ADDENDUM NO. 2

Lakeside Force Main Replacement
PROJECT NO. 21LS401

This addendum shall hereby provide edits to project specifications and serve as responses to bidders' questions.

Addendum No. 2 includes the following:

Language to be deleted is indicated in ~~strikeout~~; new language to be added is indicated in ***boldfaced italic;*** existing language is normal text.

<u>Addendum 1</u>

~~"Proposals must be received no later than 4:00 pm, Tuesday, May 4th, 2021."~~

- Delete the text above and replace with the following:
- ***"Proposals must be received no later than 4:00 pm, Tuesday, May 11, 2021**."*

- Delete Section 00 41 43.
- Replace with the attached second revision of Section 00 41 43

<u>Appendix A</u>

- Delete Project Drawings and replace with attached Project Drawings.

<u>Attachments:</u>
Section 00 41 43 (second revision)
Appendix A Project Drawings (revised)

Kenneth C Deibert, PE
Engineer III
West County Wastewater

SECTION 00 41 43
SCHEDULE OF BID

Schedule of Prices for Construction of
WCW Project No. 21LS401
Lakeside Force Main Replacements

Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1.	Mobilization and demobilization, as described and specified	1	LS	___________	______________
2.	Allowance for permitting costs	1	AL	$_______	$ __3,000__ ____
3.	Furnish and install dual 10-inch diameter DR-11 HDPE ANSI/AWWA C906 and Class 200 Ductile Iron force main (through vaults and for end connections, where specified on plans) by open trench including but not limited to potholing, trenching, backfilling, shoring, fittings, and appurtenances complete as shown in the drawings	1277	LF	___________	______________
4.	Furnish and install dual 10-inch diameter DR-11 HDPE ANSI/AWWA C906 force main by horizontal directional drilling including but not limited to potholing, excavating entry/exit pits, limited trenching, backfilling, fittings, and appurtenances complete as shown in the drawings	317	LF	___________	______________
5.	Plug, cap, fill and abandon exterior manhole drop structure per plans. Furnish and install new 10-inch interior drop structure per plans from connection point outside of manhole complete with PVC AWWA C900 pipe inside manhole. Shall include but not limited to stainless steel hardware, core	1	LS	___________	______________

	drilling, sealing, and backfill				
6.	Furnish and install precast concrete vaults including but not limited to excavation, subgrade preparation, setting and leveling, traffic rated hatches, piping, rubber boots, fittings and supports within vaults	3	EA	___________	_______________
7.	Furnish and install plug valves complete with Motor Operated Valve (MOV) actuators	2	EA	___________	_______________
8.	Furnish and install all electrical work to control MOV actuators but not limited to conduits, trenching, backfilling, power and control conductors, pull boxes, terminal enclosures, wall penetrations, and connection to lift station per plans	1	LS	___________	_______________
9.	Furnish and install air release and air vacuum assembly including but not limited to excavation, saddle connection, valve, operator, well cap, combination AR/AV, enclosure and backfill	1	LS	___________	_______________
10.	Testing of force main including HDD portion, appurtenances, connections, and tees	1	LS	___________	_______________
11.	Construct asphalt concrete base paving and aggregate base (6” thick minimum over 12” AB) to repair mainline per Dwg G-02, including saw cutting, removal and disposal of existing paving and base	1	LS	___________	_______________
12.	Furnish and install temporary sewer bypass system, fittings, appurtenances, complete and in place, for making end connections	4	WKS	$_______	$ ___________
13.	Furnish and install flowable fill for pipeline abandonment at all locations as shown on the plans	1	LS	$_______	$ ___________

14. Remove and replace and install new concrete to include but not limited to curb, gutter, sidewalk, miscellaneous pipe blocks, and small slabs for appurtenances	5	CY	$_______	$ __________
15. Furnish traffic control in accordance with City of Richmond requirements, complete and in place	1	LS	$_______	$ __________

Total **Base** Bid (**Items 1, 2, 3, … <u>ONLY</u>**) all work incidental thereto and connected therewith):

(Enter Bid Numerically) $ ____

Total **Base** Bid in Words: ____ dollars and

______________________________ cents

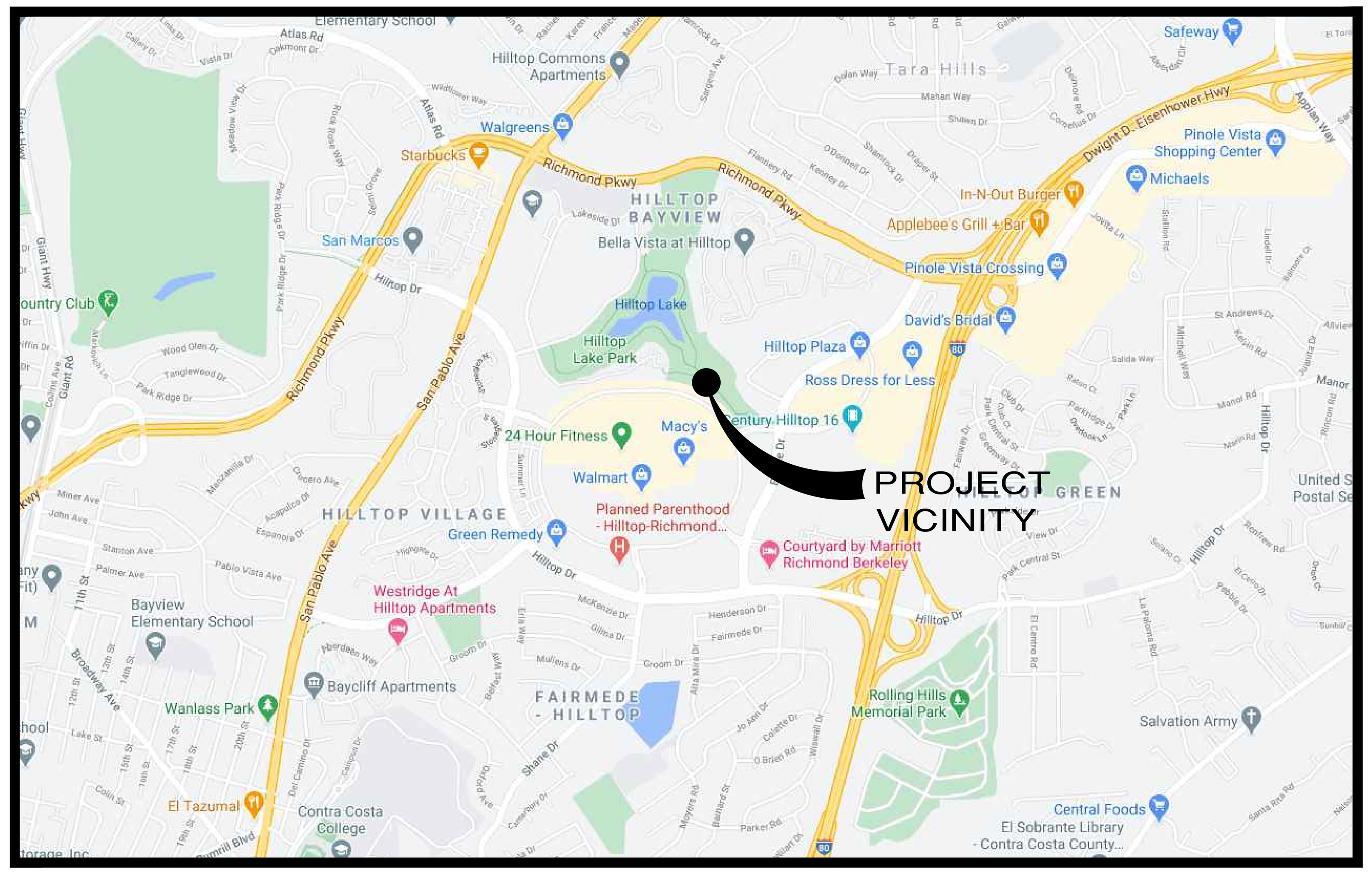
In case of discrepancy between words and figures, the words shall prevail.

Signed: ____________________________________
Bidder

WEST COUNTY WASTEWATER DISTRICT

CONTRA COSTA COUNTY, CALIFORNIA

LAKESIDE FORCE MAIN IMPROVEMENT



VICINITY MAP

SCALE: NONE

CONTRACT NO. 20-049

MAY, 2021

BOARD OF DIRECTORS

CHERYL SUDDUTH – PRESIDENT
CESAR ZEPEDA – VICE PRESIDENT
DAVID ALVARADO
SHERRY ANN STANLEY
HARRY WIENER

LOCATION MAP

SCALE: NONE

SHEET INDEX		
NO.	DWG. NO.	DESCRIPTION
1	G-01	TITLE SHEET
2	G-02	GENERAL NOTES AND DETAILS
3	C-01	PLAN AND PROFILE – STA 10+00.00 TO STA 15+00.00
4	C-02	PLAN AND PROFILE – STA 15+00.00 TO STA 21+00.00
5	C-03	PLAN AND PROFILE – STA 21+00.00 TO STA 25+94.00
6	C-04	CIVIL DETAILS 1 OF 2
7	C-05	CIVIL DETAILS 2 OF 2
8	E-01	ELECTRICAL PLAN AND DETAILS

J:\PROJ\666 WCWD Lakeside LS FM Design\4 DWG\Current Submittal\01-GEN\666-G01.dwg Apr 26, 2021 – 6:30pm

REVISIONS			
NUMBER	DATE	INITIALS	DESCRIPTION

SCALE: AS SHOWN
R. BACHUVALA
DESIGNED:
R. BACHUVALA
DRAWN:
M. KADIYALA
CHECKED:

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WEST COUNTY WASTEWATER DISTRICT
2910 HILLTOP DRIVE, RICHMOND, CA 94806

