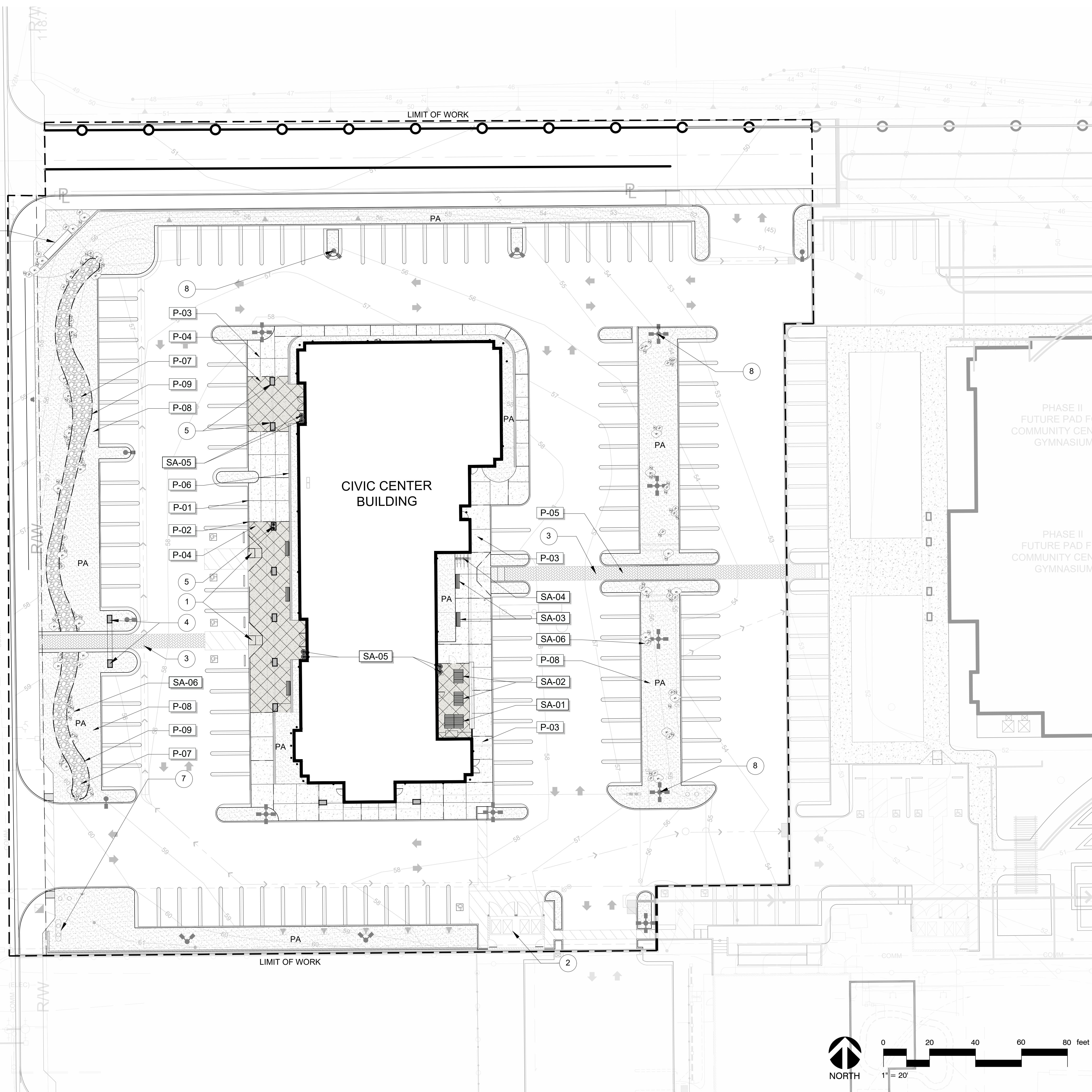


SHEEP CREEK ROAD

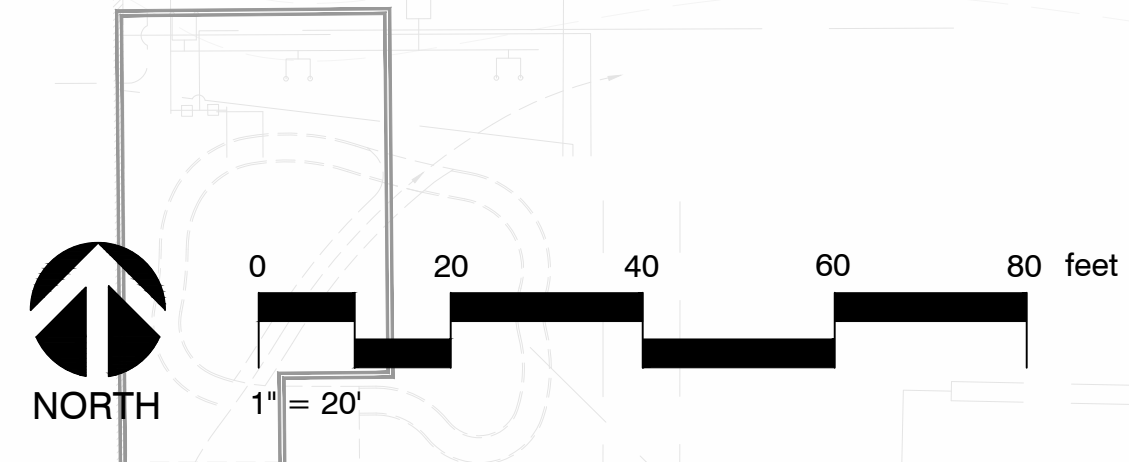


LEGEND		
KEY	SYMBOL	DESCRIPTION
P-01	— — — — —	CONTROL JOINT
P-02	- - - - -	EXPANSION JOINT
P-03	[Pattern]	PEDESTRIAN CONCRETE PAVING
P-04	[Pattern]	ENHANCED CONCRETE PAVING
P-05	[Pattern]	UNIT PAVERS
P-06	[Pattern]	1'-3" COBBLE
P-07	[Pattern]	COBBLE
P-08	[Pattern]	DECOMPOSED GRANITE
P-09	- - - - -	ALUMINUM HEADER
SA-01	[Symbol]	8' PICNIC TABLE
SA-02	[Symbol]	4' PICNIC TABLE
SA-03	[Symbol]	BENCH
SA-04	[Symbol]	BIKE RACK
SA-05	[Symbol]	TRASH & RECYCLING RECEPTACLE
SA-06	[Symbol]	BOULDERS

KEYNOTES	
KEY	DESCRIPTION
1	ADA ACCESSIBLE RAMP, TYP., PER CIVIL ENGINEER
2	TRASH ENCLOSURE, PER ARCHITECT
3	PEDESTRIAN CROSSING, PER CIVIL ENGINEER
4	ENTRY COLUMNS, TYP., PER ARCHITECT
5	BUILDING OVERHANG WITH COLUMNS, PER ARCHITECT
6	ENTRY SIGN, BY OTHERS
7	UTILITIES, PER CIVIL ENGINEER
8	LIGHT POLES TYP., PER ELECTRICAL ENGINEER

NOTES

- REFER TO SHEET LC-02 FOR LANDSCAPE CONSTRUCTION NOTES.
- REFER TO SHEET LC-03 FOR FULL LANDSCAPE CONSTRUCTION LEGEND.
- REFER TO SHEETS LC-04 - LC-05 FOR LANDSCAPE CONSTRUCTION DETAILS.
- AREAS LABELED "PA" ARE UNPAVED PLANTER AREAS.
- ALL SHEET CALLOUTS ARE USED TO POINT OUT THE SYMBOL BEING USED FOR EACH SITE ELEMENT ON THE SHEET. THESE CALLOUTS ARE TYPICAL AND EACH SITE ELEMENT IS ONLY INDICATED VIA CALLOUT IN ONE LOCATION ON EACH SHEET. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL OF THE SITE ELEMENTS SHOWN ON PLANS NOT JUST THOSE WITH A CALLOUT (REFER TO SYMBOLS INDICATED IN LEGEND).



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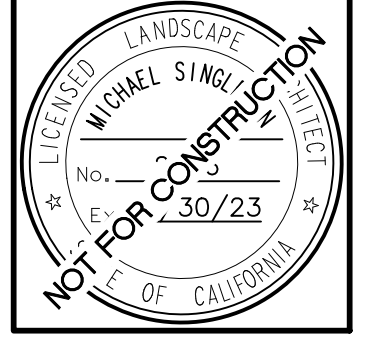


DATE FINISHED

REVISONS

THESE PLANS SHALL COMPLY WITH THE 2015 CALIFORNIA BUILDING CODE WHICH ADOPTS THE 2015 IBC, 2015 CBC AND THE 2015 ASCE 7-16 AND THE 2015 IBC 903.2.1.1.

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PROJECT: PHELAN CIVIC CENTER PARK

JOB NO.

SHEET NAME:

LANDSCAPE CONSTRUCTION PLAN

PAGE

LC-01

LANDSCAPE CONSTRUCTION NOTES

1. PRIOR TO BIDDING, THE CONTRACTOR IS TO CONFIRM CONDITIONS IN THE FIELD AFFECTING THE COMPLETION OF CONSTRUCTION WORK AND REPORT DISCREPANCIES TO THE RESIDENT ENGINEER / LANDSCAPE ARCHITECT.
2. PROTECT EXISTING UTILITIES, CURBS AND GUTTERS, LIGHTS, SIGNS, CATCH BASINS, STREET IMPROVEMENTS DURING CONSTRUCTION. ANY DAMAGED ITEMS SHALL BE REPLACED TO MATCH EXISTING AT CONTRACTORS OWN EXPENSE.
3. CONTRACTOR SHALL LAYOUT AND FIELD VERIFY ALL DIMENSIONS OF SITE ELEMENTS INCLUDING SCORELINES AND ALL RELATED WORK PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER AND LANDSCAPE ARCHITECT. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE ADJUSTMENTS IN THE FIELD.
4. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALING OF DRAWINGS. ANGLES ARE AT 90 DEGREES UNLESS NOTED OTHERWISE.
5. WHERE CONFLICTS OCCUR BETWEEN GENERAL CONSTRUCTION NOTES, DRAWINGS AND ACTUAL FIELD CONDITIONS, NOTIFY RESIDENT ENGINEER FOR CLARIFICATION. FAILURE TO PROVIDE NOTIFICATION MAY MAKE CONTRACTOR LIABLE FOR COSTS INCURRED TO RECTIFY THE DISCREPANCY.
6. CONTRACTOR TO CONSULT WITH THE PROJECT'S RESIDENT ENGINEER, APPROPRIATE AGENCIES, DIG ALERT, AND DRAWINGS TO VERIFY LOCATIONS OF UNDERGROUND UTILITIES, PIPES AND RELATED STRUCTURES. RESPONSIBILITY FOR COSTS INCURRED DUE TO DAMAGE OF THE UTILITIES, PIPES OR STRUCTURES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR IF PROPER VERIFICATION WAS NOT PERFORMED.
7. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION OPERATIONS WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTION AND GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING THE DESIGN PROCESS. CONTRACTOR SHALL BRING SUCH CONDITIONS TO ATTENTION OF RESIDENT ENGINEER IMMEDIATELY FOR RESOLUTION. CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR COSTS INCURRED AND REQUIRED MODIFICATIONS DUE TO LACK OF PROVIDING SUCH NOTIFICATION.
8. ALL HARDSCAPE TO SLOPE TOWARDS PLANTER AREAS. MIN. SLOPE 0.5%, MAX. 1.5%
9. FIELD VERIFY VERTICAL CONTROLS OF ALL CONSTRUCTION FEATURES AS SHOWN ON THE CONSTRUCTION PLANS PRIOR TO POURING CONCRETE FLATWORK.
10. ENSURE THAT FINISHED GRADES HAVE BEEN SET CORRECTLY PRIOR TO INSTALLING PAVING, CURBS AND OTHER STRUCTURES.
11. ENSURE THAT DRAIN LINES, IRRIGATION LATERAL AND MAINLINES, ELECTRICAL CONDUIT SLEEVES, ETC., ARE IN PLACE PRIOR TO INSTALLATION OF PAVING AND CURBS.
12. SEE CIVIL DRAWINGS FOR HARDSCAPE LAYOUT, GRADING, AND DRAINAGE INFORMATION.

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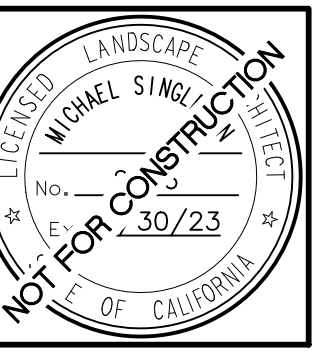


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REVISIONS

THESE PLANS SHALL COMPLY WITH THE 2018 CALIFORNIA BUILDING CODE WHICH ADOPTS THE 2018 IBC, 2018 CBC, 2018 FBC, 2018 CFC AND THE 2018 ENERGY STANDARDS.

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PROJECT: PHELAN CIVIC CENTER PARK

JOB NO.

SHEET NAME:

LANDSCAPE CONSTRUCTION NOTES


PAGE

LC-02

LANDSCAPE CONSTRUCTION SCHEDULE

KEY	DETAIL	ITEM	DESCRIPTION	COLOR & FINISH	NOTES & REMARKS	SUPPLIER INFORMATION
PAVING AND SURFACING						
P-03	PER CIVIL JOINTING: B / LC-04	PAVING TYPE 1	PEDESTRIAN CONCRETE PAVING	COLOR: NATURAL GRAY FINISH: LIGHT BROOM	CONCRETE DETAIL PER CIVIL ENGINEER, SEE PLANS FOR JOINTING	DAVIS COLORS PHONE: (800) 356-4848 WEBSITE: WWW.DAVISCOLORS.COM
P-04	PER CIVIL JOINTING: B / LC-04	PAVING TYPE 2	INTEGRAL COLOR CONCRETE	COLOR: DUNE FINISH: LIGHT BROOM	CONCRETE DETAIL PER CIVIL ENGINEER, SEE PLANS FOR JOINTING	
P-05	A / LC-0X	UNIT PAVERS	4" X 8" X 80 MM HOLLAND STONE, HERRINGBONE PATTERN	COLOR: SILEX BLEND FINISH: -	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	BELGARD PHONE: (877) 235-4273 WEBSITE: BELGARD.COM
P-06 P-07	D / LC-04	COBBLE	1"-2", 3"-5" & 6"-9" COBBLE	COLOR: MEXICAN BEACH PEBBLE - BUFF	SEE PLANS FOR LOCATIONS OF DIFFERENT COBBLE TYPES	SOUTHWEST BOULDER & STONE PHONE: (760) 328-5877 WEBSITE: SOUTHWESTBOULDER.COM
P-08	E / LC-04	UNSTABILIZED DECOMPOSED GRANITE	APPLIED AS MULCH IN PLANTING AREAS	COLOR: INDIAN RED	-	
P-09	F / LC-04	ALUMINUM HEADER	3/16" X 6" X 16' PERMALOC ALUMINUM HEADER WITH 18" STAKE	COLOR: BLACK DURAFLEX	-	PERMALOC PHONE: (616) 399-9600 WEBSITE: PERMALOC.COM
FURNISHINGS						
SA-01	A,B / LC-04	8' PICNIC TABLE	VICTOR STANLEY "ELLA" 8' PICNIC TABLE WITH TWO ELLA BACKLESS BENCHES	METAL: WHITE POWDER-COATED STEEL SLATS: WALNUT RECYCLED PLASTIC	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	VICTOR STANLEY PHONE: - WEBSITE: VICTORSTANLEY.COM
SA-02	A,B / LC-04	4' PICNIC TABLE	VICTOR STANLEY "ELLA" 4' PICNIC TABLE WITH TWO ELLA BACKLESS BENCHES	METAL: WHITE POWDER-COATED STEEL SLATS: WALNUT RECYCLED PLASTIC	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	
SA-03	F / LC-04	BENCH	VICTOR STANLEY "STELL" 6' BENCH	METAL: WHITE POWDER-COATED STEEL SLATS: WALNUT RECYCLED PLASTIC	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	
SA-04	C / LC-04	BIKE RACK	VICTOR STANLEY "STELL" BIKE RACK	METAL: WHITE POWDER-COATED STEEL SLATS: WALNUT RECYCLED PLASTIC	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	
SA-05	D / LC-04	TRASH & RECYCLING RECEPTACLE	VICTOR STANLEY "REN" TOP DEPOSIT TRASH AND RECYCLING RECEPTACLES	METAL: WHITE POWDER-COATED STEEL SLATS: WALNUT RECYCLED PLASTIC	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	
SA-06	C / LC-04	BOULDERS	2', 3', AND 4' DECORATIVE BOULDERS	COLOR: APACHE SUNSET	BOULDER LOCATIONS TO BE CONFIRMED BY LANDSCAPE ARCHITECT	
						SOUTHWEST BOULDER & STONE PHONE: (760) 328-5877 WEBSITE: SOUTHWESTBOULDER.COM

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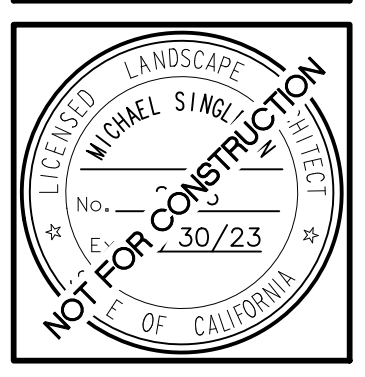


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REVISIONS

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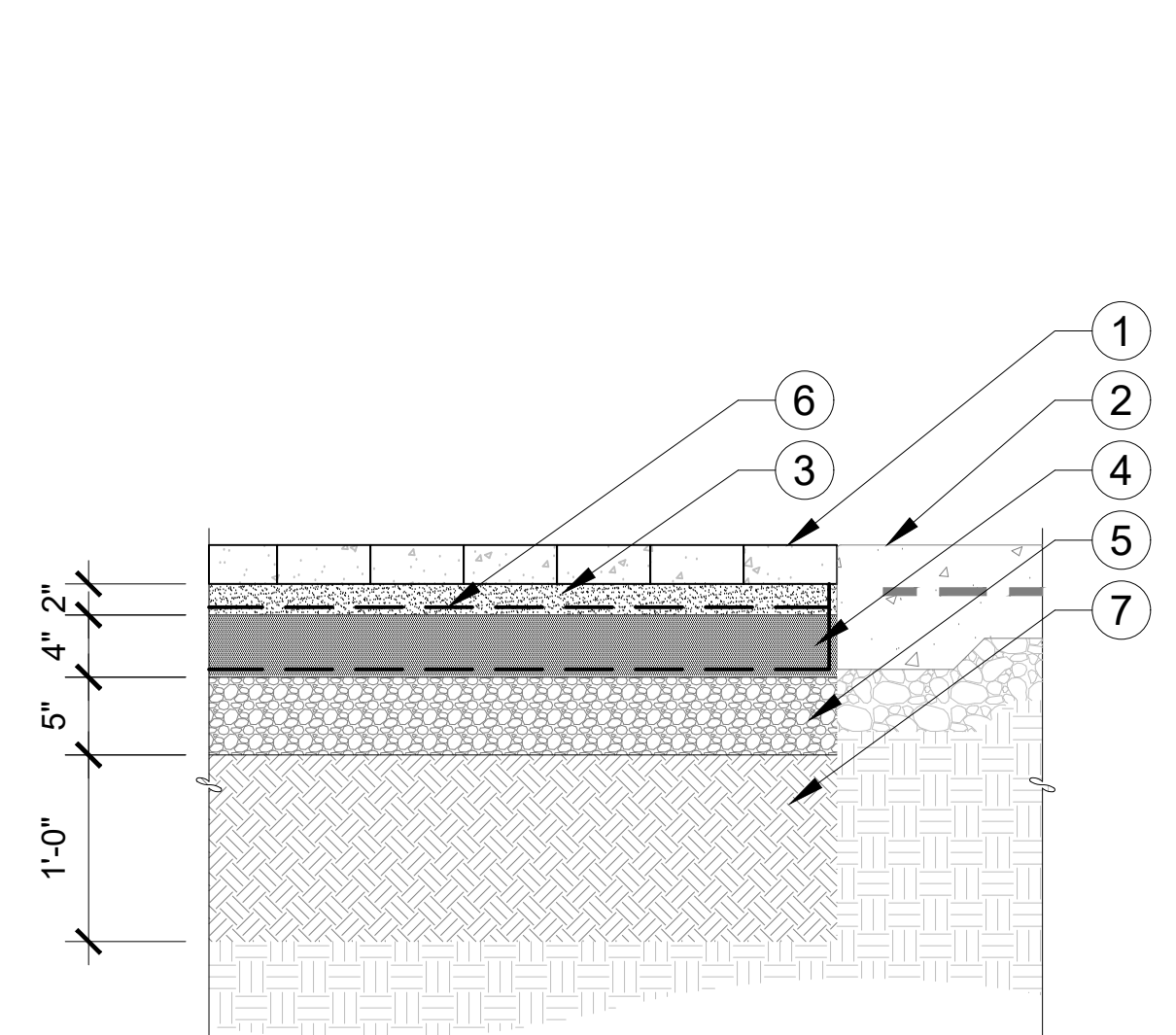


PROJECT: PHELAN CIVIC CENTER PARK

JOB NO.

SHEET NAME:
LANDSCAPE
CONSTRUCTION
LEGEND

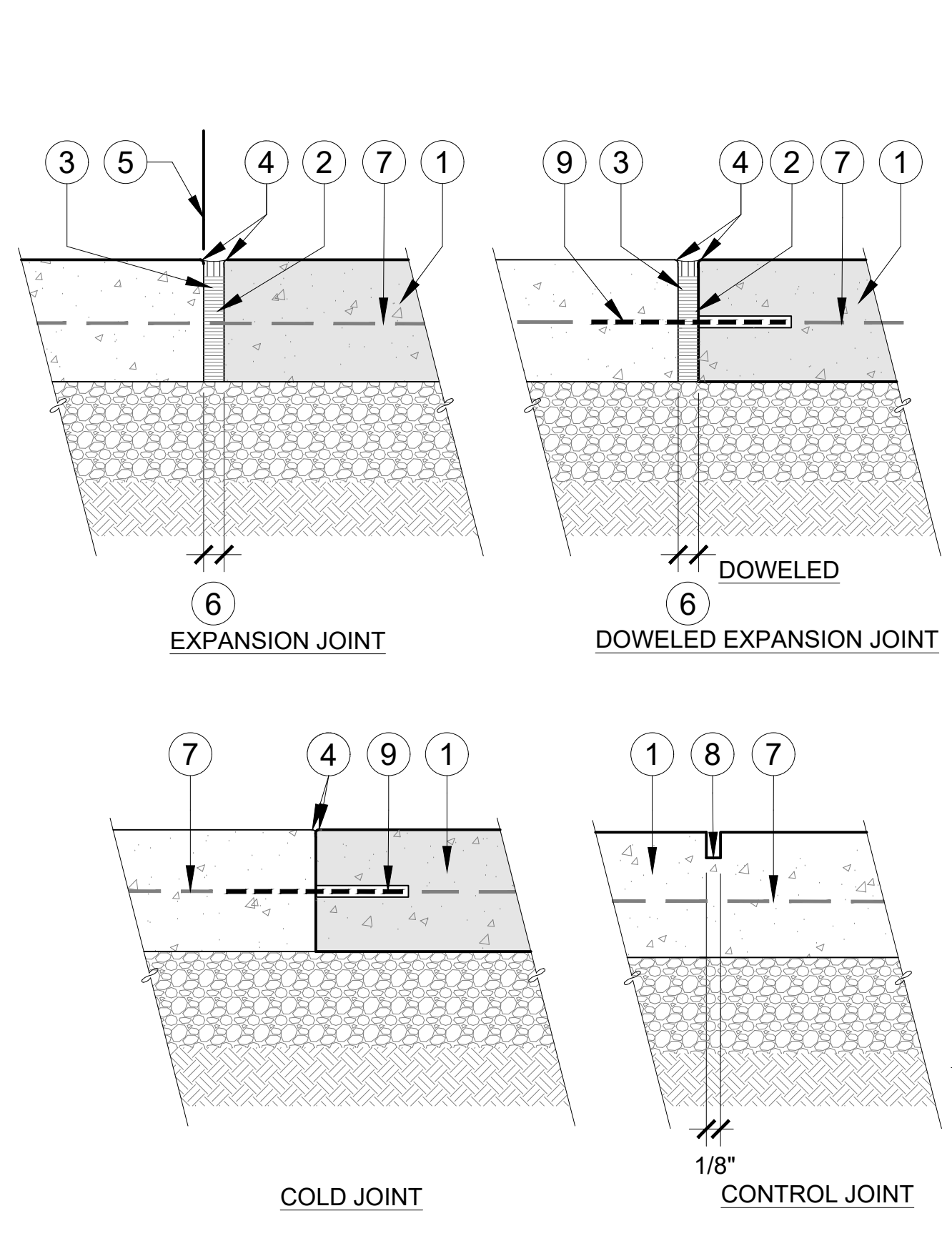
PAGE
LC-03



- LEGEND**
- ① 80 MM HOLLAND STONE PAVER
 - ② ADJACENT PAVING PER PLANS
 - ③ 2" SAND BEDDING COURSE
 - ④ CEMENT TREATED BASE COURSE
 - ⑤ 3/4" AGGREGATE BASE
 - ⑥ MIRAFI N-SERIES NONWOVEN POLYPROPYLENE GEOTEXTILE. PRODUCT TO BE SELECTED PER GEOTECHNICAL REPORT
 - ⑦ 95% COMPACTED SUBGRADE
 - ⑧ ADJACENT CURB OR PAVING PER PLANS

- NOTES:**
1. CONTRACTOR TO HAVE PAVEMENT AND SUBBASE THICKNESS VERIFIED WITH RESIDENT ENGINEER IN ACCORDANCE WITH GEOTECHNICAL STANDARDS
 2. REFER TO LANDSCAPE CONSTRUCTION LEGEND FOR COLORS AND FINISHES

