

RECYCLED WATER NOTES

SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE OTAY WATER DISTRICT'S RULES AND REGULATIONS.
- DRINKING WATER FOUNTAINS AND DESIGNATED OUTDOOR EATING AREAS SHALL BE PROTECTED AGAINST CONTACT WITH RECYCLED WATER SPRAY, MIST, OR RUNOFF.
- BEST MANAGEMENT PRACTICES SHALL BE USED TO ELIMINATE OR CONTROL TO THE BEST EXTENT POSSIBLE PONDING, RUN-OFF, OVER-SPRAY AND MISTING.
- HOSE BIBS ARE STRICTLY PROHIBITED.
- CROSS-CONNECTIONS BETWEEN RECYCLED WATERLINES AND POTABLE WATER LINES ARE STRICTLY PROHIBITED.
- NO SUBSTITUTIONS OF PIPE MATERIALS WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE OTAY WATER DISTRICT.
- ALL MAINLINE PIPES SHALL HAVE WARNING TAPE PER OTAY WATER DISTRICT'S RULES AND REGULATIONS.
- HOURS FOR IRRIGATION WITH RECYCLED WATER ARE FROM 9:00P.M. TO 6:00 A.M. THE HOURS FOR IRRIGATION WITH DISINFECTED TERTIARY RECYCLED WATER MAY BE MODIFIED BY THE LOCAL AUTHORITY. IRRIGATION DURING PUBLIC USE PERIODS WITH DISINFECTED TERTIARY RECYCLED WATER SHALL BE UNDER THE SUPERVISION OF THE DESIGNATED USER SUPERVISOR. IRRIGATION WITH WATER OF A LESSER QUALITY THAN DISINFECTED TERTIARY RECYCLED WATER SHALL BE BETWEEN THE HOURS OF 9:00P.M. AND 6:00 A.M.
- BURIAL OF ALL WIRING AND PIPING SHALL MEET OTAY WATER DISTRICT'S RULES AND REGULATIONS.
- NON-DESIGNATED USE AREAS SHALL BE PROTECTED FROM CONTACT WITH RECYCLED WATER, WHETHER BY WINDBLOWN SPRAY OR BY DIRECT APPLICATION THROUGH IRRIGATION OR OTHER USE. LACK OF PROTECTION, WHETHER BY DESIGN, CONSTRUCTION PRACTICE OR SYSTEM OPERATION, IS STRICTLY PROHIBITED.
- IRRIGATION HEADS SHALL BE RELOCATED OR ADJUSTED TO MINIMIZE OR ELIMINATE OVER-SPRAYING ON SIDEWALKS, STREETS AND NON-DESIGNATED USE AREAS.
- RECYCLED WATER QUICK COUPLING VALVES SHALL BE OF A TYPE DESIGNED FOR THE USE ON RECYCLED WATER DISTRIBUTION SYSTEMS PER OTAY WATER DISTRICT'S RULES AND REGULATIONS.
- ON RECYCLED WATER SYSTEMS, ALL APPURTENANCES (SPRINKLER HEADS, VALVE BOXES, ETC.) SHALL BE COLOR-CODED PURPLE PER AWWA GUIDELINES AND SECTION 116815 OF THE CALIFORNIA HEALTH AND SAFETY CODE.
- ALL IRRIGATION PIPES SHALL BE STENCILED WITH THE WARNING, "NON- POTABLE OR RECYCLED WATER," COLOR-CODED (PURPLE) AND LAID WITH WARNING TAPE AND STENCILING ORIENTED TOWARD THE TOP OF THE TRENCH PER OTAY WATER DISTRICT'S RULES AND REGULATIONS.
- ON NEW ON-SITE SYSTEMS (POST-METER), POTABLE WATER, CONSTANT PRESSURE RECYCLED WATER AND SEWER LINES SHOULD BE PLACED A MINIMUM OF FOUR FEET APART OR AS DIRECTED BY THE PROJECT ENGINEER AND /OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
- CONSTANT PRESSURE RECYCLED WATERLINES SHALL CROSS AT LEAST TWELVE INCHES BELOW POTABLE WATERLINES AND MAINTAIN AT LEAST TWELVE INCHES CROSSING SEPARATION BETWEEN OTHER UTILITIES.
- IF A CONSTANT PRESSURE RECYCLED WATER LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE INCHES BELOW A POTABLE WATER LINE, THEN THE RECYCLED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE AS PER OTAY WATER DISTRICT'S RULES AND REGULATIONS.
- DEVELOPER/CONTRACTOR SHALL CONDUCT A CROSS-CONNECTION TEST AND COVERAGE TEST AS DIRECTED BY THE OTAY WATER DISTRICT AND THE SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH PRIOR TO ANY USE OF RECYCLED WATER.
- THE REQUIRED CROSS-CONNECTION INSPECTION SHALL BE DONE BY EITHER THE OTAY WATER DISTRICT AND/OR THE SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH. COPIES OF INSPECTION REPORTS WILL BE FORWARDED TO THE NON-INSPECTING PARTY.
- THE DESIGN AND LOCATIONS PROPOSED FOR RECYCLED WATER "DO NOT DRINK SIGNS SHALL BE CALLED OUT ON THE PLANS.
- WHEN RECYCLED WATER BECOMES AVAILABLE, AN ON-SITE USER SUPERVISOR SHALL BE DESIGNATED IN WRITING. THIS INDIVIDUAL SHALL BE FAMILIAR WITH PLUMBING SYSTEMS WITHIN THE PROPERTY, WITH THE BASIC CONCEPTS OF BACKFLOW/CROSS-CONNECTION PROTECTION, THE RECYCLED PURVEYOR'S RULES AND REGULATIONS AND THE SPECIFIC REQUIREMENTS OF A RECYCLED WATER SYSTEM. COPIES OF THE DESIGNATION, WITH CONTACT PHONE NUMBERS SHALL BE PROVIDED TO THE OTAY WATER DISTRICT AND/OR THE SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH.

IN CASE OF EMERGENCY CONTACT BRAD SAGER AT (619) 204-2441
 NAME PHONE NUMBER
 OR AFTER HOURS CONTACT BRAD SAGER AT (619) 204-2441
 NAME PHONE NUMBER

- ALL PUBLIC AND PRIVATE POTABLE WATER MAINS INCLUDING FIRE MAINS AND ANY WATER WELLS AND WATER COURSES WITHIN THE RECYCLED WATER PROJECT SHALL BE SHOWN ON THE PLANS.
- CALL OUT ON THE PLANS IF THERE ARE OR ARE NOT DRINKING FOUNTAINS AND/OR DESIGNATED OUTDOOR EATING AREAS ON THIS SITE.
- EDUCATE ALL MAINTENANCE PERSONNEL ON A CONTINUOUS BASIS OF THE PRESENCE OF RECYCLED WATER. PERSONNEL MUST BE INFORMED THAT RECYCLED WATER IS MEANT FOR IRRIGATION PURPOSES ONLY, AND IS NOT APPROVED FOR DRINKING PURPOSES, HAND WASHING, CLEANING OF TOOLS, ETC. GIVEN THE HIGH TURNOVER RATE OF EMPLOYEES IN THE LANDSCAPE INDUSTRY IT IS IMPORTANT THIS INFORMATION BE DISSEMINATED ON AN ALMOST DAILY BASIS.
- A PHYSICAL SEPARATION SHALL BE PROVIDED BETWEEN ADJACENT AREAS IRRIGATED WITH RECYCLED WATER AND POTABLE WATER. SEPARATION SHALL BE PROVIDED BY DISTANCE, CONCRETE MOW STRIPS OR OTHER APPROVED METHODS.

OMISSION STATEMENT

THERE ARE NO DECORATIVE FOUNTAINS, OR SWIMMING POOLS, OR WELLS ON THE SITE. A COMFORT STATION, OUTDOOR EATING AREAS, DRINKING FOUNTAINS AND PLAYGROUND EQUIPMENT ARE ON THE SITE.

If one of the listed items does exist, each must be clearly identified on plan. Note shall read, "DRINKING WATER FOUNTAINS, DESIGNATED OUTDOOR EATING AREAS, POOLS, ETC. SHALL BE PROTECTED AGAINST CONTACT WITH RECYCLED WATER SPRAY, MIST, OR RUN-OFF".

RESPONSIBILITY DISCLAIMER

ALL SCREENED FACILITIES, EXISTING OR PROPOSED, WERE OBTAINED FROM CIVIL PLAN NO. 14031 OWD D0740-090205, PLAN NO. 06033 OWD D0261-010182, PLAN NO. 16022 OWD D0740-060133 AND PLAN NO. 06071 OWD D0099-010211. ACTUAL SIZE AND LOCATION OF FACILITIES SHALL BE VERIFIED. CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES TO VERIFY TIE IN LOCATIONS, PIPE SIZE AND TYPE PRIOR TO ANY WORK BEING PERFORMED. TO THE BEST OF OUR KNOWLEDGE THE FACILITIES EXIST OR WILL EXIST AS SHOWN. THE OTAY WATER DISTRICT AND KTUA SHALL NOT BE HELD RESPONSIBLE FOR ACTUAL SIZE OR LOCATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OTAY WATER DISTRICT ENGINEER.

INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

RECYCLED WATER PLANS FOR: OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK



VICINITY MAP

NO SCALE NORTH

OWNER:

CITY OF CHULA VISTA
 DEVELOPMENT SERVICES
 DEPARTMENT
 276 FOURTH AVENUE
 CHULA VISTA, CA 91910
 P: (619) 407-3542
 LANDSCAPE ARCHITECT:
 MARY RADLEY
 MRADLEY@CHULAVISTACA.GOV

SITE ADDRESS

1325 SANTA VICTORIA ROAD
 CHULA VISTA, CA 91913

ASSESSOR'S PARCEL NUMBER

644-311-14-00

TOPOGRAPHY SOURCE

BWE
 DECEMBER 04, 2018

REFERENCE DRAWINGS:

GREENBOOK SPECIFICATIONS 2018
 CITY OF CHULA VISTA PARK FACILITIES GUIDELINES, FEB. 2004.
 UPDATED JAN. 2019
 OTAY RANCH VILLAGE 2 SOUTH - BACKBONE & INTRACT STREETS
 PLAN (DWG # 16022)
 DEPARTMENT OF WATER AGENCIES' STANDARDS, SECTION 15152

DEVELOPER:

BALDWIN & SONS
 610 W. ASH STREET, SUITE 1500
 SAN DIEGO, CA 92101
 P: (619) 234-4050
 CONTACT:
 TORI MASSIE, PROJECT
 COORDINATOR
 TMASSIE@BALDWINSONS.COM
 NICK LEE, VICE PRESIDENT
 NLEE@BALDWINSONS.COM

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE LANDSCAPE ARCHITECT OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF CHULA VISTA, THE OTAY WATER DISTRICT AND THE COUNTY OF SAN DIEGO DEPARTMENT OF ENVIRONMENTAL HEALTH IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS LANDSCAPE ARCHITECT OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

KTUA 3916 NORMAL STREET, SAN DIEGO, CA 92103
 FIRM NAME & ADDRESS

Brooke Whalen
 SIGNATURE

09/14/2021
 DATE

REGISTRATION NO. RLA #5175

CONSTRUCTION STORM WATER PROTECTION NOTES:

- TOTAL SITE DISTURBANCE AREA (ACRES) 7.1 ACRES
 HYDROLOGIC UNIT/ WATERSHED OTAY RIVER
 HYDROLOGIC SUBAREA NAME & NO. OTAY VALLEY (910.20)
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE
 WPCP
 THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT
 NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100
 SWPPP
- CONSTRUCTION SITE PRIORITY
 ASBS HIGH MEDIUM LOW

WATER POLLUTION CONTROL NOTES:

THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS NOTED IN THE "GREENBOOK" (LATEST EDITION) CITY SUPPLEMENT SEC 801 - WATER POLLUTION CONTROL.

WATER FEES:

THE CITY OF CHULA VISTA PROJECT MANAGER AND THE CONSULTANT SHALL COORDINATE THE FOLLOWING: WATER AND SEWER CAPACITY FEES SHALL BE PAID BY THE DEVELOPER; THE CONTRACTOR SHALL PAY ALL OTHER CONSTRUCTION AND MAINTENANCE WATER METER AND SEWER FEES, AND SHALL COORDINATE WITH THE WATER UTILITIES DEPARTMENT FOR INSTALLATION OF SERVICES. ALLOW THREE (3) MONTHS NOTICE TO THE WATER UTILITIES DEPARTMENT. FOR DEVELOPER-BUILD PROJECTS, ALL FEES SHALL BE PAID BY THE DEVELOPER.

COMPLIANCE WITH WATER CONSERVATION ORDINANCE

I AM FAMILIAR WITH AND AGREE TO COMPLY WITH THE REQUIREMENTS FOR LANDSCAPE IMPROVEMENT PLANS AS DESCRIBED IN CHAPTER 20.12 OF THE MUNICIPAL CODE. I HAVE PREPARED THIS PLAN IN COMPLIANCE WITH THOSE REGULATIONS. I CERTIFY THAT THE PLAN IMPLEMENTS THE REGULATIONS TO PROVIDE EFFICIENT LANDSCAPE WATER USE.

Brooke Whalen
 SIGNATURE

09/14/2021
 DATE

BROOKE WHALEN (RLA #5175)

SHEET INDEX

(RECYCLED WATER SHEETS ONLY)

SHEET NO.	DISCIPLINE CODE	TITLE
39.	LI-01	RECYCLED WATER TITLE SHEET
40.	LI-02	IRRIGATION PLAN
41.	LI-03	IRRIGATION PLAN
42.	LI-04	IRRIGATION PLAN
43.	LI-05	IRRIGATION SCHEDULE
44.	LI-06	IRRIGATION CALCULATIONS
45.	LI-07	IRRIGATION CALCULATIONS
46.	LI-08	IRRIGATION NOTES
47.	LI-09	IRRIGATION DETAILS
48.	LI-10	IRRIGATION DETAILS
49.	LI-11	IRRIGATION DETAILS
50.	LI-12	IRRIGATION DETAILS
51.	LI-13	IRRIGATION DETAILS
52.	LI-14	IRRIGATION DETAILS
53.	LI-15	IRRIGATION DETAILS AND WATER AGENCIES' STANDARD SPECIFICATIONS SECTION 15152
54.	LI-16	WATER AGENCIES' STANDARD SPECIFICATIONS SECTION 15152

COUNTY OF SAN DIEGO

DEPARTMENT OF ENVIRONMENTAL HEALTH
 LAND AND WATER QUALITY DIVISION

Jenna Lepore Digitally signed by Jenna Lepore
 Date: 2021.09.21 12:41:09 -07'00'

ENVIRONMENTAL HEALTH SPECIALIST DATE:

OTAY WATER DISTRICT

PROJECT NO. D0894-060253

PZ 711 RPZ 680

Brandon DiPietro Digitally signed by Brandon DiPietro
 DN: cn=Brandon DiPietro, o=Otay Water District, ou=Otay Water District, email=brandon@otaywater.gov, c=US
 Date: 2021.09.22 13:49:46 -07'00'

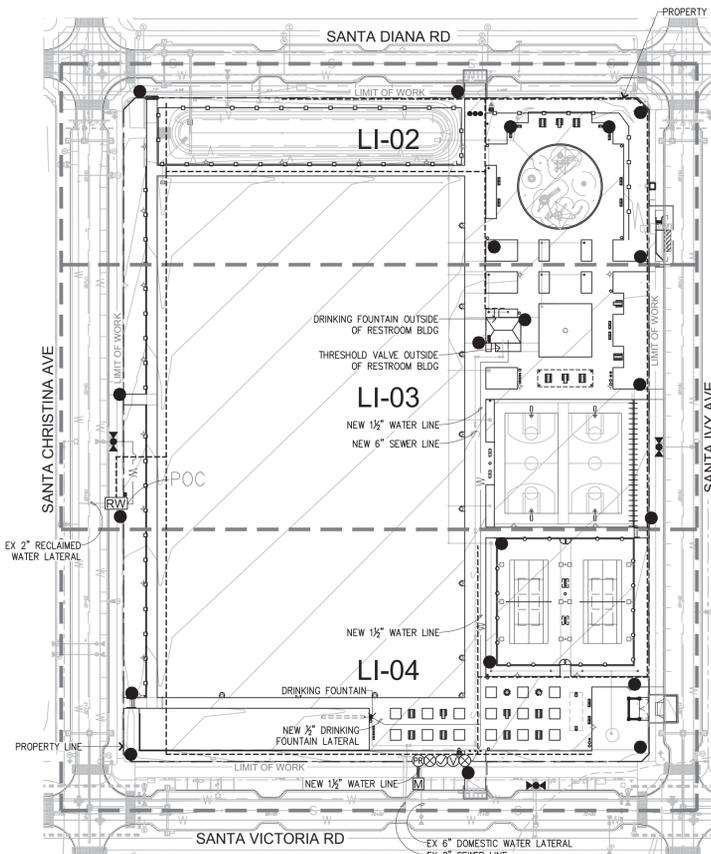
BRANDON DIPIETRO, FIELD SERVICES MANAGER DATE:

Juan Tamayo Digitally signed by Juan Tamayo
 DN: cn=Juan Tamayo, o=Otay Water District, ou=Otay Water District, email=juan@otaywater.gov, c=US
 Date: 2021.09.22 13:13:16 -07'00'

JUAN TAMAYO, RECYCLED WATER PROGRAM SUPERVISOR DATE:

Tanya Ayala-Mason Digitally signed by Tanya Ayala-Mason
 DN: cn=Tanya Ayala-Mason, o=Otay Water District, ou=Otay Water District, email=tanya@otaywater.gov, c=US
 Date: 2021.09.22 12:33:16 -07'00'

REVIEWED BY Tanya Ayala-Mason DATE:
 NOTE: SIGNATURE EXPIRES 1 YEAR AFTER DATE



INDEX MAP

SCALE: 1"=80'

WATER METER INFORMATION TABLE

POC ID	POC STA.	IRRIGATED AREA (SF)	DEMAND (GPM)	ANNUAL USAGE (ACRE-FT)	LATERAL SIZE (IN)	METER SIZE (IN)
POC 'A'	STA. 19+08	212,817	105	15.02	2"	2"
TOTAL		212,817	105	15.02		

OWD Revision

Digitally signed by Brandon DiPietro
 DN: cn=Brandon DiPietro, o=Otay Water District, ou=Otay Water District, email=brandon@otaywater.gov, c=US
 Date: 2022.11.17 08:16:53 -08'00'

OWD AS BUILT

Signature and Date
 Field Services Mngnr. Brandon DiPietro

AS BUILT		UTILITY NOTE	
SIGNATURE _____	DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
Printed Name _____	R.L.A. No. _____		
My Registration Expires _____	Discipline _____		
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
CONTRACTOR: _____	MAP # 15350		DELTA A IRRIGATION REVISIONS
INSPECTOR: _____			
DATE COMPLETED: _____	DWG. #S 16022		

SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
HORIZONTAL: N/A	HH	HH	BE
VERTICAL: N/A	Plans Prepared Under Supervision Of: BROOKE JP. WHALEN, M.L.A. No. 5175		
N/A			

CONSULTANT

ktua 3916 Normal Street
 San Diego, CA 92103
 619.294.4477
 www.ktua.com

Submitted: _____ DATE: _____
 By: _____
 Office: _____

APPROVED BY: _____ DATE: _____
 DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE

BID DOCUMENTS - OCTOBER 11, 2021

RECYCLED WATER TITLE SHEET

CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT

OTAY RANCH VILLAGE 2 P-2 PARK,
 GROVE PARK

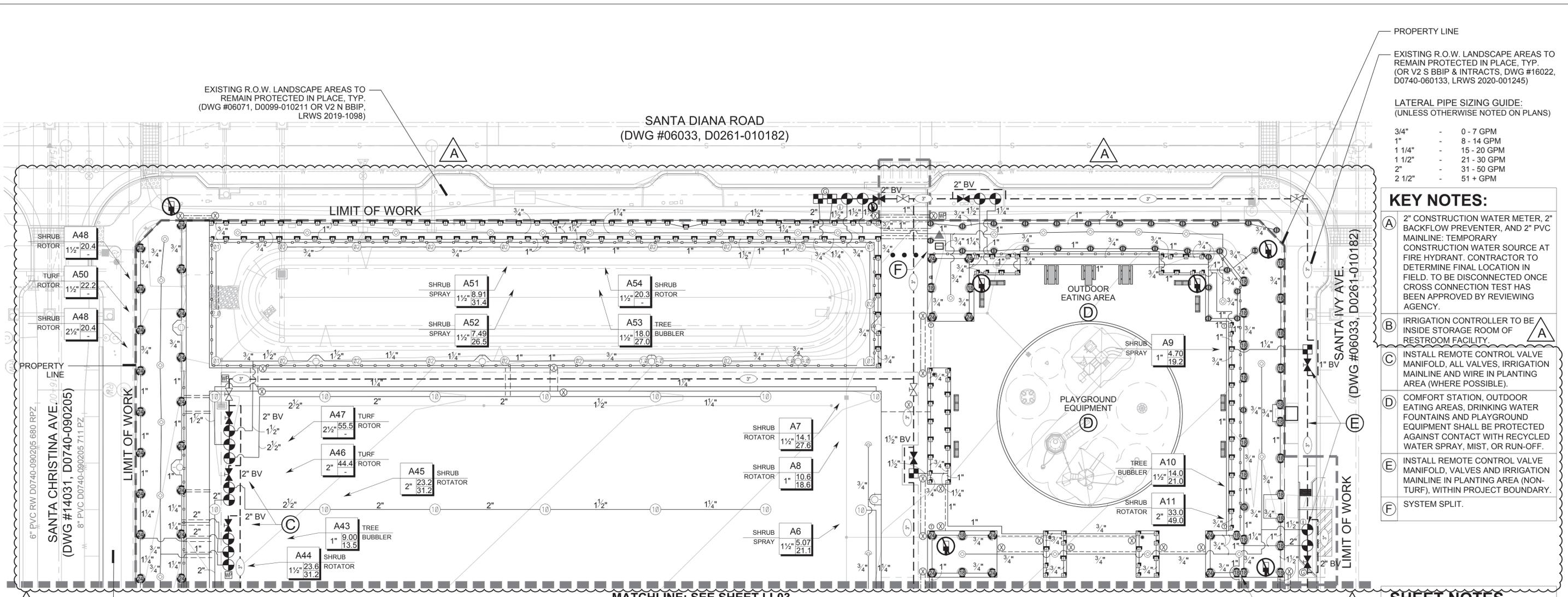
LANDSCAPE DWG. NO. LI-01
 SHEET 1 OF 16
 W.O. NO. PRK-0330
 DRAWING NO. 19010-39
 SHEET 39 OF 100

PERMIT NO. PLR-19-012

DEH2019-LRWS-001118

OWD# D0894-060253

SANTA DIANA ROAD
(DWG #06033, D0261-010182)



EXISTING R.O.W. LANDSCAPE AREAS TO REMAIN PROTECTED IN PLACE, TYP. (OR V2 S BBIP & INTRACTS, DWG #16022, D0740-060133, LRWS 2020-001245)

EXISTING R.O.W. LANDSCAPE AREAS TO REMAIN PROTECTED IN PLACE, TYP. (DWG #06071, D0099-010211 OR V2 N BBIP, LRWS 2019-1098)

LATERAL PIPE SIZING GUIDE:
(UNLESS OTHERWISE NOTED ON PLANS)

3/4"	-	0 - 7 GPM
1"	-	8 - 14 GPM
1 1/4"	-	15 - 20 GPM
1 1/2"	-	21 - 30 GPM
2"	-	31 - 50 GPM
2 1/2"	-	51 + GPM

KEY NOTES:

- (A) 2" CONSTRUCTION WATER METER, 2" BACKFLOW PREVENTER, AND 2" PVC MAINLINE; TEMPORARY CONSTRUCTION WATER SOURCE AT FIRE HYDRANT. CONTRACTOR TO DETERMINE FINAL LOCATION IN FIELD. TO BE DISCONNECTED ONCE CROSS CONNECTION TEST HAS BEEN APPROVED BY REVIEWING AGENCY.
- (B) IRRIGATION CONTROLLER TO BE INSIDE STORAGE ROOM OF RESTROOM FACILITY.
- (C) INSTALL REMOTE CONTROL VALVE MANIFOLD, ALL VALVES, IRRIGATION MAINLINE AND WIRE IN PLANTING AREA (WHERE POSSIBLE).
- (D) COMFORT STATION, OUTDOOR EATING AREAS, DRINKING WATER FOUNTAINS AND PLAYGROUND EQUIPMENT SHALL BE PROTECTED AGAINST CONTACT WITH RECYCLED WATER SPRAY, MIST, OR RUN-OFF.
- (E) INSTALL REMOTE CONTROL VALVE MANIFOLD, VALVES AND IRRIGATION MAINLINE IN PLANTING AREA (NON-TURF), WITHIN PROJECT BOUNDARY.
- (F) SYSTEM SPLIT.

