NOTES:

1. GROUND ROD OR COPPER GROUND PLATE MIN. 8’ AND 12’ MAX. AWAY FROM CONTROLLER. REFER TO MANUFACTURER’S RECOMMENDATION FOR GROUNDING EQUIPMENT SIZE AND INSTALLATION.

2. GROUNDING RESISTANCE SHOULD BE MEASURED AT 10 OHMS OR LESS. IF GREATER THAN 10 OHMS, A SECOND GROUNDING ROD OR PLATE MAY BE REQUIRED.

3. ON WALL MOUNTED CONTROLLERS, GROUNDING MAY BE TIED INTO BUILDING GROUNDING SYSTEM WHERE POSSIBLE.

4. IN TWO-WIRE SYSTEMS BOTH THE COMMON WIRE AND THE CONTROL WIRE ARE COMBINED INTO A SINGLE 2-WIRE CABLE.
1. PRE-FORMED SUPPORT BASE
2. QUICKPAD 3/8" MIN. THICKNESS ALUMINUM POWDER COATED PREFORMED PAD
3. (2) QUICKPAD FASTENING BRACKET
4. CONTROLLER AND CONTROLLER ENCLOSURE – SEE IRRIGATION EQUIPMENT SCHEDULE
5. CADWELD CLAMP CONNECTED TO CONTROLLER GROUND WIRE
6. FILL INSIDE BASE WITH PEA GRAVEL
7. FINISHED GRADE
8. SUBGRADE COMPACTED TO 90% MDD PER ASTM D-1557

9. DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES. IN 2-WIRE SYSTEM, PLACE CABLES IN PVC ELECTRICAL CONDUIT.
10. ADDITIONAL PVC CONDUIT W/ SWEEP ELL – AS NEEDED (TRADITIONAL WIRING)
11. 2" PVC CONDUIT W/ SWEEP ELL – MAX. 40 14 AWG WIRES (TRADITIONAL WIRING)
12. 7/8" X 8' COPPER CLAD GROUND ROD INSTALL GROUNDING PER MANUFACTURER'S RECOMMENDATIONS.
13. 120 - VOLT SERVICE IN CONDUIT
14. 8 AWG BARE SOLID COPPER WIRE

NOTES:
1. GROUND ROD OR COPPER GROUND PLATE MIN. 8' AND 12' MAX. AWAY FROM CONTROLLER. REFER TO MANUFACTURER'S RECOMMENDATION FOR GROUNDING EQUIPMENT SIZE AND INSTALLATION.
2. GROUNDING RESISTANCE SHOULD BE MEASURED AT 10 OHMS OR LESS. IF GREATER THAN 10 OHMS, A SECOND GROUNDING ROD OR PLATE MAY BE REQUIRED.
3. IN TWO-WIRE SYSTEMS BOTH THE COMMON WIRE AND THE CONTROL WIRE ARE COMBINED INTO A SINGLE 2-WIRE CABLE.
4. QUICKPAD MAY BE REPLACED WITH 6" THICK CONCRETE PAD. CONCRETE PAD DIMENSIONS SHALL BE 6" LARGER ON ALL SIDES THAN THE FOOTPRINT OF CONTROL BOX.
NOTES:

1. ALL FITTINGS SHALL BE BRASS. FITTINGS ON THE DOWNSTREAM SIDE OF THE BACKFLOW PREVENTER SHALL MIRROR THOSE ON THE UPSTREAM SIDE.

2. FLANGED BACKFLOW PREVENTERS (REGARDLESS OF SIZE) DO NOT REQUIRE UNIONS.
1. Fibrelyte composite irrigation box or approved equal in concrete only. Standard 10" green plastic box in landscape areas.

2. Finished grade – paved area

3. Sch. 40 PVC sleeve (see irrigation plans for size)

4. 4"x4" treated timber frame

5. 2' excess coiled wire


7. Sweep ell (typ.)

8. 3M DBR/Y dry connection splice if required
1. 18" JUMBO GREEN PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUIVALENT)
2. FLUSH WITH PLANTING BED FINISH SURFACE
3. PLANTING BED MULCH – SEE PLANTING PLANS FOR DEPTH AND MATERIAL
4. FINISHED GRADE
5. TO PVC SUPPLY HEADER
6. 4"x4" TREATED TIMBER FRAME
7. 4" MIN. ¾" SEWER ROCK
8. ACTION UNION – PART 18010-XX, PART 18011-XX, PART 18012
9. INLINE PRESSURE REGULATOR
10. ELECTRIC CONTROL VALVE – SEE IRRIGATION EQUIPMENT SCHEDULE
11. 4" MIN. CLEARANCE
12. (2) 3M DBR/Y WATER TIGHT WIRE CONNECTORS. COIL SPARE WIRE 2’
13. INLINE FILTER
14. PLASTIC PVC BALL VALVE (LINE SIZE)
15. FLOW FROM PVC MAIN LINE
16. 2" FROM BOTTOM OF VALVE BOX LID TO TALLEST HARDWARE INSIDE
**SECTION VIEW**

