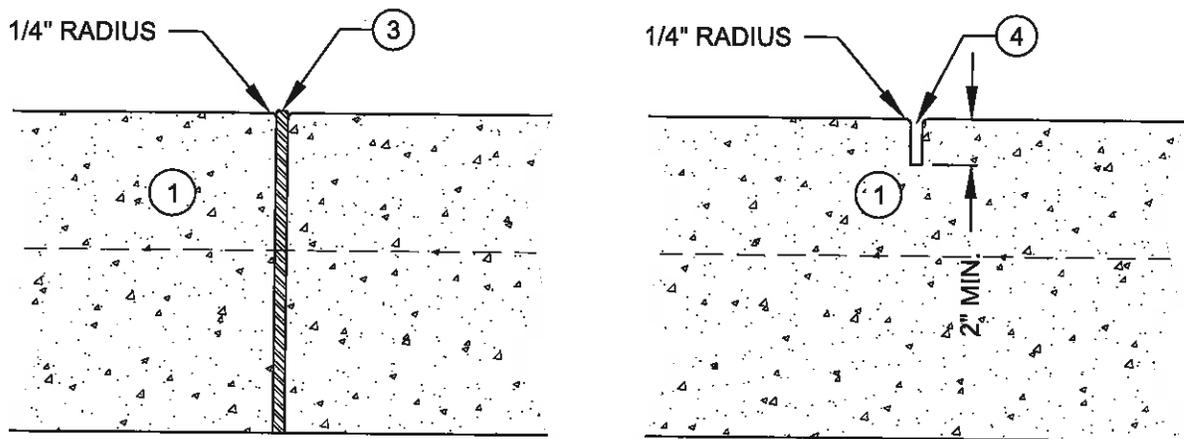
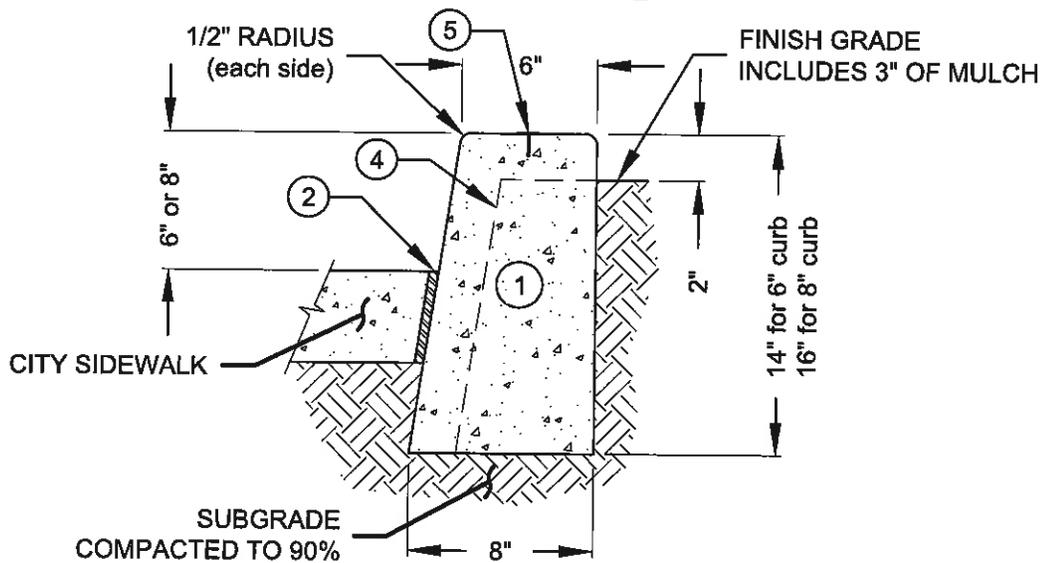

EXHIBIT "B"
CITY OF VICTORVILLE PUBLIC
WORKS DEPARTMENT
LANDSCAPING STANDARD
DETAILS



EXPANSION JOINT

CURB FACE VIEW

WEEKENED PLANE JOINT

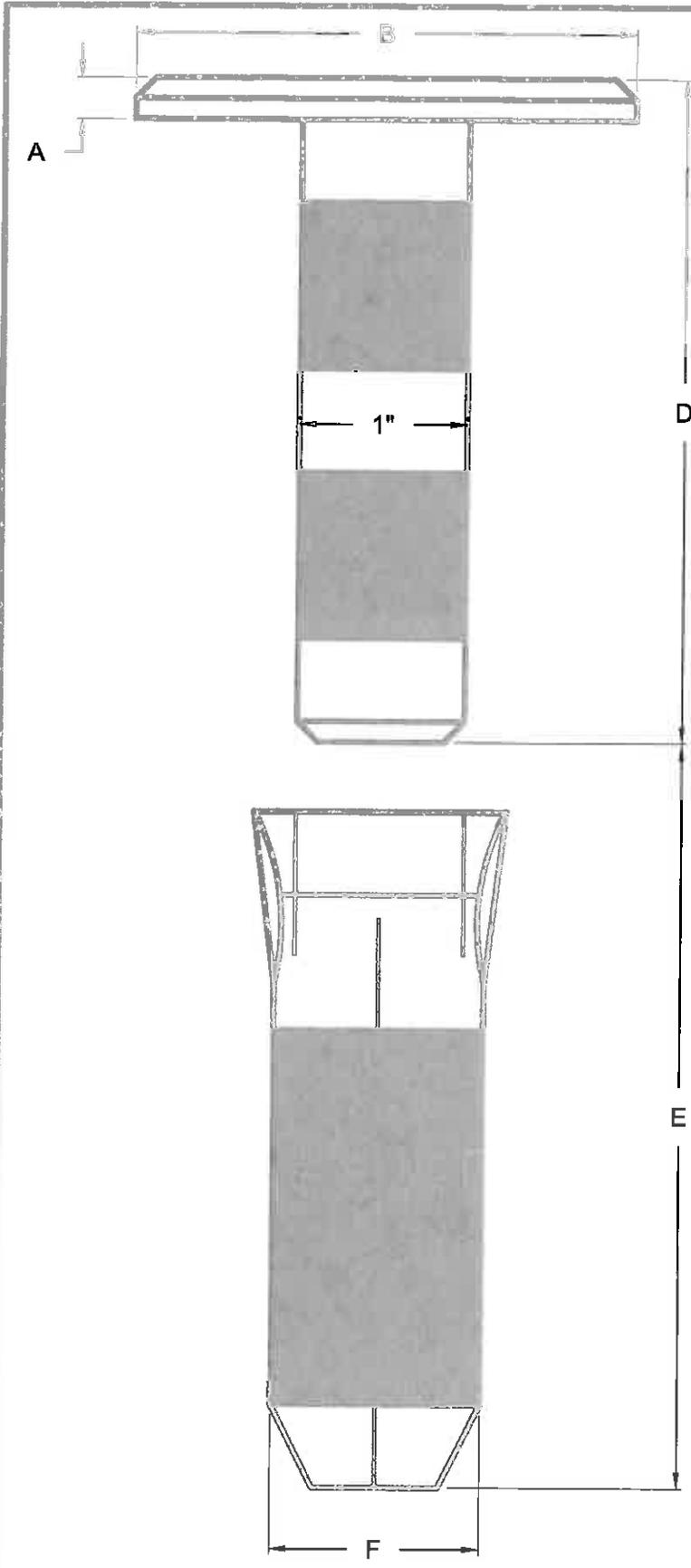


CROSS SECTION VIEW

- ① Planter curb constructed of cement concrete containing not less than 550 lbs. of type II portland cement per cubic yard, not less than 4% air entrainment, and 1" max. aggregate grading (min. 2800 psi @ 28 days). Medium broom finish on all exposed surfaces. Concrete to be cured with white pimented curing compound.
- ② Expansion joint with 3/16" fiber material where curb abuts any concrete improvement.
- ③ Weakened plane joints 2" deep at 10' intervals
- ④ 1/2" wide expansion joint filled with plastic type filler at 60' intervals
- ⑤ Location of utility marker per detail H-02

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	"A" CURB DETAIL	PAGE 1 STANDARD H-01
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	



- A = 1/8" (3 mm)
- B = 1 5/32" (30 mm)
- C = 21/64" (8 mm)
- D = 1 11/16" (43 mm)
- E = 1 7/16" (37 mm)
- F = 29/64" (12 mm)

NOTE: The location of the utility marker is to be as shown on standard H-01 and/or as directed by the City Engineer.

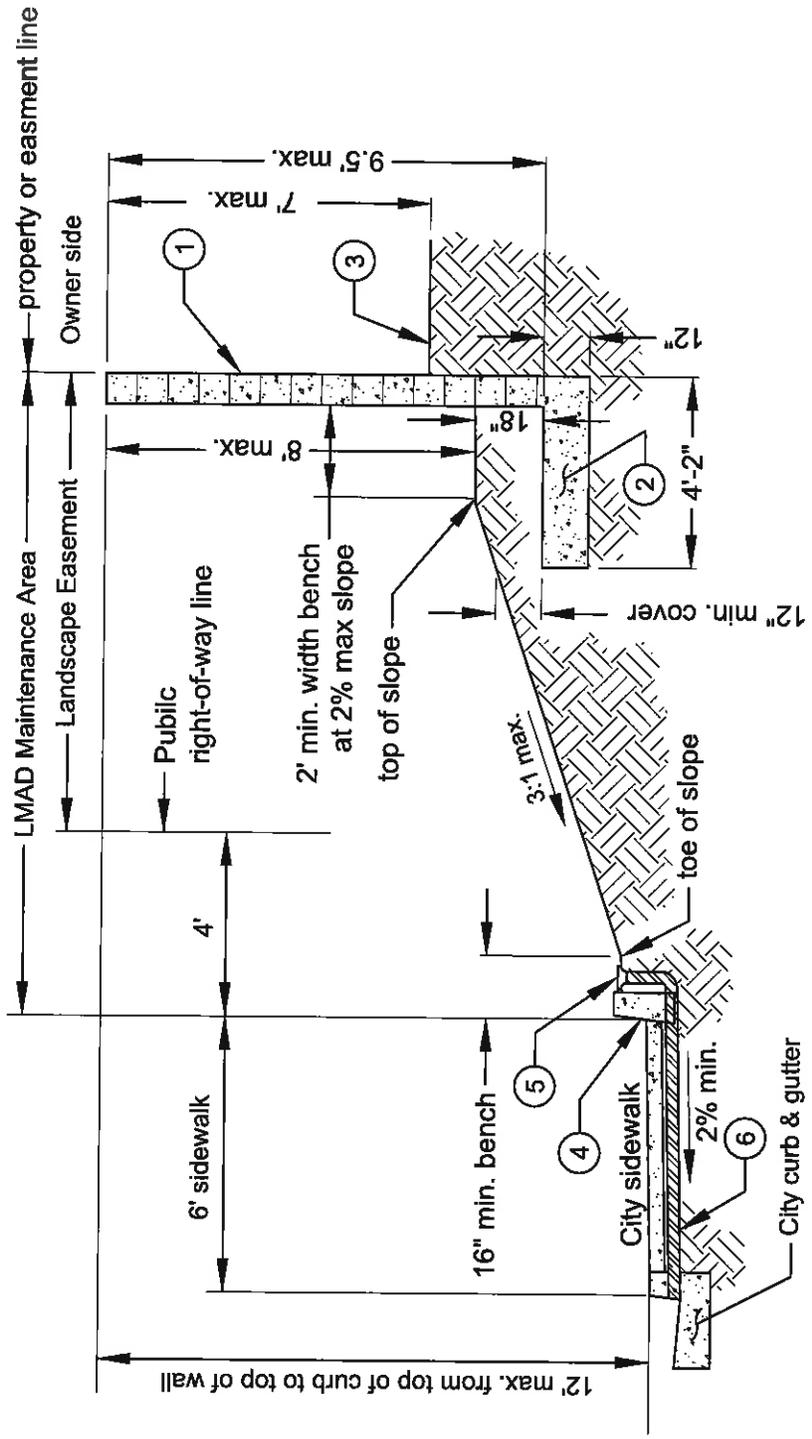
**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

11/30/2015
NOT TO SCALE

BP UTILITY MARKER WITH ANCHORING PLUG

PAGE 2
STANDARD
H-02

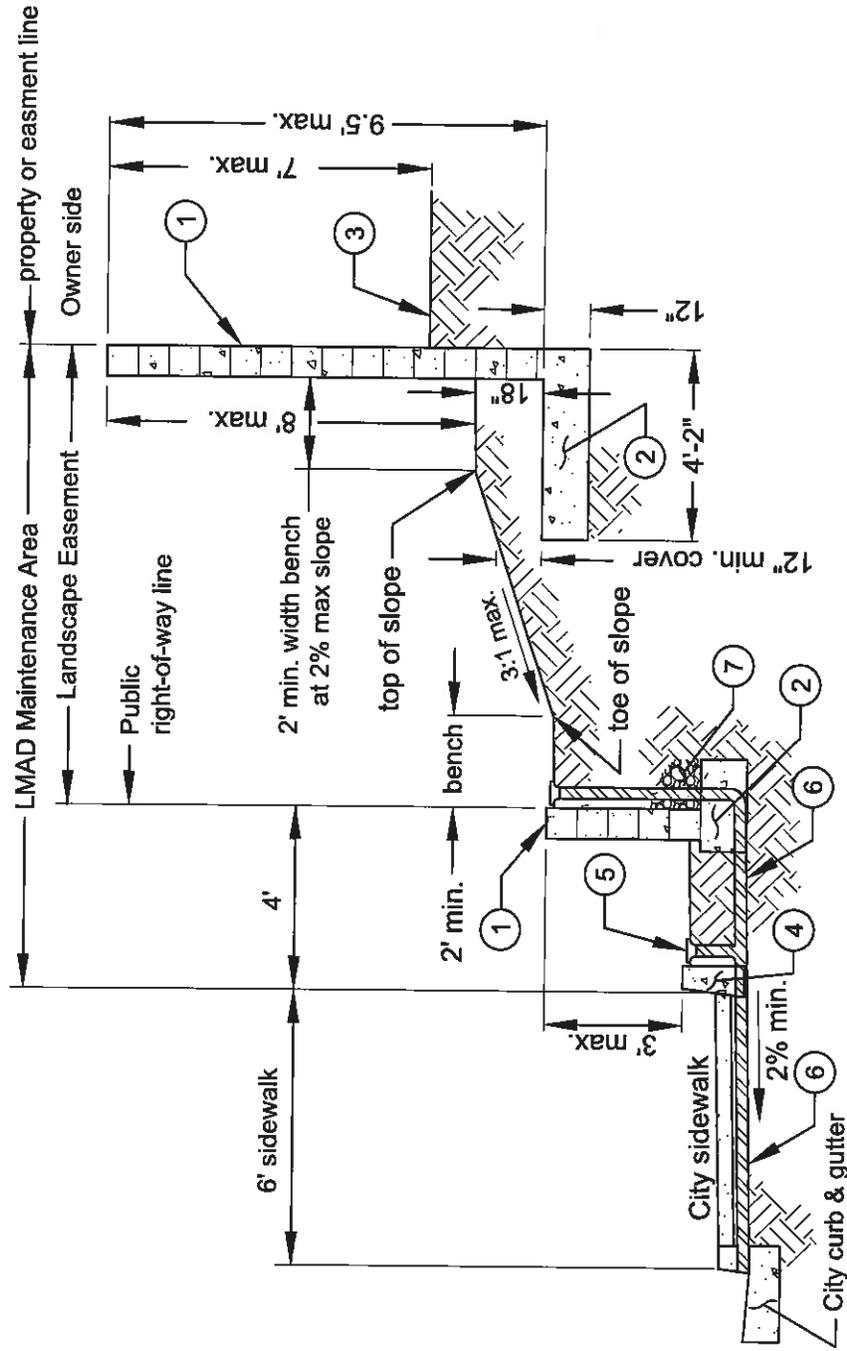
**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**



Note: All wall surface below ground shall be coated with waterproofing sealant - meet or exceed A.S.T.M. D449 type I

- ① 8" split face block wall per LMAD Detail H-04. All cells grout filled. Min. 6' high from finish grade of the higher side (owner or easement); Max. 8' high on street side; Max. 7' on property owner side.
- ② Footing per LMAD Standard Wall Detail H-04.
- ③ Finish surface per precise grading plans.
- ④ 6" curb per city standard drawing No. H-01 and S-09
- ⑤ Drain grate located within slope bench area, top of grate set 1" below top of curb or wall, (unless otherwise directed by City inspector). Finish grade to be 2" below curb (Finish grade includes 3" of mulch).
- ⑥ 3" Ø - sch. 40 PVC rigid drain at 2% grade min. every 100'- 150' max. (though curb as required)

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

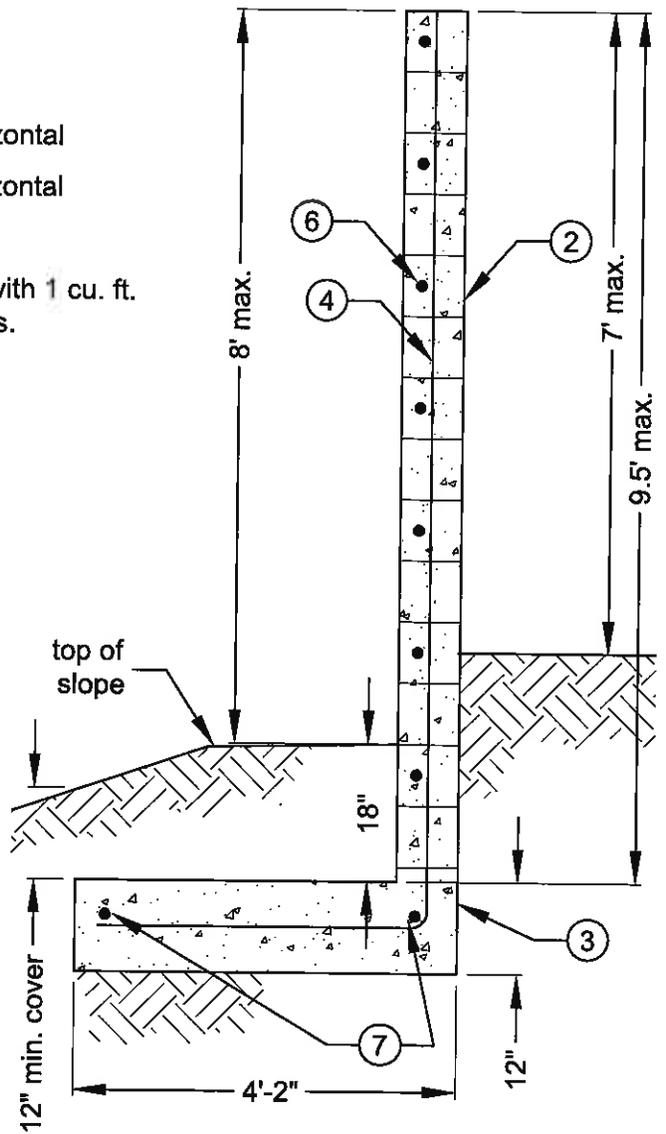
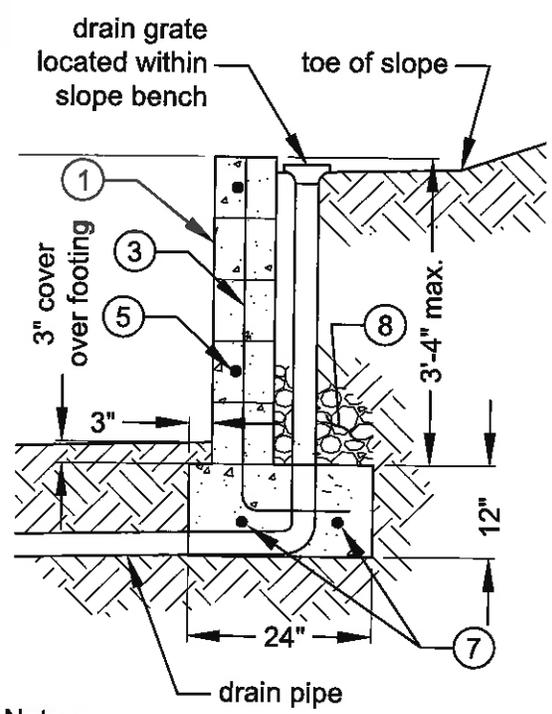


Note: All wall surface below ground shall be coated with waterproofing sealant - meet or exceed A.S.T.M. D449 type I

- ① 8" split face block wall per LMAD Detail H-04. All cells grout filled. Min. 6' high from finish grade of the higher side (owner or easement); Max. 8' high on street side; Max. 7' on property owner side.
- ② Footing per LMAD Standard Wall Detail H-04.
- ③ Finish surface per precise grading plans.
- ④ 6" curb per city standard drawing No. H-01 and S-09
- ⑤ Drain grate located within slope bench area, top of grate set 1" below top of curb or wall, (unless otherwise directed by City Inspector). Finish grade to be 2" below curb (Finish grade includes 3" of mulch).
- ⑥ 3" Ø - sch. 40 PVC rigid drain at 2% grade min. every 100'- 150' max. (though curb and footing as required)
- ⑦ Open head joints or 2" weep holes, with 1 cu. ft. pea gravel behind wall at 20' intervals on center.

- ① 6" or 8" CMU, solid grout in all cells
- ② 8" CMU, solid grout in all cells
- ③ #4 vertical and toe rebar @ 32" o.c.
- ④ #4 vertical and toe rebar @ 16" o.c.
- ⑤ #4 bond beam rebars @ 24" oc horizontal
- ⑥ #4 bond beam rebars @ 16" oc horizontal
- ⑦ #4 continuous rebar through footing.
- ⑧ Open head joints or 2" weep holes, with 1 cu. ft. pea gravel behind wall at 20' intervals.
- ⑨ concrete footing 2500 psi min.

All rebar splices shall be lapped 20" min.



