



## LANDSCAPE PLAN

SCALE: 1"=20'-0"

PLANT MATERIALS LEGEND					
COUNT	SIZE	SYM	COMMON NAME	BOTANICAL NAME	
TREES					
3	24 GAL/ 2" CAL/ 7-8' HT	PNA	AUSTRIAN PINE	PINUS NIGRA 'OREGON GREEN'	
2	24 GAL/ 2" CAL/ 7-8' HT	PNA	AUSTRIAN PINE	PINUS NIGRA 'OREGON GREEN'	
3	24 GAL/ 2" CAL/ 7-8' HT	JW	ROCKY MOUNTAIN JUNIPER	JUNIPERUS SCOPULORUM 'WICHITA BLUE'	
3	24" BOX/ 2" CAL	FVM	MODESTO ASH	FRAXINUS VELUTINA 'MODESTO'	
6	24" BOX/ 2" CAL	PR	PURPLE ROBE LOCUST	CHITALPA X TASHKENTENSIS	
6	24" BOX/ 2" CAL- SINGLE	CC	EASTERN REDBUD	CERCIS CANADENSIS	
SHRUBS					
14	5 GAL	R	RED AUTUMN CHERRY SAGE	SALVIA GREGGII 'RED'	
4	5 GAL	RS	RUSSIAN SAGE	PEROVSKIA ATRIPLICIFOLIA	
12	5 GAL	PF	POTENTILLA	POTENTILLA FRUTICOSA 'GOLDFINGER'	
3	5 GAL	AS	POINT LEAF MANZANITA	ARCTOSTAPHYLOS PUNGENS	
10	5 GAL	BD	BUDDLEIA DWARF	BUDDLEIA DAVIDII X 'BLUE CHIP'	
ACCENTS					
18	5 GAL	HY	RED YUCCA	HESPERALOE PARVIFLORA	
GROUND COVER					
15	5 GAL	CD	LOWFAST COTONEASTER	COTONEASTER DAMMERI 'LOWFAST'	
12	5 GAL	JB	BLUE RUG JUNIPER	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	
4	5 GAL	LH	HALL'S HONEYSUCKLE	LONICERA JAPONICA 'HALLIANA'	

LEGEND: MATERIALS- GROUNDCOVER

QUANTITY	SYMBOL	DESCRIPTION
11,400 SF		1-INCH SCREENED LANDSCAPE ROCK TO MATCH COMPLEX; TREAT WITH PRE-EMERGENT AS PER LANDSCAPE SPECIFICATIONS
4		SURFACE BOULDER BOULDER GROUPING, INSTALL PER DETAIL SHEET L3 (1) 3X3' MIN, (1) 5X4' MIN

## GENERAL LANDSCAPE NOTES

1. THE CONTRACTOR IS TO PROVIDE A 2 LB SAMPLE OF THE PROPOSED LANDSCAPE ROCK FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE FOR APPROVAL. THE CONTRACTOR SHALL PROVIDE 100% COVERAGE OF NON-PAVED AREAS WHERE DEFINED.
2. FOR ALL TREE PLANTING THAT ENCOUNTERS HARDPAN/CALICHE PROVIDE SEPARATE UNIT PRICE TO INSTALL TREES.
3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO INFORM THE LANDSCAPE ARCHITECT OF ANY PLANT MATERIAL CONCERNS BASED ON THE PLANTING SEASON, (E.G. SUMMER VS. WINTER) REGARDING THE LANDSCAPE CONTRACTOR HAVE ANY CONCERNS ABOUT PLANT MATERIAL DUE TO HEAT OR FROST EXPOSURE, THE INSTALLER SHALL REQUEST A SUBSTITUTION OR DELAY IN PLANTING. ONCE PLANTED, ALL PLANT MATERIAL IS SUBJECT TO SPECIFIED WARRANTIES.
4. ALL TREES TO BE UNCONDITIONALLY GUARANTEED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION.
5. TREES, SHRUBS, VINES, AND GROUNDCOVERS WHICH HAVE TO BE REPLACED UNDER THE TERMS OF THE GUARANTEE SHALL BE GUARANTEED FOR AN ADDITIONAL (1) YEAR FROM THE DATE OF REPLACEMENT.
6. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FINISHED GRADES AND FOR MAINTAINING POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS DURING THE FINISH GRADING PROCESS. ALL SLOPES NOT TO EXCEED 4:1 IN LANDSCAPE AREAS. SHOULD THE GRADING EXCEED A 3:1 SLOPE THE AREA SHALL BE SECURED WITH AN EROSION CONTROL METHOD APPROVED BY THE LANDSCAPE ARCHITECT
7. THE LANDSCAPE CONTRACTOR SHALL VERIFY BERM AND RETENTION BASIN LOCATIONS SHOWN ON THESE PLANS WITH THOSE ON THE CIVIL ENGINEERING PLANS. SHOULD A DISCREPANCY EXIST BETWEEN THE PLANS, THE LANDSCAPE ARCHITECT SHOULD BE NOTIFIED IMMEDIATELY.
8. UNDER NO CIRCUMSTANCE SHALL ANY TREE BE PLANTED WITHIN 6' OF ANY BUILDING WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
9. TREES AND SHRUBS SHALL BE PLACED A MINIMUM OF 6' FROM PUBLIC ACCESSWAYS, UTILITY CABINETS AND FIRE HYDRANTS.
10. SHRUBS MUST BE AT MATURITY, 6' FROM THE REAR OF A FIRE HYDRANT. NO MATERIAL OTHER THAN GROUNDCOVERS MAY BE PLACED BETWEEN A FIRE HYDRANT AND THE STREET OR ROADWAY OR 6' ON EITHER SIDE. FIELD VERIFY ALL HYDRANT LOCATION WITH THE CIVIL ENGINEERING PLANS.
11. ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPE AND SITE CLEAN UP MUST BE COMPLETED PRIOR TO FINAL APPROVAL OR CERTIFICATE OF OCCUPANCY.
12. ALL TREES ADJACENT TO PEDESTRIAN WALKWAYS SHOULD HAVE MINIMUM CANOPY CLEARANCE OF 8'-8"

## TOWN OF PRESCOTT VALLEY CALCULATIONS

STREET FRONTAGE- N/A/  
(REQUIRED: 1 TREE PER 30 LF, (1) 5 GAL SHRUB PER 100 SF)  
TOTAL TREES REQUIRED: N/A, TOTAL SHRUBS REQUIRED: N/A

PARKING- (REQUIRED: (1) TREE AND (2) 5 GAL SHRUBS PER ISLAND- 36" MAX HT)  
TOTAL PARKING ISLANDS- 6  
TOTAL TREES REQUIRED: 6, TOTAL SHRUBS REQUIRED: 12  
TOTAL TREES PROVIDED: >6, TOTAL SHRUBS PROVIDED: >12



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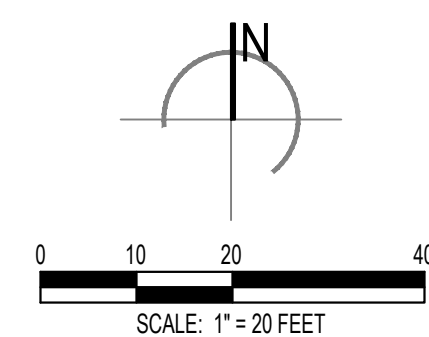
ISSUE FOR PRICING / BIDDING:

ISSUE FOR PERMIT APPLICATION:  
05.20.2024, 06.12.2024, 07.18.24

## ISSUE FOR CONSTRUCTION

REV	DATE	DESCRIPTION
1	5/20/24	OWNER COMMENTS
2	6/1/24	TOPV COMMENTS-PLANT SIZES
3	7/18/24	TOPV COMMENTS-RELOCATE TREE

**BRAKES PLUS**  
PRESCOTT VALLEY, AZ  
-LANDSCAPE PLAN-



SHEET CONTENTS

LANDSCAPE PLAN

SHEET NO.

L1 OF 6

SKETCH JOB NO. SK2402





THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM AS STATED IN THE CALCULATIONS. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO INSTALLATION.

2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.

3. COORDINATE UTILITY LOCATIONS ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OF GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND NOTES, OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.

5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE THE FOLLOWING SHOULD BE NOTED:

- A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPE AREAS WHENEVER POSSIBLE.
- B. TREE AND SHRUB LOCATIONS AS SHOWN ON THE LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS AND ARCHITECTURAL FEATURES.
- C. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT ALLOWED.

6. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT.

- A. TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES.
- B. TWO (2) OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS, IF APPLICABLE.

7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVES. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVES WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHEN A SLEEVE WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR.

8. INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRICAL UTILITY CODES.

9. THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.

11. INSTALL TWO (2) #14 AWG CONTROL WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE FOR USE AS SPARES IN CASE OF CONTROL WIRE FAILURE. CUL 3 FEET OF WIRE IN VALVE BOX.

12. ALL EMISSION POINTS TO BE LOCATED ON THE UPHILL SIDE OF THE PLANT MATERIAL. ONE EMISSION POINT TO BE LOCATED AT THE PLANT BALL. ALL ADDITIONAL POINTS TO BE LOCATED WITHIN PLANT PIT PERIMETER

13. REFER TO BACKFLOW DETAIL FOR SCREEN ENCLOSURE SPECIFICATION

14. IRRIGATION SLEEVES ARE TO BE SCHEDULE 40 PIPE WITH A MINIMUM DIAMETER TWICE THE SIZE OF THE IRRIGATION SLEEVE. IRRIGATION SLEEVES ARE TO BE INSTALLED BEYOND EDGE OF PAVEMENT, WALL OR CURB AND A MINIMUM OF 36" BEYOND EDGE OF SIDEWALKS. PROVIDE SEPARATE SLEEVE FOR WIRE AT EACH SLEEVE LOCATION.

15. CONTROLLERS ARE TO BE PROGRAMMED TO ALLOW SUFFICIENT FLOW RATES ARE MAINTAINED THROUGHTOUT THE SYSTEM.

16. ALL VALVE BOXES (IRRIGATION, GATE VALVES, FLUSH CAP, WATER FEATURES, CONTROL WIRE ETC.) ARE TO BE PLACED IN DECOMPOSED GRANITE/PLANTING AREAS. UNDER NO CIRCUMSTANCES ARE THE VALVE BOXES TO BE PLACED IN A LAWN OR HARDSCAPE AREA. BOXILD COLOR TO MATCH ADJACENT GRANITE/SURFACE MATERIAL.

17. THE GENERAL CONTRACTOR IS RESPONSIBLE TO PROVIDE POWER TO THE IRRIGATION CONTROLLER, IF APPLICABLE

18. SUBMIT SHOP DRAWINGS OF PROPOSED SYSTEM, LAUNCH AND ANY PRE-AGREED UPON EQUIPMENT AND/OR LAYOUT MODIFICATION FOR LA APPROVAL PRIOR TO INSTALLATION.

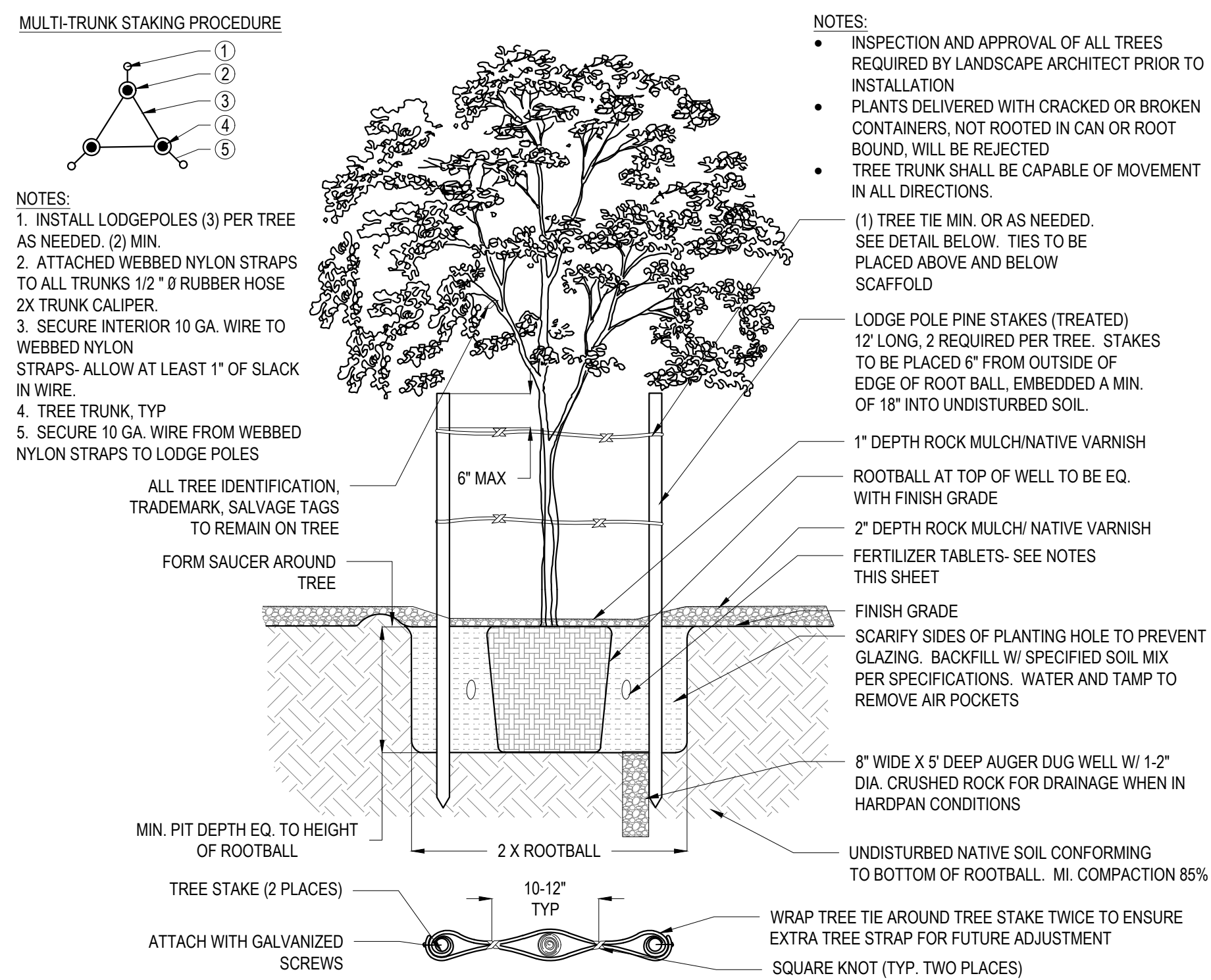
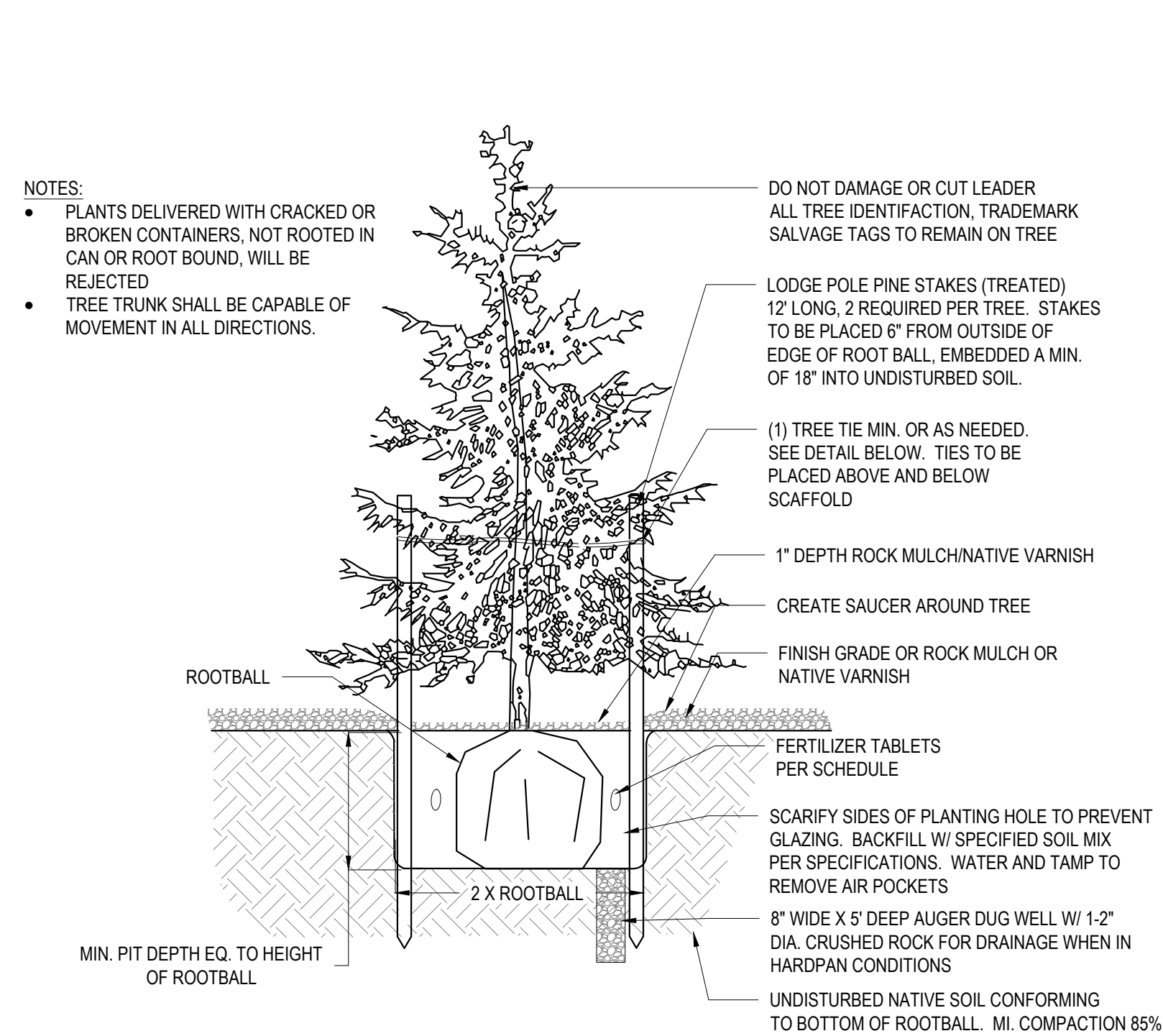
19. SCREEN SERVICE EQUIPMENT WITH LANDSCAPE MATERIAL FROM VIEW OF STREETS, WALKWAYS AND ADJACENT PROPERTIES

20. SUBMIT AS-BUILT RECORD DRAWINGS ILLUSTRATING COMPLETE IRRIGATIONS SYSTEM TO LA/OWNER REP. AT TIME OF COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL PAYMENT.

