

Michael A. Cook  
P.L.A. 5123 Exp. 11/30/2022



**INTEGRA**  
PLANNING +  
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**PROJECT:**  
CHERRY RANCH  
SUBDIVISION  
930 FRESNO AVENUE  
SANTA ROSA, CA. 94507  
APN #035-101-004

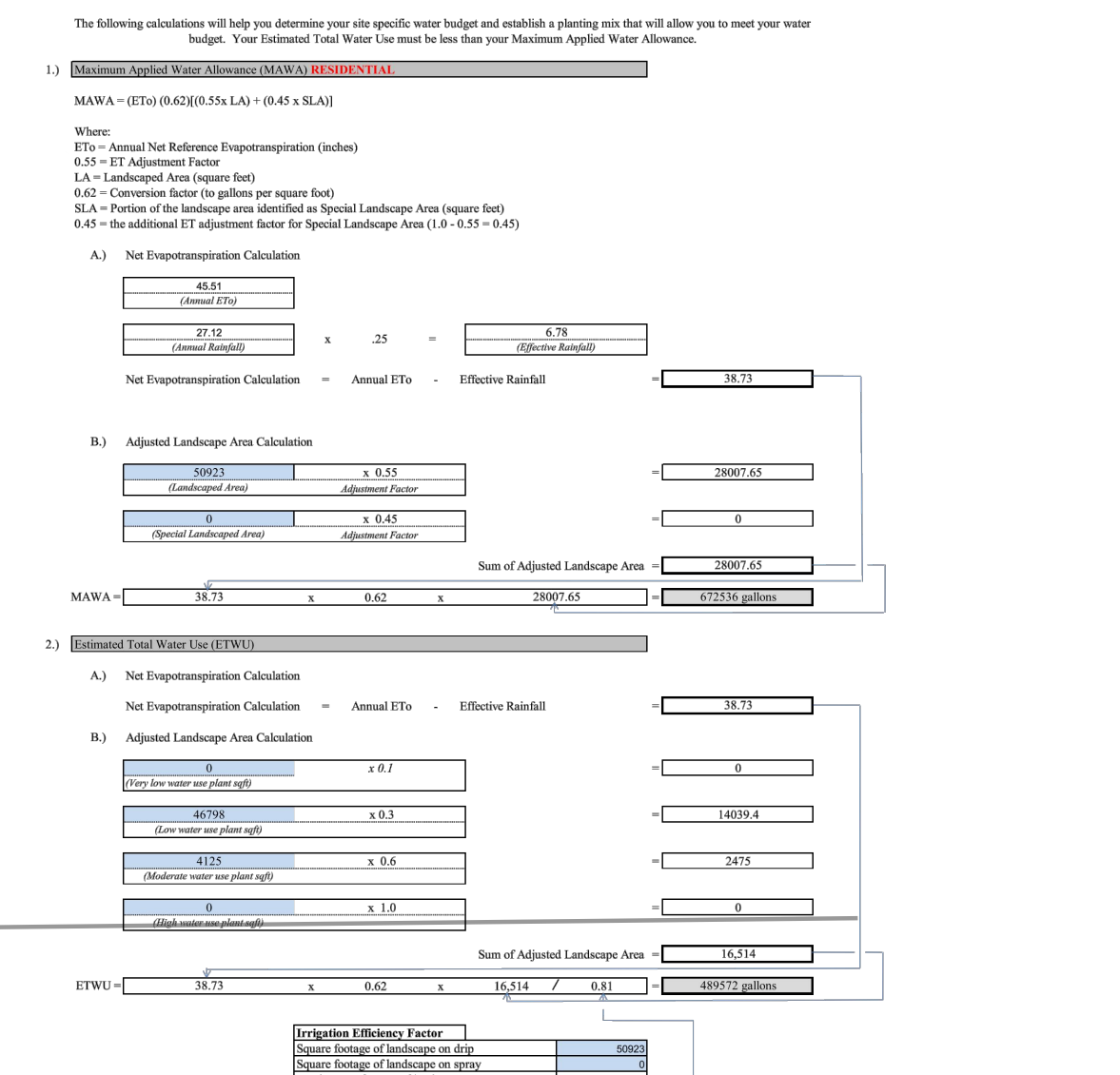
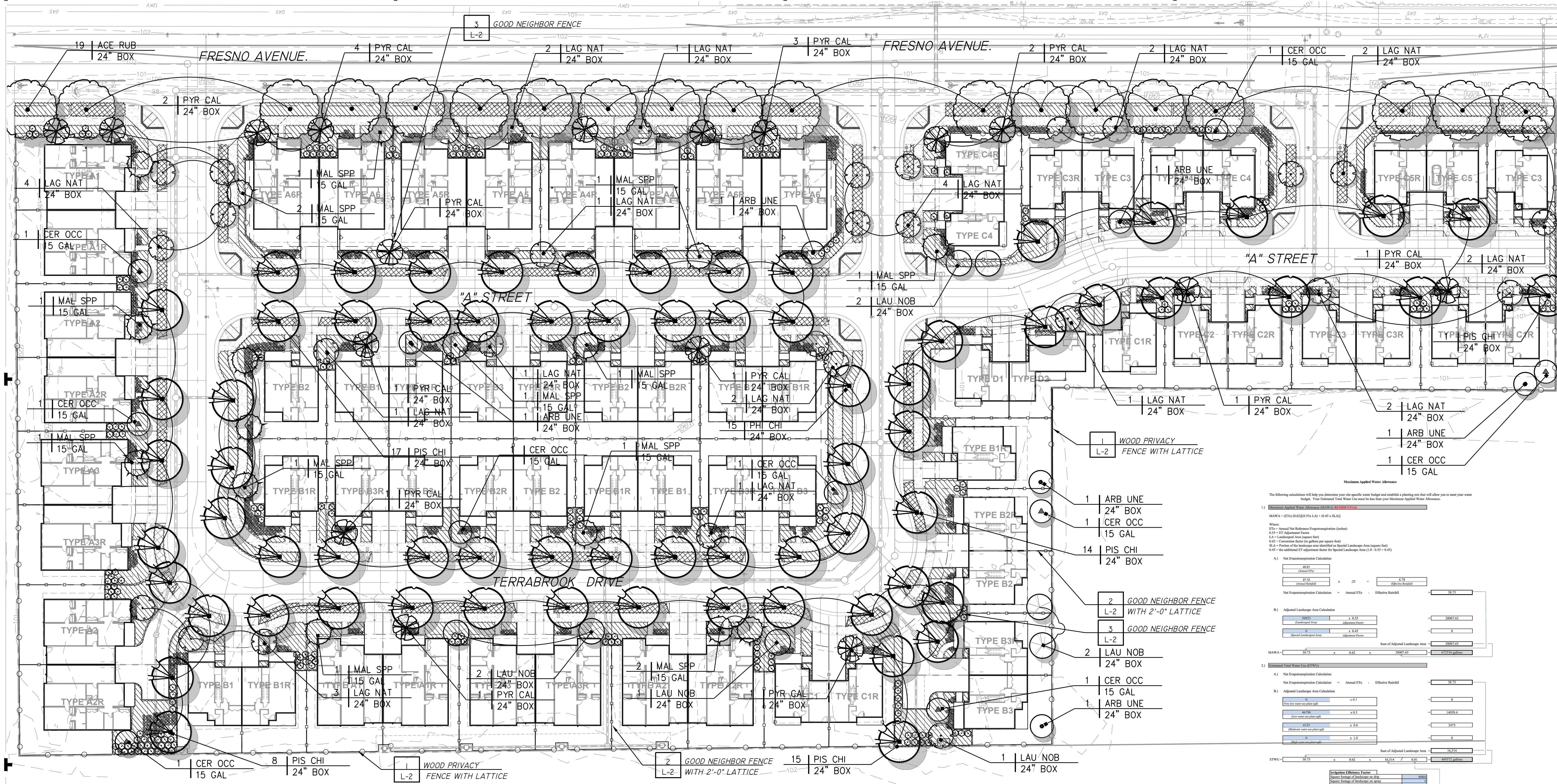
**CLIENT:**  
CRC DEVELOPMENT LLC  
364 41ST STREET  
OAKLAND, CA 94609

**SHEET DESCRIPTION:**  
CONDITIONAL  
USE PERMIT  
LANDSCAPE PLAN

**REVISIONS:**

**NOT FOR  
CONSTRUCTION**

DATE: 06/28/2021  
SCALE: 1" = 30'-0"  
DRAWN BY: EG  
CHECKED BY: MAC  
SHEET NUMBER: L-1 OF 3  
PROJECT NUMBER: 19-055.02



