

A01	1"	0.4	30
1	D	LOW	487

A02	1"	0.15	30
1	D	LOW	1703

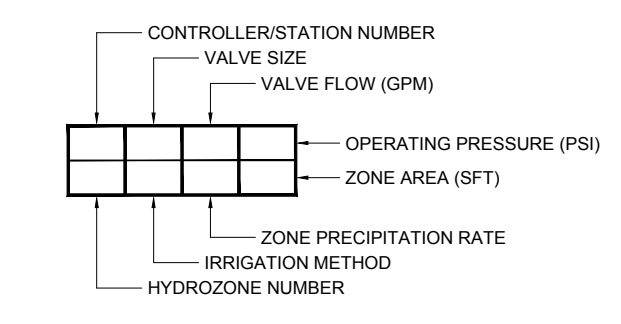
A03	1"	8	30
2	S	MED	1192

RENOVATE EXISTING IRRIGATION

SCALE: 1 : 10

IRRIGATION EQUIPMENT LEGEND		
SYMBOL	DESCRIPTION	Detail
[Symbol]	Hunter Pro-C automatic controller model: PCC-6000. Mount controller inside of building. Connect to 120VAC power.	UL-03
[Symbol]	Mini-Click Rain Sensor by Hunter. Mounted on any exterior surface that is not obstructed by rainfall.	ML-03
[Symbol]	Remote Control Valves: Hunter drip zone control kit model: PCZ-101. Hunter spray zone valve model: PGV 1". See plan call out for valve size. Valve box enclosure	AL-03 & FL-03
[Symbol]	Quick Coupler Valve, 1/2". Hunter Model HQ3 w/matching single lug key	EL-03
[Symbol]	Direct Burial waterproof wire connector use 3M #DBRY-6 Direct Burial or Paige #P70790	
[Symbol]	NETAFILM - DRIFLINE: TECHLINE CV. TLOCV-1801 (18" interval spacing 0.6 GPH flow)	UL-03 & DL-03 & BL-04
[Symbol]	Manual flush valve: TSLOV (Used at dead ends / further point on all drip zones)	CL-03
[Symbol]	Mainline piping: PVC SCH. 40 galvanized pipe with restrained fittings as required per detail, unless otherwise noted. Provide thrust blocks.	KL-03
[Symbol]	PVC sch. 40 Lateral Line piping; solvent weld. Size as noted	
[Symbol]	PVC sleeve under paving. Schedule 40 PVC sleeve shall be two pipe sizes greater than the piping which is to run in the sleeve, or 4" dia. for control wire without mainline. Cover depth shall be the same as the Mainline or Lateral Line.	KL-03
[Symbol]	Hunter Ball Valve: #CV-151G	BL-03

IRRIGATION HEADS LEGEND						
SYMBOL	DESCRIPTION	GPM	SPACING	NOZZLE PRESSURE	PRECIP RATE	DETAIL NUMBER
[Symbol]	Rainbird RD-06-S-P30-F Pop-up spray body with RD-12-S-P45-1NP spray head	0.5	2.5'-24"	15-100 PSI		



Static water pressure: is estimated to be 50 PSI. This is based on information from Long Beach Water Department 55 - 60 PSI at meter, and reduced by 300' of sch 40 mainline to approx 50 PSI.

HYDROZONE TABLE FOR CALCULATING ETWU: DRIP				
STATION #	STATION #	PLANT FACTOR	AREA (SF)	PA X HA
A01	LOW	0.3	487	148.10
A02	LOW	0.3	1703	510.90
TOTAL				657.00

HYDROZONE TABLE FOR CALCULATING ETWU: SPRAY				
STATION #	STATION #	PLANT FACTOR	AREA (SF)	PA X HA
A03	MED	0.4	1192	476.80
TOTAL				476.80

HYDROZONE				
HYDROZONE	STATION #	IRRIGATION	AREA (SF)	% OF TOTAL
1	A01	D	487	14.40%
1	A02	D	1703	50.30%
2	A03	S	1192	35.25%
TOTAL			3382	100%

**Water Budget Calculations:**  
 Maximum Apples Water Allowance:  $ET_0 \times 0.62 (ET_0/PA) + (1-ET_0/PA)SLA$   
 $MAWA = 39.7 \times 0.62 (0.45 \times 3382) + (0) = 41,623 \text{ GAL/YR}$   
 Estimated Total Water Use:  $(ET_0) (0.62) (PF/HA)(E + SLA)$   
 $ETWU (DRIP) = (39.7) (0.62) (657/81 + 0) = 19,965$   
 $ETWU (SPRAY) = (39.7) (0.62) (476.8/75 + 0) = 15,649$   
 $TOTAL ETWU = 19,965 + 15,649 = 35,614 \text{ GAL/YR}$

Water Efficient Landscape Worksheet	
HYDROZONE	HYDROZONE DESCRIPTION
1	SHRUBS IRRIGATED
2	TURF IRRIGATION

IRR METHOD	IRRIGATION METHOD DESCRIPTION
S	SPRAY IRRIGATION
D	DRIP IRRIGATION

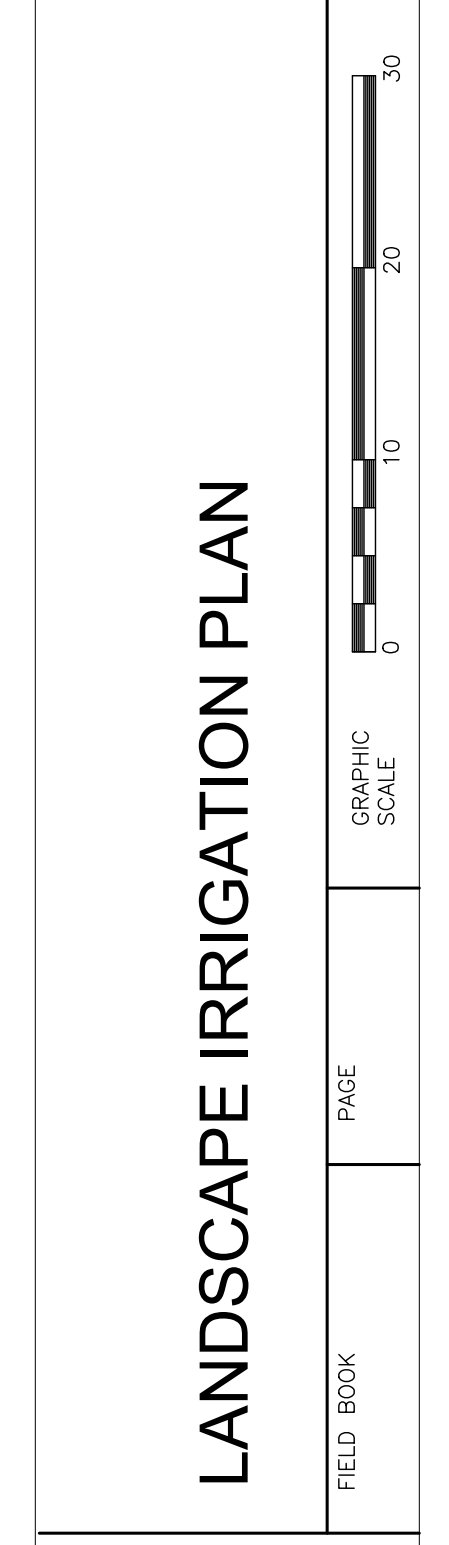
Lateral Line Pipe Sizing Chart:	
FLOW RANGE	MINIMUM SIZE OF LATERAL LINE
0 THROUGH 5 GPM	MINIMUM SIZE SHALL BE 3/4 INCH
6 THROUGH 11 GPM	MINIMUM SIZE SHALL BE 1 INCH
12 THROUGH 22 GPM	MINIMUM SIZE SHALL BE 1 1/4 INCH
23 THROUGH 30 GPM	MINIMUM SIZE SHALL BE 1 1/2 INCH
31 THROUGH 50 GPM	MINIMUM SIZE SHALL BE 2 INCH

ALL LATERAL LINES SHALL BE SCHEDULE 40 PVC. ALL LATERAL LINES INSTALLED UNDER PAVING SHALL BE PRESSURE TESTED PRIOR TO BURIAL.