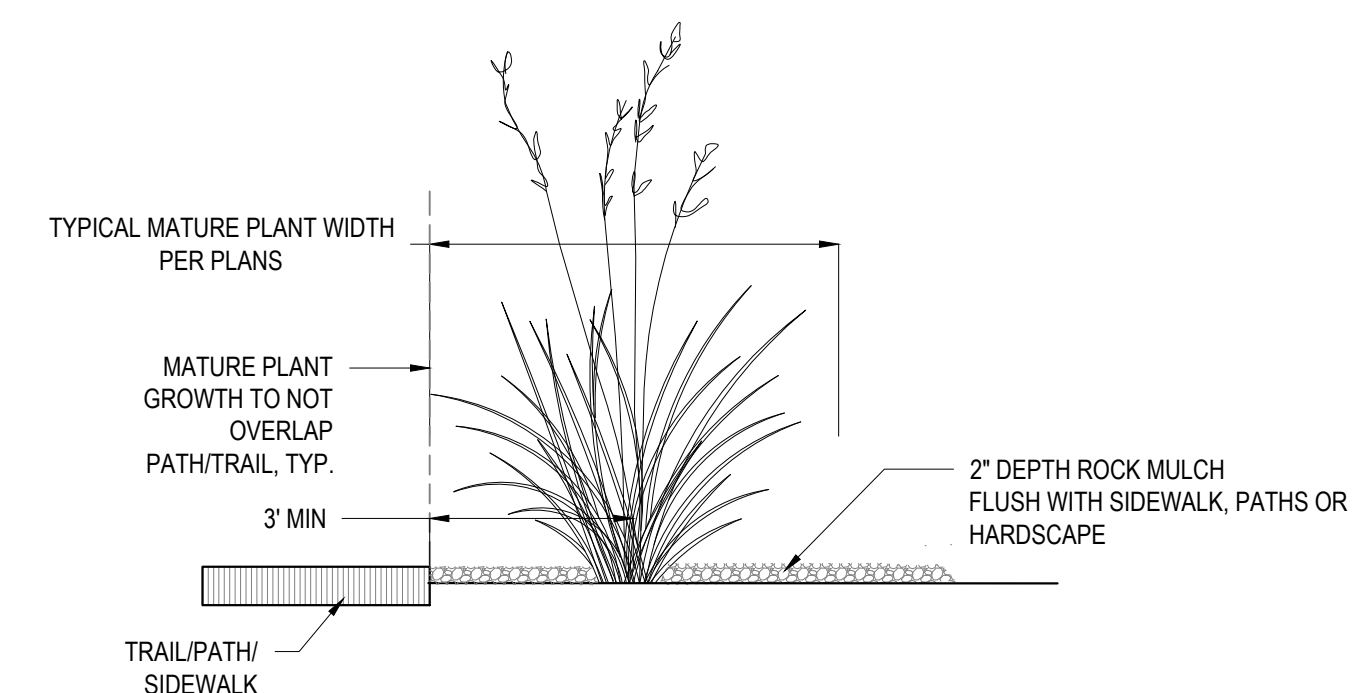
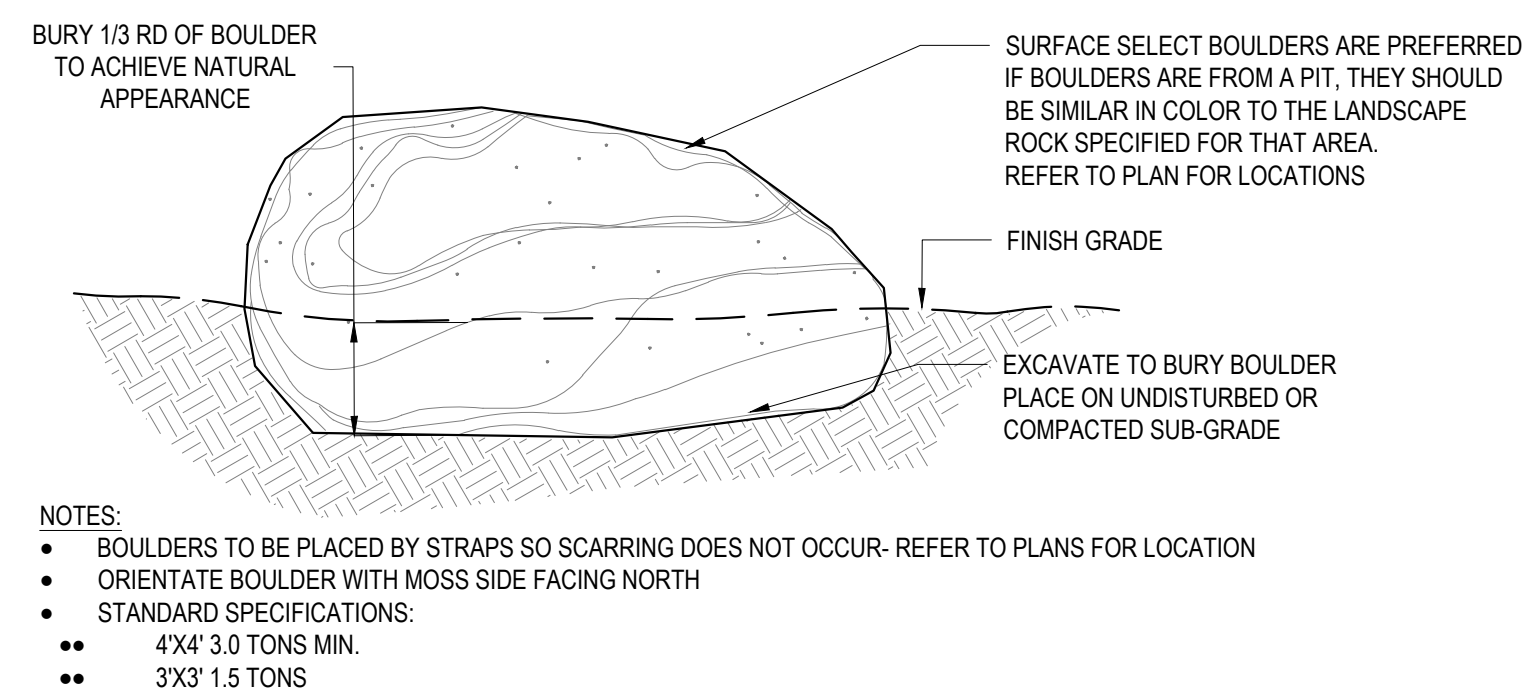
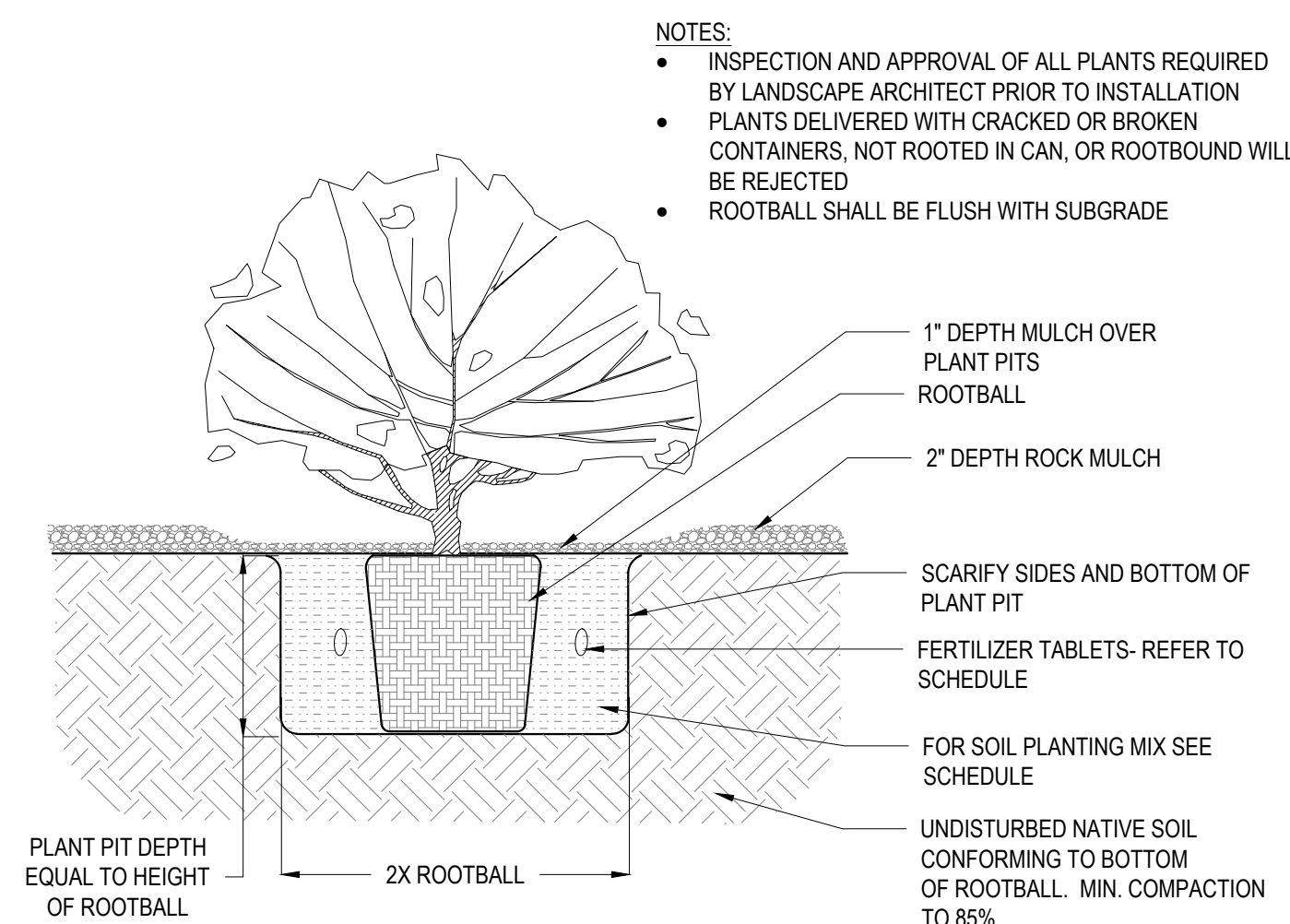
21. CIVIL PLANS SHALL GOVERN IN THE INSTALLATION OF WATER, SEWER, STORM DRAINAGE AND FIRE PROTECTION LINES. SEE CIVIL PLANS FOR LOCATION AND SIZES.





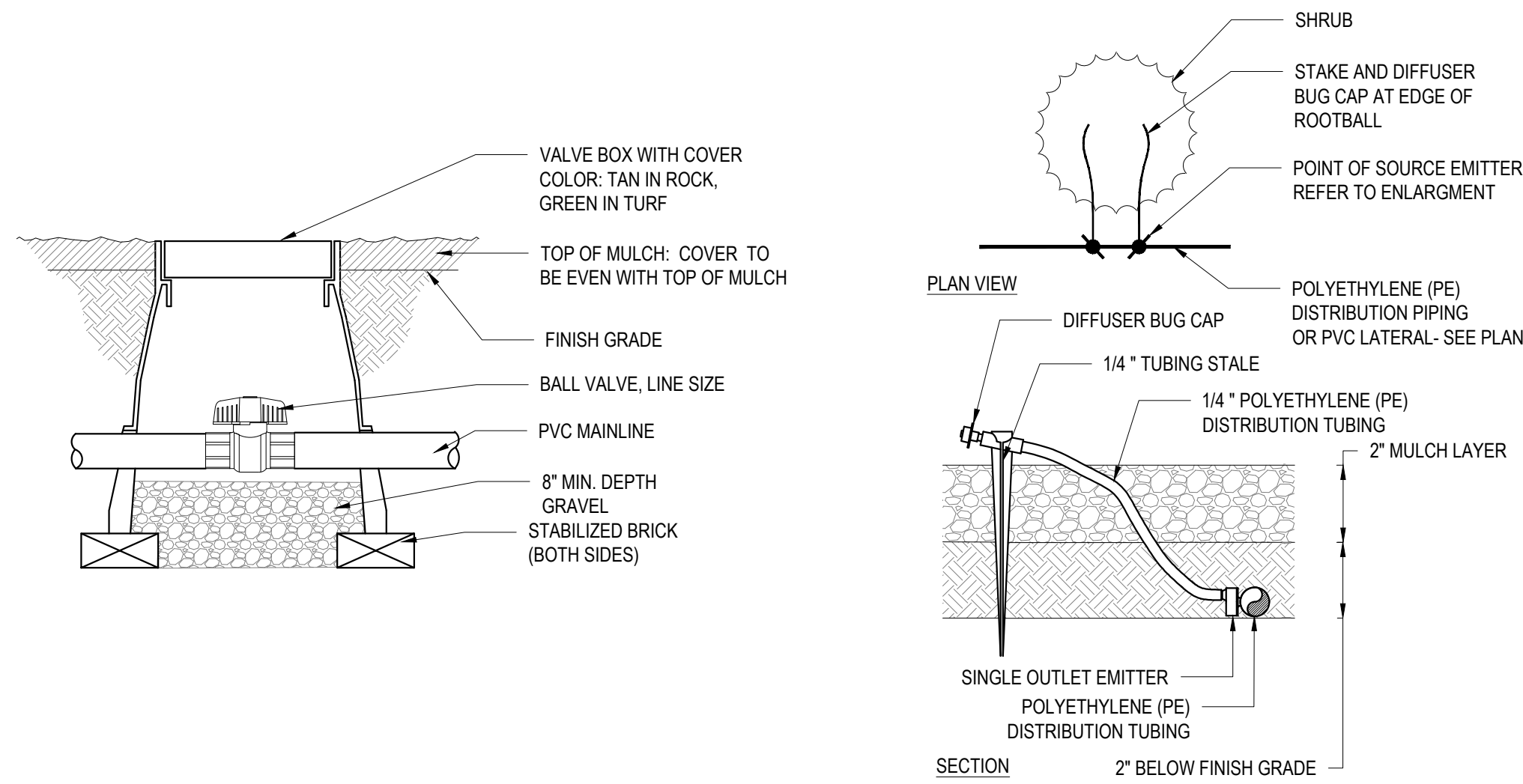
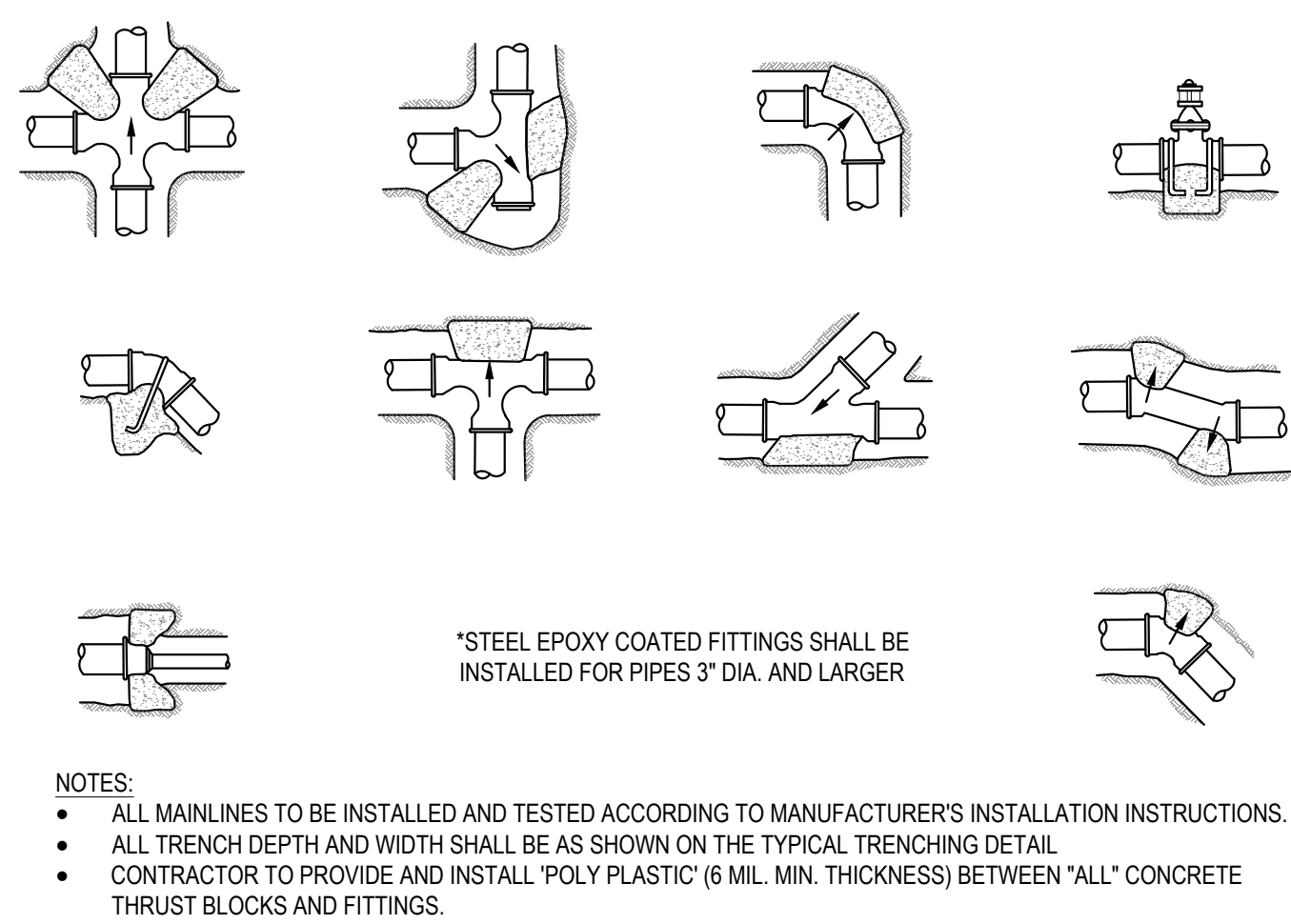
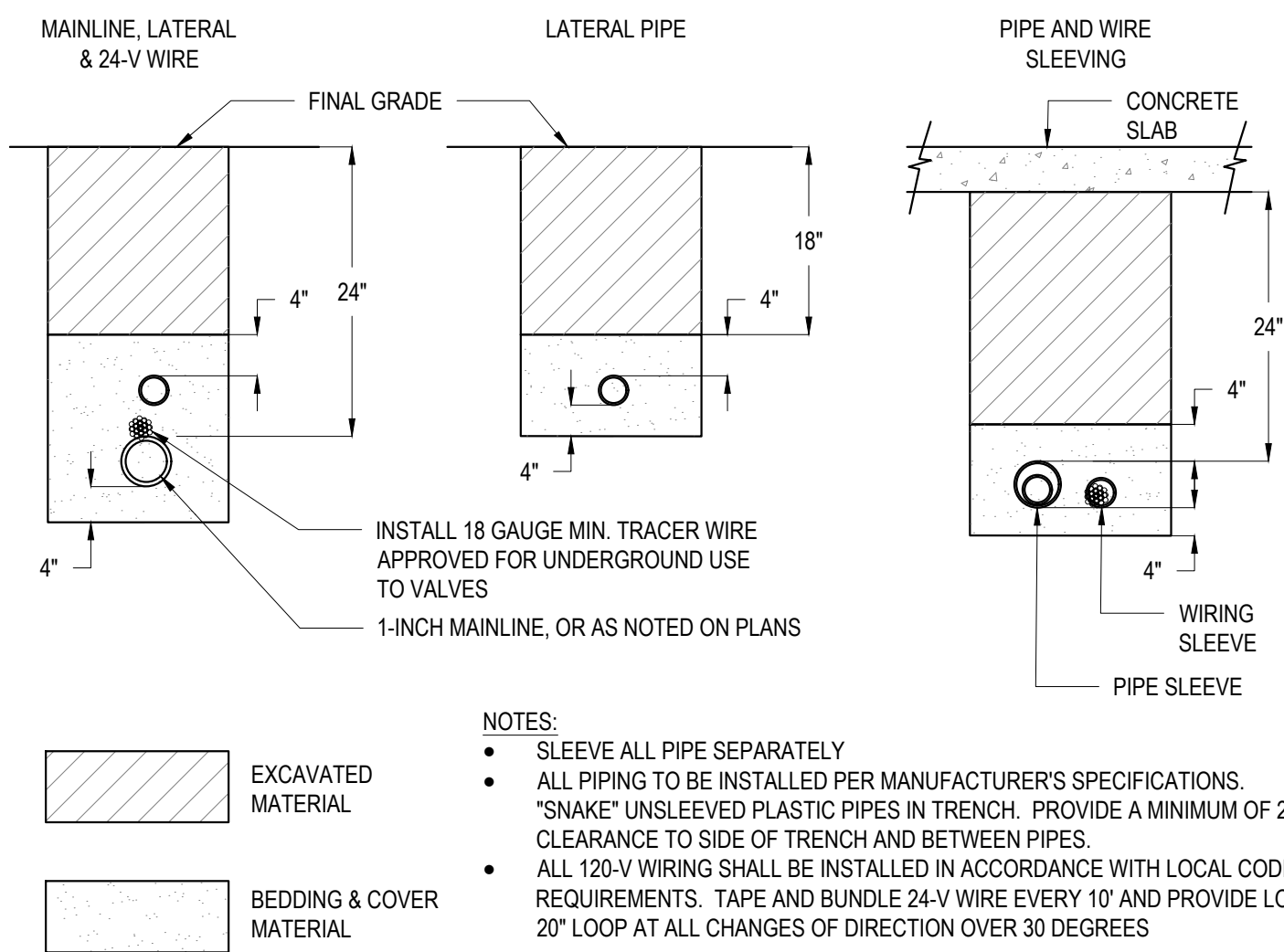


