CONTACT INFORMATION

WNER MARINA COAST WATER DISTRICT

2840 FOURTH AVENUE MARINA, CA 93933

MICHAEL WEGLEY (831) 883-5925

CIVIL ENGINEER

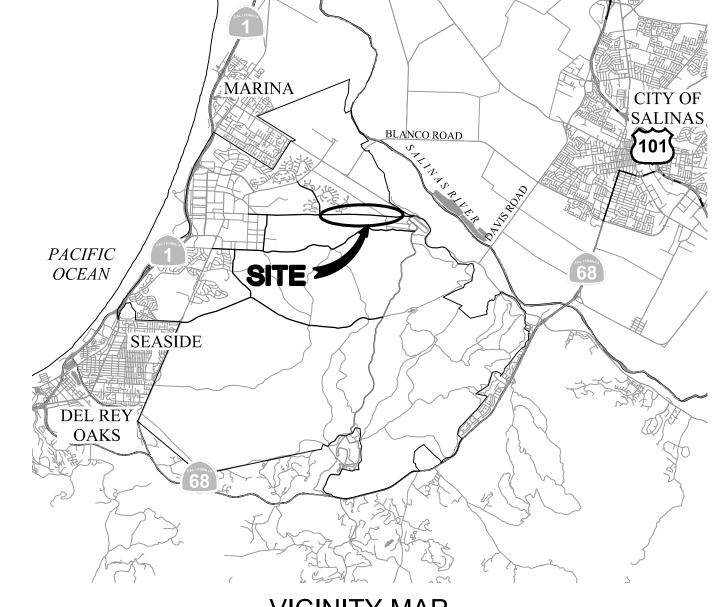
WHITSON ENGINEERS 6 HARRIS COURT MONTEREY, CA 93940

ANDREW HUNTER, RCE 67730 (831) 649-5225

INTER-GARRISON ROAD MARINA COAST WATER DISTRICT

WATER DISTRIBUTION PIPELINE PROJECT

(CIP OW-0206) APRIL 2018



VICINITY MAP

BENCHMARK

NGS BENCHMARK GU2130 (L813 RESET),
22' WEST OF THE CENTERLINE OF A U.S. ARMY SPUR TRACK,
ABOUT 40' NORTH OF THE NORTH END OF A CUT FOR SPUR
TRACK, ON THE NORTH SIDE OF A FOOT PATH,
VERTICAL 1ST ORDER, CLASS 1, ELEVATION 145.94 (NAVD 88)

SHEET INDEX

1 COVER SHEET

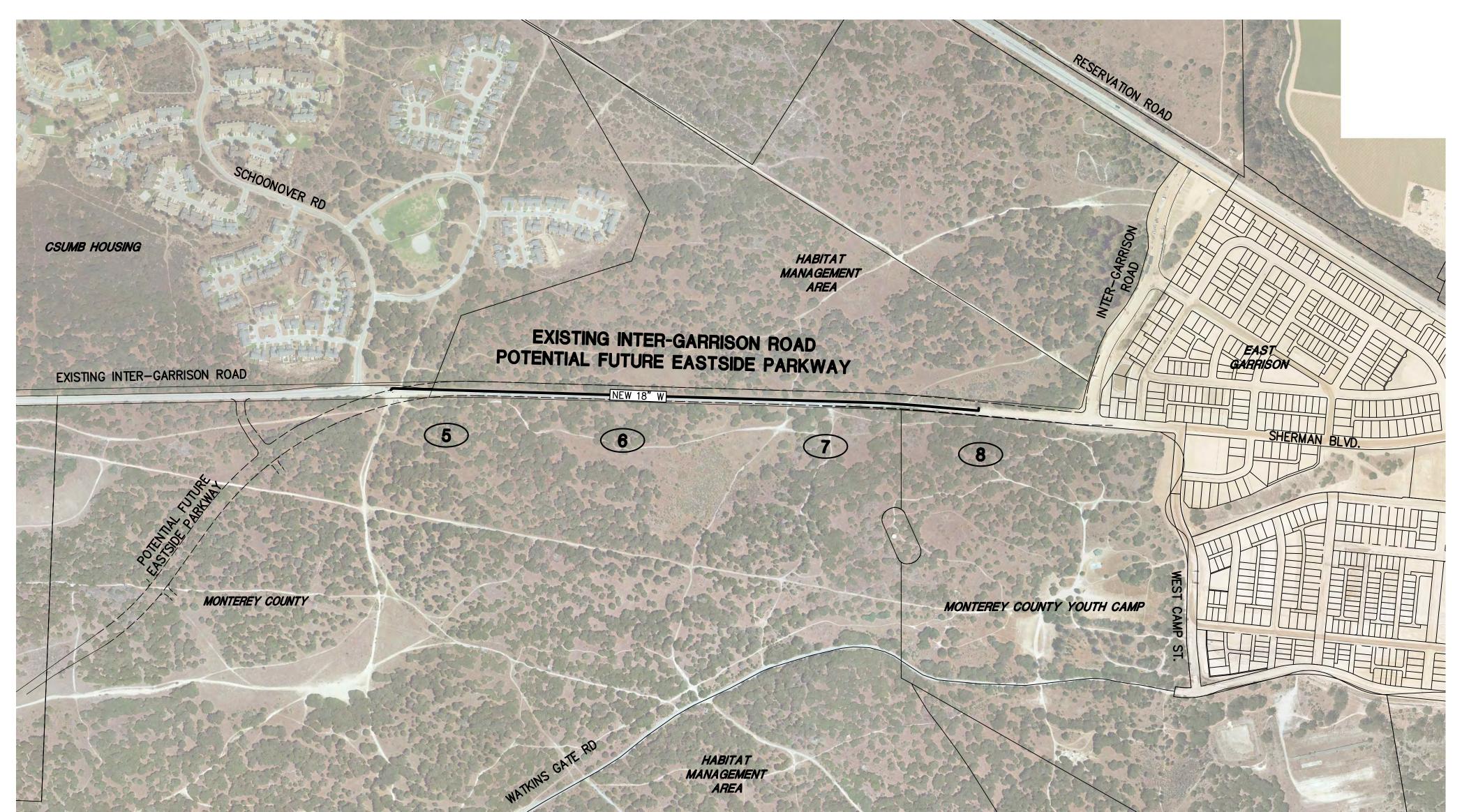
CIVIL NOTES & SPECIFICATIONS
THRUST RESTRAINT DETAILS

4 MCWD STANDARD DETAILS

PLAN AND PROFILE STA. 9+00 - 17+50 PLAN AND PROFILE STA. 17+50 - 30+00

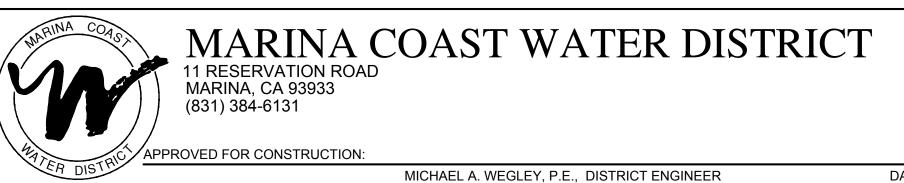
7 PLAN AND PROFILE STA. 30+00 - 42+00

8 PLAN AND PROFILE STA. 42+00 - 51+00



KEY MAP1" = 400'

