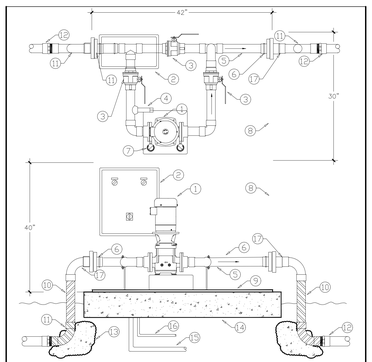


1. VERTICAL MULTISTAGE STAINLESS FITTED CENTRIFUGAL PUMP.
2. NEMA 4X SIMPLEX CONTROL PANEL FOR AUTOMATIC OPERATION.
3. STAINLESS 1/4 TURN BALL VALVE
4. FLOW SWITCH - THERMAL DISPERSION
5. 1 1/2 INCH TYPE 304 STAINLESS STEEL.
6. STAINLESS FLANGE.
7. PRESSURE GAUGE, LIQUID DAMPENED.
8. OMIT
9. STRUCTURAL ALUMINUM BASEPLATE.
10. INLET AND OUTLET PIPING
11. 90 DEG. ELBOW.
12. MALE ADAPTER.
13. CONCRETE THRUST BLOCKS OR JOINT RESTRAINT.
14. 4-6 INCH THICK CONCRETE PAD, ASTM C-94, ACI STD 318-83 MIX, 2500 PSI RATED. PAD DIMENSIONS SHALL BE 42" X 54".
15. MAIN POWER CONDUIT
16. IRRIGATION CONTROLLER SIGNAL CONDUIT - IF APPLICABLE
17. CONTRACTOR'S RESPONSIBILITY TO PROVIDE.

BARRETT ENGINEERED PUMPS

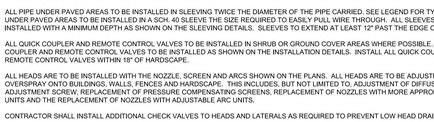
SIZE	DWG NO.	710 WILSHIRE - IRRIGATION CONTROLLER SIGNAL ACTIVATED	REV
SCALE		SHEET IBV--LF--2.dwg	

N IRRIGATION BOOSTER PUMP

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED, ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
9. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
10. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
11. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
12. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
13. CONTRACTOR SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.
14. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. SWEENEY AND ASSOCIATES RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.

VALVE CALLOUT LEGEND



IRR METHOD	IRR METHOD DESCRIPTION
1	SHRUBS IRRIGATED W/ DRIP TUBING
2	PALMS IRRIGATED W/ BUBBLERS
3	TREES IRRIGATED W/ BUBBLERS

