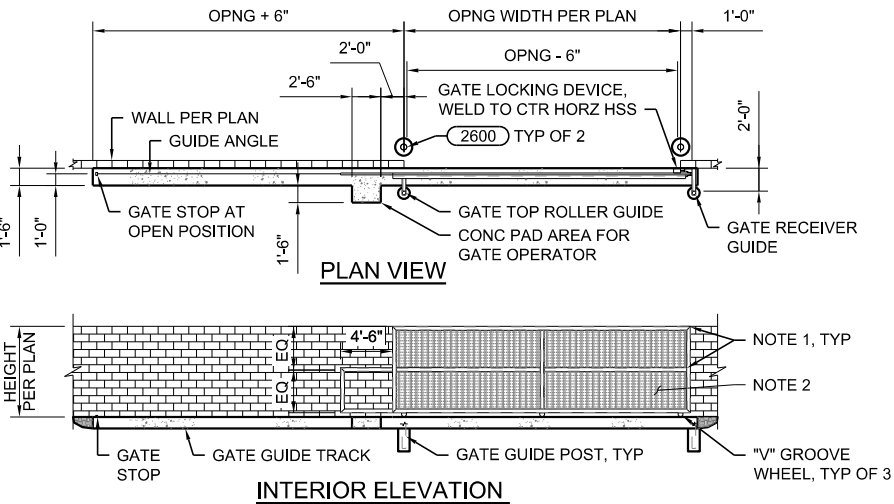


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WATERWORKS ENGINEERS 2280 Douglas Blvd. Suite 105 • Roseville, CA 95661 • 916-785-2888			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL STANDARD DETAILS 19			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-038			
SHEET NUMBER 34			



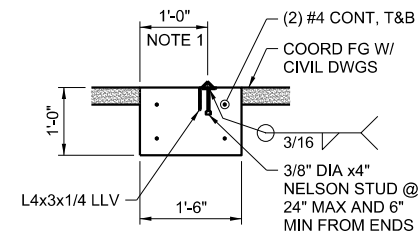
8 - INCH MASONRY WALL
NTS

2810

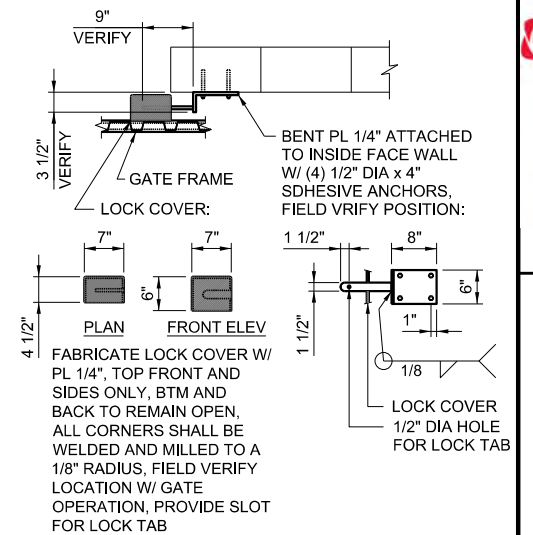


ROLLING FABRICATED STEEL GATE 1 OF 3
NTS

2815



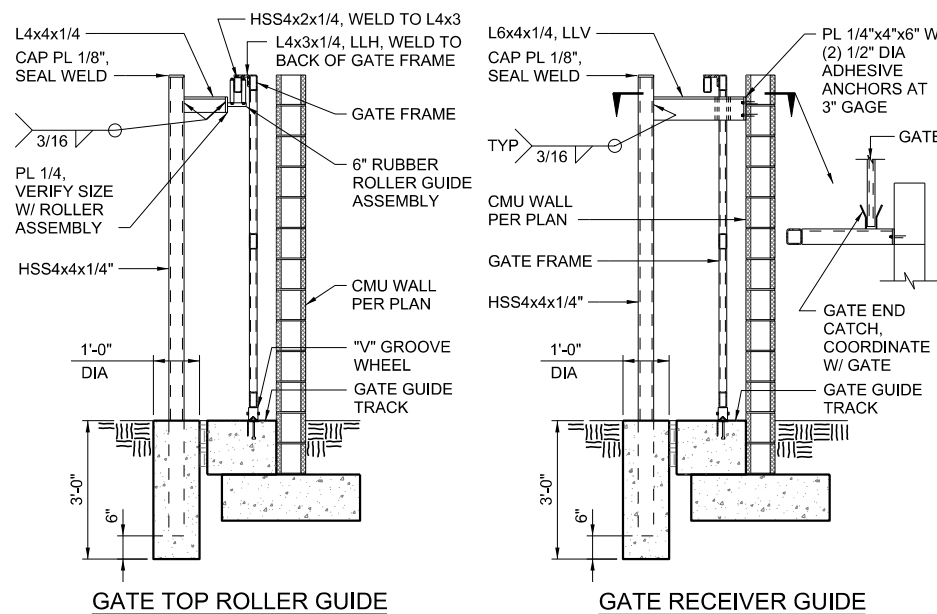
GATE GUIDE TRACK



GATE LOCKING DEVICE

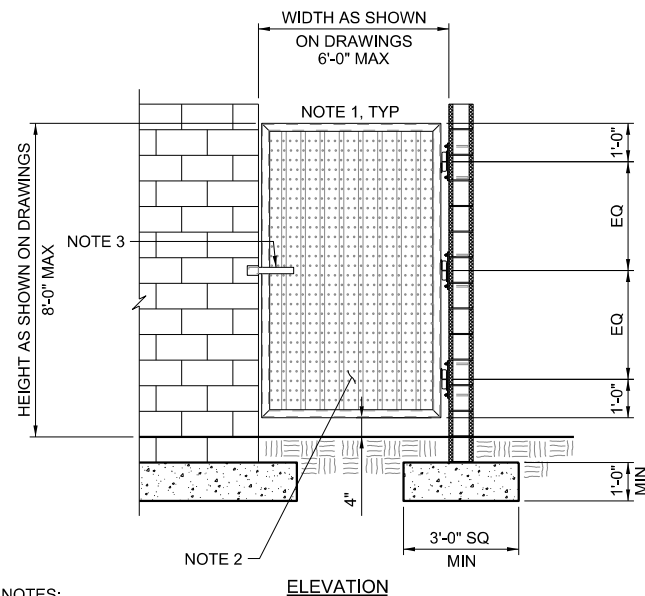
STEEL ROLLING GATE
NTS

2 OF 3 2815



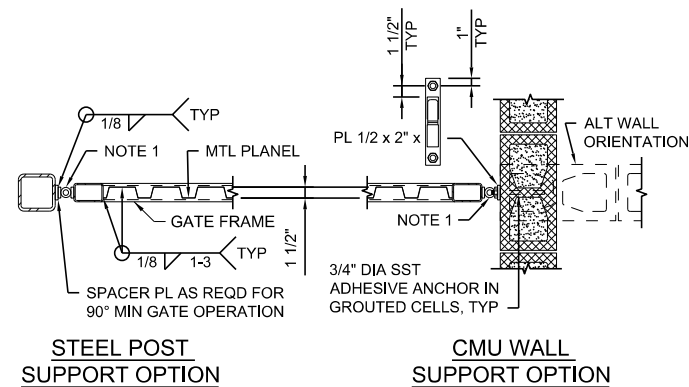
STEEL ROLLING GATE
NTS

3 OF 3 2815



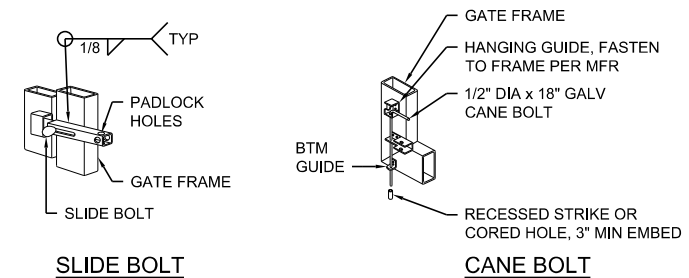
STEEL SINGLE-LEAF GATE
NTS

2817



STEEL POST SUPPORT OPTION

CMU WALL SUPPORT OPTION



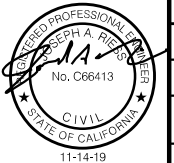
SLIDE BOLT

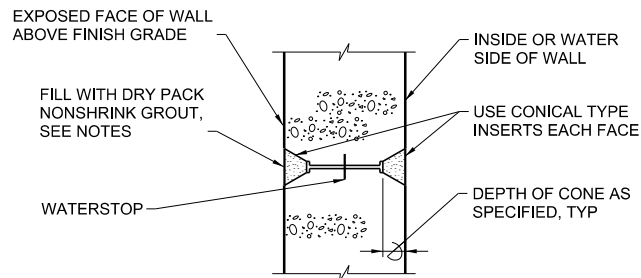
CANE BOLT

SINGLE-LEAF FABRICATED STEEL GATE
NTS

2819

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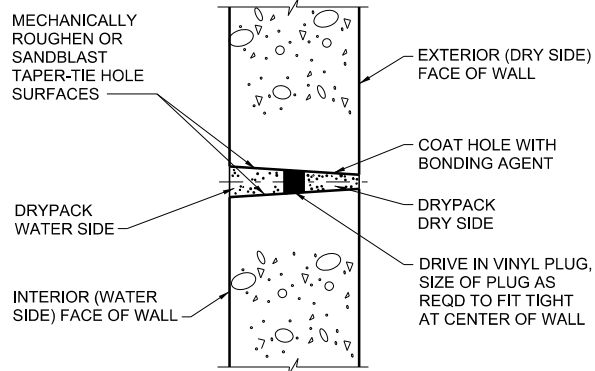




- NOTES:
1. THE SPACING OF FORM TIES ON EXPOSED PORTIONS OF WALLS SHALL BE APPROXIMATELY EQUAL HORIZONTALLY AND VERTICALLY AND SHALL BE UNIFORM IN EACH DIRECTION.
 2. DRY PACK METHOD SHALL BE AS SPECIFIED USING STEEL TOOLS.

FORM SNAP-TIE HOLE
NTS

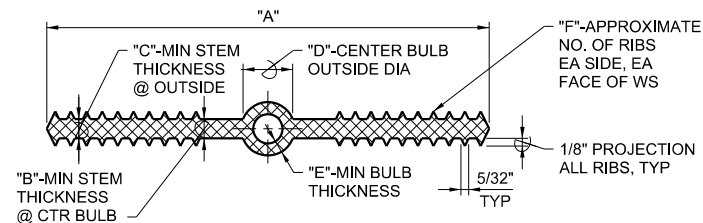
3051



- NOTE:
MINIMUM HOLE DIAMETER AT EXTERIOR FACE = 1". TAPER HOLE SO THAT MINIMUM HOLE DIAMETER AT INTERIOR FACE = 1 1/4"
- CONSTRUCTION STEPS:
1. SANDBLAST OR MECHANICALLY ROUGHEN WITH ELECTRIC EQUIPMENT.
 2. DRIVE IN VINYL PLUG.
 3. COAT HOLE ON DRY SIDE OF PLUG AND WHILE BONDING AGENT IS TACKY, DRYPACK.
 4. COAT HOLE ON WATER SIDE OF PLUG AND WHILE BONDING AGENT IS TACKY, DRYPACK.
 5. USE TYPE II, NON-SHRINK GROUT AS SPECIFIED.

ALTERNATE FORM TIE-THROUGH BOLT
NTS

3052

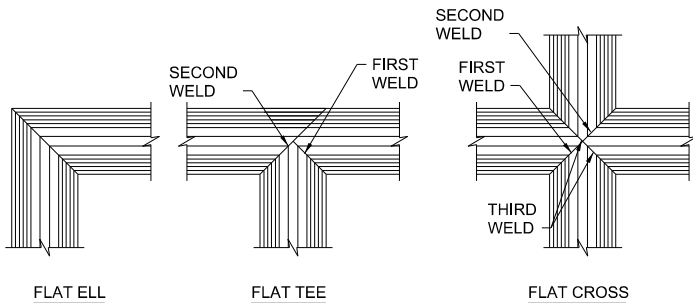
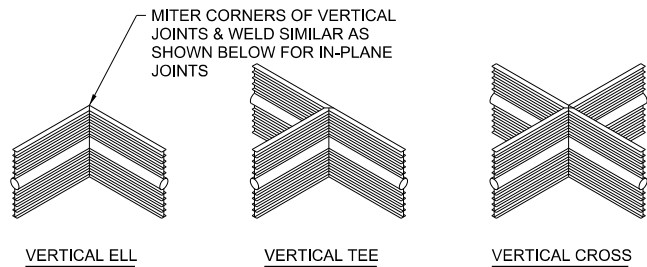


SIZE	"A"	"B"	"C"	"D"	"E"	"F"
4"x3/16"	4"	3/16"	3/16"	3/4"	1/4"	4
6"x3/8"	6"	3/8"	3/8"	7/8"	1/4"	6
9"x3/8"	9"	3/8"	3/8"	1"	1/4"	8

- NOTES:
1. NON-ROUND CENTER BULBS SHALL HAVE A MINIMUM OUTSIDE DIMENSION OF 'D'.
 2. SEE SPLICE DETAIL (3111)
 3. BULB TYPE WATERSTOP SHOWN IS REQUIRED FOR EXPANSION AND CONTROL JOINTS. SIMILAR WATERSTOPS WITHOUT CENTER BULB MAY BE SUBSTITUTED AT CONSTRUCTION JOINTS.
 4. USE 6 INCH WATERSTOPS IN ALL CONSTRUCTION JOINTS UNLESS SPECIFICALLY SHOWN OTHERWISE.

PLASTIC WATERSTOP
NTS

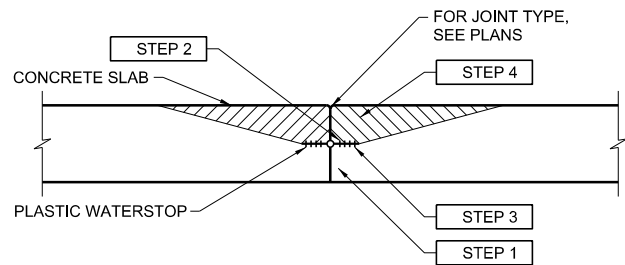
3101



NOTE:
ALL WELDS SHALL BE PER WATERSTOP MANUFACTURER'S RECOMMENDATIONS.

WATERSTOP JOINTS
NTS

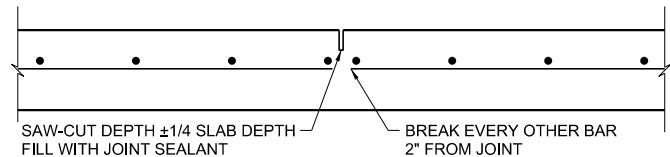
3111



- NOTES:
- PLACEMENT SEQUENCE SHOWN REQUIRED ON BOTH SIDES OF JOINTS, IN ALL CONCRETE SLAB AND FOOTING POURS WITH HORIZONTALLY PLACED PLASTIC WATERSTOPS.
- STEP 1
PLACE CONCRETE BELOW WATERSTOP FIRST, REMOVE ALL AIR VOIDS BY VIBRATING THOROUGHLY.
- STEP 2
TO CONFIRM THERE ARE NO AIR VOIDS, LIFT WATERSTOP. A CONTINUOUS IMPRESSION OF THE WATERSTOP, INCLUDING EDGE OF BULB, SHOULD BE VISIBLE IN THE FRESH CONCRETE. CONTINUE THIS PROCEDURE ALONG THE ENTIRE POURED JOINT, END TO END. IF A CONTINUOUS IMPRESSION IS CONFIRMED, PROCEED WITH STEP 4. IF A VOID LARGER THAN 1/4 INCH IN DIAMETER IS PRESENT ANYWHERE IN THE WATERSTOP IMPRESSION, PROCEED WITH STEP 3.
- STEP 3
IF A VOID LARGER THAN 1/4 INCH IN DIAMETER IS PRESENT IN THE WATERSTOP IMPRESSION, ADDITIONAL CONCRETE SHALL BE PLACED UNDER THE WATERSTOP, VIBRATED, AND STEP 2 REPEATED.
- STEP 4
FINISH PLACING CONCRETE ABOVE THE WATERSTOP TO TOP OF SLAB.
- USE IN CONJUNCTION WITH ALL TYPES OF SLAB AND FOOTING JOINTS. CROSS REFERENCE ON JOINT DETAILS.

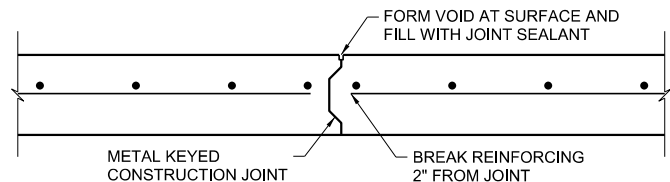
CONCRETE PLACEMENT SEQUENCE
NTS

3133

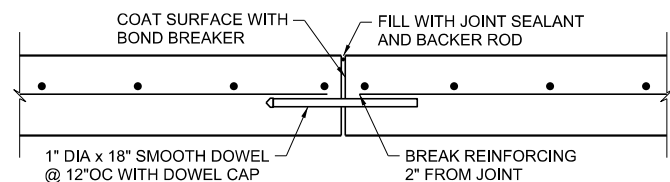


- NOTES:
1. SAW-CUT SAME DAY AS POUR AS SOON AS SPALLING WILL NOT OCCUR.
 2. CONTRACTOR SHALL USE STRING LINE OR OTHER POSITIVE MEANS TO PLACE REINFORCING AND LOCATE SAWCUT.
 3. BREAK REINF AND ADD SPLICE BARS SIMILAR AT DOUBLE MAT.
 4. 3/8" TOOLED JOINT MAY BE USED IN PLACE OF SAWN JOINT.

SLAB ON GRADE SAWN JOINT, TYPE A



SLAB ON GRADE CONSTRUCTION JOINT, TYPE B



SLAB ON GRADE CONSTRUCTION JOINT, TYPE C

CONC SLAB ON GRADE JOINTS
NTS

3160

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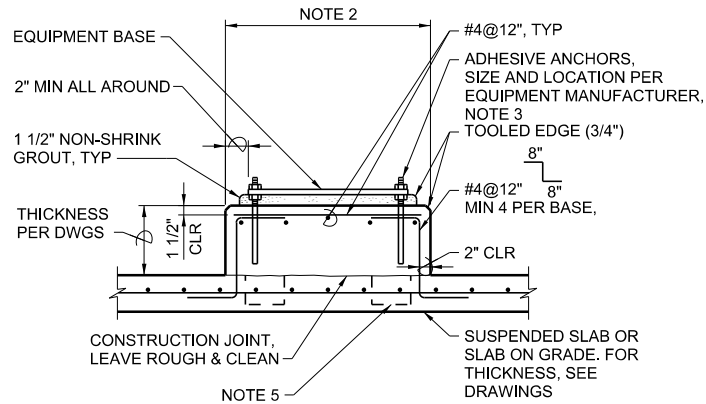
1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE DRAWINGS OR AS INDICATED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER, AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A ONE PIECE TEMPLATE, MATCHING THE BASE PLATE, WHILE PAD IS BEING POURED.
3. ANCHOR BOLT SLEEVES SHALL BE USED TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.
4. ANCHOR BOLT SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER 3" GREATER THAN ANCHOR BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.
5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE.
6. THE TYPE "D" DETAIL SHALL BE USED ONLY FOR SLABS ON GRADE AND AT GRADE. THE SURROUNDING FLOOR SLAB SHALL NOT BE PLACED UNTIL THE EXACT SIZE AND LOCATION OF THE PAD IS KNOWN.
7. WEDGES OR SHIMS SHALL BE USED TO SUPPORT THE BASE WHILE THE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. IF LEFT IN, THE WEDGES OR SHIMS SHALL NOT BE EXPOSED TO VIEW.
8. HEIGHT OF PADS SHALL BE MINIMUM REQUIRED FOR ANCHOR BOLT CLEARANCE TO KEEP ANCHOR BOLT OUT OF SLAB (SEE TABLE BELOW). WHERE EQUIPMENT OR PIPING ELEVATION REQUIRE A PAD HEIGHT LESS THAN THE MINIMUM SHOWN, USE TYPE B WITH BLOCKOUT.

AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2
MIN PAD HT (IN.)	7	8 1/2	10	11	12 1/2	15	16 1/2	18	21	24

9. TYPE "F" PADS MAY BE SUBSTITUTED FOR TYPE "A" PADS FOR LOCATIONS APPROVED IN WRITING BY THE ENGINEER.
10. SEE ANCHOR BOLT AND BLOCKOUT DETAILS (3210)

3200

NTS

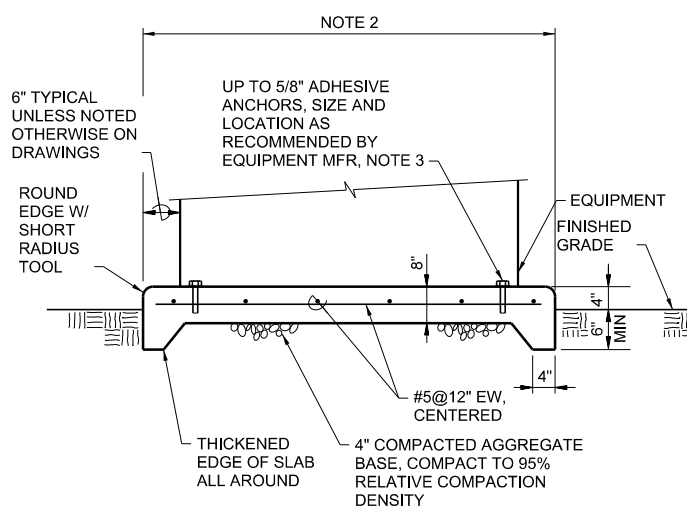


1. SEE (3200) FOR GENERAL EQUIPMENT PAD NOTES.

2. EQUIPMENT PAD SIZE PER DRAWINGS. WHERE PAD SIZE IS NOT SHOWN, SIZE TO FIT EQUIPMENT.
3. IF ANCHOR BOLTS ARE CALLED OUT FOR ON DRAWINGS, PROVIDE ANCHOR BOLTS PER (3210) IN LIEU OF ADHESIVE ANCHORS.
4. ANCHOR BOLT LOCATION SHALL BE WITHIN AN ACCEPTABLE TOLERANCE TO FIT EQUIPMENT MOUNTING OR EQUIPMENT PAD SHALL BE DEMOLISHED AND RE-CONSTRUCTED.
5. IF REQUIRED TO ACCOMMODATE ANCHOR BOLT LENGTH, PROVIDE BLOCK-OUT OR CORE DRILL IN SLABS AT ALL ANCHOR BOLT LOCATIONS PER (3210) .

3200A

NTS

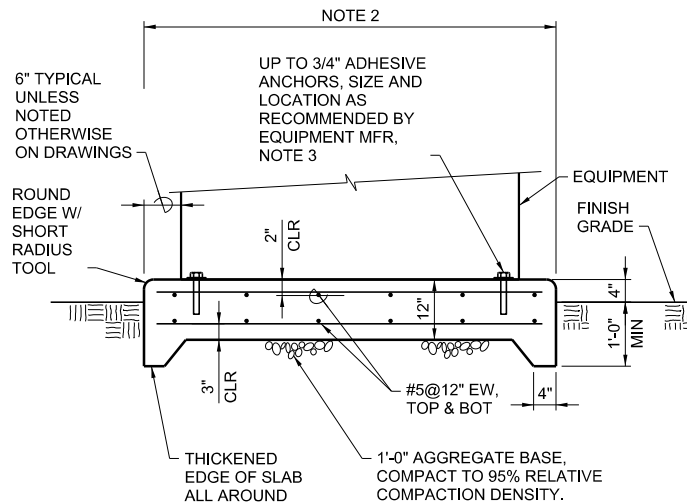


1. SEE (3200) FOR GENERAL EQUIPMENT PAD NOTES.

2. EQUIPMENT PAD SIZE PER DRAWINGS. WHERE PAD SIZE IS NOT SHOWN, SIZE TO FIT EQUIPMENT.
3. IF ANCHOR BOLTS ARE CALLED OUT FOR ON DRAWINGS, PROVIDE ANCHOR BOLTS PER (3210) IN LIEU OF ADHESIVE ANCHORS.

3200D

NTS

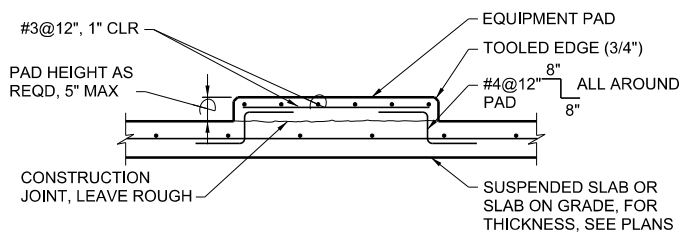


1. SEE (3200) FOR GENERAL EQUIPMENT PAD NOTES.

2. EQUIPMENT PAD SIZE PER DRAWINGS. WHERE PAD SIZE IS NOT SHOWN, SIZE TO FIT EQUIPMENT.
3. IF ANCHOR BOLTS ARE CALLED OUT FOR ON DRAWINGS, PROVIDE ANCHOR BOLTS PER 3210 IN LIEU OF ADHESIVE ANCHORS.

3200E

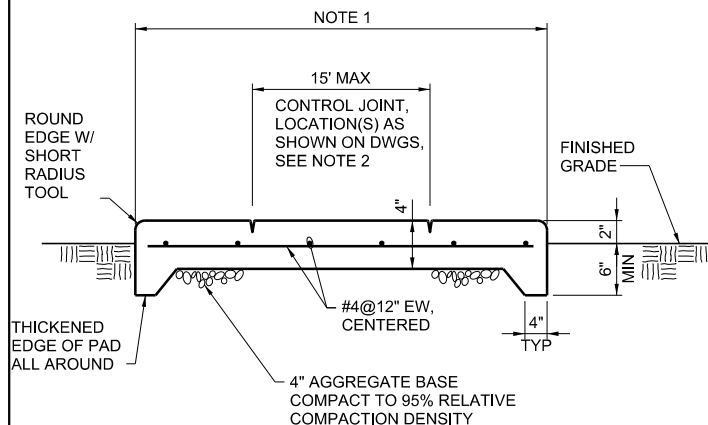
NTS



1. SEE (3200) FOR GENERAL EQUIPMENT PAD NOTES.
2. WHEN ANCHORAGE OF EQUIPMENT TO SLAB IS REQUIRED, USE CAST-IN-PLACE ANCHOR BOLTS IN ACCORDANCE WITH (3210) UNLESS OTHERWISE APPROVED BY THE ENGINEER.

3200F

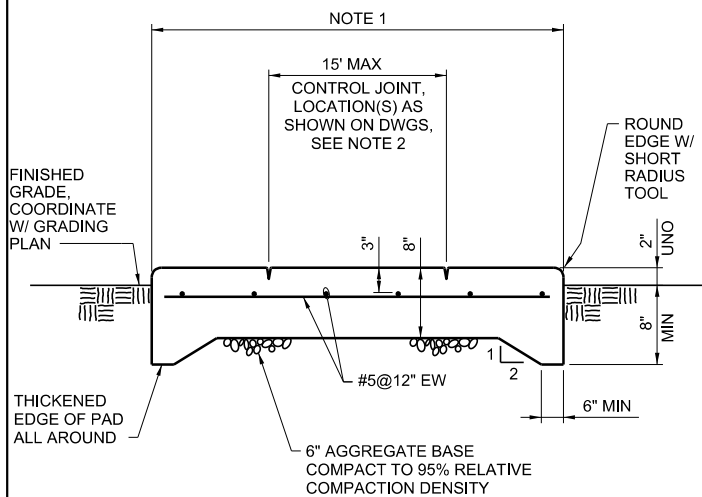
NTS



1. CONCRETE PAD, SIZED PER DRAWINGS.
2. CONTROL JOINT SHALL BE FORMED IN FRESH CONCRETE BY HAND TOOLING OR SAW CUTTING. CONTROL JOINTS SHALL BE FORMED TO A DEPTH OF 1 1/2"

3201

NTS



1. CONCRETE PAD, SIZED PER DRAWINGS.
2. CONTROL JOINT SHALL BE FORMED IN FRESH CONCRETE BY HAND TOOLING OR SAW CUTTING. PROVIDE (3160) TYPE A CONTROL JOINTS, UNLESS OTHERWISE NOTED.

3202

NTS

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DRAWN
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CHECKED
S KADER

APPROVED
M FISHER



CITY OF
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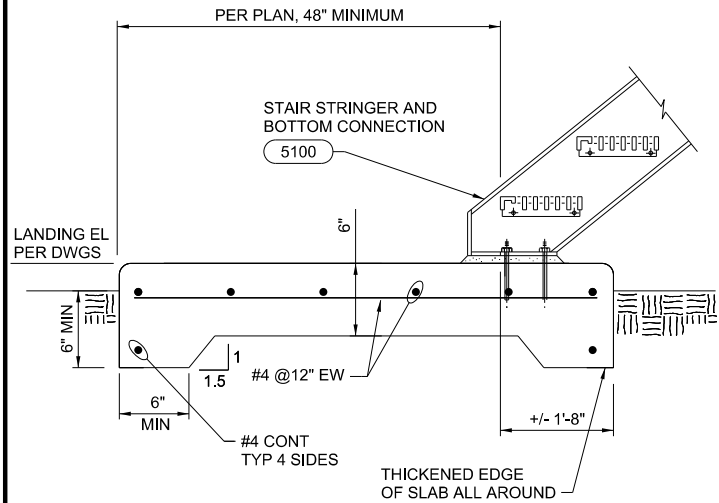


CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL

STANDARD DETAILS 22

DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-041
SHEET NUMBER	37

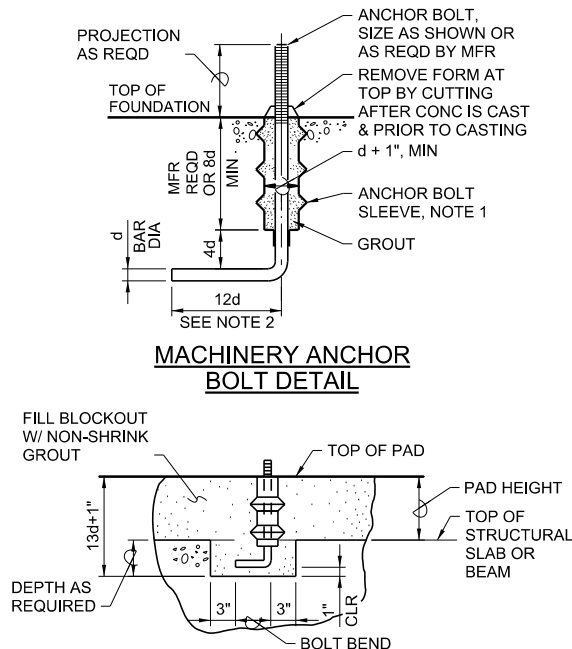


NOTE:
LANDING WIDTH MINIMUM OF CLEAR STAIR WIDTH PLUS 1'-0".

CONCRETE STAIR LANDING

NTS

3203

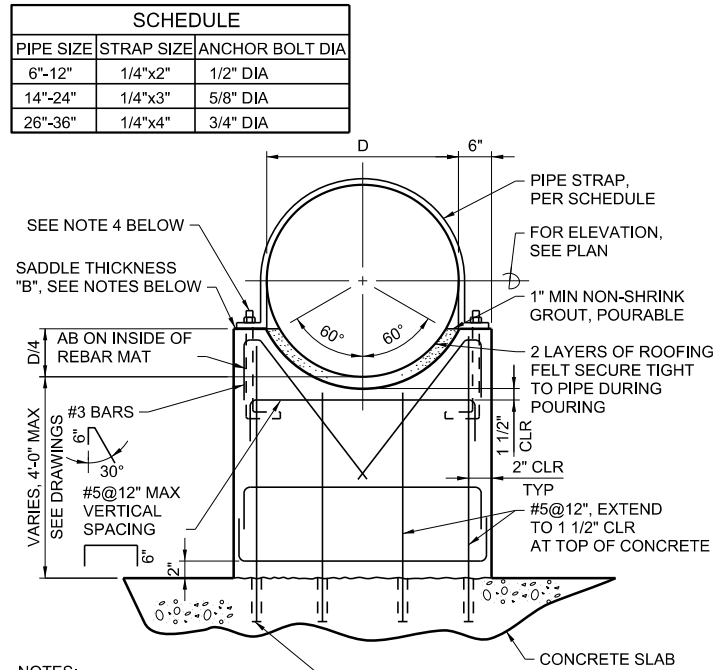


NOTES:
1. ANCHOR BOLT SLEEVE BY THE ANCHOR BOLT SLEEVE COMPANY, SHELTON, CT, OR EQUAL.
2. 3d WHERE MANUFACTURER VERIFIES NO BOLT PULLOUT RESISTANCE REQUIRED.

ANCHOR BOLT DETAILS

NTS

3210

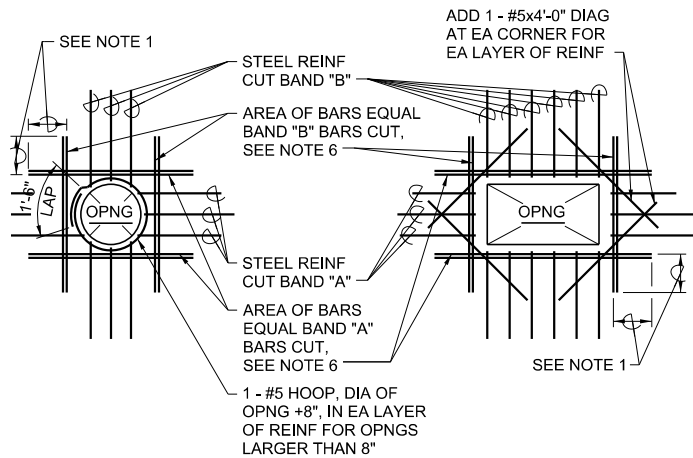


NOTES:
1. SADDLE THICKNESS, "B"
B = 6" WHEN: D < 12"
B = 8" WHEN: 12" ≤ D < 24"
B = 10" WHEN: 24" ≤ D < 36"
B = 12" WHEN: 36" ≤ D < 48"
FOR "B"=10" OR THICKER, USE 2 LAYERS OF REINFORCING, TURN HORIZONTAL BARS 90° TO HOOK AROUND VERTICALS, 1 1/2" CLEAR OF CONCRETE
2. FORM 3/4" BEVEL ON ALL EXPOSED CORNERS OF SUPPORT.
3. PIPE STRAP ANCHOR BOLTS SHALL HAVE A MINIMUM EMBEDMENT DEPTH OF 8 X D.
4. MAXIMUM DISTANCE BETWEEN SUPPORTS 10'-0".

CONCRETE PIPE SUPPORT

NTS

3300

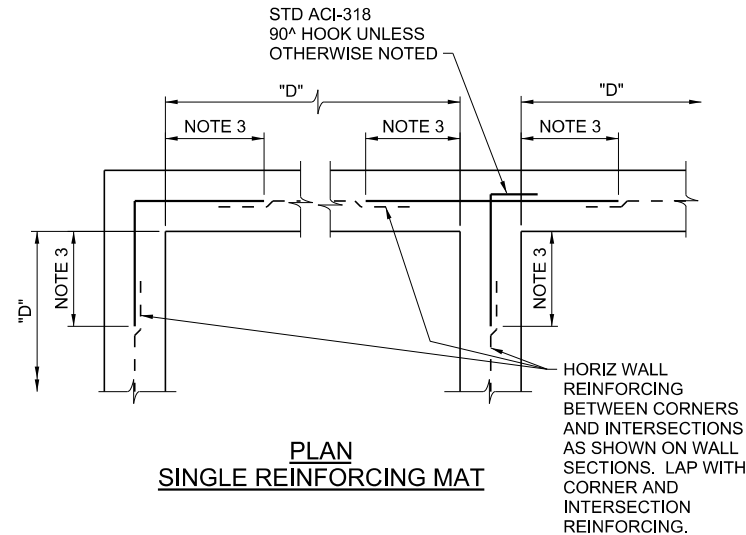


NOTES:
1. PROVIDE MINIMUM LAP, SEE GENERAL STRUCTURAL NOTES. WHERE FULL LAP LENGTH CANNOT BE ACHIEVED DUE TO SLAB OR WALL EDGE, TERMINATE BARS WITH A STANDARD 90 DEGREE BEND 2 INCHES CLEAR OF SLAB OR WALL EDGE. ROTATE HOOKS AS REQUIRED TO MAINTAIN CONCRETE COVER.
2. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS OF BELOW GRADE AND HYDRAULIC STRUCTURES AND ALL STRUCTURAL CONCRETE SLABS UNLESS INDICATED OTHERWISE ON PLANS.
3. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
4. PROVIDE A MINIMUM OF 2 "A" BARS AND 2 "B" BARS EACH SIDE OF OPENING (1 EACH FACE).
5. FOR OPENINGS LARGER THAN 8'-0", REINFORCE SAME AS FOR 8'-0" OPENINGS.
6. SPACE AT 3 BAR DIAMETERS (OR 3" MINIMUM) ON CENTER.

