

**WATER EFFICIENT LANDSCAPE WORKSHEET**

Reference Evapotranspiration (Eto)		Reference Site	Eto	Project ETAF			0.45	
Pasadena			52.3					
Valve #	Hydrozone # /Planting Descriptions <sup>a</sup>	Plant Factor (PF)	Irrigation Method <sup>b</sup>	Irrigation Efficiency (IE) <sup>c</sup>	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) <sup>d</sup>
<b>Regular Landscape Areas</b>								
A1	Moderate Water Use Plants	0.4	Drip	0.81	0.49	1457	719.51	23,330.71
A2	Moderate Water Use Plants	0.4	Bubbler	0.81	0.49	36	17.28	560.45
A3	Moderate Water Use Plants	0.4	Bubbler	0.81	0.49	150	74.07	2,401.93
A4	Moderate Water Use Plants	0.4	Drip	0.81	0.49	853	614.95	13658.9521
A5	Mod Water Use Plants	0.4	Bubbler	0.81	0.49	100	49.38	1,601.28
A6	Low Water Use Plants	0.2	Drip	0.81	0.25	50	634.55	400.32
A7	Low Water Use Plants	0.2	Drip	0.81	0.25	787	926.59	6,301.05
A8	Low Water Use Plants	0.2	Bubbler	0.81	0.25	1255	309.88	10,048.06
A9	Low Water Use Plants	0.2	Drip	0.81	0.25	75	1573.39	600.49
A10	Low Water Use Plants	0.2	Drip	0.81	0.25	1011	249.63	8,094.49
A11	Low Water Use Plants	0.2	Bubbler	0.81	0.25	75	418.95	600.48
A12	Low Water Use Plants	0.2	Drip	0.81	0.25	1269	418.95	10,160.15
A13	Moderate Water Use Plants	0.4	Bubbler	0.81	0.49	50	418.95	800.64
A14	Low Water Use Plants	0.2	Drip	0.81	0.25	1608	418.95	12,874.32
A15	Moderate Water Use Plants	0.4	Bubbler	0.81	0.49	100	418.95	0.90
A16	Low Water Use Plants	0.2	Bubbler	0.81	0.25	100	418.95	800.64
A17	Moderate Water Use Plants	0.4	Drip	0.81	0.49	3887	418.95	62,241.91
					Subtotals:	12862	8101.88	154,475.86
					<b>Total Landscape Area</b>			12,862.00
					<b>ETWU Total</b>			<b>154,475.86</b>
					<b>ETWU (in acre-feet)</b>			<b>0.47</b>
					<b>Maximum Allowed Water Allowance (MAWA)<sup>e</sup></b>			<b>187,696.28</b>
					<b>MAWA (in acre-feet)</b>			<b>0.58</b>

<sup>a</sup> **Hydrozone/Planting Description**  
E.g.  
1) Front Lawn  
2) Low water use plantings  
3) Medium water use planting  
**\*MAWA (Annual Gallons Allowed) = (Eto) (0.62)((ETAF x LA) + ((1-ETAF) x SLA))**

<sup>b</sup> **Irrigation Method**  
Overhead spray or drip

<sup>c</sup> **Irrigation Efficiency**  
75 for spray head  
81 for drip

<sup>d</sup> **ETWU (Annual Gallons Required) = ETWU Total**  
ETWU = 0.62 x ETAF x Area  
where 0.62 is conversion factor that converts acre-inches per acre per year to per square foot per year.

<sup>e</sup> **MAWA (Annual Gallons Allowed) = (Eto) (0.62)((ETAF x LA) + ((1-ETAF) x SLA))**  
where 0.62 is conversion factor that converts acre-inches per acre per year to gallon per square foot per year. LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is 0.55 for residential areas and 0.45 for non-residential areas

**ETAF Calculations**

Regular Landscape Areas	
Total ETAF x Area	8,101.88
Total Area	12862
<b>Average ETAF</b>	<b>0.63</b>