NATIVE PLANTING BACKFILL MIX:	MIX SHALL CONSIST OF: 'NATIVE' SITE SOIL, (NO CALICHE IN BACKFILL). REMOVE ALL INORGANIC MATERIAL GREATER THAN 1" IN SIZE . SOIL MIX SHALL BE WATER SETTLED WITHOUT POOLING.
AMENDED PLANTING BACKFILL MIX:	MIX SHALL CONSIST OF: 1/2 PART 'NATIVE' SITE SOIL (NO CALICHE IN BACKFILL) & 1/2 PART MULCH ("HUMUS") * NATURAL FERTILE, FRIABLE SOIL THOROUGHLY MIXED PRIOR TO BACKFILLING. PIT REMOVE ALL INORGANIC MATERIAL GREATER THAN 1" IN SIZE. SOIL BACKFILLING SHALL BE ACCOMPLISHED IN 6" LIFTS. EACH LIFT SHALL BE WATER SETTLED WITHOUT POOLING.
FERTILIZER TABLETS	FERTILIZER TABLETS SHALL BE AGRIFORM OR EQUAL (21 GRAMS 20-20-5) SLOW RELEASE. TABLETS SHALL BE PLACED AT 1/2 THE DEPTH OF THE ROOTBALL AT THE FOLLOWING RATES: 1 TABLET PER 1 GAL CONTAINER 2 TABLETS PER 5 GAL CONTAINER 3 TABLETS PER 15 GAL CONTAINER 4 TABLETS PER 24" BOX AND AT A RATE OF 1 TABLET PER EACH ADDITIONAL 6" BOX SIZE. WHEN MULTIPLE QUANTITIES OF TABLETS ARE REQUIRED, THEY SHALL BE EQUALLY SPACED AT THE SPECIFIED DEPTH.  INCLUDE GRUBICIDE TO EACH APPLICATION



REV	DATE	DESCRIPTION
1	5-20-24	OWNER COMMENTS
2	6-12-24	TOPV COMMENTS- PLANT SIZES
3	7-18-24	TOPV COMMENTS- RELOCATE TREE





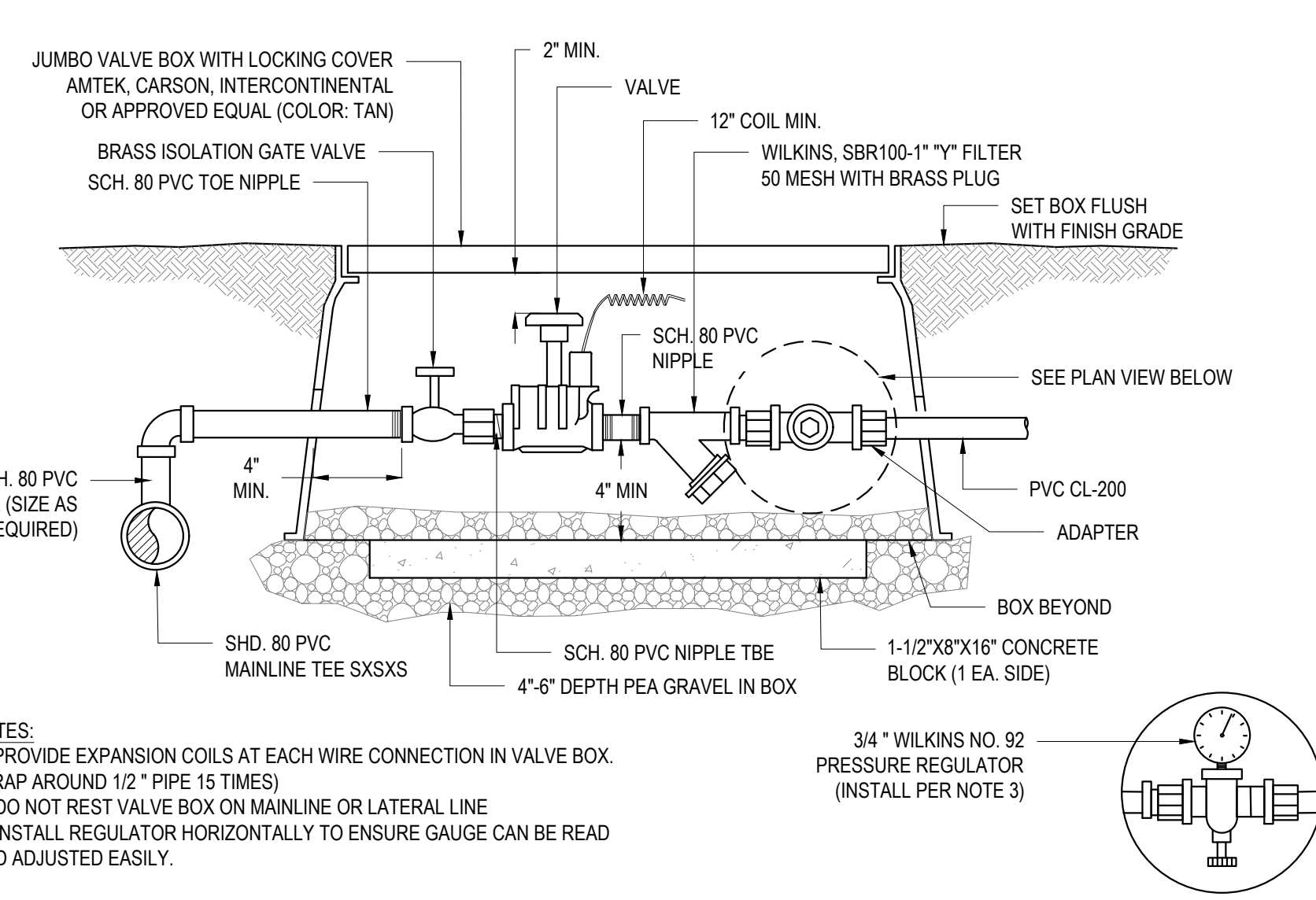
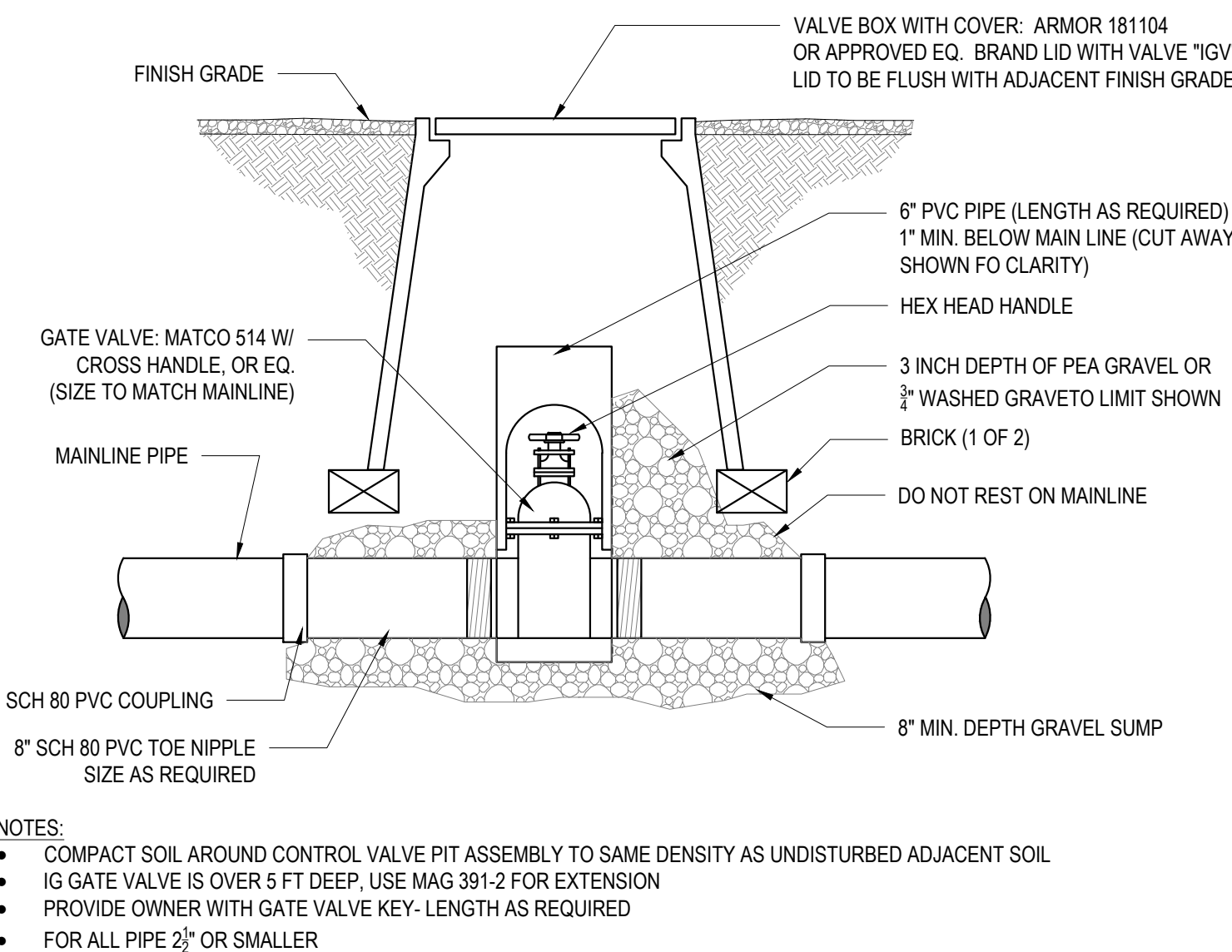
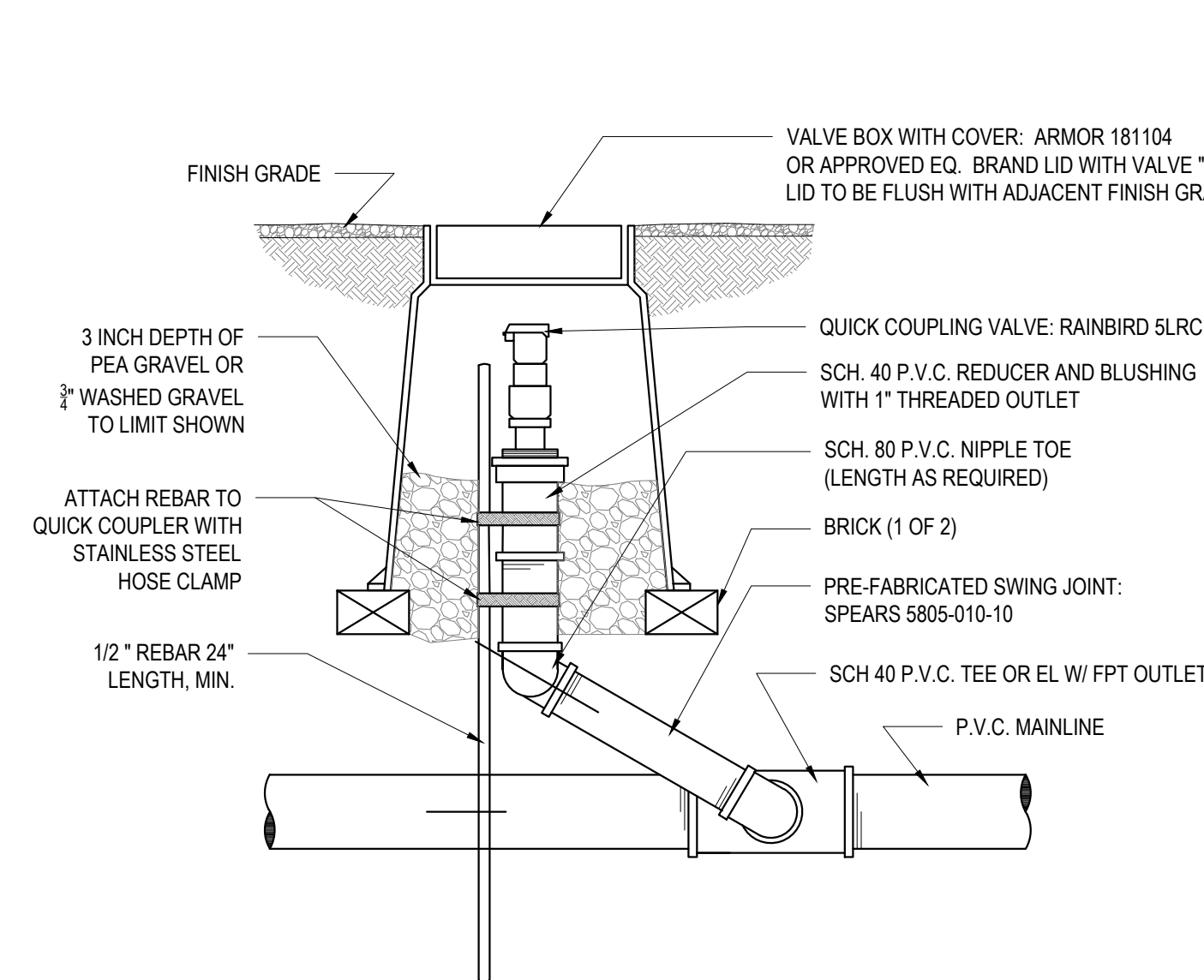
### EMITTER SCHEDULE: OPERATION AT 20-25 PSI

MATCH EXISTING ONSITE: RAINBIRD XB10, OR EQ.