OPENING REINFORCING

NTS

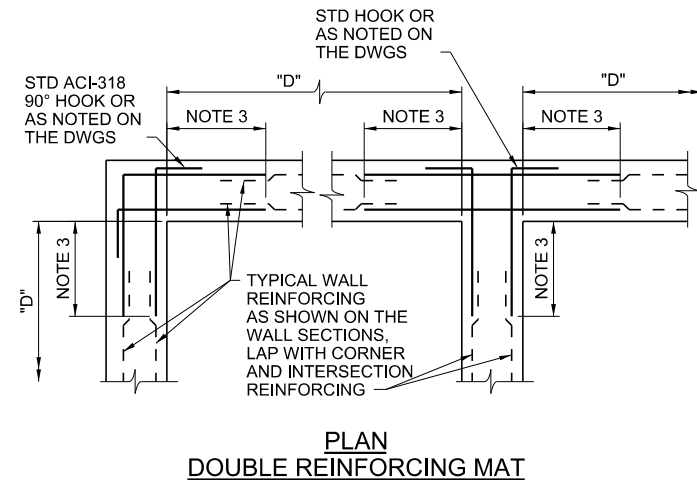
3301



NOTES:
1. TYPICAL HORIZONTAL WALL CORNER AND INTERSECTION REINFORCING LAYOUT IS SHOWN. FOR SIZE AND SPACING, SEE PLANS.
2. WHERE THE CORNER OR INTERSECTION REINFORCING SIZE AND SPACING IS NOT SHOWN, NOTED OR TABULATED ON THE PLANS, THE SIZE AND SPACING SHALL BE THE SAME AS THE WALL HORIZONTAL REINFORCING SHOWN ON THE WALL SECTIONS OR AS NOTED FOR THE REINFORCING BETWEEN THE CORNERS OR INTERSECTIONS.

TYPICAL WALL CORNER AND INTERSECTION REINFORCING

NTS



NOTES:
3. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 3" SHALL BE THE LESSER OF D/4, 8 FEET, OR 1.0 TIMES THE HEIGHT OF THE WALL, EXCEPT THAT IN NO CASE SHALL IT BE LESS THAN 2.0 FEET.
4. D = LENGTH OF WALL PARALLEL TO THE BAR LENGTH IN QUESTION.
5. USE THE LAP LENGTH AS REQUIRED FOR THE SMALLER OF THE TWO REINFORCING BARS BEING SPLICED, SEE CONCRETE REINFORCING NOTES.

PLAN DOUBLE REINFORCING MAT

3303

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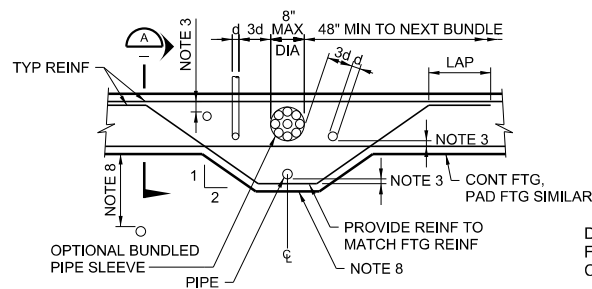
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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL
STANDARD DETAILS 23

DATE
NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-G042
SHEET NUMBER 38

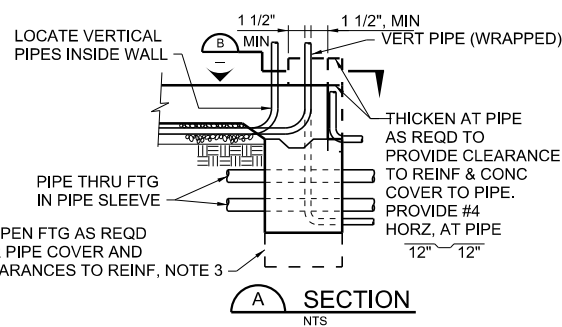


NOTES:

- PIPE = ANY PENETRATION THRU OR EMBEDDED IN FOUNDATION.
- ALL PIPES THROUGH FOOTINGS TO BE WRAPPED OR SLEEVED AS FOLLOWS:
 - SLEEVES: PROVIDE 1" MIN CLR ALL AROUND O.D. PIPE TO I.D. SLEEVE, UNO.
 - WRAPPED VERTICAL PIPES: PROVIDE 1/8" NOMINAL SHEET FOAM WITH (3) WRAPS MINIMUM, UNO.
 - WRAPPED HORIZONTAL PIPES: PROVIDE 1/8" NOMINAL SHEET FOAM WITH (8) WRAPS MINIMUM, UNO.
 - UNDERGROUND FIRE LINES 4" AND LARGER:
 - SLEEVES: PROVIDE 2" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE
 - WRAPPED: PROVIDE 1/8" NOMINAL SHEET FOAM WITH (16) WRAPS MIN.
- WRAPPED & SLEEVED PIPES SHALL HAVE 1 1/2" MIN CLEAR TO REINF STEEL. MIN CONC COVER AT PIPES TO BE 3".
- CLEARANCE BETWEEN PIPES TO BE 3d MIN TYP. WITH A MAXIMUM OF (8) PIPES PER 48". GROUPS OF PIPES MAY BE BUNDLED AS SHOWN, EXCEPT IN PAD FOOTINGS.
- NO PIPE TO RUN PARALLEL IN FOOTINGS, STEM OR CURB.
- PVC CONDUIT (PIPE) EMBEDDED IN CURB/STEM MAY BE WIRED TIED TO HORIZ REINF.
- NO HORIZONTAL PIPES ALLOWED THROUGH FOOTING WITH 2'-0" EACH SIDE OF HOLD-DOWNS OR STEEL COLUMNS. NO VERTICAL PIPES ALLOWED IN FOOTINGS AT BRACED FRAMES.
- PROVIDE 18" MIN OF COMPACTED FILL ABOVE PIPES UP TO 12" DIA, FOR LARGER PIPES INCREASE COMPACTED FILL DEPTH 1'-0" FOR EACH 6" INCREASE IN PIPE DIAMETER. OTHERWISE DEEPEN THE FOOTING AS SHOWN.

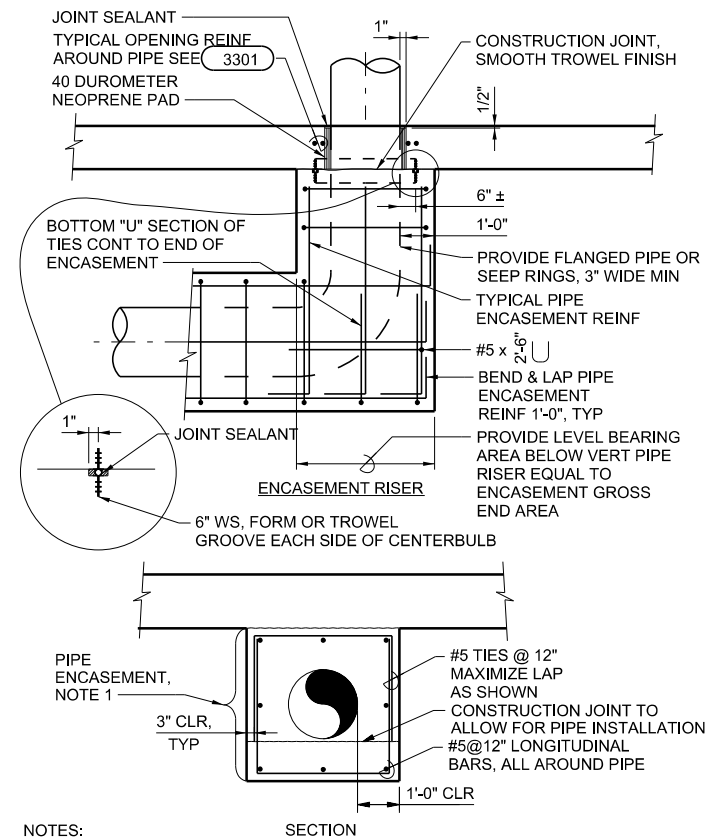
PIPES THRU FOOTINGS
NTS

3305



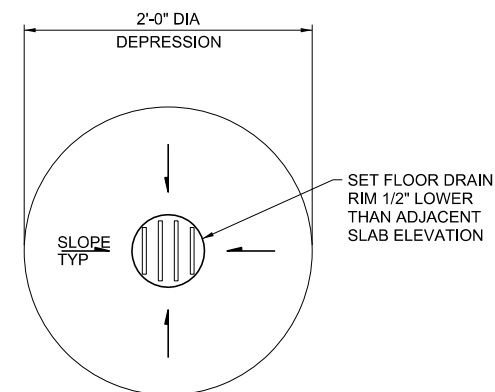
GENERAL PIPE ENCASEMENT
NTS

3311



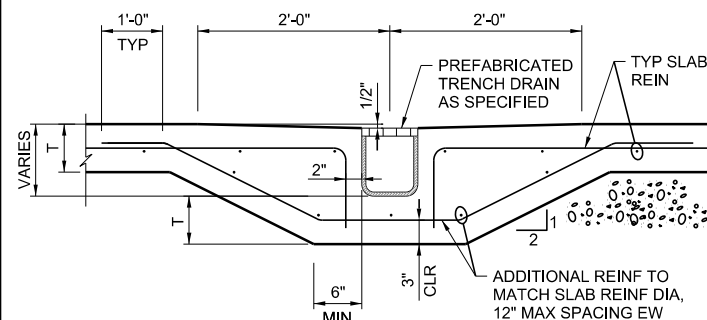
PIPE ENCASEMENT
NTS

3312

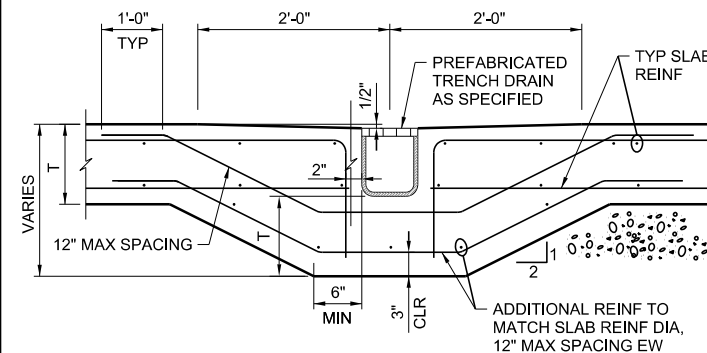


FLOOR DRAIN
NTS

3600



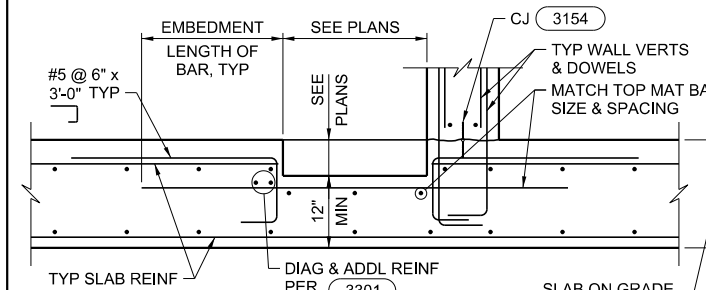
SLAB WITH SINGLE MAT REINFORCING



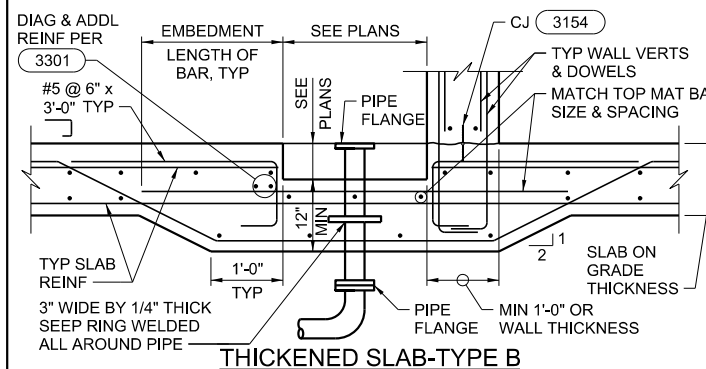
SLAB WITH DOUBLE MAT REINFORCING

THICKENED SLAB AT TRENCH DRAIN
NTS

3601



TYPICAL SLAB-TYPE A



THICKENED SLAB-TYPE B

NOTES:

- REBAR LOCATION SHALL ACCOMMODATE GRATING CONNECTIONS WHERE REQUIRED. SEE DETAIL 5400.

IN-SLAB SUMP REINFORCING
NTS

3610

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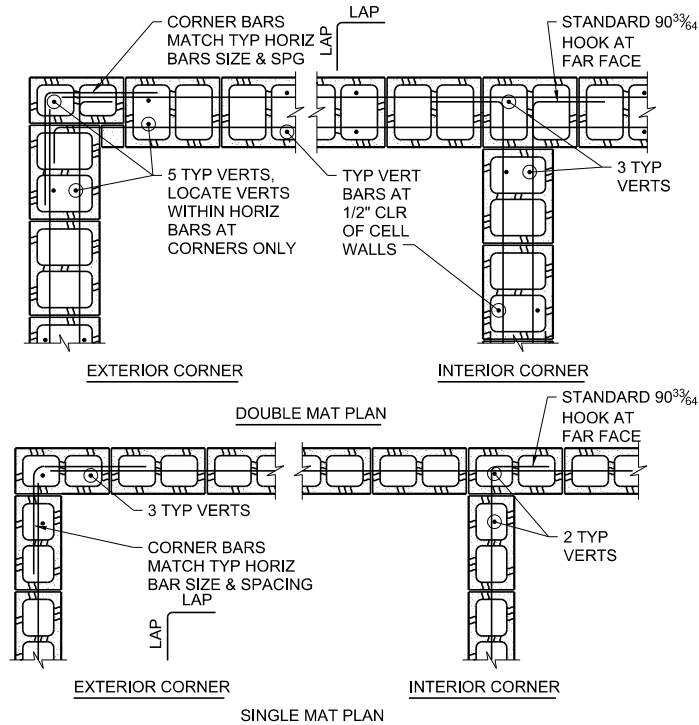
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ROSEVILLE, CALIFORNIA

GENERAL
STANDARD DETAILS 24

DATE
NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-G-043
SHEET NUMBER 39

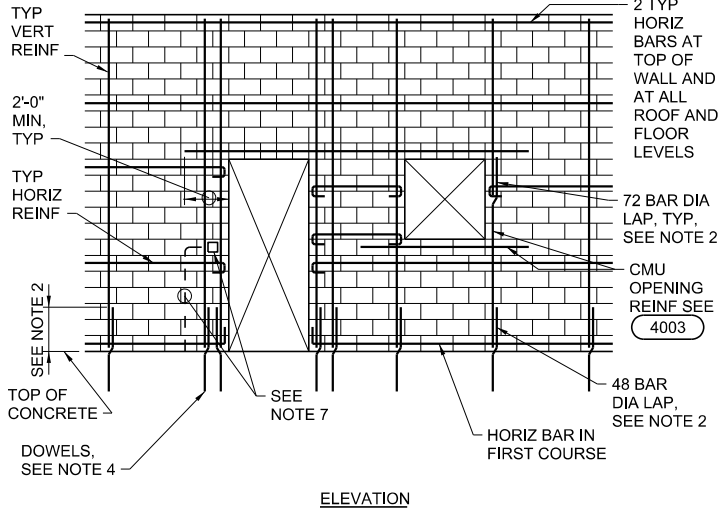


- NOTES:
1. LAP=48 BAR DIAMETERS OR 2'-0" MINIMUM UNLESS OTHERWISE NOTED.
 2. PROVIDE A STANDARD 90° HOOK EACH END ON ANY HORIZONTAL BAR BETWEEN OPENINGS, CONTROL JOINTS, OR CORNERS LESS THAN 6'-0" IN LENGTH.

CMU WALL CORNERS

NTS

4001

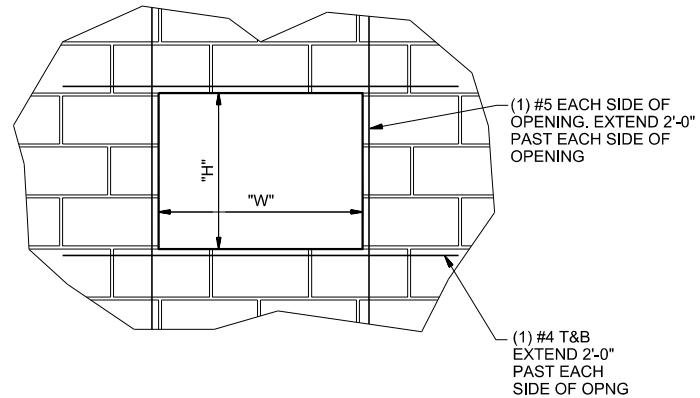


- NOTES:
1. FOR TYPICAL WALL REINFORCING, SEE WALL SECTIONS AND DETAILS FOR EACH FACILITY.
 2. LAP VERTICAL REINFORCING WITH WALL DOWELS 48 BAR DIAMETERS (2'-0" MIN), LAP ALL OTHER VERTICAL BARS 72 BAR DIAMETERS.
 3. STAGGER SPLICES IN ADJACENT HORIZONTAL BARS IN THE SAME COURSE BY 2'-0".
 4. PROVIDE DOWEL BARS IN FOUNDATION TO MATCH ALL VERTICAL REINFORCING.
 5. FOR ADDED REINFORCING AT WALL INTERSECTIONS AND CORNERS, SEE 4001
 6. SOLID GROUT ALL CMU WALLS UNLESS NOTED OTHERWISE.
 7. DO NOT PLACE VERTICAL CONDUIT IN THE SAME CELL AS VERTICAL REINFORCING.

REINFORCED CMU WALL

NTS

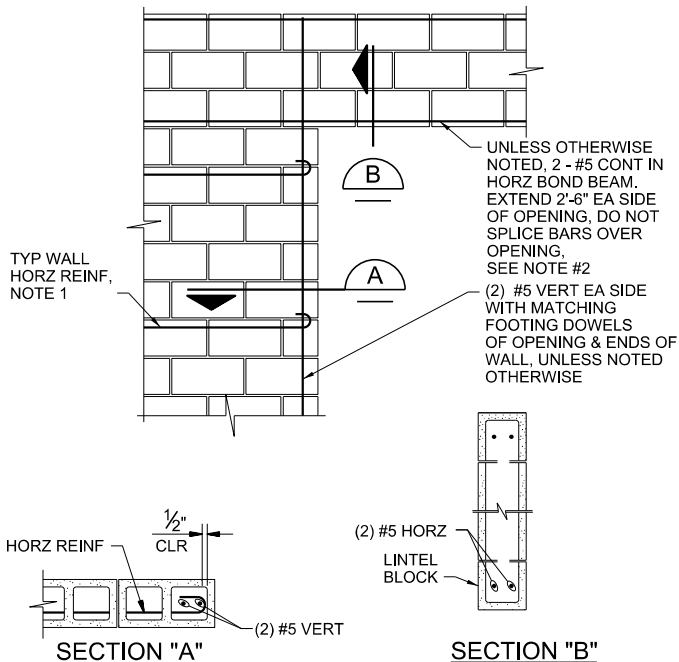
4002



CMU OPENINGS LESS THAN 3'-0"

NTS

4003

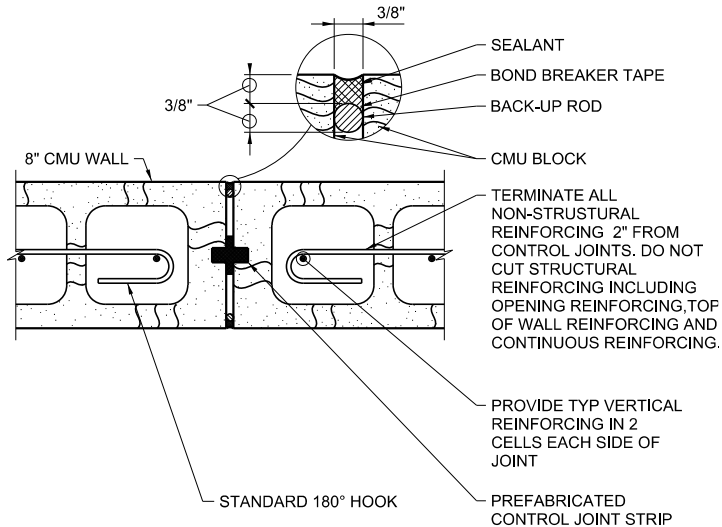


- NOTES:
1. TERMINATE HORZ REINF WITH 180° HOOK AT WALL ENDS, JAMB OPENINGS AND CMU CONTROL JOINTS.
 2. PLACE (2) #5 HORIZ AT WINDOW SILLS, SIM TO TOP OF OPENING.

CMU OPENINGS GREATER THAN 3'-0"

NTS

4004



- NOTE:
- 12" CMU WALL WITH 2 LAYERS OF REINFORCING IS SIMILAR.

CMU CONTROL JOINT

NTS

4100

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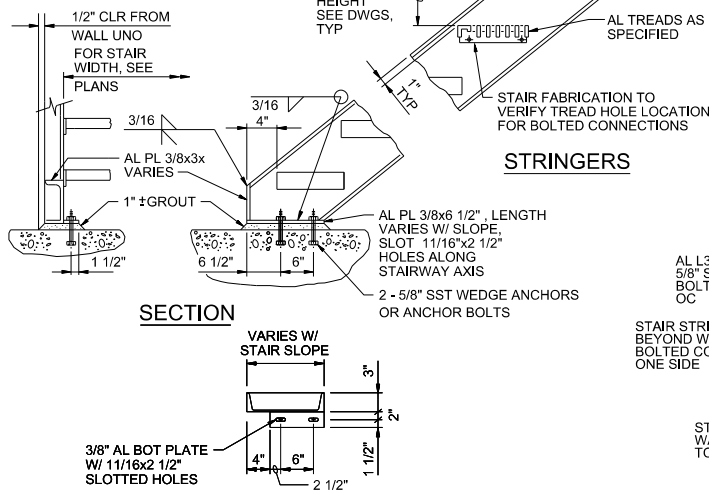
CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL
STANDARD DETAILS 25

DATE
NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-G-044
SHEET NUMBER 40

STAIRWAY WIDTH	BEARING BARS
2'-3" OR LESS	1"x3/16"
2'-9" OR LESS	1 1/4"x3/16"
3'-5" OR LESS	1 1/2"x3/16"
4'-2" OR LESS	1 3/4"x3/16"

- NOTES:
1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE AS SPECIFIED.
 2. GRIND EXPOSED FACES ONLY.
 3. STAIR HANDRAIL NOT SHOWN FOR CLARITY, PROVIDE STAIR HANDRAIL BOTH SIDES.
 4. FABRICATOR TO COORDINATE BOLTED TREADS AND RAIL POST CONNECTIONS



PLAN
BOTTOM

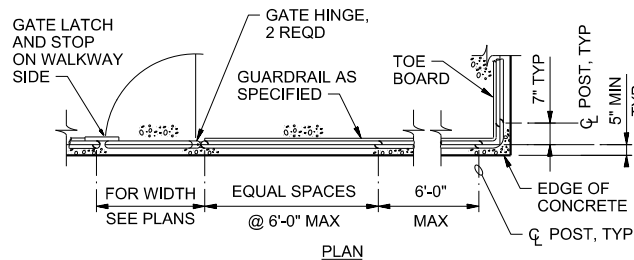
ALUMINUM STAIRS
NTS

TOP CONNECTION CONCRETE

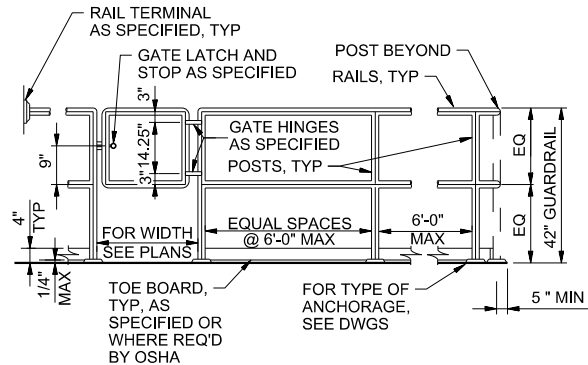
TOP CONNECTION ALUMINUM

LANDING

5100



PLAN



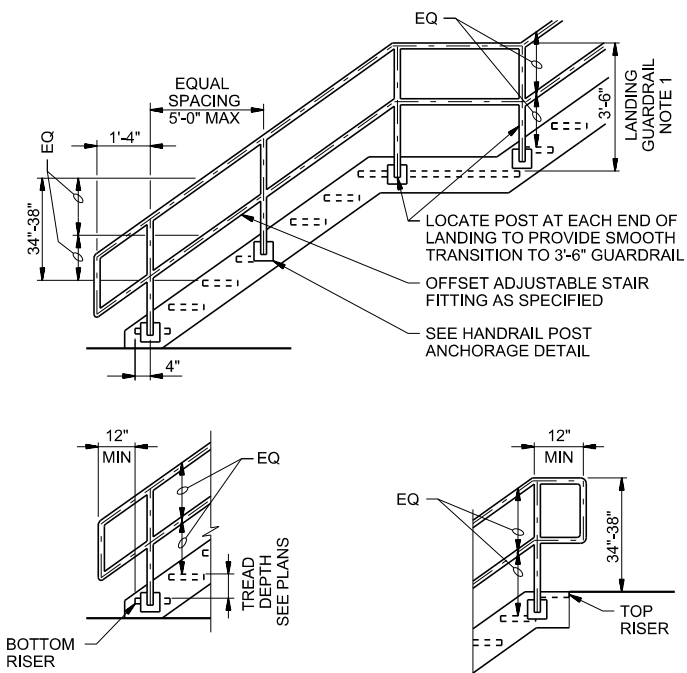
ELEVATION

NOTE:

1. FOR GUARDRAIL MATERIAL REFERENCE DRAWINGS AND/OR JOB SPECIFICATIONS

TWO-RAIL GUARDRAIL
NTS

5200A

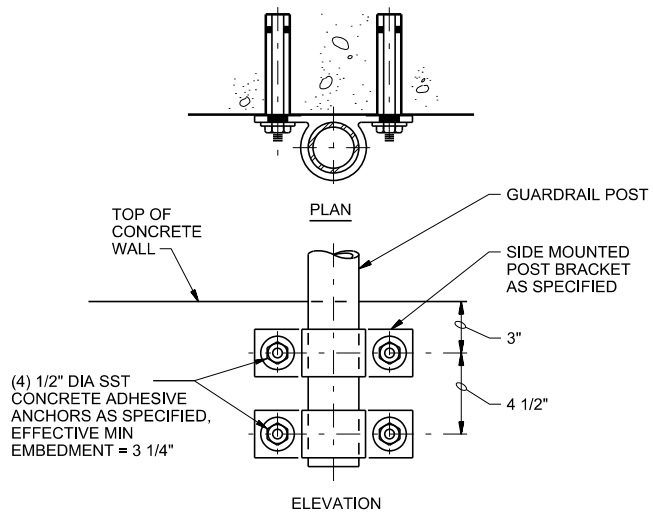


NOTES:

1. SEE TYPICAL GUARDRAIL DETAIL (5200A).
2. SEE SPECIFICATIONS FOR HANDRAIL MATERIAL.

TWO-RAIL HANDRAIL AT STAIRS
NTS

5201A

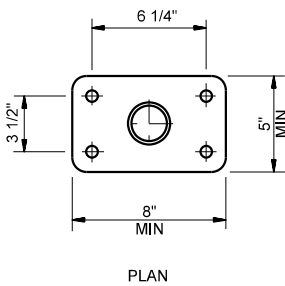


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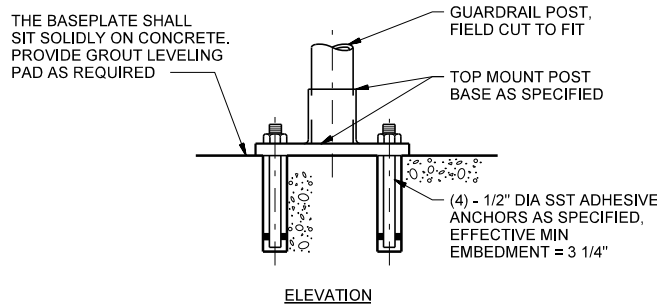
1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.
2. USE SIDE MOUNTED POST BRACKET AS A TEMPLATE FOR THE ANCHOR BOLTS.
3. MAINTAIN THE CLEARANCES BETWEEN THE TOE BOARD AND THE CONCRETE SURFACES REQUIRED BY ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

GUARDRAIL POST ANCHORAGE-ALUMINUM
NTS

5250B



PLAN



ELEVATION

NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.

GUARDRAIL POST ANCHORAGE-TYPE C
NTS

5250C

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DESIGNED	J KELLOGG
DRAWN	J MARTIN
CHECKED	S KADER
APPROVED	M FISHER



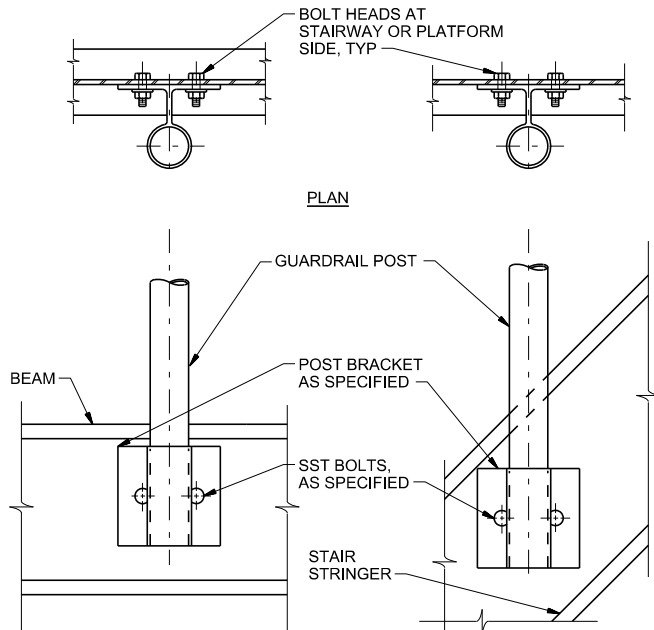
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ROSEVILLE, CALIFORNIA

GENERAL
STANDARD DETAILS 26

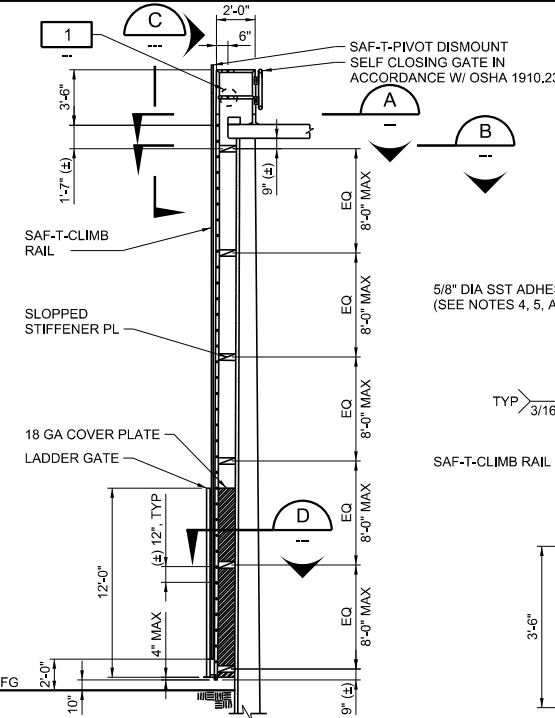
DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-045
SHEET NUMBER	41



- NOTES:**
1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.
 2. HANDRAIL POST ANCHORAGE TO ALSO BE USED FOR GUARDRAIL POST ANCHORAGE.
 3. REFERENCE DRAWINGS AND OR SPECIFICATIONS FOR MATERIALS.

GUARDRAIL POST ANCHORAGE-TYPE D

5250D

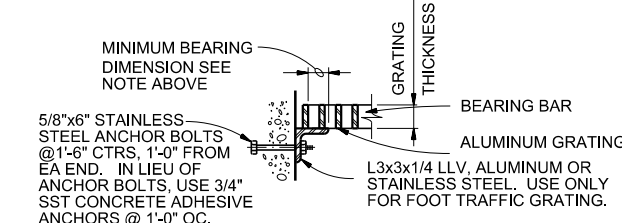
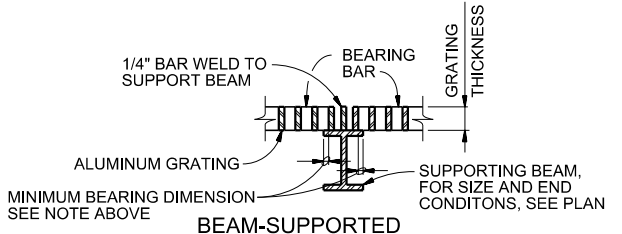
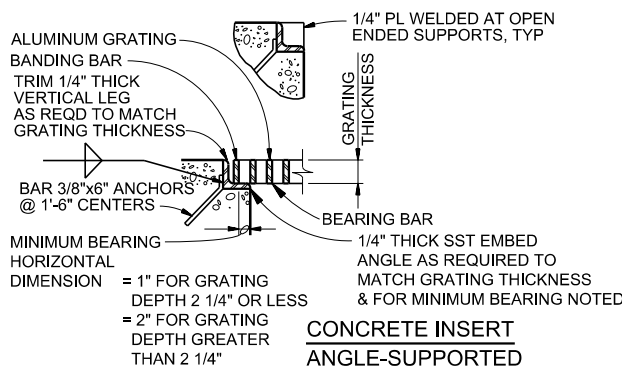


- EXTERIOR LADDER NOTES:**
1. ALL LADDER MATERIALS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. ALL MATERIALS FOR SAF-T-CLIMB TO BE SST 304.
 2. LADDER RUNGS TO BE SOLID BARS.
 3. ALL WELDS TO BE 3/16" MINIMUM.
 4. USE SST 316 FOR ALL BOLTS UNLESS SHOWN OTHERWISE.
 5. WHERE SST BOLTS ARE IN CONTACT WITH DISSIMILAR METALS, USE INSULATING SLEEVES AND PHENOLIC WASHERS TO ELECTRICALLY ISOLATE THE BOLTS.
 6. WHERE SST BOLTS ARE PLACED IN THE WALL EXTERIOR, DRILL AND PLACE AFTER WRAPPING AND BEFORE SHOTCRETING. TAKE EXTREME CARE TO AVOID DAMAGING PRESTRESSING. PLACE A STEEL PIPE AROUND THE DRILL BIT TO KEEP BIT FROM COMING IN CONTACT WITH THE PRESTRESSING. INSTALL BOLTS BEFORE SHOTCRETING. LOCATE TO AVOID VERTICAL THREADBARS.