Notes:

- All wall surface below ground shall be coated with waterproofing sealant - meet or exceed A.S.T.M. D449 Type I
- Any proposed modification to wall design or alternate design requires approval from City Building Division and Public Works Department.
- Drain grate must be located within slope bench area. Horizontal portion of drain at 2% from flowline of City curb & gutter requires pipe installation through wall footing.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

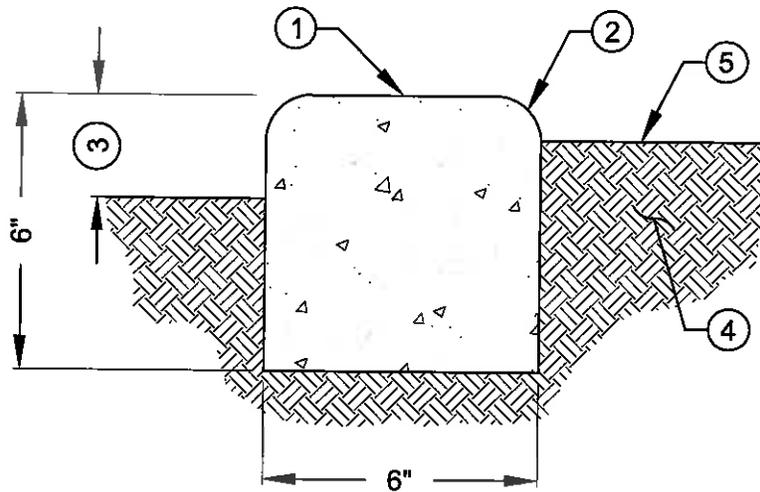
Prepared on:
09-25-13

NOT TO SCALE

LMAD STANDARD WALL DETAIL

Approved By: John A. McGlade, Director of Public Works/City Engineer

PAGE 5
STANDARD
H-05



- ① Concrete mow edge with light broom finish - provide expansion joints @ 20' intervals max.
- ② $\frac{1}{2}$ " radius (typical)
- ③ 3" @ lawn area 3" @ ground cover
- ④ 95% min. compacted subgrade - under mow strip only
- ⑤ Finish grade includes 3" of mulch

Note: Provide mow curb at end of limit or where planted area changes and to separate LMAD/DFAD area from private property.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

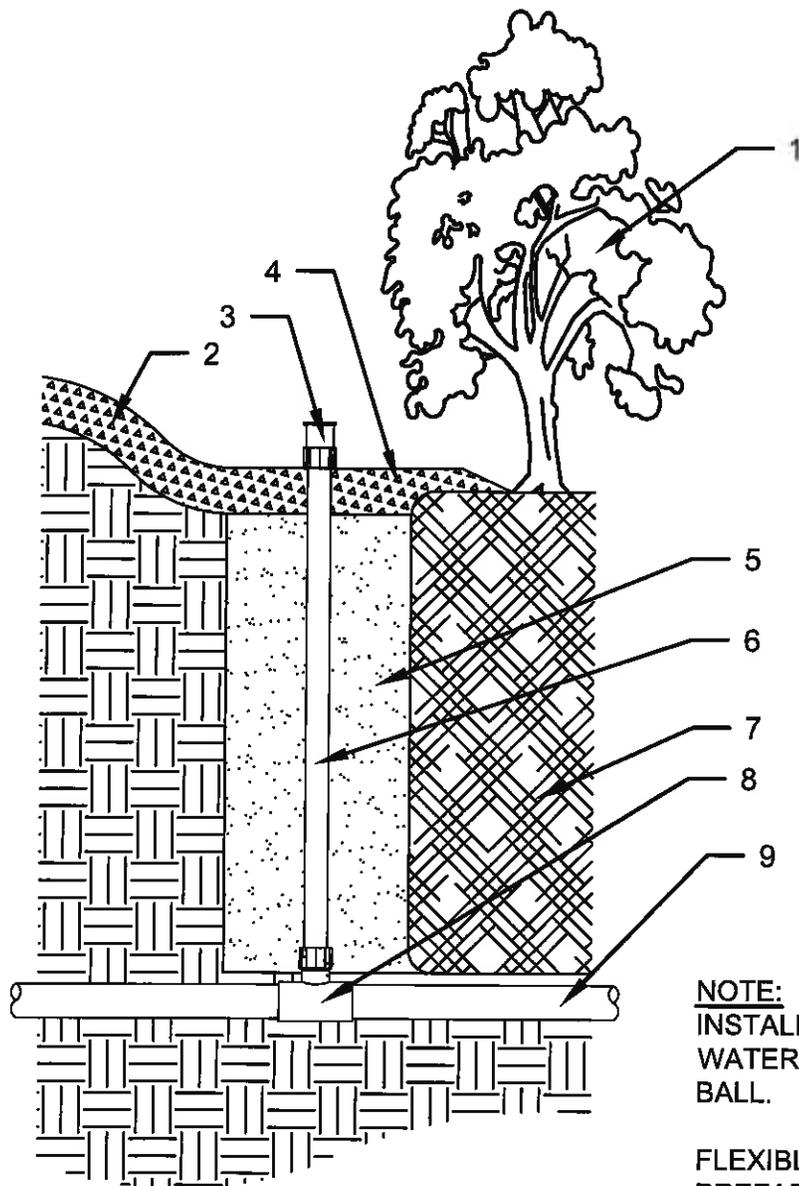
MOW EDGE

PAGE 6
STANDARD

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

H-06



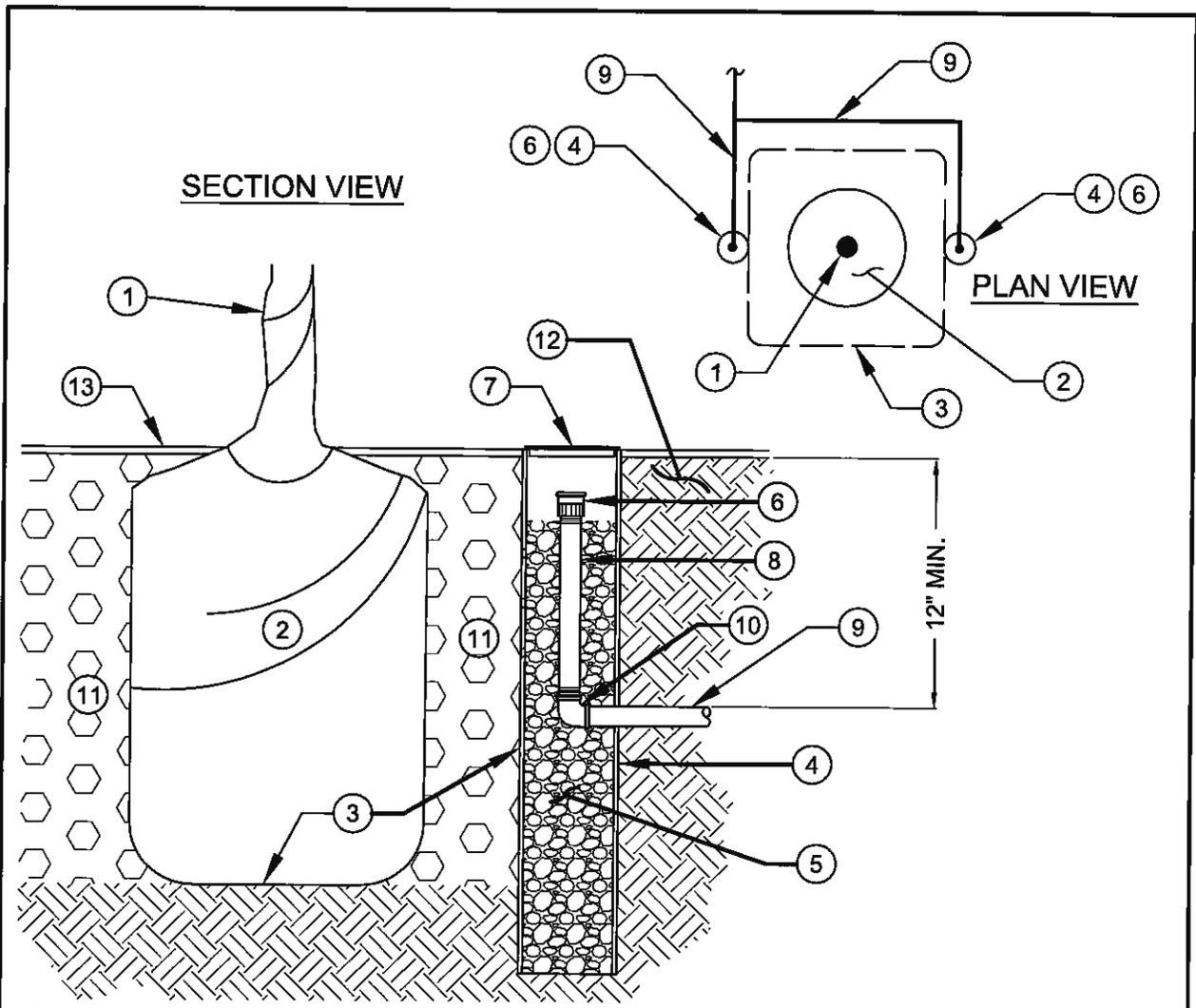
NOTE:
 INSTALL DRIP EMITTER INSIDE OF PLANT WATERING BASING ADAJCENT TO ROOT BALL.

FLEXIBLE PVC RISERS SHALL BE PREFABRICATED BY THE MANUFACTURER UNLESS OTHERWISE APPROVED BY LMD REPRESENTATIVE.

1. SHRUB OR GROUND C OVER
2. PLANT WATERING BASIN
3. PURPLE EMITTER NOZZLE AND SCREEN, SEE SPECIFICATIONS
4. MULCH PER PLANTING DETAILS
5. AMENDED BACKFILL
6. 1/2" X 12" FLEXIBLE PVC RISER
7. PLANT ROOT BALL
8. SCH 40 S x S x T TEE (OR ELBOW)(LATERAL SIZE x 1/2" FIPT
9. PVC LATERAL LINE

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
 LANDSCAPING STANDARD DETAILS

11/30/2015	BUBBLER & SWING JOINT ASSEMBLY	PAGE 7 STANDARD I-01
NOT TO SCALE		

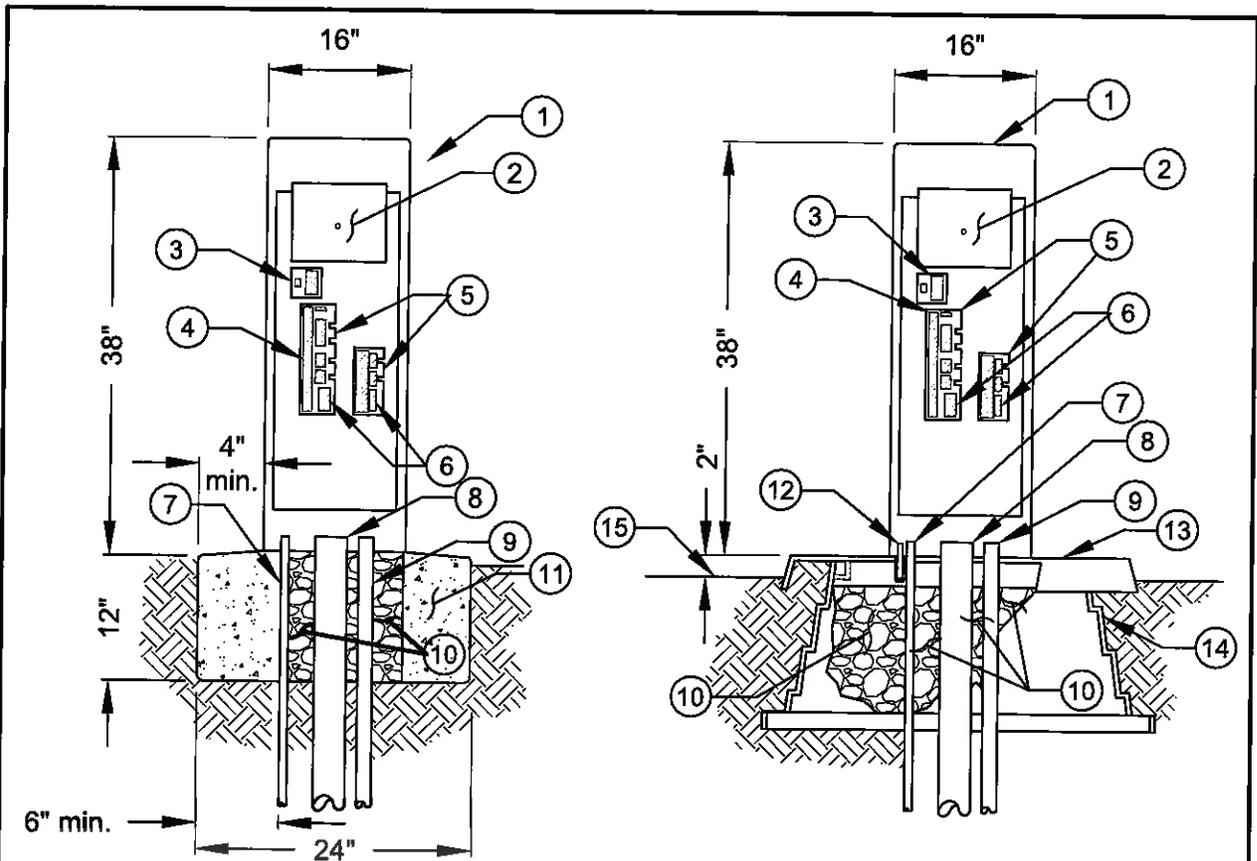


- ① Tree trunk
- ② Root ball
- ③ Edge of plant pit
- ④ Rigid PVC perforated pipe (4"~ x depth of plant pit)
- ⑤ ¾" to 1" ~ pea gravel
- ⑥ Bubble nozzle
- ⑦ 4" ~ pvc cap or valve cover
- ⑧ PVC sch 80 nipple
- ⑨ PVC sch 40 lateral
- ⑩ PVC sch 40 S x T ell
- ⑪ Back fill mix
- ⑫ Native soil
- ⑬ Finish grade includes 3" of mulch

Notes:
 1. Position perforated pipe on outside edge of plant pit wall. Face holes in pipe toward rootball.
 2. See tree planting detail for additional requirements.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
 LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	BUBBLER IN SLEEVE	PAGE 8 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-02



Imperial Assembly with concrete base

Imperial Assembly with quick pad

Note: All grounding requirements for controller assemblies shall conform to local electrical codes.

- | | |
|---|--|
| <ul style="list-style-type: none"> ① Imperial Assemblies 18" front entry Controller Assembly NEMA 3R rain proof enclosure (UL listed) ② Controller ③ Power switch/GFI receptacle ④ Master valve relay assembly or pump start relay assembly (optional) ⑤ Terminal board ⑥ Remote receiver connector ⑦ 1" PVC conduit for 120 VAC from metered power supply | <ul style="list-style-type: none"> ⑧ PVC conduit for control wires, size as required. ⑨ 1" PVC conduit for flow sensor cable PAIGE CABLE P-7162-D (if applicable) ⑩ Fill voids with $\frac{3}{8}$" pea gravel ⑪ Poured concrete base ⑫ Mounting pad mounting brace ⑬ Mounting pad aluminum power coated performed pad 20" x 30" ⑭ Mounting pad base ⑮ Finish grade 2" below top of mounting pad |
|---|--|

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

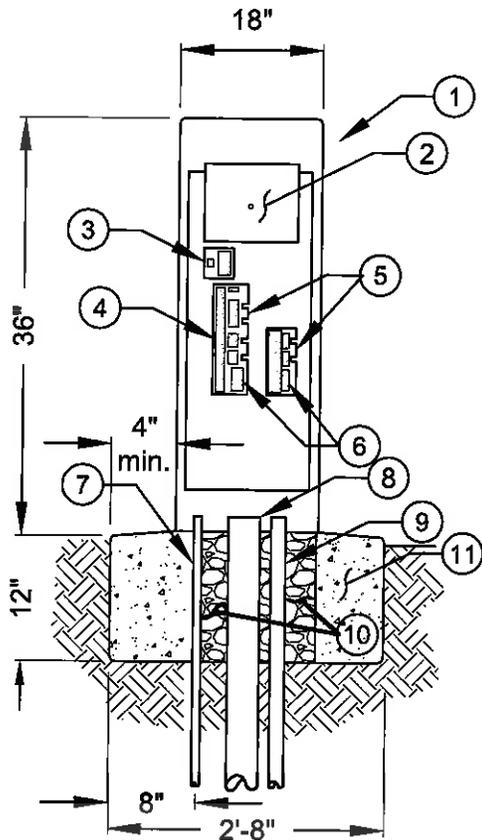
16"X16" CONTROLLER ASSEMBLY (ICA6 SERIES)

PAGE 9
STANDARD

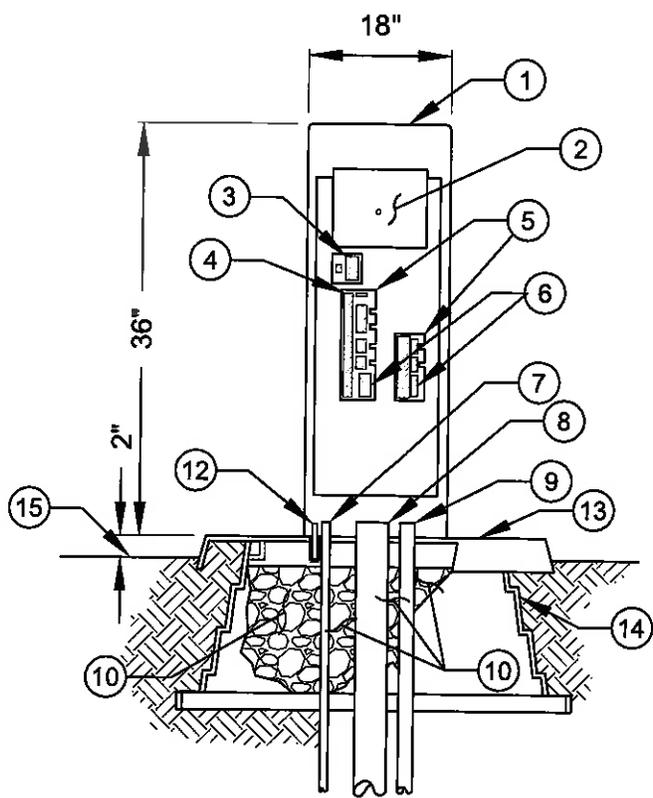
NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

I-03



Imperial Assembly with concrete base



Imperial Assembly with quick pad

Note: All grounding requirements for controller assemblies shall conform to local electrical codes.

- | | |
|--|---|
| <ul style="list-style-type: none"> ① Imperial assemblies 18" top entry controller assembly NEMA 3R rain proof enclosure (UL listed) ② Controller ③ Power switch/GFI receptacle ④ Master valve relay assembly or pump start relay assembly (optional) ⑤ Terminal board ⑥ RMPM Remote receiver connector ⑦ 1" PVC conduit for 120 vac from metered power supply | <ul style="list-style-type: none"> ⑧ PVC conduit for control wires, size as required. ⑨ 1" pvc conduit for flow sensor cable Paige cable P-7162-D(if applicable) ⑩ Fill voids with $\frac{3}{8}$" pea gravel ⑪ Poured concrete base ⑫ Mounting pad aluminum power coated performed pad 20"x30" ⑬ Mounting pad base ⑭ Mounting pad mounting base ⑮ Finish grade 2" below top of mounting pad |
|--|---|

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

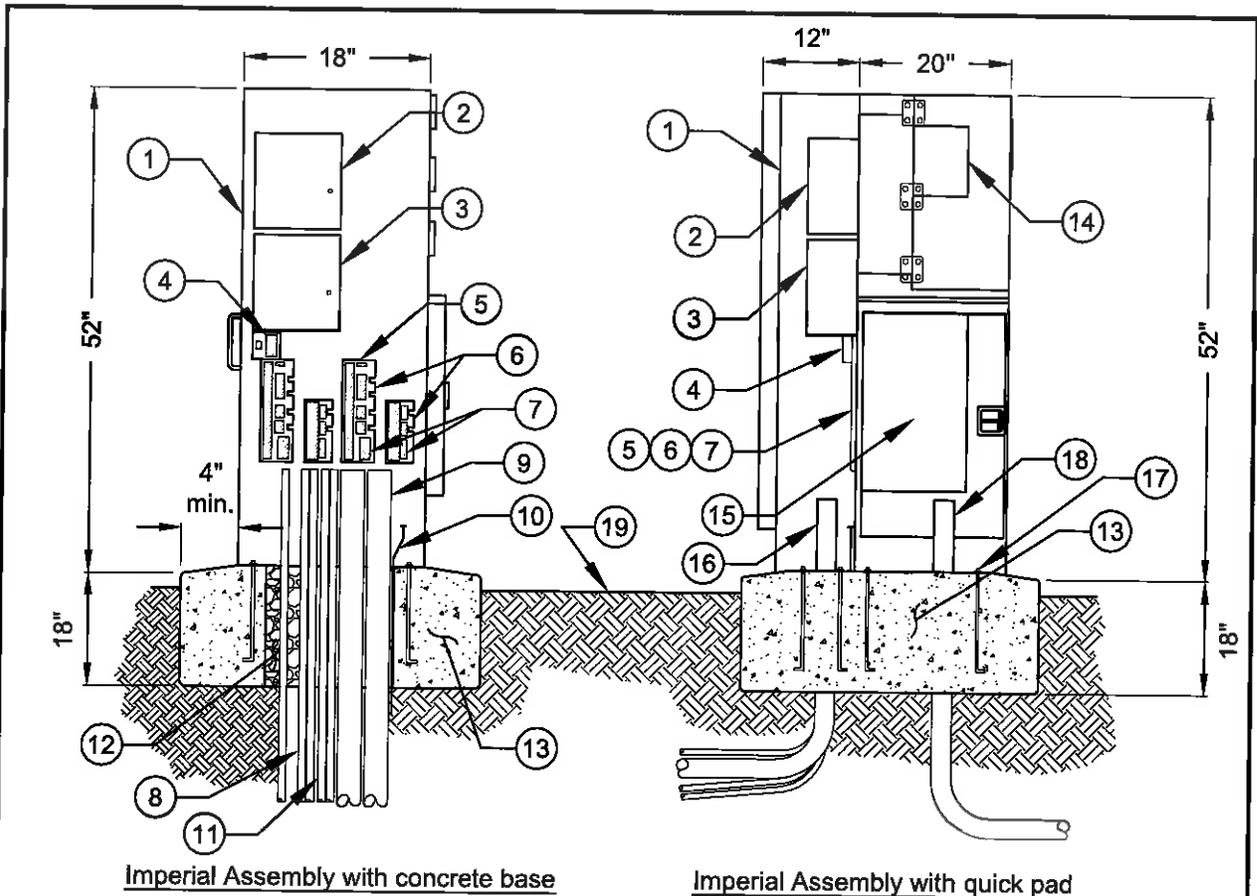
18"X24" CONTROLLER ASSEMBLY (ICA2 SERIES)

