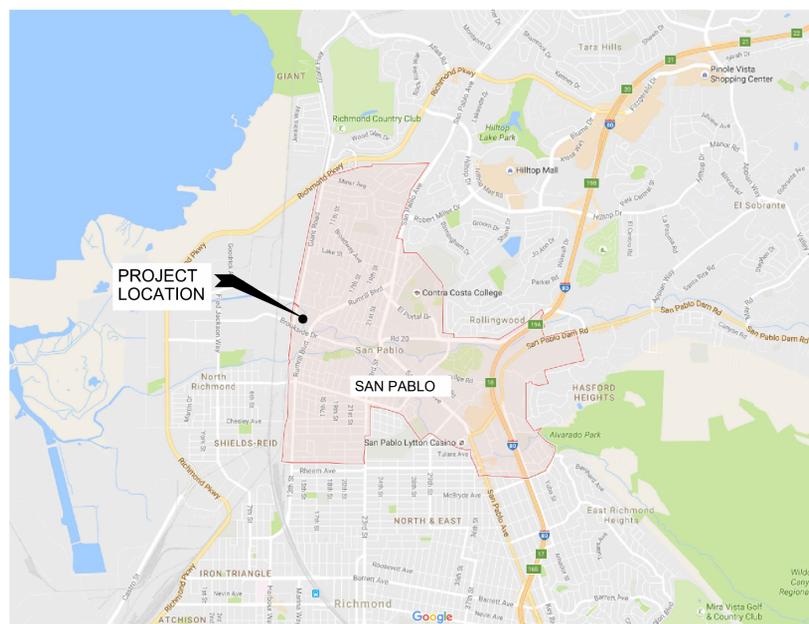


# CITY OF SAN PABLO

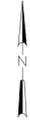
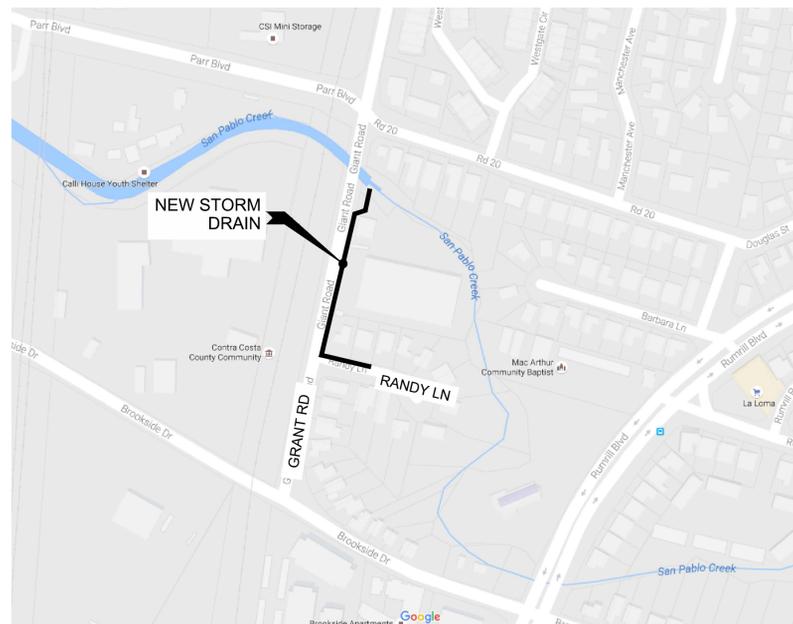
## RANDY LANE DRAINAGE IMPROVEMENT PROJECT

### CONTRACT DRAWINGS

CITY OF SAN PABLO  
13831 SAN PABLO AVE  
SAN PABLO, CA 94806  
(510) 215-3000



VICINITY MAP  
NTS



LOCATION MAP  
NTS

## AUGUST 2017 CONTRACT DOCUMENTS

### DRAWING INDEX

SHEET NUMBER	SHEET TITLE	TITLE
<b>GENERAL</b>		
1	G-1	TITLE SHEET
2	G-2	GENERAL NOTES & BID SCHEDULE
3	G-3	STRUCTURAL NOTES, SURVEY DATUM, LEGEND SHEET
<b>CIVIL</b>		
4	C-1	PLAN & PROFILE
5	C-2	PLAN & PROFILE
6	D-1	DEMOLITION PLAN
7	CD-1	CIVIL DETAILS
8	SD-1	STANDARD DETAILS

NOTE:  
CONTRACTOR SHALL NOT BEGIN WORK  
IN SAN PABLO CREEK AND CONCRETE CHANNEL  
UNTIL CITY ACQUIRES ENCROACHMENT PERMIT  
FROM CONTRA COSTA COUNTY FLOOD  
CONTROL DISTRICT.

### UTILITY REPRESENTATIVES

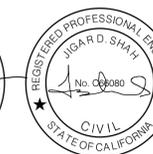
UTILITY	COMPANY	REPRESENTATIVE	TELEPHONE
SEWER	WEST COUNTY WASTEWATER DISTRICT	CECIL VILORIA	(510) 222-6700
WATER	EAST BAY MUD	ALI CHEHRAZI	(510) 287-0669
GAS & ELECTRIC	PGE	KEVIN LIM	(510) 437-2164
COMMUNICATIONS	COMCAST / CABLE COM LLC (OVERHEAD)	FRED BOYD	(925) 383-6507
TELEPHONE	ATT (OVERHEAD)	GREGORY GREENWOOD	(925) 824-5564
PETROLEUM	CHEVRON PITTSBURG	JEREMY GROSS	(925) 753-2003
CREEK/CANAL	CONTRA COSTA COUNTY FLOOD CONTROL DISTRICT	MARIO CONSOLACION	(925) 313-2283



**WATERWORKS**  
ENGINEERS

FOR MORE INFORMATION  
PLEASE CONTACT:

JIGAR SHAH, P.E.  
(916) 780-2888 EXT. 414



**GENERAL NOTES**

- 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.
- DEVIATION FROM THESE PLANS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
- IN THE EVENT THAT ANY CONFLICT BETWEEN ANY PROVISIONS OF THE CONSTRUCTION AGREEMENT OR OF THE CITY OF SAN PABLO (CITY'S) SPECIFICATIONS OR OF THE DRAWINGS SHALL DEVELOP, THE CITY SHALL DETERMINE WHICH PROVISION SHALL PREVAIL AND ITS DECISION SHALL BE FINAL AND BINDING UPON THE PARTIES AND SHALL NOT BE SUBJECT TO ARBITRATION OR REVIEW.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH THE CITY WHEN WORKING WITHIN THE PUBLIC RIGHT-OF-WAY.
- ALL PIPE LENGTHS AND DISTANCES BETWEEN STRUCTURES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE ALONG A HORIZONTAL PLANE.
- ELEVATIONS FOR THE PROPOSED PIPELINE ARE TO THE INVERT OF THE PIPE.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS OR MARKERS DURING CONSTRUCTION.
- 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 ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. PRIOR TO DIGGING ON AND OFF SITE, 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.
- BURIED WATER AND GAS UTILITY PIPELINES 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 ELEVATION OF THE CABLES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH LOCATING, COORDINATION FOR RELOCATION OR REPAIRING OF BURIED WATER AND GAS LINES ALONG THE PIPELINE ALIGNMENT.
- EXISTING OVERHEAD ELECTRIC AND TELEPHONE TRANSMISSION LINES IN THE PROJECT AREA MAY NOT BE 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.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL NOTIFY PACIFIC GAS & ELECTRIC (PG&E) PRIOR TO EXCAVATING CLOSER THAN FIVE 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.
- THE CONTRACTOR SHALL INSTALL ALL TEMPORARY AND PERMANENT SIGNS AS REQUIRED BY CALTRANS ALONG STATE ROADWAYS AND BY THE CITY ALONG STREETS, IN ACCORDANCE WITH THE APPROVED TRAFFIC CONTROL PLAN.
- THE CONTRACTOR SHALL INSTALL PROJECT DESCRIPTION TEMPORARY SIGNS AS REQUIRED BY THE ENGINEER AND CITY.
- MINIMUM PIPE COVER FOR ALL UTILITIES SHALL BE 3 FEET UNLESS LESS COVER IS SPECIFICALLY APPROVED BY THE ENGINEER OR SHOWN ON PLANS.
- LIMITS OF PAVEMENT REMOVAL AND RECONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND AS MODIFIED HEREIN. THE ASPHALT CONCRETE ALONG THE EDGES OF THE TRENCH SHALL BE SAWCUT AND REMOVED TO A STRAIGHT LINE PRIOR TO FINAL PAVING. EXPOSED VERTICAL EDGES WHICH WILL HAVE ASPHALT CONCRETE AGAINST THEM SHALL BE TACKED WITH EMULSION PRIOR TO PLACEMENT OF ASPHALT CONCRETE. IN NO CASE SHALL THE THICKNESS OF THE NEW PAVEMENT SECTION BE LESS THAN THAT OF THE EXISTING PAVEMENT.
- 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. REPLACED FENCE SHALL MATCH EXISTING FENCE TYPE.
- 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.

- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL DEVELOP AND SUBMIT TO THE CITY A 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 DESIGNATED EASEMENT WIDTHS. EXCAVATION WITHIN PAVED AREAS SHALL BE KEPT TO A MINIMUM. SHEETING SHALL BE INSTALLED AS REQUIRED TO PROTECT EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL DEVELOP AND SUBMIT TO THE CITY, 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.
- ADVISORY SIGNS SHALL BE POSTED 21 DAYS IN ADVANCE OF CONSTRUCTION ACTIVITIES.
- ALL NON-APPLICABLE SIGNS SHALL BE COVERED WITH BLACK PLASTIC OR REMOVED.
- 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.
- THE CONTRACTOR SHALL MAINTAIN A MEANS FOR INGRESS/EGRESS TO EACH PROPERTY AT ALL TIMES.
- THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING. ANY EXISTING SURVEY STAKES SHALL NOT BE USED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOTIFY HOME OWNERS WITHIN 500' OF CONSTRUCTION AT LEAST 21 CALENDAR DAYS PRIOR TO CONSTRUCTION THAT CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THEIR AREA. THIS AND ALL OTHER NOTIFICATIONS SHALL BE MADE PER THE SPECIAL PROVISIONS.
- THE EXISTING VEGETATION OUTSIDE OF THE CLEARING LIMITS TO REMAIN SHALL BE PROTECTED FROM DAMAGE. THE CONTRACTOR SHALL INSTALL A 4 FOOT HIGH ORANGE BARRIER FENCE ALONG THE CLEARING LIMITS PRIOR TO CLEARING THE SITE.
- ALL CONSTRUCTION ACTIVITY SHALL BE LIMITED TO STREET RIGHTS-OF-WAY, ON CITY PROPERTY, AND THE CONSTRUCTION LIMITS AS SHOWN ON PLANS.
- THE CONTRACTOR SHALL RESTORE ALL ACCESS ROADS AND STREETS WITHIN THE CONSTRUCTION LIMITS TO PRE-CONSTRUCTION CONDITIONS AND AS SHOW ON THE CONTRACT DRAWINGS.
- ALL TRENCHING AND BACK FILLING SHALL BE IN ACCORDANCE WITH THE CITY STANDARDS AND AS MODIFIED IN THE CONSTRUCTION DETAILS ELSEWHERE IN THE PLANS. TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED. TRENCHES SHALL BE CLOSED OR COVERED AT THE END OF THE WORK DAY.
- FOR ALL TRENCHING EXCAVATIONS 5 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL OBTAIN A PERMIT FROM INDUSTRIAL RELATIONS PRIOR TO BEGINNING ANY EXCAVATION. A COPY OF THIS PERMIT SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
- THE CONTRACTOR SHALL PERMANENTLY PATCH PAVEMENT FOR ALL PARALLEL PAVEMENT DISTURBANCES BY THE END OF EACH WEEK. TEMPORARY STEEL PLATES OR APPROVED EQUAL PATCHES SHALL BE PROVIDED DAILY AND MAINTAINED UNTIL THE PAVEMENT PATCH IS PROVIDED.
- THE CONTRACTOR MUST ACCESS WORK AREAS THROUGH PUBLICLY OWNED RIGHT-OF-WAY (RW) OR THROUGH ACCESS POINTS DELINEATED ON THE PLANS WHERE PUBLIC RIGHT-OF-WAY IS NOT AVAILABLE.
- PRIOR TO ACCEPTANCE OF THE UTILITIES, THE PIPELINES SHALL BE PROPERLY CLEANED OF ALL DEBRIS USING TECHNIQUES THE CITY CONSIDERS ACCEPTABLE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- STRUCTURES NOTED IN THE PLANS AS EXISTING SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND ANY DISCREPANCIES NOTED SHALL BE REPORTED TO THE ENGINEER.
- 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.
- OBSERVATION VISITS (SITE VISITS) BY REPRESENTATIVES OF THE CITY 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 OR VERIFICATION OF CONSTRUCTION.
- ALL SPECIFICATIONS AND CODES NOTED SHALL BE THE LATEST APPROVED EDITIONS AND REVISIONS BY THE AGENCY HAVING JURISDICTION OVER THIS PROJECT.
- CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, UTILITIES, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- CONTRACTOR SHALL COORDINATE WITH CONTRA COSTA COUNTY FLOOD CONTROL DISTRICT (CCFCD) FOR ANY WORK INSIDE SAN PABLO CREEK ROW. CONTRACTOR SHALL OBTAIN A FLOOD CONTROL ENCROACHMENT PERMIT PRIOR TO ENTERING AND DOING WORK IN FLOOD CONTROL DISTRICT SAN PABLO CREEK ROW.