EXTERIOR TANK LADDER

NTS

5301B



ALUMINUM GRATING

NTS

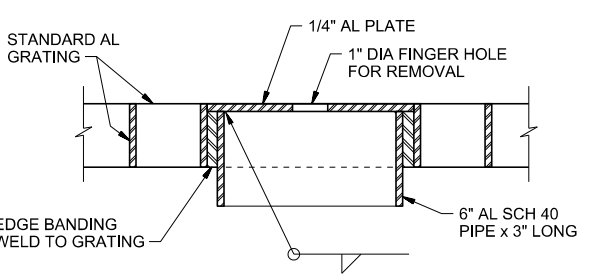
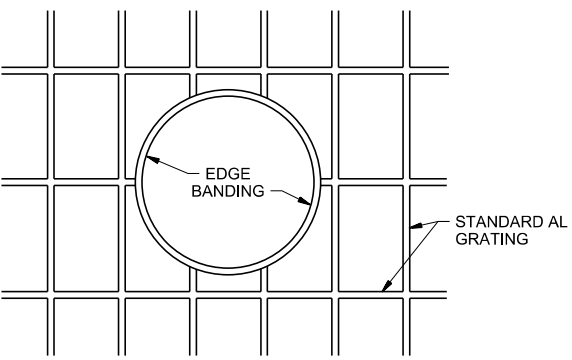
5400

GRATING NOTES

1. EXTEND GRATING CONTINUOUSLY OVER GATE GUIDES AND GATES.
2. NOTCH GRATING SUPPORTS AT GATES AS REQUIRED.
3. GRATING SPAN — SEE PLAN.
4. WIDTH OF GRATING SECTIONS SHALL NOT EXCEED 3'-0" AND INDIVIDUAL SECTION WEIGHT SHALL NOT EXCEED 150 POUNDS.
5. SHOP DRAWINGS BASED ON FIELD DIMENSIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION.
6. MATERIAL FOR SUPPORTS OF ALUMINUM GRATING TO BE SAME AS GRATING. EXCEPT METAL SUPPORTS THAT ARE TO BE EMBEDDED IN CONCRETE SHALL BE TYPE 316 STAINLESS STEEL.
7. UNLESS NOTED OTHERWISE ON PLANS, GRATING THICKNESS SHALL BE AS TABULATED IN "GRATING THICKNESS TABLE" FOR APPLICABLE TRAFFIC.
8. BEARING BAR THICKNESS FOR GRATING TO BE 3/16" MINIMUM.
9. BAND ALL EDGES WITH 3/16" x DEPTH OF BEARING BAR.
10. PROVIDE MISCELLANEOUS GRATING FASTENERS AS REQUIRED.
11. THE HORIZONTAL CLEARANCE BETWEEN THE GRATING AND GRATING SUPPORTS SHALL NOT BE LESS THAN 1/4" NOR GREATER THAN 1/2" AND AS SPECIFIED.
12. ALL GRATING SECTIONS, WHEN IN PLACE, SHALL ALWAYS BE FIRMLY ANCHORED TO THEIR SUPPORTS AS SPECIFIED.
13. PROVIDE SUPPORT TYPE SHOWN IN DRAWINGS OR MOST APPLICABLE FOR THE INSTALLATION CONDITIONS.

FOOT TRAFFIC GRATING THICKNESS TABLE

MAXIMUM SPAN	ALUMINUM (IN.)
3'-6"	1 1/4"
4'-0"	1 1/2"
4'-6"	1 3/4"
5'-0"	1 3/4"
5'-6"	2"
6'-0"	2 1/4"
6'-6"	2 1/4"
7'-0"	2 1/2"



OPERATING NUT ACCESS HOLE

NTS

5405

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M. FISHER

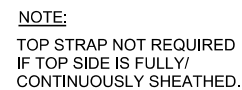
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GENERAL
STANDARD DETAILS 27

DATE
NOVEMBER 2019
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17-083
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WD00-G-046
SHEET NUMBER
42



NTS

CONNECTION SHOWN FOR 4" OR NARROWER TUBE COLUMN

WT 3x8xAS REQD CONNECTION SIMILAR TO BEAM CONNECTION DETAIL

6" MIN TUBE WIDTH REQD FOR CLIP CONNECTION SHOWN

1/2" RETURN T & B, TYP

PL 3/8xAS REQD, NOTCH COLUMN TO RECEIVE PLATE, OFFSET SO BEAM CENTERED ON COLUMN CL

CLIP L 3x2x1/4 EA SIDE CONN SIMILAR TO BEAM CONNECTION DETAIL

1/4" CAP PL, SEAL WELD

END OF GUSSET PL FOR ONE SIDED CONNECTION

STEEL BEAM, SEE FRAMING PLANS

STEEL TUBE COLUMN, SEE FRAMING PLANS

3/4" BOLTS, SEE TYPICAL BEAM FRAMING CONNECTION DETAIL

NOTE:

BOLTED CONNECTION INDICATED TYPICAL. WELD CONNECTION ONLY AT COLUMNS OF BRACED FRAMES AND WHERE INDICATED ON PLANS.

NTS

NOTE:
FOR DETAIL 5814 CLOSURES, LOCATE ANCHORS SO THEY DO NOT
CONFLICT WITH LEDGER ANGLE.

NTS

PLAN

- SOLID GROUT CELL EACH SIDE OF BLOCKOUT
- STANDARD OVERSIZED HOLES
- 8" GA FOR BEAMS W/ FLANGE WIDTH < 5 1/2",
3 1/2" GA FOR BEAMS W/ FLANGE WIDTH > 5 1/2"
- CL WALL & BEARING
- 3/4" CLR
- 6"
- 6"
- 1/4"
- STEEL BEAM,
SEE FRAMING PLANS

ELEVATION

- FILL VOID AROUND BEAM W/ GROUT
- 2 - 3/4"x0"-10" ANCHOR BOLTS W/ LEVELING NUTS & 2 - HEAVY WASHERS
- NON-SHRINK GROUT MASONRY EXTERIOR BEARING WALL
- CONTINUE FACE SHELLS OF MASONRY ACROSS SEAT BLOCKOUT
- BLOCKOUT DEPTH, SEE NOTE 1
- PL 3/4x4x10 1/2"
- 8" BOND BEAM W/ 2 TYP HORIZONTAL BARS CONTINUOUS (#5 MIN) ABOVE AND BELOW BLOCKOUT (5'-4" MIN LENGTH CENTERED ON SINGLE BEAM SEAT)
- 2"
- 2"

NOTE:

NOTE: PROVIDE BLOCKOUT DEPTH AS REQUIRED FOR SETTING BEAMS, (BEAM DEPTH + 6") MIN, OR SET BEAMS BEFORE COMPLETING WALL ABOVE.

NTS

SEE NOTE 4

1 1/4" MIN
AT COPED
BEAM
FLANGE

2 1/2"

DOUBLE ANGLES
MIN 5/16" THICK,
SIZE AS REQD
BY AISC STD CONN

3/4" DIA
A325N BOLTS

VARIES

NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	LENGTH (3) OF ANGLE
36	7	1'-8 1/2"
30-33	6	1'-5 1/2"
24-27	5	1'-2 1/2"
16-21	4	11 1/2"
12-15	3	8 1/2"
8-10	2	5 1/2"
6	1	3"
4	1	2 1/2"

NOTES:

1. NUMBER OF ROWS IS EQUAL TO NUMBER OF BOLTS TO ENCLOSED WEB.
2. ALL FRAMING CONNECTIONS SHALL CONFORM TO SCHEDULE UNLESS DETAILED OTHERWISE ON FRAMING PLANS.
3. ADD 1 1/2 " TO ANGLE LENGTH FOR STAGGERED BOLT CONNECTIONS.
4. 3" DIMENSION TYP EXCEPT AS RECOMMENDED BY AISC FOR LARGER MEMBERS.

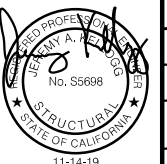
NTS

NOTE: PROVIDE BLOCKOUT DEPTH AS REQUIRED FOR SETTING BEAMS, (BEAM DEPTH + 6") MIN, OR SET BEAMS BEFORE COMPLETING WALL ABOVE.

NTS

5814

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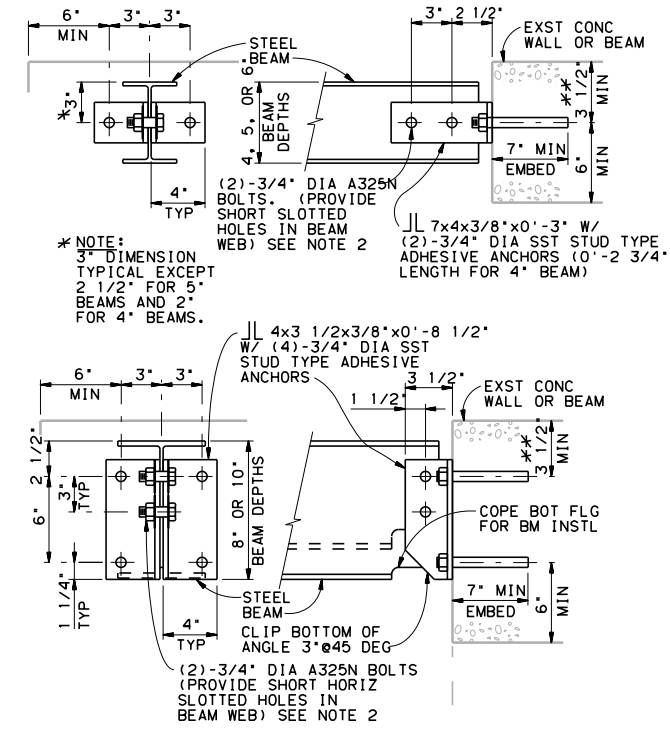


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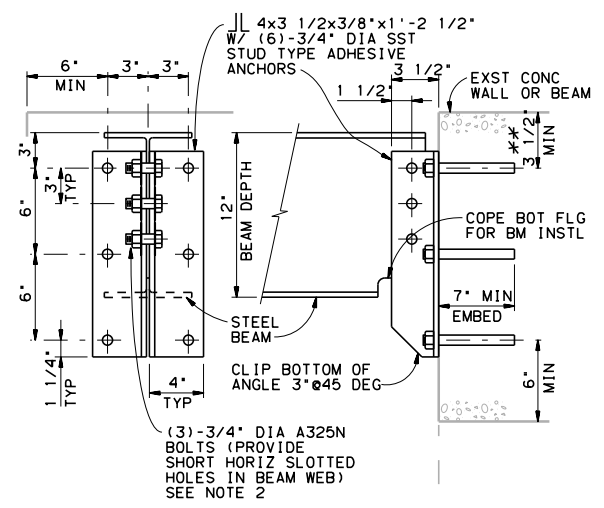
STANDARD DETAILS 28

DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-047
SHEET NUMBER	43

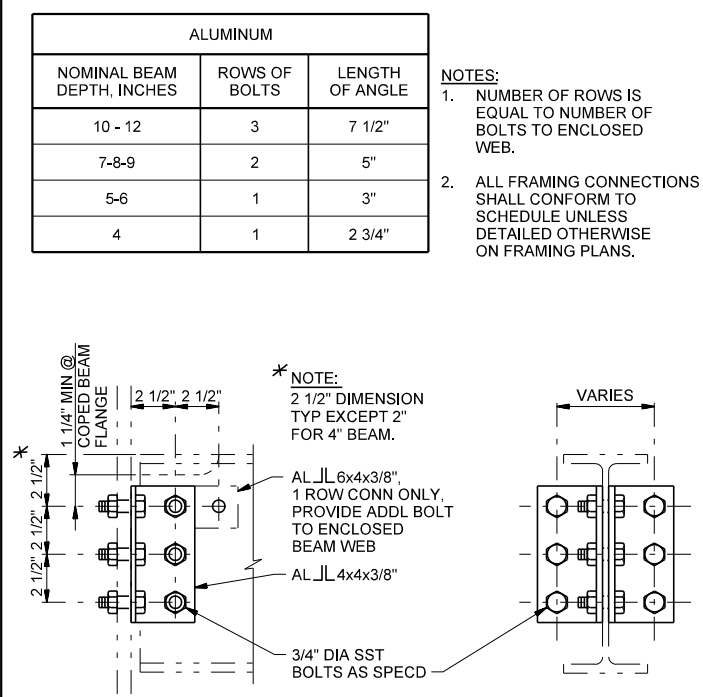


BEAM / WALL CONNECTION - STEEL
NTS

5826

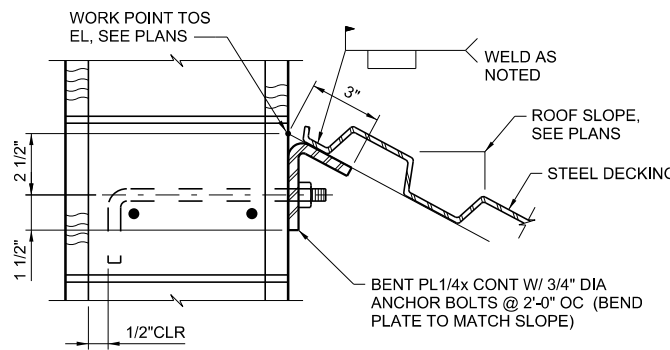


- NOTES:
- DO NOT CUT EXISTING CONCRETE BEAM TOP REINFORCING DURING DRILL-IN ANCHOR INSTALLATION. FIELD LOCATE BEAM REINFORCING PRIOR TO FABRICATION. ADD LENGTH TO CLIP ANGLES AS REQUIRED TO LOWER ANCHORS TO CLEAR REINFORCING WHILE MAINTAINING SPACING AND EDGE DISTANCE AS SHOWN.
 - AT ONE END ONLY, TIGHTEN SNUG TIGHT & BACK OFF 1/2 TURN AND DOUBLE NUT.

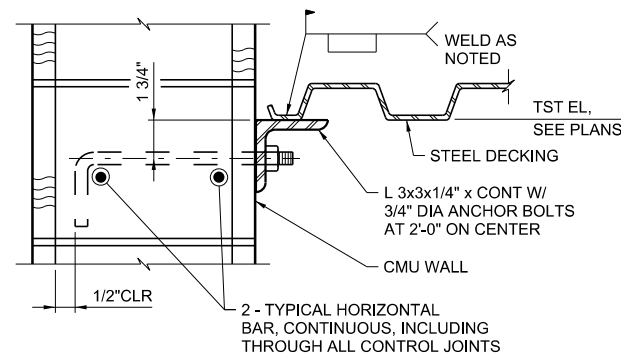


TYPICAL FRAMING
CONNECTION - ALUMINUM
NTS

5827



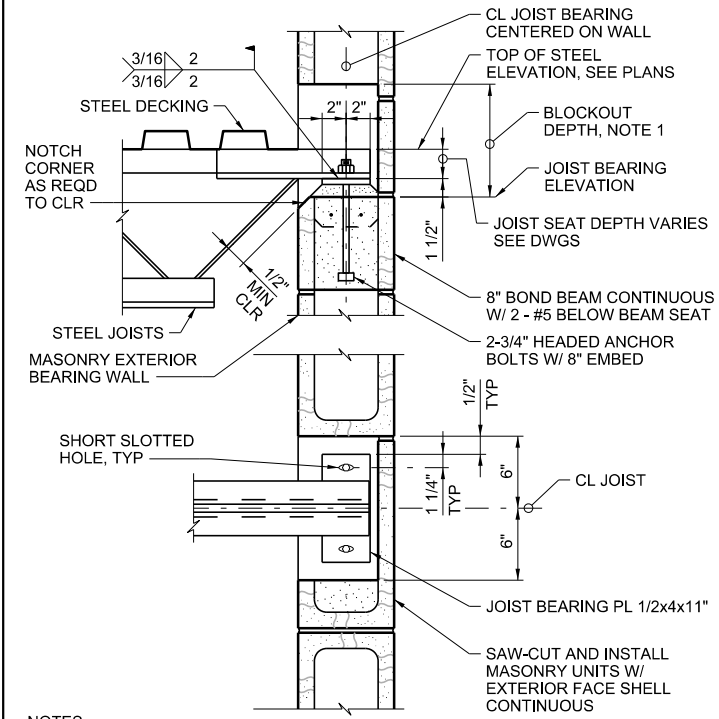
DECKING AT ANGLE TO WALL



DECKING LEDGER SUPPORT ANGLE

DECKING LEDGER SUPPORT ANGLE
NTS

5900



- NOTES:
- PROVIDE BLOCKOUT DEPTH AS REQUIRED FOR SETTING JOISTS, 8\"/>

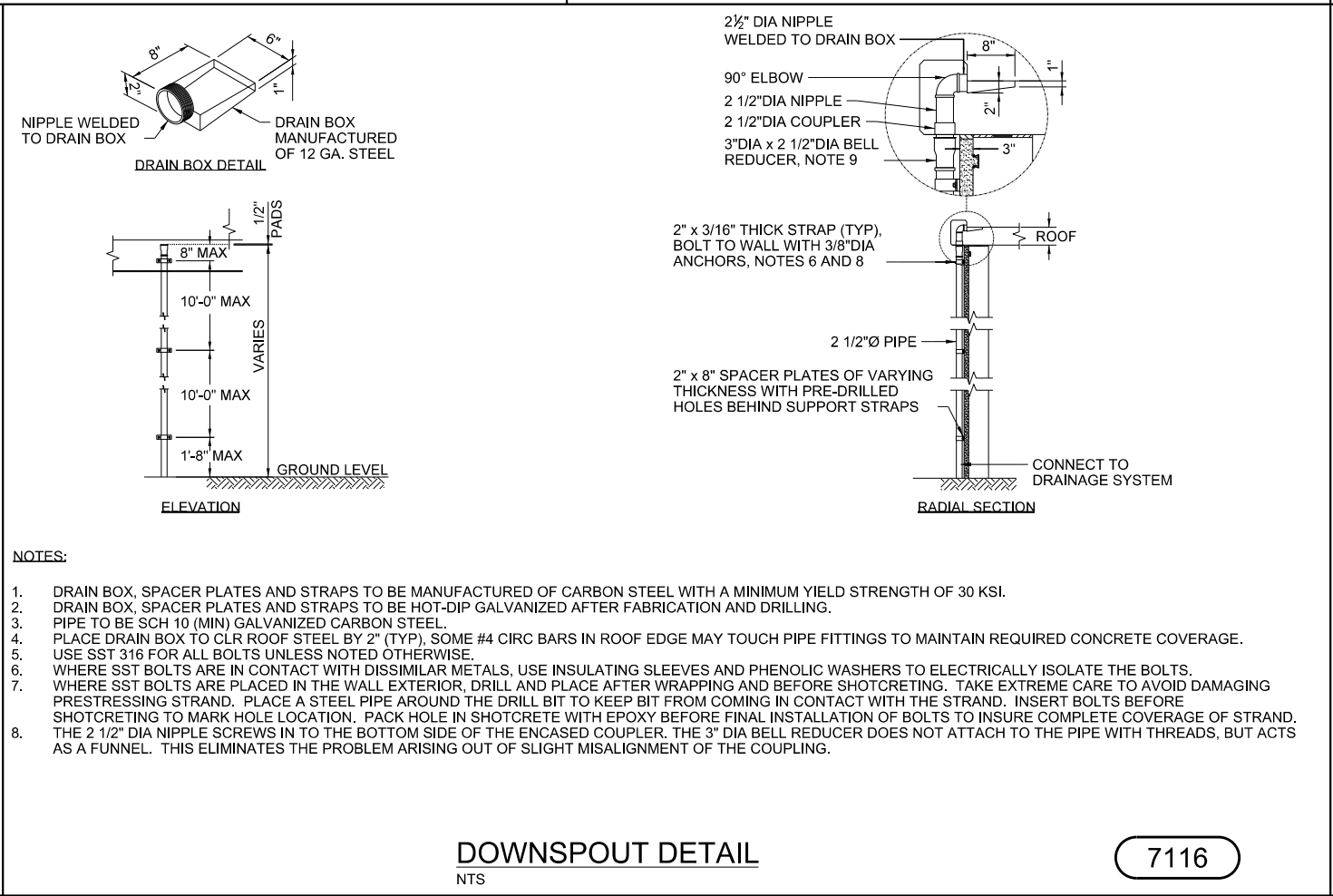
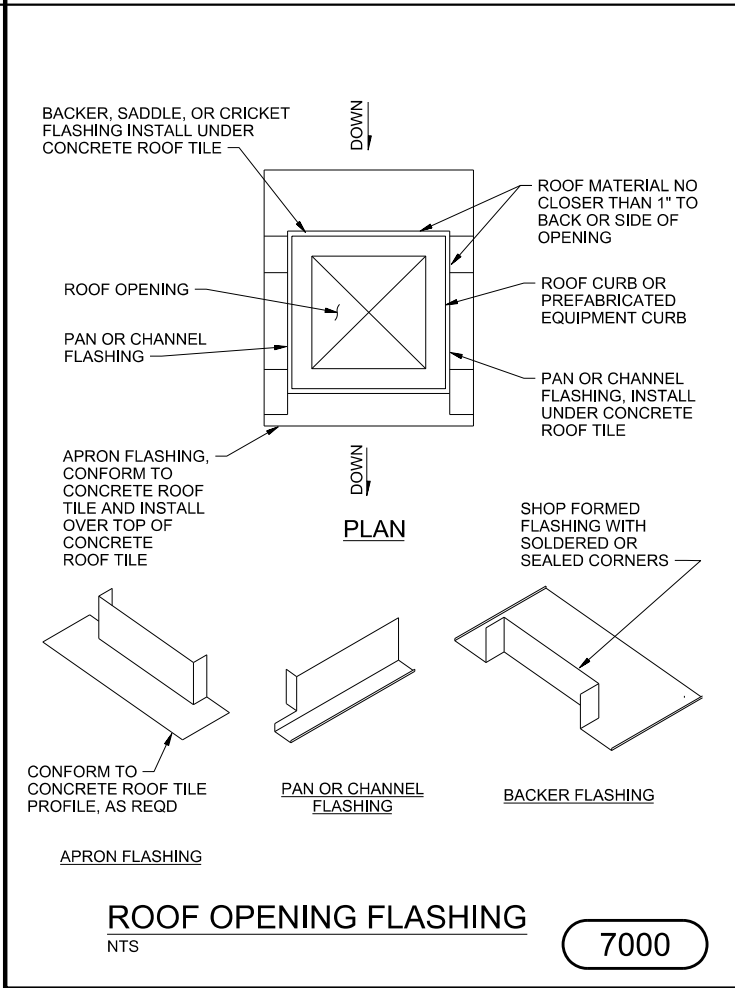
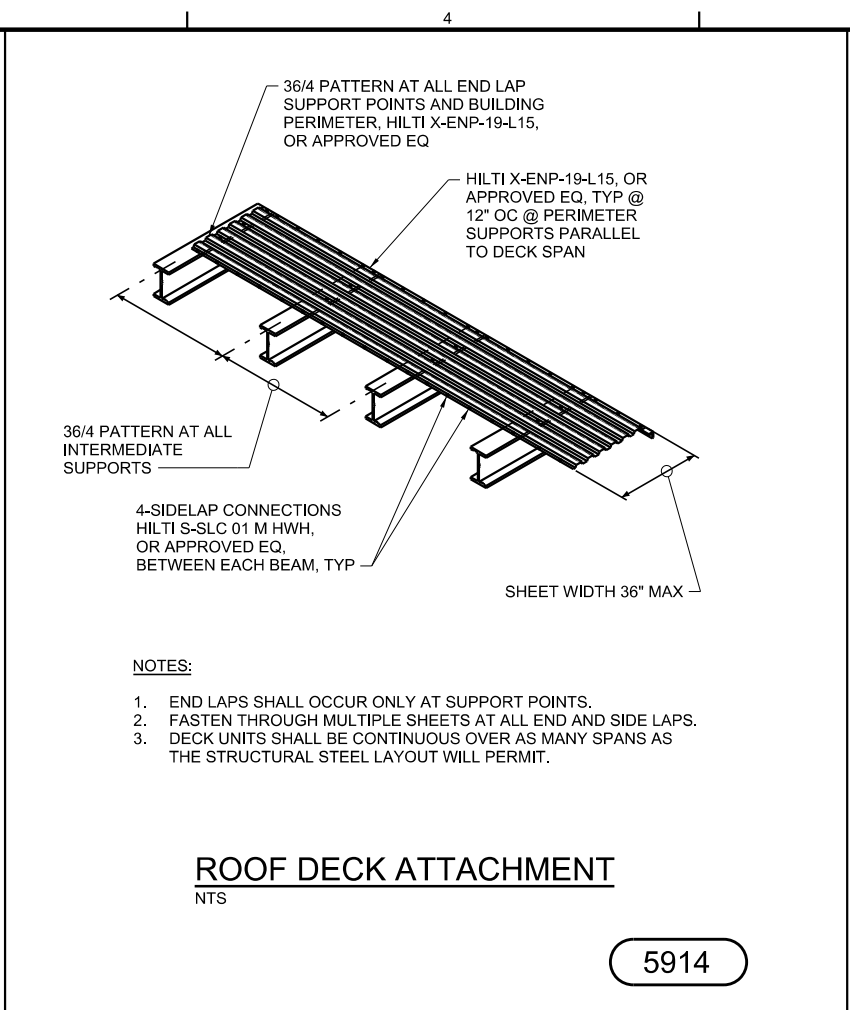
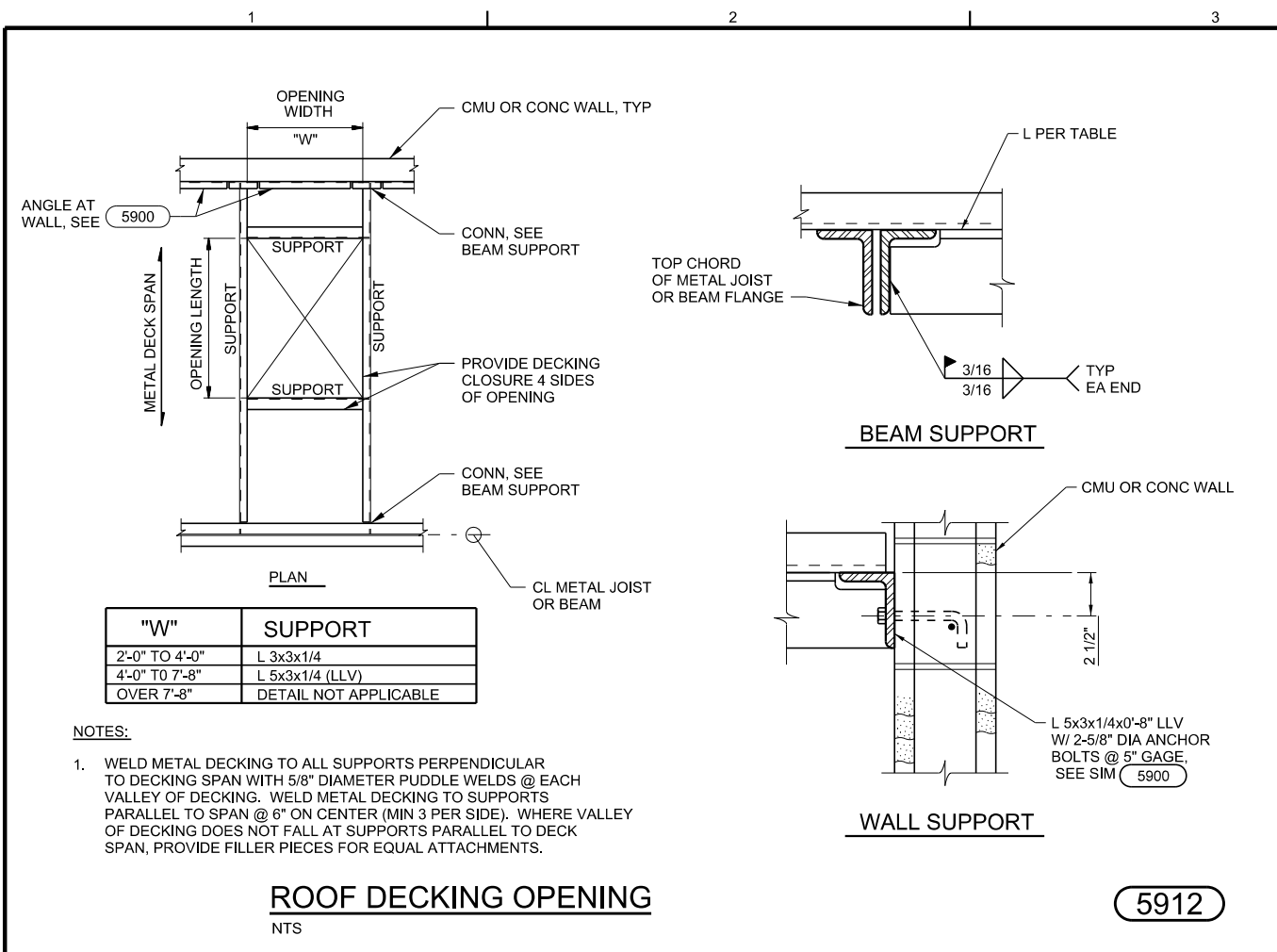
STEEL JOIST SEAT/EXTERIOR WALL
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5907

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GENERAL STANDARD DETAILS 29			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-048			
SHEET NUMBER 44			



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CITY OF ROSEVILLE
WEST SIDE TANK AND
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(PHASE 2)

GENERAL

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DATE
NOVEMBER 2019

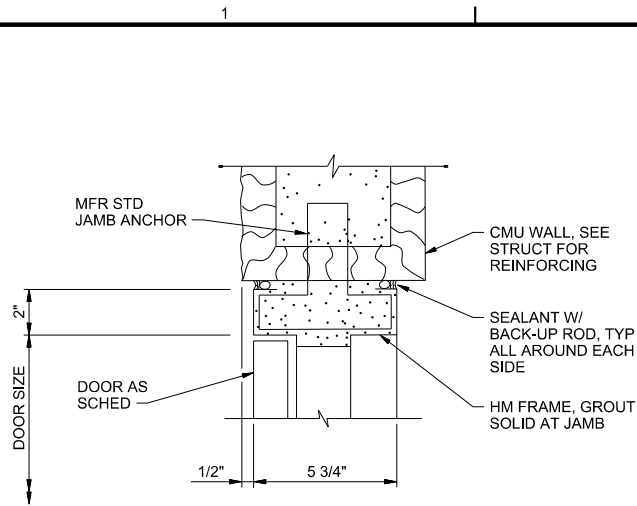
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17-083

DRAWING NUMBER
WD00-G-049

SHEET NUMBER 45

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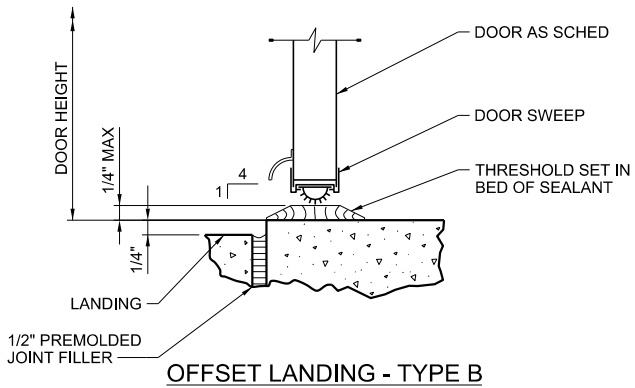
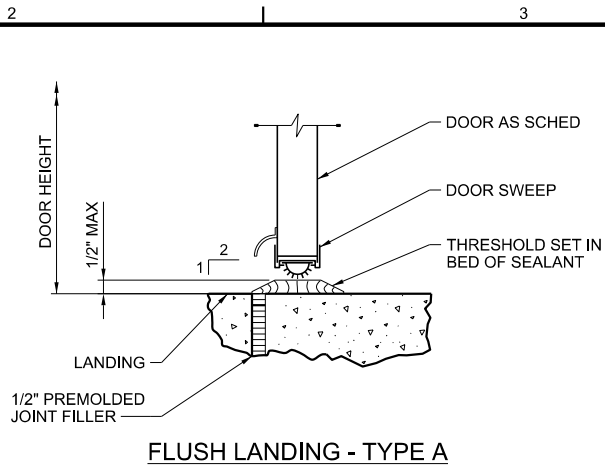
PROFESSOR OF ENGINEERING
ANTHONY A. FISHER
No. S5698
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STATE OF CALIFORNIA
11-14-19



NOTE:
HEAD SIMILAR

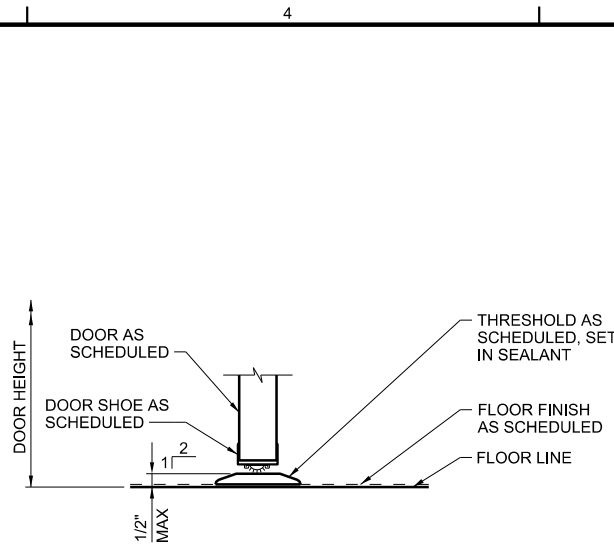
DOOR JAMB - 8" CMU
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8100



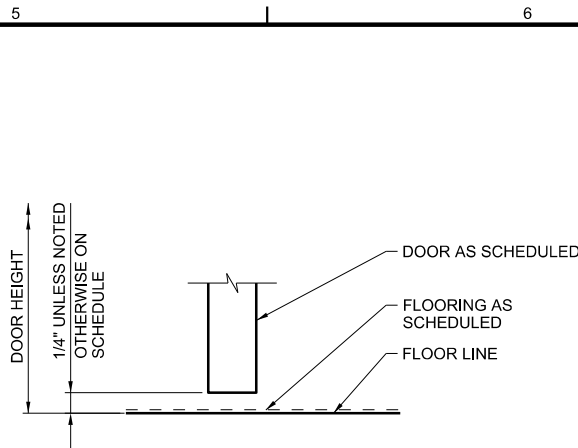
DOOR THRESHOLD
NTS

8110



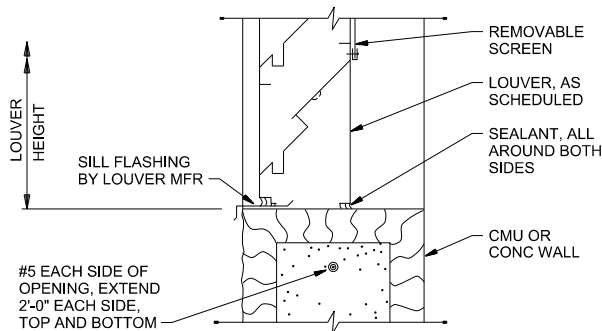
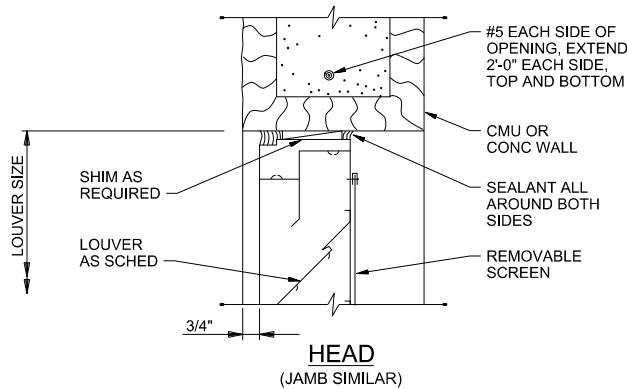
DOOR THRESHOLD
NTS