SHEET NOTES

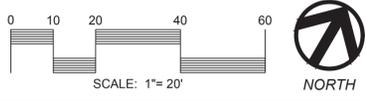
1. SEE SHEET LI-05 FOR IRRIGATION LEGEND
2. SEE SHEETS LI-06 THROUGH LI-07 FOR IRRIGATION WATER USE CALCULATIONS
3. SEE SHEETS LI-08 - LI-15 FOR IRRIGATION NOTES AND DETAILS
4. SEE SHEETS LI-15 THROUGH LI-16 FOR WATER AGENCIES' STANDARD SPECIFICATIONS SECTION 15152
5. WATER METER AND CONTROLLER LOCATED ON SHEET LI-03

EXISTING R.O.W. LANDSCAPE AREAS TO REMAIN PROTECTED IN PLACE, TYP. (OR V2 S BBIP & INTRACTS, DWG #16022, D0740-060133, LRWS 2020-001245)

IRRIGATION REFERENCE LEGEND:

(10) (10)	6" POP-UP I-25 TURF ROTOR	POC	POINT OF CONNECTION	■	REMOTE CONTROL VALVE WITH PRESSURE REGULATING FILTER ASSEMBLY
(10) (20)	6" POP-UP TURF ROTATOR W/ R-VAN24 NOZZLE (24' R)	(RW)	RECYCLED WATER METER	CONT	AUTOMATIC IRRIGATION CONTROLLER
(01) (02)	12" POP-UP SHRUB ROTOR W/ LOW ANGLE NOZZLE (29'-32'R)	(Y)	Y-STRAINER	---	IRRIGATION MAINLINE
(01) (01)	12" POP-UP SHRUB ROTATOR W/ R-VAN14 NOZZLE (14' R)	(PR)	PRESSURE REGULATOR	---	IRRIGATION LATERAL LINE
(01) (01)	12" POP-UP SHRUB ROTATOR W/ R-VAN18 NOZZLE (18' R)	(BT)	BACKFLOW / CHECK VALVE	---	SLEEVE
(01) (01)	12" POP-UP SHRUB ROTATOR W/ R-VAN24 NOZZLE (24' R)	(TS)	TEST STATION	---	WIRE CONDUIT
(01) (01)	12" POP-UP SHRUB ROTATOR W/ R-VAN-SST NOZZLE (SIDE STRIP - 5'x30')	(BP)	BOOSTER PUMP	⊙	SURGE PROTECTOR AND GROUNDING ROD
(01) (01)	12" POP-UP SHRUB SPRAY W/ SQUARE NOZZLE (4'x4' & 4'x8')	(MV)	IRRIGATION MASTER VALVE (NORMALLY CLOSED)	⊗	PULL BOX
(01) (01)	TREE BUBBLER SYSTEM (IN SHRUB)	(FS)	FLOW SENSOR	WF	WIRE PULL BOX
(01) (01)	TREE BUBBLER SYSTEM (IN TURF)	---	FLOW SENSOR COMMUNICATION CABLE	W	POTABLE WATER LINE
(01) (01)	TREE BUBBLER SYSTEM POP-UP INDICATOR HEAD	⊗	BALL VALVE ISOLATION VALVE	M	NEW 1" DOMESTIC WATER METER
(01) (01)	RECYCLED WATER SIGN	⊗	BALL VALVE (MANIFOLD VALVE)	⊗⊗⊗	NEW 1" DOMESTIC BACKFLOW PREVENTER
		⊗	REMOTE CONTROL VALVE	⊗	NEW 1" DOMESTIC PRESSURE REGULATOR

AS BUILT	UTILITY NOTE
SIGNATURE _____ DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.
Printed Name _____ R.L.A. No. _____	
My Registration Expires _____ Discipline _____	
CONSTRUCTION RECORD	REFERENCES
CONTRACTOR: _____	MAP # 15350
INSPECTOR: _____	By: _____
DATE COMPLETED: _____	DWG. #S 16022



CONSULTANT

ktua

3916 Normal Street
San Diego, CA 92103
619.294.4477
www.ktua.com

Submitted: _____ APPROVED BY: _____ DATE: _____

By: _____

Office: _____

DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE

BID DOCUMENTS - OCTOBER 11, 2021

IRRIGATION PLAN

CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT

OTAY RANCH VILLAGE 2 P-2 PARK,
GROVE PARK

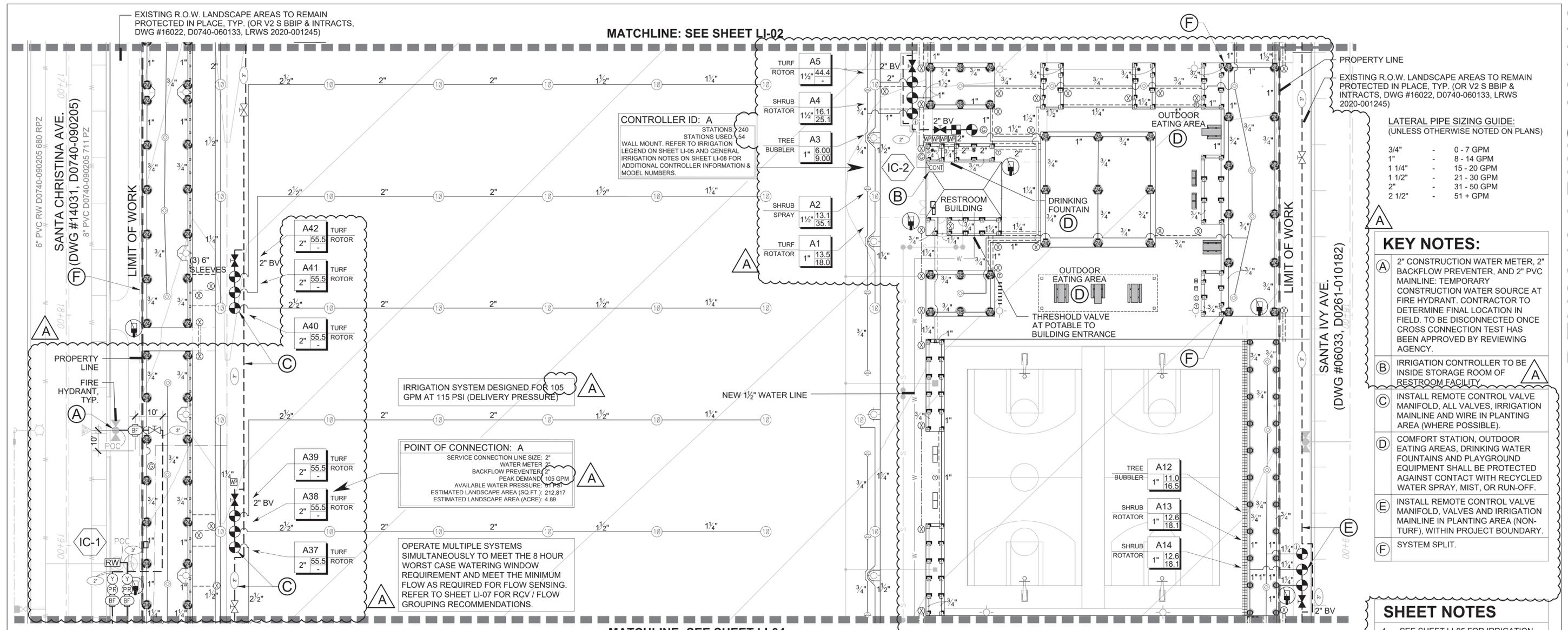
LANDSCAPE DWG NO. **LI-02**
SHEET 2 OF 16
W.O. NO. PRK-0330

DRAWING NO. **19010-40**
SHEET 40 OF 100

PERMIT NO. PLR-19-012

INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.



IRRIGATION REFERENCE LEGEND:

④ ⑩	6" POP-UP I-25 TURF ROTOR	POC	POINT OF CONNECTION	■	REMOTE CONTROL VALVE WITH PRESSURE REGULATING FILTER ASSEMBLY
④ ②	6" POP-UP TURF ROTATOR W/ R-VAN24 NOZZLE (24' R)	RW	RECYCLED WATER METER	CONT	AUTOMATIC IRRIGATION CONTROLLER
① ②	12" POP-UP SHRUB ROTOR W/ LOW ANGLE NOZZLE (29'-32'R)	Y	Y-STRAINER	— 3" —	IRRIGATION MAINLINE
① ④	12" POP-UP SHRUB ROTATOR W/ R-VAN14 NOZZLE (14' R)	PR	PRESSURE REGULATOR	— — — —	IRRIGATION LATERAL LINE
① ⑥	12" POP-UP SHRUB ROTATOR W/ R-VAN18 NOZZLE (18' R)	BF	BACKFLOW / CHECK VALVE	— — — —	SLEEVE
④ ②	12" POP-UP SHRUB ROTATOR W/ R-VAN24 NOZZLE (24' R)	TS	TEST STATION	— — — —	WIRE CONDUIT
④ ④	12" POP-UP SHRUB ROTATOR W/ R-VAN-SST NOZZLE (SIDE STRIP - 5'x30')	BP	BOOSTER PUMP	⊙	SURGE PROTECTOR AND GROUNDING ROD
④ ④	12" POP-UP SHRUB SPRAY W/ SQUARE NOZZLE (4'x4' & 4'x8')	MV	IRRIGATION MASTER VALVE (NORMALLY CLOSED)	⊗	PULL BOX
⊙	TREE BUBBLER SYSTEM (IN SHRUB)	FS	FLOW SENSOR	— W —	POTABLE WATER LINE
⊙	TREE BUBBLER SYSTEM (IN TURF)	— — — —	FLOW SENSOR COMMUNICATION CABLE	⊞	NEW 1" DOMESTIC WATER METER
⊙	TREE BUBBLER SYSTEM POP-UP INDICATOR HEAD	⊞	BALL VALVE ISOLATION VALVE	⊞⊞⊞	NEW 1" DOMESTIC BACKFLOW PREVENTER
⊙	RECYCLED WATER SIGN	⊞	BALL VALVE (MANIFOLD VALVE)	⊞	NEW 1" DOMESTIC PRESSURE REGULATOR

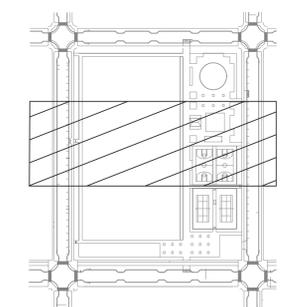
IRRIGATION CONSTRUCTION NOTES

- IC-1 LOCATE POINT OF CONNECTION IN THE VICINITY SHOWN AND CONNECT TO IT. DOWNSTREAM OF THE RECYCLED WATER METER, INSTALL SPECIFIED DUAL BACKFLOW PREVENTERS, Y-STRAINERS, TEST STATIONS, NORMALLY CLOSED MASTER VALVE, FLOW SENSOR, BOOSTER PUMP AND ISOLATION VALVE, AND EXTEND PRESSURE SUPPLY LINE TO THE IRRIGATION SYSTEM, REFER TO DETAIL S, LANDSCAPE DWG NO. LI-14 FOR P.O.C. ENLARGEMENT.
- IC-2 LOCATE AVAILABLE 120 VOLT POWER SOURCE FOR THE CONTROLLER. PRIOR TO ORDERING MATERIALS AND BEGINNING INSTALLATION, THE CONTRACTOR SHALL COORDINATE EXACT LOCATION OF CONTROLLER WITH THE CITY REPRESENTATIVE. ONCE THE FINAL LOCATION IS DETERMINED, INSTALL THE CONTROLLER PER DETAIL AND ANY MANUFACTURER'S SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR EXTENDING, LABELING AND CONNECTING THE PUMP SIGNAL WIRE, AND MASTER VALVE AND FLOW SENSING WIRES TO CONTROLLER.

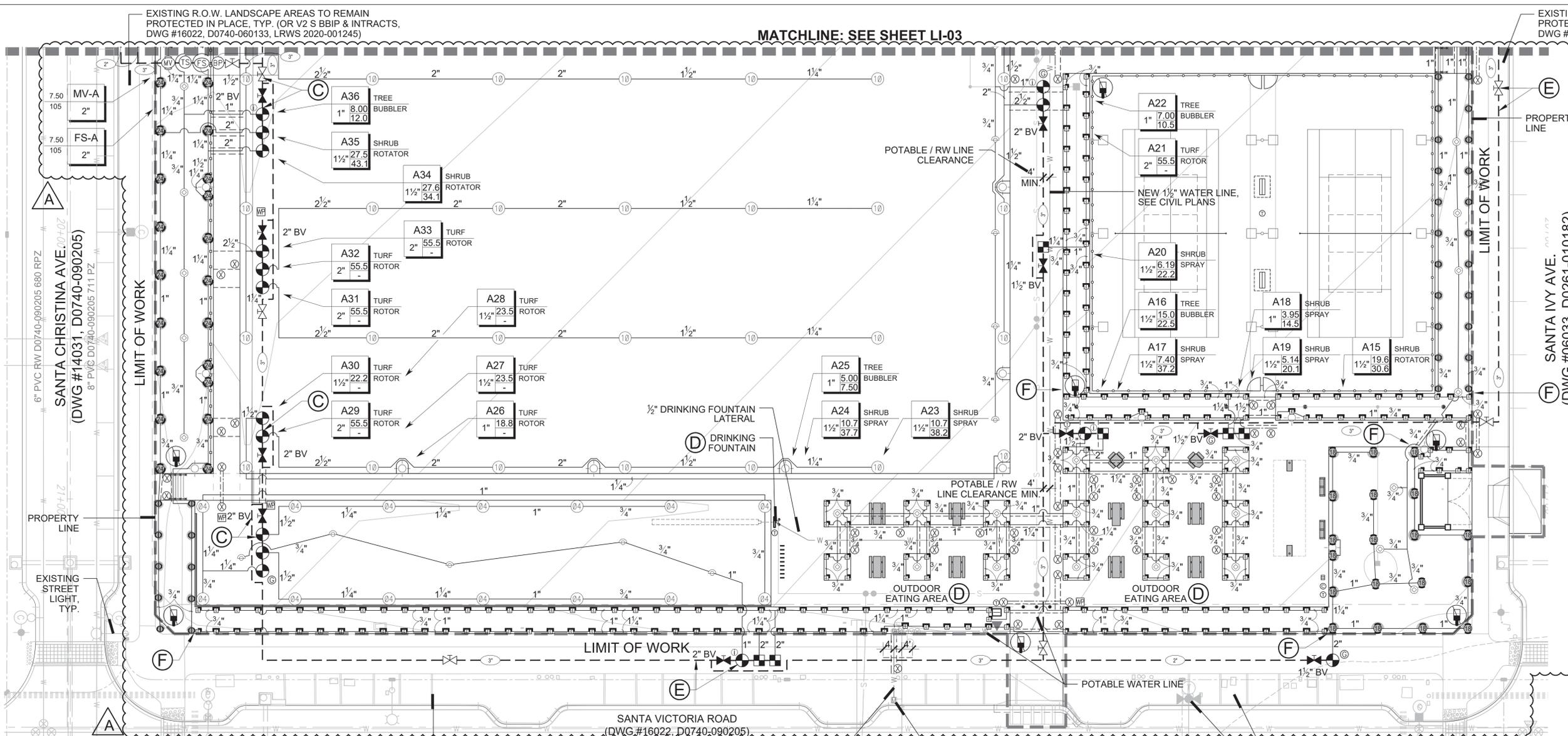
INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

KEYMAP



AS BUILT		UTILITY NOTE		CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG NO.	
SIGNATURE _____ DATE _____		ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.		ktua 3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		IRRIGATION PLAN		LI-03 SHEET 3 OF 16	
Printed Name _____ R.L.A. No. _____				Submitted: _____ APPROVED BY: _____ DATE: _____		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT		W.O. NO. PRK-0330	
My Registration Expires _____ Discipline _____				By: _____		OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK		DRAWING NO. 19010-41	
CONSTRUCTION RECORD		REFERENCES		Planned Under Supervision Of: _____ Date: 10/11/2021		DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		SHEET 41 OF 100	
CONTRACTOR:	MAP # 15350	By:	REVISIONS	Scale:	Designed By: _____ Drawn By: _____ Checked By: _____				
INSPECTOR:	DWG. #S 16022	Date:	DELTA IRRIGATION REVISIONS	1" = 20'	08/16/22				
DATE COMPLETED:		App'd:		VERTICAL: 446.361 (NAVD 88)					
				HORIZONTAL: I.E. N78°21'27"E NAD 83					
				SCALE: 1" = 20'					

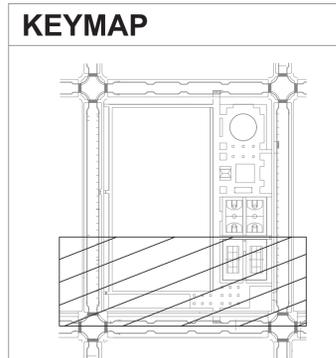


LATERAL PIPE SIZING GUIDE:
(UNLESS OTHERWISE NOTED ON PLANS)

3/4"	0 - 7 GPM
1"	8 - 14 GPM
1 1/4"	15 - 20 GPM
1 1/2"	21 - 30 GPM
2"	31 - 50 GPM
2 1/2"	51 + GPM

- KEY NOTES:**
- (A) 2" CONSTRUCTION WATER METER, 2" BACKFLOW PREVENTER, AND 2" PVC MAINLINE. TEMPORARY CONSTRUCTION WATER SOURCE AT FIRE HYDRANT. CONTRACTOR TO DETERMINE FINAL LOCATION IN FIELD. TO BE DISCONNECTED ONCE CROSS CONNECTION TEST HAS BEEN APPROVED BY REVIEWING AGENCY.
 - (B) IRRIGATION CONTROLLER TO BE INSIDE STORAGE ROOM OF RESTROOM FACILITY.
 - (C) INSTALL REMOTE CONTROL VALVE MANIFOLD, ALL VALVES, IRRIGATION MAINLINE AND WIRE IN PLANTING AREA (WHERE POSSIBLE).
 - (D) COMFORT STATION, OUTDOOR EATING AREAS, DRINKING WATER FOUNTAINS AND PLAYGROUND EQUIPMENT SHALL BE PROTECTED AGAINST CONTACT WITH RECYCLED WATER SPRAY, MIST, OR RUN-OFF.
 - (E) INSTALL REMOTE CONTROL VALVE MANIFOLD, VALVES AND IRRIGATION MAINLINE IN PLANTING AREA (NON-TURF), WITHIN PROJECT BOUNDARY.
 - (F) SYSTEM SPLIT.

- SHEET NOTES**
- SEE SHEET LI-05 FOR IRRIGATION LEGEND
 - SEE SHEETS LI-06 THROUGH LI-07 FOR IRRIGATION WATER USE CALCULATIONS
 - SEE SHEETS LI-08 - LI-15 FOR IRRIGATION NOTES AND DETAILS
 - SEE SHEETS LI-15 THROUGH LI-16 FOR WATER AGENCIES' STANDARD SPECIFICATIONS SECTION 15152
 - WATER METER AND CONTROLLER LOCATED ON SHEET LI-03



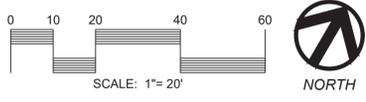
IRRIGATION REFERENCE LEGEND:

	6" POP-UP I-25 TURF ROTOR		POINT OF CONNECTION		REMOTE CONTROL VALVE WITH PRESSURE REGULATING FILTER ASSEMBLY
	6" POP-UP TURF ROTATOR W/ R-VAN24 NOZZLE (24' R)		RECYCLED WATER METER		AUTOMATIC IRRIGATION CONTROLLER
	12" POP-UP SHRUB ROTATOR W/ LOW ANGLE NOZZLE (29'-32'R)		Y-STRAINER		IRRIGATION MAINLINE
	12" POP-UP SHRUB ROTATOR W/ R-VAN14 NOZZLE (14' R)		PRESSURE REGULATOR		IRRIGATION LATERAL LINE
	12" POP-UP SHRUB ROTATOR W/ R-VAN18 NOZZLE (18' R)		BACKFLOW / CHECK VALVE		SLEEVE
	12" POP-UP SHRUB ROTATOR W/ R-VAN24 NOZZLE (24' R)		TEST STATION		WIRE CONDUIT
	12" POP-UP SHRUB ROTATOR W/ R-VAN-SST NOZZLE (SIDE STRIP - 5'x30')		BOOSTER PUMP		SURGE PROTECTOR AND GROUNDING ROD
	12" POP-UP SHRUB SPRAY W/ SQUARE NOZZLE (4'x4' & 4'x8')		IRRIGATION MASTER VALVE (NORMALLY CLOSED)		PULL BOX
	TREE BUBBLER SYSTEM (IN SHRUB)		FLOW SENSOR		WIRE PULL BOX
	TREE BUBBLER SYSTEM (IN TURF)		FLOW SENSOR COMMUNICATION CABLE		POTABLE WATER LINE
	TREE BUBBLER SYSTEM POP-UP INDICATOR HEAD		BALL VALVE ISOLATION VALVE		NEW 1" DOMESTIC WATER METER
	RECYCLED WATER SIGN		BALL VALVE (MANIFOLD VALVE)		NEW 1" DOMESTIC BACKFLOW PREVENTER
			REMOTE CONTROL VALVE		NEW 1" DOMESTIC PRESSURE REGULATOR

INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

AS BUILT		UTILITY NOTE	
SIGNATURE _____	DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
Printed Name _____	R.L.A. No. _____		
My Registration Expires _____	Discipline _____		
CONSTRUCTION RECORD	REFERENCES	REVISIONS	DATUMS
CONTRACTOR: _____	MAP # 15350	By: _____	Date: 08/18/22
INSPECTOR: _____	DWG. #S 16022	REVISIONS: DELTA IRRIGATION REVISIONS	App'd: _____
DATE COMPLETED: _____			VERTICAL: 446.361 (NAVD 88)
			HORIZONTAL: I.E. N78°21'27"E NAD 83



CONSULTANT

ktua
3916 Normal Street
San Diego, CA 92103
619.294.4477
www.ktua.com

Submitted: _____ APPROVED BY: _____ DATE: _____
By: _____
Office: _____ DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE

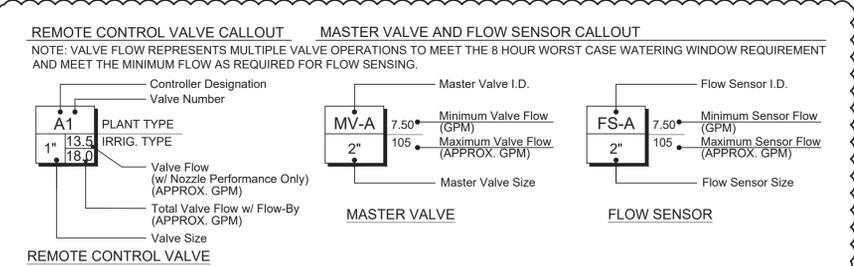
BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG NO.
IRRIGATION PLAN		LI-04
		SHEET 4 OF 16
CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT		W.O. NO. PRK-0330
OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK		DRAWING NO. 19010-42
		SHEET 42 OF 100

IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO.	REMARKS	DETAIL
POC	POINT OF CONNECTION	-	APPROX. LOCATION SHOWN, FIELD VERIFY. SEE ALSO CIVIL PLANS.	S
RW	RECYCLED WATER METER	NEW 2" RECYCLED WATER METER	APPROX. LOCATION SHOWN, FIELD VERIFY	WR-08
Y	Y-STRAINER IN BOX	WILKINS SXL (2"), OR APPROVED EQUAL	APPROX. LOCATION SHOWN, FIELD VERIFY	A
PR	PRESSURE REGULATOR	WILKINS 500XL-HR (2"), SET DELIVERY PRESSURE REGULATOR AT 115 PSI / AS REQUIRED	INSTALL UPSTREAM BACKFLOW PREVENTER	WR-08
BF	BACKFLOW REDUCED PRESSURE	WATTS 009 QT-2"	APPROX. LOCATION SHOWN, FIELD VERIFY	WR-02
NO SYMBOL	BACKFLOW REDUCED PRESSURE ENCLOSURE	V.I.T. STRONG BOX SMOOTH TOUCH SBBC-45SS	APPROX. LOCATION SHOWN, FIELD VERIFY	WR-02
TS	TEST STATION	-	APPROX. LOCATION SHOWN, FIELD VERIFY	WR-04/S
BP	BOOSTER PUMP	BARRETT ENGINEERED PUMPS IBPCO-7.5-2-3/VFD-F/PSPIPE 3" WITH BY-PASS AND GAUGES (7.5 HP PUMP ASSEMBLY)	APPROX. LOCATION SHOWN, FIELD VERIFY. PROVIDE SIGNAL WIRE IN CONDUIT BETWEEN CONTROLLER AND PUMP, AND DECODER IN BOX AT PUMP. CONTACT ITS AT (714) 696-7535	B
MV	MASTER VALVE (NORMALLY CLOSED)	RAINBIRD IVM200EFB-NP-HAN2, 2" SIZE	APPROX. LOCATION SHOWN, FIELD VERIFY. PROVIDE 2-WIRE CABLE IN SEPARATE CONDUIT BETWEEN CONTROLLER AND VALVE	C
FS	FLOW SENSOR	UFS-200 SENSOR WITH RAIN BIRD LXIVMSEN MODULE (1-200 GPM)	IMMEDIATELY DOWNSTREAM MASTER VALVE	D
---	FLOW SENSOR COMMUNICATION CABLE	P7072D MAXI WIRE	INSTALL IN CONDUIT BETWEEN FLOW SENSOR AND CONTROLLER WITH NO CABLE SPLICES. PROVIDE 2-WIRE SENSOR MODULE IN BOX AT SENSOR.	M
⊗	BALL VALVE (ISOLATION VALVE)	HAYWARD TB SERIES PVC SCH 80 TRUE UNION WITH EPDM SEALS	MAINLINE SIZE	E
⊗	BALL VALVE (MANIFOLD VALVE)	HAYWARD TB SERIES PVC SCH 80 TRUE UNION WITH EPDM SEALS	APPROX. LOCATION SHOWN, FIELD VERIFY, SIZE PER PLAN	E
⊕	REMOTE CONTROL VALVE (PRESSURE REGULATING)	IVM100EFB-PRS-D-NP-HAN1, IVM150EFB-PRS-D-NP-HAN2, IVM200EFB-PRS-D-NP-HAN2, WITH FACTORY-INSTALLED IVM-SOL	APPROX. LOCATION SHOWN, FIELD VERIFY, SIZE PER PLAN NOTE: PRS-D REGULATOR MUST BE FIELD INSTALLED	G
⊕	REMOTE CONTROL VALVE WITH PRESSURE REGULATING FILTER ASSEMBLY	RAINBIRD IVM100EFB-PRS-D-NP-HAN1 WITH OPTIONS NOTED: PES-B VALVE, PRB-QKCHK-100 PRESSURE-REGULATING FILTER (0.3 - 20 GPM) FOR 1" VALVE ASSEMBLY, IVM150EFB-PRS-D-NP-HAN2, LCRBY150D FILTER AND PSI-H40X-150 PRESSURE REGULATOR (21 - 62 GPM) FOR 1-1/2" VALVE ASSEMBLY WITH FACTORY-INSTALLED IVM-SOL	APPROX. LOCATION SHOWN, FIELD VERIFY, SIZE PER PLAN. NOTE: -PRS-D REGULATOR MUST BE FIELD INSTALLED	U
CONT	AUTOMATIC IRRIGATION CONTROLLER	RAINBIRD ESPLXVMP: INCLUDES 240 STATIONS CONTROLLER IN PLASTIC WALL-MOUNT CABINET. ADD RS32 COMMUNICATION CARTRIDGE FOR RADIO COMMUNICATION, AND PSR220-IVM PUMP START RELAY	APPROX. LOCATION SHOWN (IN RESTROOM STORAGE SPACE), FIELD VERIFY. WALL MOUNT WITH STAINLESS STEEL CABINET. CITY CONTROL SYSTEM MANAGEMENT: PRIMARY COMMUNICATION (ETHERNET) WILL ORIGINATE AT FIRE STATION 7 USING AN ETHERNET CARTRIDGE AND 900 MHZ RADIO. THIS PARK WILL CONNECT TO IT VIA RADIO CARTRIDGE AS SECONDARY COMMUNICATION. CONTROL SYSTEM INSTALLATION, OPERATION AND DATA SERVICE SHALL BE REVIEWED BY TORO FIELD SERVICE REPRESENTATIVE PRIOR TO OBTAINING FINAL ACCEPTANCE OF SYSTEM BY RAIN BIRD AND OWNER.	H
NO SYMBOL	RAIN SENSOR	RAINBIRD RSD WITH LXIVMSEN	MOUNT THE SENSOR ON BUILDING ROOF IN EXACT LOCATION COORDINATED WITH THE CITY AND PER RAIN BIRD RECOMMENDATIONS.	-
NO SYMBOL	WIRE CONNECTOR	RAIN BIRD WC20	BELOW GRADE WIRE SPLICES. ALL WIRE CONNECTIONS AND SPARE WIRE ENDS SHALL BE PER STANDARD DRAWINGS AND ENCLOSE IN SEALANT FOR WATERTIGHTNESS	I
---	IRRIGATION MAINLINE (SIZE AS NOTED ON PLAN)	PURPLE RECYCLED WATER PVC CLASS 315 (SDR 13.5) = 2" TO 3" SIZE WITH PVC SCH 80 FITTINGS PURPLE RECYCLED WATER PVC SCH 40 = 1-1/2" SIZE WITH PVC SCH 80 FITTINGS	18" NORMAL DEPTH OF COVER, 30"-36" UNDER HARDSCAPE	F, J, K, WI-01, WI-02 & WI-04
---	IRRIGATION LATERAL LINE (SIZE AS NOTED ON PLAN)	PURPLE RECYCLED WATER PVC SCH 40 WITH PVC SCH 40 FITTINGS	1" SIZE & ABOVE ARE INDICATED ON THE PLAN, WITH ALL OTHERS 3/4" IN SIZE. 15" DEPTH OF COVER	J, K & WI-04
---	SLEEVE	PURPLE RECYCLED WATER PVC SCH 40	MIN. 2" SIZE, TWICE THE DIA. OF PIPE SLEEVED. APPROX. LOCATION SHOWN, FIELD VERIFY. INSTALL AS NOTED AND UNDER PAVING/HARDSCAPE	F, K, WI-01, WI-02 & WI-04
---	WIRE CONDUIT	GREY PVC SCH 40	MIN. 3/4" SIZE, SIZE TWICE THE DIA. OF WIRE BUNDLE SLEEVED, AND AS NOTED. APPROX. LOCATION SHOWN ONLY FOR COORDINATING CONDUIT INSTALLATION PRIOR TO PAVING CONSTRUCTION. ALL WIRE/ CABLE SHALL BE INSIDE CONDUIT (FLOW SENSOR WIRE AND MASTER VALVE WIRE IN SEPARATE 1" DIA. MIN. ELECTRICAL CONDUIT). INSTALL AS NOTED AND UNDER PAVING/HARDSCAPE	K & S