BID ITEM TABLE		
ITEM	QUANTITY	UNIT
1	1	LS
2	1	LS
3	1	LS
4	1	LS
5	2550	SF
6A	102	LF
6B	500	SF
7	200	SF
8	7	EA
9A	120	LF
9B	400	LF
10	3	EA
11	1	LS
12	1	LS
13	1	LS
14A	1	LS
14B	15	CY

DESIGN	J. SHAH
CHECKED	K. ALAGON
DATE	U. SHAH
BY	M. FISHER



**WATERWORKS**  
ENGINEERS  
1405 Victor Avenue, Suite A • Redding, CA 96002 • 530-243-2113



CITY OF SAN PABLO  
RANDY LANE DRAINAGE  
IMPROVEMENT PROJECT

CIVIL  
GENERAL NOTES  
& BID SCHEDULE



DATE	MARCH 2017
PROJECT NUMBER	16-050
DRAWING NUMBER	G-2
SHEET NUMBER	2

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**CONCRETE:**

- STRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
- THE CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGNS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO USE.
- HORIZONTAL CONSTRUCTION JOINTS SHALL BE PREPARED TO EXPOSE CLEAN, SOLIDLY EMBEDDED AGGREGATE OVER THE ENTIRE JOINT INTERFACE.
- 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.
- NO ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.
- CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
- THE REQUIREMENTS FOR CONCRETE MIXES, PLACING, TESTING AND CURING ARE CONTAINED IN ACI 318-14 CHAPTER 26 AND THE PROJECT SPECIFICATIONS.
- PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE II, AGGREGATE SHALL CONFORM TO ASTM C33.
- CONTINUOUS WATERSTOP, AS SPECIFIED, SHALL BE INSTALLED IN ALL CONSTRUCTION JOINTS IN WALLS, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
- 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:**

- PROVIDE LARGER SIZES AND MORE REINFORCING IN ALL SECTIONS OF CONCRETE WHERE REQUIRED BY THE DETAILS ON THE DRAWINGS OR BY THE SPECIFICATIONS.
- CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE: CAST AGAINST EARTH = 3", ALL OTHER CONCRETE SURFACES: #5 BAR OR SMALLER = 1 1/2", #6 BAR OR LARGER = 2".
- ALL BENDS, UNLESS OTHERWISE SHOWN, SHALL BE 90 DEGREE ACI 318 STANDARD HOOKS.
- ALL REINFORCING BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,000 PSI		GR 60 REINF			
BAR SIZE	#4	#5	#6	#7	
LAP SPLICE STRENGTH					
TOP BAR *	20"	24"	29"	48"	
OTHER BAR	15"	19"	22"	37"	

\* 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.

**ABBREVIATIONS**

- AD = AREA DRAIN
- AP = ANGLE POINT
- BC = BASE FLOOD ELEVATION
- BFE = BUILDING CORNER
- BFP = BACK FLOW PREVENTER
- BL = BUILDING LINE
- BOL = BOLLARD
- BW = BOTTOM OF WALL
- C = TOP OF CURB
- CB = CATCH BASIN
- CD = CURB DRAIN
- CL = CENTER LINE
- COL = COLUMN
- CONC = CONCRETE
- DI = DRAIN INLET
- DL = DAYLIGHT
- DW = DRIVEWAY
- EJ = EDGE OF
- EB = ELECTRIC BOX
- EBMUD = EAST BAY MUNICIPAL UTILITY DISTRICT
- EP = EDGE OF PAVEMENT
- F = FENCE
- FDC = FIRE DEPARTMENT CONNECTION
- FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY
- FF = FINISH FLOOR
- FH = FIRE HYDRANT
- FL = FLOW LINE
- G- = GAS LINE
- GB = GRADE BREAK
- GL = GUTTER LIP
- GM = GAS METER
- GP = GATE POST
- GR = GROUND ELEVATION
- GUY = GUY WIRE
- GV = GAS VALVE
- HB = HOSE BIB
- HCR = HANDICAP RAMP
- INV = INVERT
- JP = JOINT POLE
- JP/C = JOINT POLE W/CONDUIT
- MH = MAN HOLE
- P = PAVEMENT
- PP = POWER POLE
- PBB = PACIFIC BELL BOX
- PGE = PACIFIC GAS AND ELECTRIC
- PLNTR = PLANTER
- POC = POINT ON CURVE
- RET = RETURN
- RMP = RAMP
- R&R = REMOVE AND REPLACE
- R/W = RIGHT OF WAY
- S = SIGN
- SD- = STORM DRAIN LINE
- SDMH = STORM DRAIN MANHOLE
- SL = STREET LIGHT
- SLB = STREET LIGHT BOX
- SS- = SANITARY SEWER LINE
- SSMH = SANITARY SEWER MANHOLE
- SSCO = SANITARY SEWER CLEAN OUT
- STR = STAIRS
- T = TREE (APPROX. DIA. @ BREAST HEIGHT)
- T = TOP OF SLOPE
- t = TOE OF SLOPE
- TEL- = UNDERGROUND TELEPHONE LINE
- TIE- = OVERHEAD TELEPHONE & ELECTRIC
- TOC = TOP OF CONCRETE
- TW = TOP OF WALL
- UB = UTILITY BOX
- VD = V-DITCH
- VG = VALLEY GUTTER
- W = BACK OF WALK
- WL- = WATER LINE
- WLK = WALK
- WM = WATER METER
- WV = WATER VALVE

**LEGEND**

- OHW — — — — — OVERHEAD AT&T, PG&E COMCAST ELECTRICAL, CABLE, & TELEPHONE LINES
- GAS — — — — — GAS LINE
- W — — — — — WATER LINE
- SD — — — — — STORM DRAIN LINE
- SS — — — — — SANITARY SEWER LINE
- - - - - (EP) EDGE OF PAVEMENT LINE
- - - - - ROAD LINE
- - - - - GUTTER AND SIDEWALK LINE
- - - - - HYDRAULIC GRADE LINE
- - - - - PROPERTY LINE
- - - - - FLOW LINE

**NOTES:**

- CONTACT ENGINEER FOR ABBREVIATIONS NOT LISTED.
- EXISTING PIPING, EQUIPMENT, AND TOPOGRAPHY IS SHOWN SCREENED AND/OR LIGHT-LINED. NEW PIPING, EQUIPMENT, STRUCTURE, AND FINISHED GRADE IS SHOWN HEAVY-LINED.
- THIS IS A STANDARD LEGEND SHEET. THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.

**SURVEY BENCHMARK NOTES**

- BASIS OF BEARINGS: COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM ZONE III (CCS83), ESTABLISHED BY AN RTK GPS SURVEY, REFERENCED TO THE TOPNET LIVE REAL TIME GNSS REFERENCE NETWORK.
- BENCHMARK: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), ESTABLISHED BY AN RTK GPS SURVEY, REFERENCED TO THE TOPNET LIVE REAL TIME GNSS REFERENCE NETWORK.
- BOUNDARY LINES ARE APPROXIMATE ONLY, AND ARE BASED ON AVAILABLE RECORD INFORMATION.
- SPRINKLER HEADS AND IRRIGATION LINES ARE NOT SHOWN HEREON.