8111



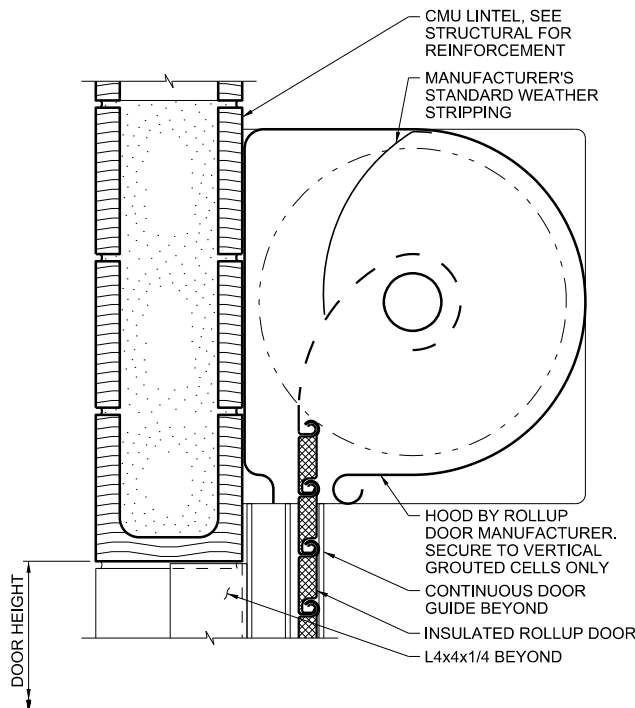
DOOR THRESHOLD
NTS

8112



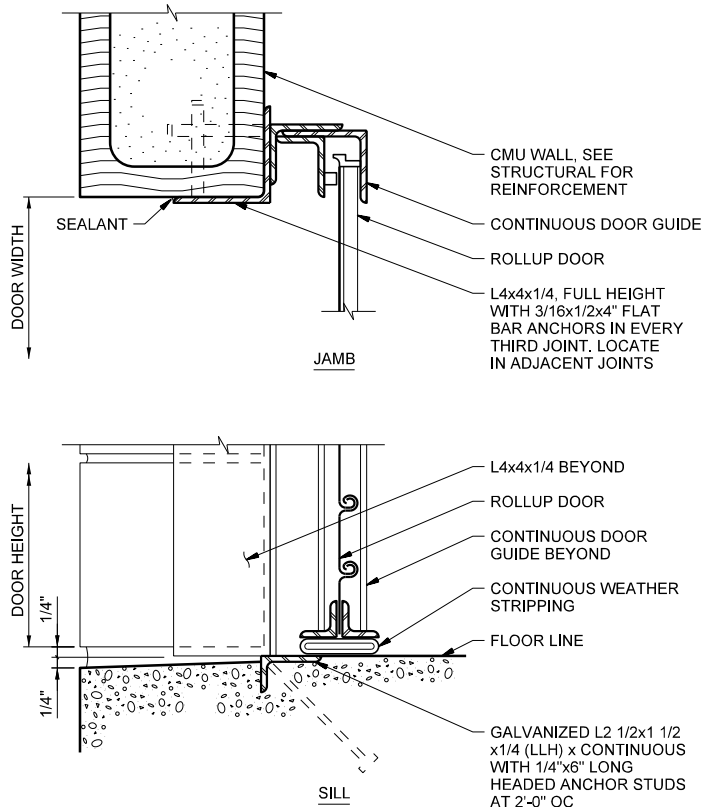
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8115



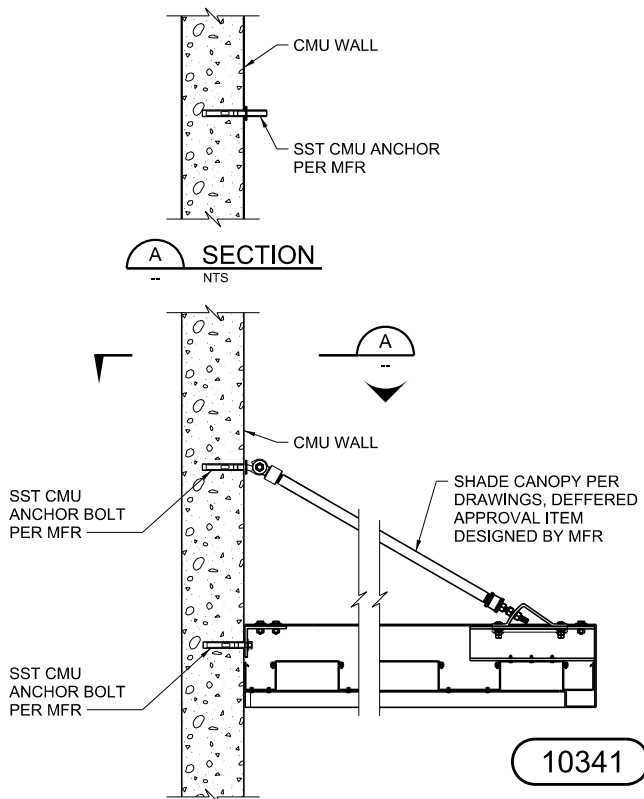
ROLLUP DOOR HEAD
NTS

8300



ROLLUP DOOR JAMB AND SILL
NTS

8301



SUN SHADE CANOPY ATTACHMENT (CMU WALL)
NTS

10341

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DESIGNED	J KELLOGG
DRAWN	J MARTIN
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APPROVED	M FISHER



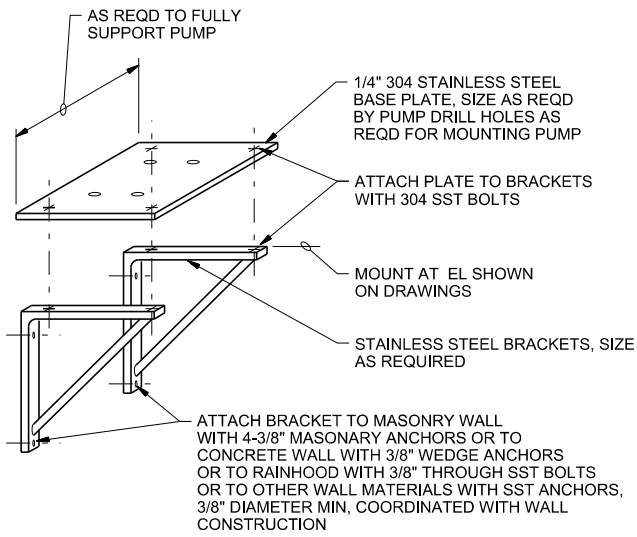
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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

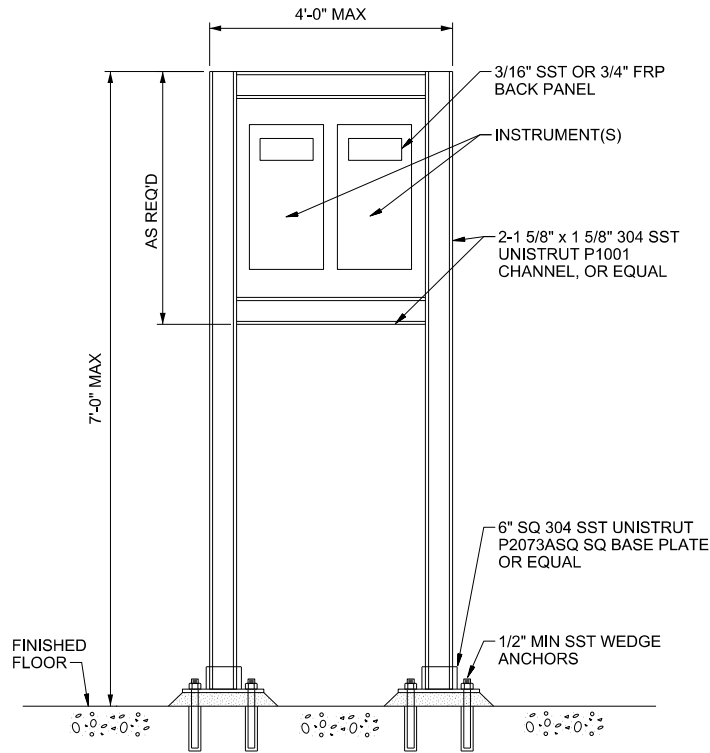
GENERAL
STANDARD DETAILS 31

DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-050
SHEET NUMBER	46



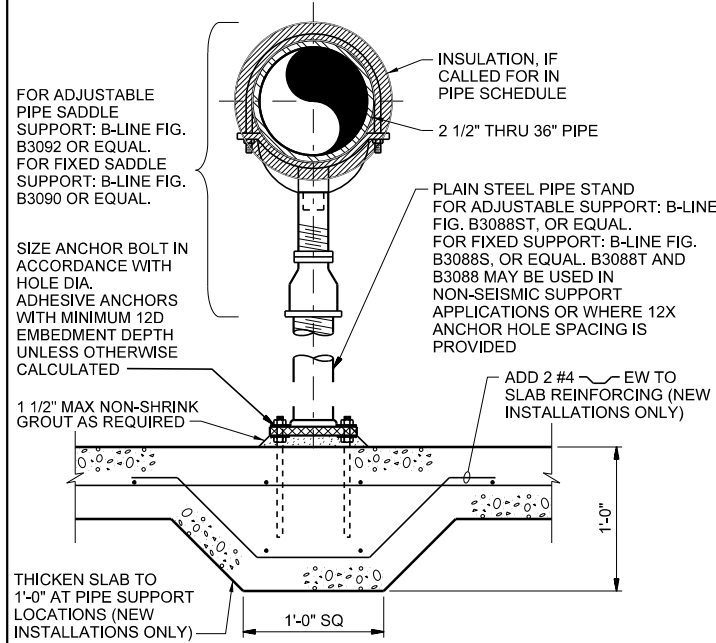
SMALL PUMP SUPPORT
NTS

11900



DOUBLE CHANNEL SUPPORT FOR INSTRUMENTS
NTS

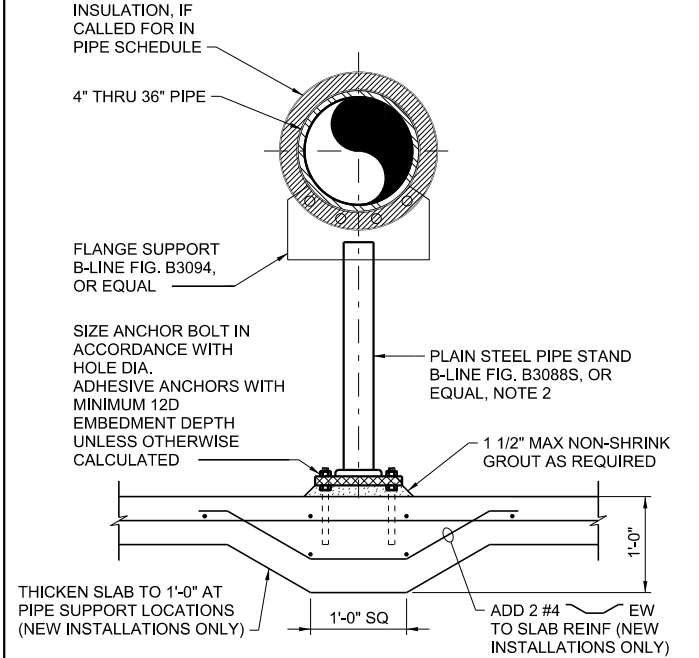
13301



- NOTES:**
1. COAT ALL SHAPES PER SPECIFICATION SECTION 09900 SYSTEM 300.
 2. ADJUSTABLE OR FIXED SUPPORT INSTALLATION AT CONTRACTOR'S DISCRETION, UNLESS SHOWN OTHERWISE.

SADDLE PIPE SUPPORT
NTS

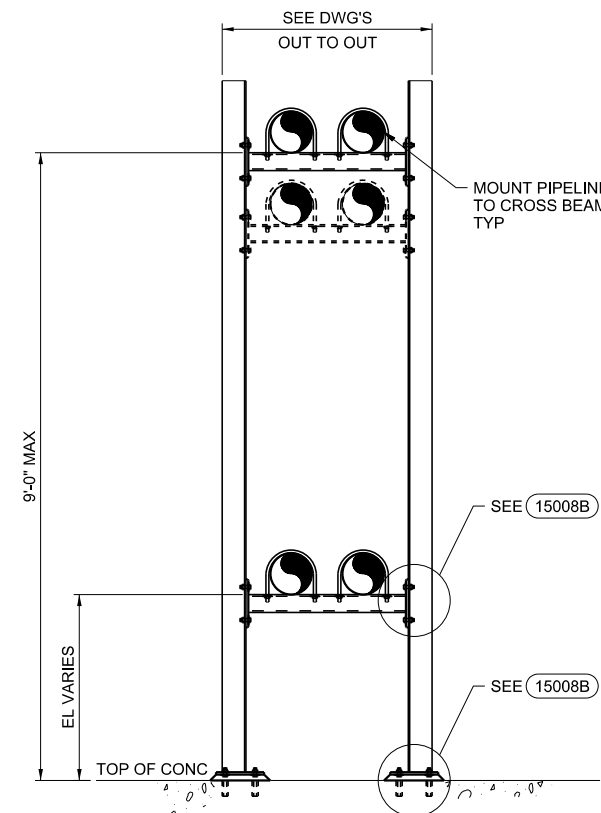
15000



- NOTES:**
1. COAT ALL SHAPES PER SPECIFICATION SECTION 09900 SYSTEM 300.
 2. B-LINE FIG. B3088 MAY BE USED IN NON-SEISMIC SUPPORT APPLICATIONS OR WHERE 12X ANCHOR HOLE SPACING IS PROVIDED. FOR VERTICAL ADJUSTMENTS USE PIPE ADJUSTER B-LINE FIG. B3089 AND FIG. B3088ST OR FIG. B3088T IN NON-SEISMIC SUPPORT APPLICATIONS.

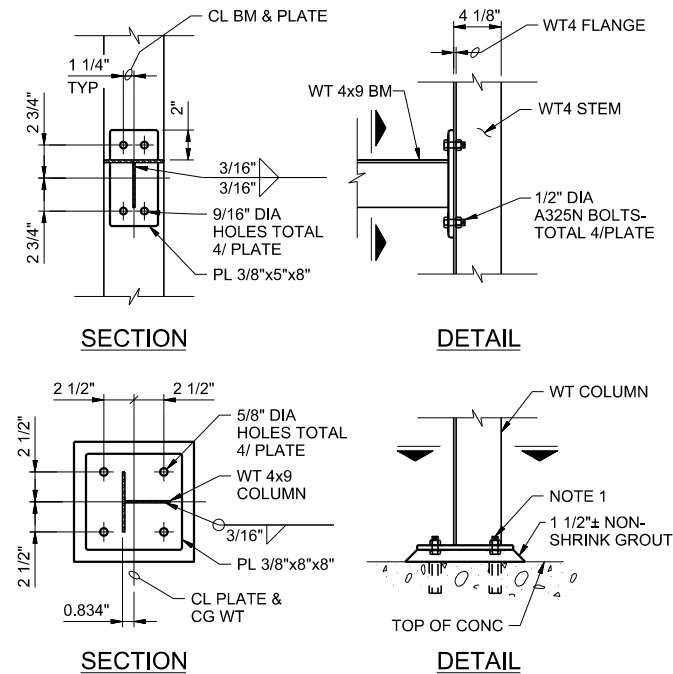
FLANGE MOUNTED PIPE SUPPORT
NTS

15002



FIXED PIPE SUPPORT RACK
NTS

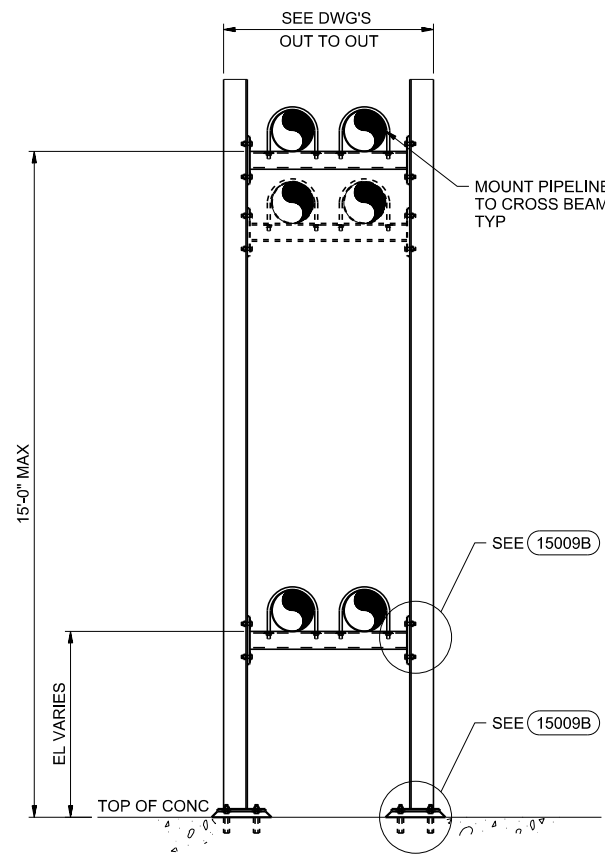
15008A



- NOTE:**
1. 1/2\"/>
 2. ALL SHAPES TO BE MADE OF STEEL AND COATED PER SPECIFICATIONS SECTION 09900.

FIXED PIPE SUPPORT RACK SECTIONS AND DETAILS
NTS

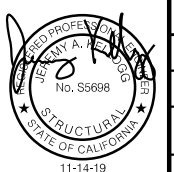
15008B

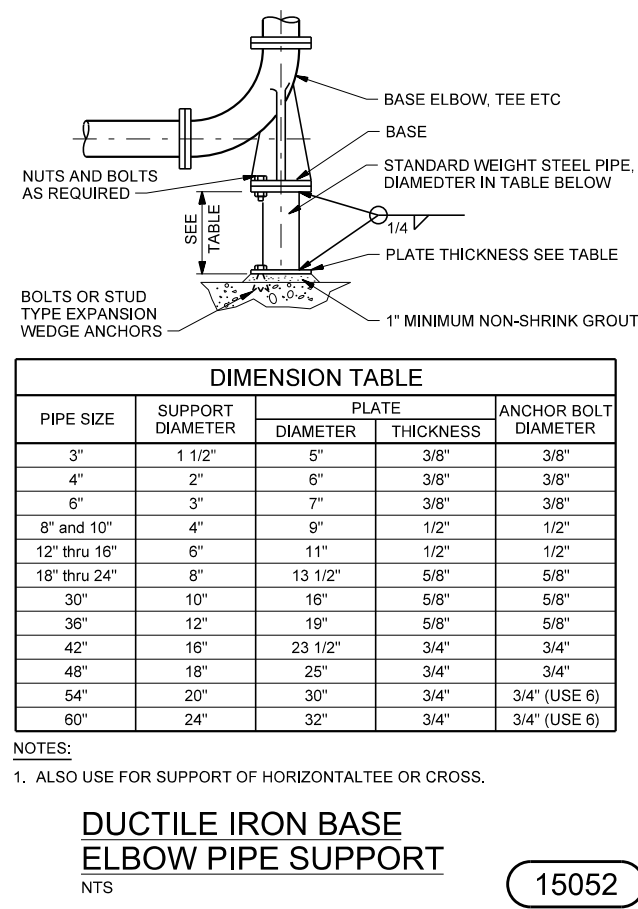
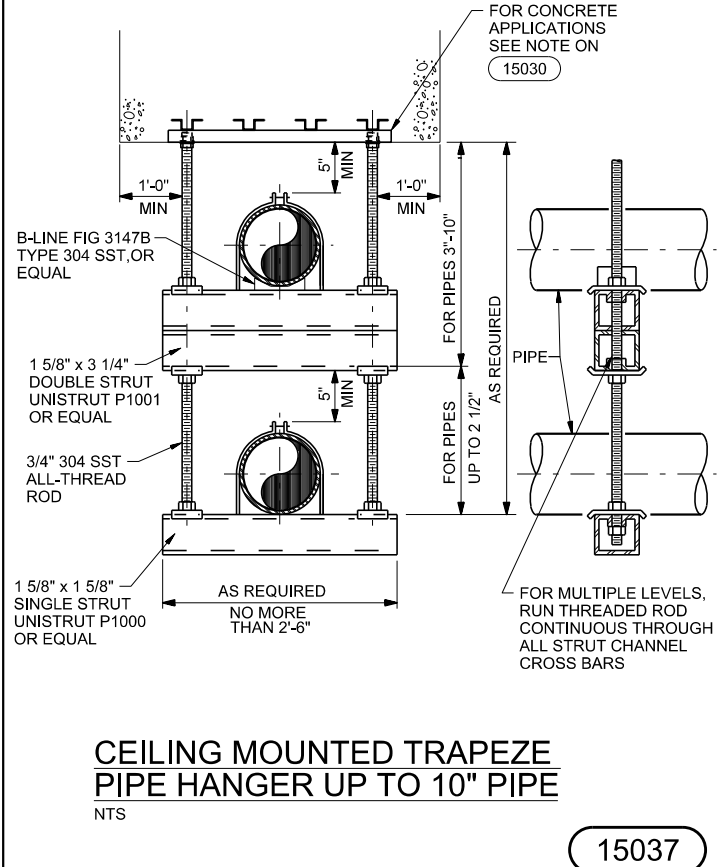
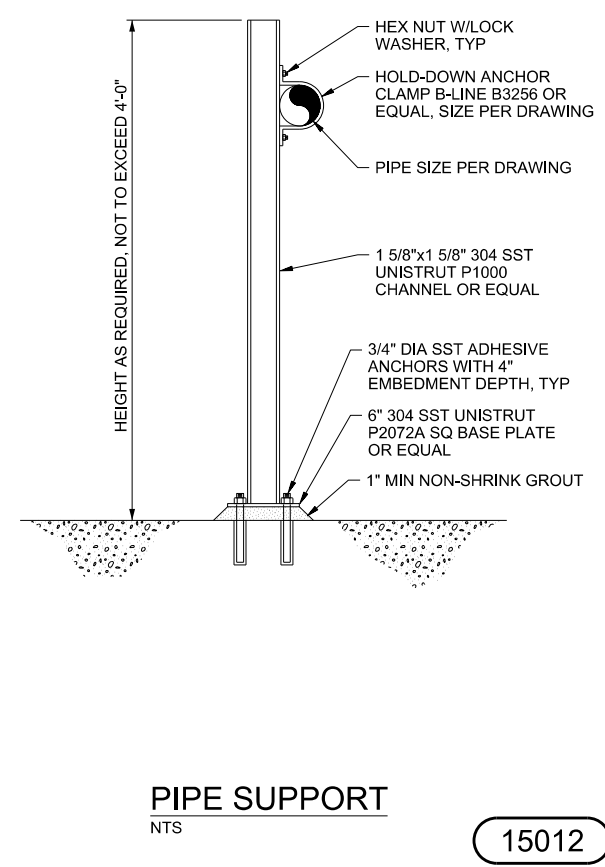
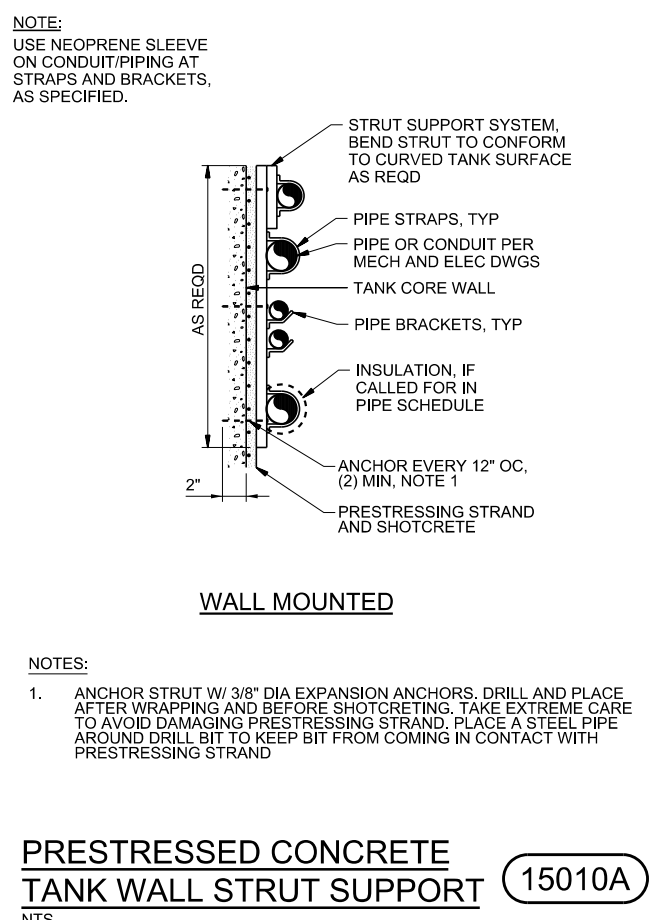
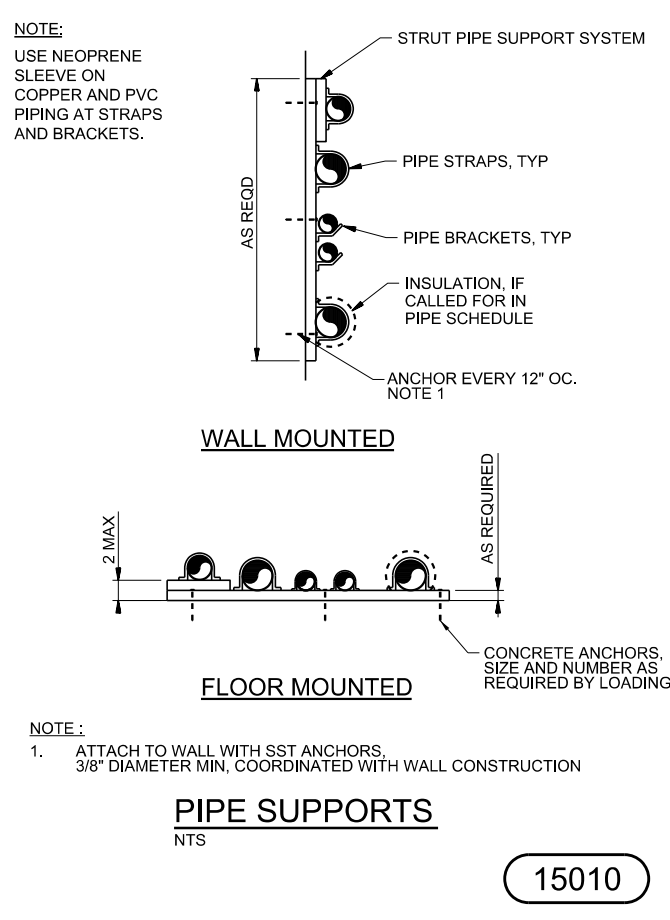
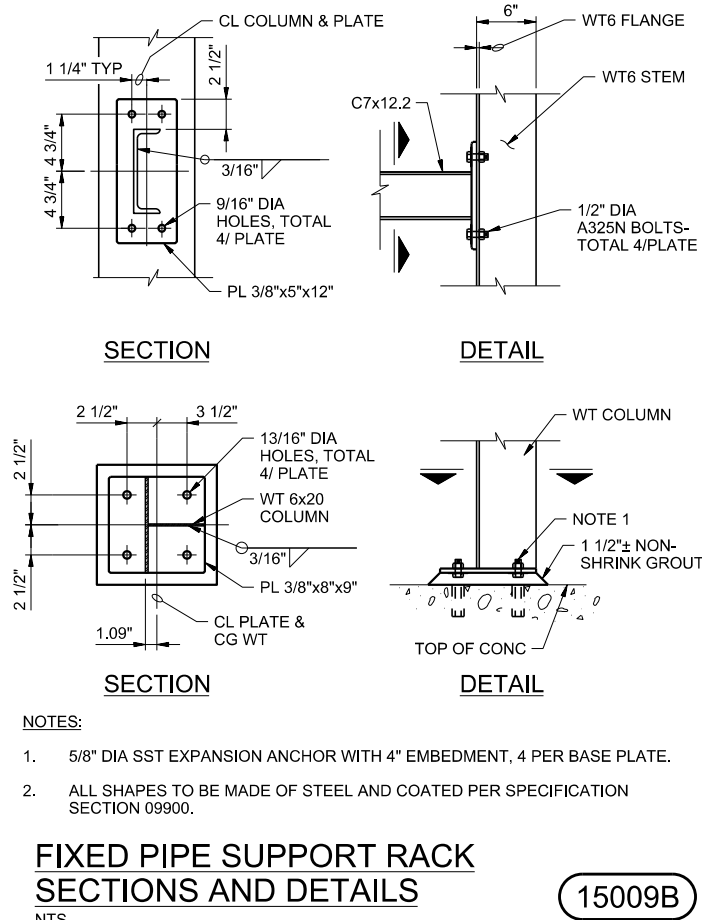


FIXED PIPE SUPPORT RACK
NTS

15009A

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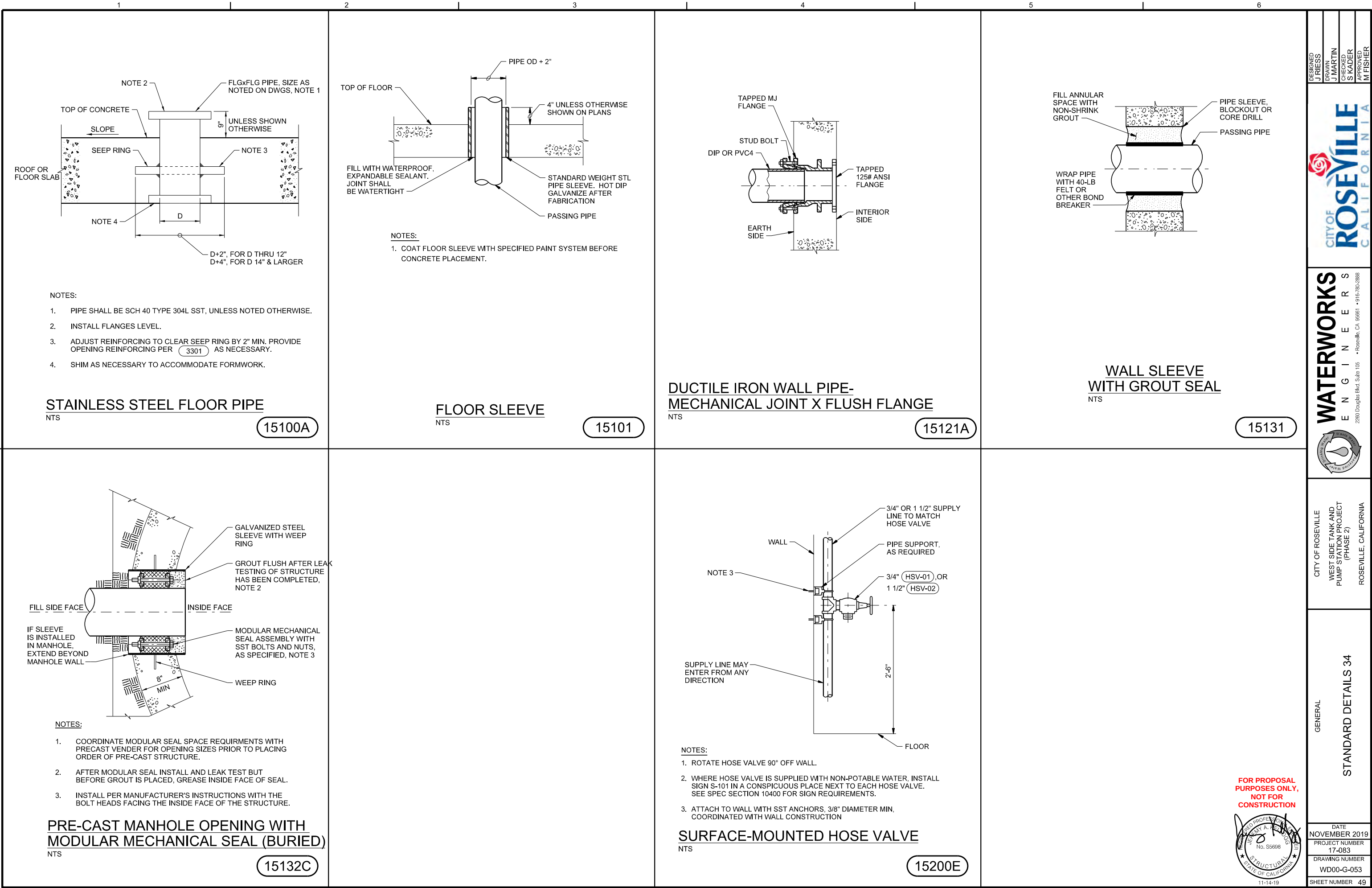




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PROFESSIONAL ENGINEER
JERRY A. FISHER
No. S5698
STATE OF CALIFORNIA
11-14-19

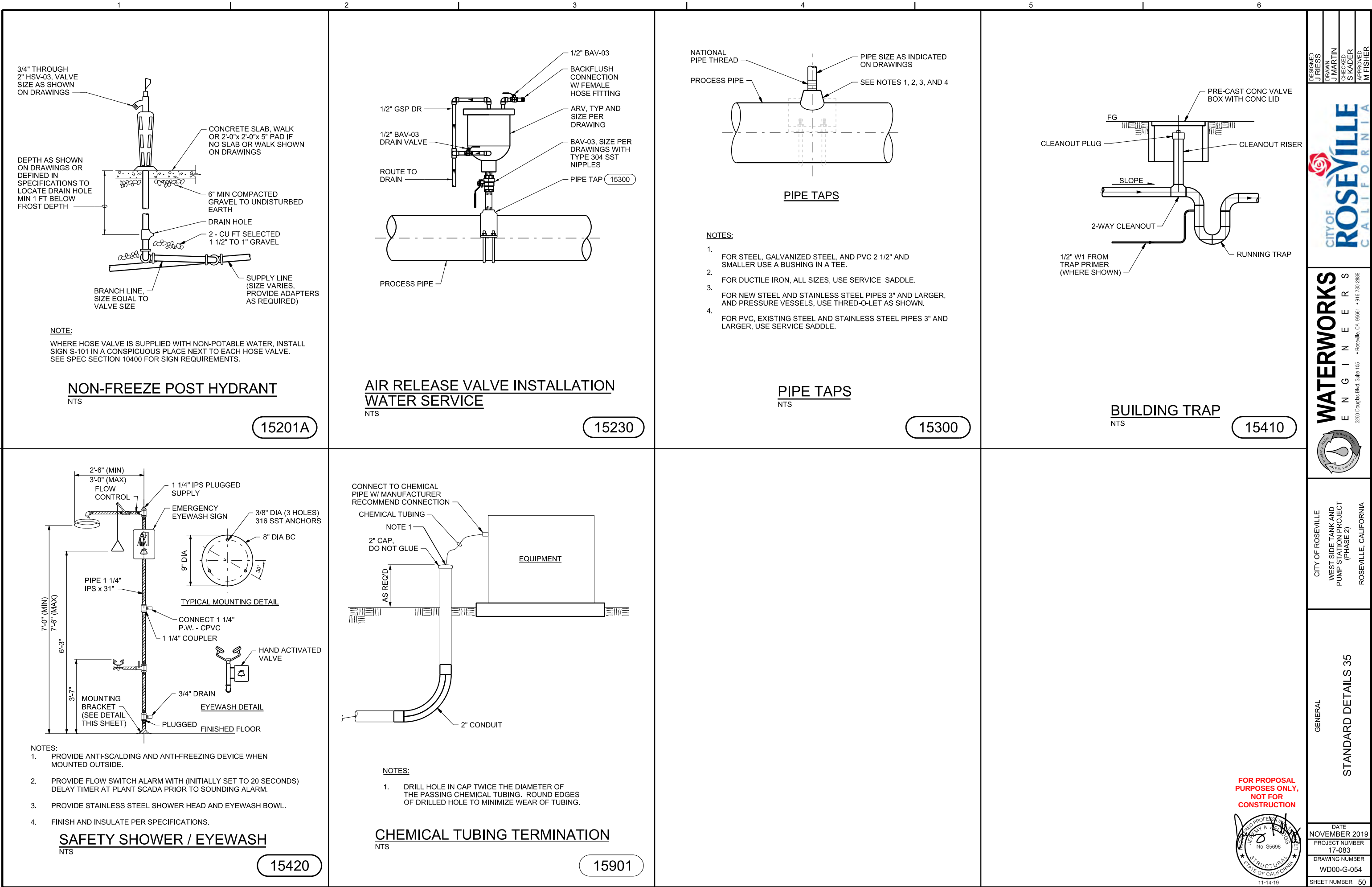
DESIGNED J KELLOGG	DRAWN J MARTIN	CHECKED S KADER	APPROVED M FISHER
			
WATERWORKS ENGINEERS 2280 Douglas Blvd. Suite 105 • Roseville, CA 95661 • 916-785-2888			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL STANDARD DETAILS 33			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-052			
SHEET NUMBER 48			