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO./NOZZLE	RADIUS	PSI	GPM	DETAIL
⊕	6" POP-UP GEAR DRIVEN (IN TURF)	HUNTER I-25-06-SS-R W/ ADJUSTABLE TO FULL CIRCLE NON-STANDARD 4.0 YELLOW NOZZLE	42'	60	4.70	O
⊕	6" POP-UP GEAR DRIVEN (IN TURF)	HUNTER I-25-06-SS-R W/ ADJUSTABLE TO FULL CIRCLE STANDARD 10.0 LIGHT GREEN NOZZLE	52'	60	11.10	O
⊕	6" POP-UP ROTATING STREAM (IN TURF)	RAINBIRD RD06-S-P-45-F-NP W/ R-VAN24 NOZZLE - 90°-270°	23'	45	0.84-2.52	N
⊕	6" POP-UP ROTATING STREAM (IN TURF)	RAINBIRD RD06-S-P-45-F-NP W/ R-VAN24 NOZZLE - 360°	23'	45	3.48	N
⊕	12" POP-UP GEAR DRIVEN (IN SHRUB)	RAINBIRD 5012-PCSMRNP W/ ADJUSTABLE TO FULL CIRCLE 1.0 LA, Q NOZZLE	29'	45	1.05	O
⊕	12" POP-UP GEAR DRIVEN (IN SHRUB)	RAINBIRD 5012-PCSMRNP W/ ADJUSTABLE TO FULL CIRCLE 2.0 LA, H NOZZLE	32'	45	2.02	O
⊕	12" POP-UP SPRAY (IN SHRUB)	RAINBIRD RD12-S-P-30-F-NP W/ SQ-Q NOZZLE	4'x4'	30	0.12	N
⊕	12" POP-UP SPRAY (IN SHRUB)	RAINBIRD RD12-S-P-30-F-NP W/ SQ-H NOZZLE	4'x8'	30	0.20	N
⊕	12" POP-UP ROTATING STREAM (IN SHRUB)	RAINBIRD RD12-S-P-45-F-NP W/ R-VAN14 NOZZLE - 90°-270°	14'	45	0.32-0.94	N
⊕	12" POP-UP ROTATING STREAM (IN SHRUB)	RAINBIRD RD12-S-P-45-F-NP W/ R-VAN14 NOZZLE - 360°	14'	45	1.27	N
⊕	12" POP-UP ROTATING STREAM (IN SHRUB)	RAINBIRD RD12-S-P-45-F-NP W/ R-VAN18 NOZZLE - 90°-270°	17'	45	0.50-1.51	N
⊕	12" POP-UP ROTATING STREAM (IN SHRUB)	RAINBIRD RD12-S-P-45-F-NP W/ R-VAN18 NOZZLE - 360°	17'	45	1.85	N
⊕	12" POP-UP ROTATING STREAM (IN SHRUB)	RAINBIRD RD12-S-P-45-F-NP W/ R-VAN24 NOZZLE - 90°-270°	23'	45	0.84-2.52	N
⊕	12" POP-UP ROTATING STREAM (IN SHRUB)	RAINBIRD RD12-S-P-45-F-NP W/ R-VAN-SST NOZZLE	5'x30'	45	0.48	N
⊕	TREE BUBBLER SYSTEM (IN SHRUB) (2 BUBBLERS PER SYMBOL / TREE)	EACH TREE SHALL HAVE: - ONE (1) 4" POP-UP (RAINBIRD RD04-S-P-30-F-NP WITH 5Q-B NOZZLE) WITH FACTORY INSTALLED CHECK VALVE. - ONE (1) FIXED BUBBLER (RAINBIRD 1402 NOZZLE) IN A PERFORATED PIPE. WITH ANTI-DRAIN SPRING CHECK VALVE.	5'	30	0.50	P & FLOOD Q
⊕	TREE BUBBLER SYSTEM (IN TURF) (2 BUBBLERS PER SYMBOL / TREE)	EACH TREE SHALL HAVE: - ONE (1) 4" POP-UP (RAINBIRD RD04-S-P-30-F-NP WITH 5Q-B NOZZLE) WITH FACTORY INSTALLED CHECK VALVE. - ONE (1) FIXED BUBBLER (RAINBIRD 1402 NOZZLE) IN A PERFORATED PIPE. WITH ANTI-DRAIN SPRING CHECK VALVE.	5'	30	0.50	P & FLOOD Q
⊕	TREE BUBBLER SYSTEM POP-UP INDICATOR HEAD	RAINBIRD RD12-S-P-30-F-NP WITH GPH GDFN-R EACH TREE SYSTEM SHALL REQUIRE ONE (1) POP-UP INDICATOR HEAD NEAR TREE SYSTEM REMOTE CONTROL VALVE.	-	30	-	N (SIMILAR)

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO.	REMARKS	DETAIL
NO SYMBOL	2-WIRE VALVE DEVICE CABLE	14/2, PAIGE P7072D MAXI WIRE, OR AS APPROVED BY CONTROLLER MANUFACTURER.	SPLICES, WHEN APPROVED, SHALL USE WATER TIGHT ELECTRICAL WIRE CONNECTOR RAIN BIRD WC20. INSTALL IN 1-1/4" GREY SCH 40 PVC PIPE WITH SWEEPS FROM CONTROLLER TO REMOTE CONTROL VALVES.	V
NO SYMBOL	2-WIRE FLOW SENSOR DEVICE	LXIVMSEN	USE APPROVED RAIN BIRD WC20 WIRE CONNECTOR	-
⊕	2-WIRE GROUND ROD WITH RAIN BIRD SURGE DEVICE	5/8" DIA. X 8 FT LONG BARE COPPER ROD OR PER MANUFACTURER'S REQUIREMENTS, WITH RAIN BIRD MODEL #LXIVMSD SURGE DEVICE	DO NOT SOLELY INSTALL PER PLAN LOCATIONS. VERIFY AND INSTALL (1) GROUND ROD WITH LXIVMSD SURGE DEVICE EVERY 500 FT, OR FOR EVERY 15 DECODERS ON 2 WIRE CABLE (WHICHEVER IS SMALLER DISTANCE). INSTALL PER MANUFACTURER'S RECOMMENDATIONS.	X
⊕	PULL BOX	OLDCASTLE / CARSON PRODUCTS	AS NOTED, 6" DIA. VALVE BOX AT ENDS OF EACH SLEEVE CROSSING. LOW VOLT. = LOCKING LID HIGH VOLT. = BOLTDOWN LID INCLUDE AT LOCATIONS WITH 270 DEGREES OF CONDUIT BENDING. INCLUDE SWEEPS. MAX. 200 FEET DISTANCE SPACING ALONG WIRE RUN	L & M
⊕	WIRE PULL BOX	OLDCASTLE / CARSON PRODUCTS	APPROX. LOCATION SHOWN, FIELD VERIFY. SPLICE WIRE AND INSTALL WIRE SPLICE BOX ONLY WHERE WIRE RUN EXCEEDS 500'. INCLUDE AT LOCATIONS WITH 270 DEGREES OF CONDUIT BENDING. INCLUDE SWEEPS.	L & M
⊕	RECYCLED WATER "DO NOT DRINK" SIGN	SIGN TYPE APPROVED BY OTAY WATER DISTRICT	INSTALL QUANTITY AND LOCATION PER MUNICIPAL WATER DISTRICT AND SAN DIEGO (DEH) RECYCLED WATER REQUIREMENTS	WM-08



COLOR CODING

SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

INSPECTION NOTE

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AS BUILT		UTILITY NOTE				INSPECTION NOTE OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.		CONSULTANT 3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		BID DOCUMENTS - OCTOBER 11, 2021 IRRIGATION SCHEDULE CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK		LANDSCAPE DWG. NO. LI-05 SHEET 5 OF 16 W.O. NO. PRK-0330					
CONTRACTOR: _____ INSPECTOR: _____ DATE COMPLETED: _____		REFERENCES: MAP # 15350 DWG. #S 16022		REVISIONS: DELTA A IRRIGATION REVISIONS Date: 08/18/22 App'd: _____		DATUMS: VERTICAL: 446.361 (NAVD 88) HORIZONTAL: I.E. N78°21'27"E NAD 83		SCALE: HORIZONTAL: N/A VERTICAL: N/A		Designed By: _____ Drawn By: _____ Checked By: _____ Date: 10/11/2021 Plans Prepared Under Supervision Of: BROOKE J.P. WHALEN, License No. 977229		Submitted: _____ By: _____ Office: _____		APPROVED BY: _____ DATE: _____ DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNER		DRAWING NO. 19010-43 SHEET 43 OF 100	

DEH2019-LRWS-001118

OWD# D0894-060253

HYDRAULIC AND WATER USE CALCULATIONS, AND IRRIGATION WATERING SCHEDULE

Project No: 017-057	Date: 12/12/2021
City/Governing Agency: City of Chula Vista	City of Chula Vista
Reference ETO: Groves Park	City of Chula Vista
LA (Landscape area): 51.2 sq ft	City of Chula Vista
SLA (Special Landscape area): 212,817 sq ft	City of Chula Vista
Limit of work: Controller: A	City of Chula Vista
Water Source: Recycled Water	City of Chula Vista

MAWA = Maximum Applied Water Allowance (gallons per year)	Total: 212,817
MAWA (SLA Only) = (ETO) (0.62) (ETAF x SLA)	
MAWA (SLA Only) = (51.2) (0.62) (1.00 x 212,817)	
ETo = Reference evapotranspiration (in inches per year)	
0.62 = Conversion factor (to get gallons per sq ft)	
0.45 = ET Adjustment Factor (ETAF) (for plant factors and irrigation efficiency) for non-residential areas	
0.55 = ET Adjustment Factor (ETAF) (for plant factors and irrigation efficiency) for residential areas	
1.00 = ET Adjustment Factor (ETAF) for SLA only	
SLA = Landscape Area excluding any SLA (in sq ft)	
SLA = Special Landscape Area (in sq ft)(edible crops, recyl. water features, recyl. water, recreational/active turf areas)	
MAWA = 6,755,663 gal/year	

ETWU = Estimated Total Water Use (gal/yr)	Calculations:
ETWU (SLA Only) = ETo x 0.62 x SLA	51.2 x 0.62 x (212,817) =
ETWU = 6,755,663 gal/year	

ETo = Reference ET (inches per year)	
0.62 = Conversion factor (to get gallons per sq ft)	
PF = Plant Factor from WUCOLS* (low: 0.1-0.3, moderate: 0.4-0.7, high water use: 0.8-1.0; art. turf: 0.1-0.2; water features: 0.8; SLA: 1.0)	
HA = Hydrozone Area (very low, low, moderate or high water use, in sq ft)	
IE = Irrigation Efficiency (Bubbler: 0.81; Spray: 0.75; Microspray: 0.75; Rotator: 0.75; Rotor: 0.75; Drip: 0.81)	
SLA = Special Landscape Area (in sq ft)(edible crops, recyl. water features, recyl. water, recreational/active turf areas)	
WUCOLS = Water Use Classification of Landscape Species	

Hydrozone No.	Plant Water Use Type Classification	Plant Factor (PF)	Hydrozone Area (HA) (sq ft)	PF x HA (sq ft)	IE	PF x HA / IE	
1	Moderate Turf	0.6	2,900	1,500	0.75	2,000	(Rotator)
2	Moderate Shrub	0.4	2,171	868	0.75	1,158	(Spray)
3	Moderate Tree	0.5	96	48	0.81	59	(Bubbler)
4	Moderate Shrub	0.4	1,673	669	0.75	892	(Rotator)
5	Moderate Turf	0.6	5,070	3,042	0.75	4,058	(Rotator)
6	Moderate Shrub	0.4	899	360	0.75	479	(Spray)
7	Moderate Shrub	0.4	2,397	959	0.75	1,278	(Rotator)
8	Moderate Shrub	0.4	1,228	491	0.75	655	(Rotator)
9	Moderate Shrub	0.4	809	324	0.75	431	(Spray)
10	Moderate Tree	0.5	224	112	0.81	138	(Bubbler)
11	Moderate Shrub	0.4	5,020	2,008	0.75	2,677	(Rotator)
12	Moderate Tree	0.5	176	88	0.81	109	(Bubbler)
13	Moderate Shrub	0.4	1,619	648	0.75	863	(Rotator)
14	Moderate Shrub	0.4	1,619	648	0.75	863	(Rotator)
15	Moderate Shrub	0.4	3,102	1,241	0.75	1,654	(Rotator)
16	Moderate Tree	0.5	240	120	0.81	149	(Bubbler)
17	Low Shrub	0.2	360	72	0.75	96	(Spray)
18	Low Shrub	0.2	721	144	0.75	192	(Spray)
19	Low Shrub	0.2	919	184	0.75	245	(Spray)
20	Low Shrub	0.2	1,183	237	0.75	315	(Spray)
21	Moderate Turf	0.6	6,337	3,802	0.75	5,070	(Rotator)
22	Moderate Tree	0.5	112	56	0.81	69	(Bubbler)
23	Moderate Shrub	0.4	2,050	820	0.75	1,093	(Spray)
24	Moderate Shrub	0.4	2,050	820	0.75	1,093	(Spray)
25	Moderate Tree	0.5	80	40	0.81	49	(Bubbler)
26	Moderate Turf	0.6	1,492	895	0.75	1,194	(Rotator)
27	Moderate Turf	0.6	3,522	2,113	0.75	2,818	(Rotator)
28	Moderate Turf	0.6	3,542	2,125	0.75	2,834	(Rotator)
29	Moderate Turf	0.6	6,323	3,794	0.75	5,058	(Rotator)
30	Moderate Turf	0.6	1,385	831	0.75	1,103	(Rotator)
31	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
32	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
33	Moderate Turf	0.6	6,337	3,802	0.75	5,070	(Rotator)
34	Moderate Shrub	0.4	3,322	1,329	0.75	1,772	(Rotator)
35	Moderate Shrub	0.4	3,322	1,329	0.75	1,772	(Rotator)
36	Moderate Tree	0.5	128	64	0.81	79	(Bubbler)
37	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
38	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
39	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
40	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
41	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
42	Moderate Turf	0.6	11,541	6,925	0.75	9,233	(Rotator)
43	Moderate Tree	0.5	128	64	0.81	79	(Bubbler)
44	Moderate Shrub	0.4	3,111	1,244	0.75	1,659	(Rotator)
45	Moderate Shrub	0.4	2,984	1,194	0.75	1,591	(Rotator)
46	Moderate Turf	0.6	5,070	3,042	0.75	4,058	(Rotator)
47	Moderate Turf	0.6	11,166	6,700	0.75	8,933	(Rotator)
48	Moderate Shrub (Basin)	0.4	7,841	3,136	0.75	4,182	(Rotator)
49	Moderate Turf	0.6	6,122	3,673	0.75	4,898	(Rotator)
50	Moderate Turf	0.6	1,348	809	0.75	1,078	(Spray)
51	Moderate Shrub	0.4	1,306	522	0.75	697	(Spray)
52	Moderate Shrub	0.4	1,468	587	0.75	783	(Bubbler)
53	Moderate Tree	0.5	368	184	0.81	227	(Bubbler)
54	Moderate Shrub (Basin)	0.4	7,549	3,020	0.75	4,026	(Rotator)
Subtotal: 153,462							115,154
ETWU = 6,755,663 gal/year							
MAWA = 6,755,663 gal/year							

Notes:
 1. MAWA Formula and irrigation efficiency factors per State MWEL0 revisions.
 2. Project will utilize Recycled Water, thus LA (Landscape Area) and HA (Hydrozone Area) are calculated as SLA (Special Landscape Area). No potable water will be used for irrigation system.
 Estimated Total Water Use is equal to the Maximum Applied Water Allowance.

ETAF Calculations	
Regular Landscape Areas	0
Total ETAF x Area	0
Total Area	0
Average ETAF	0
All Landscape Areas	
Total ETAF x Area	153,462
Total Area	212,817
Sitewide ETAF	0.72

Note: Sitewide ETAF is calculated with actual Plant Factor (PF) and Irrig. Efficiency (IE) figures shown above to show the amount of water that needs to be applied to the landscape.

CHULA VISTA (51.15)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days per Month	31	28	31	30	31	30	31	31	30	31	30	31
ETo Average per Month	2.24	2.72	4.11	4.91	5.37	6.32	6.05	4.86	3.84	2.84	2.00	2.00
ETo Average per Day	0.072	0.097	0.133	0.164	0.173	0.200	0.204	0.155	0.122	0.091	0.065	

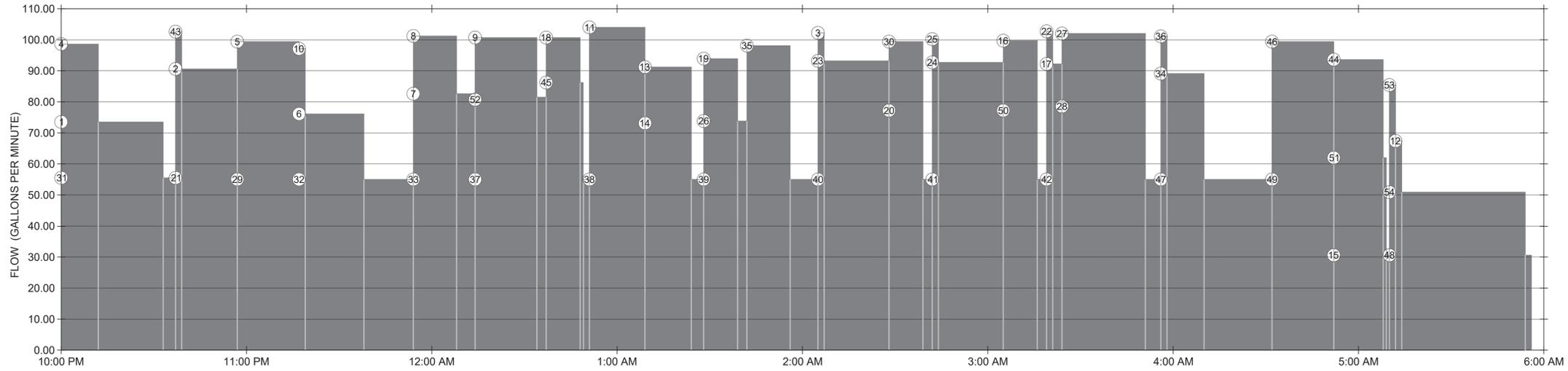
CONTROLLER 'A': 4 DAY WATERING SCHEDULE

Plant Type	Irrig. Method	Sta. #	PR	PF	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Turf	Rotator	02	0.52	0.6	12	16	26	28	32	33	32	26	20	15	10	7
Shrub	Spray	02	0.54	0.6	7	9	13	16	17	19	16	12	9	6	7	
Tree	Bubbler	03	6.02	0.5	1	1	1	2	2	2	2	2	2	1	1	
Shrub	Rotator	04	0.93	0.4	4	6	8	10	10	12	12	10	7	6	4	
Turf	Rotator	05	0.84	0.6	7	10	13	16	17	20	20	19	16	12	9	6
Shrub	Rotator	06	0.54	0.6	7	10	13	16	17	18	21	21	20	17	13	9
Shrub	Rotator	07	0.57	0.4	7	10	13	16	17	20	20	19	16	12	9	6
Shrub	Rotator	08	0.83	0.4	5	7	9	11	12	13	14	13	11	8	6	4
Shrub	Spray	09	0.56	0.4	7	10	13	16	17	20	20	20	16	12	9	6
Tree	Bubbler	10	6.02	0.5	1	1	1	2	2	2	2	2	2	1	1	1
Shrub	Rotator	11	0.63	0.6	6	9	12	14	15	18	18	17	14	11	8	6
Tree	Bubbler	12	6.02	0.5	1	1	1	2	2	2	2	2	2	1	1	1
Shrub	Rotator	13	0.75	0.4	5	7	10	12	13	15	15	15	12	9	7	5
Shrub	Rotator	14	0.75	0.4	5	7	10	12	13	15	15	15	12	9	7	5
Shrub	Rotator	15	0.61	0.4	7	9	12	15	16	18	19	18	15	11	8	6
Tree	Bubbler	16	6.02	0.5	1	1	1	2	2	2	2	2	2	1	1	1
Shrub	Spray	17	1.98	0.2	1	1	2	2	2	3	2	2	2	1	1	1
Shrub	Spray	18	0.53	0.2	4	5	7	9	9	11	11	10	9	7	5	3
Shrub	Spray	19	0.54	0.2	4	5	7	9	9	10	11	10	8	6	5	3
Shrub	Spray	20	0.50	0.2	4	5	7	9	10	11	11	11	9	7	5	4
Turf	Rotator	21	0.84	0.6	7	10	13	16	17	20	20	19	16	12	9	6
Tree	Bubbler	22	6.02	0.5	1	1	1	2	2	2	2	2	2	1	1	1
Shrub	Spray	23	0.50	0.4	8	11	15	18	19	22	23	22	18	14	10	7
Shrub	Spray	24	0.50	0.4	8	11	15	18	19	22	23	22	18	14	10	7
Turf	Rotator	25	6.02	0.5	1	1	1	2	2	2	2	2	2	1	1	1
Turf	Rotator	26	1.21	0.6	5	7	9	11	11	12	14	14	11	9	6	4
Turf	Rotator	27	0.64	0.6	9	13	17	21	23	26	27	26	21	16	12	8
Turf	Rotator	28	0.64	0.6	10	13	17	22	23	26	27	26	21	16	12	8
Turf	Rotator	29	0.84	0.6	7	10	13	16	17	20	20	19	16	12	9	6
Turf	Rotator	30	1.54	0.6	4	5	7	9	9	11	11	11	9	7	5	4
Turf	Rotator	31	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Turf	Rotator	32	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Turf	Rotator	33	0.84	0.6	7	10	13	16	17	20	20	19	16	12	9	6
Shrub	Rotator	34	0.80	0.4	5	7	9	11	12	14	14	14	11	9	6	5
Shrub	Rotator	35	0.80	0.4	5	7	9	12	12	14	14	14	11	9	6	5
Tree	Bubbler	36	6.77	0.5	1	1	1	2	2	2	2	2	2	1	1	1
Turf	Rotator	37	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Turf	Rotator	38	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Turf	Rotator	39	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Turf	Rotator	40	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Turf	Rotator	41	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Turf	Rotator	42	0.46	0.6	13	18	24	30	31	36	37	35	29	22	17	12
Tree	Bubbler	43	6.02	0.5	1	1	1	2	2	2	2	2	2	1	1	1
Shrub	Rotator	44	0.73	0.4	6	7	10	13	13	15	16	15	12	10	7	5
Shrub	Rotator	45	0.75	0.4	5	7	10	12	13	15	15	15	12	9	7	5
Turf	Rotator	46	0.84	0.6	7	10	13	16	17	20	20	19	16	12	9	6
Turf	Rotator	47	0.48	0.6	13	17	23	29	30	35	36	34	28			

RECOMMENDATION FOR SIMULTANEOUS OPERATION OF MULTIPLE SYSTEMS (MONTH OF JULY):

(WITHIN 8 HOUR WATERING WINDOW)