**All Landscape Areas**

Total ETAF x Area	8,101.88
Total Area	12862
<b>Site-wide ETAF</b>	<b>0.63</b>

**Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.**

**GENERAL IRRIGATION NOTES**

- The irrigation contractor shall be responsible for familiarizing themselves with all differences in grade, location of seawalls, location of retaining walls, etc. The contractor shall be responsible for coordinating all irrigation work with the general contractor, electrical contractor, and all other subcontractors for the location and the installation of irrigation related sleeves through walls, structures, under roadways, paving, etc.
- The irrigation design presented in these documents is intended to be diagrammatic. All irrigation equipment, piping and valve locations, etc. shown within paved areas are for design identification and shall only be installed in planting areas. Irrigation contractor shall install all remote control valves, quick couplers, and gate valves, in shrub planting areas or as approved by owner's representative & the landscape irrigation designer. Avoid any conflicts between the sprinkler system, planting and architectural features.
- The irrigation system design is based upon the minimum operating pressure and the maximum flow demand shown on the irrigation drawings at each point of connection. The irrigation contractor shall verify water pressure prior to construction. Any difference between the water pressure indicated on the drawings and the actual pressure reading at the irrigation point of connection shall be immediately reported in writing to the owner's authorized representative. If the pressure differences are not immediately reported prior to beginning construction, the irrigation contractor shall assume full responsibility for all revisions to the irrigation system deemed necessary by the owner's representative and all costs associated with those revisions.
- When it is apparent to the landscape contractor in the field that obstructions, grade differences, or differences in the calculated area dimensions exist that may have not been considered in the design of the system, the irrigation contractor shall not willfully install the irrigation system as indicated on the construction drawings. The owner's authorized representative shall be notified in writing of any such obstructions or differences prior to beginning any irrigation installation. If notification is not received prior to beginning installation, the irrigation contractor shall assume full responsibility for all revisions to the irrigation system as deemed necessary by owner's representative and all costs associated with those revisions.
- The irrigation contractor shall be responsible for installing all control wire sleeving of sufficient size, under all paved areas in addition to the control wire sleeving shown on the drawings.
- All piping and equipment shall be installed per the irrigation details. Teflon tape or Teflon pipe dope shall be applied to all male PVC pipe threads on all irrigation valve assemblies.
- All pop-up style irrigation heads located in shrub or groundcover areas shall be installed so the top of the irrigation head is 1" above finish grade.
- All pop-up style irrigation heads to be located in turf areas shall initially be installed so the top of the irrigation heads are flush with the adjacent sidewalk or curb. Within 10 days of being notified by the owner's representative, the irrigation contractor shall be responsible for adjusting all turf irrigation heads so the top of the irrigation head is 1/2" above finish grade.
- The irrigation contractor shall be responsible for flushing and adjusting all irrigation heads for optimum performance and to prevent over spray onto areas not intended for irrigation. This shall include selecting the proper fan pattern, adjusting the spray radius of the irrigation head with PRS screens and/or also throttling the flow control at each valve to obtain the optimum operating pressure for each system.
- The irrigation contractor shall be responsible for adjusting the pressure regulator on each electric control valve so the irrigation head farthest and highest in elevation from its associated control valve functions within the operating pressure shown on the irrigation legend (not to exceed 5 PSI above the indicated operating pressure).
- When installing Rain Bird 1800 series nozzles that require arc patterns other than the standard arc patterns (e.g., 360°, 180°, and 90°), the contractor shall use the appropriate head arc pattern (e.g., 120°, 240°, 270°). The contractor shall use Rain Bird variable arc nozzles (VAN) when installing irrigation heads using Rain Bird 1800 series nozzles only when required pattern is not one of the fixed arc patterns. Select the radius of VAN nozzles to match site conditions. For example: use 8" VAN where an 8 foot radius is required or a 12" VAN where a 12 foot radius is required.
- The irrigation contractor shall be responsible for making field adjustments to the irrigation system by installing a quarter circle or half circle sprinkler head on each side of any vertical element (props, street lights, trees, etc.) which prevents proper coverage by interfering with the spray pattern of the irrigation head. All adjustments shall be made at no additional costs to the owner.
- Drainage of irrigation water through spray head will not be allowed. Rain Bird SAM feature shall be used to prevent spray head drainage. During construction, the contractor shall charge spray bodies from Rain Bird 1800-PRS to 1800-SAM-PRS for spray heads showing signs of draining after the irrigation system has operated from an ON to OFF position. Installation of Rain Bird SAM feature shall be included in the Bid Price of the irrigation system.
- The irrigation contractor shall be responsible for making the final connection between the power source and the automatic controller. 120 volt electrical power source shall be provided by others at the automatic controller location.
- Adhesives, sealants and caulks shall meet local or regional air pollution control or south coast AQMD rule 1168 VOC and statewide VOC standards.
- Contractor shall verify exterior mounted rain sensor location and provide wiring between rain sensor and controller.

**OBSERVATION SCHEDULING**

The landscape contractor shall schedule an irrigation site observation by the irrigation designer, and/or the owner's representative, which shall not occur without at least 48 hours prior notification. The following items shall be reviewed:

- Pre-job/kick-off meeting with contractor, general contractor, and irrigation designer.
- Mainline, backflow preventer, master valves, flow sensors, booster pump installation and operation, installation review prior to backfilling trenches, irrigation mainline pressure test, etc.
- Finalizing the location for the controller assemblies - landscape contractor shall coordinate with the irrigation designer to verify connection of flow sensors and associated equipment to each controller assembly and for certification/warranty of equipment.
- Irrigation coverage test - a dynamic pressure test shall be performed by the landscape contractor and shall be observed by the owner (or the owner's representative) and the irrigation designer for each valve during the irrigation coverage test.