PAGE 10
STANDARD

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

I-04



Imperial Assembly with concrete base

Imperial Assembly with quick pad

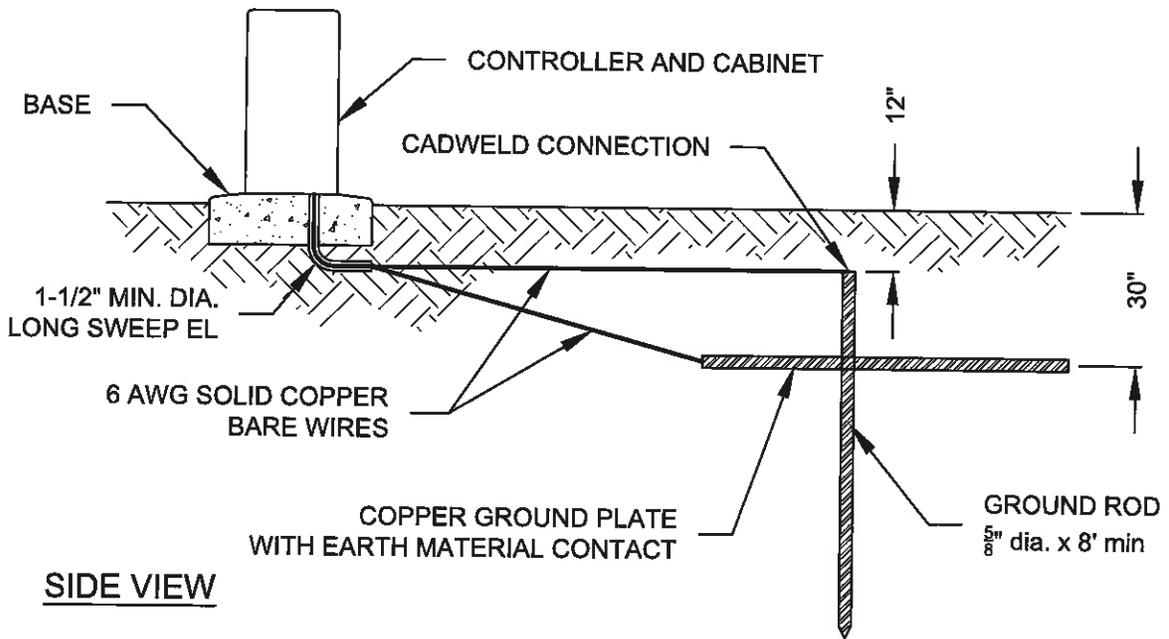
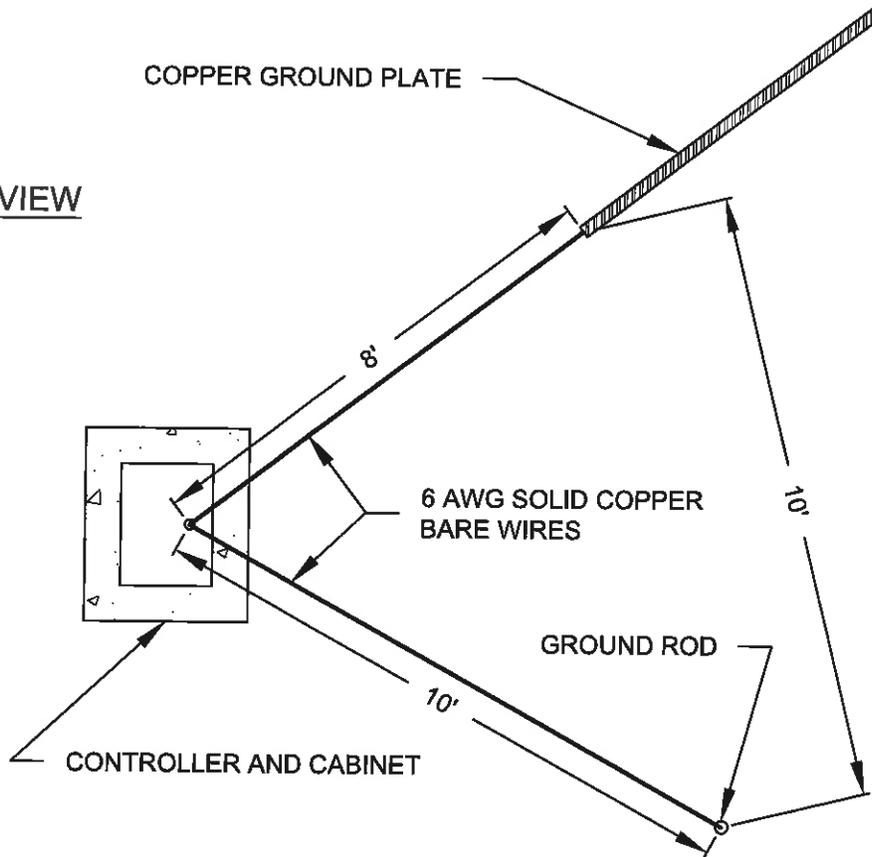
Note: All grounding requirements for controller assemblies shall conform to local electrical codes.

- | | |
|--|---|
| <ul style="list-style-type: none"> ① Imperial assemblies metered controller assembly NEMA 3R rain proof enclosure (UL listed) ② Controller ③ Second controller ④ Power switch/GFI receptacle ⑤ Master valve relay assembly or pump start relay assembly (optional) ⑥ Terminal board ⑦ Remote receiver connector ⑧ 1" PVC conduit for 120 vac from metered power supply ⑨ PVC conduit for control wires, size as required. ⑩ #10 ground wire to ground lugs on the backboard. | <ul style="list-style-type: none"> ⑪ 1" pvc conduit for flow sensor cable Paige cable P-7162-D(if applicable) ⑫ Fill voids with 3/8" pea gravel ⑬ Poured concrete base ⑭ Meter socket with test blocks ⑮ Load center compartment, see model number for phase type, voltage, size of amp, amp size for load center and the number of circuits. ⑯ PVC conduits for control wires, electrical, and flow sensing, size as required. ⑰ Stainless steel mounting base with 3/8" stainless steel anchor bolts in concrete ⑱ PVC conduit and electrical power source |
|--|---|

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	18"X32" METERED CONTROLLER (ICA5 SERIES)	PAGE 11 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-05

TOP VIEW

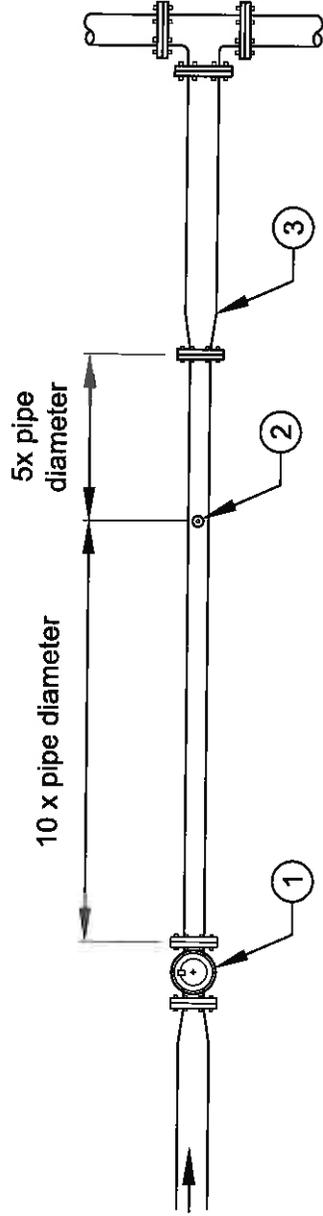


SIDE VIEW

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	CONTROLLER GROUNDING	PAGE 12 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-06

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
 LANDSCAPING STANDARD DETAILS



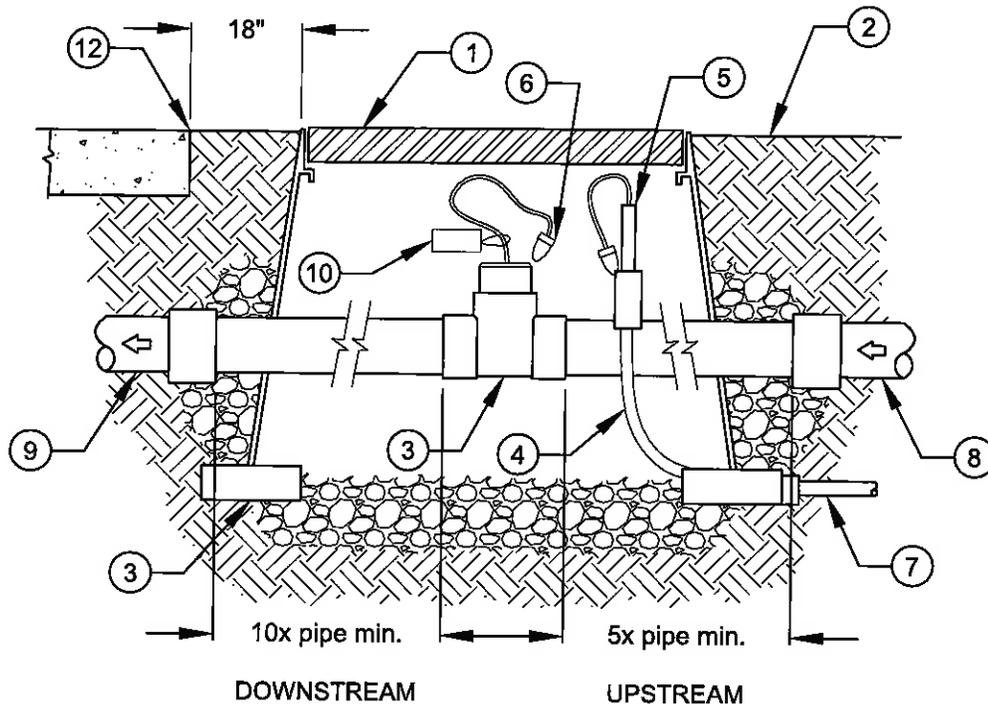
- ① Pressure reducing normally closed master valve (size as required). Wire to master valve circuit on nearest satellite.
- ② Rainbird FS series flow sensor. Wire to ET Water clock sensor.
- ③ Reducer

Prepared on:
 09-25-13

MAXICOM DUAL FLOW SENSORS DETAIL

Approved By: John A. McGlade, Director of Public Works/City Engineer

NOT TO SCALE



- | | |
|---|---|
| ① Rectangular plastic valve box. Hot brand lid "FS" | ⑦ 1" electrical conduit and sweep elbow |
| ② Finish grade includes 3" of mulch | ⑧ Irrigation mainline from master valve |
| ③ Flow sensor | ⑨ Mainline to the rcv's |
| ④ Flow sensor cable P-7162D | ⑩ Christy's tag #ID-Max- P2-RCIP2 |
| ⑤ Conduit bushing | ⑪ Quantity of (4) - brick for stabilization |
| ⑥ Waterproof dry splice connector 3M DBY | ⑫ Edge of paving header or building wall |

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

FLOW SENSOR

PAGE 14
STANDARD

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

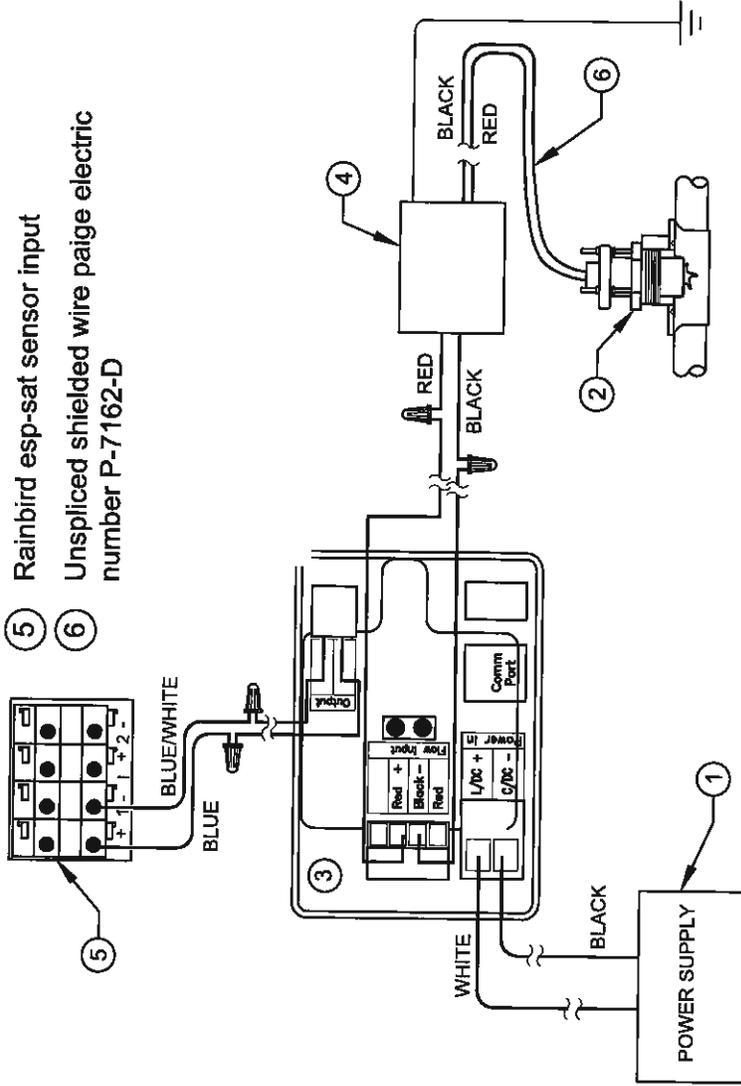
I-08

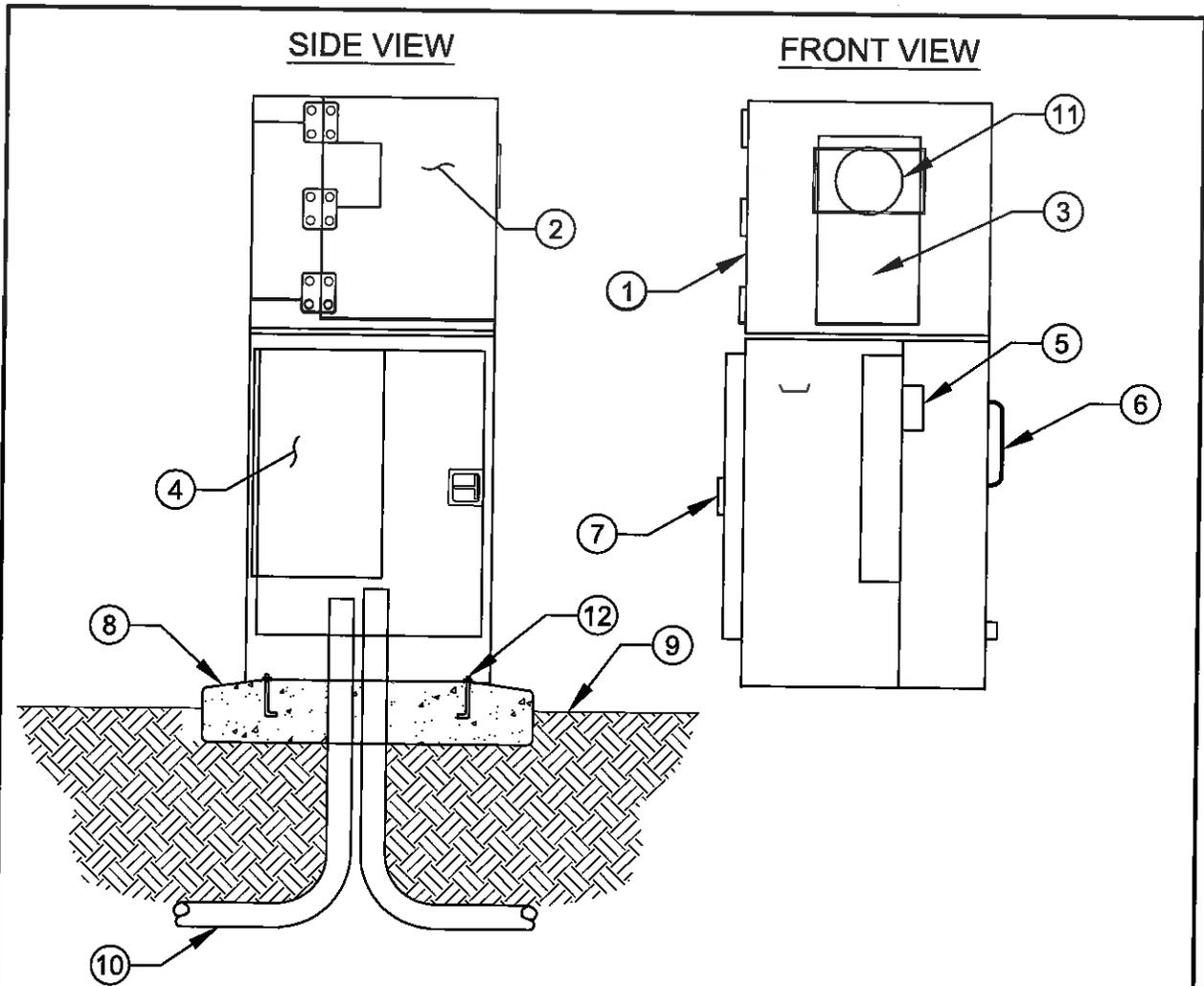
MAXICOM FLOW SENSOR DETAIL

Prepared on:
09-25-13

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

- ① Power supply (Rainbird #PTPWRSUPP)
- ② Flow sensor (Rainbird "FS series)
- ③ Surge protection kit (Rainbird "FSSURKIT")
- ④ Green wire to ground
- ⑤ Rainbird esp-sat sensor input
- ⑥ Unspliced shielded wire paige electric number P-7162-D





INSTALLATION DETAILS: MODELS MPS-A 16, MPS-B 16, MPS-D 18 100 AMP

- ① Strong box metered enclosure, stainless steel, NEMA Type 3R - 18" x 20" x 52" #MPS-XXX-XX

② Hinged removable lid

③ Meter socket with test blocks

④ Load Center

⑤ Landing Lugs

⑥ Landing lug compartment
- ⑦ Load center compartment

⑧ Poured concrete base - 6" min. thickness - extend 6" beyond outside dimensions of enclosure with 1/2% slope for drainage

⑨ Finish grade includes 3" of mulch

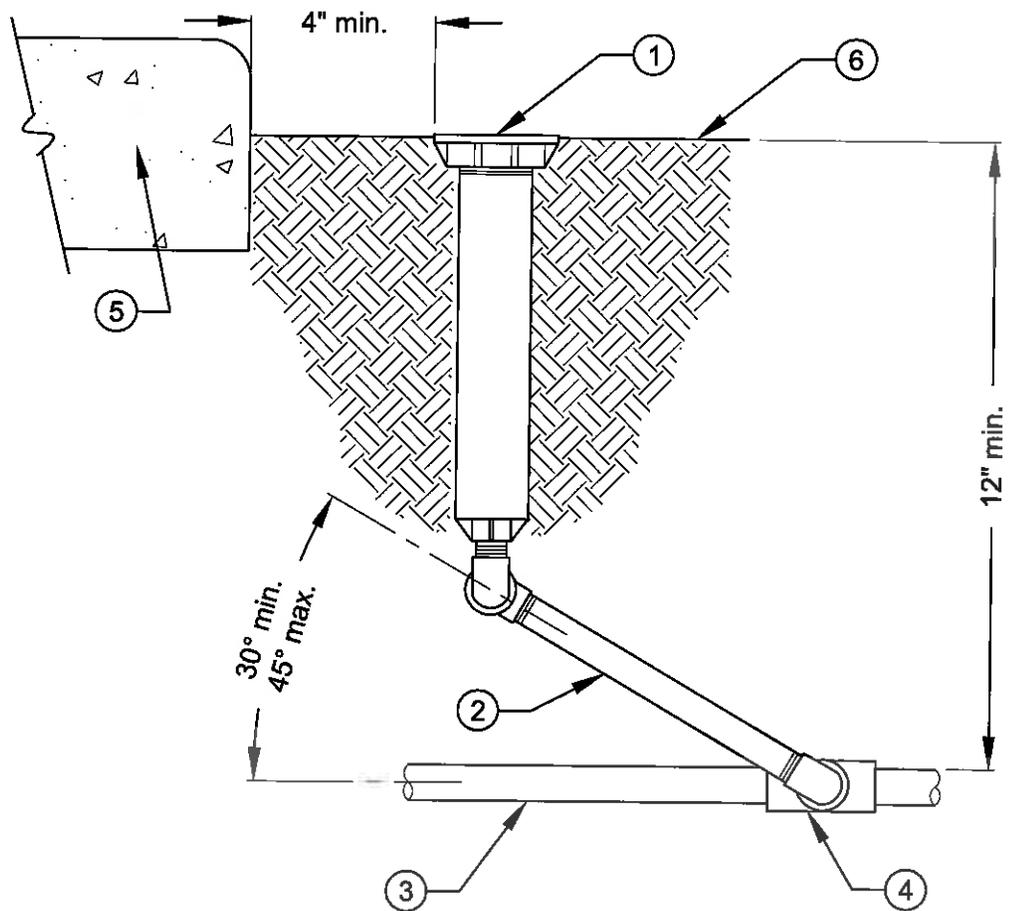
⑩ Underground service

⑪ Meter viewing window 5" x 10"

⑫ 3/8" stainless anchor bolts

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	STAINLESS STEEL METER PEDESTAL	PAGE 16 STANDARD I-10
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	



