

2. POINT OF CONNECTION - CONNECT DOWNSTREAM FROM AN IRRIGATION ONLY WATER METER. REFERENCE ISIT DRAWINGS FOR LOCATION.

3. SYSTEM PRESSURE - CONFIRM STATIC WATER PRESSURE OF 82 PSI AT LEAST SEVEN DAYS BEFORE BEGINNING WORK. IF STATIC PRESSURE IS LESS THAN STATED ABOVE, NOTIFY LANDSCAPE ARCHITECT IN WRITING AT LEAST SEVEN DAYS PRIOR TO COMMENCING WITH WORK. IF STATIC PRESSURE EXCEEDS 80 PSI, INSTALL A PRESSURE REDUCING DEVICE UPSTREAM FROM BACKFLOW DEVICE AT NO ADDITIONAL COST TO THE OWNER.

4. SYSTEM LAYOUT - COORDINATE IRRIGATION LAYOUT WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE COVERAGE WITH NO OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER. PRIOR TO SUBMISSION OF THE BID CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CONDITIONS THEREOF.

5. CONTRACTOR QUALIFICATIONS - INSTALLATION OF THE IRRIGATION SYSTEM SHALL BE UNDER THE ONSITE SUPERVISION OF A SUPERINTENDENT CURRENTLY LICENSED AS A LANDSCAPE IRRIGATOR IN THE STATE OF TEXAS.

6. GUARANTEE - GUARANTEE THE UNDERGROUND SPRINKLER SYSTEM AGAINST DEFECTS IN THE MATERIALS AND WORKMANSHIP FOR ONE YEAR AFTER FINAL ACCEPTANCE.

7. EXISTING UTILITIES - CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION.

8. CODES AND PERMITS - CONTRACTOR TO COMPLY WITH REQUIREMENTS OF THE INTERNATIONAL PLUMBING CODE AND ALL OTHER APPLICABLE CODES AS THEY SHALL PREVAIL OVER ANY DISCREPANCIES HEREIN. IRRIGATION CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS, WATERING VARIANCES, AND PAY ALL ASSOCIATED FEES + PENALTIES UNLESS OTHERWISE DIRECTED. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH MUNICIPAL DRAINAGE/WATERING RESTRICTIONS.

9. TRENCHING - PROTECT EXISTING PLANT MATERIAL. ROUTE EXCAVATION TRENCHES TO AVOID DAMAGE TO EXISTING TREES. COORDINATE CONFIGURATION OF PLANTING BEDS WITH LANDSCAPE CONTRACTOR TO ENSURE PROPER LOCATION OF TURF AND SHRUB IRRIGATION HEADS. STAKE ALL SPRINKLER HEAD LOCATIONS AND TRENCH TO A MINIMUM WIDTH OF 4" AND PROVIDE 16" OF COVER FOR MAIN SUPPLY LINE AND 10" OF COVER OVER ALL LATERALS AND WRING.

10. PIPING - ALL PIPING IS TO BE SIZED FOR A MAXIMUM WATER FLOW OF 5 FEET PER SECOND. SIZE LATERAL PIPE SUCH THAT NO TWO SPRAY HEADS WITHIN THE SAME ZONE MAY VARY BY MORE THAN 10% IN PSI. RULE-OF-THUMB PIPE SIZING IS NOT ACCEPTABLE NOR PERMITTED IN RUNS LONGER THAN 100'. LAY PIPE ON A 2" SAND CUSHION SUBBASE, UNIFORMLY SLOPED WITHOUT HUMPS AND DEPRESSIONS. KEEP PIPE INTERIOR CLEAN AT ALL TIMES.

11. BACKFLOW PREVENTER - INSTALL BACKFLOW PREVENTER AS PER CITY CODES AND STANDARDS. INSTALL 17" X 30" PLASTIC ACCESS BOX FLUSH WITH GRADE AND BACKFILL WITH 3" OF GRAVEL IN BOTTOM OF BOX. PROVIDE WYE STRAINER AND SHUT-OFF VALVE UPSTREAM OF BACKFLOW DEVICE.