WEST COUNTY WASTEWATER DISTRICT
APPROVED FOR CONSTRUCTION:
ENGINEERING DATE

LAKESIDE FORCE MAIN IMPROVEMENT

TITLE SHEET

DRAWING G–01

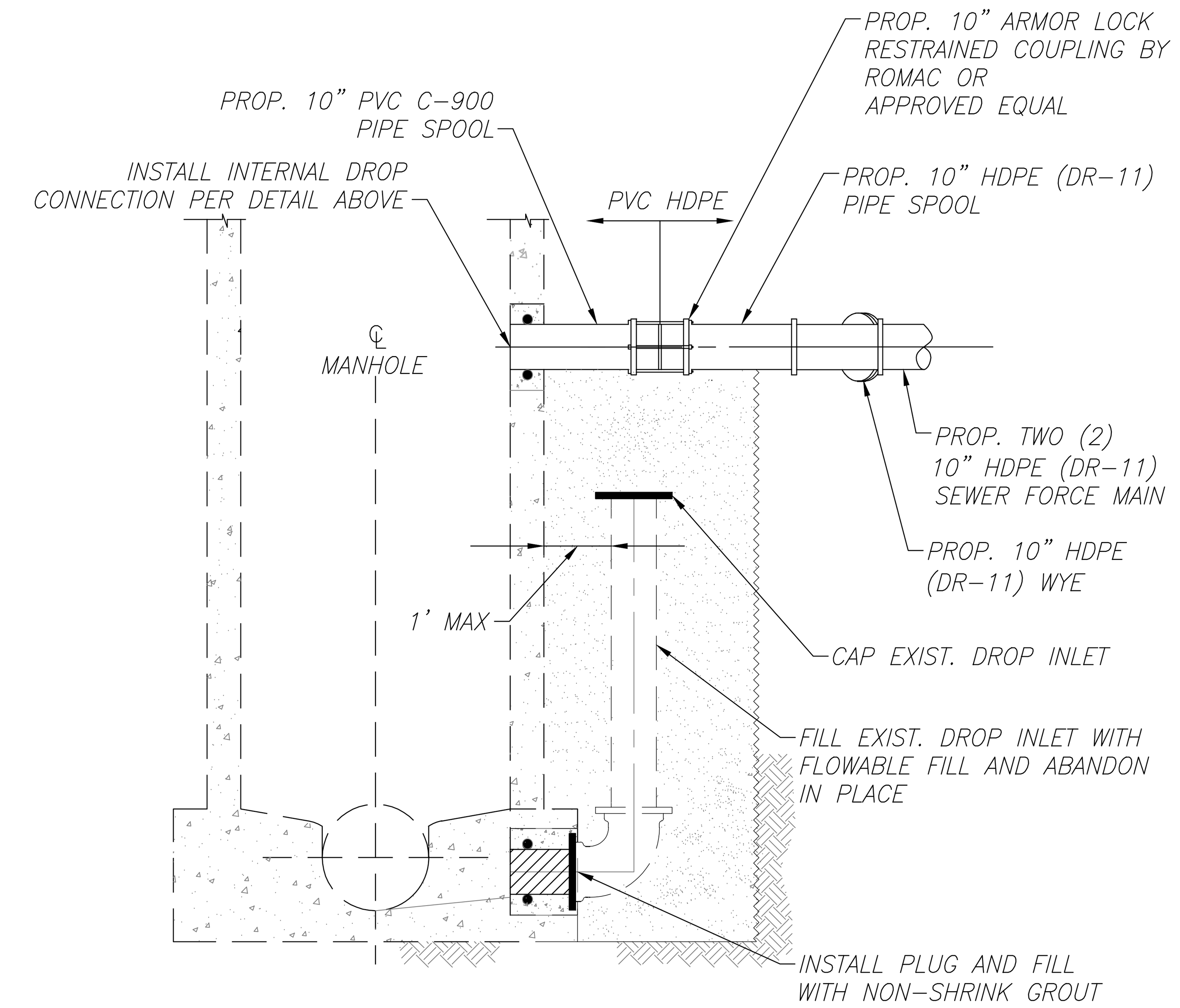
SHEET 1 OF 8

GENERAL NOTES

1. CONTRACTOR SHALL RESTORE ALL FACILITIES OUTSIDE LIMITS OF WORK DAMAGED BY CONSTRUCTION OPERATIONS TO EQUAL OR BETTER THAN THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE DISTRICT.
2. THE PLANS DO NOT SHOW ALL EXISTING UTILITIES. UTILITIES SHOWN ARE BASED ON FACILITY MAPS AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALIGNMENT AND ELEVATION OF EXISTING UTILITIES AFFECTING THE WORK PRIOR TO CONSTRUCTION. PRIOR TO ANY DIGGING, CALL U.S.A. AT 811 A MINIMUM OF 48 HOURS IN ADVANCE OF EXCAVATION.
3. EXISTING SANITARY SEWER LINES ARE TO BE PROTECTED IN PLACE DURING CONSTRUCTION. CONTRACTOR SHALL LOCATE LINES PRIOR TO BEGINNING WORK.
4. ALL STREET MARKINGS, STRIPING, AND MARKERS AFFECTED BY CONSTRUCTION SHALL BE REPLACED AT THEIR EXISTING LOCATIONS AT NO ADDITIONAL COST TO THE CITY. THIS INCLUDES DAMAGE OF STREET MARKINGS ON ANY STREET DAMAGED BY CONSTRUCTION OPERATIONS.
5. ALL PAVEMENT SHALL SAWCUT FULL DEPTH FOR PIPE TRENCH AND FOR PAVEMENT REMOVAL.
6. TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONTRA COSTA COUNTY ENCROACHMENT PERMIT REQUIREMENTS. THE CONTRACTOR SHALL SUBMIT A WRITTEN TRAFFIC CONTROL & SIGNING PLAN (INCLUDING STREET CLOSURE DETAILS) TO THE ENGINEER WITHIN TEN (10) WORKING DAYS AFTER AWARD OF CONTRACT. SEE NOTE 20 BELOW.
7. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN AND OTHER DEVICES TO PROVIDE VEHICULAR AND PEDESTRIAN SAFETY.
8. CONTRACTOR SHALL PROTECT ALL UTILITY STRUCTURES AND SURVEY MONUMENTS WITHIN THE WORK AREAS. THE CONTRACTOR SHALL REVIEW THE WORK SITES PRIOR TO SUBMISSION OF BIDS.
9. THE CONTRACTOR SHALL, AS NECESSARY, BYPASS PUMP ALL SANITARY SEWER FLOW DURING OPEN TRENCH AND RECONNECTION TO EXISTING MANHOLE OPERATIONS. PEAK SEWER FLOW IS XXXX GALLONS PER MINUTE.
10. DIMENSIONS SHOWN ON PLANS ARE HORIZONTAL MEASUREMENTS.
11. HORIZONTAL DIMENSIONS PROVIDED ON THE DRAWINGS ARE BASED ON RECORD DRAWING INFORMATION. FIELD MEASUREMENTS MAY VARY FROM THOSE ON THE DRAWINGS. PAYMENT WILL BE BASED ON QUANTITIES INSTALLED.
12. RIGHT OF WAY LINES ARE SHOWN AT APPROXIMATE LOCATIONS.
13. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING FACILITIES AND TO IMMEDIATELY NOTIFY THE ENGINEER OF ANY FIELD CONFLICTS OR OMISSIONS. LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS PRIOR TO DIGGING.
14. ALL STREET SURFACES AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE WATER TESTED BY THE CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND ELIMINATION OF BIRD BATHS PRIOR TO INITIAL ACCEPTANCE.
15. EXISTING EASEMENTS SHOWN ON THE PLANS BASED ON THE AVAILABLE RECORDS.
16. CONTRACTOR SHALL OBTAIN A CONTRA COSTA COUNTY ENCROACHMENT PERMIT PRIOR TO START WORK.
17. CONTRACTOR SHALL REDUCE DIESEL EMISSIONS BY LIMITING THE USE OF EQUIPMENT, USE—GASOLINE—POWERED EQUIPMENT WHEN FEASIBLE, AND UTILIZING CURRENT DIESEL TECHNOLOGY.
18. THE TRAFFIC CONTROL PLAN AND WATER POLLUTION CONTROL PLAN INCLUDED IN THESE CONSTRUCTION DOCUMENTS SHOW THE MINIMUM REQUIREMENTS. CONTRACTOR SHALL REVIEW AND ADD TO THE PLANS AS NECESSARY TO ACCOMMODATE THEIR CONSTRUCTION REQUIREMENTS. CONTRACTOR SHALL RESUBMIT THE TRAFFIC CONTROL PLAN AND WATER POLLUTION CONTROL PLAN FOR APPROVAL BY THE CITY PRIOR TO STARTING WORK.

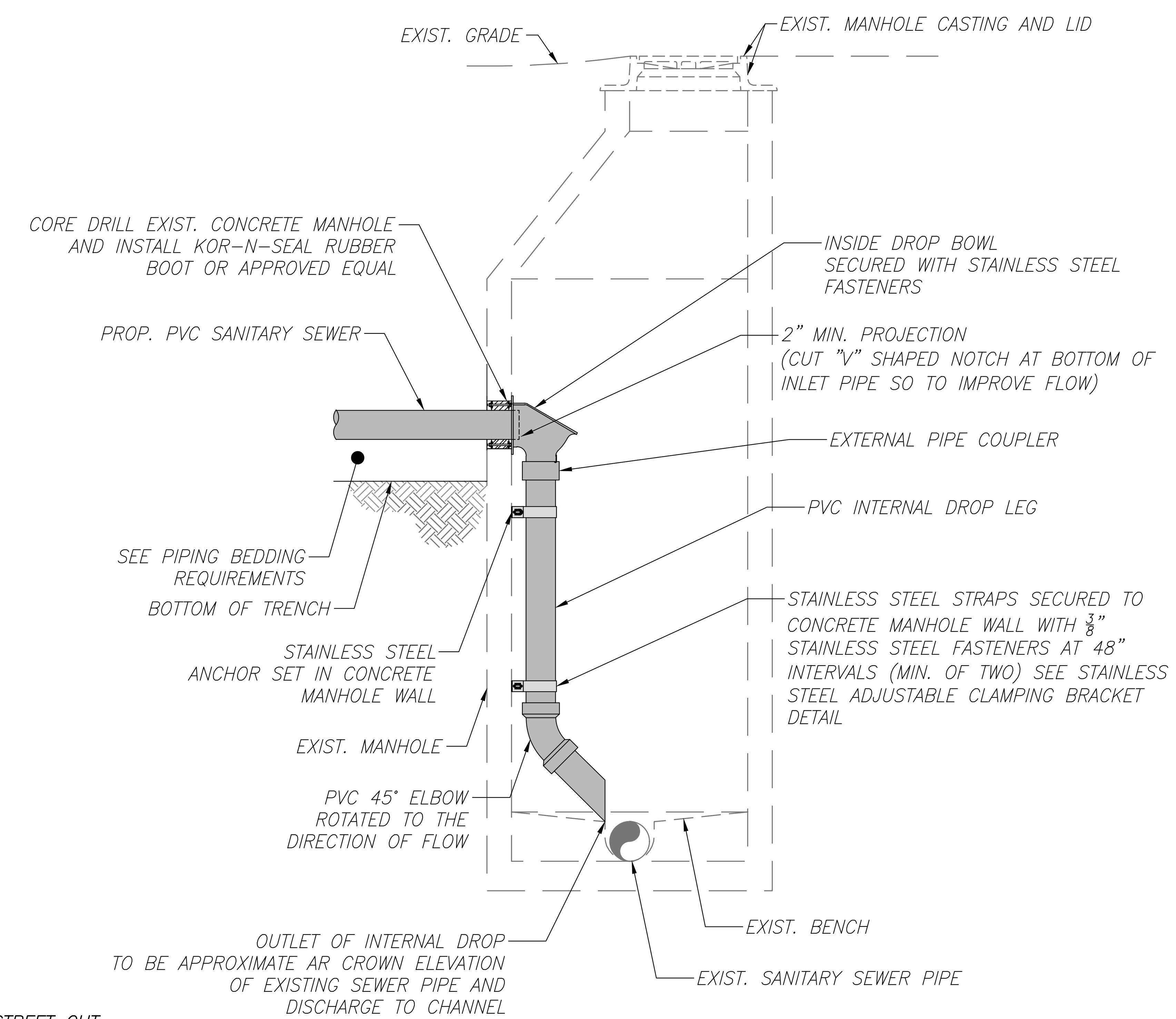
ABBREVIATIONS

ABAND	ABANDONED	MOV	MOTOR OPERATED VALVE
AB	AGGREGATE BASE	N	NORTH
AC	ASPHALT CONCRETE	NO.	NUMBER
ACP	ASBESTOS CEMENT PIPE	NTS	NOT TO SCALE
AV/AR ASSEMBLY	AIR VALVE/AIR RELEASE	PB	PULL BOX
BTM	BOTTOM	PCC	PORTLAND CEMENT CONCRETE
BEG	BEGIN	PIV	POST INDICATOR VALVE
BFP	BACKFLOW PREVENTER	P/L	PROPERTY LINE
BFV	BUTTERFLY VALVE	PRELIM.	PRELIMINARY
CAB	CRUSHED AGGREGATE BASE	PROP.	PROPOSED
CATV	CABLE TELEVISION	PVMT	PAVEMENT
C&G	CURB AND GUTTER	R/W	RIGHT-OF-WAY
CL	CENTERLINE / CLASS	REF	REFERENCE
CONC	CONCRETE	RCA ADAPTER	RESTRAINED (DRESSER) COUPLING
CONST.	CONSTRUCT	RD	ROAD
CTB	CEMENT TREATED BASE	RFCA ADAPTER	RESTRAINED FLANGED COUPLING
DOM	DOMESTIC SERVICE	RJ	RESTRAINED JOINT
DCDA ASSEMBLY	DOUBLE CHECK DETECTOR	RPDA ASSEMBLY	REDUCED PRESSURE DETECTOR
DI	DUCTILE IRON	RSGV	RESILIENT SEAT GATE VALVE
D/S	DOWNSTREAM	RT	RIGHT
DWG	DRAWING	S	SEWER / SOUTH
E	EXISTING / EAST	SD	STORM DRAIN
ELEV	ELEVATION	SH	SHEET
ENG	ENGINEERING	SL	STREET LIGHT
EXIST.	EXISTING	SFM	SEWER FORCE MAIN
FDC CONNECTION	FIRE DEPARTMENT	SS	STAINLESS STEEL
FH	FIRE HYDRANT	ST	STREET
FIRE	FIRE SERVICE	STA	STATION
FL	FLOWLINE	STD	STANDARD
FLG'D	FLANGED	STL	STEEL
FT.	FEET	SW	SIDEWALK
FUT.	FUTURE	T	TELEPHONE
G	GAS	TB	THRUST BLOCK
GB	GRADE BREAK	TBA	TO BE ABANDONED
GV	GATE VALVE	TEMP	TEMPORARY
HOR	HORIZONTAL	TJ	PUSH ON JOINT
HP	HIGH PRESSURE	TYP	TYPICAL
INTER	INTERSECTION	ULT	ULTIMATE
INV	INVERT	U/O	UNKNOWN OBJECT
IRR	IRRIGATION	U/S	UPSTREAM
LAT	LATERAL	VAR	VARIES
LF	LINEAR FEET	VER	VERTICAL
MAX	MAXIMUM	W	WATER / WEST
MFT	MANUFACTURER	WM	WATER METER
MH	MANHOLE	WV	WATER VALVE
MIN	MINIMUM		
MJ	MECHANICAL JOINT		