**IRRIGATION CONSTRUCTION NOTES**

- The landscape contractor shall purchase and install one 2" domestic water meter located per the civil engineer's sewer & water plan and as shown on the irrigation plan. Verify that the static pressure is .92 PSI prior to construction. Contractor shall furnish and install mainline to the flagged gate valves, backflow preventer, quick couplers, master valve, and flow sensor per the irrigation legend and details. (Refer to the irrigation plans for sizing). Refer to irrigation legend and irrigation construction notes for model numbers. Install the flow sensor per the manufacturer's recommendations and details. Contractor shall furnish all materials and labor to execute and install the irrigation system per the irrigation plans. Install the gate valves, backflow preventer, master valves, flow sensors, and quick couplers within the shrub planting areas only. The flow sensor wire shall be manufactured by "Rain Master", model #REV-CAB-SEN. No field splices allowed between flow sensor and controller. All flow sensor wires shall be installed within a gray 1-1/2" DIA. SCH. 40 PVC conduit. Each conduit shall have a separate flow sensor cable installed within it based on the corresponding controller assembly. Imperial Technical Services shall make the final connections from the flow sensor to the controller assemblies. Mainline shown in hardscape areas is diagrammatic. Mainlines are intended to be installed within the shrub areas only. Any mainline, lateral, or control wires that run under hardscape areas shall be installed in SCH. 40 PVC sleeves which shall be sized a minimum of twice the diameter of the actual pipe diameter. Refer to irrigation details for installation and depths of sleeving.

**CONTROLLER INFORMATION**

**CONTROLLER NOTE**

MANUFACTURER: HUNTER  
TYPE: ACC2 WALL MOUNT CONTROLLER  
ASSEMBLED BY: -  
CONTROLLER IDENTIFICATION: CONTROLLER PART NUMBER  
A AC2-1200-SS

INTERNET REQUIRED: NO  
FLOW SENSOR CABLE: YES  
Install flow sensor cable in a 1 1/2" U.L. PVC SCH. 40 gray conduit.

The 120 volt power supply connection to the irrigation controller assembly shall be the responsibility of the irrigation contractor. Refer to electrical plans for additional information. Final location of the irrigation controller assembly shall be approved by the owner's authorized representative prior to installation. All sprinkler heads shall be field adjusted to prevent over spray onto the irrigation controller assembly enclosure.

The system is designed for the operation of one valve at a time per controller. The system has been designed for one valve opening and one valve closing.

The controller shall be located as shown on the drawings or as directed by the owner's authorized representative.

**PRESSURE CALCULATIONS FOR DOMESTIC IRRIGATION**

Project Name and/or Tract#: SIERRA MADRE LIBRARY  
Date and Source of Information:  
Name of Contact Person and Phone Number:  
P.O.C. Water Meter #: 2"  
Water Meter Size and Type: 992 FT  
Hydraulic Grade Level: 992 FT  
Water Meter Elevation: 992 FT  
Highest Head Elevation on the System: 992 FT  
Basis for Calculations: HIGHEST GPM DEMAND

Remote Control Valve#: A-18  
Size of Remote Control Valve: 1"  
Demand at Remote Control Valve: 18 GPM

QUANTITY	SIZE	DESCRIPTION	FLOW (GPM)	LOSS (PSI)
1	2"	Water Meter	18	0
1	2"	Backflow RP	18	12
		Pressure Regulator		
		Gate Valve(s)		
		Gate Valve(s)		
1	2"	Master Valve	18	0.5
1	2"	Flow Sensor	18	0.5
352	2"	Mainline		0.73
		Mainline		
		Mainline		
17	1"	Remote Control Valve	18	0.5
		Lateral Line Losses(10%)		1.42
		Other Losses(10%)		1.42
		Elevation Loss or Gain		-0.73
		<b>Total</b>		<b>16.34</b>

PRESSURE (PSI)

Pressure Required to Operate Irrigation Head	30
Sub-Total Pressure Required for Irrigation System	46.34
Total Pressure Required for Irrigation System (Sub-Total Pressure + 25%)	57.92
Static Pressure Available	90
Residual Pressure	32.08
(Subtract Total Pressure from Static Pressure)	

**IRRIGATION LEGEND**

SYMBOL	RAJ	MANF	MODEL NO. WITH NOZZLE SIZE & TYPE
●	-	RainBird	RWS-RCG-1402 (.50 GPM)
○	-	RainBird	1402 on 1802 w/ PA-80
	-	Netafim (Shrub)	Irrigation Dripline - Technline CV Dripline TLCV6-18
	-	Netafim	Air Relief Valve
	-	Netafim	TLSOV - Manual Flush Valve
	-	Netafim	Drip Connector
	-	Netafim	Hydrometer - 2" normally closed LHM15M11A4PMLE
	-	Wilcox	975XL - 1-1/2" Backflow Preventer
	-	Nibco	T-111 Gate Valve - Line Size 2 1/2" and smaller
	-	RainBird	33-DLRC - 3/4" Quick Coupler Valve
	-	RainBird	EPB-CP-PRS-D
	-	RainBird	XCZ-PRB-100-COM 0.3-20 GPM XCZ-PRB-150-COM 15-40 GPM
	-	King Bros.	Line Size Check Valve
	-	HUNTER	HUNTER SOLAR SYNC
	-	HUNTER	ACC2 WALL MOUNT w/ (1) ACC 6-Station Expansion Module
	-	-	Spare Wire Pull Box
	-	-	Existing Mainline
	-	-	Mainline
	-	-	Lateral Line
	-	-	PVC Sleeves