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DESIGNED J. RESS	DRAWN J. MARTIN	CHECKED S. KADER	APPROVED M. FISHER
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CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
GENERAL STANDARD DETAILS 34			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-G-053			
SHEET NUMBER 49			



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DESIGNED	J. RISS
DRAWN	J. MARTIN
CHECKED	S. KADER
APPROVED	M. FISHER



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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL
STANDARD DETAILS 36

DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-055
SHEET NUMBER	51

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DRAWN	J. MARTIN
CHECKED	S. KADER
APPROVED	M. FISHER



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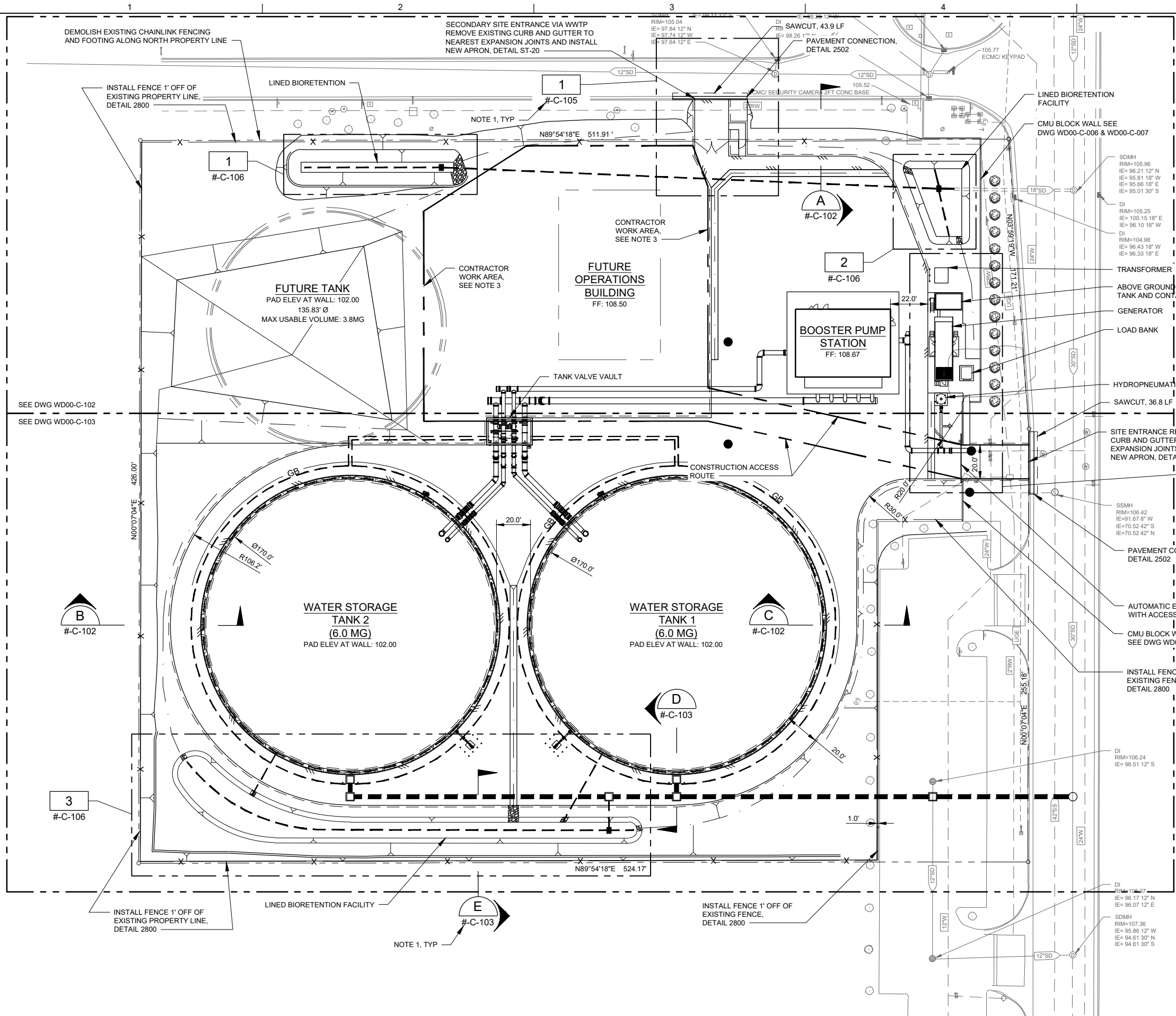


CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

GENERAL
STANDARD DETAILS 37

DATE	NOVEMBER 2019
PROJECT NUMBER	17-083
DRAWING NUMBER	WD00-G-056
SHEET NUMBER	52

L:\CAD\PROJECTS\17-083 ROSEVILLE WEST SIDE TANK - PS_(S)\PROJECT FILES\DELIVERABLES\WD5400C101.DWG



NOTES:

1. REPLACE "H" IN DRAWING REFERENCES WITH "WD00".
2. SEE DWG WD00-C-201 FOR YARD PIPING.
3. CITY INTENDS TO INITIATE CONSTRUCTION OF THE FUTURE OPERATIONS/CREW BUILDING IN THE AREA INDICATED ON THE PLANS BEFORE THE COMPLETION OF THIS PROJECT. CONTRACTOR WILL COMPLETE SITE GRADING AND DRAINAGE IMPROVEMENTS FOR THE FUTURE OPERATIONS/CREW BUILDING AREA AND EVACUATE THEIR EQUIPMENT, STAGING, AND ALL OTHER USES OF THIS AREA IN ACCORDANCE WITH PROJECT MILESTONE 2. THIS CONSTRUCTION WORK AREA IS DEDICATED FOR CREW FACILITY CONTRACTOR AFTER MILESTONE 2. KEEP CLEAR AT ALL TIMES AND COORDINATE OPERATIONS AND SWPPP ACTIVITIES WITH CREW FACILITY CONTRACTOR.

GRADING NOTES:

1. NON-POTABLE WATER SHALL BE SPRAYED ON ALL EXPOSED EARTH SURFACES DURING CLEARING, GRADING, EARTH MOVING, AND OTHER SITE PREPARATION ACTIVITIES. THE EXPOSED EARTH SHALL BE WATERED THROUGHOUT THE DAY TO MINIMIZE DUST.
2. TARPULINS OR OTHER EFFECTIVE COVERS SHALL BE USED ON ALL STOCKPILED EARTH MATERIAL AND ON HAUL TRUCKS TO MINIMIZE DUST.
3. THE CITY SHALL HAVE THE AUTHORITY TO STOP ALL GRADING OPERATIONS, IF, IN THE OPINION OF CITY STAFF, INADEQUATE DUST CONTROL MEASURES ARE BEING PRACTICED OR EXCESSIVE WIND CONDITIONS CONTRIBUTE TO FUGITIVE DUST EMISSIONS.
4. ADJACENT STREET FRONTAGES SHALL BE SWEEPED AT LEAST ONCE A DAY TO REMOVE SILT AND OTHER DIRT WHICH IS EVIDENT FROM CONSTRUCTION ACTIVITIES. REFER TO SCHEDULES WITHIN SWPPP.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING CONSTRUCTION VEHICLES LEAVING THE SITE ON A DAILY BASIS TO PREVENT DUST, SILT AND DIRT FROM BEING RELEASED OR TRACKED OFFSITE. REFER TO SWPPP FOR SPECIFIC REQUIREMENTS.
6. CONSTRUCTION SHALL STOP IF CULTURAL RESOURCES ARE SUSPECTED. IT IS POSSIBLE THAT PREVIOUS ACTIVITIES HAVE OBSCURED SURFACE EVIDENCE OF CULTURAL RESOURCES. IF SIGNS OF AN ARCHEOLOGICAL SITE, SUCH AS ANY UNUSUAL AMOUNTS OF STONE, BONE, OR SHELL, ARE UNCOVERED DURING GRADING OR OTHER CONSTRUCTION ACTIVITIES, WORK SHALL BE HALTED WITHIN 100 FEET OF THE FIND AND THE CITY'S ENVIRONMENTAL COORDINATOR SHALL BE NOTIFIED. A QUALIFIED ARCHEOLOGIST SHALL BE CONSULTED FOR AN ON-SITE EVALUATION. THE ARCHEOLOGIST MAY REQUIRE ADDITIONAL MITIGATION.
7. SHOULD GRADING OPERATIONS UNCOVER HAZARDOUS MATERIALS, OR WHAT APPEARS TO BE HAZARDOUS MATERIALS, THE FIRE DEPARTMENT SHALL BE CONTACTED IMMEDIATELY AT (916) 774-5820. THE AREA, WHICH CONTAINS THE HAZARDOUS MATERIALS, SHALL BE MARKED OFF UNTIL AN INVESTIGATION BY A MEMBER OF THE FIRE DEPARTMENT IS CONDUCTED.
8. THE CONTRACTOR IS EXPECTED TO COMPLY WITH THE FUGITIVE DUST CONTROL REQUIREMENTS FROM THE PLACER COUNTY AIR POLLUTION CONTROL DISTRICT: WWW.PLACER.CA.GOV/APCD
9. CONTRACTOR RESPONSIBLE FOR ANY/ALL FINES.

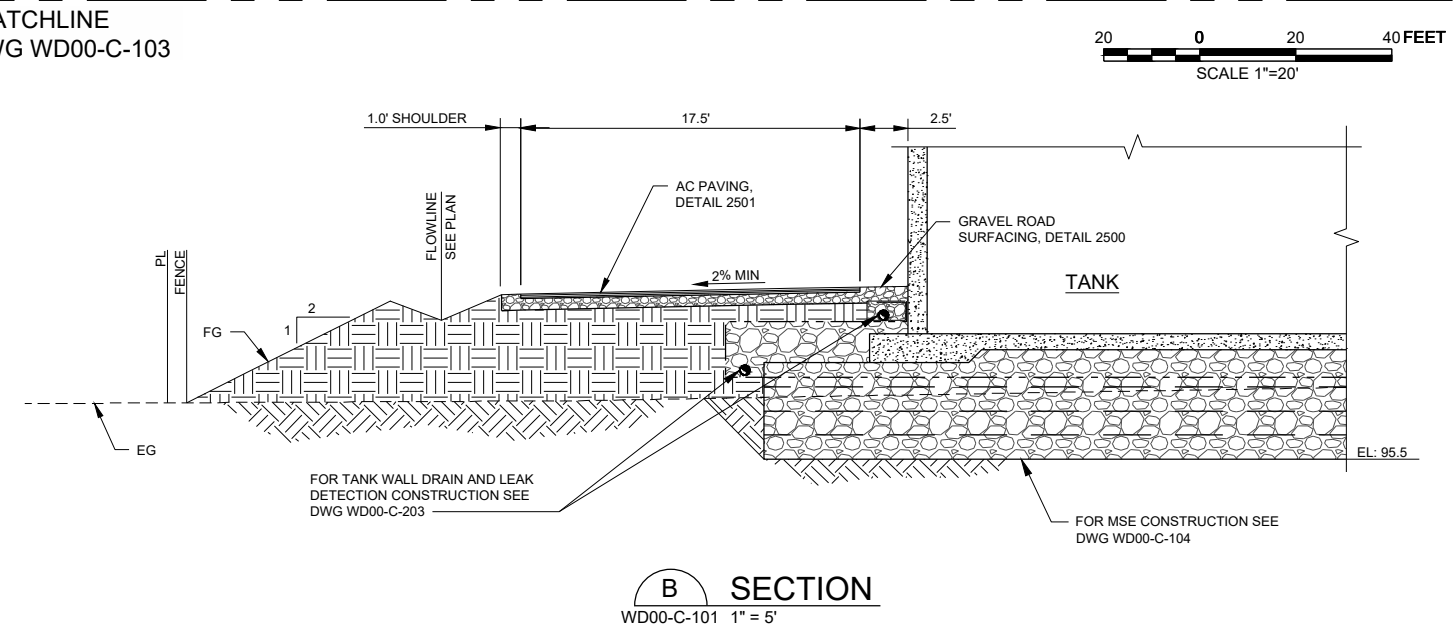
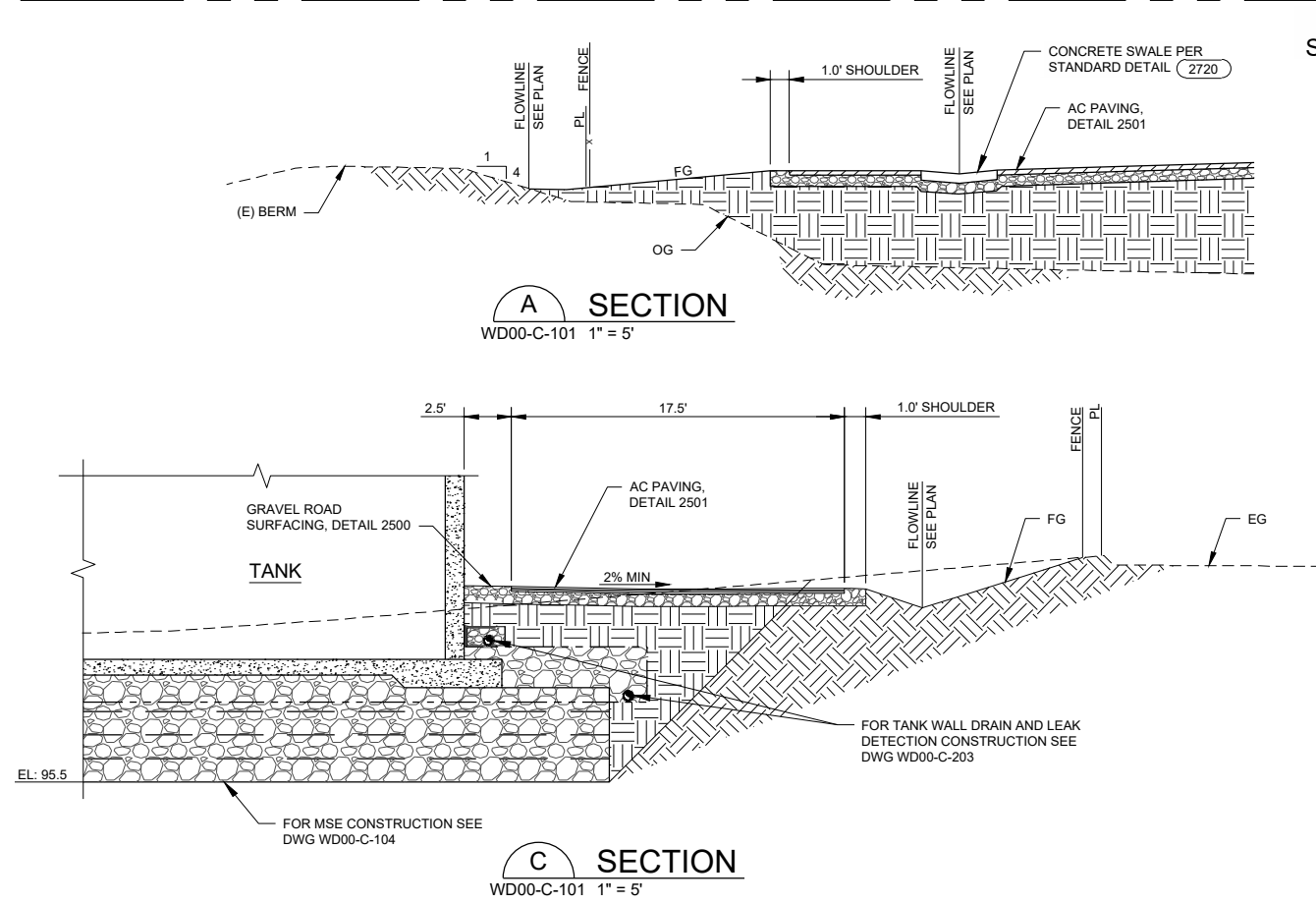
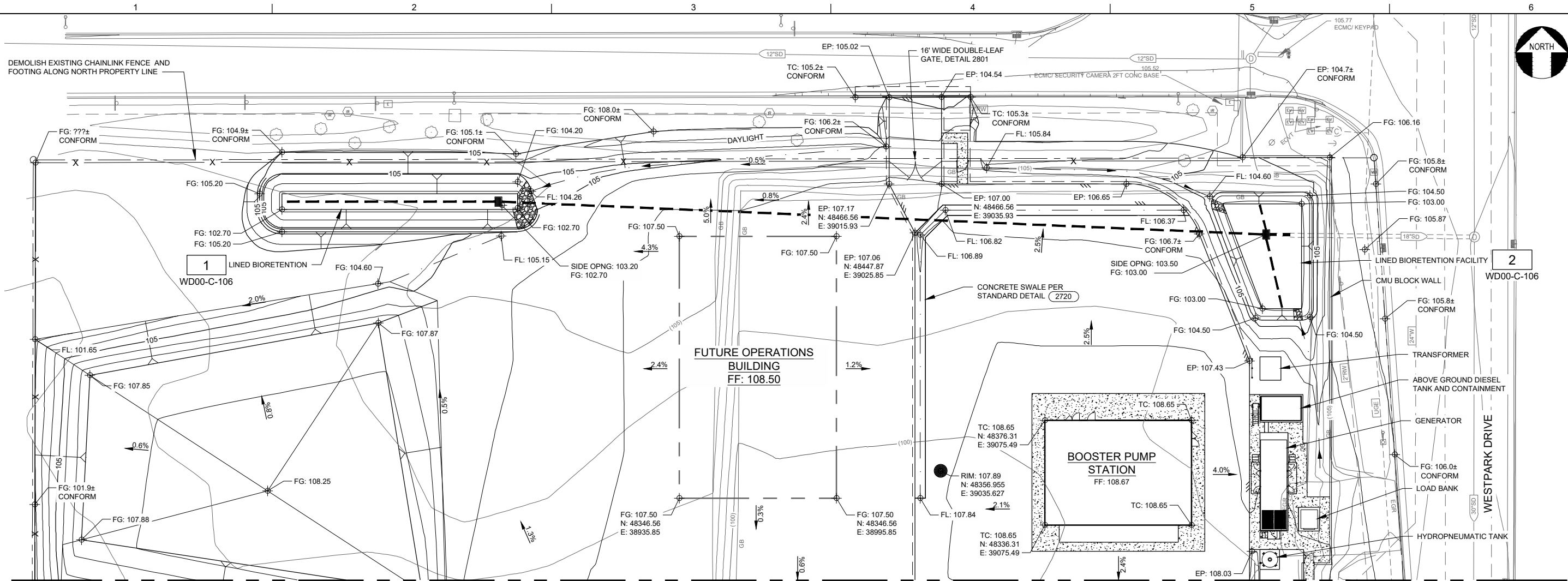
30 0 30 60 FEET
SCALE 1"=30'



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CONSTRUCTION

DESIGN P WEBSTER	DRAWN P WEBSTER	CHECKED C BERTSCH	APPROVED M FISHER
CITY OF ROSEVILLE ENGINEERS 2250 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-3888			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
CIVIL OVERALL SITE PLAN			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-C-101			
SHEET NUMBER 54			

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CONSTRUCTION

JOB NUMBER: 17-083

FILENAME: WD5400C102.DWG

PLOT DATE: 11/7/19

PLOT TIME: 13:55:00

DESIGN
P. WEBSTER
DRAWN
P. WEBSTER
CHECKED
C. BERTSCH
APPROVED
M. FISHER

CITY OF
ROSEVILLE
CALIFORNIA

WATERWORKS
ENGINEERS
2250 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-9888

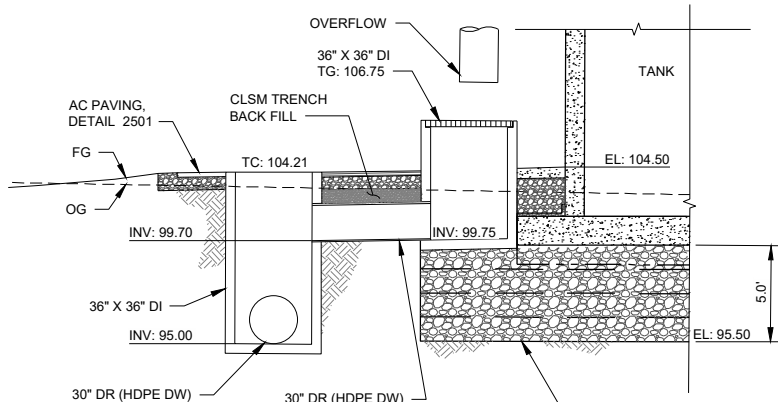
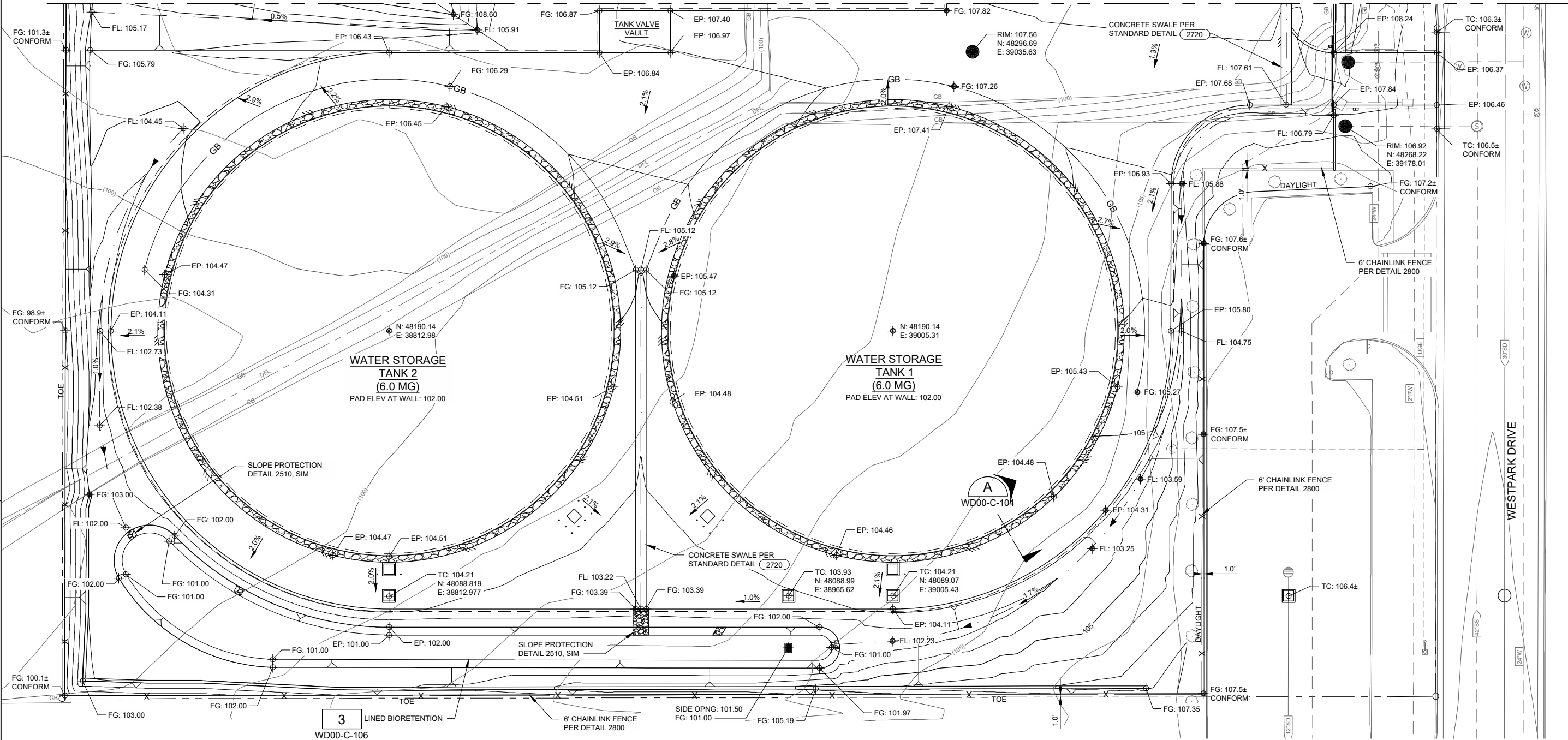
CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

CIVIL
GRADING PLAN - NORTH

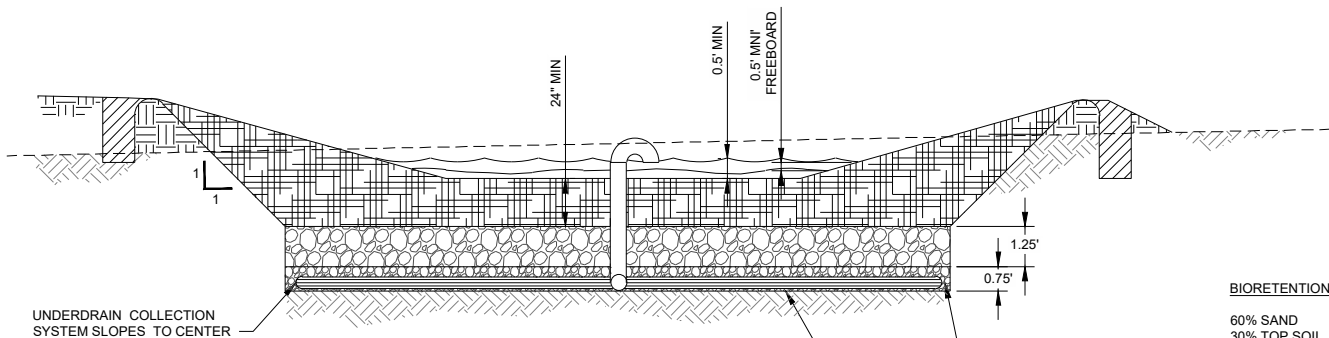
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NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-C-102
SHEET NUMBER 55

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MATCHLINE
SEE DWG WD00-C-102



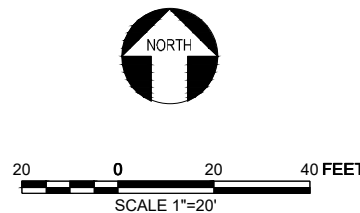
D SECTION
WD00-C-101 NTS



E SECTION
WD00-C-101 NTS

BIORETENTION SOIL SHALL CONTAIN:

60% SAND
30% TOP SOIL
10% LEAF COMPOST



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CONSTRUCTION**

JOB NUMBER: 17-083

FILENAME: WD5400C103.DWG

PLOT DATE: 11/7/19

PLOT TIME: 13:55:18



CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

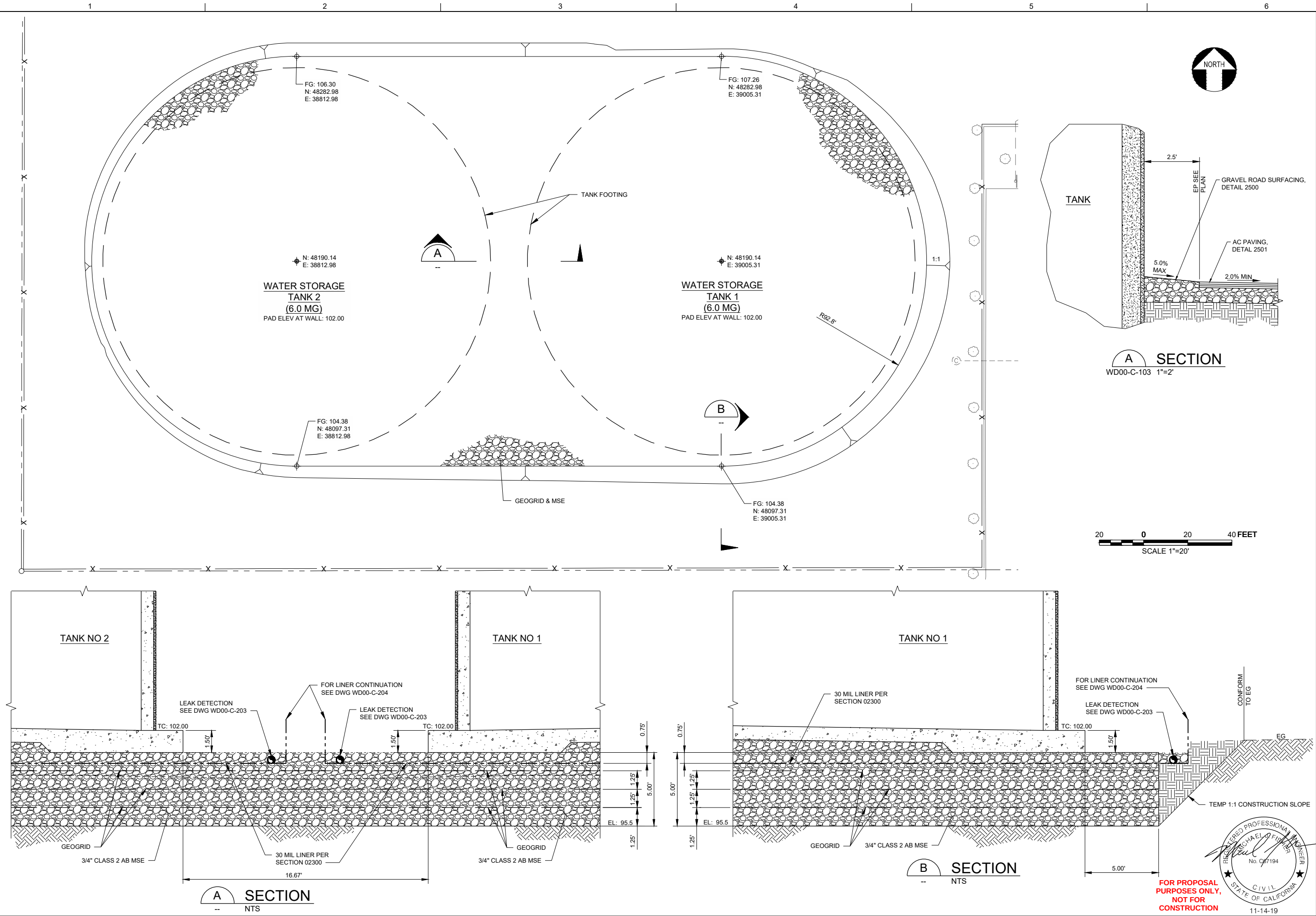
CIVIL
GRADING PLAN - SOUTH

DATE
NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-C-103
SHEET NUMBER 56

DESIGN
P WEBSTER
DRAWN
P WEBSTER
CHECKED
C BERTSCH
APPROVED
M FISHER



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JOB NUMBER: 17-083

FILENAME: WD5400C104.DWG

PLOT DATE: 11/7/19

PLOT TIME: 13:55:30

DESIGN
P WEBSTER
DRAWN
P WEBSTER
CHECKED
C BERTSCH
APPROVED
M FISHER



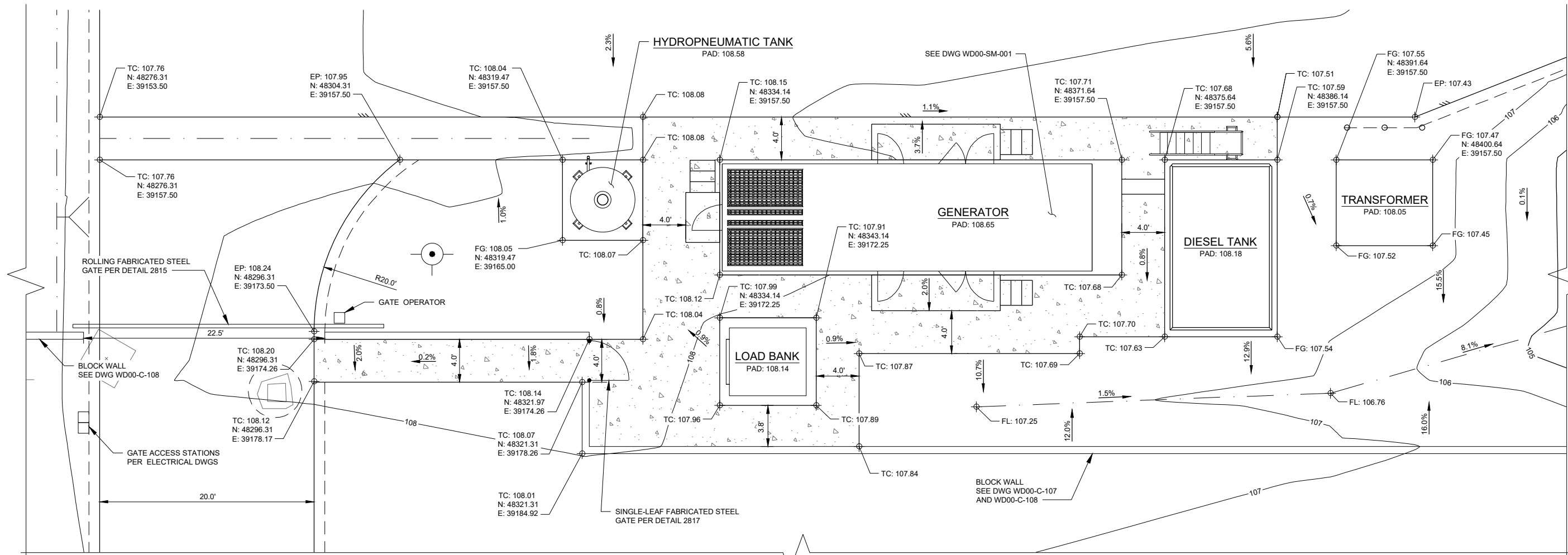
WATERWORKS
ENGINEERS
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CITY OF ROSEVILLE
WEST SIDE TANK AND
PUMP STATION PROJECT
(PHASE 2)
ROSEVILLE, CALIFORNIA

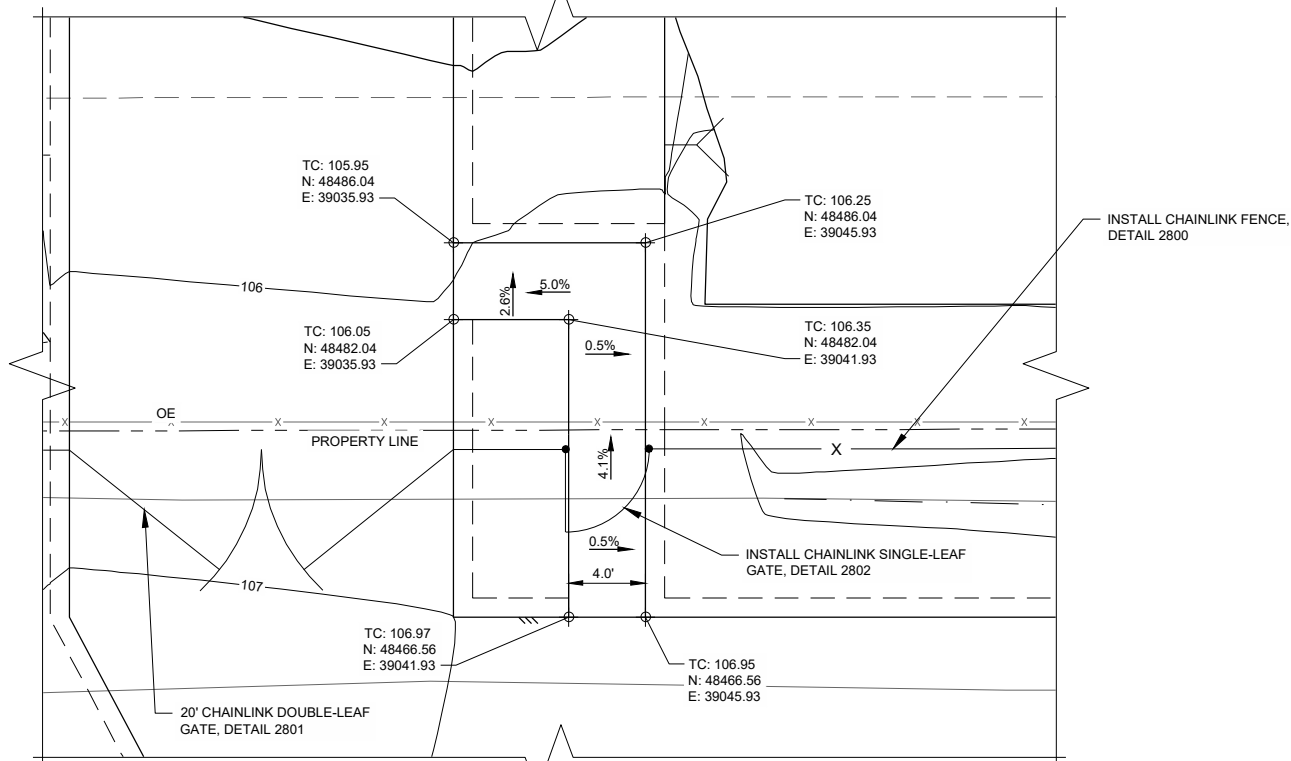
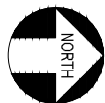
CIVIL
PARTIAL PLAN AND SECTIONS