HYDROZONE	HYDROZONE DESCRIPTION
BUBB	POP-UP BUBBLER HEADS
DRIP	IN-LINE DRIP TUBING
EMIT	DRIP EMITTERS ON RISERS

IRRIGATION MATERIAL LEGEND

SYMBOL	MANUFACT.	MODEL NO. / DESCRIPTION	GPM	PSI	RADIUS	PR (TRL)	DETAIL
▽	RAIN BIRD	RWS-B-C-1401 BUBBLER HEAD, EACH SYMBOL REPRESENTS TWO BUBBLERS PER TREE, PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE TYPICAL.	.25 (0.5)	30	N/A	0.45 IN./HR	B
	RAIN BIRD	XFS-06-12 SUBSURFACE DRIP TUBING (COPPER EXTERIOR COLOR) WITH 0.60 GPH PRESSURE COMPENSATING EMITTERS INTERNALLY INSTALLED IN THE DRIP TUBING AT 12" O.C. SPACING. DRIP TUBING SHALL BE EQUIPPED WITH COPPER CHIP TECHNOLOGY TO PREVENT ROOT INTRUSION INTO THE DRIP EMITTER. DRIP TUBING SHALL BE INSTALLED 4" BELOW FINISHED SOIL GRADE (NOT COUNTING MULCH) AND IN PARALLEL ROWS A MAXIMUM OF 16" ON CENTER. THE PERIMETER ROW OF DRIP TUBING SHALL BE INSTALLED A MAXIMUM OF 4" FROM THE EDGE OF ANY HARDSCAPE OR TURF EDGE. ALL SUBSEQUENT INTERIOR ROWS SHALL BE ADJUSTED TO PROVIDE AN EVEN SPACING ACROSS THE PLANTER WITHOUT EXCEEDING 16" MAXIMUM SPACING. INSTALL 9" PVC COATED GALVANIZED TUBING STAKES A MAXIMUM OF FIVE (5) FEET ON CENTER ALONG THE LENGTH OF THE TUBING. TUBING STAKES SHALL BE MODEL #GDTS140900 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684. THE HATCH PATTERN SYMBOLS ON THE PLANS REPRESENT THE APPROXIMATE DIRECTION AND SPACING OF THE DRIP TUBING ROWS, SEE ACTUAL SPACING REQUIREMENTS ABOVE AND IN DETAILS.					C,D
NO SYMBOL	RAIN BIRD	CONNECTION BETWEEN XFS DRIP TUBING AND PVC SUPPLY AND DISCHARGE HEADERS SHALL BE MADE USING XF DRIP LINE BARBED FITTINGS, SCH. 40 PVC THREADED FITTINGS, SCH. 80 NIPPLES AND FLEXIBLE NIPPLES. WHEN THE CONNECTION IS AT THE END RUN OF THE TUBING USE A 1/2" SCH. 40 PVC THREADED 90° ELBOW, A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE, A 1/2" X 6" MIPT X FIPT FLEXIBLE NIPPLE, AND A XFF-MA-050 17mm BARB X 1/2" MIPT ADAPTER FITTING. WHEN THE CONNECTION IS IN THE MIDDLE OF THE TUBING RUN USE A 1/2" SCH. 40 PVC THREADED TEE FITTING, A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE, A 1/2" X 6" MIPT X FIPT FLEXIBLE NIPPLE, AND TWO (2) XFF-MA-050 17mm BARB X 1/2" MIPT ADAPTERS. ALL END RUNS OF TUBING SHALL BE CONNECTED WITH A PVC DISCHARGE HEADER. FLEXIBLE NIPPLES SHALL BE MODEL #GFND50600 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684.					C,D
NO SYMBOL	RAIN BIRD	XF SERIES 17mm BARBED FITTINGS FOR ALL CONNECTIONS BETWEEN DRIP TUBING (TUBING-TO-TUBING ONLY). ALL BARBED DRIP TUBING FITTINGS SHALL BE INSTALLED USING A FITINS-TOOL FOR PROPER INSERTION OF THE FITTING INTO THE TUBING. NO HEATING OF TUBING SHALL BE ALLOWED.					C,D
— — — —	AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS SHALL BE PVC LATERAL LINE PIPE (AS SHOWN BELOW), 1" MINIMUM SIZE WITH SCH. 40 PVC FITTINGS.					C,D
	RAIN BIRD	WHERE VINES ARE PLANTED ON WALLS, FENCES OR COLUMNS WITHIN THE DRIP TUBING ZONES, ADDITIONAL DRIP EMITTERS SHALL BE REQUIRED FOR THESE VINE PLANTINGS. THE CONTRACTOR SHALL INSTALL TWO (2) XB-10PC 1 GPH DRIP EMITTERS PER VINE PLANTING. THESE ADDITIONAL EMITTERS SHALL BE PUNCHED DIRECTLY INTO THE DRIP TUBING. EMITTERS SHALL BE INSTALLED USING A XM-TOOL EMITTER INSTALLATION TOOL. EACH DRIP EMITTER SHALL BE INSTALLED WITH AN 18" LENGTH OF XQ-14" DISTRIBUTION TUBING, A TS-025 TUBING STAKE AND A DBC-025 DIFFUSER BUG CAP. LOCATE EMITTER OUTLETS DIRECTLY OVER THE ROOT BALL OF THE VINE PLANTING.					D,E