**IRRIGATION VALVE CALLOUT:**

**LATERAL LINE SIZING CHART**

Station No.	34"	NOTE: THE LATERAL SIZE BETWEEN TWO IDENTICAL TEE MARKS SHALL BE NOTED THE SAME. MAXIMUM PIPE SIZE IS 3/4".
X-X	1"	
X-X	1 1/4"	
X-X	1 1/2"	
X-X	2"	
X-X	2 1/2"	
X-X	3"	

DESCRIPTION	PSI	FLOW RATE IN GPM	DETAIL		
	F	H	Q	A	
Bubbler in Sleeve with Grate	30	50	-	-	JL2.51
Flood Bubbler on 2" pop-up Spray Head	30	50	-	-	JL2.51
Space lateral rows at 18". Dripper spacing at 18". Install 3" min. - 6" max below grade per specifications. Application rate: 0.43 in/hr. Time to apply 1/4": 36 minutes.	30	0.6 GPM Flow Rate			NL2.51
Install per manufacturer's specifications.					NL2.51
Install per manufacturer's specifications.					NL2.51
See civil engineers plans for additional information.					LA2.51
Verify location in field prior to installation. Install within Coast Guardback Stainless Steel Enclosure per detail.					FL2.51
Assemble with stainless steel hardware. Install in a 10" round valve box.					GL2.51
Quick coupler valve with locking rubber cover. Install in round valve box per detail.					GL2.51
Remote control valve. Install in rectangle valve box per detail.					HL2.51
Remote control valve kit with pressure regulating basket filter. Install in rectangle valve box per detail.					DL2.51
Provide spring check valve when direction of water flow is uphill. Provide spring check valve when direction of flow is downhill.					-
Rain Sensor. Verify location in field.					KL2.51
Irrigation controller assembly with flow sensing and ET capability located per irrigation plans. See irrigation construction notes for more information.					KL2.51
Four (4) continuous spare control wires, blue in color and one (1) white common wire, 24" coil minimum.					-
Protect in place.					C, DL2.51
Irrigation Mainline - PVC SCH. 40 IPS white pipe. PVC SCH. 40 IPS for mainline sizes 1" to 2". PVC Class 315 IPS for mainline sizes 2" and larger. Sleeve mainline per notes and details.					C, DL2.51
Lateral Pipe - PVC SCH. 40 IPS white pipe. Minimum pipe size shall be 3/4" size laterals per plan. PVC SCH. 40 IPS for sizes 3/4" to 2 1/2".					C, DL2.51
PVC SCH. 40 IPS white pipe - sleeves shall be installed for any mainline, lateral, or wires crossing under hardscape per irrigation construction notes. Refer to sleeving sizing chart L2.01.					DL2.51

**PLANT MATERIAL ABBREVIATIONS:**

**DOMESTIC WATER POINT OF CONNECTION EQUIPMENT SIZES:**

**Plant Type:**  
TF Turf  
SB Shrub / Ground Cover  
TR Trees  
PT Pots

**P.O.C.#**  
WM WM  
BF BF  
MV MV  
FS FS  
XX XX  
XX XX  
XX XX

WATER METER  
WM = WATER METER  
BF = BACKFLOW  
MV = MASTER VALVE  
FS = FLOW SENSOR

**Hydrozone:**  
H High  
M Medium  
L Low



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Job No: 23-025.00  
Owner

**CONFORMED SET**

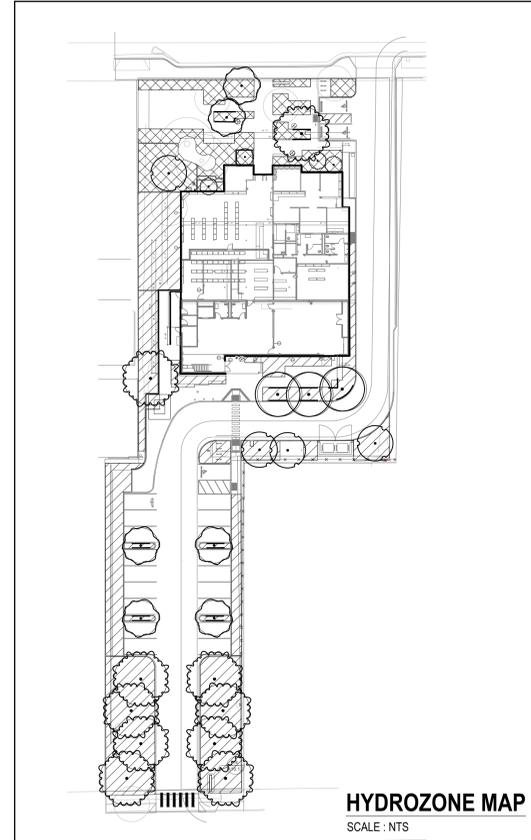
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	10/18/24	CONFORMED SET