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2018 – 1: erev Projec					
- 10, 2 Monte	NO.	REVISION DESCRIPTION	DATE	APPR	





INTER-GARRISON ROAD WATER LINE
COVER SHEET

СИГГТ	4/9/18	DATE:
SHEET	1"=400'	SCALE:
ı	KCH	DESIGN:
0F 8	KCH	DRAWN:
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GENERAL

- 1. CONSTRUCTION CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL(S) HARMLESS FROM ANY AND ALL LIABILITY, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL(S).
- 2. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH:

D. THE PROJECT PLANS AND SPECIFICATIONS

- A. ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, ORDINANCES, AND RULES, INCLUDING WITHOUT LIMITATION:
 - CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE CODE (CAL-OSHA)
 - CALIFORNIA CODE 4216 PROTECTION OF UNDERGROUND INFRASTRUCTURE MARINA COAST WATER DISTRICT STANDARD PLANS AND SPECIFICATIONS (LATEST EDITION)
- B. THE 2016 CALIFORNIA BUILDING STANDARDS CODE (CCR TITLE 24), WITH AMENDMENTS ADOPTED BY THE JURISDICTION HAVING AUTHORITY
- C. CALIFORNIA EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
- E. THE 2015 EDITION OF "STANDARD SPECIFICATIONS," STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS), AS AMENDED BY THE MOST CURRENT "REVISED STANDARD SPECIFICATIONS". THE "STANDARD SPECIFICATIONS" AND "REVISED STANDARD SPECIFICATIONS" CAN BE DOWNLOADED FOR FREE FROM
- http://www.dot.ca.gov/hq/esc/oe/construction_standards.html
- F. THE 2015 EDITION OF "STANDARD PLANS," STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS), AS AMENDED BY THE MOST CURRENT "REVISED STANDARD PLANS". THE "STANDARD PLANS" AND "REVISED STANDARD PLANS" CAN BE DOWNLOADED FOR FREE FROM http://www.dot.ca.gov/hq/esc/oe/construction_standards.html
- 3. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL CURRENTLY APPLICABLE SAFETY LAWS OF ALL APPLICABLE JURISDICTIONAL BODIES. FOR INFORMATION REGARDING THIS PROVISION, THE CONTRACTOR IS DIRECTED TO CONTACT STATE OF CALIFORNIA, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, SALINAS, CALIFORNIA AT PHONE (831) 443-3050.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES. SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN THE CONSTRUCTION AREA.
- 5. ESTIMATED START: 06/01/2018, ESTIMATED COMPLETION: 08/31/2018
- 6. IF, DURING THE COURSE OF CONSTRUCTION, CULTURAL, ARCHAEOLOGICAL, HISTORICAL OR PALEONTOLOGICAL RESOURCES ARE UNCOVERED AT THE SITE (SURFACE OR SUBSURFACE RESOURCES) WORK SHALL BE HALTED IMMEDIATELY WITHIN 50 METERS (165 FEET) OF THE FIND UNTIL A QUALIFIED PROFESSIONAL ARCHEOLOGIST CAN EVALUATE IT. MONTEREY COUNTY RMA - PLANNING AND A QUALIFIED ARCHAEOLOGIST (I.E. AN ARCHAEOLOGIST REGISTERED WITH THE REGISTER OF PROFESSIONAL ARCHAEOLOGISTS) SHALL BE IMMEDIATELY CONTACTED BY THE RESPONSIBLE INDIVIDUAL PRESENT ON-SITE. WHEN CONTACTED, THE PROJECT PLANNER AND THE ARCHAEOLOGIST SHALL IMMEDIATELY VISIT THE SITE TO DETERMINE THE EXTENT OF THE RESOURCES AND TO DEVELOP PROPER MITIGATION MEASURES REQUIRED FOR THE DISCOVERY

EXISTING CONDITIONS

- 1. TOPOGRAPHY IS BASED ON AN AERIAL SURVEY PREPARED BY WHITSON ENGINEERS IN JULY 2010.
- 2. ALL "MATCH" OR "JOIN" CALLOUTS ON THE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IN THE CASE OF ANY FIELD DISCREPANCY.
- 3. THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL DEVIATIONS FROM THE WORK PROPOSED IN THESE PLANS AND SPECIFICATIONS, AND A RECORD DRAWING SET SHALL BE PREPARED AND PROVIDED TO THE ENGINEER AT THE COMPLETION OF WORK. CHANGES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER.
- 4. THE EXISTENCE, LOCATION AND ELEVATION OF ANY UNDERGROUND FACILITIES ARE SHOWN ON THESE PLANS IN A GENERAL WAY ONLY. NOT ALL UTILITIES MAY BE SHOWN. IT IS MANDATORY THAT THE CONTRACTOR EXPOSE AND VERIFY THE TOP AND BOTTOM OF ALL UTILITIES PRIOR TO ANY WORK ON SYSTEMS WHICH MAY BE AFFECTED BY THE EXISTING UTILITY'S LOCATION. IT IS THE RESPONSIBILITY AND DUTY OF THE CONTRACTOR TO MAKE THE FINAL DETERMINATION AS TO THE EXISTENCE LOCATION AND ELEVATION OF ALL UTILITIES AND TO BRING ANY DISCREPANCY TO THE ATTENTION OF THE ARCHITECT.
- 5. BOUNDARY INFORMATION SHOWN IS FROM RECORD DATA. A BOUNDARY SURVEY WAS NOT PERFORMED AS A PART OF THIS WORK. THERE MAY BE EASEMENTS OR OTHER RIGHTS, RECORDED OR UNRECORDED, AFFECTING THE SUBJECT PROPERTY WHICH ARE NOT SHOWN HEREON.

GRADING AND DRAINAGE

REVISION DESCRIPTION

NO.