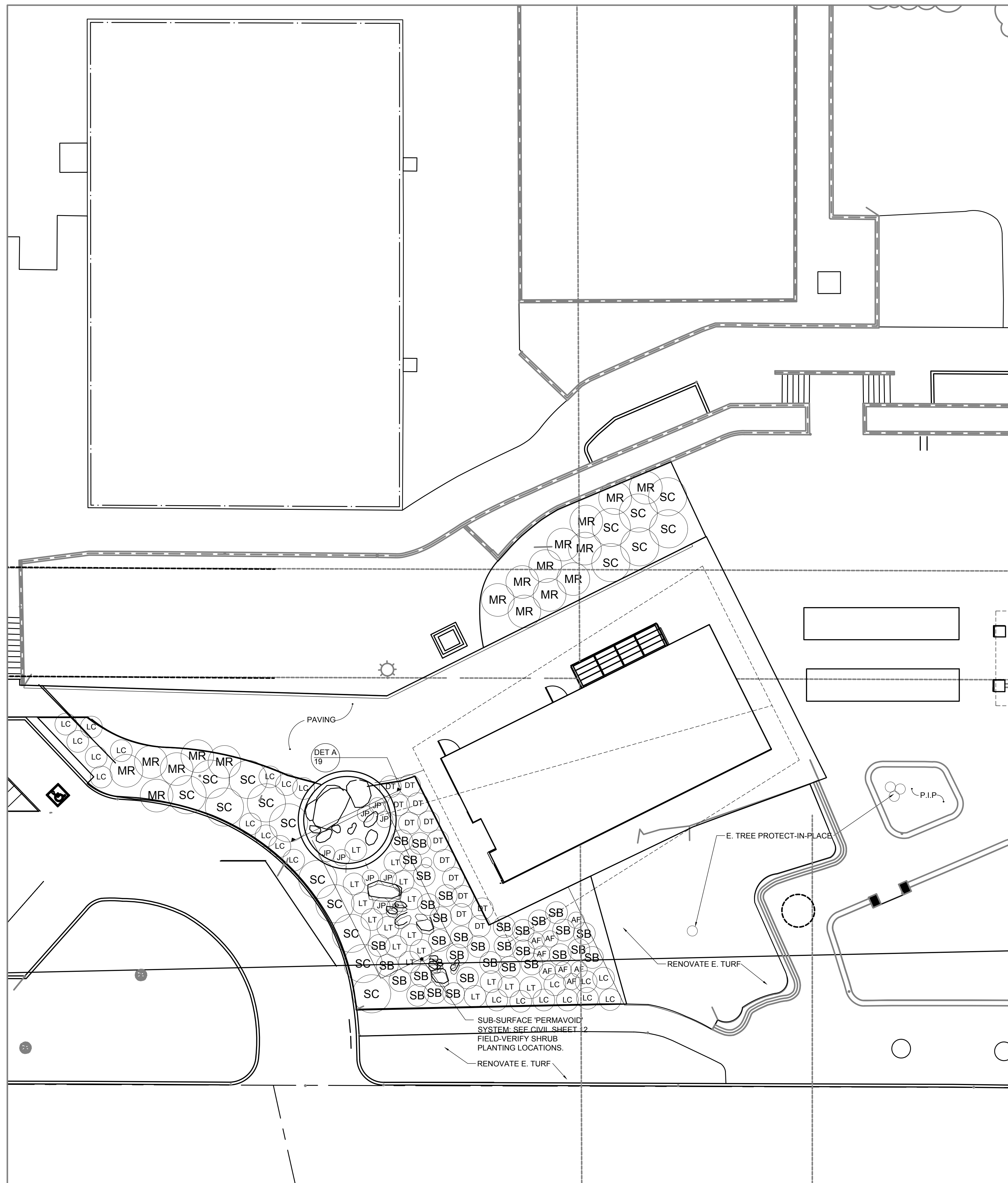
- IRRIGATION NOTES:**
- ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
  - THE CONTRACTOR SHALL VERIFY THE LOCATIONS 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.
  - THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN UNPAVED AREAS.
  - THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK ON 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 SHALL VERIFY THAT THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER OPERATE ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AT THE TIME WORK IS COMPLETE.
  - CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
  - ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
  - ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HANDSCAPE.
  - LOCKS SHALL BE INSTALLED ON ALL PUBLICLY ACCESSIBLE EXTERIOR FAUCETS AND HOSE BIBBS.
  - THE "LANDSCAPE CERTIFICATION" FORM GRN 12 SHALL BE COMPLETED PRIOR TO FINAL INSPECTION APPROVAL.
  - PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.
  - CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR.
  - A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
  - A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE SIGNER OF THE LANDSCAPE PLANS, THE SIGNER OF THE IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.

I have complied with the criteria of the Irrigation Guidelines and applied them for the efficient use of water in the landscape irrigation design plans.  
 I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package.

REVISIONS		DESCRIPTION
No.	DATE	SHEET
0	03.12.21	PLAN CHECK SUBMITTAL
1	04.16.21	PLAN CHECK RE-SUBMITTAL
2	04.23.21	PLAN CHECK RE-SUBMITTAL 2



NO. R-	
JOB NO.	
SHEET	16 OF 66
DRAWING NO.	C-6514



PLANTING PLAN

SCALE: 1 : 10

SHRUB LEGEND:

Symbol	Size	Scientific Name	Common Name	WUCOLS Water Use	Notes
⊙ AF	1 Gal.	<i>Asclepias fascicularis</i>	Narrow Leaf Milkweed	L	-
⊙ DT	1 Gal.	<i>Dianella tasmanica</i>	Flax Lilly	M	-
⊙ JP	1 Gal.	<i>Juncus patens</i>	Wire Grass	M	-
⊙ LC	1 Gal.	<i>Leymus condustus</i> 'Canyon Prince'	Cyn Prince Wild Rye	M	-
⊙ LT	1 Gal.	<i>Leymus triticoides</i> 'Gray Dawn'	Gray Dawn Wild Rye	M	-
⊙ MR	1 Gal.	<i>Muhlenbergia rigens</i>	Deer Grass	L	-
⊙ SB	1 Gal.	<i>Salvia</i> 'Bee's Bliss'	Bee's Bliss Sage	L	-
⊙ SC	5 Gal.	<i>Salvia Clevelandii</i>	Cleveland Sage	L	-
▨	SOD	Tif-Green Bermuda	Hybrid Bermuda Grass	M	-

MULCH:

Bark Mulch:  
All planting areas to be completely covered in 3" layer of fir bark mulch.

LANDSCAPE PLANTING NOTES:

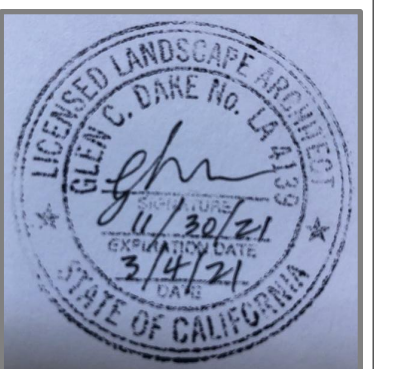
Conduct soil testing for agricultural suitability and the resulting recommendations for amendment are incorporated herein by reference. Remove top 12" of soil and amend soil as recommended and bring to finished grade designed. Existing irrigation system is to be salvaged and operational before plants are installed. Amend existing soil with 2" of organic compost matter. Existing shrubs and trees to be protected-in-place are to be evaluated and treated with improved horticultural maintenance so that their performance and life span is improved.

Shrubs are to be fill with the planting areas as shown.