Sheet Title  
**OVERALL IRRIGATION LEGEND**

Sheet No:  
**L2.00**

**HYDROZONE LEGEND**

	LOW WATER USE SHRUBS
	MODERATE WATER USE SHRUBS

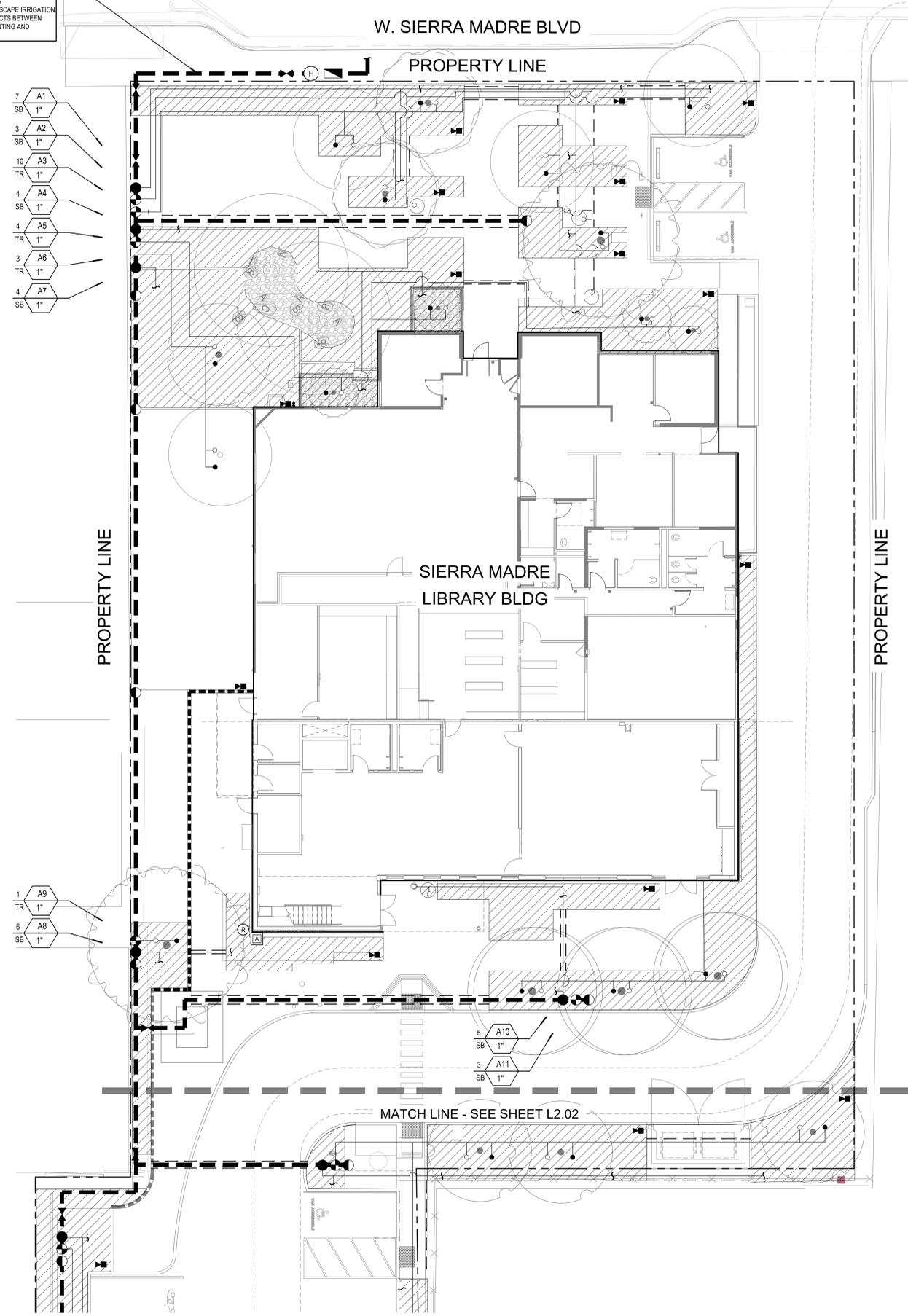


THE IRRIGATION DESIGN PRESENTED IN THESE DOCUMENTS IS INTENDED TO BE DIAGNOSTIC. ALL IRRIGATION EQUIPMENT, PIPING AND VALVE LOCATIONS, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION AND SHALL ONLY BE INSTALLED IN PLANTING AREAS. IRRIGATION CONTRACTOR SHALL INSTALL ALL REMOTE CONTROL VALVES, QUICK COUPLERS, AND GATE VALVES, IN SHRUB PLANTING AREAS OR AS APPROVED BY OWNERS REPRESENTATIVE & THE LANDSCAPE IRRIGATION DESIGNER. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.