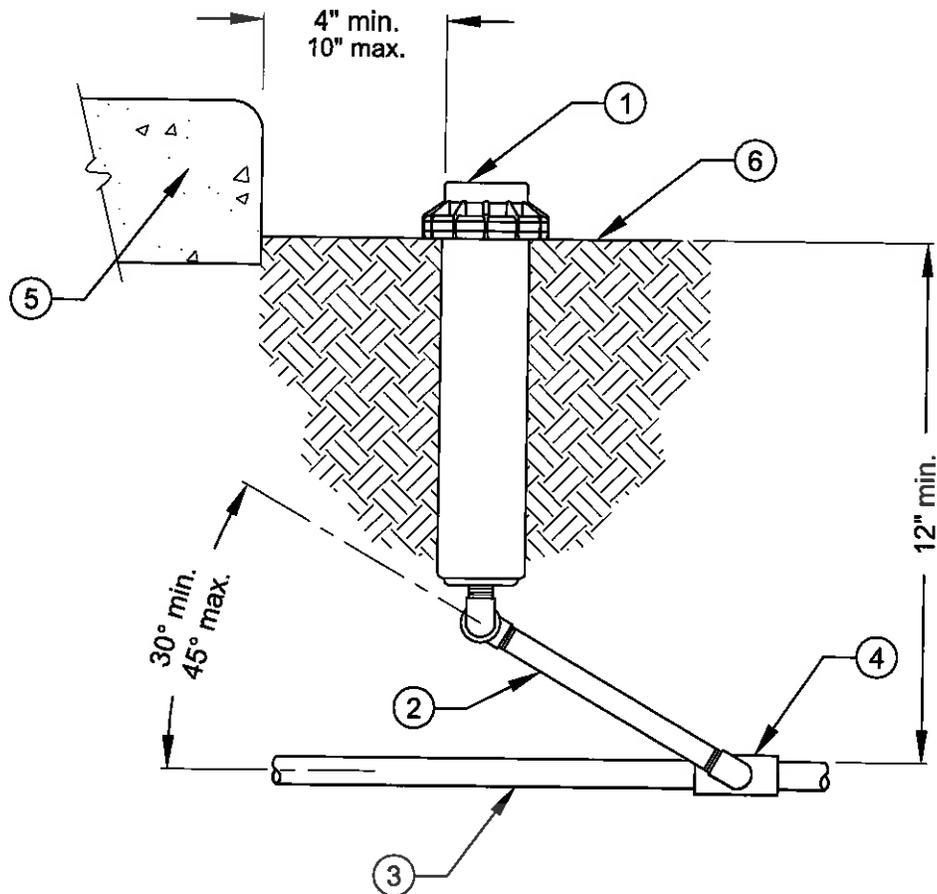
- | | |
|---|--|
| <p>① Pop up head</p> <p>② Fabricate with:
 (3) sch 40 street ell
 (1) SCH 80 12" nipple (or length as required)</p> | <p>③ Lateral line</p> <p>④ S x S x T tee or S x T ell (pvc sch. 40)</p> <p>⑤ Curb, walk, paving, other improvement,</p> <p>⑥ Finish grade (includes 3" of mulch)</p> |
|---|--|

Notes:

1. All threaded fittings shall be wrapped with Teflon tape (1-1/2 to 2 wraps)
2. Flush pipes prior to installing sprinklers on swing joint.
3. Install heads-up marking flag to each spray head. Reset to grade in established turf areas. Compact back fill around spray head & swing joint assembly.
4. Swing joint shall be same size as spray head inlet.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
 LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	POP-UP SPRAY SPRINKLER	PAGE 17 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-11



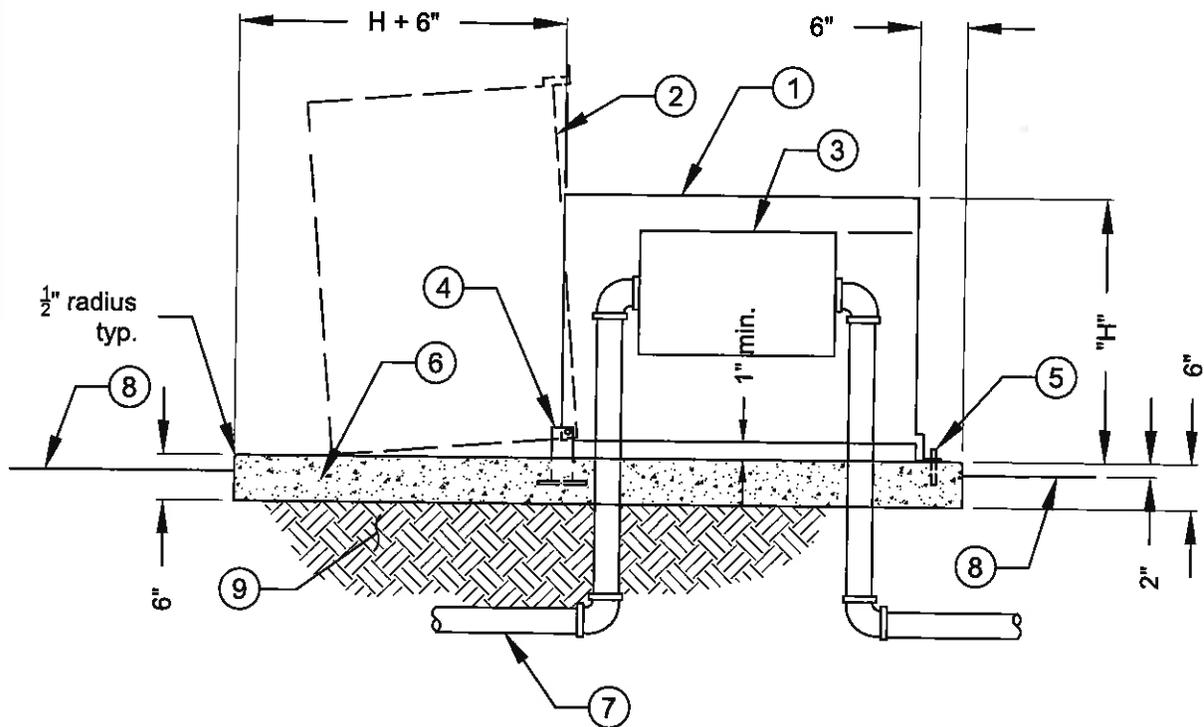
- | | |
|---|---|
| ① Pop up rotor head | ③ Lateral line |
| ② Fabricate with: | ④ S x S x T tee or ell (pvc sch 40) |
| (3) sch 40 street ell | ⑤ Walk, curb, paving or other improvement |
| (2) sch 80 12" nipple (or length as required) | ⑥ Finish grade (includes 3" of mulch) |

Notes:

1. All threaded fittings shall be wrapped with teflon tape (1-1/2 to 2 wraps)
2. Flush pipes prior to installing sprinklers on swing joint.
3. Pop up spray head install above grade in newly planted shrub or ground cover areas. Install flush with grade in lawn areas. Install heads-up marking flag to each spray head. Reset to grade in established turf areas. Compact backfill around spray head & swing joint assembly.
4. Swing joint shall be same size as spray head inlet.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	POP-UP ROTOR (SMALL RADIUS)	PAGE 18 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-12



- | | |
|--|---|
| <p>① Backflow enclosure (closed position), color: solid 'stainless steel', center enclosure over backflow preventer, maintain 1" min. space @ base for drainage</p> <p>② Backflow enclosure (open position)</p> <p>③ Backflow preventer (see detail)</p> <p>④ Enclosure foot, anchor in concrete</p> | <p>⑤ U-bolt (stainless steel), anchor in concrete, provide lock & (2) keys</p> <p>⑥ Concrete slab, 2800 psi @ 28 days (slope 2% min. for drainage)</p> <p>⑦ Irrigation pressure pipe</p> <p>⑧ Finish grade includes 3" of mulch</p> <p>⑨ 90% compacted subgrade</p> |
|--|---|

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

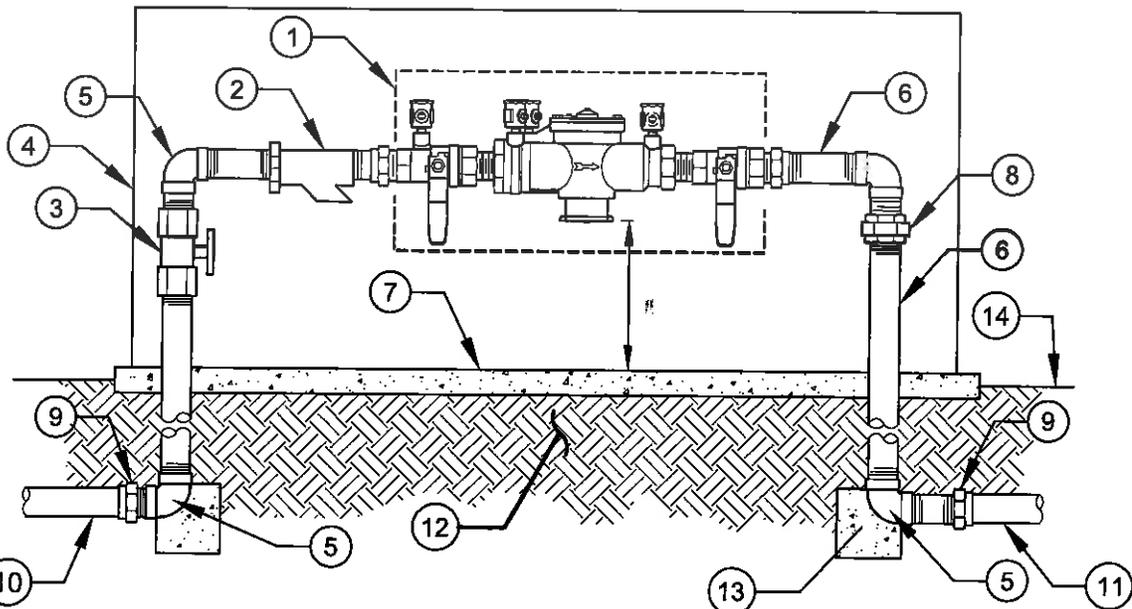
BACKFLOW PREVENTER ENCLOSURE

PAGE 19
STANDARD

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

I-13



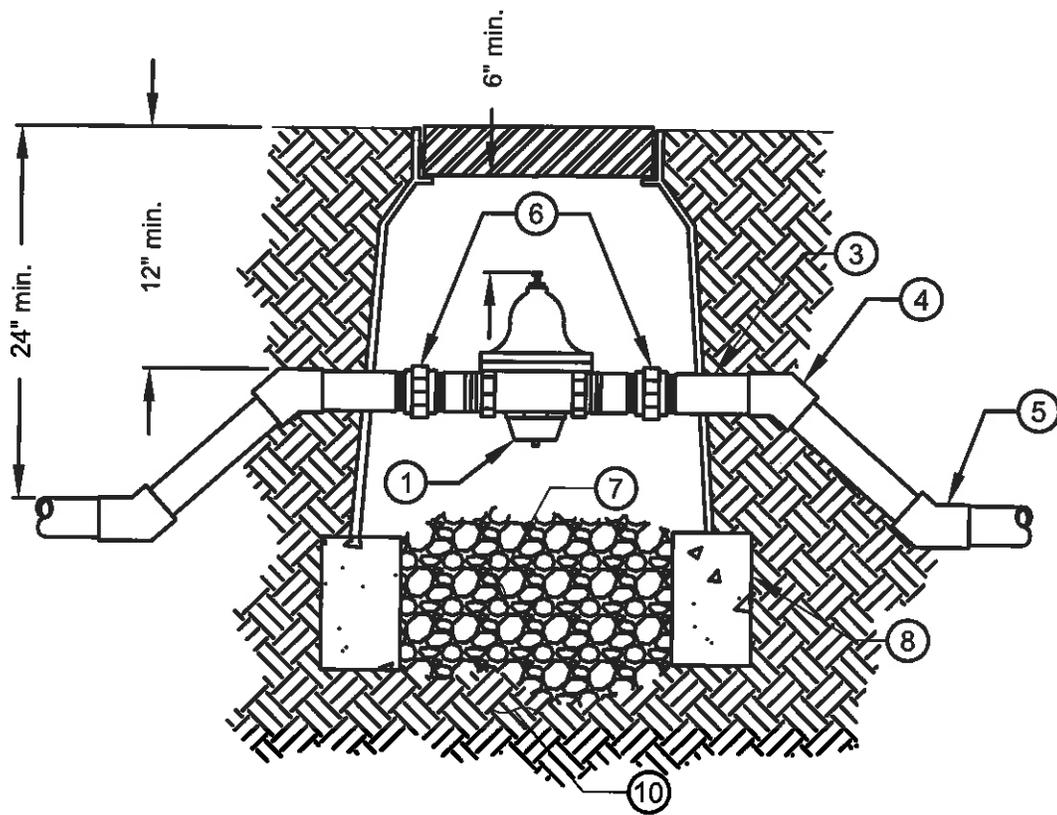
- | | |
|--|---|
| <ul style="list-style-type: none"> ① Reduced pressure backflow preventer per Engineering Dept. Standard W-39. ② Wye strainer with 150 mesh screen (wilkens # YSBR or equal) Required on all reduced pressures 2" or smaller ③ Ball valve ④ Enclosure by "Strongbox" or equal ⑤ Threaded brass ell (typical) Qty 4 ⑥ Threaded brass pipe (typical) ⑦ Concrete pad (2800 psi @ 28 days) | <ul style="list-style-type: none"> ⑧ Union ⑨ PVC sch 80 ⑩ Water service line to point of connection ⑪ PVC mainline (see irrigation legend for size and type) to irrigation system. ⑫ 90% compacted sub-grade ⑬ Concrete thrust block (one c.f. min) (typical) formed in undisturbed soil ⑭ Finish grade includes 3" of mulch |
|--|---|

Notes:

1. Valves shall be FEBCO model no: 825Y -BV-S or 825YA-BV-S for $\frac{3}{4}$ " -2" or 825YA for 2- $\frac{1}{2}$ " or larger (install pipe supports per manufacturer's recommendations)
2. Freeze protection: All brass installed underground or in direct contact with concrete shall be covered with polar blanket or equivalent.
3. Backflow valve and piping shall match size of meter.
4. Bottom of valve to be 12" minimum and 24" maximum above finish grade.
5. No connections of any kind is allowed between meter and backflow assembly.
6. A pressure regulator is to be installed when pressure is greater than or equal to 100 psi

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	REDUCED PRESSURE BACKFLOW PREVENTER	PAGE 20 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-14



- | | |
|--|---|
| ① Pressure reduced brass valve | ⑤ PVC mainline pipe (sch 40) |
| ② Plastic valve box with locking lid (10" dia. round). Hot brand lid "P R" | ⑥ PVC sch 80 union |
| ③ PVC sch 80 nipple- threaded on one end. Length as req'd to extend beyond box | ⑦ ¾" crushed rock or gravel (2 c.f. min.) |
| ④ PVC sch 80 coupling (45 degree)(typ.) to adjust mainline depth as req'd. | ⑧ Common brick (three min. per box) |
| | ⑨ Finish grade includes 3" of mulch |
| | ⑩ 90% compacted subgrade (under box only) |

Notes:

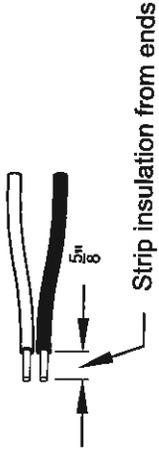
1. Provide thrust block at all 45 degree and 90 degree ells. Wrap pipe with 10 mil polyethylene tape when in direct contact with concrete.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	PRESSURE REGULATOR	PAGE 21 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-15

INSTALLATION STEPS:

1. Strip insulation $\frac{5}{8}$ " from ends



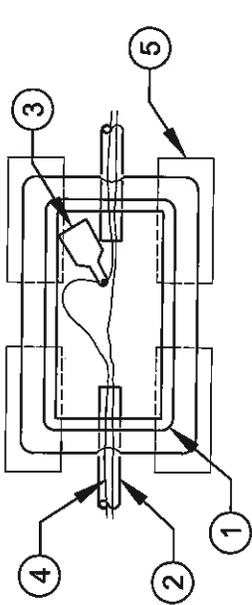
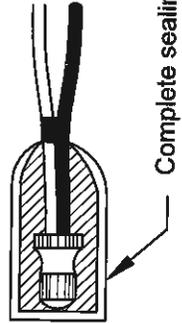
2. Twist wire nut until ends of wire reach bottom.



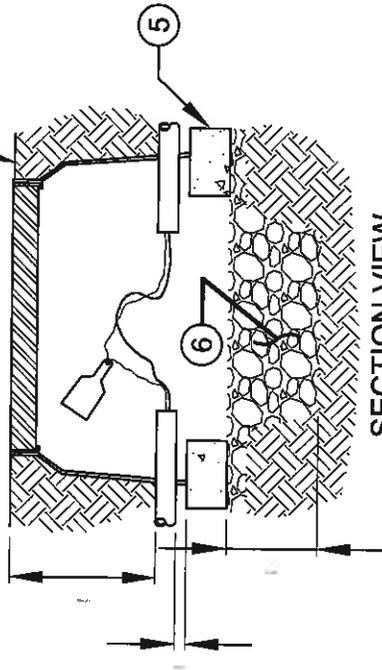
3. Mix contents of sealing bag per manufacturer. Cut $\frac{1}{2}$ " off end of bag and insert wire nut to opposite end.



4. Wrap open end of selling bag with tape. Leave taped end in raised position until resin sets.



PLAN VIEW

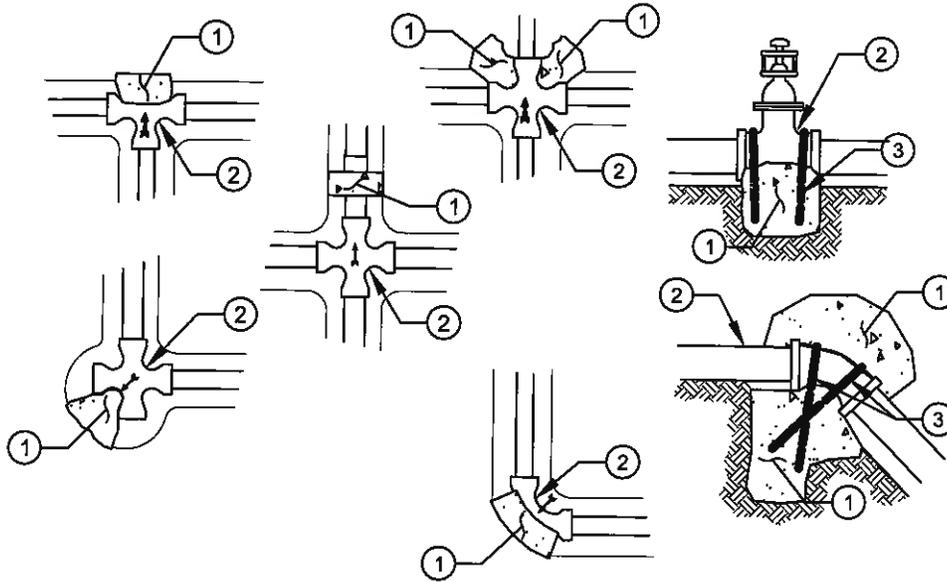


SECTION VIEW

- 1 Plastic box with locking lid (rectangular), mark lid "electrical", install flush to grade.
- 2 PVC sch. 40 conduit
- 3 Identification tag; secure to pull rope
- 4 Pull rope ($\frac{1}{4}$ " \emptyset polypropylene); provide 12" slack (typical)
- 5 Common brick @ corners of box
- 6 $\frac{3}{4}$ " \emptyset gravel
- 7 Finish grade includes 3" of mulch

CONNECTOR FOR 110 VAC WIRES

(All splices to be approved by city prior to installation)



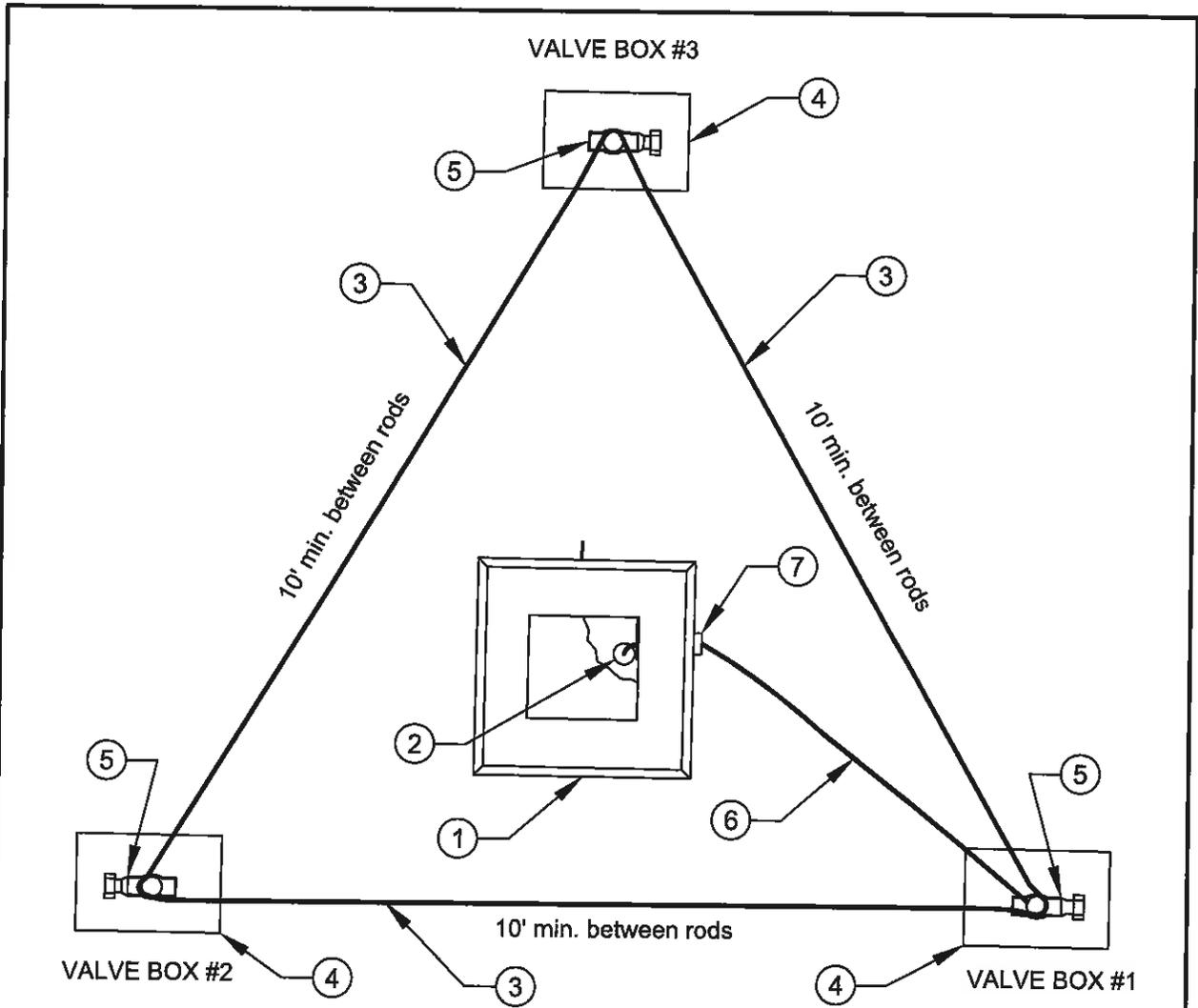
- ① Concrete (typ. 2000psi @ 28 days)
- ② Pipe or fittings (typ.)
- ③ #5 rebar w/ 2" min. cover (typ.)