**PLANTING LEGEND**

ABBREV.	BOTANICAL NAME	COMMON NAME	WOCULS	SIZE	QTY	REMARKS/SPACING
<b>TREES</b>						
ACE RUB	ACER R. 'OCTOBER GLORY'	RED MAPLE	M	24" BOX	19	SINGLE TRUNK
ARB UNE	ARBUS UNEDO	STRAWBERRY TREE	L	24" BOX	6	MULTI TRUNK
CER OCC	CERCIS OCCIDENTALIS	WESTERN REDBUD	L	15 GAL	10	MULTI TRUNK
PIS CHI	PISTACHIA CHINENSIS	CHINESE PISTACHE	L	24" BOX	69	SINGLE TRUNK
LAG NAT	LAGERSTROMIA INDICA	CRAPE MYRTLE	L	24" BOX	30	SINGLE TRUNK
LAU NOB	LAURUS NOBILIS 'SARATOGA'	BAY LAUREL	L	24" BOX	7	SINGLE TRUNK
MAL SPP	MALUS SPP.	FLOWERING CHERRY	M	15 GAL	15	SINGLE TRUNK
PYR CAL	PYRUS CAL. 'ARISTOCRAT'	FLOWERING PEAR	M	24" BOX	17	SINGLE TRUNK
<b>SHRUBS</b>						
	CEANOTHUS 'DARK STAR'	CEANOTHUS	L	5 GAL.	6'	0.0. SPACING
	CALAMAGROSTIS ACU.	KARL FORESTER	L	5 GAL.	3'	0.0. SPACING
	CARPINTERIA CALIFORNICA	BUSH ANEMONE	L	5 GAL.	5'	0.0. SPACING
	HETEROMELES ARBUTIFOLIA	TOYON	L	5 GAL.	6'	0.0. SPACING
	MUHLBERGIA CAPILLARIS	DAWN MUHLY	L	5 GAL.	6'	0.0. SPACING
	MUHLBERGIA RIGEN	DEER GRASS	L	5 GAL.	4'	0.0. SPACING
	CHONDRPETALUM TEC.	SMALL CAPE RUSH	L	5 GAL.	3'	0.0. SPACING
	CISTUS X HYBRID	WHITE ROCK ROSE	L	5 GAL.	4'	0.0. SPACING
	EUPHORBIA CHARCAIS	EUPHORBIA	L	5 GAL.	3'	0.0. SPACING
	LAVANDULA A. 'MUNSTEAD'	LAVENDER	L	5 GAL.	2'	0.0. SPACING
	LOMANDRA LONGIFOLIA	LOMANDRA	L	5 GAL.	3'	0.0. SPACING

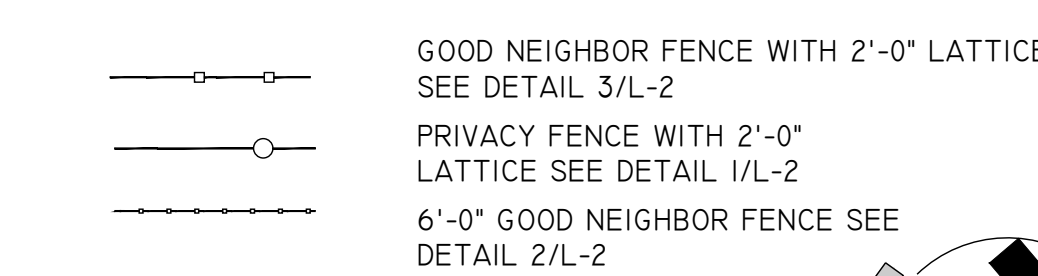
ABBREV.	BOTANICAL NAME	COMMON NAME	WOCULS	SIZE	QTY	REMARKS/SPACING
<b>TREES</b>						
PHO YEL	PHORMIUM 'YELLOW WAVE'	NEW ZEALAND FLAX	L	5 GAL.	4'	0.0. SPACING
RHA EVE	RHAMNUS CAL. 'EVECASE'	CAL. COFFEE BERRY	L	5 GAL.	6'	0.0. SPACING
ROS SPI	ROSMARINUS 'SPICE ISLAND'	ROSEMARY	L	5 GAL.	3'	0.0. SPACING
OLE LIL	OLEA E. 'MONTRIA'	DWARF OLIVE	L	5 GAL.	5'	0.0. SPACING
<b>VINES</b>						
CLE ARM	CLEMATIS ARMANDII	CLEMATIS	M	5 GAL.	TRAIN TO FENCE	
HAR VIO	HARDENBERGIA VIOLACEA	LILAC VINE	M	5 GAL.	TRAIN TO TRELLIS	
<b>GROUNDCOVERS</b>						
	ARCTOSTAPHYLOS	'EMERALD CARPET'	L	1 GAL.	6'	0.0. SPACING
	ARTEMESIA CALIFORNICA	ARTEMESIA	L	1 GAL.	4'	0.0. SPACING
	FESTUCA CALIFORNICA	FESCUE	L	1 GAL.	18'	0.0. SPACING
	LANTANA MONTEVIDENSIS	LANTANA	L	1 GAL.	6'	0.0. SPACING
	MYOPORUM PROSTRATE	MYOPORUM	L	1 GAL.	6'	0.0. SPACING
	NEPETA X FAASSENII	CATMINT	L	1 GAL.	3'	0.0. SPACING
	ROSA 'CARPET ROSE'	WHITE CARPET ROSE	L	1 GAL.	4'	0.0. SPACING
	ROSMARINUS	HUNTINGTON CARPET	L	1 GAL.	5'	0.0. SPACING
<b>DRAINAGE</b>						
	SWALES HYDROSEED					
	WILD FLOWER & GRASS MIX		L	1 GAL.	2'	0.0. SPACING
	ACHILLEA MILLEFOLIUM	YARROW	L	1 GAL.	2'	0.0. SPACING
	CAREX TUMULICOLA	BERKELEY SAGE	M	1 GAL.	2'	0.0. SPACING
	FESTUCA IDAHONENSIS	IDAHO FESCUE	L	1 GAL.	2'	0.0. SPACING
	JUNCUS PATENS	GREY SEDGE	L	1 GAL.	2'	0.0. SPACING
	MIMULUS AURANTIACUS	MONKEY FLOWER	L	4" POTS	18'	0.0. SPACING

**MWEO STATEMENT**

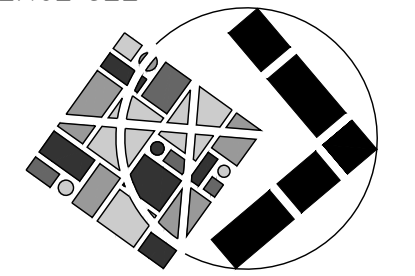
I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE PLANTING PLAN

*[Signature]*  
MICHAEL A. COOK  
REGISTERED LANDSCAPE ARCHITECT #5123  
DATE: 06/29/2021

**FENCE LEGEND**



PACIFIC COAST SEED  
553 HAWTHORN PLACE  
LIVERMORE, CA. 94550  
925-373-4417



GRAPHIC SCALE  
(IN FEET)  
1" = 30'

Jul 07, 2021 - 10:05am  
G:\Shared drives\ProjectServer\19-055.dwg\3\_Design\Development\19-055\_PLANT.dwg