LANDSCAPE AND IRRIGATION NOTES:

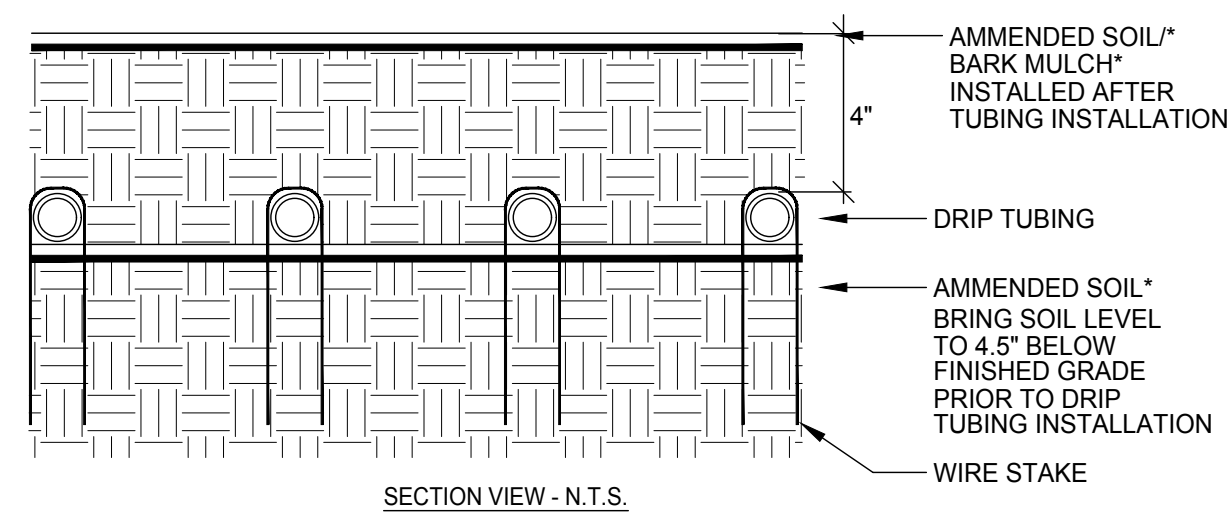
I agree to comply with the Long Beach Model Water Efficient Landscape Ordinance (MWELO).

REVISIONS		REVISIONS	
No.	DATE	No.	DATE
0	03.12.21	0	03.12.21
1	04.16.21	1	04.16.21
2	04.23.21	2	04.23.21



LANDSCAPE PLANTING PLAN

NO. R-	
JOB NO.	
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	17 OF 66
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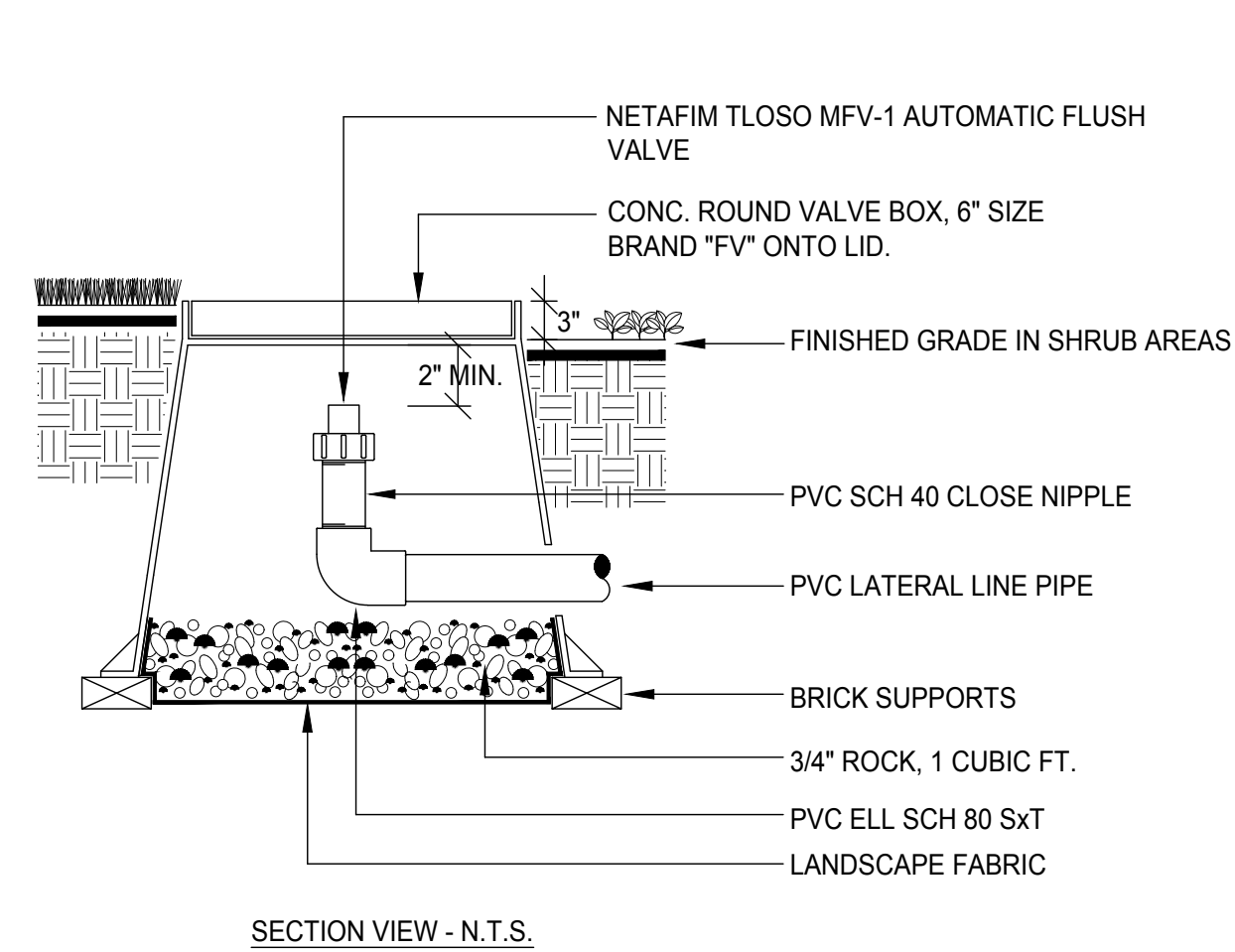
RECOMMENDED INSTALLATION: \* AS PER LANDSCAPE DRAWINGS

TO INSURE EVEN PARALLEL AND LEVEL TUBING ROWS IT IS RECOMMENDED THAT THE SOIL LEVEL IN THE PLANTER AREAS BE BROUGHT TO 4.5" BELOW FINISHED GRADE AND PROPERLY COMPACTED AS PER THE LANDSCAPED DRAWINGS PRIOR TO THE INSTALLATION OF THE TUBING.

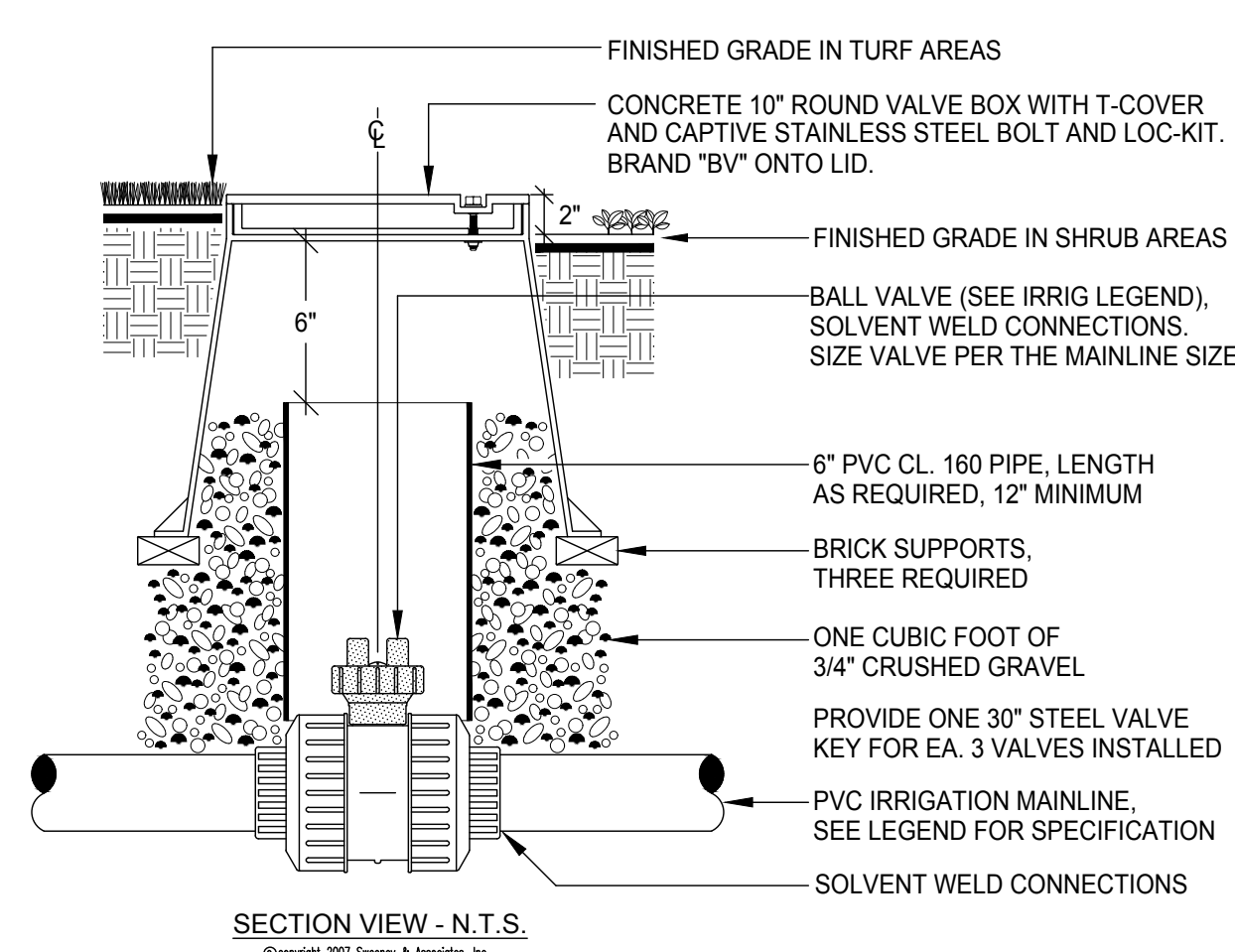
INSTALL TUBING AS INDICATED ON THESE DRAWINGS AND SECURE TO GRADE USING WIRE HOOP STAKES AT 5 FEET ON CENTER SPACING.