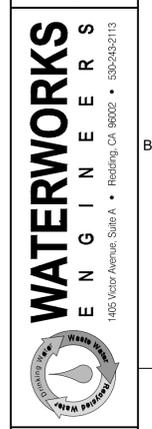
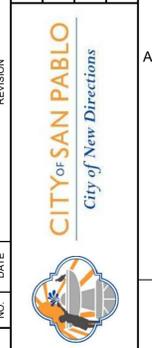
**DISCIPLINE**

LETTER	DISCIPLINE
C	SITE CIVIL
CD	CIVIL DETAIL
D	DEMOLITION PLAN
SD	STANDARD DETAIL

**SECTION AND DETAIL IDENTIFICATION**

- XXXXX - STANDARD DETAILS
- A - DETAIL CALLOUT
- A **DETAIL** - SHEET DETAIL CALLOUT
- NTS

NO.	DATE	REVISION	BY	APP'D



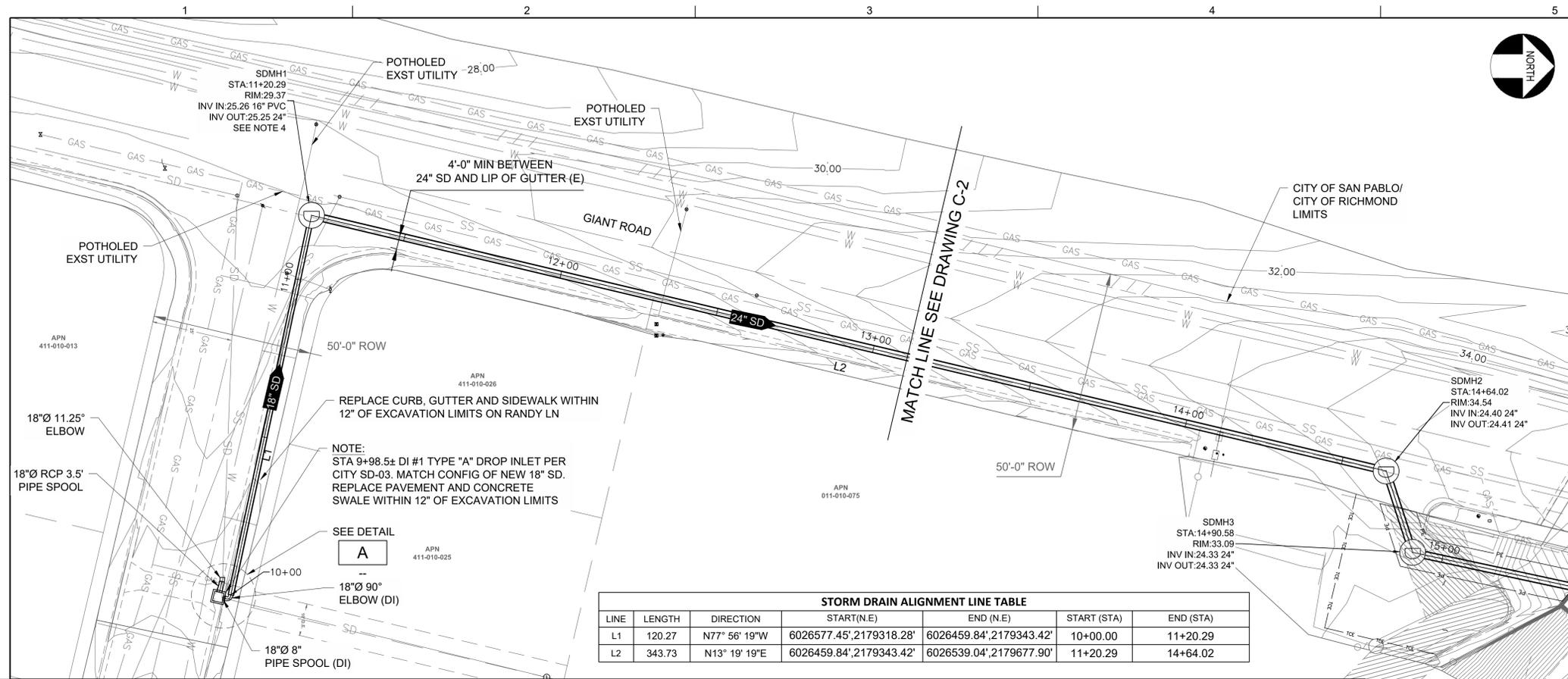
CITY OF SAN PABLO  
RANDY LANE DRAINAGE  
IMPROVEMENT PROJECT

CIVIL  
STRUCTURAL NOTES, ABBREVIATIONS,  
SURVEY BENCHMARK NOTES & LEGEND



DATE	MARCH 2017
PROJECT NUMBER	16-050
DRAWING NUMBER	G-3
SHEET NUMBER	3

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STORM DRAIN ALIGNMENT LINE TABLE						
LINE	LENGTH	DIRECTION	START(N.E)	END (N.E)	START (STA)	END (STA)
L1	120.27	N77° 56' 19"W	6026577.45',2179318.28'	6026459.84',2179343.42'	10+00.00	11+20.29
L2	343.73	N13° 19' 19"E	6026459.84',2179343.42'	6026539.04',2179677.90'	11+20.29	14+64.02

- GENERAL CONSTRUCTION NOTES**
- POHOLED UTILITIES ARE CLEARLY MARKED IN PLAN VIEW AS "POHOLED EXST UTILITIES". POHOLED EXST UTILITIES ARE GIVEN INVERT ELEVATIONS IN PROFILE.
  - ALL EXST UTILITIES SHOWN HERE ARE APPROX. CONTRACTOR SHALL FIELD VERIFY (POTHOLE) ALL EXST UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
  - A MINIMUM OF 12-INCH VERTICAL CLEARANCE IS REQUIRED BETWEEN THE EXISTING UTILITIES AND NEW STORM DRAIN PIPE. IN CASE 12-INCH VERTICAL CLEARANCE IS NOT POSSIBLE, CONTRACTOR SHALL USE DETAIL 3 ON DWG CD-1 AND PER BID ITEM 7.
  - CONTRACTOR MUST PLACE ECCENTRIC MANHOLE AND KEEP IT'S STRAIGHT EDGE TOWARDS EXISTING UTILITIES. BACKFILL AROUND THE MANHOLE USING CLSM AS PER SPECS 02300.
  - RELATIVE COMPACTION SHALL BE TESTED AND COPIES OF THE REPORT PROVIDED DAILY TO THE CITY INSPECTOR.
  - DUST RESULTING FROM CONTRACTOR'S PERFORMANCE OF THE WORK, EITHER INSIDE OR OUTSIDE OF RIGHT OF WAY, SHALL BE CONTROLLED BY THE CONTRACTOR BY EITHER WATER (NOT WASHING) OR DUST CONTROL, OR BOTH, FOR THE ALLEVIATION OR PREVENTION OF DUST NUISANCE.
  - ALL TRENCHES SHALL BE BACKFILLED AND TEMPORARY PAVING PLACED AT THE END OF EACH WORKING DAY.
  - FORTY EIGHT (48) HOUR NOTIFICATION TO INSPECTOR IS REQUIRED PRIOR TO COMMENCEMENT OF WORK.
  - ALL TRENCHING AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH SECTION 306, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
  - SEE C-2 FOR CONSTRUCTION SEQUENCING.

- EBMUD NOTES:**
- FOR RELOCATION OF WATER FACILITIES CONTACT EAST BAY MUNICIPAL UTILITY DISTRICT A MINIMUM OF EIGHT WEEKS PRIOR TO DATE OF REQUIRED WORK. CONTACT AARON SHEAR 510-715-8149 OR ANDREW HAWKSWORTH 510-287-1388.
  - CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEY STAKING FOR LOCATION OF METERS. ELEVATION OF NEW PROPOSED STORM DRAIN INVERTS AND ALL NEW FACILITIES AS REQUIRED TO INSTALL OR RELOCATE WATER INFRASTRUCTURE.
  - EBMUD IS NOT RESPONSIBLE FOR ANY WORK BEYOND THE WATER METER. CONTRACTOR SHALL BE RESPONSIBLE, FOR ALL MATERIALS, LABOR, AND NECESSARY EQUIPMENT TO RECONNECT PRIVATE SERVICE WATER LINE DOWN STREAM OF METER DUE TO RELOCATED OR DAMAGE.
  - IF THE CITY'S CONTRACTOR DAMAGES EBMUD WATER MAINS WHILE PERFORMING WORK FOR THIS PROJECT, THE CITY OR COUNTY OR THEIR CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE MAIN REPAIR AND EBMUD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S DELAY COSTS.