FLOWERING PEAR



STRAWBERRY TREE



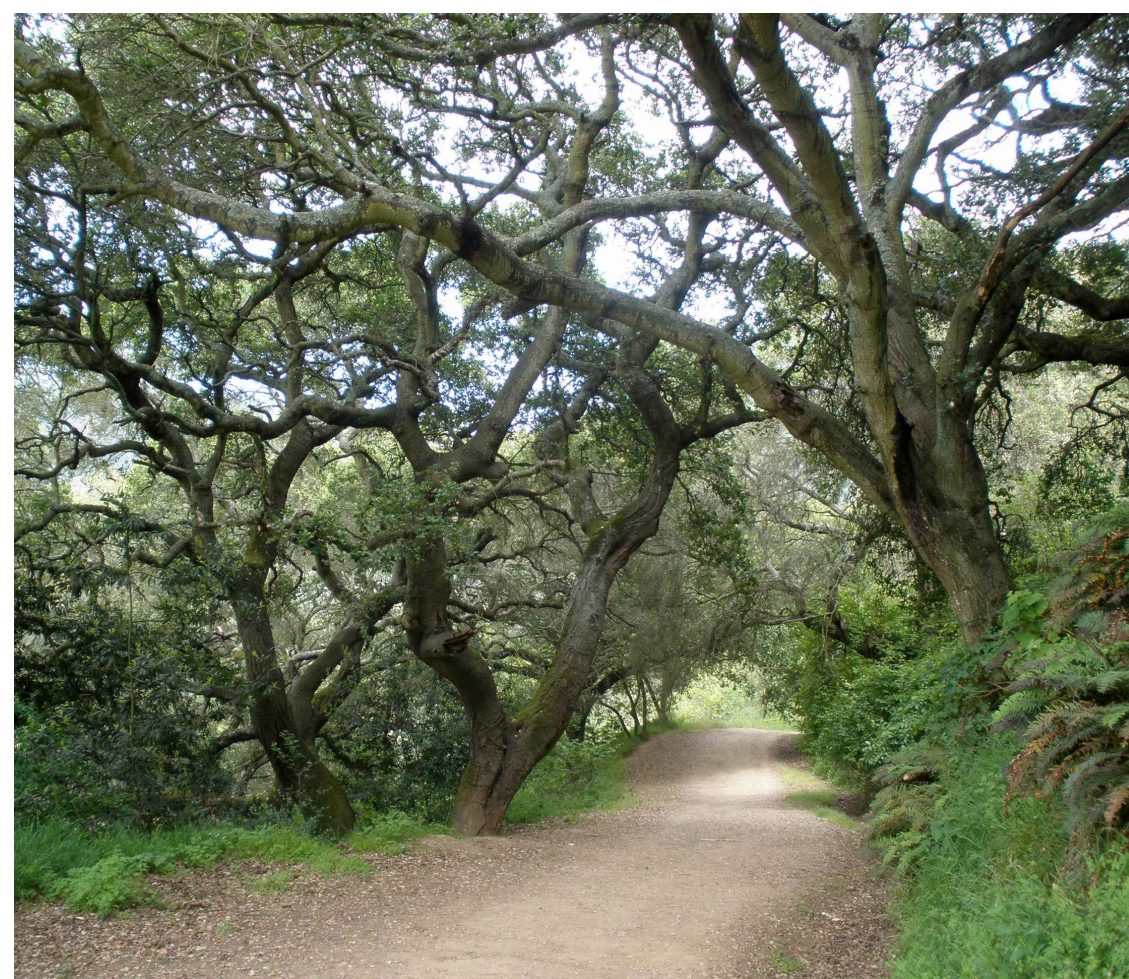
CRAPE MYRTLE



BAY LAUREL



WESTERN REDBUD



COAST LIVE OAK



FLOWERING CHERRY

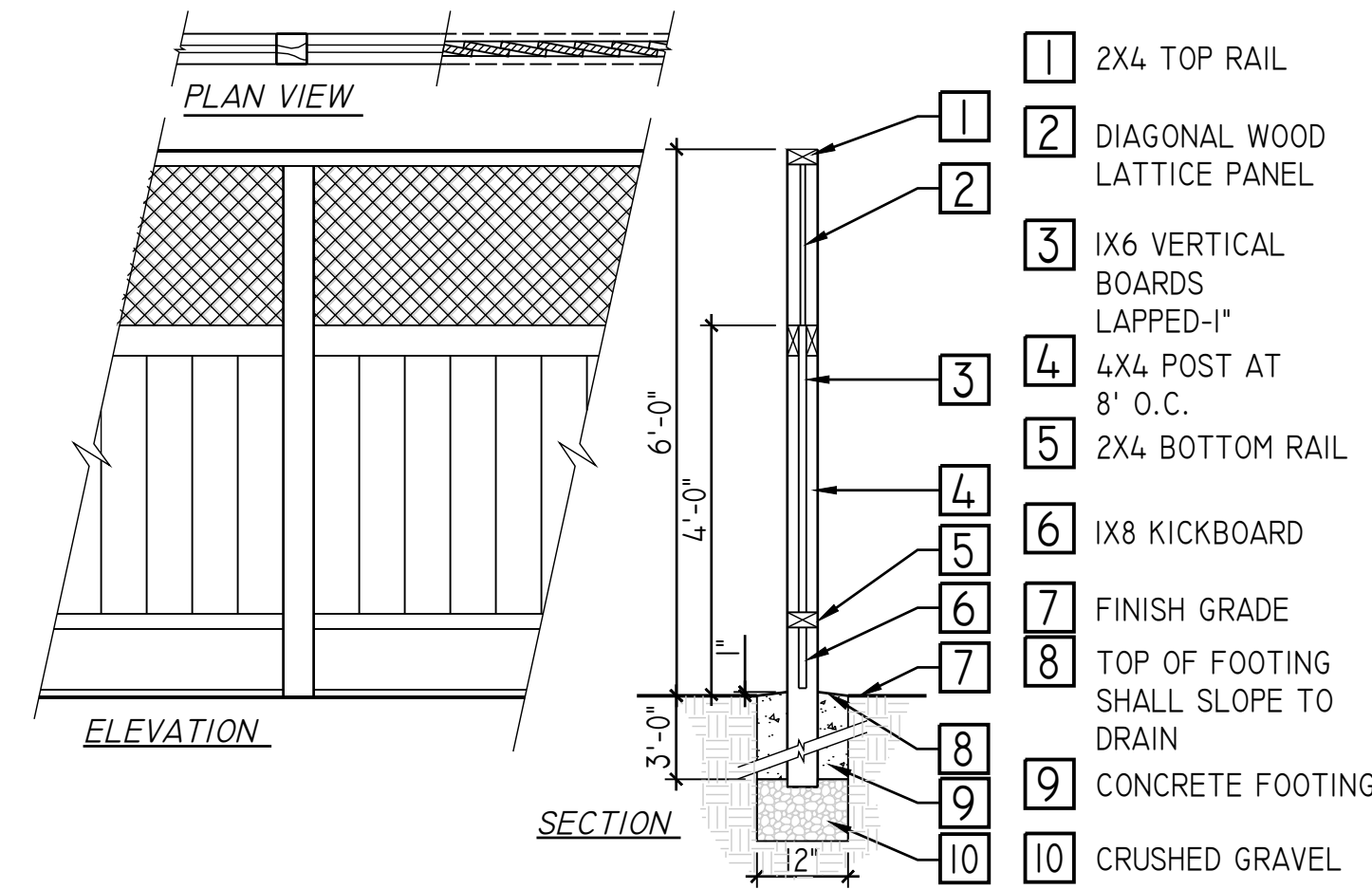


CHINESE PISTACHE



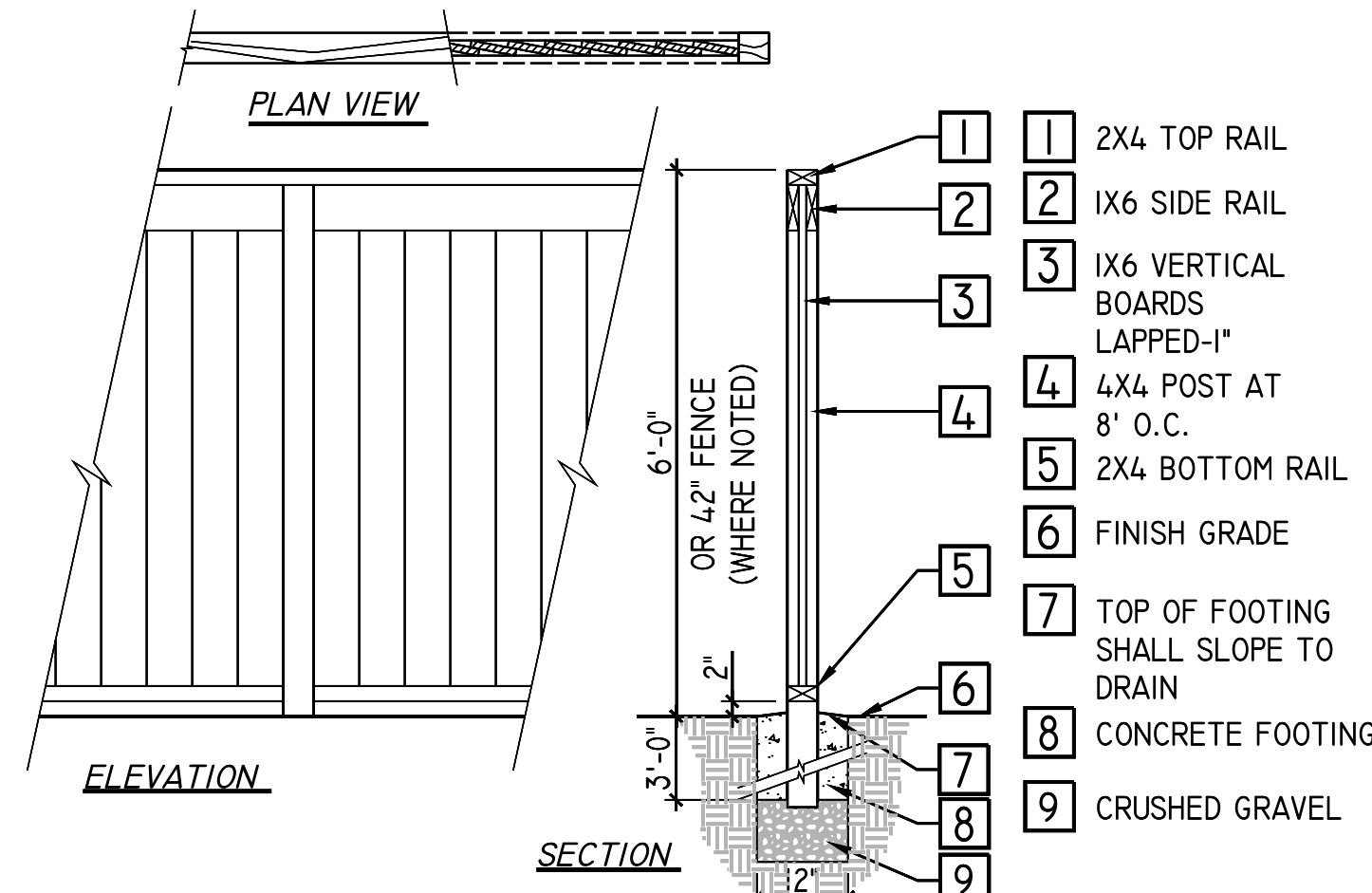
RED MAPLE