BACKFILL FINAL 4.5" OF SOIL/BARK MULCH OVER THE TUBING AFTER INSTALLATION OF THE TUBING AND OBSERVATION BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

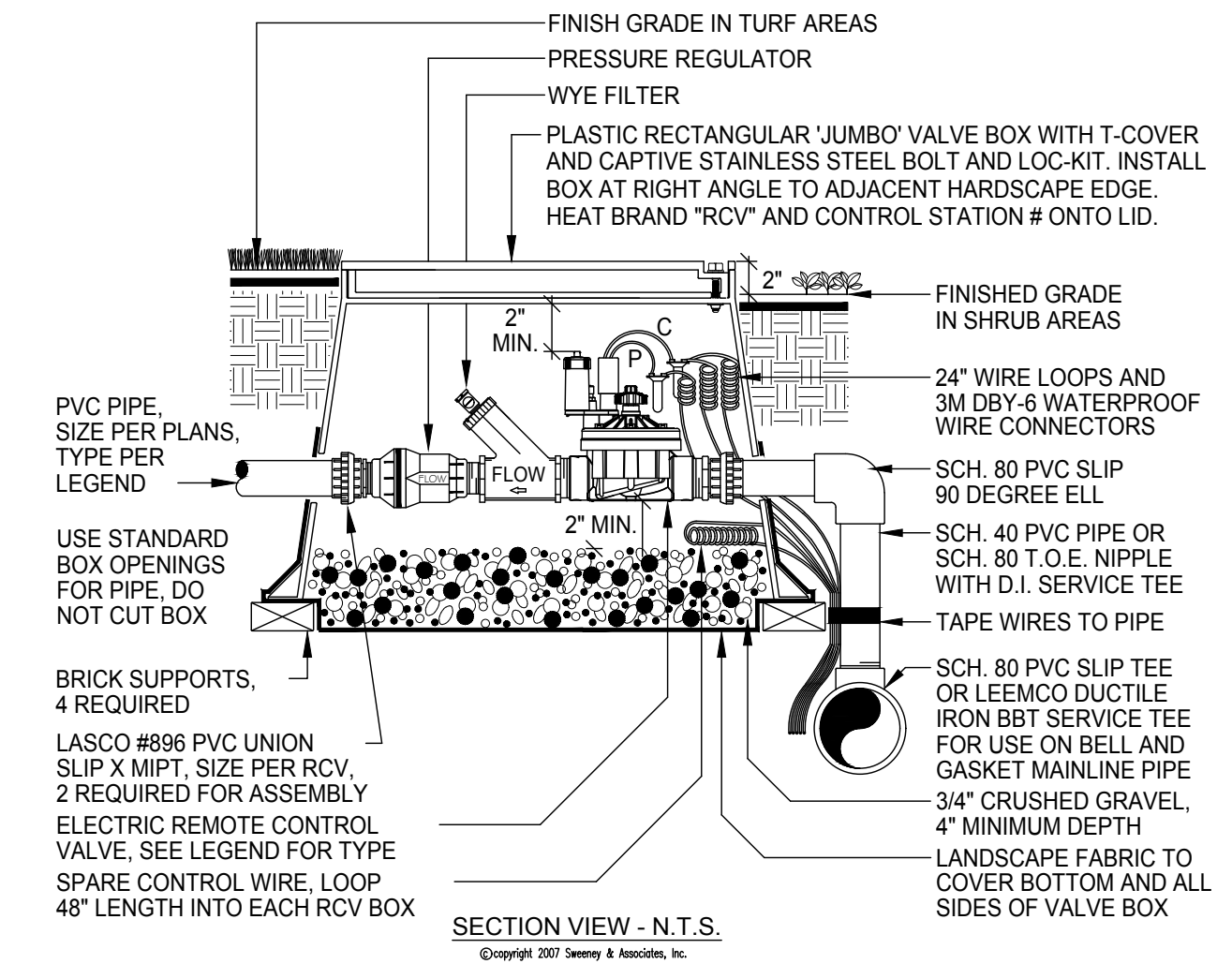
(D) DRIPLINE CONNECTION(SECTION)