- 7 A1 SB 1"
- 3 A2 SB 1"
- 10 A3 TR 1"
- 4 A4 SB 1"
- 4 A5 TR 1"
- 3 A6 TR 1"
- 4 A7 SB 1"

- 1 A9 TR 1"
- 6 A8 SB 1"

- 5 A10 SB 1"
- 3 A11 SB 1"



IRRIGATION LEGEND			
SYMBOL	RAD.	MANF.	MODEL NO. WITH NOZZLE SIZE & TYPE
●	-	RainBird	RWS-BCG-1402 (50 GPM)
○	-	RainBird	1402 on 1802 w/ PA-80
	-	Netafim (Shrub)	Irrigation Dripline - Techtline CV Dripline TL CV6-18
	-	Netafim	Air Relief Valve
	-	Netafim	TL SOV - Manual Flush Valve
	-	Netafim	Drip Connector
	-	Netafim	Hydrometer - 2" normally closed LHM15EM1A AFMEL
	-	Wilkins	975XL - 1-1/2" Backflow Preventer
	-	Nibco	T-111 Gate Valve - Line Size 2 1/2" and smaller.
	-	RainBird	33-DLRC - 3/4" Quick Coupler Valve
	-	RainBird	EFB-CP-PRS-D
	-	RainBird	XC2-PRB-100-COM 0.3-20 GPM XC2-PRB-150-COM 15-40 GPM
	-	King Bros.	Line Size Check Valve
	-	HUNTER	HUNTER SOLAR SYNC
	-	HUNTER	ACC2 WALL MOUNT w/ (1) ACC 6-Station Expansion Module
	-	-	Spare Wire Pull Box
	-	-	Existing Mainline
	-	-	Mainline
	-	-	Lateral Line
	-	-	PVC Sleeves

- IRRIGATION VALVE CALLOUT:**
- Station No. X-X  
GPM X"  
Plant Type X  
Valve Size X
- LATERAL LINE SIZING CHART**
- |      |    |        |        |    |        |    |
|------|----|--------|--------|----|--------|----|
| 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" |
|------|----|--------|--------|----|--------|----|
- NOTE: THE LATERAL SIZE BETWEEN TWO SHALL BE THE SAME. MINIMUM PIPE SIZE IS 3/4".
- EQUIPMENT LOCATION NOTE**
- All irrigation equipment, piping and valve locations, etc. shown within paved areas are for design clarification and shall only be installed in planting areas (typical).
  - Locations of automatic controller, basket strainer assembly, and flow sensor are approximate. Owner's representative shall determine final and precise positioning of above grade installation of irrigation equipment. Contractor to stake out all above grade irrigation equipment locations for review by owner's representative. Owner approval to be obtained prior to installation. Contractor shall provide minor adjustments of above grade irrigation equipment locations at no additional cost to the owner. If owner approval is not received prior to beginning installation, the irrigation contractor shall assume full responsibility for all revisions to the equipment locations as deemed necessary by owner's representative and all costs associated with those revisions.
  - Locations of remote control valves and gate valves are approximate. Owner's representative shall determine final and precise positioning of above grade installation of remote control valves and gate valves. Contractor to stake out all remote control valve and gate valve locations for review by owner's representative. Owner approval to be obtained prior to installation. See irrigation details for additional installation information. Contractor shall provide minor adjustments of remote control valve and gate valve locations at no additional cost to the owner. If owner approval is not received prior to beginning installation, the irrigation contractor shall assume full responsibility for all revisions to the remote control valve and gate valve locations as deemed necessary by owner's representative and all costs associated with those revisions.

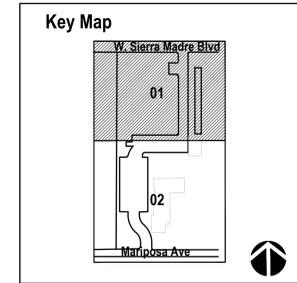
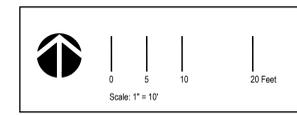
**CONTROL WIRE CONDUIT SIZING CHART**

SLEEVE SIZE	2" MIN.	2-1/2"	3"	4"
WIRES IN SLEEVE	0-16	17-24	25-40	41-48

**IRRIGATION SLEEVE SIZING CHART**

PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
SLEEVE SIZE	3"	3"	3"	4"	4"	4"	6"

- IRRIGATION SLEEVE AND CONDUIT NOTES**
- Sleeves are required for all irrigation pipe and control wire conduit under paving (typical). Refer to Irrigation Sleeve Sizes and Control Wire Conduit Charts for appropriate sleeve and conduit sizing.
  - For drawing clarity, not all irrigation sleeves are sized but shall be installed and included as part of the contractor's bid. Also, for drawing clarity, not all conduits and irrigation sleeves are shown. Contractor is responsible for installation for sleeves and conduits of appropriate size under all paved areas as well as all sleeves and conduits that are shown on the drawings.
  - The irrigation contractor shall be responsible for familiarizing themselves with all differences in grade, location of seatwalls, location of retaining walls, etc. The contractor shall be responsible for coordinating all irrigation work with the general contractor, electrical contractor, and all other subcontractors for the location and the installation of irrigation related sleeves through walls, structures, under roadways, paving, etc.