- 1. ONSITE GRADING AND EARTHWORK, SITE PREPARATION, EXCAVATION, TRENCHING AND COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER DESIGNATED BY THE OWNER. ALL GRADING AND EARTHWORK SHALL BE DONE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
- 2. SHOULD THE RESULTS OF ANY COMPACTION TEST FAIL TO MEET THE MINIMUM REQUIRED DENSITY AS SPECIFIED BY MCWD, THE DEFICIENCY SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE EXPENSE OF RETESTING SUCH AREAS SHALL ALSO BE BORNE BY THE CONTRACTOR, AT NO COST TO
- 3. RELATIVE COMPACTION SHALL BE EXPRESSED AS A PERCENTAGE OF THE MAXIMUM DRY DENSITY OF THE MATERIAL AS DETERMINED BY ASTM TEST D-1557. IN-PLACE DENSITY TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM TESTS D-1556 AND D-6938.
- 4. SURPLUS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE SITE IN A LEGAL MANNER.
- 5. ALL RE-COMPACTED AND ENGINEERED FILL SOILS SHALL BE COMPACTED WITHIN 2 PERCENT OF THE LABORATORY OPTIMUM MOISTURE CONTENT FOR THE SOIL.

| DATE | APPR

MCWD STANDARD WATER NOTES:

- 1. THE WATER SYSTEM AS SHOWN ON THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD PLANS AND SPECIFICATIONS OF THE MARINA COAST WATER DISTRICT. CONTRACTOR SHALL KEEP A COPY OF THE STANDARD SPECIFICATIONS AND DRAWINGS ON THE JOBSITE AT ALL TIMES.
- 2. THE MARINA COAST WATER DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO COMMENCING WORK ON THE WATER SYSTEM. PHONE (831) 883-5929 FOR INSPECTION. A PRE-CONSTRUCTION MEETING SHALL BE HELD AT LEAST 24 HOURS BEFORE STARTING CONSTRUCTION.
- 3. ALL WATER SYSTEM WORK SHALL CONFORM TO THE DISTRICT'S "STANDARD PLANS AND SPECIFICATIONS," AS LAST REVISED. THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS AND STANDARD SPECIFICATIONS ON THE JOB AT ALL TIMES.
- 4. A CONFERENCE OF REPRESENTATIVES FROM AFFECTED AGENCIES AND THE CONTRACTOR SHALL BE HELD ON THE JOB SITE 24 HOURS PRIOR TO START OF WORK.
- 5. DOMESTIC WATER MAINS SHALL BE INSTALLED AS STAKED BY THE DISTRICT'S SURVEYOR AT A MINIMUM 50-FOOT STATIONING, IF THERE ARE NO EXISTING CURBS.
- ALL NUTS AND BOLTS, SHALL BE GRADE 316 STAINLESS STEEL. ALL BURIED FLANGES, VALVES AND
- 7. ANY WATER SERVICE FOUND TO BE WITHIN A DRIVEWAY OR SIDEWALK SHALL BE REMOVED AT
- CORPORATION VALVE AND REINSTALLED AT THE PROPER LOCATION, AT NO COST TO THE DISTRICT.
- 8. ALL MAIN LINE VALVES SHALL BE MAINTAINED SO AS TO BE ACCESSIBLE DURING TRACT DEVELOPMENT, AND ALL VALVE STEM TOPS HAVING OVER 48 INCHES OF COVER MAY REQUIRE AN EXTENSION AS PER MCWD STANDARD PLAN W-7.
- THE TOP OF THE PIPE SHALL BE A MINIMUM OF 42 INCHES OF COVER FROM THE FINISHED GRADE IN PAVED SECTIONS, UNLESS INDICATED OTHERWISE ON THE JOB PLANS OR DIRECTED OTHERWISE BY THE DISTRICT BECAUSE OF UNUSUAL CONDITIONS. PIPE SHALL BE BEDDED AND BACKFILLED PER MCWD STANDARD PLAN W-12.
- 10. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROPRIATE DETAILS HEREIN AND INSTALLED BEHIND CURBS AND SIDEWALKS WHERE THE SIDEWALKS ARE ADJACENT TO THE CURBS. FIRE HYDRANTS SHALL BE PER THE DISTRICT'S SPECIFICATIONS AND SHALL HAVE A CONCRETE PAD POURED AROUND THEM. ALL FIRE HYDRANTS SHALL BE SET WITH THE BOTTOM FLANGE 4 INCHES ABOVE THE CONCRETE PAD OR SIDEWALK.
- 11. NO FACILITY IS TO BE BACKFILLED UNTIL INSPECTED BY THE DISTRICT.

FITTINGS SHALL BE WRAPPED WITH 10-MIL POLYETHYLENE SHEET

- 12. SHUT DOWN OR TAPPING OF EXISTING DOMESTIC WATERLINES TO FACILITATE CONNECTION TO EXISTING FACILITIES SHALL BE COORDINATED WITH THE DISTRICT AT LEAST 24 HOURS IN ADVANCE. ANY RELOCATION OF EXISTING FACILITIES IS SUBJECT TO APPROVAL OF THE DISTRICT ENGINEER.
- 13. NO TAPS OR OTHER CONNECTIONS SHALL BE MADE TO EXISTING DISTRICT WATER MAINS PRIOR TO CONDUCTING AN APPROVED PRESSURE AND BACTERIOLOGICAL TEST ON THE NEW WATER DISTRIBUTION SYSTEM. TAPPING SLEEVES SHALL BE PRESSURE TESTED IN AN APPROVED MANNER IN THE FIELD IN THE PRESENCE OF THE DISTRICT INSPECTOR, PRIOR TO TAPPING THE MAIN LINE. TAPPING OF THE MAIN LINE SHALL NOT PROCEED UNLESS A DISTRICT INSPECTOR IS PRESENT.
- 14. ALL WATER SERVICES SHALL BE INSTALLED PER THE DISTRICT'S STANDARD SPECIFICATIONS. ALI METERS SHALL BE INSTALLED IN GRASS OR PLANTER AREAS AND ACCESSIBLE BY VEHICLE. ANY SERVICES LOCATED IN SIDEWALKS ARE SUBJECT TO THE APPROPRIATE GOVERNING AGENCY AND DISTRICT APPROVAL. ANY METERS LOCATED IN BANKS OF 4 SHALL BE MANIFOLDED PER MCWD STANDARD PLAN W-3. ALL METER REGISTERS AND LIDS SHALL BE MARKED WITH ADDRESS IDENTIFICATION.
- 15. WHERE METERS AND METER BOXES ARE LOCATED WITHIN SLOPES, THE ANGLE METER STOPS SHALL BE SO LOCATED THAT THE METERS AND BOXES WILL BE PARALLEL AND FLUSH, RESPECTIVELY, WITH THE FINISHED STREET SURFACE. A RETAINING WALL MAY BE REQUIRED AROUND THE METER BOX.
- 16. THE APPLICANT SHALL FURNISH AND INSTALL THE SERVICE CONNECTIONS BETWEEN WATER MAINS AND METERS AND METER BOXES. WATER SERVICES SHALL BE INSTALLED TO THE PROPERTY LINE PRIOR TO PAVING OF THE STREET.
- 17. CURB FACE SHALL BE INSCRIBED WITH "W" INDICATING LOCATIONS OF ALL DOMESTIC WATER SERVICES.
- 18. ALL VALVES SHALL BE LOCATED OFF THE TEE UNLESS OTHERWISE APPROVED BY THE DISTRICT. AT INTERSECTIONS AND BUS STOPS WITH CONCRETE PADS, THE MAIN LINE SHALL BE ROPED TO AVOID CROSS GUTTER CONFLICT.
- 19. ALL WATER METERS WILL BE FURNISHED BY THE MARINA COAST WATER DISTRICT FOLLOWING RECEIPT OF APPLICATION AND DEPOSIT. THE DISTRICT WILL INSTALL WATER METERS UP TO 2 INCHES. THE CONTRACTOR SHALL INSTALL WATER METERS 3 INCHES AND GREATER. THE CONTRACTOR SHALL PLACE ALL PIPING PER DISTRICT PLANS AND PROPERLY LOCATE THE METER BOXES TO GRADE PRIOR TO INSTALLATION OF THE METERS BY THE DISTRICT.
- 20. ANY DISTRICT WATER USED FOR CONSTRUCTION SHALL BE METERED WITH A CONSTRUCTION METER OBTAINED FROM THE DISTRICT.
- 21. AN ENCROACHMENT PERMIT FROM THE COUNTY OR CITY HAVING JURISDICTION IS REQUIRED PRIOR TO ANY WORK WITHIN PUBLIC RIGHT-OF-WAY OR EASEMENT.
- 22. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. APPROVAL OF THESE PLANS BY THE DISTRICT DOES NOT GUARANTEE THE ACCURACY, COMPLETENESS, LOCATION, OR THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEANS NECESSARY TO PROTECT THOSE UTILITY LINES NOT SHOWN ON THESE PLANS.
- 23. THE APPLICANT SHALL REMOVE TO THE SATISFACTION OF THE MCWD INSPECTOR ALL UNUSED WATER STUBS AND/OR SERVICES THAT WERE PROVIDED TO THE PROJECT SITE.

