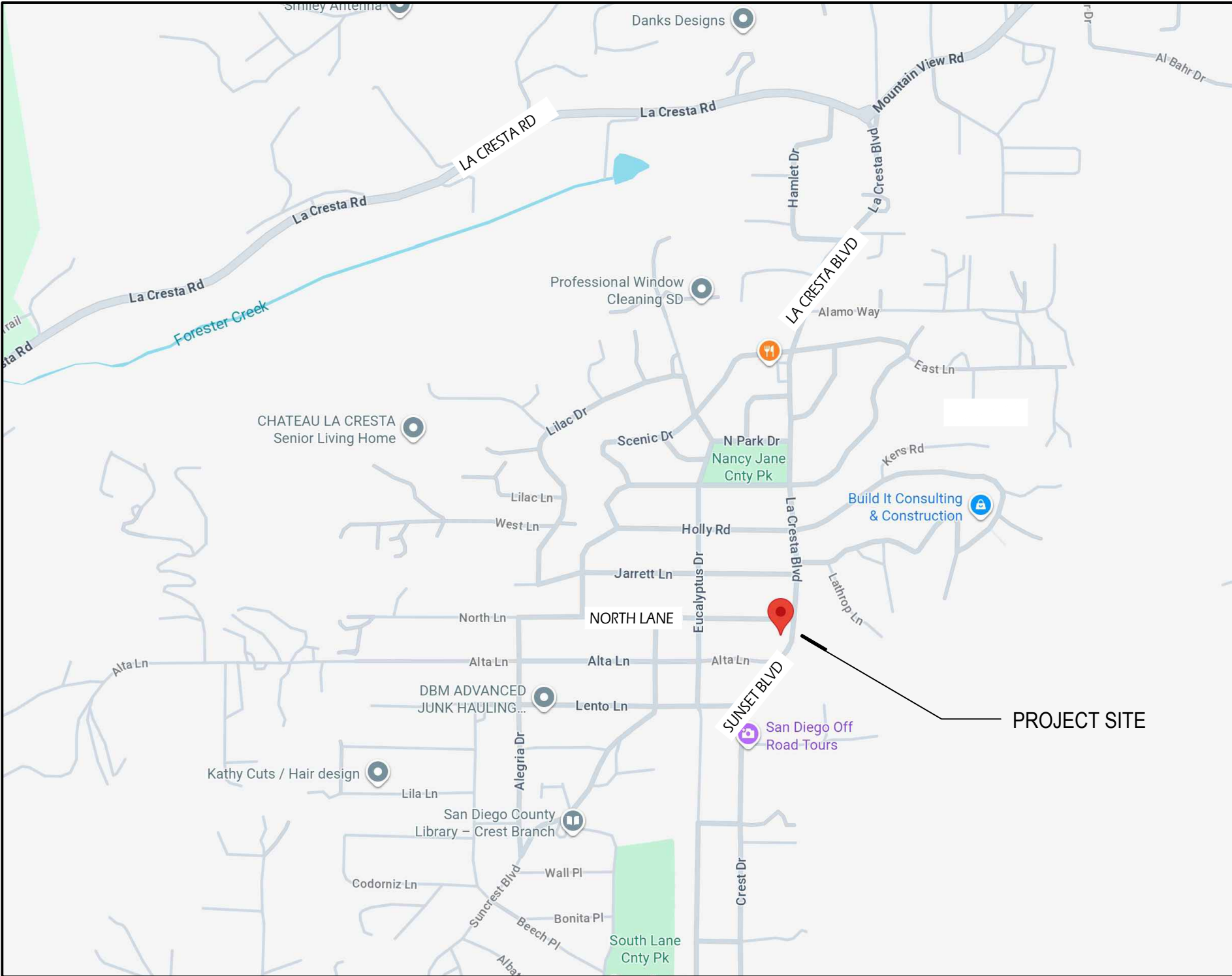


SAN MIGUEL FIRESTATION #18
EL CAJON, CA.
LANDSCAPE PLANS BY:
LINEAR LANDSCAPE ARCHITECTURE

1619 MYRTLE AVE
SAN DIEGO, CA 92103



VICINITY MAP

NTS

SHEET INDEX:

SHEET NUMBER	SHEET TITLE
T-1	TITLE SHEET (VICINITY MAP, LEGAL INFORMATION, GENERAL NOTES)
L-1	IRRIGATION PLAN, LEGEND & NOTES
L-2	HYDROZONE MAP & WATER CALCULATIONS
L-3 & L-4	IRRIGATION DETAILS
L-5 & L-6	IRRIGATION SPECIFICATIONS
L-7	PLANTING PLAN, PLANTING LEGEND
L-8	NOTES & DETAILS
L-9	PLANTING SPECIFICATIONS

LEGAL OWNER

SAN MIGUEL FIRE DISTRICT

PROJECT DATA

APN: 509-191-16-00
ADDRESS: 1811 SUNCREST BLVD
EL CAJON, CA 92021
COUNTY: SAN DIEGO

DESIGNER

LANDSCAPE ARCHITECT OF RECORD:

LINEAR LANDSCAPE ARCHITECTURE

JOE DODD, PLA #CA 6005

1619 MYRTLE AVE

SAN DIEGO, CA 92103

812-350-2997

NOTES

- ALL MEASUREMENTS ARE APPROXIMATE. CONTRACTOR TO VERIFY DIMENSIONS AND FINISH ELEVATIONS IN THE FIELD. MINOR ADJUSTMENTS IN LAYOUT OR FINISH ELEVATIONS MAY OCCUR DUE TO FIELD CONDITIONS OR AT THE DISCRETION OF THE OWNER.
- THE CONTRACTOR IS TO BEAR FULL RESPONSIBILITY OF OBTAINING ALL PERMITS AND PLAN APPROVALS THROUGH PERTINENT BUILDING DEPARTMENTS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO PROVIDE CLIENT WITH SAMPLES OF ALL STONE MATERIAL, DECOMPOSED GRANITE, AND GROUT. CLIENT AND DESIGNER SHALL APPROVE SAMPLES BEFORE ORDERING MATERIALS.
- THIS PLAN IS DIAGRAMMATIC ONLY. THE INTENT IS TO PORTRAY LANDSCAPE INFORMATION ONLY. THESE PLANS DO NOT PROVIDE SOLUTIONS TO ALL LANDSCAPE RELATED PROBLEMS.
- MINOR ADJUSTMENTS IN LAYOUT OR FINISH ELEVATIONS MAY OCCUR DUE TO FIELD CONDITIONS OR AT THE DISCRETION OF THE OWNER. THE CONTRACTOR IS TO BEAR FULL RESPONSIBILITY OF OBTAINING ALL PERMITS AND PLAN APPROVALS THROUGH PERTINENT BUILDING DEPARTMENTS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE SUFFICIENT DRAINAGE IN AREAS OF NEW CONSTRUCTION AND TIE INTO EXISTING DRAINAGE SYSTEM AND SHALL VERIFY THAT ALL EXISTING DRAINS AND DRAIN LINES ARE IN ADEQUATE CONDITION.

HOLD HARMLESS AND INDEMNIFICATION CLAUSE

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER, THE CITY/COUNTY OF LOCAL JURISDICTION, AND THE LANDSCAPE ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE CITY/COUNTY OF LOCAL JURISDICTION, OR THE LANDSCAPE ARCHITECT.

MAINTENANCE NOTE

ALL LANDSCAPE AND IRRIGATION AREAS WITHIN THE PROPERTY AND THE PUBLIC RIGHT OF WAY SHALL BE MAINTAINED IN A HEALTHY AND DISEASE-FREE CONDITION BY THE SAN MIGUEL FIRE DISTRICT.

THE REVIEW OF THE LANDSCAPE DOCUMENTATION PACKAGE DOES NOT INCLUDE BUILDING PLAN CHECK REVIEW OR APPROVALS. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR PULLING BUILDING PERMITS FOR ALL IMPROVEMENTS REQUIRING PERMITS UNDER SAN DIEGO COUNTY CODE, INCLUDING, BUT NOT LIMITED TO GRADING, PAVING, WALLS OVER 6' IN HEIGHT, RETAINING WALLS, ROCK WALLS, CONCRETE PAD, ETC. HARDSCAPE IMPROVEMENTS SHOWN WITHIN THE REVIEWED LANDSCAPE DOCUMENTATION PACKAGE ARE PROVIDED FOR REFERENCE ONLY AND SHALL REQUIRE SEPARATE PLAN CHECK AND PERMIT ISSUANCE FOR CONSTRUCTION

GENERAL NOTES

- CONTRACTOR SHALL NOTIFY THE DEVELOPMENT SERVICES DEPARTMENT AT LEAST 48 HOURS (TWO WORKING DAYS) PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY EXISTING STATIC WATER PRESSURE AT EACH POINT-OF-CONNECTION PRIOR TO INSTALLING IRRIGATION SYSTEM. VERIFICATION SHALL BE MADE WITH THE COUNTY OF SAN DIEGO PUBLIC SERVICES DEPARTMENT.
- CONTRACTOR SHALL OBTAIN PERMITS REQUIRED TO COMPLETE LANDSCAPE IMPROVEMENTS PRIOR TO CONSTRUCTION.
- IRRIGATION SYSTEMS FOR INDIVIDUAL LOTS SHALL HAVE POINTS-OF-CONNECTION BETWEEN WATER METERS AND WATER SERVICE RISERS INTO DWELLINGS, AND AHEAD OF WATER REGULATING DEVICES INSTALLED FOR DWELLINGS.
- LANDSCAPE WORK SHALL BE IN ACCORDANCE WITH THE 'COUNTY OF SAN DIEGO'S LANDSCAPE MANUAL' LATEST EDITION. CONTRACTOR IS RESPONSIBLE FOR BECOMING FAMILIAR WITH THIS DOCUMENT.
- CONTRACTOR SHALL NOTIFY "DIG ALERT" (1-800-227-2600) PRIOR TO START OF EXCAVATION IN PUBLIC RIGHTS-OF-WAY.
- OWNER SHALL BE RESPONSIBLE FOR ANY ASSOCIATED FEES THAT MAY INCUR DUE TO ADDITIONAL WORK RESULTING FROM MANDATED CITY REGULATORY GUIDELINES AND/OR REQUIRED PERMITS. ALL WORK DONE "AT RISK" SHALL BE THE RESPONSIBILITY AND LIABILITY OF THE HOMEOWNER.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND FEATURES TO REMAIN ON, AND ADJACENT TO, THE PROJECT SITE DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ALL DAMAGE RESULTING FROM HIS OPERATIONS OR NEGLIGENCE.
- 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 OF LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL ADHERE TO ALL LOCAL, MUNICIPAL, AND STATE LAWS, RULES, AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THE WORK.
- THE CONTRACTOR AGREES TO HOLD THE LANDSCAPE ARCHITECT/DESIGNER HARMLESS FROM ANY CLAIMS ARISING OUT OF HIS OPERATIONS OF ANY OF HIS SUB CONTRACTORS, MATERIAL SUPPLIERS, OR AGENTS.

L) BEFORE START OF ANY EXCAVATION OR TRENCHING IN LOCATION ON PROJECT SITE, CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES. CONTACT UNDERGROUND SERVICE ALERT FOR LOCATION OF RIGHT OF WAY UTILITIES AT 1-800-422-4133 AND PROPERTY OWNER FOR ON SITE UTILITIES A MINIMUM OF 48 WORKING HOURS PRIOR TO START OF ANY EXCAVATION. DO NOT COMMENCE ANY EXCAVATION UNTIL UTILITIES HAVE BEEN LOCATED.

M) CONTRACTOR AND/OR OWNER BUILDER IS TO BEAR FULL RESPONSIBILITY FOR OBTAINING ALL PERMITS AND PLAN APPROVALS THROUGH THE PERTINENT BUILDING DEPT. FOR THIS PROJECT.

N) CONTRACTOR SHALL ADHERE TO ALL PREVAILING BUILDING CODES, ZONING REQUIREMENTS AND SETBACKS RELATED TO THE PROJECT.

O) IN ADDITION, THE CONTRACTOR SHALL TAKE NOTE OF ANY UNUSUAL SITE CONDITIONS EFFECTING COST OR CONSTRUCTION FEASIBILITY AND WILL NOTIFY OWNER AND/OR LANDSCAPE DESIGNER PRIOR TO COMMENCEMENT OF WORK.

P) CONTRACTOR TO INSPECT SITE PRIOR TO START OF CONSTRUCTION AND VERIFY ALL SPECIAL CONDITIONS WHICH MIGHT INVOLVE ADDED COST, I.E. SITE PREP, DEMOLITION, HAULING COST, ETC. PROVIDE OWNER WITH WRITTEN ESTIMATE OF ALL ANTICIPATED COSTS.

Q) CONTRACTOR TO VERIFY ALL PROPERTY LINES, EASEMENTS, AND SETBACKS IN THE FIELD PRIOR TO INSTALLATION OF WORK.

Underground Service Alert

Call: TOLL FREE

1-800

227-2600

TWO WORKING DAYS BEFORE YOU DIG

"CAUTION": Remember that the USA Center notifies only those utilities belonging to the center. There could be other utilities present at the work site. The center will inform you of whom they will notify.

SDC PDS RCVD 11-19-25
LP25-043

PDS2025-LP-25-043



SAN MIGUEL FIRESTATION #18

1811 SUNCREST BLVD
EL CAJON, CA

TITLE SHEET

PREPARED FOR

SAN MIGUEL FIRE DIST.
2850 VIA ORANGE WAY
SPRING VALLEY, CA

PREPARED BY

LINEAR LANDSCAPE
ARCHITECTURE

JOE DODD, ASLA
1619 MYRTLE AVE
SAN DIEGO, CA 92103
P | 888.203.6628

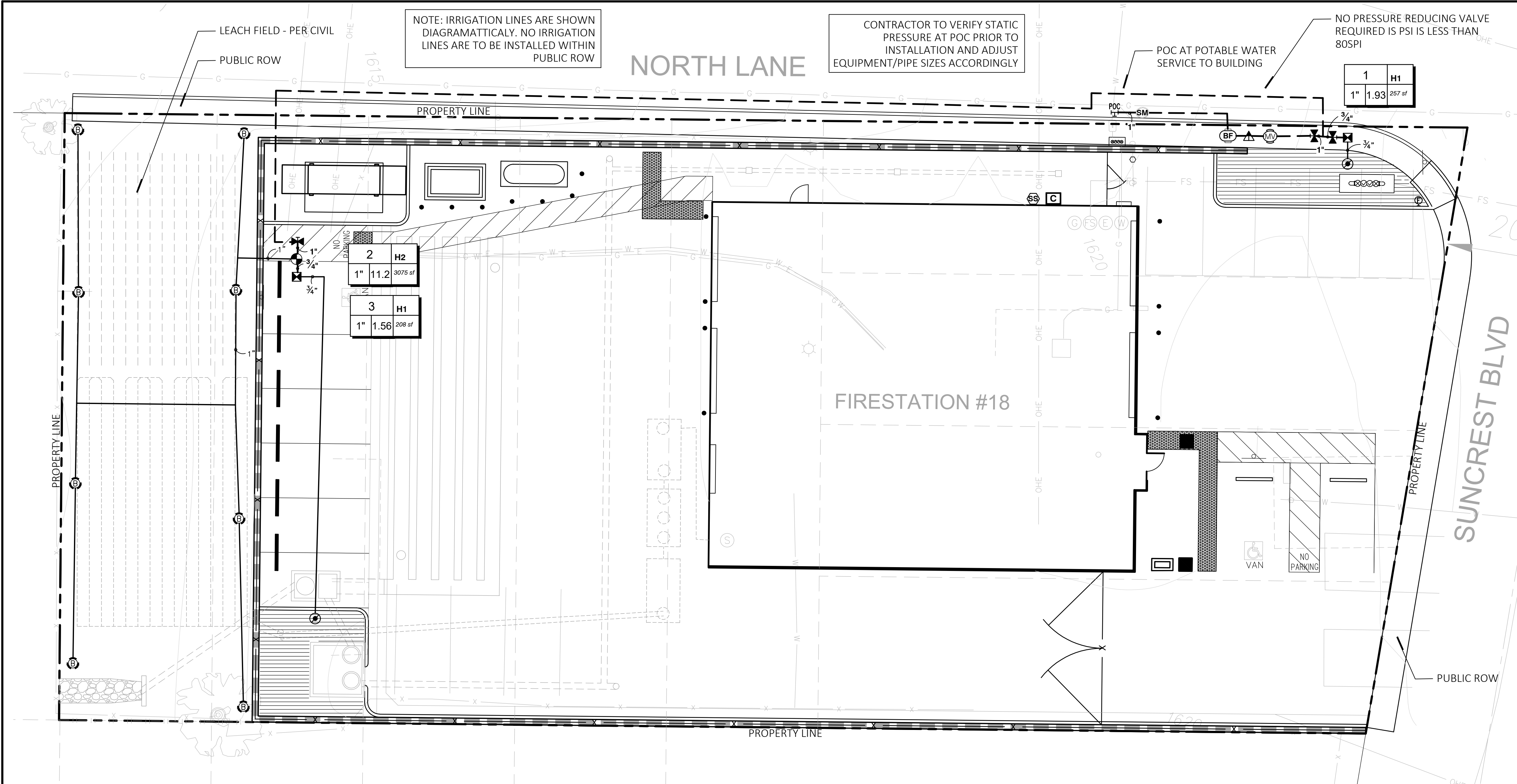
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03 11-15-25

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SHT

1 OF 10

FILE NAME: G:\SAN MIGUEL FIRE STATION\GHT-SAN MIGUEL FIRESTATION.DWG



GENERAL IRRIGATION NOTES

- 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. IN CASE OF CONFLICT BETWEEN THE SPECIFICATIONS, DRAWINGS, AND/OR CODE, THE MORE STRINGENT REQUIREMENT SHALL PREVAIL.
- 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.
- THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
- THE MAINLINE AND SLEEVING IS DIAGRAMMATIC. ALL PIPING IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED WITHIN LIMIT OF WORK BOUNDARIES AND IN SHRUB PLANTING AREAS WHERE POSSIBLE. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
- IRRIGATION EQUIPMENT AS SHOWN IS DIAGRAMMATIC. INSTALL ALL THE IRRIGATION REMOTE CONTROL VALVES, QUICK COUPLERS, MASTER VALVES, FLOW SENSORS, BACKFLOWS, AIR/VACUUM DEVICES, BALL VALVES, AND ANCILLARY EQUIPMENT, IN SHRUB PLANTING AREAS WHEN FEASIBLE OR AS APPROVED BY OWNER'S REPRESENTATIVE AND THE LANDSCAPE IRRIGATION DESIGNER.
- DO 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.
- 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.
- CONTRACTOR TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAINLINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS
- ALL PIPE UNDER PAVED AREAS, HARDSCAPE, OR AS DIRECTED BY OWNERS REPRESENTATIVE TO BE INSTALLED IN SLEEVING, TWICE THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED. ALL 2" AND 3" SLEEVING FOR NON-VHICULAR PAVING SHALL BE PVC1220 SCH. 40, TYPE 1, GRADE 2 MATERIAL CONFORMING TO ASTM STANDARD D-1785-4. ALL 4" AND LARGER SLEEVING BELOW VEHICULAR PAVING SHALL BE PVC1220 SCH.80 SDR21, TYPE 1, GRADE 2 MATERIAL CONFORMING TO ASTM STANDARD D-2241. SLEEVES UNDER BROW DITCHES SHALL BE ENCASED IN CONCRETE A MINIMUM OF 6" THICK ON ALL SIDES OF PIPE. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF PAVING.
- ALL QUICK COUPLER VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER VALVES WITHIN 18" OF HARDSCAPE.