NOTE: WOOD POSTS TO BE PTFD AND ALL OTHER WOOD TO BE HEART REDWOOD.



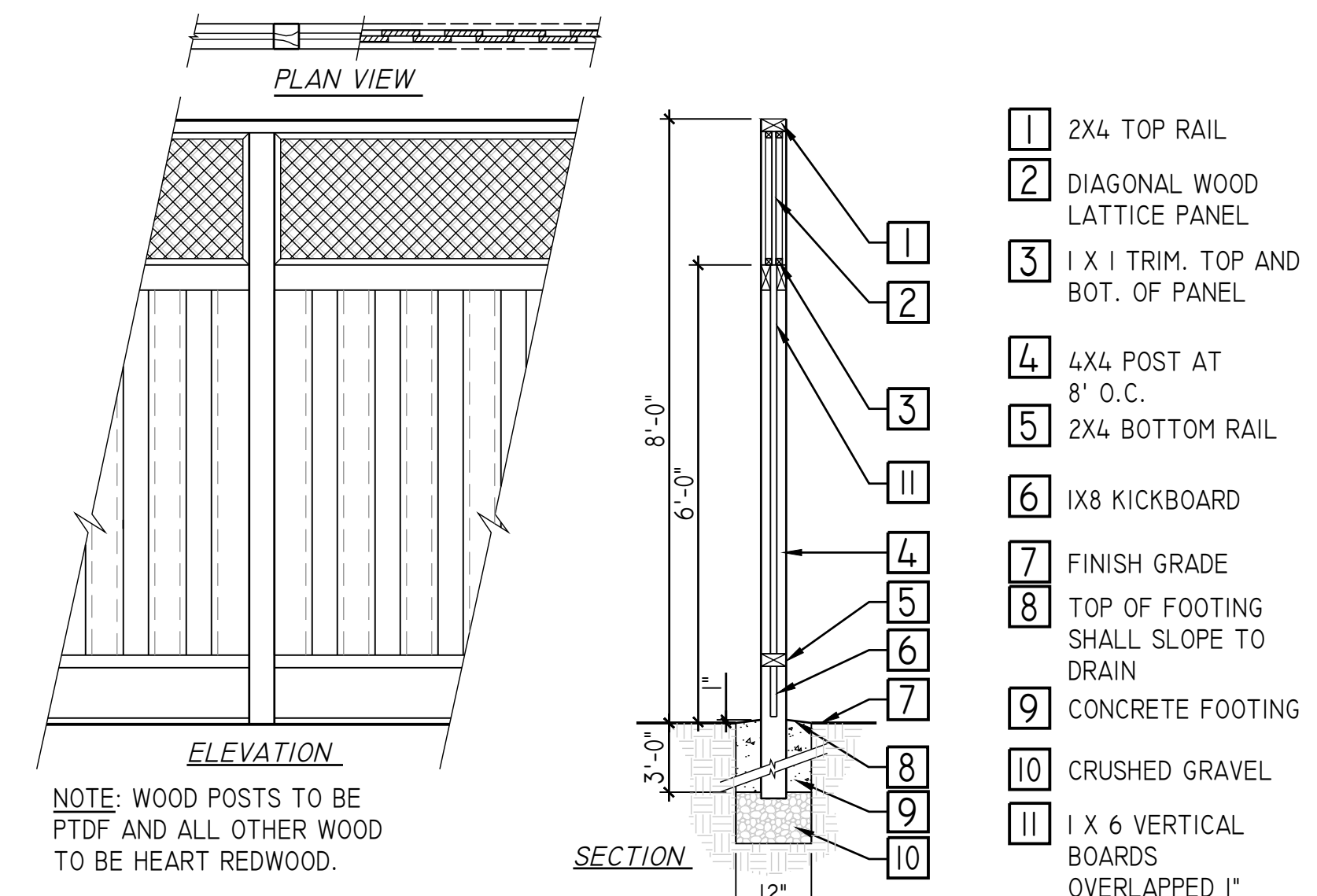
**2 GOOD NEIGHBOR FENCE WITH LATTICE**  
SCALE: 1/2" = 1'-0"

NOTE: WOOD POSTS TO BE PTFD AND ALL OTHER WOOD TO BE HEART REDWOOD.



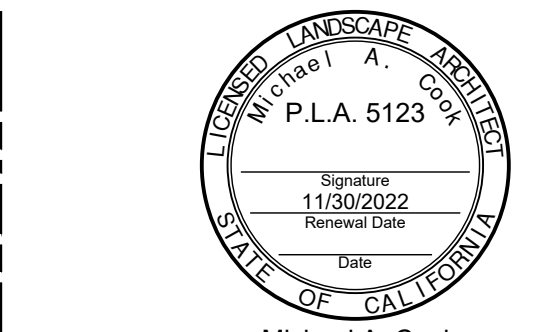
**3 WOOD GOOD NEIGHBOR FENCE**  
SCALE: 1/2" = 1'-0"