FLOW CHART

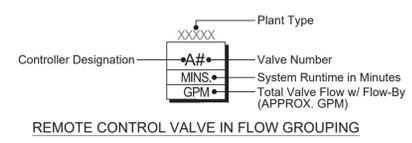


- NOTES:
- IRRIGATION SYSTEM IS DESIGNED TO OPERATE AT 115 PSI DELIVERY WITH 105 GPM PEAK DEMAND FLOW, WITH SIMULTANEOUS OPERATION OF MULTIPLE VALVES DURING THE WARMER MONTHS (FROM APRIL THROUGH SEPTEMBER) OF THE YEAR TO MEET PARK'S WATER WINDOW LIMITS.
 - ABOVE FIGURE IS TAKEN FROM THE MONTH OF JULY, WORST CASE SCENARIO USING SINGLE ZONE OPERATION, WHICH TOTALS 17 HOURS AND 20 MINUTES.
 - # - IRRIGATION SYSTEM REMOTE CONTROL VALVE NUMBER

FLOW GROUPING

A	SHRUB A4 12 MINS. 25.1 GPM	TREE A43 2 MINS. 12.0 GPM		TREE A10 2 MINS. 21.0 GPM	SHRUB A8 14 MINS. 18.6 GPM	SHRUB A9 20 MINS. 19.2 GPM	SHRUB A18 11 MINS. 14.5 GPM		SHRUB A13 15 MINS. 18.1 GPM	SHRUB A19 11 MINS. 20.1 GPM		TREE A3 2 MINS. 9.00 GPM	TURF A30 11 MINS. 22.2 GPM	TREE A25 2 MINS. 7.50 GPM	TREE A16 2 MINS. 22.5 GPM	TREE A22 2 MINS. 10.5 GPM	TURF A27 27 MINS. 23.5 GPM	TREE A36 2 MINS. 12.0 GPM		SHRUB A44 16 MINS. 31.6 GPM	TREE A53 2 MINS. 34.5 GPM	TREE A12 2 MINS. 16.5 GPM	TOTAL RUNTIME = 155 MIN. (2 HR, 35 MIN.)
B	TURF A1 33 MINS. 18.0 GPM	SHRUB A2 20 MINS. 35.1 GPM	TURF A5 20 MINS. 44.4 GPM	SHRUB A6 21 MINS. 21.1 GPM	SHRUB A7 20 MINS. 27.6 GPM	SHRUB A52 23 MINS. 26.5 GPM	SHRUB A45 15 MINS. 31.2 GPM	SHRUB A11 18 MINS. 49.0 GPM	SHRUB A14 15 MINS. 18.1 GPM	TURF A26 14 MINS. 18.8 GPM	SHRUB A35 14 MINS. 43.1 GPM	SHRUB A23 23 MINS. 38.2 GPM	SHRUB A20 11 MINS. 22.2 GPM	SHRUB A24 23 MINS. 37.7 GPM	SHRUB A50 11 MINS. 22.2 GPM	SHRUB A17 3 MINS. 37.2 GPM	TURF A28 27 MINS. 23.5 GPM	SHRUB A34 14 MINS. 34.1 GPM	TURF A46 20 MINS. 44.4 GPM	SHRUB A51 17 MINS. 31.4 GPM	SHRUB A54 44 MINS. 20.3 GPM	SHRUB	TOTAL RUNTIME = 406 MIN. (6 HRS, 46 MIN.)
C	TURF A31 37 MINS. 55.5 GPM	TURF A21 20 MINS. 55.5 GPM	TURF A29 20 MINS. 55.5 GPM	TURF A32 37 MINS. 55.5 GPM	TURF A33 20 MINS. 55.5 GPM	TURF A37 37 MINS. 55.5 GPM	SHRUB	TURF A38 37 MINS. 55.5 GPM	SHRUB	TURF A39 37 MINS. 55.5 GPM	SHRUB	TURF A40 37 MINS. 55.5 GPM	SHRUB	TURF A41 37 MINS. 55.5 GPM	SHRUB	TURF A42 37 MINS. 55.5 GPM	SHRUB	TURF A47 36 MINS. 55.5 GPM	TURF A49 20 MINS. 55.5 GPM	SHRUB A15 18 MINS. 30.6 GPM	SHRUB A48 46 MINS. 20.4 GPM	SHRUB	TOTAL RUNTIME = 476 MIN. (7 HRS, 56 MIN.)
D	98.6 GPM	102.6 GPM	99.9 GPM	97.6 GPM	101.7 GPM	101.2 GPM	101.2 GPM	104.5 GPM	91.7 GPM	94.4 GPM	98.6 GPM	102.7 GPM	99.9 GPM	100.7 GPM	100.2 GPM	103.2 GPM	102.5 GPM	101.6 GPM	99.9 GPM	93.6 GPM	75.2 GPM	57.2 GPM	TOTAL RUNTIME = 476 MIN. (7 HRS, 56 MIN.)
E	37 MINS.	20 MINS.	20 MINS.	37 MINS.	20 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	37 MINS.	36 MINS.	20 MINS.	18 MINS.	46 MINS.		
	10:00 PM	10:37 PM	10:57 PM	11:17 PM	11:54 PM	12:14 AM		12:51 AM		1:28 AM		2:05 AM		2:42 AM		3:19 AM		3:56 AM		4:32 AM	4:52 AM	5:10 AM	5:56 AM

- NOTES:
- PER COUNTY DEH & OWD, THERE IS A 9 HOUR MAXIMUM WATERING WINDOW USING RECYCLED WATER BETWEEN THE HOURS OF 9 P.M. AND 6 A.M. PER CITY PARKS, THERE IS AN 8 HOUR MAXIMUM WATERING WINDOW USING RECYCLED WATER BETWEEN THE HOURS OF 10 P.M. AND 6 A.M.
 - FLOW GROUPING - GROUPING OF SYSTEM VALVES TO OPERATE SIMULTANEOUSLY.
 - ROW "C" - "BASE" VALVES - VALVES THAT HAVE THE MOST FLOW AND HAVE BEEN CALCULATED TO OPERATE WITHIN THE 8 HOUR (480 MINS.) WATERING WINDOW.
 - ROW "A" AND "B" - "FILLER" VALVES - VALVES THAT ARE ADDED UP TO OPERATE SIMULTANEOUSLY WITH THE "BASE" VALVES.
 - ROW "D" - TOTAL GALLONS PER MINUTE FLOW.
 - TOTAL MINUTES OF EACH ROW "A" AND "B" SHALL BE ONLY EQUAL TO, OR LESS THAN TOTAL MINUTES OF ROW "E" (8 HOUR MAXIMUM WATERING WINDOW)
 - - VALVE SYSTEM OPERATION CONTINUED (WITH COMBINED WORST CASE SCENARIO).



INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

COLOR CODING

SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

AS BUILT		UTILITY NOTE	
SIGNATURE _____	DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
Printed Name _____	R.L.A. No. _____		
My Registration Expires _____	Discipline _____		
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
CONTRACTOR: _____	MAP # 15350	By	DELTA A IRRIGATION REVISIONS
INSPECTOR: _____	DWG. #S 16022	Date	08/18/22
DATE COMPLETED: _____		App'd	



DATUMS	SCALE	Designed By:	Drawn By:	Checked By:
VERTICAL: 446.361 (NAVD 88)	HORIZONTAL	HH	HH	BE
HORIZONTAL: I.E. N78°21'27"E NAD 83	N/A	Plans Prepared Under Supervision Of:		Date: 10/11/2021
	VERTICAL	BROOKE J.P. WHALEN		
	N/A	J.A. No. 5175		

CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021	
3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		IRRIGATION CALCULATIONS LI-07 SHEET 7 OF 16 W.O. NO. PRK-0330	
Submitted: _____	APPROVED BY: _____	DATE: _____	CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT
By: _____	DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		DRAWING NO.
Office: _____			19010-45
			SHEET 45 OF 100

OTAY WATER DISTRICT RECYCLED WATER NOTES

- ALL ON-SITE IRRIGATION IMPROVEMENTS SHOWN ON THESE PLANS ARE PART OF A RECYCLED WATER DISTRIBUTION SYSTEM. NO CONSTRUCTION WILL BE ALLOWED UNTIL ALL APPROVALS HAVE BEEN OBTAINED.
- CROSS CONNECTIONS BETWEEN RECYCLED WATER LINES AND POTABLE WATER LINES ARE STRICTLY PROHIBITED.
- USE OF RECYCLED WATER SHALL ADHERE TO TITLE 22, DIVISION 4, CHAPTER 3 OF THE CALIFORNIA CODE OF REGULATIONS AND THE CURRENT RULES, REGULATIONS AND SPECIFICATIONS OF THE DISTRICT.
- OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.
- PUBLIC FACILITIES, SUCH AS DRINKING AND DECORATIVE FOUNTAINS, COMFORT STATIONS, PLAYGROUND EQUIPMENT, ETC., DO EXIST ON THIS PROJECT.
- ALL ON-SITE RECYCLED WATER IRRIGATION PIPING AND ON-SITE POTABLE WATER PIPING INSTALLED UNDER THIS DESIGN SHALL BE IDENTIFIED IN ACCORDANCE WITH THE DISTRICT STANDARD SPECIFICATIONS.
- ALL ON-SITE RECYCLED WATER PIPING SHALL BE PURPLE COLORED PVC, CONTINUOUSLY STENCILED ON OPPOSITE SIDES OF THE PIPE WITH THE WORDS "CAUTION - RECYCLED WATER". APPROVED MANUFACTURERS OF THIS PIPE CAN BE FOUND IN THE DISTRICTS "APPROVED MATERIALS LIST".
- ALL ON-SITE POTABLE WATER LINES SHALL BE WHITE OR BLUE UNLESS OTHERWISE APPROVED BY THE DISTRICT.
- UNLESS OTHERWISE DIRECTED BY THE DISTRICT, A 10-FOOT HORIZONTAL AND 1- FOOT VERTICAL SEPARATION BETWEEN POTABLE WATER AND CONSTANT PRESSURE RECYCLED WATER LINES SHALL BE MAINTAINED AT ALL TIMES. THE POTABLE LINES SHALL BE INSTALLED ABOVE THE RECYCLED LINES UNLESS OTHERWISE APPROVED BY THE DISTRICT OR DEHQ.
- WHERE POTABLE LINES AND CONSTANT PRESSURE RECYCLED WATER LINES CROSS, THE RECYCLED WATER LINE SHOULD BE INSTALLED BELOW THE POTABLE WATER LINE IN A SCHEDULE 40 PURPLE COLORED PVC SLEEVE. THE SLEEVE SHALL EXTEND 10- FEET ON EITHER SIDE OF THE POTABLE LINE, FOR A TOTAL OF 20- FEET.
- A MINIMUM VERTICAL SEPARATION OF 12 INCHES SHALL BE MAINTAINED BETWEEN UTILITIES AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE DISTRICT.
- HOSE BIBS ARE STRICTLY PROHIBITED ON RECYCLED WATER SYSTEMS.
- ALL SPRAY HEADS, VALVE BOXES, AND QUICK COUPLER VALVES SHALL BE CLEARLY COLOR CODED (PURPLE) TO INDICATE THE USE OF RECYCLED WATER.
- RECYCLED WATER LINES SHALL NOT CROSS ROADS, STREETS, OR EASEMENTS UNLESS SPECIFICALLY SHOWN ON THESE PLANS.
- ALL CONSTANT PRESSURE LINES SHALL BE TESTED WITH HYDROSTATIC PRESSURE AS REQUIRED IN THE DISTRICT STANDARD SPECIFICATIONS. NO LEAKS SHALL BE ALLOWED. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS. THESE TESTS SHALL BE WITNESSED BY A REPRESENTATIVE OF THE DISTRICT.
- ALL SIGNAGE SHALL BE APPROVED AND INSTALLED PRIOR TO ENERGIZING THE SYSTEM WITH WATER. A SIGNAGE PLAN INDICATING USE OF RECYCLED WATER SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL PRIOR TO INSTALLATION. AS A MINIMUM, SIGNS MUST BE POSTED AND WRITTEN IN ENGLISH AND SPANISH WITH THE INTERNATIONAL SYMBOL (DO NOT DRINK).
- ALL METER SIZES SHALL BE VERIFIED BY THE DISTRICT. FINAL DETERMINATION OF METER SIZES IS RESERVED BY THE DISTRICT.
- ALL RECYCLED WATER SERVICES REQUIRE BACKFLOW PREVENTION AS SHOWN IN THE POINT OF CONNECTION (POC) DETAIL. IRRIGATION SYSTEMS BEING SUPPLIED WITH RECYCLED WATER SHALL INSTALL BACKFLOW PREVENTION AND A WYE STRAINER PER DISTRICT STANDARD DRAWING WR-03, WR-04, WR-05, WR-06, AND WR-08.
- PRIOR TO ENERGIZING THE ON-SITE SYSTEM WITH WATER, ONE (1) COMPLETE SET OF LAMINATED CONTROLLER CHARTS AND ONE (1) ELECTRONIC COPY CREATED FROM THE FINAL APPROVED AS-BUILT SHALL BE PROVIDED TO THE DISTRICT.
- EACH AUTOMATIC CONTROLLER AND ITS ASSOCIATED EQUIPMENT SHALL BE IDENTIFIED WITH A SIGN BEARING THE WORDS "RECYCLED WATER USED FOR IRRIGATION" IN ENGLISH AND SPANISH, WITH WHITE LETTERS AT LEAST 1 INCH HIGH ON A PURPLE, PANTONE 512, BACKGROUND. THE SIGN SHALL BE PLACED AS TO BE READILY SEEN BY ANY OPERATIONS PERSONNEL UTILIZING THE EQUIPMENT.
- THE CONTRACTOR SHALL ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE. THIS SHALL INCLUDE THROTTLING THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM. CONDITIONS THAT CAUSE OVERSPRAYS, PONDING, OR RUNOFF SHALL BE ELIMINATED. ADJUST SYSTEM TO AVOID THESE CONDITIONS.
- THE IRRIGATION SYSTEM HAS BEEN DESIGNED TO AND SHALL BE OPERATED BETWEEN THE HOURS OF 9:00 P.M. AND 6:00 A.M. UNLESS OTHERWISE APPROVED BY THE DISTRICT.
- NO SUBSTITUTION OF PIPE MATERIALS WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE DISTRICT.
- AN INITIAL CROSS-CONNECTION INSPECTION WILL BE DONE AT SITES WITH BOTH POTABLE AND RECYCLED WATER SERVICES BY THE DISTRICT AND/OR THE SAN DIEGO COUNTY ENVIRONMENTAL HEALTH (DEHQ). COPIES OF INSPECTION REPORTS WILL BE FORWARDED TO THE NON-INSPECTING PARTY. ANNUAL INSPECTIONS OR CROSS-CONNECTION TESTING WILL BE PERFORMED THEREAFTER.
- FAILURE TO COMPLY WITH THE DISTRICT'S RULES AND REGULATIONS IS A VIOLATION AND COULD RESULT IN SUSPENSION OF SERVICE UNTIL THE APPROPRIATE CORRECTIVE STEPS HAVE BEEN TAKEN.
- WHEN RECYCLED WATER BECOMES AVAILABLE, AN ON-SITE CERTIFIED RECYCLED WATER SITE SUPERVISOR SHALL BE DESIGNATED IN WRITING. THIS INDIVIDUAL SHALL BE FAMILIAR WITH PLUMBING SYSTEMS WITHIN THE PROPERTY, WITH THE BASIC CONCEPTS OF BACKFLOW/CROSS CONNECTION PROTECTION, THE RECYCLED PURVEYOR'S RULES AND REGULATIONS, AND THE SPECIFIC REQUIREMENTS OF A RECYCLED WATER SYSTEM. COPIES OF THE DESIGNATION, WITH CONTACT PHONE NUMBERS SHALL BE PROVIDED TO THE OTAY WATER DISTRICT AND SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH.

IN CASE OF EMERGENCY, CONTACT BRAD SAGER AT (619) 204-2441
 NAME PHONE NO.

OR AFTER HOURS, CONTACT BRAD SAGER AT (619) 204-2441
 NAME PHONE NO.

- BEST MANAGEMENT PRACTICES SHALL BE USED TO ELIMINATE OR CONTROL TO THE BEST EXTENT POSSIBLE PONDING, RUN-OFF, OVER-SPRAY AND MISTING.
- AT THE DESCRETION OF OTAY WATER DISTRICT, RECYCLED WATER QUICK COUPLERS MAY BE ALLOWED WITHIN SLOPES AND PARKWAYS.
- RECYCLED WATER QUICK COUPLING VALVES SHALL BE OF A TYPE DESIGNED FOR USE ON RECYCLED WATER DISTRIBUTION SYSTEMS (SPIKES NOT INTERCHANGEABLE WITH POTABLE WATER QUICK COUPLER SPIKES) PER OTAY WATER DISTRICT'S RULES AND REGULATIONS.
- ALL BUILDINGS SHALL HAVE INDIVIDUAL POTABLE WATER SHUT-OFF VALVES INSTALLED ON THE EXTERIOR OF EACH BUILDING AND SHALL BE MAINTAINED IN WORKING ORDER FOR THE PURPOSE OF THE CROSS-CONNECTION SHUTDOWN TEST. A DETAIL OF POTABLE WATER SHUT-OFF VALVE INSTALLATION MUST BE INCLUDED ON PLANS FOR DISTRICT APPROVAL.
- ALL BOX LIDS SHALL BE BRANDED.
- A 10-FOOT SEPARATION BETWEEN RECYCLED WATER IRRIGATION MAIN LINE TIE IN POINT AND PROJECT POINT OF CONNECTION (POC) IS TO BE MAINTAINED DURING THE CONSTRUCTION PROCESS AND IS TO BE TIED IN AT THE INSPECTIONS DIRECTION, AFTER DEH APPROVALS AND METER(S) SET(S) HAVE TAKEN PLACE.
- RECYCLED WATER IRRIGATION PROJECTS THAT REQUIRE PHASING OF CONSTRUCTION SHALL REQUIRE A DETAILED PHASING PLAN BE SUBMITTED BY THE PROJECT ARCHITECT TO THE DISTRICT FOR REVIEW. UPON APPROVAL OF THE PHASING PLAN BY THE DISTRICT, A COPY OF THE APPROVED PHASING PLAN SHALL BE INCORPORATED INTO THE APPROVED PLAN SET(S) BY THE PROJECT ARCHITECT.
- ALL DUAL SOURCED RECYCLED WATER USE SITES SHALL BE DESIGNED AND BUILT TO UTILIZE SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVED TEST METHOD 1, UTILIZING PRESSURE RECORDERS FOR THE RECYCLED AND POTABLE CROSS-CONNECTION TESTING. PROPOSED ALTERNATIVE TEST METHODS MUST BE APPROVED BY THE OTAY WATER DISTRICT AND SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH.

GENERAL IRRIGATION NOTES

- THE IRRIGATION SYSTEM DESIGN IS BASED ON AN AVAILABLE CITY WATER PRESSURE OF 91 +/-10 PSI. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING WATER PRESSURE PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION AND SHALL PROMPTLY REPORT ANY DIFFERENCES TO THE CITY LANDSCAPE INSPECTOR.
- THIS SYSTEM IS DESIGNED FOR USE OF RECYCLED WATER AT 8 GPM TO 90 GPM AT 91 PSI. PRIOR TO PERMANENT CONNECTION TO RECYCLED WATER MAIN, ALL NEW IRRIGATION SHALL BE CONNECTED TO A TEMPORARY POTABLE WATER SOURCE UNTIL CROSS CONNECTION TEST CAN BE COMPLETED AND APPROVED. DO NOT CONNECT TO THE RECYCLED WATER IRRIGATION SYSTEM UNTIL APPROVED.
- THE IRRIGATION SYSTEM IS SHOWN DIAGRAMMATICALLY FOR CLARITY PURPOSES. LOCATE ALL PIPING, VALVES AND OTHER IRRIGATION EQUIPMENT WITHIN LANDSCAPE AREAS, AND IN ACCORDANCE WITH THE CRITERIA AND STANDARDS OF THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT, OTAY WATER DISTRICT, CITY OF CHULA VISTA'S PARK AND FACILITIES GUIDELINES, THE CITY OF CHULA VISTA'S LANDSCAPE MANUAL AND ANY WATER RESTRICTIONS IN EFFECT. REFER ALSO TO SPECIFIC NOTES ON PLANS AND DETAILS.
- PRIOR TO ANY EXCAVATION OR TRENCHING, LOCATE AND VERIFY ALL CABLES, CONDUITS, AND UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING AN UNDERGROUND UTILITY LOCATING SERVICE TO LOCATE AND MARK ALL UTILITIES. THE CONTRACTOR WILL TAKE PROPER PRECAUTIONS NOT TO DAMAGE OR DISTURB SUCH UNDERGROUND UTILITIES. NOTIFY THE CITY LANDSCAPE INSPECTOR IMMEDIATELY IF A CONFLICT EXISTS BETWEEN SUCH OBSTACLES AND THE PROPOSED WORK. PROCEED IN SAME MANNER IF ROCK LAYERS OR ANY OTHER CONFLICTING CONDITIONS ARE ENCOUNTERED UNDERGROUND.
- THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT PROMPTLY TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND CITY LANDSCAPE INSPECTOR. SHOULD THE CONTRACTOR FAIL TO NOTIFY THE CITY LANDSCAPE INSPECTOR OF ANY DISCREPANCIES, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS NECESSARY AT NO ADDITIONAL COST TO THE CITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH GENERAL CONTRACTOR AND VERIFYING THE AVAILABLE POWER SOURCE FOR THE CONTROLLER IN THE AREA SHOWN ON THE PLANS. SHOULD A POWER SOURCE NOT BE AVAILABLE IN THE LOCATION SHOWN, THEN THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT AND CITY LANDSCAPE INSPECTOR PRIOR TO PROCEEDING WITH INSTALLATION.
- THE CONTROLLER FOR THIS SYSTEM SHALL BE A PRE-ASSEMBLED UNIT AS SPECIFIED. AT LEAST TWO WEEKS PRIOR TO THE FINAL WALK THROUGH, THE CONTRACTOR SHALL CONTACT THE PRE-ASSEMBLER AND ARRANGE FOR THEIR REPRESENTATIVE TO APPROVE THE INSTALLATION AND PROVIDE IN WRITING THAT THE INSTALLATION HAS MET THEIR SPECIFICATIONS. THE WRITTEN STATEMENT SHALL BE AVAILABLE PRIOR TO, OR AT THE FINAL WALK THROUGH.
- THE BOOSTER PUMP SHALL BE A PRE-ASSEMBLED UNIT AS SPECIFIED. WHEN ORDERING, CONTACT PUMP SUPPLIER AT LEAST FOUR WEEKS PRIOR TO INSTALLATION. AT AN APPOINTED TIME FOLLOWING PUMP INSTALLATION, CONTACT PUMP SUPPLIER'S FIELD TECHNICIAN FOR START-UP APPOINTMENT.
- ALL CONTROL VALVES SHALL BE MANIFOLDED AND GROUPED IN GENERAL AREAS SHOWN AND AS NOTED ON PLANS. WHEREVER POSSIBLE, LOCATE IN ACCESSIBLE AREAS WITHIN PLANTING AREA AND NOT IN TURF AREA.
- VALVES SHALL BE LOCATED IN PLANTING AREAS (WHERE POSSIBLE) AND IMMEDIATELY ADJACENT TO WALKS, CURBS, OR PAVING AREAS AND SET AT RIGHT ANGLES TO EDGES UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. MANIFOLD PIPE AND BALL VALVE SIZES SHALL BE AS NOTED. ALL VALVE BOXES AND IRRIGATION LINES SHALL BE SPACED WITH A 12" TYPICAL CLEAR DISTANCE BETWEEN VALVE BOXES AND 12" MAXIMUM FROM EDGE OF PAVEMENT.
- DO NOT INSTALL POTABLE WATER LINE AND RECYCLED WATER LINE IN SAME TRENCH.
- IRRIGATION LINES SHALL INSTALLED IN LANDSCAPE AREAS WHEREVER POSSIBLE AND WITHIN 12" OF LANDSCAPE AREA EDGES UNLESS INDICATED OTHERWISE.
- EVEN IF NOT SHOWN, ALL IRRIGATION LINES UNDER PAVING SHALL BE SLEEVED WITH PVC SCH 40 PIPE. SLEEVE SHALL BE A MINIMUM 2 TIMES THE DIAMETER OF PIPE TO BE SLEEVED (2" MIN. DIA.). SLEEVES SHALL EXTEND 12" BACK UNDER HARDSCAPE.
- EVEN IF NOT SHOWN, ALL WIRES UNDER PAVING SHALL BE SLEEVED WITH PVC SCH 40 GRAY CONDUIT. SLEEVE SHALL BE A MINIMUM 2 TIMES THE DIAMETER OF WIRE BUNDLE TO BE SLEEVED (2" MIN. DIA.). SLEEVES SHALL EXTEND 12" BACK UNDER HARDSCAPE.
- WIRE COLOR SHALL BE AS FOLLOWS:
 - CONTROLLER 'A' CONTROL VALVES: ORANGE.
 - MASTER VALVE: BLACK
 - FLOW SENSOR: RED
 - SPARE WIRES: ORANGE
- SPARE CONTROL WIRE SHALL BE RUN ALONG EACH MAINLINE TO BRANCH TO THE FURTHEST VALVE MANIFOLD. BUNDLE AND TAPE 10 FEET OF ADDITIONAL WIRE AND INSTALL IN A PULL BOX ADJACENT TO THE VALVE MANIFOLD.
- CONTROL WIRE RUNS UNDER PAVING SHALL BE INSTALLED IN A SCHEDULE 40 PVC SLEEVE.
- ALL CONTROL WIRES SHALL BE TAGGED INSIDE CONDUIT - GRAY SCHEDULE 40 ELECTRICAL CONDUIT.
- NO SPLICES WILL BE ALLOWED ON RUNS OF LESS THAN 500 FEET. ON RUNS GREATER THAN 500 FEET, SPLICES ARE TO BE MADE WITH AN APPROVED SPLICE UNIT AND TO BE INSTALLED IN A CONCRETE PULL BOX. IDENTIFY WHERE SPLICES ARE MADE AND PULL BOX LOCATIONS ON PLANS. CONNECTION SHALL BE MADE WITH APPROVED DBY6 CONNECTORS.
- ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO THE FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE DESIGNED ON THE PLANS.
- ALL SPRINKLER HEADS SHALL BE INSTALLED AND ADJUSTED TO KEEP WATER AND SPRAY OFF ALL PAVING, WALKS, WALLS, OBSTRUCTIONS, AND AREAS NOT UNDER THE CONTROL OF THE OWNER AT ALL TIMES. UTILIZE ADDITIONAL HEADS AT OBSTACLES AS NECESSARY AND ADJUST ALL HEADS TO MINIMIZE BACKSPASH AND DEFLECTION FROM PLANTS OR ANY OTHER OBSTACLES. INSTALL BUBBLERS WITHIN SMALL PLANTERS WITH SHRUBS SUCH THAT BUBBLERS ARE BETWEEN PLANTS AND NOT ADJACENT TO PAVEMENT.
- ALL SPRINKLER HEADS SHALL BE ADJUSTED AS REQUIRED, AS TO HEIGHT, COVERAGE PATTERN, OR SPRINKLER HEAD ORIENTATION, SO AS NOT TO ALLOW RESTRICTION OF SPRAY PATTERN BY PLANT MATERIAL THAT MAY IN TURN CAUSE PLANT DECLINE OR DEMISE.
- INSTALL FIXED ARC NOZZLES WHENEVER POSSIBLE. VARIABLE ARC NOZZLES SHALL ONLY BE USED IN AREAS WHERE FIXED ARC NOZZLES CANNOT ACHIEVE EFFECTIVE COVERAGE OR WOULD CAUSE EXCESSIVE OVERSPRAY. DURING THE FINAL CLOSEOUT PROCEDURES, NOZZLE CHANGES MAY BE REQUESTED AT NO ADDITIONAL EXPENSE TO THE CITY.
- SHOULD THE CONTRACTOR MAKE NOZZLE CHANGES OR ADD HEADS AS A RESULT OF SITE OBSTACLES OR CONSTRUCTION CHANGES, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATION AND ADJUSTMENTS IN PIPE SIZES. IN NO CASE SHALL FLOW VELOCITIES EXCEED 5 FEET PER SECOND.
- REFER TO THE DETAILS AND SPECIFICATIONS FOR FURTHER INFORMATION.
- ALL PLANTINGS SHALL BE FULLY WATERED IN UPON PLANTING. DO NOT RELY SOLELY UPON THE AUTOMATIC IRRIGATION SYSTEM. UTILIZE SUPPLEMENTAL HOSE WATERING AS REQUIRED, INITIALLY AND DURING THE PLANT ESTABLISHMENT PERIOD, AND AS DIRECTED ON PLANS TO ENSURE ALL PLANTINGS RECEIVE ADEQUATE WATER TO THE ENTIRE ROOT ZONE.
- NO LOW HEAD DRAINAGE IS PERMITTED. ALL LOW HEAD DRAINAGE SHALL BE CORRECTED BY THE CONTRACTOR. SPRING CHECK AND / OR SWING CHECK VALVES SHALL BE INSTALLED WHERE NEEDED AT NO ADDITIONAL COST TO THE CITY.
- THE WORK INCLUDES ALL SERVICES NECESSARY TO PERFORM THE IRRIGATION WORK AS SHOWN AND / OR NOTED ON THE DRAWINGS AND / OR AS SPECIFIED WITHOUT ADDITIONAL COST TO THE CITY. NO CHANGES FROM THE CONSTRUCTION DOCUMENTS ARE ALLOWED UNLESS PREVIOUSLY AUTHORIZED IN WRITING BY THE CITY LANDSCAPE INSPECTOR.
- UPON COMPLETION OF THE PROJECT, A POST-PROJECT WALK-THROUGH SHALL BE SCHEDULED WITH THE CITY LANDSCAPE INSPECTOR TO CONFIRM ALL IRRIGATION WORK HAS BEEN MAINTAINED IN A FUNCTIONAL MANNER AND IS IN A CONDITION ACCEPTABLE TO THE CITY LANDSCAPE INSPECTOR.
- INSTALLATION AND MATERIALS FOR RECYCLED WATER IRRIGATION SYSTEM SHALL CONFORM AND SPECIFICATIONS, SECTION 15152 RECYCLED WATER FACILITIES.
- PROVIDE MEGOHM TESTING OF ALL WIRES PRIOR TO CONNECTIONS BEING MADE AND BACKFILLING TO VERIFY PERFORMANCE WITHIN THE CONTROLLER MANUFACTURER'S REQUIREMENTS. NO CIRCUIT CHECKING LOWER THAN 1 MEGOHM WILL BE ACCEPTABLE. REPAIR/REPLACE SUBSTANDARD PERFORMING WIRE.

INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

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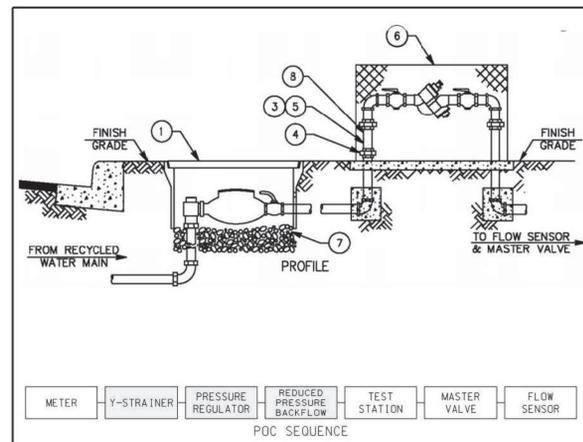
SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

AS BUILT		UTILITY NOTE	
_____ SIGNATURE	_____ DATE	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
_____ Printed Name	_____ R.L.A. No.		
My Registration Expires _____	Discipline _____		
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
CONTRACTOR:	MAP # 15350		DELTA A IRRIGATION REVISIONS
INSPECTOR:			
DATE COMPLETED:	DWG. #S 16022		



Date	App'd	DATUMS	SCALE	Designed By:	Drawn By:	Checked By:
08/18/22		VERTICAL: 446.361 (NAVD 88)	HORIZONTAL	HH	HH	BE
		HORIZONTAL: I.E. N78°21'27"E NAD 83	N/A			
			VERTICAL	Plans Prepared Under Supervision Of:		
			N/A	BROOKE J.P. WHALEN, License No. 87723		

CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG. NO.
3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		IRRIGATION NOTES		LI-08
Submitted: _____		APPROVED BY: _____		SHEET 8 OF 16
By: _____		DATE: _____		W.O. NO. PRK-0330
Office: _____		DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		
		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT		DRAWING NO.
		OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK		19010-46
				SHEET 46 OF 100



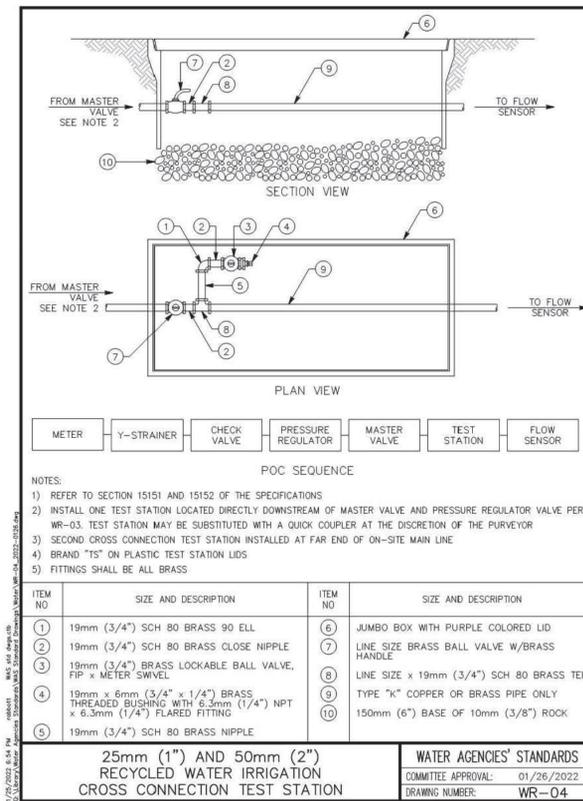
NOTES:

- REFER TO SECTIONS 15151 AND 15152 OF THE SPECIFICATIONS
- SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB OR FINISH GRADE
- INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
- WATER LATERALS INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN SECTION 15151 OF THE SPECIFICATIONS
- INSTALL WYE STRAINER HORIZONTAL TO SERVICE LATERAL
- MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	METER ASSEMBLY PER WS-01 & WS-02	6	REDUCED PRESSURE BACKFLOW DEVICE AND OPTIONAL ENCLOSURE
2	BRASS OR COPPER PIPE	7	10mm (3/8") ROCK, 100mm TO 150mm
3		8	14" TO 6" DEEP
4	SCREWED BRASS UNION		
5	13mm (1/2") BRASS BALL VALVE	8	PRESSURE REGULATOR

25mm AND 50mm (1" AND 2") RECYCLED WATER IRRIGATION REDUCED PRESSURE BACKFLOW DEVICE INSTALLATION

WATER AGENCIES' STANDARDS
COMMITTEE APPROVAL: 08/03/2018
DRAWING NUMBER: WR-08



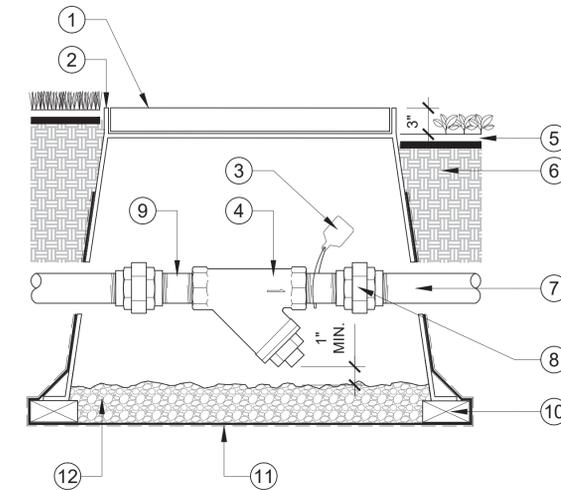
NOTES:

- REFER TO SECTION 15151 AND 15152 OF THE SPECIFICATIONS
- INSTALL ONE TEST STATION LOCATED DIRECTLY DOWNSTREAM OF MASTER VALVE AND PRESSURE REGULATOR VALVE PER WR-03. TEST STATION MAY BE SUBSTITUTED WITH A QUICK COUPLER AT THE DISCRETION OF THE PURVEYOR
- SECOND CROSS CONNECTION TEST STATION INSTALLED AT FAR END OF ON-SITE MAIN LINE
- BRAND "TST" ON PLASTIC TEST STATION LIDS
- FITTINGS SHALL BE ALL BRASS

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	19mm (3/4") SCH 80 BRASS 90 ELL	6	JUMBO BOX WITH PURPLE COLORED LID
2	19mm (3/4") SCH 80 BRASS CLOSE NIPPLE	7	LINE SIZE BRASS BALL VALVE W/BRASS HANDLE
3	19mm (3/4") BRASS LOCKABLE BALL VALVE, FIP x METER SWIVEL	8	LINE SIZE x 19mm (3/4") SCH 80 BRASS TEE
4	19mm x 6mm (3/4" x 1/4") BRASS THREADED BUSHING WITH 6.3mm (1/4") NPT x 6.3mm (1/4") FLARED FITTING	9	TYPE "K" COPPER OR BRASS PIPE ONLY
5	19mm (3/4") SCH 80 BRASS NIPPLE	10	150mm (6") BASE OF 10mm (3/8") ROCK

25mm (1") AND 50mm (2") RECYCLED WATER IRRIGATION CROSS CONNECTION TEST STATION

WATER AGENCIES' STANDARDS
COMMITTEE APPROVAL: 01/26/2022
DRAWING NUMBER: WR-04



LEGEND

- ① PURPLE PLASTIC RECT. VALVE BOX WITH BOLT DOWN PURPLE LID, USE STAINLESS STEEL BOLT, NUT AND WASHER, BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "YR" ONTO LID
- ② FINISH GRADE IN TURF AREAS
- ③ RECYCLED WATER VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG)
- ④ WYE STRAINER. REFER TO DETAIL NOTES AND LEGEND
- ⑤ FINISH GRADE IN SHRUB AREAS
- ⑥ UNDISTURBED / COMPACTED SUBGRADE
- ⑦ PRESSURE SUPPLY. BRASS MAINLINE
- ⑧ BRASS UNION
- ⑨ BRASS NIPPLE, TYP.
- ⑩ BRICK SUPPORTS, END TO END UNDER BOX BOTTOM
- ⑪ FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX COVERING HOLES WITH 1/2" GALV. WIRE MESH, OR DURA DRY BOX WITH SNAP-ON BOTTOM FEATURE
- ⑫ 3/8" ROCK, 2 CUBIC FEET, TYP.

NOTES:

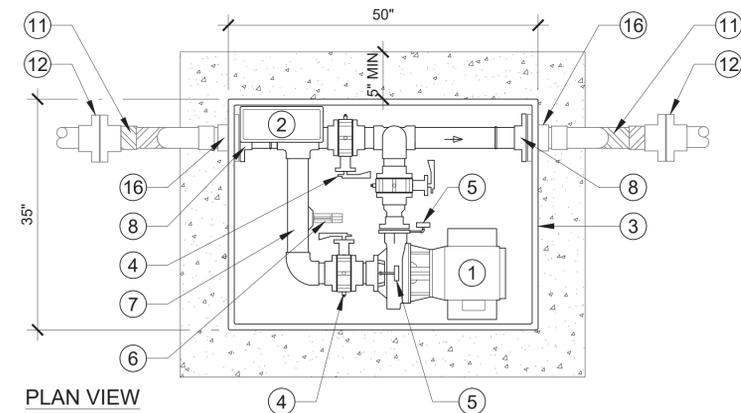
- USE TEFLON TAPE ON ALL THREADED CONNECTIONS.
- ORIENT Y-STRAINER FOR EASE OF MAINTENANCE ACCESS
- INSTALL WYE STRAINER HORIZONTAL TO SERVICE LATERAL. REPLACE THREADED PLUG WITH 1/2" BRONZE BENT NOSE HOSE BIB (FOR FLUSHING)

A Y-STRAINER IN BOX SECTION

NOT TO SCALE



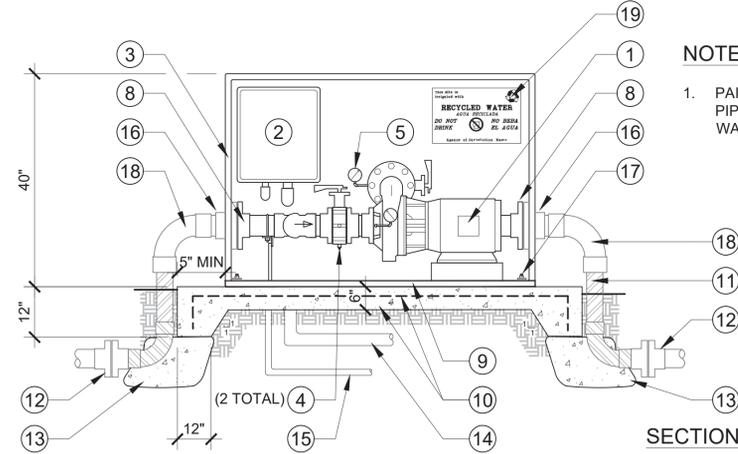
Y-STRAINER IN BOX SECTION



PLAN VIEW

LEGEND

- ① CLOSE-COUPLED END SUCTION CENTRIFUGAL PUMP, CAST IRON BRONZE FITTED, BACK PULLOUT DESIGN, MECHANICAL SEAL, ODP MOTOR
- ② NEMA 4 ENCLOSED CONTROL PANEL, WITH CIRCUIT BREAKER, MAGNETIC STARTER, HOA SWITCH, AND COMPONENTS FOR AUTOMATIC BOOSTER PUMP CONTROL
- ③ MARINE GRADE ALUMINUM ENCLOSURE, TOP HINGED DESIGN WITH VENTING. AFFIX ADHESIVE BACKED RECYCLED WATER WARNING DECAL (8.25"L x 2.5"W) (CHRISTY PROD., INC. #ID-4200) TO FRONT SIDE OF ENCLOSURE
- ④ CAST IRON ELASTOMER LINED FULL LUG WAFER STYLE BUTTERFLY VALVE ON PUMP BYPASS PIPING
- ⑤ PRESSURE GAUGE, 2 1/2" DIAL, LIQUID FILLED, STAINLESS CASE, 0-200 PSI
- ⑥ FLOW SWITCH, THERMAL DISPERSION, 150 PSI RATED
- ⑦ 3" INCH TYPE 304 STAINLESS STEEL WITH POWDER COAT PANTONE 522 PURPLE PAINT ON ALL PUMP ASSEMBLY PIPING. AFFIX PURPLE RECLAIMED WATER ID TAG WITH NYLON ZIP TIE TO EACH PIPE IN EACH DIRECTION
- ⑧ 150# ANSI RATED STAINLESS STEEL OUTPUT FLANGE



SECTION

NOTE:

- PAINT ALL EXTERIOR AND INTERIOR PIPING WITH APPROVED OTAY WATER DISTRICT PURPLE COLOR.

B BOOSTER PUMP ASSEMBLY PLAN / SECTION

NOT TO SCALE

INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

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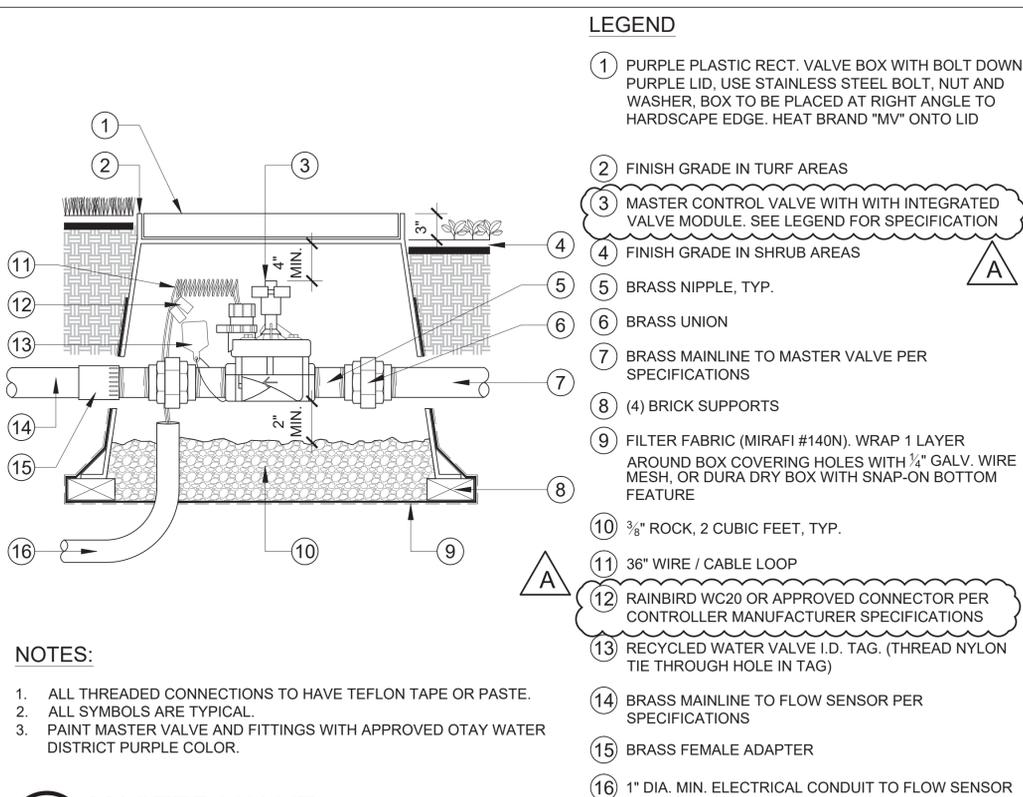
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AS BUILT		UTILITY NOTE	
SIGNATURE _____	DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
Printed Name _____	R.L.A. No. _____		
My Registration Expires _____	Discipline _____		
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
CONTRACTOR: _____	MAP # 15350		DELTA A IRRIGATION REVISIONS
INSPECTOR: _____	DWG. #S 16022		
DATE COMPLETED: _____			
		Date	App'd
		08/18/22	
		DATUMS	
		VERTICAL: 446.361 (NAVD 88)	
		HORIZONTAL: I.E. N78°21'27"E NAD 83	
		SCALE	
		HORIZONTAL	HH
		VERTICAL	N/A
		N/A	
		Designed By: _____	Drawn By: _____
		Checked By: _____	BE
		Date: 10/11/2021	
		Plans Prepared Under Supervision Of: _____	
		BROOKE JP. WHALEN	N.A. No. 5175

CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG. NO.	
3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		IRRIGATION DETAILS		LI-09 SHEET 9 OF 16 W.O. NO. PRK-0330	
Submitted: _____ By: _____ Office: _____		APPROVED BY: _____ DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK DRAWING NO. 19010-47 SHEET 47 OF 100	

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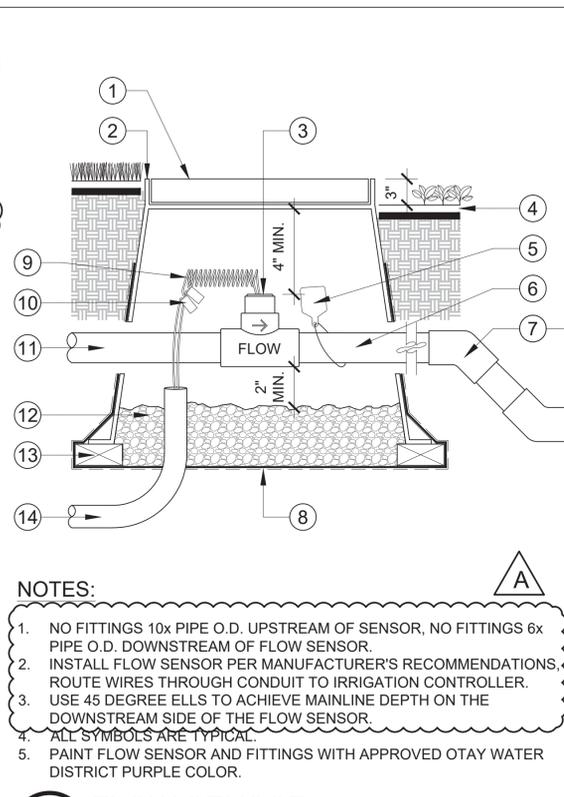
OWD# D0894-060253



- LEGEND**
- 1 PURPLE PLASTIC RECT. VALVE BOX WITH BOLT DOWN PURPLE LID, USE STAINLESS STEEL BOLT, NUT AND WASHER, BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "MV" ONTO LID
 - 2 FINISH GRADE IN TURF AREAS
 - 3 MASTER CONTROL VALVE WITH INTEGRATED VALVE MODULE. SEE LEGEND FOR SPECIFICATION
 - 4 FINISH GRADE IN SHRUB AREAS
 - 5 BRASS NIPPLE, TYP.
 - 6 BRASS UNION
 - 7 BRASS MAINLINE TO MASTER VALVE PER SPECIFICATIONS
 - 8 (4) BRICK SUPPORTS
 - 9 FILTER FABRIC (MIRAFI #140N), WRAP 1 LAYER AROUND BOX COVERING HOLES WITH 1/4" GALV. WIRE MESH, OR DURA DRY BOX WITH SNAP-ON BOTTOM FEATURE
 - 10 3/8" ROCK, 2 CUBIC FEET, TYP.
 - 11 36" WIRE / CABLE LOOP
 - 12 RAINBIRD WC20 OR APPROVED CONNECTOR PER CONTROLLER MANUFACTURER SPECIFICATIONS
 - 13 RECYCLED WATER VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG)
 - 14 BRASS MAINLINE TO FLOW SENSOR PER SPECIFICATIONS
 - 15 BRASS FEMALE ADAPTER
 - 16 1" DIA. MIN. ELECTRICAL CONDUIT TO FLOW SENSOR

- NOTES:**
1. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.
 2. ALL SYMBOLS ARE TYPICAL.
 3. PAINT MASTER VALVE AND FITTINGS WITH APPROVED OTAY WATER DISTRICT PURPLE COLOR.

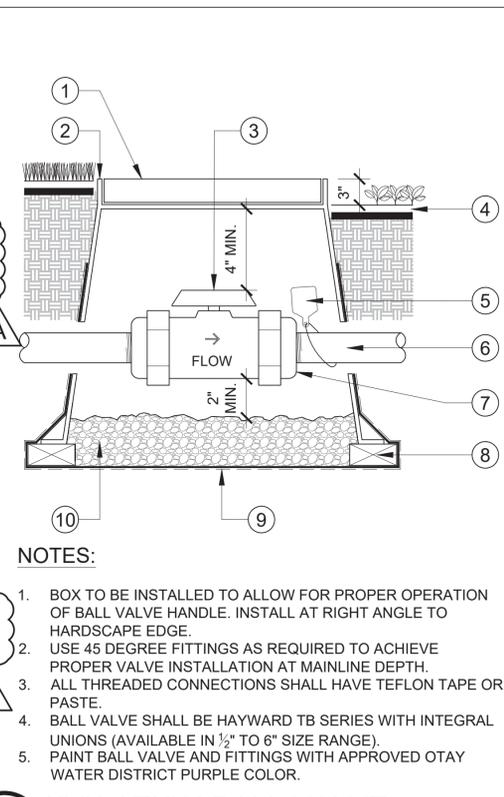
C MASTER VALVE SECTION NOT TO SCALE



- LEGEND**
- 1 PURPLE PLASTIC RECT. VALVE BOX WITH BOLT DOWN PURPLE LID, USE STAINLESS STEEL BOLT, NUT AND WASHER, BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "FS" ONTO LID
 - 2 FINISH GRADE IN TURF AREAS
 - 3 FLOW SENSOR WITH FLOW SENSOR DEVICE MODULE. SEE LEGEND FOR SPECIFICATION
 - 4 FINISH GRADE IN SHRUB AREAS
 - 5 RECYCLED WATER VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG)
 - 6 PURPLE PVC MAINLINE TO SYSTEM, PIPE PER SPECIFICATIONS
 - 7 PVC SCH 80 FITTINGS
 - 8 FILTER FABRIC (MIRAFI #140N), WRAP 1 LAYER AROUND BOX COVERING HOLES WITH 1/4" GALV. WIRE MESH, OR DURA DRY BOX WITH SNAP-ON BOTTOM FEATURE
 - 9 SHIELDED CABLE
 - 10 RAINBIRD WC20 OR APPROVED CONNECTOR PER CONTROLLER MANUFACTURER SPECIFICATIONS
 - 11 BRASS MAINLINE FROM MASTER VALVE
 - 12 3/8" ROCK, 2 CUBIC FEET, TYP.
 - 13 (4) BRICK SUPPORTS
 - 14 1" DIA. MIN. ELECTRICAL CONDUIT TO CONTROLLER

- NOTES:**
1. NO FITTINGS 10x PIPE O.D. UPSTREAM OF SENSOR, NO FITTINGS 6x PIPE O.D. DOWNSTREAM OF FLOW SENSOR.
 2. INSTALL FLOW SENSOR PER MANUFACTURER'S RECOMMENDATIONS, ROUTE WIRES THROUGH CONDUIT TO IRRIGATION CONTROLLER.
 3. USE 45 DEGREE ELLS TO ACHIEVE MAINLINE DEPTH ON THE DOWNSTREAM SIDE OF THE FLOW SENSOR.
 4. ALL SYMBOLS ARE TYPICAL.
 5. PAINT FLOW SENSOR AND FITTINGS WITH APPROVED OTAY WATER DISTRICT PURPLE COLOR.