- IRRIGATION HEADS ADJACENT TO THE STREET SHALL BE HELD A MINIMUM OF 2 FEET FROM EDGE OF PAVEMENT. 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. WHEN VERTICAL OBSTRUCTIONS (PROPS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS PREVENTING PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- THE IRRIGATION CONTRACTOR SHALL ADJUST THE PRESSURE REGULATOR ON EACH ELECTRIC CONTROL VALVE SO THAT THE SPRINKLER HEAD FARTHEST AND HIGHEST IN ELEVATION FROM ITS RESPECTIVE CONTROL VALVE OPERATES WITHIN THE OPERATING PRESSURE SHOWN ON THE IRRIGATION LEGEND. NOT TO EXCEED FIVE (5) PSI ABOVE THE GIVEN OPERATING PRESSURE FROM THE SPECIFIED PRESSURE LOCATED ON THE IRRIGATION LEGEND.
- THE IRRIGATION SYSTEM DESIGN IS BASED ON 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 VIA DIRECT FIELD MEASUREMENT PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS, AND COSTS ASSOCIATED WITH SAID REVISIONS.
- SHOULD FIELD CONDITIONS REQUIRE PIPE INSTALLATION OTHER THAN THAT SHOWN ON PLANS, THE CONTRACTOR SHALL LIMIT EXCESS FLOW AND SIZE ALL PIPE NOT TO EXCEED A VELOCITY OF 5 FEET PER SECOND (FPS) IN PVC PIPE AND CAST IRON PIPE. FLOW THROUGH ANCILLARY EQUIPMENT, STEEL AND COPPER PIPE SHALL NOT EXCEED A VELOCITY OF 7 ½ FPS. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- CHECK VALVES SHALL BE USED TO PREVENT ALL LOW HEAD DRAINAGE

I AM FAMILIAR WITH THE REQUIREMENTS FOR THE LANDSCAPE AND IRRIGATION PLANS CONTAINED IN THE COUNTY OF SAN DIEGO WATER EFFICIENT LANDSCAPE REGULATIONS. I HAVE PREPARED THIS PLAN IN COMPLIANCE WITH THOSE REGULATION AND THE LANDSCAPE DESIGN MANUAL. I CERTIFY THAT THE PLAN IMPLEMENTS THOSE REGULATIONS TO PROVIDE EFFICIENT USE OF WATER. UNDER PENALTY OF PERJURY, I AFFIRM THAT THE FOREGOING IS TRUE AND CORRECT

JOE DODD, PLA CA# 6005

DATE

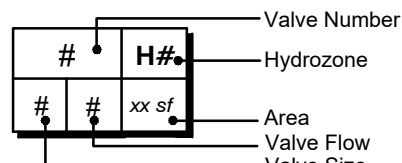
CONTRACTOR TO VERIFY STATIC PRESSURE AT POC PRIOR TO INSTALLATION AND ADJUST EQUIPMENT/PIPE SIZES ACCORDINGLY

POC AT POTABLE WATER SERVICE TO BUILDING

NO PRESSURE REDUCING VALVE REQUIRED IS PSI IS LESS THAN 80SP1

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DTL
	Hunter MP3000 PROS-12-PRS40-CV Shrub Rotator, 12" (30.48 cm) pop-up with check valve, pressure regulated to 40 psi (2.76 bar), MP rotary nozzle. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc on PRS40 body. 40 PSI	K/L-3
	Hunter ICZ-101 1" Drip Control Zone Kit. 1" ICV Globe Valve with 1" HY100 filter system. Pressure Regulation: 25psi. Flow Range: 2 GPM to 20 GPM. 150 mesh stainless steel screen. Install in Jumbo Valve Box	P/L-4
	Pipe Transition Point above grade. Pipe transition point from PVC lateral to drip tubing with riser to above grade installation.	R/L-4
	Hunter PLD-BV Manual flush/shut off valve, barbed insert. Typically installed in 10in. box, with adequate blank tubing to extend valve out of valve box. Use with HDL or other 3/4in. dripline.	S/L-4
	Area to Receive Dripline	
	HDL-06-12-CV: Hunter Dripline w/ 0.6 GPH emitters at 12" O.C. Check valve, dark brown tubing with gray striping. Dripline laterals spaced at 16" apart, with emitters offset for triangular pattern. Install with Hunter PLD barbed or PLD-LOC fittings. For use on Slopes with Moderate/Clay Soils	Q,U, V,W L-4
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	
	Hunter PGV-101G 1" 1" Plastic Electric Remote Control Valve, for Residential/Light Commercial Use. Female NPT Inlet/Outlet. Globe Configuration, With Flow Control.	D/L-3
	Hunter PGV-101G 1" 1" Plastic Electric Remote Control Valve, for Residential/Light Commercial Use. Female NPT Inlet/Outlet. Globe Configuration,	
	Hunter ICV-G-FS 1" 1", 1-1/2", 2", and 3" Plastic Electric Master Valve, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use. With Filter Sentry, Size per Mainline	C/L-3
	Pressure Reducing Valve WILKINS - 500-HLR series pressure reducing valve with 10-125 PSI spring range, size and pressure setting as noted. Pressure required downstream is 54.6 PSI	B/L-3
	Zurn 975XL 3/4" Reduced Pressure Backflow device	A/L-3
	Hunter PHC-600 (2) Wi-Fi enabled, full-functioning controller with touchscreen, 6-Station fixed controller, 120 VAC, Outdoor model.	G/L-3
	Hunter WSS Wireless Solar, rain freeze sensor with outdoor interface, connects to Hunter PCC, Pro-C, and I-Core Controllers, install as noted. Includes 10 year lithium battery and rubber module cover, and gutter mount bracket.	F/L-3
	Hunter HC-075-FLOW 3/4in. Flow meter for use with Hydrowise enabled controller to monitor flow and provide system alerts. Also functions as stand alone flow totalizer/sub meter on any residential or commercial irrigation system.	A/L-2
	Point of Connection 1"	
	Irrigation Lateral Line: PVC Schedule 40 3/4"	I,J/L-3
	Irrigation Lateral Line: PVC Schedule 40 1"	I,J/L-3
	Irrigation Mainline: PVC Schedule 40	I,J/L-3
	Irrigation Mainline: PVC Schedule 40 3/4"	I,J/L-3
	Irrigation Mainline: PVC Schedule 40 1"	I,J/L-3



NOTE: MAINLINE LOCATION IS DIAGRAMMATIC. CONTRACTOR SHALL DETERMINE AN APPROPRIATE LOCATION IN THE FIELD, FREE OF OBSTRUCTIONS AND PROPOSED ELEMENTS WHILE MINIMIZING SLEEVING.

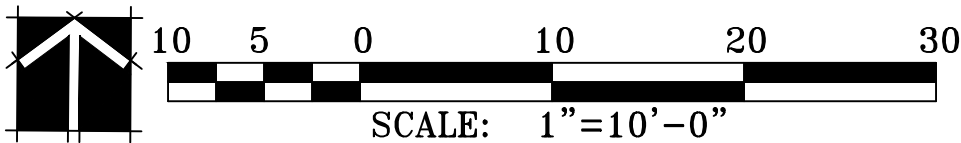
EXISTING MAINLINE LOCATION SHALL BE VERIFIED BEFORE CONSTRUCTION AND MAY BE UTILIZED UNDER THE FOLLOWING CONDITIONS:

- ALL PIPING SHALL BE IN GOOD WORKING CONDITION,
- CURRENT PIPE SIZE IS APPROPRIATE FOR THE DEMAND OF THE PROPOSED IRRIGATION SYSTEM AS DESIGNED PER PLAN
- MAINLINE PIPE DEPTH, MATERIAL, AND LOCATION MEET ALL LOCAL CODES

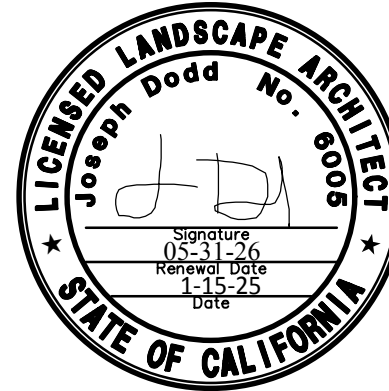
NOTE: MAINLINE EQUIPMENT AND APPURTENANCE LOCATION IS DIAGRAMMATIC. CONTRACTOR SHALL DETERMINE AN APPROPRIATE LOCATION IN THE FIELD, FREE OF OBSTRUCTIONS AND NEAR EXISTING METER LOCATION.

VALVE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE AN APPROPRIATE AND DISCREET LOCATION IN THE FIELD FOR EASY ACCESS.

A CERTIFICATE OF COMPLETION WILL BE REQUIRED FOR ALL IRRIGATION AND LANDSCAPING. ANY DEVIATIONS FROM LANDSCAPING WILL REQUIRE APPROVAL PRIOR TO THE PLANNING FINAL INSPECTION



PDS2025-LP-25-043



SAN MIGUEL FIRESTATION #18

1811 SUNCREST BLVD
EL CAJON, CA

IRRIGATION PLAN

PREPARED FOR

SAN MIGUEL FIRE DIST.
2850 VIA ORANGE WAY
SPRING VALLEY, CA

PREPARED BY

LINEAR LANDSCAPE
ARCHITECTURE

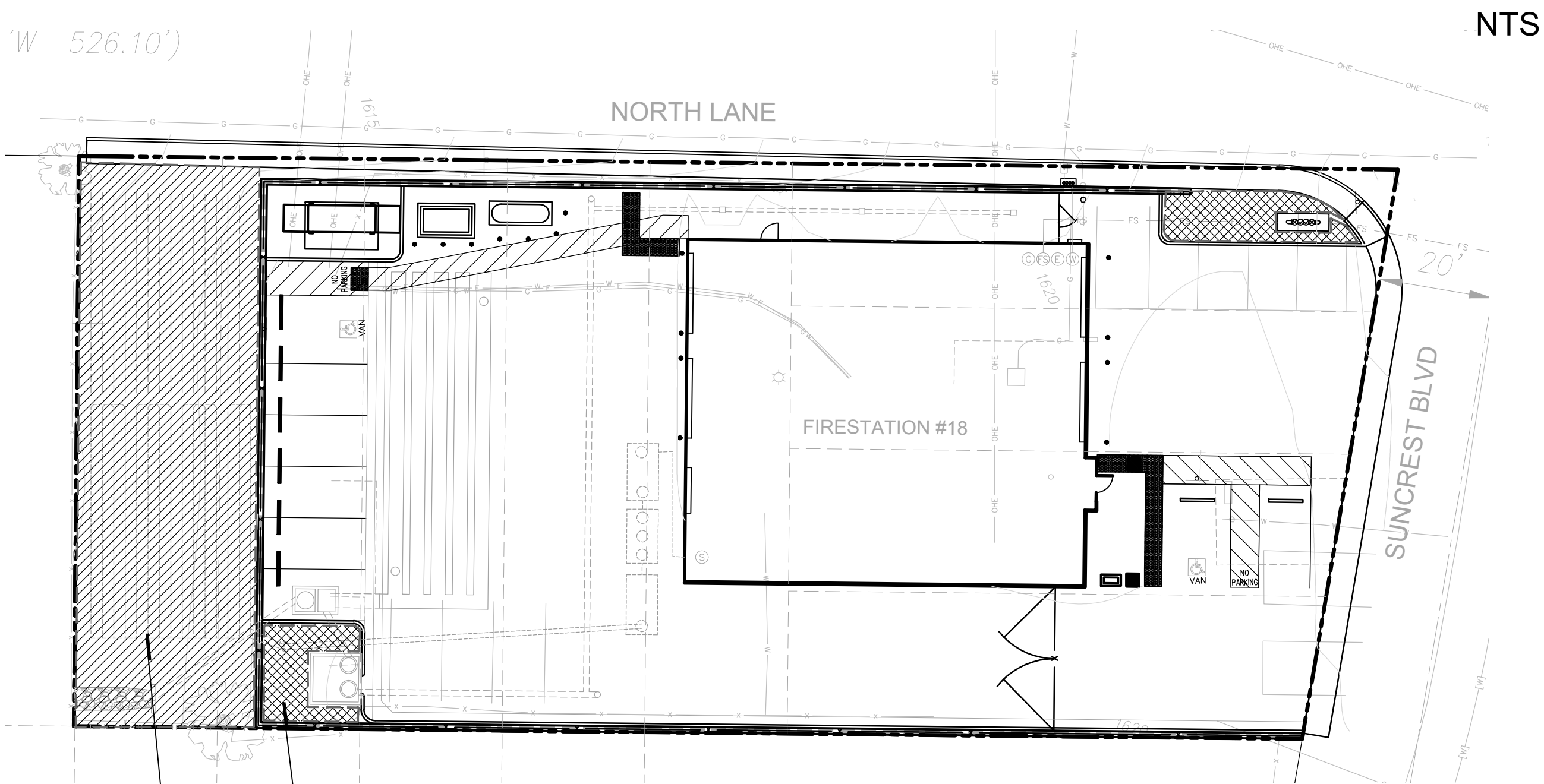
JOE DODD, ASLA
1619 MYRTLE AVE
SAN DIEGO, CA 92103
P | 888.203.6628

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02 6-4-25
03 11-15-25

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HYDROZONE MAP



HYDROZONE VALVE #	1	
WATER METHOD	DRIP	
AREA	465 SF	
PLANT FACTOR	LOW	

HYDROZONE VALVE #	2	
WATER METHOD	ROTARY	
AREA	3075 SF	
PLANT FACTOR	LOW	

WATER CALCULATIONS



County of San Diego, Planning & Development Services
WATER EFFICIENT LANDSCAPE WORKSHEET
COUNTY LANDSCAPE ARCHITECT

The project applicant must fill out this worksheet for each individual parcel/lot as it is a required element of the Landscape Documentation Package. Complete all sections of the worksheet.

PROJECT INFORMATION

Project Applicant:

Name of Project Applicant	Phone No.
JOE DODD	812-350-2997
Title	Email
LANDSCAPE ARCHITECT	JOE@LINEARLANDARCH.COM
Company	Fax No.
LINEAR LANDSCAPE ARCHITECTURE	
Address (must include City, State and Zip Code)	
1619 MYRTLE AVE SAN DIEGO, CA 92103	

Project:

Project's Name	County Landscape Plan No.
SAN MIGUEL FIRESTATION #18	PDS2025-LP-25-043
Assessor's Parcel No.	Address (must include City, State and Zip Code)
	1811 SUNCREST BLVD EL CAJON, CA

Use the information and formulas below to fill out the worksheet and calculations on page 2.

Hydrozone Category ^(a)	PF- Plant Factor	Irrigation Method ^(b)	IE- Irrigation Efficiency ^(c)
Very Low Water Use	0.0 - 0.1	Filler Pipe for Pools/Spas	1.00
Low Water Use*	0.2 - 0.3	Drip/Subsurface	0.90
Moderate Water Use	0.4 - 0.6	Bubblers	0.85
High Water Use	0.7 - 1.0	Rotors	0.75
		Rotators	0.70
		Overhead Spray	0.60

*Artificial turf and temporarily irrigated areas are considered Low Water Use.

ETWU^(d) (Annual Gallons Required) =
 $Eto \times 0.62 \times ETAF \times Area$

MAWA^(e) (Annual Gallons Allowed) =
 $(Eto)/(0.62)/((ETAF \times LA) + ((1- ETAF) \times SLA))$

Eto - see Appendix A in Water Efficient Landscape Design Manual.
0.62 is the conversion factor to gallons per sq. ft.
ETAF is Plant Factor/Irrigation Efficiency.
Area is the Landscaped Area for each hydrozone.

LA is the total landscape of all hydrozone areas in sq. ft.
SLA is the total special landscape area in square feet.
ETAF is 0.42 for residential and non-residential areas.

5510 OVERLAND AVE, SUITE 110, SAN DIEGO, CA 92123 • (858) 565-5981 • (888) 267-8770
www.sandiegocounty.gov/pds/
PDS-405 (Rev. 06/24/20) PAGE 1 of 2



County of San Diego, PDS, Zoning Division
WATER EFFICIENT LANDSCAPE WORKSHEET
Continued

REFERENCE EVAPOTRANSPIRATION (Eto) 47

Hydrozone # / Planting Description ^(a)	Plant Factor (PF)	Irrigation Method ^(b)	Irrigation Efficiency (IE) ^(c)	ETAF (PF/IE)	Landscape Area In Square Feet	ETAF x Area	Estimated Total Water Use (ETWU) ^(d)
Regular Landscape Areas							
# 1 - LOW WATER	.3	DRIP	.9	.33	465	153.45	4471.5
# 2 LOW WATER	.3	ROTATORS	.7	.42	3075	1291.5	37634.31
#							
#							
#							
#							
#							
#							
#							
#							
#							
#							
#							
Totals					(A) 3540	(B) 1444.95	42105.81
Special Landscape Areas							
#				1.0			
#				1.0			
#				1.0			
#				1.0			
Totals					(C)	(D)	
Estimated Total Water Use (ETWU) Total							42105.81
Maximum Water Allowance (MAWA) ^(e)							43325.35
Irrigation Efficiency (IE) Average**							80

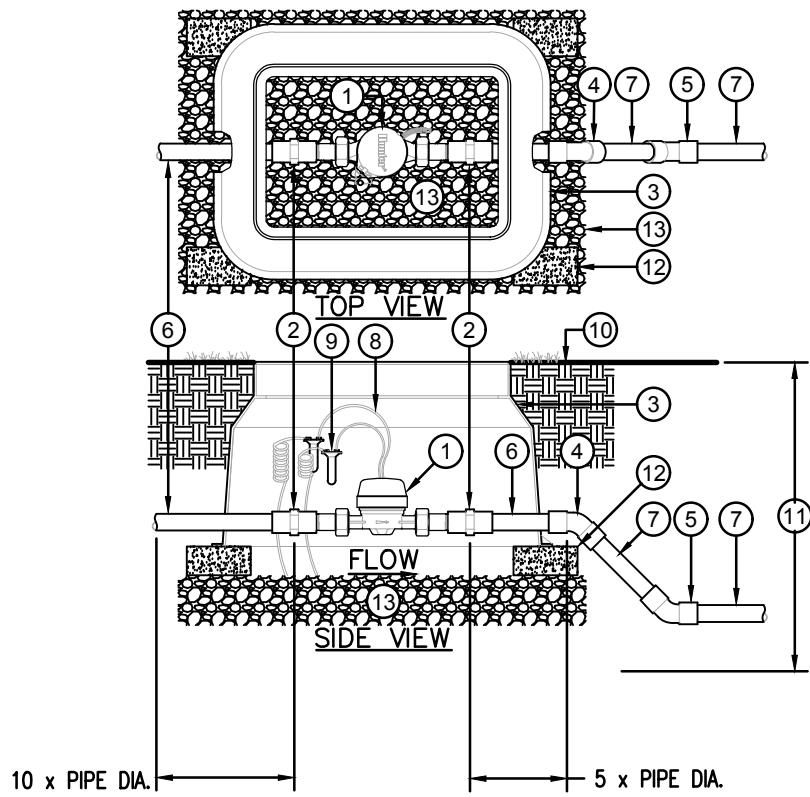
**Average Irrigation Efficiency for overall irrigation system shall meet or exceed 0.75 (total of all efficiency ratings divided by number of hydrozones).

ETAF CALCULATIONS

Average ETAF for Regular Landscape Areas must be 0.42 or below for residential and non-residential areas.
Provide Totals based on information calculated in Worksheet above.

Regular Landscape Areas	Totals	All Landscape Areas	Totals
Total ETAF x Area	(B) = 1444.95	Total ETAF x Area	(B+D) = 1444.95
Total Area	(A) = 3540	Total Area	(A+C) = 3540
Average ETAF	(B) ÷ (A) = .408	Site wide ETAF	(B+D) ÷ (A+C) = .408

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www.sandiegocounty.gov/pds/
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HC-XX FLOW METER
SCALE: N.T.S.

LEGEND:

- HUNTER HC FLOW METER WITH UNION CONNECTIONS, SIZE PER LEGEND
 - SCH 80 PVC FEMALE ADAPTER (S X T)
 - RECTANGULAR VALVE BOX PER SPECIFICATIONS
 - SCH 80 PVC 45 DEGREE ELBOW (S X S) TO LOWER MAIN LINE TO PROPER DEPTH (SIZE FOR LARGER MAIN LINE AS NEEDED)
 - SCH 80 PVC 45 DEGREE ELBOW (S X S) TO LOWER MAIN LINE TO PROPER DEPTH
 - MAIN LINE AT INLET & OUTLET - SEE CHART BELOW FOR SIZE
 - MAIN LINE TO SYSTEM (SEE LEGEND AND PLANS FOR TYPE AND SIZE)
 - TWO WIRES TO FLOW SENSOR TERMINALS AT CONTROLLER. MIN. 14 AWG-UP (2.08 mm²) WIRE WITH DIFFERENT COLOR FROM CONTROL/Common WIRE.
 - WEATHERPROOF WIRE CONNECTOR
 - FINISH GRADE
 - SPECIFIED SOIL COVER (SEE LEGEND)
 - COMMON BRICK
 - GRAVEL BASE, 6" (15 cm) DEEP
- NOTE: INLET PIPE ENTERING METER: LENGTH MUST BE A MIN. OF 10 X PIPE DIA.
OUTLET PIPE LEAVING METER: LENGTH MUST BE MIN. OF 5 X PIPE DIA.
INLET AND OUTLET PIPE MUST BE STRAIGHT PIPE WITH NO FITTINGS OR TURNS UNTIL AFTER THESE SPECIFIED LENGTHS. PIPE AND FITTINGS MAY BE SCH 80 PVC SOLVENT WELD, THREADED SCH 80 PVC OR BRASS, AS REQUIRED FOR PROJECT.