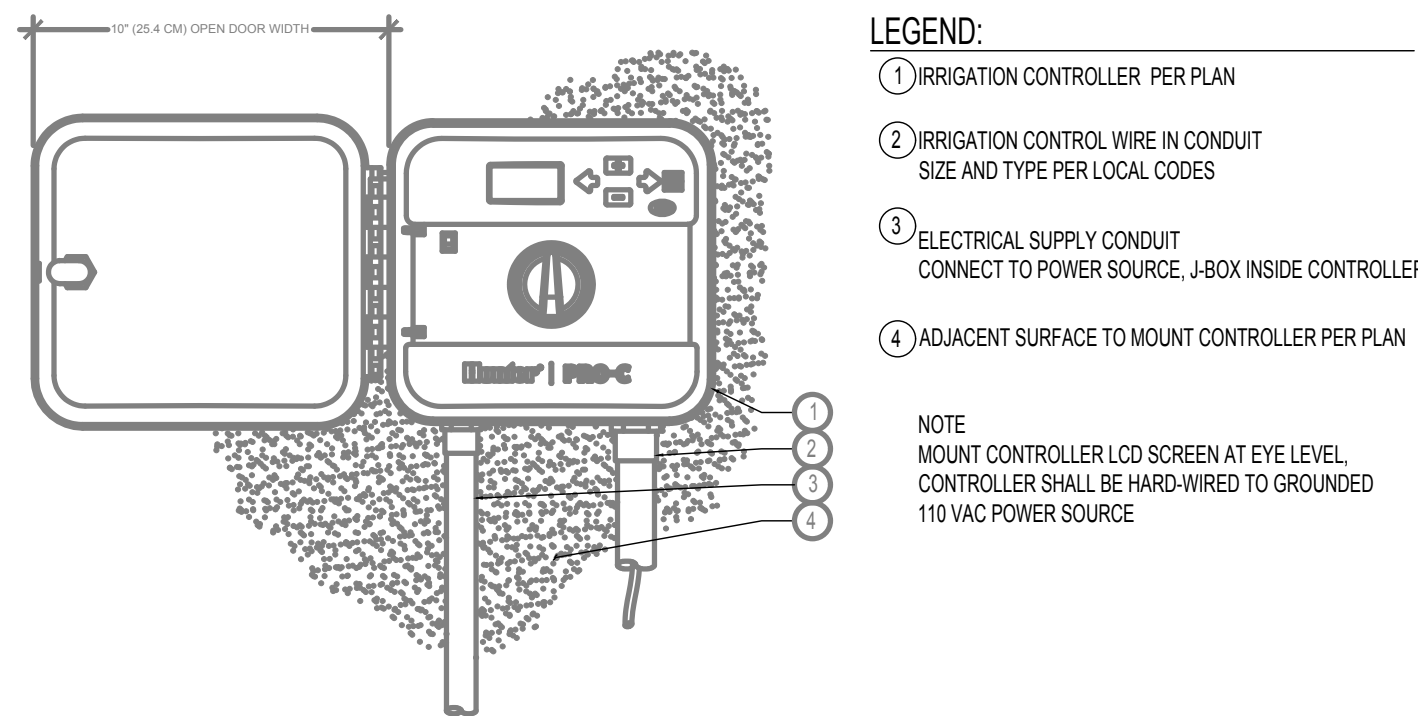
(C) DRIP FLUSH VALVE



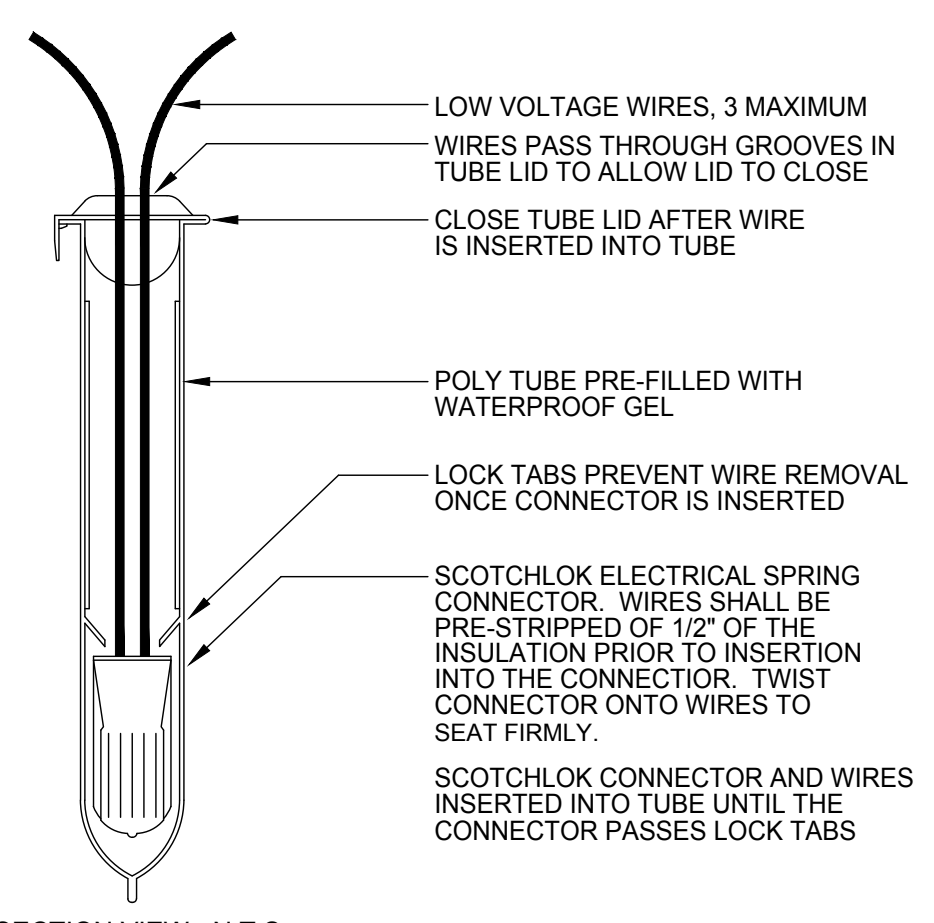
(B) BALL VALVE



(A) DRIP RCV ASSEMBLY



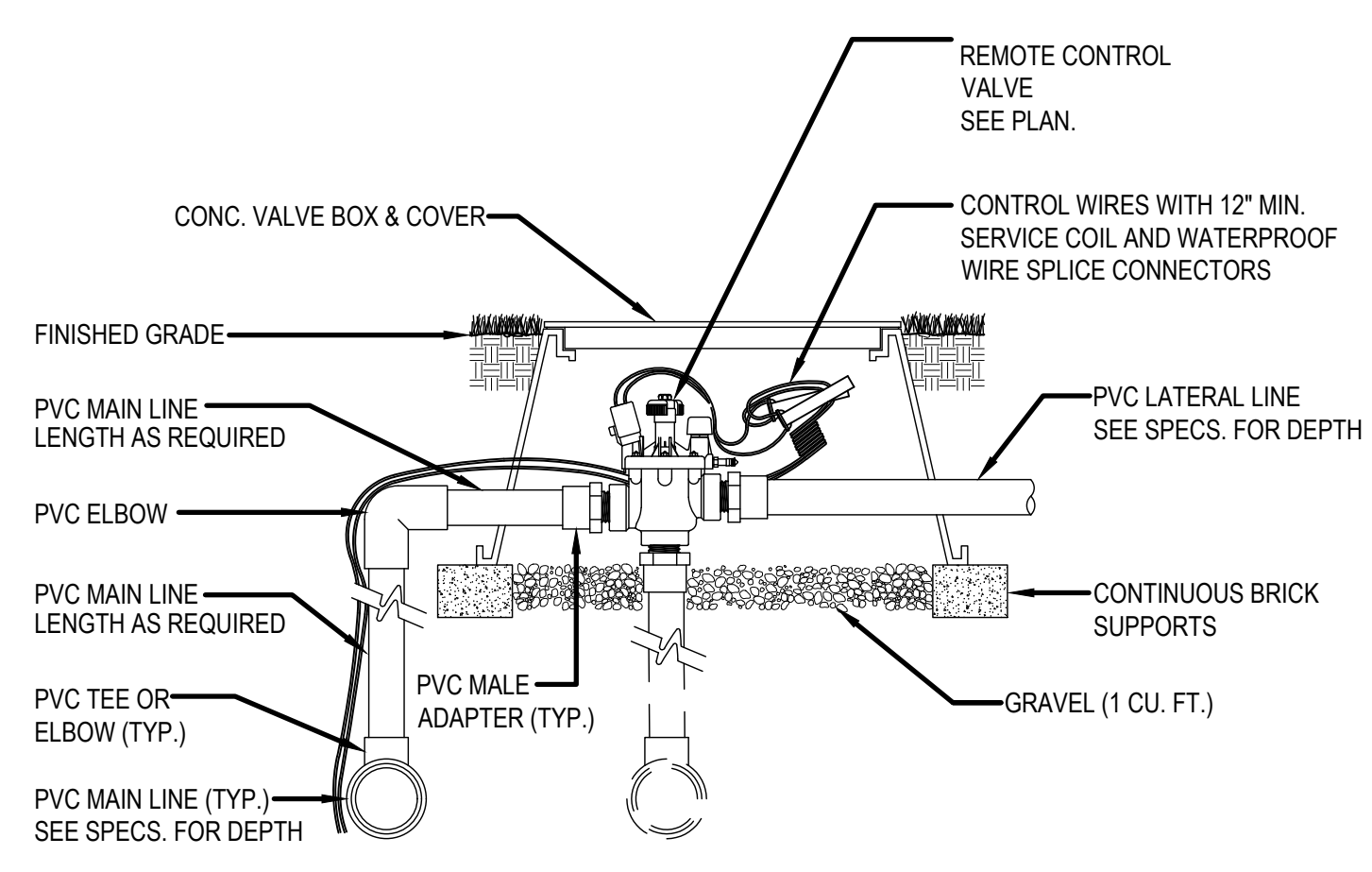
(H) IRRIGATION CONTROLLER



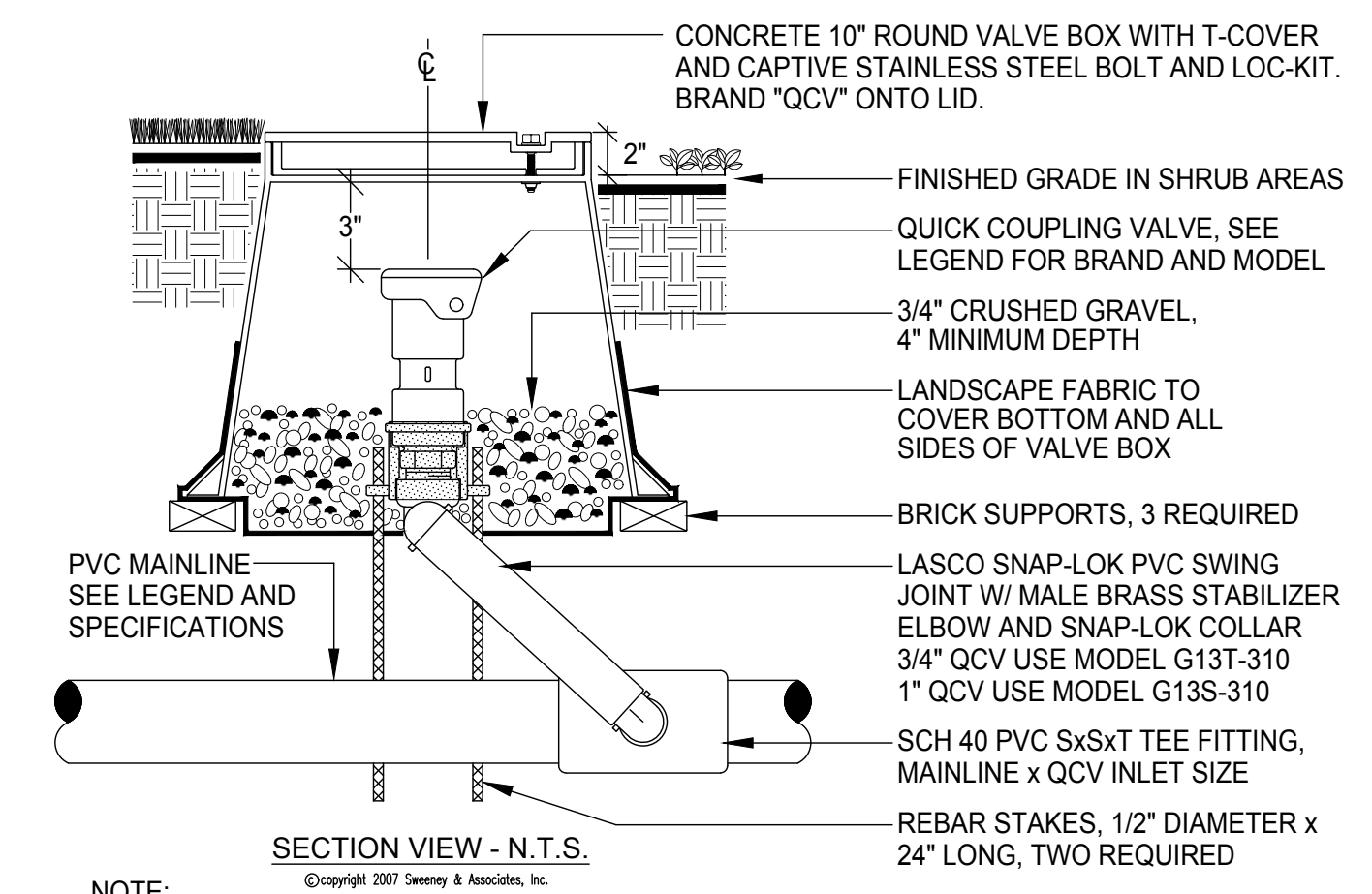
NOTE: WIRE CONNECTOR SHALL BE A 3M DBY-6 DIRECT BURY SPLICE KIT. KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR, A POLYPROPYLENE TUBE AND A WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PREFILLED WITH GEL.

DIRECT BURY SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2 - 3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