THRUST @ FITTINGS (in pounds @ 100 psi)					THRUST AT FITTINGS (in Pascals at 689 kPa)				
Pipe Size Inches	90° Bends	45° Bends	22-1/2° Bends	Dead Ends & Tees	Pipe Size (mm)	90° Bends	45° Bends	22-1/2° Bends	Dead Ends & Tees
1-1/2"	415	225	115	295	38.1	1848.8	1001.3	511.8	1312.8
2	645	350	180	455	50.8	2870.3	1557.5	801	2024.8
2-1/2	935	510	260	660	63.5	4160.8	2269.5	1157	3937
3	1,395	755	385	985	76.2	6207.8	3359.8	1713.3	4383.3
3-1/2	1,780	962	495	1,260	86.9	7921	4280.9	2202.8	5607
4	2,295	1,245	635	1,620	101.6	10212.8	5540.3	2815.8	7209
5	3,500	1,900	975	2,490	127	15575	8455	4338.8	11080.5
6	4,950	2,710	1,385	3,550	152.4	22027.5	12059.5	6163.3	15979.5
8	8,300	4,500	2,290	5,860	203.2	36935	20025	10190.5	26077
10	12,800	6,900	3,540	9,050	254	56960	30705	15753	40272.5
12	18,100	9,800	5,000	12,800	304.8	80545	43610	22250	56960

EXAMPLE: A pressure of 150 psi (1933.5 kpa) on a 4-inch (101.6mm) tee. AWWA Table 1008.1.4(a) indicates 1,620 pounds (7209 n) for 100 psi (689 kpa). Therefore, total thrust for 150 psi (10335 kpa) will equal 1-1/2 times 1,620 pounds (7209 n) for a total thrust of 2,430 pounds (10810 n). To determine the bearing area of thrust blocks, refer to AWWA table 1008.1.4(b) for the safe bearing load of the soil and divide the total thrust by the safe bearing load.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	THRUST BLOCK CONGIFURATIONS	PAGE 23 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-17

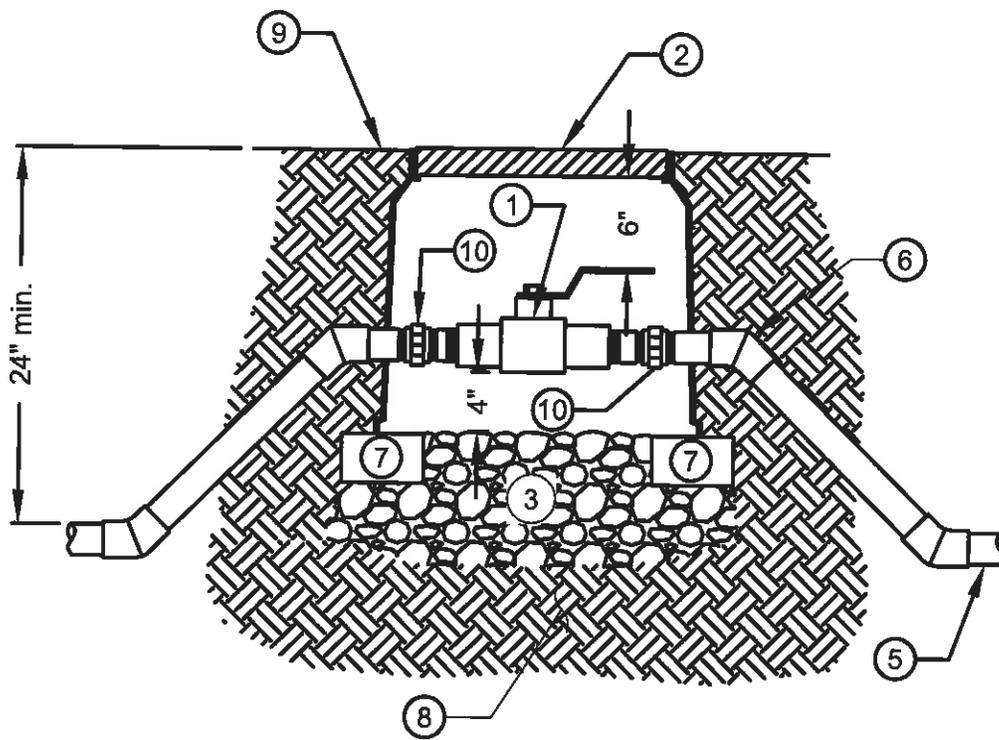


- ① Satellite or WS-PRO
- ② #10 bare copper wire from grounding terminal lug
- ③ #10 bare copper wire from valve box held in place with brass clamp (see detail for "grounding wires in grid")
- ④ Standard valve box with cover (1 of 3)
- ⑤ Grounding rod from GK-UL3ROD three rod kit
- ⑥ #10 bare copper wire fed through conduit from satellite to grounding rod
- ⑦ Conduit from satellite

Note:
Plan view for layout only. See grounding rod notes for installation instructions.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

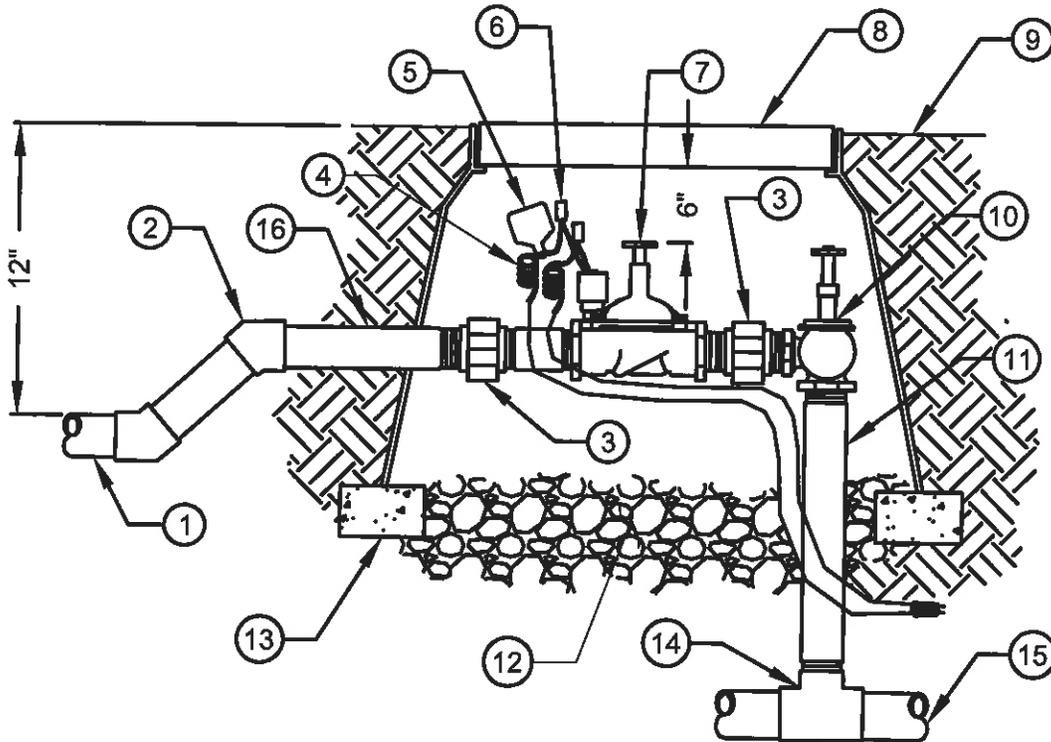
Prepared on: 09-25-13	TRIANGULAR GRID PLAN VIEW DETAIL	PAGE 24 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-18



- ① Ball valve up to 3" (line-size)
- ② Valve box with locking cover (NDS #1100 or equal) installed flush with finish grade. Hot brand mark lid "BV".
- ③ 3/4" pea gravel (one c.f. min.)
- ④ 5 PVC mainline
- ⑤ PVC sch 80 45° (typ. of 4) slip
- ⑥ Common brick (min. 3 per box), set on undisturbed soil.
- ⑦ 90% compacted sub grade (under box only)
- ⑧ Finish grade includes 3" of mulch
- ⑨ Sch. 80 union - two (2)

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	BALL VALVE	PAGE 25 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-19



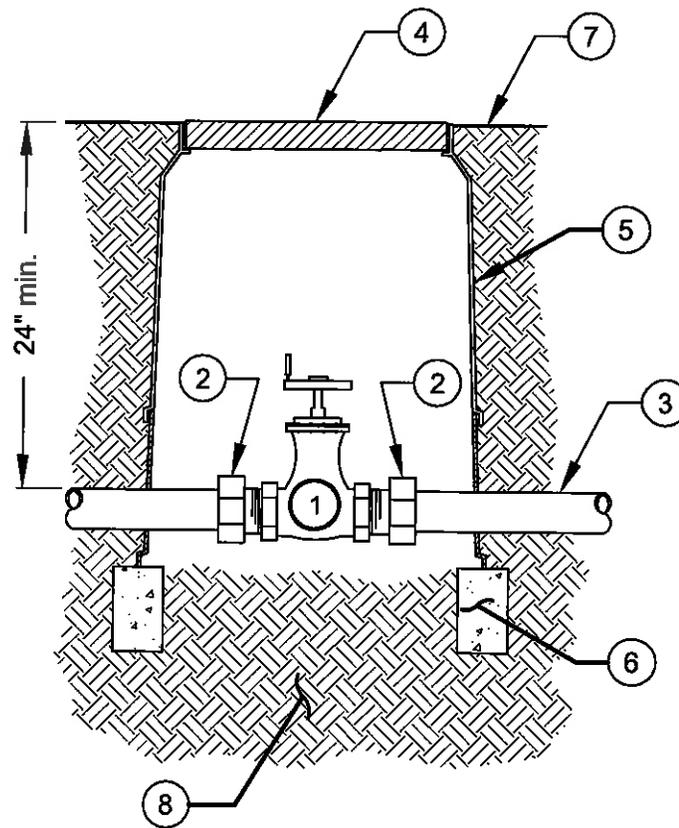
- | | |
|---|---|
| <ul style="list-style-type: none"> ① PVC sch 40 lateral pipe ② PVC sch 80 coupling (45°) slip to angle pipe to lateral depth (typical) ③ Sch 80 union ④ Extra wire coils - 6 to 8 wraps over 1" pipe. Install a total of 3 wires for every valve to have a spare wire. ⑤ Valve id tag ⑥ Waterproof connector (24v) ⑦ Remote control valve ⑧ Valve box with locking lid (rectangular). | <ul style="list-style-type: none"> Install flush with grade, mark lid "RCV" ⑨ Finish grade includes 3" of mulch ⑩ Brass angle valve with cross handle or ball valve ⑪ PVC sch 80 riser pipe length varies ⑫ 3/4"Ø gravel (2 c.f min.) ⑬ Common brick (typical @ corner) ⑭ Sch. 80 Tee ⑮ PVC mainline pipe ⑯ PVC sch. 80 nipple (typ) |
|---|---|

Notes:

1. Flush all pipe lines prior to installing valve
2. Wrap all threads with teflon tape (2 wraps maximum.)
3. Compact soils around valve box to 90% of original dry density
4. Install heads-up marking flag on valve box lid. Contractor to maintain marking flag locations until project is complete.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	BUBBLER REMOTE CONTROL VALVE	PAGE 26 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-20



- ① Brass gate valve (line - size) non-rising stem by nibco or City approved equal. All valves 3" or larger shall be flanged.

② PVC sch. 80 nipples and sch. 80 unions

③ PVC mainline 3" or smaller (mainline larger than 4" dia. shall be class 200 ring-tite).

④ Valve box with locking cover (NDS #1100 or equal) mark lid "G V" install flush to grade.
- ⑤ Valve box extension (length as req'd), extension box shall not rest on pipe.

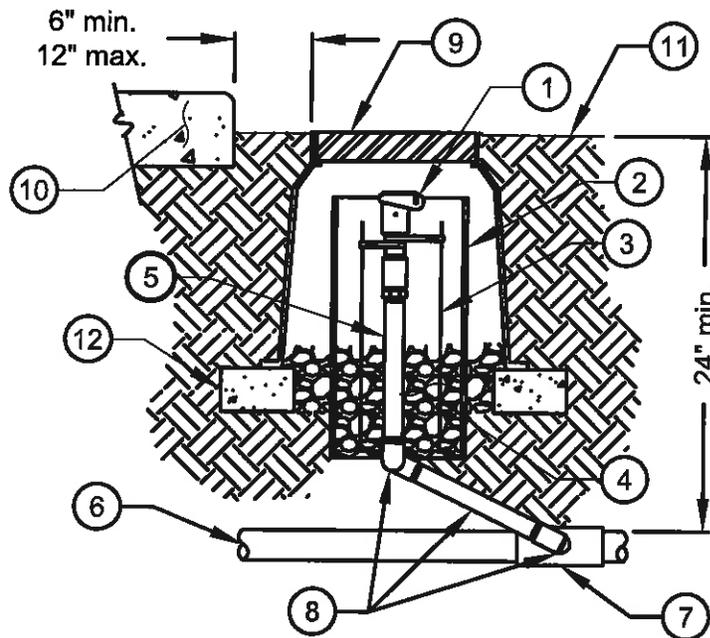
⑥ Common brick (min. three per box), set on undisturbed soil.

⑦ Finish grade includes 3" of mulch.

⑧ 90% compacted sub-grade

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	GATE VALVE (3" OR SMALLER)	PAGE 27 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-21



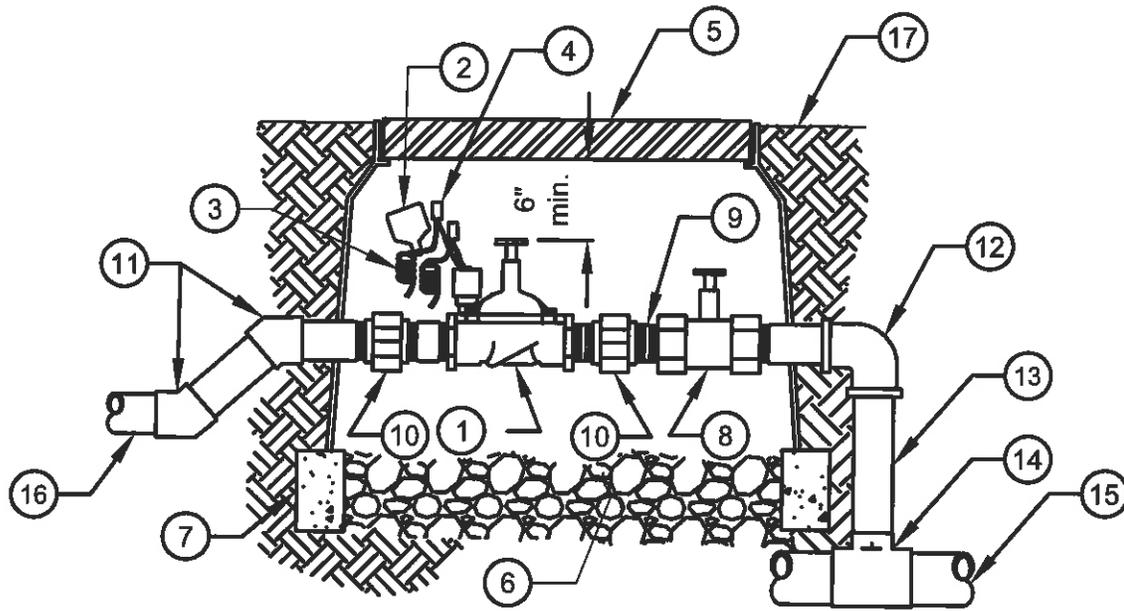
- | | |
|---|---|
| <p>① Quick-coupling valve (bronze two piece with 1"- inch inlet and locking rubber cover).</p> <p>② 8" dia. pipe sleeve, keep sleeve from bearing on riser or pipe.</p> <p>③ (2) 5/8" x 18" rebar with (2) stainless steel pipe clamps</p> <p>④ 3/4" to 1" dia. gravel (12" deep)</p> <p>⑤ PVC sch 80 brass nipple</p> <p>⑥ PVC mainline pipe</p> | <p>⑦ S x S x T tee or S x T ell (pvc sch. 80)</p> <p>⑧ Fabricate with:
(3) street ell
(1) 12" L. nipple</p> <p>⑨ 10" round valve box with locking lid install flush to finish grade. Hot brand lid "Q C".</p> <p>⑩ Walk curb, paving or other improvement</p> <p>⑪ Finish grade includes 3" of mulch</p> <p>⑫ Common brick (typical of 3 per box)</p> |
|---|---|

Notes:

1. All threaded fittings shall be wrapped with teflon tape (2 wraps min.)
2. Flush pipes prior to installing quick coupling valve on swing joint.
3. Install heads-up marking flag on valve box lid. Contractor to maintain marking until project is complete
4. Furnish fittings and piping nominally sized identical to nominal quick coupling valve inlet size.
5. Compact soils around valve box to 80% of original dry density.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	QUICK-COUPLING VALVE	PAGE 28 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	I-22



- | | |
|---|---|
| ① Remote control valve | ⑨ PVC sch 80 nipple (typ.) |
| ② Valve id tag | ⑩ PVC sch 80 union |
| ③ Extra wire coils - 6 to 8 wraps over 1" pipe | ⑪ PVC sch 80 SS coupling (45°) to angle pipe to lateral depth (typical) |
| ④ Waterproof connector (24v) | ⑫ PVC sch 80 ell (for ball valve) |
| ⑤ Valve box w/ locking lid (rectangular), install flush with grade. Hot brand lid "RCV" and with valve number. | ⑬ PVC sch 80 riser pipe length varies |
| ⑥ 3/4"Ø gravel (2 c.f. min.) | ⑭ SSS Tee |
| ⑦ Common brick (one per corner of box) | ⑮ PVC mainline pipe |
| ⑧ Brass ball valve (line-size) or brass angle valve (angle valve replaces const. note 12) Angle valve to be located within box. | ⑯ PVC sch 40 lateral pipe |
| | ⑰ Finish grade includes 3" of mulch |

Notes:

1. Flush all pipe lines prior to installing valve
2. Wrap all threads with teflon tape (2 wraps maximum.)
3. Compact soils around valve box to 90% of original dry density
4. Install heads-up marking flag on valve box lid. Contractor to maintain marking flag locations until project is complete.
5. Install (4) 1-5/8 inch long dry wall screws; each corner of the lid to the box.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

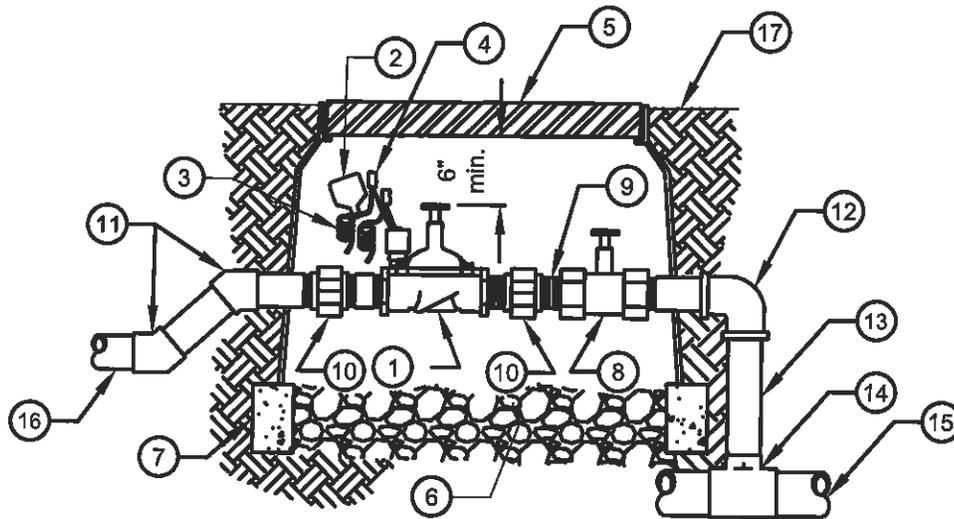
REMOTE CONTROL VALVE

PAGE 29
STANDARD

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

I-23



- | | |
|---|---|
| ① Remote control valve | ⑨ PVC sch 80 nipple (typ.) |
| ② Valve id tag | ⑩ PVC sch 80 union |
| ③ Extra wire coils - 6 to 8 wraps over 1" pipe | ⑪ PVC sch 80 SS coupling (45°) to angle pipe to lateral depth (typical) |
| ④ Waterproof connector (24v) | ⑫ PVC sch 80 ell (for ball valve) |
| ⑤ Valve box w/ locking lid (rectangular), install flush with grade. Hot brand lid "RCV" and with valve number. | ⑬ PVC sch 80 riser pipe length varies |
| ⑥ 3/4"Ø gravel (2 c.f. min.) | ⑭ SSS Tee |
| ⑦ Common brick (one per corner of box) | ⑮ PVC mainline pipe |
| ⑧ Brass ball valve (line-size) or brass angle valve (angle valve replaces const. note 12) Angle valve to be located within box. | ⑯ PVC sch 40 lateral pipe |
| | ⑰ Finish grade includes 3" of mulch |

Notes:

1. Flush all pipe lines prior to installing valve
2. Wrap all threads with teflon tape (2 wraps maximum.)
3. Compact soils around valve box to 90% of original dry density
4. Install heads-up marking flag on valve box lid. Contractor to maintain marking flag locations until project is complete.
5. Install (4) 1-5/8 inch long dry wall screws; each corner of the lid to the box.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