DEMOLITION

REPLACEMENT OF PAVEMENTS

PIPE TRENCHING WORK IN EXISTING IMPROVED STREETS SHALL INCLUDE REPLACEMENT OF EXISTING PAVEMENT. THE THICKNESS OF THE NEW AC AND AB SHALL BE AT A MINIMUM EQUIVALENT TO THE EXISTING AC AND AB THICKNESS. TRENCH PATCH SHALL EXTEND MIN 6" BEYOND TRENCH WALL.

SAWCUTTING

SAWCUTTING SHALL BE DONE SO AS TO PROVIDE A STRAIGHT, NEAT EDGE. WHERE CONSTRUCTION OPERATIONS CAUSE DAMAGE BEYOND THE LIMITS OF THE SAWCUT LINE, THE DAMAGED AREA SHALL ALSO BE REMOVED AND REPLACED TO A SAWCUT EDGE.

SAWCUT SLURRY SHALL BE VACUUMED AND NOT BE ALLOWED TO RUN INTO CATCH BASINS.

ASPHALT CONCRETE PAVEMENT SHALL BE SAWCUT AT THE LOCATIONS INDICATED BY THE ENGINEER AND AS SHOWN ON THE PLANS. SAWCUT LINES SHALL BE PARALLEL OR PERPENDICULAR TO AN ADJACENT CURB LINE OR PAVEMENT EDGE WHERE POSSIBLE. SAWCUT SHALL BE TO A MINIMUM DEPTH OF 2 INCHES.

UTILITY REMOVAL AND ABANDONMENT

PRECAUTION SHOULD BE TAKEN DURING GRADING AND UTILITY REMOVAL ACTIVITIES TO PREVENT BREAKAGE OF ACP OR TRANSITE PIPES AS NOT TO RENDER THE PIPE MATERIAL FRIABLE. WHEN ACP OR TRANSITE PIPE IS ENCOUNTERED, APPROPRIATE ACTION FOR REMOVAL AND DISPOSAL SHOULD BE

WATER SYSTEM

BURIED WATER PIPE AND FITTINGS

PVC PIPE: AWWA C-900-97, PC 305 (DR-14) DUCTILE IRON PIPE: AWWA C-151, CLASS 250, CEMENT MORTAR LINED PER AWWA C-104 DUCTILE IRON FITTINGS: AWWA C-110 OR C-153, CLASS 250, WITH RUBBER GASKETED JOINT PER AWWA C-111. FITTING SHALL BE CEMENT MORTAR LINED PER AWWA C-104.

THRUST RESTRAINT

POTENTIAL

FUTURE MEDIAN

,-----

-- / SCALE: 1" = 6'

OG -

SECTION - FILL CONDITION

RESTRAIN ALL PIPE JOINTS PER DETAIL ON SHEET 3 USING FIELD LOK 350 GASKETS. RESTRAIN ALL FITTINGS USING EBAA MEGALUG SERIES 1100.

LEGEND

EXISTING PROPOSED —— — FUTURE GROUND CONTOUR EXISTING GROUND CONTOUR EASEMENT LINE CENTER LINE CONTROL POINT BENCHMARK BORE HOLE / BORING LOCATION ⊕ BH−1 $\times_{210.6}$ SPOT GRADE • 12" OAK TREE DRIP LINE WATER LINE

WATER VALVE/ARV BLOW OFF VALVE FIRE HYDRANT STORM DRAIN (FUTURE CONSTRUCTION) CONSTRUCTION)

STORM DRAIN MANHOLE (FUTURE CATCH BASIN (FUTURE CONSTRUCTION) OVERHEAD UTILITY LINES EASTSIDE PARKWAY AC (FUTURE

CONSTRUCTION)

DIP (E) EG **ELEC** ELEV EQ. ETW EDGE OF TRAVELED WAY EVC END VERTICAL CURVE EVCE EVC ELEVATION **EVCS** EVC STATION E.W. ΕX FG FΗ GB GBE GBS GRT GV EXISTING INTER-GARRISON ROAD AC

ABBREVIATIONS

AREA DRAIN

BEGIN CURVE

BLOW OFF VALVE

CURB AND GUTTER

BVC ELEVATION

BVC STATION

CABLE TV

CENTERLINE

CLEANOUT

CONCRETE

CONSTRUCT

CONTINUOUS

DRAIN INLET

DUCTILE IRON PIPE

DIAMETER

EXISTING

ELECTRIC

EQUAL

ELEVATION

EACH WAY

FACE OF CURB

EXISTING

END CURVE

EXISTING GRADE

CLASS

CLEAR

APPROX APPROXIMATE

AGGREGATE BASE

ASPHALT CONCRETE

AIR RELEASE VALVE

AGGREGATE SUBBASE

BEGIN VERTICAL CURVE

CURB, GUTTER AND SIDEWALK

CORRUGATED METAL PIPE

DEMOLISH AND DISPOSE OF

AB

ASB

BO

BVC

BVCE

BVCS

C&G

CATV

CGSW

CLR

CMP

CO

CONC

CONST

CONT

DEMO

DI

DIA

PLUS OR MINUS; APPROX

FINISHED GRADE FIRE HYDRANT FLOWLINE FINISHED SURFACE GRADE BREAK GB ELEVATION GB STATION GRATE GAS VALVE/VAULT HIGH POINT **HORIZ** HORIZONTAL INVERT INV JOINT UTILITY POLE LINEAR FEET LOW POINT LEFT MATCH EXISTING GRADE MAXIMUM MCWD

