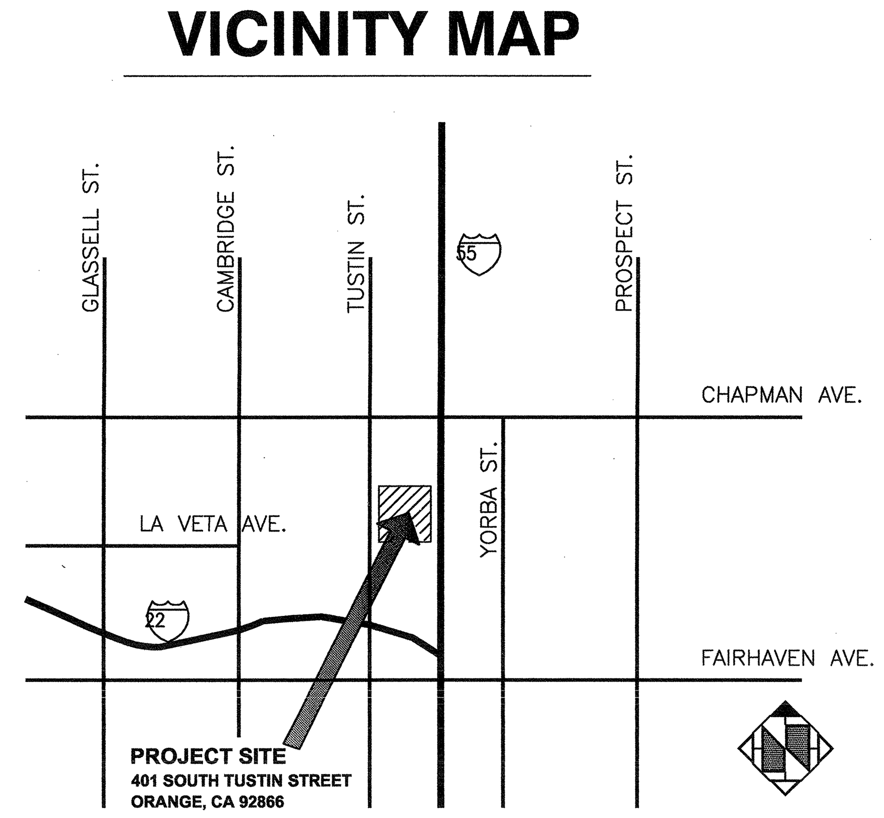
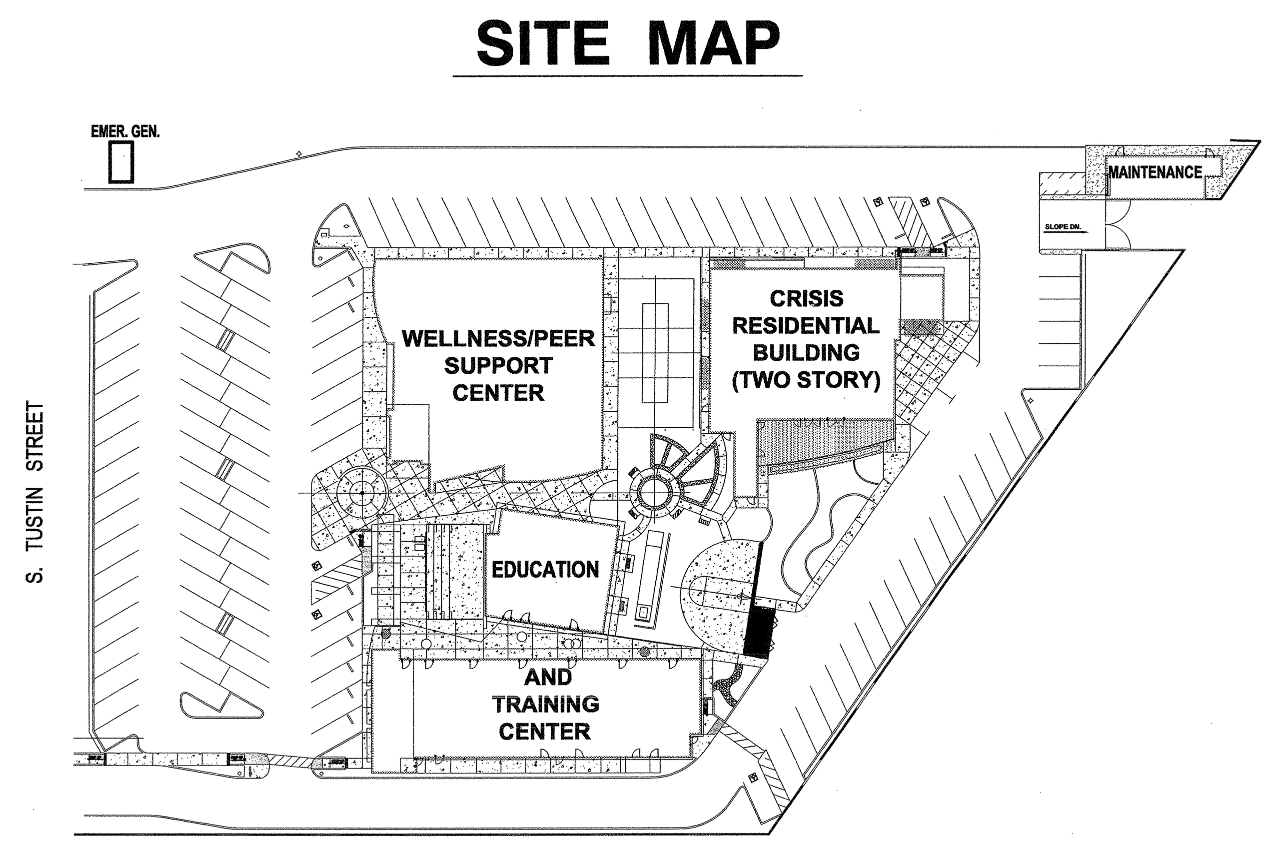
VICINITY MAP