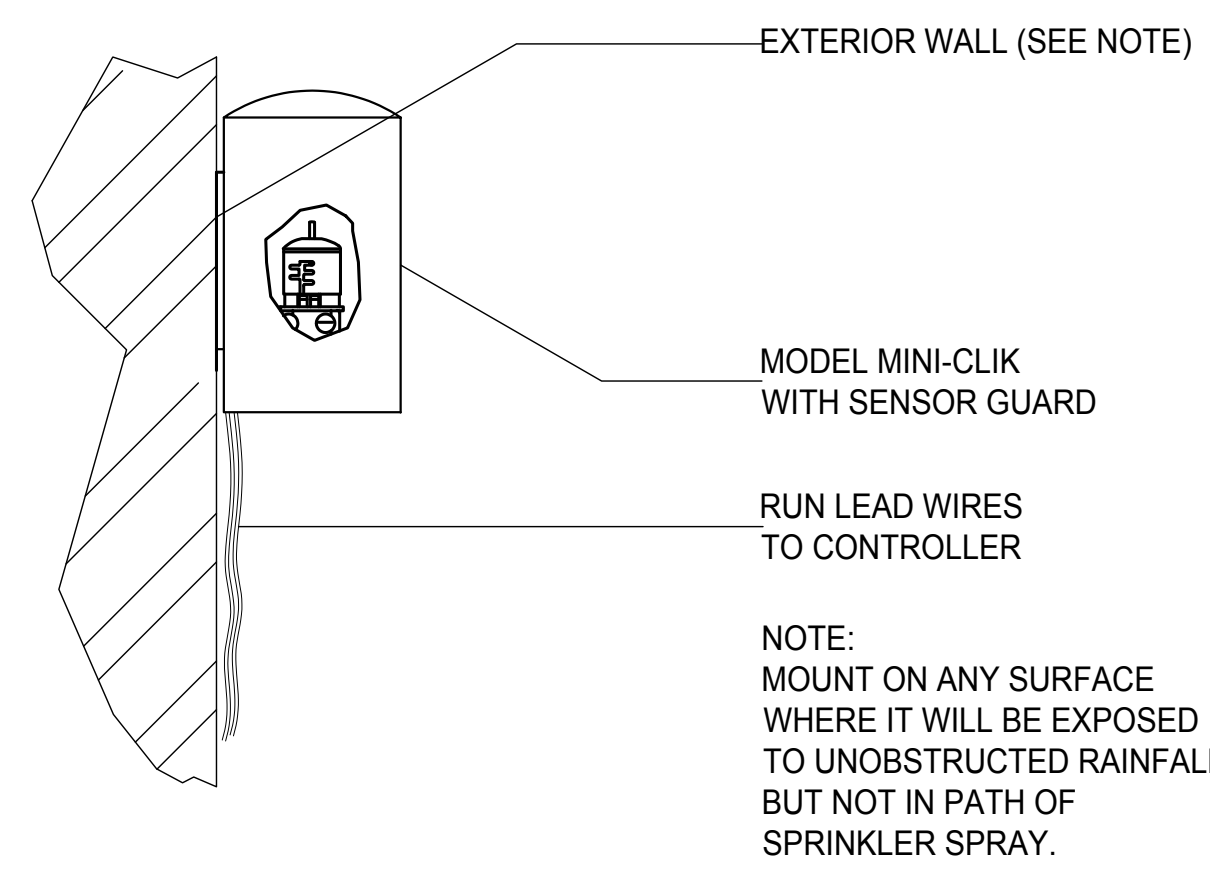
(G) WIRE CONNECTION



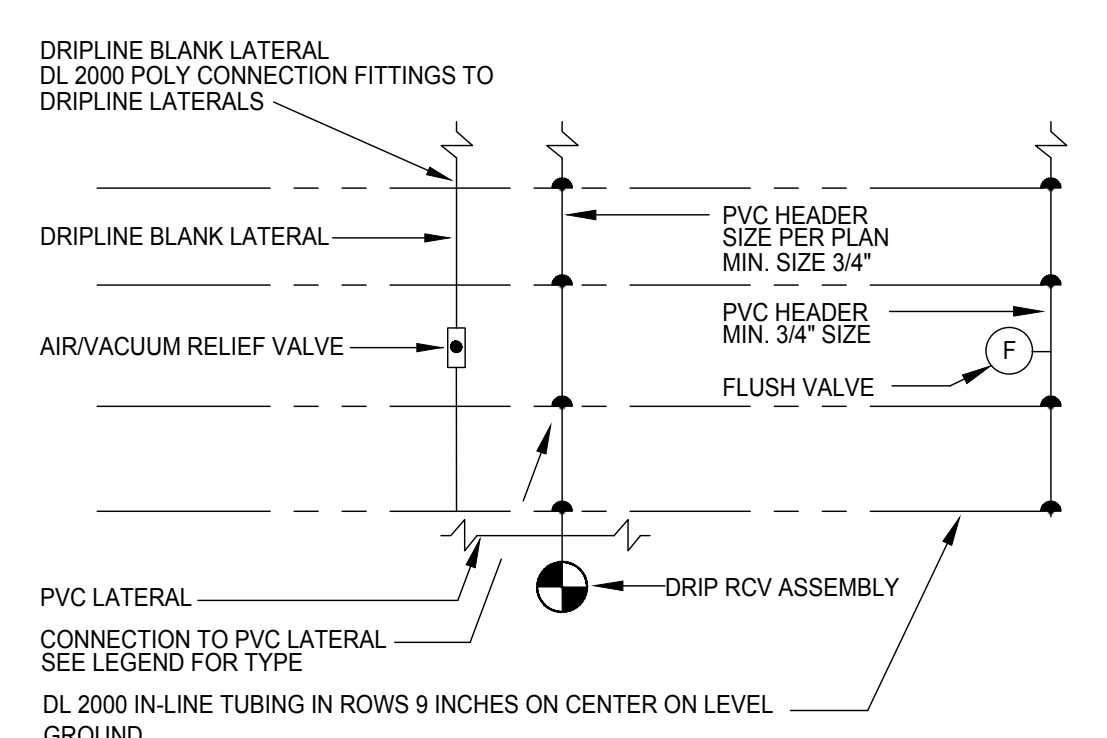
(F) REMOTE CONTROL VALVE



(E) QUICK COUPLER VALVE



(L) MINI-CLIK W/GUARD



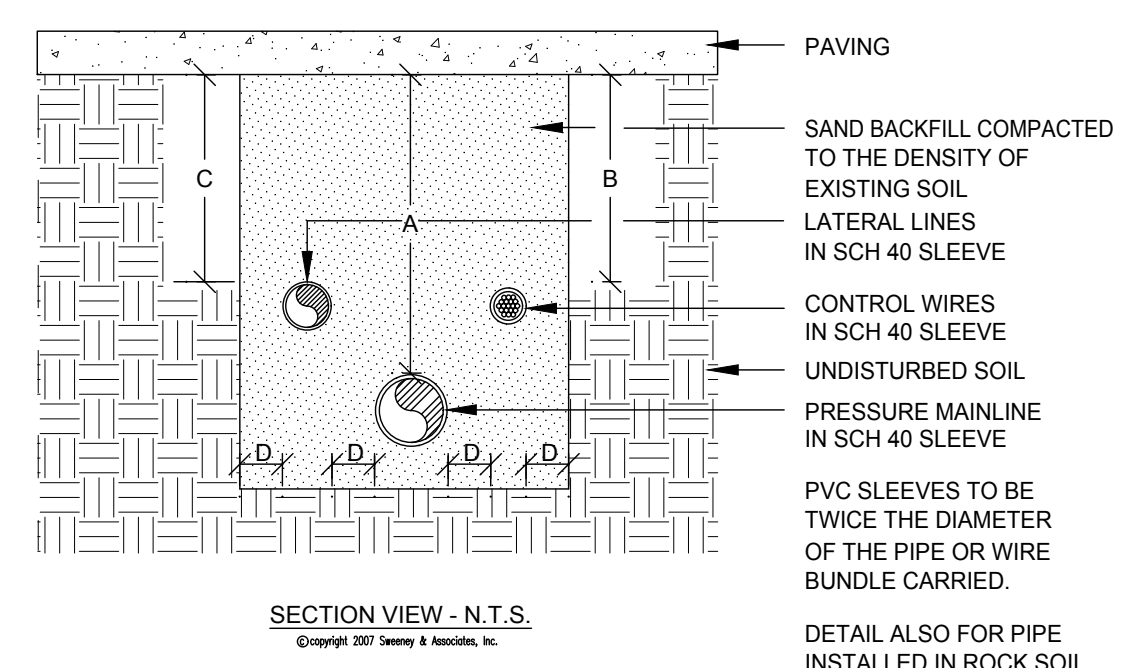
INSTALL DRIP FLUSH VALVE PER DETAIL AT THE END OF EACH TUBING SECTION PER PLAN

INSTALL AIR RELIEF VALVES PER DETAIL, AT HIGH POINTS OF EACH TUBING SECTION PER PLAN.

RUN AIR/VACUUM RELIEF BLANK TUBING LATERAL ALONG HIGH POINT OF MOUND OR BERM.

ATTACH ALL IN-LINE DRIP TUBING TO BLANK LATERAL. MORE THAN TWO RELIEF VALVES MAY NEED TO BE INSTALLED PER SECTION

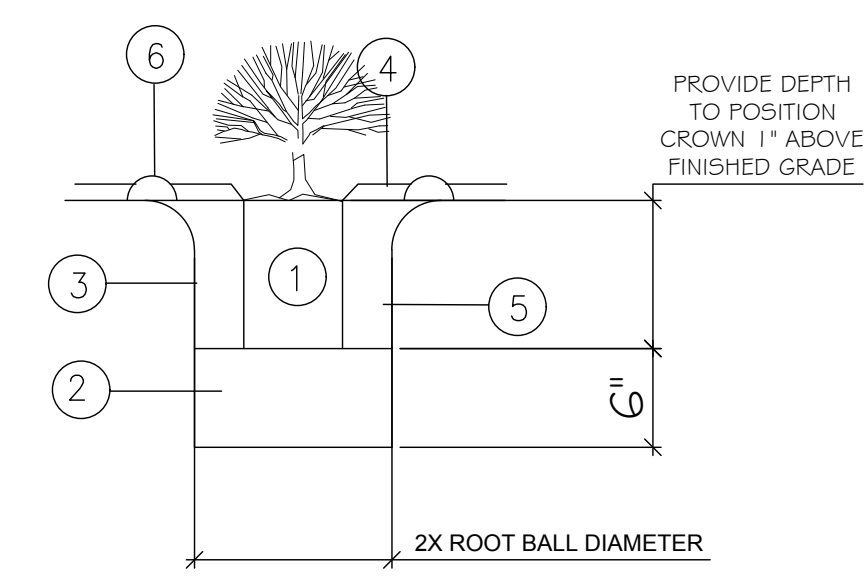
(K) DRIPLINE CONNECTION(PLAN)



	A	B	C	D
1 1/2" TO 6" IN SIZE	36"	24"	24"	4"

(J) SLEEVE INSTALLATION

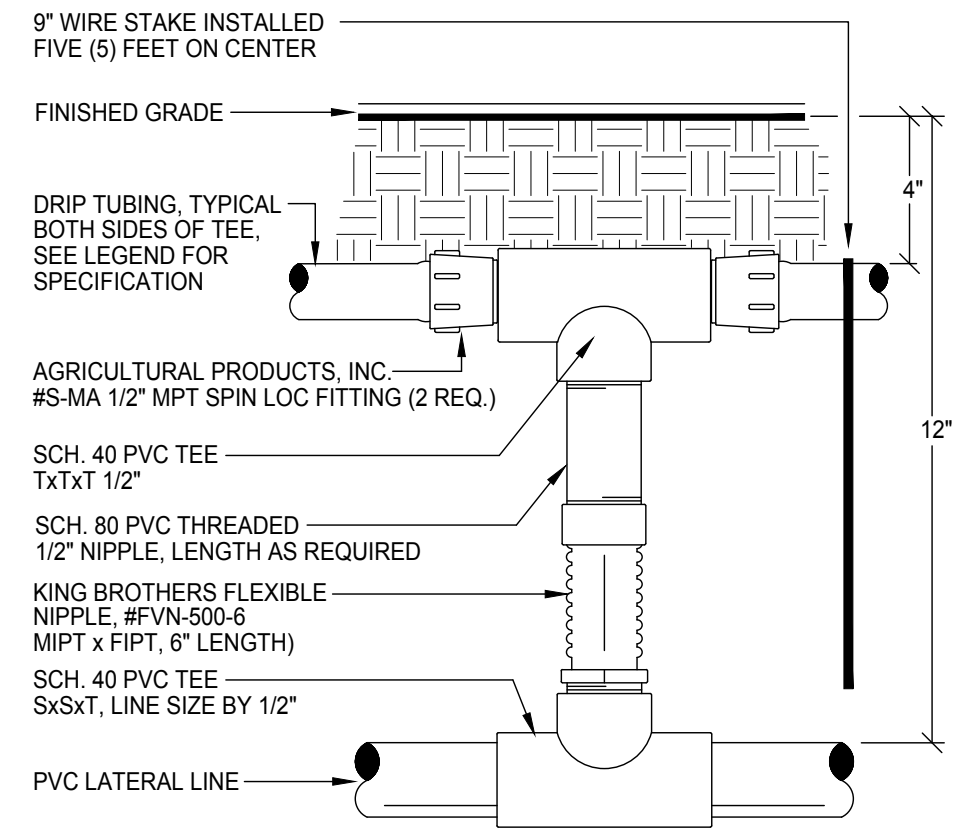
- ROOTBALL
- BACKFILL: SEE SPEC. TAMP BELOW PLANT
- SCARIFY SIDES & BOTTOM OF PIT
- MULCH: 3" DEPTH. MULCH DOES NOT TOUCH CROWN
- AMEND BACKFILL SOIL PER SPECS
- WATERING BASIN: 3" HIGH



