



Know what's below.  
Call before you dig.

### DRIPLINE INSTALLATION NOTES

- ALL DRIPLINE, FITTINGS, FILTERS, PRESSURE REGULATORS, AIR VACUUM RELIEF VALVES, AND FLUSH VALVES SHALL BE FURNISHED BY THE MANUFACTURER LISTED IN THE LEGEND, AND SHALL BE INSTALLED AS PER THE LEGEND, THE DETAILS, AND THE MANUFACTURERS' RECOMMENDATIONS. NO SUBSTITUTIONS WILL BE ACCEPTED.
- DRIPLINE SHALL GENERALLY BE LAID OUT AS FOLLOWS:
  - DRIPLINE IS INSTALLED AROUND THE ENTIRE EDGE OF THE AREA TO BE IRRIGATED.
    - (1) DISTANCES FROM THE EDGE OF THE IRRIGATED AREA ARE:
      - (a) 2'-4" NEXT TO ASPHALT, CONCRETE PAVING, OR "HARDSCAPE".
      - (b) 2'-4" OUTSIDE OF UNCONTAINED LANDSCAPES.
    - (2) AT CORNERS, THE DRIPLINE MAY BE CURVED, DOWN TO A MINIMUM RADIUS OF 15 INCHES. FOR CORNERS SHARPER THAN THIS, ELBOWS (OR TEES, AS APPLICABLE) SHALL BE USED.
  - DRIPLINE IS INSTALLED THROUGHOUT THE ENTIRE AREA TO BE IRRIGATED, AND IS CONNECTED WITH TEES TO THE DRIPLINE LAID AROUND THE EDGE.
    - (1) ON FLAT GROUND (LESS THAN 3%).
      - (a) DRIPLINE SHALL GENERALLY RUN PARALLEL TO THE LONGEST SIDE OF THE AREA TO BE IRRIGATED.
      - (b) DRIPLINES SHALL BE EVENLY SPACED AT A DISTANCE NOT TO EXCEED THE ON-CENTER (O.C.) SPACING INDICATED IN THE LEGEND.
    - (2) ON SLOPES (3% OR STEEPER).
      - (a) DRIPLINE SHALL GENERALLY RUN PARALLEL TO CONTOUR LINES, NOT UP AND DOWN THE SLOPE.
      - (b) DRIPLINES SHALL BE SPACED AT 125% OF ON-CENTER SPACING ON THE LOWER ONE-THIRD OF THE SLOPE.
  - THE RESULTING GRID OF DRIPLINE SHALL BE A "CLOSED LOOP" SYSTEM, EXCEPT IN NARROW AREAS WHICH ARE ONLY WIDE ENOUGH FOR ONE DRIPLINE.
- ON LOOPED DRIPLINE SYSTEMS WITH A SINGLE POINT OF SUPPLY, THE SUPPLY CONNECTION SHALL BE MADE ON THE PERIMETER OF THE LOOP, AND THE CONNECTION SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE LOOP FROM THE FLUSH VALVE.
- THE IRRIGATION CONTRACTOR SHALL THOROUGHLY FLUSH ALL LATERALS AND DRIPLINES PRIOR TO INSTALLATION OF FLUSH VALVES AND AIR VACUUM RELIEF VALVES.
- LOCATION OF FLUSH VALVES ON THE PLANS IS DIAGRAMMATIC ONLY. FLUSH VALVES SHALL BE LOCATED AT THE LOWEST POINT IN ELEVATION OPPOSITE THE POINT OF SUPPLY ON LOOPED DRIPLINE SYSTEMS, AND AT THE END OF THE LINE ON SINGULAR RUNS OF DRIPLINE.
- LOCATION OF AIR VACUUM RELIEF VALVES ON THE PLANS IS DIAGRAMMATIC ONLY. AIR VACUUM RELIEF VALVES SHALL BE LOCATED AT THE HIGHEST POINT IN ELEVATION ON LOOPED OR SINGULAR DRIPLINES.