1. 1 1/2" PVC HEADER
2. NETAFLIX PVC CONNECTION
3. PLANTING BED FINISHED GRADE
4. DRIPLINE / BLANK TUBING
5. WEED BARRIER FABRIC
6. ELBOW
7. CROSS
8. TEE

**PLAN VIEW**

1. 1 1/2" PVC HEADER
2. NETAFLIX PVC CONNECTION
3. PLANTING BED FINISHED GRADE
4. DRIPLINE / BLANK TUBING
5. WEED BARRIER FABRIC
6. ELBOW
7. CROSS
8. TEE
1. **FINISHED GRADE**

2. **BARK MULCH 3" DEPTH**

3. **COMBINATION TEE INS X INS X 3/4" FPT MODEL: TL075FTE**

4. **TECHLINE CV DRIPLINE (SEE PLANS FOR EMMITER SIZE AND SPACING)**

5. **3/4" PVC MPT THREADED TOE NIPPLE RISER**

6. **LASCO UNITIZED SWING JOINT OR SPEARS SWING JOINT RISER ASSEMBLY; 6" IN LENGTH**

7. **PVC SCHEDULE 40 SXSXT TEE**

8. **PVC LATERAL LINE, SIZE AS NOTED ON PLAN**

9. **SWING JOINT ARM INSTALLED AT ANGLE BETWEEN 20 AND 45 DEG. OF LATERAL PIPE**
1. FINISHED GRADE
2. BARK MULCH 3" DEPTH
3. COMBINATION TEE INS X INS X 3/4" FPT MODEL TL075FTEE
4. TECHLINE CV DRIPLINE (SEE PLANS FOR EMITTER SIZE AND SPACING)
5. 3/4" PVC MPT THREADED TOE NIPPLE RISER
6. LASCO UNITIZED SWING JOINT OR SPEARS SWING JOINT RISER ASSEMBLY; 6" IN LENGTH
7. PVC SCHEDULE 40 SXSXT TEE
8. PVC LATERAL LINE, SIZE AS NOTED ON PLAN
9. SWING JOINT ARM INSTALLED AT ANGLE BETWEEN 20 AND 45 DEG. OF LATERAL PIPE
HERRIMAN CITY ENGINEERING DEPARTMENT
IRRIGATION IR-09 DRIPLINE CIRCUIT LAYOUT

NOTE: ON SLOPES, ALIGN DRIPLINE PARALLEL TO THE CONTOURS OF THE SLOPE.
1. Manual Flush Valve Plumbed to PVC in Lowest Point
2. Netafim TLI PVC Connector
3. 1 1/2" PVC Exhaust Header
4. 1 1/2" PVC Supply Header
5. Remote Control Valve Assembly
6. Area Perimeter
7. Drip Line Tubing Lateral
8. Perimeter Drip Line Tubing Laterals 2" to 4" From Edge
9. Drip Line Tee

Herriman City Engineering Department
Irrigation
Inline Drip Layouts
1 DRIPLINE TUBING – ATTACH TO HEADERS USING INSERT ADAPTOR W/ GROMMET*

2 DRIP FLUSH VALVE**

3 1 1/2” EXHAUST HEADER

4 1 1/2” SUPPLY HEADER

5 TREE CENTER

6 LATERAL LINE SUPPLY

NOTES:
* NETAFIM #TLAPVC-B
**LOCATE DRAINS AT END OF HEADERS WHICH ARE THE LOWEST POINT OF TREE RING.

SPACE DRIPLINE TUBING 12” FROM TRUNK WITH ADDITIONAL TUBING RINGS 18” APART.
1. DRIPLINE TUBING – ATTACH TO HEADERS USING INSERT ADAPTOR W/ GROMMET*

2. DRIP FLUSH VALVE**

3. 1 1/2" EXHAUST HEADER

4. 1 1/2" SUPPLY HEADER

5. TREE CENTER

6. LATERAL LINE SUPPLY

7. FUTURE DRIPLINE TUBING – ATTACH TO STUBBED TUBING

8. STUBBED TUBING WITH INSERT COUPLING ON END FOR FUTURE EXPANSION (TYP). FOLD AND CLAMP TUBING CLOSED. STUBBED TUBING SHALL LE ON FINISHED GRADE. (SEE STUBBED TUBING SECTION DETAIL FOR MORE INFORMATION)

NOTES:

* NETAFIM #TLA PVC-B

** LOCATE DRAINS AT END OF HEADERS WHICH ARE THE LOWEST POINT OF TREE RING

SPACE DRIPLINE TUBING 12" FROM TRUNK WITH ADDITIONAL TUBING RINGS 18" APART.
1. 1½" PVC SUPPLY HEADER
2. TIAPVC CONNECTION
3. PLANTING BED FINISHED GRADE
4. DRIPLINE / BLANK TUBING
5. WEED BARRIER FABRIC (IF USED)
6. EXHAUST HEADER
7. NETAHIM FIGURE 8 LINE END ADAPTER - MODEL TLF18
8. MULCH - SEE PLANTING PLAN
1. **Netfim Dripline (Typ)**
   TDL-4-12 (18) Tree Ring
2. **Tree Trunk**
3. **Insert Tee (Typ) Model:** TLTEE
4. **Insert Cross (Typ) Model:** TLCROS
5. **Netfim Dripline (Typ)**
   TDL-4-12 (18) Shrub Area
1. REMOTE CONTROL VALVE WITH DISC FILTER AND PRESSURE REGULATING VALVE
2. COMBINATION TEE INS x INS x 3/4" FPT MODEL: TL075FTEE
3. ROW SPACING - PER PLANS (TYP.)
4. TECHLINE CV DRIPLINE (SEE PLANS FOR EMMITER SIZE AND SPACING)
5. INSERT TEE (TYP) MODEL: TLTEE
6. 3/4" PVC THREADED TOE NIPPLE RISER
7. BLANK TECHLINE CV TUBING
8. MANUAL FLUSH VALVE PLUMBED TO TECHLINE CV
1. PLANTING BED MULCH - SEE PLANTING NOTES FOR DEPTH AND TYPE

2. 8" ROUND GREEN PLASTIC VALVE BOX (CARSON OR APPROVED EQUAL) FLUSH WITH MULCH GRADE

3. FINISHED GRADE

4. PVC REDUCER BUSHING (SP X 1/2") FIPT - SIZE AS REQUIRED

5. PVC EXHAUST HEADER

6. 4"X4" TREATED TIMBER FRAME

7. 1 C.F. 3/4" CRUSHED SEWER GRAVEL

8. PLASTIC PVC BALL VALVE

9. 1/2 X 6 (SCH. 80 PVC) NIPPLE TBE
1. FINISH GRADE
2. 8" ROUND GREEN PLASTIC VALVE BOX (CARSON OR APPROVED EQUAL)
3. MANUAL LINE FLUSHING VALVE, NETAIFM MODEL: TL50V
4. TECLINE CV 17mm TUBING
5. 4"x4" TREATED TIMBER FRAME
6. 1 C.F. 3/4" CRUSHED SEWER ROCK
1. INLINE FILTER – SEE IRRIGATION EQUIPMENT SCHEDULE
2. GALVANIZED THREADED NIPPLE (LENGTH AS REQUIRED)
3. FILTER ENCLOSURE – SEE IRRIGATION EQUIPMENT SCHEDULE
4. FINISHED GRADE
5. CONCRETE THRUST BLOCK (TYP). WRAP PIPES W/ 10 MIL TAPE. CAST AGAINST UNDISTURBED SOIL.
6. FEMALE THREADED GALVANIZED 90 DEGREE ELL
7. FULL PORT APOLLO BALL VALVE
8. BACKFLUSH EXHAUST PIPE TO NEAREST STORM DRAIN BOX OR STORMWATER STRUCTURE – DEPENDING ON PROJECT REQUIREMENTS
9. 6" MIN.
10. 12" MIN.
11. THREADED ACTION UNION
12. 4" UBC COMPACTED TO 95% MDD PER ASTM D-1557

HERRIMAN CITY ENGINEERING DEPARTMENT LANDSCAPE 2" AND SMALLER FILTER ASSEMBLY
1. BACKFILL MATERIAL – SEE NOTES, COMPACT TO 90% MOD PER ASTM D-1557
2. ADJACENT HARD SURFACE
3. NON-PRESSURE LATERAL LINE
4. MAIN LINE LOCATOR WIRE; BURIED WITH ALL MAIN LINES
5. PVC MAIN LINE
6. DIRECT BURIAL, LOW VOLTAGE CONTROL WIRES; TO BE INSTALLED IN ELECTRICAL CONDUIT. LOCATE DIRECTLY ADJACENT TO MAIN LINE.
7. BEDDING MATERIAL – SEE LANDSCAPE PLANS
8. PIPE DEPTHS – SEE IRRIGATION SPECIFICATIONS