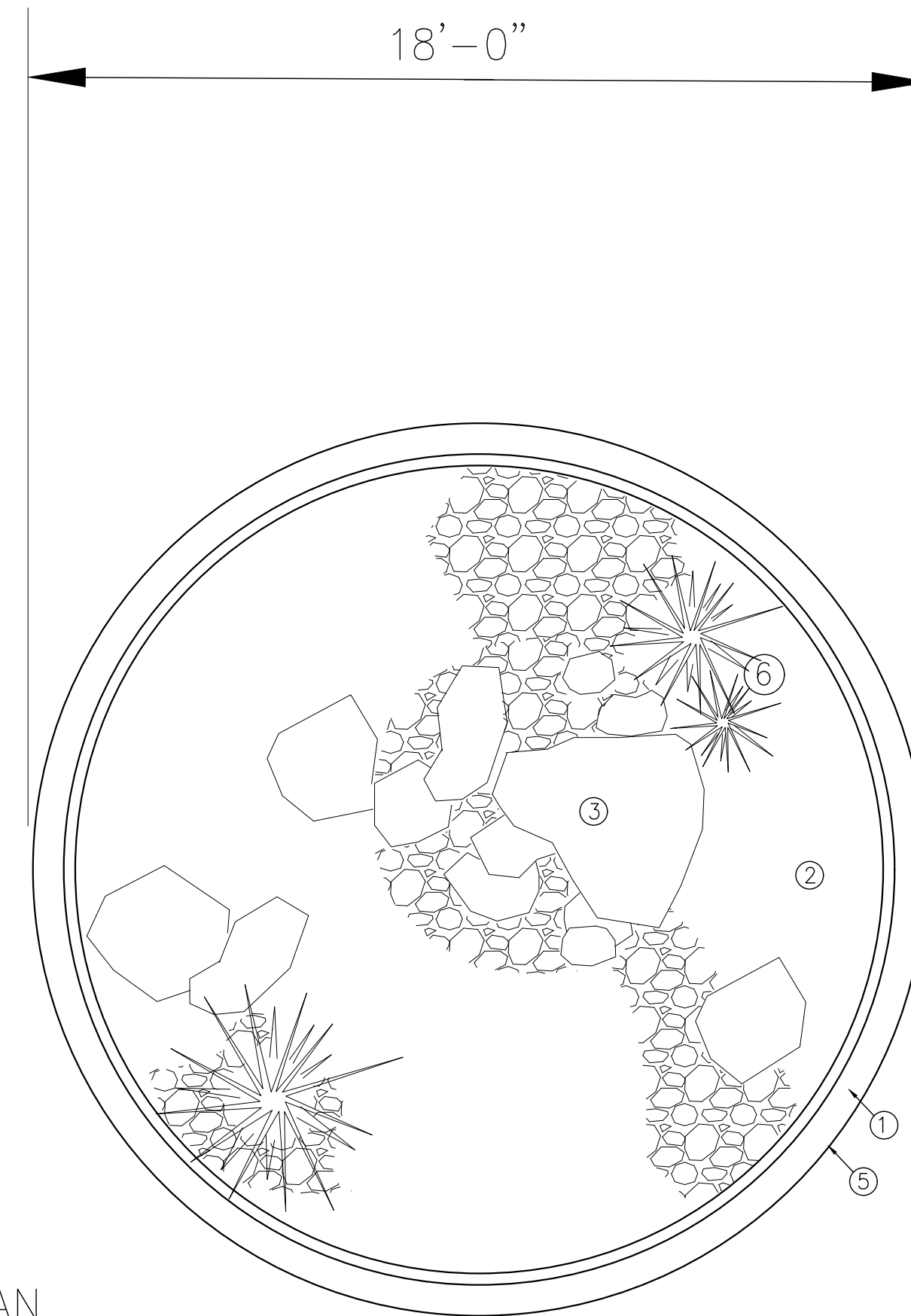
(I) SHRUB PLANTING

REVISIONS		DESCRIPTION	
No.	DATE	SHEET	
0	03.12.21	1	PLAN CHECK SUBMITTAL
1	04.16.21	1	PLAN CHECK RE-SUBMITTAL
2	04.23.21	2	PLAN CHECK RE-SUBMITTAL 2

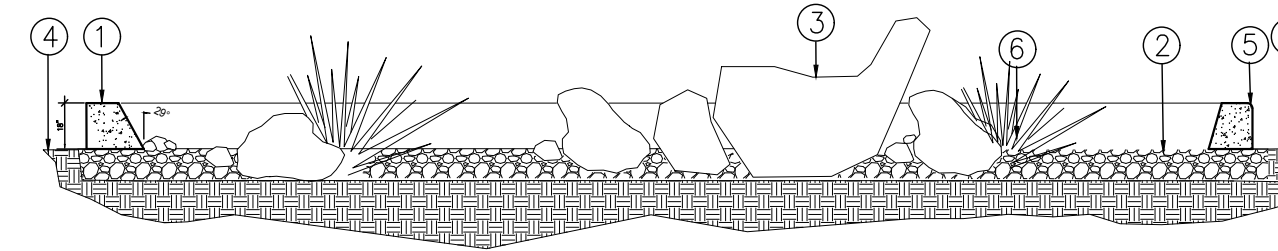




(B) DRIPLINE TUBING



PLAN



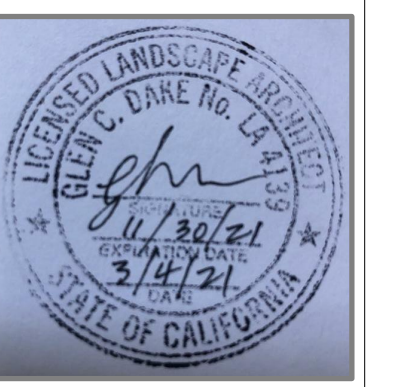
SECTION

(A) RAIN GARDEN CONCRETE RING

- ① PRECAST CONC. RING, AS MANF. BY QCP. SLATE GRAY OR APPROVED EQ.
- ② CRUSHED ROCK (ANGULAR) 3/4" 2" - 4" THICK LAYER
- ③ BOULDER: "CA GOLD" AS MANF BY KRC ROCK OR APPROVED EQ.
- ④ PLANTING BACKFILL SOIL
- ⑤ 2" RADIUS BULLNOSE EDGE W/ INCISED SKATEBOARD DETERRENT 48" O.C.
- ⑥ SHRUB

REFER TO CIVIL SHEET 10 FOR GRADING AND DRAINAGE.

REVISIONS		REVISIONS	
No.	DATE	No.	DATE
0	03.12.21	1	04.16.21
1		2	04.23.21



**LANDSCAPE DETAILS**

FIELD BOOK PAGE GRAPHIC SCALE

NO. R-  
JOB NO.  
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**19** OF **66**  
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**C-6514**