FLOW METER SPECIFICATIONS

FLOW METER MODEL	HC-075	HC-100	HC-150	HC-200
INLET / OUTLET CONNECTION SIZE	3/4" NPT BODY, MALE THREAD WITH 1" NPT MALE ADAPTER	1" NPT BODY, MALE THREAD WITH 1.5" NPT MALE ADAPTER	1.5" NPT BODY, MALE THREAD WITH 2" NPT MALE ADAPTER	2" NPT BODY, MALE THREAD WITH 3" NPT MALE ADAPTER
MAINLINE AT INLET/OUTLET	1"	1.5"	2"	3"
INTERNAL DIA.	3/4"	1"	1 1/2"	2"
MIN. FLOW	0.22 GPM	0.30 GPM	0.88 GPM	2.00 GPM
MAX. RECOMMENDED FLOW	15 GPM	30 GPM	66 GPM	105 GPM
MAX. FLOW RATE	21 GPM	34 GPM	88 GPM	132 GPM
DIAL READING	1 PULSE PER 0.1 US. GALLON	1 PULSE PER 1 US. GALLON	1 PULSE PER 1 US. GALLON	1 PULSE PER 1 US. GALLON
WORKING PRESSURE	1-230 PSI	1-230 PSI	2-230 PSI	3-230 PSI



PREPARED FOR

SAN MIGUEL FIRE DIST.
2850 VIA ORANGE WAY
SPRING VALLEY, CA

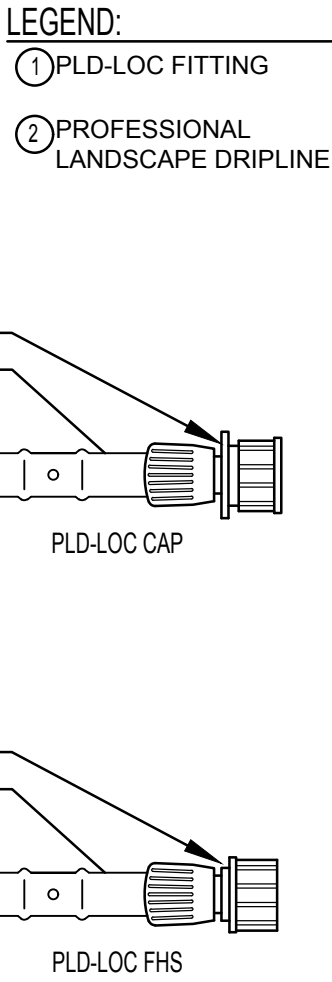
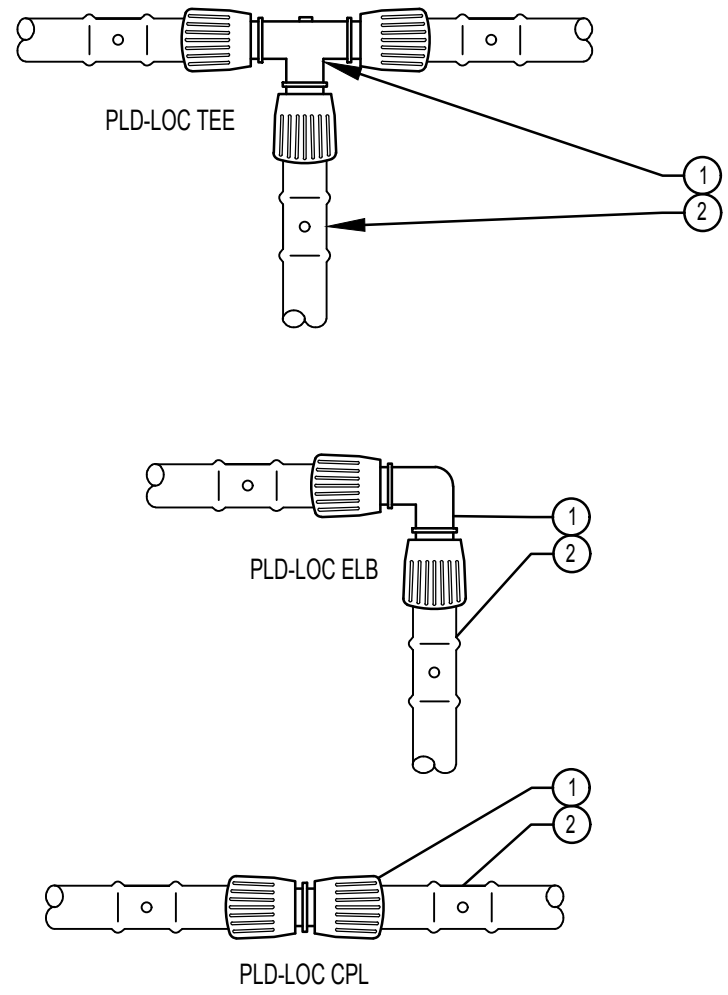
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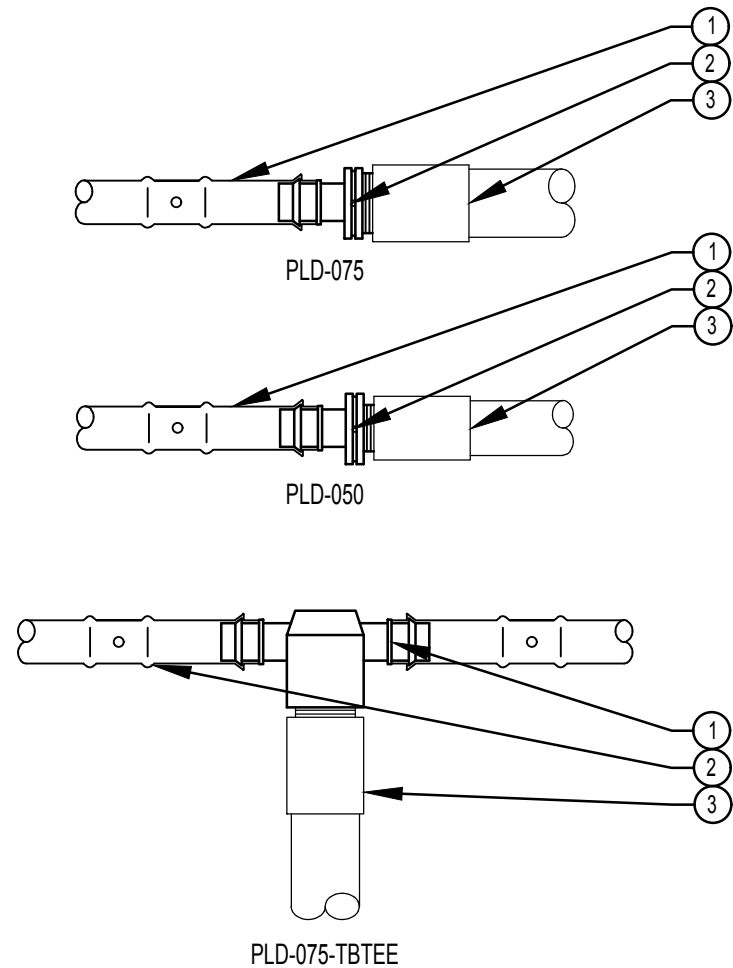
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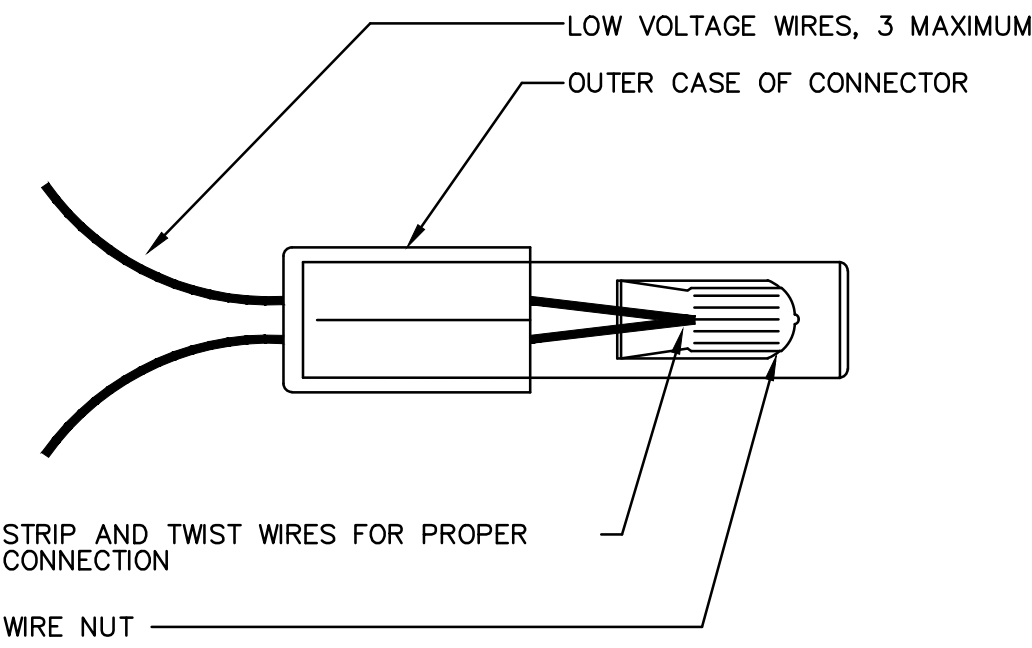
L PLD-LOC FITTINGS

SCALE: N.T.S.



M INSERT FITTINGS

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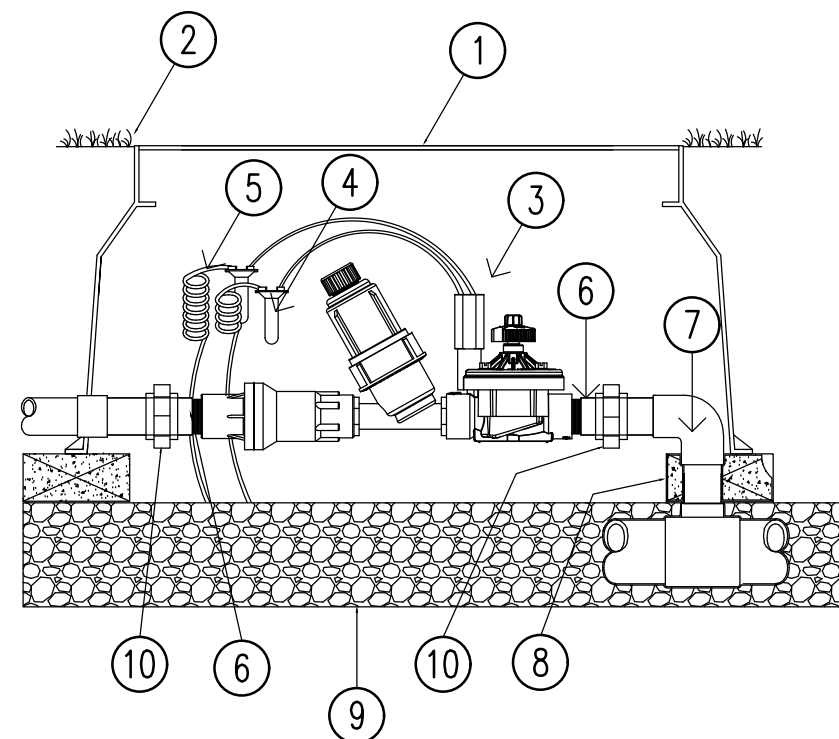


NOTE:
INSPECT, TEST, AND VERIFY PROPER SYSTEM CONNECTION BEFORE INSERTION INTO SEALANT CARTRIDGE.
DO NOT RESUSE SEALANT CARTRIDGES.

N WIRE CONNECTIONS

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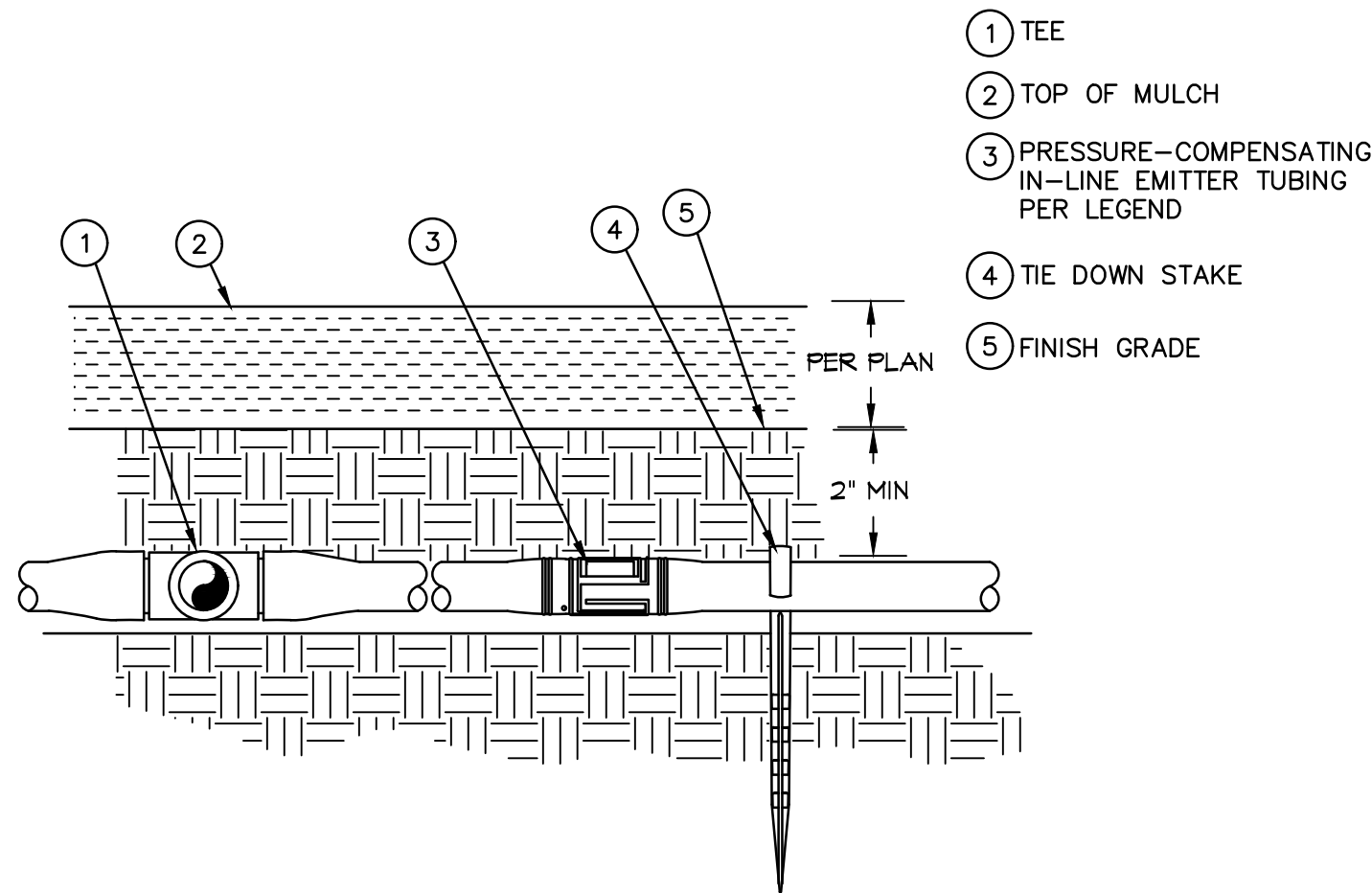
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- LEGEND:
- 1 JUMBO VALVE BOX
 - 2 FINISH GRADE
 - 3 HUNTER DRIP ZONE KIT MODEL PER LEGEND
 - 4 FILTER (TIP 45 DEGREES) REGULATOR 25 OR 40 PSI
 - 5 WATERPROOF CONNECTORS (2)
 - 6 18-24" COILED WIRE
 - 7 SCH 80 T.O.E. NIPPLE
 - 8 MAIN LINE PIPE & FITTINGS
 - 9 BRICK SUPPORTS (4)
 - 10 3/4" MINUS WASHED GRAVEL
 - 11 PVC SLIP UNIONS (2)

P DRIP CONTROL ZONE KIT

SCALE: N.T.S.

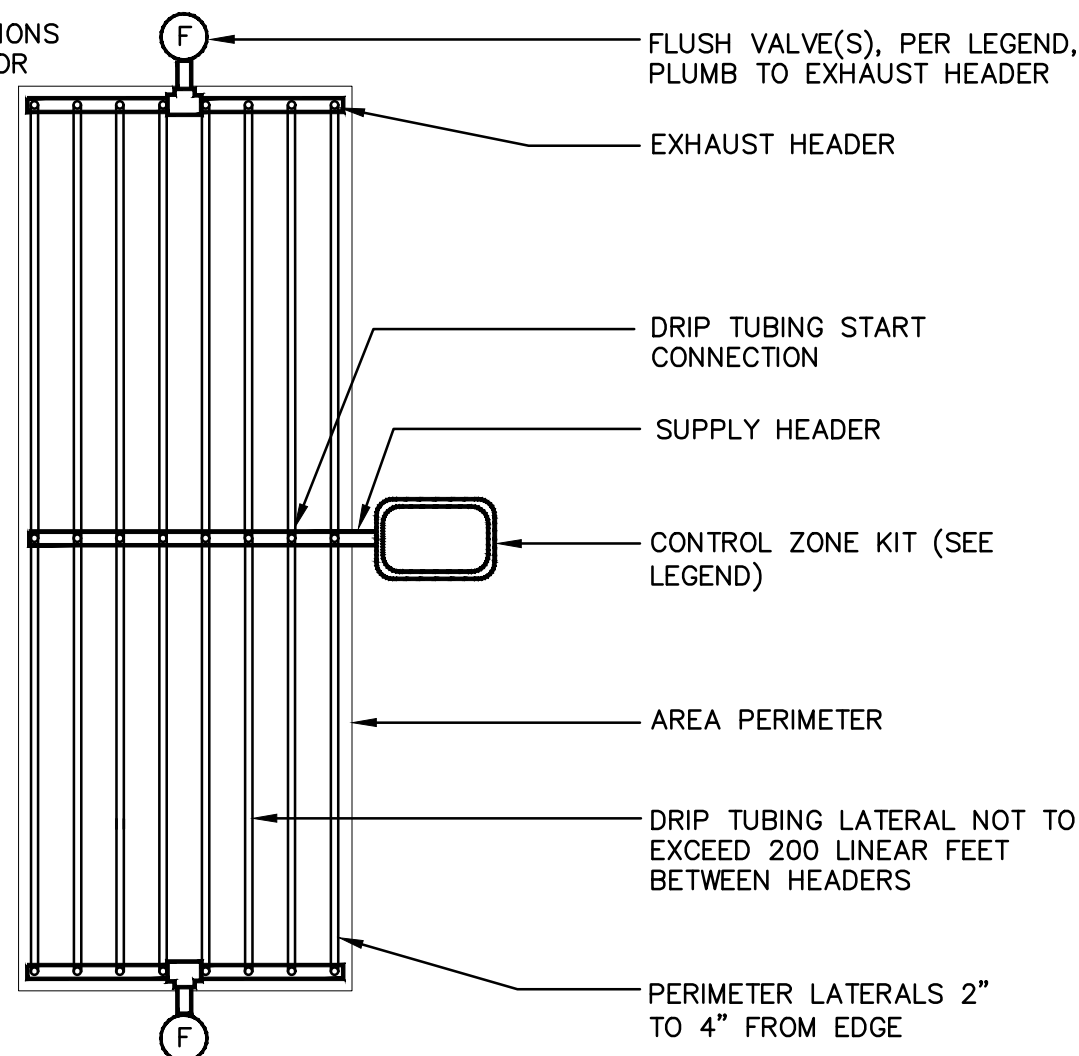


- LEGEND:
- 1 TEE
 - 2 TOP OF MULCH
 - 3 PRESSURE-COMPENSATING IN-LINE EMITTER TUBING PER LEGEND
 - 4 TIE DOWN STAKE
 - 5 FINISH GRADE

Q LANDSCAPE DRIPLINE

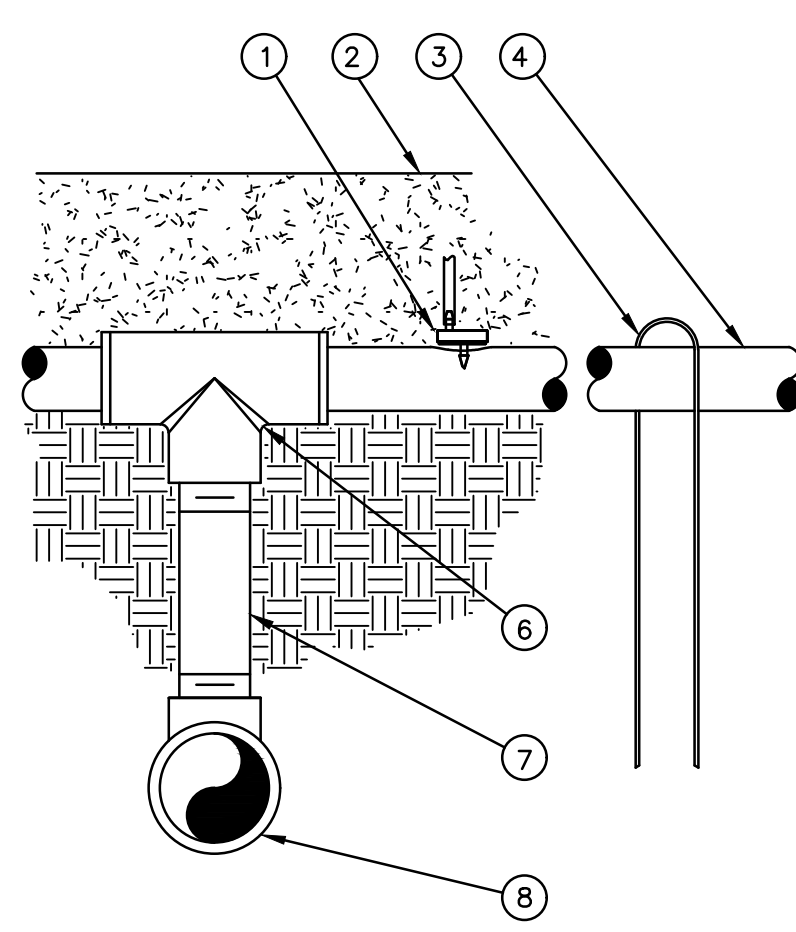
SCALE: N.T.S.

NOTE:
ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.



U DRIP ZONE LAYOUT - CENTER FEED

SCALE: N.T.S.