MARINA COAST WATER DISTRICT MANHOLE **MINIMUM** NOT IN CONTRACT (BY OTHERS) ON CENTER ORIGINAL GROUND POINT OF CURVATURE P.O.C. POINT OF CONNECTION POWER POLE POINT OF REVERSE CURVATURE PRESSURE REDUCING VALVE POLYVINYL CHLORIDE POINT OF VERTICAL INTERSECTION RADIUS RELATIVE COMPACTION RIGHT STORM DRAIN

STA STATION STANDARD TEMPORARY BENCH MARK TOP OF CURB TOP OF FLUSH CURB TOP OF GRATE TOP OF PIPE TYPICAL

UNDERGROUND U.O.N. UNLESS OTHERWISE NOTED UTILITY POLE UNKN UNKNOWN VARIES VERTICAL WATER WATER METER WATER VALVE

POTENTIAL -POTENTIAL FUTURE ROADWAY-FUTURE MEDIAN EXISTING INTER-GARRISON ROAD _____ 42" MIN POTENTIAL ─ COVER - FUTURE EASTSIDE PARKWAY FG ○ EX 12"W

— POTENTIAL FUTURE ROADWAY ——

FILL DEPTH

VARIES

COVER

DEPTH

POTENTIAL FUTURE

EASTSIDE PARKWAY FG

- EXISTING INTER-GARRISON ROAD

IF FILL DEPTH TO OG IS > 1', PIPE COVER SHALL BE > 36"

IF FILL DEPTH TO OG IS < 1', PIPE COVER SHALL BE > 42"



SECTION - CUT CONDITION SCALE: 1" = 6

MARINA COAST WATER DISTRICT 11 RESERVATION ROAD MARINA, CA 93933 (831) 384-6131

APPROVED FOR CONSTRUCTION:

WHITSON ENGINEERS 6 Harris Court Monterey, CA 93940 831 649-5225 = Fax 831 373-5065

CIVIL ENGINEERING - LAND SURVEYING - PROJECT MANAGEMENT



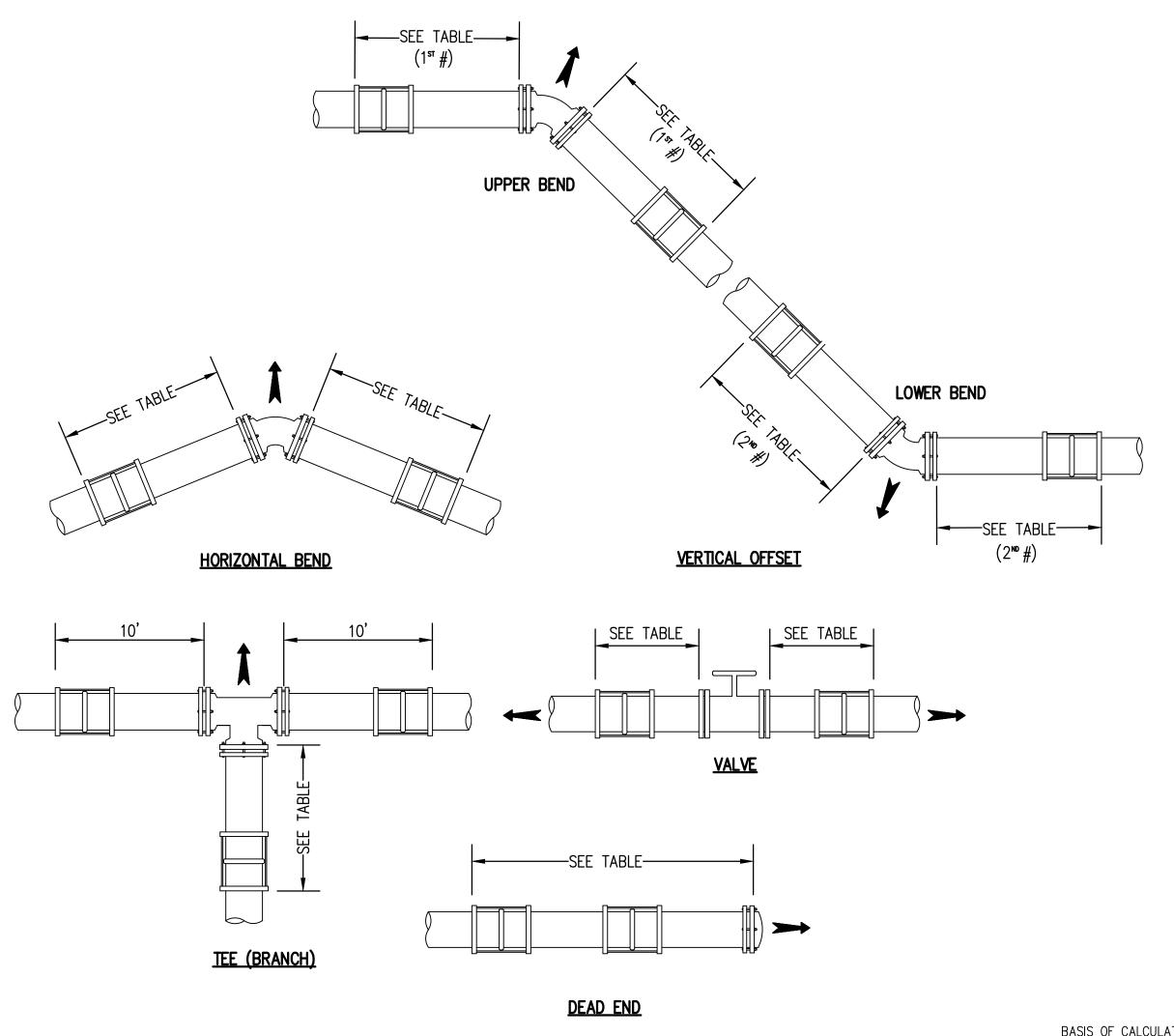
INTER-GARRISON ROAD WATER LINE CIVIL NOTES AND SPECIFICATIONS

4/9/18 ISCALE: N.A DESIGN: DRAWN: ICHECK:

SHEET

MICHAEL A. WEGLEY, P.E., DISTRICT ENGINEER

DATE



	REQUIRED LENGTH OF RESTRAINED JOINTS (FEET)								
	HORIZONTAL RESTRAINING				VERTICAL RESTRAINING				
TYPE OF PIPE	TEE (BRANCH)	DEAD END/ VALVE	BEND 90°	BEND 45°	BEND 22.5°	BEND 11.25°	VERTICAL OFFSET, 11.25°	VERTICAL OFFSET, 22.5°	VERTICAL OFFSET, 45°
18" DUCTILE IRON	88	129	54	23	11	6	13, 4	26, 8	54, 17

THRUST RESTRAINT DETAILS

NOT TO SCALE

BASIS OF CALCULATIONS (CONSULT DISTRICT FOR OTHER CONDITIONS)

-RESTRAINT LENGTHS IN TABLE ARE TO BE APPLIED IN BOTH DIRECTIONS OF FEATURE. -RESTRAINT LENGTH CALCULATION CRITERIA:

SOIL TYPE: SP (SAND) SAFETY FACTOR: 1.5 TRENCH TYPE: TYPE 5

DEPTH OF BURY: 3.5 FEET TYP, 5 FEET LOW SIDE BEND TEST PRESSURE: 250 PSI

DATE

NOTES:

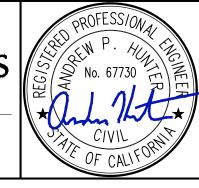
MICHAEL A. WEGLEY, P.E., DISTRICT ENGINEER

- MCWD PREFERS THAT ALL PIPES BE MECHANICALLY RESTRAINED AT JOINTS PER REQUIREMENTS INCLUDED WITH TABLE TO LEFT. THRUST BLOCKS TO BE ALLOWED ON A CASE-BY-CASE BASIS PER MCWD APPROVAL.
- 2. CONTRACTOR SHALL OBTAIN MCWD APPROVAL FOR RESTRAINED JOINT FITTINGS AND LENGTHS NOT LISTED IN THIS TABLE, OR FOR MODIFICATIONS TO CALCULATION CRITERIA.
- 3. FOR VERTICAL OFFSETS, THE FIRST NUMBER LISTED IS THE RESTRAINING LENGTH AT THE UPPER BEND, AND THE SECOND NUMBER IS THE RESTRAINING LENGTH AT THE LOWER BEND.
- 4. LENGTH OF RESTRAINED JOINTS ALONG A BRANCH OF A TEE IS BASED ON A UNIFORM TEE FITTING SIZE. CONTRACTOR SHALL OBTAIN MCWD APPROVAL FOR LENGTH OF RESTRAINED JOINTS AT REDUCING TEES.

MARINA COAST WATER DISTRICT

11 RESERVATION ROAD
MARINA, CA 93933

WE WHITSON ENGINEERS 6 Harris Court Monterey, CA 93940



INTER-GARRISON ROAD WATER LINE THRUST RESTRAINT DETAILS

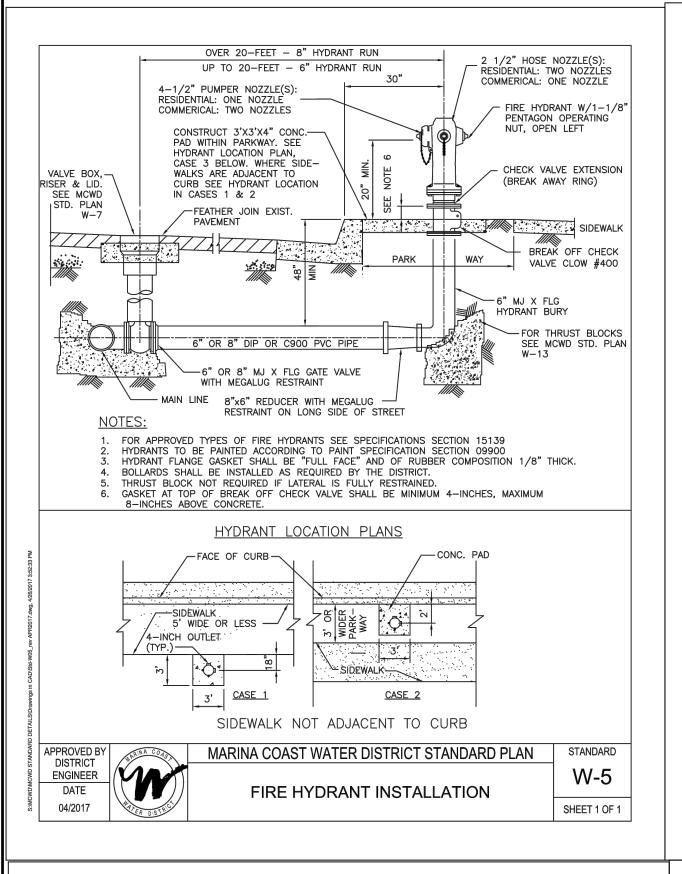
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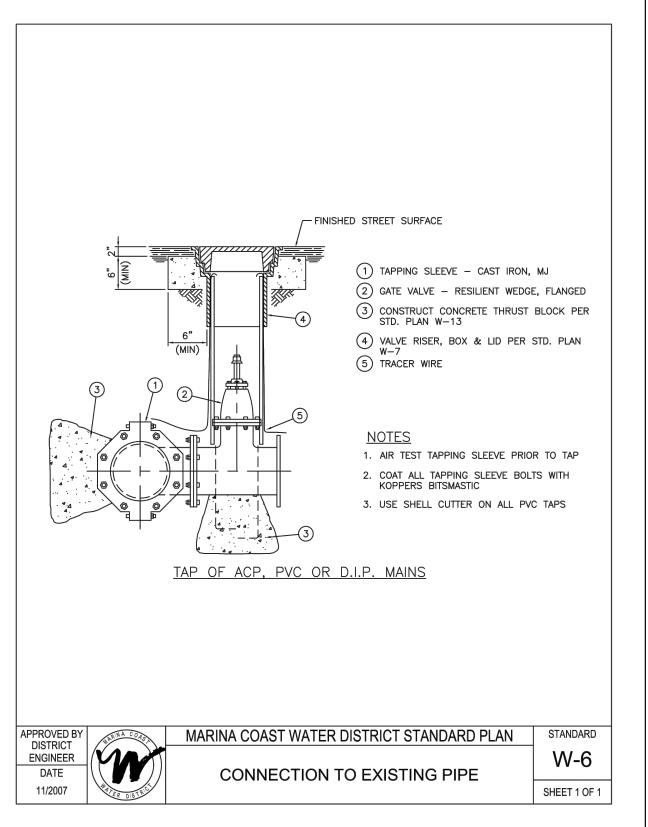
(831) 384-6131 APPROVED FOR CONSTRUCTION:

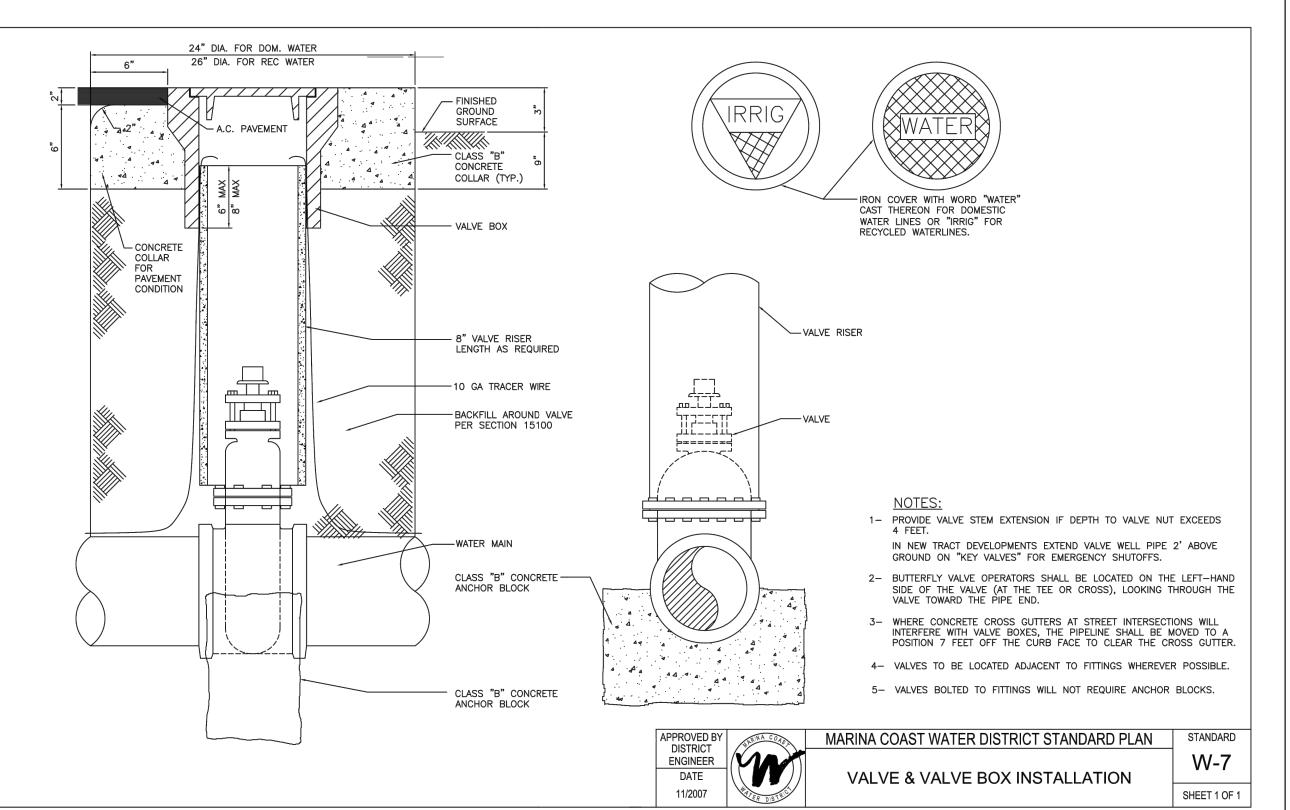
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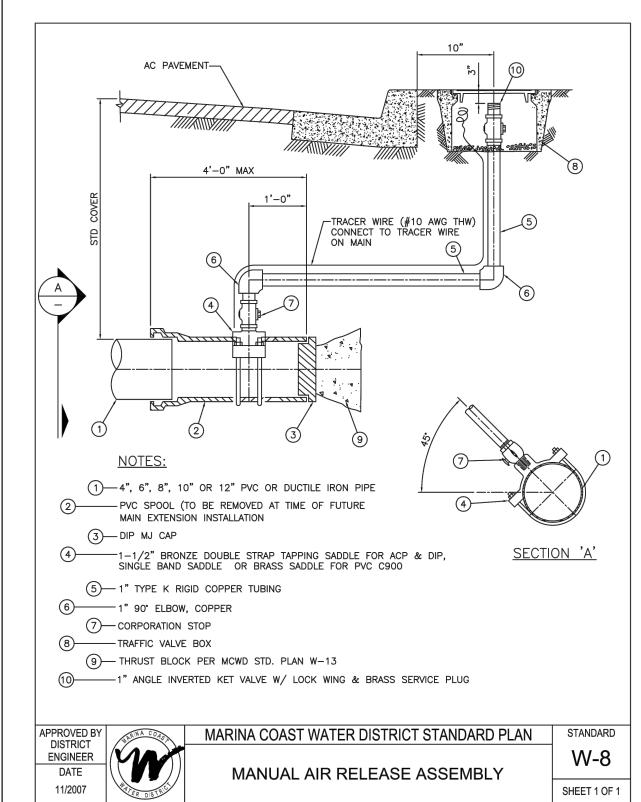
DATE APPR

831 649-5225 = Fax 831 373-5065 CIVIL ENGINEERING = LAND SURVEYING = PROJECT MANAGEMENT









Proposed Regulations, continued

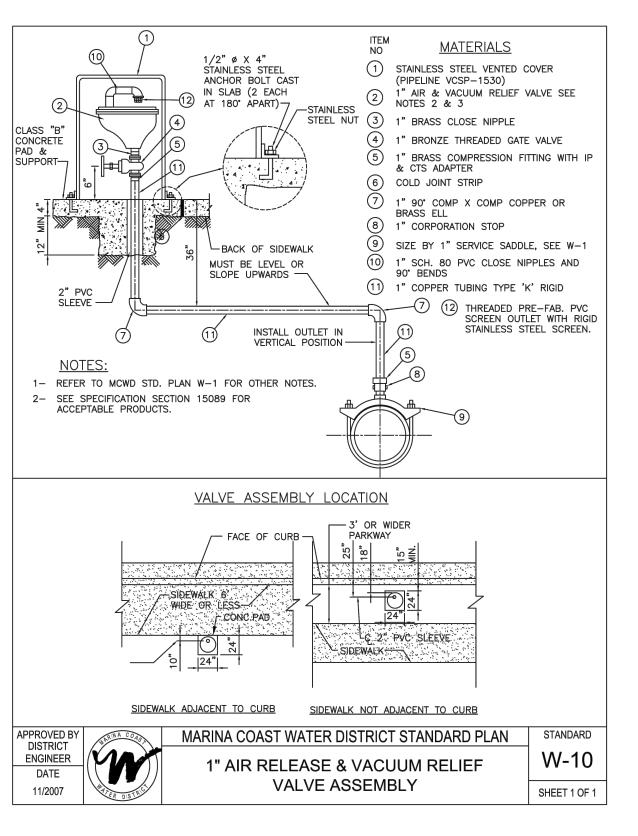
Case 2: New water mains Installation (Figures 1 and 2)

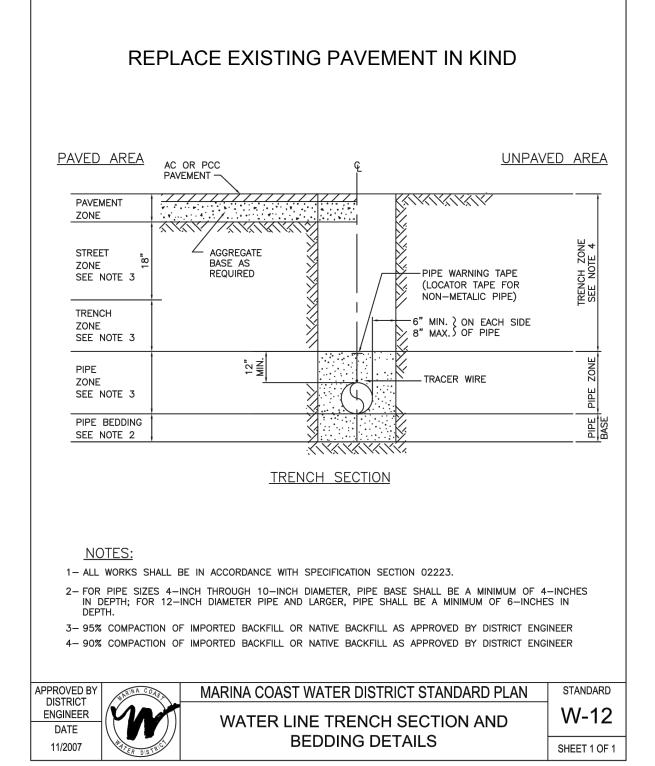
A) No water mains parallel to sanitary sewer mains shall be constructed without prior written approval from the Department.