- CONTRACTOR SHALL BID AND INSTALL PLANTING MATERIALS PER THESE PLANS AND SPECIFICATIONS, UNLESS GIVEN FURTHER WRITTEN INSTRUCTIONS, OR WRITTEN INSTRUCTION BY LANDSCAPE ARCHITECT. WORK INCLUDES, BUT IS NOT LIMITED TO ALL LABOR, GENERAL LIABILITY INSURANCE, WORKMAN'S COMPENSATION, EQUIPMENT, AND MATERIALS NECESSARY TO FURNISH, INSTALL AND GUARANTEE PLANTING AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
- COORDINATE FIELD OBSERVATIONS WITH LANDSCAPE ARCHITECT (MINIMUM 2 VISITS), CALL TO PROVIDE 48 HOUR NOTICE.
  - REVIEW FINISHED GRADE W/ LANDSCAPE ARCHITECT PRIOR TO PLANT PLACEMENT. ALL PLANTS SHALL BE INSPECTED BY ARBORIST/ LANDSCAPE ARCHITECT FOR HEALTH, PESTS AND SIZE PRIOR TO LAYOUT.
  - LAYOUT PLANTINGS FOR APPROVAL IN FULL QUANTITIES, PRIOR TO DIGGING HOLES. ADJUST LAYOUT AS DIRECTED BY LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL PROVIDE SUBMITTALS/SAMPLES TO LANDSCAPE ARCHITECT OF ALL SPECIMEN TREES (PHOTOGRAPHS WITH HUMAN SCALE), SOIL, MULCH, STAKES, TIES, AGRIFORM TABLETS, GRASS PAVE MATERIALS, STEEL EDGING, AND OTHER MATERIALS.
- ALL WORK SHALL CONFORM TO THE LATEST APPLICABLE SONOMA COUNTY WATER AGENCY ORDINANCES RELATING TO PLANTING AND IRRIGATION. ALL PLANT MATERIALS TO BE INSTALLED PER CITY OF SANTA ROSA STANDARDS AND PLANTING DETAILS. THE PLANT MATERIALS SHALL CONFORM TO THE PLANT LEGEND SPECIFICATION FOR SIZE & LATEST EDITION OF THE AMERICAN NURSERYMAN STANDARDS.
- PRIOR TO REMOVING ANY PLANTS, CONTRACTOR SHALL OBTAIN APPROVAL OF OWNER AND LANDSCAPE ARCHITECT TO DETERMINE SPECIMENS TO REMAIN OR BE TRANSPLANTED. ALL PLANTING AREAS ARE TO BE FREE OF DELETERIOUS MATERIALS AND WEEDS PRIOR TO PLANTING.
- A SOIL FERTILITY TEST SHALL BE REQUIRED FOR REVIEW BY THE LANDSCAPE ARCHITECT AFTER GRADING IS COMPLETE AND BEFORE ANY PLANT WORK. A SOIL TEST SHALL BE PERFORMED TO DETERMINE THE FINAL AMENDMENT AND FERTILIZER FORMULA. THE SOILS REPORT CONDUCTED BY WAYPOINT ANALYTICAL, (408) 727-0330, UNLESS OTHERWISE APPROVED) MUST CONTAIN THE FOLLOWING INFORMATION:
  - SOIL PERMEABILITY RATE IN INCHES PER HOUR
  - SOIL TEXTURE TEST
  - CATION EXCHANGE CAPACITY
  - SOIL FERTILITY INCLUDING TESTS FOR NITROGEN, POTASSIUM, PHOSPHOROUS, PH, ORGANIC MATTER
  - TOTAL SOLUBLE SALTS AND SODIUM CONTENT
  - CONTRACTOR TO REQUEST A "BAY-FRIENDLY" RECOMMENDATION FOR AMENDMENTS TO THE PLANTING AREA SOIL
- A MINIMUM OF 8" OF NON-MECHANICALLY COMPACTED SOIL SHALL BE AVAILABLE FOR WATER ABSORPTION AND ROOT GROWTH IN PLANTED AREAS. WITHIN THE LIMITS OF NEW PLANTING AREAS, THE TOP 12" OF EXISTING SOIL OR TO THE EXTENT OF EXISTING TOPSOIL, WHICH EVER IS LESS, SHALL BE STRIPPED AND STOCKPILED ON THE SITE FOR RE-USE. ALL PLANTING AREAS TO BE TILLED SO THAT SOIL IS LOOSE AND NOT COMPACTED. ALL PLANTING BEDS TO RECEIVE A MINIMUM OF 12" OF APPROVED TOPSOIL. TO PREPARE PLANTING BEDS AND LAWN AREAS, CULTIVATE INTO TOP 12" OF SOIL: 6 CUBIC YARDS OF ORGANIC COMPOST PER 1,000 SQUARE FEET. COMPOST IS TO HAVE THE US COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE (STA) AND THE ORGANIC MATERIALS REVIEW INSTITUTE (OMRI) LISTING. INCORPORATE COMPOST OR NATURAL FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 8" AT A MINIMUM RATE OF 6 CUBIC YARDS PER 1000 SQUARE FEET OR PER SPECIFIC AMENDMENT RECOMMENDATIONS FROM A SOILS LABORATORY REPORT. ANY ADDITIONAL AMENDMENTS SHALL BE CERTIFIED ORGANIC BY OMRI.
- ALL PLANT LOCATIONS TO BE CONFIRMED IN THE FIELD BY THE LANDSCAPE ARCHITECT. CONTRACTOR IS TO COORDINATE ALL PLANTING WITH UTILITY LOCATIONS NOT SHOWN ON THIS PLAN. ANY CONFLICTS BETWEEN LOCATIONS OF PROPOSED PLANTING AND SITE UTILITIES OR LIGHTING TO BE CALLED TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
- LAYOUT OF PLANTINGS IS DIAGRAMMATIC AND MAY NEED FIELD ADJUSTMENT FOR EXISTING SITE CONDITIONS NOT SHOWN ON PLANS, OR AS DIRECTED BY THE LANDSCAPE ARCHITECT. ADJUSTMENTS WILL BE MADE FOR VIEWS, ACCESS, ETC. ALL PLANTINGS SHALL BE FIELD ADJUSTED TO MEET THE MINIMUM STATE REGULATIONS FOR PLANTING AND MAINTAINING A FIRE DEFENSIBLE SPACE, DEPT. OF FORESTRY. PLANT QUANTITIES ARE FOR INFORMATIONAL USE ONLY. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANTS AS SHOWN ON THE DRAWINGS.
- PLANTS SHALL BE SUFFICIENTLY ROOTED TO THE EDGE OF THE CONTAINER AND TO AN EXTENT SUFFICIENT TO HOLD THE ROOTBALL INTACT WHEN REMOVED FROM THE CONTAINER. NO PLANTS SHALL BE ACCEPTABLE THAT SHOW SIGNS OF CIRCLING OR GIRDLING OF ROOTS, OR ANY OTHER ROOT-BOUND CONDITION. PLANTS SHALL BE FREE FROM ALL PESTS AND DISEASES.
- ALL PLANTS SHALL BE PLACED IN A TRIANGULAR SPACED PATTERN, UNLESS OTHERWISE SPECIFIED.
- EXCAVATE PLANTING PITS 1" LESS THAN THE DEPTH OF THE PLANT CONTAINER AND TWO TIMES THE WIDTH OF THE PLANT CONTAINER. PREPARE HOLE BACKFILL MATERIAL BY USING 1 PART EXISTING SOIL TO 1 PART ORGANIC COMPOST. THOROUGHLY MIX THIS COMBINATION BEFORE BACKFILLING. SET PLANT PLUMB IN PLANTING PIT AND BRACE RIGIDLY IN POSITION. TAMING BACKFILL MIX SOLIDLY AROUND THE BALL AND ROOTS. PLACE TOP OF ROOTBALL 1" ABOVE SURROUNDING GRADE. (SEE PLANTING DETAILS FOR TREES, SHRUBS AND GROUNDCOVERS ON THIS SHEET). DO NOT OVER COMPACT SOIL.
- ALL TREES ARE TO BE STAKED AND TREES AND SHRUBS ARE TO HAVE WATERING BASINS. ALL TREES CLOSER THAN 8'-0" TO BUILDINGS, WALKS, PAVING, CURBS OR FOOTINGS SHALL BE INSTALLED WITH A DEEP ROOT BARRIER. USE DEEP ROOT BARRIER, TYPE UB 24-2 PER MANUFACTURER'S RECOMMENDATIONS.
- AFTER PLANTING, WATER NEW PLANTINGS DEEPLY AND THOROUGHLY.
- A MINIMUM 3" LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT IN TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS OR DIRECT SEEDING APPLICATIONS. MULCH SHALL BE "WOOD CHIPS" FROM SEQUOIA LANDSCAPE MATERIALS (707-527-5512), NATURAL COLOR.
- THE CONTRACTOR SHALL MAINTAIN THE PLANTING AND IRRIGATION INSTALLATIONS FOR 60 DAYS FROM THE DATE OF FINAL ACCEPTANCE. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR A MINIMUM PERIOD OF 6 MONTHS FROM DATE OF FINAL ACCEPTANCE.



NOTE: WOOD POSTS TO BE PTFD AND ALL OTHER WOOD TO BE HEART REDWOOD.