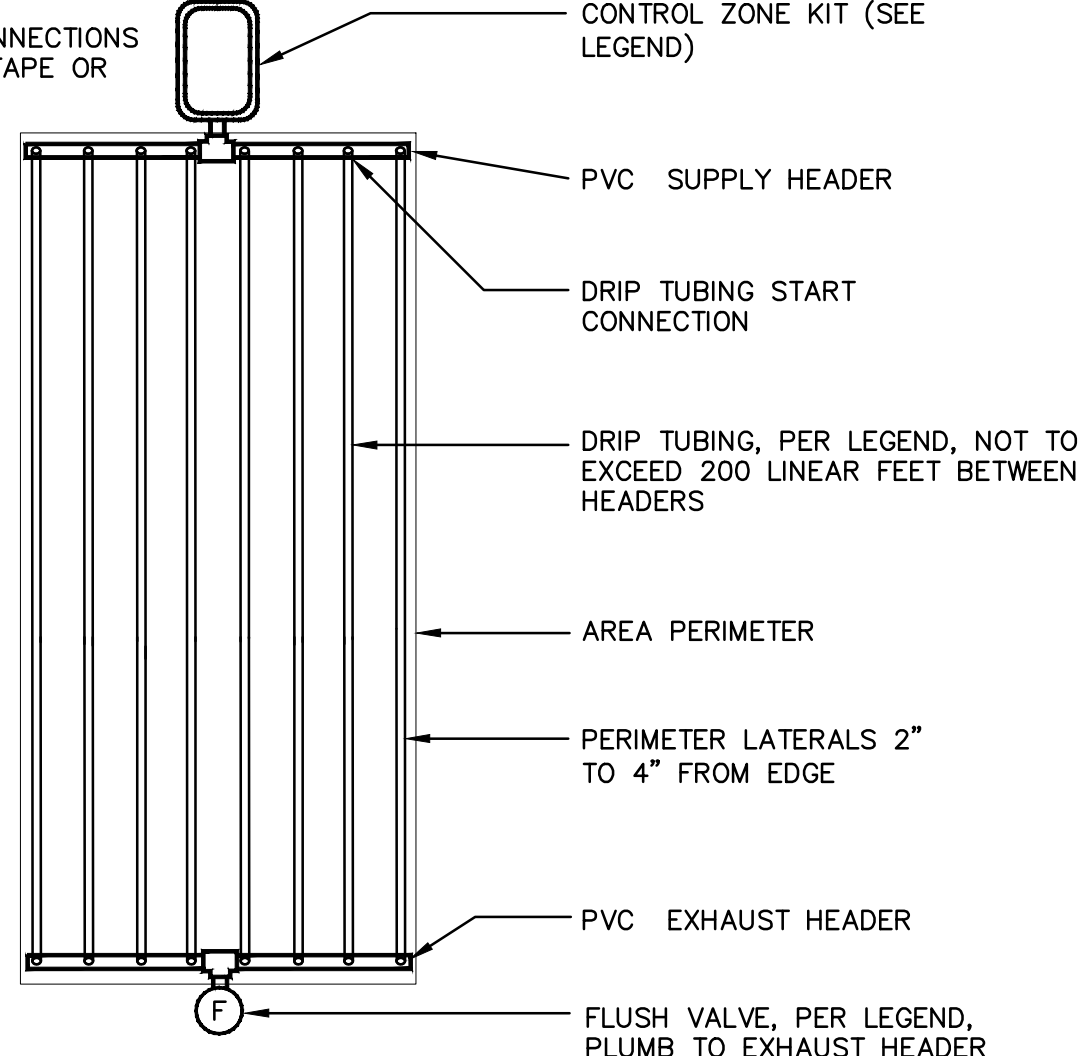


- LEGEND:
- 1 SINGLE-OUTLET EMITTER WITH 1/4" DISTRIBUTION TUBING PER LEGEND
 - 2 TOP OF MULCH, DEPTH PER PLANTING PLAN
 - 3 TIE-DOWN STAKE PER LEGEND
 - 4 POLYETHYLENE DISTRIBUTION FEEDER TUBE PER LEGEND
 - 5 RAINBIRD MDC COMPRESSION MDCFTTEE WITH MDCF75FHT FEMALE ADAPTER
 - 6 3/4" PVC SCH. 80 NIPPLE (LENGTH AS REQUIRED)
 - 7 LATERAL HEADER PIPE SxT TEE OR ELL, SIZE AND DEPTH PER LEGEND
- NOTE:
USE MANUFACTURER TOOL TO INSERT EMITTER DIRECTLY INTO DISTRIBUTION FEEDER TUBE.
- ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.

R PVC HEADER TO TUBING CONNECTION

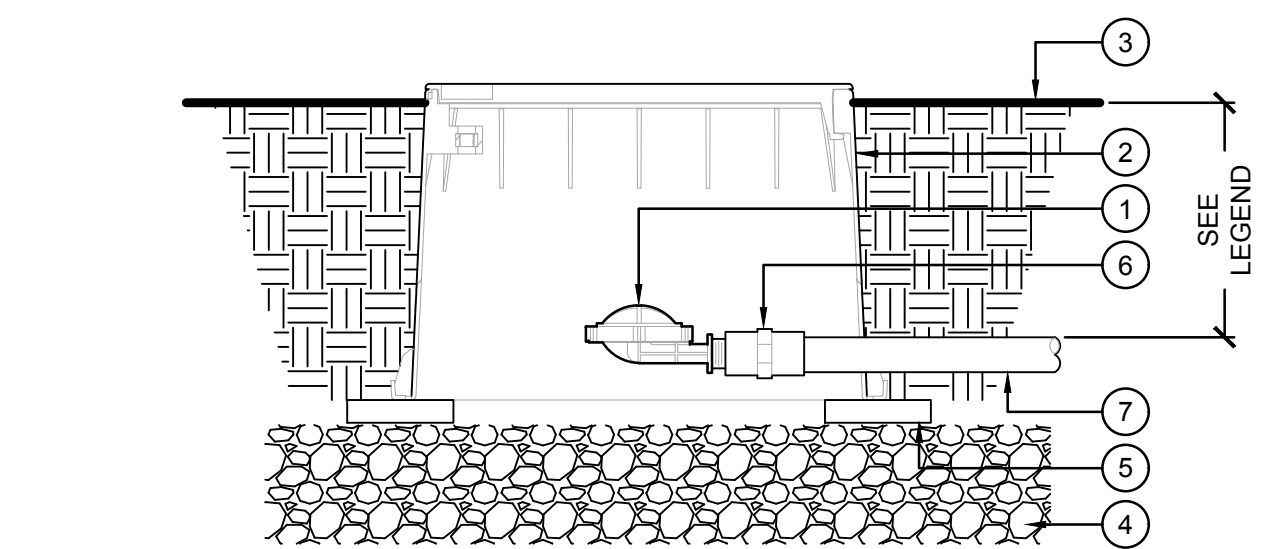
SCALE: N.T.S.

NOTE:
ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.



V DRIP ZONE LAYOUT - END FEED

SCALE: N.T.S.

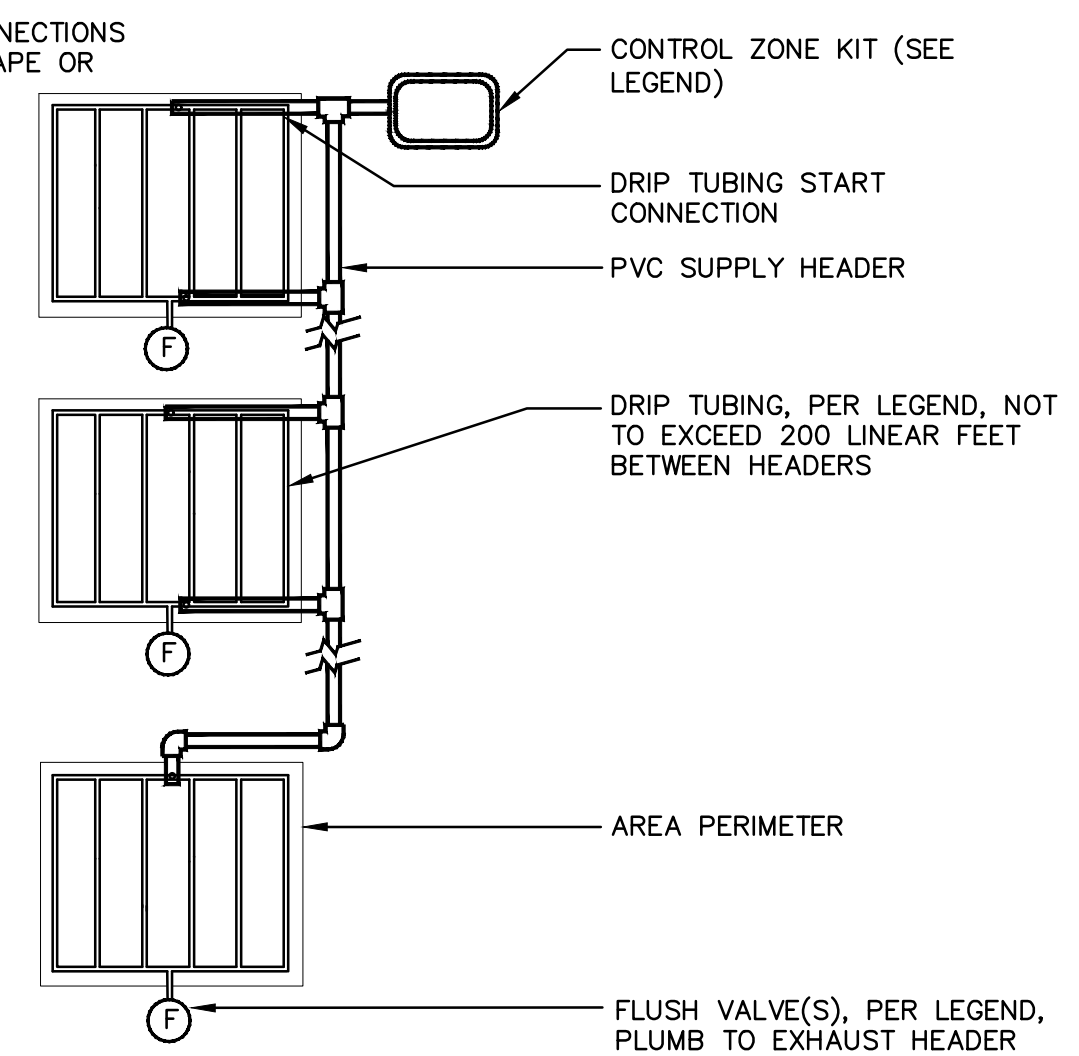


- DETAIL LEGEND:
- 1 HUNTER AUTOMATIC FLUSH VALVE WITH 5/8" [17 mm] BARB CONNECTION, MODEL AFV-T.
 - 2 HUNTER RECTANGULAR PLASTIC VALVE BOX AND LID (MB-0811). LID COLORS: STANDARD BLACK, PURPLE FOR RECYCLED WATER USE, AND OTHER COLORS AVAILABLE, SEE HUNTER CATALOG.
 - 3 FINISHED GRADE
 - 4 GRAVEL BASE, DEPTH AS SPECIFIED
 - 5 COMMON HALF BRICK, 2 TOTAL. INSTALL ONE ON EACH SHORT SIDE OF BOX.
 - 6 FEMALE ADAPTER PER PLAN, SLIP X FPT
 - 7 LATERAL LINE PER PLAN

S AUTOMATIC FLUSH VALVE

SCALE: N.T.S.

NOTE:
ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.



W DRIP ZONE LAYOUT - MULTIPLE BEDS

SCALE: N.T.S.

T - OMIT

FILE NAME: 615 SAN MIGUEL FIRE STATION\1811-SAN MIGUEL FIRESTATION.DWG

IRRIGATION SPECIFICATIONS

LANDSCAPE IRRIGATION
PART I – GENERAL

- 1.01SUMMARY
- A. IT IS THE INTENT OF THE SPECIFICATIONS AND DRAWINGS THAT THE FINISHED SYSTEM IS COMPLETE IN EVERY RESPECT AND SHALL BE READY FOR OPERATION SATISFACTORY TO THE OWNER.

B. THE WORK SHALL INCLUDE ALL MATERIALS, LABOR, SERVICES, TRANSPORTATION, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS, IN THESE SPECIFICATION, AND AS NECESSARY TO COMPLETE THE CONTRACT.
- 1.02CONSTRUCTION DRAWINGS
- A. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC. WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS WORK AND PLAN HIS WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC. AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEMS, PLANTING, AND ARCHITECTURAL FEATURES.

B. ALL WORK CALLED FOR ON THE DRAWINGS BY NOTES OR DETAILS SHALL BE FURNISHED AND INSTALLED WHETHER OR NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS. WHEN AN ITEM IS SHOWN ON THE PLANS BUT NOT SHOWN ON THE SPECIFICATIONS OR VICE VERSA, IT SHALL BE DEEMED TO BE AS SHOWN ON BOTH. THE LANDSCAPE ARCHITECT SHALL HAVE FINAL AUTHORITY FOR CLARIFICATION.

C. 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 DISCREPANCIES IN AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AS SOON AS DETECTED. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISION NECESSARY.
- 1.03QUALITY ASSURANCE
- A. PROVIDE AT LEAST ONE ENGLISH SPEAKING PERSON WHO SHALL BE PRESENT AT ALL TIMES DURING EXECUTION OF THIS PORTION OF THE WORK AND WHO SHALL BE THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE MANUFACTURER'S RECOMMENDED METHODS OF INSTALLATION AND WHO SHALL DIRECT ALL WORK PERFORMED UNDER THIS SECTION.

B. MANUFACTURER'S DIRECTIONS AND DETAILED DRAWINGS SHALL BE FOLLOWED IN ALL CASES WHERE THE MANUFACTURER OF ARTICLES USED IN THIS CONTRACT FURNISH DIRECTIONS COVERING POINTS NOT SHOWN IN THE DRAWINGS AND SPECIFICATIONS.

C. 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. ANYTHING CONTAINED IN THESE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CONFLICT WITH ANY OF THE ABOVE RULES AND REGULATIONS OF THE SAME. HOWEVER, WHEN THESE SPECIFICATIONS AND DRAWINGS CALL FOR OR DESCRIBE MATERIALS, WORKMANSHIP, OR CONSTRUCTION OF A BETTER QUALITY, HIGHER STANDARD, OR LARGER SIZE THAN IS REQUIRED BY THE ABOVE RULES AND REGULATIONS, THE PROVISIONS OF THESE SPECIFICATIONS AND DRAWINGS SHALL TAKE PRECEDENCE.

D. ALL MATERIALS SUPPLIED FOR THIS PROJECT SHALL BE NEW AND FREE FROM ANY DEFECTS. ALL DEFECTIVE MATERIALS SHALL BE REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO OWNER.

E. THE CONTRACTOR SHALL SECURE THE REQUIRED LICENSES AND PERMITS INCLUDING PAYMENTS OF CHARGES AND FEES, GIVE REQUIRED NOTICES TO PUBLIC AUTHORITIES, VERIFY PERMITS SECURED OR ARRANGEMENTS MADE BY OTHERS AFFECTING THE WORK OF THIS SECTION.
- 1.04SUBMITTALS
- A. MATERIALS LIST:

1. AFTER AWARD OF CONTRACT AND BEFORE ANY IRRIGATION SYSTEM MATERIALS ARE DELIVERED TO THE JOB SITE, SUBMIT TO THE OWNER A COMPLETE LIST OF ALL IRRIGATION SYSTEMS, MATERIALS, OR PROCESSES PROPOSED TO BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT.

2. SHOW MANUFACTURER'S NAME AND CATALOG NUMBER FOR EACH ITEM, FURNISH COMPLETE CATALOG CUTS AND TECHNICAL DATA, FURNISH THE MANUFACTURER'S RECOMMENDATIONS AS TO THE METHOD OF INSTALLATION.

3. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR WRITTEN ACCEPTANCE BY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE.

4. MANUFACTURER'S WARRANTIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS LIABILITY UNDER THE GUARANTEE. SUCH WARRANTIES SHALL ONLY SUPPLEMENT THE GUARANTEE.

B. SUBSTITUTIONS:

IF THE IRRIGATION CONTRACTOR WISHES TO SUBSTITUTE ANY EQUIPMENT OR MATERIALS FOR THOSE EQUIPMENT OR MATERIALS LISTED ON THE IRRIGATION DRAWINGS AND SPECIFICATIONS HE MAY DO SO BY PROVIDING THE FOLLOWING INFORMATION TO THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE AND CITY INSPECTOR FOR APPROVAL.

1. PROVIDE A WRITTEN STATEMENT INDICATING THE REASON FOR MAKING THE SUBSTITUTION.

2. PROVIDE CATALOG CUT SHEETS, TECHNICAL DATA, AND PERFORMANCE INFORMATION FOR EACH SUBSTITUTE ITEM.

3. PROVIDE IN WRITING THE DIFFERENCE IN INSTALLED PRICE IF THE ITEM IS ACCEPTED.
- 1.05EXISTING CONDITIONS
- A. THE CONTRACTOR SHALL VERIFY AND BE FAMILIAR WITH THE LOCATIONS, SIZE AND DETAIL OF POINTS OF CONNECTION PROVIDED AS THE SOURCE OF WATER, ELECTRICAL SUPPLY, AND ANY TELEPHONE LINE CONNECTION TO THE IRRIGATION SYSTEM.

B. IRRIGATION DESIGN IS BASED ON THE AVAILABLE STATIC WATER PRESSURE SHOWN ON THE DRAWINGS. CONTRACTOR SHALL VERIFY STATIC WATER ON THE PROJECT PRIOR TO THE START OF CONSTRUCTION. SHOULD A DISCREPANCY EXIST, NOTIFY THE LANDSCAPE ARCHITECT AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

C. PRIOR TO CUTTING INTO THE SOIL, THE CONTRACTOR SHALL LOCATE ALL CABLES, CONDUITS, SEWER SEPTIC TANKS, AND OTHER UTILITIES AS ARE COMMONLY ENCOUNTERED UNDERGROUND AND HE SHALL TAKE PROPER PRECAUTIONS NOT TO DAMAGE OR DISTURB SUCH IMPROVEMENTS. IF A CONFLICT EXISTS BETWEEN THE SUCH OBSTACLES AND THE PROPOSED WORK, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE LANDSCAPE ARCHITECT AND OWNER WHO WILL ARRANGE FOR RELOCATIONS. THE CONTRACTOR WILL PROCEED IN THE SAME MANNER IF A ROCK LAYER OR ANY OTHER SUCH CONDITIONS ARE ENCOUNTERED.

D. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND FEATURES TO REMAIN ON AND ADJACENT TO THE PROJECT SITE DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR, AT HIS OWN COST, ALL DAMAGE RESULTING FROM HIS OPERATIONS OR NEGLIGENCE.

E. THE IRRIGATION CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR INSTALLATION OF REQUIRED SLEEVING AS SHOWN ON THE PLANS.
- 1.06INSPECTIONS
- A. THE CONTRACTOR SHALL PERMIT THE LANDSCAPE ARCHITECT, OWNER'S AUTHORIZED REPRESENTATIVE AND CITY INSPECTOR TO VISIT AND INSPECT AT ALL TIMES ANY PART OF THE WORK AND SHALL PROVIDE SAFE ACCESS FOR SUCH VISITS.

B. WHERE THE SPECIFICATIONS REQUIRE WORK TO BE TESTED BY THE CONTRACTOR, IT SHALL NOT BE COVERED OVER UNTIL ACCEPTED BY THE LANDSCAPE ARCHITECT, OWNER'S AUTHORIZED REPRESENTATIVE, AND/OR GOVERNING AGENCIES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR NOTIFYING THE LANDSCAPE ARCHITECT, OWNER, AND GOVERNING AGENCIES, A MINIMUM OF 48 HOURS IN ADVANCE, WHERE AND WHEN THE WORK IS READY FOR TESTING. SHOULD ANY WORK BE COVERED WITHOUT TESTING OR ACCEPTANCE, IT SHALL BE, IF SO ORDERED, UNCOVERED AT THE CONTRACTOR'S EXPENSE.

C. INSPECTIONS WILL BE REQUIRED FOR THE FOLLOWING AT A MINIMUM:

1. SYSTEM LAYOUT

2. PRESSURE TEST OF IRRIGATION MAIN LINE (FOUR HOURS AT 125 PSI OR 120% OF STATIC WATER PRESSURE, WHICH EVER IS GREATER) APPROVAL REQUIRED BY CITY INSPECTOR.

3. COVERAGE TEST OF IRRIGATION SYSTEM (APPROVAL REQUIRED BY CITY INSPECTOR).

4. FINAL INSPECTION PRIOR TO START OF MAINTENANCE PERIOD

5. FINAL ACCEPTANCE

D. SITE OBSERVATIONS AND TESTING WILL NOT COMMENCE WITHOUT THE RECORD DRAWINGS AS PREPARED BY THE IRRIGATION CONTRACTOR. RECORD DRAWINGS MUST COMPLETE AND UP TO DATE FOR EACH SITE VISIT.

E. WORK WHICH FAILS TESTING AND IS NOT ACCEPTED WILL BE RETESTED. HOURLY RATES AND EXPENSES OF THE LANDSCAPE ARCHITECT, OWNER'S AUTHORIZED REPRESENTATIVE, AND GOVERNING AGENCIES FOR REINSPECTION OR RETESTING WILL BE PAID BY THE IRRIGATION CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.
- 1.07STORAGE AND HANDLING
- A. USE ALL MEANS NECESSARY TO PROTECT IRRIGATION SYSTEM MATERIALS BEFORE, DURING, AND AFTER INSTALLATION AND TO PROTECT THE INSTALLATION WORK AND MATERIALS OF ALL OTHER TRADES. IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE ACCEPTANCE OF THE LANDSCAPE ARCHITECT AND OWNER AND AT NO ADDITIONAL COST TO THE OWNER.