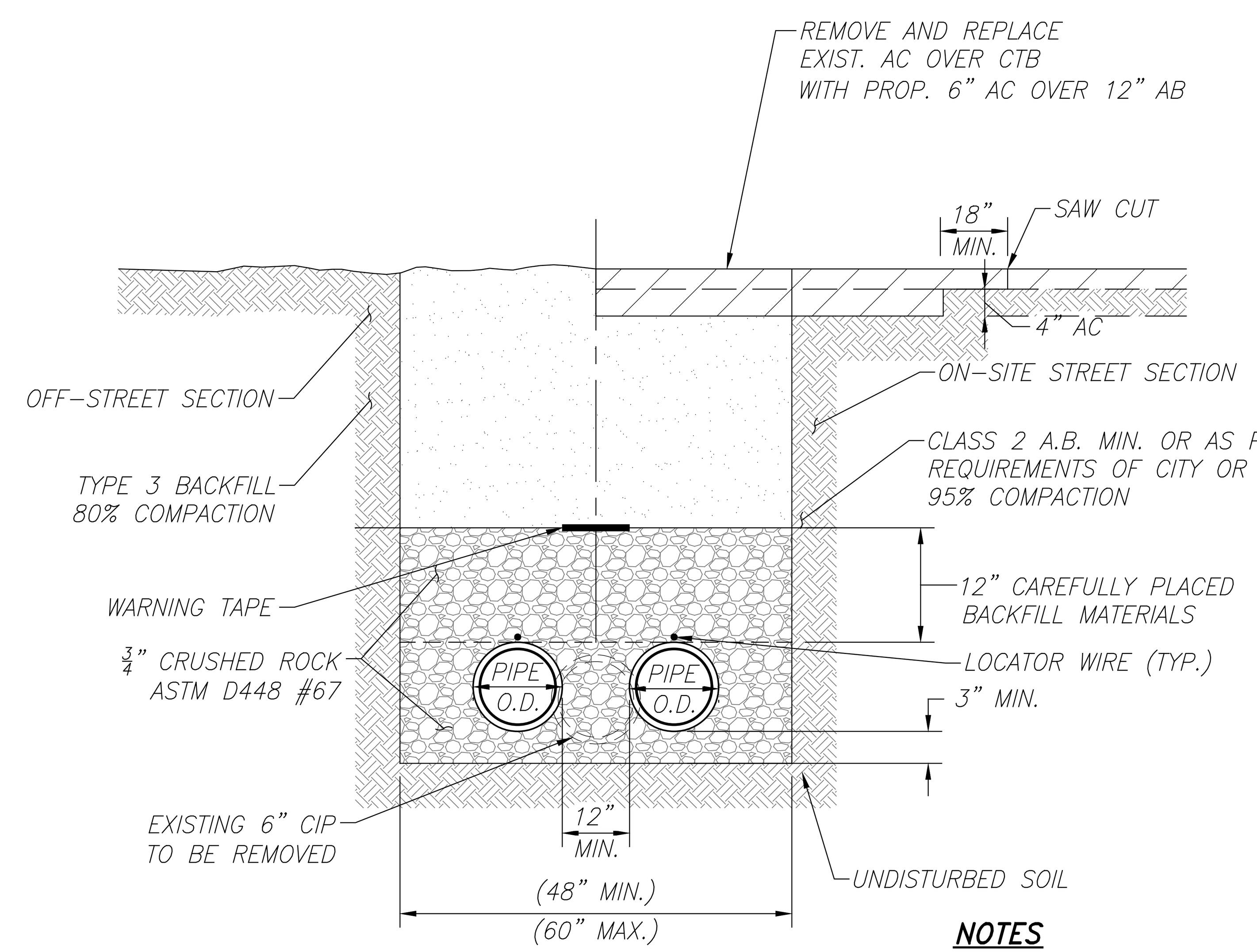
ABANDONMENT OF EXTERNAL DROP INLET

DETAIL 2
SCALE: NONE



INTERNAL DROP CONNECTION TO EXISTING MANHOLE

DETAIL 3
SCALE: NONE



TRENCH AND BACKFILL DETAIL

DETAIL 1
SCALE: NONE

NOTES

1. ENCROACHMENT PERMIT: PROOF OF COUNTY OR CITY STREET CUT ENCROADHMNET PERMIT REQUIRED PRIOR TO WCWD INSPECTION.
2. MATERIALS: TO CONFORM TO CURRENT CLATRANS STANDARD SPECIFICATIONS.
3. PAVEMENT CUTS: TRIM NEATLY 12" (MIN.) FROM BROKEN EDGE AFTER BACKFILLING, PRIOR TO PAVING.
4. SAFETY: ALL WORK TO MEET THE REQUIREMENTS OF CALOSHA FOR UNDERGROUND SAFETY AND CONFINED SPACES.
5. CONTRACTOR SHALL OBTAIN NECESSARY STREET-CUT PERMIT FROM APPROPRIATE AGENCY, AND VERIFY BACKFILL REQUIREMENTS. CURRENT REQUIREMENTS ARE LISTED ABOVE.

LEGEND

	SEWER MANHOLE	16"W	EXISTING WATER LINE
	UTILITY MANHOLE	24"SD	EXISTING STORM DRAIN
	STORM DRAIN MANHOLE	8"SS	EXISTING SEWER LINE
WV	WATER VALVE	4"G	EXISTING GAS LINE
WM	WATER METER	E	EXISTING ELECTRIC LINE
	TRAFFIC SIGN	T	EXISTING TELEPHONE LINE
FH	FIRE HYDRANT	CATV	EXISTING CABLE TV LINE
	STREET LIGHT POLE	FO	EXISTING FIBER OPTIC LINE
	TRAFFIC LOOP	TS	EXISTING TRAFFIC SIGNAL LINE
	UTILITY POLE	OH	EXISTING OVERHEAD LINE
	PULL BOX / RISER		PROPOSED SEWER MAIN
	TRAFFIC SIGNAL		EXPOSED ELECTRICAL CONDUIT
			CONDUIT IN SLAB OR UNDERGROUND

REVISIONS			
NUMBER	DATE	INITIALS	DESCRIPTION

SCALE: AS SHOWN
R. BACHUVALA
DESIGNED: R. BACHUVALA
DRAWN: M. KADIYALA
CHECKED:

811 Know what's below. Call before you dig. CALL 811 AT LEAST TWO DAYS BEFORE YOU DIG
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WEST COUNTY WASTEWATER