**1 WOOD PRIVACY FENCE WITH LATTICE**  
SCALE: 1/2" = 1'-0"



Michael A. Cook  
PLA 5123 Exp. 11/30/2022



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CHERRY RANCH  
SUBDIVISION  
930 FRESNO AVENUE  
SANTA ROSA, CA. 94507  
APN #035-101-004

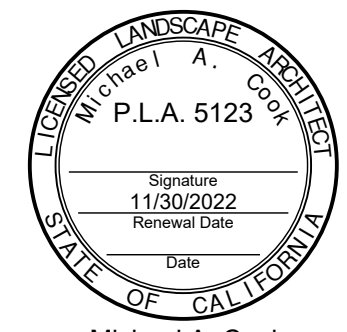
**CLIENT:**  
CRC DEVELOPMENT LLC  
364 41ST STREET  
OAKLAND, CA 94609

**SHEET DESCRIPTION:**  
CONDITIONAL  
USE PERMIT  
LANDSCAPE DETAILS

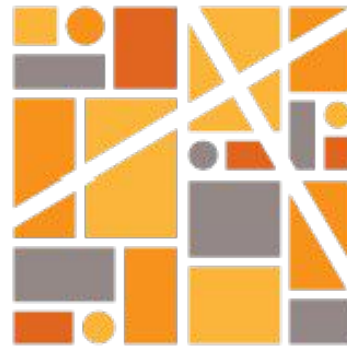
**REVISIONS:**

DATE:	06/28/2021
SCALE:	1' = 30'-0"
DRAWN BY:	EG
CHECKED BY:	MAC
SHEET NUMBER:	L-2 OF 3
PROJECT NUMBER:	19-055.02

NOT FOR CONSTRUCTION



Michael A. Cook  
PLA 5123 Exp. 11/30/2022



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SUBDIVISION  
930 FRESNO AVENUE  
SANTA ROSA, CA. 94507  
APN #035-101-004

**CLIENT:**  
CRC DEVELOPMENT LLC  
364 41ST STREET  
OAKLAND, CA 94609

**SHEET DESCRIPTION:**  
CONDITIONAL  
USE PERMIT  
IRRIGATION PLAN

**REVISIONS:**

**MWEO STATEMENT**  
"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION PLAN"

*Michael A. Cook*  
MICHAEL A. COOK  
REGISTERED LANDSCAPE ARCHITECT #5123

06/28/2021  
DATE

**SUMMARY HYDROZONE TABLE: (CONTROLLER A)**

PLANT TYPE	AREA (SF)	% OF LANDSCAPE
LOW WATER USE	46,899	91.92%
MEDIUM WATER USE	4,125	8.08%
HIGH WATER USE	0	0.00%
<b>TOTAL</b>	<b>51,024</b>	<b>100.0%</b>

**NOT FOR  
CONSTRUCTION**

DATE: 06/28/2021

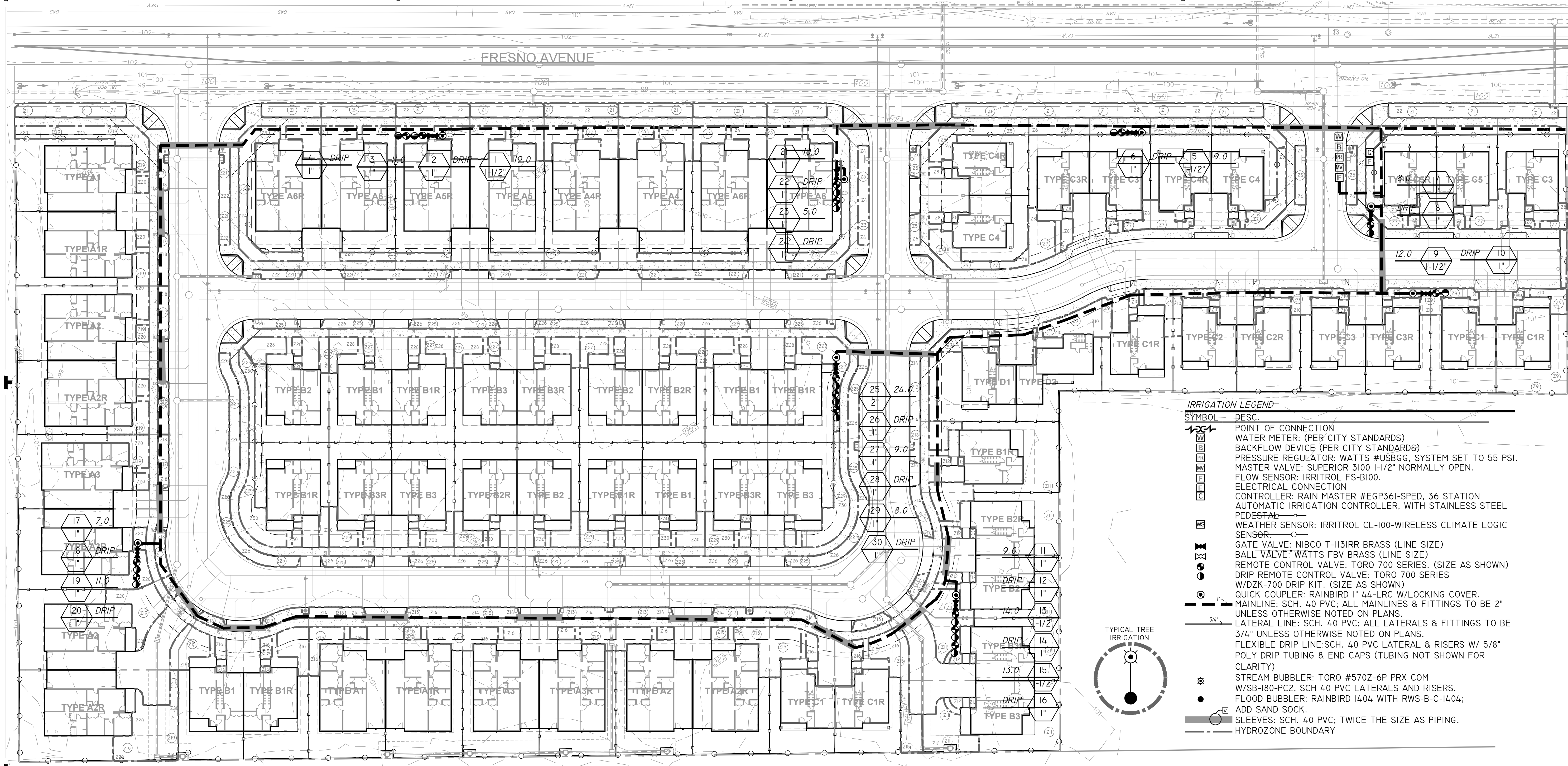
SCALE: 1" = 30'-0"

DRAWN BY: EG

CHECKED BY: MAC

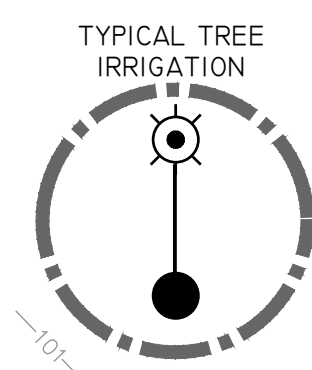
SHEET NUMBER: L-3 OF 3

PROJECT NUMBER: 19-055.02



**IRRIGATION LEGEND**

SYMBOL	DESC.
	POINT OF CONNECTION
	WATER METER: (PER CITY STANDARDS)
	BACKFLOW DEVICE (PER CITY STANDARDS)
	PRESSURE REGULATOR: WATTS #USBGG, SYSTEM SET TO 55 PSI.
	MASTER VALVE: SUPERIOR 3100 1-1/2" NORMALLY OPEN.
	FLOW SENSOR: IRRITROL FS-B100.
	ELECTRICAL CONNECTION
	CONTROLLER: RAIN MASTER #EGP361-SPED, 36 STATION AUTOMATIC IRRIGATION CONTROLLER, WITH STAINLESS STEEL PEDESTAL
	WEATHER SENSOR: IRRITROL CL-100-WIRELESS CLIMATE LOGIC SENSOR
	GATE VALVE: NIBCO T-113IRR BRASS (LINE SIZE)
	BALL VALVE: WATTS FBV BRASS (LINE SIZE)
	REMOTE CONTROL VALVE: TORO 700 SERIES. (SIZE AS SHOWN)
	DRIP REMOTE CONTROL VALVE: TORO 700 SERIES W/DZK-700 DRIP KIT. (SIZE AS SHOWN)
	QUICK COUPLER: RAINBIRD 1" 44-LRC W/LOCKING COVER.
	MAINLINE: SCH. 40 PVC; ALL MAINLINES & FITTINGS TO BE 2" UNLESS OTHERWISE NOTED ON PLANS.
	LATERAL LINE: SCH. 40 PVC; ALL LATERALS & FITTINGS TO BE 3/4" UNLESS OTHERWISE NOTED ON PLANS.
	FLEXIBLE DRIP LINE: SCH. 40 PVC LATERAL & RISERS W/ 5/8" POLY DRIP TUBING & END CAPS (TUBING NOT SHOWN FOR CLARITY)
	STREAM BUBBLER: TORO #570Z-6P PRX COM W/SB-180-PC2, SCH 40 PVC LATERALS AND RISERS.
	FLOOD BUBBLER: RAINBIRD 1404 WITH RWS-B-C-1404; ADD SAND SOCK.
	SLEEVES: SCH. 40 PVC; TWICE THE SIZE AS PIPING.
	HYDROZONE BOUNDARY