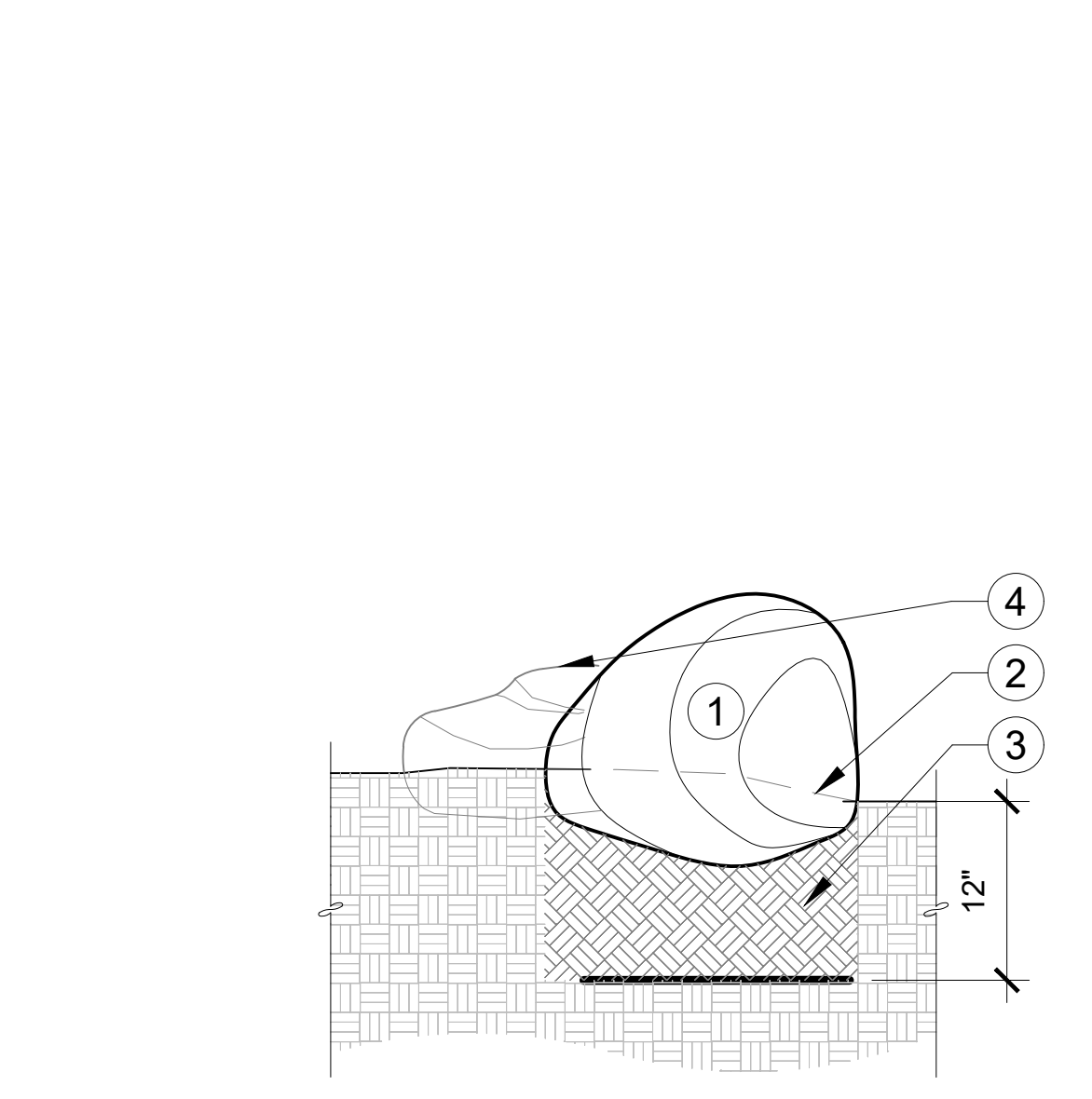
A UNIT PAVERS SECTION SCALE: 1" = 1'



- LEGEND**
- ① CONCRETE PAVING PER PLANS. REFER TO DETAIL B ON THIS SHEET
 - ② NOMAFLEX POLYPROPYLENE JOINT BACKER MATERIAL OR POLYFOAM BACKER MATERIAL (TO BE USED AROUND CURVES AND BOULDERS)
 - ③ SIKAFLEX - 1A JOINT SEALANT AT 1/2" DEPTH. COLOR TO MATCH ADJACENT HARDSCAPE SURFACE
 - ④ 1/4" RADIUS, TYP.
 - ⑤ FACE OF CURB, CONCRETE PAVING, WALL, BUILDING OR STRUCTURE - WHERE OCCURS
 - ⑥ EXPANSION JOINT WIDTH: PEDESTRIAN PAVEMENT - 3/8" VEHICULAR PAVEMENT - 1/2"
 - ⑦ CONCRETE REINFORCING PER GEOTECHNICAL REPORT AND CIVIL DRAWINGS
 - ⑧ SAWCUT JOINT PER PLANS. 1/2" DEPTH FOR PEDESTRIAN PAVING, 3/4" DEPTH FOR VEHICULAR PAVING. STOPPING JOINT SHORT OF GRATES, WALLS, BUILDING, ETC. IS UNACCEPTABLE
 - ⑨ #4 REBAR DOWEL WITH "SPEED DOWEL" PLASTIC SLEEVE #PSD1/2X5LT. SPACE DOWELS AT 12" O.C.

- NOTES:**
1. FOR CONCRETE THICKNESS AND INSTALLATION DETAILS OTHER THAN JOINTING, REFER TO CONCRETE PAVING DETAIL IN CIVIL DRAWINGS.
 2. SPACE EXPANSION JOINTS PER PLANS OR AT 20' O.C. MAX. SPACE CONTROL JOINTS PER PLANS OR AT 7' O.C. MAX.
 3. WHERE CONCRETE ABUTS WALLS / BUILDING PROVIDE CONTINUOUS EXPANSION JOINT MATERIAL (SEALED, NO DOWEL), TYP.

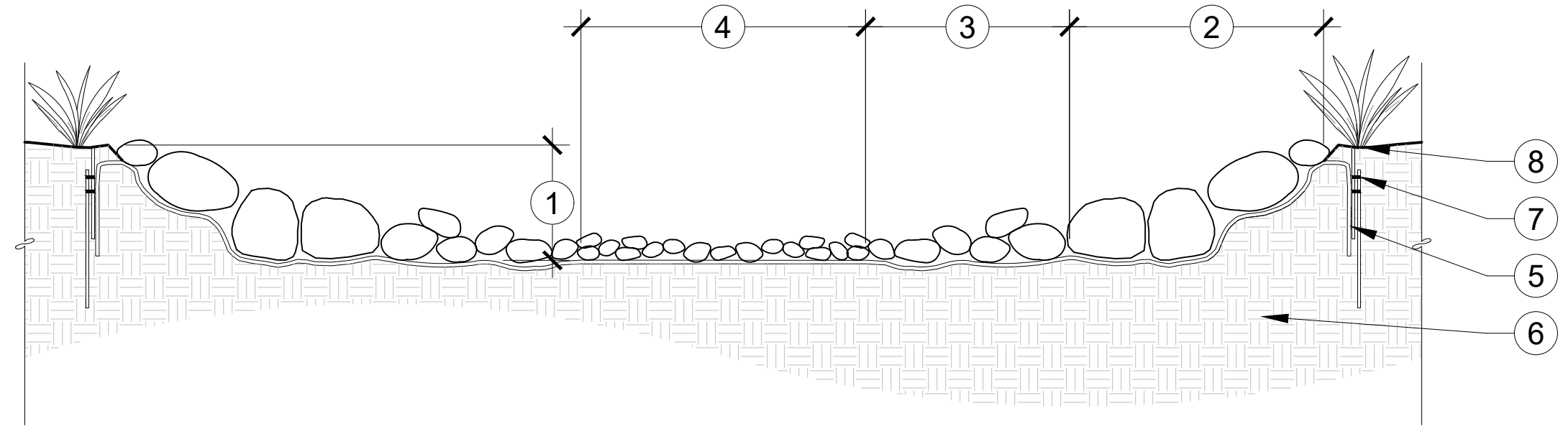
B TYPICAL JOINTS SECTION SCALE: NTS



- LEGEND**
- ① BOULDER - BURY LOWER THIRD
 - ② FINISH GRADE IN PLANTING AREA
 - ③ SUBGRADE. COMPACT 90% TO MIN. 12" DEPTH
 - ④ LANDSCAPE BOULDER BEYOND

- NOTES:**
1. APPROXIMATE BOULDER LOCATIONS SHOWN ON PLAN. FINAL BOULDER LOCATIONS SHALL BE REVIEWED AND APPROVED BY LANDSCAPE ARCHITECT IN THE FIELD. CONTRACTOR SHALL ADJUST POSITIONS OF BOULDERS AS REQUIRED BY LANDSCAPE ARCHITECT'S REVIEW.
 2. PLACE FLATTEST, WIDEST FACE OF BOULDER DOWN WITH APPROXIMATELY 1/3 OF ROCK BELOW FINISH GRADE. BOULDER SHALL NOT APPEAR TO "SIT" ON FINISH GRADE.
 3. REFER TO LANDSCAPE CONSTRUCTION LEGEND ON SHEET LC-03 FOR SIZES, COLORS AND TYPES OF BOULDERS.

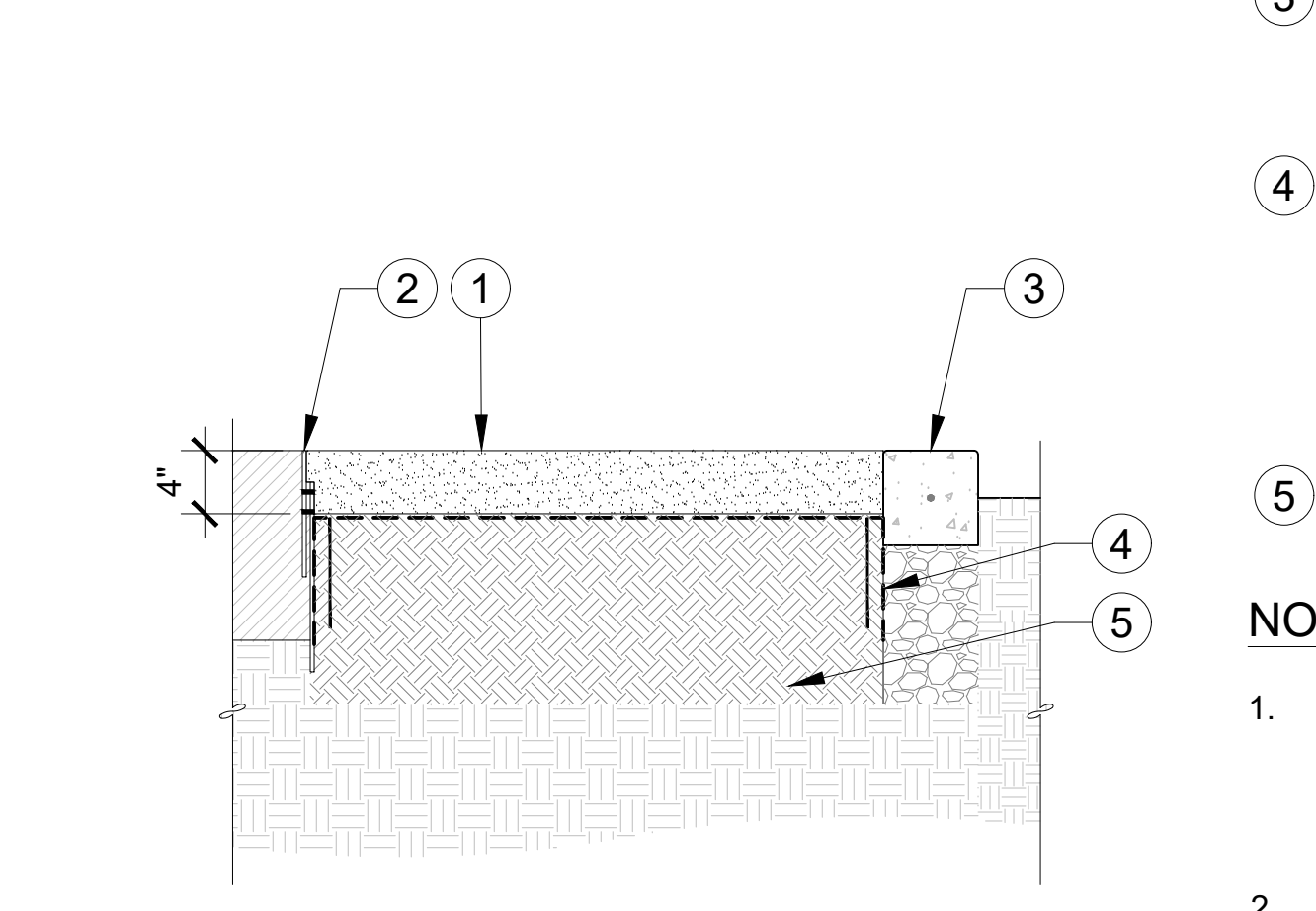
C LANDSCAPE BOULDER SECTION SCALE: 1" = 1'



- LEGEND**
- ① GRADES VARY, SEE CIVIL PLANS
 - ② 6"-8" COBBLE
 - ③ 3"-4" COBBLE
 - ④ 1"-2" COBBLE
 - ⑤ PERMEABLE WEED BLOCKING LANDSCAPE FABRIC. TENCATE MIRAFI 140N OR APPROVED EQUAL. INSTALL BELOW COBBLE AND TURN FABRIC UNDER AT ALL EDGES AT 8" MIN. DEPTH AS SHOWN. SECURE FABRIC WITH 6" LONG STAINLESS STEEL "U" STAKES AT 24" O.C. AT ALL EDGES
 - ⑥ SUBGRADE
 - ⑦ ALUMINUM HEADER, SEE DETAIL F, LC-04
 - ⑧ PLANTING AREA, WHERE OCCURS IN PLANS

- NOTES:**
1. COBBLE TO FULLY COVER WEED BLOCKING FABRIC SO THAT IT IS NOT VISIBLE THROUGHOUT AREA OF APPLICATION.
 2. LARGER COBBLE AT EDGES OF CHANNEL. EXACT WIDTH OF APPLICATION OF EACH TYPE OF COBBLE WILL VARY ALONG LENGTH OF CHANNEL.

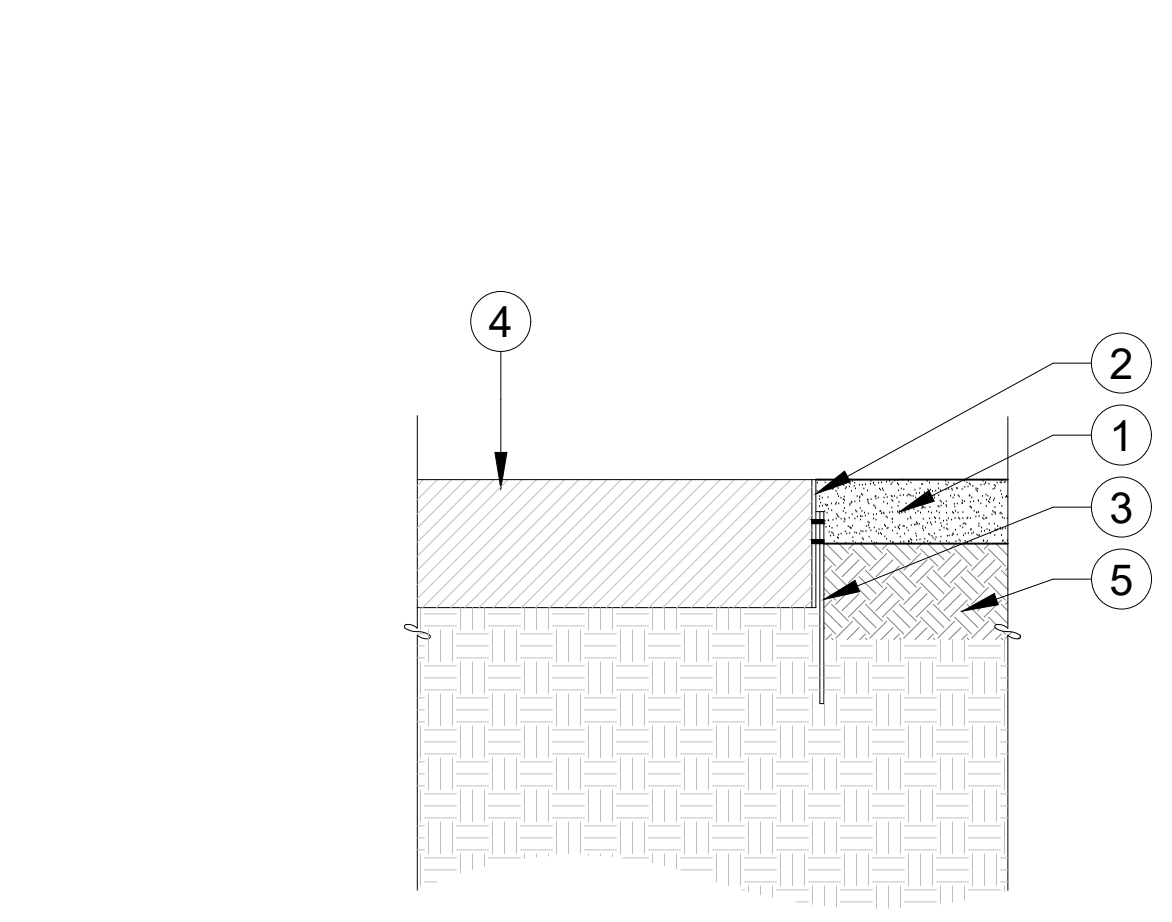
D COBBLE PLAN | SECTION | ELEVATION | ISOMETRIC SCALE: 1" = 1'



- LEGEND**
- ① DECOMPOSED GRANITE SURFACE
 - ② ALUMINUM HEADER WHERE OCCURS, SEE DETAIL F, THIS SHEET
 - ③ CONCRETE CURB OR PAVING WHERE OCCURS. DECOMPOSED GRANITE SHALL BE INSTALLED FLUSH AND LEVEL WITH PAVEMENT FINISH SURFACE
 - ④ PERMEABLE WEED BLOCKING LANDSCAPE FABRIC. TENCATE MIRAFI 140N OR APPROVED EQUAL. INSTALL BELOW DECOMPOSED GRANITE AND TURN FABRIC UNDER AT ALL EDGES AT 8" MIN. DEPTH AS SHOWN. SECURE FABRIC WITH 6" LONG STAINLESS STEEL "U" STAKES AT 24" O.C. AT ALL EDGES
 - ⑤ 95% COMPACTED SUBGRADE PER GEOTECH REPORT

- NOTES:**
1. STABILIZED DECOMPOSED GRANITE SURFACE SHALL BE MAINTAINED SO THAT A LEVEL, FIRM, STABLE, RESISTANT SURFACE IS PROVIDED. RE-APPLY STABILIZER PER MANUFACTURER'S RECOMMENDATIONS (EVERY 5-10 YEARS)
 2. REFER TO LANDSCAPE CONSTRUCTION SHEETS FOR EDGE CONDITIONS.
 3. REFER TO LANDSCAPE CONSTRUCTION LEGEND FOR COLORS AND FINISHES.

E DECOMPOSED GRANITE SECTION SCALE: 1" = 1'



- LEGEND**
- ① DECOMPOSED GRANITE, SEE DETAIL E, THIS SHEET
 - ② 3/16" X 8" X 16" PERMALOC ALUMINUM HEADER
 - ③ 12" METAL STAKES AT 30" O.C., FASTEN TO HEADER PER MANUFACTURER'S RECOMMENDATIONS
 - ④ COBBLE OR PLANTING WHERE OCCURS
 - ⑤ 95% COMPACTED SUBGRADE PER GEOTECH REPORT

- NOTES:**
1. TOP OF EDGING TO BE MAXIMUM OF 1/2" ABOVE SURFACE MATERIAL

F ALUMINUM HEADER SECTION SCALE: 1" = 1'

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DATE FINISHED
 REVISIONS

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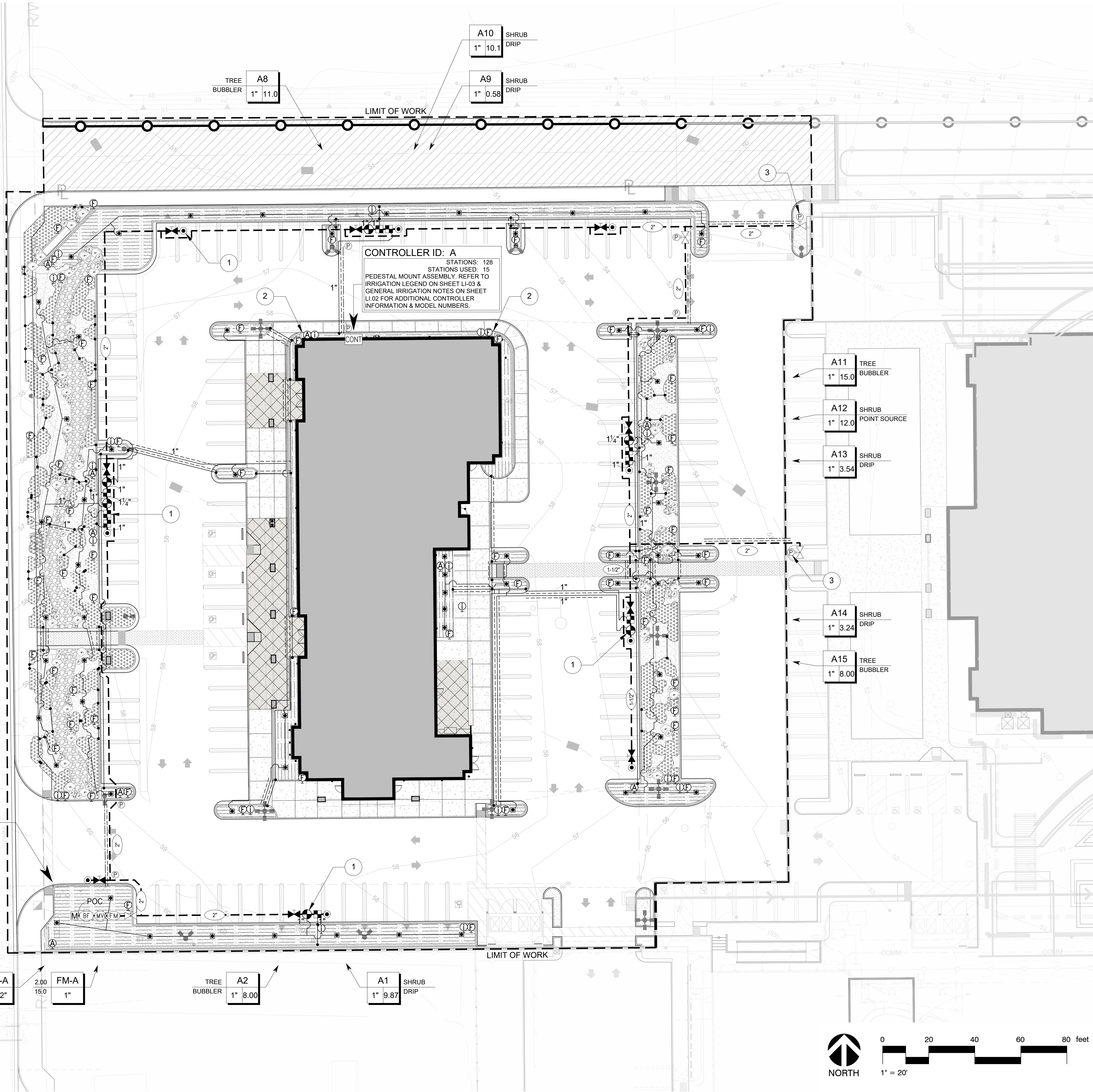
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LANDSCAPE ARCHITECT
 LICENSE NO. 10000
 EXPIRES 03/31/23
 NOT FOR CONSTRUCTION
 STATE OF CALIFORNIA

PROJECT: PHELAN CIVIC CENTER PARK

JOB NO.
 SHEET NAME:
 LANDSCAPE CONSTRUCTION DETAILS
 PAGE
 LC-04

SHEEP CREEK ROAD



POINT OF CONNECTION: A
 WATER METER: 1-1/2"
 BACKFLOW PREVENTER: 1-1/2"
 WYE STRAINER: 1-1/2"
 PEAK DEMAND: 15 GPM
 AVAILABLE WATER PRESSURE: 75 PSI
 ESTIMATED LANDSCAPE AREA (SQ.FT.): 12,151
 ESTIMATED LANDSCAPE AREA (ACRE): 0.28

IRRIGATION SYSTEM DESIGNED FOR 15 GPM AT 75 PSI (DELIVERY PRESSURE)

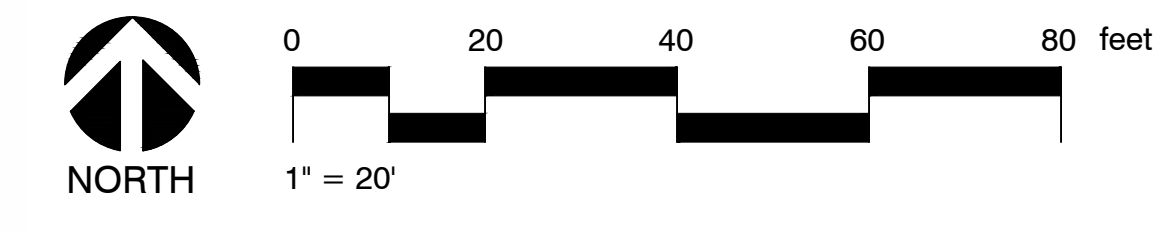
CONTROLLER ID: A
 STATIONS: 128
 STATIONS USED: 15
 PEDESTAL MOUNT ASSEMBLY. REFER TO IRRIGATION LEGEND ON SHEET LI-03 & GENERAL IRRIGATION NOTES ON SHEET LI-02 FOR ADDITIONAL CONTROLLER INFORMATION & MODEL NUMBERS.