CITY OF ORANGE
PUBLIC WATER OFF-SITE IMPROVEMENT PLANS
401 SOUTH TUSTIN STREET ORANGE, CA. 92866

SITE MAP



CITY OF ORANGE GENERAL WATER CONSTRUCTION NOTES

REVISED JULY 13, 2009

(GENERAL WATER CONSTRUCTION NOTES FOR PUBLIC WATER SYSTEM TO BE SHOWN ON CONSTRUCTION PLANS)

1. CONTRACTOR TO PROVIDE THREE COPIES OF THE FOLLOWING INFORMATION TO THE WATER DIVISION PROJECT ENGINEER FOR APPROVAL A MINIMUM OF FOURTEEN CALENDAR DAYS PRIOR TO CONSTRUCTION. (1.) CERTIFICATION THAT ALL PUBLIC WATER SYSTEM MATERIALS COMPLY WITH THE PLANS/SPECIFICATIONS. (2.) CATALOG CUTS FOR ALL PUBLIC WATER SYSTEM PIPE, VALVES, FITTINGS, APPURTENANCES, AND RELATED ITEMS. ALL MATERIALS SHALL BE NEW AND FREE OF DEFECTS. MATERIALS SPECIFICATIONS ARE AVAILABLE AT THE CITY OF ORANGE WATER DIVISION, 189 S. WATER ST., ORANGE, CA 92866 OR FROM THE CITY'S WEBSITE.
2. SPECIAL SCHEDULING OUTSIDE OF NORMAL WORKING HOURS MAY BE REQUIRED AND A MINIMUM THREE (3) WORKING DAY ADVANCE NOTICE BY THE DEVELOPER'S CONTRACTOR TO THE ORANGE WATER DIVISON INSPECTOR IS REQUIRED FOR SYSTEM SHUT-DOWNS.
3. WATER DEPARTMENT INSPECTOR SHALL BE NOTIFIED OF ANY AND ALL WATER SYSTEM CONSTRUCTION 24 HOURS PRIOR TO BEGINNING CONSTRUCTION, (714) 744-5526.
4. WATER MAINS AND APPURTENANCES SHALL BE ISNTALLED IN ACCORDANCE WITH A.W.W.A STANDARD FOR INSTALLATION OF DUCTILE-IRON WATER MAINS AND THEIR APPURTENANCES; C-600-2001, C-105/A21.5-93 OR MOST RECENT UPDATE AND CITY OF ORANGE WATER DEPARTMENT'S STANDARDS. INSTALLATION SHALL BE BY A CONTRACTOR HOLDING A VALID CLASS A OR C-34 SPECIALTY LICENSE FROM THE STATE OF CALIFORNIA.
5. CONNECTION TO EXISTING CITY WATER MAINS SHALL BE MADE ONLY AFTER SUCCESSFUL PRESSURE TEST AND STERILIZATION HAS BEEN COMPLETED.
6. FINAL INSPECTION SHALL BE MADE AFTER COMPLETE INSTALLATION OF THE WATER SYSTEM AND APPURTENANCES, DISINFECTION, RAISING TO GRADE OF ALL ON-SITE, OFF-SITE, VALVES, AND METER BOXES AND OR FIRE HYDRANT SUPPORT COLLARS.
7. ALL CITY DEDICATED FIRE HYDRANTS SHALL BE PAINTED AFTER INSTALLATION WITH APPROVED SAFETY ORANGE.
8. WATER DEPARTMENT STANDARDS ARE AVAILABLE AT THE CITY OF ORANGE WATER DEPARTMENT, 189 S. WATER ST., ORANGE, CA 92866.
9. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF WATER MAINS AND OTHER UTILITIES PRIOR TO CONSTRUCTION.
10. INSTALLATION OF SEWER MAINS IN THE VICINITY OF WATER MAINS SHALL BE DONE IN PER DPW STD. 204 AND IN ACCORDANCE WITH THE CALIFORNIA STATE HEALTH DEPARTMENT STANDARD REQUIREMENTS FOR MATERIALS INSTALLATIONS AND HORIZONTAL AND VERTICAL SEPARATIONS.
11. A SIX (6) SIX FOOT MINIMUM HORIZONTAL CLEARANCE AND A ONE (1) FOOT MINIMUM VERTICAL CLEARANCE IS REQUIRED BETWEEN CITY WATER MAINS, LATERALS, SERVICES, METERS, FIRE HYDRANTS AND ALL OTHER UTILITIES EXCEPT SEWER.