WEST COUNTY WASTEWATER DISTRICT
2910 HILLTOP DRIVE, RICHMOND, CA 94806

WEST COUNTY WASTEWATER DISTRICT
APPROVED FOR CONSTRUCTION:
ENGINEERING DATE

LAKESIDE FORCE MAIN IMPROVEMENT

GENERAL NOTES AND DETAILS

DRAWING G-02

SHEET 2 OF 8

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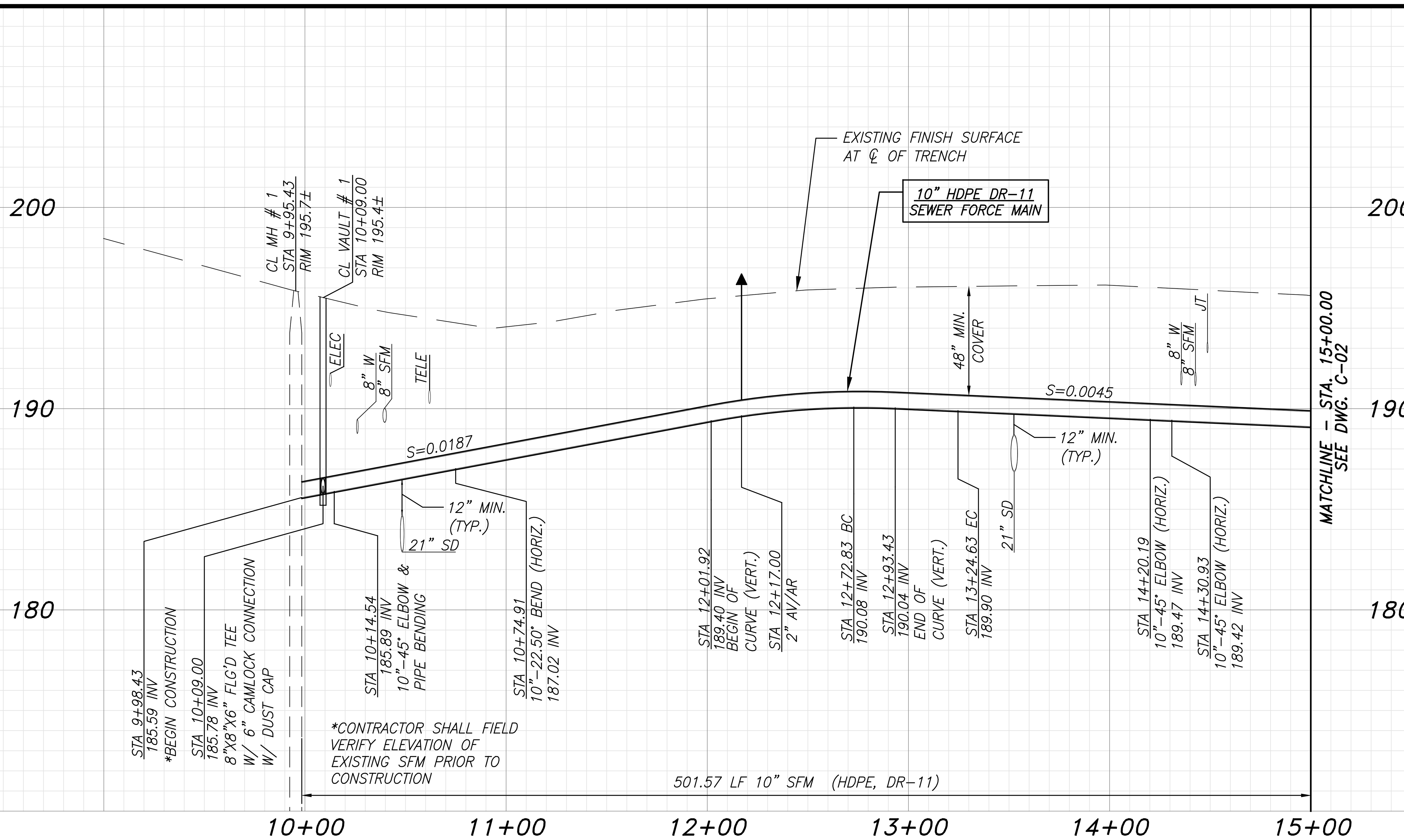
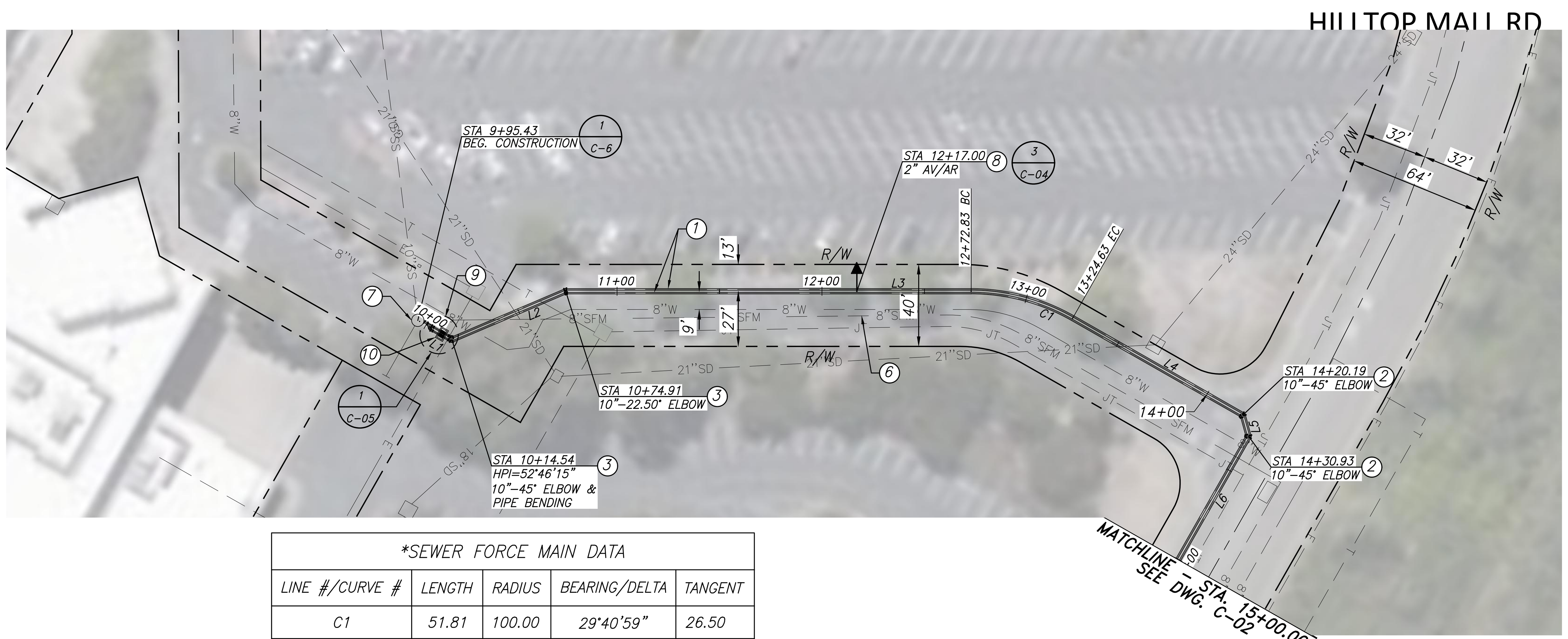


SCALE: HOR. 1"=40'
VERT. 1"=4'



*SEWER FORCE MAIN DATA				
LINE #/CURVE #	LENGTH	RADIUS	BEARING/DELTA	TANGENT
C1	51.81	100.00	29°40'59"	26.50
L1	16.27		N00°00'00"W	
L2	60.36		N52°46'15"W	
L3	197.92		N29°40'56"W	
L4	95.56		N00°00'03"E	
L5	10.75		N45°00'03"E	
L6	69.07		S89°59'57"E	

*NOTES:

THE SEWER FORCE MAIN DATA ARE MEASURED ALONG STATION CENTERLINE

40' 0' 40' 80'
SCALE: 1" = 40'

CONSTRUCTION NOTES:

1. CONSTRUCT NEW TWO (2)-10" NOMINAL DIA (8.68" I.D.) IPS HDPE DR-11 (200 PSI) SEWER PIPE BY OPEN CUT TRENCH PER DETAIL 1 ON DWG G-02. TRACER WIRE AND WARNING TAPE SHALL BE INSTALLED OVER ALL NEW MAIN PIPING. MAINTAIN MIN 48" COVER UNLESS NOTED OTHERWISE.
2. INSTALL 10"-45' HDPE FABRICATED IPS DR11 (200 PSI) ELBOW.
3. INSTALL 10"-22.50' HDPE FABRICATED IPS DR11 (200 PSI) ELBOW.
4. INSTALL 10"-11.25' HDPE FABRICATED IPS DR11 (200 PSI) ELBOW.
5. CONSTRUCT NEW OUTSIDE DROP CONNECTION PER DETAIL 2 ON DWG. G-02.
6. ABANDON EXISTING 8" SSFM BY FILLING WITH FLOWABLE FILL, REMOVE INTERFERING PORTIONS OF EXISTING SSFM AS NECESSARY FOR CONSTRUCTION. SEE NOTE 5.
7. PROTECT IN PLACE EXISTING MANHOLE.
8. INSTALL 2" AV/AR PER DETAIL 3 ON DWG C-04.
9. INSTALL 8"x8"x6" TEE (FLGXFLGXFLG) AND 6" CAMLOCK CONNECTION WITH DUST CAP.
10. INSTALL 3'X5' CONCRETE VAULT WITH 12" DIA SUMP KNOCKOUT. INSTALL H20 WHEEL LOADS TRAFFIC RATED ACCESS HATCH PER DETAIL 4 ON DWG C-04.
11. INSTALL 8" DEZURIK PLUG VALVE (FLGXFLG) WITH STAINLESS STEEL PIPE SUPPORTS & HARDWARE, MOTOR OPERATED VALVE ACTUATOR BY AUMA OR APPROVED EQUAL (TYP OF 1 ON EACH FORCE MAIN)

NOTES:

1. UTILITIES SHOWN HEREON ARE PER RECORD MAPS. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD LOCATE AND/OR POTHOLE TO CONFIRM EXACT LOCATION AND/OR ELEVATION OF UTILITIES.
2. NO TOPOGRAPHIC SURVEY HAS BEEN PERFORMED. PROFILE AND ELEVATIONS ARE BASED ON RECORD MAPS AND CONTOUR DATA RECEIVED FROM CONTRA COSTA COUNTY AND IS APPROXIMATE.
3. EXISTING PIPE DEPTH VARIES, BUT TYPICALLY IS 48" TO TOP OF PIPE.
4. BENDING OF NEW PIPE SHALL BE IN ACCORDANCE WITH AWWA AND PIPE MANUFACTURER'S RECOMMENDATIONS.

REVISIONS			
NUMBER	DATE	INITIALS	DESCRIPTION

SCALE: AS SHOWN
R. BACHUVALA
DESIGNED: R. BACHUVALA
DRAWN: M. KADIYALA
CHECKED:

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WEST COUNTY WASTEWATER DISTRICT
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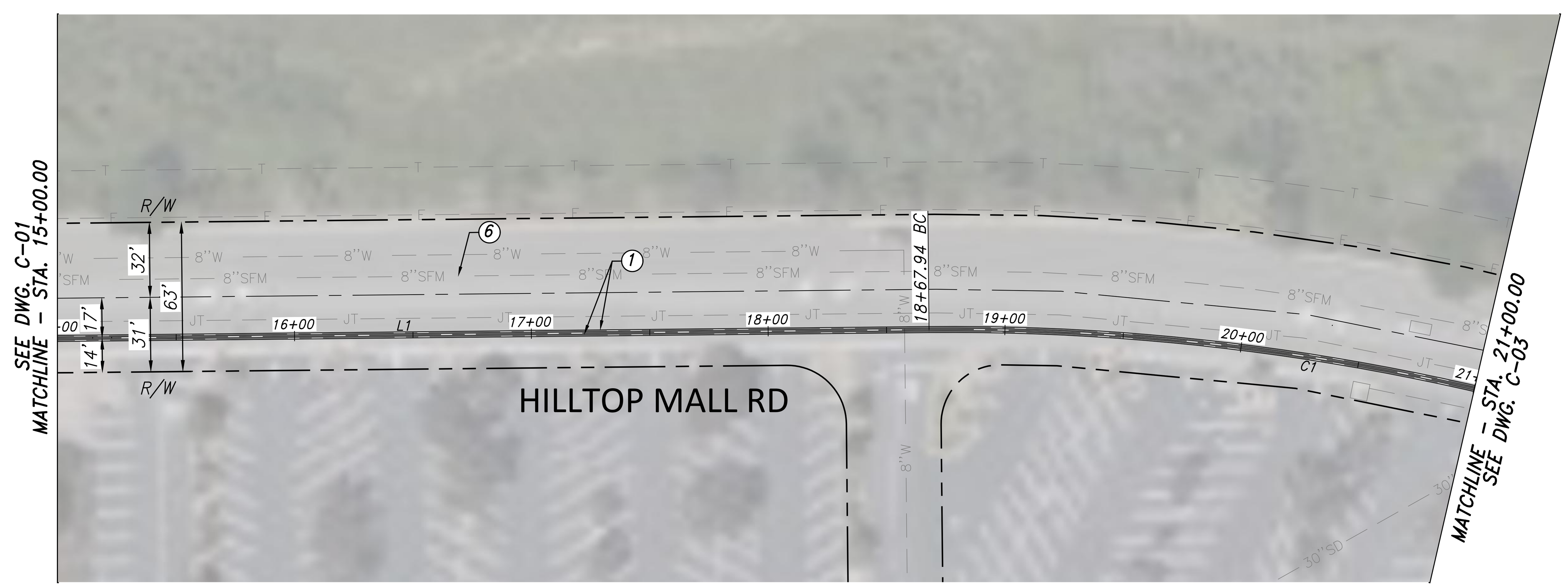
LAKESIDE FORCE MAIN IMPROVEMENT

PLAN AND PROFILE
STA 10+00.00 TO STA 15+00.00

DRAWING C-01

SHEET 3 OF 8



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2. INSTALL 10"-45° HDPE FABRICATED IPS DR11 (200 PSI) ELBOW.
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3. EXISTING PIPE DEPTH VARIES, BUT TYPICALLY IS 48" TO TOP OF PIPE.
4. LOCATION OF INSERTION/RECEIVING AREAS ARE APPROXIMATE AND CAN VARY TO SUIT CONTRACTOR'S EQUIPMENT AND OPERATIONS, WITH CONCURRENCE BY THE ENGINEER.
5. BENDING OF NEW PIPE SHALL BE IN ACCORDANCE WITH AWWA AND PIPE MANUFACTURER'S RECOMMENDATIONS.