IRRIGATION REFERENCE LEGEND	
SYMBOL	DESCRIPTION
	4" POP-UP TREE BUBBLER SYSTEM (2 BUBBLERS PER TREE / SYMBOL)
	WATER METER
	POINT OF CONNECTION
	BACKFLOW PREVENTER
NO SYMBOL	WYE STRAINER
	MASTER VALVE
	FLOW METER
	SITE IRRIGATION CONTROLLER (WALL MOUNT, EXT.) LOCATION TO BE DETERMINED
	BALL VALVE (MAINLINE ISOLATION VALVE)
	BALL VALVE (MANIFOLD ISOLATION VALVE)
	REMOTE CONTROL VALVE
	DRIP REMOTE CONTROL VALVE ASSEMBLY
	QUICK COUPLING VALVE
	POINT SOURCE IRRIGATION
	SUBSURFACE INLINE DRIP EMITTER TUBING
	DRIP AIR / VACUUM RELIEF VALVE
	DRIP FLUSH VALVE
	DRIP OPERATION / PRESSURE INDICATOR
	DRIP TO PVC TRANSITION FITTINGS
	IRRIGATION MAINLINE
	IRRIGATION LATERAL LINE
	PIPE SLEEVE
	WIRE CONDUIT
	PULL BOX

IRRIGATION KEY NOTES	
1	SHOWN DIAGRAMMATICALLY FOR DRAWING CLARITY. INSTALL VALVE MANIFOLD (BALL VALVE, REMOTE CONTROL VALVE AND QUICK COUPLING VALVE) AND IRRIGATION MAINLINE / WIRES IN PLANTING AREA, TYPICAL
2	SYSTEM SPLIT
3	PULL 5 FEET LENGTH OF 2-WIRE CABLE COILED NEATLY INSIDE PULL BOX FOR FUTURE SYSTEM EXPANSION (REFER TO ADJACENT PROJECT NOT IN CONTRACT)

LATERAL PIPE SIZING GUIDE			
UNLESS NOTED OTHERWISE, SIZE LATERAL PIPE AS FOLLOWS:			
0 - 7 GPM	-	3/4"	21 - 30 GPM - 1-1/2"
8 - 14 GPM	-	1"	31 - 50 GPM - 2"
15 - 20 GPM	-	1-1/4"	51 + GPM - 2-1/2"

SHEET NOTES	
1.	REFER TO SHEET LI-02 FOR IRRIGATION NOTES AND WATER USE CALCULATIONS.
2.	REFER TO SHEET LI-03 FOR FULL IRRIGATION LEGEND.
3.	REFER TO SHEETS LI-04 - LI-07 FOR IRRIGATION DETAILS.
4.	IRRIGATION MAINLINE, SPRINKLERS AND EQUIPMENT ARE SHOWN DIAGRAMMATICALLY. MAINLINE AND VALVES SHALL NOT BE PLACED IN PAVED AREAS. INSTALL MAINLINE WHENEVER POSSIBLE 18" FROM WALKS, CURBS AND WALLS.



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DATE FINISHED: _____
 REVISIONS: _____
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PROJECT: PHELAN CIVIC CENTER PARK

JOB NO. _____

SHEET NAME: IRRIGATION PLAN

PAGE: LI-01

WATER USE CALCULATIONS

Project No: 020-023		Date: 11/8/2021						
		City/Governing Agency: PPHCSD						
		Landscape Project Type: Non-residential						
Project Name: Phelan Civic Center Park								
Reference ETo: 66.5		CIMIS Station #: 117						
LA (Landscape area): 12,151 sq ft								
SLA (Special landscape area): 0 sq ft								
		SLA Description:						
		Crop plants 0						
		RW irrigation 0						
		RW feature/s 0						
		Active turf 0						
		Total: 0						
MAWA = Maximum Applied Water Allowance (gallons per year)								
MAWA = (ETo)(0.62) [0.45 x LA + 0.55 x SLA]								
ETo = Reference evapotranspiration (in inches per year)								
0.62 = Conversion factor (to get gallons per sq ft)								
0.45 = ET Adjustment Factor (ETAF) (for plant factors and irrigation efficiency)								
LA = Landscape Area including any SLA (in sq ft)								
0.55 = Additional Water Allowance for any SLA								
SLA = Special Landscape Area (in sq ft)(edible crops, recycl. water features, recycl. water, recreational/active turf areas)								
		MAWA = 225,444 gal/year						
ETWU = Estimated Total Water use (gal/yr)								
		Calculations:						
ETWU = (ETo)(0.62)(PF x HA/IE)		(67*0.62)*(5,100)= 210,293 gal/year						
ETWU(SLA) = (ETo)(0.62)(SLA)		(67*0.62)*(0)= 0 gal/year						
Total ETWU = ETWU+ETWU(SLA)		ETWU = 210,293 gal/year						
ETo = Reference ET (inches per year)								
0.62 = Conversion factor (to get gallons per sq ft)								
PF = Plant Factor from WUCOLS* (low: 0.1-0.3, moderate: 0.4-0.6, high water use: 0.7-1.0; art. turf: 0.1-0.2; water features: 0.8)								
HA = Hydrozone Area (very low, low, moderate or high water use, in sq ft)								
IE = Irrigation Efficiency (Bubbler: 0.81; Spray: 0.75; Microspray: 0.75; Rotator: 0.75; Rotor: 0.75; Drip: 0.81)								
SLA = Special Landscape Area (in sq ft)(edible crops, recycl. water features, recycl. water, recreational/active turf areas)								
*WUCOLS = Water Use Classification of Landscape Species								
Hydrozone No.	Plant Water Use Type Classification	Plant	Plant Factor (PF)	Hydrozone Area (HA) (sq ft)	PF x HA (sq ft)	IE	PF x HA / IE	
1	Moderate	Trees	0.5	992	496	0.81	612	(Bubbler)
2	Moderate	Shrubs	0.4	7,018	2807	0.81	3,466	(Drip)
3	Low	Shrubs	0.2	4,141	828	0.81	1,022	(Point Source)
HA sq ft Sum:				12,151			5,100	
				ETWU = 210,293 gal/year				
				MAWA = 225,444 gal/year				

IRRIGATION NOTES

GENERAL NOTES:

- IRRIGATION MAINLINE, WIRE, VALVES AND CONTROLLERS WHICH SERVE AREAS OUTSIDE OF THE PROJECT SITE SHALL REMAIN OPERATIONAL.
- ASCERTAIN THE EXTENT OF ANY SIMULTANEOUS AND ESSENTIAL WORK BY OTHERS ON THE SITE. CONTRACTORS SHALL COORDINATE THEIR OPERATIONS AND SHALL COOPERATE TO MINIMIZE INTERFERENCE.
- CORRELATE AND CONFIRM DIMENSIONS AT THE JOB SITE, PRIOR TO START OF ANY WORK.
- ALL NEW CONTROLLER STATION TERMINALS SHALL HAVE WIRES CONNECTED TO THEM, WITH ALL STATION WIRES RUN OUT TO THE FIELD. ALL SPARE CONTROLLER VALVE WIRES SHALL BE STUBBED OUT FOR FUTURE USE AS NOTED ON THIS PLAN. COORDINATE ALL WIRE STUBOUTS WITH CITY'S REPRESENTATIVE PRIOR TO INSTALLING WIRES.
- THESE SYSTEMS ARE DESIGNED ACCORDING TO AN EXISTING STATIC WATER PRESSURE OF 79 PSI AVAILABLE AT THE BACKFLOW IRRIGATION PREVENTER. A MINIMUM OF 40 PSI IS REQUIRED AT THE SPRINKLER HEADS. ENSURE ALL LANDSCAPED AREAS AFFECTED BY THIS CONSTRUCTION RECEIVE COMPLETE IRRIGATION COVERAGE.
- VERIFY THE EXACT LOCATION AND THE EXISTING AVAILABLE WATER PRESSURE AT POINT OF CONNECTION PRIOR TO ORDERING ANY IRRIGATION MATERIALS AND PROCEEDING WITH INSTALLING IRRIGATION SYSTEM. IF THE CONTRACTOR FAILS TO NOTIFY THE LANDSCAPE ARCHITECT SHOULD THE EXISTING AVAILABLE WATER PRESSURE FOUND BE DIFFERENT, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES AND ADDITIONS THAT MAY OCCUR TO THE SYSTEMS.
- IRRIGATION MAINLINE, SPRINKLERS AND EQUIPMENT ARE SHOWN DIAGRAMMATICALLY. MAINLINE AND VALVES SHALL NOT BE PLACED IN PAVED AREAS. INSTALL MAINLINE WHENEVER POSSIBLE 18" FROM WALKS, CURBS AND WALLS.
- VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES, STRUCTURES IN WORK AREA PRIOR TO START OF CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN SUCH OBSTACLES AND THE PROPOSED WORK, CONTRACTOR SHALL PROMPTLY NOTIFY LANDSCAPE ARCHITECT TO ARRANGE FOR RELOCATIONS IF REQUIRED WITHIN WORK AREA PRIOR TO START OF CONSTRUCTION.
- VERIFY SITE FOR LOCATION OF ELECTRICAL SOURCE AND HAVE ELECTRICAL CONTRACTOR PROVIDE POWER AND DATA SERVICE TO CONTROLLER.
- INSTALL QUICK COUPLING VALVES AND REMOTE CONTROL VALVES ADJACENT TO WALKS AND CURBS (12" MAX. FROM SUCH EDGES) IN PLANTING AREAS WHENEVER POSSIBLE.
- ALL LATERAL END RUNS ARE 3/4" SIZE UNLESS INDICATED OTHERWISE.
- ALL IRRIGATION LINES PASSING UNDER PAVING, THROUGH WALLS, STRUCTURES, ETC. SHALL BE SLEEVED WITH PVC SCH 40 BELL-END PIPE. SLEEVE SHALL BE 2 TIMES THE DIAMETER OF PIPE TO BE SLEEVED, MINIMUM.
- CONTROL WIRES PASSING UNDER PAVING, THROUGH WALLS, STRUCTURES, ETC. SHALL BE INSTALLED IN PVC SCH 40 BELL-END PIPE SLEEVES (USE SWEEPS WHERE POSSIBLE) AT LEAST 2 TIMES THE DIAMETER OF WIRE BUNDLE (2" SIZE MINIMUM); KEEP SEPARATE FROM WATER LINE SLEEVES INDICATED ON PLANS.
- NO LOW HEAD DRAINAGE IS ALLOWED. WHERE LOW HEAD DRAINAGE OCCURS THE CONTRACTOR SHALL INSTALL AN ANTI-DRAIN VALVE UNDER EACH SPRINKLER HEAD. THE ANTI-DRAIN VALVE WILL BE THE SAME DIAMETER SIZE AS THE RISER AND SHALL BE INTEGRATED INTO THE RISER ASSEMBLY. VALVE SHALL BE "HUNTER HCV", OR APPROVED EQUAL. IN THE CASE OF HEADS WITH BUILT-IN ANTI-DRAIN VALVES, THE MANUFACTURER'S INTEGRATED CHECK VALVE SHALL BE USED.
- ALL SPRINKLER HEADS SHALL BE INSTALLED AND ADJUSTED TO KEEP WATER AND SPRAY OFF ALL PAVING, WALKS, NON-PLANTED AREAS, WALLS AND OTHER STRUCTURES, AT ALL TIMES.
- UPRIGHT GROWING SHRUBS SHALL BE PLANTED NO CLOSER THAN 2 FEET FROM SPRINKLER HEADS, FROM SPRINKLER HEAD TO OUTSIDE EDGE OF SHRUB FOLIAGE.
- ALL SPRINKLER HEADS SHALL BE ADJUSTED AS REQUIRED, AS TO HEIGHT, COVERAGE PATTERN OR SPRINKLER HEAD ORIENTATION, SO AS NOT TO ALLOW BLOCKAGE OF SPRAY PATTERN BY PLANT MATERIAL THAT MAY IN TURN CAUSE PLANT DECLINE OR DEMISE.
- ALL PLANTINGS SHALL BE FULLY WATERED IN UPON PLANTING. DO NOT RELY SOLELY UPON THE SPRINKLER SYSTEM. UTILIZE SUPPLEMENTAL HOSE WATERING AS REQUIRED, INITIALLY AND DURING THE PLANT ESTABLISHMENT PERIOD, TO ENSURE ALL PLANTINGS RECEIVE ADEQUATE AND REGULAR WATER TO THE ENTIRE ROOT ZONE.

KTUA PLANNING AND IRRIGATION
3816 NORRIMA STREET
SAN DIEGO, CA 92103
TEL: 619.294.4477

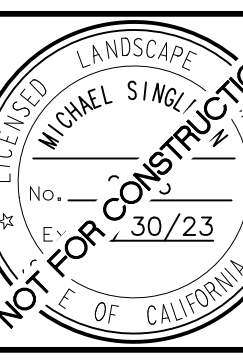


DATE FINISHED

REVISIONS

THESE PLANS SHALL COMPLY WITH THE 2018 CALIFORNIA BUILDING CODE, CALIFORNIA THE 2018 CIVIL ENGINEERING AND LANDSCAPE ARCHITECTURE CODES, 2018 CALIFORNIA ELECTRICAL CODE, 2018 CALIFORNIA MECHANICAL CODE AND THE 2018 ENERGY STANDARDS.

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PROJECT: PHELAN CIVIC CENTER PARK

JOB NO.

SHEET NAME:

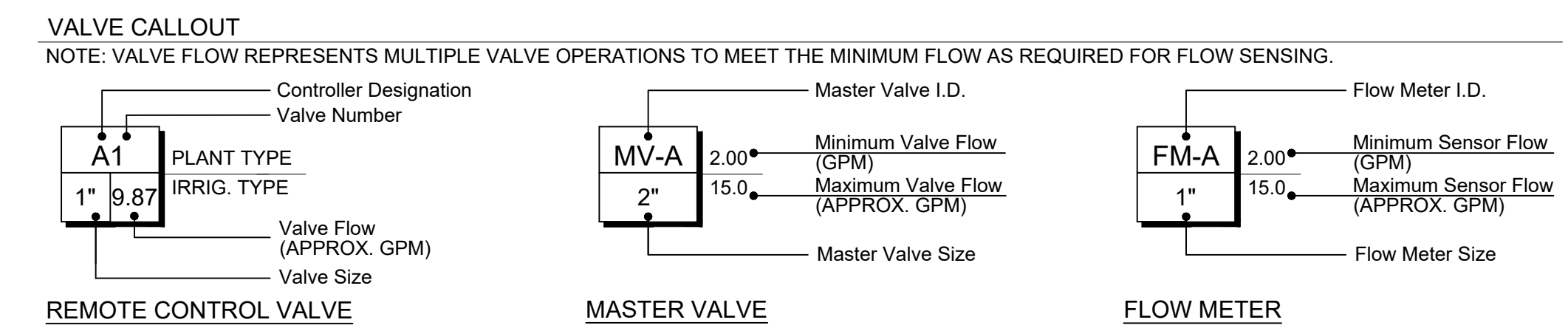
IRRIGATION NOTES AND WATER USE CALCULATIONS

PAGE

LI-02

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO./NOZZLE	RADIUS	PSI	GPM	DETAIL
■	TREE BUBBLER SYSTEM (IN SHRUB) (2 BUBBLERS PER TREE / SYMBOL)	4" POP-UP (HUNTER PROS-04-PRS30-CV WITH MSBN-50H NOZZLE) WITH 30 PSI PRESSURE-REGULATING BODY AND FACTORY INSTALLED CHECK VALVE.	1'	30	0.50	B / LI-07
SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO.	REMARKS	DETAIL		
M	WATER METER	1-1/2"	DEDICATED IRRIGATION METER, APPROX. LOCATION	-		
POC	POINT OF CONNECTION	-	APPROX. LOCATION SHOWN, FIELD VERIFY. SEE ALSO CIVIL PLANS.	-		
BF	BACKFLOW PREVENTER ASSEMBLY	WILKINS 975XL, 1-1/2" SIZE	APPROX. LOCATION SHOWN, FIELD VERIFY	B / LI-04		
NO SYMBOL	BACKFLOW PREVENTER ENCLOSURE	STRONGBOX SBBC-45AL	APPROX. LOCATION SHOWN, FIELD VERIFY SIZE TO FIT BACKFLOW PREVENTER ASSY.	B / LI-04		
NO SYMBOL	WYE STRAINER	WILKINS YBXL, 1-1/2" SIZE	PART OF BACKFLOW PREVENTER ASSEMBLY	B / LI-04		
MV	MASTER VALVE (NORMALLY CLOSED)	SUPERIOR #3200, 1-1/2" SIZE IN 10"x19" NOM. GREEN CARSON BOX	APPROX. LOCATION SHOWN, FIELD VERIFY	C / LI-04		
FM	FLOW METER	CALSENSE FM-1B IN 10"x19" NOM. GREEN CARSON BOX	IMMEDIATELY DOWNSTREAM MASTER VALVE. INSTALL WITH FLOW METER WIRES RECOMMENDED BY CONTROLLER MANUFACTURER	D / LI-04		
CONT	SITE IRRIGATION CONTROLLER ASSEMBLY (WALL MOUNT, EXT.)	CALSENSE CS3000 (128 STATION): CS3-128-WM/CS3-EN/TP-110/FM-1B INCLUDES 128 STATION CONTROLLER (2 WIRE OPTION, STAINLESS STEEL WALL MOUNT ENCLOSURE, 110VAC LINE PRIMARY PROTECTION, ETHERNET COMMUNICATION MODULE, GROUNDING ROD KIT, AND 1" BRASS FLOW METER	APPROX. LOCATION SHOWN, FIELD VERIFY. CONTROL SYSTEM SHALL BE LINKED (WEATHER-BASED)	A / LI-04		
NO SYMBOL	TIPPING RAIN BUCKET	CALSENSE RB-1	INSTALL ON STRUCTURE ROOF, COORDINATE ELECTRICAL CONDUIT INSTALLATION BETWEEN CONTROLLER AND BUCKET WITH ELECTRICAL CONTRACTOR	F / LI-07		
⊗	BALL VALVE (MAINLINE ISOLATION VALVE)	LASCO FTG TRUE UNION V----N-SC, OR APPROVED EQUAL FOR BALL VALVE 1-1/2" AND SMALLER: 10" ROUND GREEN CARSON BOX FOR BALL VALVE 2" AND LARGER: 10"x19" NOM. GREEN CARSON BOX	MAINLINE SIZE.	E / LI-04		
⊗	BALL VALVE (MANIFOLD ISOLATION VALVE)	LASCO FTG TRUE UNION V----N-SC, OR APPROVED EQUAL IN 10" ROUND GREEN CARSON BOX	SAME SIZE AS LARGEST REMOTE CONTROL VALVE IN MANIFOLD.	E / LI-04		
⊗	REMOTE CONTROL VALVE	RAINBIRD 150-PESB 1-1/2" (21 - 45 GPM) 100-PESB 1" (0.25 - 20 GPM) IN 10"x19" NOM. GREEN CARSON BOX	APPROX. LOCATION SHOWN, FIELD VERIFY, SIZE PER PLAN	F / LI-04		
⊗	DRIP REMOTE CONTROL VALVE ASSEMBLY	RAINBIRD XCZ-100-PRB-COM 1" (0.30 - 20 GPM) IN 15"x21" NOM. GREEN CARSON JUMBO BOX	APPROX. LOCATION SHOWN, FIELD VERIFY, SIZE PER PLAN	A / LI-05		
⊗	QUICK COUPLING VALVE	RAINBIRD 44-LRC 1" IN 10" ROUND GREEN CARSON BOX	APPROX. LOCATION SHOWN, FIELD VERIFY	B / LI-05		
⊗	POINT SOURCE IRRIGATION	GPH IRRIGATION PRODUCT GPST-CV2 WITH GF1H (12)ABR, OR APPROVED EQUAL	TWO EMITTERS PER PLANT	A / LI-07		
⊗	SUBSURFACE INLINE DRIP EMITTER TUBING	NETAFIM TLCV-06-18	0.6 GPH / 18" EMITTER SPACING. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN, WITH NETAFIM FITTINGS	B & C / LI-06		
⊗	DRIP AIR / VACUUM RELIEF VALVE	NETAFIM TLAVRV IN 10" ROUND GREEN CARSON BOX	INSTALL AT HIGHEST POINT OF DRIP ZONE	D / LI-06		
⊗	DRIP FLUSH VALVE	BALL VALVE FLUSH ASSEMBLY IN 10" ROUND GREEN CARSON BOX	INSTALL AT LOCATIONS NOTED	E / LI-06		
⊗	DRIP OPERATION / PRESSURE INDICATOR	HUNTER INDICATOR, INC. ECO-ID 6" POP-UP	INSTALL WHERE VISIBLE NEAR DRIP REMOTE CONTROL VALVE ASSEMBLY	F / LI-06		
⊗	IRRIGATION MAINLINE (SIZE AS NOTED ON PLAN)	PVC CLASS 315 = 2" SIZE AND LARGER WITH PVC SCH 80 FITTINGS PVC SCH 40 = 1-1/2" SIZE AND SMALLER WITH PVC SCH 80 FITTINGS	DEPTH OF COVER PER TRENCHING DETAILS	C & D / LI-05		
⊗	IRRIGATION LATERAL LINE (SIZE AS NOTED ON PLAN)	PVC SCH 40 WITH PVC SCH 40 FITTINGS	1" SIZE & ABOVE ARE INDICATED ON THE PLANS. LINE ENDS ARE 3/4" IN SIZE UNLESS OTHERWISE NOTED.	C & D / LI-05		
⊗	PIPE SLEEVE	PVC SCH 40	MIN. 2" SIZE, TWICE THE DIA. OF PIPE SLEEVED. APPROX. LOCATION SHOWN, FIELD VERIFY. INSTALL AS NOTED AND UNDER PAVING/HARDSCAPE	D / LI-5		
⊗	WIRE CONDUIT	GRAY PVC SCH 40	MIN. 1-1/4" SIZE, TWICE THE DIA. OF WIRE BUNDLE / WIRE CABLE SLEEVED. APPROX. LOCATION SHOWN ONLY FOR COORDINATING CONDUIT INSTALLATION PRIOR TO PAVING CONSTRUCTION. ALL WIRE SHALL BE INSIDE CONDUIT, FIELD VERIFY. INSTALL AS NOTED AND UNDER PAVING/HARDSCAPE	D / LI-5		
NO SYMBOL	WATERPROOF WIRE SPLICE	3M SCOTCHCAST 3570-G N	BELOW GRADE WIRE SPLICES	A / LI-06		
NO SYMBOL	TWO-WIRE P.O.C. DECODER (MASTER VALVE / FLOW METER)	CALSENSE CS-2W-POC	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	D & E / LI-07		
NO SYMBOL	TWO-WIRE VALVE DECODER	CALSENSE CS-2W-2ST	INSTALL PER MANUFACTURER'S RECOMMENDATIONS	D & E / LI-07		
NO SYMBOL	TWO-WIRE CABLE	PAIGE P7354D (14AWG), OR APPROVED EQUAL	INSTALL INSIDE 1-1/4" CONDUIT, ENTIRE LENGTH WIRE / WIRE CABLE	C / LI-07		
⊗	PULL BOX	OLDCASTLE / CARSON PRODUCTS 10" ROUND GREEN CARSON BOX	APPROX. LOCATION SHOWN, FIELD VERIFY. LOW VOLT. = LOCKING LID HIGH VOLT. = BOLTDOWN LID	E / LI-05		



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ktua

DATE FINISHED

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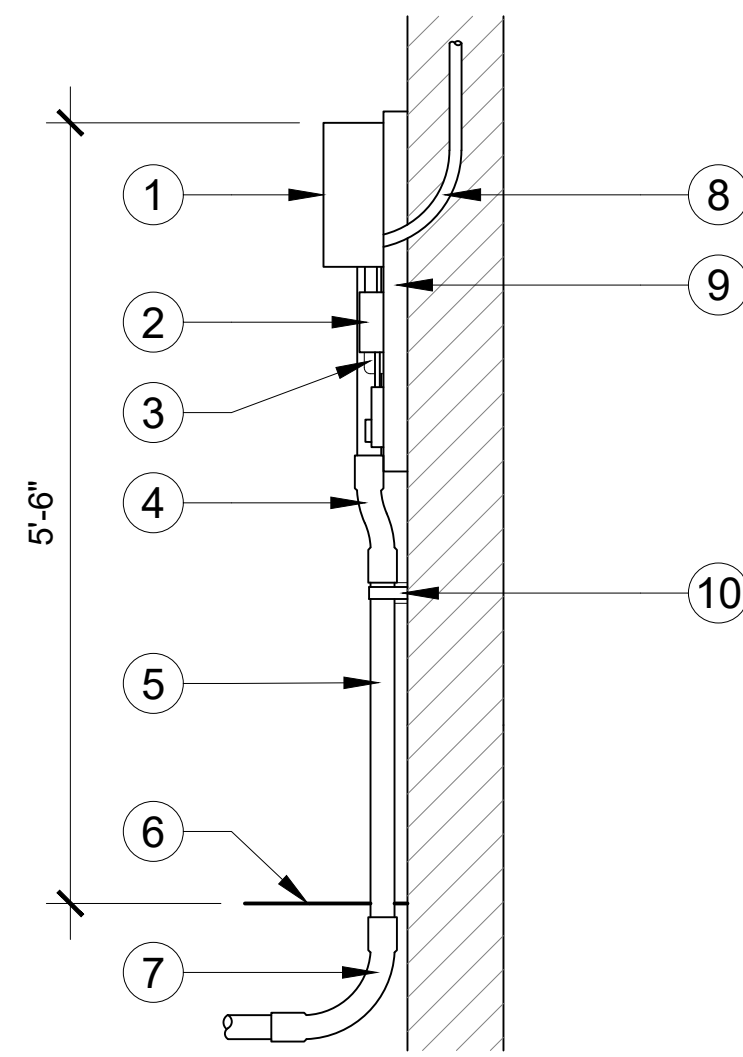
REGISTERED LANDSCAPE ARCHITECT
NOTICE TO CONTRACTOR
NO. 10-00000000
DATE: 03/20/23
STATE OF CALIFORNIA

PROJECT: PHELAN CIVIC CENTER PARK

JOB NO.