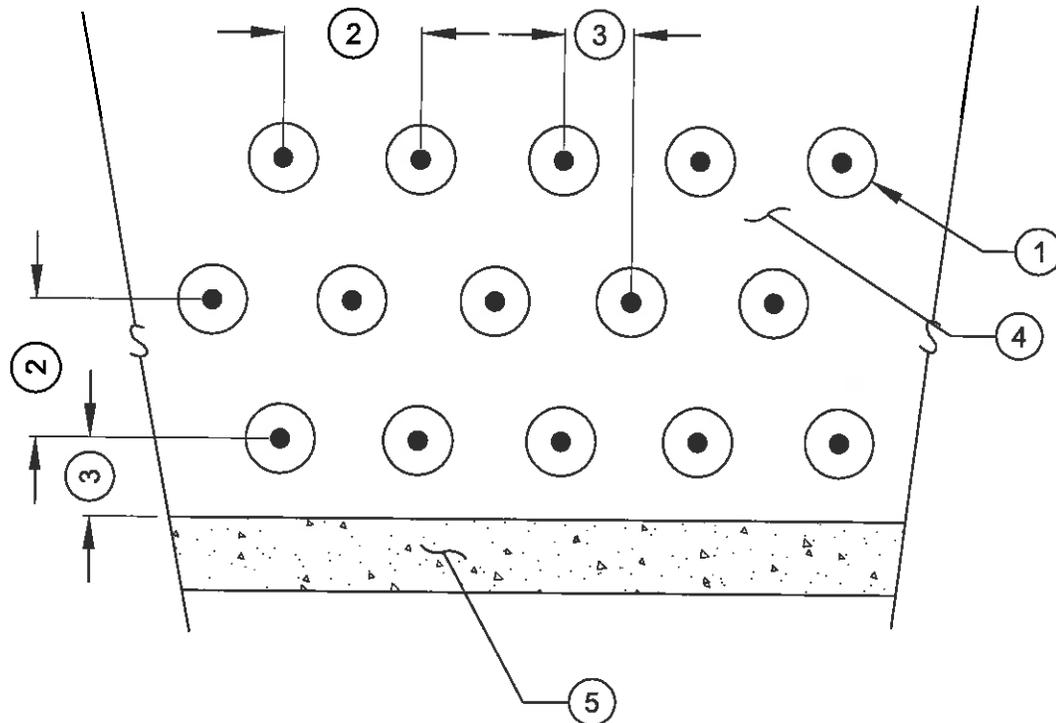
MASTER CONTROL VALVE

PAGE 30
STANDARD

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

I-24



PLAN VIEW

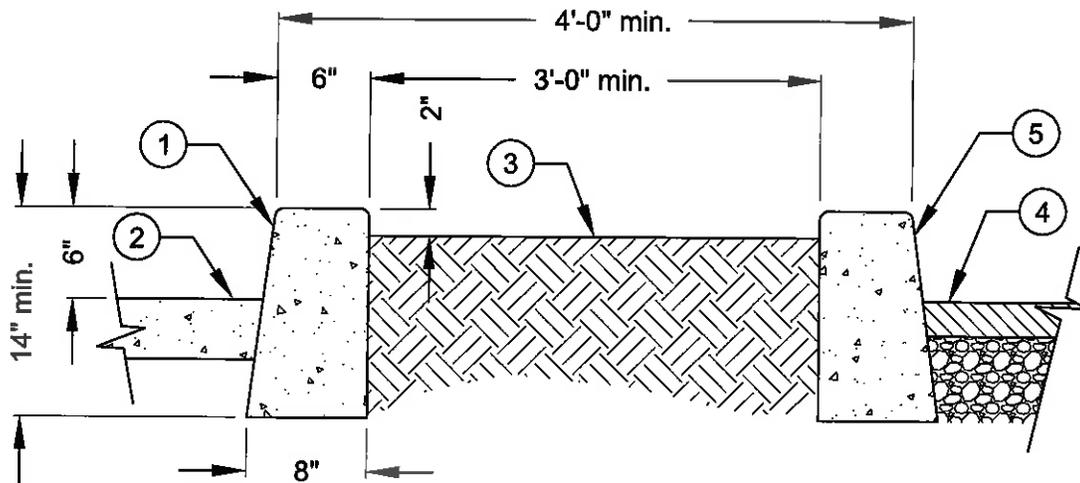
- ① Groundcover (set crown @ original height)
- ② On-center plant spacing (per plan)
- ③ 1/2 of on-center spacing (per plan)
- ④ Shrub or ground cover planting area
- ⑤ Curb, hardscape, or other improvement (where occurs per plan)

PLANTING TABLET TABLE	
Size of plant	No. of tablets
Flat Plant	(1) - 7 oz
1 gallon	2-3
Planting tablets shall be gro-power or equal	

Note:
Erosion control mesh (City approved) shall be installed on all slopes 2:1 or greater.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	GROUND COVER DETAIL	PAGE 31 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	L-01



- ① Concrete planter curb, 2800 psi @ 28 days (min.)
- ② Finish grade at sidewalk or parking lot
- ③ Finish grade includes 3" of mulch
- ④ Street paving on base (depth per Engineer's requirements)
- ⑤ Concrete curb "A" (City standard drawing S-09)

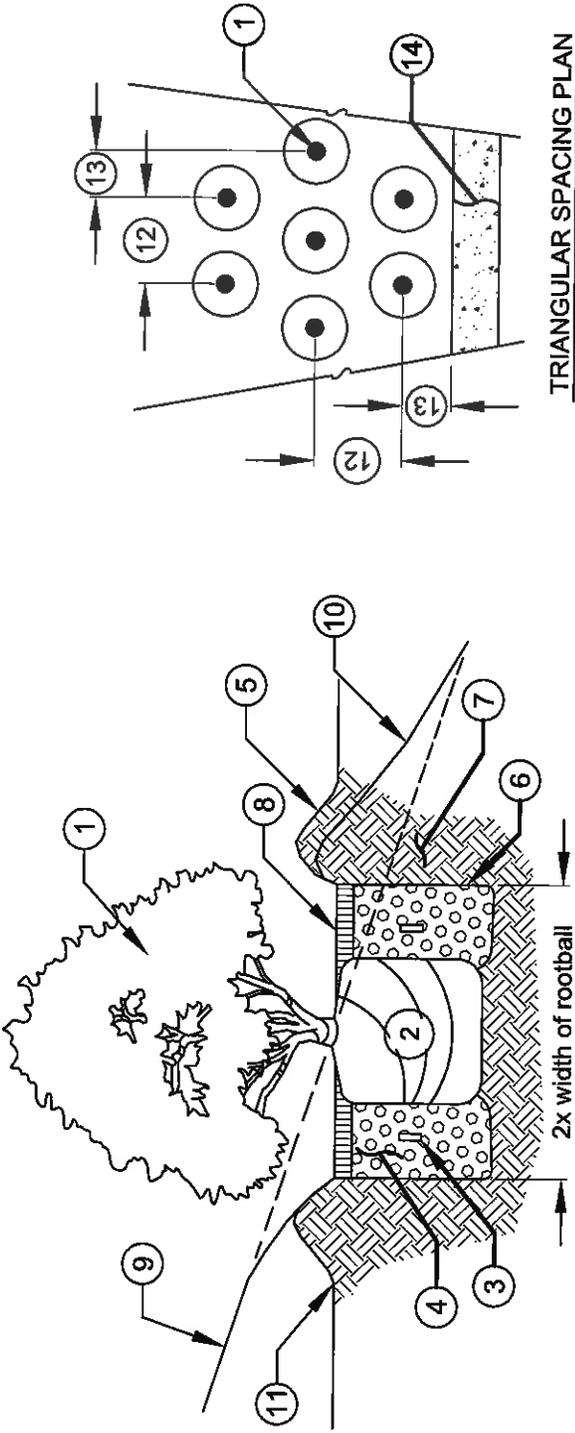
Notes:

1. Provide planter strip with concrete curb "A" along the entire property adjacent to a dedicated street, excluding drive approaches.
2. Omit concrete planter curb when turf is planted in strip. Finish grade at turf shall be flush with sidewalk.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	PLANTER STRIP AT STREET MEDIANS	PAGE 32 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	L-02

CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS

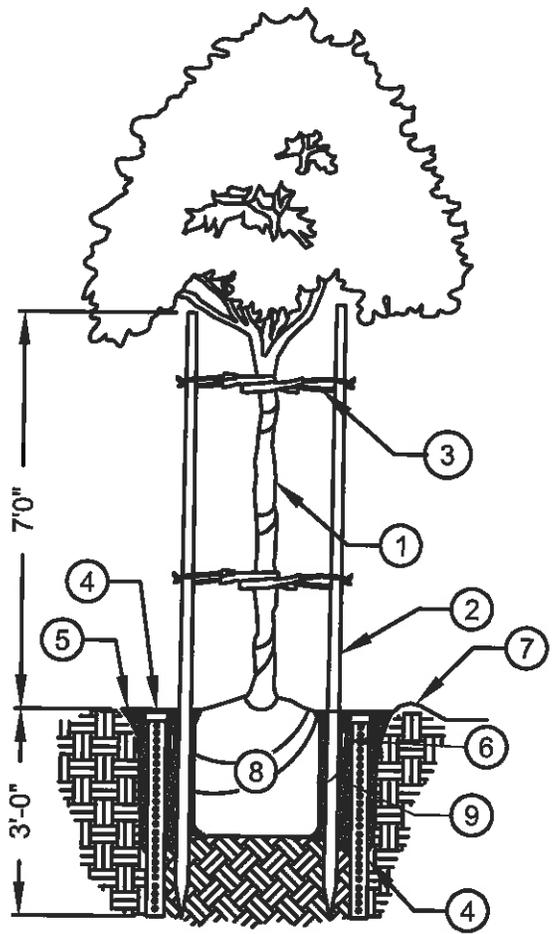
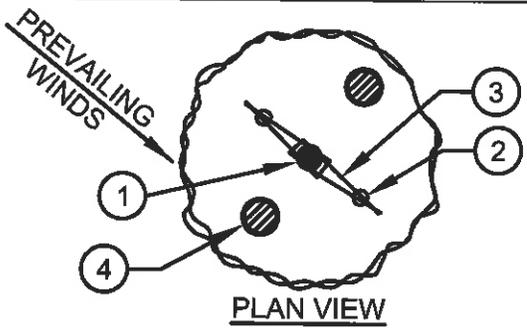


PLANTING TABLET TABLE	No. of tablets
1 GALLON	2-3
3 GALLON	3-6
5 GALLON	6-9
7 GALLON	8-10
10 GALLON	10-12
15 GALLON	12-15
Planting tablets shall be gro-power or equal	

- ① Shrub, see plan for spacing (set crown at original height)
- ② Rootball - set on undisturbed soil
- ③ Planting tablets (typ.) (see table for quantity)
- ④ Amended backfill: 2/3 site soil + 1/3 organic backfill mixture (forest humus or equal) + amendments per soil analysis
- ⑤ Soil berm (on the downhill side of plant pit if on slope)
- ⑥ Plant pit - rougher sides
- ⑦ Undisturbed soil
- ⑧ Bark mulch
- ⑨ Slope @ original grade
- ⑩ Slope @ proposed grade
- ⑪ Finish grade includes 3" of mulch
- ⑫ On-center plant spacing (per plan)
- ⑬ 1/2 of on-center spacing (per plan)
- ⑭ Curb, hardscape, or other improvement (where occurs on plan)

Note:

1. Erosion control matting or jute mesh (city approved) shall be installed on all slopes 2:1 or greater.



- ① Tree trunk
- ② 3" x 10' lodge pole pine stakes with green preservative stain
- ③ (2) 16" v.i.t. twist braces; screw to stakes with 1" inch dry wall screws.
- ④ 4" dia. x 36"l. perforated pvc pipe w/ pvc cap, fill with 3/4" dia. pea gravel, (install 90 deg. from stakes) top of pipe shall be flush with grade in basin
- ⑤ Bark mulch (forest humus); up to but not covering crown
- ⑥ Planting tablets (see table)
- ⑦ Soil berm
- ⑧ Rootball
- ⑨ Amended backfill: site soil + 1/3 organic backfill mixture (forest humus or equal) + amendments per soil analyses

PLANTING TABLET TABLE	
Size of plant	No. of tablets
1 GALLON	2-3
3 GALLON	3-6
5 GALLON	6-9
7 GALLON	8-10
10 GALLON	10-12
15 GALLON	12-15
24" BOX	18-21
36" BOX	21-24
Planting tablets shall be gro- power or equal	

Notes:

SECTION VIEW

- 1. Root barriers (2' deep x twice the rootball diameter) shall be required where a tree is 5' or less from any hardscape or infrastructure.
- 2. Tree shall not be planted in LMAD's 9' wide or less
- 3. Cut turf away from trunk 4" in diameter. Slope soil away from rootball in all directions a maximum of 4%
- 4. 24" is the minimum distance of irrigation bubbler to the tree trunk.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

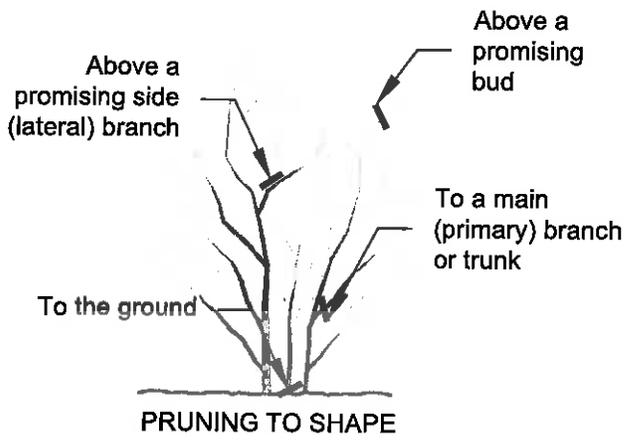
Prepared on:
09-25-13

NOT TO SCALE

TREE PLANTING DETAIL

Approved By: John A. McGlade, Director of Public Works/City Engineer

PAGE 34
STANDARD
L-04

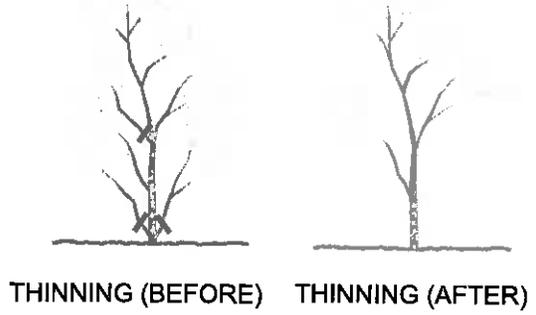


PRUNING TO SHAPE:

Pruning to shape is a concept in which the artistic side of pruning determines your concept of what the right shape of a plant should be. Every plant has a "natural" shape where the growth tends to conform to a natural pattern. Observe what a plant's natural shape is, and then prune the plant in a manner that will allow the natural form to continue to develop. Remove excess growth that obscures the basic pattern or any errant growth that departs from the natural form.

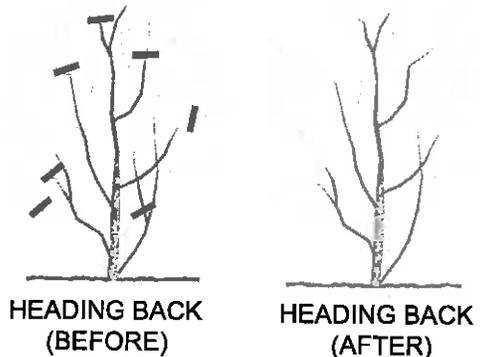
THINNING:

Thinning is the extreme of heading back, instead of removing parts of stems, entire stems, limbs, or branches are removed. Reasons for thinning are essentially the same as for heading back. It opens up a plant by simplifying its structure, removing old and unproductive growth, or limbs that are growing in directions that detract from the plant's attractiveness. Rose pruning, removing entire canes to the plant's base.



HEADING BACK:

Heading back (also called cutting back), uses the same growth principle as pinching, that growth elongates in one direction until it is stopped. The difference is that in heading back, lengths of stem already grown are cut off rather than removing growth before it forms stems. In heading back, stems are cut down to side branches or lateral buds that will grow in the direction desired. The annual ritual of rose pruning probably is the most familiar example of heading back. During heading back, decisions are made regarding which growth to remove and to leave, thereby controlling and directing a plant's growth.



HEADING BACK MAY BE DONE:

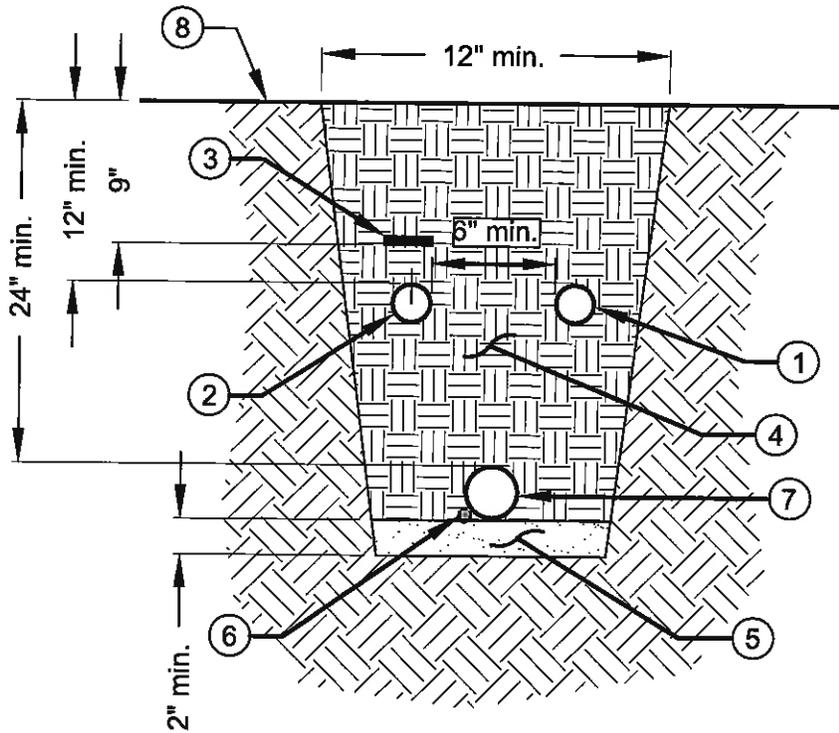
1. To remove weak or unproductive wood.
2. To encourage growth in a desired direction.
3. To prevent growth from continuing in the undesirable direction.
4. To stimulate flower or fruit production by encouraging growth of wood that will produce.
5. To prevent wind or snow damage.
6. To revitalize an old plant.

HEADING BACK MAY BE DONE BETWEEN DECEMBER THROUGH FEBRUARY AND INCLUDE:

1. Cut out dead or broken branches & limbs
2. Cut off sucker growth.
3. Cut out crossing or inward growing branches.
4. Cut up to 25% of growth (to upward-facing bud)

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	TREE PRUNING (DEC. TO FEB.)	PAGE 35 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	L-05



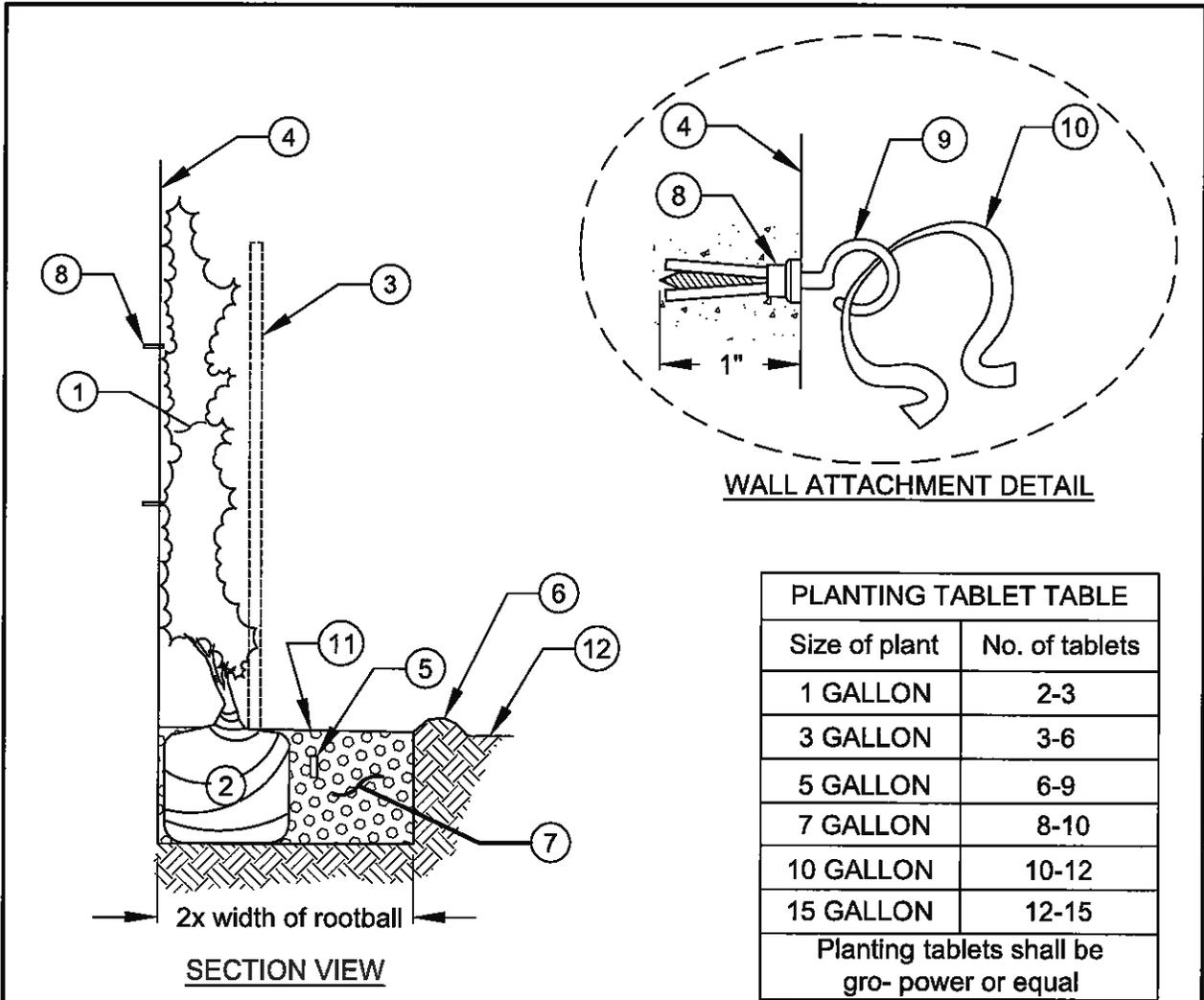
- | | |
|--|--|
| ① Non-pressure lateral pipe | ⑤ Sand or approved bedding material |
| ② EMT conduit or equal for 110v wires | ⑥ Irrigation controller wire bundle (24v), provide 10' -15' coil at every turn and valve |
| ③ Trench marker - continuous plastic tape labeled "caution- electrical" directly above conduit | ⑦ Mainline pressure pipe |
| ④ Backfill | ⑧ Finish grade includes 3" of mulch |