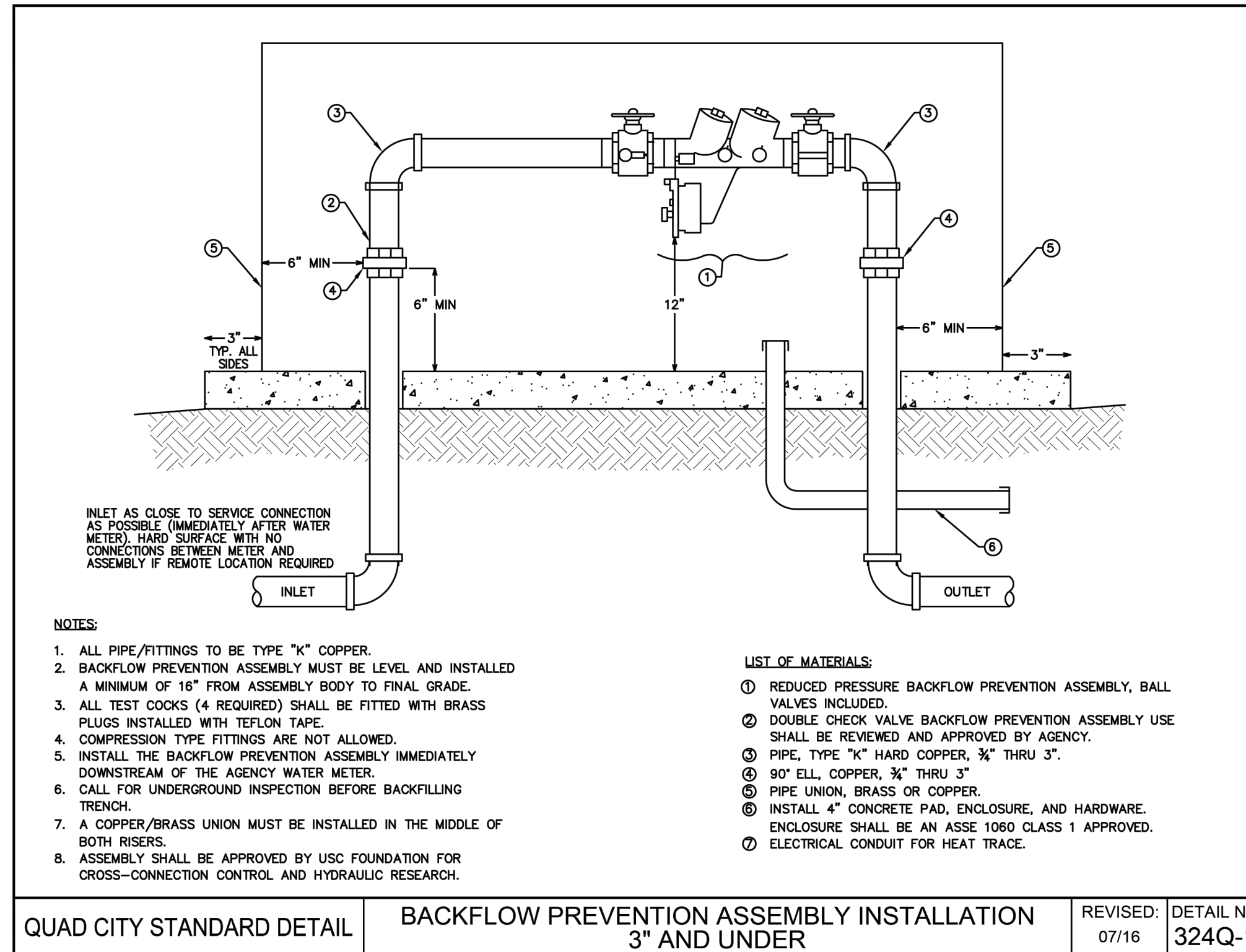
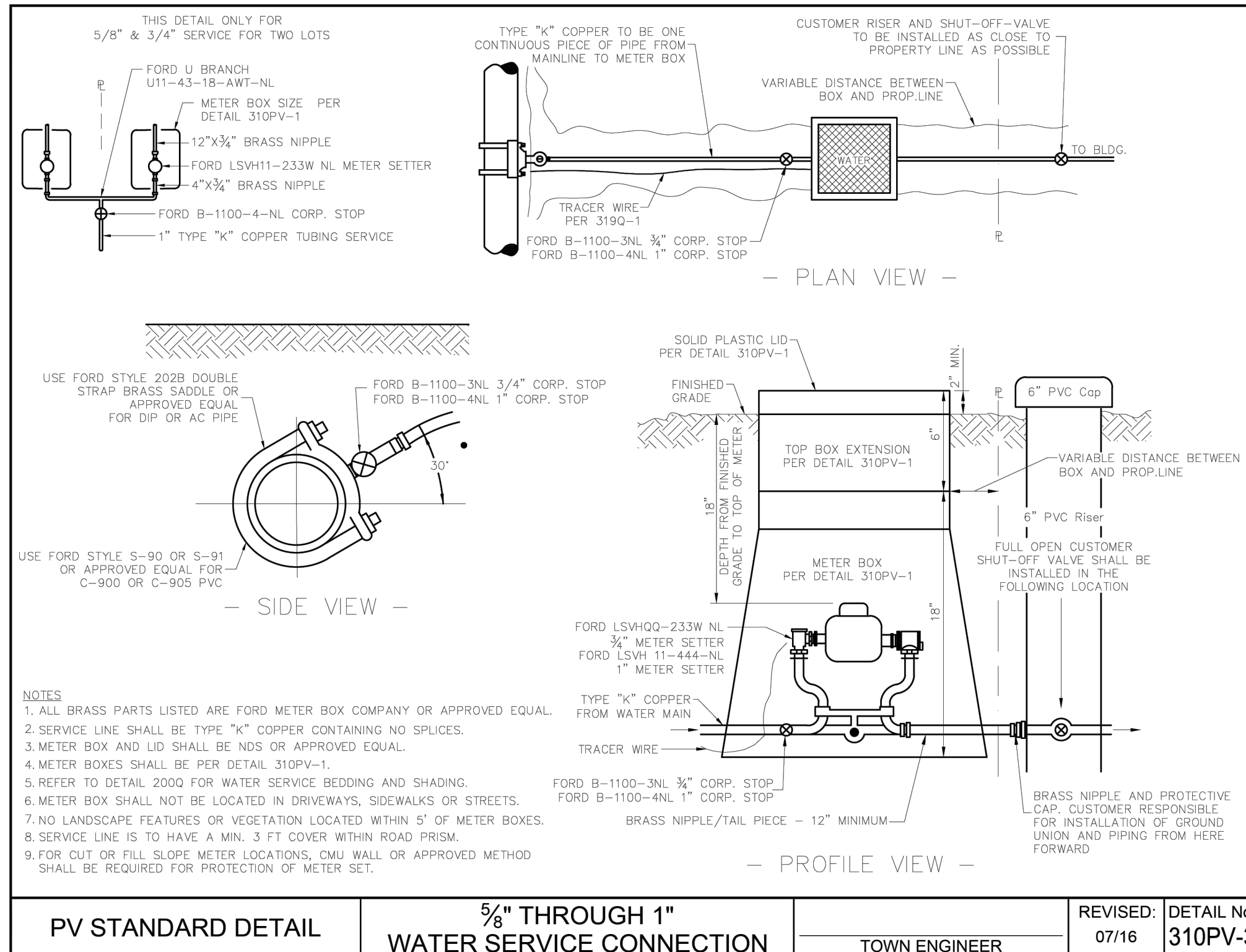
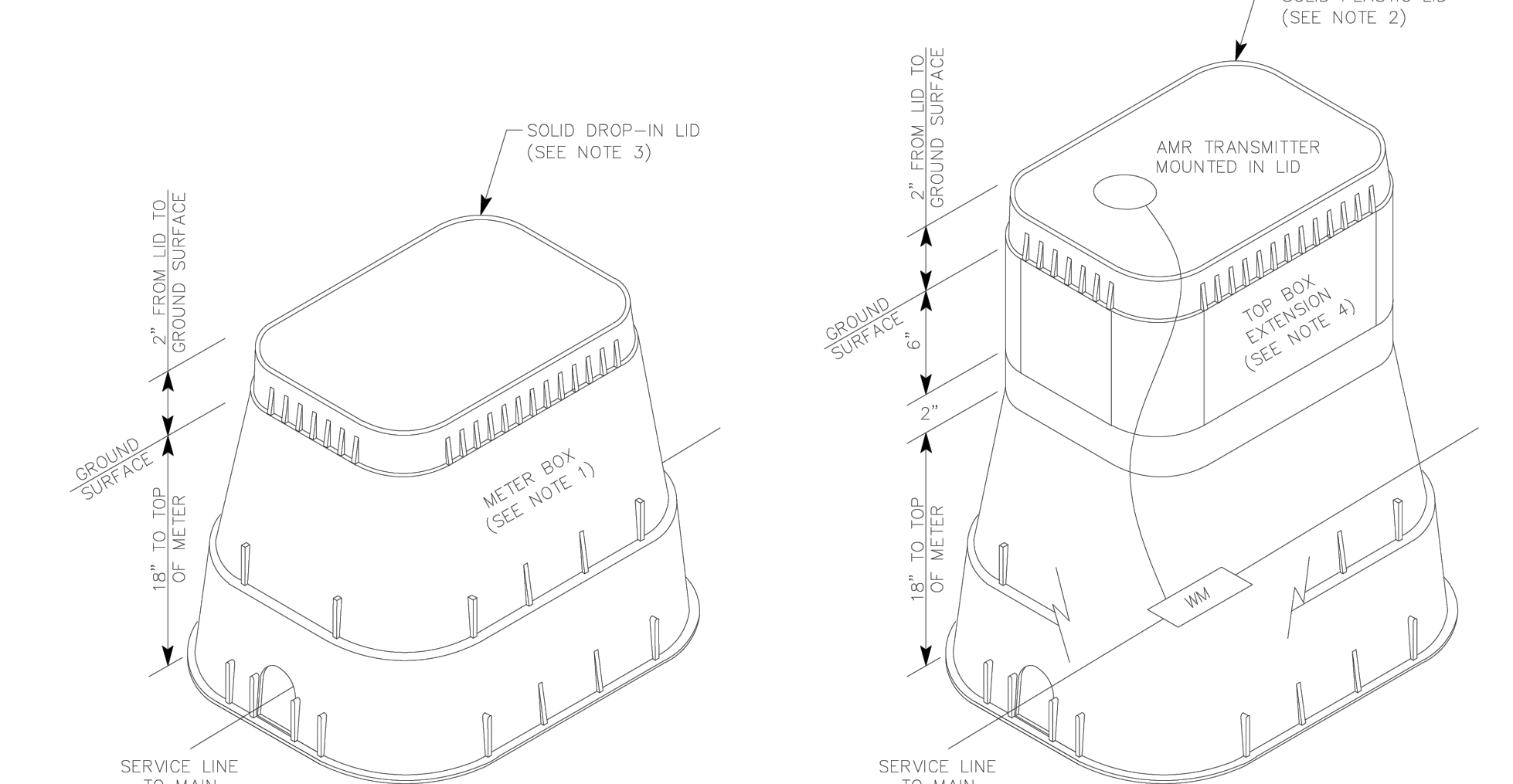
FOR 15 GALLON TREES  
3 OUTLETS EQUALLY SPACED AROUND TREE / 8'-10" +/- FROM TREE TRUNK

FOR 24" BOX TREES  
4 OUTLETS EQUALLY SPACED AROUND TREE / 10'-12" +/- FROM TREE TRUNK

NOTE: FOR EACH 12" INCREASE IN BOX, PROVIDE (1) ADDITIONAL OUTLET (MAINTAIN EQUAL SPACING OF OUTLETS)



- NOTES:**
- NDS D1800 B/O (METER BOX ONLY) OR APPROVED EQUAL - 14"Wx19"Lx18"D.
  - FOR SINGLE BOX APPLICATION, USE NDS D12-TAMRL LOCKING SOLID PLASTIC LID WITH 2 INCH AMR/TRANSMITTER HOLE WITH 7 INCH TOP RECESS COVER.
  - FOR DUAL BOX (SIDE BY SIDE METERS), USE SOLID DROP-IN LID ON THE SECOND BOX.
  - NDS D600E-EXT-TOP BOX EXTENSION OR APPROVED EQUAL.



REV	DATE	DESCRIPTION
1	5-20-24	OWNER COMMENTS
2	6-12-24	TOP COMMENTS PLANT SIZES
3	7-18-24	TOP COMMENTS RELOCATE TREE



DEMOLITION NOTES- IF APPLICABLE

1) PRIOR TO BID THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXTENT OF THE DEMOLITION REQUIRED AND FIELD VERIFY USING A LOCATOR SERVICE ALL UTILITIES PRIOR TO THE COMMENCEMENT OF WORK.

2) THE CONTRACTOR SHALL PROVIDE A COMPLETE INVENTORY OF ALL ITEMS SALVAGED FROM THE SITE TO THE LANDSCAPE ARCHITECT AND OWNER.

3) THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON EVERYTHING SALVAGED FROM THIS SITE. ALL OTHER MATERIALS NOT DESIGNATED TO BE REMOVED SHALL BECOME THE CONTRACTOR(S) PROPERTY AND SHALL BE REMOVED FROM THE PROPERTY.

4) ALL EQUIPMENT TO BE SAVED SHALL BE STORED IN A LOCATION ON SITE, TO BE DETERMINED BY THE OWNER.

5) THE CONTRACTOR(S) SHALL MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING THE DEMOLITION OPERATIONS. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.

6) PREPARATION OF SITE BY THE CONTRACTOR SHALL INCLUDE THE FOLLOWING: PROTECTING AND MAINTAINING BENCHMARKS AND SURVEY CONTROL POINTS FROM DEMOLITION. PROVIDING EROSION CONTROL TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES, ROADS AND WALKWAYS. LOCATING AND CLEARLY FLAGGING OF TREES AND VEGETATION TO REMAIN OR TO BE RELOCATED. PROTECT EXISTING SITE IMPROVEMENT TO REMAIN FROM DAMAGE DURING DEMOLITION.

7) TREE PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR BY A TEMPORARY FENCE AROUND THE DRIP LINE OF INDIVIDUAL TREES OR AROUND PERIMETER OF DRIP LINE OF GROUPS OF TREES TO REMAIN. THE FENCE SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE. DO NOT STORE DEMOLISHED OR CONSTRUCTION MATERIALS WITHIN THE DRIP LINE OF TREES TO REMAIN. DO NOT PERMIT VEHICLES, EQUIPMENT OR FOOT TRAFFIC WITHIN DRIP LINE OF TREES TO REMAIN. DO NOT EXCAVATE WITHIN DRIP LINE OF TREES, UNLESS OTHERWISE INDICATED. WHERE DEMOLITION IS REQUIRED WITHIN DRIP LINE OF TREES, THE CONTRACTOR(S) SHALL HAND CLEAR AND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS. USE NARROW-TINE SPADING FORKS TO COMB SOIL AND EXPOSE ROOTS SO CLEAN CUTS CAN BE MADE AS CLOSE TO THE EXCAVATION AS POSSIBLE. COVER ANY EXPOSED ROOTS WITH BURLAP AND WATER REGULARLY. THE CONTRACTOR(S) SHALL TEMPORARILY SUPPORT THE TREE AND ROOTS AND PROTECT UNTIL THEY ARE PERMANENTLY RELOCATED AND COVERED WITH SOIL. IF MORE THAN A QUARTER OF THE ROOT SYSTEM IS DAMAGED DURING DEMOLITION THE CONTRACTOR(S) SHALL EMPLOY A QUALIFIED ARBORIST TO REMOVE PORTIONS OF THE TREE TO PREVENT STRESS AND DIE BACK ON THE TREE. ANY PLANT MATERIAL FLAGGED TO REMAIN THAT IS DESTROYED DURING DEMOLITION SHALL BE REPLACE IN KIND BY THE CONTRACTOR(S).

8) COORDINATE ALL DEMOLITION EFFORTS WITH LANDSCAPE ARCHITECT/OWNER. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION TO ANY ADJACENT STRUCTURE AND TO PROVIDE OCCUPANTS AND WORKERS SAFETY. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER.

9) THE CONTRACTOR SHALL REMOVE ALL EXISTING ABOVE AND BELOW GROUND HARDSCAPE AS INDICATED AND NECESSARY TO FACILITATE THE NEW CONSTRUCTION. UNLESS EXISTING FULL-DEPTH JOINTS COINCIDE WITH LINE OF DEMOLITION, NEATLY SAW-CUT LENGTH OF EXISTING HARDSCAPE TO REMAIN BEFORE REMOVING. SAW-CUT FACES VERTICALLY.

10) UTILITY DISCONNECTING, CAPPING AND SEALING THAT SERVE EXISTING STRUCTURES AND SITE UTILITIES SHUT OFF SHALL BE ARRANGED AND COORDINATED WITH THE OWNER PRIOR TO THE DEMOLITION OF THE SITE. THE CONTRACTOR(S) SHALL EXCAVATE AND REMOVE UNDERGROUND UTILITIES INDICATED TO BE REMOVED.

11) WHILE PROCEEDING WITH WORK, CARE SHALL BE TAKEN TO AVOID DISCONNECTING SERVICES WHICH MAY HAVE CONNECTION TO OTHER STRUCTURES NEARBY. IF A REQUIRED SERVICE IS DISCONNECTED OR DISTURBED THE CONTRACTOR(S) SHALL REPAIR AND/OR REPLACE THOSE DAMAGED SERVICES IMMEDIATELY AT THE CONTRACTOR(S) EXPENSE.

12) CLEARING, GRUBBING AND REMOVAL OF OBSTRUCTIONS, TREES, SHRUBS, GRASS AND OTHER VEGETATION SHALL INCLUDE THE DIGGING OUT STUMPS, OBSTRUCTIONS AND ROOTS TO A MINIMUM DEPTH OF 18 INCHES BELOW EXPOSED SUBGRADE. FILL ALL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING WITH EXISTING SOIL OR SATISFACTORY IMPORTED SOILS IN 8" LIFTS AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND. THE CONTRACTOR SHALL REMOVED SOD AND GRASS BEFORE STRIPPING OF TOPSOIL FOR STORAGE AND STRIP SURFACE OF UNSUITABLE TOPSOIL INCLUDING TRASH, DEBRIS, WEEDS, ROOTS AND OTHER WASTE MATERIALS. THE STOCKPILING OF TOPSOIL SHALL BE LIMITED TO 72 INCHES AND BE PLACED AWAY FROM THE EDGE OF EXCAVATION AND DRIP LINE OF TREES AND SHAPED TO DRAIN SURFACE WATER AND COVERED TO PREVENT WINDBLOWN DUST.

13) UPON COMPLETION OF THE DEMOLITION WORK, THE DEMOLISHED AREAS AND THE MARKED PORTIONS OF SIDEWALKS, PLANTERS, CURBS AND DESIGNATED ITEMS REMOVED SHOULD BE FREE ALL PLANT AND MATERIALS INCLUDING STRUCTURE, CONCRETE SLABS, FOOTINGS, FOUNDATIONS AND ASPHALT. ROUGH GRADE ENTIRE DEMOLISHED AREAS TO A SMOOTH WORKABLE SURFACE. REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED AND WASTE MATERIALS INCLUDING TRASH AND DEBRIS. THE DISPOSAL OF ALL ITEMS SCHEDULED TO BE REMOVED SHALL BE CONDUCTED PROPERLY OFF SITE IN ACCORDANCE WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL REGULATIONS COVERING THE DISPOSAL OF MATERIALS.

LANDSCAPE SPECIFICATIONS

1.0 GENERAL CONDITIONS AND DEFINITIONS

1.1 CONTRACTOR SHALL VISIT AND INSPECT SITE AND THOROUGHLY INFORM THEMSELVES OF ALL EXISTING CONDITIONS PRIOR TO THE BID. DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.

1.2 "PROJECT COMPLETION" SHALL BE DEFINED ON THE LETTER OF ACCEPTANCE AS THE DATE CONSTRUCTION IS COMPLETE AND THE MAINTENANCE PERIOD BEGINS.

1.3 "GUARANTEE PERIOD" SHALL BE DEFINED AS ANY TIME ATTACHED TO THESE DOCUMENTS DURING WHICH THE CONTRACTOR IS RESPONSIBLE FOR THE HEALTH AND REPLACEMENT OF PLANT MATERIAL.

1.4 THE LANDSCAPE CONTRACTOR, WITH THEIR BID SUBMITTAL SHALL PROVIDE WRITTEN VERIFICATION OF THREE (3) YEARS DEMONSTRATIVE ABILITY TO PERFORM THE WORK SPECIFIED HEREIN. PAST WORK SHALL BE OF SIMILAR TYPE, SCALE AND QUALITY.

1.5 THE "FLAIR" OF PLANT MATERIAL REFERS TO THE BASE OF THE PLANT WERE THE STEM MEETS THE TOP OF THE ROOTBALL.

2.0 WORK SPECIFIED HEREIN

2.1 THE WORK SPECIFIED WITHIN THIS SECTION SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO COMPLETE ALL THE LANDSCAPING AS DETAILED AND SPECIFIED, INCLUDING THE FOLLOWING WORK REASONABLY INCIDENTAL THERETO.

2.2 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING WORK UNLESS OTHERWISE SPECIFIED ON THE PLANS.

2.2.1 COORDINATION OF ALL THE IRRIGATION WORK TO INSURE SUCCESSFUL INTEGRATION WITH THE LANDSCAPING.

2.2.2 ACCEPTING THE FINISHED GRADE PROVIDED, +/- 0.1 OF A FOOT AS SHOWN ON THE GRADING PLAN.

2.2.3 SOIL CONDITION AND FINE RAKE PRIOR TO PLANTING GROUNDCOVER, AND DECOMPOSED GRANITE INSTALLATION.

3.0 SAMPLES & TESTS

3.1 THE ARCHITECT RESERVES THE RIGHT TO TAKE AND ANALYZE SAMPLES OF MATERIALS FOR CONFORMITY TO SPECIFICATIONS AT ANY TIME. CONTRACTOR SHALL FURNISH SAMPLES UPON REQUEST BY ARCHITECT. REJECTED MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND REPLACED AT THE CONTRACTORS EXPENSE. COST OF TESTING OF MATERIALS NOT MEETING SPECIFICATION SHALL BE PAID BY CONTRACTOR.

3.2 THE CONTRACTOR SHALL PROVIDE A 2 LBS SAMPLE OF ANY MINERAL MULCH OR BARK MULCH, THAT WILL BE USED ON THIS PROJECT, PRIOR TO DELIVERY TO THE SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT.

4.0 COORDINATION AND RESPONSIBILITY

4.1 COORDINATE AND COOPERATE WITH OTHER TRADES WORKING ON THE SITE FOR SUCCESSFUL COMPLETION OF THE PROJECT.

4.2 BEFORE COMMENCING WORK ON THE SITE, BECOME THOROUGHLY ACQUAINTED WITH LAYOUT OF ALL UNDERGROUND UTILITIES AND STRUCTURES OVER THE ENTIRE SITE. ALL REQUISITE REPAIRS TO CORRECT DAMAGE CAUSED BY WORK OF THIS SECTION SHALL BE AT THE CONTRACTOR'S EXPENSE.

4.3 ALL EXISTING PLANT MATERIAL AND ASSOCIATED ELEMENTS NOT INDICATED FOR REMOVAL SHALL BE FENCED AT THE DRIP LINE OF PLANT MATERIAL, PROTECTED AND MAINTAINED AS NECESSARY TO ENSURE SURVIVAL AND PER DEMOLITION NOTES.