SHEET NAME:
IRRIGATION LEGEND

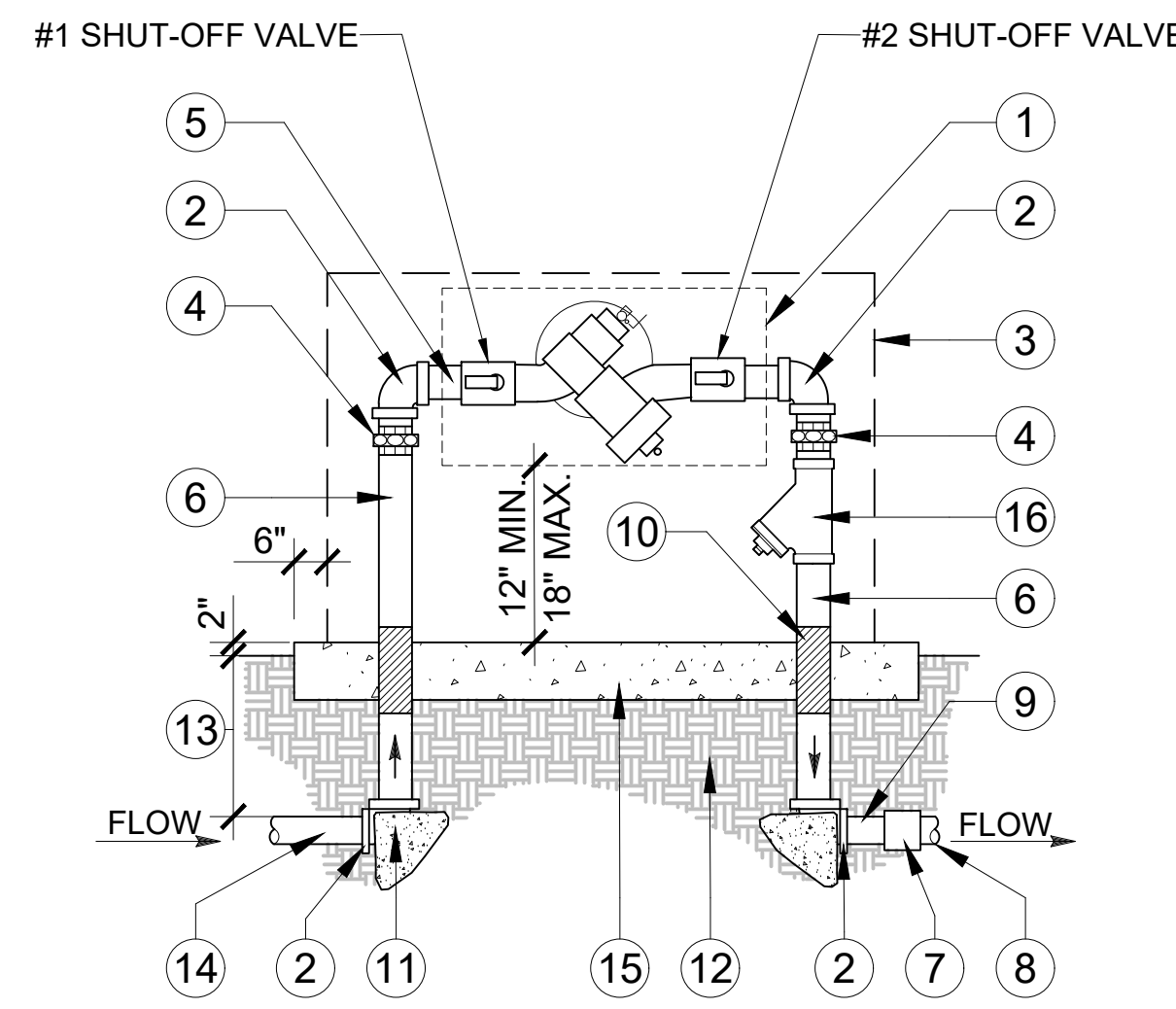
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LEGEND

- | | |
|---|---|
| 1 CONTROLLER WITH ENCLOSURE (WALL MOUNTED). REFER TO LEGEND | 8 1" CONDUIT TO ROOF MOUNTED RAIN BUCKET |
| 2 ETHERNET SERVICE TO RJ-45 JACK FROM NEAREST SWITCH / ROUTER (BY ELECTRICAL CONTRACTOR) AND POWER SOURCE. JUNCTION BOX WITH ON / OFF SWITCH (BY ELECTRICAL CONTRACTOR) | 9 PRE-ASSEMBLED BACKBOARD. ANCHORED TO WALL PER MANUFACTURER'S SPECIFICATIONS |
| 3 ELL-BOX AND CONDUIT FROM POWER SOURCE | 10 CONDUIT STRAPS. 1 EVERY 18" ALONG CONDUIT RUN. SECURE TO WALL WITH 3/16" DIA. x 1-1/4" LENGTH GALVANIZED STEEL SCREWS IN ANCHORS |
| 4 SWEEP | |
| 5 2" CONDUIT FOR CONTROL WIRES AND GROUND WIRE | |
| 6 FINISH SURFACE / FINISH GRADE | |
| 7 CONDUIT SWEEP. (1) REQUIRED FROM DEPTH OF CONDUIT BELOW FINISH GRADE | |

A SITE IRRIGATION CONTROLLER ASSEMBLY (WALL MOUNT, EXTERIOR) SECTION SCALE: N.T.S.



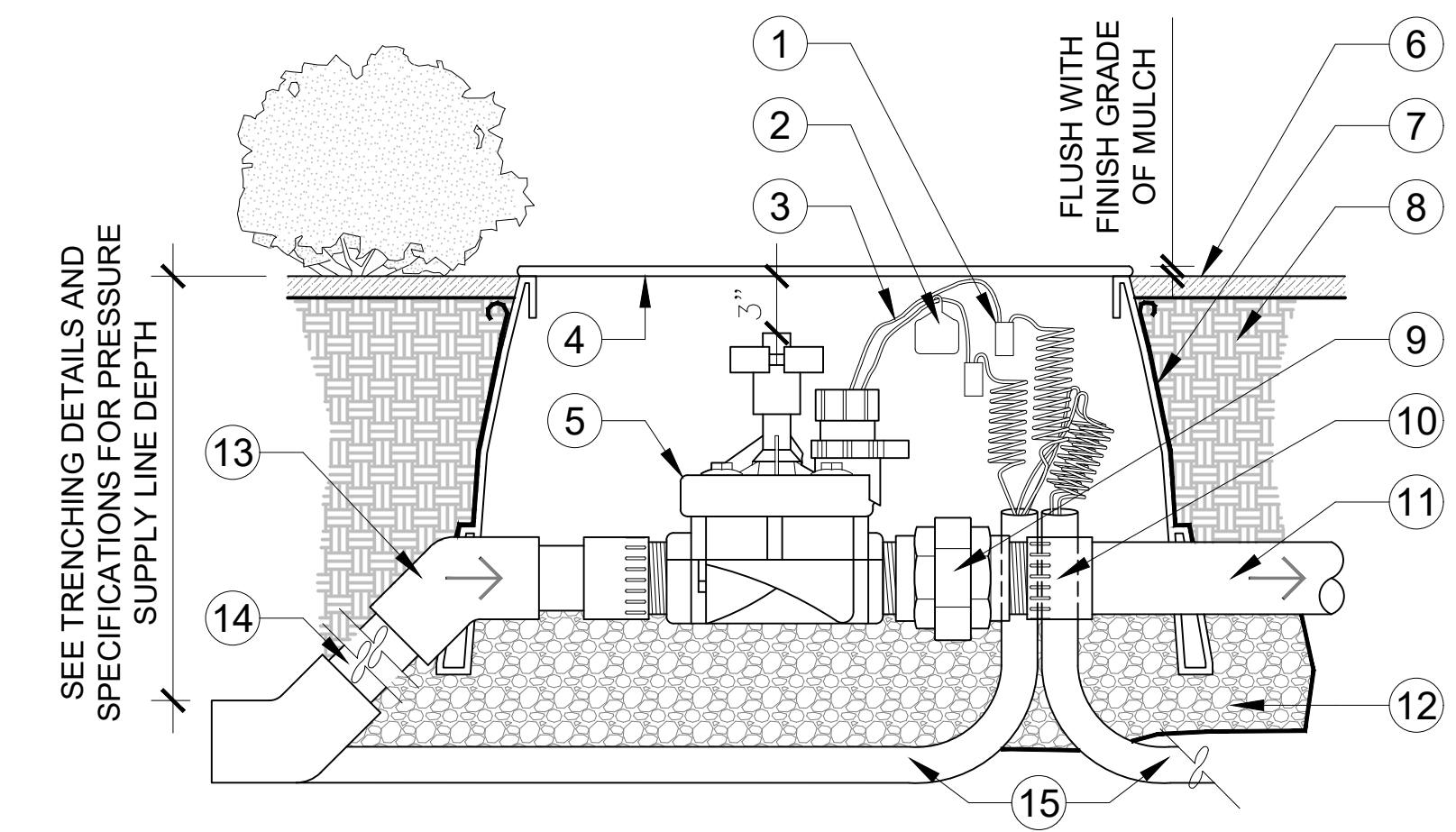
LEGEND

- | | |
|---|--|
| 1 BACKFLOW PREVENTER ASSEMBLY | 14 COPPER PIPE FROM WATER SOURCE |
| 2 COPPER ELL | 15 CONCRETE FOOTING (4" THICK) |
| 3 ENCLOSURE. REFER TO LEGEND | 16 WYE-STRAINER. REFER TO LEGEND AND PLANS FOR PRESSURE SETTING. |
| 4 BRASS UNION | |
| 5 COPPER NIPPLE (3" LONG, TYP.) | |
| 6 COPPER RISER (LENGTH AS REQUIRED) | |
| 7 STAINLESS STEEL ADAPTER | |
| 8 PRESSURE SUPPLY. STAINLESS STEEL PIPE | |
| 9 8" LONG COPPER NIPPLE | |
| 10 BLACK ADHESIVE BACKED PVC TAPE | |
| 11 1CU FT MIN. CONCRETE THRUST BLOCK FOR 2" ASSEMBLIES ONLY. (NOT REQUIRED ON ASSEMBLIES SMALLER THAN 2") | |
| 12 COMPACTED SUBGRADE | |
| 13 SEE TRENCH DETAILS FOR DEPTH | |

NOTES:

- INSTALL BACKFLOW PREVENTION ASSEMBLY PER LOCAL WATER AGENCY REQUIREMENTS.
- INSTALL ENCLOSURE TO SWING FREE AND CLEAR OF BACKFLOW PREVENTION ASSEMBLY PER EQUIPMENT LEGEND. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.
- PROVIDE A MINIMUM 2 WRAPS OF BLACK ADHESIVE BACKED PVC TAPE, WITH 1/2" OVERLAP, TO ALL METAL PIPE AND FITTINGS EXPOSED TO CONCRETE.

B BACKFLOW PREVENTER ASSEMBLY SECTION SCALE: N.T.S.



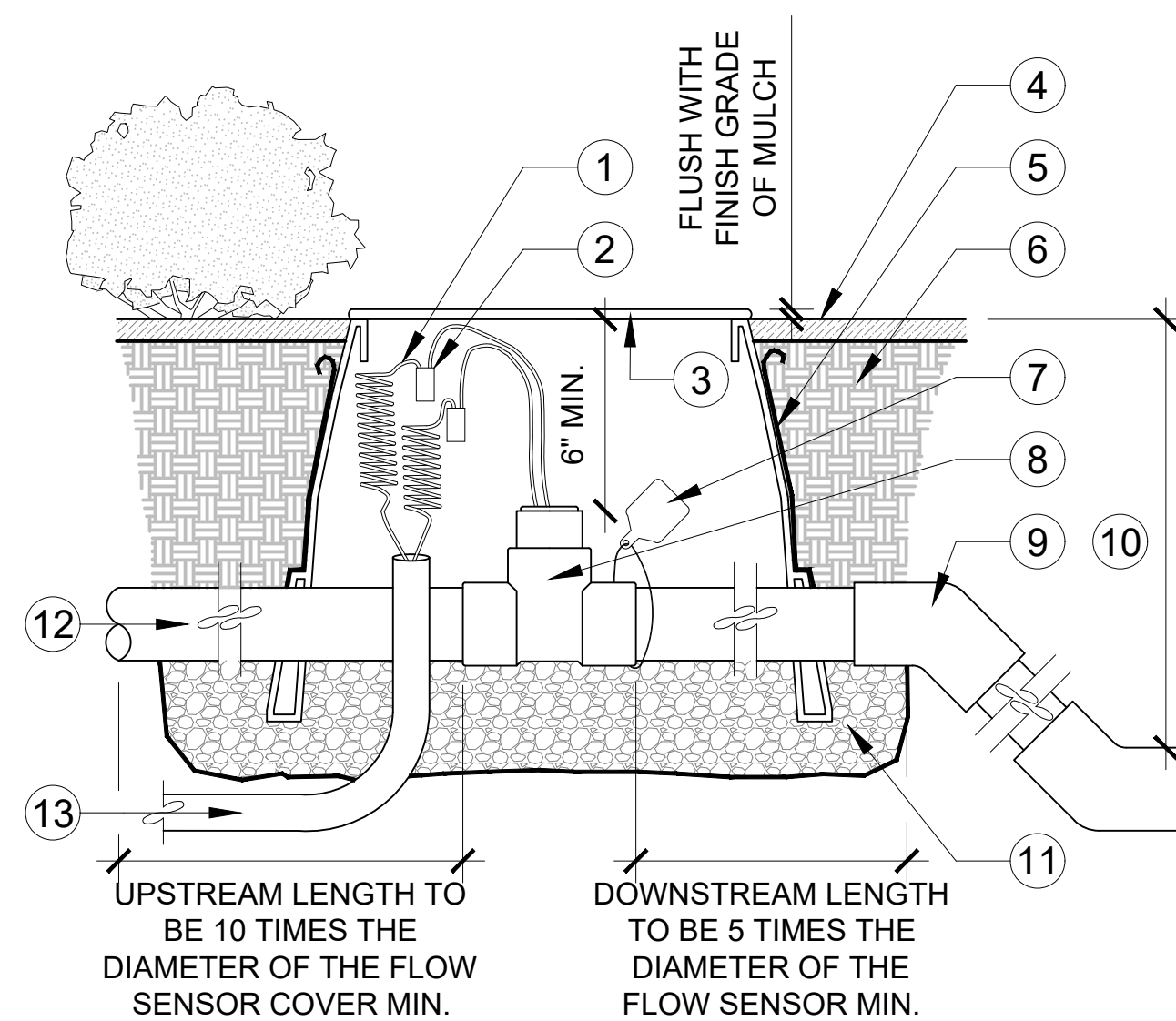
LEGEND

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|---|---|
| 1 WATERPROOF WIRE CONNECTOR | 12 GRAVEL BASE AND SUMP. (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE). |
| 2 VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG) | 13 PVC SCH 80 45 DEGREE ELL'S. (2) REQUIRED. |
| 3 CONTROL WIRE W/ 24" COILED EXPANSION LOOP | 14 PRESSURE SUPPLY LINE. SEE PLAN FOR SIZE. |
| 4 RECTANGULAR VALVE BOX WITH LID, SEE SPECIFICATIONS (DO NOT CUT ADDITIONAL HOLES IN BOX) | 15 1/2" PVC SCH 40 GREY CONDUIT (WITH SWEEP) FOR MASTER VALVE AND FLOW SENSOR WIRES. TO CONTROLLER (END OF SWEEPS TO BE MIN. 4" PAST TOP OF GRAVEL SUMP). |
| 5 MASTER VALVE. REFER TO LEGEND | |
| 6 FINISH GRADE OF MULCH | |
| 7 FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX, COVERING HOLES | |
| 8 BACKFILL MATERIAL | |
| 9 PVC SCH 80 SINGLE UNION, MIPT X FIPT MODEL | |
| 10 PVC SCH 80 MALE ADAPTER, 2 REQUIRED. | |
| 11 PRESSURE SUPPLY LINE TO FLOW SENSOR | |

NOTE:

- USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

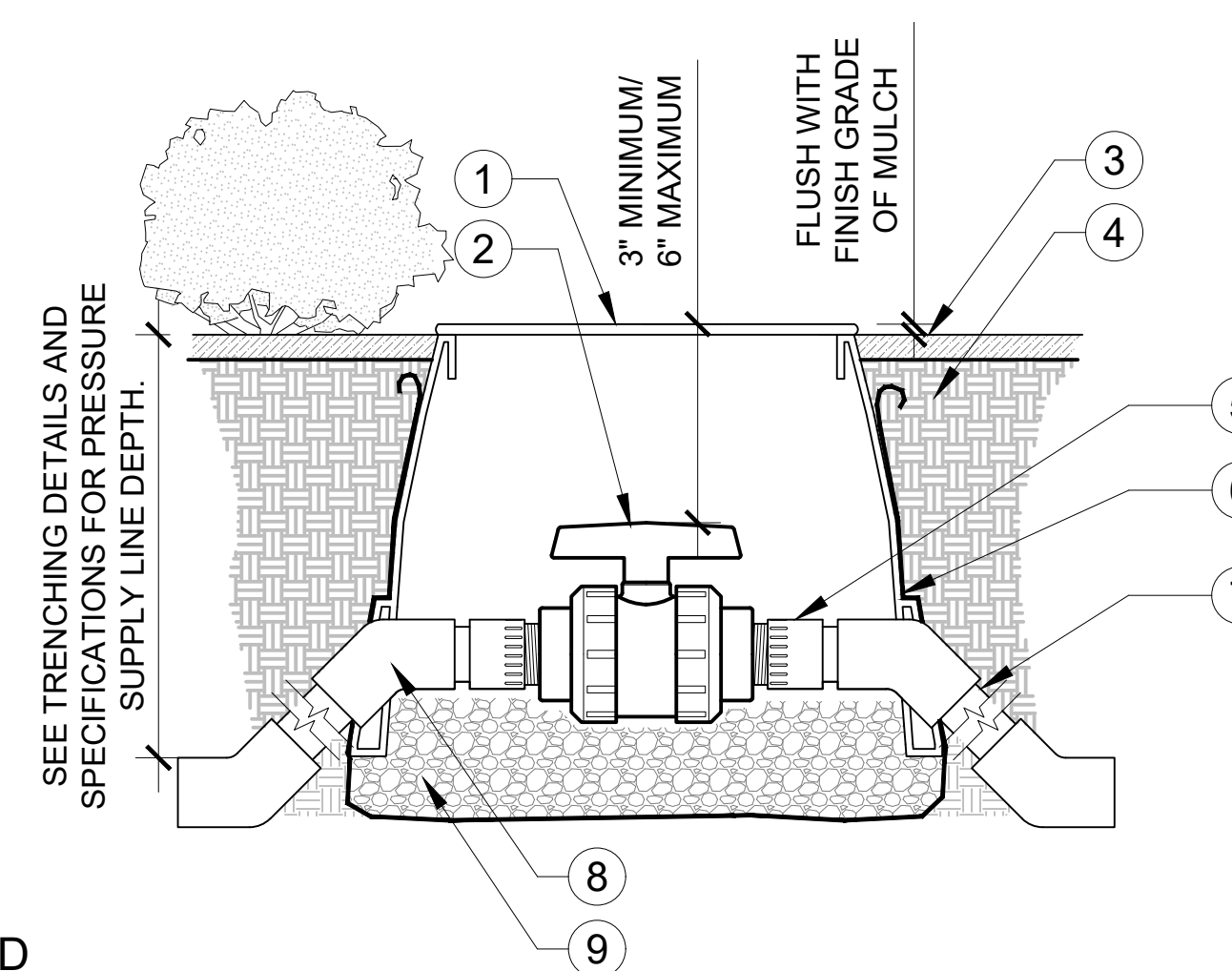
C MASTER VALVE SECTION SCALE: N.T.S.



LEGEND

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|--|---|
| 1 CONTROL WIRE WITH 24" COILED EXPANSION LOOP | 10 SEE TRENCHING DETAILS AND SPECIFICATIONS FOR PRESSURE SUPPLY LINE DEPTH OF COVER. |
| 2 WATERPROOF WIRE CONNECTOR | 11 GRAVEL BASE AND SUMP (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF SENSOR) |
| 3 10" DIA. ROUND VALVE BOX WITH LID, SEE SPECIFICATIONS (DO NOT CUT ADDITIONAL HOLES IN BOX) | 12 PRESSURE SUPPLY LINE FROM MASTER VALVE. SIZE AS NOTED ABOVE |
| 4 FINISH GRADE OF MULCH | 13 1/2" PVC SCH 40 GREY CONDUIT (WITH SWEEP) FOR FLOW SENSOR WIRES. TO CONTROLLER. END OF SWEEP MIN. 4" ABOVE TOP OF GRAVEL SUMP. |
| 5 FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX, COVERING HOLES | |
| 6 BACKFILL MATERIAL | |
| 7 VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG) | |
| 8 FLOW METER (BRASS). REFER TO LEGEND | |
| 9 PVC SCH 80, 45 DEGREE ELL'S. (2) REQ'D | |

D FLOW METER SECTION SCALE: N.T.S.



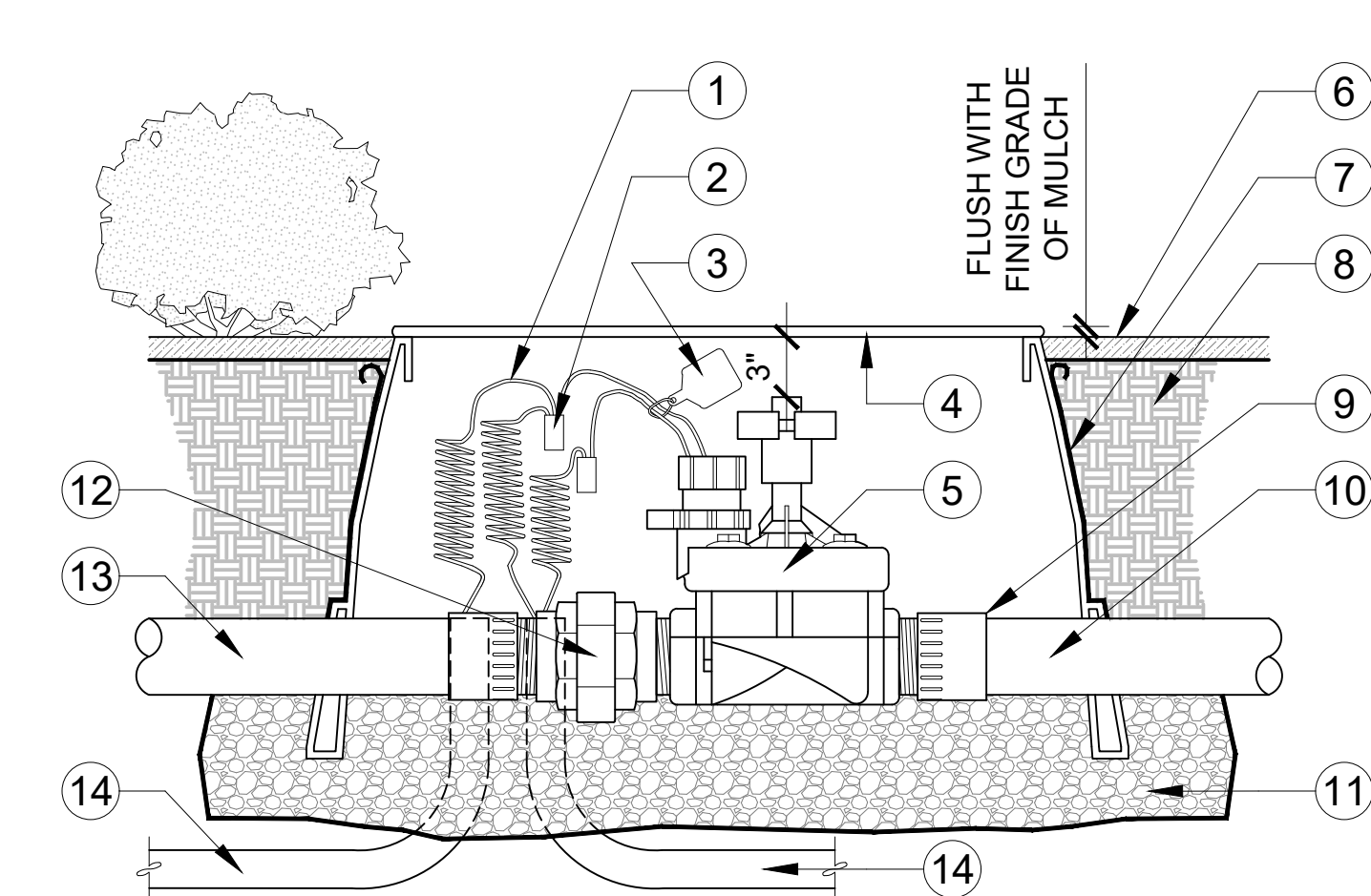
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|---|--|
| 1 VALVE BOX WITH LID, SEE SPECIFICATIONS (DO NOT CUT ADDITIONAL HOLES IN BOX) | 7 PRESSURE SUPPLY. LENGTH AS REQUIRED. REFER TO LEGEND FOR CLASS |
| 2 ISOLATION BALL VALVE. REFER TO LEGEND | 8 PVC SCH 80, 45 DEGREE ELL'S. (4) REQUIRED |
| 3 FINISH GRADE OF MULCH | 9 GRAVEL BASE AND SUMP. (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE) |
| 4 BACKFILL MATERIAL | |
| 5 PVC SCH 80 MALE ADAPTER, MIPT X SLIP, LINE/VALVE MALE | |
| 6 FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX, COVERING HOLES | |

NOTE:

- USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

E ISOLATION BALL VALVE SECTION SCALE: N.T.S.