Notes:

1. Two or more laterals (r main lines) in the same trench shall be placed side by side with 6" min. backfill between pipes both horizontally and vertically.
2. Sleeve all laterals, mainline, and electrical under concrete and asphalt surfaces
3. All measurements shall be from finish grade to top of pipe.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

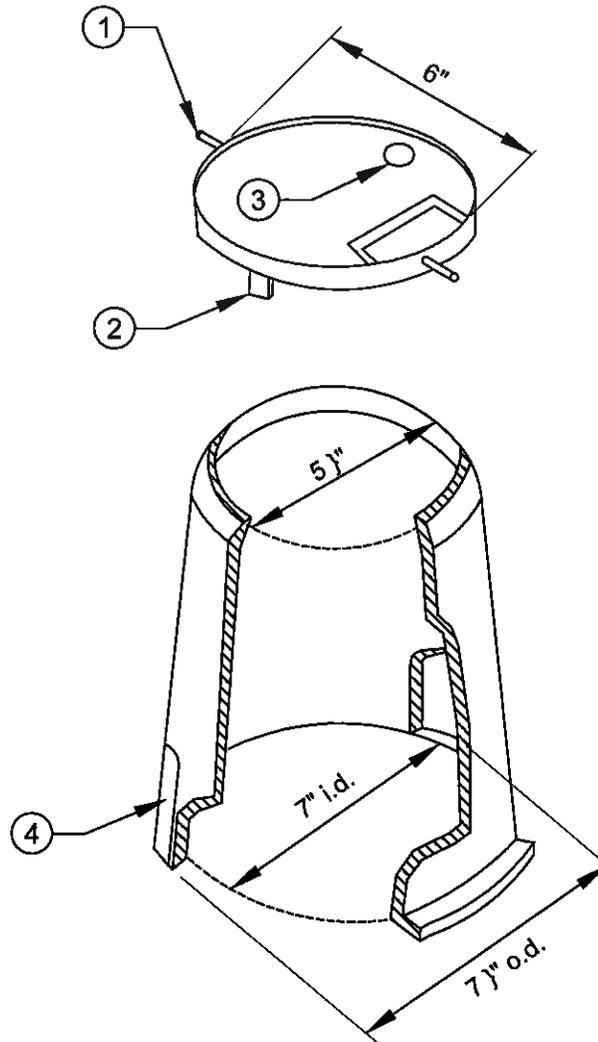
Prepared on: 09-25-13	TRENCHING REQUIREMENTS	PAGE 36 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	L-06



PLANTING TABLET TABLE	
Size of plant	No. of tablets
1 GALLON	2-3
3 GALLON	3-6
5 GALLON	6-9
7 GALLON	8-10
10 GALLON	10-12
15 GALLON	12-15
Planting tablets shall be gro- power or equal	

- ① Vine (espalier on wall)
- ② Rootball (set tight to ftgs). Remove excess concrete to accommodate planting hole
- ③ Nursery stake (do not damage plant or rootball). Attach vine to fence, wall, overhead, or other adjacent vertical surface.
- ④ Wall, fence or post
- ⑤ Planting tablets (see table for quantity)
- ⑥ 4" watering berm
- ⑦ Amended backfill: site soil + 1/3 organic backfill mixture (forest humus or equal) + amendments per soil analysis.
- ⑧ Lead expansion anchor (as needed)
- ⑨ 3/16" stainless steel eye-screw
- ⑩ Heavy duty green plastic ribbon tie, 2 ties (min.) per vine (length as required)
- ⑪ Bark mulch (2" deep)
- ⑫ Finish grade includes 3" of mulch

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- ① Location of #8 screws (see note)
- ② "Snap- lock" tab
- ③ Cover lift hole
- ④ 2" x 2" pipe slots (2 places)

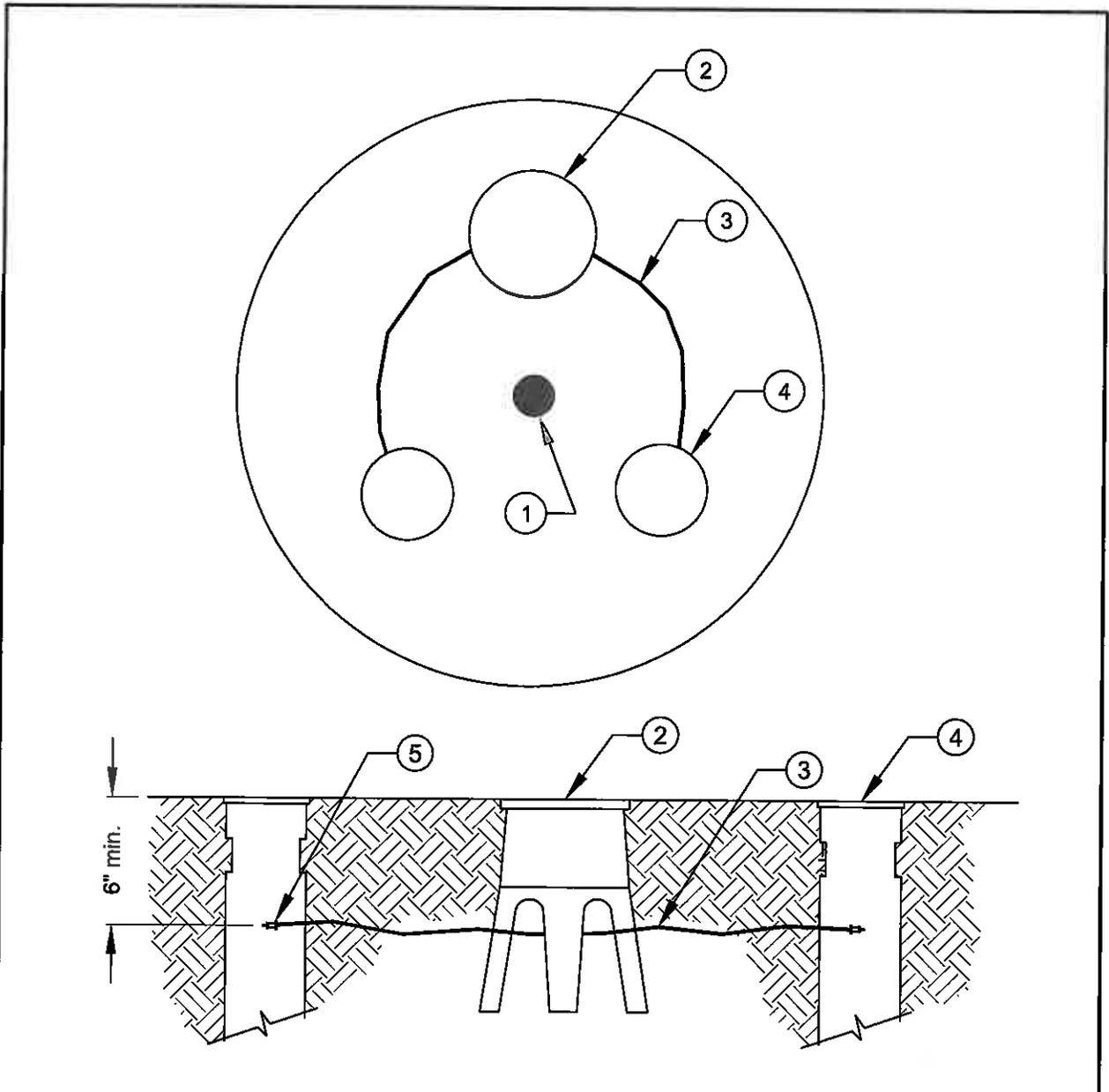
Notes:

- 1. Use brooks xx series or equal
- 2. Spanner screw $\frac{3}{8}$ " x 2", anti- theft.
- 3. Cover st. - 5 oz.
- 4. Body wt. 1 lb. 6 oz

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	SMALL COVER BOX DETAIL	PAGE 38 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	R-01

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).
 CITY NO LONGER ALLOWS DRIP SYSTEMS.



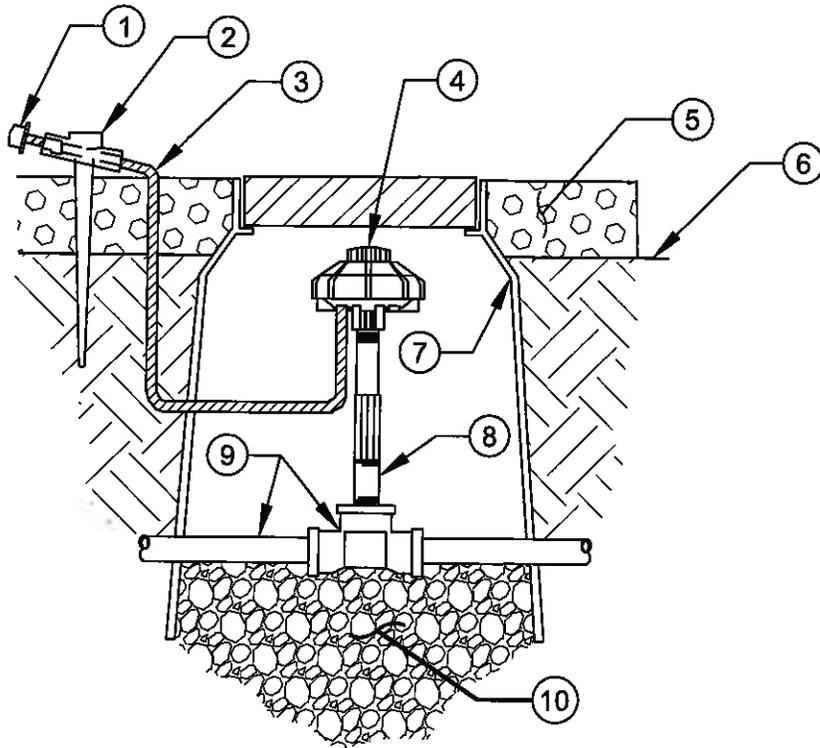
- ① Tree
- ② Emitter within brooks 70 series box
- ③ 1/4" distribution tubing
- ④ 4" perforated pcv pipe (typ.)
- ⑤ Diffuser bug cap (typ.)

Note: See irrigation legend for type and size of emitter.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
 LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	DRIP DISTRIBUTION DETAIL	PAGE 39 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	R-02

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- | | |
|---|--|
| ① Difuser bug cap | ⑥ Finish grade |
| ② 1/4" Tubing stake | ⑦ Emitter box (Brooks 70 series) |
| ③ 1/4" distribution tubing max. length not exceed 20 feet | ⑧ PVC sch 80 riser (length as required) |
| ④ Xeri-bird 8 (see irr. legend for gph/port) | ⑨ PVC sch 40 pipe and sch. 80 fitting (12" cover min.) |
| ⑤ Mulch bed 3" | ⑩ 3/4" crushed rock |

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

8 PORT EMITTER IN BOX DETAIL

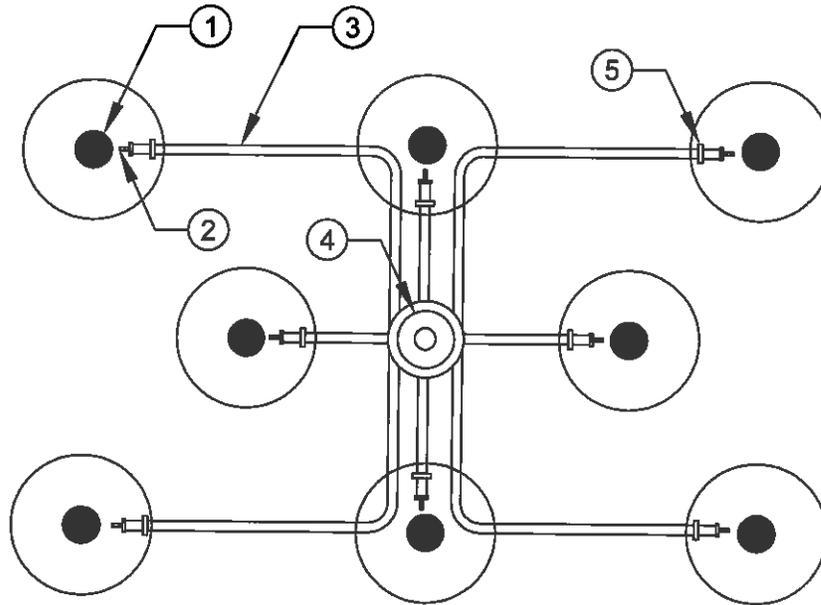
PAGE 40
STANDARD

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

R-03

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



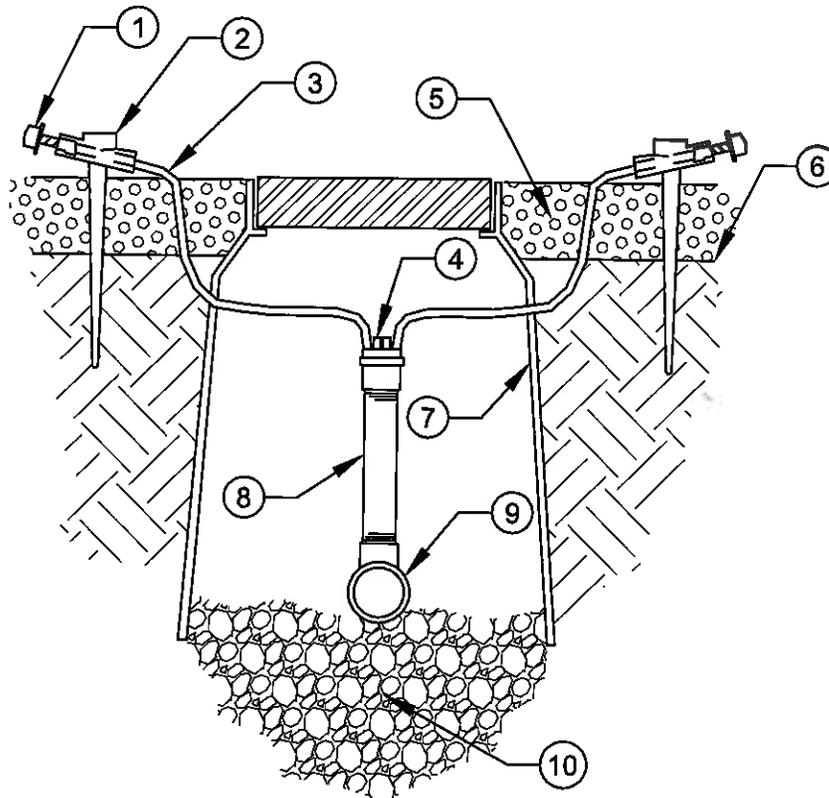
PLAN VIEW

- ① Plant material (typ.)
- ② Diffuser bug cap (typ.)
- ③ 1/4" distribution tubing max. length not to exceed 20 ft.
- ④ Xeri-bird 8 multi-outlet emission device
gph flow/ port per irrigation legend
- ⑤ Tubing stake (typ.)

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	8 PORT EMITTER LAYOUT DETAIL	PAGE 41 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	R-04

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- | | |
|---|--|
| ① Diffuser bug cap | ⑥ Finish grade |
| ② 1/4" Tubing stake | ⑦ Emitter box (Brooks 30 series) |
| ③ 1/4" distribution tubing max. length not exceed 20 feet | ⑧ PVC sch 80 riser (length as required) |
| ④ Multi-outlet xeri-bug emitter | ⑨ PVC sch 40 pipe and sch. 80 fitting (12" cover min.) |
| ⑤ Mulch bed 3" | ⑩ 3/4" crushed rock |

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

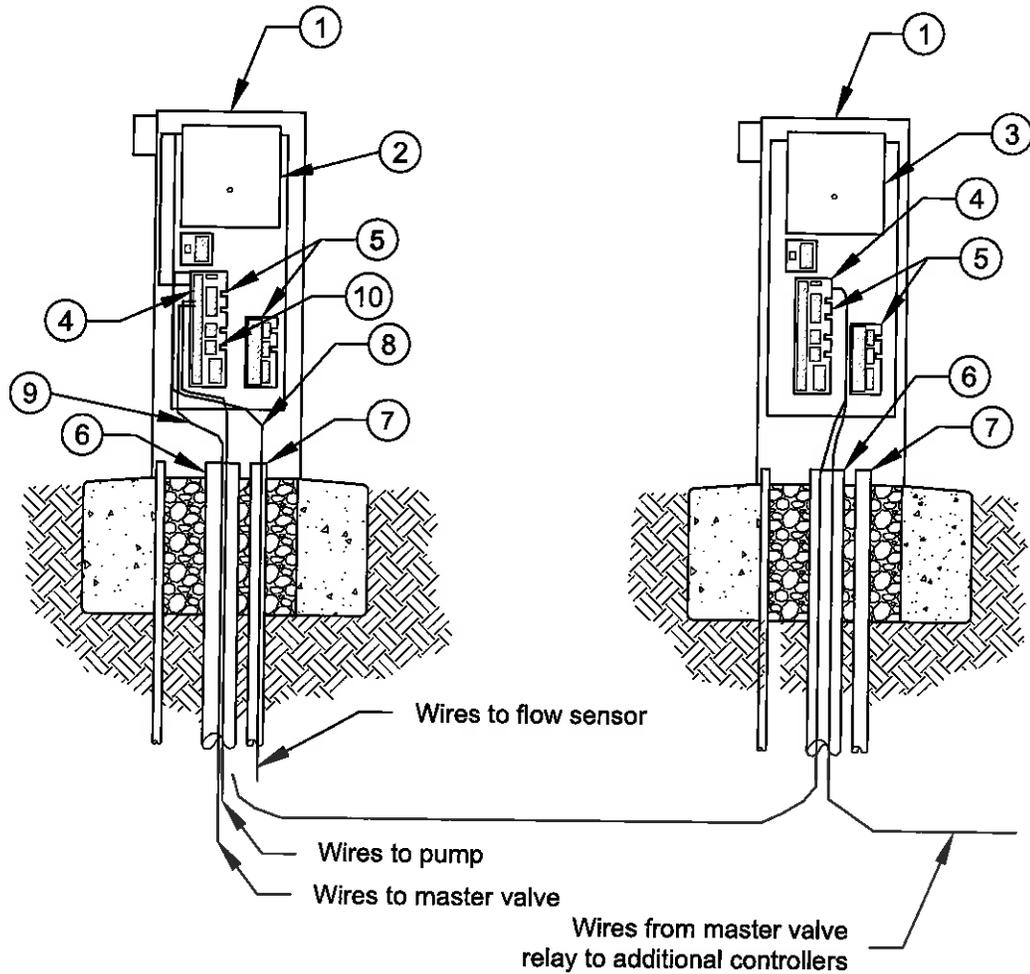
MULTI-OUTLET EMITTER IN BOX DETAIL

PAGE 42
STANDARD
R-05

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- ① Imperial assemblies 18" front entry satellite assembly NEMA 3R rain proof enclosure (UL listed)
- ② Controller 1 &/or 2
- ③ Controller 3 &/or 4
- ④ Master valve relay assembly or pump start relay assembly (optional)
- ⑤ Terminal board
- ⑥ PVC conduit for control wires, size as required.
- ⑦ 1" PVC conduit for flow sensor cable
- ⑧ Flow sensor cable Paige Cable P-7162- D to flow sensor
- ⑨ Master valve two (2) wires Paige cable P-7001D- REV5 to the master valve
- ⑩ Three (3) Paige cable P-7001D-REV5 wires from the master valve relay/pump start relay to the controller 3 and 4
- ⑪ Rain shut-off device with enclosure wired to the terminal board

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

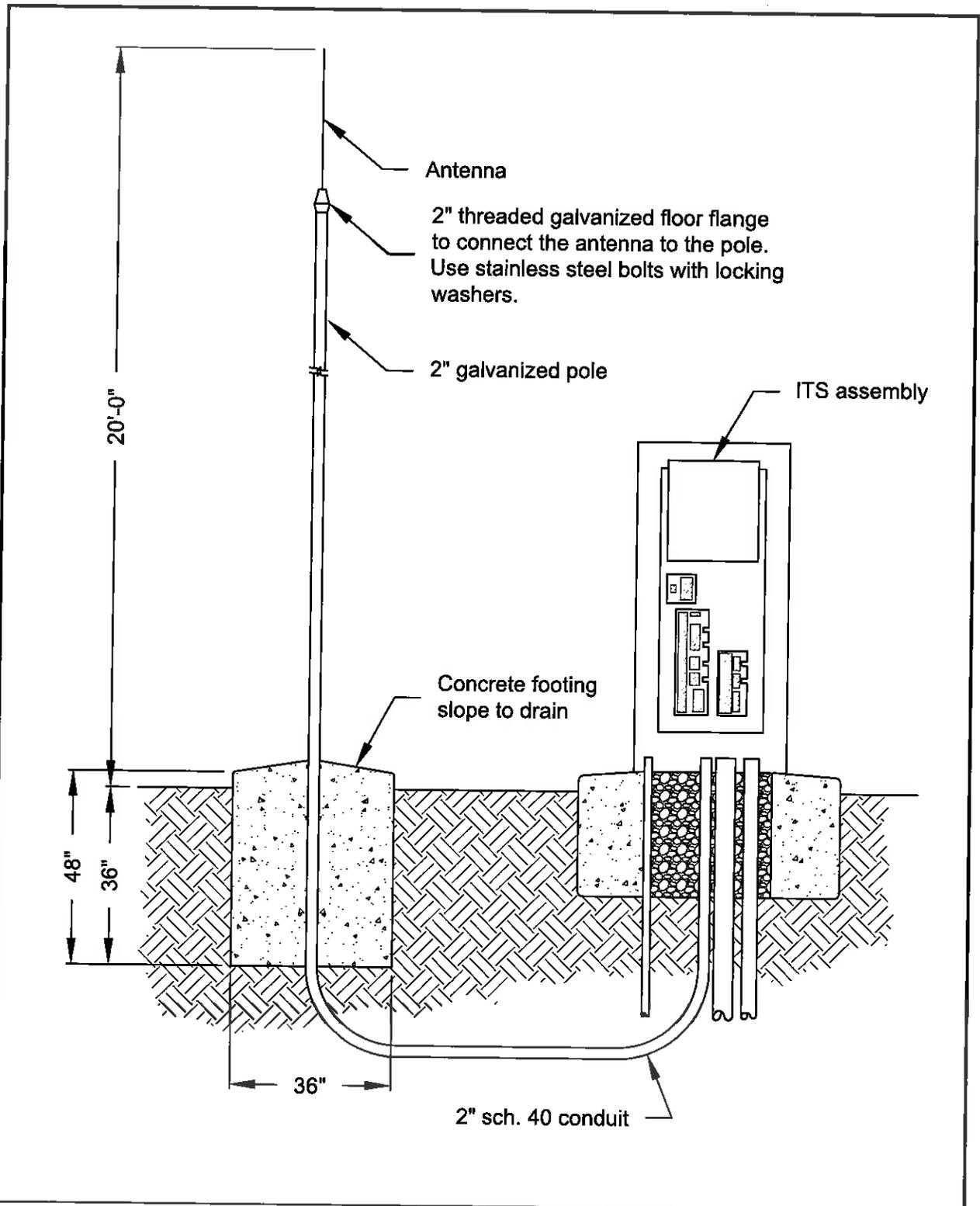
MASTER VALVE-FLOW SENSOR, PUMP START, & RAIN
SENSOR FOR MULTIPLE CONTROLLERS (CENTRAL CONTROL)