### IRRIGATION LEGEND

UNDERGROUND TREE BUBBLERS		BUBBLER **		REMARKS	5-50 PSI
RAIN BIRD	RWS-M-B-C-1401 w/ RWS SOCK	TORO **	GPH	DESCRIPTION	DETAIL
▽	PRE-ASSEMBLED MAIN ROOT WATERING SYSTEM	LF20-PC	2.0 (each)	EACH SYMBOL REPRESENTS 1 TREE & 1 RWS-M SYSTEM	F-52
** IMPORTANT: THE CONTRACTOR SHALL REMOVE ALL RAIN BIRD #1401 0.25 GPM BUBBLERS IN THE DEEP ROOT WATERING SYSTEMS AND REPLACE WITH TORO #LF-20PC 2.0 GPH BUBBLERS PRIOR TO INSTALLATION.					

RAIN BIRD		BUBBLER **		REMARKS	5-50 PSI
SYMBOL	DESCRIPTION	TORO **	GPH	DESCRIPTION	DETAIL
▽	PRE-ASSEMBLED DEEP ROOT WATERING SYSTEM	LF20-PC	2.0 (each)	EACH SYMBOL REPRESENTS 1 TREE & 2 RWS SYSTEMS	F-53
** IMPORTANT: THE CONTRACTOR SHALL REMOVE ALL RAIN BIRD #1401 0.25 GPM BUBBLERS IN THE DEEP ROOT WATERING SYSTEMS AND REPLACE WITH TORO #LF-20PC 2.0 GPH BUBBLERS PRIOR TO INSTALLATION.					