NOTE: SEE SLEEving DETAIL FOR TRENCHING IN PAVED AREAS.
**HARDSCAPE SURFACE** - SEE PLANS

**BACKFILL MATERIAL** - SEE PLANS AND HERRIMAN CITY SPECIFICATIONS

**LATERAL LINE WITH SLEEVE**

**PVC MAIN LINE AND LOCATOR WIRE WITH SLEEVE**

**CONTROL WIRE SLEEVE** - SEE CHART BELOW FOR SIZE

**BEDDING MATERIAL** - SEE NOTES

**MIN. COVER - 12" UNDER WALKS AND 18" UNDER STREETS**

**NOTES:**

1. SLEEVES 4" AND SMALLER USE PVC SCHEDULE 40 PIPE.
2. SLEEVES LARGER THAN 4" USE PVC CLASS 200.
3. ALL SLEEVES SHALL BE TWO (2) TIMES LARGER THAN THE DIAMETER OF THE PIPE BEING SLEEVED, UNLESS NOTED OTHERWISE ON THE PLANS.
4. INSTALL SLEEVES AT A DEPTH SUFFICIENT TO AVOID CONFLICT WITH OTHER UTILITIES AND MAINS.
5. WIRES SHALL BE IN SEPARATE CONDUIT.
6. REFER TO SLEEVING DIAGRAM FOR SIZES OF ALL SLEEVES.
7. EXTEND ALL SLEEVING 12" MIN. BEYOND EDGE OF PAVING.
1. **POP-UP ROTOR SPRINKLER** - SEE IRRIGATION EQUIPMENT SCHEDULE

2. **TOP OF SPRINKLER WILL BE FLUSH WITH FINISHED GRADE**

3. **NOTE:** ALL SPRAY HEADS ADJACENT TO HARDSCAPE SHALL BE LOCATED 2" CLEAR OF ALL HARDSCAPE EDGES

4. **LASCO UNITIZED SWING JOINT OR SPEARS SWING JOINT RISER ASSEMBLY; MIN. LENGTH - SIZE AS REQUIRED**

5. **PVC SCHEDULE 40 SXSXT TEE OR ELL**

6. **PVC LATERAL LINE, SIZE AS NOTED ON PLAN**

7. **SWING JOINT ARM INSTALLED AT ANGLE BETWEEN 20 AND 45 DEG. OF LATERAL PIPE**

8. **DEPTH - SEE NOTES AND TRENCH DETAIL**
1. POP-UP SPRAY HEAD - SEE IRRIGATION EQUIPMENT SCHEDULE
2. TOP OF SPRINKLER WILL BE FLUSH WITH FINISHED GRADE
3. NOTE: ALL SPRAY HEADS ADJACENT TO HARDSCAPE SHALL BE LOCATED 2" CLEAR OF ALL HARDSCAPE EDGES
4. SWING PIPE ELL WITH SPIRAL BARB FITTING (TYP.)
5. MARLEX STREET ELL
6. FLEXIBLE SWING PIPE, 12" MIN., 36" MAX. LENGTH
7. PVC SCHEDULE 40 S X S X TEE (OR ELL)
8. PVC LATERAL LINE, SIZE AS NOTED ON PLAN
9. DEPTH - SEE NOTES AND TRENCH DETAIL
NOTE:
SPACING SHOWN IS FOR 5' MOW STRIP. VARY SPACING ACCORDINGLY FOR OTHER STREETScape WIDTHS.

NEW RAINBIRD SST-PC POP-UP SPRAY HEAD
NEW RAINBIRD EST-PC POP-UP SPRAY HEAD

NOTES:
1. HEADS ALTERNATING TO FORM TRIANGLE SPACING.
2. DRAWING NOT TO SCALE.
3. MAIN LINE AND LATERALS ARE TO BE LOCATED ON SIDEWALK SIDE OF PARK STRIP.
DETAIL NOTES:
1. FIGURE (100%) AT THRUST BLOCK INDICATES PERCENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA OF 2,000 P.S.F.
2. ARROW (→) INDICATES THRUST DIRECTION.
3. CONCRETE FOR THRUST BLOCKS TO BE 2,000 P.S.I.
4. ALL MJ AND FLANGED FITTINGS TO BE WRAPPED WITH POLYETHYLENE WRAP PRIOR TO POURING THRUST BLOCK.
5. CONTROL WIRE SHALL BE KEPT OUT OF THE CONCRETE THRUST BLOCKS.
6. ALL MAIN LINE FITTINGS THREE (3") INCHES AND LARGER, WHETHER DUCTILE IRON OR SOLVENT WELD, SHALL BE THRUST BLOCKED.