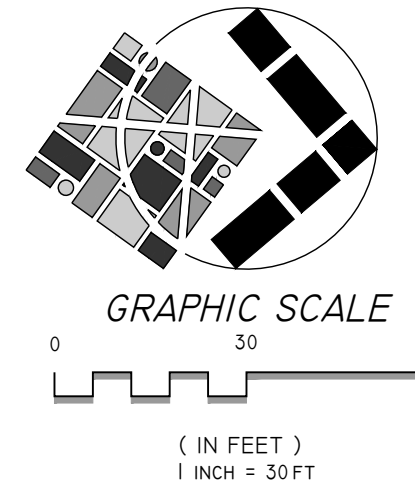
11 1.0 VALVE NUMBER  
1" 1.0 GALLONS PER MINUTE (G.P.M.)  
1" 1.0 VALVE SIZE

**HYDROZONE TABLE: (CONTROLLER A)**

VALVE #	IRRIG. METHOD	WATER USE	AREA (SF)	% OF TOTAL
VALVE #1	BUBBLER	MODERATE	475	0.9%
VALVE #2	DRIP	LOW	5,328	10.4%
VALVE #3	BUBBLER	LOW	225	0.4%
VALVE #4	DRIP	LOW	4,387	8.6%
VALVE #5	BUBBLER	MODERATE	225	0.4%
VALVE #6	DRIP	LOW	2,506	4.5%
VALVE #7	BUBBLER	MODERATE	175	0.3%
VALVE #8	DRIP	LOW	3,235	6.3%
VALVE #9	BUBBLER	MODERATE	350	0.7%
VALVE #10	DRIP	LOW	2,888	5.7%
VALVE #11	BUBBLER	MODERATE	225	0.4%
VALVE #12	DRIP	LOW	2,494	4.9%
VALVE #13	BUBBLER	MODERATE	350	0.7%
VALVE #14	DRIP	LOW	2,224	4.4%
VALVE #15	BUBBLER	MODERATE	275	0.5%
VALVE #16	DRIP	LOW	4,399	8.6%
VALVE #17	BUBBLER	LOW	175	0.3%
VALVE #18	DRIP	MODERATE	1,023	2.0%
VALVE #19	BUBBLER	MODERATE	275	0.5%
VALVE #20	DRIP	LOW	4,218	8.3%
VALVE #21	BUBBLER	MODERATE	250	0.5%
VALVE #22	DRIP	LOW	4,459	8.7%
VALVE #23	BUBBLER	MODERATE	125	0.2%
VALVE #24	DRIP	LOW	1,916	3.8%
VALVE #25	BUBBLER	MODERATE	575	1.1%
VALVE #26	DRIP	LOW	3,964	7.8%
VALVE #27	BUBBLER	MODERATE	200	0.4%
VALVE #28	DRIP	LOW	3,064	6%
VALVE #29	BUBBLER	MODERATE	225	0.4%
VALVE #30	DRIP	LOW	3,893	7.6%
<b>TOTAL</b>			<b>51,024</b>	<b>100.0%</b>