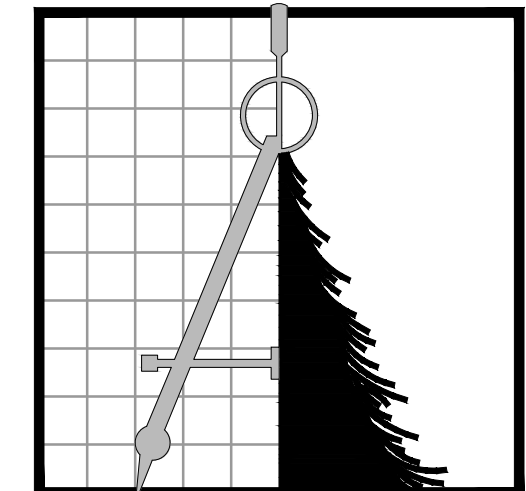
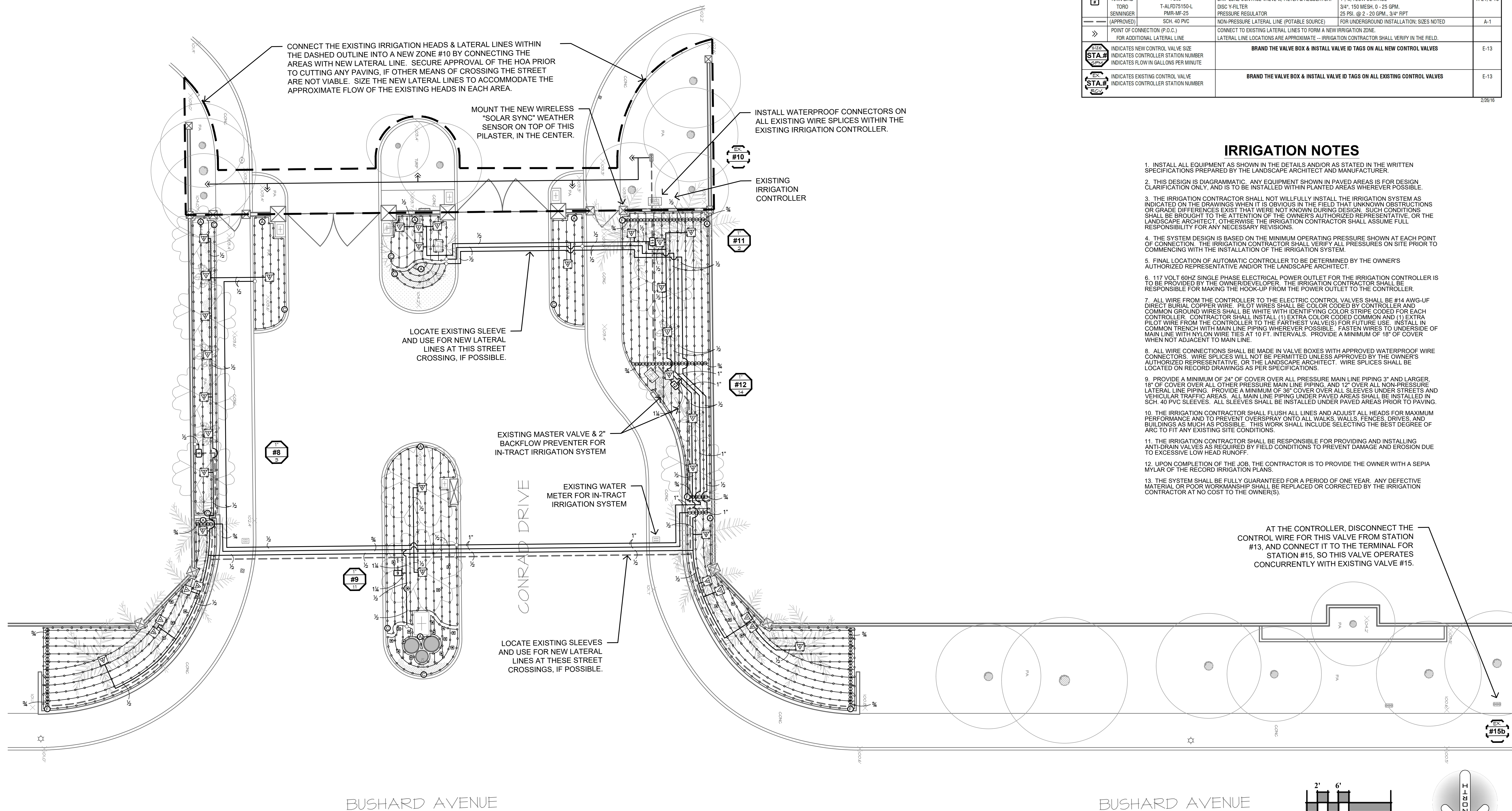
DRIPLINE		BUBBLER **		REMARKS	5-50 PSI				
SYMBOL	MFR	MODEL NUMBER	COLOR	DESCRIPTION	EMITTERS	GPH	GPM	PSI	DETAIL
—	TORO	RSP-418	BLACK	DL2000 PRESSURE COMP. DRIPLINE w/ ROOTGUARD (FACTORY PRE-ASSEMBLED)	1/8" O.C.	1.02 GPH	1.13 / 100'	15 - 80	H-12, H-13
○	TORO	T-FAM16		1" LOC-EZE PVC TO DRIPLINE MALE ADAPTER	1/2" MIPT x DRIPLINE				H-12
○	TORO	T-FF16		1" LOC-EZE PVC TO DRIPLINE ADAPTER TEE	1/2" FPT x DRIPLINE x DRIPLINE				H-13
○	TORO	T-YD-500-24		AIR VACUUM RELIEF VALVE (1/2" MIPT)	INSTALL IN #T-FF16 TEE IN A 6" ROUND VALVE BOX				H-14
○	TORO	T-FJ16		1" LOC-EZE MANUAL FLUSH CAP	DRIPLINE x 3/4" MALE HOSE w/ CAP. INSTALL OFF SIDE OUTLET OF #T-FF16 TEE USING SHORT PIECE OF DRIPLINE				H-17
○	(APPROVED)			SCH. 40 PVC BALL VALVE (THREADED) FOR MANUALLY FLUSHING DRIPLINES	LINE SIZE: FOR INSTALLATION ON PVC DRIPLINE MANIFOLD				D-4
(no symbol)	TORO	T-DL-MP9		POP-UP OPERATION INDICATOR	INSTALL 1 ON EACH DRIPLINE ZONE, AT THE CONTROL VALVE				
⊖	TORO	T-DPC04-DC		MGE PRESSURE-COMPENSATING DRIP EMITTER	1.05 GPH, (0.02 GPM) @ 8 - 60 PSI, w/ DUST CAP				H-60
—	TORO	T-FC0400		MICROLINE COUPLING (BARB x BARB)	1/4"				
—	TORO	T-EH0427		BLUE STRIPE MICRO-DISTRIBUTION HOSE	1/4" POLYETHYLENE				