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<th>PIPE SIZE</th>
<th>DEAD END OR TEE</th>
<th>90° ELBOW</th>
<th>45° ELBOW</th>
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NOTE: RESTRAINT SIZING IS BASED UPON A MAXIMUM OPERATING PRESSURE OF 150 PSI AND A TEST PRESSURE OF 200 PSI, AND A MINIMUM SOIL BEARING STRENGTH OF 2,000 PSF. OPERATING PRESSURES IN EXCESS OF 150 OR SOILS WITH LESS THAN 2,000 POUND BEARING STRENGTH WILL REQUIRE SPECIAL DESIGN.
NOTE:
1. ONLY ONE VALVE PER BOX.
2. PLACE BOXES A MINIMUM OF 2' APART.
3. USE BOX EXTENSIONS AS REQUIRED.

1. PVC LATERAL LINE
2. SCHEDULE 80 THREADED UNION
3. ACTION UNION - PART PART 18010-XX, PART 18011-XX, PART 18012-XX
4. 2" MIN. CLEARANCE
5. REMOTE CONTROL VALVE - SEE IRRIGATION EQUIPMENT SCHEDULE
6. 3" MIN. 6" MAX. CLEARANCE
7. PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUAL) SIZE AS PER VALVE SIZE: 1" VALVE = 18" STANDARD BOX; 1 1/2" - 2" VALVE = 18" JUMBO BOX
8. FINISHED GRADE
9. BRASS RESILIENT SEATED WEDGE GATE VALVE (MILWAUKEE OR APPROVED AMERICAN MADE BRASS) WITH HANDWHEEL AND NON-RISE STEM
10. PVC TOE NIPPLE
11. PVC SCHEDULE 80 ELL
12. PVC SCHEDULE 80 PIPE, SOLVENT WELDED - LENGTH AS REQUIRED
13. PVC SCHEDULE 80 TEE (OR ELL OR DUCTILE IRON SERVICE TEE)
14. PVC MAIN LINE
15. 4" MIN. PEA GRAVEL
16. WIRES TO CONTROLLER: INSTALL IN CONDUIT - SEE TRENCH DETAIL. USE SWEEP ELLS TO BRING WIRES TO VALVE BOX
17. 4"X4" TREATED TIMBER FRAME
18. PROVIDE 24" EXPANSION LOOP AT EACH WIRE CONNECTOR IN VALVE BOX
19. 3M DBR/Y ELECTRIC CONTROL WIRE CONNECTORS (TYP.)
20. DECODER - SEE IRRIGATION EQUIPMENT SCHEDULE
1. 18" JUMBO GREEN PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUAL)
2. 1" MAX. CLEARANCE
3. PLANTING BED MULCH - SEE PLANTING SPECIFICATIONS AND PLANS FOR DEPTH AND TYPE
4. FINISHED GRADE
5. PVC SUPPLY HEADER
6. 4"X4" TREATED TIMBER FRAME
7. 4" MIN. PEA GRAVEL
8. THREADED ACTION UNION (TYP.)
9. INLINE PRESSURE REGULATOR
10. ELECTRIC CONTROL VALVE - SEE IRRIGATION EQUIPMENT SCHEDULE
11. 2" MIN. CLEARANCE
12. (4) 3M DBR/Y WATER TIGHT WIRE CONNECTORS
13. INLINE 1" FILTER
14. PLASTIC PVC BALL VALVE
15. FLOW FROM PVC MAIN LINE
16. TWO-WIRE CONTROL WIRE; INSTALL IN CONDUIT - SEE TRENCH DETAIL. USE SWEEP ELLS TO BRING WIRE INTO VALVE BOX
17. DECODER - SEE IRRIGATION EQUIPMENT SCHEDULE
NOTES:
VALVE BOXES SHALL HAVE A MINIMUM SPACING OF 2'. INSTALL DECODERS PER MANUFACTURE'S RECOMMENDATIONS.

1. SINGLE (1) VALVE DECODER – SEE IRRIGATION EQUIPMENT SCHEDULE
2. DOUBLE (2) VALVE DECODER – SEE IRRIGATION EQUIPMENT SCHEDULE
3. QUADRUPLE (4) VALVE DECODER – SEE IRRIGATION EQUIPMENT SCHEDULE
4. TWO WIRE COMMUNICATION WIRE TO CONTROLLER
5. MAIN LINE
6. MAIN LINE STUB TO CONTROL VALVE
7. CONTROL VALVE – SEE IRRIGATION EQUIPMENT SCHEDULE AND CONTROL VALVE DETAIL
8. LATERAL TO HEADS
9. VALVE BOX – SEE CONTROL VALVE DETAIL
10. 3M DBR/Y WATER TIGHT WIRE CONNECTORS (TYP.)
1. FINISHED GRADE

2. 8" ROUND GREEN PLASTIC VALVE BOX WITH BOLT LOCK (CARSON OR APPROVED EQUAL)

3. 3M DBR/Y ELECTRIC CONTROL WIRE CONNECTORS (TYP.)