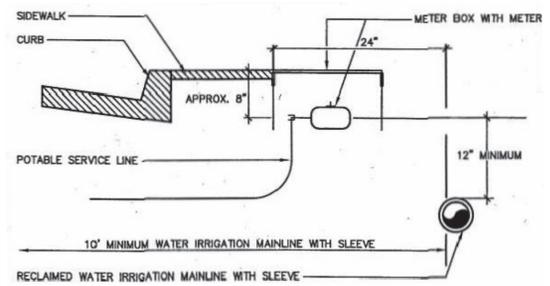
D FLOW SENSOR SECTION NOT TO SCALE



- LEGEND**
- 1 PURPLE PLASTIC RECT. VALVE BOX WITH BOLT DOWN PURPLE LID, USE STAINLESS STEEL BOLT, NUT AND WASHER, BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "BV" ONTO LID
 - 2 FINISH GRADE IN TURF AREAS
 - 3 PVC SCH 80 BALL VALVE. SEE LEGEND FOR SPECIFICATION
 - 4 FINISH GRADE IN SHRUB AREAS
 - 5 RECYCLED WATER VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG)
 - 6 PURPLE MAINLINE. DEPTH AS PER SPECIFICATIONS. ANY MAINLINE FITTINGS SHALL BE SCH 80 PVC
 - 7 USE DUAL UNION CONNECTIONS AS PART OF BALL VALVE, AS SPECIFIED IN LEGEND.
 - 8 (4) BRICK SUPPORTS
 - 9 FILTER FABRIC (MIRAFI #140N), WRAP 1 LAYER AROUND BOX COVERING HOLES WITH 1/4" GALV. WIRE MESH, OR DURA DRY BOX WITH SNAP-ON BOTTOM FEATURE
 - 10 3/8" ROCK, 2 CUBIC FEET, TYP.

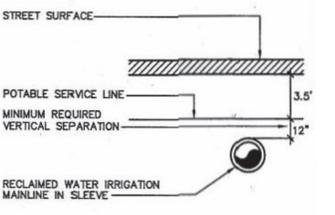
- NOTES:**
1. BOX TO BE INSTALLED TO ALLOW FOR PROPER OPERATION OF BALL VALVE HANDLE. INSTALL AT RIGHT ANGLE TO HARDSCAPE EDGE.
 2. USE 45 DEGREE FITTINGS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION AT MAINLINE DEPTH.
 3. ALL THREADED CONNECTIONS SHALL HAVE TEFLON TAPE OR PASTE.
 4. BALL VALVE SHALL BE HAYWARD TB SERIES WITH INTEGRAL UNIONS (AVAILABLE IN 1/2" TO 6" SIZE RANGE).
 5. PAINT BALL VALVE AND FITTINGS WITH APPROVED OTAY WATER DISTRICT PURPLE COLOR.

E ISOLATION BALL VALVE SECTION NOT TO SCALE



NOTE:
VERTICAL CLEARANCE OF 12" MINIMUM IS MANDATORY WHEN CROSSING PATH OF A POTABLE WATER LINE. INSTALLATION OF RECLAIMED WATER IRRIGATION MAINLINE 24" FROM FACE OF SIDEWALK WILL PROVIDE THE NECESSARY 10' HORIZONTAL CLEARANCE FROM THE POTABLE MAINLINE IN THE STREET.

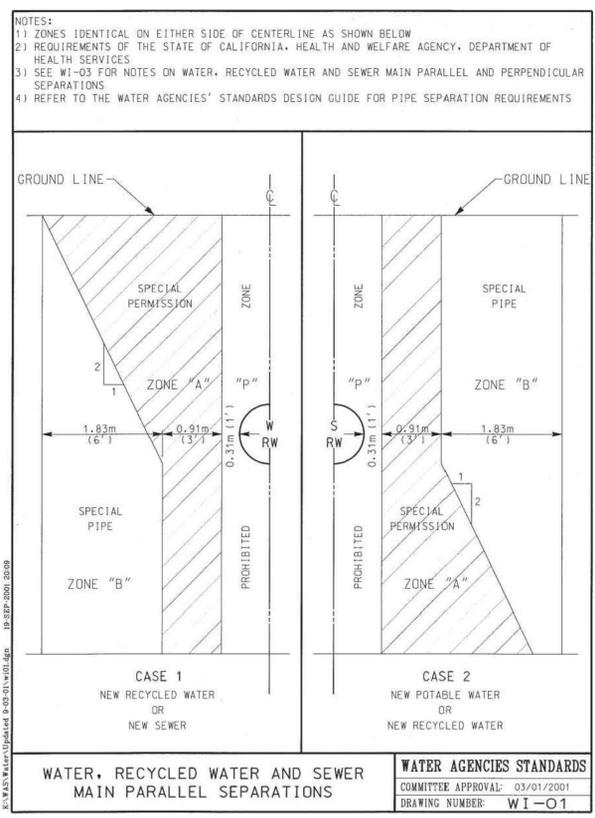
POTABLE MAINLINE CROSSING



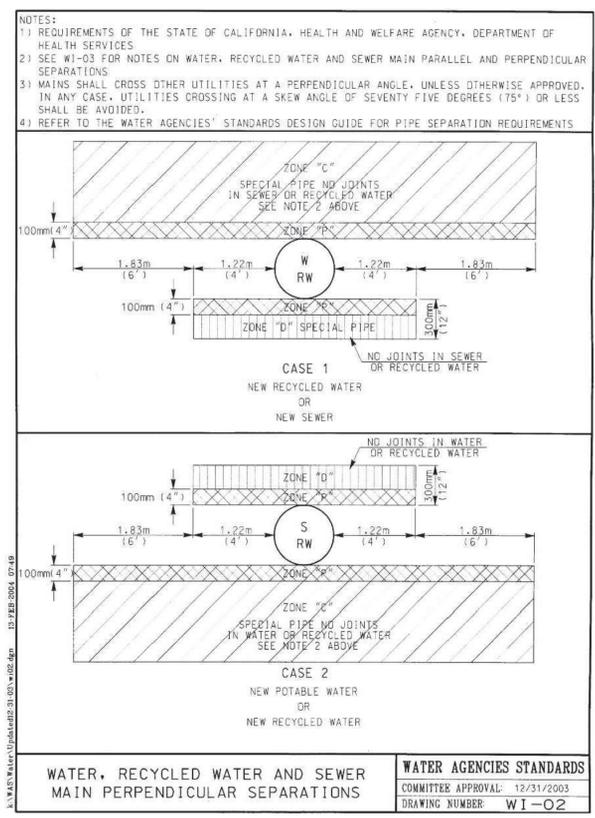
NOTE:
ALL RECLAIMED WATER IRRIGATION PIPE AND SLEEVES SHALL BE PURPLE AND LABELED AS SPECIFIED IN THE STANDARD SPECIFICATIONS FOR PRIVATE IRRIGATION SYSTEMS WATER DISTRICT RULES AND REGULATIONS FOR CONSTRUCTION OF RECLAIMED WATER MAINS OCTOBER 1993.

POTABLE SERVICE LINE CROSSING

F TYPICAL LINE CROSSINGS SECTION NOT TO SCALE



WATER, RECYCLED WATER AND SEWER MAIN PARALLEL SEPARATIONS
WATER AGENCIES STANDARDS
COMMITTEE APPROVAL: 03/01/2001
DRAWING NUMBER: WI-01



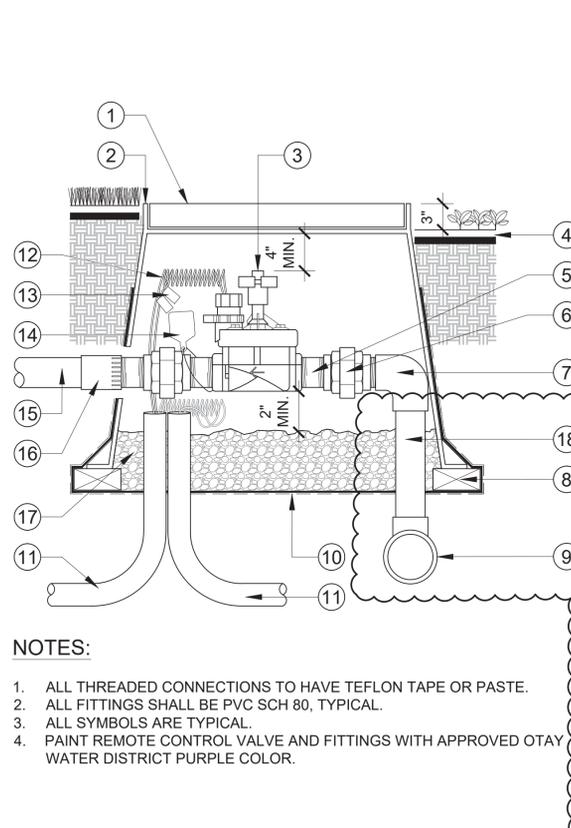
WATER, RECYCLED WATER AND SEWER MAIN PERPENDICULAR SEPARATIONS
WATER AGENCIES STANDARDS
COMMITTEE APPROVAL: 12/31/2003
DRAWING NUMBER: WI-02

INSPECTION NOTE
OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

COLOR CODING
SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

AS BUILT		UTILITY NOTE	
CONTRACTOR:	MAP # 15350	REFERENCES:	By
INSPECTOR:	DWG. #S 16022	REVISIONS:	DELTA A IRRIGATION REVISIONS
DATE COMPLETED:		Date:	08/18/22
		App'd:	
		DATUMS:	VERTICAL: 446.361 (NAVD 88)
		SCALE:	HORIZONTAL: HH
		Designed By:	BROOKE JP. WHALEN
		Drawn By:	Judy G. Whalen
		Checked By:	BE
		Date:	10/11/2021
		Scale:	N/A
		Vertical:	N/A
		Horizontal:	I.E. N78°21'27"E NAD 83

CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG. NO.	
ktua		3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		LI-10 SHEET 10 OF 16 W.O. NO. PRK-0330	
Submitted:		APPROVED BY:		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT	
By:		DATE:		DRAWING NO.	
Office:		DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		19010-48	
				SHEET 48 OF 100	

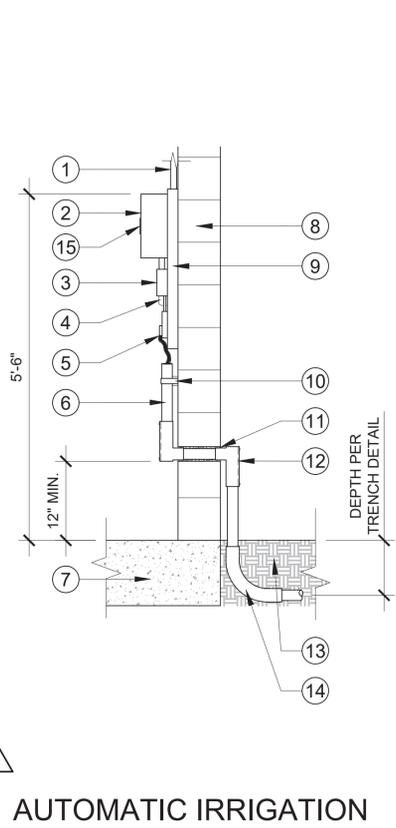


- LEGEND**
- 1 PURPLE PLASTIC RECT. VALVE BOX WITH BOLT DOWN PURPLE LID, USE S.S. BOLT, NUT AND WASHER, BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" & CONT. STA. # ONTO LID
 - 2 FINISH GRADE IN TURF AREAS
 - 3 IRRIGATION CONTROL VALVE WITH INTEGRATED VALVE MODULE. SEE LEGEND FOR SPECIFICATION
 - 4 FINISH GRADE IN SHRUB AREAS
 - 5 PVC SCH 80 NIPPLES (TYP.) LENGTH AS REQUIRED
 - 6 PVC SCH 80 UNION (TWO)
 - 7 PVC SCH 80 ELL (S X T)
 - 8 (4) BRICK SUPPORTS
 - 9 PVC SCH 80 TEE OR ELL (SLIP)
 - 10 FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX COVERING HOLES WITH 1/4" GALV. WIRE MESH, OR DURA DRY BOX WITH SNAP-ON BOTTOM FEATURE
 - 11 WIRE / CABLE IN 3/4" DIA. CONDUIT
 - 12 36" WIRE / CABLE LOOP
 - 13 RAINBIRD WC20 OR APPROVED CONNECTOR PER CONTROLLER MANUFACTURER SPECIFICATIONS
 - 14 RECYCLED WATER VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG)
 - 15 PURPLE LATERAL LINE
 - 16 PVC SCH 80 FEMALE ADAPTER
 - 17 3/8" ROCK, 2 CUBIC FEET, TYP.
 - 18 PVC SCH 80 PIPE

NOTES:

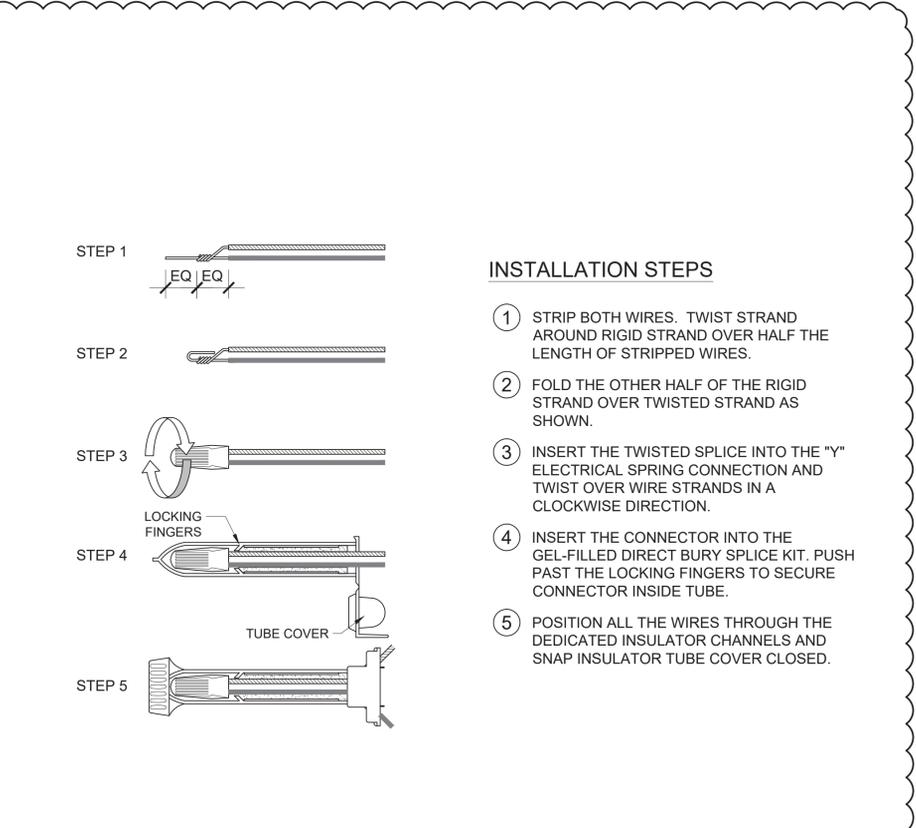
1. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.
2. ALL FITTINGS SHALL BE PVC SCH 80, TYPICAL.
3. ALL SYMBOLS ARE TYPICAL.
4. PAINT REMOTE CONTROL VALVE AND FITTINGS WITH APPROVED OTAY WATER DISTRICT PURPLE COLOR.

G REMOTE CONTROL VALVE ASSY. SECTION NOT TO SCALE



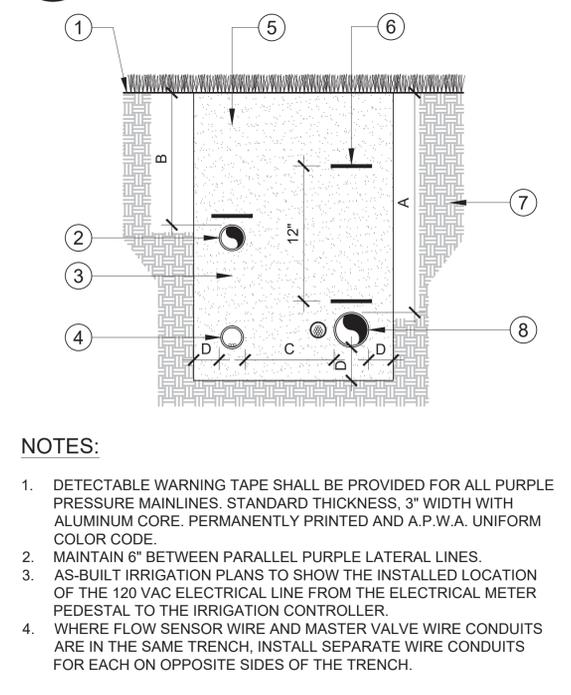
- LEGEND**
- 1 CONDUIT FOR RAIN SENSOR
 - 2 CONTROLLER (WALL MOUNTED)
 - 3 POWER SOURCE JUNCTION BOX WITH SWITCH AND OUTLET (ELECTRICAL CONTRACTOR)
 - 4 ELL-BOX AND CONDUIT FROM POWER SOURCE
 - 5 TERMINAL STRIP
 - 6 BUILDING FLOOR
 - 7 BUILDING WALL
 - 8 PRE-ASSEMBLED BACKBOARD. ANCHORED TO WALL PER MANUFACTURER'S SPECIFICATIONS
 - 9 CONDUIT STRAPS, 1 EVERY 18"
 - 10 WATERPROOF SEALANT
 - 11 ELL-BOX FOR WIRE CONDUIT (8) REQUIRED INSIDE AND (8) REQUIRED OUTSIDE
 - 12 EXTERIOR SURFACE
 - 13 CONDUITS AND SWEEPS. (8) REQUIRED (1 FOR MASTER VALVE, 1 FOR FLOW SENSOR, 1 FOR RAIN SENSOR - IF #1 IS NOT INSTALLED, 1 FOR CONTROL WIRES, 1 FOR INTERNET CABLE, 1 FOR REMOTE CABLE, 1 FOR GROUND WIRE AND 1 FOR PUMP SIGNAL WIRES)
 - 14 "DO NOT DRINK" DECAL ON IRRIGATION CONTROLLER (MOUNT ON ENCLOSURE DOOR) PER WM-08

H AUTOMATIC IRRIGATION CONTROLLER (WALL MOUNT, INTERIOR) SECTION NOT TO SCALE



I WIRE CONNECTOR (RAIN BIRD WC20) ISOMETRIC NOT TO SCALE

- INSTALLATION STEPS**
- 1 STRIP BOTH WIRES. TWIST STRAND AROUND RIGID STRAND OVER HALF THE LENGTH OF STRIPPED WIRES.
 - 2 FOLD THE OTHER HALF OF THE RIGID STRAND OVER TWISTED STRAND AS SHOWN.
 - 3 INSERT THE TWISTED SPLICE INTO THE "Y" ELECTRICAL SPRING CONNECTION AND TWIST OVER WIRE STRANDS IN A CLOCKWISE DIRECTION.
 - 4 INSERT THE CONNECTOR INTO THE GEL-FILLED DIRECT BURY SPLICE KIT. PUSH PAST THE LOCKING FINGERS TO SECURE CONNECTOR INSIDE TUBE.
 - 5 POSITION ALL THE WIRES THROUGH THE DEDICATED INSULATOR CHANNELS AND SNAP INSULATOR TUBE COVER CLOSED.

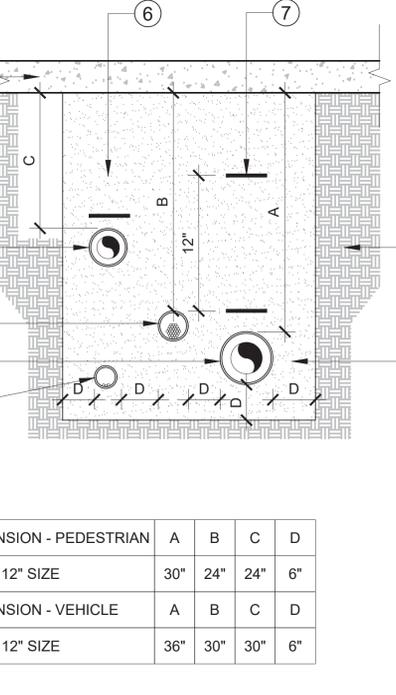


- LEGEND**
- 1 FINISH GRADE
 - 2 PURPLE LATERAL LINES, PER SPECIFICATIONS
 - 3 6" BEDDING DEPTH BELOW MAINLINE WITH 6" COVER, SAND BACKFILL (S.E. 30 OR BETTER) COMPACTED TO THE DENSITY OF EXISTING SOIL
 - 4 120V WIRING IN GRAY PVC SCH 40 CONDUIT, MIN. 12" AWAY FROM OTHER PIPING. NOTE: ONLY APPLICABLE WHEN 120V LINE CAN BE INSTALLED IN THE IRRIGATION TRENCH
 - 5 CLEAN COMPACTED BACKFILL OVER SAND BEDDING
 - 6 (2) DETECTABLE WARNING TAPES
 - 7 UNDISTURBED SOIL
 - 8 PURPLE MAINLINE AND CONTROL WIRES IN CONDUIT, PER SPECIFICATIONS. MIN. 6" FROM OTHER PIPING

NOTES:

1. DETECTABLE WARNING TAPE SHALL BE PROVIDED FOR ALL PURPLE PRESSURE MAINLINES. STANDARD THICKNESS, 3" WIDTH WITH ALUMINUM CORE. PERMANENTLY PRINTED AND A.P.W.A. UNIFORM COLOR CODE.
2. MAINTAIN 6" BETWEEN PARALLEL PURPLE LATERAL LINES.
3. AS-BUILT IRRIGATION PLANS TO SHOW THE INSTALLED LOCATION OF THE 120 VAC ELECTRICAL LINE FROM THE ELECTRICAL METER PEDESTAL TO THE IRRIGATION CONTROLLER.
4. WHERE FLOW SENSOR WIRE AND MASTER VALVE WIRE CONDUITS ARE IN THE SAME TRENCH, INSTALL SEPARATE WIRE CONDUITS FOR EACH ON OPPOSITE SIDES OF THE TRENCH.

J TRENCH IN LANDSCAPE SECTION NOT TO SCALE



- LEGEND**
- 1 PAVING
 - 2 PURPLE LATERAL LINE SLEEVE, PER SPECIFICATIONS
 - 3 CONTROL WIRE IN CONDUIT, PER SPECIFICATIONS. MIN. 6" FROM OTHER PIPING. PULL BOX SHALL BE AT EVERY 200 FEET, OR 270 DEGREES CONDUIT BENDS
 - 4 PURPLE MAINLINE SLEEVE, PER SPECIFICATIONS
 - 5 120V WIRING IN GRAY PVC SCH 40 CONDUIT, MIN. 12" AWAY FROM OTHER PIPING. NOTE: ONLY APPLICABLE WHEN 120V LINE CAN BE INSTALLED IN THE IRRIGATION TRENCH
 - 6 CLEAN COMPACTED FILL OVER SAND BEDDING
 - 7 (2) DETECTABLE WARNING TAPES
 - 8 UNDISTURBED SOIL
 - 9 6" SAND BEDDING DEPTH WITH 6" COVER SAND BACKFILL (S.E. 30 OR BETTER) COMPACTED TO THE DENSITY OF EXISTING SOIL

K TRENCH IN HARDSCAPE SECTION NOT TO SCALE

NOTES:

1. PURPLE SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED.
2. DETECTABLE WARNING TAPE SHALL BE PROVIDED FOR ALL PURPLE PRESSURE MAINLINES, STANDARD 5MIL THICKNESS, 3" WIDTH WITH ALUMINUM CORE. PERMANENTLY PRINTED AND A.P.W.A. UNIFORM COLOR CODE.
3. ALL SAND BEDDING AT WALKS AND STREETS SAND BED SHALL BE COMPACTED TO THE DENSITY OF THE EXISTING SOIL REQUIRED PER OWD.
4. SLEEVES AT CURB OR EDGE OF HARDSCAPE SHALL EXTEND 12" BACK UNDER HARDSCAPE.
5. MAINTAIN A SEPARATION OF 6" BETWEEN PARALLEL PURPLE LATERAL LINES.
6. AS-BUILT IRRIGATION PLANS TO SHOW THE INSTALLED LOCATION OF THE 120 VAC ELECTRICAL LINE FROM THE ELECTRICAL METER PEDESTAL TO THE IRRIGATION CONTROLLER.
7. WHERE FLOW SENSOR WIRE AND MASTER VALVE WIRE CONDUITS ARE IN THE SAME TRENCH, INSTALL SEPARATE WIRE CONDUITS FOR EACH ON OPPOSITE SIDES OF THE TRENCH.