LEGEND

- | | |
|---|--|
| 1 CONTROL WIRE IN CONDUIT SWEEPS W/ 24" COILED EXPANSION LOOP | 11 GRAVEL BASE AND SUMP. (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE). |
| 2 WATERPROOF WIRE CONNECTOR | 12 PVC SCH 80 SINGLE UNION, MIPT X FIPT MODEL |
| 3 VALVE I.D. TAG. (THREAD NYLON TIE THROUGH HOLE IN TAG) | 13 NON-PRESSURE LATERAL LINE. SEE PLAN FOR SIZE |
| 4 RECTANGULAR VALVE BOX WITH LID, SEE SPECIFICATIONS (DO NOT CUT ADDITIONAL HOLES IN BOX) | 14 MIN. 1/2" SIZE PVC SCH 40 GRAY CONDUIT (WITH SWEEP) FOR CONTROL WIRES. TO CONTROLLER (END OF SWEEPS TO BE MIN. 4" PAST TOP OF GRAVEL SUMP). |
| 5 CONTROL VALVE PER LEGEND, SEE PLAN FOR SIZE | |
| 6 FINISH GRADE OF MULCH | |
| 7 FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX, COVERING HOLES | |
| 8 BACKFILL MATERIAL | |
| 9 PVC SCH 80 MALE ADAPTER, 2 REQUIRED. | |
| 10 PRESSURE SUPPLY LINE FROM MANIFOLD | |

NOTE:

- USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

F REMOTE CONTROL VALVE ASSEMBLY SECTION SCALE: N.T.S.



DATE FINISHED

REVISIONS

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PROJECT: PHELAN CIVIC CENTER PARK

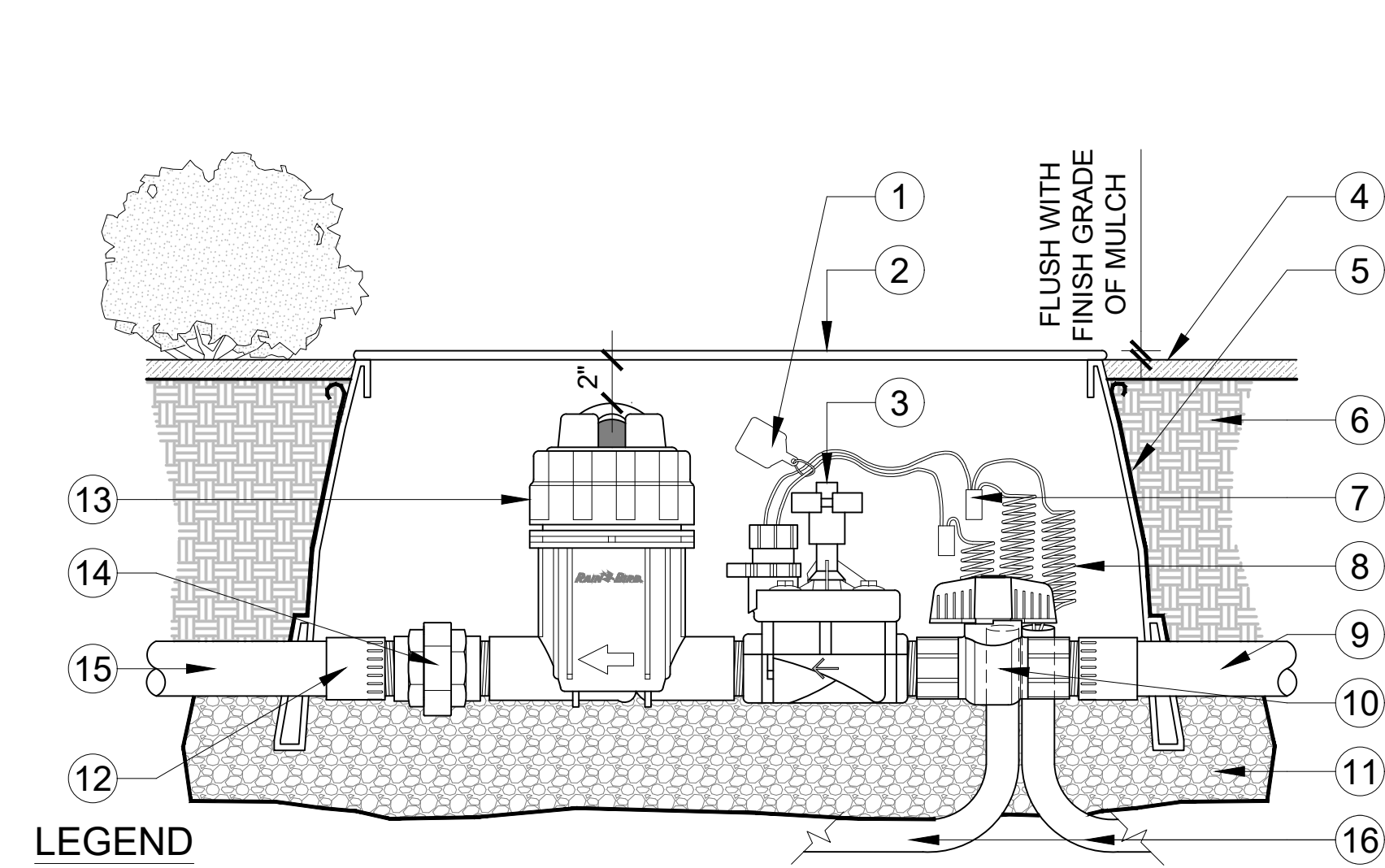
JOB NO.

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IRRIGATION DETAILS

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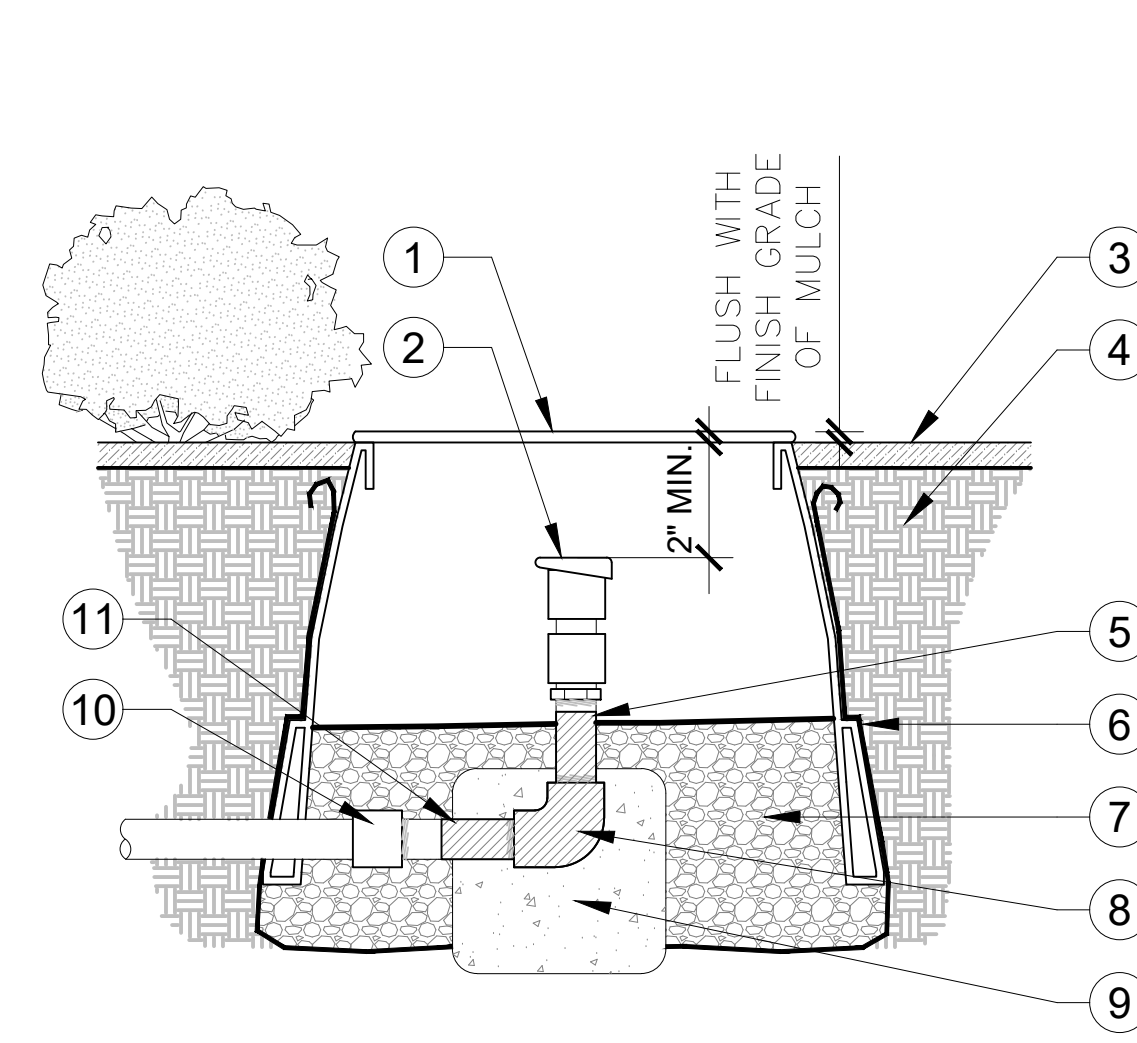


LEGEND

- | | |
|---|---|
| 1 VALVE I.D. TAG, (THREAD NYLON TIE THROUGH HOLE IN TAG) | 10 1" BALL VALVE |
| 2 RECTANGULAR JUMBO VALVE BOX WITH LID, SEE SPECIFICATIONS (DO NOT CUT ADDITIONAL HOLES IN BOX) | 11 GRAVEL BASE AND SUMP, (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE) |
| 3 DRIP CONTROL VALVE PER LEGEND, SEE PLAN FOR SIZE | 12 PVC SCH 80 MALE ADAPTER, 2 REQUIRED. |
| 4 FINISH GRADE OF MULCH | 13 PRESSURE REGULATING (40 PSI), QUICK-CHECK BASKET FILTER, OR APPROVED EQUAL |
| 5 FILTER FABRIC (MIRAFI #140N), WRAP 1 LAYER AROUND BOX, COVERING HOLES | 14 PVC SCH 80 SINGLE UNION, MIPT X FIPT MODEL |
| 6 BACKFILL MATERIAL | 15 NON-PRESSURE LATERAL LINE, SEE PLAN FOR SIZE |
| 7 WATERPROOF WIRE CONNECTOR | 16 1-1/4" PVC SCH 40 GREY CONDUIT (WITH SWEEP) |
| 8 CONTROL WIRE W/ 24" COILED EXPANSION LOOP | |
| 9 PRESSURE SUPPLY LINE FROM MANIFOLD | |

NOTE:

A. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

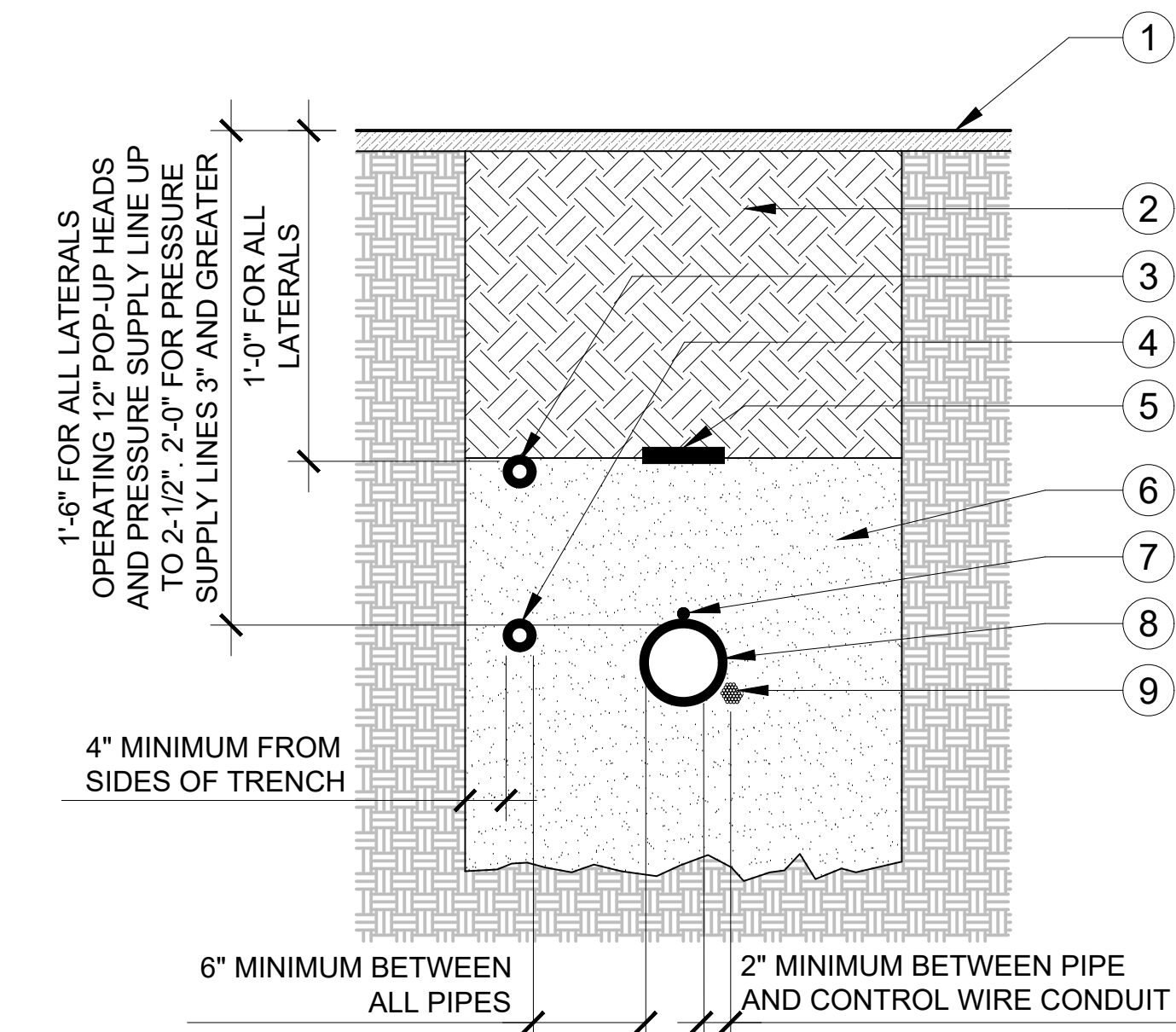


LEGEND

- | | |
|--|--|
| 1 VALVE BOX WITH LID, SEE SPECIFICATIONS (DO NOT CUT ADDITIONAL HOLES IN BOX) | 8 BRASS 90 DEGREE ELL, WRAP WITH PVC TAPE. |
| 2 QUICK COUPLING VALVE, REFER TO LEGEND. | 9 CONCRETE THRUST BLOCK, 1 CU.FT MINIMUM |
| 3 FINISH GRADE OF MULCH | 10 BRASS COUPLING WITH PVC SCH 80 MALE ADAPTER, SLIP X MIPT |
| 4 BACKFILL MATERIAL | 11 THREADED BRASS NIPPLE, LENGTH AS REQUIRED, WRAP WITH PVC TAPE |
| 5 THREADED BRASS PIPE RISER, LENGTH AS REQUIRED, WRAP WITH PVC TAPE | |
| 6 FILTER FABRIC (MIRAFI #140N, OR APPROVED EQUAL), WRAP 1 LAYER AROUND BOX, COVERING HOLES | |
| 7 NON-PRESSURE LATERAL LINE, SEE PLAN FOR SIZE | |

NOTES:

- USE TEFLON TAPE ON ALL THREADED CONNECTIONS
- PROVIDE TWO (2) WRAPS (WITH 1/4" OVERLAP) BLACK PVC ADHESIVE TO ALL BRASS EXPOSED TO CEMENT.



LEGEND

- | | |
|--|---|
| 1 FINISH GRADE | 7 #12 TRACER WIRE, TAPED TO TOP OF MAINLINE EVERY 10 FEET |
| 2 BACKFILL MATERIAL, FREE FROM ALL ROCK AND DEBRIS GREATER THAN ONE INCH | 8 PRESSURE SUPPLY LINE, SEE LEGEND FOR CLASS, REFER TO PLAN FOR SIZE |
| 3 NON-PRESSURE LATERAL LINE FOR RISERS OUTLET PVC PIPE, AND POP-UPS 6" OR LESS, SEE LEGEND FOR CLASS, REFER TO PLAN FOR SIZE | 9 CONTROL WIRES IN CONDUIT, 2" AWAY FROM AND BESIDE PRESSURE SUPPLY LINE. |
| 4 NON-PRESSURE LATERAL LINE FOR 12" POP-UP HEADS, SEE LEGEND FOR CLASS, REFER TO PLAN FOR SIZE | |
| 5 3" DETECTABLE MARKING TAPE. | |
| 6 NATIVE BACKFILL MATERIAL, FREE FROM ALL ROCK AND DEBRIS GREATER THAN ONE HALF INCH, 6" ABOVE AND 6" BELOW PRESSURE SUPPLY LINE | |

A DRIP REMOTE CONTROL VALVE ASSEMBLY SECTION

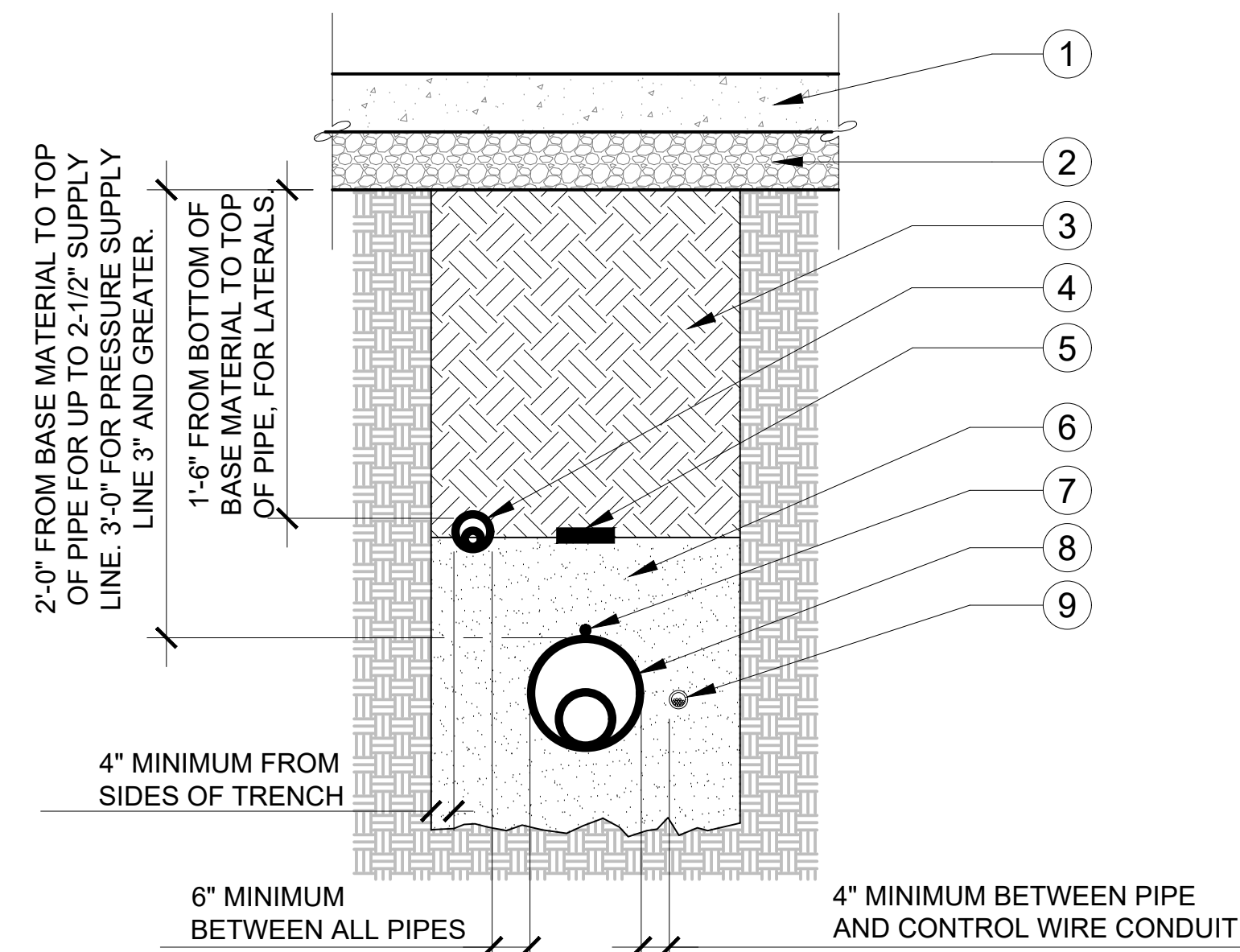
SCALE: N.T.S.

B QUICK COUPLING VALVE SECTION

SCALE: N.T.S.

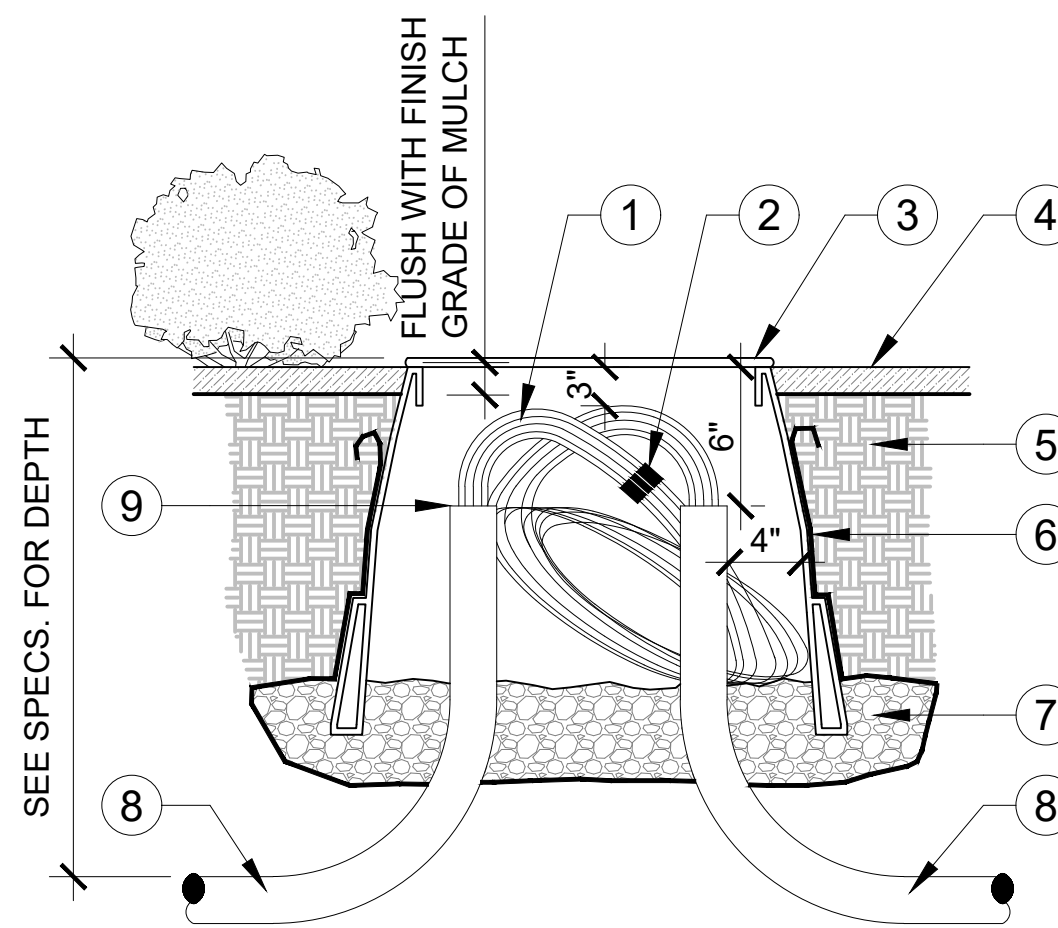
C TRENCH IN LANDSCAPE SECTION

SCALE: N.T.S.