4. DECODER – SEE IRRIGATION EQUIPMENT SCHEDULE

5. MIN. 10' FROM TWO-WIRE

6. 5/8" DIA. X 8' LENGTH COPPER GROUND ROD

7. 4" MIN. PEA GRAVEL

8. TWO WIRE TO CONTROLLER

9. 24" MIN. EXPANSION LOOP AT EACH WIRE SPLICE ON TWO WIRE
NOTE:
1. ONLY ONE VALVE PER BOX.
2. PLACE BOXES A MINIMUM OF 2' APART.
3. USE BOX EXTENSIONS AS REQUIRED.
4. ALL FITTINGS AND NIPPLES IN MANIFOLD SHALL BE SCHEDULE 80 THREADED PVC USING TEFLOM TAPE AND #5 RECTOR SEAL.
5. VALVE MANIFOLD TO BE INSTALLED PERPENDICULAR (90 DEGREES) TO MAIN LINE MIN. OF 1' BEFORE CHANGE IN DIRECTION.

1. CARSON-BROOKS 1419-12 STANDARD OR JUMBO VALVE BOX WITH STAINLESS STEEL BOLTS. (BOLT DOWN LID). (MUST BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION)
2. INSTALL AT GRADE
3. MAIN WATER SUPPLY LINE
4. PVC SCHEDULE 80 T X T ELBOW
5. PVC SCHEDULE 80 NIPPLE; LENGTH AS REQUIRED (TYP.)
6. PVC SCHEDULE 80 T X T ELBOW SAME SIZE AS VALVE
7. PVC SCHEDULE 80 NIPPLE ON EITHER SIDE OF GATE VALVE
8. BRASS GATE VALVE WITH NON RISING STEM (LINE SIZE)
9. ELECTRIC CONTROL VALVE - SEE EQUIPMENT SCHEDULE
10. SCHEDULE 80 NIPPLE ON EITHER SIDE OF THE UNION
11. PVC SCHEDULE 80 UNION
12. WATER TIGHT CONNECTORS (3M DBR/Y ONLY)
13. PROVIDE 18" EXPANSION LOOP AT EACH WIRE CONNECTOR IN BOX
14. SCHEDULE 80 ELBOW WITH SCHEDULE 80 NIPPLE INTO T X T BUSHING TO LATERAL
15. LATERAL LINE
16. CONTROL WIRES & SPARE WIRES, INSTALL IN CONDUIT - SEE TRENCH DETAIL. USE SWEEP ELLS TO BRING WIRE INTO VALVE BOX.
17. 6" MIN. DEPTH CLEAN PEA GRAVEL
18. THREADED NIPPLE WITH BUSHING OR FEMALE ADAPTER
19. PVC SCHEDULE 80 TEE 5 X 5 X 5 WITH SCHEDULE 80 SXT BUSHING OR DOUBLE STRAP SADDLE OR HARCO SERVICE TEE
20. 4"X4" TREATED TIMBER FRAME
1. 10" ROUND PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUAL, MARKED "G.V." IN 2" WHITE LETTERS)

2. FINISHED GRADE

3. 3" MIN. CLEARANCE

4. 4" PVC SCHEDULE 40 PIPE SLEEVE (NOTCH TO FIT PIPE), CAPPED BY GREEN CAM LOCK SNUG CAP

5. 3"-4" DEPTH CLEAN PEA GRAVEL

6. 4"X4" TREATED TIMBER FRAME

7. PVC MAIN LINE

8. FLANGED GATE VALVE – SEE IRRIGATION EQUIPMENT SCHEDULE

9. PVC FLANGE ADAPTOR (TYP.)

10. 2" SQUARE OPERATING NUT
1. 10" ROUND PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUAL MARKED "G.V." IN 2" WHITE LETTERS).