DATE
NOVEMBER 2019
PROJECT NUMBER
17-083
DRAWING NUMBER
WD00-C-104
SHEET NUMBER 57

L:\CAD\PROJECTS\17-083 ROSEVILLE WEST SIDE TANK - PS_(S)\PROJECT FILES\DELIVERABLES\WD5400C105.DWG



2 DETAIL
WD00-C-101 SCALE: 1"=5'



1 DETAIL
WD00-C-101 SCALE: 1"=5'

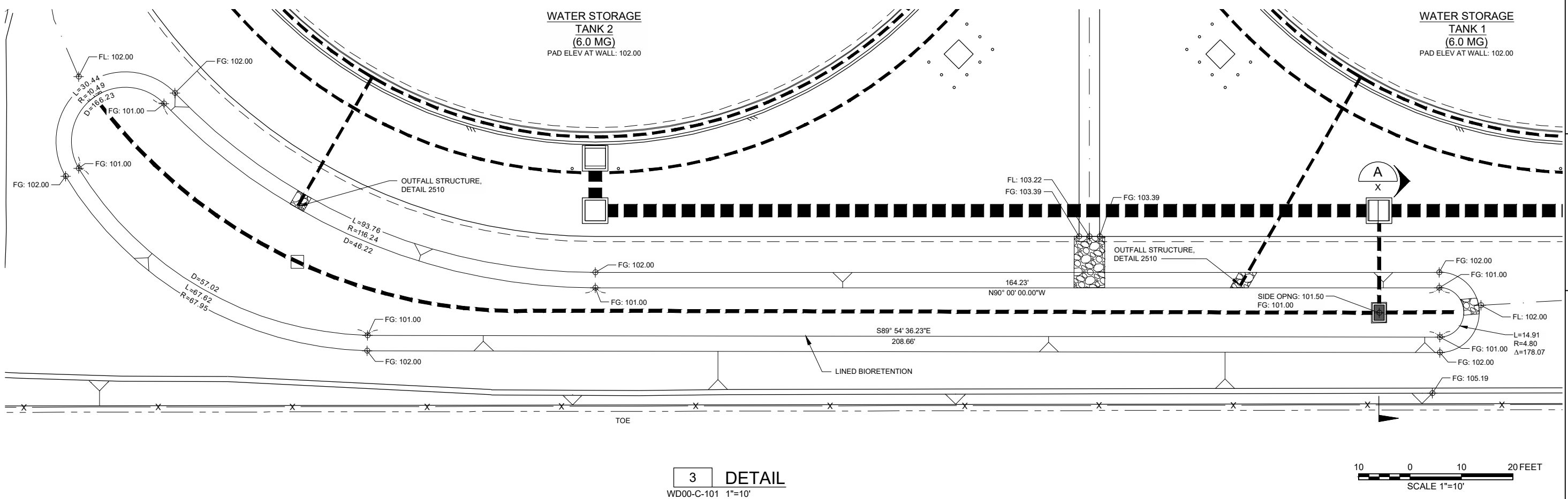
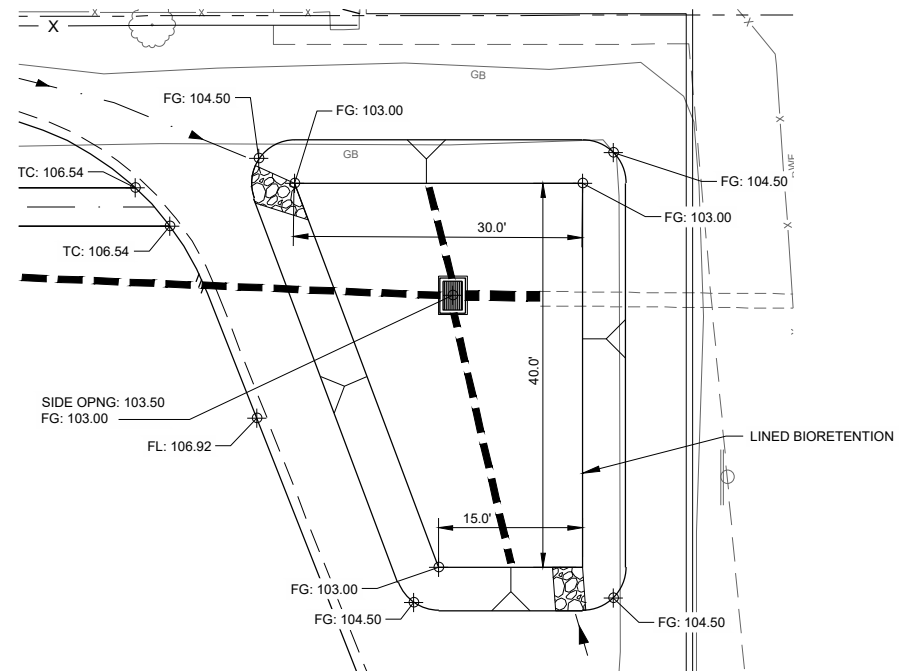
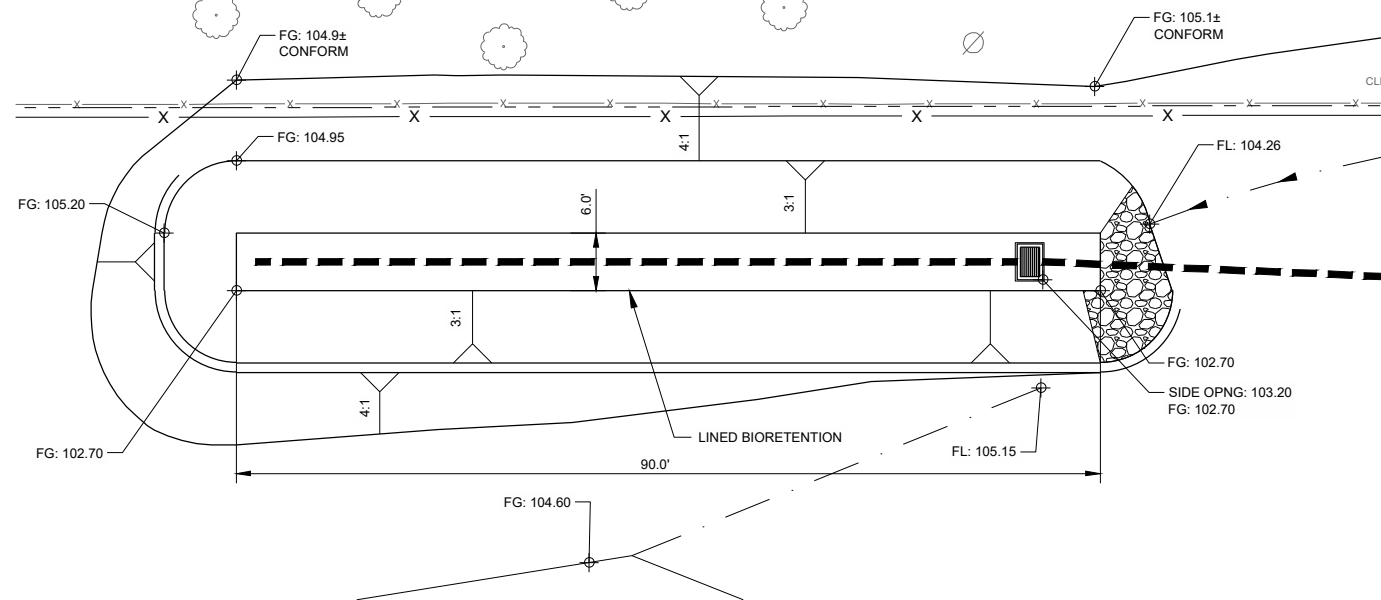


5 0 5 10 FEET
SCALE 1"=5'

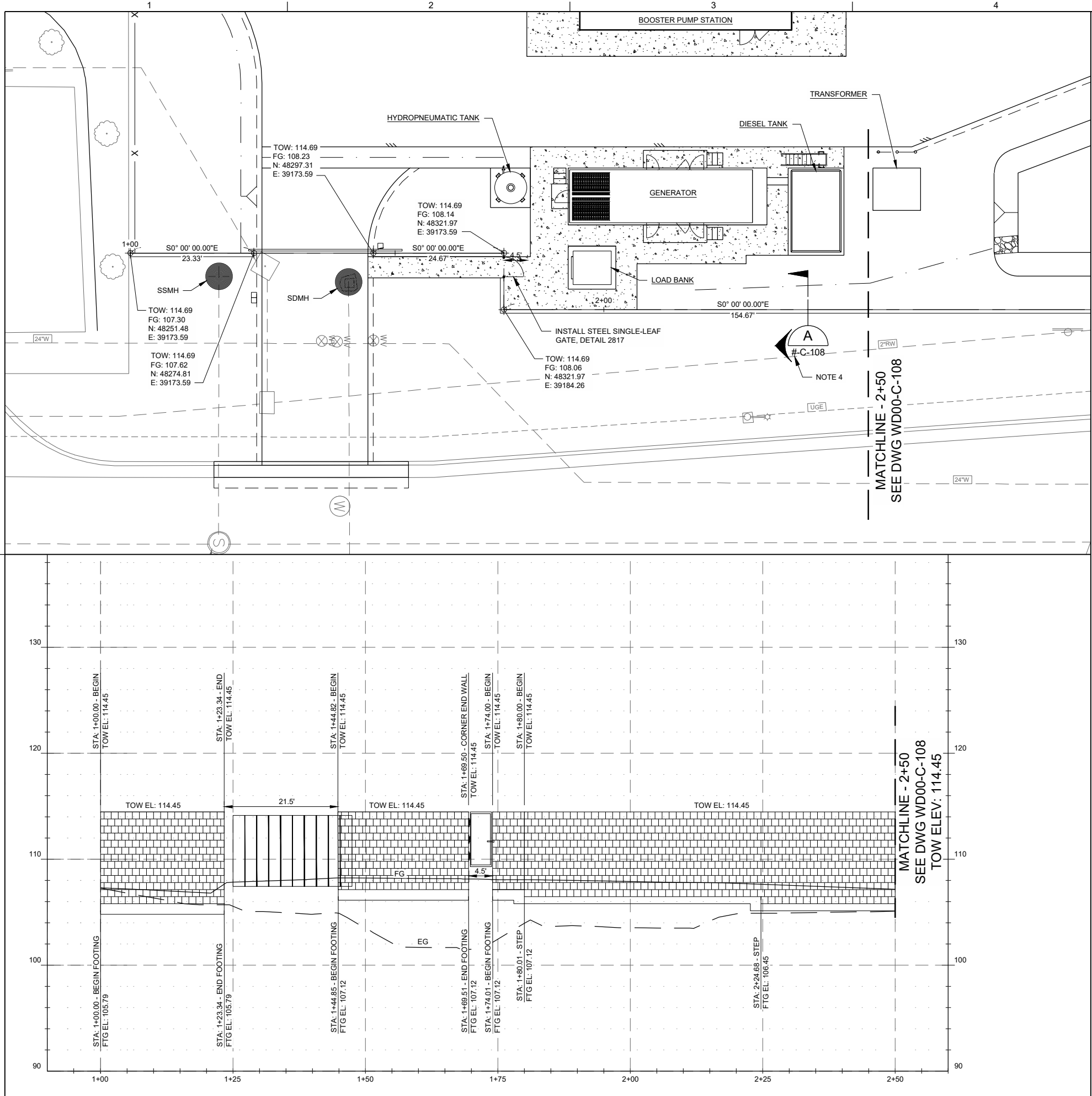


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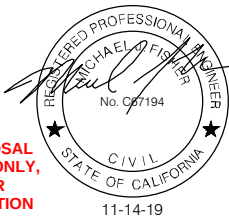
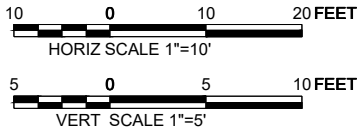
DESIGN P WEBSTER	DRAWN P WEBSTER	CHECKED C BERTSCH	APPROVED M FISHER
 CITY OF ROSEVILLE CALIFORNIA			
 WATERWORKS ENGINEERS 2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-9888			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			
CIVIL DETAILS			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-C-105			
SHEET NUMBER 58			



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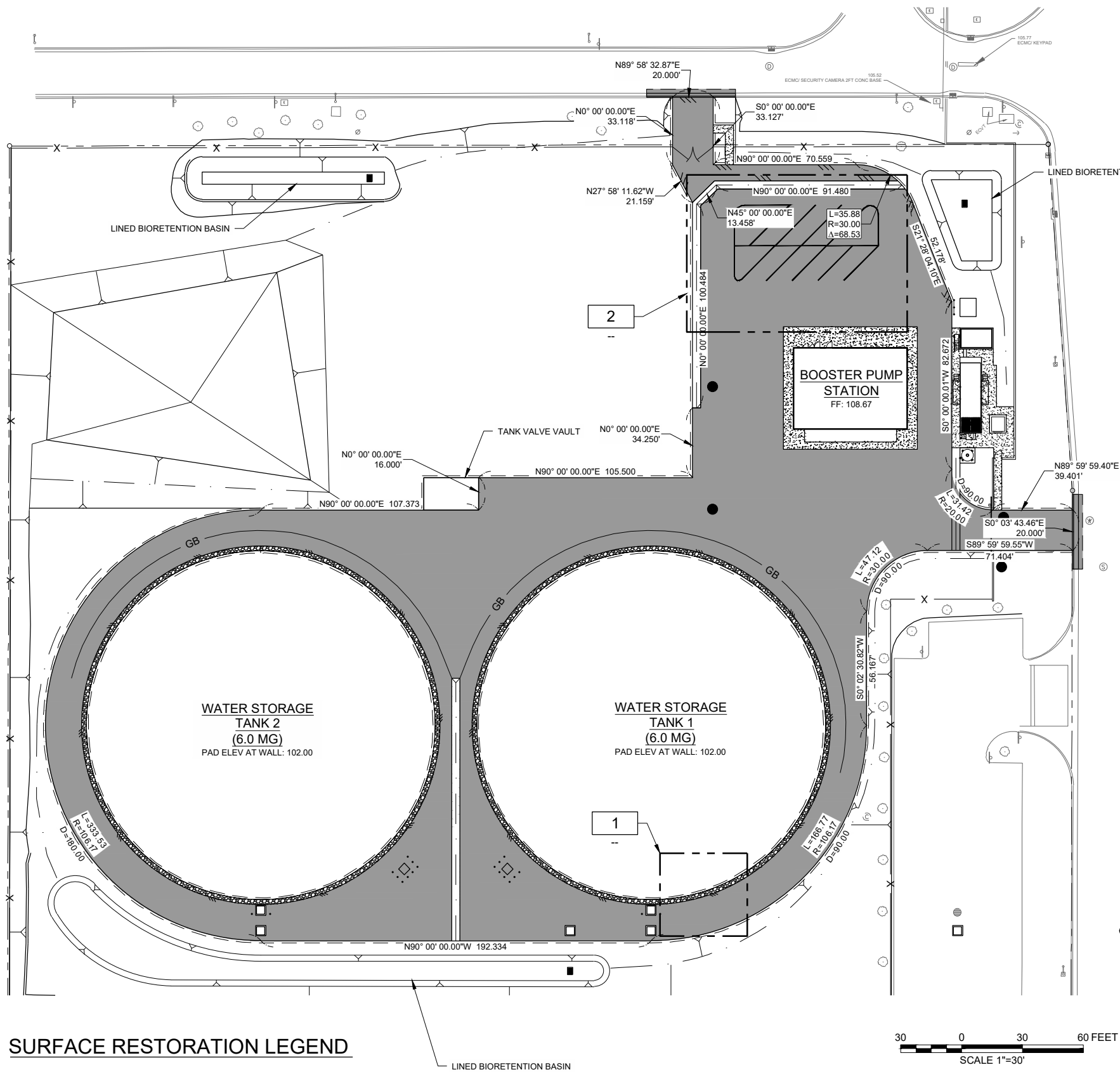
- NOTES:
1. APPLY ANTI-GRAFFITI COATING TO ALL EXTERIOR FACES OF CMU WALL. SHERWIN WILLIAMS B97C150 12 MILS WFT.
 2. ALL CMU BLOCKS AND WALL CAPS TO BE GRAY SPLIT FACED BLOCKS.
 3. WALL IS 6' TALL FROM FINISHED GRADE.
 4. REPLACE "#" IN DRAWING REFERENCES WITH "WD00".



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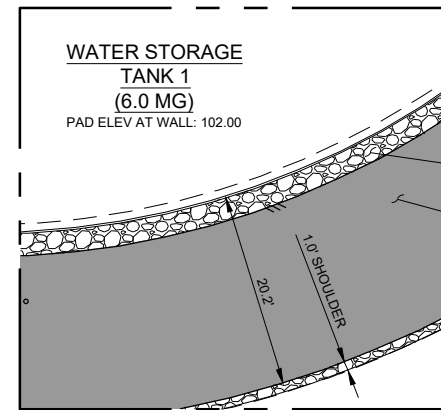
DESIGN P WEBSTER		 CITY OF ROSEVILLE CALIFORNIA	
DRAWN P WEBSTER			
CHECKED C BERTSCH			
APPROVED M FISHER			
CIVIL WALL PLAN AND PROFILE BEG TO 2+50			 WATERWORKS ENGINEERS 2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-9888
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2)			
ROSEVILLE, CALIFORNIA			
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			 WATERWORKS ENGINEERS 2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-9888
DRAWING NUMBER WD00-C-107			
SHEET NUMBER 60			

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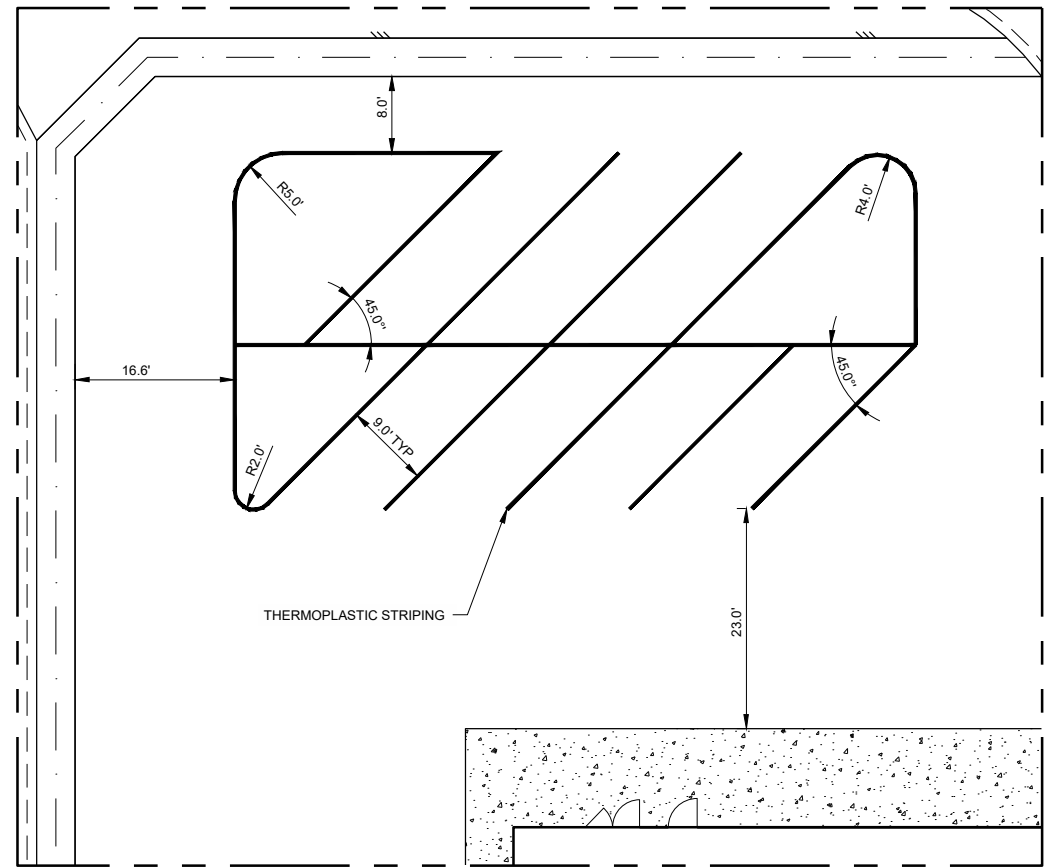


SURFACE RESTORATION LEGEND

- GRAVEL ROAD SURFACING, DETAIL 2500
- AC PAVEMENT, DETAIL 2501
- CONCRETE

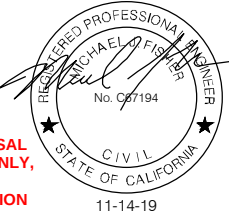


1 DETAIL
1"=10'



2 DETAIL
1"=10'

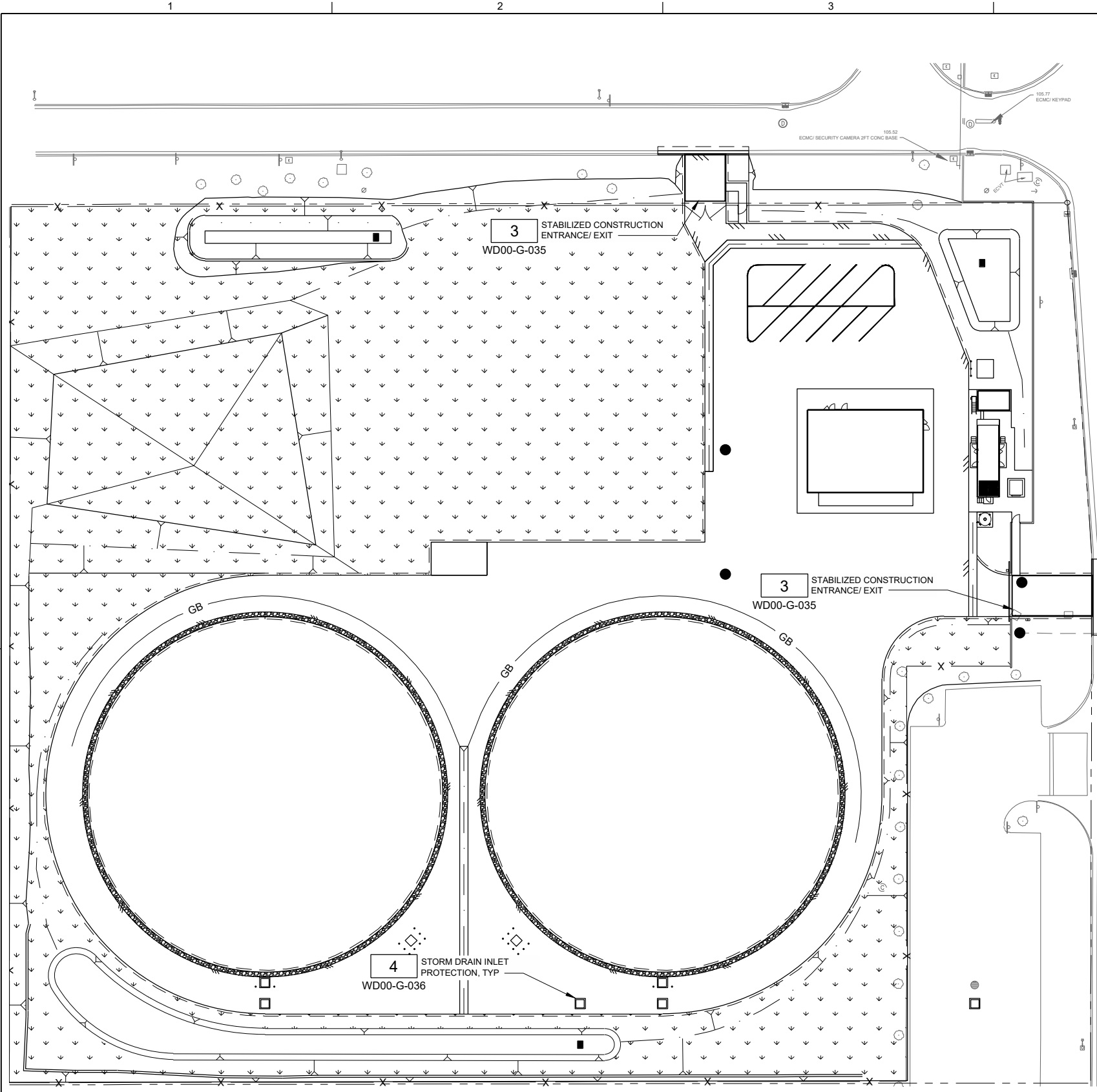
10 0 10 20 FEET
SCALE 1"=10'



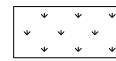
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CONSTRUCTION

DESIGN P WEBSTER	 CITY OF ROSEVILLE CALIFORNIA	A
DRAWN P WEBSTER		
CHECKED C BERTSCH		
APPROVED M FISHER		
 WATERWORKS ENGINEERS 2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-3888		B
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA		C
CIVIL SURFACE RESTORATION PLAN		D
DATE NOVEMBER 2019 PROJECT NUMBER 17-083 DRAWING NUMBER WD00-C-109 SHEET NUMBER 62		

L:\CAD\PROJECTS\17-083 ROSEVILLE WEST SIDE TANK - PS_(S)\PROJECT FILES\DELIVERABLES\WD5400C110.DWG



EROSION CONTROL LEGEND

 HYDROSEED AND INSTALL EROSION CONTROL MEASURES ON ALL DISTURBED AREAS PER SECTION 02936.

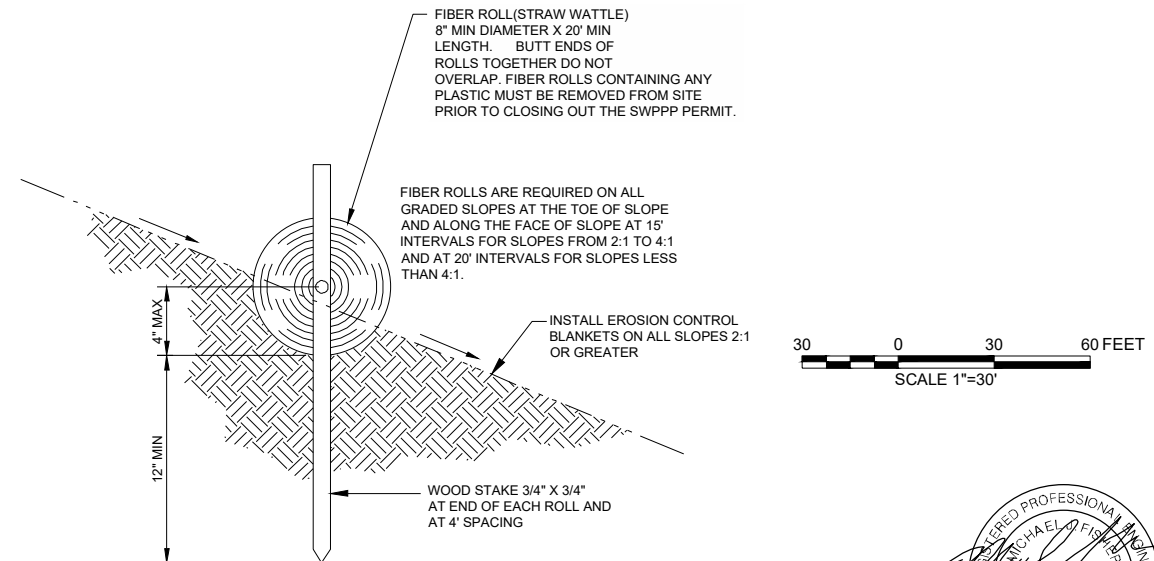
SLOPE TABLE	
SLOPE PERCENTAGE	SHEET FLOW LENGTH NOT TO EXCEED
0-25%	20 FEET
26-50%	15 FEET
OVER 51%	10 FEET

NOTES:

- EROSION CONTROL PER BEST MANAGEMENT PRACTICES AND EROSION NOTES AND DETAILS, SEE PAGES SD-16 AND SD-17.
- HYDROSEEDING (OR EQUIVALENT VEGETATION) WILL BE APPLIED TO INACTIVE DISTURBED AREAS THAT ARE DEEMED SUBSTANTIALLY COMPLETE. HYDROSEEDING (OR EQUIVALENT) WILL BE RE-APPLIED AS NEEDED TO MAINTAIN EFFECTIVENESS.
- STRAW MULCH WILL BE APPLIED TO ALL INACTIVE DISTURBED AREAS. AN INACTIVE DISTURBED AREA IS DEFINED AS AN AREA THAT HAS BEEN DISTURBED, IS NOT YET STABILIZED, AND WORK IS NOT SCHEDULED TO RESUME AT THE AREA WITHIN 14 DAYS. STRAW MULCH WILL BE RE-APPLIED AS NEEDED TO MAINTAIN EFFECTIVENESS.
- DISTURBED SLOPES THAT ARE NOT DEEMED SUBSTANTIALLY COMPLETE WILL BE STABILIZED WITH PLASTIC COVERS (HYDROSEEDING WILL BE USED WHEN DISTURBED SLOPES ARE DEEMED SUBSTANTIALLY COMPLETE). LINEAR SEDIMENT CONTROLS WILL BE DEPLOYED AT THE BASE OF AREAS PROTECTED WITH PLASTIC COVERS.
- LINEAR SEDIMENT CONTROLS (SILT FENCING, FIBER ROLLS, ETC.) WILL BE DEPLOYED ON DISTURBED SLOPES THAT HAVE A SLOPE UP TO 1:4 (V:H), AND A SLOPE LENGTH LESS THAN 100 FEET (FIBER ROLLS WILL BE USED WHEN SLOPE LENGTH EXCEEDS 100 FEET). FIBER ROLLS WILL BE DEPLOYED ON DISTURBED SLOPES GREATER THAN, OR EQUAL TO, 1:4 (V:H). THE CONTRACTOR SHALL APPLY LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE SLOPE, FACE OF THE SLOPE, AND AT THE GRADE BREAKS OF EXPOSED SLOPES TO COMPLY WITH SHEET FLOW LENGTHS IN ACCORDANCE WITH TABLE 300-1 "CRITICAL SLOPE/SHEET FLOW LENGTH COMBINATIONS", LOCATED ON THIS SHEET. ADDITIONALLY, LINEAR SEDIMENT CONTROLS WILL BE USED AS A PERIMETER CONTROL TO CONTAIN SEDIMENT WITHIN THE PROJECT AREA. IT IS NOT NECESSARY TO DEPLOY PERIMETER CONTROLS AT LOCATIONS WHERE SEDIMENT IS UNABLE TO LEAVE THE PROJECT SITE (SUCH AS AREAS THAT SLOPE INWARD).
- CHECK DAMS WILL BE DEPLOYED TO SLOW FLOW VELOCITIES IN UNLINED SWALES UNTIL GRASS IS ESTABLISHED.
- THE CONTRACTOR SHALL INSPECT ALL IMMEDIATE ACCESS ROADS DAILY. THE CONTRACTOR SHALL REMOVE ANY SEDIMENT OR OTHER CONSTRUCTION ACTIVITY RELATED MATERIALS THAT ARE DEPOSITED ON THE ROADS BY VACUUMING OR SWEEPING ON A DAILY BASIS AND PRIOR TO ANY RAIN EVENT.
- ANY STORM DRAIN INLETS DOWN GRADIENT OF DISTURBED SOIL AREAS WILL BE PROTECTED.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT WILL BE CONSTRUCTED. CONSTRUCTION ACTIVITY TRAFFIC TO AND FROM THE PROJECT WILL BE LIMITED TO THESE STABILIZED CONSTRUCTION ENTRANCES/EXITS. IF THE PROJECT'S STABILIZED CONSTRUCTION ENTRANCES/EXITS DO NOT SUFFICIENTLY REMOVE SEDIMENT FROM THE TIRES OF CONSTRUCTION VEHICLES AND EQUIPMENT, AN ENTRANCE/OUTLET TIRE WASH WILL BE CONSTRUCTED. ADDITIONAL TIRE WASHES WILL BE CONSTRUCTED AS NEEDED.
- ALL STOCKPILES WILL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER, DRAINAGE COURSES, AND INLETS. ALL STOCKPILES WILL BE BERMED. ADDITIONALLY, STOCKPILES WILL BE COVERED AT ALL TIMES (TO PROTECT THEM FROM THE WIND AND THE RAIN) WHEN THEY ARE NOT ACTIVELY BEING USED. STOCKPILES THAT ARE UNSTABILIZED DURING CONSTRUCTION ACTIVITIES WILL BE SPRAYED WITH WATER AS NEEDED FOR DUST CONTROL.
- AN ABOVE GRADE OR MOBILE CONCRETE WASHOUT WILL BE CONSTRUCTED OR PLACED AT THE STAGING AREA IF CONCRETE TRUCKS OR CONCRETE EQUIPMENT WILL BE WASHED ON-SITE. THE WASHOUT WILL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER, DRAINAGE COURSES, AND INLETS. ADDITIONAL WASHOUTS WILL BE UTILIZED AS NEEDED.

EROSION CONTROL NOTES:

- THE STATE'S GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (2009-2009-DWQ) REQUIRES THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR SITES WITH SOIL DISTURBANCES GREATER THAN OR EQUAL TO ONE ACRE, OR FROM SITES SMALLER THAN ONE ACRE IF THE CONSTRUCTION ACTIVITY IS PART OF A LARGER PLAN OF DEVELOPMENT OR SALE THAT DISTURBS ONE ACRE OR MORE. CONSTRUCTION ACTIVITY SHALL NOT COMMENCE, NOR A PRE-CONSTRUCTION MEETING BE PERMITTED TO BE SCHEDULED, PRIOR TO THE SWPPP BEING ACCEPTED BY THE CITY. FOR MORE INFORMATION SEE: http://www.roseville.ca.us/eu/stormwater_management
- THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS INCORPORATED BY REFERENCE INTO THIS SET OF PLANS. THE SWPPP IS CONSIDERED A DYNAMIC DOCUMENT AND WILL CHANGE AS CONDITIONS WARRANT. PERMANENT EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED AS SHOWN ON THESE PLANS.
- A COPY OF THE SWPPP SHALL BE KEPT AT THE PROJECT SITE AT ALL TIMES.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AS SPECIFIED IN THE SWPPP.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN ACCORDANCE WITH THE SWPPP.
- THE CONTRACTOR SHALL ESTABLISH A SPECIFIC SITE WITHIN THE DEVELOPMENT FOR MAINTENANCE AND STORAGE OF EQUIPMENT OR ANY OTHER ACTIVITY THAT MAY ADVERSELY CONTRIBUTE TO THE WATER QUALITY OF THE RUNOFF IN ACCORDANCE WITH THE SWPPP.
- NO TRACKING ON PUBLIC STREET.