B. EXERCISE CARE IN HANDLING, LOADING, UNLOADING, AND STORING PLASTIC PIPE AND FITTINGS UNDER COVER UNTIL READY TO INSTALL. TRANSPORT PLASTIC PIPE ONLY ON A VEHICLE WITH A BED LONG ENOUGH TO ALLOW THE PIPE TO LAY FLAT TO AVOID UNDUE BENDING AND CONCENTRATED EXTERNAL LOAD.
- 1.08CLEANUP AND DISPOSAL
- A. DISPOSE OF WASTE, TRASH, AND DEBRIS IN ACCORDANCE WITH APPLICABLE LAWS AND ORDINANCES AND AS PRESCRIBED BY AUTHORITIES HAVING JURISDICTION. BURY NO SUCH WASTE MATERIAL AND DEBRIS ON THE SITE. BURNING OF TRASH AND DEBRIS WILL NOT BE PERMITTED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF RUBBISH AND DEBRIS GENERATED BY HIS WORK AND WORKMEN AT FREQUENT INTERVALS OR WHEN ORDERED TO DO SO BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

B. AT THE TIME OF COMPLETION THE ENTIRE SITE WILL BE CLEARED OF TOOLS, EQUIPMENT, RUBBISH AND DEBRIS WHICH SHALL BE DISPOSED OF OFF-SITE IN A LEGAL DISPOSAL AREA.
- 1.09TURNOVER ITEMS
- A. RECORD DRAWINGS:

1. RECORD ACCURATELY ON ONE SET OF CONTRACT DRAWINGS ALL CHANGES IN THE WORK CONSTITUTING DEPARTURES FROM THE ORIGINAL CONTRACT DRAWINGS.

2. THE CHANGES AND DIMENSIONS SHALL BE RECORDED IN A LEGIBLE AND WORKMANLIKE MANNER TO THE SATISFACTION OF THE OWNER. PRIOR TO FINAL INSPECTION OF WORK, SUBMIT RECORD DRAWINGS TO THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE.

3. DIMENSIONS FROM/TO PERMANENT POINTS OF REFERENCE SUCH AS BUILDINGS, SIDEWALKS, CURBS, ETC. SHALL BE SHOWN. DATA ON RECORD DRAWINGS SHALL BE RECORDED ON A DAY TO DAY BASIS AS THE PROJECT IS BEING INSTALLED. ALL LETTERING ON DRAWINGS SHALL BE MINIMUM 1/8 INCH IN SIZE.

4. SHOW LOCATIONS AND DEPTHS OF THE FOLLOWING ITEMS:

B. GUARANTEE SHALL BE SUBMITTED ON CONTRACTORS OWN LETTERHEAD AS FOLLOWS: GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM WE HEREBY GUARANTEE THAT THE SPRINKLER IRRIGATION SYSTEM WE HAVE FURNISHED AND INSTALLED IS FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP, AND THE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, ORDINARY WEAR AND TEAR AND UNUSUAL ABUSE, OR NEGLIGENCE EXCEPTED. WE AGREE TO REPAIR OR REPLACE ANY DEFECTIVE MATERIAL.

- A. POINT OF CONNECTION (INCLUDING WATER METERS, BACKFLOW PREVENTERS, MASTER CONTROL VALVES, ETC.)
- B. ROUTING OF SPRINKLER PRESSURE LINES (DIMENSIONS SHOWN AT A MAXIMUM OF 100 FEET ALONG ROUTING)
- C. GATE VALVES
- D. AUTOMATIC REMOTE CONTROL VALVES AND ISOLATION BALL VALVES
- E. QUICK COUPLING VALVES AND ISOLATION BALL VALVES
- F. ROUTING OF CONTROL WIRES
- G. IRRIGATION CONTROLLERS
- H. RELATED EQUIPMENT (AS MAY BE DIRECTED)
5. MAINTAIN RECORD DRAWINGS ON SITE AT ALL TIMES. UPON COMPLETION OF WORK, TRANSFER ALL AS-BUILT INFORMATION AND DIMENSIONS TO REPRODUCIBLE SEPIA PRINTS.
- B. CONTROLLER CHARTS:

1. RECORD DRAWINGS MUST BE APPROVED BY LANDSCAPE ARCHITECT AND/OR OWNER'S AUTHORIZED REPRESENTATIVE BEFORE CHARTS ARE PREPARED.

2. PROVIDE ONE CONTROLLER CHART FOR EACH AUTOMATIC CONTROLLER. CHART SHALL SHOW THE AREA COVERED BY THE PARTICULAR CONTROLLER.

3. THE CHART IS TO BE A REDUCED COPY OF THE ACTUAL "RECORD" DRAWING. IN THE EVENT THE CONTROLLER SEQUENCE IS NOT LEGIBLE WHEN THE DRAWING IS REDUCED, IT SHALL BE ENLARGED TO A READABLE SIZE.

4. WHEN COMPLETED AND APPROVED, THE CHART SHALL BE HERMETICALLY SEALED BETWEEN TWO PIECES OF PLASTIC, EACH PIECE BEING A MINIMUM 20 MILS IN THICKNESS.
- C. OPERATION AND MAINTENANCE MANUALS:

1. TWO INDIVIDUALLY BOUND COPIES OF OPERATION AND MAINTENANCE MANUALS SHALL BE DELIVERED TO THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE AT LEAST 10 CALENDAR DAYS PRIOR TO FINAL INSPECTION. THE MANUALS SHALL DESCRIBE THE MATERIAL INSTALLED AND THE PROPER OPERATION OF THE SYSTEM.

2. EACH COMPLETE, BOUND MANUAL SHALL INCLUDE THE FOLLOWING INFORMATION:

A. INDEX SHEET STATING CONTRACTOR'S ADDRESS AND TELEPHONE NUMBER, DURATION OF GUARANTEE PERIOD, LIST OF EQUIPMENT INCLUDING NAMES AND ADDRESSES OF LOCAL MANUFACTURER REPRESENTATIVES.

B. OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT.

C. SPARE PARTS LISTS AND RELATED MANUFACTURER INFORMATION FOR ALL EQUIPMENT.
- D. EQUIPMENT:

1. SUPPLY AS A PART OF THIS CONTRACT THE FOLLOWING ITEMS:

A. TWO (2) WRENCHES FOR DISASSEMBLY AND ADJUSTMENT OF EACH TYPE OF SPRINKLER HEAD USED IN THE IRRIGATION SYSTEM.

B. THREE 30-INCH SPRINKLER KEYS FOR MANUAL OPERATION OF CONTROL VALVES.

C. TWO KEYS FOR EACH AUTOMATIC CONTROLLER.

D. FIVE QUICK COUPLER KEYS WITH A BRONZE HOSE THREAD 90 DEGREE SWIVEL ATTACHMENT AND FIVE COUPLER LID KEYS.

E. FIVE VALVE BOX COVER KEY OR WRENCH.

F. ONE 5-FOOT TEE WRENCH FOR OPERATING GATE VALVES 3 INCHES OR LARGER (IF USED).

G. SIX EXTRA SPRINKLER HEADS OF EACH SIZE AND TYPE PER IRRIGATION P.O.C.
2. THE ABOVE EQUIPMENT SHALL BE TURNED OVER TO OWNER'S AUTHORIZED REPRESENTATIVE AT THE FINAL INSPECTION.
- 1.10COMPLETION
- A. AT THE TIME OF THE PRE-MAINTENANCE PERIOD INSPECTION, THE LANDSCAPE ARCHITECT, OWNER'S AUTHORIZED REPRESENTATIVE, AND GOVERNING AGENCIES WILL INSPECT THE WORK, AND IF NOT ACCEPTED, WILL PREPARE A LIST OF ITEMS TO BE COMPLETED BY THE CONTRACTOR. AT THE TIME OF THE POST-MAINTENANCE PERIOD OR FINAL INSPECTION THE WORK WILL BE REINSPECTED AND FINAL ACCEPTANCE WILL BE IN WRITING BY THE LANDSCAPE ARCHITECT, OWNER'S AUTHORIZED REPRESENTATIVE, AND GOVERNING AGENCIES.

B. THE OWNER'S AUTHORIZED REPRESENTATIVE SHALL HAVE FINAL AUTHORITY ON ALL PORTIONS OF THE WORK.

C. AFTER THE SYSTEM HAS BEEN COMPLETED, THE CONTRACTOR SHALL INSTRUCT OWNER'S AUTHORIZED REPRESENTATIVE IN THE OPERATION AND MAINTENANCE OF THE IRRIGATION SYSTEM AND SHALL FURNISH A COMPLETE SET OF OPERATING AND MAINTENANCE INSTRUCTIONS.

D. ANY SETTLING OF TRENCHES WHICH MAY OCCUR DURING THE ONE-YEAR PERIOD FOLLOWING ACCEPTANCE SHALL BE REPAIRED TO THE OWNER'S SATISFACTION BY THE CONTRACTOR WITHOUT ANY ADDITIONAL EXPENSE TO THE OWNER. REPAIRS SHALL INCLUDE THE COMPLETE RESTORATION OF ALL DAMAGE TO PLANTING, PAVING OR OTHER IMPROVEMENTS OF ANY KIND AS A RESULT OF THE WORK.
- 1.11GUARANTEE
- A. THE ENTIRE SPRINKLER SYSTEM, INCLUDING ALL WORK DONE UNDER THIS CONTRACT, SHALL BE UNCONDITIONALLY GUARANTEED AGAINST ALL DEFECTS AND FAULT OF MATERIAL AND WORKMANSHIP, INCLUDING SETTling OF BACK FIELD AREAS BELOW GRADE, FOR A PERIOD OF ONE (1) YEAR FOLLOWING THE FILING OF THE NOTICE OF COMPLETION. SHOULD ANY PROBLEM WITH THE IRRIGATION SYSTEM BE DISCOVERED WITHIN THE GUARANTEE PERIOD, IT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER WITHIN TEN (10) CALENDAR DAYS OF RECEIPT OF WRITTEN NOTICE FROM OWNER. WHEN THE NATURE OF THE REPAIRS AS DETERMINED BY THE OWNER CONSTITUTE AN EMERGENCY (I.E. BROKEN PRESSURE LINE) THE OWNER MAY PROCEED TO MAKE REPAIRS AT THE CONTRACTOR'S EXPENSE. ANY AND ALL DAMAGES TO EXISTING IMPROVEMENT RESULTING EITHER FROM FAULTY MATERIALS OR WORKMANSHIP, OR FROM THE NECESSARY REPAIRS TO CORRECT SAME, SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER BY THE CONTRACTOR, ALL AT NO ADDITIONAL COST TO THE OWNER.

B. GUARANTEE SHALL BE SUBMITTED ON CONTRACTORS OWN LETTERHEAD AS FOLLOWS: GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM WE HEREBY GUARANTEE THAT THE SPRINKLER IRRIGATION SYSTEM WE HAVE FURNISHED AND INSTALLED IS FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP, AND THE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, ORDINARY WEAR AND TEAR AND UNUSUAL ABUSE, OR NEGLIGENCE EXCEPTED. WE AGREE TO REPAIR OR REPLACE ANY DEFECTIVE MATERIAL.

DURING THE PERIOD OF ONE YEAR FROM DATE OF FILING OF THE NOTICE OF COMPLETION AND ALSO TO REPAIR OR REPLACE ANY DAMAGE RESULTING FROM THE REPAIRING OR REPLACING OF SUCH DEFECTS AT NO ADDITIONAL COST TO THE OWNER. WE SHALL MAKE SUCH REPAIRS OR REPLACEMENTS WITHIN 10 CALENDAR DAYS FOLLOWING WRITTEN NOTIFICATION BY THE OWNER. IN THE EVENT OF OUR FAILURE TO MAKE SUCH REPAIRS OR REPLACEMENTS WITHIN THE TIME SPECIFIED AFTER RECEIPT OF WRITTEN NOTICE FROM OWNER, WE AUTHORIZE THE OWNER TO PROCEED TO HAVE SAID REPAIRS OR REPLACEMENTS MADE AT OUR EXPENSE AND WE WILL PAY THE COSTS AND CHARGES THEREFORE UPON DEMAND.

PROJECT NAME:
PROJECT LOCATION:
CONTRACTOR NAME:
ADDRESS:
TELEPHONE:
SIGNED:
DATE:

PART II – MATERIALS

- 2.01SUMMARY
- USE ONLY NEW MATERIALS OF THE MANUFACTURER, SIZE AND TYPE SHOWN ON THE DRAWINGS AND SPECIFICATIONS. MATERIALS OR EQUIPMENT INSTALLED OR FURNISHED THAT DO NOT MEET LANDSCAPE ARCHITECT'S, OWNER'S, OR GOVERNING AGENCIES STANDARDS WILL BE REJECTED AND SHALL BE REMOVED FROM THE SITE AT NO EXPENSE TO THE OWNER.

2.02PIPE

A. PRESSURE SUPPLY LINE FROM POINT OF CONNECTION THROUGH BACKFLOW PREVENTION UNIT SHALL BE TYPE K "HARD" COPPER PIPE OR BRASS NIPPLES (LENGTH AS REQUIRED).

B. PRESSURE SUPPLY LINES 2 INCHES IN DIAMETER AND UP TO 2.5 INCHES IN DIAMETER DOWNSTREAM OF BACKFLOW PREVENTION UNIT SHALL BE CLASS 315 SOLVENT WELD PVC. PIPING SHALL CONFORM TO ASTM D2241.

C. PRESSURE SUPPLY LINES 3 INCHES IN DIAMETER AND UP TO 8 INCHES IN DIAMETER DOWNSTREAM OF BACKFLOW PREVENTION UNIT SHALL BE CLASS 200 GASKET JOINT PVC. PIPING SHALL CONFORM TO ASTM D2241.

D. PRESSURE SUPPLY LINES 1.5 INCHES IN DIAMETER AND SMALLER OF THE BACKFLOW PREVENTION UNIT SHALL BE SCHEDULE 40 SOLVENT WELD PVC CONFORMING TO ASTM D1785.

E. NON-PRESSURE LINES .75 INCHES IN DIAMETER AND LARGER DOWNSTREAM OF THE REMOTE CONTROL VALVE SHALL BE SCH. 40 PVC.

F. ALL SPECIALIZED PIPING SHALL BE AS INDICATED ON THE DRAWING LEGEND OR DETAILS.

2.03METAL PIPE AND FITTINGS

A. BRASS PIPE SHALL BE 85 PERCENT RED BRASS, ANSI, IPS STANDARD 125 POUNDS, SCHEDULE 40 SCREWED PIPE.

B. BRASS FITTINGS SHALL BE MEDIUM BRASS, SCREWED 125--POUND CLASS.

C. COPPER PIPE SHALL BE "HARD" TYPE K OR AS NOTED ON THE DRAWING LEGEND OR DETAILS.

D. COPPER FITTINGS SHALL BE SOLDERED TYPE.

2.04PLASTIC PIPE AND FITTINGS

A. PIPE SHALL BE MARKED CONTINUOUSLY WITH MANUFACTURER'S NAME, NOMINAL PIPE SIZE, SCHEDULE OR CLASS, PVC TYPE AND GRADE, NATIONAL SANITATION FOUNDATION APPROVAL, COMMERCIAL STANDARDS DESIGNATION, AND DATE OF EXTRUSION.

B. ALL PLASTIC PIPE SHALL BE EXTRUDED OF AN IMPROVED PVC VIRGIN PIPE COMPOUND IN ACCORDANCE WITH ASTM D2241 OR ASTM D1784.

C. ALL PVC FITTINGS SHALL BE STANDARD WEIGHT SCHEDULE 40 AND SHALL BE INJECTION MOLDED OF AN IMPROVED VIRGIN PVC FITTING COMPOUND. SLIP PVC FITTINGS SHALL BE THE "DEEP SOCKET" BRACKETED TYPE. THREADED PLASTIC FITTINGS SHALL BE INJECTION MOLDED. ALL TEES AND ELLS SHALL BE SIDE GATED. ALL FITTINGS SHALL CONFORM TO ASTM D2466.

D. ALL THREADED NIPPLES SHALL BE STANDARD WEIGHT SCHEDULE 80 WITH MOLDED THREADS AND SHALL CONFORM TO ASTM D1785.

E. ALL SOLVENT CEMENTING OF PLASTIC PIPE AND FITTINGS SHALL BE A TWO-STEP PROCESS, USING PRIMER AND SOLVENT CEMENT APPLIED PER THE MANUFACTURER'S RECOMMENDATIONS. CEMENT SHALL BE OF A FLUID CONSISTENCY, NOT GEL-LIKE OR ROPY. SOLVENT CEMENTING SHALL BE IN CONFORMANCE WITH ASTM D2564 AND ASTM D2855.

F. WHEN CONNECTION IS PLASTIC TO METAL, FEMALE ADAPTERS SHALL BE HAND TIGHTENED, PLUS ONE TURN WITH A STRAP WRENCH. JOINT COMPOUND SHALL BE NON-LEAD BASE TEFLON PASTE, TAPE, OR EQUAL.
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- SAN MIGUEL FIRESTATION #18
- 1811 SUNCREST BLVD
EL CAJON, CA
- IRRIGATION SPECIFICATIONS
- PREPARED FOR
- SAN MIGUEL FIRE DIST.
2850 VIA ORANGE WAY
SPRING VALLEY, CA
- PREPARED BY
- LINEAR LANDSCAPE
ARCHITECTURE
- JOE DODD, ASLA
1619 MYRTLE AVE
SAN DIEGO, CA 92103
P | 888.203.6628
- SUBMITTAL:
01 2-1-25
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- PDS2025-LP-25-043
- THIS DRAWING IS TO BE USED AS A GUIDE ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION.

FILE NAME: G:\SAN MIGUEL FIRE STATION\818T-SAN MIGUEL FIRE STATION.DWG

IRRIGATION SPECIFICATIONS

PART II – MATERIALS (CONT.)

2.05 BACKFLOW PREVENTION UNITS

- A. THE BACKFLOW PREVENTION UNIT SHALL BE OF THE MANUFACTURER, SIZE, AND TYPE INDICATED ON THE DRAWINGS.
- B. THE BACKFLOW PREVENTION UNIT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY LOCAL CODES.
- C. THE BACKFLOW PREVENTION ASSEMBLY SHALL CONSIST OF BRASS PIPING, UNIONS AND FITTINGS.

2.06 VALVES

- A. GATE VALVES:
1. GATE VALVES SHALL BE OF THE MANUFACTURER, SIZE, AND TYPE INDICATED ON THE DRAWINGS.
2. GATE VALVES SHALL BE CONSTRUCTED OF A BRONZE BODY, BONNET AND DISC, AND A MALLEABLE IRON HANDWHEEL. GATE VALVES SHALL HAVE THREADED CONNECTIONS.
3. ALL GATE VALVES SHALL HAVE A MINIMUM WORKING PRESSURE OF NOT LESS THAN 150 PSI AND SHALL CONFORM TO AWWA STANDARDS.
- B. BALL VALVES:
1. BALL VALVES SHALL BE OF THE MANUFACTURER, SIZE, AND TYPE INDICATED ON THE DRAWINGS.
2. BALL VALVES SHALL BE CONSTRUCTED OF A BRONZE BODY, STAINLESS STEEL BALL AND STEM, MALLEABLE IRON HANDLE. BALL VALVES SHALL HAVE THREADED CONNECTIONS.
3. ALL BALL VALVES SHALL HAVE A MINIMUM WORKING PRESSURE OF NOT LESS THAN 150 PSI AND SHALL CONFORM TO AWWA STANDARDS.
- C. QUICK COUPLER VALVES:
1. QUICK COUPLER VALVES SHALL BE OF THE MANUFACTURER, SIZE, AND TYPE INDICATED ON THE DRAWINGS.
2. QUICK COUPLER VALVES SHALL BE BRASS WITH A WALL THICKNESS GUARANTEED TO WITHSTAND NORMAL WORKING PRESSURE OF 150 PSI WITHOUT LEAKAGE. VALVES SHALL HAVE FEMALE THREADS OPENING AT BASE, WITH TWO-PIECE BODY. VALVES TO BE OPERATED ONLY WITH A COUPLER KEY, DESIGNED FOR THAT PURPOSE. COUPLER KEY IS INSERTED INTO VALVE AND A POSITIVE, WATERTIGHT CONNECTION SHALL BE MADE BETWEEN THE COUPLER KEY AND VALVE. HINGE COVER SHALL BE THE LOCKING TYPE CONSTRUCTED OF BRASS WITH A RUBBER-LIKE VINYL COVER.
3. VINYL QUICK COUPLER COVER FOR RECLAIMED WATER QUICK COUPLER VALVES TO BE PURPLE IN COLOR WITH THE WORDS "WARNING-RECYCLED (RECLAIMED) WATER-DO NOT DRINK PERMANENTLY MARKED ON LID FOR RECYCLED SYSTEM.
- D. AUTOMATIC CONTROL VALVES:
1. AUTOMATIC CONTROL VALVES SHALL BE OF THE MANUFACTURER, SIZE, AND TYPE INDICATED ON THE DRAWINGS.
2. AUTOMATIC CONTROL VALVES SHALL BE ELECTRICALLY OPERATED.
- E. ANTI-DRAIN VALVES:
1. ANTI-DRAIN VALVES SHALL BE OF THE MANUFACTURER, SIZE, AND TYPE INDICATED ON THE DRAWINGS.
2. ANTI-DRAIN VALVES SHALL HAVE 18-8 STAINLESS STEEL SPRINGS AND VALVE STEMS WITH BUNA-N SEALS.
3. ANTI-DRAIN VALVES WILL HAVE THREADED CONNECTIONS THE SIZE OF THE RISER OR PIPE THEY ARE TO BE INSTALLED ONTO, OR THE NEXT AVAILABLE SIZE. NO SLP CONNECTION ANTI-DRAIN VALVES ARE ALLOWED.