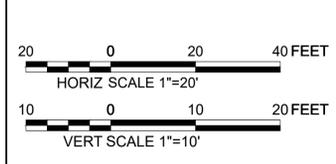
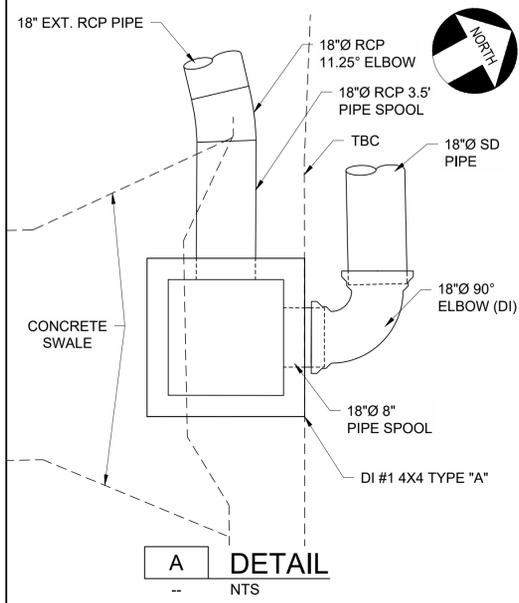
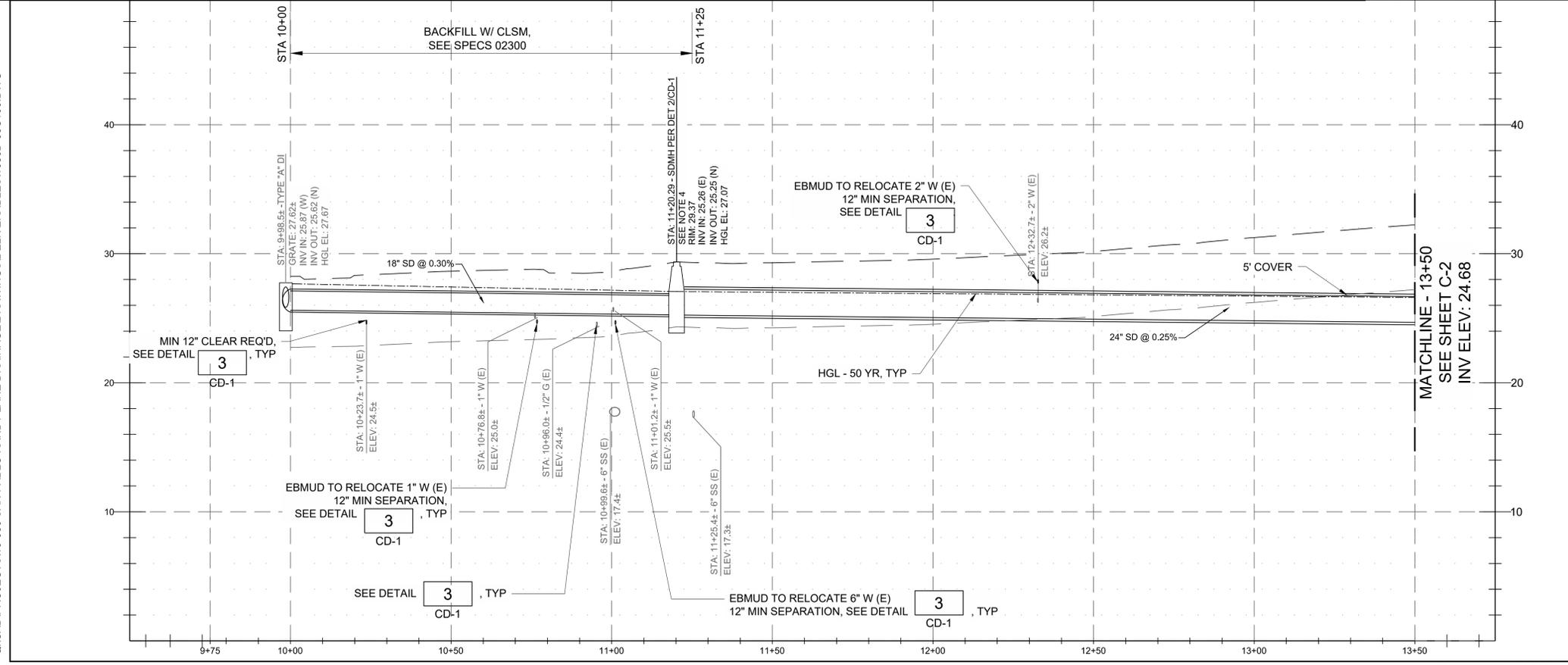
NO.	DATE	REVISION	BY	APP'D