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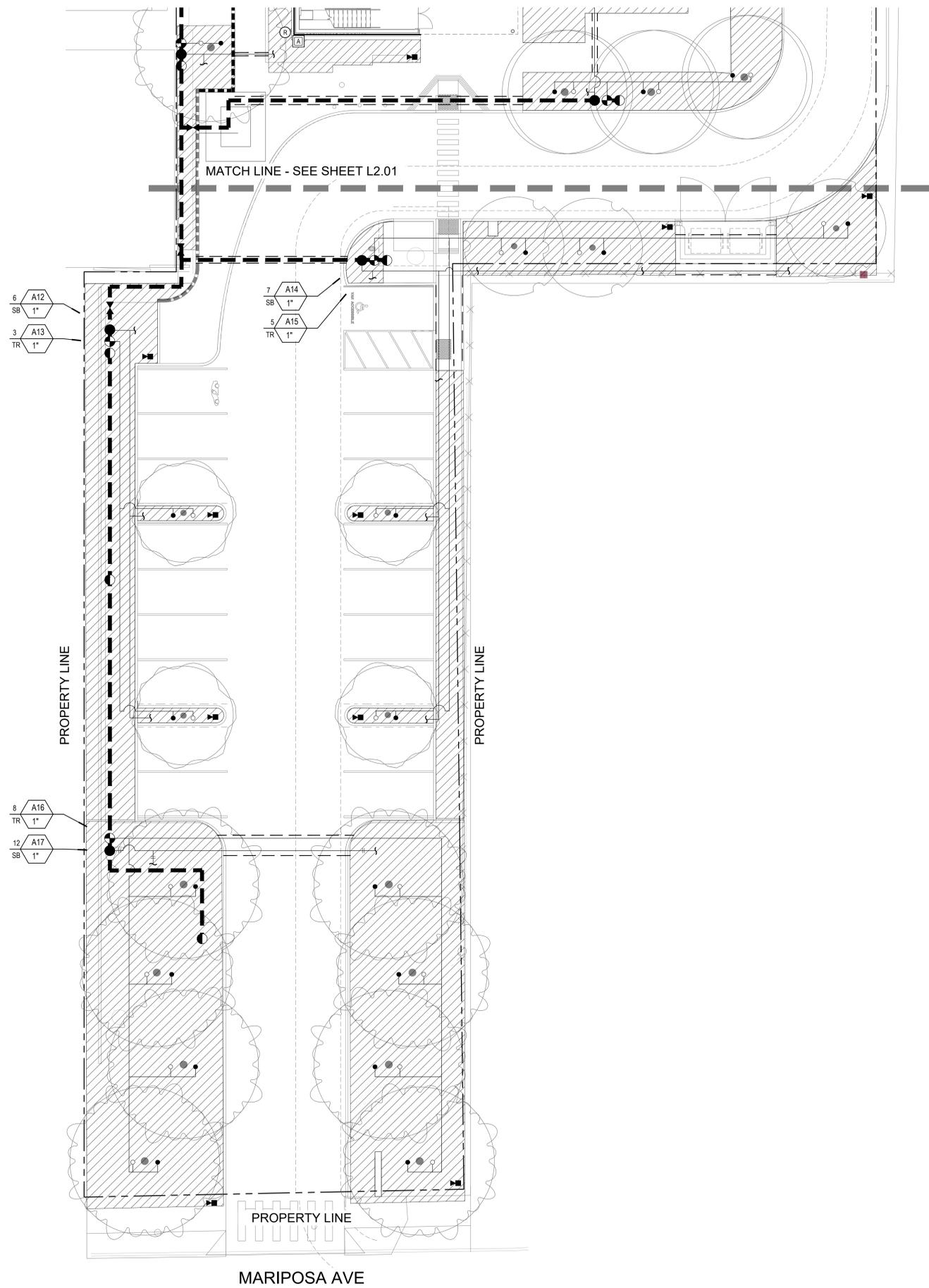
Job No: 23-025.00  
Owner