Ⓕ	GPH IRRIGATION/ RAIN BIRD	GDFN DRIP FLUSH / INDICATOR NOZZLE, ORANGE IN COLOR, INSTALLED ONTO A RAIN BIRD 1812 12" POP-UP SPRINKLER BODY. THE FLUSH NOZZLE SHALL BE ORIENTED TO SEND FLUSH WATER INTO THE PLANTER AREA AND CLOSED FOR NORMAL OPERATION OF THE DRIP SYSTEM.					D,F
Ⓐ	RAIN BIRD	ARV050 AIR/VACUUM RELIEF VALVE INSTALLED WITH A XFD-TFA-075 BARB X BARB X 3/4" FIPT TEE FITTING AND A AND A 3/4" X 1/2" SCH. 40 PVC THREADED REDUCER BUSHING. INSTALL AIR RELIEF ASSEMBLY AT THE HIGH POINT OF EACH PLANTER. SEE PLANS FOR APPROXIMATE LOCATION AND QUANTITY OF ARV'S PER DRIP ZONE. USING AN AIR RELIEF LATERAL CONSTRUCTED OF XFD "BLANK" XF TUBING, CONNECT AIR RELIEF VALVE TO ALL DRIP LINE LATERALS WITHIN THE ELEVATED AREA. MULTIPLE ARV'S MAY BE REQUIRED PER DRIP TUBING ZONE, SEE PLANS. INSTALL INSIDE A 7" ROUND VALVE BOX.					D,G
Ⓟ	P.O.C.	1" POTABLE (DOMESTIC) WATER METER WITH 1" SERVICE LINE. VERIFY METER SIZE, LOCATION AND WATER PRESSURE IN FIELD.					N/A
Ⓦ	WILKINS	1" R/P BACK FLOW PREVENTION DEVICE. REFER TO UTILITY PLAN C-150					N/A
Ⓑ	B.E.P.	BARRETT IRRIGATION BOOSTER PUMP. MOD. # ISCRS-1.5-2-1.5/VFD-FLECV, SEE DETAIL. INSTALL PER MANUFACTURERS RECOMMENDATION. CONTACT DARYL GREEN @ GPS 949.584.7311 CONTRACTOR SHALL VERIFY EXISTING POWER SUPPLY PRIOR TO ORDERING PUMP.					N
Ⓜ	EATON	65Y SERIES 1" Y-STRAINER WITH 200 MESH FILTER SCREEN, INSTALLED ON WALL					H
Ⓜ	HUNTER	IBV-101G-FS 1" NORMALLY CLOSED, BRASS MASTER CONTROL VALVE INSTALLED ON WALL					H
Ⓜ	RAIN MASTER	FSB-100, 1" FLOW SENSOR IN A BRASS TEE, WIRE TO CONTROLLER USING EV-CAB-SEN CABLE WITHIN A 1" CONDUIT, INSTALL PER MANUFACTURER'S RECOMMENDATIONS.					H
	NIBCO	1" NIBCO T-585-70 BRONZE BALL VALVE WITH FIPT ENDS					H,J
Ⓜ	WILKINS	500XLHLR SERIES 1" PRESSURE REGULATING VALVE INSTALLED ON WALL. SET PER PRESSURE CALCULATIONS					J
	HUNTER	IBV-101G-FS (1") SERIES BRASS REMOTE CONTROL VALVE, WITH NIBCO T-580 BALL VALVE (SIZE TO MATCH REMOTE CONTROL VALVE)					J
Ⓒ	RAIN MASTER	EGP16i-S EAGLE PLUS 16 STATION WALL MOUNTED CONTROLLER WITH INTERNET COMMUNICATIONS CARD ((CENTRAL)),COMPLETE WITH A WALL MOUNTED ENCLOSURE. CONTROLLER IS COMPLETE WITH TWO (2) YEARS OF iCENTRAL INTERNET BASED CENTRAL CONTROL. CONTRACTOR TO REGISTER iCENTRAL SOFTWARE AND FULLY PROGRAM THE CONTROLLER FOR AUTOMATIC PROGRAM ADJUSTMENT WITH RAINMASTER WEATHER DATA DOWNLOAD. CONTRACTOR TO PROVIDE PROOF OF REGISTRATION AND PROGRAMMING TO THE OWNER. IF NECESSARY, PROVIDE AN ANTENNA FOR PROPER COMMUNICATION.					I
Ⓡ	RAIN MASTER	RS-500 WIRED RAIN SENSOR, MOUNT TO EXTERIOR OF BUILDING, WIRE TO THE CONTROLLER.					N/A
Ⓔ	N/A	120 VOLT ELECTRICAL POWER, PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD					N/A
Ⓔ	N/A	230 VOLT (SINGLE) PHASE ELECTRICAL POWER FOR BOOSTER PUMP SYSTEM, PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD					N/A
NO SYMBOL	IRROMETER	MHS-2-1 SERIES WATERMARK SOIL MOISTURE MANAGER WITH 2 ELECTRONIC HYDROZONE MONITORS. INSTALL MHS ASSEMBLIES ON WALL DIRECTLY ADJACENT TO IRRIGATION CONTROLLER. WIRE TO IRRIGATION CONTROLLER PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL CONNECT ONE (1) ELECTRONIC MODULE EACH FOR ALL HYDROZONES (SEE BELOW FOR ADDITIONAL INFORMATION)					N/A
✱	IRROMETER	APPROXIMATE LOCATION OF WATERMARK MOISTURE SENSOR, PROVIDED AS PART OF ABOVE ASSEMBLY, INSTALL PER MANUFACTURER'S RECOMMENDATION					N/A