2.07 VALVE BOXES

- A. VALVE BOXES SHALL BE FABRICATED FROM A DURABLE, WEATHER-RESISTANT PLASTIC MATERIAL RESISTANT TO SUNLIGHT AND CHEMICAL ACTION OF SOILS.
- B. THE VALVE BOX COVER SHALL BE GREEN IN COLOR AND SECURED WITH BOLTS.
- C. THE COVER AND BOX SHALL BE CAPABLE OF SUSTAINING A LOAD OF 1,500 POUNDS.
- D. VALVE BOX EXTENSIONS SHALL BE BY THE SAME MANUFACTURER AS THE VALVE BOX.
- E. AUTOMATIC CONTROL AND MASTER VALVE BOXES SHALL BE 16"x11"x12" RECTANGULAR SIZE. VALVE BOX COVERS SHALL BE "HEAT BRANDED" IN 2" HIGH LETTERS WITH EITHER "RCV" WITH THE VALVE IDENTIFICATION NUMBERS OR "MCV".
- F. SPECIALITY 'JUMBO' BOXES MAY BE INDICATED ON DRAWNGS AND SHALL BE 25"x15"x12" RECTANGULAR SIZE.
- G. BALL VALVE, GATE VALVE, AND QUICK COUPLER VALVE BOXES SHALL BE CIRCULAR 10" SIZE. VALVE BOX COVERS SHALL BE "HEAT BRANDED" IN 2" HIGH LETTERS WITH EITHER "BV", "GV", OR "QCV".

2.08 IRRIGATION CONTROLLER

- A. CONTROLLER SHALL BE OF THE MANUFACTURER, SIZE AND TYPE INDICATED ON THE DRAWINGS.
- B. THE CONTROLLER ENCLOSURE SHALL BE OF THE MANUFACTURER, SIZE AND TYPE INDICATED ON THE DRAWINGS. THE ENCLOSURE SHALL ALSO ENCLOSE THE CONTROLLER ELECTRICAL METER.

THE CONTROLLER SHALL BE OF THE MANUFACTURER, SIZE AND TYPE REQUIRED BY THE **COUNTY OF SAN DIEGO**

2.09 ELECTRICAL

- A. ALL ELECTRICAL EQUIPMENT SHALL BE NEMA TYPE 3, WATERPROOFED FOR EXTERIOR INSTALLATIONS.
- B. ALL ELECTRICAL WORK SHALL CONFORM TO LOCAL CODES AND ORDINANCES.

2.10 LOW VOLTAGE CONTROL WIRING

- A. REMOTE CONTROL WIRE SHALL BE DIRECT-BURIAL AWG-UF TYPE, SIZE AS INDICATED ON THE DRAWINGS, AND IN NO CASE SMALLER THAN 14 GAUGE.
- B. CONNECTIONS SHALL BE EITHER EPOXY-SEALED PACKET TYPE OR PENN-TITE CONNECTORS. SPLICES ARE NOT ACCEPTABLE
- C. COMMON WIRES SHALL BE WHITE IN COLOR, AND IN NO CASE SMALLER THAN 14 GAUGE. CONTROL WIRES SHALL BE RED (WHERE TWO OR MORE CONTROLLERS ARE USED), THE CONTROL WIRES SHALL BE A DIFFERENT COLOR FOR EACH CONTROLLER.
- D. TWO ADDITIONAL WIRES SHALL BE RUN FROM THE CONTROLLERS TO THE LAST VALVE/VALVE MANIFOLD ON THE MAINLINE. AN ADDITIONAL TWO WIRES SHALL BE RUN FOR EACH SPLIT IN THE MAINLINE. A TRACER WIRE SHALL BE RUN ALONG THE ENTIRE LENGTH OF THE MAINLINE.
- E. GROUND WIRES SHALL BE GREEN IN COLOR, AND IN NO CASE SMALLER THAN 6 GAUGE.
- F. PROVIDE A 24" LONG EXPANSION LOOP FOR ALL DIRECTIONAL CHANGES IN CONTROL WIRE ROUTING.

2.11 IRRIGATION HEADS

- A. SPRINKLER HEADS SHALL BE OF THE MANUFACTURER SIZE, TYPE, WITH RADIUS OF THROW, OPERATING PRESSURE, AND DISCHARGE RATE INDICATED ON THE DRAWINGS.
- B. POP-UP HEADS AND RISER HEADS SHALL BE USED AS INDICATED ON THE DRAWINGS.

PART III – EXECUTION

3.01 SITE CONDITIONS

- A. INSPECTIONS:
1. PRIOR TO ALL WORK OF THIS SECTION, CAREFULLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIFY THAT ALL SUCH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE.
2. VERIFY THAT IRRIGATION SYSTEM MAY BE INSTALLED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS, THE ORIGINAL DESIGN, THE REFERENCED STANDARDS, AND THE MANUFACTURER'S RECOMMENDATIONS.
- B. DISCREPANCIES:
1. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE.
2. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL DISCREPANCIES HAVE BEEN RESOLVED.
- C. GRADES:
1. BEFORE STARTING WORK, CAREFULLY CHECK ALL GRADES TO DETERMINE THAT WORK MAY SAFELY PROCEED, KEEPING WITHIN THE SPECIFIED MATERIAL DEPTHS WITH RESPECT TO FINISH GRADE.
2. FINAL GRADES SHALL BE ACCEPTED BY THE ENGINEER BEFORE WORK ON THIS SECTION WILL BE ALLOWED TO BEGIN.
- D. FIELD MEASUREMENTS:
1. MAKE ALL NECESSARY MEASUREMENTS IN THE FIELD TO ENSURE PRECISE FIT OF ITEMS IN ACCORDANCE WITH THE ORIGINAL DESIGN. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL IRRIGATION MATERIALS WITH ALL OTHER WORK.
2. ALL SCALED DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL CHECK AND VERIFY ALL SIZE DIMENSIONS PRIOR TO PROCEEDING WITH WORK UNDER THIS SECTION.
3. EXEROISE EXTREME CARE IN EXCAVATING AND WORKING NEAR EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO UTILITIES WHICH ARE CAUSED BY HIS OPERATIONS' NEGLIGENCE.
- E. DIAGRAMMATIC INTENT:
THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC. THE SIZE AND LOCATION OF EQUIPMENT AND FIXTURES ARE DRAWN TO SCALE WHERE POSSIBLE. PROVIDE OFFSETS IN PIPING CHANGES IN EQUIPMENT LOCATIONS AS NECESSARY TO CONFORM WITH STRUCTURES AND TO AVOID OBSTRUCTIONS OR CONFLICTS WITH OTHER WORK AT NO ADDITIONAL EXPENSE TO OWNER.
- F. LAYOUT:
1. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL STAKE OUT ALL PRESSURE SUPPLY LINES, ROUTING AND LOCATION OF SPRINKLER HEADS, VALVES, BACKFLOW PREVENTER, AND AUTOMATIC CONTROLLER.
2. LAYOUT IRRIGATION SYSTEM AND MAKE MINOR ADJUSTMENTS REQUIRED DUE TO DIFFERENCES BETWEEN SITE AND DRAWINGS. WHERE PIPING IS SHOWN ON DRAWINGS UNDER PAVED AREAS, BUT RUNNING PARALLEL AND ADJACENT TO PLANTED AREAS, INSTALL THE PIPING IN THE PLANTED AREAS.
- G. WATER SUPPLY CONNECTIONS TO, OR THE INSTALLATION OF, THE WATER SUPPLY SHALL BE AT THE LOCATIONS SHOWN ON THE DRAWINGS. MINOR CHANGES CAUSED BY ACTUAL SITE CONDITIONS SHALL BE MADE AT NO ADDITIONAL EXPENSE TO OWNER.
- H. ELECTRICAL SERVICE:
1. CONNECTIONS TO THE ELECTRICAL SUPPLY SHALL BE AT THE LOCATIONS SHOWN ON THE DRAWINGS. MINOR CHANGES CAUSED BY SITE CONDITIONS SHALL BE MADE AT NO ADDITIONAL EXPENSE TO OWNER.
2. CONTRACTOR SHALL MAKE 120 VOLT CONNECTION TO THE IRRIGATION CONTROLLERS. ELECTRICAL POWER SOURCE TO CONTROLLER LOCATIONS SHALL BE PROVIDED BY OTHERS.

3.02 TRENCHING

- A. EXCAVATIONS SHALL BE STRAIGHT WITH VERTICAL SIDES, EVEN GRADE, AND SUPPORT PIPE CONTINUOUSLY ON BOTTOM OF TRENCH. TRENCHING EXCAVATION SHALL FOLLOW LAYOUT INDICATED ON DRAWINGS TO THE DEPTHS BELOW FINISHED GRADE AND AS NOTED. WHERE LINES OCCUR UNDER PAVED AREA, THESE DIMENSIONS SHALL BE CONSIDERED BELOW SUBGRADE.
- B. PROVIDE MINIMUM COVER OF 18 INCHES ON PRESSURE SUPPLY LINES 2 1/2 INCHES AND SMALLER. PROVIDE MINIMUM COVER OF 24 INCHES ON PRESSURE SUPPLY LINES 3 INCHES, AND 36 INCHES OF COVER ON PRESSURE SUPPLY LINES 4 INCH AND LARGER.
- C. PROVIDE MINIMUM COVER OF 18 INCHES FOR CONTROL WIRES.
- D. PROVIDE MINIMUM COVER OF 12 INCHES FOR NON-PRESSURE LINES.
- E. PIPES INSTALLED IN A COMMON TRENCH SHALL HAVE A 4 INCH MINIMUM SPACE BETWEEN PIPES.
- F. PROVIDE SAND BACKFILL A MINIMUM OF 4 INCHES OVER AND UNDER ALL MAINLINE PIPING.

3.03 BACKFILLING

- A. BACKFILL MATERIAL ON ALL LINES SHALL BE THE SAME AS ADJACENT SOIL FREE OF DEBRIS, LITTER, AND ROCKS OVER 1/2 INCH IN DIAMETER.
- B. BACKFILL SHALL BE TAMPED IN 4-INCH LAYERS UNDER THE PIPE AND UNIFORMLY ON BOTH SIDES FOR THE FULL WIDTH OF THE TRENCH AND THE FULL LENGTH OF THE PIPE. BACKFILL MATERIALS SHALL BE SUFFICIENTLY DAMP TO PERMIT THOROUGH COMPACTION, FREE OF VOIDS. BACKFILL SHALL BE COMPACTED TO DRY DENSITY EQUAL TO ADJACENT UNDISTURBED SOIL AND SHALL CONFORM TO ADJACENT GRADES.
- C. FLOODING IN LIEU OF TAMPING IS NOT ALLOWED.
- D. UNDER NO CIRCUMSTANCES SHALL TRUCK WHEELS BE USED TO COMPACT BACKFILL.
- E. PROVIDE SAND BACKFILL A MINIMUM OF 6 INCHES OVER AND UNDER ALL PIPING UNDER PAVED AREAS.

3.04 PIPING

- A. PIPING UNDER EXISTING PAVEMENT MAY BE INSTALLED BY JACKING, BORING, OR HYDRAULIC DRIVING. NO HYDRAULIC DRIVING IS PERMITTED UNDER ASPHALT PAVEMENT.
- B. CUTTING OR BREAKING OF EXISTING PAVEMENT IS NOT PERMITTED.
- C. CAREFULLY INSPECT ALL PIPE AND FITTINGS BEFORE INSTALLATION, REMOVING DIRT, SCALE, BURRS REAMING. INSTALL PIPE WITH ALL MARKINGS UP FOR VISUAL INSPECTION AND VERIFICATION.
- D. REMOVE ALL DENTED AND DAMAGED PIPE SECTIONS.
- E. ALL LINES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM EACH OTHER AND 12 INCHES FROM LINES OF OTHER TRADES.
- F. PARALLEL LINES SHALL NOT BE INSTALLED DIRECTLY OVER EACH OTHER.
- G. IN SOLVENT WELDING, USE ONLY THE SPECIFIED PRIMER AND SOLVENT CEMENT AND MAKE ALL JOINTS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED METHODS INCLUDING WIPING ALL EXCESS SOLVENT FROM EACH WELD. ALLOW SOLVENT WELDS AT LEAST 15 MINUTES SETUP TIME BEFORE MOVING OR HANDLING AND 24 HOURS CURING TIME BEFORE FILLING.
- H. PVC PIPE SHALL BE INSTALLED IN A MANNER WHICH WILL PROVIDE FOR EXPANSION CONTRACTION AS RECOMMENDED BY THE PIPE MANUFACTURER.
- I. CENTERLOAD ALL PLASTIC PIPE PRIOR TO PRESSURE TESTING.
- J. ALL THREADED PLASTIC-TO-PLASTIC CONNECTIONS SHALL BE ASSEMBLED USING TEFLON TAPE OR TEFLON PASTE.
- K. FOR PLASTIC-TO-METAL CONNECTIONS, WORK THE METAL CONNECTIONS FIRST. USE A NON-HARDENING PIPE DOPE AN ALL THREADED PLASTIC-TO-METAL CONNECTIONS, EXCEPT WHERE NOTED OTHERWISE. ALL PLASTIC-TO-METAL CONNECTIONS SHALL BE MADE WITH PLASTIC FEMALE ADAPTERS.
- L. ALL CONNECTIONS BETWEEN PVC LATERAL LINES SHALL BE MADE USING SCH. 40 PVC FITTINGS WITH COMPRESSION ADAPTERS. ALL CONNECTIONS BETWEEN DRIPPERLINES TO BE MADE USING COMPRESSION FITTINGS OF MANUFACTURER OF THE DRIPPERLINE. USE NO PIPE DOPE, TEFLON TAPE, PRIMER OR SOLVENT CEMENT ON COMPRESSION FITTINGS.

3.05 CONTROLLER

- A. THE EXACT LOCATION OF THE CONTROLLER SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE BEFORE INSTALLATION. THE ELECTRICAL SERVICE SHALL BE COORDINATED WITH THIS LOCATION.
- B. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL ELECTRICAL HOOK UP TO IRRIGATION CONTROLLER.
- C. THE IRRIGATION SYSTEM SHALL BE PROGRAMMED TO OPERATE DURING THE PERIODS OF MINIMAL USE OF THE DESIGN AREA.
- D. INSTALL CONTROLLER ENCLOSURE AS RECOMMENDED BY THE MANUFACTURER.

3.06 CONTROL WIRING

- A. LOW VOLTAGE CONTROL WIRING SHALL OCCUPY THE SAME TRENCH AND SHALL BE INSTALLED ALONG THE SAME ROUTE AS THE PRESSURE SUPPLY LINES WHENEVER POSSIBLE.
- B. WHERE MORE THAN ONE WIRE IS PLACED IN A TRENCH, THE WIRING SHALL BE TAPED TOGETHER IN A BUNDLE AT INTERVALS OF 10 FEET. BUNDLE SHALL BE SECURED TO THE MAINLINE WITH TAPE AT INTERVALS OF 20 FEET.
- C. ALL CONNECTIONS SHALL BE OF AN APPROVED TYPE AND SHALL OCCUR IN A VALVE BOX. PROVIDE AN 18 INCH SERVICE LOOP AT EACH CONNECTION.
- D. AN EXPANSION LOOP OF 12 INCHES SHALL BE PROVIDED AT EACH WIRE CONNECTION AND/OR DIRECTIONAL CHANGE, AND ONE OF 24 INCHES SHALL BE PROVIDED AT EACH REMOTE CONTROL VALVE.
- E. A CONTINUOUS RUN OF WIRE SHALL BE USED BETWEEN A CONTROLLER AND EACH REMOTE CONTROL VALVE. UNDER NO CIRCUMSTANCES SHALL SPLICES BE USED WITHOUT PRIOR APPROVAL.

3.07 VALVES

- A. AUTOMATIC CONTROL VALVES, BALL VALVES, GATE VALVES, AND QUICK COUPLER VALVES SHALL BE INSTALLED IN THE APPROXIMATE LOCATIONS INDICATED ON THE DRAWINGS.
- B. VALVE SHALL BE INSTALLED IN SHRUB AREAS WHENEVER POSSIBLE.
- C. INSTALL ALL VALVES AS INDICATED IN THE DETAIL DRAWINGS.
- D. VALVES TO BE INSTALLED IN VALVE BOXES SHALL BE INSTALLED ONE VALVE PER BOX.
- E. REMOTE CONTROL VALVES AND QUICK COUPLER VALVES SHALL BE ISOLATED FROM THE MAINLINE BY A BALL VALVE SIZED PER THE LARGEST R.C.V. IN THE MANIFOLD OR 1 1/2 INCH FOR Q.C.V.'S.

3.08 VALVE BOXES

- A. VALVE BOXES SHALL BE INSTALLED IN SHRUB AREAS WHENEVER POSSIBLE.
- B. EACH VALVE BOX SHALL BE INSTALLED ON A FOUNDATION OF 3/4 INCH GRAVEL BACKFILL, 2 CUBIC FEET MINIMUM. VALVE BOXES SHALL BE INSTALLED WITH THEIR TOPS 1/2 INCH ABOVE THE SURFACE OF SURROUNDING FINISH GRADE IN LAWN AREAS AND 3 INCHES ABOVE FINISH GRADE IN GROUND COVER AREAS.

3.09 BACKFLOW PREVENTERS

- A. INSTALL BACKFLOW PREVENTER UNIT AS INDICATED IN THE DETAIL DRAWINGS.
- B. INSTALL BACKFLOW ASSEMBLIES AT LOCATIONS APPROVED IN THE FIELD AND AT HEIGHT REQUIRED BY LOCAL CODES.
- C. INSTALL WYE STRAINERS AND PRESSURE REGULATORS ON THE BACKFLOW ASSEMBLY.
- D. IF BACKFLOW PREVENTER IS INSTALLED ADJACENT TO A BUILDING, WALL, OR OTHER OBSTRUCTION, INSTALL UNIT SO THAT THE TEST COCKS ARE FACING OUTWARD AWAY FROM THE OBSTRUCTION.
- E. INSTALL BACKFLOW ENCLOSURE AS RECOMMENDED BY THE MANUFACTURER.

3.10 SPRINKLER HEADS

- A. SPRINKLER HEADS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS.
- B. SPACING OF HEADS SHALL NOT EXCEED MAXIMUM INDICATED ON THE DRAWINGS.
- C. RISER NIPPLES SHALL BE OF THE SAME SIZE AS THE RISER OPENING IN THE SPRINKLER BODY.
- D. POP-UP SPRINKLER HEADS SHALL NOT BE INSTALLED USING SIDE OUTLET OPENINGS.
- E. RISER NIPPLES ON RECYCLED WATER SYSTEMS SHALL BE IDENTIFIED WITH ADHESIVE VINYL MARKERS BELOW SPRINKLER HEAD AND A MINIMUM OF 10 INCHES ABOVE FINISH GRADE.

3.11 MISCELLANEOUS EQUIPMENT

- A. INSTALL ALL ASSEMBLIES SPECIFIED HEREIN ACCORDING TO THE RESPECTIVE DETAIL DRAWINGS OR SPECIFICATIONS, USING BEST STANDARD PRACTICES.
- B. QUICK COUPLER VALVES SHALL BE SET APPROXIMATELY 12 INCHES FROM WALKS, CURBS, HEADER BOARDS, OR PAVED AREAS WHERE APPLICABLE.
- C. UNLESS DESIGNED AS AN INTEGRAL PART OF THE IRRIGATION HEAD, ANTI-DRAIN VALVES WILL BE INSTALLED UNDER EVERY HEAD. THE ANTI-DRAIN VALVE WILL BE THE SAME DIAMETER AS THE RISER AND BE INTEGRAL TO THE RISER ASSEMBLY.
- D. INSTALL RAIN SENSOR AS INDICATED ON THE DRAWINGS AND AS RECOMMENDED BY THE MANUFACTURER.

3.12 FLUSHING THE SYSTEM

- A. PRIOR TO INSTALLATION OF SPRINKLER NOZZLES, THE VALVES SHALL BE OPENED AND A FULL HEAD OF WATER USED TO FLUSH OUT THE LINES AND RISERS.
- B. SPRINKLER NOZZLES SHALL BE INSTALLED AFTER FLUSHING THE SYSTEM HAS BEEN COMPLETED.

3.13 ADJUSTING THE SYSTEM

- A. CONTRACTOR SHALL ADJUST VALVES, ALIGN HEADS, AND CHECK COVERAGE OF EACH SYSTEM PRIOR TO COVERAGE TEST.
- B. IF IT IS DETERMINED BY THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE THAT ADDITIONAL ADJUSTMENTS OR NOZZLE CHANGES WILL BE REQUIRED TO PROVIDE PROPER COVERAGE, ALL NECESSARY CHANGES OR ADJUSTMENTS SHALL BE MADE PRIOR TO ANY PLANTING.
- C. THE ENTIRE SYSTEM SHALL BE OPERATING PROPERLY BEFORE ANY PLANTING OPERATIONS COMMENCE.
- D. AUTOMATIC CONTROL VALVES ARE TO BE ADJUSTED SO THAT THE SPRINKLER HEADS OPERATE AT THE PRESSURE RECOMMENDED BY THE MANUFACTURER.

3.14 TESTING AND OBSERVATION

- A. DO NOT ALLOW OR CAUSE ANY OF THE WORK OF THIS SECTION TO BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN OBSERVED, TESTED AND ACCEPTED BY THE LANDSCAPE ARCHITECT, OWNER, AND GOVERNING AGENCIES.
- B. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR NOTIFYING THE LANDSCAPE ARCHITECT, OWNER, AND GOVERNING AGENCIES, A MINIMUM OF 48 HOURS IN ADVANCE, WHERE AND WHEN THE WORK IS READY FOR TESTING.
- C. WHEN THE SPRINKLER SYSTEM IS COMPLETED, THE CONTRACTOR SHALL PERFORM A COVERAGE TEST OF EACH SYSTEM IN ITS ENTIRETY TO DETERMINE IF THE WATER COVERAGE FOR THE PLANTED AREAS IS COMPLETE AND ADEQUATE IN THE PRESENCE OF THE LANDSCAPE ARCHITECT.
- D. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK REQUIRED TO CORRECT ANY INADEQUACIES OF COVERAGE DUE TO DEVIATIONS FROM THE PLANS, OR WHERE THE SYSTEM HAS BEEN WILLFULLY INSTALLED AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUSLY INADEQUATE, WITHOUT BRINGING THIS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THIS TEST SHALL BE ACCEPTED BY THE LANDSCAPE ARCHITECT AND ACCOMPLISHED BEFORE STARTING ANY PLANTING.
- E. FINAL INSPECTION WILL NOT COMMENCE WITHOUT RECORD DRAWINGS AS PREPARED BY THE IRRIGATION CONTRACTOR.