LEGEND

- | | |
|--|--|
| 1 HARDSCAPE MATERIAL | 7 #12 TRACER WIRE, TAPED TO TOP OF MAINLINE EVERY 10 FEET |
| 2 BASE MATERIAL | 8 PRESSURE SUPPLY LINE IN PVC SCH 40 SLEEVE TWICE THE DIAMETER OF THE LINE RUNNING THROUGH |
| 3 BACKFILL MATERIAL, FREE FROM ALL ROCK AND DEBRIS GREATER THAN ONE INCH SIZE. | 9 SCH 40 PVC ELECTRICAL CONDUIT FOR ALL IRRIGATION WIRES, SEE LEGEND FOR SIZES |
| 4 NON-PRESSURE LATERAL LINE IN PVC SCH 40 SLEEVE MINIMUM, TWICE THE DIAMETER OF THE LINE RUNNING THROUGH, ALL LATERAL LINES SHALL BE AT THE SAME DEPTH UNDER HARDSCAPE | |
| 5 3" DETECTABLE MARKING TAPE. | |
| 6 BACKFILL SOIL FREE FROM ALL ROCK AND DEBRIS GREATER THAN ONE-HALF INCH SIZE, 6" ABOVE AND 6" BELOW PRESSURE SUPPLY LINE | |



LEGEND

- | | |
|--|---|
| 1 LOW VOLTAGE CONTROL WIRE COIL, 24" MINIMUM | 7 1 CU. FT MIN. 3/4" GRAVEL SUMP |
| 2 PVC/ELECT. TAPE, WRAP WIRE BUNDLE | 8 PVC SCH 40 ELECT. CONDUIT/ SWEEP, WHERE REQUIRED |
| 3 RECTANGULAR VALVE BOX WITH LID, BOLT DOWN COVER, STAINLESS STEEL BOLT, WASHER | 9 SEAL VOID SPACE AT CONDUIT ENDS WITH AEROSOL FOAM SEALANT |
| 4 FINISH GRADE OF MULCH | |
| 5 UNDISTURBED SOIL/ COMPACTED SOIL | |
| 6 LANDSCAPE FILTER FABRIC (MIRAFI #140N, OR APPROVED EQUAL), WRAP UP AND COVER BOX HOLES | |

LEGEND

- | | |
|---|---|
| 1 SPARE WIRE W/ 24" COILED EXPANSION LOOP | 9 SEAL VOID SPACE AT CONDUIT ENDS WITH AEROSOL FOAM SEALANT |
| 2 10" DIA. ROUND VALVE BOX WITH LID, SEE SPECIFICATIONS. (DO NOT CUT ADDITIONAL HOLES IN BOX) | 10 PRESSURE SUPPLY LINE SEE PLAN FOR SIZE |
| 3 FINISH GRADE OF MULCH | 11 PVC SCH 80 45 DEGREE ELL'S. (2) REQUIRED (FOR 2" AND LARGER PRESSURE SUPPLY LINE), PVC SCH 40 FOR 1-1/2" AND SMALLER PRESSURE SUPPLY LINE. |
| 4 BACKFILL MATERIAL | |
| 5 FILTER FABRIC (MIRAFI #140N, OR APPROVED EQUAL), WRAP 1 LAYER AROUND BOX COVERING HOLES | |
| 6 GRAVEL BASE AND SUMP, (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS) | |
| 7 PVC SCH 80 CAP (SOLVENT WELD) ON TERMINAL END OF THE PRESSURE SUPPLY LINE | |
| 8 PVC SCH 40 ELECT. CONDUIT/ SWEEP, WHERE REQUIRED | |

NOTE:

- PULL REQUIRED SPARE WIRE TO EACH SPARE WIRE BOX INDICATED ON THE PLANS. WATER PROOF THE BARE WIRE ENDS WITH APPROVED WIRE SPLICE.

D TRENCH IN HARDSCAPE SECTION

SCALE: N.T.S.

E CONTROL WIRE PULL BOX SECTION

SCALE: N.T.S.

F SPARE WIRE BOX / MAINLINE STUB-OUT BOX SECTION

SCALE: N.T.S.

KTUA PLANNING AND CONSTRUCTION
3816 NORVAL STREET
SAN DIEGO, CA 92103
TEL: 619.254.4177

ktua

DATE FINISHED: _____

REVISTONS: _____

THESE PLANS SHALL COMPLY WITH THE 2018 CALIFORNIA BUILDING CODE, 2018 CALIFORNIA ELECTRICAL CODE, 2018 CALIFORNIA MECHANICAL CODE, 2018 CALIFORNIA PLUMBING CODE, AND THE 2018 CALIFORNIA FIRE AND LIFE SAFETY CODE.

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REGISTERED LANDSCAPE ARCHITECT
STATE OF CALIFORNIA
NO. 20150
EXPIRES 12/31/23
NOT FOR CONSTRUCTION

PROJECT: PHELAN CIVIC CENTER PARK

JOB NO. _____

SHEET NAME: IRRIGATION DETAILS

PAGE _____

LI-05

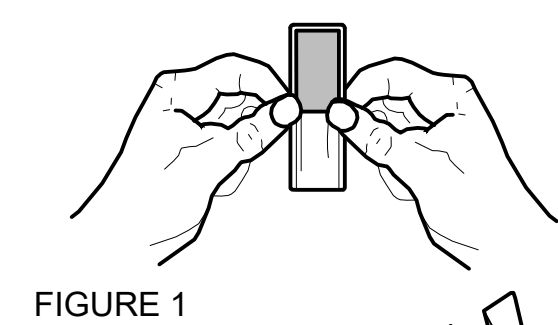


FIGURE 1

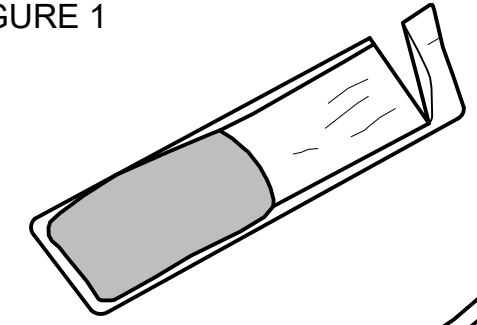


FIGURE 2

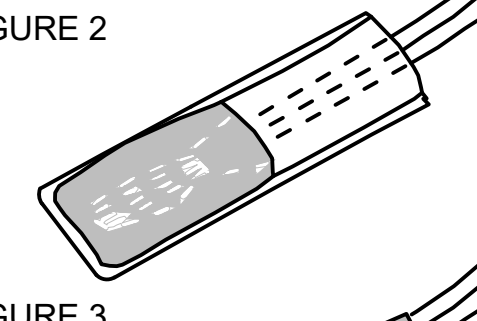


FIGURE 3

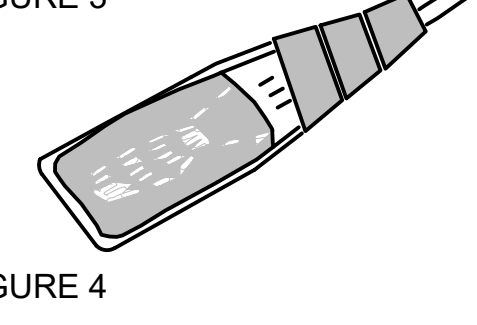


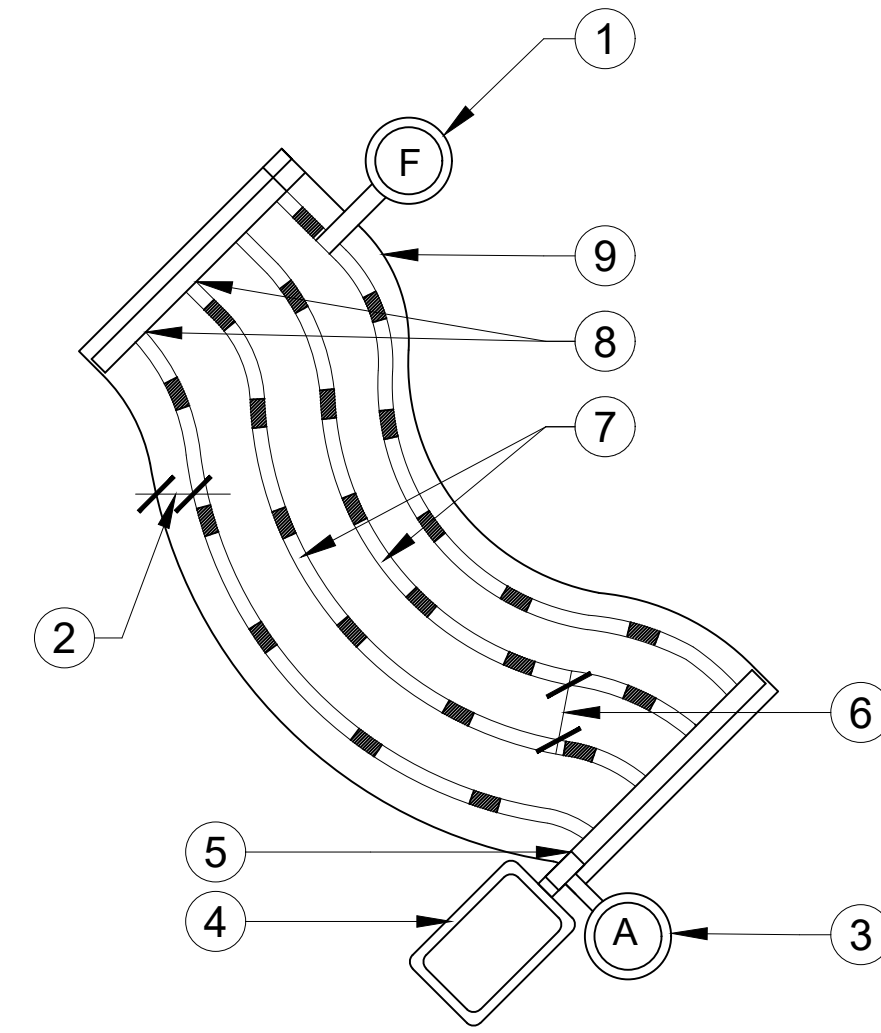
FIGURE 4

INSTALLATION STEPS

- 1 THOROUGHLY CLEAN AND DRY THE SURFACE OF THE SUBSTRATE TO WHICH THE MATERIAL IS DESIRED TO BOND.
- 2 REMOVE GUARD BAG, USING CAUTION NOT TO DAMAGE INNER BAG.
- 3 GRIP BOTH EDGES OF BAG AT THE CENTER BARRIER (FIGURE 1) AND WRINKLE AND FLEX THE BAG ACROSS THE BARRIER. THIS WILL WEAKEN THE BARRIER.
- 4 SQUEEZE THE CLEAR SIDE OF THE RESIN, FORCING THE RESIN THROUGH THE CENTER BARRIER.
- 5 MIX THOROUGHLY TO A UNIFORM COLOR BY SQUEEZING CONTENTS BACK AND FORTH 25-30 TIMES.
- 6 SQUEEZE RESIN TO ONE END OF BAG AND CUT OFF OTHER END. (FIGURE 2)
- 7 SLOWLY INSERT CONNECTION INTO SEALING PACK UNTIL IT FITS SNUGLY AGAINST THE OPPOSITE END. (FIGURE 3)
- 8 WRAP OPEN END OF BAG WITH SCOTCH SUPER 33+ VINYL ELECTRICAL TAPE AND POSITION THE TAPED END UP UNTIL RESIN GELS (8-12 MIN. @ 73°F). (FIGURE 4)

NOTE:

1. THE 3M SCOTCHCAST CONNECTOR SEALING PACK 3570G-N SHOULD REMAIN SEALED IN THE GUARD BAG (WHILE ALUMINIZED BAG) UNTIL READY TO USE. IN COLD WEATHER, WARM CLOSED MIXING POUCH TO 50°F OR WARMER PRIOR TO MIXING. KEEP IN WARM AREA, SUCH AS TRUCK CAB OR INSIDE POCKET, UNTIL READY TO USE. PER MANUFACTURER'S INSTRUCTIONS.

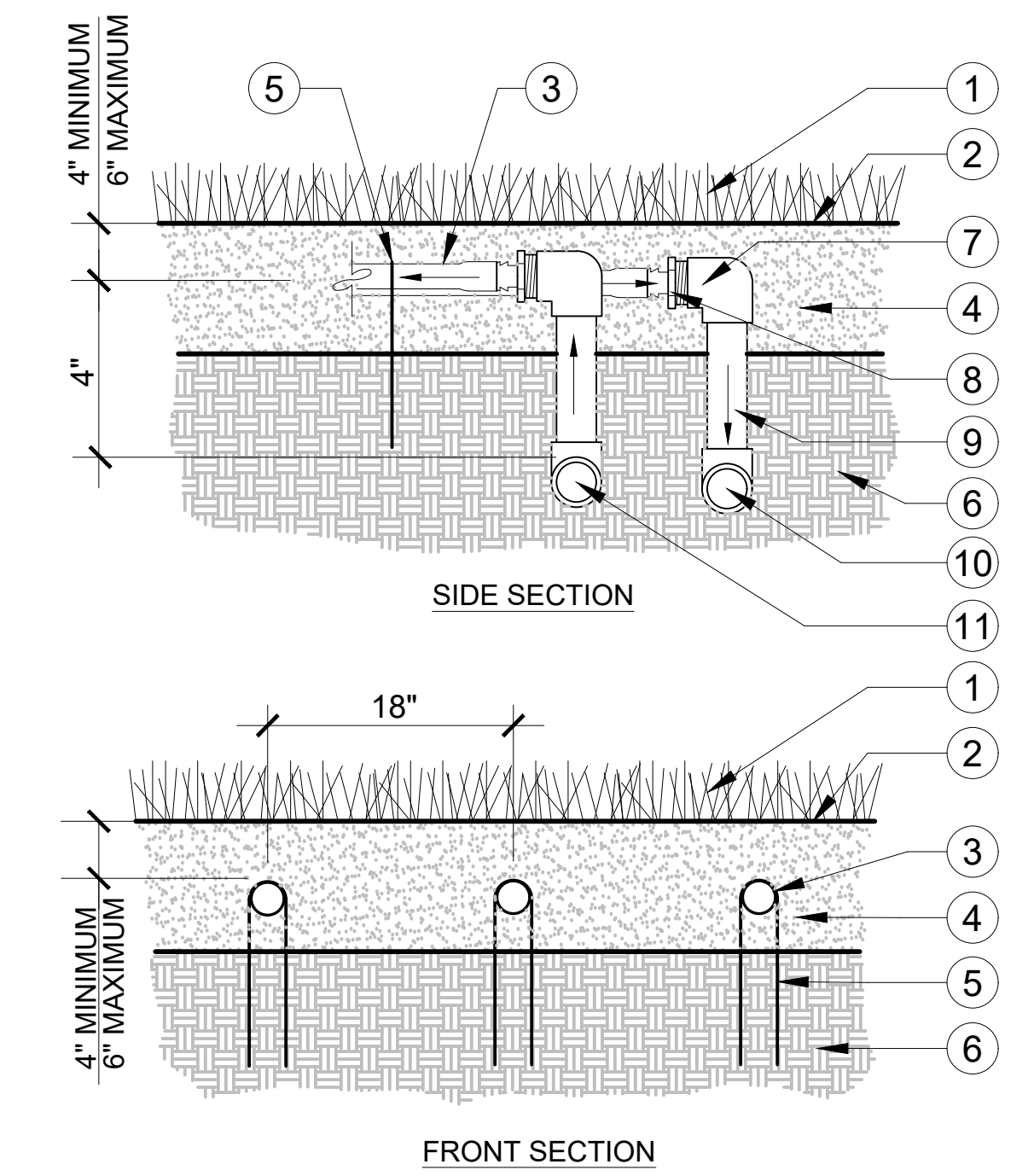


LEGEND

- 1 DRIP END FLUSH VALVE
- 2 PERIMETER TUBING 6" FROM EDGE OF HARDSCAPE. CENTER TUBING IN LONG LINEAR PLANTING AREAS.
- 3 AIR VACUUM RELIEF VALVE (PLUMBED TO PVC PIPE AT HIGH POINT).
- 4 REMOTE CONTROL VALVE WITH BALL VALVE, DRIP FILTER & PRESET PRESSURE REGULATOR.
- 5 PVC SCH 40 NON-PRESSURE SUPPLY LINE MANIFOLD
- 6 18" SPACING
- 7 POTABLE DRIPLINE (STRICTLY PARALLEL AT ALL TIMES). TRIANGULATE EMISSION POINTS
- 8 BARBED TEE/ ELL (AS REQUIRED)
- 9 AREA PERIMETER

NOTES:

1. THIS DETAIL IS INTENDED TO INDICATE GENERAL COMPONENTS AND LAYOUT. DRIPLINES ARE TO OCCUR ON EACH SIDE OF SUPPLY LINE MANIFOLD AS IF MIRRORED.
2. DRIP SYSTEM SHOWN ON PLAN CANNOT INDICATE ALL FORESEEN OR UNFORESEEN OBSTACLES (BOULDERS, FIXTURES, ETC.). PROVIDE NECESSARY FITTINGS, TUBING, AND PIPING AS REQUIRED TO PROVIDE COMPLETE WATER COVERAGE FOR LANDSCAPE PLANTINGS.
3. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.



LEGEND

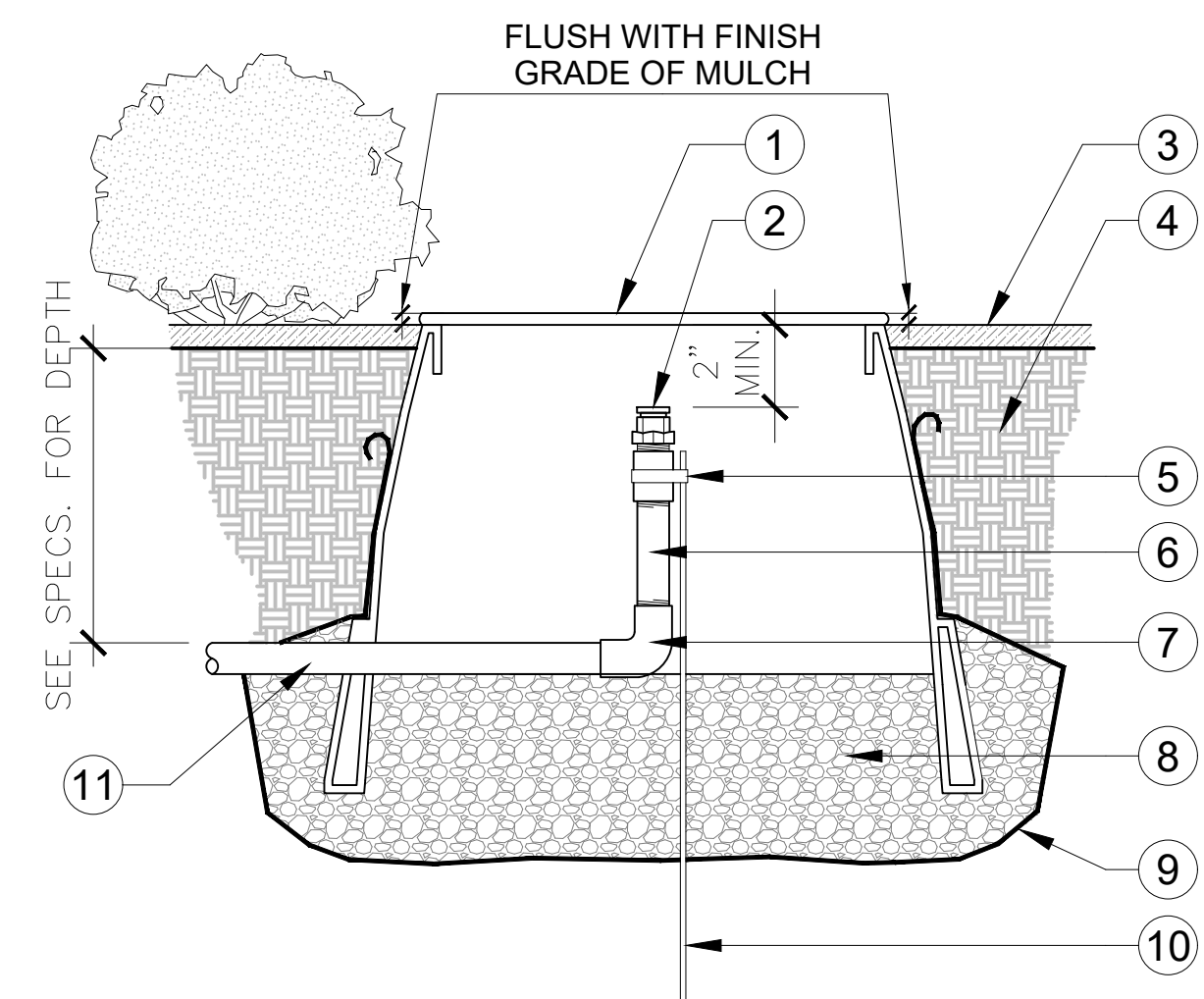
- 1 PLANT MATERIAL PER PLANTING PLAN.
- 2 FINISH GRADE
- 3 POTABLE EMITTER DRIPPERLINE. SEE LEGEND.
- 4 AMENDED BACKFILL.
- 5 9" LONG VINYL COATED TUBING STAPLE. SALCO DTS OR EQUAL. 1 PER 4 FT. AND, PUSHED INTO GROUND.
- 6 EXISTING SUBGRADE.
- 7 SCH 40 PVC ELL, LINE SIZE SLIP X 1/2" FIPT.
- 8 1/2" BARBED MALE ADAPTER.
- 9 6" LONG, 1/2" FLEXIBLE VINYL NIPPLE (GPH GFN-050-600) FROM LATERAL DEPTH.
- 10 LATERAL LINE. REFER TO PLAN FOR SIZE.
- 11 EXHAUST HEADER WITH LINE SIZE SLIP TEE.

NOTE:

1. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

A WIRE CONNECTOR ISOMETRIC

SCALE: N.T.S.



LEGEND

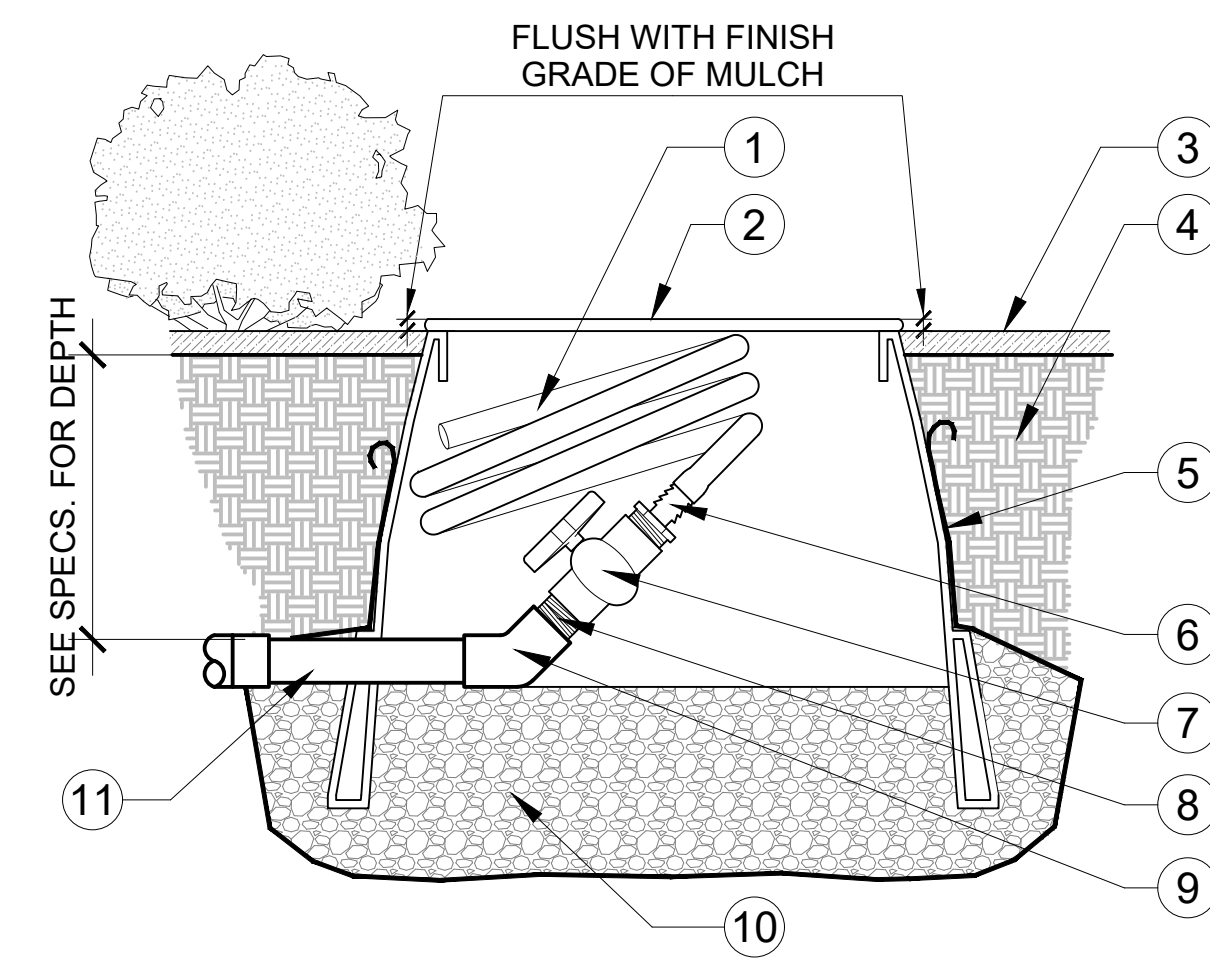
- 1 VALVE BOX WITH LOCKING LID (SEE SPECIFICATIONS)
- 2 AIR VACUUM RELIEF VALVE
- 3 FINISH GRADE OF MULCH
- 4 BACKFILL MATERIAL
- 5 PLASTIC STRAP/TIE
- 6 PVC SCH 80 THREADED RISER W/ ADAPTER (LENGTH AS REQUIRED)
- 7 PVC SCH 40 ELL (ST)
- 8 GRAVEL BASE AND SUMP. (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE)
- 9 FILTER FABRIC (MIRAFI #140N) WRAP 1 LAYER AROUND BOX, COVERING HOLES
- 10 #3 REBAR - 12" MIN. LONG
- 11 PVC SCH 40 LATERAL LINE

NOTES:

1. INSTALL VALVE AT HIGHEST ELEVATION OF SYSTEM.
2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

B DRIPLINE TUBING SPACING & LAYOUT PLAN

SCALE: N.T.S.