**WATERWORKS ENGINEERS**  
 1405 Victor Avenue, Suite A • Redding, CA 96002 • 530-243-2113

CITY OF SAN PABLO  
 RANDY LANE DRAINAGE  
 IMPROVEMENT PROJECT

CIVIL  
 PLAN AND PROFILE  
 STA 10+00 TO STA 13+50

DATE  
 MARCH 2017  
 PROJECT NUMBER  
 16-050  
 DRAWING NUMBER  
 C-1  
 SHEET NUMBER  
 4



REGISTERED PROFESSIONAL ENGINEER  
 JIGAR D. SHAH  
 No. 00800  
 CIVIL  
 STATE OF CALIFORNIA

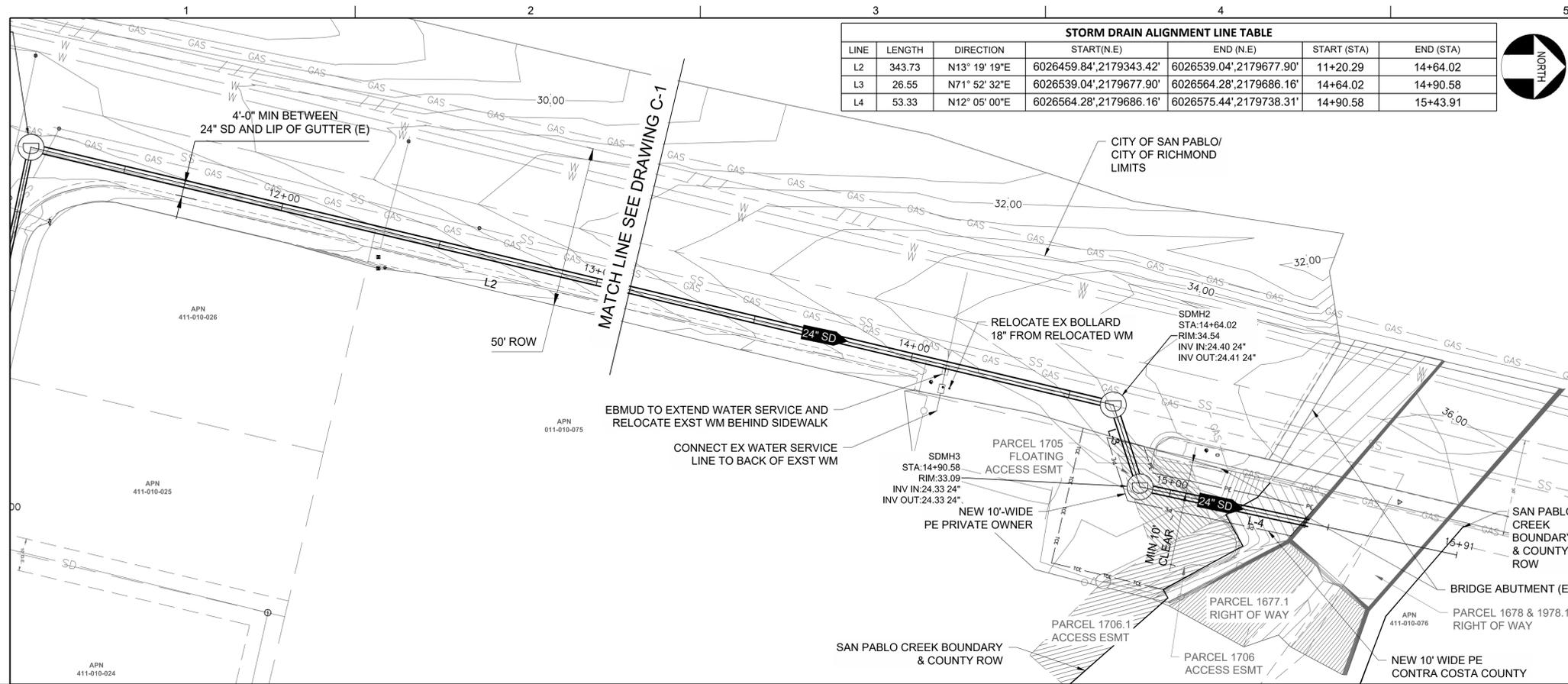
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JOB NUMBER: 16-050

FILENAME: 1650D-05C100.DWG

PLOT DATE: 18-Sep-17

PLOT TIME: 13:20:35



- GENERAL CONSTRUCTION NOTES**
- POTHOLED UTILITIES ARE CLEARLY MARKED IN PLAN VIEW AS "POTHOLED EXIST UTILITIES". POTHOLED EXIST UTILITIES ARE GIVEN INVERT ELEVATIONS IN PROFILE.
  - ALL EXIST UTILITIES SHOWN HERE ARE APPROX. CONTRACTOR SHALL FIELD VERIFY (POTHOLE) ALL EXIST UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
  - A MINIMUM OF 12-INCH VERTICAL CLEARANCE IS REQUIRED BETWEEN THE EXISTING UTILITIES AND NEW STORM DRAIN PIPE. IN CASE 12-INCH VERTICAL CLEARANCE IS NOT POSSIBLE, CONTRACTOR SHALL USE DETAIL 3 ON DWG CD-1 AND PER BID ITEM 7.
  - ECCENTRIC MANHOLE AND KEEP ITS STRAIGHT EDGE TOWARDS EXISTING UTILITIES.
  - RELATIVE COMPACTION SHALL BE TESTED AND COPIES OF THE REPORT PROVIDED DAILY TO THE CITY INSPECTOR.
  - DUST RESULTING FROM CONTRACTOR'S PERFORMANCE OF THE WORK, EITHER INSIDE OR OUTSIDE OF RIGHT OF WAY, SHALL BE CONTROLLED BY THE CONTRACTOR BY EITHER WATER (NOT WASHING) OR DUST CONTROL, OR BOTH, FOR THE ALLEVIATION OR PREVENTION OF DUST NUISANCE.
  - ALL TRENCHES SHALL BE BACKFILLED AND TEMPORARY PAVING PLACED AT THE END OF EACH WORKING DAY.
  - FORTY EIGHT (48) HOUR NOTIFICATION TO INSPECTOR IS REQUIRED PRIOR TO COMMENCEMENT OF WORK.
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- EBMUD NOTES:**
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  - IF THE CITY'S CONTRACTOR DAMAGES EBMUD WATER MAINS WHILE PERFORMING WORK FOR THIS PROJECT, THE CITY OR COUNTY OR THEIR CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE MAIN REPAIR AND EBMUD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S DELAY COSTS.

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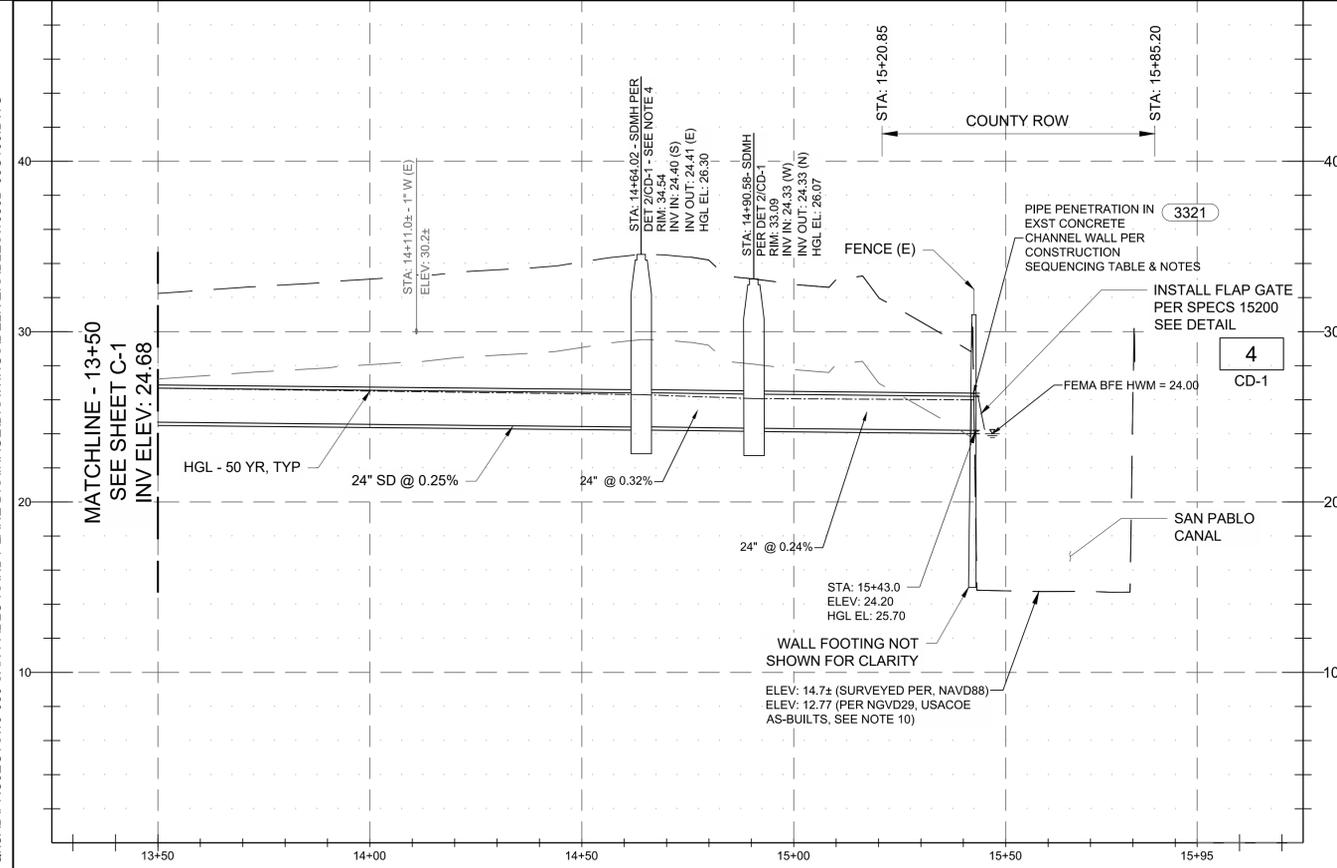