12. AN EIGHT (8) FOOT MINIMUM CLEARANCE IS REQUIRED BETWEEN CITY WATER MAINS, AND SIGNS, TREES OR OTHER SUBSTANTIAL SHRUBS, BUSHES, OR PLANTS.
13. A TWENTY (20) FOOT SEPARATION SHALL BE MAINTAINED FROM THE CITY WATER MAINS TO THE PROPOSED BUILDINGS AND STRUCTURES UNLESS OTHERWISE APPROVED BY THE WATER DIVISION.
14. PERMANENT SIGNS, AWNINGS, OR OTHER STRUCTURES ARE PROHIBITED FROM INSTALLATION OVER CITY WATER MAINS, LATERALS, SERVICES, METERS, AND FIRE HYDRANTS.
15. ALL METERS, DETECTOR CHECKS, AND FIRE HYDRANTS IMPACTED BY THE DEMOLITION SHALL BE RETURNED TO THE CITY WATER YARD.
16. ALL FITTINGS TO BE INSTALLED WITH THRUST BLOCKS AND MEGA- LUG RETAINING GLANDS OR EQUAL.
17. ALL WORK SHALL BE IN CONFORMANCE WITH THE CITY OF ORANGE WATER DIVISION STANDARDS & SPECIFICATIONS AND SHALL ALSO BE DONE TO THE SATISFACTION OF THE CITY WATER INSPECTOR.
18. ALL PIPE, PIPELINE FITTINGS, AND SERVICES SHALL BE WRAPPED WITH POLYETHYLENE PER A.W.W.A. STANDARD FOR POLYETHYLENE ENCASEMENT FOR DUCTILE IRON PIPING FOR WATER AND OTHER LIQUIDS C-105. POLYWRAP MATERIAL SHALL BE CLEAR 8 MIL POLYETHYLENE FLAT TUBING WITH DIMENSIONS APPROPRIATE FOR THE SIZE OF PIPE.
19. WATER MAINLINES, FITTINGS, & APPURTENANCES SHALL BE INSTALLED THREE AND ONE-HALF (3.5) FEET BELOW FINISHED SURFACE TYPICALLY (NOT SUBGRADE) UNLESS INDICATED OTHERWISE ON PLANS. CONTRACTOR SHALL HAVE DESIGN CIVIL ENGINEER STAKE WATER PIPELINES, FIRE HYDRANTS, AND METER LOCATIONS.
20. PUBLIC WATER VALVES SHALL BE OPERATED BY CITY STAFF ONLY.
21. EACH BUILDING SHALL BE METERED SEPARATELY UNLESS OTHERWISE APPROVED BY THE WATER DIVISION.
22. INDIVIDUAL PRESSURE REGULATORS SHALL BE FURNISHED AND INSTALLED BY THE APPLICANT/DEVELOPER ON SERVICES WHERE THE INCOMING PRESSURE EXCEEDS EIGHTY POUNDS PER SQUARE INCH (80 PSI).
23. THE APPLICANT/ DEVELOPER SHALL FURNISH A DEDICATED AND GRADED MINIMUM FIFTEEN (15) FOOT UNENCUMBERED ACCESS AND UTILITY EASEMENT FOR FUTURE FACILITIES TO BE CONTIGUOUS TO THE EXISTING CITY RIGHT OF WAYS AND EASEMENTS AS DETERMINED BY THE WATER DIVISION FOR ALL PUBLIC WATER FACILITIES INCLUDING MAINS, METERS, DETECTOR CHECKS, AND FIRE HYDRANTS PRIOR TO FINAL APPROVAL AND ACCEPTANCE OF THE WATER IMPROVEMENTS.
24. THAT APPLICANT/DEVELOPER SHALL ENTER INTO A DECORATIVE IMPROVEMENT AGREEMENT/EASEMENT DEED AND AGREEMENT WITH THE CITY OF ORANGE PRIOR TO FINAL APPROVAL AND ACCEPTANCE OF THE WATER IMPROVEMENTS.
25. EACH BUILDING SHALL BE PROTECTED WITH A SEPARATE FIRE SERVICE UNLESS OTHERWISE APPROVED BY THE FIRE DEPARTMENT AND WATER DIVISION.
26. FIRE SERVICES ARE SUBJECT TO FIRE DEPARTMENT AND WATER DIVISION REVIEW AND APPROVAL.