———	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING, 2.5 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED					K
— — — —	AS APPROVED	1 1/4" TYPE 'K' COPPER PIPING AS MAINLINES INSTALLED ON MECHANICAL ROOM WALL					K
— — — —	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING. 2.5 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED PLACE BELOW ALL PAVING, HARDSCAPE ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.					L
NO SYMBOL	LASCO	ALL FITTINGS USED WITH SOLVENT WELD MAINLINE PIPE SHALL BE SCH. 80 PVC FITTINGS, GREY IN COLOR, AND SIZED TO MATCH THE MAINLINE PIPE. ALL FITTINGS USED WITH SOLVENT WELD LATERAL LINE PIPE SHALL BE SCH. 40 PVC, WHITE IN COLOR, AND SIZED TO MATCH THE LATERAL LINE PIPE. ALL THREADED PVC NIPPLES SHALL BE SCH. 80 PVC PIPE WITH MOLDED THREADS.					N/A
NO SYMBOL	CHRISTY'S	ALL SOLVENT WELD CONNECTIONS FOR BOTH MAINLINE AND LATERAL LINE SHALL BE MADE USING THE TWO-STEP PROCESS OF PRIMER AND SOLVENT CEMENT. PRIMER SHALL BE LOW VOC "PURPLE PRIMER", MAINLINE SOLVENT CEMENT SHALL BE LOW VOC, "GRAY-HEAVY BODY" CEMENT. LATERAL LINE SOLVENT CEMENT SHALL BE LOW VOC, "RED HOT BLUE GLUE" CEMENT. USE DAUBERS SIZED AT LEAST ONE HALF THE SIZE OF THE LARGEST SIZE PIPE BEING JOINED.					N/A
- - - - - -	AS APPROVED	CPVC PIPING ROUTED BETWEEN PLANTERS, AND THROUGH BUILDING AND GARAGES. CPVC PIPING SHALL BE DESIGNED BY THE PLUMBING ENGINEER AND BE SHOWN ON THE PLUMBING PLANS. CPVC PIPING SHALL BE INSTALLED BY THE PLUMBER. CPVC PIPING SHOWN IS FOR REFERENCE ONLY. VERIFY LOCATION, SIZE AND STUB-OUTS OF CPVC PIPING IN THE FIELD PRIOR TO STARTING WORK.					N/A
- - -o- - -	AS APPROVED	CONNECTION POINT BETWEEN CPVC PIPING (PROVIDED BY PLUMBER) AND PVC IRRIGATION PIPING. CPVC PIPE STUB-OUT SHALL HAVE A LINE SIZED FEMALE MALE ADAPTER PROVIDED FOR CONNECTION TO THE IRRIGATION PIPING. USE A LINE SIZED X 6" SCH. 80 T.O.E. PVC NIPPLE AND A LINE SIZED PVC COUPLING FOR THE CONNECTION. VERIFY LOCATION, SIZE AND STUB-OUTS OF CPVC PIPING IN THE FIELD PRIOR TO STARTING WORK.					N/A
NO SYMBOL	AS APPROVED	IRRIGATION CONTROL WIRE #14UF AWG DIRECT BURIAL (U.L. APPROVED)					K,L,M
NO SYMBOL	3M	DBRY-6 DIRECT BURIAL WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE CONNECTIONS (U.L. APPROVED)					M
NO SYMBOL	K.B.I.	KSC-XXX-S SWING CHECK VALVE, LINE SIZE, 1 DOWNSTREAM OF EACH RCV WHEN RCV IS LOWER THAN THE SPRINKLERS INSTALL WITHIN SPRINKER/DRIP ZONES AS REQUIRED TO PREVENT LOW HEAD/EMITTER DRAINAGE.					N/A
NO SYMBOL	K.B.I.	KC-XXX-S SPRING CHECK VALVE, LINE SIZE, 1 DOWNSTREAM OF EACH RCV IMMEDIATELY ABOVE FIRST LATERAL LINE TEE WHEN RCV IS HIGHER THAN THE SPRINKLERS, INSTALL WITHIN SPRINKER/DRIP ZONES AS REQUIRED TO PREVENT LOW HEAD/EMITTER DRAINAGE.					N/A
NO SYMBOL	NDS	CV-0750-FF ADJUSTABLE CHECK VALVE, 1 DOWNSTREAM OF EACH ON-STRUCTURE PLANTER CONNECTION JUST DOWNSTREAM OF CPVC STUB-OUT FOR PLANTERS ON LEVELS 3, 4, 5, AND 6.					N/A
NO SYMBOL	CARSON	VALVE BOXES, SIZE PER EQUIPMENT LEGEND, WITH T-COVER LIDS AND CAPTIVE BOLT AND LOC-KIT. FOR ROUND AIR RELIEF VALVES USE MODEL 708, FOR FLUSH VALVES USE 10" ROUND MODEL 910. VALVE BOXES SHALL HAVE GREEN HDPE BODY AND GREEN LIDS IN TURF, GREEN LIDS IN SHRUB BEDS, AND TAN LIDS IN ROCK MULCH. FOR USE IN NON-VEHICULAR TRAFFIC SITUATIONS ONLY. DO NOT INSTALL IN CONCRETE OR ASPHALT.					N/A