I WIRE CONNECTOR (RAIN BIRD WC20) ISOMETRIC NOT TO SCALE

INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

COLOR CODING

SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

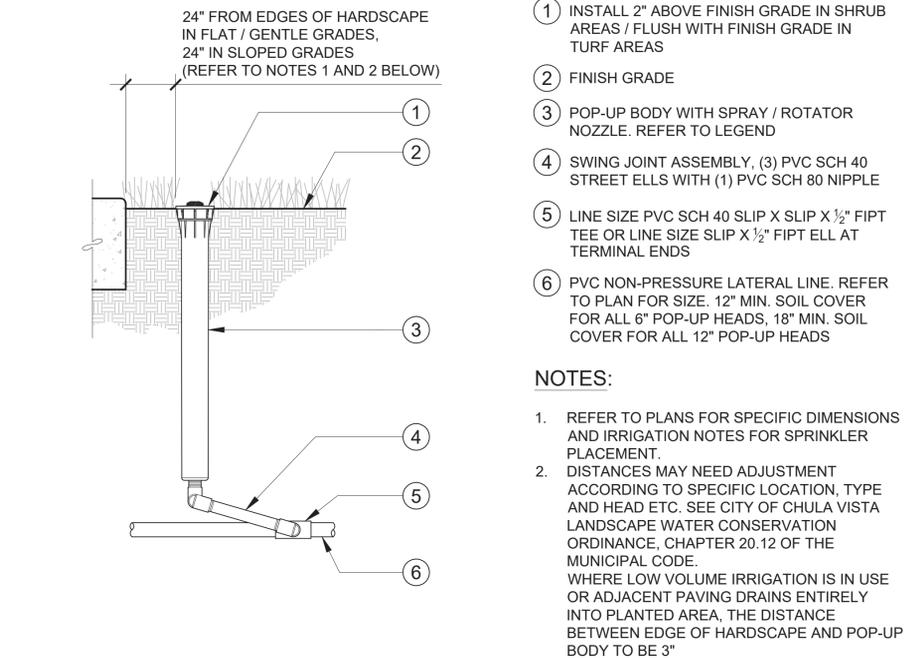
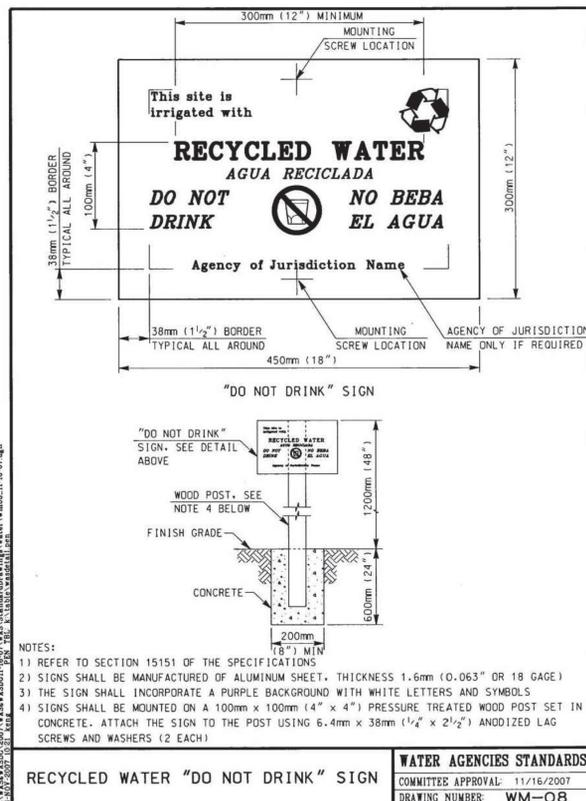
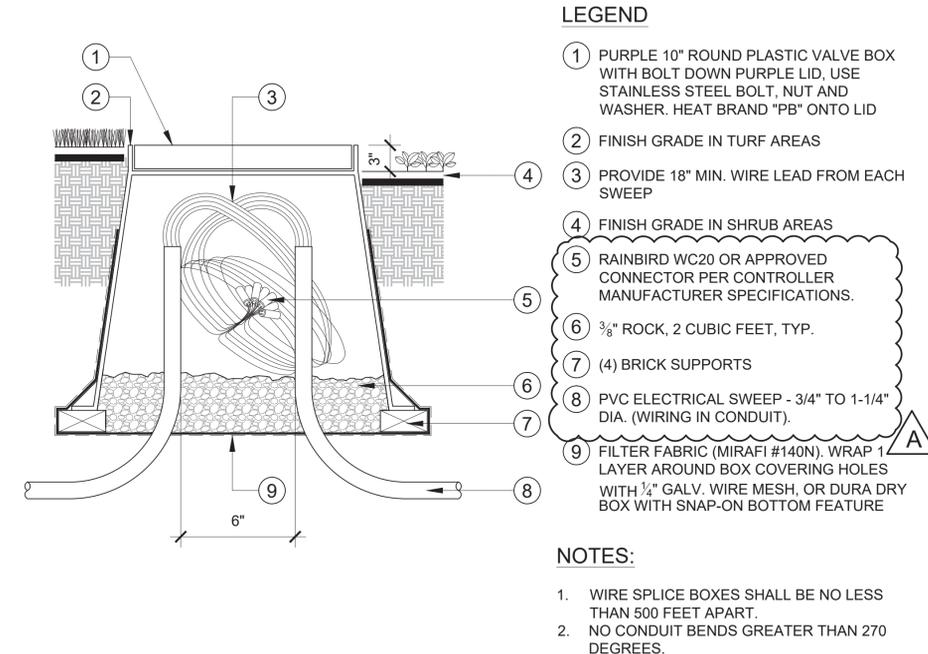
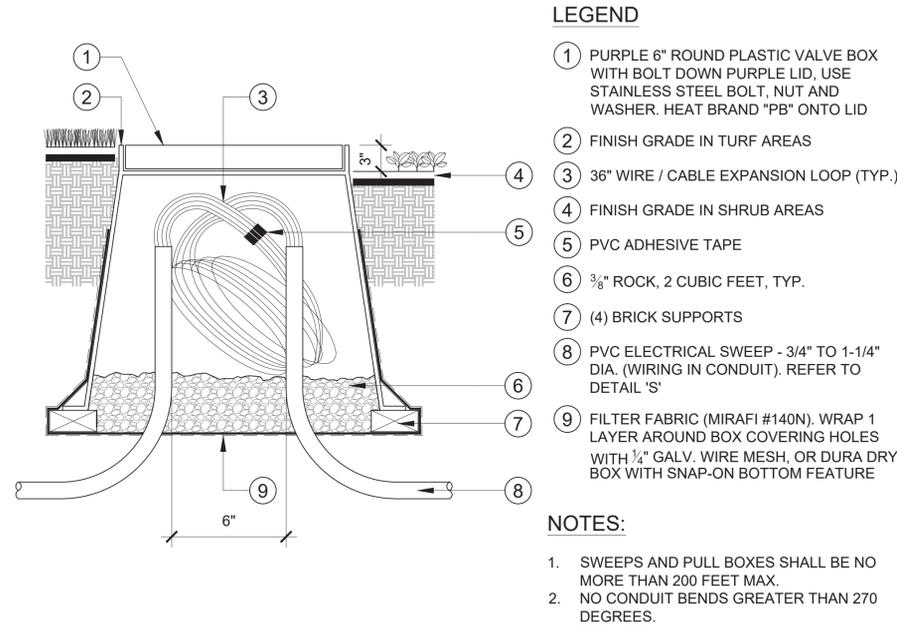
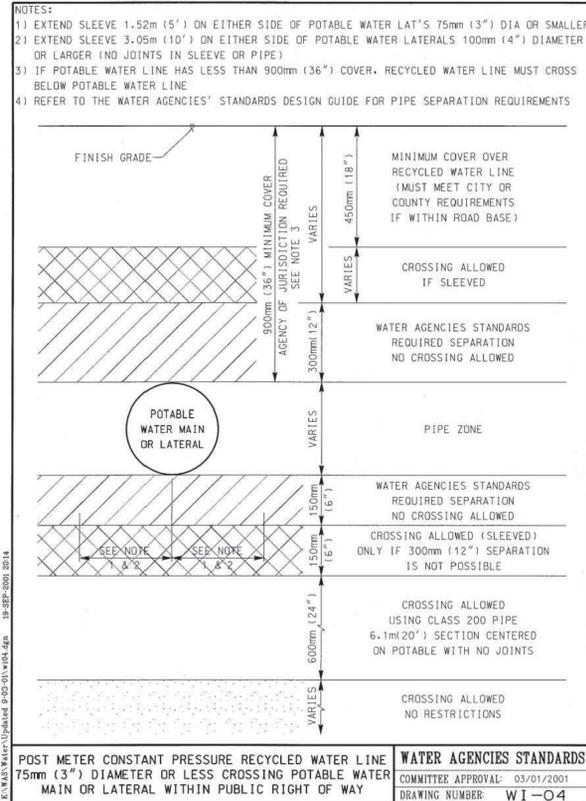
AS BUILT		UTILITY NOTE	
SIGNATURE _____	DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
Printed Name _____	R.L.A. No. _____		
My Registration Expires _____	Discipline _____		
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
CONTRACTOR: _____	MAP # 15350		DELTA A IRRIGATION REVISIONS
INSPECTOR: _____	DWG. #S 16022		
DATE COMPLETED: _____			



DATE		APP'D		DATUMS	
08/18/22				VERTICAL: 446.361 (NAVD 88)	
				HORIZONTAL: I.E. N78°21'27"E NAD 83	

CONSULTANT		
3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		
Submitted: _____	APPROVED BY: _____	DATE: _____
By: _____	DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE	

BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG. NO.
IRRIGATION DETAILS		LI-11
		SHEET 11 OF 16
		W.O. NO. PRK-0330
CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT		DRAWING NO.
OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK		19010-49
		SHEET 49 OF 100



INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

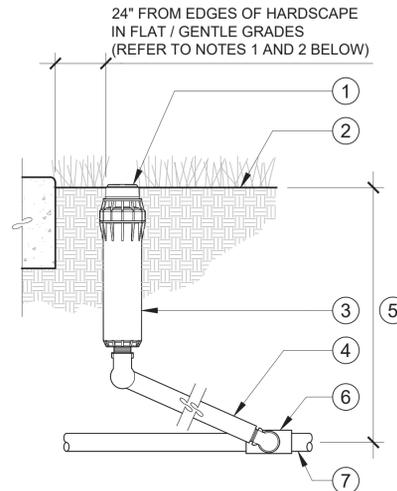
COLOR CODING

SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

AS BUILT		UTILITY NOTE	
CONTRACTOR: _____	DATE: _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
INSPECTOR: _____	R.L.A. No. _____		
DATE COMPLETED: _____	Discipline: _____		
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
MAP # 15350	DELTA A IRRIGATION REVISIONS		
DWG. #'S 16022			

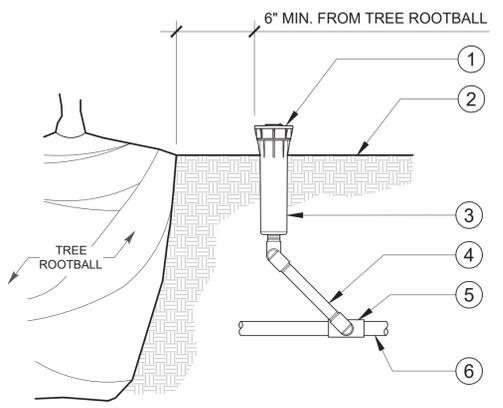


CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG. NO.	
		3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		IRRIGATION DETAILS LI-12 SHEET 12 OF 16 W.O. NO. PRK-0330	
Submitted: _____		APPROVED BY: _____		DATE: _____	
By: _____		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT		DRAWING NO.	
Office: _____		OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK		19010-50	
		DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		SHEET 50 OF 100	



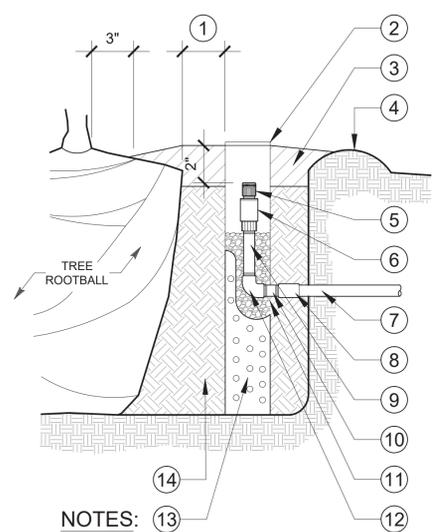
- LEGEND**
- ① INSTALL FLUSH WITH FINISH GRADE IN TURF AREAS
 - ② FINISH GRADE
 - ③ POP-UP BODY. REFER TO LEGEND
 - ④ SWING JOINT ASSEMBLY, (3) PVC SCH 40 STREET ELLS WITH (1) PVC SCH 80 NIPPLE, 3/4" PARTS ASSEMBLY
 - ⑤ SEE SPECIFICATIONS FOR DEPTH
 - ⑥ PVC SCH 40 TEE (SST) OR ELL (ST)
 - ⑦ PVC NON-PRESSURE LATERAL LINE. REFER TO PLAN FOR SIZE

- NOTES:**
1. REFER TO PLANS FOR SPECIFIC DIMENSIONS AND IRRIGATION NOTES FOR SPRINKLER PLACEMENT.
 2. DISTANCES MAY NEED ADJUSTMENT ACCORDING TO SPECIFIC LOCATION, TYPE AND HEAD ETC. SEE CITY OF CHULA VISTA LANDSCAPE WATER CONSERVATION ORDINANCE, CHAPTER 20.12 OF THE MUNICIPAL CODE. WHERE LOW VOLUME IRRIGATION IS IN USE OR WHERE ADJACENT PAVING DRAINS ENTIRELY INTO PLANTED AREA, THE DISTANCE BETWEEN EDGE OF HARDSCAPE AND POP-UP BODY TO BE 3"
 3. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.



- LEGEND**
- ① INSTALL 2" ABOVE FINISH GRADE IN SHRUB AREAS / FLUSH WITH FINISH GRADE IN TURF AREAS
 - ② FINISH GRADE
 - ③ POP-UP BODY WITH BUBBLER NOZZLE. REFER TO LEGEND
 - ④ SWING JOINT ASSEMBLY, (3) PVC SCH 40 STREET ELLS WITH (1) PVC SCH 80 NIPPLE
 - ⑤ LINE SIZE PVC SCH 40 SLIP X SLIP X 1/2" FIPT TEE OR LINE SIZE SLIP X 1/2" FIPT ELL AT TERMINAL ENDS
 - ⑥ PVC NON-PRESSURE LATERAL LINE. REFER TO PLAN FOR SIZE. 12" MIN. SOIL COVER FOR ALL 6" POP-UP HEADS, 18" MIN. SOIL COVER FOR ALL 12" POP-UP HEADS

- NOTES:**
1. SEE CITY OF CHULA VISTA LANDSCAPE WATER CONSERVATION ORDINANCE, CHAPTER 20.12 OF THE MUNICIPAL CODE.
 2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.
 3. REFER TO PLANTING PLAN FOR TREE LOCATIONS, SIZE, AND TYPE. VERIFY ON SITE THAT ALL POP-UP BUBBLERS ARE AT CORRECT TREE LOCATIONS AND HAVE THE CORRECT NUMBER OF POP-UP BUBBLERS INSTALLED FOR THEIR SIZE AND TYPE. COORDINATE ON SITE WITH LANDSCAPE ARCHITECT FOR TREE LOCATIONS.
 4. INSTALL BUBBLERS EQUIDISTANT FROM EACH OTHER AROUND TREES. TYP.
 5. ON SLOPES, INSTALL BUBBLERS ON UPHILL SIDE OF TREE.



- LEGEND**
- ① BUBBLER MIN. 6" FROM EDGE OF ROOTBALL
 - ② BUBBLER TUBE WITH PURPLE FLAT DRAIN GRATE, FLUSH WITH TOP OF MULCH
 - ③ MULCH
 - ④ WATERING BERM
 - ⑤ BUBBLER NOZZLE. SEE IRRIGATION LEGEND
 - ⑥ ANTI-DRAIN VALVE
 - ⑦ LATERAL LINE, SEE SPECIFICATIONS FOR DEPTH
 - ⑧ COUPLING FIPT X LINE SIZE SLIP
 - ⑨ 1/2" RISER, LENGTH AS REQUIRED
 - ⑩ 1/2" NIPPLE, LENGTH AS REQUIRED
 - ⑪ DRILL HOLE IN PERFORATED PIPE TWICE THE DIAMETER OF LATERAL PIPE
 - ⑫ FIPT X FIPT 1/2" ELBOW
 - ⑬ 4" PERFORATED PIPE RESTING ON BOTTOM OF PLANT PIT, FILL PIPE FROM BOTTOM OF PIPE TO BOTTOM OF ANTI-DRAIN VALVE WITH 3/8" PEA GRAVEL. WRAP ENTIRE PERFORATED PIPE WITH ONE LAYER OF FILTER FABRIC.
 - ⑭ APPROVED BACKFILL MATERIAL

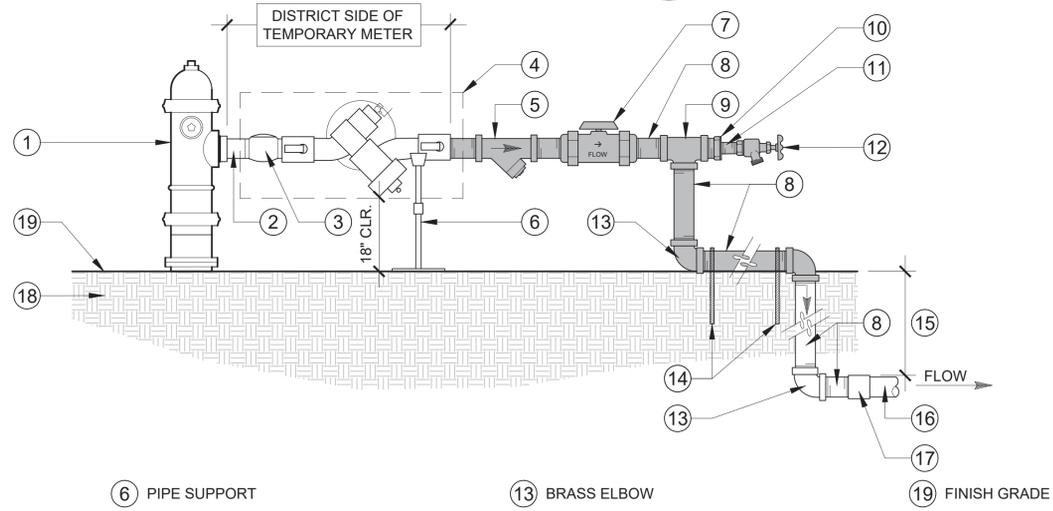
- NOTES:**
1. PLACE BUBBLER ON UPHILL SIDE OF TREE, OPPOSITE TREE DRAIN. INSTALL BUBBLER INSIDE PLANTING HOLE ADJACENT TO ROOTBALL.
 2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

6" / 12" POP-UP GEAR DRIVEN ROTOR SECTION NOT TO SCALE

4" POP-UP BUBBLER HEAD SECTION NOT TO SCALE

FIXED BUBBLER IN PERFORATED PIPE SECTION NOT TO SCALE

- NOTES:**
1. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.
 2. PAINT ALL ABOVE GRADE EQUIPMENT / PIPING AND FITTINGS ON DOWNSTREAM SIDE OF OTAY WATER DISTRICT INSTALLED BACKFLOW PREVENTER ASSEMBLY WITH APPROVED OTAY WATER DISTRICT PURPLE COLOR.



- LEGEND**
- ① FIRE HYDRANT
 - ② BRASS FIRE HYDRANT COUPLER
 - ③ TEMPORARY 2" CONSTRUCTION WATER METER
 - ④ TEMPORARY 2" CONSTRUCTION WATER METER AND BACKFLOW TO BE INSTALLED BY OTAY WATER DISTRICT
 - ⑤ Y-STRAINER (SAME SIZE AS BACKFLOW PREVENTER) (WILKINS 500XL-YSBR-HR) (SET PRESSURE REGULATOR AT 95 PSI, FIELD TEST)
 - ⑥ PIPE SUPPORT
 - ⑦ BALL VALVE
 - ⑧ BRASS NIPPLE (LENGTH AS REQUIRED). ALL EXPOSED PIPE SHALL BE THREADED BRASS
 - ⑨ BRASS TEE
 - ⑩ BRASS BUSHING REDUCER
 - ⑪ BRASS NIPPLE (LENGTH AS REQUIRED) TO HOSE BIB
 - ⑫ HOSE BIB (BENT HOSE, LOOSE KEY TYPE)
 - ⑬ BRASS ELBOW
 - ⑭ 'U' HOOK REBAR, LENGTH AS REQUIRED. DRIVE INTO SOIL A MIN. 18" DEEP
 - ⑮ SEE SPECIFICATIONS FOR DEPTH
 - ⑯ PVC PRESSURE PIPE (SEE SPECIFICATIONS) TEMPORARY POINT OF CONNECTION
 - ⑰ THREADED BRASS COUPLING WITH PVC SCH 80 MALE ADAPTER
 - ⑱ UNDISTURBED / COMPACTED SUBGRADE
 - ⑲ FINISH GRADE

WATER SOURCE AT FIRE HYDRANT (TEMPORARY CONSTRUCTION) SECTION NOT TO SCALE

INSPECTION NOTE

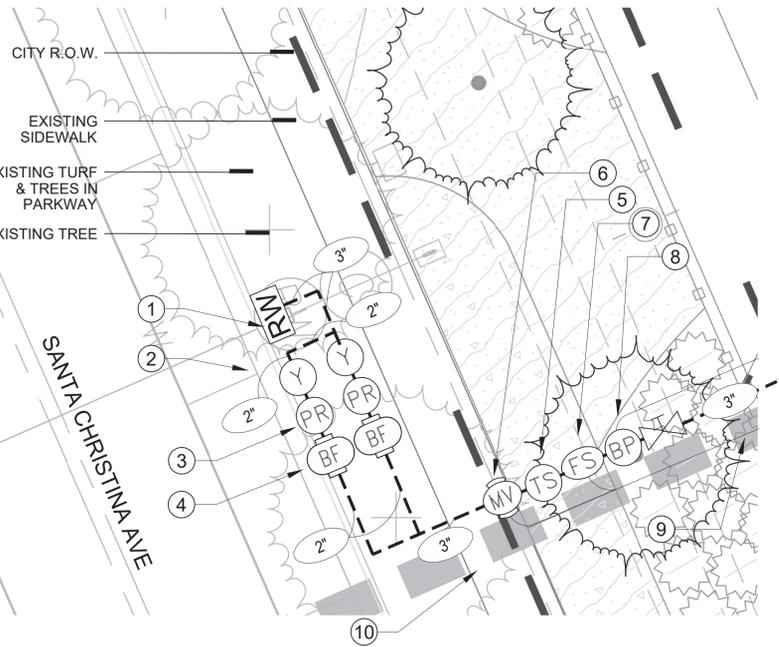
OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

COLOR CODING

SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

AS BUILT		UTILITY NOTE		
SIGNATURE _____	DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.		
Printed Name _____	R.L.A. No. _____			
My Registration Expires _____	Discipline _____			
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS	Date
CONTRACTOR:	MAP # 15350		DELTA A IRRIGATION REVISIONS	08/18/22
INSPECTOR:	DWG. #S 16022			
DATE COMPLETED:				
		DATUMS		
		VERTICAL: 446.361 (NAVD 88)		
		HORIZONTAL: I.E. N78°21'27"E NAD 83		
		SCALE		
		HORIZONTAL		
		N/A		
		VERTICAL		
		N/A		
		Designed By:		Drawn By:
		HH		HH
		Checked By:		BE
		Plans Prepared Under Supervision Of:		Date: 10/11/2021
		BROOKE J.P. WHALEN		
		Professional Engineer License No. 877239		5175

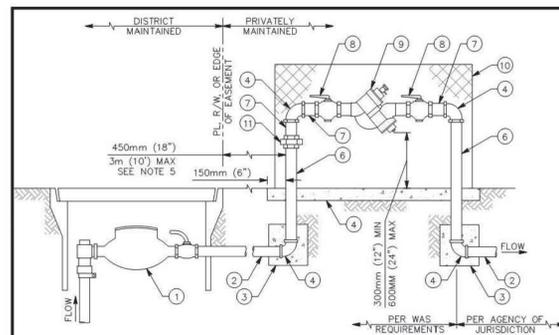
CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG NO.
		3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		LI-13
				SHEET 13 OF 16
				W.O. NO. PRK-0330
Submitted: _____		APPROVED BY: _____		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT
By: _____		DATE: _____		DRAWING NO.
		DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		19010-51
				SHEET 51 OF 100



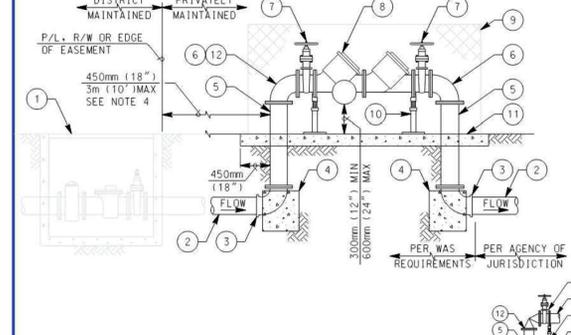
- LEGEND**
- ① 2" RECYCLED WATER METER
 - ② 2" Y-STRAINER (QUANTITY: 2)
 - ③ 2" PRESSURE REGULATOR (QUANTITY: 2)
 - ④ 2" BACKFLOW PREVENTER IN ENCLOSURE (QUANTITY: 2)
 - ⑤ RECYCLED WATER TEST STATION
 - ⑥ 2" MASTER VALVE
 - ⑦ 2" FLOW SENSOR
 - ⑧ BOOSTER PUMP
 - ⑨ TO IRRIGATION SYSTEM
 - ⑩ REMOVE & REPLACE EXISTING CONCRETE SIDEWALK PANEL FOR NEW IRRIGATION MAINLINE