PAGE 43
STANDARD
R-06

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

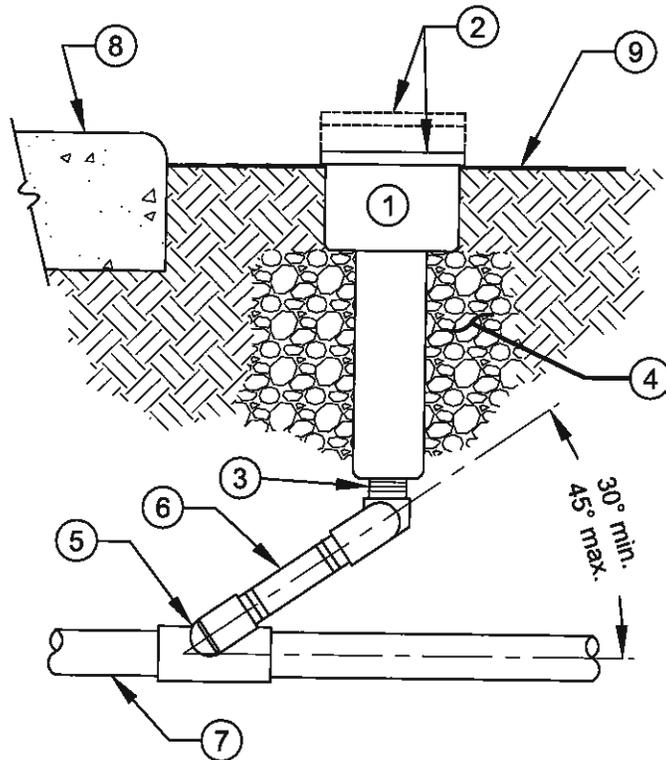
NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	OMNI ANTENNA ON A POLE	PAGE 44 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	R-07

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- ① Pop up rotor head
- ② Install 3" above grade in seeded areas or flush with grade in established turf areas.
- ③ Fabricate with:
(3) Street ell
(1) 12" L. nipple (sch 80)
- ④ S x S x T tee or ell (pvc sch. 80)
- ⑤ Lateral line
- ⑥ Walk, curb, paving or other improvement
- ⑦ Finish grade includes 3" of mulch

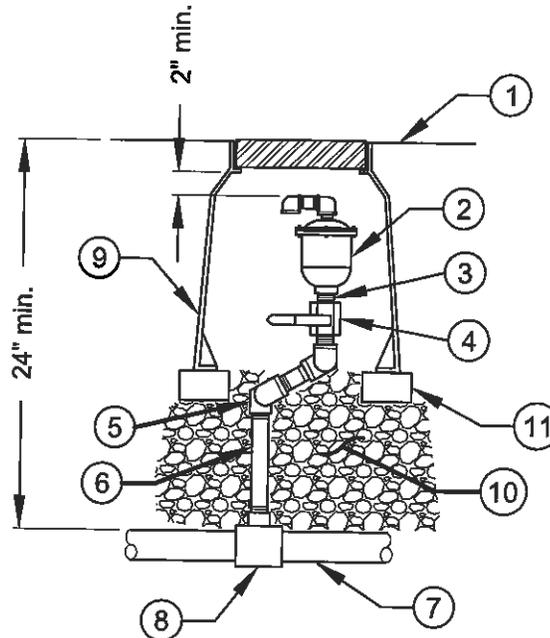
NOTES:

1. All threaded fittings shall be wrapped with teflon tape (1-1/2 to 2 wraps)
2. Flush pipes prior to installing sprinklers on swing joint.
3. Pop up spray head install above grade. Install heads-up marking flag to each spray head. Reset to grade in established turf areas. Compact backfill around spray head & swing joint assembly.
4. Swing joint shall be same size as spray head inlet.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on: 09-25-13	POP-UP ROTOR (LARGE RADIUS THROW)	PAGE 45 STANDARD
NOT TO SCALE	Approved By: John A. McGlade, Director of Public Works/City Engineer	R-08

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- | | |
|---|--|
| <p>① Finish grade includes 3" of mulch</p> <p>② Combination air valve (cav) with vent drain (galvanized)</p> <p>③ (2) 2" x 3" L. galvanized steel nipples</p> <p>④ 2" ball valve (full flow)</p> <p>⑤ 2" galvanized steel swing joint 2" includes:
 (4) 90° threaded elbows
 (4) 2" x 4" L threaded nipples
 (2) 2" x 8" L threaded nipples</p> | <p>⑥ Galvanized steel nipple (length as req'd.)</p> <p>⑦ PVC mainline pipe</p> <p>⑧ Mainline fitting (ductile iron) tapped coupling or service saddle.</p> <p>⑨ Valve box (standard round box with locking lid, install flush to grade. Hot brand lid "CAV")</p> <p>⑩ 3/4" crushed rock or gravel install 12" deep</p> <p>⑪ 2" red brick at corner</p> |
|---|--|

Notes:

1. Flush pipes prior to installing valve.
2. Paint all galvanized steel items with 2 coats of a corrosion resistant material.
3. Compact soils around valve box to 90%-95% of original dry density.
4. Wrap all threads with teflon tape, 1 to 2 wraps maximum
5. Install heads-up marking flag on valve box lid. Contractor to maintain flagging until project is complete.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
 LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

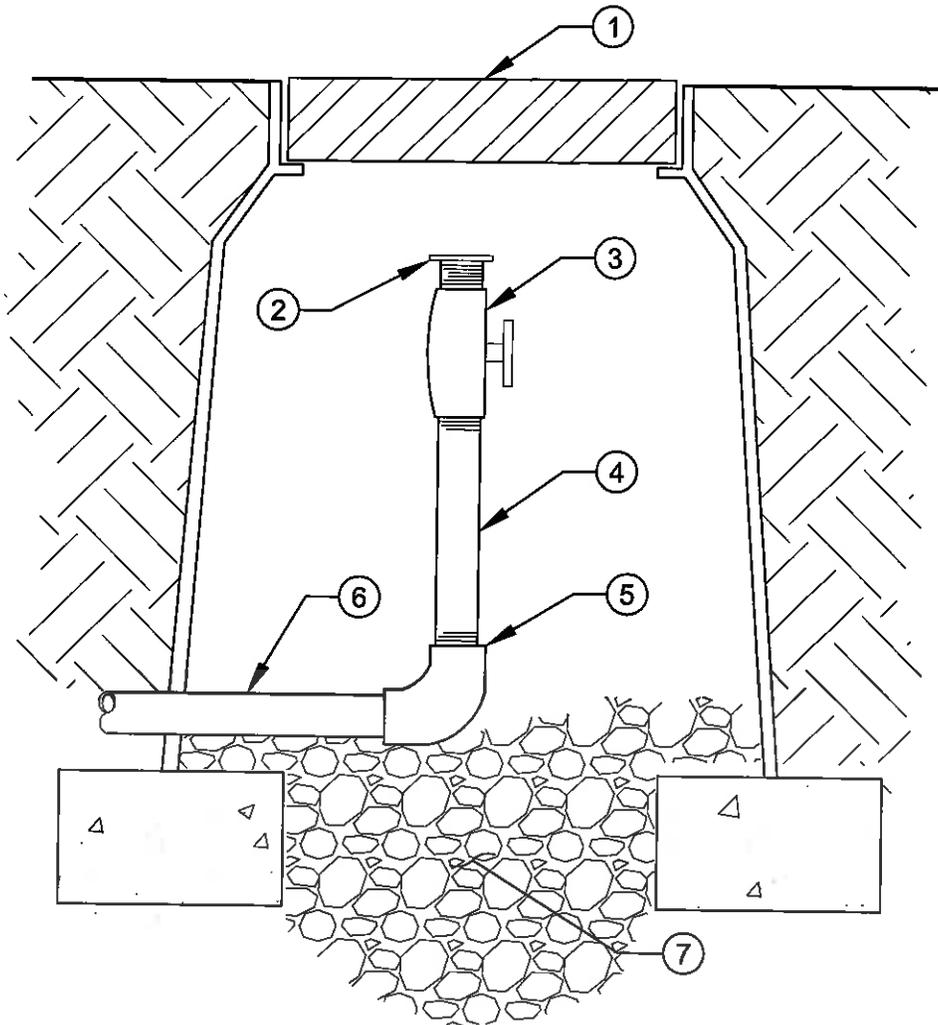
COMBINATION AIR VALVE

PAGE 46
STANDARD
R-09

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- ① Brook 1110 10' round locking valve box. Hot brand lid "FV"
- ② Brass hose adapter
- ③ Flush valve
- ④ PVC sch. 80 nipple
- ⑤ PVC sch. 80 ells s x t
- ⑥ PVC sch. 40 lateral main line
- ⑦ 3/4" dia. gravel

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

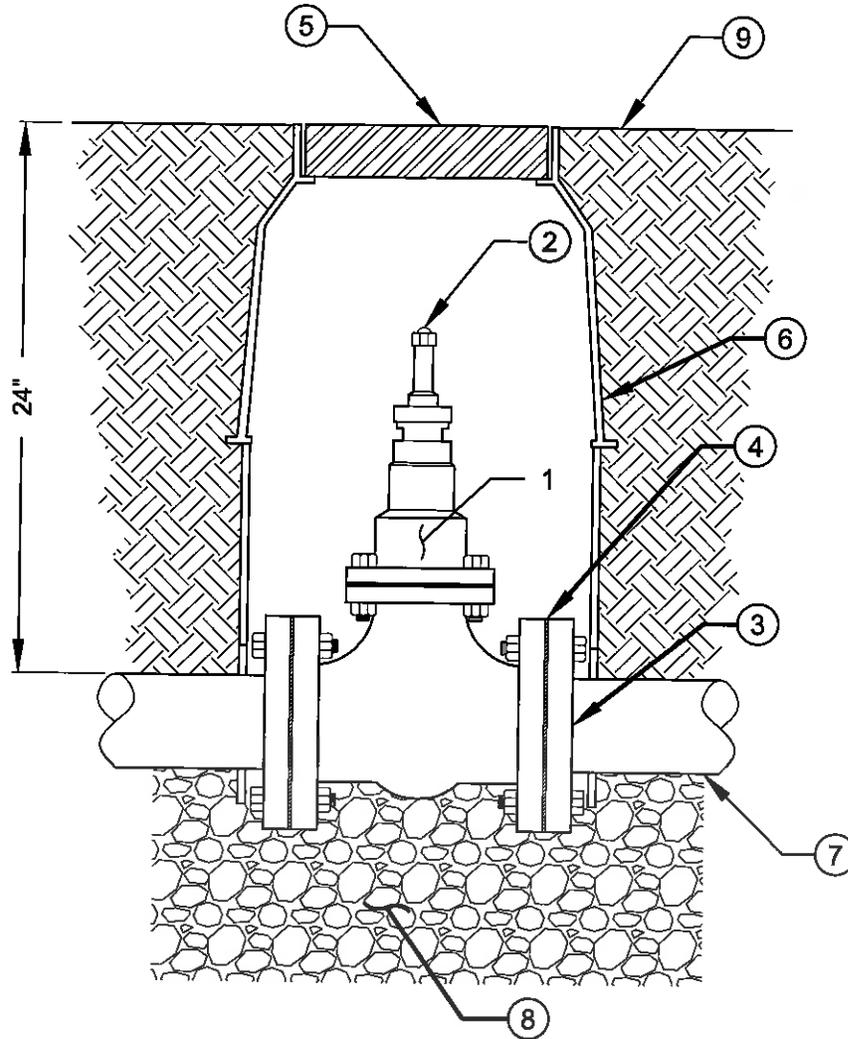
FLUSH VALVE DETAIL

PAGE 47
STANDARD
R-10

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer

NOT AN OPTION (FOR REPAIR ONLY OF EXISTING SYSTEMS).



- ① Gate Valve
- ② 2" square operating nut
- ③ Companion flange (line size)
- ④ Companion flange gasket (line size)
- ⑤ Round valve box with locking cover, install flush with grade. Hot brand lid "GV"
- ⑥ 6" pvc sch. 40 pipe extension (length as required) keep inside free of debris.
- ⑦ PVC mainline 4" or larger
- ⑧ 3/4" pea gravel (two c.f. min.)
- ⑨ Finish grade includes 3" of mulch

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

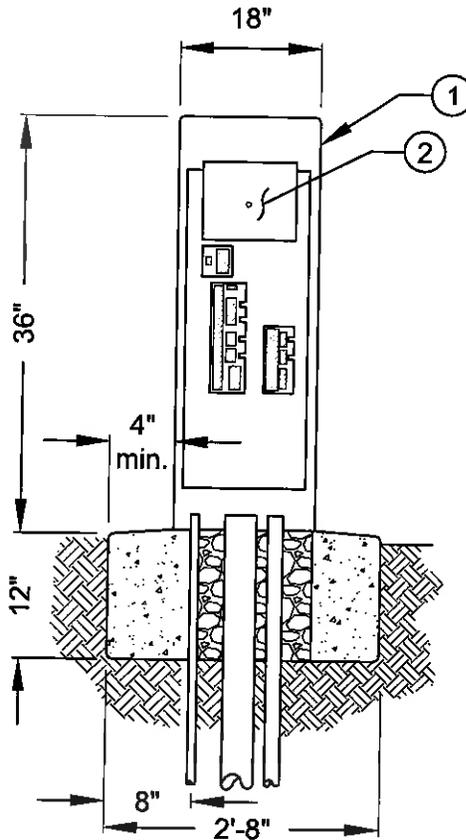
Prepared on:
09-25-13

FLANGED GATE VALVE (4" OR LARGER)

PAGE 48
STANDARD
R-11

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer



- ① Existing controller assembly rainproof enclosure (UL listed)
- ② **ET Water - 50 Pin Retrofit Panel for Rain Bird ESP Controllers** (see attached installation instructions)
 - * 110V power to be turned off
 - * Contractor shall remove existing Rain Bird ESP style panel fade-plate and disconnect 50 pin connector from output board.
 - * Install provided brackets
 - * Install 50 pin ET Water faceplate and connect ribbon cable to existing Rain Bird output board.
 - * Install dome type antenna to enclosure and connect to new ET Water faceplate
 - * Activate system per instructions

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

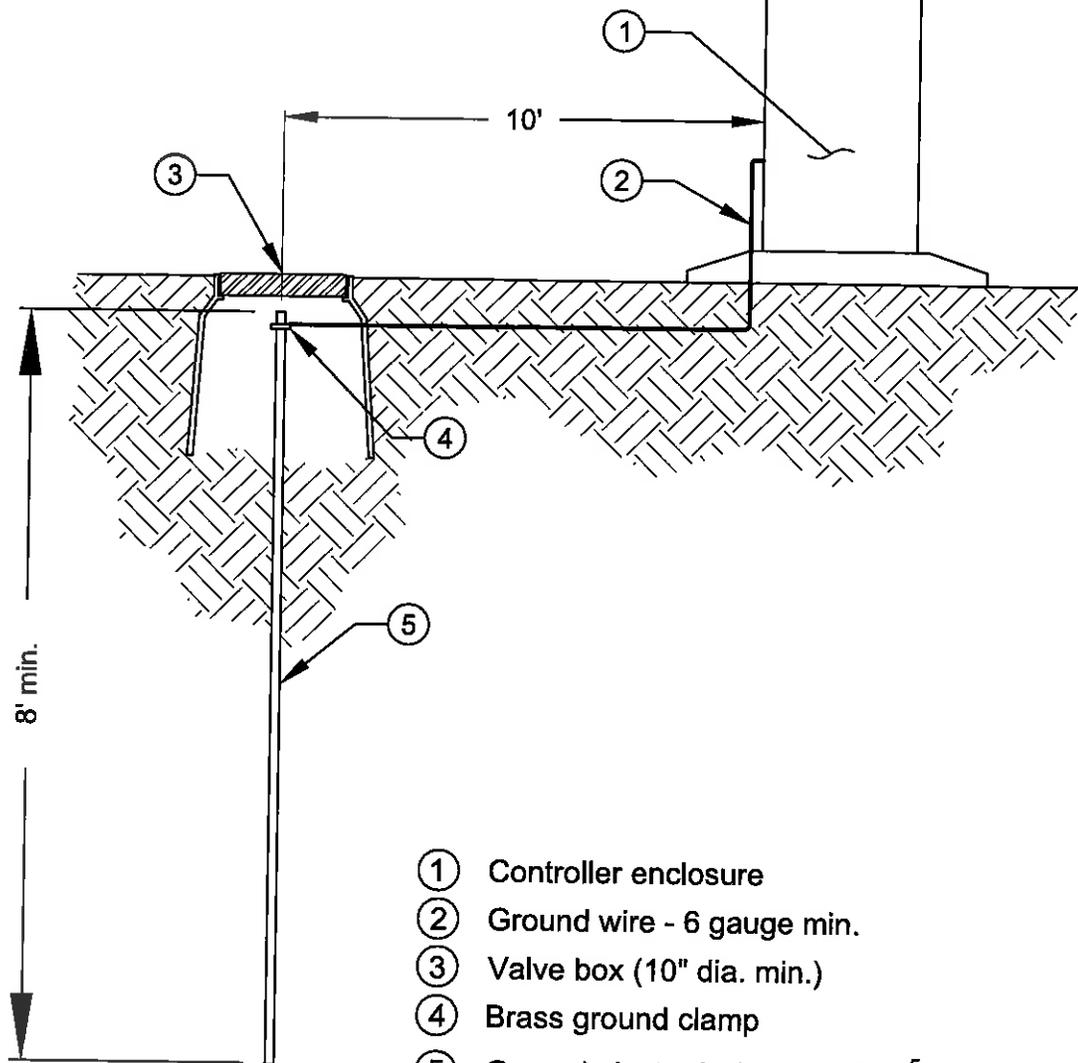
Prepared on:
09-25-13

RAINBIRD CONTROLLER REPLACEMENT

PAGE 49
STANDARD
R-12

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer



- ① Controller enclosure
- ② Ground wire - 6 gauge min.
- ③ Valve box (10" dia. min.)
- ④ Brass ground clamp
- ⑤ Ground electrode (copper clad $\frac{5}{8}$ " dia. x 8" min. rod) minimum 10' from control panel

Note:

Ground conductor shall be the shortest length possible with no sharp bends, kinks, or coils in the wire. Exposed wire shall be in an approved conduit or armored cable.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

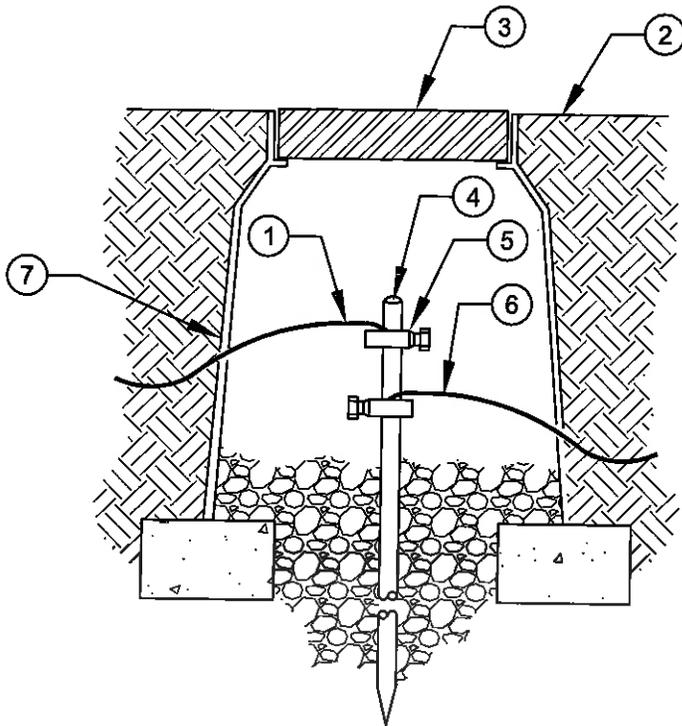
Prepared on:
09-25-13

MINIMUM GROUNDING REQUIREMENTS

PAGE 50
STANDARD
R-13

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer



- ① #6 bare copper wire from previous rod in grid

② Finish grade includes 3" of mulch

③ Standard valve box with cover, hot brand lid "GR".

④ Grounding rod from GK-UL3ROD three rod kit
- ⑤ Brass clamp (1 of 2)

⑥ #6 bare copper wire to next rod in grid

⑦ Valve box (10" diam. min.) See Specification Booklet page 20.

NOTE: See grounding rod notes for installation instructions.

**CITY OF VICTORVILLE - PUBLIC WORKS DEPARTMENT
LANDSCAPING STANDARD DETAILS**

Prepared on:
09-25-13

GROUNDING WIRES IN BOX DETAIL

PAGE 51
STANDARD
R-14

NOT TO SCALE

Approved By: John A. McGlade, Director of Public Works/City Engineer