LEGEND

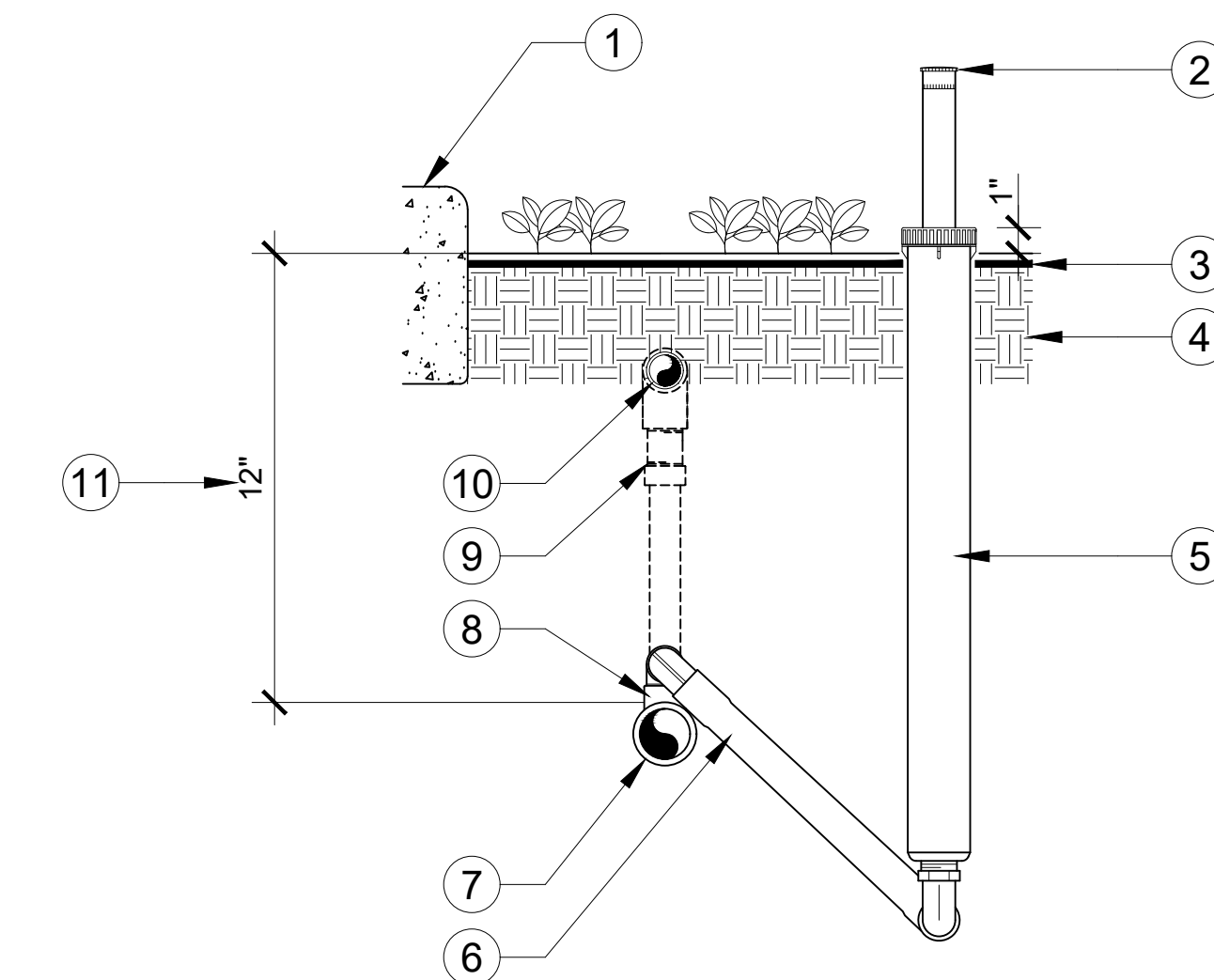
- 1 18" MINIMUM LENGTH OF 1/2" RUBBER OR CLEAR SILICONE HOSE.
- 2 VALVE BOX WITH LID. (DO NOT CUT ADDITIONAL HOLES IN BOX)
- 3 FINISH GRADE OF MULCH
- 4 BACKFILL MATERIAL
- 5 FILTER FABRIC (MIRAFI #140N). WRAP 1 LAYER AROUND BOX, COVERING HOLES
- 6 PVC SCH 40, 3/4" MIPT X 1/2" BARB HOSE ADAPTER
- 7 PVC SCH 40, 3/4" FIPT X FIPT BALL VALVE
- 8 PVC SCH 40, 3/4" THREADED NIPPLE
- 9 PVC SCH 40, 45 DEGREE ELL
- 10 GRAVEL BASE AND SUMP. (COMPACT GRAVEL FOR BOX BASE, DO NOT USE BLOCKS OR BRICKS, FILL GRAVEL TO BOTTOM OF VALVE)
- 11 TERMINAL END OF NON-PRESSURE LATERAL LINE, 1/2" SIZE

NOTE:

1. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

C SUBSURFACE DRIPPERLINE SECTION

SCALE: N.T.S.



LEGEND

- 1 PAVEMENT OR EDGE OF PLANTED AREA
- 2 POP-UP INDICATOR CAP ON POP-UP RISER
- 3 INSTALL POP-UP INDICATOR HEAD 1/2" ABOVE FINISHED GRADE IN SHRUB AND GROUND COVER AREAS
- 4 AMENDED SOIL
- 5 HUNTER ECO-ID, 6" POP-UP HEAD
- 6 PRE-ASSEMBLED POLY, TRIPLE SWING JOINT, 1/2" LAY LENGTH, HUNTER, MODEL #SJ512, OR APPROVED EQUAL
- 7 DRIP SYSTEM EXHAUST HEADER, PVC LATERAL LINE PIPE, TYPE AND SIZE AS SHOWN ON LEGEND
- 8 SCH 40 PVC SxSxT TEE FITTING, LATERAL X LATERAL X 1/2" SIZE WITH FIPT THREADS (TWO TOTAL AT LOCATION)
- 9 DRIP LATERAL CONNECTION, PVC SCH 40 PIPE AND PVC SCH 40 TEE (SxSxS) OR ELL (SxS) FITTING
- 10 SUBSURFACE DRIP TUBING, DEPTH AS SHOWN ON LEGEND AND DETAIL
- 11 EXHAUST HEADER SHALL BE INSTALLED 10" MIN. BELOW FINISHED SOIL GRADE, TYPICAL

NOTES:

1. INSTALL INDICATOR HEAD A MIN. 30" FROM THE EDGE OF PAVING OR THE PLANTER EDGE.
2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

D DRIP AIR / VACUUM RELIEF VALVE SECTION

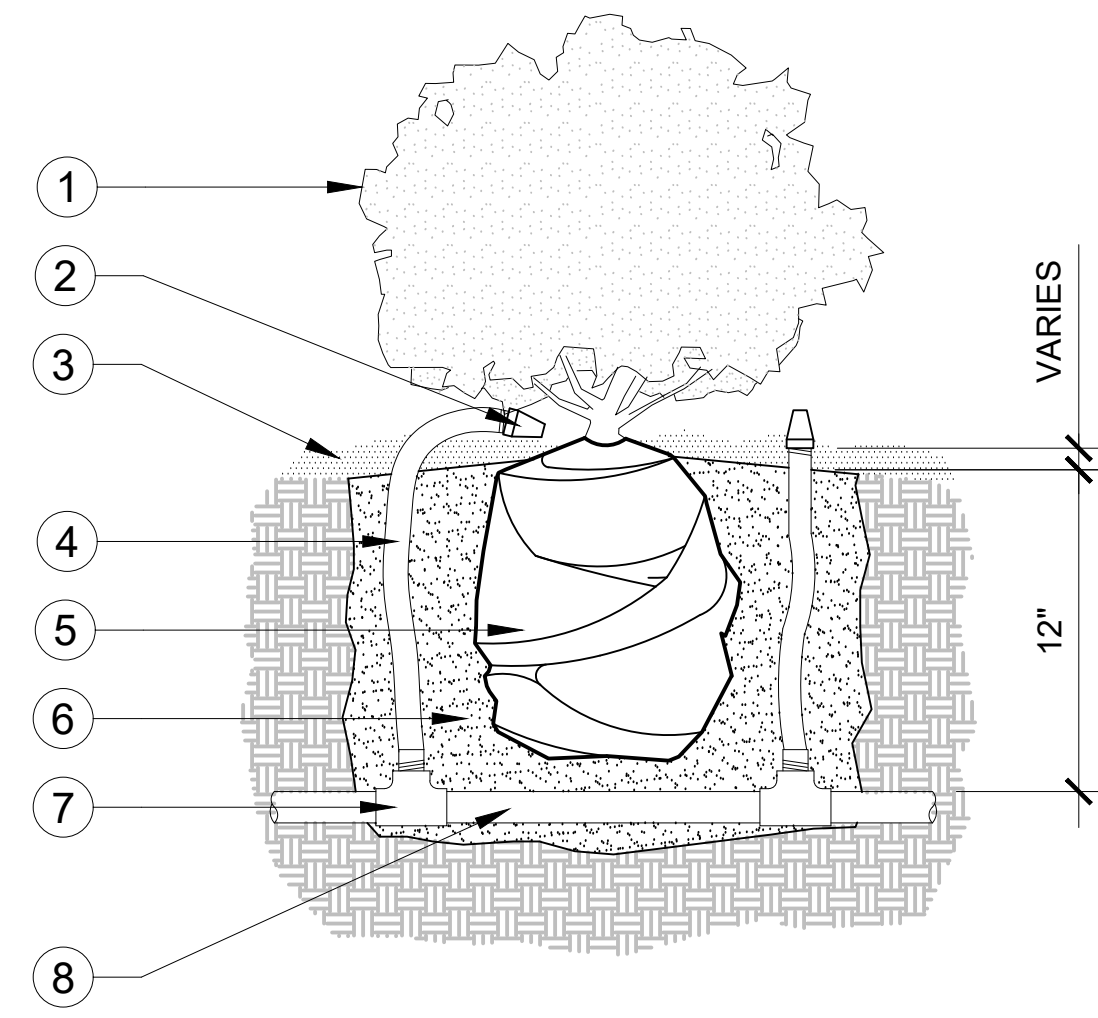
SCALE: N.T.S.

E DRIP FLUSH VALVE (MANUAL OP.) SECTION

SCALE: N.T.S.

F DRIP OPERATION POP-UP INDICATOR SECTION

SCALE: N.T.S.

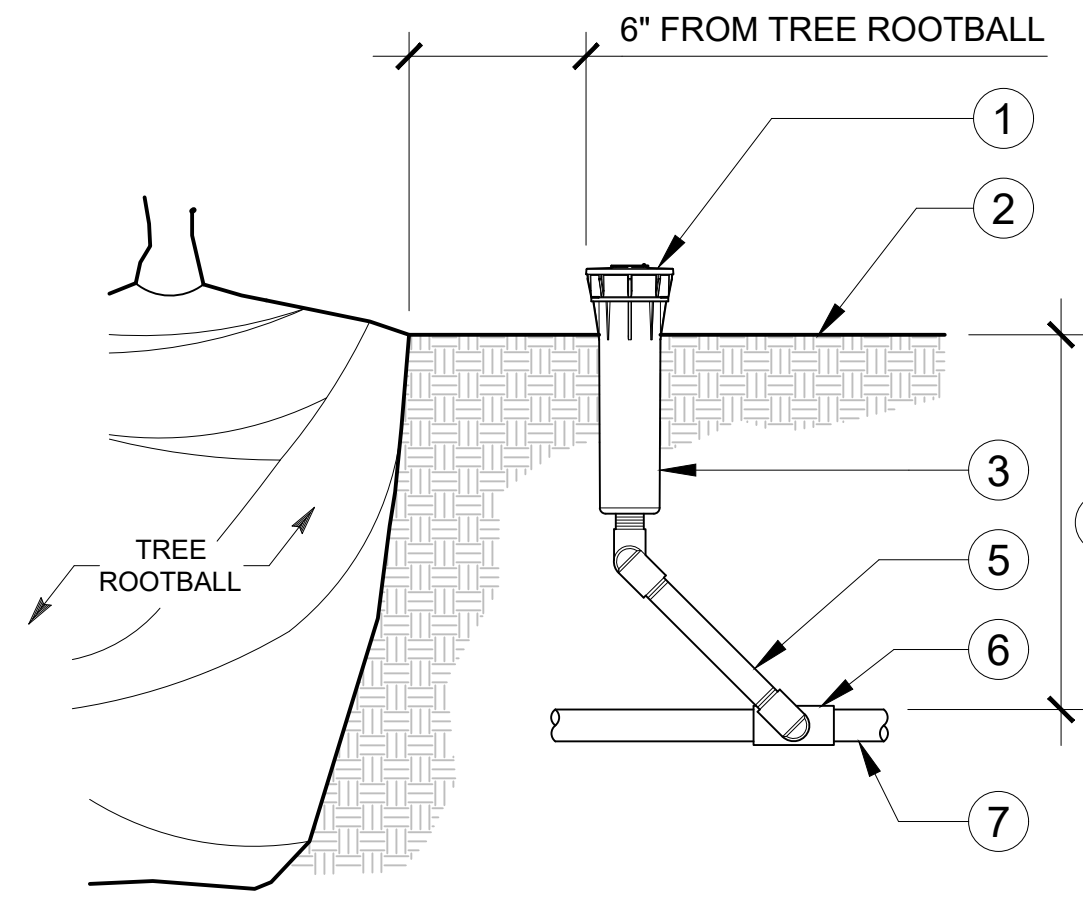


LEGEND

- ① PLANT MATERIAL
- ② DRIP EMITTER WITH BUG CAP (SAME EMITTER AS EMITTER MANUFACTURER)
- ③ MULCH
- ④ BEND AND HOLD TYPE FLEXIBLE RISER DRIP EMITTER ASSEMBLY WITH PRE-INSTALLED DIRECT CONNECT 2.0 GPH EMITTER, 1/2" FIPT. INSTALL TWO EMITTER ASSEMBLY PER PLANT. EXCEPTION: SEE ALSO PLANS FOR OTHER APPLICATIONS
- ⑤ ROOT BALL
- ⑥ PLANTING BACKFILL MIX PER PLANTING PLAN AND SPECIFICATIONS
- ⑦ LATERAL LINE TEE OR ELL WITH THREADED CONNECTION, SIZE AS REQUIRED
- ⑧ RIGID PVC DRIP LATERAL (SEE PLANS FOR SIZES)

NOTE:

- 1. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

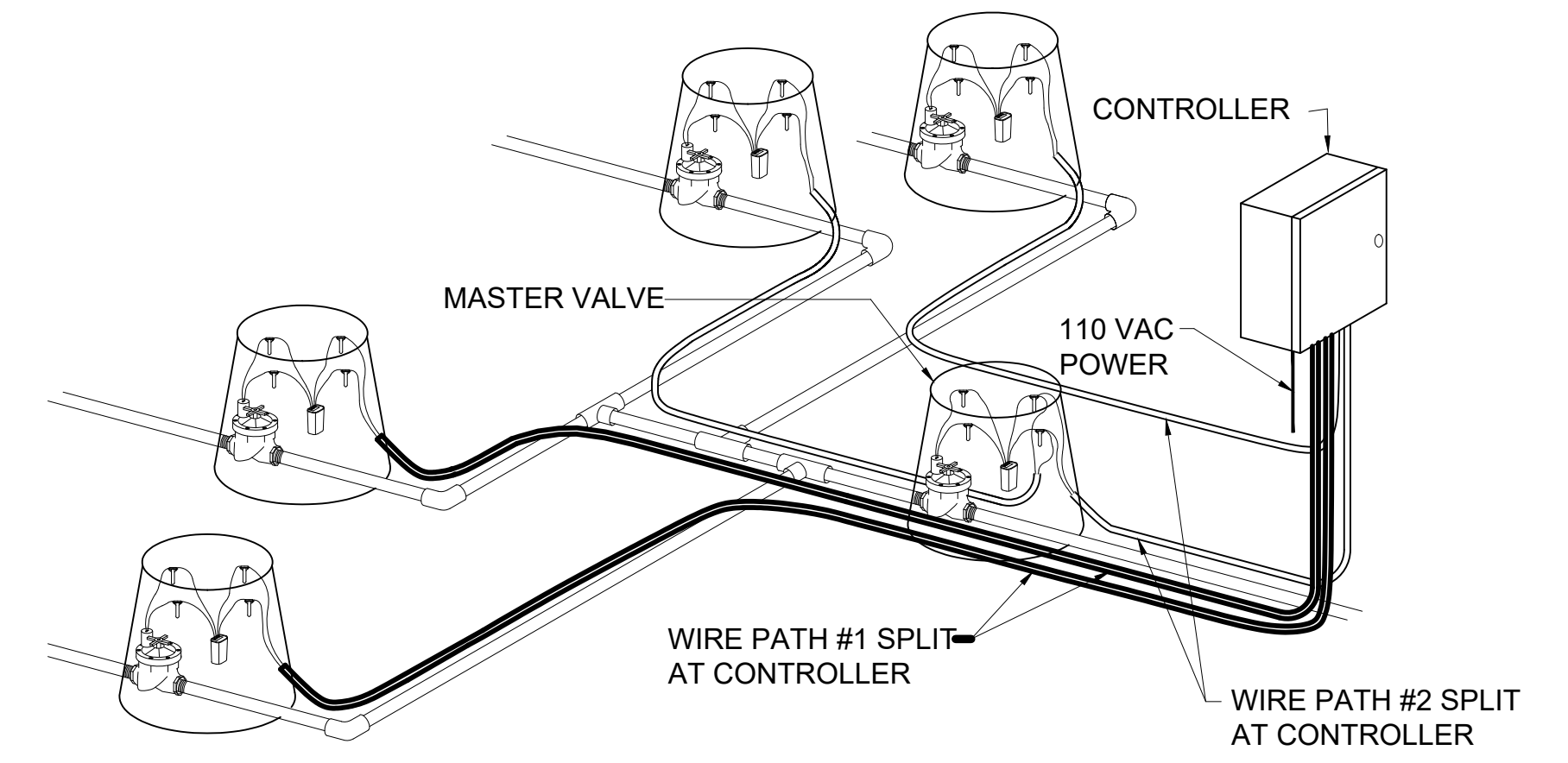


LEGEND

- ① INSTALL 2" ABOVE FINISH GRADE IN SHRUB AREAS / FLUSH WITH FINISH GRADE IN TURF AREAS
- ② FINISH GRADE
- ③ POP-UP BODY WITH BUBBLER NOZZLE. REFER TO LEGEND
- ④ SEE SPECIFICATIONS FOR DEPTH
- ⑤ SWING JOINT ASSEMBLY, (3) PVC SCH 40 STREET ELLS WITH (1) PVC SCH 80 NIPPLE
- ⑥ LINE SIZE PVC SCH 40 SLIP X SLIP X 1/2" FIPT TEE OR LINE SIZE SLIP X 1/2" FIPT ELL AT TERMINAL ENDS
- ⑦ PVC NON-PRESSURE LATERAL LINE. REFER TO PLAN FOR SIZE. 12" MIN. SOIL COVER FOR ALL 4" / 6" POP-UP HEADS, 18" MIN. SOIL COVER FOR ALL 12" POP-UP HEADS

NOTES:

- 1. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.
- 2. REFER TO PLANTING PLAN FOR TREE LOCATIONS, SIZE, AND TYPE. VERIFY ON SITE THAT ALL POP-UP BUBBLERS ARE AT CORRECT TREE LOCATIONS AND HAVE THE CORRECT NUMBER OF POP-UP BUBBLERS INSTALLED FOR THEIR SIZE AND TYPE. COORDINATE ON SITE WITH LANDSCAPE ARCHITECT FOR TREE LOCATIONS.
- 3. INSTALL BUBBLERS EQUIDISTANT FROM EACH OTHER AROUND TREES. TYP.
- 4. ON SLOPES, INSTALL BUBBLERS ON UPHILL SIDE OF TREE.

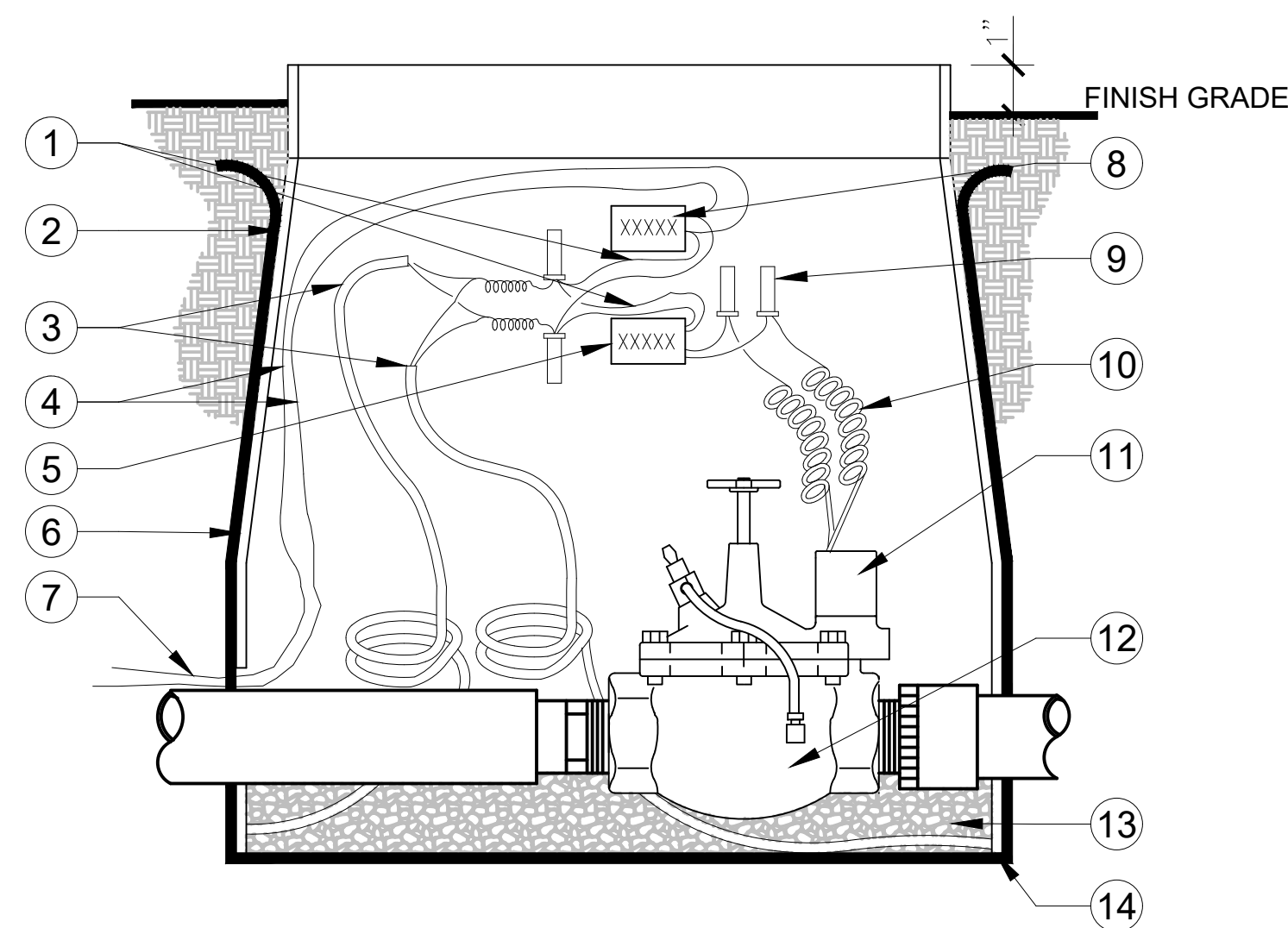


NOTES:

- 1. ALL WIRE CONNECTIONS SHALL BE MADE WITH APPROVED CONNECTORS (3M SCOTCH LOCK 3570G-N, OR APPROVED EQUAL).
- 2. MAKE ALL WIRE SPLICES IN VALVE BOXES.
- 3. LEAVE A MINIMUM OF 12" EXTRA WIRE AT ALL SPLICE POINTS.
- 4. MAXIMUM DISTANCE FROM DECODER TO VALVE=100 FT.
- 5. REFER TO CONTROLLER MANUFACTURER FOR SPECIFIC DIRECTIONS.

A POINT SOURCE IRRIGATION SECTION

SCALE: N.T.S.



LEGEND

- ① BLUE WIRES TO TWO WIRE COMUNICATION PATH
- ② VALVE BOX AND LID
- ③ TWO WIRE COMMUNICATION PATH. REFER TO NOTES BELOW FOR WIRE LENGTH
- ④ #6AWG SOLID GROUND WIRE CONNECTED TO GROUND ROD USING BRASS CLAMP
- ⑤ DECODER-INSTALL SECURELY TO UPPER SECTION OF SIDE OF VALVE BOX WITH STAINLESS STEEL SCREW
- ⑥ EXTENSION (LENGTH AS REQUIRED)
- ⑦ GROUND WIRE TO CONNECT TO GROUNDING ROD
- ⑧ SURGE ARRESTOR (AS REQUIRED)
- ⑨ WIRE CONNECTORS. 3M SCOTCH LOCK 3570G-N, OR APPROVED EQUAL
- ⑩ EXPANSION COILS
- ⑪ SOLENOID
- ⑫ ELECTRIC VALVE AS REQUIRED
- ⑬ GRAVEL
- ⑭ FILTER FABRIC (MIRAFI #140N, OR APPROVED EQUAL). WRAP 1 LAYER AROUND BOX COVERING HOLES

NOTE:

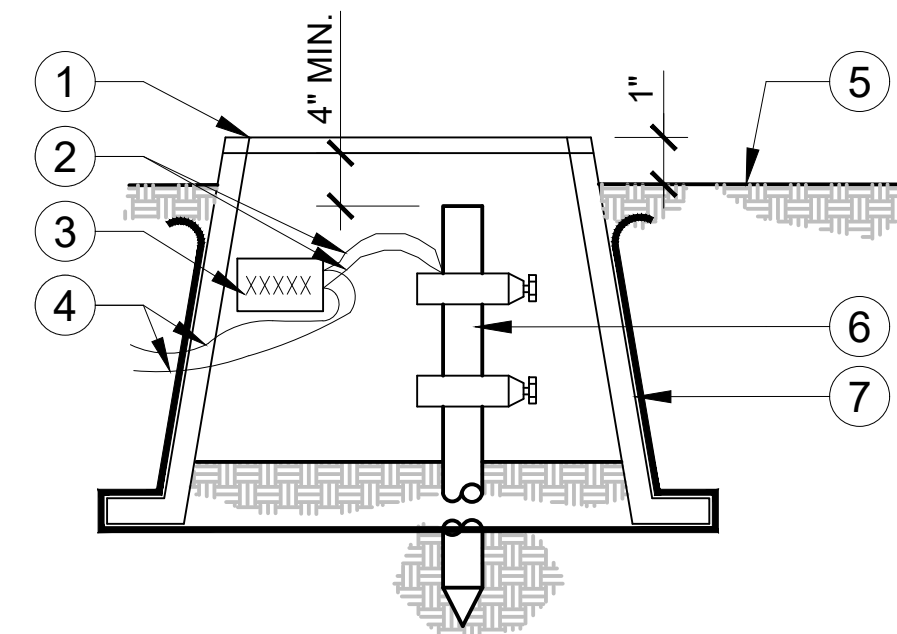
- 1. WIRE COIL 4 FEET LENGTH.