27. THE APPLICANT/DEVELOPER SHALL SATISFY ALL WATER MAIN CONNECTION, PLAN CHECK, AND INSPECTION CHARGES AS DETERMINED BY THE WATER DIVISION PRIOR TO APPROVAL OF THE WATER PLAN.
28. THE APPLICANT/DEVELOPER SHALL SATISFY ALL WATER BOND REQUIREMENTS FOR THE INSTALLATION OF THE WATER SYSTEM AS DETERMINED BY THE WATER DIVISION PRIOR TO APPROVAL OF THE WATER PLAN.
29. ALL METERS PURCHASED FROM THE CITY OF ORANGE SHALL BE PICKED UP FROM THE CITY WATER YARD DURING NORMAL WORKING HOURS MONDAY – THURSDAY EXCLUDING CITY OBSERVED HOLIDAYS. WATER INSPECTOR TO BE NOTIFIED 24 HOURS IN ADVANCE OF RECEIVING MATERIALS, 714-744-5526.
30. ALL UNUSED SERVICE LATERALS TO BE CUT AND CAPPED AT MAIN WITH METER BOXES REMOVED AND DISPOSED OF BY CONTRACTOR PER O.W.D. INSPECTOR APPROVAL. RELATED SIDEWALK/STREET REPAIRS TO BE COMPLETED BY CONTRACTOR.
31. ALL UNUSED SERVICE LATERALS 4" AND LARGER SHALL BE CUT AND CAPPED AT MAIN WITH CONCRETE THRUST BLOCKS PER O.W.D. STD 109 AND METER BOXES REMOVED AND DISPOSED OF BY CONTRACTOR PER O.W.D. INSPECTOR APPROVAL. RELATED SIDEWALK/STREET REPAIRS TO BE COMPLETED BY CONTRACTOR.
32. HOT TAPS EQUAL TO OR GREATER THAN 4" ARE PERFORMED BY CITY CREWS WITH THE EXCAVATION AND INSTALLATION DONE BY CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR OBTAINING STREET CUT ENCROACHMENT/EXCAVATION PERMITS.
33. POLYETHYLENE WRAP SHALL BE INSTALLED OVER ALL DUCTILE IRON PIPE, VALVES FITTINGS, COPPER SERVICE LATERALS, AND APPURTENANCES PER A.W.W.A. STD C-105/A21.5-93 OR MOST RECENT UPDATE.
34. THE CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING LATERAL CONNECTIONS AND TEMPORARY TIE-OVERS MAY BE REQUIRED AS DETERMINED BY THE WATER DIVISION.
35. INSTALLATIONS FOUND TO BE IN NON-COMPLIANCE WITH THESE CONSTRUCTION NOTES SHALL BE REMOVED AND RE-INSTALLED PER O.W.D. INSPECTOR APPROVAL PRIOR TO FINAL JOB APPROVAL AT THE CONTRACTOR'S EXPENSE.
36. THE ENGINEER SHALL SUBMIT ALL PROPOSED DEVIATIONS FROM THE ORIGINALLY APPROVED DESIGN THAT IMPACT THE PUBLIC WATER SYSTEM TO THE WATER DIVISION FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION AND SHALL MAINTAIN A COMPLETE SET OF SAID RECORD DRAWINGS/PLANS. UPON APPROVAL THE ENGINEER WILL MAKE CHANGES TO THE ORIGINAL DRAWINGS INDICATING RECORD CONDITIONS AND PROVIDE PRINTS TO THE CONTRACTOR AND THE WATER DIVISION. UPON COMPLETION OF THE JOB, THE ENGINEER SHALL PROVIDE THE APPROPRIATE RECORDS TO THE CITY OF ORANGE WATER DIVISION.
37. THE APPLICANT IS RESPONSIBLE FOR OBTAINING STREET ADDRESS ASSIGNMENTS FOR EACH WATER METER AND DETECTOR CHECK LOCATION FROM THE CITY OF ORANGE DEPARTMENT OF PUBLIC WORKS SUBDIVISION SECTION PRIOR TO MAKING APPLICATION FOR METERS AND SERVICES.