CITY OF SAN PABLO  
 RANDY LANE DRAINAGE  
 IMPROVEMENT PROJECT

CIVIL  
 PLAN AND PROFILE  
 STA 13+50 TO STA END

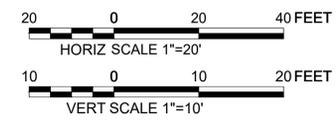
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 PROJECT NUMBER: 16-050  
 DRAWING NUMBER: C-2  
 SHEET NUMBER: 5

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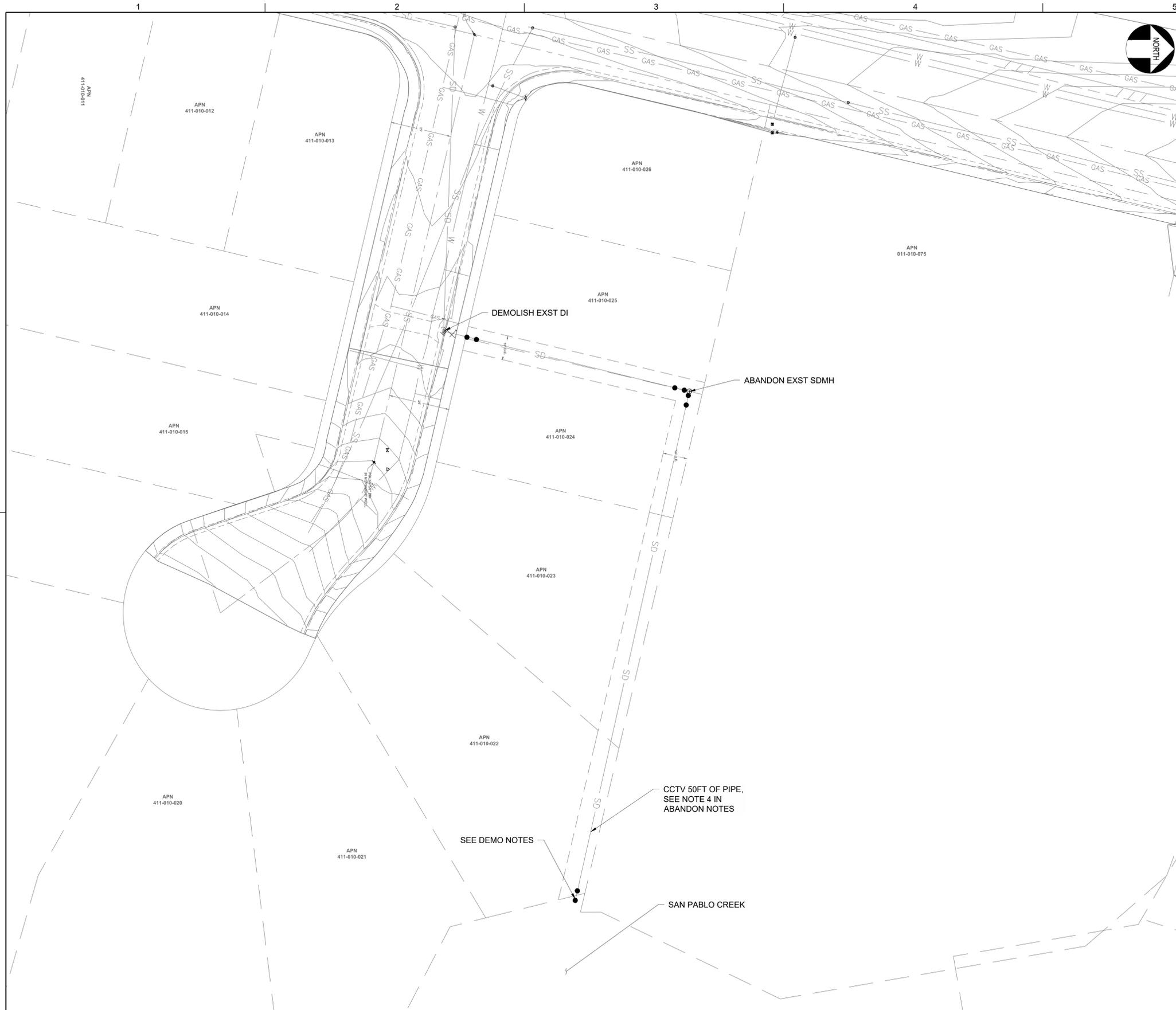


SEQUENCE #	BEGIN TO END STA NO.	DESCRIPTION	COMMENTS
1	14+90 TO WALL	CONSTRUCT FROM SDMH3 TO WALL PIPE	CONTRACTOR SHALL SET UP HANGING SCAFFOLDING IN THE CHANNEL. SAW CUT AND CHIP OUT THE PERIMETER OF WALL. INSTALL REBAR, WALL SLEEVE AND FORMWORK. POUR CONCRETE AND CURE FOR MIN 10 DAYS. REMOVE FORMWORK AND INSTALL SD PIPE. CONTRACTOR SHALL COMPLY WITH CAL-OSHA REGULATIONS AND HAVE FALL PROTECTION WHILE WORKING IN THE CHANNEL OR USING SCAFFOLDING. CONTRACTOR SHALL ALSO PLACE A CATCHMENT IN THE CHANNEL TO CATCH ALL DEBRIS ENTERING IN THE CHANNEL. WORK SHALL BE DONE WHEN CHANNEL IS DRY.
2	11+20 TO 14+90	CONSTRUCT FROM SDMH1 TO SDMH3	CONSTRUCT SD PIPE WITHIN NEW 10' EASEMENT. COMMUNICATE TO PROPERTY OWNER AND PROVIDE ACCESS DURING CONSTRUCTION.
3	10+00 TO 11+20	CONSTRUCT FROM D1 TO SDMH1	R&R EXST DI W/36" TYPE A DI @ STA: 10+00. R&R EXST CURB, GUTTER & SIDEWALK TO CITY STDS & DET 1/CD-1.
4	14+90 TO WALL	CONSTRUCT FROM SDMH3 TO WALL PIPE	CONTRACTOR SHALL SET UP HANGING SCAFFOLDING IN THE CHANNEL. SAW CUT AND CHIP OUT THE PERIMETER OF WALL. INSTALL REBAR, WALL SLEEVE AND FORMWORK. POUR CONCRETE AND CURE FOR MIN 10 DAYS. REMOVE FORMWORK AND INSTALL SD PIPE. CONTRACTOR SHALL COMPLY WITH CAL-OSHA REGULATIONS AND HAVE FALL PROTECTION WHILE WORKING IN THE CHANNEL OR USING SCAFFOLDING. CONTRACTOR SHALL ALSO PLACE A CATCHMENT IN THE CHANNEL TO CATCH ALL DEBRIS ENTERING IN THE CHANNEL. WORK SHALL BE DONE WHEN CHANNEL IS DRY.