*SEWER FORCE MAIN DATA

LINE #/CURVE #	LENGTH	RADIUS	BEARING/DELTA	TANGENT
C1	232.06	983.70	19°38'35"	170.30
L1	437.01		S89°59'57"E	

*NOTES:
THE SEWER FORCE MAIN DATA ARE MEASURED ALONG STATION CENTERLINE

40' 0' 40' 80'
SCALE: 1" = 40'

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DESIGNED:
R. BACHUVALA
DRAWN:
M. KADIYALA
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ENGINEERING DATE

LAKESIDE FORCE MAIN IMPROVEMENT

PLAN AND PROFILE
STA 15+00.00 TO STA 21+00.00

DRAWING
C-02
SHEET 4 OF 8

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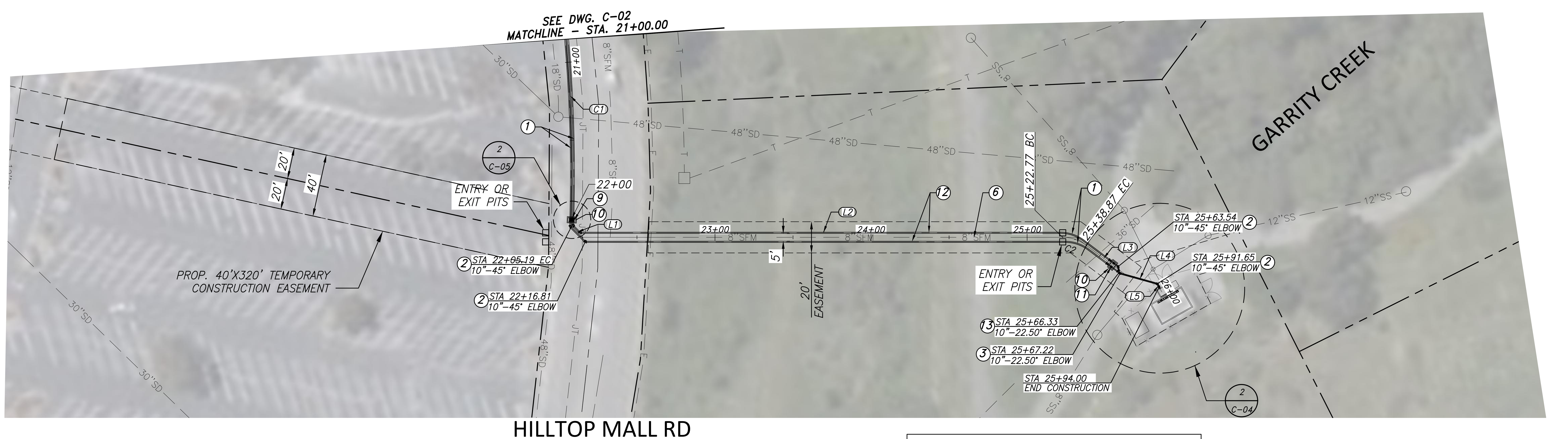
3. INSTALL 10"-22.50° HDPE FABRICATED IPS DR11 (200 PSI) ELBOW.
4. INSTALL 10"-11.25° HDPE FABRICATED IPS DR11 (200 PSI) ELBOW.
5. CONSTRUCT NEW OUTSIDE DROP CONNECTION PER DETAIL 2 ON DWG. G-02.
6. ABANDON EXISTING 8" SSFM BY FILLING WITH FLOWABLE FILL, REMOVE INTERFERING PORTIONS OF EXISTING SSFM AS NECESSARY FOR CONSTRUCTION. SEE NOTE 5.
7. PROTECT IN PLACE EXISTING MANHOLE.
8. INSTALL 2" AV/AR PER DETAIL 3 ON DWG C-04.
9. INSTALL 8"x8"x6" TEE (FLGXFLGXFLG) WITH 6" CAMLOCK CONNECTION WITH DUST CAP.
10. INSTALL 3'X5' CONCRETE VAULT WITH TRAFFIC H20 WHEEL LOADS RATED ACCESS HATCH PER DETAIL 4 ON DWG C-04.
11. INSTALL 8" DEZURIK PLUG VALVE (FLGXFLG) WITH STAINLESS STEEL PIPE SUPPORTS & HARDWARE, MOTOR OPERATED VALVE ACTUATOR BY AUMA OR APPROVED EQUAL (TYP OF 1 ON EACH FORCE MAIN)
12. INSTALL 3'X5' CONCRETE VAULT WITH 12" DIA SUMP KNOCKOUT. INSTALL H20 WHEEL LOADS TRAFFIC RATED ACCESS HATCH PER DETAIL 4 ON DWG C-04.
13. INSTALL 8"X8"X8" WYE (FLGXFLGXFLG)



NOTES:

1. UTILITIES SHOWN HEREON ARE PER RECORD MAPS. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD LOCATE AND/OR POTHOLE TO CONFIRM EXACT LOCATION AND/OR ELEVATION OF UTILITIES.
2. NO TOPOGRAPHIC SURVEY HAS BEEN PERFORMED. PROFILE AND ELEVATIONS ARE BASED ON RECORD MAPS AND CONTOUR DATA RECEIVED FROM CONTRA COSTA COUNTY AND IS APPROXIMATE.
3. EXISTING PIPE DEPTH VARIES, BUT TYPICALLY IS 48" TO TOP OF PIPE.
4. LOCATION OF INSERTION/RECEIVING AREAS ARE APPORXIMATE AND CAN VARY TO SUIT CONTRACTOR'S EQUIPMENT AND OPERATIONS, WITH CONCURRENCE BY THE ENGINEER.
5. BENDING OF NEW PIPE SHALL BE IN ACCORDANCE WITH AWWA AND PIPE MANUFACTURER'S RECOMMENDATIONS.

*SEWER FORCE MAIN DATA

LINE #/CURVE #	LENGTH	RADIUS	BEARING/DELTA	TANGENT
C1	337.25	983.70	19°38'35"	170.30
L1	10.00		N62°41'22"E	
L2	307.58		N17°41'22"E	
L3	31.93		N54°36'10"E	
L4	24.70		S33°16'54"W	
L5	3.26		N78°16'54"E	

*NOTES:

THE SEWER FORCE MAIN DATA ARE MEASURED ALONG STATION CENTERLINE

REVISIONS			
NUMBER	DATE	INITIALS	DESCRIPTION

SCALE: AS SHOWN
R. BACHUVALA
DESIGNED: R. BACHUVALA
DRAWN: M. KADIYALA
CHECKED:

811 Know what's below. Call before you dig. CALL 811 AT LEAST TWO DAYS BEFORE YOU DIG. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MURTHY KADIYALA No. C73472 CIVIL STATE OF CALIFORNIA

LEE+RO WATER INFRASTRUCTURE ENGINEERS
1550 PARKSIDE DRIVE, SUITE 320
WALNUT CREEK, CA 94596
TEL: (925) 937-4050

WEST COUNTY WASTEWATER

WEST COUNTY WASTEWATER DISTRICT
2910 HILLTOP DRIVE, RICHMOND, CA 94806

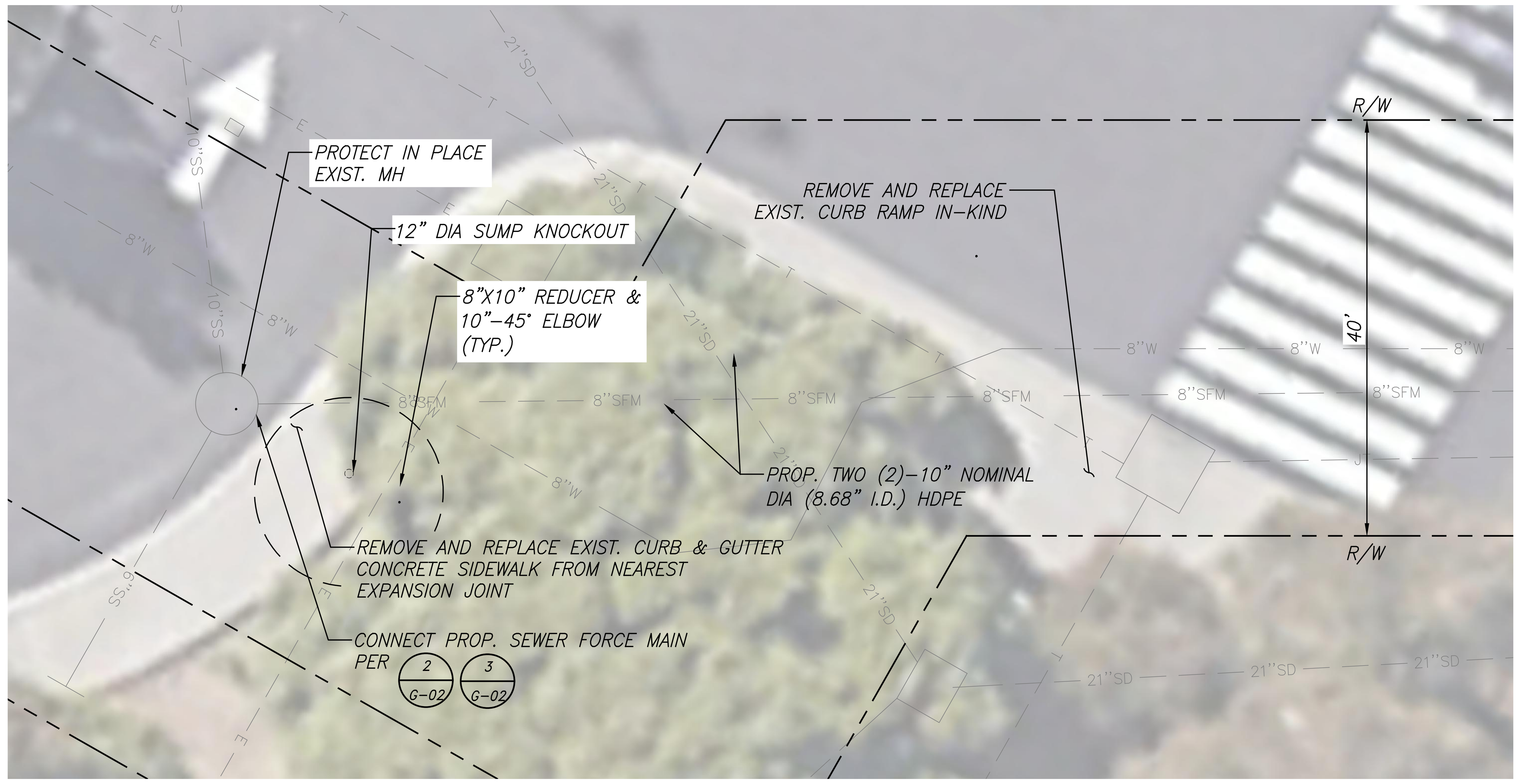
WEST COUNTY WASTEWATER DISTRICT
APPROVED FOR CONSTRUCTION:

ENGINEERING DATE

LAKESIDE FORCE MAIN IMPROVEMENT

PLAN AND PROFILE
STA 21+00.00 TO STA 25+94.00

DRAWING C-03



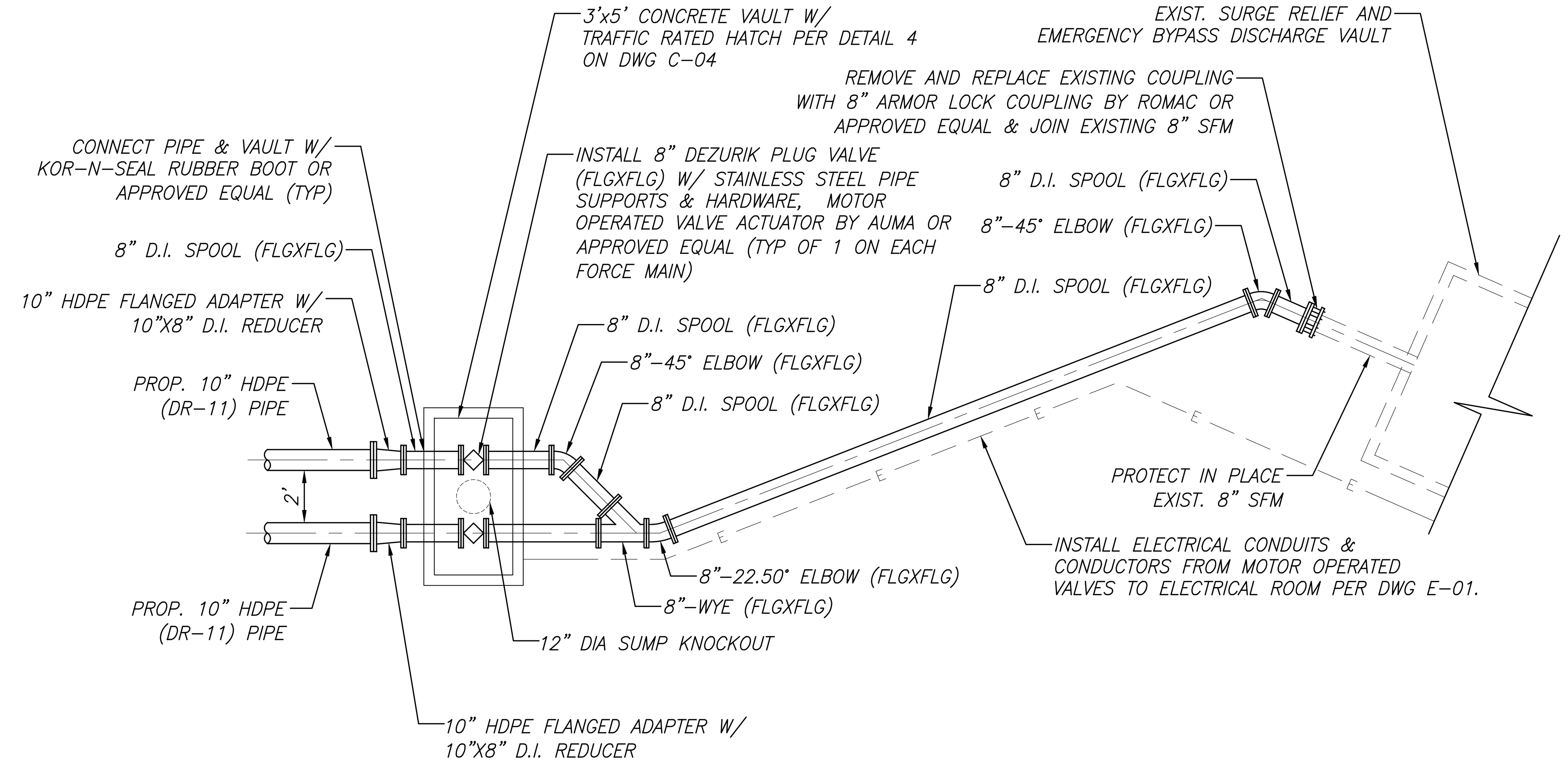
10' 0' 10' 20'
SCALE: 1" = 10'

MANHOLE CONNECTION DETAIL

DETAIL 1 C-1
SCALE: 1"=10'

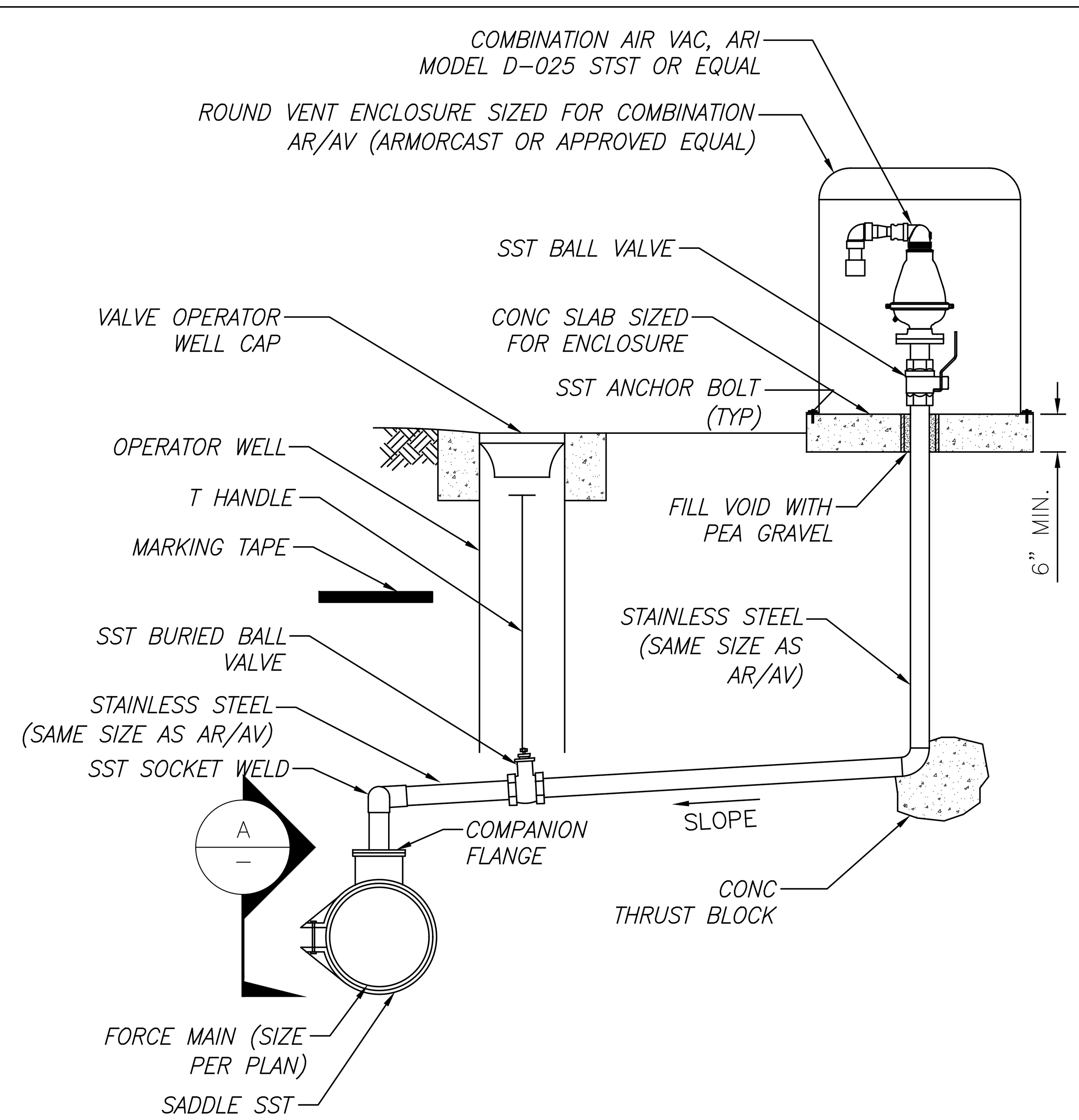
GENERAL NOTES:

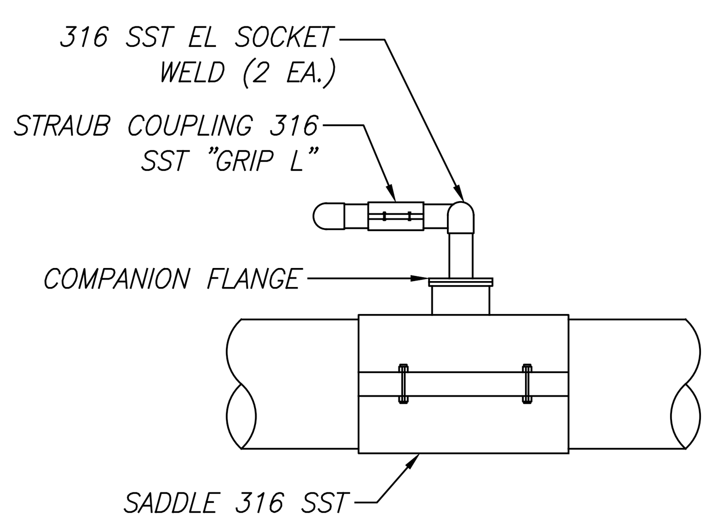
1. CONTRACTOR SHALL REPLACE ALL TRAFFIC STRIPING IN-KIND ACCORDANCE WITH THE CITY STANDARDS.
2. CONTRACTOR SHALL RESTORE IRRIGATION AND LANDSCAPE DAMAGED BY CONSTRUCTION ACTIVITIES IN-KIND.
3. SHOWN AERIAL BACKGROUND IS FOR REFERENCE ONLY. THE VAULT SHALL BE INSTALLED BEHIND THE EXISTING SIDEWALK.



SEWER FORCE MAIN CONNECTION DETAIL

DETAIL 2 C-3
SCALE: NONE

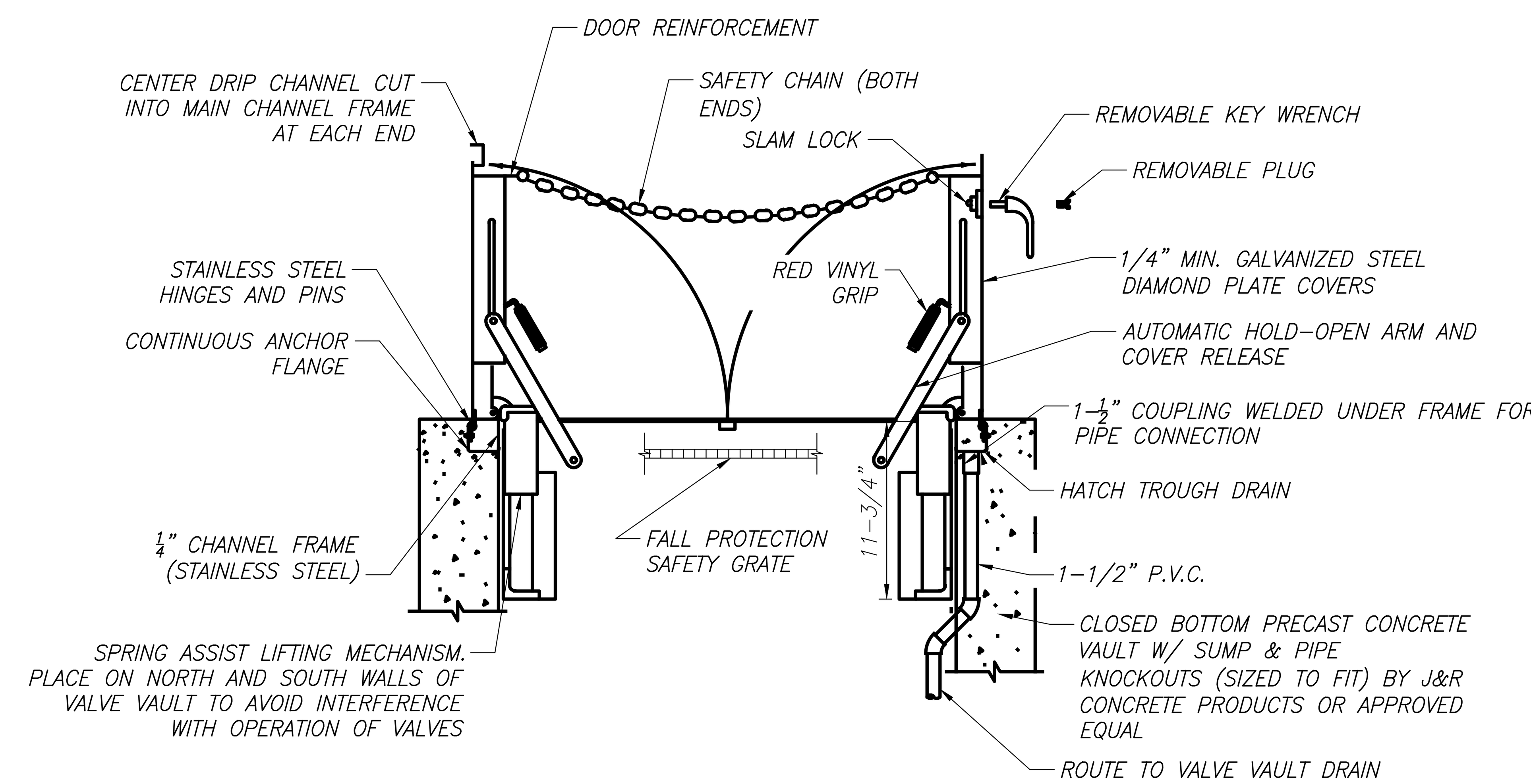




SECTION A –
SCALE: NONE

AIR RELEASE/AIR VACUUM ASSEMBLY

DETAIL 3 C-1
SCALE: NONE



ACCESS HATCH

DETAIL 4 VAR
SCALE: NONE

NOTE:

1. HATCH TO BE DESIGNED FOR DIRECT TRAFFIC H20 WHEEL LOAD COVERS.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS SHOWING CALCULATIONS AND COMPLETE FABRICATION OF HATCH.
3. CONTRACTOR TO PROVIDE PROPOSED SEALANT MATERIALS.
4. HATCH BE TO WATERTIGHT AND SHALL CHANNEL WATER TO VAULT DRAIN.