DISTRIBUTION & CONTROL EQUIPMENT		DESCRIPTION		REMARKS	DETAIL
SYMBOL	MFR	MODEL NUMBER	DESCRIPTION	REMARKS	DETAIL
(no symbol)	HUNTER	WSS	WIRELESS SOLAR-SYNC SENSOR, WIRELESS RECEIVER, & MODULE	INSTALL RECEIVER & MODULE IN EXISTING HUNTER ICC 48 STA. CONTROLLER. INSTALL SENSOR WHERE INDICATED.	
□	RAIN BIRD	PE8	DRIPLINE CONTROL VALVE w/ FILTER & REGULATOR	1" w/ FLOW CONTROL	A-21, E-13
□	TORO	T-ALFD7150-L	DISC FILTER	3/4", 150 MESH, 0-25 GPM.	
□	SENNINGER	PMR-MF-25	PRESSURE REGULATOR	25 PSI @ 2 - 20 GPM, 3/4" FPT	
(no symbol)	(APPROVED)	SCH. 40 PVC	NON-PRESSURE LATERAL LINE (POTABLE SOURCE)	FOR UNDERGROUND INSTALLATION; SIZES NOTED	A-1
—	(no symbol)	(no symbol)	POINT OF CONNECTION (P.O.C.) FOR ADDITIONAL LATERAL LINE	CONNECT TO EXISTING LATERAL LINES TO FORM A NEW IRRIGATION ZONE. LATERAL LINE LOCATIONS APPROXIMATE - IRRIGATION CONTRACTOR SHALL VERIFY IN THE FIELD.	
⊖	(no symbol)	(no symbol)	INDICATES NEW CONTROL VALVE SIZE	BRAND THE VALVE BOX & INSTALL VALVE ID TAGS ON ALL NEW CONTROL VALVES	E-13
⊖	(no symbol)	(no symbol)	INDICATES EXISTING CONTROL VALVE	BRAND THE VALVE BOX & INSTALL VALVE ID TAGS ON ALL EXISTING CONTROL VALVES	E-13

### IRRIGATION NOTES

- INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND/OR AS STATED IN THE WRITTEN SPECIFICATIONS PREPARED BY THE LANDSCAPE ARCHITECT AND MANUFACTURER.
- THIS DESIGN IS DIAGRAMMATIC. ANY EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY, AND IS TO BE INSTALLED WITHIN PLANTED AREAS WHEREVER POSSIBLE.
- THE IRRIGATION CONTRACTOR SHALL NOT FULLY INSTALL THE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE, OR THE LANDSCAPE ARCHITECT, OTHERWISE THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.
- THE SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY ALL PRESSURES ON SITE PRIOR TO COMMENCING WITH THE INSTALLATION OF THE IRRIGATION SYSTEM.
- FINAL LOCATION OF AUTOMATIC CONTROLLER TO BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND/OR THE LANDSCAPE ARCHITECT.
- 117 VOLT 60HZ SINGLE PHASE ELECTRICAL POWER OUTLET FOR THE IRRIGATION CONTROLLER IS TO BE PROVIDED BY THE OWNER/DEVELOPER. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE HOOK-UP FROM THE POWER OUTLET TO THE CONTROLLER.
- ALL WIRE FROM THE CONTROLLER TO THE ELECTRIC CONTROL VALVES SHALL BE #14 AWG-UF DIRECT BURIAL COPPER WIRE. PILOT WIRES SHALL BE COLOR CODED BY CONTROLLER AND COMMON GROUND WIRES SHALL BE WHITE WITH IDENTIFYING COLOR STRIPE CODED FOR EACH CONTROLLER. CONTRACTOR SHALL INSTALL (1) EXTRA COLOR CODED COMMON AND (1) EXTRA PILOT WIRE FROM THE CONTROLLER TO THE FARTHEST VALVE(S) FOR FUTURE USE. INSTALL IN COMMON TRENCH WITH MAIN LINE PIPING WHEREVER POSSIBLE. FASTEN WIRES TO UNDERSIDE OF MAIN LINE WITH NYLON WIRE TIES AT 10 FT. INTERVALS. PROVIDE A MINIMUM OF 18" OF COVER WHEN NOT ADJACENT TO MAIN LINE.
- ALL WIRE CONNECTIONS SHALL BE MADE IN VALVE BOXES WITH APPROVED WATERPROOF WIRE CONNECTORS. WIRE SPLICES WILL NOT BE PERMITTED UNLESS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE, OR THE LANDSCAPE ARCHITECT. WIRE SPLICES SHALL BE LOCATED ON RECORD DRAWINGS AS PER SPECIFICATIONS.
- PROVIDE A MINIMUM OF 24" OF COVER OVER ALL PRESSURE MAIN LINE PIPING 3" AND LARGER, 18" OF COVER OVER ALL OTHER PRESSURE MAIN LINE PIPING, AND 12" OVER ALL NON-PRESSURE LATERAL LINE PIPING. PROVIDE A MINIMUM OF 36" COVER OVER ALL SLEEVES UNDER STREETS AND VEHICULAR TRAFFIC AREAS. ALL MAIN LINE PIPING UNDER PAVED AREAS SHALL BE INSTALLED IN SCH. 40 PVC SLEEVES. ALL SLEEVES SHALL BE INSTALLED UNDER PAVED AREAS PRIOR TO PAVING.
- THE IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND ADJUST ALL HEADS FOR MAXIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO ALL WALKS, WALLS, FENCES, DRIVES, AND BUILDINGS AS MUCH AS POSSIBLE. THIS WORK SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT ANY EXISTING SITE CONDITIONS.
- THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANTI-DRAIN VALVES AS REQUIRED BY FIELD CONDITIONS TO PREVENT DAMAGE AND EROSION DUE TO EXCESSIVE LOW HEAD RUNOFF.
- UPON COMPLETION OF THE JOB, THE CONTRACTOR IS TO PROVIDE THE OWNER WITH A SEPIA MYLAR OF THE RECORD IRRIGATION PLANS.
- THE SYSTEM SHALL BE FULLY GUARANTEED FOR A PERIOD OF ONE YEAR. ANY DEFECTIVE MATERIAL OR POOR WORKMANSHIP SHALL BE REPLACED OR CORRECTED BY THE IRRIGATION CONTRACTOR AT NO COST TO THE OWNER(S).