2. FINISHED GRADE

3. 3" MIN. CLEARANCE

4. 4" PVC SCHEDULE 40 PIPE SLEEVE (NOTCH TO FIT PIPE), CAPPED BY CAM LOCK SNUG CAP

5. 3"-4" DEPTH CLEAN PEA GRAVEL

6. 4"X4" TREATED TIMBER FRAME

7. PVC MAIN LINE

8. GATE VALVE – SEE IRRIGATION EQUIPMENT SCHEDULE

9. 2" SQUARE OPERATING NUT
10" ROUND GREEN PLASTIC VALVE BOX WITH BOLT LOCK (CARSON OR APPROVED EQUAL)
2 4" PVC SCHEDULE 40 PIPE SLEEVE (NOTCH TO FIT PIPE), CAPPED BY YELLOW CAM LOCK SNUG CAP
3 FINISHED GRADE
4 3" MIN. 6" MAX. CLEARANCE
5 4" MIN. PEA GRAVEL
6 4"X4" TREATED TIMBER FRAME
7 3/4" VALVE - SEE IRRIGATION EQUIPMENT SCHEDULE
8 3/4" 90 DEGREE STREET ELL
9 FILTER FABRIC COVERING SUMP
10 3/4" X 6" PVC SCHEDULE 80 TOE NIPPLE
11 3/4" CRUSHED SEWER ROCK - 6 C.F. MIN. SIZE
12 3/4" X 12" PVC SCHEDULE 80 NIPPLE
13 (2) FIPT X FIPT 90 DEGREE ELL, (2) 3/4" X CLOSE PVC NIPPLE
14 PVC MAIN LINE AND SERVICE TEE

NOTE: MAIN LINE SHALL GRAVITY DRAIN TO MANUAL DRAIN VALVE. MANUAL DRAIN VALVE SHALL BE PLACED IN ALL LOW SPOTS AND WHERE SHOWN ON THE PLAN.
1. **Finish Grade**
2. Valve ID tag with "MV" printed on it
3. Master valve wires from solenoid (included)
4. Pair of wires, color coded different than other valves. Refer to controller specs
5. 1 1/2" SCH 40 conduit from controller per specs. Pull boxes every 200' and on each side of hardscape areas.
6. PVC mainline piping per irrigation specs (Plan size)
7. Filter fabric per specs
8. 4"x4" treated timber frame
9. Jumbo valve box (with extension(s) per specs).
10. Pressure reducing pilot
12. Shielded flow sensor wires to controller (per controller specs).
13. Hydrometer - see Irrigation Schedule
14. SCH. 80 PVC MIPT adaptor size per valve and mainline piping (2 required)
15. Drainage nut for winterization (included).
16. Concrete paver support block.
17. Compacted 3/4" crushed sewer rock, 12" thick min.
18. Native soil compacted to 90% MDD per ASTM D-1557
1. FINISH GRADE
2. 4"x4" TREATED TIMBER FRAME
3. 10" ROUND GREEN PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUAL)
4. APPROVED BACKFILL
5. QUICK COUPLER KEY
6. QUICK COUPLER HOSE SWIVEL
7. QUICK COUPLER VALVE (SEE IRRIGATION EQUIPMENT SCHEDULE)
8. LASCO STANDARD UNITIZED SWING JOINT, WITH SNAP-LOK STABILIZER ELBOW OUTLET. NOTE: INLET IS MPT, OUTLET IS BRASS MPT W/ SNAP-LOK
9. ½" OR ⅜" X 24" REBAR (2) REQUIRED
10. MAINLINE PIPE, PVC - SEE IRRIGATION PLAN
11. 1" PVC PIPE STABILIZER (OPTIONAL)
12. SERVICE TEE OR ELBOW, SCH. 40 (SIZE PER PLAN), SIZE TEE/ELBOW FIPT OUTLET BASED ON MIPT INLET SIZE OF THE SWING JOINT
13. 3-4" 3/4" CRUSHED SEWER ROCK
## Equipment Sizing Table

<table>
<thead>
<tr>
<th>City Meter Size</th>
<th>Shut Off Size</th>
<th>Initial Main Line Size</th>
<th>EPA Size</th>
<th>Master Valve/Flow Meter Size</th>
<th>Master Valve/Flow Meter Device</th>
<th>Maximum Area of Coverage (8 hr. Water Window)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>1&quot;</td>
<td>1 1/2&quot;</td>
<td>1&quot;</td>
<td>2&quot;</td>
<td>1 1/2&quot; Hydrometer</td>
<td>Up to 20,000 sq/ft</td>
</tr>
<tr>
<td>2&quot;</td>
<td>2&quot;</td>
<td>2&quot;</td>
<td>1 1/2&quot;</td>
<td>2&quot;</td>
<td>1 1/2&quot; Hydrometer</td>
<td>Up to 50,000 sq/ft</td>
</tr>
<tr>
<td>4&quot;</td>
<td>4&quot;</td>
<td>4&quot;</td>
<td>3&quot;</td>
<td>4&quot;</td>
<td>3&quot; Hydrometer</td>
<td>Up to 115,000 sq/ft</td>
</tr>
<tr>
<td>6&quot;</td>
<td>6&quot;</td>
<td>6&quot;</td>
<td>6&quot;</td>
<td>6&quot;</td>
<td>4&quot; Hydrometer</td>
<td>Up to 185,000 sq/ft</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Up to 300,000 sq/ft</td>
</tr>
</tbody>
</table>