12. VALVES - CLEAN AND TEST PRIOR TO INSTALLATION. INSTALL PLUMB AND STRAIGHT. INSTALL SAME SIZE BALL VALVE PRECEDING EACH VALVE. SET PLASTIC VALVE BOX FLUSH WITH GRADE ON MASONRY BRICKS WITH 3" GRAVEL SUMP AND STABILIZE WITH COMPACTED SOIL. USE 1" X 1/4" PLASTIC ACCESS VALVE BOXES FOR ELECTRIC VALVES AND QUICK COUPLING VALVES UNLESS OTHERWISE NOTED.

13. BACKFILL - USE BACKFILL FREE FROM ROCKS AND OTHER UNSUITABLE MATERIALS WHICH COULD DAMAGE PIPE OR CREATE SETTLING PROBLEMS. APPLY BACKFILL MATERIAL IN 6" LAYERS AND TAMP EACH LAYER TO PREVENT SETTLING. USE TOPSOIL (NOT SUBSOIL) WITHIN THE TOP 6" OF BACKFILL. ACHIEVE FINISH GRADE AND REPAIR ALL DAMAGED EXISTING TURF AND PLANTINGS. REMOVE EXCESS EXCAVATION AND BACKFILL MATERIAL FROM THE SITE IMMEDIATELY. PROVIDE A 2" SAND CUSHION BELOW AND ABOVE ALL PIPE.

14. SPRINKLER HEADS - FLUSH LATERAL LINES WITH FULL HEAD OF WATER AND INSIDE HEADS. LOCATE SPRINKLER HEADS TO MAINTAIN A DISTANCE OF 6" FROM WALLS AND 4" FROM OTHER BOUNDARIES. HEADS TO BE INSTALLED WITH IPS FLEX PIPE OR SCH. 80 SWING JOINTS. USE IN-HEAD CHECK VALVES TO ELIMINATE LOW HEAD DRAINAGE. AT LOCATIONS OF EXCESSIVE LOW HEAD DRAINAGE, INSTALL HUNTER HCV CHECK VALVES BETWEEN HEAD AND SWING-JOINT. NO OVERSPRAY WILL BE ALLOWED ONTO IMPERVIOUS SURFACES SUCH AS DRIVES, WALKS, BUILDINGS, ROADS, ETC.

15. WIRING - 14 AWG RATED FOR DIRECT BURIAL. LAY WIRING BESIDE PIPE IN TRENCHES. PROVIDE A MINIMUM COVERAGE OF 12" FOR WIRING LAD IN SEPARATE TRENCHES. WIRE SPLICES SHALL BE ENCASED IN A WATERPROOF COMPOUND OR GEL. BUNDLE AND TAPE MULTIPLE WIRES AT A MAXIMUM OF 10 FOOT INTERVALS. PROVIDE A 30" EXPANSION LOOP AT EACH ELECTRIC REMOTE CONTROL VALVE AND AT EVERY 100' INTERVAL. ALL FIELD SPLICES SHALL BE LOCATED IN A 10" ROUND VALVE BOX TO ALLOW FOR INSPECTION.

16. AUTOMATIC CONTROLLER - PROVIDE 120 VOLT ELECTRICAL CURRENT TO THE CONTROLLER IN CONDUIT IN ACCORDANCE WITH LOCAL, STATE, AND NATIONAL CODES.

17. CLEAN-UP - KEEP THE PREMISES AND PUBLIC STREETS FREE FROM ACCUMULATION OF WASTE MATERIAL. AT THE COMPLETION OF THE WORK REMOVE ALL WASTE, EXCESS MATERIAL, RUBBISH AND EQUIPMENT. LEAVE THE SITE CLEAN.

18. FINAL ACCEPTANCE - PERFORM OPERATIONAL TEST WITH THE OWNER PRESENT AFTER SYSTEM IS COMPLETE AND IRRIGATION HEADS ADJUSTED TO FINAL POSITION. DEMONSTRATE TO OWNER THAT ENTIRE SYSTEM MEETS COVERAGE REQUIREMENTS AND FUNCTIONS PROPERLY. PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS FOR PROPER OPERATION AND MAINTENANCE OF THE SPRINKLER SYSTEM.