**CONFORMED SET**

REVISIONS		DESCRIPTION
REV	DATE	DESCRIPTION
	10/18/24	CONFORMED SET

Sheet Title  
**IRRIGATION PLAN**

Sheet No:  
**L2.01**



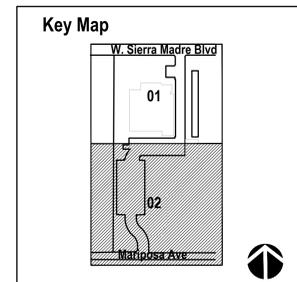
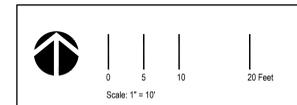
IRRIGATION LEGEND			
SYMBOL	RAD.	MANF.	MODEL NO. WITH NOZZLE SIZE & TYPE
●		RainBird	RWS-BCG-1402 (50 GPM)
○		RainBird	1402 on 1802 w/ PA-80
		Netafim (Shrub)	Irrigation Dripline - Techtline CV Dripline TLCV6-18
		Netafim	Air Relief Valve
		Netafim	TLSOV - Manual Flush Valve
		Netafim	Drip Connector
		Netafim	Hydrometer - 2" normally closed LHM15EM11A/FMEL
		Wilkins	975XL - 1-1/2" Backflow Preventer
		Nibco	T-111 Gate Valve - Line Size 2 1/2" and smaller.
		RainBird	33-DLRC - 3/4" Quick Coupler Valve
		RainBird	EFB-CP-PRS-D
		RainBird	XC2-PRB-100-COM 0.3-20 GPM XC2-PRB-150-COM 15-40 GPM
		King Bros.	Line Size Check Valve
		HUNTER	HUNTER SOLAR SYNC
		HUNTER	AGC2 WALL MOUNT w/ (1) AGC 6-Station Expansion Module
		-	Spare Wire Pull Box
		-	Existing Mainline
		-	Mainline
		-	Lateral Line
		-	PVC Sleeves
IRRIGATION VALVE CALLOUT:		LATERAL LINE SIZING CHART	
	Station No.		NOTE: THE LATERAL SIZE BETWEEN TWO GATE VALVES SHALL BE THE SAME. MINIMUM PIPE SIZE IS 3/4".
	GPM		
	Plant Type		
	Valve Size		

- EQUIPMENT LOCATION NOTE**
- All irrigation equipment, piping and valve locations, etc. shown within paved areas are for design clarification and shall only be installed in planting areas (typical).
  - Locations of automatic controller, basket strainer assembly, and flow sensor are approximate. Owner's representative shall determine final and precise positioning of above grade installation of irrigation equipment. Contractor to stake out all above grade irrigation equipment locations for review by owner's representative. Owner approval to be obtained prior to installation. Contractor shall provide minor adjustments of above grade irrigation equipment locations at no additional cost to the owner. If owner approval is not received prior to beginning installation, the irrigation contractor shall assume full responsibility for all revisions to the equipment locations as deemed necessary by owner's representative and all costs associated with those revisions.
  - Locations of remote control valves and gate valves are approximate. Owner's representative shall determine final and precise positioning of above grade installation of remote control valves and gate valves. Contractor to stake out all remote control valve and gate valve locations for review by owner's representative. Owner approval to be obtained prior to installation. See irrigation details for additional installation information. Contractor shall provide minor adjustments of remote control valve and gate valve locations at no additional cost to the owner. If owner approval is not received prior to beginning installation, the irrigation contractor shall assume full responsibility for all revisions to the remote control valve and gate valve locations as deemed necessary by owner's representative and all costs associated with those revisions.

CONTROL WIRE CONDUIT SIZING CHART				
SLEEVE SIZE	2" MIN.	2-1/2"	3"	4"
WIRES IN SLEEVE	0-16	17-24	25-40	41-48

IRRIGATION SLEEVE SIZING CHART							
PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
SLEEVE SIZE	3"	3"	3"	4"	4"	4"	6"

- IRRIGATION SLEEVE AND CONDUIT NOTES**
- Sleeves are required for all irrigation pipe and control wire conduit under paving (typical). Refer to Irrigation Sleeve Sizes and Control Wire Conduit Charts for appropriate sleeve and conduit sizing.
  - For drawing clarity, not all irrigation sleeves are sized but shall be installed and included as part of the contractor's bid. Also, for drawing clarity, not all conduits and irrigation sleeves are shown. Contractor is responsible for installation for sleeves and conduits of appropriate size under all paved areas as well as all sleeve pipes and conduits that are shown on the drawings.
  - The irrigation contractor shall be responsible for familiarizing themselves with all differences in grade, location of seatwalls, location of retaining walls, etc. The contractor shall be responsible for coordinating all irrigation work with the general contractor, electrical contractor, and all other subcontractors for the location and the installation of irrigation related sleeves through walls, structures, under roadways, paving, etc.



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PLEASE RECYCLE

Project  
**City of Sierra Madre Library**

**400 W Sierra Madre Boulevard**  
**Sierra Madre, CA 91024**

Job No: 23-025.00  
Owner

**CONFORMED SET**

REVISIONS		
REV	DATE	DESCRIPTION
10/18/24		CONFORMED SET

Sheet Title  
**IRRIGATION PLAN**

Sheet No:  
**L2.02**