1 FIBER ROLL DETAIL
-- NTS

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DESIGN P WEBSTER		CITY OF ROSEVILLE ENGINEERS 2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-760-9888	
DRAWN P WEBSTER			
CHECKED C BERTSCH			
APPROVED M FISHER			
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA			CIVIL EROSION CONTROL PLAN
DATE NOVEMBER 2019			
PROJECT NUMBER 17-083			
DRAWING NUMBER WD00-C-110			
SHEET NUMBER 63			

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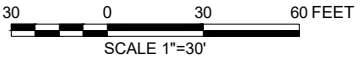
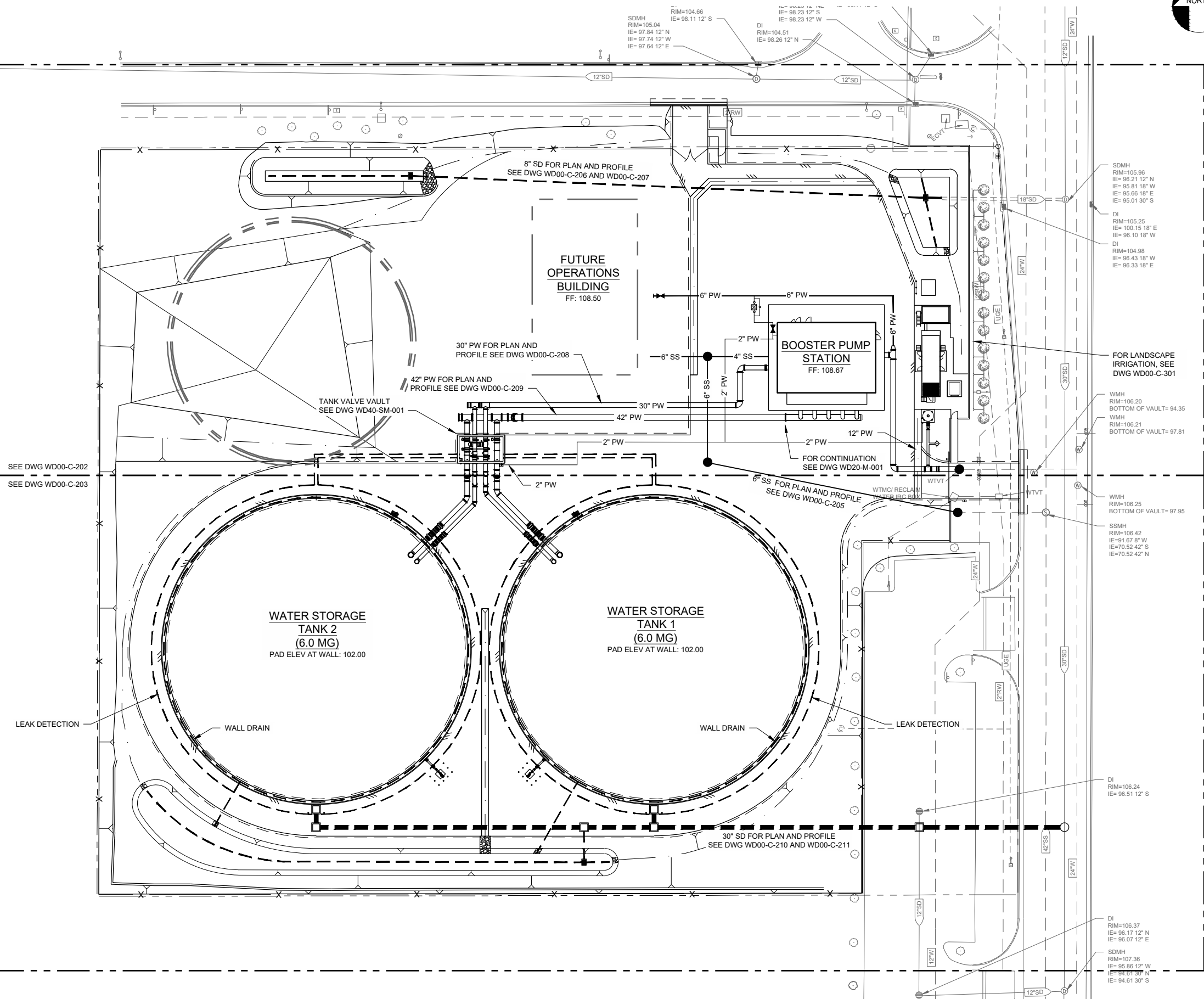
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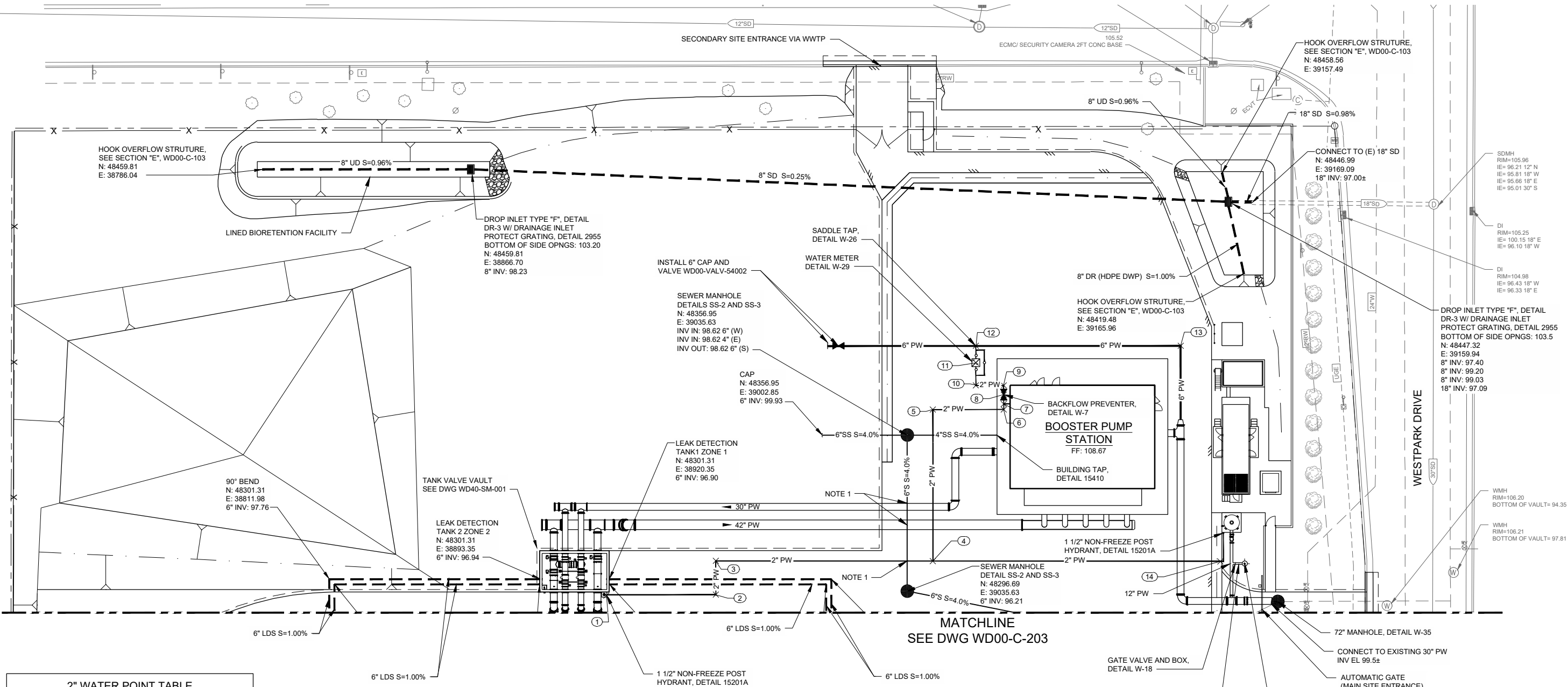


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DESIGN P WEBSTER	 CITY OF ROSEVILLE CALIFORNIA	2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-3888	CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA	YARD PIPING OVERALL PLAN	DATE NOVEMBER 2019
DRAWN P WEBSTER					PROJECT NUMBER 17-083
CHECKED C BERTSCH					DRAWING NUMBER WD00-C-201
APPROVED M FISHER					SHEET NUMBER 64

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2" WATER POINT TABLE			
POINT #	NORTHING	EASTING	DESCRIPTION
1	48294.97	38919.25	90° BEND
2	48295.31	38961.56	90° BEND
3	48308.40	38961.57	90° BEND
4	48308.32	39045.63	TEE
5	48366.95	39045.63	90° BEND
6	48366.95	39072.99	90° BEND
7	48369.13	39072.99	TEE
8	48372.72	39072.99	BACKFLOW PREVENTER
9	48376.31	39072.99	90°
10	48376.31	39062.24	90°
11	48385.06	39062.24	WATER METER
12	48391.56	39062.24	TEE
13	48391.56	39141.49	90° BEND
14	48308.23	39156.92	90° BEND



NOTES

1. WATER AND SEWER CROSSING, DETAIL W-39

20 0 20 40 FEET
SCALE 1"=20'

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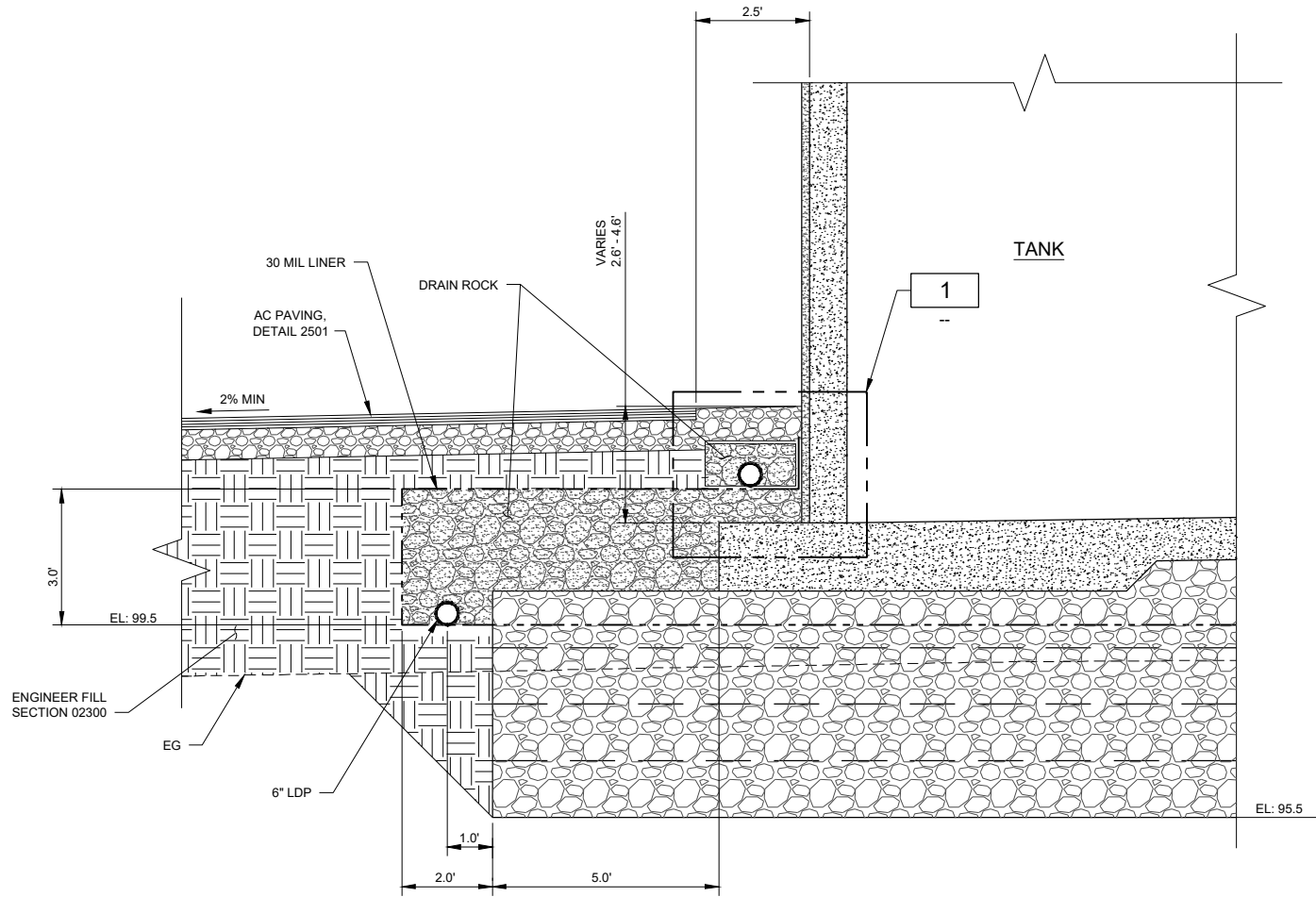
JOB NUMBER: 17-083

FILENAME: WD5400C202.DWG

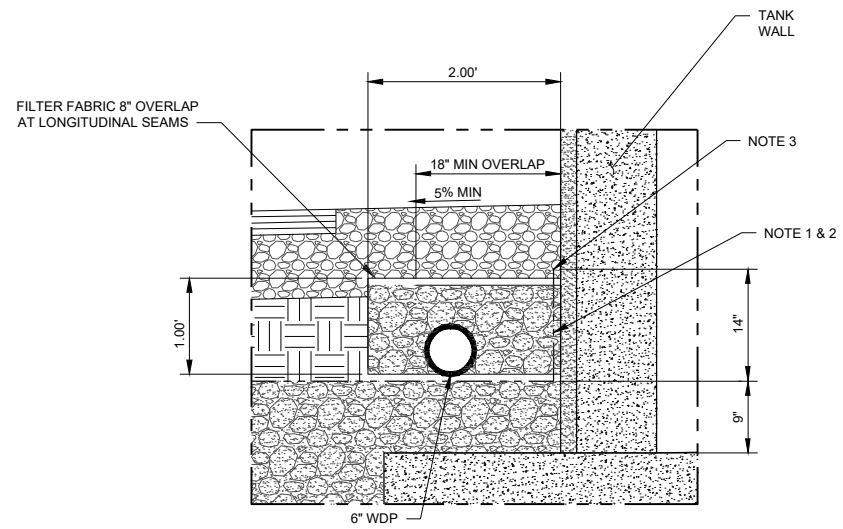
PLOT DATE: 11/7/19

PLOT TIME: 13:58:09

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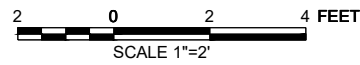
A TYP. SECTION
WD00-C-203 1"= 2'



1 DETAIL
-- NTS

NOTES:

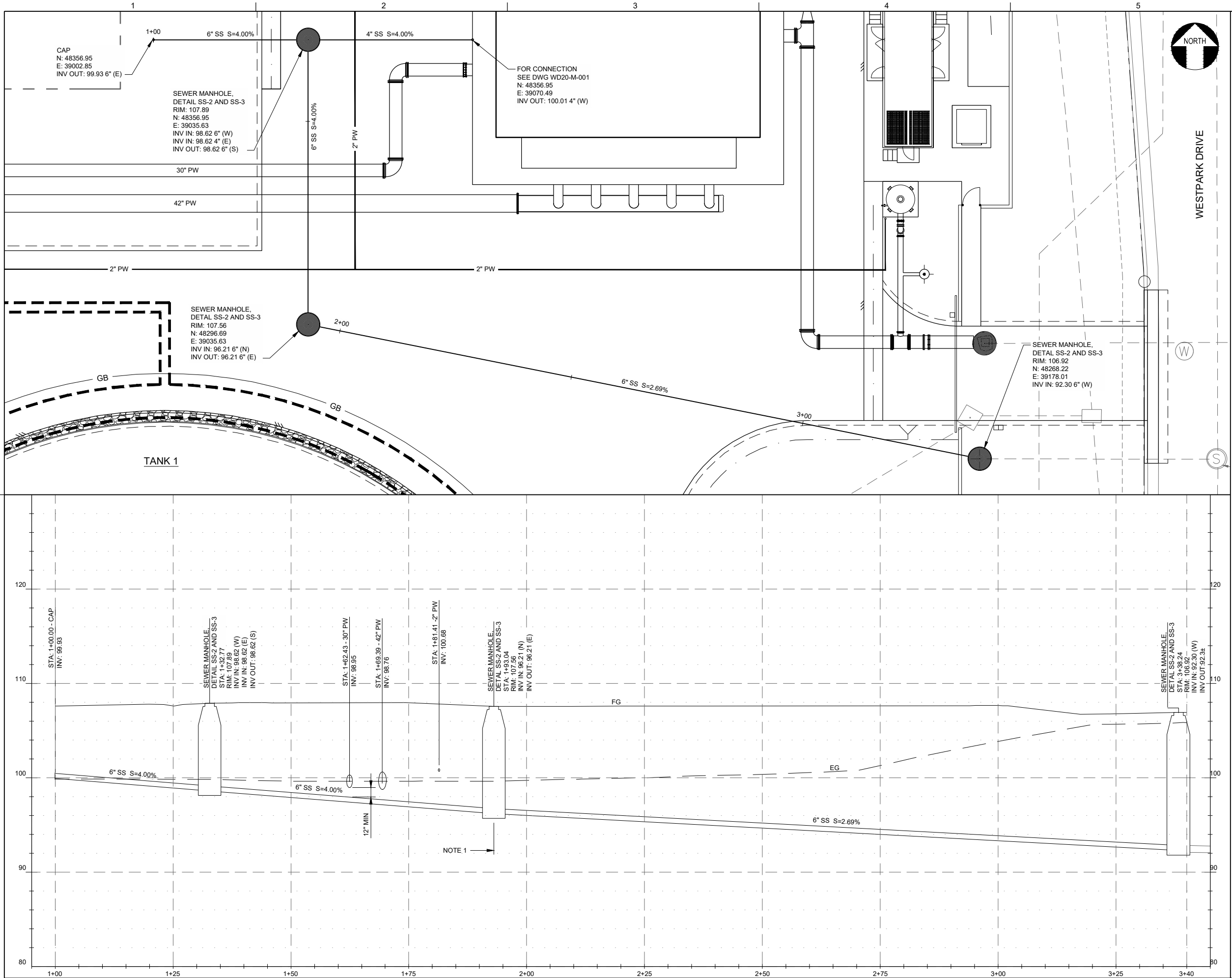
- 30 MIL LINER SHALL BE CUT/FITTED TO PROVIDE A UNIFORM LAYER OF LINER MATERIAL AGAINST TANK WALL. LINER SHALL HAVE A MAX OF 1 FOLD THICKNESS (3 LAYERS OF LINER) AT ANY POINT AROUND TANK.
- LINER SHALL BE HELD TIGHT TO TANK WALL BY TENSIONED BULL TAPE. MINIMUM OF 2 HORIZONTAL WRAPS REQUIRED @ 4" VERTICAL SPACING.
- SEAL TOP EDGE OF 30 MIL LINER TO SHOTCRETE WITH SIKAFLEX 1A.
- INSTALL 12" WIDE X 24" LONG LAYER OF GEOTEXTURE FABRIC AT ALL PIPE JOINTS. TO PROTECT 30 MIL LINER BELOW



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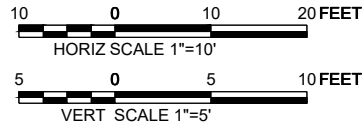
DESIGN P WEBSTER	CITY OF ROSEVILLE CALIFORNIA	WATERWORKS ENGINEERS 2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-9888	CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA	SECTIONS AND DETAILS	DATE
					PROJECT NUMBER
					DRAWING NUMBER
					SHEET NUMBER
					NOVEMBER 2019
					17-083
					WD00-C-204
					67

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NOTES:

- SANITARY SEWER (SS) PIPE MATERIAL FROM STA 1+00.00 TO STA 1+93.04 TO BE DUCTILE IRON PIPE (DIP).



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DESIGN P WEBSTER	 CITY OF ROSEVILLE CALIFORNIA	WATERWORKS ENGINEERS 2290 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-9888	CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA	SEWER PLAN AND PROFILE	YARD PIPING	DATE NOVEMBER 2019 PROJECT NUMBER 17-083 DRAWING NUMBER WD00-C-205 SHEET NUMBER 68
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CHECKED C BERTSCH						
APPROVED M FISHER						

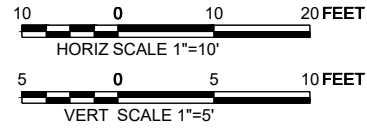
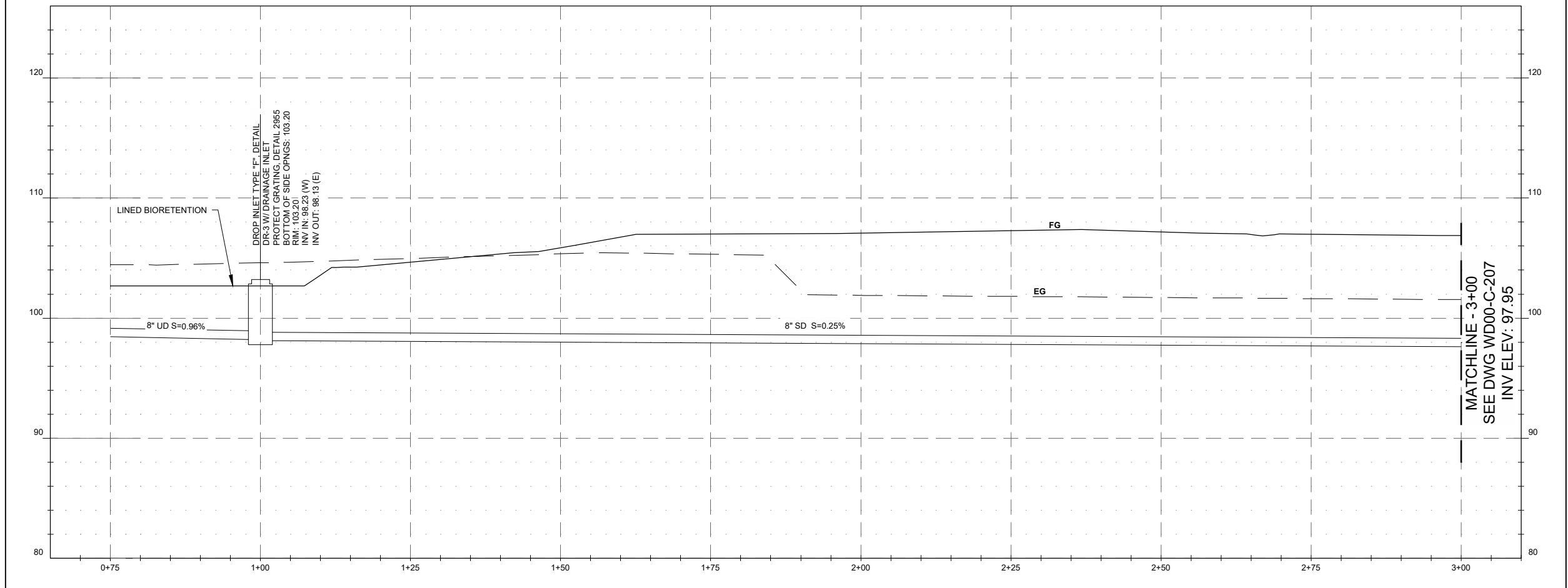
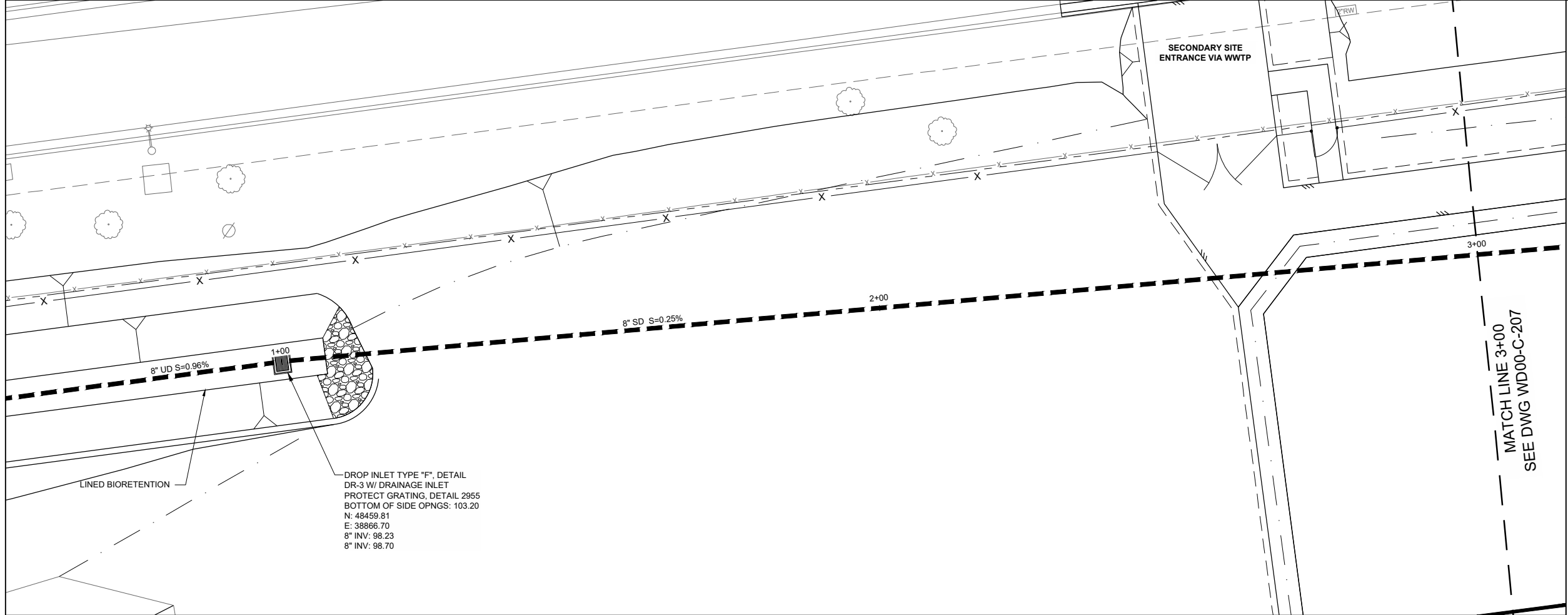
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FILENAME: WD5400C205.DWG

PLOT DATE: 11/7/19

PLOT TIME: 13:59:05

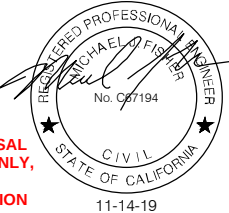
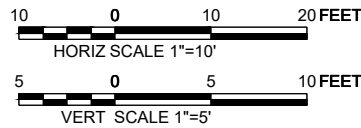
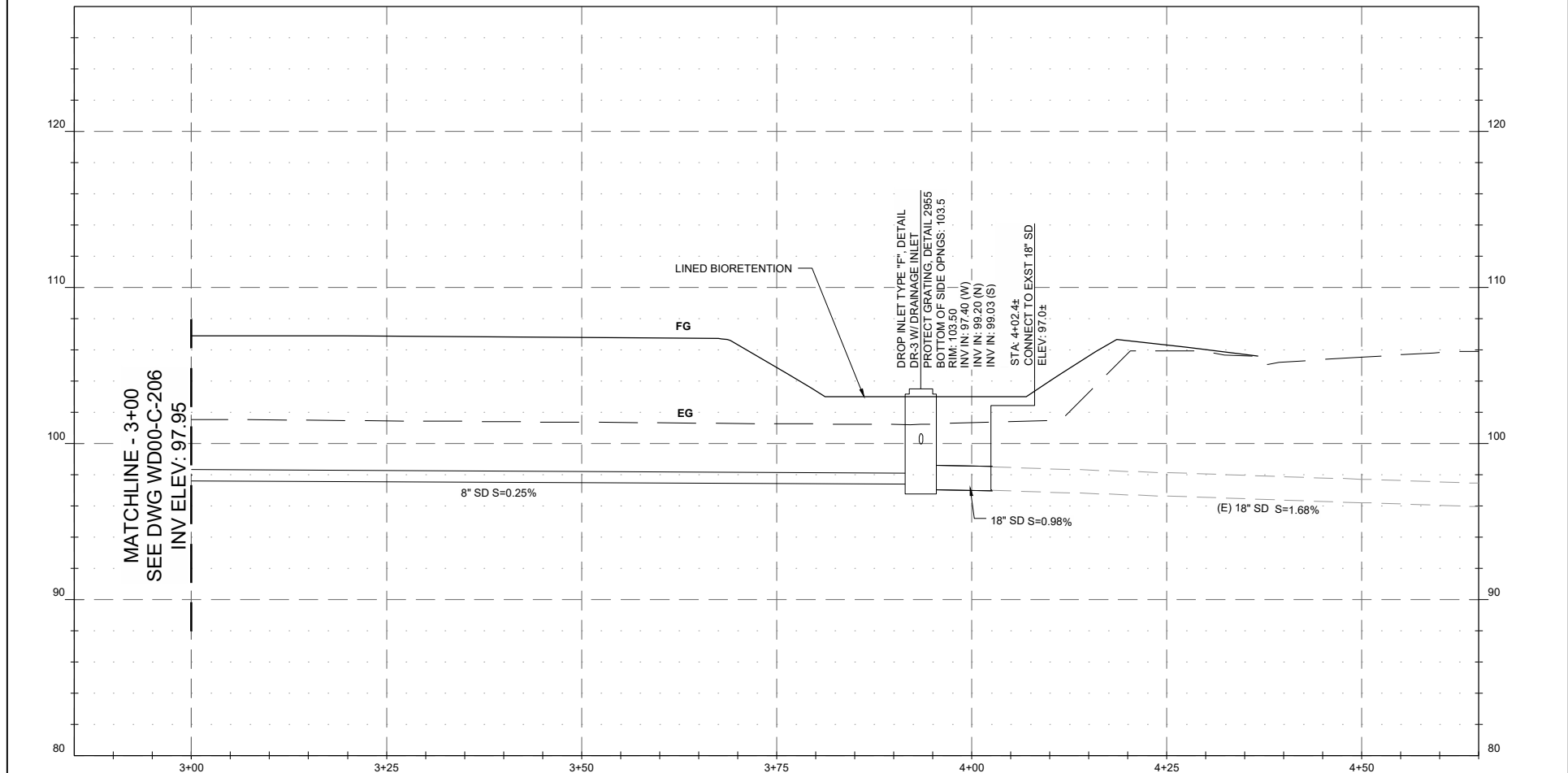
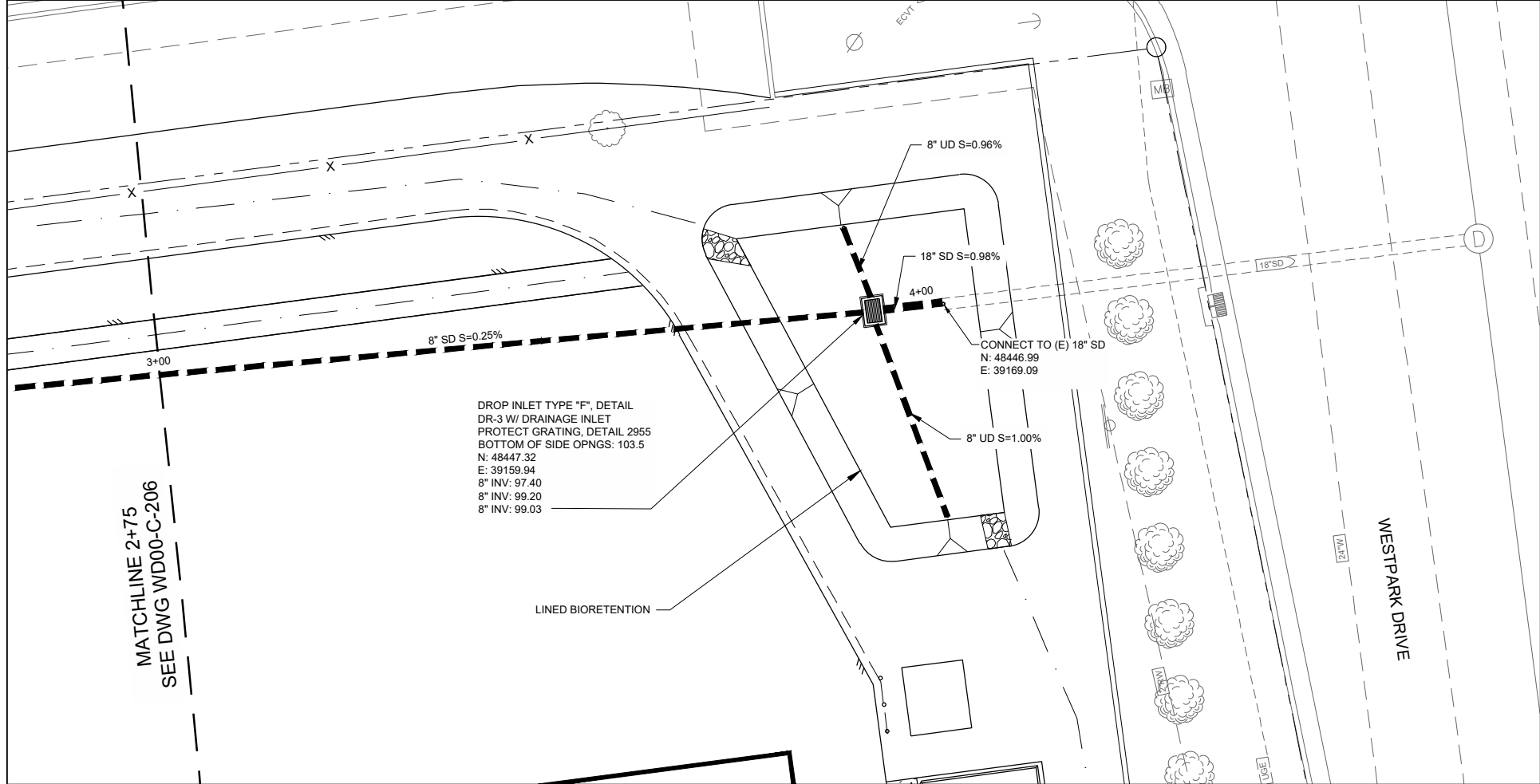
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DESIGN P WEBSTER				WATERWORKS ENGINEERS 2260 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-9888
DRAWN P WEBSTER				
CHECKED C BERTSCH				
APPROVED M FISHER				
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA				
YARD PIPING STORM DRAIN PLAN AND PROFILE NORTH - BEG TO 2+75				
DATE NOVEMBER 2019				
PROJECT NUMBER 17-083				
DRAWING NUMBER WD00-C-206				
SHEET NUMBER 69				