**IRRIGATION NOTES**

- LANDSCAPE CONTRACTOR (C-27 LICENSE) SHALL BID AND INSTALL IRRIGATION PER THESE PLANS AND SPECIFICATIONS, UNLESS GIVEN FURTHER WRITTEN INSTRUCTIONS, OR REVISED PLANS PER OWNER OR LANDSCAPE ARCHITECT. WORK INCLUDES, BUT IS NOT LIMITED TO ALL LABOR, COVERED LIABILITY INSURANCE, WORKMAN'S COMPENSATIONS, EQUIPMENT AND MATERIALS NECESSARY TO FURNISH, INSTALL AND TEST IRRIGATION SYSTEM, AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
- COORDINATE A MINIMUM OF (2) FIELD OBSERVATIONS WITH LANDSCAPE ARCHITECT AND CALL TO PROVIDE 48 HOUR NOTICE:
  - VERIFY FLAGGED HEAD AND CHALKED MAINLINE LAYOUT PRIOR TO TRENCHING OPERATIONS. ADJUST LAYOUT AS DIRECTED BY LANDSCAPE ARCHITECT.
  - OBSERVE COMPLETE PLUMBING SYSTEM AND PRESSURE TEST ALL MAINLINE & LATERALS PRIOR TO ANY BACKFILLING OPERATIONS.
- CONTRACTOR SHALL PROVIDE SUBMITTALS/CUT SHEETS TO LANDSCAPE ARCHITECT OF ALL IRRIGATION MATERIALS INCLUDING, BUT NOT LIMITED TO, CONTROL WIRE, MAIN LINE PVC, VALVES, PRESSURE REDUCER, ETC. CONTRACTOR SHALL FURNISH TO OWNER KEYS TO CONTROLLER, QUICK COUPLER AND ANY SPECIAL TOOLS REQUIRED FOR MAINTENANCE OF ALL IRRIGATION COMPONENTS.
- MANUFACTURERS DIRECTIONS AND DETAILED DRAWINGS SHALL BE FOLLOWED IN ALL CASES WHERE THE MANUFACTURERS OF COMPONENTS, USED IN THIS CONTRACT, COVER POINTS NOT SHOWN ON DRAWINGS AND SPECIFICATIONS:
  - CONTRACTOR SHALL KEEP DETAILED REDLINE PLAN RECORDING INSTALLATION OF IRRIGATION SYSTEM AS IT PROGRESSES. RECORD PLAN SHALL BE DRAFTED ONTO DRAWINGS PROVIDED BY LANDSCAPE ARCHITECT INTO AS-BUILT DRAWINGS SHOWING LOCATIONS OF POINT OF CONNECTION, LATERALS, MAIN LINES, QUICK COUPLERS, VALVES, HEADS, WIRING, ETC., FOR APPROVAL BY LANDSCAPE ARCHITECT. FOLLOWING APPROVAL, AS-BUILTS SHALL BE REDUCED TO 1/4" SIZE, COLOR CODED BY STATION, AND LAMINATED IN 6 MIL. PLASTIC. 3 REQUIRED FOR EACH CONTROLLER.
  - THREE LAMINATED DETAILED IRRIGATION SCHEDULES SHOWING STATION PROGRAMMING AND RUN TIMES SHALL BE PROVIDED FOR EACH CONTROLLER AND APPROVED BY LANDSCAPE ARCHITECT, ONE WARM SEASON, ONE COOL SEASON AND ONE FOR ESTABLISHMENT PERIOD. EACH SCHEDULE SHALL BE ACCOMPANIED BY REDUCED "AS-BUILT" PLAN PERMANENTLY MOUNTED IN OR NEAR CONTROLLER. THESE SHALL BE SUBMITTED PRIOR TO ACCEPTANCE TO WORK AND AS A CONDITION OF COMMENCEMENT OF MAINTENANCE PERIOD.
- ALL IRRIGATION EQUIPMENT TO BE INSTALLED PER CITY AND STATE STANDARDS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY AND ALL PERMITS AND INSPECTIONS AS REQUIRED. THE MATERIAL AND WORK SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF THE LATEST EDITIONS OF THE UNIFORM PLUMBING CODE AND THE NATIONAL ELECTRIC CODE. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL STATE AND LOCAL LAWS, CODES, ORDINANCES, RESTRICTIONS BEFORE BEGINNING INSTALLATION.
- CONTRACTOR SHALL VERIFY GALLONS PER MINUTE (G.P.M.) AT POINT OF CONNECTION DOWNSTREAM OF BACKFLOW DEVICE TO BE A MINIMUM OF 60 G.P.M. AND 70 P.S.I. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. FAILURE TO DO SO WILL MAKE THE CONTRACTOR LIABLE FOR ALL NECESSARY CHANGES.
- TEST ALL PRESSURE LINES PRIOR TO BACK FILLING, UNDER STATIC PRESSURE OF 150 PSI FOR A PERIOD OF 2 HOURS. IF LEAKS DEVELOP, REPAIR SYSTEM AND REPEAT TEST UNTIL PRESSURE IS HELD.
- ALL 120V. ELECTRIC POWER SUPPLY FOR IRRIGATION CONTROLLER SHALL BE PROVIDED AND CONNECTED TO CONTROLLER BY A LICENSED ELECTRICIAN. LANDSCAPE CONTRACTOR SHALL MAKE HARDWIRE CONNECTION FOR ALL CONTROL WIRES. CONTRACTOR SHALL INSTALL CONTROL WIRES THAT:
  - CONNECTIONS BETWEEN THE CONTROLLER AND THE REMOTE CONTROL VALVES SHALL BE MADE CONTINUOUS (NO SPLICES) WITH DIRECT BURIAL COPPER WIRE 1/4 GA. AWG U.F. 600 VOLT. TAPE WIRES TO THE MAINLINE AT 10 FOOT INTERVALS, EXCEPT WHERE INDEPENDENTLY SLEEVED UNDER PAVING.
  - PROVIDE THREE CONTINUOUS LOOP WIRES FROM THE CONTROLLER TO EACH VALVE WITH 9' LOOP. LABEL IN VALVE BOX. PROVIDE SEPARATE COLOR WIRES FOR CONTROL, COMMON AND EXTRA LOOP WIRES. CONTROL SHALL BE RED, COMMON SHALL BE WHITE AND EXTRAS SHALL BE BLACK/YELLOW. AN EXPANSION CURL SHALL BE PROVIDED WITHIN (3) FEET OF EACH WIRE CONNECTION IN VALVE BOX. EXPANSION CURLS SHALL BE 18 INCHES IN LENGTH AT EACH SPLICE CONNECTION AND AT EACH CONTROL VALVE. SO THAT IN CASE OF REPAIR THE VALVE BONNET CAN BE BROUGHT TO THE SURFACE WITHOUT DISCONNECTION OF THE CONTROL WIRES.
  - ALL SPLICES SHALL BE MADE WATERPROOF WITH RAINBIRD SNAP-TIE WIRE CONNECTIONS OR APPROVED EQUAL.
- THESE DRAWINGS INCLUDE A DIAGRAMMATIC DISPLAY THAT SHOWS:
  - BEFORE PROCEEDING WITH ANY WORK, CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND QUANTITIES. CONTACT AND INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL CONDITION IMMEDIATELY.
  - LAYOUT OF PIPING, VALVES, AND HEADS IS DIAGRAMMATIC. THERE MAY BE FIELD ADJUSTED FOR EASE OF INSTALLATION, COMMON TRENCHING, AND OPTIMUM COVERAGE. OBTAIN WRITTEN APPROVAL FOR CHANGES PRIOR TO CONSTRUCTION.
  - DRIP SYMBOL IS SCHEMATIC. VERIFY PLANT QUALITIES FOR EXACT NUMBER OF EMITTERS AND LENGTH OF PIPE. ALL OFFSET, FITTINGS, SLEEVES, ETC. ARE NOT INDICATED DUE TO SCALE OF DRAWINGS, AND ARE TO BE FURNISHED AS REQUIRED.
  - CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR WORK INSTALLED IN AREA WHERE WORK HAS BEEN MODIFIED WITHOUT WRITTEN APPROVAL.
  - PIPE SIZES ON PLANS ARE MINIMUM ALLOWABLE.
- FINAL LOCATION OF BACKFLOW PREVENTION DEVICE SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
  - THE DRIP PORTION OF THE SYSTEM SHALL BE AUTOMATICALLY OPERATED AND CAPABLE OF OPERATING THE SYSTEM FROM 1/2 HOUR TO SEVERAL HOURS PER DAY AND PER SETTING, AND HAVE AN AUTOMATIC RAIN SHUTOFF UNIT. THE SYSTEM SHALL MEET THE FOLLOWING BASIC PARAMETERS:
    - FROM THE VALVE ASSEMBLY, A 3/4 INCH SCH 40 PVC PIPE SHALL BE BROUGHT TO A 3/4 INCH PVC TEE. ALL STATIONS SHOULD BE CENTER-LOADED WHEREVER POSSIBLE, AND AT NO TIME SHALL THE WATER FLOW IN ANY PIPE EXCEED A SPEED OF 5 FEET PER SECOND.
    - A 5/8" A/R PVC HOSE SHALL EXTEND FROM EACH SIDE OF THE PVC TEE. FLOW IN EACH OF THESE 5/8" LINES SHALL NOT EXCEED 90 GALLONS PER HOUR. A TORO NGE FC EMITTER (OR APPROVED EQUAL) SHALL BE INSTALLED INTO THIS HOSE PER THESE QUANTITIES: TWO 1/2 GALLON PER HOUR SINGLE OUTLET EMITTERS SHALL BE PLACED AT THE BASE OF EACH 1 GALLON CONTAINER. TWO 1 GALLON PER HOUR EMITTERS SHALL BE PLACED AT THE BASE OF EACH 3 GALLON CONTAINER. CAP ALL LINE ENDS WITH A BALL VALVE SO THEY MAY BE FLUSHED. USE A KB INLINE CHECK VALVE WHERE REQUIRED FOR LOW-HEAD DRAINAGE WHERE ELEVATION DIFFERENTIAL BETWEEN HEADS MAY CAUSE RUN OFF.
- THE SYSTEM SHALL BE DESIGNED ACCORDING TO TORO RECOMMENDATIONS AND FOR A WORKING PRESSURE OF 25 PSI.
  - AVOID CUTTING EXISTING ROOTS GREATER THAN 1" DIAMETER, TUNNEL UNDER ROOT WITHOUT DAMAGING CAMBIUM LAYER OF BARK. ALL TRENCHING WITHIN THE DRIPLINE OF EXISTING TREES SHALL BE DONE BY HAND. VERIFY PIPE ROUTE WITH LANDSCAPE ARCHITECT PRIOR TO TRENCHING.
  - USE SCH 40 PVC AT DRIVEWAY/ROAD CROSSING WITH 24" OF COVER. ALL SLEEVES TO BE TWICE DIAMETER OF REQUIRED PIPE AND EXTEND 12" BEYOND PAVING EDGE. SLEEVE EACH PIPE SEPARATELY AND PROVIDE SEPARATE SLEEVE FOR CONTROL WIRES.
  - THE TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE PERFORMED. BACKFILL SHALL BE WATER SETTLED OR MECHANICALLY COMPACTED IN LANDSCAPED AREAS TO A DRY DENSITY EQUAL TO ADJACENT UNDISTURBED AREAS. CONTRACTOR WILL INSTALL 5" WIDE DETECTABLE TAPE (43 DTP, AS MANUFACTURED BY T. CHRISTY). TAPE SHALL BE INSTALLED 6" ABOVE THE IRRIGATION MAINLINE AND BE LABELED "CAUTION WATER LINE BURIED BELOW". INSTALL ABOVE ALL WATER MAIN LINES. BACKFILLING SHALL CONFORM TO ADJACENT GRADES WITHOUT DIRTS, SUNKEN AREAS, HUMPS OR OTHER SURFACES IRREGULARITIES. IF SETTLEMENT OCCURS AND SUBSEQUENT ADJUSTMENTS ARE NECESSARY, THE CONTRACTOR SHALL MAKE ALL REQUIRED ADJUSTMENTS WITHOUT COST TO THE OWNER.
  - ADJUST RADIUS OF SPRINKLERS AND REPLACE OR CHANGE NOZZLES TO MINIMIZE OVERSPRAY ON BUILDINGS & PAVING AND TO OBTAIN UNIFORM COVERAGE.
  - THE CONTRACTOR SHALL GUARANTEE THE IRRIGATION SYSTEM FOR A PERIOD OF 12 MONTHS. THE SYSTEM SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP AND THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DEFECTS AND REPAIR ANY DAMAGE CAUSED BY DEFECTS FOR THE ABOVE MENTIONED TIME PERIOD AT NO COST TO THE OWNER. SUCH REPAIRS OR REPLACEMENTS SHALL BE COMPLETED WITHIN A 48 HOUR PERIOD AND IMMEDIATELY IF IT IS A SAFETY ISSUE.
  - CLEANUP SHALL BE MADE AS EACH PORTION OF WORK PROGRESSES. ALL PAVING AND WALKS SHALL BE BROOMED OR WASHED DOWN AND ANY DAMAGE SUSTAINED TO THE WORK OF OTHERS SHALL BE REPAIRED TO ORIGINAL CONDITIONS ACCEPTABLE TO THE OWNER.



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