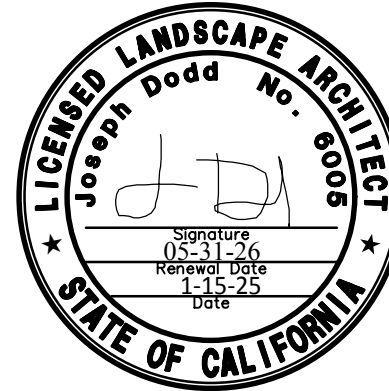
3.15 MAINTENANCE

DURING THE MAINTENANCE PERIOD THE CONTRACTOR SHALL ADJUST AND MAINTAIN THE IRRIGATION SYSTEM IN A FULLY OPERATIONAL CONDITION PROVIDING COMPLETE IRRIGATION COVERAGE TO ALL INTENDED PLANTINGS.

3.16 COMPLETION CLEANING

CLEAN-UP SHALL BE MADE AS EACH PORTION OF THE WORK PROGRESSES. REFUSE AND EXCESS DIRT SHALL BE REMOVED FROM THE SITE, ALL WALKS AND PAVING SHALL BE BROOMED, AND ANY DAMAGE SUSTAINED ON THE WORK OF OTHERS SHALL BE REPAIRED TO ORIGINAL CONDITIONS.

END OF SECTION



SAN MIGUEL FIRESTATION #18

1811 SUNCREST BLVD
EL CAJON, CA

IRRIGATION SPECIFICATIONS

PREPARED FOR

SAN MIGUEL FIRE DIST.
2850 VIA ORANGE WAY
SPRING VALLEY, CA

PREPARED BY

LINEAR LANDSCAPE
ARCHITECTURE

JOE DODD, ASLA
1619 MYRTLE AVE
SAN DIEGO, CA 92103
P | 888.203.6628

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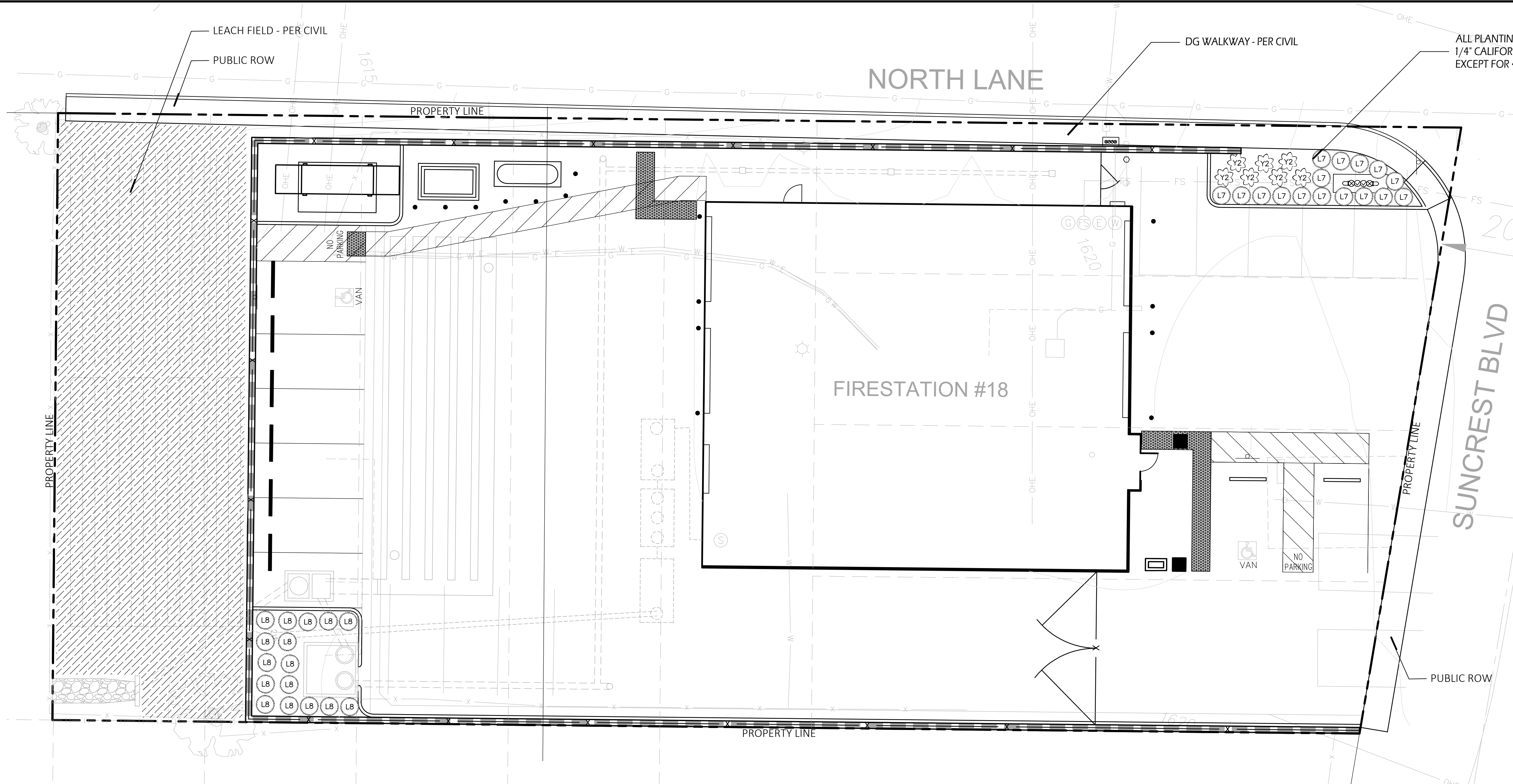
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OF 10

PDS2025-LP-25-043

THIS DRAWING IS TO BE SCALE 1/8"=1'-0" UNLESS OTHERWISE NOTED

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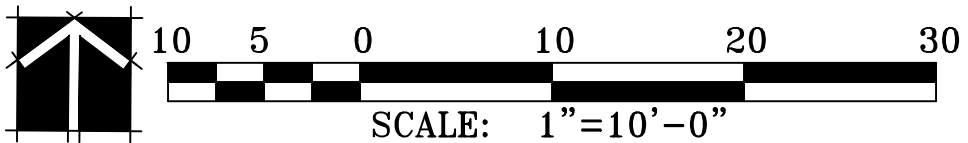


PLANT SCHEDULE

<u>SYMBOL</u>	<u>QTY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>WUCOLS</u>	
<u>SHRUBS</u>						
	16	Lomandra longifolia 'Breeze'	Dwarf Mat Rush	5 GAL	LOW	
	16	Lomandra longifolia 'Roma 13' TM	Platinum Beauty Variegated Mat Rush	1 GAL	LOW	
	7	Yucca filamentosa 'Color Guard'	Variegated Adams Needle	5 GAL	LOW	
<u>SYMBOL</u>	<u>QTY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>WUCOLS</u>	<u>SPACING</u>
<u>GROUND COVERS</u>						
	2,910 sf	Baccharis pilularis 'Twin Peaks'	Twin Peaks Coyote Brush	1 GAL	LOW	96" o.c.

I AM FAMILIAR WITH THE REQUIREMENTS FOR THE LANDSCAPE AND IRRIGATION PLANS CONTAINED IN THE COUNTY OF SAN DIEGO WATER EFFICIENT LANDSCAPE REGULATIONS. I HAVE PREPARED THIS PLAN IN COMPLIANCE WITH THOSE REGULATION AND THE LANDSCAPE DESIGN MANUAL. I CERTIFY THAT THE PLAN IMPLEMENTS THOSE REGULATIONS TO PROVIDE EFFICIENT USE OF WATER. UNDER PENALTY OF PERJURY, I AFFIRM THAT THE FOREGOING IS TRUE AND CORRECT

 1-17-25
JOE DODD, PLA CA# 6005 DATE



PDS2025-LP-25-043



SAN MIGUEL FIRESTATION #18

1811 SUNCREST BLVD
EL CAJON, CA

PLANTING PLAN

PREPARED FOR

SAN MIGUEL FIRE DIST.
2850 VIA ORANGE WAY
SPRING VALLEY, CA

PREPARED BY

LINEAR LANDSCAPE
ARCHITECTURE

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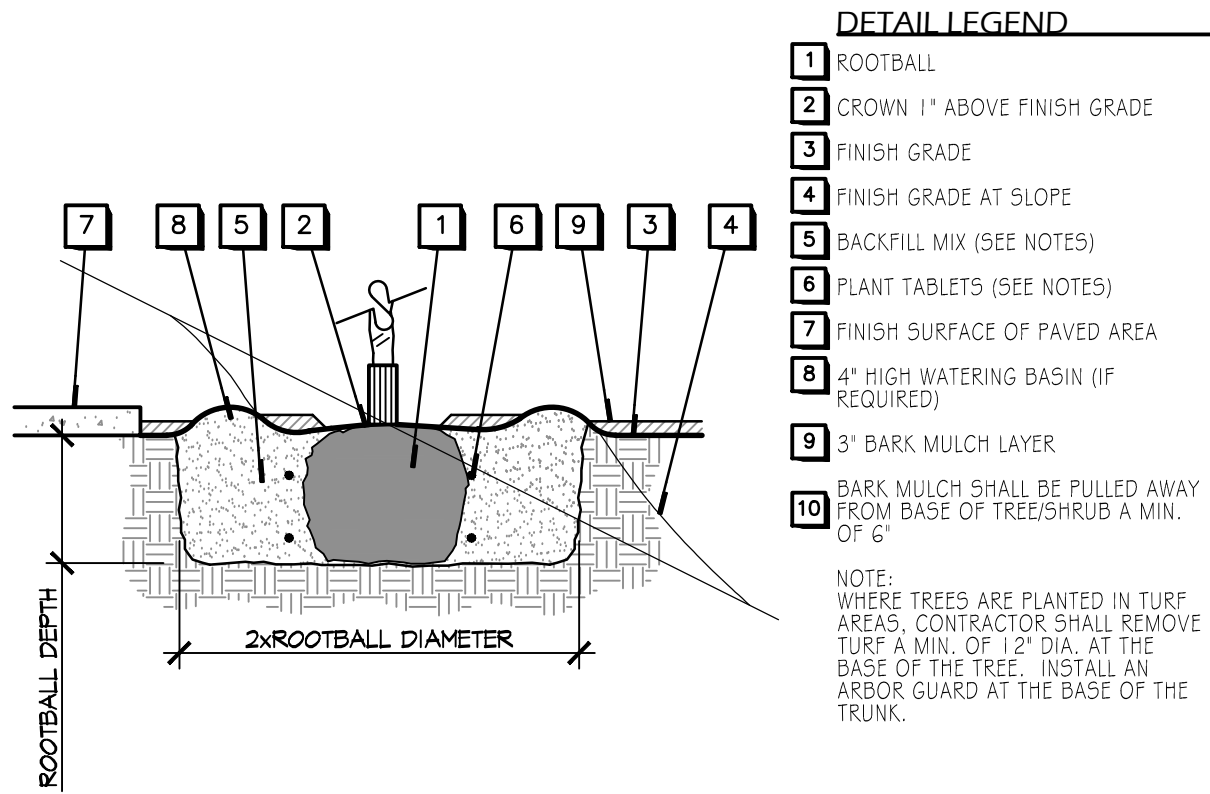
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PLANTING NOTES

1. A. THE PLANTING PLAN IS DIAGRAMMATIC. ALL PLANT LOCATIONS ARE APPROXIMATE. PLANT SYMBOLS TAKE PRECEDENCE OVER PLANT QUANTITIES SPECIFIED.
- B. QUANTITIES SHOWN ON THE PLANTING PLAN ARE APPROXIMATE AND ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY.
- C. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF THE DISCREPANCIES BETWEEN QUANTITIES AND SYMBOLS SHOWN.
2. LANDSCAPE CONTRACTOR SHALL APPLY A CONTACT HERBICIDE, WHERE WEEDS ARE PRESENT, PER MANUFACTURERS SPECIFICATIONS A MINIMUM OF TEN (10) DAYS PRIOR TO COMMENCEMENT OF ANY PLANTING OR IRRIGATION WORK. WEEDS SHALL BE ALLOWED TO COMPLETELY DIE BACK, INCLUDING THE ROOTS BEFORE PROCEEDING WITH WORK.
3. AN AGRONOMIC SOILS TEST WILL BE REQUIRED PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL SUBMIT A SOIL ANALYSIS REPORT FROM AN AUTHORIZED TESTING AGENCY TO THE LANDSCAPE ARCHITECT BEFORE BEGINNING WORK.
4. PRIOR TO PLANTING, IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL AND PLANTING AREAS SHALL BE THOROUGHLY SOAKED.
5. ALL AREAS TO BE PLANTED, WHICH HAVE A SLOPE OF LESS THAN 10%, SHALL BE CROSS-RIPPED TO A DEPTH OF SIX (6") INCHES AND THE FOLLOWING AMENDMENTS SPREAD EVENLY AND THOROUGHLY BLENDED IN PER 1,000 SQUARE FEET (QUANTITIES SUBJECT TO CHANGE PER SOIL ANALYSIS):
- A. 4 CUBIC YARDS COMPOST
- B. 100 POUNDS AGRICULTURAL GYPSUM
- C. 15 POUNDS IRON SULPHATE
- D. 25 POUNDS 16-6-8 SLOW RELEASE FERTILIZER
6. EACH PLANT SHALL RECEIVE "AGRIFORM" (OR EQUAL) PLANT TABLETS AS FOLLOWS:
- A. ROOTED CUTTING/4" POT - (1) 5 GRAM
- B. 1 GAL. CONTAINER - (1) 21 GRAM
- C. 5 GAL. CONTAINER - (3) 21 GRAM
- D. 15 GAL. CONTAINER - (5) 21 GRAM
- E. BOX TREE - (1) 21 GRAM PER 3" BOX SIZE
7. PLANT BACK FILL SHALL BE 50% SITE SOIL, AND 50% NITROGEN FORTIFIED REDWOOD SHAVINGS BY VOLUME.
8. PLANT PITS SHALL BE TWICE THE SIZE OF THE DESIGNATED NURSERY CONTAINER.
9. PLANT MATERIAL SHALL NOT BE ROOT BOUND. FIVE GALLON PLANTS AND LARGER SHALL HAVE BEEN GROWN IN CONTAINERS FOR A MINIMUM OF 6 MONTHS AND A MAXIMUM OF TWO YEARS.
10. PLANTS SHALL EXHIBIT HEALTHY GROWTH AND BE FREE OF DISEASES AND PESTS.
11. STAKE ALL TREES PER DETAIL.
12. REMOVE NURSERY STAKES ON ALL VINES AND ATTACH TO ADJACENT FENCES WITH GALV. NAILS AND GREEN NURSERY TAPE.
13. REMOVE NURSERY STAKES AND TIES FROM ALL CONTAINER STOCK. MAINTAIN SIDE GROWTH ON ALL TREES.
14. PLANTS SHALL NOT BE PLACED WITHIN TWELVE (24") INCHES OF SPRINKLER HEADS.
15. SHRUBS SHOWN IN PLANT AREAS SHALL BE UNDER-PLANTED WITH GROUNDCOVER SHOWN BY ADJACENT SYMBOL, TO WITHIN 12" OF MAIN PLANT STEM.
16. LANDSCAPE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 2% DRAINAGE AWAY FROM ALL BUILDINGS, STRUCTURES, AND WALLS. FINISHED GRADES SHALL BE SMOOTHED TO ELIMINATE PUDDLING OR STANDING WATER.
17. FINISHED GRADES SHALL BE ONE (1) INCH BELOW THE TOP OF CURBS, SILLS, AND WALKWAYS IN ALL AREAS. WHERE SOD IS LAID NEXT TO THESE IMPROVEMENTS-FINISH GRADE BEFORE LAYING SOD SHALL BE 1-1/2" BELOW THE TOP.
18. THE LANDSCAPE CONTRACTOR SHALL LEAVE SITE IN A CLEAN CONDITION, REMOVING ALL UNUSED MATERIAL, TRASH, AND TOOLS.
19. LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS FOR A PERIOD OF SIXTY (60) DAYS AFTER COMPLETION. ALL AREAS SHALL BE KEPT CLEAN, WATERED, AND WEED FREE.
20. AT COMPLETION OF ALL WORK OUTLINED IN THESE PLANS, THE LANDSCAPE CONTRACTOR SHALL CONTACT OWNER AND ARRANGE FOR A WALK THROUGH TO DETERMINE THAT ALL ASPECTS OF WORK ARE COMPLETED. WORK MUST BE FULLY COMPLETED ACCORDING TO ALL PLANS AND SPECIFICATIONS, MUST BE COMPLETED IN A GOOD WORKMANSHIP MANNER, AND MUST BE ACCEPTED BY THE OWNER IN WRITING PRIOR TO THE BEGINNING OF THE MAINTENANCE PERIOD.

21. MULCH: ALL REQUIRED PLANTING AREAS SHALL BE COVERED WITH MULCH TO A MIN. DEPTH OF 3 INCHES, EXCLUDING SLOPES REQUIRING REVEGETATION AND AREAS PLANTED WITH GROUND COVER. ALL EXPOSED SOIL AREAS WITHOUT VEGETATION SHALL ALSO BE MULCHED TO THIS MIN. DEPTH (SDMC 142.0413(b)).
22. ALL TREES PLANTED WITHIN 5' FROM ANY HARDSCAPE PAVEMENT, OR CURBS SHALL RECEIVE A LB24-2 'DEEP ROOT' TREE ROOT BARRIER INSTALLED IN A 10' LINEAR APPLICATION, OR AS SHOWN ON PLANTING PLAN. ROOT BARRIER SHALL NOT ENCIRCLE THE ROOT BALL. SEE ROOT BARRIER DETAIL.
23. LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS FOR A PERIOD OF SIXTY (60) DAYS AFTER COMPLETION. ALL AREAS SHALL BE KEPT CLEAN, WATERED, AND WEED FREE.
24. AT COMPLETION OF ALL WORK OUTLINED IN THESE PLANS, THE LANDSCAPE CONTRACTOR SHALL CONTACT OWNER AND ARRANGE FOR A WALK THROUGH TO DETERMINE THAT ALL ASPECTS OF WORK ARE COMPLETED. WORK MUST BE FULLY COMPLETED ACCORDING TO ALL PLANS AND SPECIFICATIONS AND MUST BE COMPLETED IN A GOOD WORKMANSHIP MANNER AND MUST BE ACCEPTED BY THE OWNER IN WRITING PRIOR TO THE BEGINNING OF THE MAINTENANCE PERIOD.
25. THE MAINTENANCE PERIOD SHALL INCLUDE THE FOLLOWING SCOPE OF WORK:
- A. DAILY WATERING OF ALL PLANT MATERIAL.
- B. WEEKLY MOWING OF ALL TURF AREAS.
- C. WEEDING AND REMOVAL OF ALL WEEDS FROM GROUND COVER AREAS.
- D. REPLACEMENT OF ANY DEAD, DYING, OR DAMAGED TREES, SHRUBS, OR GROUND COVERS.
- E. FILLING AND REPLANTING OF ANY LOW AREAS WHICH MAY CAUSE STANDING WATER.
- F. ADJUSTING OF SPRINKLER HEAD HEIGHT AND WATERING SYSTEM.
- G. FILLING AND RECOMPACTION OF ERODED AREAS.
- H. WEEKLY REMOVAL OF ALL TRASH, LITTER, CLIPPINGS, AND ALL FOREIGN DEBRIS.
- I. AT 120 DAYS AFTER PLANTING AND PRIOR TO THE END OF THE MAINTENANCE PERIOD, ORGANIC FERTILIZER SHALL BE APPLIED TO PLANTING AREAS AS PER MANUFACTURER'S RECOMMENDATIONS.
- J. AT 60 DAYS ORGANIC FERTILIZER SHALL BE APPLIED TO TURF AREAS AS PER MANUFACTURER'S RECOMMENDATIONS.
26. PRIOR TO END OF MAINTENANCE PERIOD, LANDSCAPE CONTRACTOR SHALL CONTACT OWNER AND ARRANGE FOR A FINAL WALK THROUGH. OWNER MUST ACCEPT ALL MAINTAINED AREAS IN WRITING PRIOR TO END OF MAINTENANCE PERIOD.
27. ALL GROUND COVERS SHALL BE GUARANTEED BY THE CONTRACTOR AS TO GROWTH AND HEALTH FOR A PERIOD OF SIXTY (60) DAYS AFTER THE COMPLETION OF MAINTENANCE PERIOD AND FINAL ACCEPTANCE. ALL SHRUBS SHALL BE GUARANTEED BY THE CONTRACTOR AS TO GROWTH AND HEALTH FOR A PERIOD OF NINETY (90) DAYS AFTER COMPLETION OF MAINTENANCE PERIOD AND FINAL ACCEPTANCE. ALL TREES SHALL BE GUARANTEED BY THE CONTRACTOR TO LIVE AND GROW IN AN ACCEPTABLE UPRIGHT POSITION FOR A PERIOD OF ONE (1) YEAR AFTER COMPLETION OF THE SPECIFIED MAINTENANCE PERIOD AND FINAL ACCEPTANCE.
28. THE CONTRACTOR, WITHIN FIFTEEN (15) DAYS OF WRITTEN NOTIFICATION BY THE LANDSCAPE ARCHITECT, SHALL REMOVE AND REPLACE ALL GUARANTEED PLANT MATERIALS, WHICH FOR ANY REASON FAIL TO MEET THE REQUIREMENTS OF THE GUARANTEE. REPLACEMENT SHALL BE MADE WITH PLANT MATERIALS AS INDICATED OR SPECIFIED ON THE ORIGINAL PLANS, AND ALL SUCH REPLACEMENT MATERIALS SHALL BE GUARANTEED AS SPECIFIED FOR THE ORIGINAL MATERIAL GUARANTEE.
29. ALL MECHANICAL EQUIPMENT AND UTILITIES SHALL BE SCREENED BY PLANTING. IF NOT ALREADY INDICATED ON THE PLAN, ALLOW EIGHT 5-GALLON SHRUBS PER UTILITY TO BE PLACED DURING PLANT INSTALLATION AS NEEDED TO PROVIDE REQUIRED SCREENING.
30. A CERTIFICATE OF COMPLETION, USING THE CITY'S FORM AND SIGNED BY THE LICENSED PROFESSIONAL WHO PREPARED THE PLANS, WILL BE REQUIRED AT TIME OF COMPLETION OF INSTALLATION.