4.4 PRECONSTRUCTION CONFERENCE:

A PRECONSTRUCTION CONFERENCE TO DISCUSS THE LANDSCAPE PROJECT WORK SHALL BE HELD AT A TIME AGREED UPON. THE CONTRACTOR, TOGETHER WITH REPRESENTATIVES OF HIS IRRIGATION SUBCONTRACTOR, SHALL ATTEND, AS WILL THE OWNER'S REPRESENTATIVE AND ARCHITECT. THE PURPOSE OF THIS CONFERENCE IS TO DISCUSS THE PROJECT IN DETAIL, INCLUDING SCHEDULING OF WORK, SITE PREPARATION, INTERPRETATION OF DOCUMENTS AND TO ANSWER QUESTIONS THAT MAY ARISE. UNLESS FOLLOWED UP IN WRITING, VERBAL AUTHORIZATIONS OR ACKNOWLEDGEMENT BY ANYONE PRESENT SHALL NOT BE BINDING.

5.0 STANDARDS

5.1 QUANTITY: QUANTITIES ON PLANT LIST, IF SHOWN, ARE FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL PLANT MATERIALS SHOWN ON THE PLANS. IF SHOWN, QUANTITIES ARE PROVIDED FOR ESTIMATING OR CITY APPROVAL PURPOSES ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE FOR BIDDING. WHEN GROUND COVER OR GRANITE IS SPECIFIED IN ONE SECTION OF A PLANTER BED, IT SHALL BE ASSUMED THE GROUND COVER EXTENDS THROUGHOUT SAID BED, BELOW ALL 1, 5, 15 GALLON AND LARGER PLANTS. ALL SIGNIFICANT DIFFERENCES BETWEEN THE SITE AND THE DRAWINGS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY UPON DETERMINING SAID DISCREPANCIES. FAILURE TO DO SO MAY REQUIRE THE CONTRACTOR TO MAKE ADDITIONAL PLANTINGS TO FILL SPACES, OR OTHER CHANGES AS DETERMINED BY THE LANDSCAPE ARCHITECT AT THE CONTRACTOR'S EXPENSE.

5.2 PLANT MATERIAL SUBSTITUTION: AT THE TIME OF BIDDING, THE CONTRACTOR SHALL VERIFY THE ABILITY TO PURCHASE ALL PLANT MATERIALS REQUIRED TO COMPLETE THIS WORK. UPON AWARD OF BIDS, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH HIS SUPPLIERS FOR ADEQUATE AND PROPERLY SIZED MATERIALS AS SPECIFIED ON THE PLANS. IF PERCEIVED SHORTAGE IS DETERMINED EITHER AT TIME OF BIDDING, OR UPON AWARD OF CONTRACT, THE SUPPLIER MAY EMPLOY ONE OF THE FOLLOWING METHODS.

5.2.1 CONTRACT GROWING OF MATERIALS: WHEN REQUIRED ON THE CONSTRUCTION DOCUMENTS, AND SUFFICIENT LEAD TIME ALLOWS, PLANTS MAY BE CONTRACT GROWN. SPECIFIED MINIMUM TIME OF 6 MONTHS PER CONTAINER, PRIOR TO MOVING INTO LARGER SIZES, SHALL BE WAIVED, PROVIDED ADEQUATE ROOTS DEVELOP THROUGHOUT THE CONTAINER TO HOLD THE SOIL TOGETHER UPON REMOVAL FROM THE CONTAINER. COST FOR CONTRACT GROWING SHALL BE STIPULATED TO AND AGREED UPON AS A SEPARATE CONTRACT COST WITH THE OWNER PRIOR TO COMMENCING ANY WORK TOWARD CONTRACT GROWING.

5.2.2 SUBSTITUTION OF MATERIALS: IF THE ABOVE METHOD PROVES INADEQUATE, AND UPON APPROVAL OF THE OWNER/ARCHITECT, PLANT SUBSTITUTIONS WILL BE CONSIDERED. THE CONTRACTOR SHALL MAKE RECOMMENDATIONS TO THE LANDSCAPE ARCHITECT, IN WRITING, FOR CONSIDERATION. THE SUBSTITUTE SHALL MATCH THE ORIGINAL PLANT MATERIAL SPECIFIED AS CLOSELY AS POSSIBLE IN MATURE SIZE, GENERAL APPEARANCE, SOIL CONDITIONS, CLIMATE REQUIREMENT, LIGHT TOLERANCES, AND OTHER DATA. SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE THE SPECIFIED MATERIALS PRIOR TO ASKING FOR A SUBSTITUTION.

5.3 NOMENCLATURE: FOR IDENTIFICATION PURPOSES AND INSPECTIONS, TAGS SHALL BE DURABLE, LEGIBLE PLASTIC LABELS SECURELY ATTACHED TO AT LEAST 25% OF ALL PLANT TYPES, STATING THE BOTANICAL NAME AND SIZE OF THE PLANT MATERIALS. NAMES OF PLANT MATERIALS ON THE PLANS ARE IN ACCORDANCE WITH SUNSET'S NEW WESTERN GARDEN BOOK, LATEST EDITION, AND/OR AS SPECIFIED IN THE PLANT LIST.

5.4 QUALITY & SIZE: THE QUALITY AND SIZE OF ALL PLANT MATERIALS SHALL BE BASED UPON THE AMERICAN NURSERY ASSOCIATION ACCEPTED STANDARDS FOR SIZE, SHAPE AND CALIPER UNLESS SPECIFIED OTHERWISE ON THE PLANS. ALL REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE, AND REPLACED IMMEDIATELY (THE DECISION OF THE CONTRACT ADMINISTRATOR SHALL BE FINAL). CONTAINER GROWN PLANTS SHALL HAVE BEEN GROWN IN POTS, CANS, TUBS OR BOXES FOR A MINIMUM OF SIX MONTHS, EXCEPT WHEN THE PLANTS SHALL HOLD THE ENTIRE ROOTBALL TOGETHER UPON REMOVAL FROM THE CONTAINERS, WITHOUT BEING ROOT-BOUND. ALL NON-ARIZONA GROWN PLANTS SHALL BE "WATIZED" FOR AT LEAST FOUR WEEKS IN PARTIAL SHADE, DURING THE SUMMER MONTHS, PRIOR TO DELIVERY TO THE SITE. TREES SHALL HAVE STRAIGHT TRUNKS THROUGHOUT THEIR HEIGHT, EXCEPT MULT-TRUNKED SPECIFIED MATERIAL. ANY TREE WITH WEAK TRUNKS INCAPABLE OF SUPPORTING ITS FULL GROWTH SHALL BE DOUBLE-STAKED, WHETHER CALLED FOR IN THE SPECIFICATIONS OR NOT.

5.5 PLANT MATERIAL PROCUREMENT: ALL TREES, CACTI AND SUCCULENTS SHALL BE PURCHASED BY THE CONTRACTOR WITHIN 30 DAYS OF CONTRACT AWARD BY THE OWNER. WRITTEN VERIFICATION THAT THIS HAS TAKEN PLACE SHALL BE FORWARDED TO THE OWNER AND ARCHITECT FOR THEIR FILES. ALL STORAGE AND MAINTENANCE COSTS SHALL BE BORNE BY THE CONTRACTOR.

5.6 INSPECTION: ALL PLANT MATERIALS ARE SUBJECT TO ACCEPTANCE OR REJECTION BY THE CONTRACT ADMINISTRATOR. NOTIFY THE LANDSCAPE ARCHITECT AFTER DELIVERY OF PLANT MATERIALS. THE LANDSCAPE ARCHITECT WILL VISIT THE SITE, DETERMINE THE QUALITY OF STORED MATERIALS, AND NOTIFY THE CONTRACT ADMINISTRATOR OF ALL REJECTED MATERIALS. THE CONTRACT ADMINISTRATOR WILL NOTIFY CONTRACTOR.

5.7 PRODUCT DELIVERY, STORAGE & HANDLING: ALL PLANT MATERIALS DELIVERED TO THE SITE SHALL BE PLANTED AS SOON AS PRACTICAL, AFTER INSPECTION AND APPROVAL. KEEP ALL SUN SENSITIVE PLANT MATERIALS OUT OF FULL SUN DURING SUMMER MONTHS. PROTECT FROM DRYING WINDS AND DUST STORMS. DELIVERY, MAINTENANCE AND INSTALLATION OF ALL PLANT MATERIALS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND THEY SHALL MAKE ALL ARRANGEMENTS FOR PROPER LABOR TO AVOID DELAYS AND REJECTION OF PLANT MATERIALS WHICH HAVE BEEN ON-SITE TOO LONG WITHOUT PLANTING OR INSTALLATION.

6.0 MATERIALS

6.1 MANURE: SHALL BE WELL-ROTTED, UNBLEACHED STEER MANURE, NOT LESS THAN 8 MONTHS NOR MORE THAN 2 YEARS OLD. REASONABLY FREE OF WOOD SHAVINGS, SAWDUST OR REFUSE, AND SHALL NOT CONTAIN MORE THAN 10% STRAW OR OTHER FOREIGN MATERIALS BY VOLUME.

6.2 MULCH: SHALL BE WELL-ROTTED, DECOMPOSED WOOD FIBER, OR COTTON STUBBLE-DERIVED MATERIALS WITH NO FILLERS OR AGENTS SAVE FOR THE BALANCE OF NITROGEN-ADDING INGREDIENTS. PH SHALL RANGE FROM 6.8 TO 7.2; MOISTURE CONTENT SHALL BE 30 TO 40% BY WEIGHT, AND NUTRIENTS SHALL COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS BY VOLUME: NITRATE NITROGEN - 1.5%; ORGANIC NITROGEN - 3.65%; PHOSPHORUS - 1.14%; POTASSIUM - 1.19%; IRON - 0.84%. DELIVERY TO SITE SHALL BE EITHER BULK OR MARKED BAGS. ACCEPTABLE PRODUCTS ARE "GREENWORLD MULCH", "COM-PEL SOIL CONDITIONER", AND NATURAL "PEAT MOSS".

6.3 SAND: SHALL BE COURSE, GRANULAR CONCRETE SAND OR GROUT SAND (NOT MORTAR OR SILICA SAND), CONFORMING TO ASTM C-33, THOROUGHLY AND UNIFORMLY WASHED, ENTIRELY FREE OF OIL OR OTHER DELETERIOUS SUBSTANCES.

6.4 FERTILIZER TABLETS: SHALL BE "AGRIFORM"OR "ZIM" (IN PILL OR TABLET FORM). PLACE 4" TO 10" DEEP AND 2" OUTSIDE OF THE ROOTBALL AT THE FOLLOWING RATES: ONE TABLET PER 1-GAL; TWO PER 5- GAL. ONE TABLET PER EACH 1/2" OF TRUNK DIAMETER, OR ONE PER EACH 24" OF HEIGHT, WHICHEVER IS GREATER.

6.5 TOPSOIL: SHALL BE SCREENED, FERTILE, FRABLE SOIL, FROM WELL-DRAINED ARABLE LAND FREE FROM NON-ORGANIC REFUSE, NOXIOUS WEEDS, NUT GRASS, THORNY CLAY CLODS, ROOTS AND ALL MATERIAL TOXIC TO PLANT GROWTH. TOPSOIL SHALL COMPLY WITH MAC SPECIFICATIONS 755.2. TOPSOIL SHALL BE BLENDED ONSITE WITH 25% SAND BY VOLUME PRIOR TO INSTALLATION UNDER TURF AREAS.

6.6 PLANTING PIT BACKFILL FOR ALL TREES AND SHRUBS SHALL BE AS FOLLOWS:

6 PARTS BY VOLUME ON SITE FERTILE SOIL  
4 PARTS BY VOLUME CLEAN MASON SAND  
2 PARTS ORGANIC TOP SOIL  
1 POUND 15-20-0 FERTILIZER PER CUBIC YARD OF MIX  
GROUND COVER PLANTING MIX SHALL BE AS STATED ON THE PLANS.

6.7 TREE STAKING, GUYING & BRACING: ALL 15-GAL. AND LARGER TREES SHALL BE STAKED AS SHOWN ON THE PLANS. STAKES SHALL BE A 2" DIAMETER ROUND KNOT FREE PINE "LODGE POLE". LENGTH AS REQUIRED BELOW, AND INSTALLED AS FOLLOWS: STAKES SHALL BE PLACED IMMEDIATELY ADJACENT TO, BUT IN NO CASE THROUGH, THE ROOT BALL, PENETRATING AT LEAST 8" INTO UNDISTURBED SOIL, AND ALIGNED VERTICALLY. THE STAKE SHALL BE POINTED AT ONE END, AND ALIGNMENT SHOULD NOT INTERFERE WITH THE EXISTING BRANCH STRUCTURE OF THE TREE. INSTALL ALL STAKES AS FOLLOWS: 15-GAL. - 2 EA. 8' LONG POLE, 24" AND 30" BOX SIZE. 2 EA. 12' LONG STAKES, 36" BOX AND LARGER SIZE. THREE GUY WIRES (8 GAUGE STEEL) WITH GROUND STAKES. WIRE FOR FASTENING TREES TO STAKES SHALL BE #12 GAUGE GALVANIZED STEEL. WIRE FOR GUYING SHALL BE #8 GAUGE GALVANIZED STEEL, ATTACHED TO A 1" DIAMETER BY 36" LONG STEEL GROUND STAKE BY DRILLING A HOLE COMPLETELY THROUGH THE GROUND STAKE, AND SECURING THE WIRE WITH

TWO MECHANICAL CLAMPS PER WIRE. ALL WIRE ATTACHED TO THE TREES SHALL BE DONE AT THE LOWEST BRANCHES, ENCASED WITH RUBBER HOSES, AND CLAMPED WITH AT LEAST TWO CLAMPS. HOSE MAY BE EITHER NEW OR OLD RUBBER, BUT NOT PLASTIC. ALLOW 1" CLEARANCE AROUND THE TRUNKS OF 36" BOX TREES OR LARGER UNLESS SPECIFIED OTHERWISE ON THE PLANS) WHEN FORMING THE HOSE-ENCASED WIRE RING. FORM A COMPLETE RING OF HOSE-ENCASED WIRE FOR EACH OF THE TREE GUYS, APPROXIMATELY 120 DEGREES APART. SET THE GROUND STAKES AN APPROPRIATE DISTANCE FROM THE TREE TO PROVIDE AN APPROXIMATE ANGLE OF 45 DEGREES BETWEEN THE GROUND AND WIRE.

6.8 HEADERS: SEE PLANS AND DETAILS FOR TYPE OF HEADER AND INSTALLATION SPECIFICATIONS. HEADERS SHALL BE USED TO SEPARATE TWO INCOMPATIBLE USES SUCH AS TURF/PLANTERS/DECOMPOSED GRANITE/GROUND COVER AREAS. ALL HEADERS SHALL BE MOUNTED WITH THEIR TOPS FLUSH WITH SIDEWALKS, GENERALLY KEPT 1 1/2" ABOVE FINISHED GRADES, AND SHALL NOT HAVE MORE THAN A 6:1 SLOPE. REDWOOD OR PLASTIC HEADERS SHALL NOT BE ALLOWED.

6.9 DECOMPOSED GRANITE: UNLESS OTHERWISE NOTED ALL LANDSCAPE AREAS SHALL BE TOPDRESSED WITH 1/2" SCREENED DECOMPOSED GRANITE. THE COLOR SHALL MATCH AS CLOSELY AS POSSIBLE, THE NATURAL COLOR OF THE SURROUNDING AREA. A 2 LBS SAMPLE SHALL BE SUBMITTED FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO DELIVERY. THE GRANITE SHALL BE FREE OF LUMPS AND FOREIGN SUBSTANCES. GRANITE SHALL BE INSTALLED TO A DEPTH OF 2" AND SHALL BE MEASURED AFTER COMPACTION AND ROLLING.

6.10 TOPDRESSING OF REVEGETATION AREAS: ALL REVEGETATION AREAS SHALL BE TOPDRESSED WITH A MINIMUM OF 2" OF DECOMPOSED GRANITE AND COBBLES SALVAGED FROM ONSITE BY THE GRADING CONTRACTOR SEE GRADING SPECIFICATIONS IN CIVIL SPECIFICATIONS. THIS MATERIAL SHALL BE SCREENED BY THE LANDSCAPE CONTRACTOR PRIOR TO INSTALLATION IN ORDER TO REPRODUCE THE TEXTURE AND APPEARANCE OF THE SURROUNDING AREA. LANDSCAPE CONTRACTOR SHALL PLACE A 200 SQUARE FOOT MINIMUM AREA OF TOPDRESSING FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE BALANCE OF THE SITE.

6.11 WEED CONTROL: REMOVE ALL WEEDS BY MECHANICAL METHODS OR AS PER OWNER DIRECTION. ALL LANDSCAPE AREAS EXCEPT REVEGETATION/HYDROSEED AREAS SHALL BE TREATED WITH A PRE-EMERGENT APPROVED BY THE AUTHORITY HAVING JURISDICTION. PLASTIC LINERS SHALL NOT BE ALLOWED. WEED BARRIER TO BE INSTALLED PER OWNER'S DISCRETION AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALL.

7.0 LAYOUT AND EXCAVATION OF PLANTING AREAS

7.1 CONTRACTOR SHALL STAKE TREE LOCATIONS AS SHOWN ON DRAWINGS. THE LANDSCAPE ARCHITECT SHALL FIELD CHECK THE LAYOUT LOCATION OF PLANTS AND WILL DIRECT THE CONTRACTOR TO ADJUST TO EXACT POSITION BEFORE EXCAVATION BEGINS. NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 48 HOURS PRIOR TO SCHEDULING WORK.

7.2 NOTIFY THE LANDSCAPE ARCHITECT OF ROCK CALICHE, HARD PAN CLAY, AND OTHER OBSTRUCTIONS WHICH ARE ENCOUNTERED IN THE EXCAVATION OF PLANT PITS. ALTERNATIVE PLANTING LOCATIONS MAY BE SELECTED BY LANDSCAPE ARCHITECT.

7.3 DIG PLANTING PITS WITH PERPENDICULAR SIDES 1-1/2 TIMES THE SIZE OF THE ROOT BALL AND DEPTH TO MATCH HEIGHT OF BOX OR ROOT BALL. BACKFILL PIT WITH PLANTING MIXTURE TO 1/3 DEPTH BEFORE SETTING SHRUBS AND TREES.

7.4 PUDDLE PLANTING MIXTURE WHEN PIT IS 2/3 FULL OF MIX. CONTINUE BACKFILLING TO WITHIN 1" OF THE SURROUNDING FINISH GRADE.

7.5 CUT PLANT CONTAINER (CANS) ON TWO SIDES WITHOUT INJURING ROOT BALL AND CAREFULLY REMOVE THE PLANT. DO NOT CUT CONTAINER WITH SPADE. ANY PLANT INJURED OR ROOT BALL BROKEN DURING PLANTING OPERATIONS WILL BE REJECTED.

7.6 ALL GROUND COVER AND DECOMPOSED GRANITE AREAS, EXCEPT REVEGETATION AREAS, SHALL BE TREATED WITH A PRE-EMERGENT AS OUTLINED IN SECTION 6.11.

7.7 GENERALLY, FINISHED GRADE SHALL BE 1-1/2" BELOW TOPS OF HEADER, WALKS, ETC.

7.8 SIDEWALKS AND PAVING SHALL BE BROOMED DAILY DURING PLANTING OPERATION. PLANT CONTAINERS, EMPTY FERTILIZER BAGS AND SEED BAGS AND CONTAINER ARE TO BE PICKED UP AND DISPOSED OF DAILY. CONTRACTOR'S TRASH SHALL BE REMOVED FROM THE SITE AT THE COMPLETION OF WORK.