REVISED JULY 13, 2009

CITY OF ORANGE GENERAL WATER CONSTRUCTION NOTES

Revised 06-19-09

(GENERAL WATER CONSTRUCTION NOTES FOR PUBLIC WATER SYSTEM TO BE SHOWN ON LANDSCAPE ARTCHITECT'S AND CONSTRUCTION PLANS)

1. AN EIGHT (8) FOOT MINIMUM CLEARANCE IS REQUIRED BETWEEN CITY WATER MAINS AND TREES OR OTHER SUSBSTANTIAL SHRUBS, BUSHES, OR PLANTS.
2. WHERE A PROPOSED FENCE INSTALLATION CROSSES A CITY WATER MAIN, THE FOOTINGS SHALL BE SPACED TO ALLOW FOR THE MAXIMUM SEPARATION BETWEEN THE FOOTINGS AND THE WATER MAIN AND PER INSPECTOR APPROVAL.
3. WHERE A PROPOSED WALL INSTALLATION CROSSES A CITY WATER MAIN, THE WALL AND FOOTING DETAILS SHALL BE SUBMITTED TO WATER ENGINEERING FOR REVIEW AND APPROVAL PRIOR TO PLAN APPROVAL.
4. INSTALLATIONS FOUND TO BE IN NON-COMPLIANCE WITH THESE CONSTRUCTION NOTES SHALL BE REMOVED AND RE-INSTALLED PER O.W.D. INSPECTOR APPROVAL PRIOR TO FINAL JOB APPROVAL AT THE CONTRACTOR'S EXPENSE.