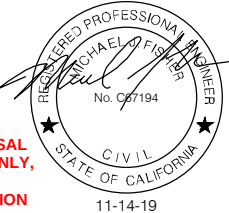
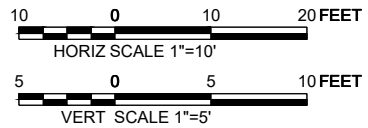
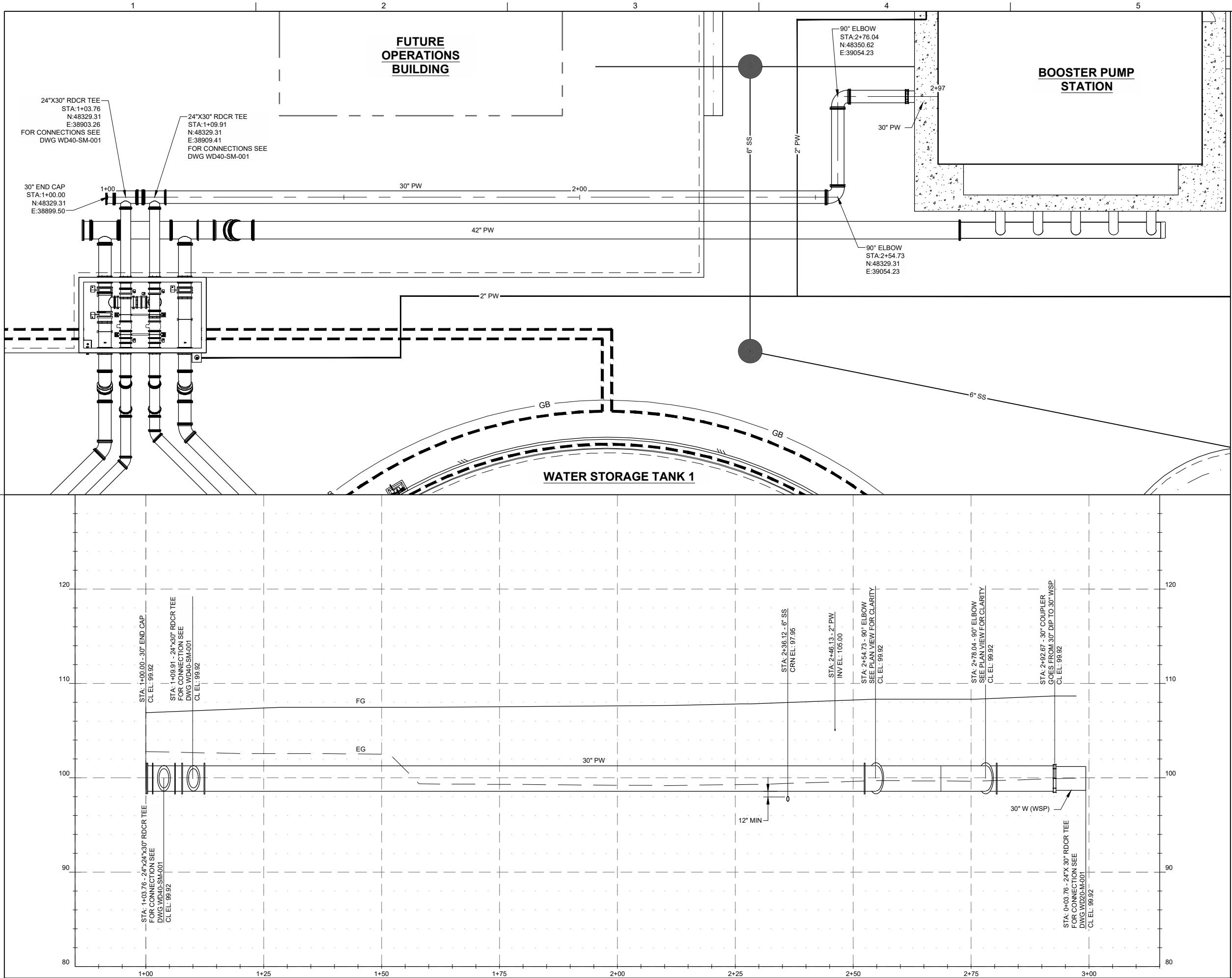
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DESIGN P WEBSTER	 CITY OF ROSEVILLE CALIFORNIA	YARD PIPING	STORM DRAIN PLAN AND PROFILE NORTH - 2+75 TO END	DATE NOVEMBER 2019
DRAWN P WEBSTER				PROJECT NUMBER 17-083
CHECKED C BERTSCH				DRAWING NUMBER WD00-C-207
APPROVED M FISHER				SHEET NUMBER 70

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JOB NUMBER: 17-083

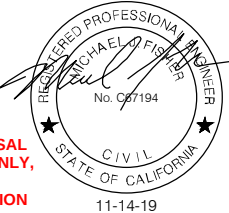
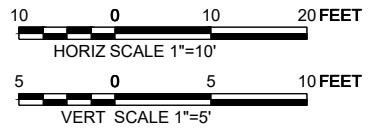
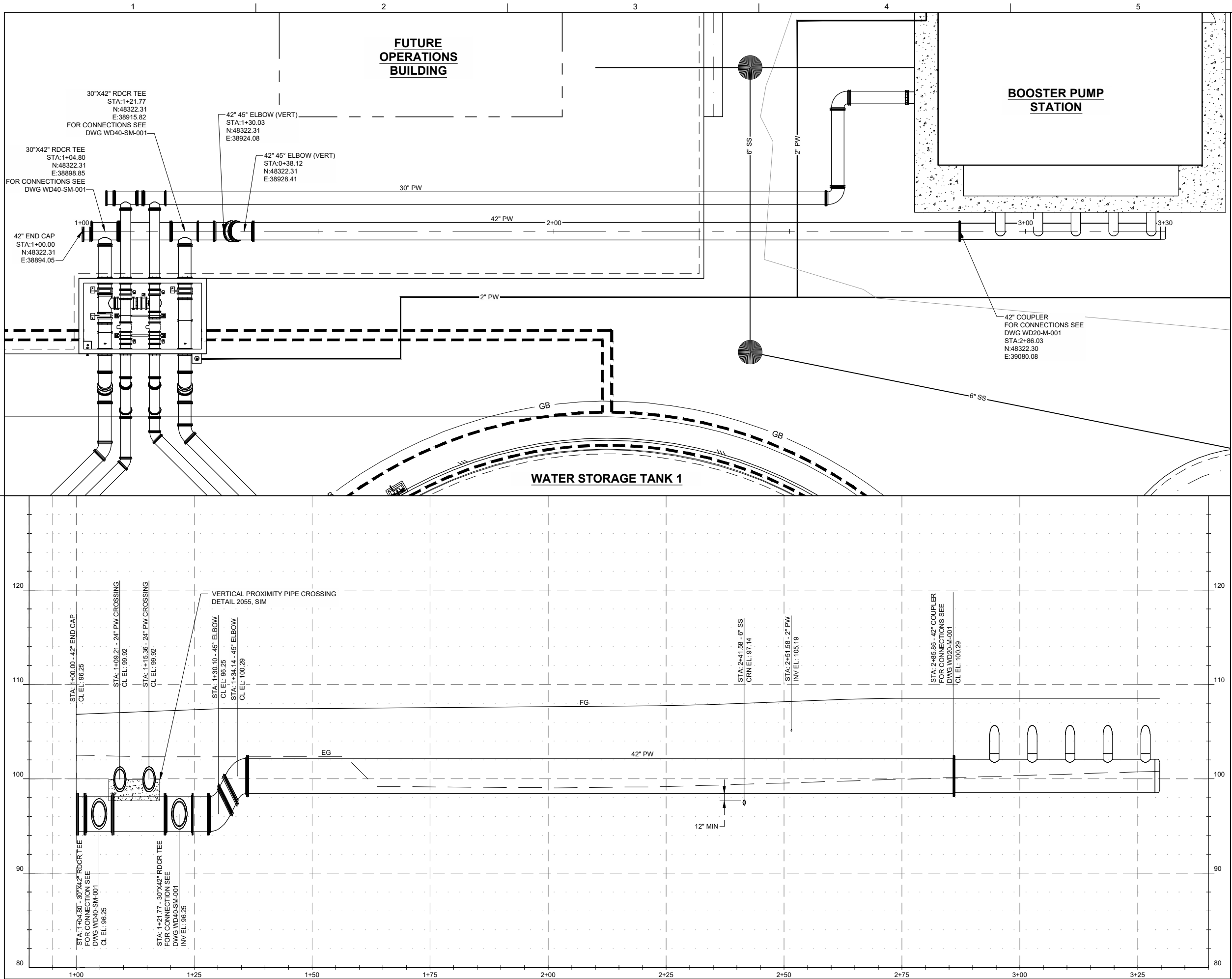
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PLOT DATE: 11/7/19

PLOT TIME: 14:00:09

DESIGN P WEBSTER	 ROSEVILLE CALIFORNIA	WATERWORKS ENGINEERS 2260 Douglas Blvd. Suite 105 • Roseville, CA 95661 • 916-790-3883
DRAWN P WEBSTER		
CHECKED C BERTSCH		
APPROVED M FISHER		
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2)		YARD PIPING
ROSEVILLE, CALIFORNIA		
30 INCH PW PLAN AND PROFILE		
DATE NOVEMBER 2019		
PROJECT NUMBER 17-083		SHEET NUMBER 71
DRAWING NUMBER WD00-C-208		
11-14-19		

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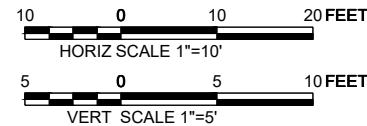
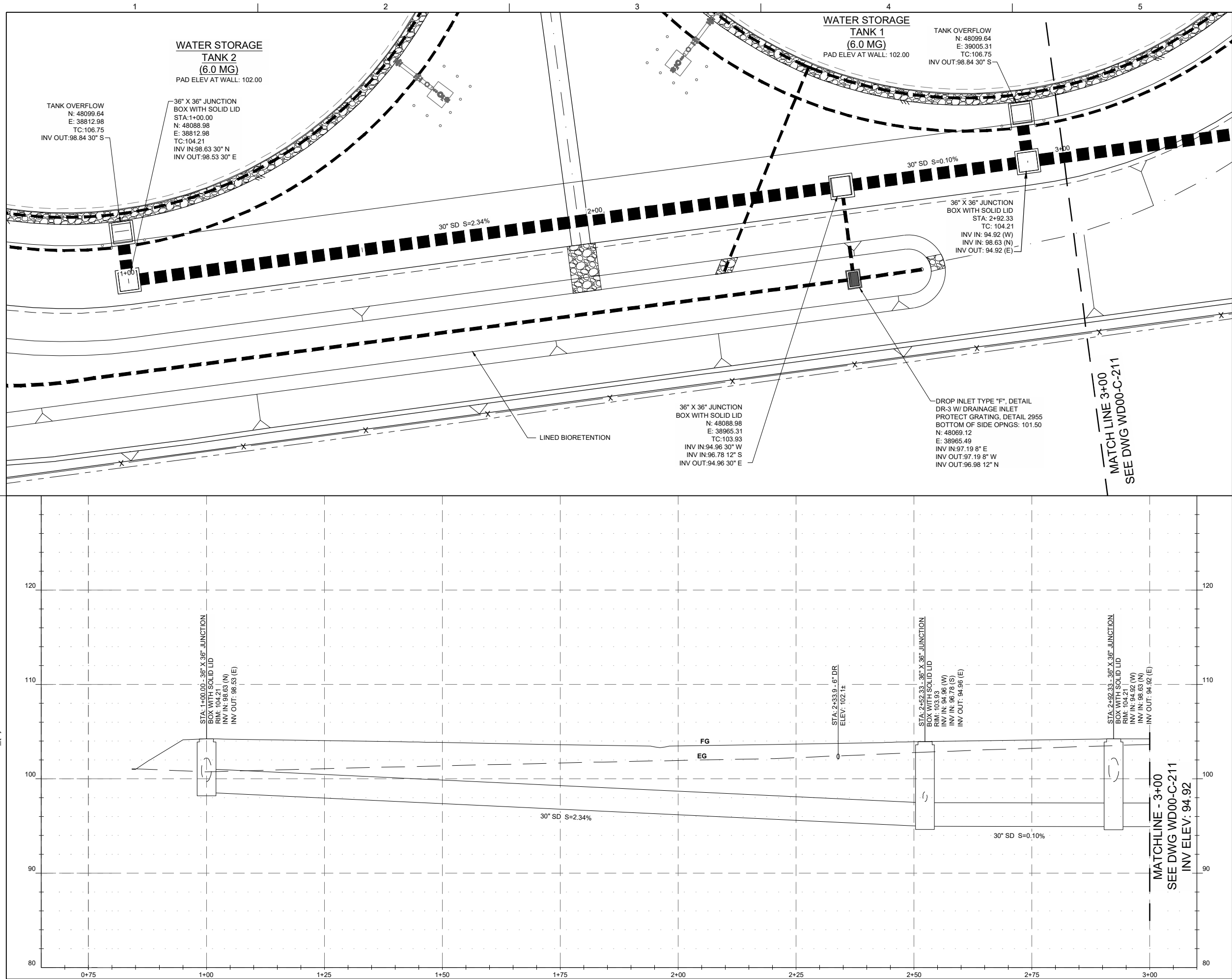
**BOOSTER PUMP
STATION**

**FUTURE
OPERATIONS
BUILDING**

WATER STORAGE TANK 1

DESIGN P WEBSTER		 CITY OF ROSEVILLE CALIFORNIA
DRAWN P WEBSTER		
CHECKED C BERTSCH		
APPROVED M FISHER		
 WATERWORKS ENGINEERS 2290 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-790-9888		
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA		
YARD PIPING 42 INCH PW PLAN AND PROFILE		
DATE NOVEMBER 2019		
PROJECT NUMBER 17-083		
DRAWING NUMBER WD00-C-209		
SHEET NUMBER 72		

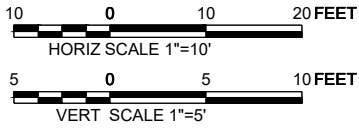
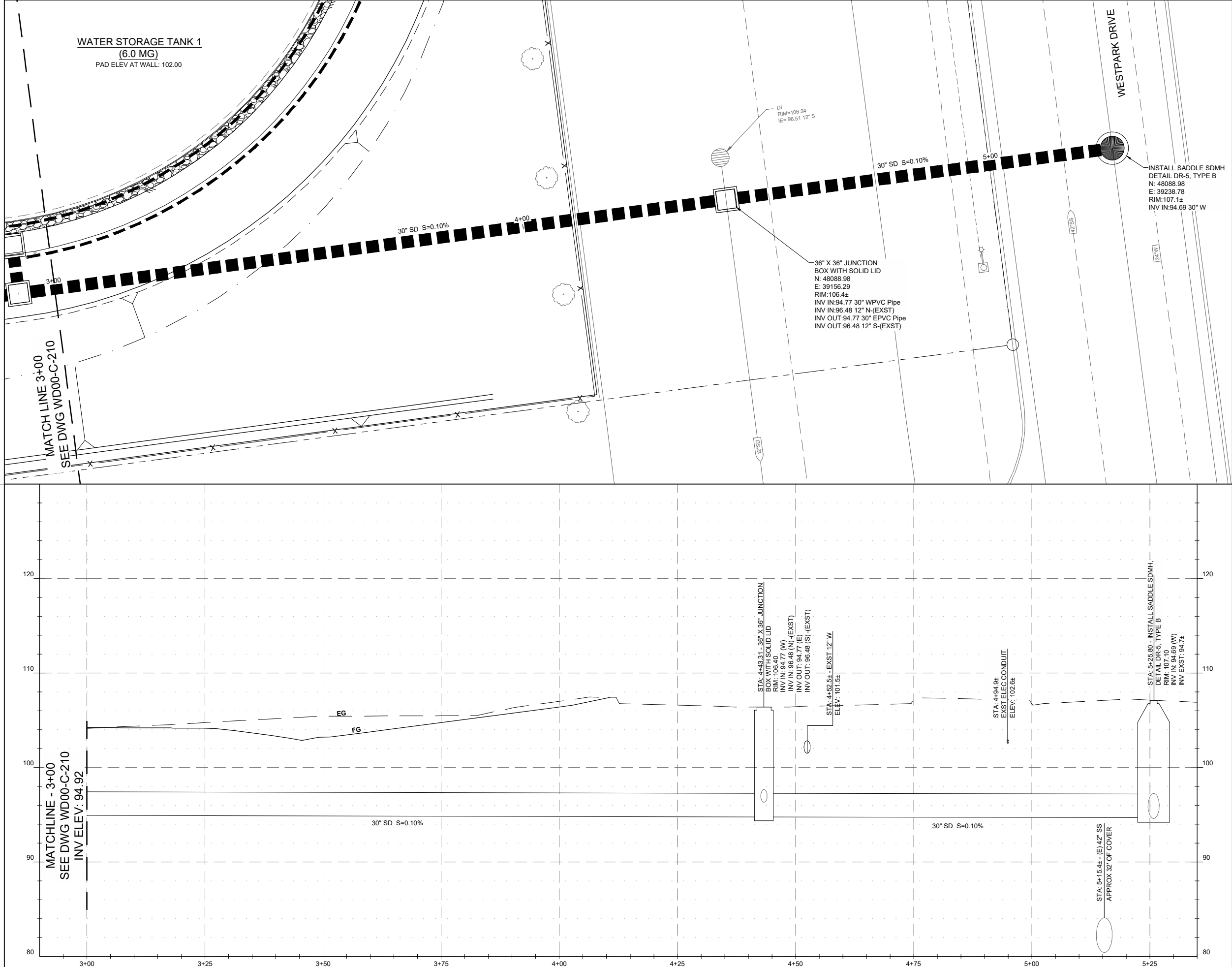
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DESIGN P WEBSTER	CITY OF ROSEVILLE ENGINEERS 2280 Douglas Blvd., Suite 105 • Roseville, CA 95661 • 916-780-3888	CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA	YARD PIPING STORM DRAIN PLAN AND PROFILE SOUTH - BEG TO 3+00	DATE NOVEMBER 2019 PROJECT NUMBER 17-083 DRAWING NUMBER WD00-C-210 SHEET NUMBER 73
DRAWN P WEBSTER				
CHECKED C BERTSCH				
APPROVED M FISHER				

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JOB NUMBER: 17-083

FILENAME: WD5400C211.DWG

PLOT DATE: 11/7/19

PLOT TIME: 14:01:27

DESIGN P WEBSTER		 CITY OF ROSEVILLE CALIFORNIA
DRAWN P WEBSTER		
CHECKED C BERTSCH		
APPROVED M FISHER		
 WATERWORKS ENGINEERS 2260 Douglas Blvd. Suite 105 • Roseville, CA 95661 • 916-780-9888		
CITY OF ROSEVILLE WEST SIDE TANK AND PUMP STATION PROJECT (PHASE 2) ROSEVILLE, CALIFORNIA		
YARD PIPING STORM DRAIN PLAN AND PROFILE SOUTH - 3+00 TO END		
DATE NOVEMBER 2019		
PROJECT NUMBER 17-083		
DRAWING NUMBER WD00-C-211		
SHEET NUMBER 74		

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CITY OF ROSEVILLE RECYCLED WATER SPECIAL ON SITE IRRIGATION NOTES:

- THE INSTALLATION OF THE RECYCLED WATER SYSTEM SHALL CONFORM TO THE REGULATIONS FOR THE CONSTRUCTION OF RECYCLED WATER SYSTEMS WITHIN THE CITY OF ROSEVILLE AND THE ACCOMPANYING PLANS AND SPECIFICATIONS.
- ALL ON-SITE RECYCLED AND POTABLE WATER PIPING INSTALLED ON THIS PROJECT SHALL BE IDENTIFIED IN ACCORDANCE WITH THE CITY OF ROSEVILLE CONSTRUCTION STANDARDS FOR RECYCLED WATER INFRASTRUCTURE AND THE IRRIGATION SPECIFICATIONS.
- CITY OF ROSEVILLE ENVIRONMENTAL UTILITIES DEPARTMENT SHALL BE NOTIFIED TWO DAYS PRIOR TO THE START OF CONSTRUCTION AT (916) 774-5750 AND EACH WORKDAY THEREAFTER UNTIL COMPLETION OF PROJECT FOR COMMERCIAL IRRIGATION SYSTEMS. CITY OF ROSEVILLE PARKS DEPARTMENT SHALL BE NOTIFIED TWO DAYS PRIOR TO THE START OF CONSTRUCTION AT (916) 746-1758 FOR LANDSCAPE CORRIDORS AND PARKS. A PRE-CONSTRUCTION MATERIALS INSPECTION MUST BE ARRANGED PRIOR TO THE START OF CONSTRUCTION.
- NO FACILITY IS TO BE BACKFILLED UNTIL INSPECTED BY THE CITY OF ROSEVILLE ENVIRONMENTAL UTILITIES DEPARTMENT AND/OR PARKS DEPARTMENT INSPECTOR.
- ALL RECYCLED WATER INFRASTRUCTURE, BOTH ON-SITE AND OFF-SITE SHALL BE INSPECTED BY CITY OF ROSEVILLE ENVIRONMENTAL UTILITIES AND/OR PARKS DEPARTMENT. FOR INSPECTION OF RECYCLED WATER SYSTEM CONTACT ENVIRONMENTAL UTILITIES AT 774-5750 FORTY- EIGHT (48) HOURS IN ADVANCE. POINTS OF INSPECTION ARE:
 - PRE-CONSTRUCTION MATERIALS INSPECTION.
 - IRRIGATION SYSTEM INSTALLATION BEFORE LINES ARE COVERED.
 - PRESSURE TESTING.
 - SYSTEM CROSS CONNECTION CONTROL TEST.
 - SYSTEM COVERAGE TEST.
- ALL RECYCLED WATER PIPING SHALL BE PURPLE COLORED PVC UNLESS OTHERWISE SPECIFIED. WHERE PURPLE PVC IS NOT USED, PIPE SHALL BE IDENTIFIED (MARKED) IN ACCORDANCE WITH THE CITY OF ROSEVILLE CONSTRUCTION STANDARDS.
- MARKING ON THE PURPLE COLORED PVC PIPE SHALL INCLUDE THE FOLLOWING:

"CAUTION: RECYCLED WATER- DO NOT DRINK". NOMINAL PIPE SIZE. PVC-1120. PRESSURE RATING IN POUNDS PER SQUARE INCH AT 73 DEGREES. ASTM DESIGNATIONS SUCH AS 1785, 2241, 1672, 3139. PRINTING SHALL BE PLACED CONTINUOUSLY ON TWO SIDES OF THE PIPE.
- ALL RECYCLED WATER SPRINKLER CONTROL VALVES, VALVE RISERS, SPRINKLER RISERS, AND SWING JOINTS SHALL BE TAGGED WITH IDENTIFICATION TAGS OR ADHESIVE LABELS AS FOLLOWS:
 - TAGS SHALL BE WEATHERPROOF PLASTIC, 3" X 4", PURPLE COLOR WITH THE WORDS "WARNING: RECYCLED WATER- DO NOT DRINK" IMPRINTED ON ONE SIDE, AND "AVISA: AGUA IMPURA- NO TOMAR" ON THE OTHER SIDE. IMPRINTING SHALL BE PERMANENT AND BLACK IN COLOR. USE TAGS AS MANUFACTURED BY T. CHRISTY ENTERPRISES OR APPROVED EQUAL.
 - ONE TAG SHALL BE ATTACHED TO EACH VALVE AS FOLLOWS:
 - ATTACH TO VALVE STEM DIRECTLY OR WITH PLASTIC TIE-WRAP, OR
 - ATTACH TO SOLENOID WIRE DIRECTLY OR WITH PLASTIC TIE-WRAP.
 - RECYCLED WATER WARNING LABELS OR STICKERS THAT ARE CONSISTENT WITH CITY OF ROSEVILLE CONSTRUCTION STANDARDS FOR RECYCLED WATER INFRASTRUCTURE AND THE IRRIGATION SPECIFICATIONS MUST BE ATTACHED TO ALL PIPING NOT IN COMPLIANCE.
 - ALL SPRINKLER HEADS MUST BE DESIGNED FOR RECYCLED WATER USAGE, WITH PURPLE RECYCLED WATER WARNING CAPS.
 - SPRINKLER RISERS AND SWING JOINTS SHALL BE IDENTIFIED WITH PURPLE ADHESIVE 3" X 3" LABELS. EACH LABEL SHALL STATE "RECYCLED WATER - DO NOT DRINK" IN ENGLISH AND SPANISH.
- ALL RECYCLED WATER CONTROL VALVE BOXES SHALL BE PURPLE AND HAVE A WARNING LABEL PERMANENTLY MOLDED INTO OR AFFIXED ONTO THE LID WITH RIVETS, BOLTS, ETC. WARNING LABELS SHALL BE CONSTRUCTED OF A PURPLE WEATHERPROOF MATERIAL WITH THE WARNING PERMANENTLY STAMPED OR MOLDED INTO THE LABEL. THE WARNING SHALL CONTAIN THE FOLLOWING INFORMATION:
 - "NON-POTABLE" OR "RECYCLED WATER".
 - "DO NOT DRINK" IN ENGLISH AND SPANISH.
- RECYCLED WATER QUICK COUPLING VALVES SHALL HAVE A PURPLE RUBBER OR VINYL COVER. THE COVER SHALL BE OF A LOCKING TYPE AND HAVE A WARNING PERMANENTLY STAMPED OR MOLDED AS FOLLOWS: "RECYCLED WATER- DO NOT DRINK" IN ENGLISH AND SPANISH.
- PLASTIC WARNING TAPE SHALL BE USED ON ALL POTABLE WATER PIPING, POTABLE WATER WARNING TAPE SHALL BE A MINIMUM OF 3 INCHES WIDE AND SHALL RUN CONTINUOUSLY FOR THE ENTIRE LENGTH OF EACH LINE. THE TAPE SHALL BE ATTACHED TO THE TOP OF THE PIPE WITH NYLON TIE-WRAP BANDED AROUND THE WARNING TAPE AND THE PIPE EVERY FIVE FEET ON CENTER. WARNING TAPE FOR THE POTABLE WATER PIPING SHALL BE BLUE IN COLOR WITH WORDS "CAUTION: POTABLE WATER LINE BURIED BELOW" IMPRINTED IN MINIMUM 1-INCH HIGH LETTERS, BLACK IN COLOR. IMPRINTING SHALL BE CONTINUOUS AND PERMANENT.
- ALL PRESSURE MAIN LINE PIPING FROM THE RECYCLED WATER SYSTEM SHALL BE INSTALLED TO MAINTAIN 10 FEET MINIMUM HORIZONTAL SEPARATION FROM ALL POTABLE WATER PIPING. WHERE RECYCLED AND POTABLE WATER PRESSURE MAIN LINE PIPING CROSS, THE RECYCLED WATER PIPING SHALL BE INSTALLED 12" BELOW THE POTABLE WATER PIPING OD TO OD. WHERE THE RECYCLED WATER PRESSURE MAIN LINE MUST PASS ABOVE POTABLE WATER PIPING, THE RECYCLED WATER PIPING SHALL INSTALLED IN A CLASS 200 PURPLE COLORED PVC SLEEVE WHICH EXTENDS A MINIMUM OF FIVE FEET ON EITHER SIDE OF THE POTABLE WATER PIPING. A 12" VERTICAL SEPARATION OD TO OD MUST BE MAINTAINED. CONVENTIONAL (WHITE) PVC PIPE MAY BE USED FOR SLEEVING MATERIAL IF IT IS TAPED WITH THREE-INCH WIDE PURPLE WARNING TAPE, WHICH READS "RECYCLED WATER- DO NOT DRINK".
- ALL PRESSURE MAIN LINE PIPING FROM THE RECYCLED WATER SYSTEM SHALL BE INSTALLED TO MAINTAIN A TEN FOOT MINIMUM HORIZONTAL SEPARATION FROM ALL SANITARY SEWER LINES. WHERE RECYCLED AND SEWER CROSS, THE RECYCLED WATER PIPING SHALL BE INSTALLED A MINIMUM OF ONE FOOT ABOVE SEWER.
- FOR ON-SITE RECLAIMED WATER PIPING, THE MINIMUM DEPTH FROM FINISH GRADE TO TOP OF PIPE SHALL BE AS FOLLOWS:
 - INTERMITTENT PRESSURE LINES (ALL SIZES) - 12"
 - CONSTANT PRESSURE LINES 2.5" AND SMALLER - 18"
 - CONSTANT PRESSURE LINES 3" AND LARGER - 24"

CONT:

- PRESSURE AND CROSS CONNECTION TESTING FOR ON-SITE RECYCLED WATER SYSTEMS:
 - ALL TESTING OF RECYCLED WATER SYSTEMS MUST BE PERFORMED UTILIZING A POTABLE WATER SOURCE VIA A CONSTRUCTION WATER CONNECTION PER CITY OF ROSEVILLE CONSTRUCTION STANDARDS. NO RECYCLED WATER MAY ENTER A RECYCLED WATER SYSTEM UNTIL ALL TESTING IS SUCCESSFULLY COMPLETED.
 - THE SOURCE OF POTABLE WATER USED FOR TESTING MUST HAVE A METER AND AN APPROVED BACK FLOW PREVENTION DEVICE. THESE CAN BE OBTAINED THROUGH THE CITY OF ROSEVILLE.
 - THE CONTRACTOR SHALL PROVIDE A MEANS TO PLUMB IN PRESSURE AND CROSS CONNECTION TESTING APPARATUS AT THE POINT OF HIGHEST ELEVATION, FOR BOTH POTABLE AND CONSTANT PRESSURE RECYCLED WATER SYSTEMS.
 - THE CONSTANT PRESSURE RECYCLED WATER SYSTEM INCLUDING ALL APPURTENANCES SHALL BE TESTED AT 125 PSI AT HIGHEST POINT OF ELEVATION FOR 1 HOUR WITH NO DETECTABLE LEAKAGE.
 - PRESSURE TESTING MUST BE SUCCESSFULLY COMPLETED PRIOR TO CROSS CONNECTION TESTING.
 - THE RECYCLED WATER SYSTEM SHALL BE TESTED FOR CROSS-CONNECTION IN ACCORDANCE WITH UNIFORM PLUMBING CODE APPENDIX J PRIOR TO USE.
 - FOR PROJECTS BEING PERFORMED IN PHASES, A CROSS CONNECTION TEST SHALL BE PERFORMED ON EACH PHASE INDEPENDENTLY, BEFORE IT IS PUT INTO SERVICE. THE POTABLE WATER SOURCE USED FOR TESTING EACH PHASE MUST BE INDEPENDENT OF OTHER PREVIOUSLY COMPLETED PHASES.
 - AT THE TIME A CROSS CONNECTION TEST IS TO BE PERFORMED, CONSTRUCTION ON BOTH THE POTABLE AND THE RECYCLED WATER SYSTEMS BEING TESTED MUST BE COMPLETE, AND BOTH SYSTEMS FULLY OPERATIONAL AND FUNCTIONING AS DESIGNED.
 - CROSS CONNECTION TESTING SHALL BE PERFORMED ON THE SYSTEM BY CITY FORCES WITH THE ASSISTANCE OF THE CONTRACTOR. THE TEST WILL BE COORDINATED THROUGH THE ENVIRONMENTAL UTILITIES OR PARKS DEPARTMENT INSPECTOR. FORTY-EIGHT (48) HOURS NOTICE IS REQUIRED BEFORE THE TEST. DEPENDING ON THE COMPLEXITY OF THE SITE, A PRELIMINARY FIELD MEET MAY ALSO BE REQUIRED.
- COVERAGE TEST:
 - ADJUST SPRAY HEADS TO ELIMINATE OVERSPRAY ONTO NATIVE OAK AREAS AND INTO AREAS NOT UNDER THE CONTROL OF THE CUSTOMER. FOR EXAMPLE: POOL DECKS, PRIVATE PATIOS, STREETS AND SIDEWALKS.
- METER INSTALLATION:
 - ONCE THE ON-SITE RECYCLED WATER SYSTEM HAS BEEN PROPERLY INSPECTED AND PASSED PRESSURE AND CROSS CONNECTION TESTING, A METER MAY BE INSTALLED. THE METER MUST BE PURCHASED FROM THE CITY OF ROSEVILLE AND INSTALLED BY CITY FORCES. COORDINATE METER PURCHASE AND INSTALLATION WITH THE ENVIRONMENTAL UTILITIES OR PARKS DEPARTMENT INSPECTOR.
- NO CONNECTION SHALL BE MADE TO THE CITY'S EXISTING RECYCLED WATER SYSTEM UNTIL THE NEW FACILITIES HAVE BEEN SUCCESSFULLY PRESSURE AND CROSS CONNECTION TESTED. TAPS TO THE EXISTING RECYCLED SYSTEM WILL BE MADE BY CITY FORCES ONLY.
- FAILURE TO COMPLY WITH ANY OR ALL OF THE ABOVE GUIDELINES VIOLATES THE CITY OF ROSEVILLE DESIGN AND CONSTRUCTION STANDARDS FOR RECYCLED WATER INFRASTRUCTURE AND WILL RESULT IN TERMINATION OF SERVICE UNTIL THE APPROPRIATE CORRECTIVE STEPS HAVE BEEN TAKEN.

GENERAL LANDSCAPE REQUIREMENTS/NOTES

- NO PLANTING SHALL BE STARTED UNTIL SPRINKLER IRRIGATION SYSTEM HAS BEEN TESTED BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE AND NOTED DEFICIENCIES CORRECTED.
- NO PLANTING SHALL BE STARTED UNTIL SOIL PREPARATION AND FINISH GRADING OPERATIONS HAVE BEEN COMPLETED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
- PLANT MATERIAL IS SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE

ENVIRONMENTAL REQUIREMENTS:

GENERAL: PROCEED WITH WORK IN ORDERLY AND TIMELY MANNER TO COMPLETE INSTALLATION OF LANDSCAPING WITHIN CONTRACT LIMITS.

PROTECTION:

LANDSCAPING: PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED AT NO ADDITIONAL COST TO CONTRACT.

ADVERSE CONDITIONS: WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY OWNER'S REPRESENTATIVE BEFORE STARTING WORK.

PLANTING INSTALLATION SEASONS AND CONDITIONS PLANTING

NO WORK SHALL BE DONE WHEN GROUND IS FROZEN, TOO WET OR IN AN OTHERWISE UNSUITABLE CONDITION FOR AMENDING SOIL, FINISH GRADING OR PLANTING.

SOIL TESTING:

- COORDINATE SOIL TESTING IN AN EXPEDITIOUS AND TIMELY MANNER AS REQUIRED FOR ON-SITE MATERIALS. RESPONSIBILITY OF CONTRACTING WITH A SOIL LABORATORY SHALL BE BORNE BY CONTRACTOR. COST OF SAMPLING AND TESTING SHALL BE INCLUDED IN CONTRACT PRICE. SIX (6) SAMPLES ARE REQUIRED. CONTRACTOR TO COLLECT SAMPLES IN THE PRESENCE OF OWNER'S REPRESENTATIVE. SAMPLES LOCATIONS TO BE IDENTIFIED ON PLAN.
- EACH SAMPLE SHALL BE SUBMITTED TO A LABORATORY. THE LABORATORY MUST BE APPROVED BY THE OWNER. SUBMIT SAMPLE SIZES AS REQUIRED BY LABORATORY.
- AS A MINIMUM, SOIL SAMPLES SHALL BE ANALYZED FOR: PH, SALINITY, AMMONIA, PHOSPHATE, POTASSIUM, CALCIUM, MAGNESIUM, BORON, AND SODIUM LEVELS. LABORATORY TO PROVIDE APPRAISAL OF CHEMICAL OF PROPERTIES, INCLUDING PARTICLE SIZE AND RECOMMENDATIONS FOR TYPES AND QUANTITIES OF AMENDMENTS AND FERTILIZERS.

SPRINKLER IRRIGATION NOTES:

- SPRINKLER SYSTEM SHALL COMPLY WITH CITY OF ROSEVILLE PARKS AND RECREATION DEPT REQUIREMENTS.
- DETERMINE LOCATION OF UNDERGROUND UTILITIES. DAMAGE CAUSED BY INSTALLATION OF THIS WORK SHALL BE REPAIRED TO SATISFACTION OF GOVERNING AGENCY OR OWNER AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL LOCAL CODES AND ORDINANCES SHALL BE COMPLIED WITH. IF THERE IS A CONFLICT, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
- TESTING:
 - PRESSURE TEST ALL UNDERGROUND PIPING AS FOLLOWS: SYSTEMS WITH OUT BOOSTER PUMP: MAIN LINE - AT STATIC PSI FOR 4 HOURS. LATERAL LINES - AT STATIC PSI FOR 2 HOURS.
 - COVERAGE TEST: NOTE: PRIOR TO REQUESTING COVERAGE TEST, INSURE ALL HEADS ARE SET PLUMB, NOZZLES ARE ADJUSTED PROPERLY AND SYSTEM HAS BEEN CHECKED FOR AUTOMATION. REQUEST OWNER'S REPRESENTATIVES PRESENCE ON-SITE WHEN SPRINKLER SYSTEM IS COMPLETELY INSTALLED AND FULLY AUTOMATIC. PROVIDE ADEQUATE PERSONNEL AT THIS MEETING TO ADJUST AND FINE TUNE SYSTEM TO SATISFACTION OF OWNER'S REPRESENTATIVE.
- LAYOUT ALL WORK PRIOR TO TRENCHING OPERATIONS TO DETERMINE IF MINOR MODIFICATIONS OR ADJUSTMENTS WILL BE REQUIRED.
- COORDINATE ALL WORK WITH OTHER TRADES SO PROGRESS OF WORK IS NOT INTERRUPTED AND CAN BE COMPLETED IN A TIMELY MANNER.



FOR PROPOSAL
PURPOSES ONLY,
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CONSTRUCTION

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