REVISIONS			
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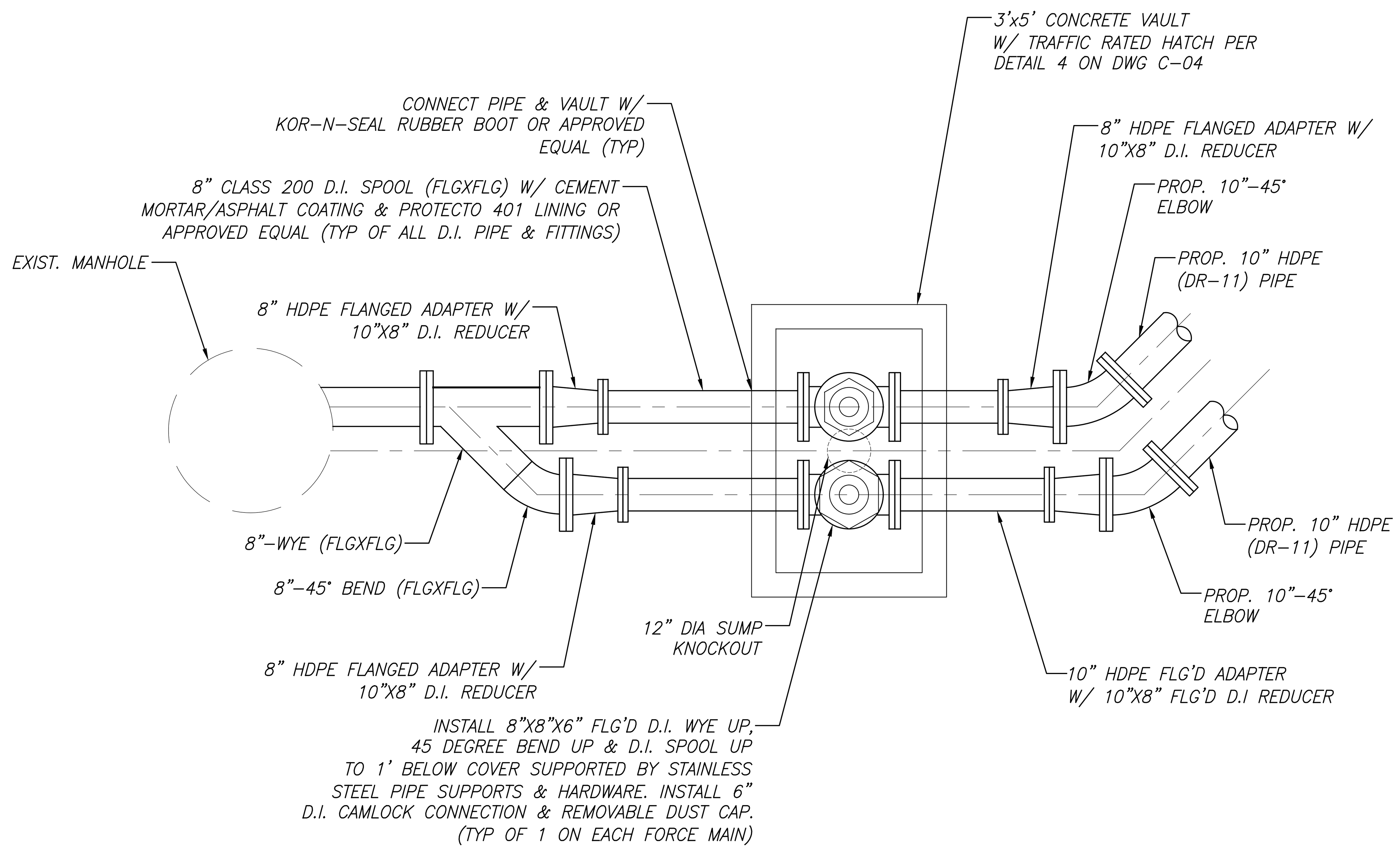
ENGINEERING DATE

LAKESIDE FORCE MAIN IMPROVEMENT

CIVIL DETAILS 1 OF 2

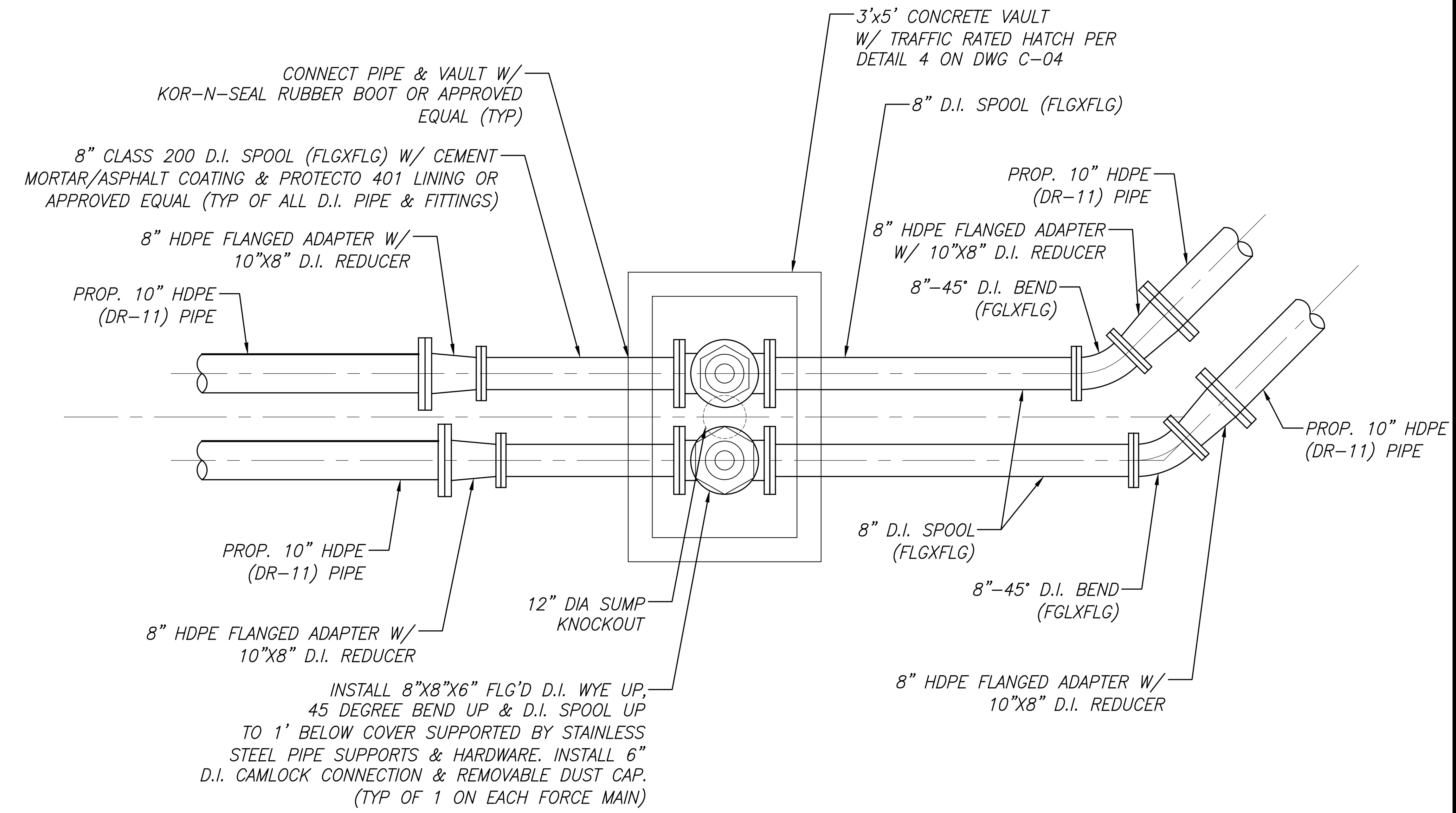
DRAWING C-04

SHEET 6 OF 8



DISCHARGE MANHOLE CONNECTION

DETAIL 1
SCALE: NTS
C-01



VALVE CONNECTION AT STA 22+01.05

DETAIL 2
SCALE: NTS
C-02

REVISIONS			
NUMBER	DATE	INITIALS	DESCRIPTION

SCALE: AS SHOWN
R. BACHUVALA
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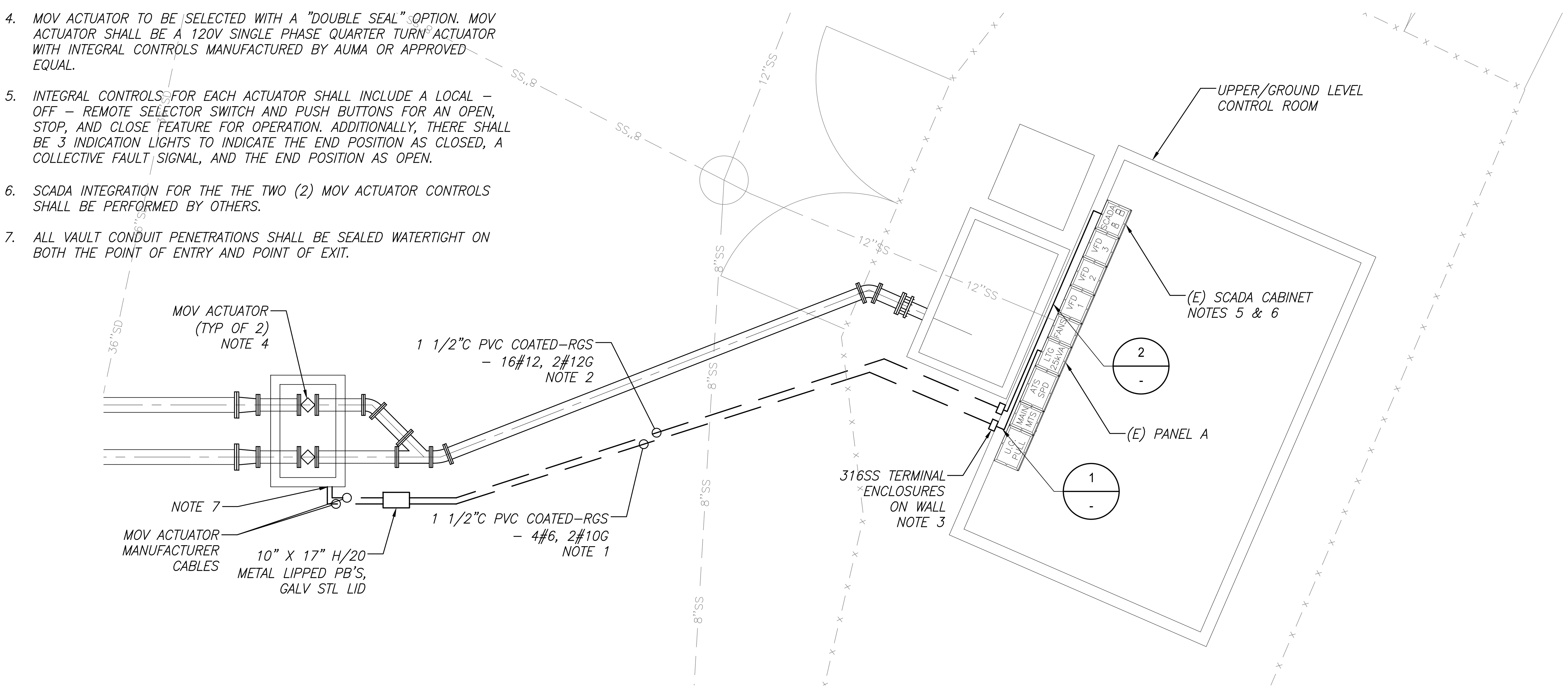
CIVIL DETAILS 2 OF 2