- CONSTRUCTION SEQUENCING NOTES:**
- CONTRACTOR MAY SUBMIT AN ALTERNATE WORK SEQUENCE FOR APPROVAL WITHIN THE PROJECT WORK PLAN AS PER SPECS 01130. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION.
  - CONTRACTOR SHALL NOT DISCHARGE ANY MATERIAL OR DEWATER WITHIN THE CHANNEL. IF CONTRACTOR CHOOSES TO DISCHARGE OR DEWATER WITHIN THE CHANNEL, CONTRACTOR MUST OBTAIN ALL REQUIRED PERMITS. SEE CEQA DOCUMENT, PERMITS AND SPECS 01130 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL PERFORM THIS WORK WHEN THE CHANNEL IS DRY WITH NO FLOWING WATER.



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- ABANDON IN PLACE NOTES:**
1. CONTRACTOR SHALL COORDINATE WITH CITY AND HOMEOWNER PRIOR TO BEGINNING OF ABANDON WORK.
  2. REMOVE EXISTING FRAME, COVER, AND CONE BACKFILL SDMH WITH 3/4" CL2 AB COMPACTED AT MINIMUM 90% RELATIVE COMPACTION AS PER SPECS 02220 AND 02300.
  3. SALVAGE EXISTING FRAME AND COVER TO CITY.
  4. PRIOR TO ABANDONMENT OF THE SD PIPE, CONTRACTOR SHALL CCTV THE EXISTING SD PIPE FROM DISCHARGE UP TO 50 FEET UPSTREAM IN THE PIPE. A BIOLOGIST MUST BE PRESENT DURING THE CCTV OPERATION TO VIEW ANY SPECIES PRESENT IN THE PIPE.
  5. ABANDON EXISTING STORM DRAIN PIPE BY PLACING A MINIMUM OF 5-FEET LONG CONCRETE PLUG ON BOTH SIDES OF THE PIPE AS PER SPECS 02220.
- DEMOLITION NOTES**
1. REMOVE EXISTING DRAINAGE INLET AND SALVAGE GRATE TO CITY.
  2. REMOVE FLAPPER GATE FROM PIPE DISCHARGE LOCATION IN THE CREEK AND PLACE A MINIMUM OF 5 FEET CONCRETE PLUG IN EXISTING PIPE.
  3. PLACE A CAP ON EXISTING PIPE AFTER PLACING CONCRETE PLUG AS PER SPECS 02220.

- LEGEND**
- ABANDONED LINE - ●●●●●●●●●●
  - DEMOLISH / REMOVE LINE - ~~~~~~



NO.	DATE	REVISION	BY	APP'D

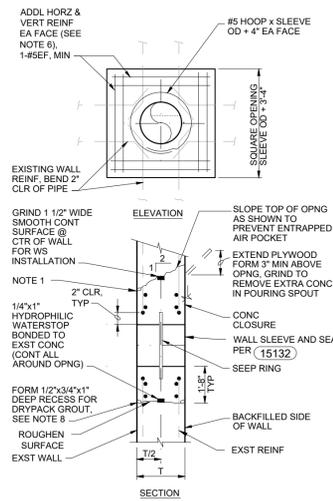
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CITY OF SAN PABLO  
 RANDY LANE DRAINAGE  
 IMPROVEMENT PROJECT

CIVIL  
 DEMOLITION PLAN

DATE	MARCH 2017
PROJECT NUMBER	16-050
DRAWING NUMBER	D-1
SHEET NUMBER	6

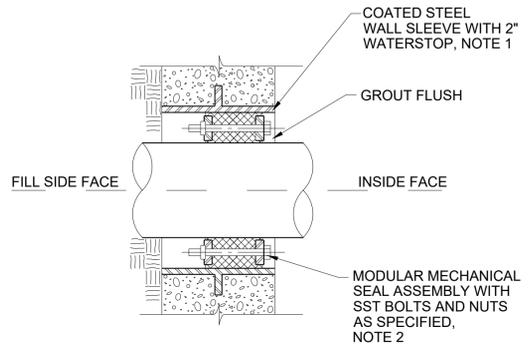




**PIPE PENETRATION AT EXISTING WALL**  
NTS

3321

- NOTES:**
1. SAW-CUT 1-INCH DEEP x PIPE SLEEVE + 3'-4" SQUARE SCORE LINE ON EACH FACE OF WALL. (VERIFY DEPTH OF CUT TO CLEAR REINFORCING.) INCREASE HEIGHT AS NOTED AT TOP ON BACKFILLED FACE FOR POURING.)
  2. CHIP TO REMOVE THE CONCRETE WITHIN THE SCORE LINE, WHILE PRESERVING THE EXISTING WALL REINFORCING.
  3. CUT EXISTING REINFORCING AT CENTER OF OPENING AND BEND TO CLEAR SLEEVE.
  4. GRIND 1 1/2" WIDE x CONC. SMOOTH SURFACE ALL AROUND THE OPENING AT CENTER OF WALL. CLEAN SURFACES AND BOND CONTINUOUS HYDROPHILIC WATERSTOP IN PLACE.
  5. INSTALL WALL SLEEVE (COAT CONCRETE EXCAVED PORTION OF SLEEVE WITH SPECIFIED COATING SYSTEM.)
  6. INSTALL ADDITIONAL REINFORCING EACH FACE, EACH SIDE, ABOVE AND BELOW SLEEVE. HORIZONTAL REINFORCING TO HAVE COMBINED AREA EQUAL TO AREA OF HORIZONTAL REINFORCING CUT. VERTICAL REINFORCING TO HAVE COMBINED AREA EQUAL TO AREA OF VERTICAL REINFORCING CUT.
  7. SOAK CONCRETE SURFACES AND WITHIN 15-MINUTES CAST CONCRETE CLOSURE. (CONCRETE CLOSURE MUST BE CAST BEFORE HYDROPHILIC WATERSTOP EXPANDS.) FORM GROOVE ON ALL SIDES OF OPENING EXCEPT AT TOP ON THE POUR SIDE.
  8. CLEAN SURFACES OF FORMED GROOVE WITH POWER WIRE BRUSH OR SANDBLASTING AND DRY-PACK WITH NON-SHRINK GROUT AFTER NEW CONCRETE MIN 28-DAYS OLD.



- NOTES:**
1. COORDINATE SIZE OF WALL SLEEVE WITH MODULAR MECHANICAL SEAL MANUFACTURER TO CREATE A LEAK PROOF ASSEMBLY TO 20 PSI.
  2. INSTALL PER MANUFACTURERS INSTRUCTIONS.

**WALL SLEEVE WITH MODULAR MECHANICAL SEAL**  
NTS

15132

NO.	DATE	REVISION	BY	APP'D
			J. SHAH	
			K. ALAGON	
			J. WELLOGG	
			M. FISHER	



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CITY OF SAN PABLO  
RANDY LANE DRAINAGE  
IMPROVEMENT PROJECT

CIVIL  
STANDARD DETAILS



DATE  
MARCH 2017  
PROJECT NUMBER  
16-050  
DRAWING NUMBER  
SD-1  
SHEET NUMBER  
8