8.0 INSTALLATION

8.1 SOIL PREPARATION: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR REMOVING ALL ABC, ROCKS OR FOREIGN OBJECTS LARGER THAN 1/2" FROM ALL PLANTED AREAS. THE CONTRACTOR SHALL VISIT THE SITE, AND WORK WITH THE GENERAL CONTNHE OWNERSRACTOR TO ASSURE THEMSELVES THIS PROVISION IS COMPLIED WITH. IN AREAS WHERE TURF WILL NOT BE PLANTED, THEY SHALL TAKE PROPER PRECAUTIONS FOR THE REMOVAL OF ANY EXISTING TURF AND OTHER AGGRESSIVE WEEDS.

8.2 SHRUBS & TREES: SHALL BE INSTALLED IN ACCORDANCE WITH THE FOREGOING SPECIFICATIONS, AMERICAN NURSERY STANDARDS AND THE DETAILS SHOWN ON THE PLANS. PLANT PITS SHALL ALWAYS PROVIDE ADEQUATE GROWTH VOLUMES FOR NEW ROOTS, AND SHALL MEET THE FOLLOWING MINIMUM STANDARDS, WHICH MAY BE INCREASED ON THE DETAILS: 1 GAL. MATERIALS, 8" CLEARANCE SIDES; 5 GAL. MATERIALS, 12" CLEAR ALL SIDES; 15 GAL. AND LARGER, 18" CLEARANCE ON SIDES, 12" CLEARANCE. DEPTH OF PLANT PITS TO MATCH HEIGHT OF BOX OR ROOT BALL TO PREVENT SETTLEMENT CAUSING THE FLAIR AT THE BASE OF THE PLANT MATERIAL TO SINK BELOW FINISH GRADE. BACKFILL THESE AREAS WITH "PREPARED BACKFILL" (SEE SECTION 6.6).

8.3 BERMS/GRADING: EARTH BERMS SHALL BE FORMED AS INDICATED ON THE PLANS. GRADING RESPONSIBILITY SHALL BE WORK OF THE MASS GRADING CONTRACTOR UNLESS SPECIFIED OTHERWISE ON THE CONSTRUCTION DOCUMENTS. THE ARCHITECT SHALL APPROVE ALL GRADING BASED ON AESTHETICS PRIOR TO ANY TREE IRRIGATION AND SITE IMPROVEMENTS. THE CIVIL ENGINEER SHALL APPROVE ALL GRADING BASED UP ON DRAINAGE. APPROVALS MUST BE OBTAINED IN WRITING PRIOR TO COMMENCING LANDSCAPE WORK. NOTIFY LANDSCAPE ARCHITECT AT LEAST 5 DAYS PRIOR TO SCHEDULED WORK.

8.4 CACTI: ALL CACTI SHALL BE INSTALLED PER DETAILS PROVIDED IN THE DRAWINGS. ALL CACTI SHALL BE WARRANTED FOR A PERIOD OF 1 YEAR FROM THE DATE OF FINAL ACCEPTANCE. ALL CACTI SHALL BE PLACED ON A SEPARATE IRRIGATION VALVE.

9.0 PRUNING AND REPAIR

9.1 UPON COMPLETION OF THE WORK OF THIS SECTION, ALL TREES AND SHRUBS SHALL HAVE BEEN PRUNED IF REQUIRED OR DIRECTED BY THE CONTRACT ADMINISTRATOR, AND ALL INJURIES REPAIRED. LIMIT AMOUNT OF PRUNING TO THE MINIMUM NECESSARY TO REMOVE DEAD AND INJURED TWIGS AND BRANCHES.

10.0 GUARANTEE AND REPLACEMENT

10.1 GUARANTEE ALL LAWN AND PLANTING FOR A PERIOD OF 1 YEAR FROM THE DATE OF INSTALLATION, UNLESS OTHERWISE NOTED. ALL LAWNS AND PLANTING SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD.

10.2 DURING THE GUARANTEE PERIOD, ALL PLANTS SHALL BE IN A HEALTHY, VIABLE CONDITION. REPLACE ANY PLANT NOT IN A HEALTHY CONDITION WHEN NOTIFIED BY THE LANDSCAPE ARCHITECT. SHOULD ANY DIFFERENCE OF OPINION ARISE OVER REPLACEMENT, THE LANDSCAPE ARCHITECT'S DECISION IS FINAL.

10.3 GUARANTEE REPLACEMENTS OF ALL PLANT MATERIAL FOR A PERIOD OF 1 YEAR FROM THE DATE OF INSTALLATION UNLESS SPECIFICALLY NOTED OTHERWISE IN THESE SPECIFICATIONS.

10.4 THE GUARANTEE PERIOD FOR DECIDUOUS TREES SHALL BE IN EFFECT UNTIL ALL ARE SHOWING NEW GROWTH THE SPRING FOLLOWING PLANTING PROVIDED THE TREE WAS INSTALLED JUST PRIOR TO ITS DORMANT STAGE.

11.0 ACCEPTANCE OF WORK

11.1 AFTER COMPLETION OF ALL WORK AND BEFORE THE BEGINNING OF THE MAINTENANCE PERIOD, THE CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR FOR THE PURPOSE OF SCHEDULING THE MAINTENANCE INSPECTION. THE CONTRACTOR SHALL PREPARE, AND HAVE ON-SITE, A COMPLETE SET OF RECORD FOR CONTRACT ADMINISTRATOR OR CITY REVIEW DURING THE MAINTENANCE INSPECTION.

11.2 BEFORE SCHEDULING THE MAINTENANCE INSPECTION, THE CONTRACTOR SHALL INSURE THAT ALL TESTS AND WORK RELATED TO IRRIGATION IS COMPLETED. THE CONTRACT ADMINISTRATOR SHALL BE NOTIFIED (14) DAYS PRIOR TO SCHEDULING INSPECTION.

11.3 INSURE THAT ALL PLANT MATERIAL EXHIBITS NORMAL GROWTH CHARACTERISTICS AND IS SUBSTANTIALLY VIGOROUS. IN ADDITION, ALL PLANT MATERIAL SHALL MEET ACCEPTED NURSERY STANDARDS FOR SIZE, TRUNK CALIPER AND FORM.

11.4 INSURE THAT TREE, SHRUB AND GROUND COVER QUANTITIES ARE ACCORDING TO PLAN AND AT CORRECT SPACING.

11.5 INSURE THAT A FULLY-FUNCTIONAL, AUTOMATIC DRIP SYSTEM IS PROPERLY INSTALLED TO PROVIDE 100 PERCENT COVERAGE TO ALL NEW AND EXISTING PLANT MATERIAL.

11.6 SHOULD THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE DETERMINE THE SITE TO BE SUFFICIENTLY INCOMPLETE OR POORLY INSTALLED, THEY RESERVE THE RIGHT TO POSTPONE OR EXTEND THE MAINTENANCE PERIOD UNTIL THE PROJECT IS IN ACCEPTABLE CONDITION.

12.0 MAINTENANCE

12.1 MAINTENANCE SHALL BE FOR A PERIOD OF (1) YEAR, UNLESS NOTED OTHERWISE.

12.2 GROUND COVER AREAS SHALL BE MAINTAINED WEEKLY FOR FIRST THIRTY DAYS, BI-WEEKLY DURING THE REMAINING DAYS, REMOVING ALL WEEDS AND GRASSES, AND FINE-TUNING THE IRRIGATION SYSTEM TO ENSURE ADEQUATE COVERAGE WHILE MINIMIZING OVERSPRAY.

12.3 DURING THE ENTIRE MAINTENANCE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING ANY PLANT MATERIAL THAT HAS SETTLED ALLOWING THE FLAIR AT THE BASE OF THE PLANT TO SINK BELOW FINISH GRADE. ANY PLANT MATERIAL THAT HAS SETTLE IN SUCH A MANNER MUST HAVE THE SOIL PULLED AWAY FROM THE FLAIR AT THE BASE OF PLANT AND GRANITE REDISTRIBUTED OVER THE ROOTBALL. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR ALL WEEDING, SPRAYING, FERTILIZING, RAKING, SWEEPING, MULCHING, REPLANTING AND WATERING AREAS WITH PROPER AMOUNTS OF WATER TO ASSURE PROPER GROWTH OF ALL PLANTED MATERIALS.

12.4 THE MAINTENANCE PERIOD MAY BE EXTENDED BY THE CONTRACT ADMINISTRATOR OR CITY IF IN THEIR OPINION THE PROJECT IS NOT BEING PROPERLY MAINTAINED DURING THE DESIGNATED PERIOD.

13.0 FINAL ACCEPTANCE

13.1 THE CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR AT LEAST 14 DAYS IN ADVANCE OF THEIR FINAL INSPECTION. THE SITE MUST BE IN PERFECT CONDITION, ALL PLANTED AREAS FREE FROM WEEDS/GRASSES, ALL REFUSE REMOVED FROM PLANTED AREAS, ALL WALKS AND DRIVES CLEAN AND DRY, AND THE CONTRACTOR SHALL OPERATE ALL REMOTE CONTROL VALVES FROM THE CONTROLLER, IN SEQUENCE, AND PROVIDE ENOUGH TIME FOR THE CITY TO INSPECT ALL AREAS BEING WATERED. THE CONTRACTOR SHALL INSTRUCT THE OWNER, OR THEIR REPRESENTATIVE ON THE SUGGESTED WATERING TIMES AND CYCLES OF ALL IRRIGATED AREAS. IF ALL IS IN ORDER, OR CAN BE MADE SO WITHIN 24 HOURS, THE SITE WILL BE ACCEPTED VERBALLY AT THIS TIME. OR EXTENDED UNTIL SUCH TIME AS THE SITE CAN BE ACCEPTED. SHOULD THE PROJECT REQUIRE ADDITIONAL MAINTENANCE, THE CONTRACT ADMINISTRATOR SHALL NOTIFY THE INVOLVED PARTIES AT THIS TIME.

\*\*\*END OF SECTION \*\*\*



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ISSUE FOR CONSTRUCTION:

REV	DATE	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12
	5-20-24	OWNER COMMENTS												
	6-12-24	TOPV COMMENTS-PLANT SIZES												
	7-18-24	TOPV COMMENTS-RELOCATE TREE												

BRAKES PLUS

PRESCOTT VALLEY, AZ

-LANDSCAPE PLAN-

SHEET CONTENTS

PLANTING SPECIFICATIONS

SHEET NO.

L5 OF 6

SKETCH JOB NO. SK2402



SECTION 02810 IRRIGATION SYSTEM

1.0 GENERAL CONDITIONS  
1.1 CONTRACTOR SHALL VISIT AND INSPECT SITE AND BE THOROUGHLY INFORMED OF ALL EXISTING CONDITIONS PRIOR TO THE BID. DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.  
1.2 "PROJECT COMPLETION" SHALL BE DEFINED AS THE DATE CONSTRUCTION IS COMPLETE AND THE MAINTENANCE PERIOD BEGINS.  
1.3 THE IRRIGATION CONTRACTOR, WITH THEIR BID SUBMITTAL SHALL PROVIDE WRITTEN VERIFICATION OF THREE (3) YEARS DEMONSTRATIVE ABILITY TO PERFORM THE WORK SPECIFIED HEREIN. PAST WORK SHALL BE OF SIMILAR TYPE, SCALE AND QUALITY.

2.0 WORK SPECIFIED HEREIN  
2.1 THE WORK SPECIFIED WITHIN THIS SECTION SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO COMPLETE ALL THE IRRIGATION AS DETAILED AND SPECIFIED, INCLUDING THE FOLLOWING WORK REASONABLY INCIDENTAL THERETO.  
2.2 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING WORK UNLESS OTHERWISE SPECIFIED ON THE PLANS.  
2.2.1 COORDINATION OF ALL THE IRRIGATION WORK TO INSURE SUCCESSFUL INTEGRATION WITH THE LANDSCAPING.  
2.2.2 ACCEPTING THE FINISHED GRADE PROVIDED, +/- 0.1 OF A FOOT AS SHOWN ON THE GRADING PLAN.

3.0 SAMPLES & TESTS  
3.1 THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO TAKE AND ANALYZE SAMPLES OF MATERIALS FOR CONFORMITY TO SPECIFICATIONS AT ANY TIME. CONTRACTOR SHALL FURNISH SAMPLES UPON REQUEST BY LANDSCAPE ARCHITECT. REJECTED MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND REPLACED AT THE CONTRACTOR'S EXPENSE. COST OF TESTING OF MATERIALS NOT MEETING SPECIFICATION SHALL BE PAID BY CONTRACTOR.  
3.2 UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PASSING ALL CITY REQUIRED INSPECTIONS, TESTING AND PERFORMANCE VERIFICATION OF THE IRRIGATION SYSTEM REPRESENTED ON THESE PLANS.  
3.3 REQUIREMENTS OF REGULATORY AGENCIES:  
3.3.1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH LATEST RULES AND REGULATIONS OF SAFETY ORDERS OF DIVISION OF INDUSTRIAL SAFETY, THE UNIFORM PLUMBING CODE, AND OTHER APPLICABLE LAWS OR REGULATIONS.  
3.3.2. SHOULD THE CONTRACT DOCUMENTS BE A VARIANCE WITH REGULATORY REQUIREMENTS, NOTIFY LANDSCAPE ARCHITECT AND RECEIVE INSTRUCTIONS BEFORE PROCEEDING WITH WORK AFFECTED.  
3.4 TESTING:  
3.4.1. PRELIMINARY REVIEW OF COMPLETED INSTALLATION WILL BE MADE BY LANDSCAPE ARCHITECT PRIOR TO BACKFILLING OF TRENCHES AND DURING HYDROSTATIC TESTING.  
3.4.2. FINAL REVIEW WILL BE MADE IN CONJUNCTION WITH THE FINAL REVIEW OF SHRUB AND TREE PLANTING.

4.0 COORDINATION AND RESPONSIBILITY  
4.1 COORDINATE AND COOPERATE WITH OTHER TRADES WORKING ON THE SITE FOR SUCCESSFUL COMPLETION OF THE PROJECT.  
4.2 BEFORE COMMENCING WORK ON THE SITE, BECOME THOROUGHLY ACQUAINTED WITH LAYOUT OF ALL UNDERGROUND UTILITIES AND STRUCTURES OVER THE ENTIRE SITE. ALL REQUISITE REPAIRS TO CORRECT DAMAGE CAUSED BY WORK OF THIS SECTION SHALL BE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR MUST ADDRESS DEMOLITION NOTES IN LANDSCAPE SPECIFICATIONS.  
4.3 ALL EXISTING PLANT MATERIAL, AND ASSOCIATED ELEMENTS NOT INDICATED FOR REMOVAL SHALL BE PROTECTED AND MAINTAINED AS NECESSARY TO ENSURE SURVIVAL. PROVIDE A TEMPORARY IRRIGATION SYSTEM BE REQUIRED TO ENSURE SURVIVAL. THE CONTRACTOR SHALL PROVIDE SUCH SYSTEM AS PART OF THIS CONTRACT. COORDINATE WORK WITH GENERAL CONTRACTOR.  
4.4 A PRECONSTRUCTION CONFERENCE TO DISCUSS THE IRRIGATION PROJECT WORK SHALL BE HELD AT A TIME AGREED UPON. THE CONTRACTOR, TOGETHER WITH REPRESENTATIVES OF HIS LANDSCAPE SUBCONTRACTOR, SHALL ATTEND. AS WILL THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT. THE PURPOSE OF THIS CONFERENCE IS TO DISCUSS THE PROJECT IN DETAIL, INCLUDING SCHEDULING OF WORK, SITE PREPARATION, INTERPRETATION OF DOCUMENTS AND TO ANSWER QUESTIONS THAT MAY ARISE. UNLESS FOLLOWED UP IN WRITING, VERBAL AUTHORIZATIONS OR ACKNOWLEDGMENT BY ANYONE PRESENT SHALL NOT BE BINDING.

5.0 STANDARDS

5.1 EXISTING CONDITIONS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE OR BREAKAGE TO EXISTING EQUIPMENT, AND RETURNING IT TO ITS EXISTING CONDITION INCLUDING PIPE, FIXED STRUCTURES, OR LANDSCAPING), BEING SUED TO FLUSH AND CLEAN OUT ALL VALVES AND SPRINKLERS AS IS NECESSARY. THE CONTRACTOR SHALL REFER TO THE DRAWINGS PROVIDED, AND CONSULT THE PROJECT SUPERINTENDENT TO AVOID DAMAGE TO EXISTING FEATURES AND UTILITIES. REFER TO DEMOLITION NOTES ON LANDSCAPE SPECIFICATIONS SHEET.  
5.2 MATERIALS: ALL MATERIALS TO BE INCORPORATED IN THIS SYSTEM SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS AND OF QUALITY AND PERFORMANCE AS SPECIFIED WITHIN THE CONSTRUCTION DOCUMENTS. WHENEVER MATERIAL IS SPECIFIED BY NAME OR NUMBER, SUCH SPECIFICATIONS SHALL BE DEEMED TO FACILITATE A DESCRIPTION OF THE MATERIAL; NO SUBSTITUTIONS OF MATERIAL SHALL BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE CITY IN WRITING. NO SUBSTITUTIONS OF SMALLER PIPE SIZES MAY BE APPROVED. ALL PIPE DAMAGED OR REJECTED BECAUSE OF DEFECTS SHALL BE REMOVED FROM THE SITE.  
5.3 RECORD DRAWINGS: THE OWNER SHALL FURNISH THE CONTRACTOR WITH ONE (1) SET OF BOND PLOTS, SHOWING ALL WORK REQUIRED UNDER THIS CONTRACT, FOR THE PURPOSE OF HAVING THE CONTRACTOR RECORD ON THESE PRINTS ALL CHANGES THAT MAY BE MADE DURING THE ACTUAL INSTALLATION OF THE SYSTEM. IMMEDIATELY UPON INSTALLATION OF ANY PIPING, VALVES, WIRING, ETC., IN LOCATIONS OTHER THAN SHOWN ON THE ORIGINAL DRAWINGS, OR OF SIZES OTHER THAN INDICATED, THE CONTRACTOR SHALL CLEARLY INDICATE SUCH CHANGES ON THE SET OF DRAWINGS WITH DIMENSIONS OF MAIN LINE FITTINGS, GATE VALVES, AND MAIN LINE ROUTING EVERY 100' (AFTER FINAL ACCEPTANCE OF THE COMPLETED INSTALLATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING COMPLETE DRAWINGS PREPARED SHOWING ALL SUCH CHANGES AND THESE "AS BUILT DRAWINGS" SHALL BE TURNED OVER TO THE OWNER'S REPRESENTATIVE FOR RECORDING PURPOSES, WITH THE REST OF THE MYLARS AT THE END OF THE JOB).  
5.4 MATERIAL STORAGE AND CLEAN UP: THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM RUBBISH AND DEBRIS AT ALL TIMES AND SHALL ARRANGE HIS MATERIAL STORAGE SO AS NOT TO INTERFERE WITH THE CONSTRUCTION OF THE PROJECT BY OTHER TRADES. ALL UNUSED MATERIAL, RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE SITE PER DEMOLITION NOTES ON LANDSCAPE SPECIFICATIONS.  
5.5 EQUIPMENT, TOOLS AND LABOR: THE CONTRACTOR SHALL FURNISH ALL SUCH EQUIPMENT, TOOLS, AND LABOR NECESSARY TO COMPLETE WORK IN AN EFFICIENT AND ACCEPTABLE MANNER. THIS CONTRACT IS BASED ON THE CONTRACTOR FURNISHING AND USING HIS OWN EQUIPMENT, TOOLS AND LABOR WHICH ARE SUITABLE TO CARRY OUT THIS CONTRACT IN A FIRST CLASS MANNER, UNLESS OTHERWISE HEREIN SPECIFIED.