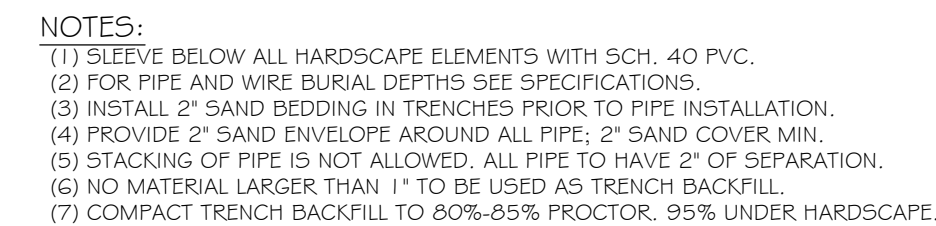
19. UNSLEEVED PIPES AND VALVES MAY BE SHOWN UNDER PAVEMENT FOR GRAPHIC CLARITY ONLY. INSTALL THESE PIPES IN ADJACENT LANDSCAPE AREAS.

20. AS-BUILTS - PROVIDE OWNER WITH A COMPLETE SET OF AS-BUILTS DRAWINGS AT FINAL ACCEPTANCE.

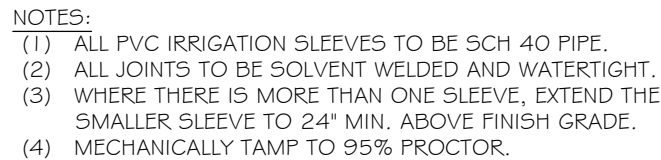
21. SENSORS - INSTALL FREEZE AND RAIN SHUT-OFF SENSORS IN ELEVATED AND EXPOSED EXTERIOR LOCATIONS CLEAR OF TREES AND OTHER OBSTRUCTIONS.

22. IRRIGATION COVERAGE STATEMENT - 100% IRRIGATION COVERAGE HAS NOT BEEN PROVIDED FOR. REFERENCE IRRIGATION PLAN FOR AREAS OF COVERAGE.

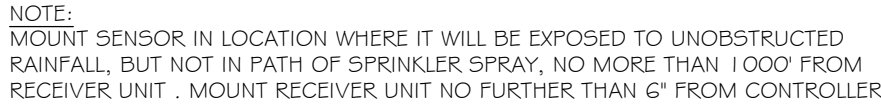
23. IRRIGATION EQUIPMENT - IRRIGATION COMPONENTS SHALL BE AS SPECIFIED OR APPROVED EQUAL MANUFACTURED BY HUNTER, RAIN BIRD, TORO, IRITROL, OR WEATHERMATIC.