HYDRO ZONE	SQ FEET	PERCENTAGE OF TOTALLS AREA	PLANT TYPE	PLANT FORM	HYDROZONE BASIS	HYDROZONE DESCRIPTION	EXPOSURE	IRRIGATION METHOD	IRRIGATION DEVICE MANUFACTURER/MODEL/NUMBER	Device Flow Rate	PRECIP. RATE	ZONE GPM	CONTROLLER STATION
HZ2	0	0.00%	MED	24",36"	PL	TREES WITH BUBBLERS	SUN PART OF DAY	B	RWS-B-C-1401	.25GPM	0.42	0.5	A1
HZ3	0	0.00%	MED	24",36"	PL	TREES WITH BUBBLERS	SUN PART OF DAY	B	RWS-B-C-1401	.25GPM	0.42	2	A2
HZ2	0	0.00%	MED	24",36"	PL	TREES WITH BUBBLERS	SUN PART OF DAY	B	RWS-B-C-1401	.25GPM	0.42	1	A3
HZ3	0	0.00%	MED	24",36"	PL	TREES WITH BUBBLERS	SUN PART OF DAY	B	RWS-B-C-1401	.25GPM	0.42	2	A4
HZ1	582	11.70%	MED/LOW	1G,5G,15G	PL	MIXED SHRUBS WITH DRIP TUBING	SUN PART OF DAY	D	RAIN BIRD XFS DRIP TUBING	.60GPH	0.72	5	A5
HZ1	1,312	26.38%	MED/LOW	1G,5G,15G	PL	MIXED SHRUBS WITH DRIP TUBING	SUN PART OF DAY	D	RAIN BIRD XFS DRIP TUBING	.60GPH	0.72	10.9	A6
HZ1	200	4.02%	MED/LOW	1G,5G,15G	PL	MIXED SHRUBS WITH DRIP TUBING	SUN PART OF DAY	D	RAIN BIRD XFS DRIP TUBING	.60GPH	0.72	1.7	A7
HZ3	0	0.00%	MED	24",36"	PL	TREES WITH BUBBLERS	SUN PART OF DAY	B	RWS-B-C-1401	.25GPM	0.42	3.5	A8
HZ3	0	0.00%	MED	24",36"	PL	TREES WITH BUBBLERS	SUN PART OF DAY	B	RWS-B-C-1401	.25GPM	0.42	15	A9
HZ1	1,312	26.38%	MED/LOW	1G,5G,15G	PL	MIXED SHRUBS WITH DRIP TUBING	SUN PART OF DAY	D	RAIN BIRD XFS DRIP TUBING	.60GPH	0.72	10.9	A10
HZ1	169	3.40%	MED/LOW	1G,5G,15G	PL	MIXED SHRUBS WITH DRIP TUBING	SUN PART OF DAY	D	RAIN BIRD XFS DRIP TUBING	.60GPH	0.72	1.4	A11
HZ3	0	0.00%	MED	24",36"	PL	TREES WITH BUBBLERS	SUN PART OF DAY	B	RWS-B-C-1401	.25GPM	0.42	4	A12
HZ1	1,399	28.13%	MED/LOW	1G,5G,15G	PL	MIXED SHRUBS WITH DRIP TUBING	SUN PART OF DAY	D	RAIN BIRD XFS DRIP TUBING	.60GPH	0.72	11.6	A13
TOTAL	4974	100.00%											