Revised 06-19-09

NOTICE TO CONTRACTOR:

1. NOTIFY RICK BICKER OR TIM HATCH OF METROPOLITAN WATER DISTRICT'S (M.W.D.) SYSTEM OPERATIONS GROUP, TELEPHONE (714) 577-5084 AT LEAST TWO WORKING DAYS PRIOR TO STARTING ANY WORK IN THE VICINITY OF MWD'S FACILITIES.
2. FACILITIES CONSTRUCTED WITHIN METROPOLITAN WATER DISTRICT'S PERMANENT EASEMENT RIGHT-OF-WAY SHALL BE SUBJECT TO THE PARAMOUNT RIGHT OF METROPOLITAN TO USE THE EASEMENT FOR THE PURPOSE FOR WHICH IT WAS ACQUIRED. IF AT ANY TIME METROPOLITAN OR IT'S ASSIGNS SHOULD, IN THE EXERCISE OF THEIR RIGHTS, FIND IT NECESSARY TO REMOVE ANY OF THE FACILITIES FROM THE EASEMENT, SUCH REMOVAL AND REPLACEMENT SHALL BE AT THE EXPENSE OF THE OWNER OF THE FACILITY.
3. A LIST AND THE SPECIFICATIONS OF ALL CONSTRUCTION EQUIPMENT TO BE USED IN THE AREA OF M.W.D.'S PIPELINE MUST BE SUBMITTED FOR OUR REVIEW AND WRITTEN APPROVAL AT LEAST 30 DAYS PRIOR TO THEIR USE. PLEASE NOTE THAT M.W.D. WILL NOT PERMIT THE STORAGE OF CONSTRUCTION EQUIPMENT, THE STOCKPILING OF MATERIALS (INCLUDING SOIL), OR THE USE OF ANY VIBRATORY EQUIPMENT IN VIBRATORY MODE, WITHIN 25 FEET OF THE CENTERLINE OF M.W.D.'S PIPELINE.

STANDARD ABBREVIATIONS

Driveway	Drwy
Concrete	Conc
Delta	Δ
Radius	R
Semitangent Distance	T
Arc Length, Along Curve	L
Begin Curve	BC
Point of Reverse Curve	PR.C.
End of Curve	E.C.
Point of Tangency	P.T.
Begin Curb Return	B.C.R.
End Curb Return	E.C.R.
Begin Vertical Curve	B.V.C.
Point of Reverse Vertical Curve	P.R.V.C.
End of Vertical Curve	E.V.C.
Point of Intersection	P.I.
Center Line	℄
Property Line	ℙ
Right of Way	R/W
Native Soil	N.S.
Asphaltic Concrete	A.C.
Aggregate Base	A.B.
Aggregate Subbase	A.S.
Imported Subbase Material	I.S.M.
Concrete Treated Base	C.T.B.
Curb Face	C.F.
Top of Curb	T.C.
Flow Line	FL
Invert	Inv.
Hydrologic Grade Line	H.G.L.
Catch Basin	C.B.
Reinforced Concrete Pipe	R.C.P.
Reinforced Concrete Box	R.C.B.
Concrete Pipe	C.P.
Cast In Place Concrete Pipe	C.I.P.C.P.
Corrugated Metal Pipe (Arched)	C.M.P.(A.)
Asbestos Cement Pipe	A.C.P.
Cast Iron Pipe	C.I.P.
Vitrified Clay Pipe	V.C.P.
Polyvinyl Chloride Pipe	P.V.C.
Manhole (Type as Indicated)	M.H.
Pavement	Pvmt.
Headwall	Hdwl.
Future	Fut.
Abandoned	Abnd.
Metropolitan Water District	M.W.D.
Arterial Highway Financing Program	A.H.F.P.
Orange County Flood Control District	O.C.F.C.D.
Santa Ana Valley Irrigation Co.	S.A.V.I.
Environmental Management Agency (County of Orange)	E.M.A.
Sidewalk	S.W.
Finished Grade	F.G.
Stress Absorbing Membrane Interlayer	S.A.M.I.