AT THE CONTROLLER, DISCONNECT THE CONTROL WIRE FOR THIS VALVE FROM STATION #13, AND CONNECT IT TO THE TERMINAL FOR STATION #15, SO THIS VALVE OPERATES CONCURRENTLY WITH EXISTING VALVE #15.

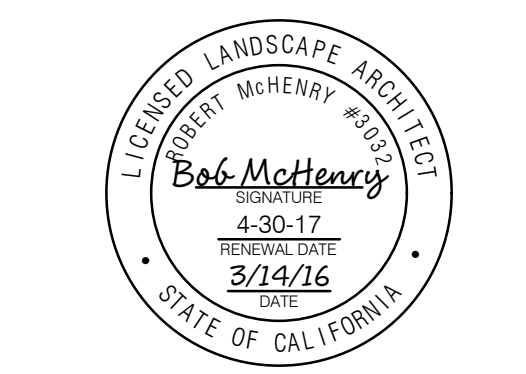


WATER RIGHT DESIGN  
8 WHATNEY SUITE 100  
IRVINE, CA 92618  
(949) 440-1030  
WWW.WATERRIGHTDESIGN.COM

Prepared for  
**MOLLY WOOD GARDEN DESIGN**  
1660 ORANGE AVE.  
COSTA MESA, CA 92627  
(949) 548-1611

**HUNTINGTON PLACE**  
BUSHARD ST. / ATLANTA AVE.  
HUNTINGTON BEACH, CA 92646  
TRACT 13656 (949) 838-3229

Revisions	



### IRRIGATION REND PLAN CONRAD DR. ENTRY

Project No. MWG-001  
Drawn by RWM  
Checked by  
Scale 1/8" = 1'-0"  
Date 3/14/16  
Sheet

NOT FOR CONSTRUCTION. PLANS MARKED "NOT FOR CONSTRUCTION" ARE NOT APPROVED FOR CONSTRUCTION BY THE BUILDER/DEVELOPER. LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER, AND/OR GOVERNING AGENCY AS MAY BE REQUIRED. THE INSTALLING CONTRACTOR SHALL NOT USE THESE PLANS FOR CONSTRUCTION WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE BUILDER/DEVELOPER.