PLANT TYPE *	
T	TURF
H	HIGH
M	MEDIUM
LVL	LOW, VERY LOW
* BASED ON WATER USE CLASSIFICATION OF LANDSCAPE SPECIES (WUCOLS) PUBLISHED BY THE STATE OF CA. DEPT. OF WATER RESOURCES	

PLANT FORM	
F	FLAT
1G	1 GALLON
5G	5 GALLON
15G	15 GALLON
24	24" BOX
MED	MED BOX
48	48" BOX
60	60" BOX
SE	SEED
SO	SOD
P	PLUG

HYDROZONE BASIS	
PL	PLANT TYPE
IR	IRRIGATION METHOD
SU	SUN EXPOSURE
SO	SOIL TYPE
SL	SLOPE
O	OTHER

IRRIGATION METHOD	
D	DRIP
S	SMALL ROTOR
L	LARGE ROTOR
B	BUBBLER
M	MICROSPRAY
R	WATER RESERVOIR TANK
O	OTHER

LANDSCAPE IRRIGATION WATER ANALYSIS

PROJECT: Santa Monica Water Garden
2450 Colorado Blvd
Santa Monica, CA

ETo: = 44.2 **HA** = 4,974
SLA = 0
LA = 4,974

MAXIMUM APPLIED WATER ALLOWANCE:
TOTAL MAWA=(ETo)(0.62)(0.7 x LA) + (0.3 x SLA)] **95,415 Gal./Yr**

TOTAL ESTIMATED APPLIED WATER USED:
TOTAL EAWU=(ETo x 0.62) x [(HA x PF)/IE) + SLA)] **60,581 Gal./Yr**

ESTIMATED APPLIED WATER USED:
EAWU= (ETo)(0.62) x [(HA x PF)/IE]