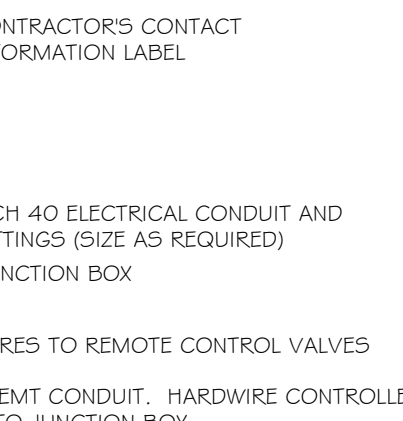
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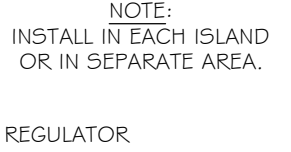
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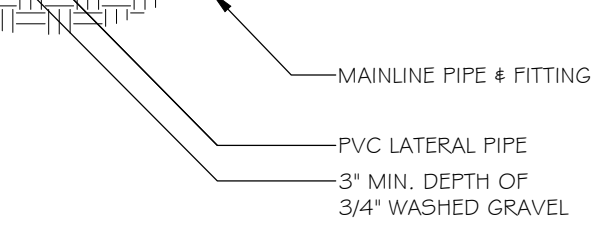
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1. LANDSCAPE IRRIGATION CONTRACTOR (L.I.C.) TO INSERT ALL COMPRESSION FITTING 1/32" PER MANUFACTURER'S RECOMMENDATIONS. FITTINGS AND DRIP LINE TUBING TO BE OF THE SAME MANUFACTURER.
2. ALL DRIP LINE AND DISTRIBUTION TUBING TO BE INSTALLED 4'-6" BELOW GRADE AT SOD AREAS AND 2'-4" BELOW SOIL AT MULCH AREAS. ALL DRIP LINE TO BE INSTALLED ON ONE FOOT ROW SPACING UNLESS OTHERWISE NOTED. TUBING TO BE STAKED WITH GALVANIZED THE DOWN STAKES INSTALL STAKES AT 3'-0" ON CENTER ALONG LENGTH OF TUBING AND A MINIMUM OF 36" FROM ANY FITTING.
3. AIR RELIEF VALVE TO BE RAIN BIRD AR VALVE KIT INSTALLED IN 6" ROUND VALVE BOX AND GRAVEL SUMP. INSTALL AT HIGHEST POINT WITHIN ZONE.
4. FLUSH VALVES TO BE RAIN BIRD EASY FIT FLUSH CAPS INSTALLED IN A 6" ROUND VALVE BOX AND GRAVEL SUMP. INSTALL AT LOWEST POINT WITHIN ZONE.
5. INSTALL DRIP LINE TUBING ON TWO SIDES OF EACH PLANT MINIMUM. INSTALL DRIP LINE ON TOP OF FILTER FABRIC.
6. DRIP IRRIGATION EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
7. DRIP LINE SHALL BE BURIED 3" TO 5" BELOW FINISHED SOIL GRADE IN PLANTING BEDS AFTER PLANTING AND BEFORE MULCH, AND 4" TO 6" BELOW FINISHED GRADE IN TURF AREAS.
8. STAGER EMITTER SPACING IN PARALLEL ROWS TO CREATE TRIANGULAR WETTING PATTERN.
9. ALL DRIP LINE SHALL BE SECURED USING SOIL STAPLES AS SUPPLIED BY THE MANUFACTURER SPACED A MAXIMUM OF 3 FT ON CENTER.
10. DRIP LATERALS SHOWN ON THE PLANS ARE USED TO INDICATE ZONING SIZES AND RELATIONSHIPS.

11. NETAFIM HCVXR SERIES DRIP LINE SHALL BE USED AS FOLLOWS:
- A. BED AREAS: TLCV 09-12, ROWS SPACED AT 18 INCHES.
  - B. BED AREAS WITH SLOPE 3:1 OR MORE: TLCV 06-12

13. WHEN CONFLICTS OCCUR BETWEEN THESE DRAWINGS AND THE MANUFACTURER'S SPECIFICATIONS DEFER TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS

14. EACH DRIP ZONE SHALL HAVE A DRIP SYSTEM OPERATION INDICATOR, AS MANUFACTURED BY NETAFIM. INSTALL PER NETAFIM RECOMMENDATIONS.

### PROPER SIZING OF SUPPLY AND EXHAUST HEADERS (17MM TLCV SERIES DRIP LINE)

TOTAL ZONE FLOW	
UP TO 5 GPM	1/2" SCH 40 PVC OR 1/2" CLASS 315 PVC
5.1 TO 8 GPM	3/4" CLASS 200 PVC
8.1 TO 13 GPM	1" CLASS 200 PVC
13.1 TO 22 GPM	1 1/4" CLASS 200 PVC
22.1 TO 31 GPM	1 1/2" CLASS 200 PVC

NOTE: A 45 PSI PRESSURE REGULATOR IS RECOMMENDED TO OBTAIN MAXIMUM RUN LENGTHS AND MAXIMIZE ZONE SIZE WHEN INSTALLING TLCV SERIES DRIP LINE.