PROFILE — **SYMBOLS**

Existing Ground
Existing Oil Surface
Grade Break
Point of Intersection

PLAN — SYMBOLS

Center Line
Right of Way Line (Prop. Line)
Existing Curb
Future Curb
Existing Curb & Gutter
Construct Curb
Construct Curb & Gutter
Existing Concrete, Walk, Etc.
Fence (Type as Indicated)
Walls: Concrete, Brick, Stone
Building Corner
Existing Railroad
Trees: Palm, Shrub, Other, Hedge
Fire Hydrant — FH
Water Valve — WV
Water Meter — WM
Manhole (Type as Indicated) — SMH
Vault with Manhole (Type as Indicated) — TMH
Gas Meter — GM
Gas Valve — GV
Light Standard (Indicate Number) — LS#
Traffic Signal
Railroad Signal
Power or Telephone Pole (Indicate Number)
Deadman
Guy Anchor
Reflector Paddle Board
Road or Stop Sign — SP
Stand Pipe (Indicate Type)
Sewer Line (Indicate Size) — 8" — S
Water Line " " — 12" — W
Gas Line " " — 3" — G
Underground Power (No. of Ducts) — E
Underground Telephone — T
Underground T.V. Cable — TV
Existing Culvert (Indicate Size & Type)
Existing Edge of Pavement
Slope
Traffic Inductive Loops
Traffic Signal Conduit — 2" — C
Pull Box (Indicate Type) — TPB
Traffic Signal Controller
Irrigation Line (Indicate Type) — 24"
Proposed AC Pavement
Proposed AC Cap, Overlay
Proposed P.C.C. Construction

DRAWING INDEX

DESCRIPTION	SHEET
TITLE SHEET	W-1
OFFSITE WATER PLAN	W-2
WATER STANDARDS AND SPECIFICATIONS	W-3 THRU W-5

SOILS ENGINEERING:

AMERICAN GEOTECHNICAL, INC.
22725 OLD CANAL ROAD
YORBA LINDA, CA 92887
(714)685-3909

PLANS PREPARED BY:
WILLDAN Engineering
2401 East Katella Avenue, Suite 450
Anaheim, CA 92806-6073
714/978-8200 fax 714/978-8299
R.C.E. NO. 56185 (EXPIRES 12-31-10) 03/05/10 DATE

REGISTERED PROFESSIONAL ENGINEER KENNETH C. TAYLOR NO. 56185 EXP. 12-31-10 CIVIL ENGINEER STATE OF CALIFORNIA

REVISIONS			
NO.	DESCRIPTION	APPR.	DATE
3	ADDENDUM NO. 3		4/5/10

CITY OF ORANGE WATER DIVISION
APPROVED
APPROVAL OF THIS PLAN DOES NOT AUTHORIZE OR APPROVE ANY OMISSION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECTED TO FIELD INSPECTION.
REVIEWED BY: ____________

CITY OF ORANGE
OFFSITE WATER IMPROVEMENT PLAN
FOR
401 S. TUSTIN STREET

Plan No.
Sheet
W-1

U:\jn17336_401_S_Tustin_Renovation\PS&E\Plans\pl-CITY-TITL-01.dwg Apr 05, 2010 - 4:00pm

County of Orange
OC PUBLIC WORKS
Architecture & Engineering

0742	Revisions		
3	ADDENDUM NO. 3	4/5/10	KT
Sym.	Descrip.	Date	By

Consultants: WILLDAN Engineering, 2401 EAST KATELLA AVENUE, SUITE 450, ANAHEIM, CALIFORNIA 92806-6073, 714/978-8200 FAX 714/978-8299. PREPARED UNDER THE SUPERVISION OF KENNETH C. TAYLOR, R.C.E. 56185, DATE 03/05/10
Drawn S.M. Chkd. K.T. Date 03/02/10

A-E Seal: REGISTERED PROFESSIONAL ENGINEER, KENNETH C. TAYLOR, NO. 56185, EXP. 12-31-10, CIVIL, STATE OF CALIFORNIA

A-E ALEXANDER + HIBBS, AIA, INC.
ALEXANDER + HIBBS, AIA, INC. Architecture and Planning, 1200 N. JEFFERSON ST, SUITE A, ANAHEIM, CALIFORNIA 92807, (714) 630-3686
Date March 2, 2010 | Chkd. | Design

Sht Title
Project: COUNTY OF ORANGE HEALTH CARE AGENCY 401 SOUTH TUSTIN STREET
401 SOUTH TUSTIN STREET ORANGE, CA 92866
PROJ. NO. 100-042-210-1900 H2407P20

Plan No. 52333-03608
Sheet W-1

0742 COUNTY OF ORANGE HEALTH CARE AGENCY 401 SOUTH TUSTIN STREET U:\jn17336_401_S_Tustin_Renovation\PS&E\Plans\pl-CITY-TITL-01.dwg Plotted: 4/5/2010 4:00 PM