HYDROZONE #1: (Shrubs with Drip Tubing)
44.2 x 0.62 x 4,974 x 0.4 = 0.9 **60,581 Gal./Yr**

MAXIMUM APPLIED WATER ALLOWANCE: **95,415 Gal./Yr**

TOTAL ESTIMATED APPLIED WATER USE: **60,581 Gal./Yr**

IRRIGATION CONTROLLER RUN TIMES

POC or Controller		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total / Avg.
A	ETo / Month (inches):	1.79	2.12	3.30	4.49	4.73	5.03	5.40	5.38	3.94	3.40	2.42	2.22	**44.22**
	ETo / Day (inches):	0.06	0.08	0.11	0.15	0.15	0.17	0.17	0.17	0.13	0.11	0.08	0.07	**0.12**
	Irrigation Days / Week:	6	6	6	6	6	6	6	6	6	6	6	6	

Plant / Irrig. Type	ARc	Pr Rate	IE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Shrubs	0.40	0.72	0.90	2.5	3.3	4.6	6.5	6.6	7.2	7.5	7.5	5.7	4.7	3.5	3.1	Min./Day/Zone
Drip Tubing	**Number of Zones:**		6	**15.0**	**19.6**	**27.6**	**38.8**	**39.6**	**43.5**	**45.2**	**45.0**	**34.0**	**28.4**	**20.9**	**18.6**	**Total Min./Day**
Palm	1.00	0.42	0.75	12.8	16.8	23.7	33.3	33.9	37.3	38.7	38.6	29.2	24.4	17.9	15.9	Min./Day/Zone
Bubblers	**Number of Zones:**		2	**25.7**	**33.7**	**47.3**	**66.5**	**67.8**	**74.5**	**77.4**	**77.1**	**58.4**	**48.7**	**35.9**	**31.8**	**Total Min./Day**
Tree	1.00	0.42	0.75	12.8	16.8	23.7	33.3	33.9	37.3	38.7	38.6	29.2	24.4	17.9	15.9	Min./Day/Zone
Bubblers	**Number of Zones:**		5	**64.2**	**84.1**	**118.3**	**166.3**	**169.5**	**186.3**	**193.5**	**192.8**	**145.9**	**121.9**	**89.6**	**79.6**	**Total Min./Day**
	Total Number of Zones:		**13**	105	137	193	272	277	304	316	315	238	199	146	130	Total Min./Day
	Total Controller Run Time in Hours:			**1.75**	**2.29**	**3.22**	**4.53**	**4.62**	**5.07**	**5.27**	**5.25**	**3.97**	**3.32**	**2.44**	**2.17**	**Total Hrs./Day**
				JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	

Note: These schedules are intended only for compliance with local municipal codes and the water efficient landscape ordinance. These calculations represent the **MAXIMUM REASONABLE** run times and are used to ensure that all irrigation may be completed during the specific watering window allowed. These schedules do not include rainfall, site soil types, specicic exposures (shade versus sun), actual irrigation days, or specific slope position. It is solely the responsibility of the irrigation contractor to program the controller as required to apply the correct amount of irrigation water for the landscape. All smart controllers shall be programmed using the specified ET or weather sensing equipment, satellite provided ET data, soil moisture sensors, and rain shut off devices as required. Contractor shall provide a controller schedule inside the controller cabinet prior to final turnover of the project to the owner.

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

sweeney + associates
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REVISIONS		
BY:	DATE:	DESCRIPTION:
	05/07/2015	Addendum #2
	05/20/2015	Addendum #3
	06/10/2015	Addendum #4
	07/02/2015	Addendum #5

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howard laks architects
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CONSULTANTS

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MIXED-USE HOTEL PROJECT
SANTA MONICA - CALIFORNIA 90401

IRRIGATION LEGEND

DRAWN	CB
CHECKED	DZ
APPROVED	–
SCALE	N.T.S.
SHEET	LI-210
DATE	June 25, 2013
PROJECT NUMBER	HLA 0000000--00000