5.6 THE INSTALLATION  
THE CONTRACTOR SHALL UNDERSTAND THAT THESE DRAWINGS ARE DIAGRAMMATIC AND THE CONTRACTOR SHALL BE RESPONSIBLE TO ACHIEVE 100% COVERAGE WITHOUT EXCESSIVE OVERSPRAY OR PUDDLING. IN ALL SITUATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE AND EFFICIENT IRRIGATION SYSTEM WHETHER CALLED OUT ON THE DRAWINGS OR NOT, ALL CACTI SHALL BE VALVED SEPARATELY. COORDINATE WITH THE LANDSCAPE CONTRACTOR.  
5.7 SUBMITTALS  
5.7.1 FURNISH REQUIRED COPIES OF MANUFACTURER'S LITERATURE, CERTIFICATIONS, AND OPERATING INSTRUCTIONS FOR THE COMPLETE LIST OF MATERIALS, FOR THE FOLLOWING ITEMS:  
A. IRRIGATION CONTROLLER  
B. BACKFLOW PREVENTER, IF APPLICABLE.  
C. GATE VALVES.  
D. PIPE AND FITTINGS.  
E. REMOTE-CONTROL VALVES.  
F. VALVE BOXES.  
G. QUICK-COUPLING VALVES AND MANUAL VALVES.  
H. DRIP EMITTERS, AND BUBBLERS.  
I. LOW VOLTAGE WIRES AND CONNECTORS.  
J. PRESSURE REGULATOR DEVICE.  
K. FILTER DEVICE.  
L. AIR RELIEF VALVE.

5.8 WARRANTY  
5.8.1. IN ADDITION TO MANUFACTURER'S WARRANTIES, WORK SHALL BE WARRANTED AND GUARANTEED FOR 2 YEARS FROM THE DATE OF COMPLETION AGAINST DEFECTS IN MATERIAL, EQUIPMENT, AND WORKMANSHIP. WARRANTY/GUARANTY SHALL ALSO COVER REPAIR OF DAMAGE TO ANY PART OF PREMISES RESULTING FROM LEAKS OR OTHER DEFECTS IN MATERIALS, EQUIPMENT, AND WORKMANSHIP, TO THE SATISFACTION OF THE OWNER.  
5.8.2. CONTRACTOR SHALL NOT BE HELD RESPONSIBLE FOR FAILURES DUE TO NEGLIGENCE BY OWNER, VANDALISM, ETC., DURING WARRANTY/GUARANTY PERIOD. REPORT SUCH CONDITIONS TO THE OWNER IN WRITING.  
5.8.3. CONTRACTOR SHALL NOT ALLOW NOR CAUSE ANY OF HIS WORK TO BE COVERED OR ENCLOSED UNTIL IT HAS BEEN INSPECTED, TESTED AND ACCEPTED BY THE AUTHORIZED PERSONNEL. SHOULD ANY OF HIS WORK BE ENCLOSED OR COVERED BEFORE SUCH INSPECTION AND TEST, HE SHALL UNCOVER THE WORK AT HIS OWN EXPENSE AND AFTER IT HAS BEEN INSPECTED, TESTED AND ACCEPTED, SHALL MAKE ALL REPAIRS WITH LIKE MATERIALS NECESSARY TO RESTORE ALL HIS WORK AND THAT OF OTHER CONTRACTORS TO ITS ORIGINAL CONDITION, AT NO ADDITIONAL COST TO THE OWNER.

6.0 EXCAVATION WORK  
6.1 EXCAVATION AND BACKFILL: PIPE TRENCHES SHALL BE EXCAVATED OF SUFFICIENT DEPTH AND WIDTH TO PERMIT PROPER HANDLING AND INSTALLATION OF THE PIPE AND FITTINGS. THE BACKFILL SHALL BE THOROUGHLY COMPACTED AND EVENED OFF WITH THE ADJACENT SOIL LEVEL IN A MANNER WHICH MINIMIZES TRENCH SETTling. SELECTED FILL DIRT OR SAND SHALL BE USED IF SOIL CONDITIONS ARE ROCKY. IN ROCKY AREAS, THE TRENCHING DEPTH SHALL BE (2) INCHES BELOW NORMAL TRENCH DEPTH TO ALLOW FOR BEDDING. THE FILL DIRT OR SAND SHALL BE USED IN FILLING FOUR (4) INCHES ABOVE THE PIPE. THE REMAINDER OF THE BACKFILL SHALL CONTAIN NO LUMPS OR ROCKS LARGER THAN (3) INCHES. THE TOP SIX (6) INCHES OF BACKFILL SHALL BE FREE OF ROCKS OVER (1) INCH, SUBSOIL, OR TRASH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPACTING TRENCHED AREAS UNDER PAVED AREAS PER SECTION 02220 AND 85% UNDER PLANTED AREAS.  
6.2 EXISTING UTILITIES AND STRUCTURES THE EXACT LOCATION OF ALL EXISTING UTILITIES AND STRUCTURES AND UNDERGROUND UTILITIES, WHETHER INDICATED ON THE DRAWINGS OR NOT, SHALL BE IDENTIFIED BY THE CONTRACTOR AND THEY SHALL CONDUCT THEIR WORK SO AS TO PROTECT EXISTING STRUCTURES AND UTILITY SERVICES AND SHALL BE RESPONSIBLE FOR THEIR REPLACEMENT IF DAMAGED. REFER TO DEMOLITION NOTES ON LANDSCAPE SPECIFICATIONS.  
6.3 MINOR ADJUSTMENTS IN THE SYSTEM SHALL BE PERMITTED TO CLEAR EXISTING FIXED OBSTRUCTIONS; SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE. GENERAL CONTRACTOR SHALL PROVIDE POWER TO ALL POINTS SHOWN ON PLANS. THE GENERAL CONTRACTOR SHALL MAKE APPLICATION WITH THE LOCAL UTILITY FOR DRAWINGS AND PERMITS TO COMPLETE THE ABOVE WORK.

7.0 PIPE AND TUBE  
7.1 GENERALLY, UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, THE CONSTRUCTION OF IRRIGATION LINES AND INSTALLATION OF CONTROL WIRING AND/OR CONTROL LINES SHALL INCLUDE EXCAVATION AND BACKFILL, THE FURNISHINGS, INSTALLING AND TESTING OF SPRINKLER PIPE, TUBE AND FITTINGS, AND THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.  
7.1.1 UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF TWELVE (12) INCHES BELOW FINISHED GRADE.  
7.1.2 GENERALLY, PIPING/SLEEVING UNDER CONCRETE OR ASPHALT SHALL BE INSTALLED PRIOR TO ANY SURFACE WORK. JACKING, BORING OR HYDRAULIC DRIVING SHALL BE AN ACCEPTABLE METHOD TO INSTALL PIPE UNDER EXISTING CONCRETE OR ASPHALT. WHERE ANY CUTTING OR BREAKING OF SIDEWALKS, CONCRETE WORK AND/OR ASPHALT IS NECESSARY, IT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR. PERMISSION TO CUT OR BREAK SIDEWALKS, CONCRETE AND/OR ASPHALT SHALL BE OBTAINED FROM THOSE HAVING PROPER JURISDICTION. SEE DEMOLITION NOTES ON LANDSCAPE SPECIFICATIONS FOR ANY ROAD OR SIDEWALK CONSTRUCTION.  
7.1.3 ALL IRRIGATION PIPE LESS THAN 4" DIAMETER INSTALLED UNDER CONCRETE OR PAVEMENT SHALL BE SLEEVED WITHIN A SCHEDULE 40 PVC PIPE TWICE THE DIAMETER OF THE IRRIGATION LINE BEING SLEEVED. SLEEVE SHALL BE OF SUFFICIENT LENGTH TO PERMIT A MINIMUM OF 12" EXTENDING BEYOND EDGE OF CONCRETE OR PAVEMENT. ALL IRRIGATION PIPE 4" OR GREATER IN DIAMETER SHALL BE UNSLEEVED SCHEDULE 40 PVC.  
7.2 PLASTIC PIPE LINES: PLASTIC PIPE SHALL BE RIGID, UNPLASTICIZED PVC, SIZE AND PRESSURE RATING OR SCHEDULE AS SHOWN ON THE PLANS, EXTRUDED FROM VIRGIN PARENT MATERIAL OF THE TYPE SPECIFIED ON THE DRAWINGS. THE PIPE SHALL BE HOMOGENEOUS THROUGHOUT AND FREE FROM VISIBLE CRACKS, HOLES, FOREIGN MATERIALS, BLISTERS, DELETIONS, WRINKLES, AND DENTS.  
7.3 PLASTIC PIPE FITTINGS AND CONNECTIONS: ALL PLASTIC PIPE FITTINGS TO BE INSTALLED SHALL BE MOLDED FITTINGS MANUFACTURED OF THE SAME MATERIAL AS THE PIPE AND SHALL BE SUITABLE FOR SOLVENT WELD, SLIP JOINT, RING TIGHT SEAL, OR TEEED CONNECTIONS. NO FITTINGS MADE OF OTHER MATERIAL SHALL BE USED EXCEPT BRASS SADDLE TEES AND CROSSES AS HEREINAFTER SPECIFIED. SLIP FITTING SOCKET TAPER SHALL BE SO SIZED THAT A DRY UNSOFTENED PIPE END, CONFORMING TO THESE SPECIAL PROVISIONS, CAN BE INSERTED NO MORE THAN HALFWAY INTO THE SOCKET. PLASTIC SADDLE AND FLANGE FITTINGS SHALL NOT BE PERMITTED. ONLY SCHEDULE 80 PIPE SHALL BE THREADED. WHEN CONNECTION IS PLASTIC TO METAL, PLASTIC SOLVENT WELD MALE ADAPTERS SHALL BE USED. THE MALE ADAPTER SHALL BE HAND TIGHTENED, PLUS ONE TURN WITH A STRAP WRENCH. JOINT COMPOUND SHALL BE TEFLON TAPE.  
7.4 IDENTIFICATION: ALL PIPE SHALL BE CONTINUOUSLY AND PERMANENTLY MARKED WITH THE FOLLOWING INFORMATION: MANUFACTURER'S NAME OR TRADEMARK, SIZE, SCHEDULE AND TYPE OF PIPE, WORKING PRESSURE AT 73 DEGREES F, AND NATIONAL SANITATION FOUNDATION (N.S.F.) APPROVAL. ALL PIPE CARRYING TREATED EFFLUENT (NON-POTABLE WATER) SHALL BE LABELED IN SUCH A MANNER TO IDENTIFY IT AS DIFFERENT FROM POTABLE WATER BY COLOR AND WRITTEN IDENTIFICATION ORIGINATING AT THE MANUFACTURER.

7.5 DELIVERY  
PLASTIC PIPE SHALL BE DELIVERED TO THE SITE IN UNBROKEN BUNDLES, ROLLS, OR PACKAGES IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION FOR THE PIPE ENDS, EITHER THREADED OR PLAIN. PLASTIC PIPE SHALL BE COVERED TO PROVIDE PROTECTION FROM THE SUN'S RAYS.

7.6 INSTALLATION OF PLASTIC PIPE  
PLASTIC PIPE SHALL BE INSTALLED IN A MANNER SO AS TO PROVIDE FOR EXPANSION AND CONTRACTION AS RECOMMENDED BY THE MANUFACTURER. PLASTIC PIPE SHALL BE CUT SQUARE IN A LOCALLY ACCEPTABLE MANNER. BURRS AT CUT ENDS SHALL BE REMOVED PRIOR TO INSTALLATION SO THAT A SMOOTH UNOBSTRUCTED FLOW IS OBTAINED. ALL PLASTIC TO PLASTIC JOINTS SHALL BE SOLVENT WELD JOINTS OR SLIP SEAL JOINTS. ONLY THE SOLVENT RECOMMENDED BY THE PIPE MANUFACTURER SHALL BE USED. ALL PLASTIC PIPE AND FITTINGS SHALL BE INSTALLED AS OUTLINED AND INSTRUCTED BY THE PIPE MANUFACTURER AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE PIPE MANUFACTURER FOR ANY FIELD ASSISTANCE THAT IS NECESSARY. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE CORRECT INSTALLATION. ALL PLASTIC TO METAL JOINTS SHALL BE MADE WITH SOLVENT WELD PLASTIC MALE ADAPTER OR SLIP SEAL JOINTS. ONLY THE SOLVENT RECOMMENDED BY THE PIPE MANUFACTURER SHALL BE USED. ALL PLASTIC PIPE AND FITTINGS SHALL BE INSTALLED AS OUTLINED AND INSTRUCTED BY THE PIPE MANUFACTURER AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE PIPE MANUFACTURER FOR ANY FIELD ASSISTANCE THAT IS NECESSARY FOR THE CORRECT INSTALLATION.

7.6.1 THE SOLVENT WELD JOINTS SHALL BE MADE IN THE FOLLOWING MANNER:  
1. THOROUGHLY CLEAN THE MATING PIPE AND FITTINGS WITH A CLEAN, DRY CLOTH.  
2. APPLY A UNIFORM COAT OF PRIMER TO THE OUTSIDE OF THE PIPE WITH A NON SYNTHETIC BRISTLE BRUSH.  
3. APPLY PRIMER TO THE FITTING IN A SIMILAR MANNER.  
4. APPLY A UNIFORM COAT OF SOLVENT TO THE OUTSIDE OF THE PIPE WITH A NON-SYNTHETIC BRISTLE BRUSH.  
5. APPLY SOLVENT TO THE FITTING IN A SIMILAR MANNER.  
6. RE-APPLY A LIGHT COAT OF SOLVENT TO THE PIPE AND QUICKLY INSERT IT INTO THE FITTING.  
7. GIVE THE PIPE OR FITTING A QUARTER TURN TO INSURE EVEN DISTRIBUTION OF THE SOLVENT AND MAKE SURE THE PIPE IS INSERTED TO THE FULL DEPTH OF THE FITTING SOCKET.  
8. HOLD IN POSITION FOR FIFTEEN (15) SECONDS.  
9. Wipe OFF EXCESS SOLVENT THAT APPEARS AT THE OUTER SHOULDER OF THE FITTING.  
7.6.2 CARE SHALL BE TAKEN SO AS NOT TO USE AN EXCESS AMOUNT OF SOLVENT, THEREBY CAUSING A BURR OR OBSTRUCTION TO FORM ON THE INSIDE OF THE PIPE.  
7.6.3 THE JOINTS SHALL BE ALLOWED TO SET AT LEAST 24 HOURS BEFORE PRESSURE IS APPLIED TO THE SYSTEM ON PVC PIPE.

7.7 FLUSHING AND TESTING  
AFTER ALL NEW DRIP PIPING IS IN PLACE AND CONNECTED, FOR A GIVEN SECTION, AND ALL NECESSARY DIVISION WORK HAS BEEN COMPLETED AND PRIOR TO INSTALLATION OF SPRINKLER HEADS, ALL CONTROL VALVES SHALL BE OPENED AND A FULL HEAD OF WATER USED TO FLUSH OUT THE SYSTEM. THE SYSTEM SHALL BE RUN UNDER FULL LOAD OF IRRIGATION DEMAND AS THE FINAL TEST.

7.8 STEEL PIPE AND FITTINGS AT BACK FLOW PREVENTER (AS NEEDED)  
7.8.1 STEEL PIPE SHALL BE NEW, SCALE-FREE, MILD STEEL PIPE AND SHALL BE STANDARD WEIGHT SCHEDULE 40.  
7.8.2 STEEL PIPE FITTINGS SHALL BE HEAVY PATTERN, BANDED, GALVANIZED MALLEABLE IRON, EPOXY COATED, THREADED PIPE FITTINGS. ALL NIPPLES SHALL BE OF THE SAME MATERIAL AS THE PIPE. BUSHINGS, CLOSE NIPPLES AND CROSSES SHALL NOT BE INSTALLED. STREET ELBOWS SHALL BE INSTALLED ONLY AS PART OF THE DRAIN VALVE ASSEMBLY.  
7.8.3 PIPE SHALL BE CAREFULLY CLEANED BEFORE INSTALLATION. THE ENDS OF ALL THREADED PIPE SHALL BE REAMED OR FULL SIZE. JOINTS IN ALL SCREWED PIPING SHALL BE MADE BY APPLYING AN APPROVED OIL BASE THREAD LUBRICANT ON THE MALE THREAD ONLY.  
7.9 MAIN LINE FITTINGS  
FITTINGS, BENDS, TEES AND CROSSES IN THE MAIN LINES SHALL BE IN ACCORDANCE WITH AWWA CAST IRON OR DUCTILE IRON TYPE. ALL MAIN LINE FITTINGS SHALL BE CAST IRON TYPE FOR PVC PIPE AS PER PLAN AND DETAILS INCLUDING TAPS TO ELECTRIC VALVES. CONTRACTOR SHALL FURNISH FITTINGS, ALL ADAPTERS, REDUCERS AND APPURTENANCE OF THE SIZE AND TYPE NECESSARY FOR THE COMPLETION OF THE PIPELINE. WHERE TAPS MUST BE MADE IN EXISTING MAIN LINE PIPE, USE ROMAC # 202-N DOUBLE STRAP SADDLE FITTINGS.

7.10 RISERS  
ALL QUICK-COUPLING VALVES SHALL HAVE AN ADJUSTABLE RISER ASSEMBLY (DOUBLE SWING JOINT RISER) ASSEMBLED BY THE USE OF AT LEAST THREE (3) PVC SCH. 80 ELLS OR TEES AS RECOMMENDED BY THE QUICK COUPLER MANUFACTURER AND/OR AS SHOWN ON THE DRAWINGS. THESE DOUBLE SWING JOINT RISERS SHALL BE OF SCH. 80 PVC PLASTIC PIPE AND FITTINGS UNLESS OTHERWISE INDICATED, AS SHOWN ON DETAIL DRAWINGS OF PLANS. THE HORIZONTAL NIPPLE CONNECTED DIRECTLY INTO THE SIDE OUTLET OF THE MAIN LINE SHALL BE A MINIMUM OF SIX (6) INCHES LONG. ALL OTHER NIPPLES OF THE SWING JOINT RISER SHALL BE OF LENGTH AS REQUIRED FOR PROPER INSTALLATION OF THE QUICK COUPLER, DRAIN VALVE AND/OR AUTOMATIC CONTROL VALVE. THE SWING JOINT RISER SHALL BE OF PROPER PIPE SIZE AS SHOWN ON THE DRAWINGS.