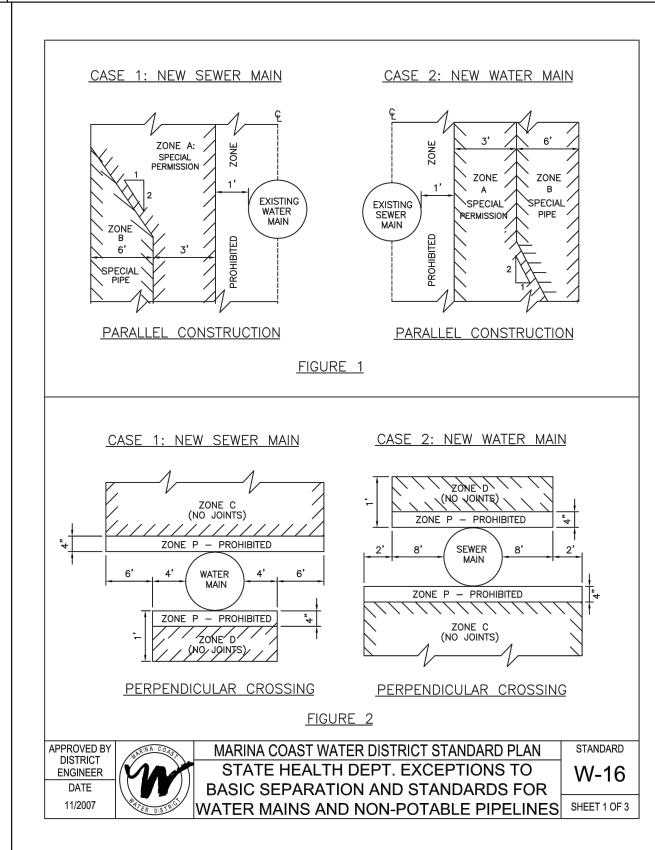
B) If the sanitary sewer main paralleling the water main does not meet the Case 1 Zone B requirements, the water main should be constructed of one

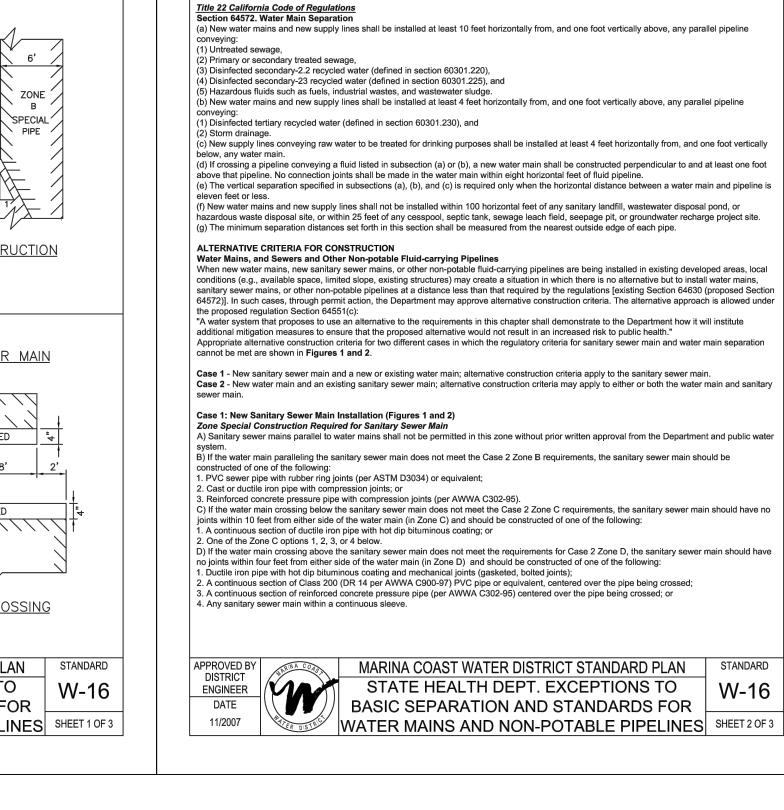
Zone Special Construction Required for Water Main

Ductile iron pipe with hot dip bituminous coating:

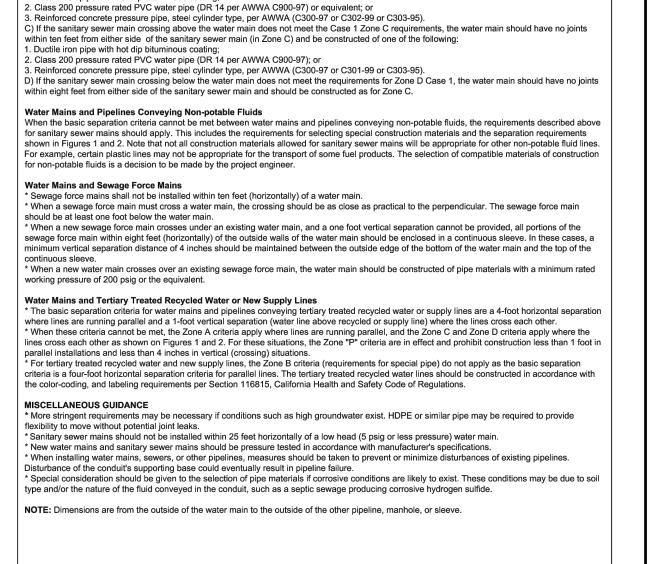


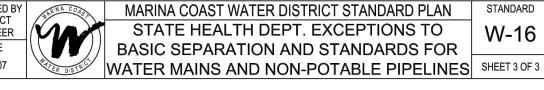


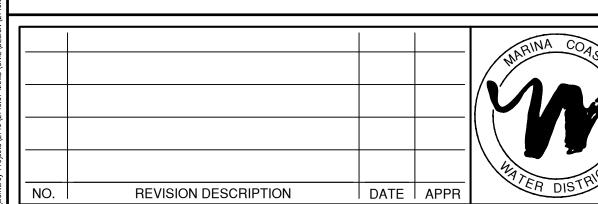




Proposed requirements as of the date of this document (April 14, 2003; Revised October 16, 2003)









MICHAEL A. WEGLEY, P.E., DISTRICT ENGINEER

APPROVED FOR CONSTRUCTION:



831 649-5225 = Fax 831 373-5065 CIVIL ENGINEERING - LAND SURVEYING - PROJECT MANAGEMENT

DATE



INTER-GARRISON ROAD WATER LINE MCWD STANDARD DETAILS

DATE:	4/9/18
SCALE:	N.A.
DESIGN:	KCH
DRAWN:	KCH
CHECK:	APH

SHEET