D RCV WITH DECODER AND SURGE PROTECTOR SECTION

SCALE: N.T.S.

B 4" POP-UP BUBBLER HEAD SECTION

SCALE: N.T.S.



LEGEND

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

NOTE:

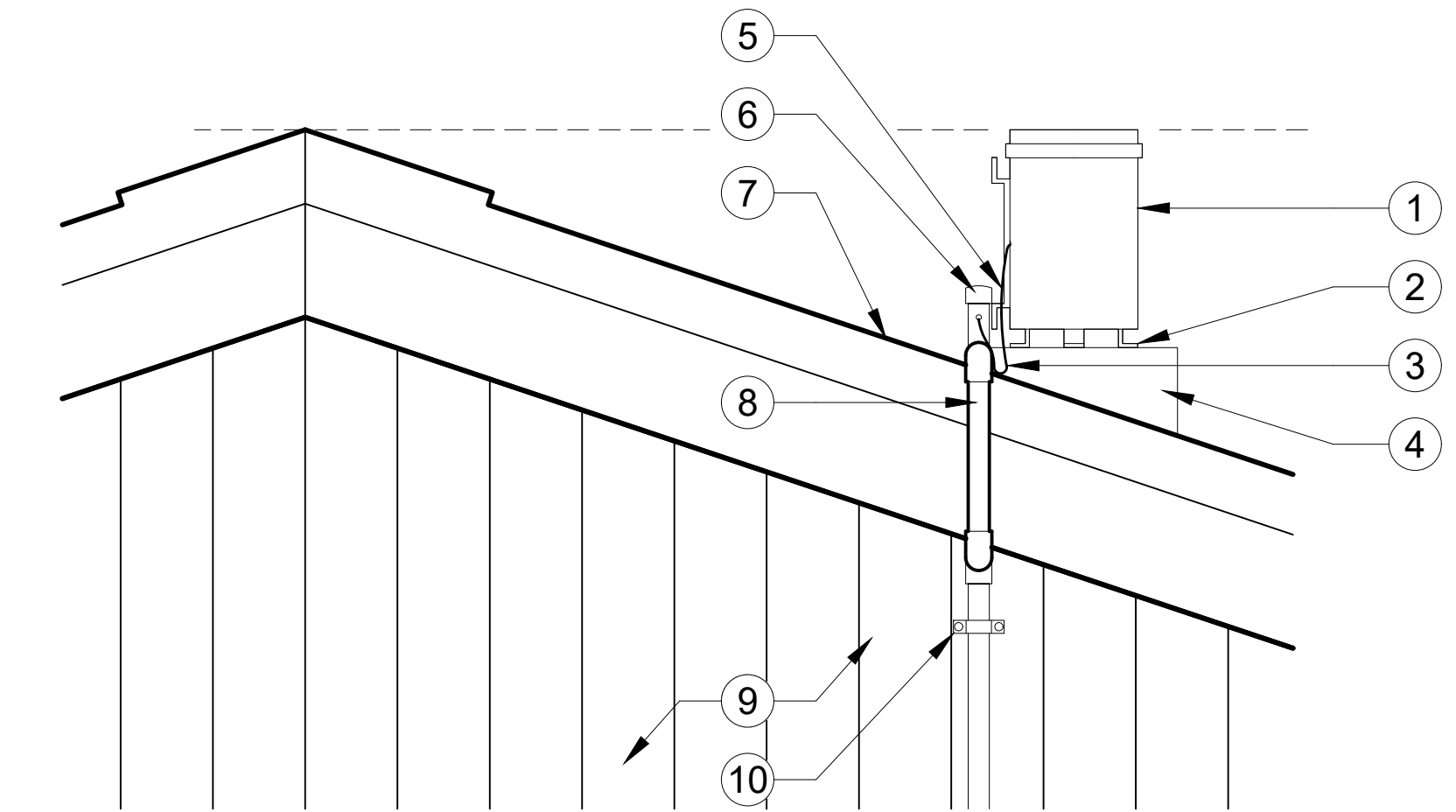
- 1. REFER TO MANUFACTURER'S SPECIFICATIONS FOR GROUND ROD INSTALLATION.

E SURGE PROTECTOR AND GROUNDING ROD SECTION

SCALE: N.T.S.

C TWO WIRE PATH DIAGRAM ISOMETRIC

SCALE: N.T.S.



LEGEND

- ① TIPPING RAIN BUCKET
- ② FLAT SURFACE MOUNTING FEET
- ③ DRIP LOOP
- ④ MOUNTING SURFACE ROOF ATTACHMENT (MATCH ROOF COLOR) SEAL ALL ATTACHMENT CONNECTIONS
- ⑤ WIRE TO CONTROLLER RAIN BUCKET CONNECTIONS
- ⑥ SEAL OPENING
- ⑦ BUILDING ROOF
- ⑧ ELECTRICAL CONDUIT TO TIPPING RAIN BUCKET, (METAL CONDUIT ONLY) SECURE CONDUIT TO BUILDING WALL AND ROOF
- ⑨ BUILDING WALL
- ⑩ GALVANIZED CLAMP AT 36" MAX. APART

NOTE:

- 1. PRIOR APPROVAL WITH EXACT LOCATION SHALL BE CONDUCTED WITH LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE.

F TIPPING RAIN BUCKET SECTION

SCALE: N.T.S.

KTUA PLANNING AND LANDSCAPE ARCHITECTURE
3816 NORVAL STREET
SAN DIEGO, CA 92103
TEL: 619.294.4177

ktua

DATE FINISHED: _____

REVISIONS: _____

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LANDSCAPE ARCHITECT
NOT FOR CONSTRUCTION
No. 2023-00000000
STATE OF CALIFORNIA

PROJECT: PHELAN CIVIC CENTER PARK

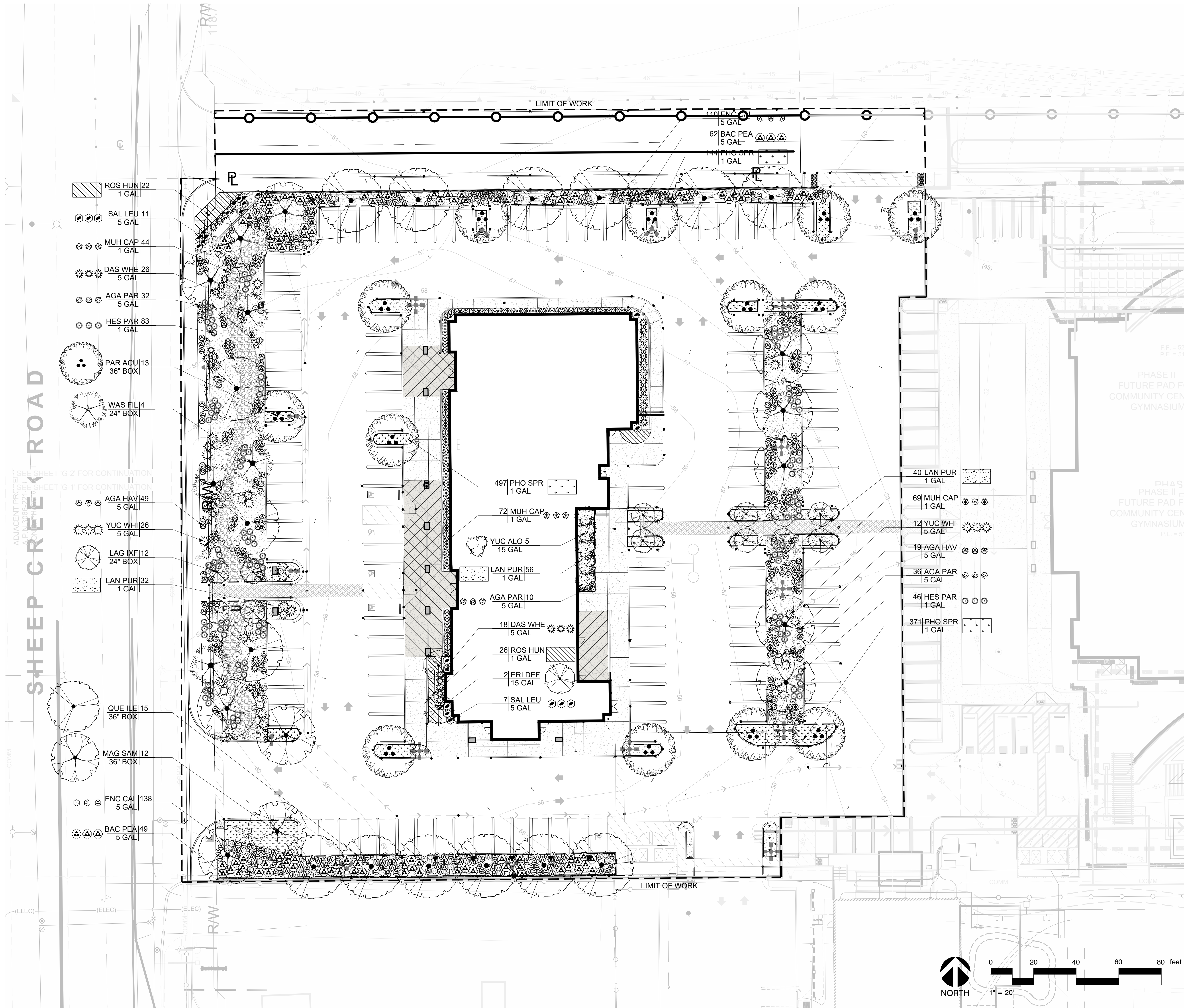
JOB NO.: _____

SHEET NAME: IRRIGATION DETAILS

PAGE: LI-07

LEGEND	
SYMBOL	DESCRIPTION
-----	TREE ROOT BARRIER TYPICAL. REFER TO DETAIL AND SPECIFICATIONS

SHEET NOTES	
1.	REFER TO SHEET LP-02 FOR PLANTING NOTES.
2.	REFER TO SHEET LP-03 FOR FULL PLANTING LEGEND.
3.	REFER TO SHEET LP-04 FOR PLANTING DETAILS.



KTUA PLANNING AND LANDSCAPE ARCHITECTURE
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DATE FINISHED

REVISIONS

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PROJECT: PHELAN CIVIC CENTER PARK

JOB NO.

SHEET NAME:
PLANTING PLAN

PAGE
LP-01

PLANTING NOTES

- | | | | | | | | | | | | | | | | |
|---|---|------------------------------|---------|------------------------------|--------|----------------|---------|---|---------|--------------|---------|---|--------|---|---------|
| <ol style="list-style-type: none"> 1. ALL FINISH GRADING AND LANDSCAPE OPERATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT DRAWINGS, DETAILS, AND PROJECT SPECIFICATIONS. REFER TO PROJECT SPECIFICATIONS FOR ALL PLANTING REQUIREMENTS. 2. SEE SHEET LP-04 FOR PLANTING DETAILS. SEE LANDSCAPE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY CHANGED CONDITIONS WHICH OCCUR ON PROJECT SITE WHICH ARE NOT REFLECTED ON PLANS. 4. REMOVE ALL WEEDS, DEBRIS, AND ROCKS LARGER THAN ONE-HALF-INCH (1/2") FROM ALL PLANTING AREAS, AND DISPOSE OF APPROPRIATELY OFF-SITE. 5. FINISH GRADE OF SOIL SHALL BE THREE-INCHES (3") BELOW ADJACENT FINISH PAVING SURFACE OR CURB IN SHRUB AND GROUND COVER AREAS. 6. CONTRACTOR SHALL INSTALL A THREE-INCH (3") LAYER OF BARK MULCH IN ALL SHRUB AND GROUND COVER AREAS THAT ARE NOT DECOMPOSED GRANITE. SUBMIT SAMPLE FOR APPROVAL BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT. REFER TO SPECIFICATIONS. 7. ALL SLOPES 2:1 OR GREATER ARE TO BE STABILIZED WITH JUTE MESH PRIOR TO PLANTING. DO NOT INSTALL JUTE MESH ON SEEDED SLOPES. REFER TO SPECIFICATIONS. 8. CONTRACTOR SHALL PROVIDE ELECTRONIC PHOTOGRAPHS OF ALL TREES FOR APPROVAL, PRIOR TO PURCHASE AND INSTALLATION. REFER TO SPECIFICATIONS. 9. TREE LOCATIONS MAY BE ADJUSTED TO AVOID CONFLICTS WITH UNDERGROUND UTILITIES. CONSULT WITH LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO ADJUSTMENT OF TREE LOCATIONS. 10. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT THE TIME OF DELIVERY OF ANY PLANT MATERIAL WHICH HAS BEEN DAMAGED OR IS IN POOR CONDITION. THE OWNER'S REPRESENTATIVE SHALL DETERMINE ACCEPTABILITY OF SUBJECT PLANT MATERIAL. 11. PLANT MATERIAL SHALL BE INSPECTED BY THE OWNER'S REPRESENTATIVE BEFORE PLANTING. PLANT MATERIAL MAY BE REJECTED AT ANY TIME BY THE OWNER'S REPRESENTATIVE DUE TO POOR CONDITION, FORM, OR DAMAGE PRIOR TO, DURING, OR AFTER THE PLANTING PROCESS. 12. AT LEAST ONE PLANT OF EACH SPECIES DELIVERED TO THE SITE SHALL HAVE AN IDENTIFICATION TAG FROM THE SUPPLYING NURSERY SHOWING BOTH COMMON AND SCIENTIFIC NAMES. 13. THE PLANTING PLANS ARE DIAGRAMMATIC. PLANT MATERIALS SHALL BE SPOTTED AS SHOWN ON THE DRAWINGS. TREE LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO THE EXCAVATION OF PLANTING PITS AND REMOVAL FROM CONTAINERS. FINAL LAYOUT OF ALL OTHER PLANT MATERIALS SHALL BE APPROVED IN THE FIELD BY THE OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT PRIOR TO PLANTING. 14. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLANT COUNTS AND SQUARE FOOTAGES. 15. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PLANT MATERIALS SUFFICIENT TO COVER AREAS SHOWN ON THE DRAWINGS AT THE SPECIFIED SPACING. 16. NURSERY STAKES ARE TO BE REMOVED AFTER PLANTING TREES AND INSTALLATION OF STAKING OR GUYING, AS SHOWN ON PLANS. 17. CONTRACTOR SHALL SUBMIT AN AGRICULTURAL SUITABILITY AND FERTILITY ANALYSIS REPORT, AS NOTED IN THE PLANTING SPECIFICATIONS, TO THE LANDSCAPE ARCHITECT AND THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO ANY PLANTING WORK OR SOIL AMENDMENT INCORPORATION. THE RECOMMENDATIONS OF THE SOILS ANALYSIS REPORT FOR TOPSOIL AMENDMENT AND BACKFILL MIX AMENDMENT SHALL SUPERSEDE THE RECOMMENDATIONS LISTED IN THE SPECIFICATIONS. 18. CONTRACTOR SHALL COORDINATE LANDSCAPE WORK WITH THE WORK OF OTHER TRADES AND PROFESSIONS. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING THE COURSE OF CONSTRUCTION. 19. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF EXISTING PROPOSED UTILITIES WITHIN THE PROJECT LIMITS WHICH MAY BE AFFECTED BY INSTALLATION. IMMEDIATELY CONTACT THE LANDSCAPE ARCHITECT IF A CONFLICT IS EVIDENT. 20. REMOVE ALL TYING MATERIALS, MARKING TAPES, AND NURSERY STAKES AT THE TIME OF PLANTING. 21. CONTRACTOR SHALL PROTECT EXISTING VEGETATION AND OTHER IMPROVEMENTS OUTSIDE THE LIMITS OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF | <p>ANY DAMAGES INCURRED DURING CONSTRUCTION.</p> <ol style="list-style-type: none"> 22. THE MAINTENANCE PERIOD SHALL BEGIN ONLY UPON WRITTEN ACCEPTANCE OF THE COMPLETED PLANTED AREAS BY THE LANDSCAPE ARCHITECT AND THE OWNER'S REPRESENTATIVE. 23. PROVIDE MATCHING FORMS AND SIZES FOR ALL PLANT MATERIAL WITHIN EACH SPECIES AND SIZE DESIGNATED BY THE DRAWINGS. 24. ALIGN AND EQUALLY SPACE, IN ALL DIRECTIONS, ALL PLANT MATERIAL WITHIN EACH SPECIES SO DESIGNATED PER THESE NOTES AND DRAWINGS. 25. FURNISH ALL DELIVERY SLIPS OF THE SPECIFIED AMENDMENTS TO THE CONSTRUCTION MANAGEMENT SUPERVISOR AND LANDSCAPE ARCHITECT FOR REVIEW AFTER PLANT INSTALLATION. IF IT IS DETERMINED MORE AMOUNTS ARE NEEDED, CONTRACTOR WILL BE REQUIRED TO ADD INTO SOIL WITH OBSERVATION OR PROVIDE CREDIT BACK TO OWNER. 26. ALL PLANTING AREAS SHALL BE GRADED TO HAVE POSITIVE DRAINAGE (2% MIN.) AWAY FROM THE BUILDING WALLS AND STRUCTURES AND TOWARDS AREA DRAINS. 27. MINIMUM TREE SEPARATION DISTANCE FROM IMPROVEMENTS: <table border="0" style="margin-left: 20px;"> <tr> <td>A. TRAFFIC SIGNAL, STOP SIGN</td> <td style="text-align: right;">20 FEET</td> </tr> <tr> <td>B. UNDERGROUND UTILITY LINES</td> <td style="text-align: right;">5 FEET</td> </tr> <tr> <td>C. SEWER LINES</td> <td style="text-align: right;">10 FEET</td> </tr> <tr> <td>D. ABOVE GROUND UTILITY STRUCTURES (TRANSFORMERS, HYDRANTS, UTILITY POLES, ETC)</td> <td style="text-align: right;">10 FEET</td> </tr> <tr> <td>E. DRIVEWAYS</td> <td style="text-align: right;">10 FEET</td> </tr> <tr> <td>F. RESIDENTIAL STREETS RATED AT 25 MPH OR LOWER</td> <td style="text-align: right;">5 FEET</td> </tr> <tr> <td>G. INTERSECTIONS (INTERSECTING CURB LINES OF TWO STREETS)</td> <td style="text-align: right;">25 FEET</td> </tr> </table> | A. TRAFFIC SIGNAL, STOP SIGN | 20 FEET | B. UNDERGROUND UTILITY LINES | 5 FEET | C. SEWER LINES | 10 FEET | D. ABOVE GROUND UTILITY STRUCTURES (TRANSFORMERS, HYDRANTS, UTILITY POLES, ETC) | 10 FEET | E. DRIVEWAYS | 10 FEET | F. RESIDENTIAL STREETS RATED AT 25 MPH OR LOWER | 5 FEET | G. INTERSECTIONS (INTERSECTING CURB LINES OF TWO STREETS) | 25 FEET |
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REVISIONS

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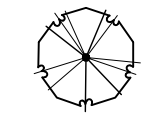


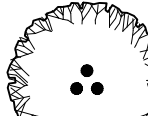
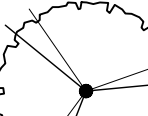
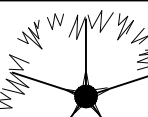

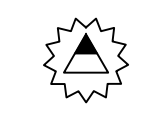
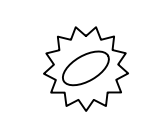

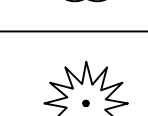
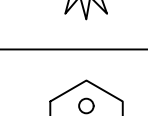
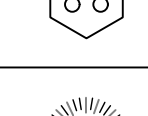
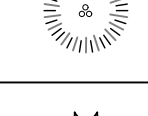
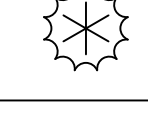
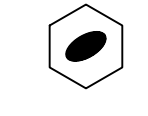
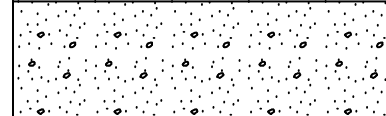
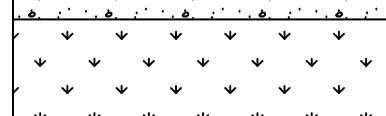
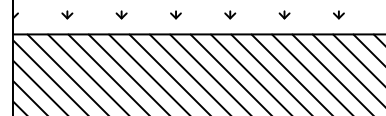
JOB NO.

SHEET NAME:


PLANTING NOTES

PAGE

LP-02

PLANTING LEGEND												
SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY	MIN. HEIGHT	MIN. SPREAD	WUCOLS	REMARKS	DETAIL	
TREES												
	ERI DEF	ERIOBOTRYA DEFLEXA	BRONZE LOQUAT	15 GAL.	NA	2	-	-	M	STANDARD TRUNK, GOOD COLOR	A,C / LP-04	
	LAG IXF	LAGERSTROEMIA INDICAX FAURIEI 'TUSCARORA'	TUSCARORA CRAPE MYRTLE	24" BOX	NA	14	-	-	M	STANDARD TRUNK, GOOD COLOR	A,C / LP-04	
	MAG SAM	MAGNOLIA GRANDIFLORA 'SAMUEL SOMMER'	SAMUEL SOMMER SOUTHERN MAGNOLIA	36" BOX	NA	15	-	-	H?	STANDARD TRUNK, GOOD COLOR	A,C / LP-04	
	PAR ACU	PARKINSONIA ACULEATA	MEXICAN PALO VERDE	36" BOX	NA	17	-	-	L	STANDARD TRUNK, GOOD COLOR	A,C / LP-04	
	QUE ILE	QUERCUS ILEX	HOLLY OAK	36" BOX	NA	15	-	-	M	STANDARD TRUNK, GOOD COLOR	A,C / LP-04	
	WAS FIL	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM	24" BOX	NA	4	-	-	M	STANDARD TRUNK, HEALTHY	E,C / LP-04	
	YUC ALO	YUCCA ALOIFOLIA	SPANISH BAYONET	15 GAL.	NA	5	-	-	L	MULTI-TRUNK	A,C / LP-04	
SHRUBS												
	AGA HAV	AGAVE HAVARDIANA	HAVARD'S CENTURY PLANT	5 GAL	NA	68	-	-	VL	-	D / LP-04	
	AGA PAR	AGAVE PARRYI	PARRY'S AGAVE	1 GAL	NA	63	-	-	VL	-	D / LP-04	
	BAC PEA	BACCHARIS PILULARIS 'TWIN PEAKS'	TWIN PEAKS COYOTE BRUSH	1 GAL	NA	99	-	-	M	FULL AND BUSHY TO GROUND, GOOD COLOR	D / LP-04	
	DAS WHE	DASYLIRION WHEELERI	GREY DESERT SPOON	1 GAL	NA	44	-	-	L	-	D / LP-04	
	ENC CAL	ENCELIA CALIFONICA	CALIFORNIA ENCELIA	1 GAL	NA	231	-	-	-	FULL AND BUSHY TO GROUND, GOOD COLOR	D / LP-04	
	HES PAR	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL	NA	129	-	-	L	-	D / LP-04	
	MUH CAP	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	1 GAL	NA	177	-	-	M	FULL AND BUSHY TO GROUND, GOOD COLOR	D / LP-04	
	SAL LEU	SALVIA LEUCANTHA	MEXICAN BUSH SAGE	1 GAL	NA	18	-	-	-	FULL AND BUSHY TO GROUND, GOOD COLOR	D / LP-04	
	YUC WHI	YUCCA WHIPPLEI	CHAPARRAL YUCCA	5 GAL	NA	35	-	-	L	-	D / LP-04	
GROUND COVER												
	LAN PUR	LANTANA MONTEVIDENSIS	TRAILING LANTANA	1 GAL	3' O.C.	128	-	-	M	FULL AND SPREADING, GOOD COLOR	E / LP-04	
	PHO SPR	PHORMIUM TENAX 'JACK SPRATT'	NEW ZEALAND FLAX	1 GAL	18" O.C.	914	-	-	-	FULL AND BUSHY TO GROUND, GOOD COLOR	E / LP-04	
	ROS HUN	ROSMARINUS OFFICINALIS 'HUNTINGTON CARPET'	HUNTINGTON CARPET ROSEMARY	1 GAL	3' O.C.	48	-	-	M	FULL AND SPREADING, GOOD COLOR	E / LP-04	

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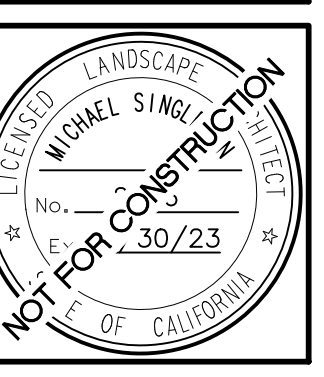


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PLANTING LEGEND

PAGE
LP-03