S P.O.C. ENLARGEMENT SECTION

NOT TO SCALE



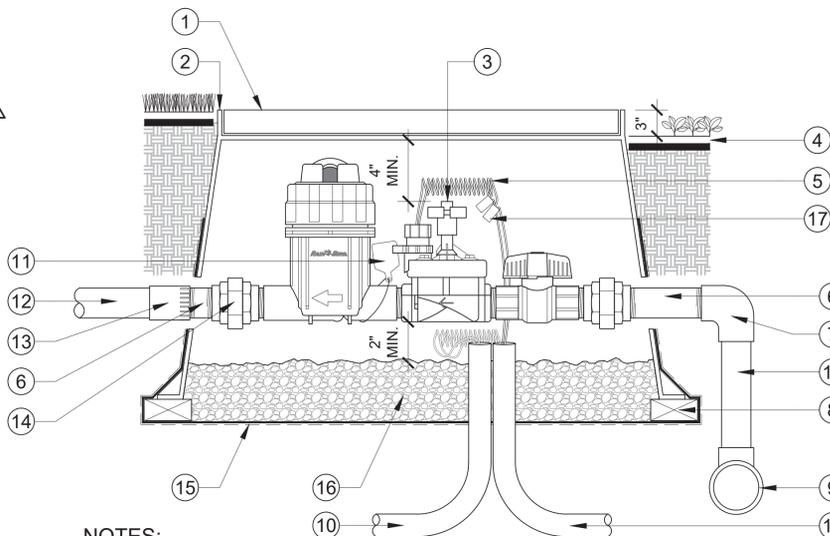
- NOTES:**
- REFER TO SECTION 15112 OF THE SPECIFICATIONS
 - INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
 - LOCATE BACKFLOW PREVENTION DEVICE (BPD) IN SUCH A MANNER THAT WILL ALLOW THE DEVICE TO BE READILY ACCESSIBLE FOR INSPECTION & REPAIR
 - ALL ABOVE GROUND PIPING, UNIONS, ELBOWS, & NIPPLES SHALL BE SOLDERED OR THREADED BRASS
 - NO CONNECTIONS OF ANY KIND WILL BE ALLOWED IN THIS AREA, INSPECTION BY THE DISTRICT SHALL TAKE PLACE PRIOR TO BACKFILL. INSTALL A CASING ENCASED IN CONCRETE WHEN THE DISTANCE BETWEEN THE METER BOX AND THE RISER TO THE BPD EXCEEDS 450mm (18").
 - INSTALL A PRESSURE REDUCING VALVE IN LINE WHEN SYSTEM PRESSURE EXCEEDS 1.03 MPa (150 PSI) OR WHEN RECOMMENDED BY THE BACKFLOW MANUFACTURER
 - TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 15112 OF THE SPECIFICATIONS PRIOR TO ACCEPTANCE BY THE DISTRICT
 - BPD & APPURTENANCES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN SECTION 15151 OF THE SPECIFICATIONS
 - MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST
- | ITEM NO | SIZE AND DESCRIPTION | ITEM NO | SIZE AND DESCRIPTION |
|---------|--|---------|--|
| ① | METER BOX & METER ASSEMBLY SEE WS-01 & WS-02 | ⑥ | BRASS OR COPPER PIPE, SEE NOTES 4 & 6 |
| ② | SCH 80 PVC, BRASS OR COPPER PIPE | ⑦ | 75mm (3") LONG NIPPLE, SEE NOTES 4 & 6 |
| ③ | CONCRETE THRUST BLOCK, SEE WT-01 | ⑧ | BALL VALVE "SHUT-OFF" |
| ④ | 90° ELL, SEE NOTE 4 | ⑨ | REDUCED PRESSURE BACKFLOW DEVICE |
| ⑤ | CONCRETE SLAB, MINIMUM 100mm (4") THICK x 450mm (18") WIDE | ⑩ | ENCLOSURE (OPTIONAL) |
| | | ⑪ | UNION, SEE NOTE 4 (ONLY ONE REQUIRED) |
- 19mm THRU 50mm (3/4" THRU 2") REDUCED PRESSURE BACKFLOW PREVENTION DEVICE**
- WATER AGENCIES' STANDARDS**
 COMMITTEE APPROVAL: 11/12/2020
 DRAWING NUMBER: WR-01



- NOTES:**
- REFER TO SECTION 15112 OF THE SPECIFICATIONS
 - INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
 - LOCATE BACKFLOW PREVENTION DEVICE (BPD) IN SUCH A MANNER THAT WILL ALLOW THE DEVICE TO BE READILY ACCESSIBLE FOR INSPECTION & REPAIR
 - INSTALL A CASING ENCASED IN CONCRETE WHEN THE DISTANCE BETWEEN THE METER BOX AND THE RISER TO THE BPD EXCEEDS 450mm (18"). NO CONNECTIONS OF ANY KIND WILL BE PERMITTED IN THIS AREA, INSPECTION REQUIRED PRIOR TO BACKFILL
 - INSTALL AN ANGLE PRESSURE REDUCING VALVE IN LIEU OF THE FIRST 90° ELL WHEN SYSTEM PRESSURE EXCEEDS 1.03 MPa (150 PSI) OR WHEN RECOMMENDED BY THE BACKFLOW MANUFACTURER
 - TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 15112 OF THE SPECIFICATIONS PRIOR TO ACCEPTANCE BY THE DISTRICT
 - BPD & APPURTENANCES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN SECTION 15151 OF THE SPECIFICATIONS
 - MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST
- | ITEM NO | SIZE AND DESCRIPTION | ITEM NO | SIZE AND DESCRIPTION |
|---------|---|---------|--|
| 1 | METER VAULT & METER ASSEMBLY, SEE WS-04 | 8 | REDUCED PRESSURE BACKFLOW DEVICE |
| 2 | PVC OR DUCTILE IRON PIPE | 9 | ENCLOSURE (OPTIONAL) |
| 3 | FLG x FLG OR MJ/PO x FLG 90° BEND | 10 | ADJUSTABLE VALVE SUPPORT |
| 4 | CONCRETE THRUST BLOCK SEE WT-01 | 11 | CONCRETE SLAB, MINIMUM 100mm (4") THICK x 900mm (36") WIDE |
| 5 | FLANGED DUCTILE IRON PIPE | 12 | FLANGED ANGLE PRESSURE REDUCING VALVE SEE NOTE 5 |
| 6 | FLANGED 90° BEND, SEE NOTE 5 | | |
| 7 | FLANGED RESILIENT WEDGE GATE VALVE | | |
- 75mm (3") AND LARGER REDUCED PRESSURE BACKFLOW PREVENTION DEVICE**
- WATER AGENCIES' STANDARDS**
 COMMITTEE APPROVAL: 11/23/2011
 DRAWING NUMBER: WR-02

LEGEND

- ① PURPLE PLASTIC RECT. VALVE BOX WITH BOLT DOWN PURPLE LID. USE S.S. BOLT, NUT AND WASHER. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" & CONT. STA. # ONTO LID
- ② FINISH GRADE IN TURF AREAS
- ③ IRRIGATION CONTROL VALVE ASSEMBLY (BALL VALVE, RCV REMOTE CONTROL VALVE WITH INTEGRATED VALVE MODULE, AND PRESSURE REGULATING 40 PSI FILTER). SEE LEGEND FOR SPECIFICATION
- ④ FINISH GRADE IN SHRUB AREAS
- ⑤ 3/8" WIRE / CABLE LOOP
- ⑥ PVC SCH 80 NIPPLES (TYP.) LENGTH AS REQUIRED
- ⑦ PVC SCH 80 (S X T)
- ⑧ (4) BRICK SUPPORTS
- ⑨ PVC SCH 80 TEE OR ELL (SLIP)
- ⑩ WIRE / CABLE IN 3/4" DIA. CONDUIT
- ⑪ RECYCLED WATER VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG)
- ⑫ PURPLE LATERAL LINE
- ⑬ PVC SCH 80 FEMALE ADAPTER
- ⑭ PVC SCH 80 UNION (TWO)
- ⑮ FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX COVERING HOLES WITH 1/2" GALV. WIRE MESH, OR DURA DRY BOX WITH SNAP-ON BOTTOM FEATURE
- ⑯ 3/8" ROCK, 2 CUBIC FEET, TYP.
- ⑰ RAINBIRD WC20 OR APPROVED CONNECTOR PER CONTROLLER MANUFACTURER SPECIFICATIONS.
- ⑱ PVC SCH 80 PIPE

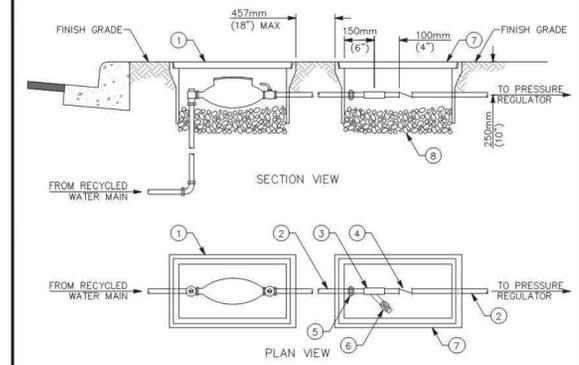


- NOTES:**
- ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.
 - ALL FITTINGS SHALL BE PVC SCH 80, TYPICAL.
 - ALL SYMBOLS ARE TYPICAL.
 - PAINT REMOTE CONTROL VALVE AND FITTINGS WITH APPROVED OTAY WATER DISTRICT PURPLE COLOR.

REMOTE CONTROL VALVE WITH PRESSURE REGULATING FILTER ASSEMBLY

U SECTION

NOT TO SCALE



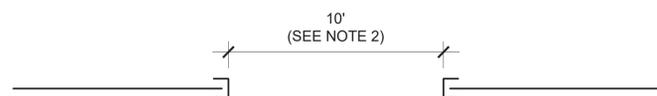
- NOTES:**
- REFER TO SECTION 15151 AND 15152 OF THE SPECIFICATIONS
 - SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB, OR FINISH GRADE
 - INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
 - WATER LATERALS INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN SECTION 15151 OF THE SPECIFICATIONS
 - INSTALL WYE STRAINER HORIZONTAL TO SERVICE LATERAL
 - MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST
 - A MORE PRESCRIPTIVE METHOD OF BACKFLOW PREVENTION MAY BE REQUIRED AS SHOWN ON THE APPROVED PLANS
 - WHEN THE POC SEQUENCE IS MORE THAN 2 FEET, INSTALL A SLEEVE AND ENCASE THE LINE IN SLURRY
- | ITEM NO | SIZE AND DESCRIPTION | ITEM NO | SIZE AND DESCRIPTION |
|---------|----------------------------------|---------|---|
| ① | METER ASSEMBLY PER WS-01 & WS-02 | ⑥ | 13mm (1/2") BRASS BALL VALVE W/BRASS HANDLE |
| ② | BRASS OR COPPER PIPE | ⑦ | METER BOX WITH LID 250mm x 500mm (10"x20") OR 425mm x 750mm (17"x30") |
| ③ | WYE STRAINER, SEE NOTE 5 | ⑧ | 10mm (3/8") ROCK, 100mm TO 150mm (4" TO 6") DEEP |
| ④ | BRASS CHECK VALVE | | |
| ⑤ | SCREWED BRASS UNION | | |
- 25mm (1") AND 50mm (2") RECYCLED WATER IRRIGATION CHECK VALVE INSTALLATION**
- WATER AGENCIES' STANDARDS**
 COMMITTEE APPROVAL: 01/26/2022
 DRAWING NUMBER: WR-03

INSPECTION NOTE

OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

COLOR CODING

SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.



NOTES:

- STUBOUTS SHALL BE VISIBLE AT ALL TIMES (12" MIN. ABOVE EXISTING GRADE)
- MAINTAIN 10-FOOT MIN. SEPARATION BETWEEN EXISTING AND PROPOSED IRRIGATION SYSTEM AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL SATISFY ALL THE REQUIREMENTS OF THE SD WAS STANDARD SPECIFICATIONS, AND DRAWINGS PRIOR TO SCHEDULING THE FINAL CONNECTION WITH OTAY WATER DISTRICT.
- CONTRACTOR SHALL PERFORM FINAL CONNECTION WITH DISTRICT REPRESENTATIVE(S) PRESENT AT TIME OF FINAL CONNECTION BETWEEN EXISTING AND PROPOSED IRRIGATION SYSTEMS.

T OWD 10-FOOT SEPARATION DETAIL SECTION

NOT TO SCALE

AS BUILT		UTILITY NOTE	
DATE	DATE	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
SIGNATURE	R.L.A. No.		
Printed Name	Discipline		
My Registration Expires			
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
CONTRACTOR:	MAP # 15350		DELTA IRRIGATION REVISIONS
INSPECTOR:			
DATE COMPLETED:	DWG. #S 16022		
		Date	App'd
		08/18/22	
		VERTICAL: 446.361 (NAVD 88)	
		HORIZONTAL: I.E. N78°21'27"E NAD 83	
		DATUMS	
		SCALE	
		HORIZONTAL	HH
		VERTICAL	N/A
		N/A	
		Designed By:	Drawn By:
		N/A	HH
		Checked By:	BE
		Date:	10/11/2021
		Plans Prepared Under Supervision Of:	
		BROOKE JP. WHALEN	N.J.A. No. 5175

CONSULTANT

ktua
 3916 Normal Street
 San Diego, CA 92103
 619.294.4477
 www.ktua.com

Submitted: _____ APPROVED BY: _____ DATE: _____

By: _____

Office: _____ DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE

BID DOCUMENTS - OCTOBER 11, 2021

IRRIGATION DETAILS

CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT

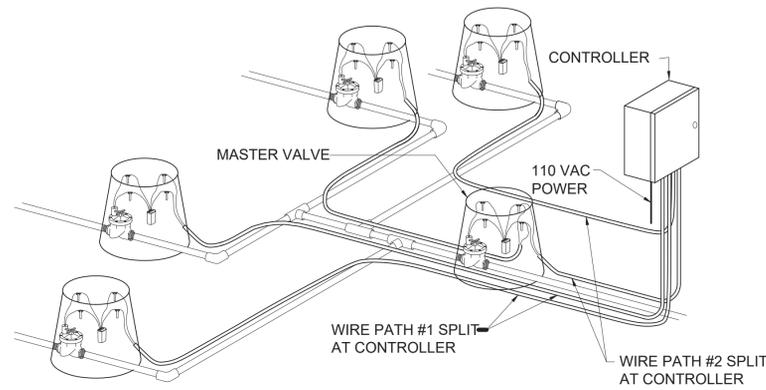
OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK

LANDSCAPE DWG. NO. LI-14 SHEET 14 OF 16 W.O. NO. PRK-0330

DRAWING NO. 19010-52 SHEET 52 OF 100

DEH2019-LRWS-001118

OWD# D0894-060253



- NOTES:**
1. ALL WIRE CONNECTIONS SHALL BE MADE WITH APPROVED CONNECTORS (RAINBIRD WC20 OR APPROVED CONNECTOR PER CONTROLLER MANUFACTURER SPECIFICATIONS).
 2. MAKE ALL WIRE SPLICES IN VALVE BOXES.
 3. LEAVE A MINIMUM OF 12" EXTRA WIRE AT ALL SPLICE POINTS.
 4. REFER TO CONTROLLER MANUFACTURER FOR SPECIFIC DIRECTIONS.

U TWO WIRE PATH DIAGRAM SECTION NOT TO SCALE

WATER AGENCIES' STANDARDS STANDARD SPECIFICATIONS (DATE: 08/03/2018)

SECTION 15152 RECYCLED WATER FACILITIES (ONSITE)

PART 1 GENERAL

- 1.01 DESCRIPTION**
This section includes special provisions, materials, and identification of onsite (post meter, private) recycled water irrigation or plumbing systems. The purpose of this section is to provide Rules and Regulations and establish procedures and specifications for the development and operation of recycled water systems in the District's service area.
- 1.02 REFERENCE STANDARDS**
The publications listed below form part of this specification to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said standards unless otherwise called for.
AWWA - American Waterworks Association Guidelines for Distribution of Non-potable Water
CCR - California Code of Regulations Title 22 and Title 17.
DOHS - Department of Health Services Recycled Water Plan Check and Inspection Manual, County of San Diego, Department of Environmental Health
- 1.03 RELATED WORK SPECIFIED ELSEWHERE**
WAS Standard Drawings
WAS Standard Specification 01000
- 1.04 OFFSITE AND ONSITE CRITERIA**
Recycled water facilities are separated into two categories:
A. "Offsite" (pre-meter, public) recycled water facilities consist of those facilities which are on the upstream side of the meter. These facilities are, or will be, owned, operated and maintained by the District. Specification Section 15151 details the requirements for construction of Offsite Recycled Water Facilities
B. "Onsite" (post-meter, private) recycled water facilities consist of those facilities which are on the downstream side of the water meter. These are facilities which will be owned, operated and maintained by the customer. This specification will detail the requirements for the design, installation and testing of onsite recycled irrigation and plumbing systems.
- 1.05 POLICY**
The District operates and maintains a recycled water distribution system within its service area enabling it to provide disinfected tertiary treated recycled water for a variety of beneficial uses. Recycled Water usage as an alternate will conserve an equal amount of potable water for domestic use.
The beneficial use of recycled water is regulated by the California State Water Resources Control Board (CWRCB), California Water Code Section 13551 establishes a State policy to encourage the use of recycled water. Permission to use recycled water is based on the ability to adequately treat wastewater to the point that the recycled water (effluent) meets or exceeds the requirements of existing Title 22, Chapter 3, regulations of the California Code of Regulations. Title 22 was promulgated by the State of California Department of Health Services (DOHS) to ensure proper health protection and specify the treatment degree to match the intended applications.
In accordance with waste discharge requirements for water reclamation projects, the Regional Water Quality Control Board, San Diego Region, (RWQCB) requires that Rules and Regulations for facilities using recycled water be established.
- 1.06 APPROVED USE**
These Rules and Regulations pertain to recycled water service to lands and/or improvements lying within the legal boundaries of the District unless otherwise stated. It is the intent of the District to provide recycled water service in accordance with these Rules and Regulations to all areas identified in the District's Water Reclamation Master Plan, including all subsequent revisions for the use of recycled water. Recycled water service shall be provided to the service area when related transmission distribution facilities are completed and service becomes available.
In accordance with the goals of the District, the uses of recycled water include only those uses approved by the State of California Department of Health Services (DOHS), the County of San Diego Department of Environmental Health (DEH) and for which Title 22 of the California Code of Regulations provides treatment requirements. All potential applications of recycled water shall be reviewed and approved by the District prior to installation of facilities. Prior to approval and at its discretion, the District may set forth specific requirements as conditions for providing service and/or require specific prior approval from the appropriate regulatory agencies.
The facilities shall be constructed in accordance with the procedures and requirements of the District. No recycled water mains or connections to the recycled water mains shall be installed unless shown on the Approved Plans.



V RCV WITH DECODER AND SURGE PROTECTOR SECTION NOT TO SCALE

1.07 CONDITIONS OF SERVICE

- Recycled water service shall be provided by the District only if such service is obtained in the manner provided in these Rules and Regulations. Recycled water service shall be available, provided, and used in accordance with other codes, rules, and regulations referenced in this specification.
If any of the following conditions of service are not satisfied at all times recycled water service may be revoked by the District.
A. Financial: Conditions relating to service rates, fees and billing shall be established by the Board of Directors.
B. Operational:
1. Liability: The District shall not be liable for any water-related damage resulting from, but not limited to:
a. defective plumbing
b. broken or faulty services
c. onsite facilities failures
d. high or low pressure conditions
e. interruptions of service
f. unauthorized connections
2. Service: All recycled water will be provided to the user as specified in the Application/Permit For Recycled Water Service. Recycled water use will be subject to the same restrictions as stated in these specifications and the regulatory requirements of DOHS and DEH.
C. Regulatory: Recycled water service may be suspended whenever the quality of the recycled water does not comply with the requirements of the regulatory agencies or at any time these Rules and Regulations For Recycled Water Service are violated.
- 1.08 DESIGN CRITERIA - ONSITE RECYCLED SYSTEMS**
A. The design of onsite recycled water facilities, including the preparation of plans and specifications, shall be under the responsibility of a licensed Landscape Architect or Civil Engineer registered with the State of California. A Declaration of Responsible Charge shall appear on the title sheet of the plans.
B. The design of onsite recycled facilities shall conform to the most current provisions set forth herein and to any other conditions, standards, and requirements set forth by the District.
C. In those areas where recycled water is not immediately available, and the District has determined that recycled water will be supplied in the future, the onsite facilities shall be designed to use recycled water. Provisions shall be made, as directed by the District, to allow for connection to the recycled distribution main when it becomes available. In the interim, potable water shall be supplied through a temporary potable water connection using a master reduced pressure principal backflow device installed per these Standard Specifications. When recycled water becomes available, the Owner shall remove the backflow prevention device in the presence of, and as directed by, the District Engineer. The onsite system will be connected to the recycled water distribution main per the requirements of the Standard Specifications at the time the connection is made.
D. Onsite recycled water systems shall be designed to include backflow prevention per the requirements of the Standard Specifications. In some cases, more stringent backflow protection may be required.
E. The recycled water system shall be separate and independent of any potable water system. Cross connections between potable water facilities and recycled water facilities are prohibited.
F. Haze ribs on recycled water facilities are prohibited.
G. Fire hydrants, wharf heads, or other appurtenances shall only be included in the design when these appurtenances are expressly approved by the District and DOHS.
H. Drinking fountains shall be protected from the spray of recycled water. There shall be no direct contact of recycled water with a drinking fountain. Protection of drinking fountains can be accomplished either by maintaining a horizontal separation of at least 9m (30') between the drinking fountain and the nearest spray type emitter, spray head modification, or by the use of a covered fountain. The manner used to protect drinking fountains from the spray of recycled water shall be approved by the District and DOHS.
I. Potable and recycled lines shall not be installed in the same trench. Recycled lines shall be designed to be installed below the potable lines where the two pipelines run parallel to each other. Where this is not possible, the recycled line shall be installed in a casing. Details of this installation shall be clearly drawn on the plans.
J. Onsite recycled water irrigation systems shall be designed to meet the peak moisture demand of the plant material to be irrigated. The use of moisture sensors is encouraged, but not mandatory.
K. Onsite recycled water irrigation systems shall be designed to apply irrigation water in a manner compatible with the infiltration rates of the soil types within the approved use area. Evidence that infiltration rates have been assessed shall be included with the design. Where varying soil types are present, the system design shall be compatible with the lowest infiltration rate present.
L. Onsite recycled water systems shall be designed to prevent discharge onto areas not under control of the Owner. Appropriate sprinklers, bubblers, emitters, rotors, etc., shall be employed in the design to confine the discharge to the approved use area. The design shall avoid spray patterns which discharge onto obstructions that tend to concentrate water which results in ponding and/or runoff.

CONTINUED - SEE NEXT LANDSCAPE DWG NO. L1-16 / SHEET 54

W GROUNDING ROD AND SURGE DEVICE SECTION NOT TO SCALE

LEGEND

- 1 10" PURPLE ROUND VALVE BOX AND PURPLE LID
- 2 #6 AWG SOLID GROUND WIRE CONNECTED TO GROUND ROD USING BRASS CLAMP
- 3 SURGE DEVICE
- 4 TWO WIRE PATH
- 5 FINISH GRADE
- 6 5/8-INCH X 8 FT. COPPER CLAD GROUNDING ROD OR GROUNDING PLATE. INSTALL RODS IN SOIL IN A TRIANGULAR PATTERN SPACED A MINIMUM OF 16 FT. APART FROM EACH OTHER. GROUNDING GRID TO HAVE MAXIMUM RESISTANCE REQUIRED BY CONTROL SYSTEM MANUFACTURER'S SPECIFICATIONS
- 7 FILTER FABRIC (MIRAFI #140N, OR APPROVED EQUAL). WRAP 1 LAYER AROUND BOX COVERING HOLES

NOTES:

1. WIRE COIL 36" LENGTH (ITEM #3)
2. ALL CABLE / WIRE SHALL BE INSTALLED IN CONDUIT / SWEEPS INTO VALVE BOX.
3. DETAIL MAY NOT REFLECT ALL COMPONENTS FOR VALVE BOX INSTALLATION. PROVIDE BRICK FOR BASE OF BOX.

INSPECTION NOTE
OTAY WATER DISTRICT INSPECTION SHALL BE NOTIFIED FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AT (619) 670-2241. ALL WORK PERFORMED WITHOUT BENEFIT OF INSPECTION SHALL BE SUBJECT TO REJECTION AND REMOVAL.

COLOR CODING
SPRINKLERS, ROTOR HEADS AND OTHER TYPES OF DISPERSION HEADS SHALL HAVE THE EXPOSED SURFACE COLORED PURPLE. THE EXPOSED SURFACE SHALL BE COLORED THROUGH THE USE OF INTEGRALLY MOLDED PURPLE PLASTIC OR PERMANENTLY ATTACHED PURPLE PLASTIC RING OR DISC. ALL SHRUB HEADS SHALL HAVE PURPLE CAPS. DECAL ON RISERS WILL NOT BE ACCEPTED.

AS BUILT		UTILITY NOTE	
SIGNATURE _____	DATE _____	ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM RECORD DATA AT THEIR APPROXIMATE LOCATIONS. UNDERGROUND FACILITIES MAY EXIST WHICH HAVE NOT BEEN REPORTED OR ARE NOT OF RECORD. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PERTINENT UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.	
Printed Name _____	R.L.A. No. _____		
My Registration Expires _____	Discipline _____		
CONSTRUCTION RECORD	REFERENCES	By	REVISIONS
CONTRACTOR: _____	MAP # 15350		DELTA A IRRIGATION REVISIONS
INSPECTOR: _____			
DATE COMPLETED: _____	DWG. #S 16022		
		Date	App'd
		08/18/22	
		DATUMS	
		VERTICAL: 446.361 (NAVD 88)	
		HORIZONTAL: I.E. N78°21'27"E NAD 83	
		SCALE	
		HORIZONTAL	HH
		VERTICAL	N/A
		N/A	
		Designed By:	Drawn By:
		Checked By:	
		N/A	HH
		Plans Prepared Under Supervision Of:	Date: 10/11/2021
		BROOKE J.P. WHALEN	
			5175

CONSULTANT		BID DOCUMENTS - OCTOBER 11, 2021		LANDSCAPE DWG NO.
		3916 Normal Street San Diego, CA 92103 619.294.4477 www.ktua.com		LI-15
Submitted: _____		APPROVED BY: _____		SHEET 15 OF 16
By: _____		DATE: _____		W.O. NO. PRK-0330
Office: _____		DIRECTOR OF DEVELOPMENT SERVICES OR DESIGNEE		DRAWING NO.
		CITY OF CHULA VISTA DEVELOPMENT SERVICES DEPARTMENT		19010-53
		OTAY RANCH VILLAGE 2 P-2 PARK, GROVE PARK		SHEET 53 OF 100

DEH2019-LRWS-001118

OWD# D0894-060253