DRAWING
C-05

SHEET 7 OF 8

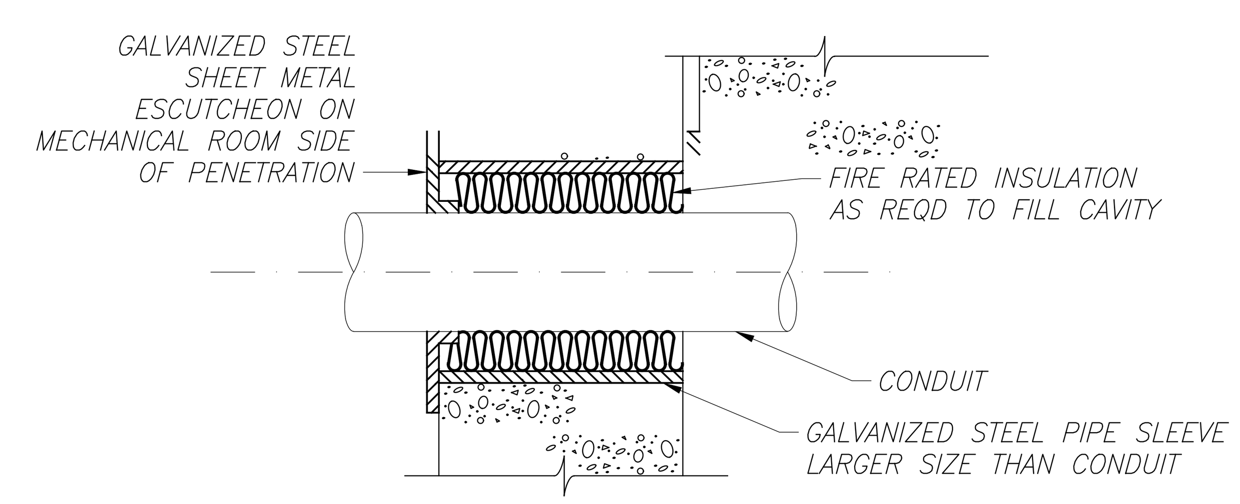
GENERAL NOTES:

1. POWER CONDUCTORS FOR THE TWO (2) PLUG VALVE ACTUATORS SHALL BE TERMINATED IN THE EXISTING LIGHTING PANEL INSIDE THE UPPER/GROUND LEVEL CONTROL ROOM. POWER CIRCUITS ARE DENOTED AS CIRCUITS 21 AND 23 ON THE LIGHTING PANEL SCHEDULE. POWER CONDUCTORS SHALL BE TYPE XHHW-2.
2. CONTROL CONDUCTORS FOR THE TWO (2) PLUG VALVE ACTUATORS SHALL BE TERMINATED IN THE EXISTING SCADA CABINET INSIDE THE UPPER/GROUND LEVEL CONTROL ROOM. CONTROL CONDUCTORS SHALL BE TYPE XHHW-2.
3. CONTRACTOR SHALL MOUNT THE 316SS TERMINAL ENCLOSURES A MINIMUM OF 5' ABOVE GRADE.
4. MOV ACTUATOR TO BE SELECTED WITH A "DOUBLE SEAL" OPTION. MOV ACTUATOR SHALL BE A 120V SINGLE PHASE QUARTER TURN ACTUATOR WITH INTEGRAL CONTROLS MANUFACTURED BY AUMA OR APPROVED EQUAL.
5. INTEGRAL CONTROLS FOR EACH ACTUATOR SHALL INCLUDE A LOCAL - OFF - REMOTE SELECTOR SWITCH AND PUSH BUTTONS FOR AN OPEN, STOP, AND CLOSE FEATURE FOR OPERATION. ADDITIONALLY, THERE SHALL BE 3 INDICATION LIGHTS TO INDICATE THE END POSITION AS CLOSED, A COLLECTIVE FAULT SIGNAL, AND THE END POSITION AS OPEN.
6. SCADA INTEGRATION FOR THE THE TWO (2) MOV ACTUATOR CONTROLS SHALL BE PERFORMED BY OTHERS.
7. ALL VAULT CONDUIT PENETRATIONS SHALL BE SEALED WATERTIGHT ON BOTH THE POINT OF ENTRY AND POINT OF EXIT.

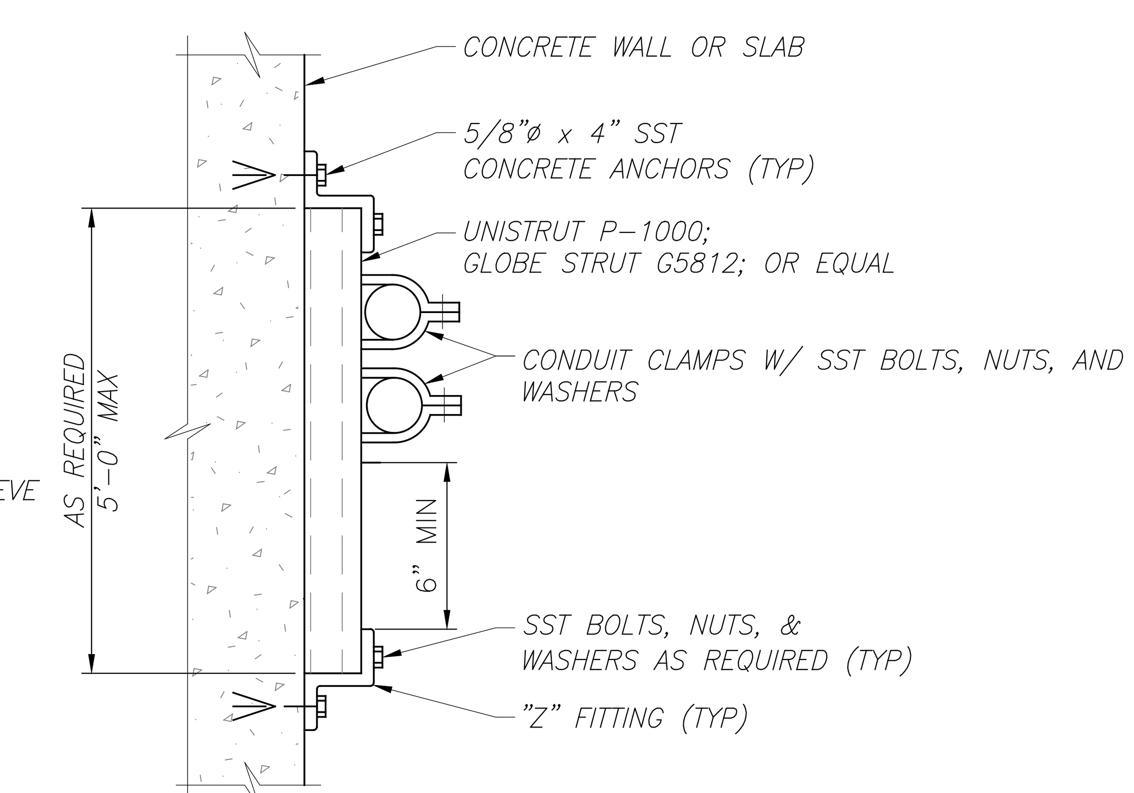


ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

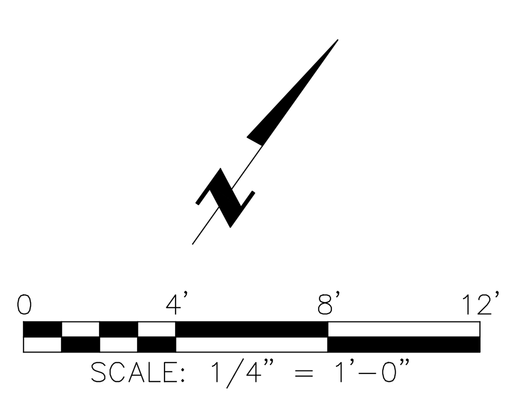
PANELBOARD SCHEDULE											
CKT			VA	VA	BRKR	CKT			VA	VA	BRKR
NO	USAGE	QTY	PHASE A	PHASE B	A/ PLS	NO	USAGE	QTY	PHASE A	PHASE B	A/ PLS
1	Ground Floor Lighting	1	600		20/1	2	Flowmeter - Shunt Trip	1	25		20/1
3	Midlevel Lighting - Shunt Trip	1		600	20/1	4	SCADA Power	1		250	20/1
5	Pump Room Ltg - Shunt Trip	1	600		20/1	6	Pump Failure Signal System	1	180		20/1
7	Generator Battery Charger	1		100	20/1	8	Air Supply (Radio)	1		180	20/1
9	Generator Block Heater	1	750		20/2	10	Emergency Lighting - Shunt Trip	1	500		20/1
11	Generator Block Heater	-		750	-	12	Sump Pump - Shunt Trip	1		1078	20/1
13	Generator Incidental power	1	1600		20/1	14	Sump Pump - Shunt Trip	1	1200		20/1
15	Receptacles - Shunt Trip	1		180	20/1	16	Shunt Trip Circuit for Main Breaker	1		20	20/1
17	Receptacles - Shunt Trip	1	180		20/1	18	24VAC Ltg Pnl Pwr Xfmr	1	0		20/1
19	Fan Monitoring/Ctrl - Shunt Trip	1		0	20/1	20	Outside Lighting	1		0	20/1
21	Motor Operated Valve	1	500		20/1	22	SPD - Factory Integrated	1	0		20/2
23	Motor Operated Valve	1		500	20/1	24	SPD - Factory Integrated	-		0	-
25			-			26			-		
27				-		28				-	
29			-			30			-		
31				-		32				-	
33			-			34			-		
35				-		36				-	
37			-			38			-		
39				-		40				-	
41			-			42			-		
	PHASE VA SUBTOTALS		4230	2130			PHASE VA SUBTOTALS		1905	1528	
							PHASE VA TOTALS		6135	3658	
							PANELBOARD VA TOTAL		9793		
							LCL (25%)		2448		
							PANELBOARD AMPS TOTAL		51		
	PANEL NOTES:				PANEL NO.:		A				
*	Indicates GFI type circuit breaker				LOCATION:		Lakeside SPS		MOUNTING:	Integrated into MCC	
					VOLTAGE:		120/240		TYPE:		
					MAIN BREAKER:		100A		AIC	22kAIC min.	
					BUS SIZE:		125A				
					PHASE:		1				
					WIRE:		3				



CONDUIT THRU MECH ROOM WALLS AND FLOORS
PLAN 1 / -
SCALE: NTS



CONDUIT SINGLE RACK
PLAN 2 / -
SCALE: NONE



REVISIONS			
NUMBER	DATE	INITIALS	DESCRIPTION

SCALE: AS SHOWN
J. LIM
DESIGNED: J. LIM
DRAWN: M. KADIYALA
CHECKED:

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WEST COUNTY WASTEWATER

WEST COUNTY WASTEWATER DISTRICT
APPROVED FOR CONSTRUCTION:
ENGINEERING DATE

LAKESIDE FORCE MAIN IMPROVEMENT

ELECTRICAL PLAN AND DETAILS

DRAWING E-01
SHEET 8 OF 8