8.0 DRIP IRRIGATION  
8.1 ELECTRIC CONTROL VALVES: CONTROL VALVES SHALL BE THE TYPE INDICATED ON THE DRAWINGS AND BE CAPABLE OF OPERATING AT 10 G.P.M.'S. NOTE: DRIP FOR PALM TYPE TREE OR FREE STANDING PLANTERS SHALL BE SET UP ON INDIVIDUAL VALVES.  
8.2 Y-FILTERS: FILTERS SHALL BE "Y" BODY TYPE AND SHALL BE CONSTRUCTED FROM GLASS REINFORCED POLYPROPYLENE WITH 150 MESH SCREENS OR AS INDICATED ON THE DRAWINGS.  
8.3 PRESSURE REGULATORS: PRESSURE REGULATORS SHALL BE FACTORY PRE-SET AT 25 PSI AND SHALL BE THE ADJUSTABLE TYPE AS INDICATED ON THE DRAWINGS.  
8.4 DRIP IRRIGATION PIPING: DRIP IRRIGATION PIPING SHALL BE CLASS 315 OR 200 PVC, NOMINAL SIZE OF 1/2" OR LARGER.  
8.5 EXTENSION TUBING: MICRO-TUBING SHALL MEET EMITTER MANUFACTURER'S RECOMMENDATIONS. BOWSMITH EMITTER WITH TUBING SHALL NOT EXCEED 5' IN LENGTH AND SHALL HAVE AN EMITTER OUTLET CHECK VALVE (BUG CAP) ATTACHED TO THE END.  
8.6 FLUSH CAP: END CAPS AND END CAP CONNECTORS (MINIMUM OF TWO PER STATION OR AS PER DETAIL).  
8.7 OTHER MATERIALS: PROVIDE OTHER MATERIALS WHICH MAY NOT BE CALLED OUT IN THE SPECIFICATIONS BUT ARE CALLED OUT IN THE DRAWINGS AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

9.0 VALVES AND KEYS  
9.1 GENERAL: UNLESS OTHERWISE SPECIFIED, THE INSTALLATION OF ALL VALVES SHALL INCLUDE THE EXCAVATION AND BACKFILL, THE FURNISHING, INSTALLING AND TESTING OF RISERS, FITTINGS, AND VALVES, AND THE REMOVAL AND/OR RESTORATION OF EXISTING IMPROVEMENTS AND ALL OTHER WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND AS REQUIRED FOR THE COMPLETED INSTALLATION.  
9.1.1 ALL DRAIN VALVE ASSEMBLIES SHALL BE INSTALLED WITH A LENGTH OF 2" PVC PLASTIC PIPE OF LENGTH REQUIRED TO EXTEND FROM THE TOP OF THE VALVE TO FINISH GRADE LINE. A RAINBIRD LOOKING TYPE VALVE MARKER OR EQUAL, SHALL BE INSTALLED IN THE TOP OF THE 2" PIPE FOR EASY LOCATION OF THE VALVE AND FOR ACCESS FOR OPERATION OF THE VALVE.  
9.1.2 IF SHOWN ON THE PLANS THE 2" DRAIN VALVE SHALL BE PROVIDED WITH PROPER GRAVEL SUMP AT THE OUTLET, OF SUFFICIENT SIZE TO PROVIDE PROPER DRAINAGE OR IF CONDITIONS ARE SUCH, THE OUTLET SHALL BE PIPED TO A DRAINAGE TILE, DRAINAGE DITCH OR POND AS DESIRED TO PROVIDE PROPER DRAINAGE.  
9.1.3 WHERE REQUIRED BY LOCAL OR STATE CODE, AN ATMOSPHERIC OR PRESSURE TYPE ANTI-SIPHON OR BACKFLOW PREVENTION TYPE VALVE SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES. BACKFLOW PREVENTION ASSEMBLY SHALL BE TESTED AND APPROVED BY THE PROPER AUTHORITIES PRIOR TO ACCEPTANCE.  
9.1.4 ALL QUICK-COUPLING VALVES SHALL BE INSTALLED WITH AN ADJUSTABLE SWING JOINT RISER ASSEMBLY UNIT (DOUBLE SWING JOINT RISER) ASSEMBLED BY THE USE OF AT LEAST THREE (3) 90 DEGREE ELLS OR TEES. THESE DOUBLE SWING JOINT RISERS SHALL BE OF SCHEDULE 80 PVC NIPPLES AND SCHEDULE 80 PVC FITTINGS OR UNLESS OTHERWISE DESIGNATED ON THE DRAWINGS. THE SWING JOINT RISER SHALL BE OF PROPER PIPE SIZE AS SHOWN ON THE DRAWINGS. (FACTORY PRE-ASSEMBLED UNITS MAY BE USED).  
9.2 KEYS AND QUICK COUPLING VALVES: THE QUICK-COUPLING VALVES, WHERE INDICATED ON THE DRAWINGS, SHALL BE TWO PIECE BODY QUICK COUPLER TURF VALVES CONSTRUCTED OF HIGHEST GRADE HEAVY DUTY BRONZE CASTING BODIES.  
9.2.1 BODY SHALL BE OF TWO PIECE CONSTRUCTION CONSISTING OF A LOWER AND UPPER PIECE BODY. THE UPPER VALVE BODY SHALL BE EASILY REMOVABLE FOR MAINTENANCE. THE VALVE PARTS SHALL BE REPLACEABLE AND EACH VALVE SHALL HAVE THREE (3) STOPS, OR OPEN POSITIONS TO PROVIDE REGULATION OF FLOW. VALVE COVER SHALL BE HEAVY, CAST IRON WITH CADMIUM PLATE PROTECTIVE FINISH.  
9.2.2 THE QUICK-COUPLING VALVES SHALL BE THREE QUARTER (3/4) INCH QUICK-COUPLING OR AS INDICATED ON THE DRAWINGS, AND SHALL HAVE 3/4-INCH SIZE BOTTOM FEMALE PIPE THREAD CONNECTION. VALVES SHALL BE COMPLETE WITH STANDARD TOP.  
9.2.3 THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ONE (1) PREPLACEMENT RAINBIRD #33 K QUICK-COUPLER WITH HOSE SWIVEL ELLS FOR EVERY QUICK COUPLER SHOWN ON PLAN.

9.3 GATE VALVES (STANDARD) ALL ZONE SHUT-OFF OR OTHER VALVES, NOT INDICATED AS MANUAL ANGLE CONTROL VALVES, OF SIZES TWO (2) INCH AND SMALLER SHALL BE ALL BRONZE DOUBLE DISC WEDGE TYPE WITH INTEGRAL TAPER SEATS AND WITH NON-RISING STEM. ALL GATE VALVES LARGER THAN 2" SHALL BE IRON BODY, BRASS TRIMMED, DOUBLE DISC WEDGE TYPE WITH INTEGRAL TAPER SEATS AND WITH NON-RISING STEMS. GATE VALVES SHALL FUNCTION AND BE EQUAL TO WATERLOUS SERIES 500 OR EQUAL. GATE VALVES 4" OR LARGER SHALL HAVE A 2" SQUARE NUT FOR FLOW CONTROL. ALL VALVES SHALL BE PLACED IN A VALVE BOX (TYPICALLY).  
9.4 AUTOMATIC, REMOTE CONTROL VALVES, ELECTRIC SOLENOID TYPE. ALL AUTOMATIC REMOTE CONTROL VALVES SHALL BE PER PLANS AND SPECIFICATIONS OR EQUAL SERIES. IN ADDITION, PLANS MAY REQUIRE ELECTRIC VALVE FOR WASTEWATER AND GRAY WATER APPLICATIONS. THE SOLENOID ELECTRICAL OPERATING RANGE SHALL BE 20 TO 30 VAC, 50/60 HZ MEAN SOLENOID VOLT-AMP RATING SHALL BE 8.5 VA AT 24 VAC, 60 HZ. SOLENOID COIL D.C. RESISTANCE SHALL BE 15 PLUS OR MINUS 3 OHMS.  
9.5 AUTOMATIC DRAIN VALVES: AT ALL LOCATIONS INDICATED ON THE DRAWINGS INSTALL AUTOMATIC DRAIN VALVES, IF SHOWN ON PLANS. THE AUTOMATIC DRAIN VALVES SHALL BE OF THE BALL-CHECK TYPE CONSTRUCTED OF HIGHEST GRADE MACHINE BRASS AND WITH STAINLESS STEEL BALL. VALVE SHALL POSITIVELY SEAL OFF AT 3 PSI PRESSURE IN THE LINE. VALVES SHALL HAVE 1/2-INCH MALE PIPE THREAD CONNECTION. INSTALL A MAXIMUM OF 2 CONTROL VALVES PER VALVE BOX UNLESS OTHERWISE NOTED ON THE DRAWINGS.

9.6 AUTOMATIC, REMOTE CONTROL VALVES, ELECTRIC SOLENOID TYPE. ALL AUTOMATIC REMOTE CONTROL VALVES SHALL BE PER PLANS AND SPECIFICATIONS OR EQUAL SERIES. IN ADDITION, PLANS MAY REQUIRE ELECTRIC VALVE FOR WASTEWATER AND GRAY WATER APPLICATIONS. THE SOLENOID ELECTRICAL OPERATING RANGE SHALL BE 20 TO 30 VAC, 50/60 HZ MEAN SOLENOID VOLT-AMP RATING SHALL BE 8.5 VA AT 24 VAC, 60 HZ. SOLENOID COIL D.C. RESISTANCE SHALL BE 15 PLUS OR MINUS 3 OHMS.  
9.7 AUTOMATIC DRAIN VALVES: AT ALL LOCATIONS INDICATED ON THE DRAWINGS INSTALL AUTOMATIC DRAIN VALVES, IF SHOWN ON PLANS. THE AUTOMATIC DRAIN VALVES SHALL BE OF THE BALL-CHECK TYPE CONSTRUCTED OF HIGHEST GRADE MACHINE BRASS AND WITH STAINLESS STEEL BALL. VALVE SHALL POSITIVELY SEAL OFF AT 3 PSI PRESSURE IN THE LINE. VALVES SHALL HAVE 1/2-INCH MALE PIPE THREAD CONNECTION. INSTALL A MAXIMUM OF 2 CONTROL VALVES PER VALVE BOX UNLESS OTHERWISE NOTED ON THE DRAWINGS.

10.0 CONTROLS  
10.1 CONTROL CABLE: ALL ELECTRICAL CONTROL AND GROUND WIRE SHALL BE COPPER IRRIGATION CONTROL CABLE OF SIZE AS INDICATED BY MANUFACTURER'S SPECS. ALL WIRING USED FOR CONNECTING THE AUTOMATIC REMOTE CONTROL VALVES TO THE AUTOMATIC CONTROLLERS SHALL BE TYPE "UP", 600 VOLT; 7 STRAND OR SOLID COPPER, SINGLE CONDUCTOR WIRE WITH PVC INSULATION AND BEARING UL APPROVAL FOR DIRECT UNDERGROUND BURIAL FEEDER CABLE. ALL PILOT OR "HOT" WIRES SHALL BE OF ONE COLOR AND ALL "COMMON" WIRES ARE TO BE OF ANOTHER.  
10.1.1 INSULATION SHALL BE FOUR-SIXTY-FOURTHS (4/64) INCH THICK MINIMUM COVERING OF ICC-100 COMPOUND FOR POSITIVE WATERPROOFING PROTECTION. SIZES FOURTEEN (14), TWELVE (12), TEN (10), AND EIGHT (8) SHALL BE SINGLE CONDUCTOR SOLID COPPER WIRE AND SIZES SIX (6), FOUR (4), AND TWO (2) SHALL BE STRANDED COPPER WIRE. ALL CONTROL OR "HOT" WIRES SHALL BE OF ONE (1) COLOR (BLACK) AND ALL COMMON OR "GROUND" WIRES SHALL BE OF ONE COLOR (WHITE). VERIFICATION OF WIRE TYPES AND INSTALLATION PROCEDURES SHALL BE MADE TO CONFORM TO LOCAL CODES.

10.2 ELECTRICAL WIRE CONNECTIONS  
WIRE CONNECTIONS TO REMOTE CONTROL ELECTRIC VALVES AND SPLICES OF WIRE IN THE FIELD SHALL BE MADE IN THE FOLLOWING MANNER, USING RAINBIRD PEN-TITE WIRE CONNECTORS AND SEALING CEMENT (OR APPROVED EQUAL).  
1. STRIP ENDS OF WIRES AND PUSH WIRES THROUGH THE HOLES OF THE BASE SOCKET.  
2. TWIST WIRES TOGETHER AND MECHANICALLY BOND TOGETHER USING CRIMP SLEEVE AND CRIMP PLIERS.  
3. PULL WIRE CONNECTION BACK INTO BASE SOCKET AS FAR AS IS POSSIBLE.

4. APPLY SOLVENT CEMENT TO OUTSIDE OF SEALING PLUG AND THEN FILL CAVITY OF SEALING PLUG COMPLETELY WITH SOLVENT CEMENT.  
5. PUSH SEALING PLUG INTO BASE SOCKET, USING SLIGHT TWISTING MOTION, UNTIL IT BOTTOMS.  
6. PUSH WIRES DOWN INTO BASE PLUG AS FAR AS THEY WILL GO, WITHOUT UNSEATING SEALING PLUG.  
10.2.1 THIS ASSURES CEMENT COMPLETELY SEALING AROUND WIRE INSULATION AND WATERPROOFING THE CONNECTION. IT IS IMPORTANT THAT THE JOINT BE ABSOLUTELY WATERPROOF SO THAT THERE IS NO CHANCE FOR LEAKAGE OF WATER AND CORROSION BUILD-UP ON THE JOINT.

10.3 AUTOMATIC CONTROLLERS: THE CONTRACTOR SHALL PROVIDE ADEQUATE PERSONNEL TO ASSIST THE OWNER TO PROGRAM THE CONTROLLER IN THE FIELD AND REVIEW THE OPERATION OF EACH STEP AFTER INSTALLATION. CONTRACTOR SHALL PROVIDE A WRITTEN STATEMENT TO SHOW WHICH GROUP OF VALVES IS TO WHICH CLOCK PROGRAM AND WATERING TIMES FOR EACH PROGRAM.

10.4 DO NOT PREPARE CHARTS UNTIL RECORD DRAWINGS HAVE BEEN APPROVED BY THE LANDSCAPE ARCHITECT/OWNER'S REPRESENTATIVE.  
10.4.1 PROVIDE ONE CONTROLLER CHART PER CONTROLLER.  
1. CHART MAY BE A REPRODUCTION OF THE RECORD DRAWING. IF THE SCALE PERMITS FITTING THE CONTROLLER DOOR. IF PHOTO REDUCTION PRINTS ARE REQUIRED, KEEP REDUCTION TO MAXIMUM SIZE POSSIBLE TO RETAIN FULL LEGIBILITY.  
2. CHART SHALL BE BLACKLINE PRINT OF THE ACTUAL SYSTEM, SHOWING THE AREA COVERED BY THAT CONTROLLER.  
10.4.2 IDENTIFY THE AREA OF COVERAGE OF EACH REMOTE CONTROL VALVE, USING A DISTINCTLY DIFFERENT PASTEL COLOR, DRAWN OVER THE ENTIRE AREA OF COVERAGE.  
10.4.3 FOLLOWING APPROVAL OF CHARTS BY THE LANDSCAPE ARCHITECT/OWNER'S REPRESENTATIVE, THEY SHALL BE HERMETICALLY SEALED BETWEEN TWO LAYERS OF 20 MIL THICK PLASTIC SHEET.  
10.4.4 CHARTS MUST BE COMPLETED AND APPROVED PRIOR TO FINAL ACCEPTANCE OF THE IRRIGATION SYSTEM.  
10.4.5 COORDINATE WITH CITY FORCES AS TO THE VALVE STATIONING OF THE NEW AREAS TO BE PROGRAMMED INTO THE EXISTING CONTROLLER.

10.5 INSTALLATION OF CONTROL CABLE: ALL ELECTRIC CONTROL CABLE SHALL BE OF SIZES SHOWN ON MANUFACTURER'S SPECS AND SHALL BE INSTALLED IN THE PIPING TRENCHES WHEREVER POSSIBLE. PIPE TRENCH SHALL BE PARTIALLY BACKFILLED TO PROVIDE THREE (3) TO FOUR (4) INCHES OF COVER OVER THE PIPE BEFORE WIRE IS INSTALLED. WIRE SHALL, THEN BE PLACED IN THE TRENCH TO ONE SIDE OF THE PIPE. WIRE SHALL BE PLACED IN THE TRENCH AS LOOSELY AS POSSIBLE TO ALLOW FOR EXPANSION AND CONTRACTION OF THE WIRE. EXPANSION COILS (5-6 TURNS OF WIRE WRAPPED AROUND A PIECE OF 1/2" PVC PIPE) AT 200' INTERVALS, ALSO SHALL BE ACCEPTABLE. WHERE IT IS NECESSARY TO RUN WIRE IN A SEPARATE TRENCH, THE WIRE SHALL HAVE A MINIMUM COVER OF TWELVE (12) INCHES. ALL WIRE UNDER CONCRETE OR PAVEMENT SHALL BE PLACED IN A SCHEDULE 40 PVC SLEEVE. THE DIAMETER SHALL BE SUFFICIENT TO ACCOMMODATE THE WIRE BUNDLE.  
10.5.1 ALL WIRE CONNECTIONS AT REMOTE CONTROL VALVES, EITHER DIRECT BURIAL OR IN CONTROL BOXES, SHALL HAVE SUFFICIENT WIRE WHICH CAN BE BROUGHT TO THE SURFACE WITHOUT DISCONNECTING THE WIRES.  
10.5.2 EACH REMOTE CONTROL VALVE OR GROUP OF REMOTE CONTROL VALVES, WHICH ARE TO BE CONNECTED TO ONE STATION OF A CONTROLLER, SHALL HAVE WIRES AS SHOWN IN THE WIRING DIAGRAMS ON THE DRAWINGS OR AS SPECIFIED. ALL REMOTE CONTROL VALVES, WHICH ARE TO BE CONNECTED TO THE SAME CONTROLLER, SHALL BE CONNECTED TO A COMMON GROUND WIRE OF A SIZE AS SHOWN ON THE DRAWINGS OR AS SPECIFIED.

10.6 VALVE BOXES: ALL REMOTE CONTROL VALVES, MANUAL CONTROL VALVES, ZONE SHUT-OFF VALVES, GATE VALVES OR BUTTERFLY VALVES, UNLESS OTHERWISE INDICATED, SHALL BE INSTALLED IN SUITABLE VALVE ACCESS BOXES OF PROPER SIZE AS REQUIRED FOR EASY ACCESS TO THE VALVE. ACCESS BOXES ON THE DRAWINGS, OR OTHERWISE INDICATED OR SPECIFIED SHALL BE INSTALLED USING VALVE MARKERS, SHALL NOT REQUIRE VALVE ACCESS BOXES. LOCKING AND/OR HINGED COVERS FOR ACCESS BOXES SHALL BE REQUIRED. ALL VALVE BOXES SHALL BE IMPRINTED WITH THE VALVE STATION IN A PERMANENT AND LEGIBLE MANNER FOR EASY REFERENCE.

\*\*\*END OF SECTION\*\*\*



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ISSUE FOR CONSTRUCTION:

REV	DATE	DESCRIPTION							
1	5-20-24	OWNER COMMENTS							
2	6-12-24	TOPIC COMMENTS- PLANT SIZES							
3	7-18-24	TOPIC COMMENTS- RELOCATE TREE							

BRAKES PLUS

PRESCOTT VALLEY, AZ

-LANDSCAPE PLAN-

SHEET CONTENTS

IRRIGATION SPECIFICATIONS

SHEET NO.

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