## Notes:

1. Minimum main line size acceptable on any irrigation system is 1".
2. This chart assumes a single POC per irrigation system.
3. Stop & waste valves shall not be allowed or accepted by Herriman City for design or construction.
4. For areas over 450,000 sq/ft or 10.3 acres, consult with Herriman City Parks, water & engineering to determine proper equipment sizing.
1. SECONDARY WATER SOURCE FROM FILTER
2. CULINARY SOURCE FROM BACKFLOW DEVICE
3. PVC TOE NIPPLE
4. THREAD NIPPLE
5. CAMLOCK MALE ADAPTER
6. CAMLOCK COUPLER
7. BRASS BALL OR GATE VALVE
8. CAMLOCK CAP
9. 200 PSI RED WATER HOSE
10. HOSE TO HYDROMETER

NOTES:
PLACE ASSEMBLY IN LARGE POLYCRETE CARSON VAULT. VAULT MUST BE LARGE ENOUGH TO ALLOW FOR CLEARANCE AROUND ALL VALVES AND CAMLOCKS, AND SWING OF HOSE FROM ONE SUPPLY TO ANOTHER. CITY MUST APPROVE VAULT PRIOR TO INSTALL.
<table>
<thead>
<tr>
<th>EQUIPMENT TYPE</th>
<th>DESCRIPTION</th>
<th>MANUFACTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Line (≥6&quot;)</td>
<td>PVC CL. 200 gasketed bell end</td>
<td></td>
</tr>
<tr>
<td>Main Line (≤4&quot;)</td>
<td>PVC SCH. 40 solvent weld</td>
<td></td>
</tr>
<tr>
<td>Main Line Fittings (≥6&quot;)</td>
<td>Mechanical Joint (M.J.) or Deep Bell push-on gasketed ductile iron</td>
<td>Harco or Leemco</td>
</tr>
<tr>
<td>Main Line Fittings (≤4&quot;)</td>
<td>PVC SCH. 80 solvent weld</td>
<td></td>
</tr>
<tr>
<td>Lateral Line</td>
<td>PVC SCH. 40 solvent weld</td>
<td></td>
</tr>
<tr>
<td>Lateral Line Fittings (all)</td>
<td>PVC SCH. 40 solvent weld (buried); PCV SCH. 80 solvent weld (exposed)</td>
<td></td>
</tr>
<tr>
<td>Master Valve</td>
<td>Hydrometer</td>
<td>Netafim</td>
</tr>
<tr>
<td>Isolation Gate Valve (line size)</td>
<td>Cast or Ductile Iron, resilient wedge, non-rising stem, 2&quot; square operating nut, fusion bonded epoxy</td>
<td>Matco, Nibco, Mueller, Milwaukee</td>
</tr>
<tr>
<td>Electric Remote Control Valve</td>
<td>Commercial grade, industrial strength glass-filled nylon globe valve</td>
<td>Rain Bird PEB and PESB Series</td>
</tr>
<tr>
<td>Drip Valve Assembly</td>
<td>Low volume control zone kit with valve, filter, and pressure regulator</td>
<td>Netafim or Rain Bird</td>
</tr>
<tr>
<td>Quick Coupling Valve</td>
<td>1&quot; locking rubber cover, 2-piece body</td>
<td>Rain Bird 44-LRC</td>
</tr>
<tr>
<td>Manual Drain Valve (main line)</td>
<td>3/4&quot; bronze irrigation ball valve, 2-piece, body, weld top</td>
<td>Apollo, No. 78-621-01</td>
</tr>
<tr>
<td>Manual Drain Valve (drip)</td>
<td>1/2&quot; PVC ball valve</td>
<td>Netafim TLSOV</td>
</tr>
<tr>
<td>Backflow Preventer (≤2&quot;)</td>
<td>Reduced pressure backflow preventer</td>
<td>Wilkins / Zurn. No. 975XL Febco 825YA</td>
</tr>
<tr>
<td>Backflow Preventer (&gt;2&quot;)</td>
<td>Reduced pressure backflow preventer</td>
<td>Wilkins / Zurn. No. 375; Febco 880V</td>
</tr>
<tr>
<td>Backflow Enclosure</td>
<td>Aluminum, marine grade</td>
<td>Strongbox (size by backflow preventer assembly dimensions and requirements)</td>
</tr>
<tr>
<td>Automatic Filter (2&quot; - 4&quot;)</td>
<td>Plastic filter, automatic operation, battery operated</td>
<td>Amiad Mini Sigma Series</td>
</tr>
<tr>
<td>Automatic Filter (≥6&quot;)</td>
<td>Steel filter, automatic operation, hydraulic operation</td>
<td>Amiad Filtomat Series</td>
</tr>
<tr>
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