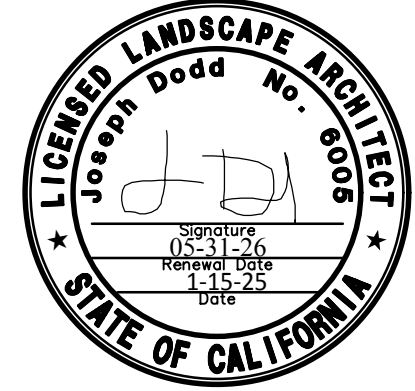
NOTE:
WHERE TREES ARE PLANTED IN TURF AREAS, CONTRACTOR SHALL REMOVE TURF A MIN. OF 12" DIA. AT THE BASE OF THE TREE. INSTALL AN ARBOR GUARD AT THE BASE OF THE TRUNK.

ROOTBALL DEPTH

2xROOTBALL DIAMETER

TREE AND SHRUB PLANTING

NOT TO SCALE



PREPARED FOR

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PLANTING SPECIFICATIONS

SECTION 02900 – LANDSCAPING
PART 1 – GENERAL
1.1 RELATED DOCUMENTS

SECTION:
1.2 SUMMARY
A. This section includes the following:

- 1. Trees.
- 2. Shrubs.
- 3. Plants.
- 4. Soil amendments.
- 5. Fertilizers and mulches.
- 6. Stakes.
- 7. Landscape edgings.

1.3 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract.

- B. Product certificates signed by manufacturers certifying that their products comply with specified requirements.
- 1. Manufacturer's certified analysis for standard products.
- 2. Analysis for other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- 3. Label data substantiating that plants, trees, shrubs, and planting materials comply with specified requirements.

C. Material test reports from qualified independent testing agency indicating and interpreting test results relative to compliance of the following materials with requirements indicated.

- 1. Analysis of existing surface soil.
- 2. Analysis of imported topsoil.

D. Planting schedule indicating anticipated dates and locations for each type of planting.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed landscaping work similar in material, design, and extent to that indicated for this Project and with a record of successful landscape establishment.

- 1. Installer's Field Supervision: Require installer to maintain an experienced full-time supervisor on the Project site during times that landscaping is in progress.

B. Provide quality, size, genus, species, and variety of trees and shrubs indicated, complying with applicable requirements of ANSI Z60.1 "American Standard for Nursery Stock."

C. Preinstallation Conference: Conduct conference at Project site notifying City of San Diego Landscape Architect, allow 48 hours notice.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivering and while stored at site.

B. Trees and Shrubs: Do not prune trees and shrubs before delivery, expect as approved by Landscape Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind–tie trees or shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery. Do not drop trees and shrubs during delivery.

C. Deliver trees, shrubs, ground covers, and plants after preparations for planting have been completed and install immediately. If planting is delayed after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist.

- 1. Do not remove container–grown stock from containers before time of planting.
- 2. Water root systems of trees and shrubs stored on site with a fine–mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.6 PROJECT CONDITIONS

A. Utilities: Determine location of above grade and underground utilities and perform work in a manner which will avoid damage. Hand excavate, as required. Maintain grade stakes until removal is mutually agreed upon by parties concerned.

B. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Architect before planting.

1.7. COORDINATION AND SCHEDULING

A. Coordinate installation of planting materials during normal planting seasons for each type of plant material required.

1.8 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Special Warranty: Warrant the following living planting materials for a period of one year for trees and 90 days for shrubs, groundcover and plants, after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents that are beyond Contractor's control.

C. Remove and replace dead planting materials immediately unless required to plant in the succeeding planting season.

D. Replace planting materials that are more than 25 percent dead at in an unhealthy condition at end of warranty period.

1.9 TREE AND SHRUB MAINTENANCE

A. MAINTAIN TREES AND SHRUBS BY PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, RESTORING PLANTING SAUCERS, TIGHTENING AND REPAIRING STAKES, AND RESETING TO PROPER GRADES OR VERTICAL POSITION, AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. RESTORE OR REPLACE DAMAGED TREE WRAPPINGS. MAINTAIN TREES AND SHRUBS FOR THE FOLLOWING PERIOD:

- 1. MAINTENANCE PERIOD: 3 MONTHS FOLLOWING SUBSTANTIAL COMPLETION.

PART 2 – PRODUCTS
2.1 TREE AND SHRUB MATERIAL

A. GENERAL: FURNISH NURSERY–GROWN TREES AND SHRUBS CONFORMING TO ANSI Z60.1, WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPANTING OR ROOT PRUNING. PROVIDE WELL–SHAPED, FULLY–BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFEATS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.

B. GRADE: PROVIDE TREES AND SHRUBS OF SIZES AND GRADES CONFORMING TO ANSI Z60.1 FOR TYPE OF TREES AND SHRUBS REQUIRED. TREES AND SHRUBS OF A LARGER SIZE MAY BE USED IF ACCEPTABLE TO ARCHITECT, WITH A PROPORTIONATE INCREASE IN SIZE OF ROOTS OR BALLS.

C. LABEL AT LEAST 1 TREE AND 1 SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.

2.2 SHADE AND FLOWERING TREES

A. SHADE TREES: SINGLE–STEM TREES WITH STRAIGHT TRUNK, WELL–BALANCED CROWN, AND INTACT LEADER, OF SIZE INDICATED, CONFORMING TO ANSI Z60.1 FOR TYPE OF TREES REQUIRED.

- 1. BRANCHING HEIGHT: 1/2 OF TREE HEIGHT.

B. Small Trees: Small upright or spreading type, branched or pruned naturally according to species and type, and with relationship of caliper, height, and branching recommended by ANSI Z60.1, and stem form as follows:

- 1. Form: Multistem, clump, with 2 or more main stems.

C. Container–grown trees will meet ANSI Z60.1 limitations for container stock.

2.3 BROADLEAF EVERGREENS

A. Form and Size: Normal–quality, well–balanced, broadleaf evergreens, of type, height, spread, and shape required, conforming to ANSI Z60.1.

2.4 PLANTS

A. Provide plants established and well rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ANSI Z60.1 for the pot size indicated.

2.5 SOIL AMENDMENTS

A. Lime: ASTM C 602, Class T, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent, with a minimum 99 percent passing a No. 8 (2.36 mm) sieve and a minimum 75 percent passing a No. 60 (250 micrometer) sieve.

- 1. Provide lime in the form of dolomitic limestone.

B. Aluminum Sulfate: Commercial grade, unadulterated.

C. Sand: Clean, washed, natural or manufactured sand, free of toxic materials.

D. Perlite: Horticultural perlite, soil amendment grade.

E. Peat Humus: Finely divided or granular texture, with a ph range of 6 to 7.5, composed of partially decomposed moss peat (other than sphagnum), peat humus, or reed–sedge peat.

F. Peat Humus: For acid–tolerant trees and shrubs, provide moss peat, with a pH range of 3.2 to 4.5, coarse fibrous texture, medium–divided sphagnum moss peat or reed–sedge peat.

G. Sawdust or Ground–Bark Humus: Decomposed, nitrogen–treated, of uniform texture, free of chips, stones, sticks, soil, or toxic materials.

- 1. When site treated, mix with at least 0.15 lb (2.4 kg) of ammonium nitrate or 0.25 lb (4 kg) of ammonium sulfate per cu. ft. (cu. m) of loose sawdust or ground bark.

H. Manure: Well–rotted, unleached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

I. Herbicides: EPA registered and approved, of type recommended by manufacturer.

J. Water: As provided by local water purveyor.

2.6 FERTILIZER

A. Bonemeal: Commercial, raw, finely ground; minimum of 4 percent nitrogen and 20 percent phosphoric acid.

B. Superphosphate: Commercial, phosphate mixture, soluble; minimum of 20 percent available phosphoric acid.

C. Commercial Fertilizer: Commercial–grade complete fertilizer of neutral character, consisting of fast– and slow–release nitrogen, 50 percent derived from natural organic sources or urea–form, phosphorous, and potassium in the following composition:

- 1. Composition: 1 lb per 1000 sq. ft. (0.5 kg per 100 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
- 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil–testing agency.

D. Slow–Release Fertilizer: Granular fertilizer consisting of 50 percent water–insoluble nitrogen, phosphorous, and potassium in the following composition:

- 1. Composition: 5 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight.
- 2. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
- 3. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil–testing agency.
- 4. 'Agriform' (or equal) planting tablets shall be tightly compressed, long–lasting and slow–release. Weights of 5, 10, and 21 grams listed in the guaranteed analysis. Install size and quantity of tablets per size of plant material as specified by manufacturer on container.

2.7 MULCHES

A. ORGANIC MULCH: ORGANIC MUCH, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS, CONSISTING OF ONE OF THE FOLLOWING:

- 1. TYPE: GROUND OR SHREDDED BARK.

B. PEAT MULCH: PROVIDE PEAT MOSS IN NATURAL, SHREDDED, OR GRANULATED FORM, OF FINE TEXTURE, WITH A PH RANGE OF 4 TO 6 AND A WATER–ABSORBING CAPACITY OF 1100 TO 2000 PERCENT.

C. FIBER MULCH: BIODEGRADABLE DYED–WOOD CELLULOSE–FIBER MULCH, NONTXIC, FREE OF PLANT GROWTH– OR GERMINATION–INHIBITORS, WITH MAXIMUM MOISTURE CONTENT OF 15 PERCENT AND A PH RANGE OF 4.5 TO 6.5.

D. INSTALL 3" DEPTH OF MULCH IN ALL NON–TURF PLANTING AREAS LESS STEEP THAN 3:1.

E. INSTALL 3" DEPTH OF SMALL BARK NUGGETS 1" MINUS ON ALL PLANTERS ON PODIUM. PRECISION SOILS AND FOREST PRODUCTS, INC. 909/880–0015.

F. INSTALL 3" DEPTH OF WALK ON BARK AT ALL ON–GRADE AREAS. ORGANIC SOLUTIONS, 800/600–5568

2.8 STAKES

A. UPRIGHT STAKES: ROUGH–SAWN, SOUND, NEW HARDWOOD, REDWOOD, OR PRESSURE–PRESERVATIVE–TREATED SOFTWOOD, FREE OF KNOTS, HOLES, CROSS GRAIN, AND OTHER DEFECTS, 2 INCHES DIAMETER BY LENGTH INDICATED, POINTED AT ONE END.

B. HOSE CHAFING GUARD: REINFORCED RUBBER OR PLASTIC HOSE AT LEAST 1/2 INCH (13 MM) IN DIAMETER, BLACK, CUT TO LENGTHS REQUIRED TO PROTECT TREE TRUNKS DAMAGE.

2.9 LIGHTWEIGHT SOIL MIX (PLANTERS)

Amount	Ingredients
0.6 cubic yards	forest residuals
0.3 cubic yards	washed concrete sand
0.1 cubic yards	screened sandy loam topsoil
$\frac{2}{3}$ Pounds	potassium nitrate
1 pound	urea
2 pounds	triple super phosphate
3 pounds	dolomite lime
2 pounds	nitroform
1 pound	iron sulfate
Available through: Lbr corp – soil prep – tamara scurlock (310) 639–4524	

B. Prior to soil installation, contractor shall Provide a letter of certification that light Weight soil meets above specs and does not Exceed a saturated weight of 80 lbs per cubic Foot.

C. Due to decomposition of organics, in lightweight Soil, maintenance contractor will be required To add lightweight soil as required to maintain Soil level as shown on detail.

PART 3 – EXECUTION
3.1 EXAMINATION

A. Examine areas to receive landscaping for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. LAY OUT INDIVIDUAL TREE AND SHRUB LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS. STAKE LOCATIONS, OUTLINE AREAS, AND SECURE ARCHITECT'S ACCEPTANCE BEFORE THE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS MAY BE REQUIRED.

3.3 PLANTING SOIL PREPARATION

A. MIX SOIL AMENDMENTS AND FERTILIZERS WITH SITE SOIL AT RATES INDICATED. DELAY MIXING FERTILIZER IF PLANTING DOES NOT FOLLOW PLACING OF PLANTING SOIL WITHIN A FEW DAYS. AMENDMENTS WILL BE MODIFIED FROM THOSE NOTED BASED ON SOILS REPORTS PERFORMED BY CONTRACTOR MIN. (3).

B. FOR TREE PIT OR TRENCH BACKFILL, MIX PLANTING SOIL BEFORE BACKFILLING AND STOCKPILE AT SITE.

C. FOR PLANTING BEDS, MIX PLANTING SOIL EITHER PRIOR TO PLANTING OR APPLY ON SURFACE OF TOPSOIL AND MIX THOROUGHLY BEFORE PLANTING.

PLANT BACKFILL SHALL BE PER SOIL TEST PERFORMED BY A SOIL TESTING LABORATORY (PRE–APPROVED BY THE CITY). THE TEST SHALL INDICATE BUT NOT BE LIMITED TO THE FOLLOWING:

- A. ORGANIC MATTER CONTENT
- B. N, P, K
- C. PH
- D. EC
- E. SOIL TEXTURE (SILT, SLAY, SAND)
- F. RECOMMENDATIONS FOR AMENDMENTS, LEACHING AND MAINTENANCE FERTILIZATIONS.

THE RESULTS AND RECOMMENDATIONS OF THE SOIL TESTING LABORATORY SHALL BE SUBMITTED TO AND APPROVED BY THE CITY OF CARLSBAD. THE APPROVED RECOMMENDATIONS FOR AMENDMENTS AND BACKFILL SHALL BE INCORPORATED INTO THE LANDSCAPE PLANS PRIOR TO THE START OF CONSTRUCTION AND SHALL BECOME PART OF THE APPROVED PLANS. PRODUCTS SPECIFIED BY PRODUCT NAME BY THE SOIL LAB. IN THE RECOMMENDATIONS MAY BE SUBSTITUTED WITH 'OR EQUAL' PRODUCTS APPROVED BY THE CITY OF CARLSBAD.

3.4 GROUND COVER AND PLANTING BED PREPARATION

A. LOOSEN SUBGRADE OF PLANTING BED AREAS TO A MINIMUM DEPTH OF 6 INCHES (150 MM). REMOVE STONES LARGER THAN 1–1/2 INCHES (38 MM) IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEIOUS MATERIALS.

B. SPREAD PLANTING SOIL MIXTURE TO DEPTH REQUIRED TO MEET THICKNESS, GRADES, AND ELEVATIONS SHOWN AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. PLACE SOIL MIXTURE IN TWO (2) LIFTS AND INSURE PROPER COMPACTION OF PLANTING BEDS.

C. EACH PLANT SHALL RECEIVE ONE (1) 5 GRAM 'AGRIFORM' (OR EQUAL) PLANT TABLET.

3.5 EXCAVATION FOR TREES AND SHRUBS

A. PITS AND TRENCHES: EXCAVATE WITH VERTICAL SIDES AND WITH BOTTOM OF EXCAVATION SLIGHTLY RAISED AT CENTER TO ASSIST DRAINAGE. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION.

- 1. CONTAINER–GROWN TREES AND SHRUBS: EXCAVATE TO TWICE CONTAINER WIDTH, AND TO DEPTH OF ROOTBALL IN CONTAINER.
- 2. EXCAVATION AND PLANTING OF TREES SHALL BE COMPLETED PRIOR TO INSTALLATION OF DRAIN LINE.

B. OBSTRUCTIONS: NOTIFY ARCHITECT IF UNEXPECTED ROCK OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS ARE ENCOUNTERED IN EXCAVATIONS.

- 1. HARDPAN LAYER: DRILL 6–INCH– (150 MM–) DIAMETER HOLES INTO FREE–DRAINING STRATA OR TO A DEPTH OF 10 FEET (3 M), WHICHEVER IS LESS, AND BACKFILL WITH FREE–DRAINING MATERIAL.

C. DRAINAGE: NOTIFY ARCHITECT IF SUBSOIL SONDITIONS EVIDENCE UNEXPECTED WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PITS.

D. FILL EXCAVATIONS WITH WATER AND ALLOW TO PERCOLATE OUT, BEFORE PLACING SETTING LAYER AND POSITIONING TREES AND SHRUBS.

3.6 PLANTING TREES AND SHRUBS

A. SET CONTAINER–GROWN STOCK PLUMB AND IN CENTER OF PIT OR TRENCH WITH TOP OF BALL LEVEL TO ADJACENT FINISH GRADES AS INDICATED.

- 1. CAREFULLY REMOVE CONTAINERS SO AS NOT TO DAMAGE ROOT BALLS.
- 2. PLACE BACKFILL AROUND BALL IN LAYERS, TAMPING TO SETTLE BACKFILL AND ELIMINATE VOIDS AND AIR POCKETS. WHEN PIT IS APPROXIMATELY 1/2 BACKFILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE IS ABSORBED. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF BACKFILL.

B. DISH AND TAMP TOP OF BACKFILL TO FORM A 3–INCH– (75–MM–) HIGH MOUND AROUND THE RIM OF THE PIT. DO NOT COVER TOP OF ROOT BALL WITH BACKFILL.

3.7 TREE AND SHRUB PRUNING

A. PRUNE, THIN, AND SHAPE TREES AND SHRUBS ACCORDING TO STANDARD HORTICULTURAL PRATICE. PRUNE TREES TO RETAIN REQUIRED HEIGHT AND SPREAD. UNLESS OTHERWISE DIRECTED BY ARCHITECT, DO NOT CUT TREE LEADERS; REMOVE ONLY INJURED OR DEAD BRANCHES FROM FLOWERING TREES. PRUNE SHRUBS TO RETAIN NATURAL CHARACTER. SHRUB SIZES INDICATED ARE SIZE AFTER PRUNING.

3.8 TREE AND SHRUB STAKING

A. UPRIGHT STAKING AND TYING: STAKE TREES OF 15 GALLON AND LARGER. USE A MINIMUM OF 2 STAKES OF LENGTH REQUIRED TO PENETRATE AT LEAST 24 INCHES BELOW BOTTOM OF BACKFILLED EXCAVATION AND TO EXTEND AT LEAST 72 INCHES ABOVE GRADE. SET VERTICAL STAKES AND SPACE TO AVOID PENETRATING BALLS OR ROOT MASSES. SUPPORT TREES WITH 2 STANDS OF TIE WIRE ENCASED IN HOSE SECTIONS AT CONTACT POINTS WITH TREE TRUNK. STAKING AND TYING OF TREE IS NOT INTENDED TO IMMOBILIZE TREE. INSTALL TO ALLOW SLACK IN TIES, AVOIDING RIGID RESTRAINT OF TREE.

3.9 PLANTING PLANTS

A. SPACE PLANTS AS INDICATED.

B. DIG HOLES LARGE ENOUGH TO ALLOW SPREADING OF ROOTS, AND BACKFILL WITH PLANTING SOIL. WORK SOIL AROUND ROOTS TO ELIMATE AIR POCKETS AND LEACE A SLIGHT SAUCER INDENTATION AROUND PLANTS TO HOLD WATER. WATER THOROUGHLY AFTER PLANTING, TAKING CARE NOT TO COVER PLANT CROWNS WITH WET SOIL

3.10 MULCHING

A. MULCH BACKFILLED SURFACES OF PITS, TRENCHES, PLANTED AREAS, AND OTHER AREAS INDICATED. 3" LAYER SHALL BE INSTALLED IN SHRUB AREA WITH GRADE LESS THAN 3:1. SUBMIT SAMPLE TO CITY INSPECTOR FOR APPROVAL.

3.11 CLEANUP AND PROTECTION

A. DURING LANDSCAPING, KEEP PAVEMENTS CLEAN AND WORK AREA IN AN ORDERLY CONDITION.

B. PROTECT LANDSCAPING FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED.

3.12 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. DISPOSAL: REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING EXCESS SUBSOIL, UNSUITABLE SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF THE OWNER'S PROPERTY.

END OF SECTION 02900



SAN MIGUEL FIRESTATION #18

1811 SUNCREST BLVD
EL CAJON, CA

PLANTING SPECIFICATIONS

PREPARED FOR

SAN MIGUEL FIRE DIST.
2850 VIA ORANGE WAY
SPRING VALLEY, CA

PREPARED BY

LINEAR LANDSCAPE
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SUBMITTAL:
01 2-1-25
02 6-4-25
03 11-15-25

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