



## CITY OF FONTANA DESIGN STANDARDS

Link to Location on City Website:

<https://www.fontanaca.gov/3483/Design-and-Construction-Standards>

STD #	SHEETS	SECTION 5000 - LANDSCAPE	DATE APPROVED
5001	1	Typical Hose Connection	10/18/2006
5002	1	Controller Placement Detail	10/18/2006
5003	1	Rain Sensor	10/18/2006
5004	1	Rain Guard	10/18/2006
5005	3	Irrigation Controller	3/15/2022
5006	1	Tipping Bucket	10/18/2006
5007	2	Typical Backflow "Fertilization"	12/2/2019
5008	1	Typical Backflow "Private"	10/18/2006
5009	1	Typical Backflow	10/18/2006
5010	1	Flow Meter/Master Valve	3/15/2022
5011	1	Typical Brass Remote Control Valve Detail	3/15/2022
5012	1	Automatic Antisiphon Valve	10/18/2006
5013	1	Wire Connector	10/18/2006
5014	1	Wire Connector	10/18/2006
5015	1	Trenching Detail	10/18/2006
5016	1	Piping and Wiring	10/18/2006
5017	1	Splice Box Assembly	3/15/2022
5018	1	Sleeving Detail	10/18/2006
5019	1	Gate Valve	3/15/2022
5020	1	Thrust Block Assembly	10/18/2006
5021	1	Quick Coupler	3/15/2022
5022	1	Swing Joint	10/18/2006
5023	1	Lawn 4", 6" 8" Shrub Pop-up Head	10/18/2006
5024	1	Hi Popup Shrub Head	10/18/2006
5025	1	Shrub Spray Head	10/18/2006
5026	1	Bubbler Head	10/18/2006
5027	1	Shrub Rotor	10/18/2006
5028	1	Irrigation at Top of Slope	10/18/2006

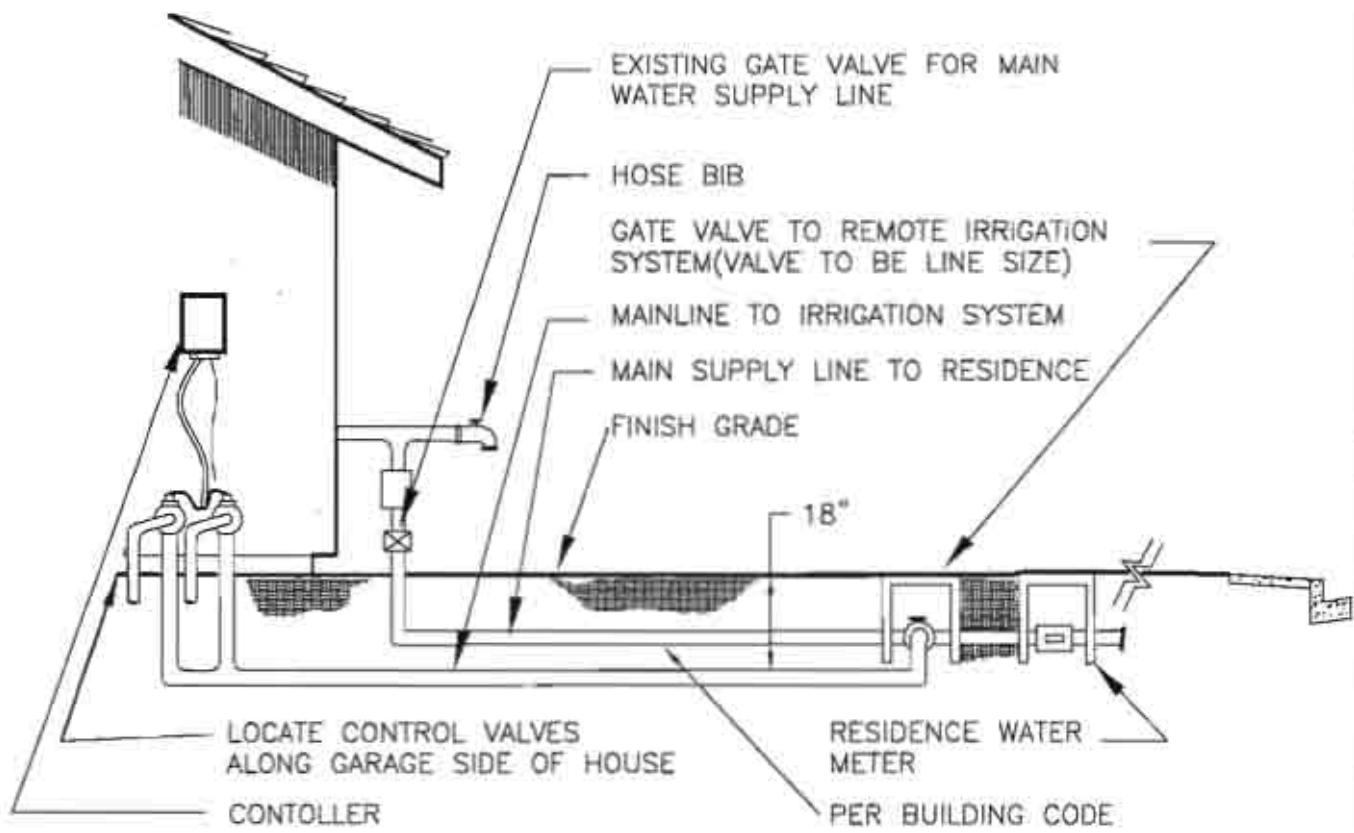


## CITY OF FONTANA DESIGN STANDARDS

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STD #	SHEETS	SECTION 5000 - LANDSCAPE (p. 2)	DATE APPROVED
5029	1	Shrub Rotor on Slope	10/18/2006
5030	1	Oscillation Head Assembly	10/18/2006
5031	1	Tree Staking	10/18/2006
5032	1	Tree Guying	10/18/2006
5033	1	Tree Placement	10/18/2006
5034	1	Palm Tree Installation	10/18/2006
5035	1	Shrub Planting	10/18/2006
5036	1	Shrub on Slope	10/18/2006
5037	1	Vine Planting	10/18/2006
5038	1	Automatic Drip Valve	3/15/2022
5039	1	Emitter	3/15/2022
5040	1	Emitter Layout	10/18/2006
5041	1	Pot Irrigation	10/18/2006
5042	1	Drip Emitter	10/18/2006
5043	1	Redwood Header Board	10/18/2006
5044	1	Concrete Mow Curb	3/15/2022
5045	1	Typical Rock Treatment	12/2/2019
5046	3	Tree Grates	1/16/2015
5047	1	Valve Box Installation	3/15/2022



APPROVED BY:

*Ricardo Sandoval* 10-18-06  
CITY ENGINEER  
**RICARDO SANDOVAL**

DATE

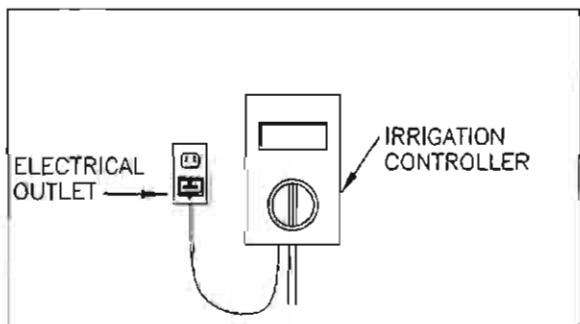
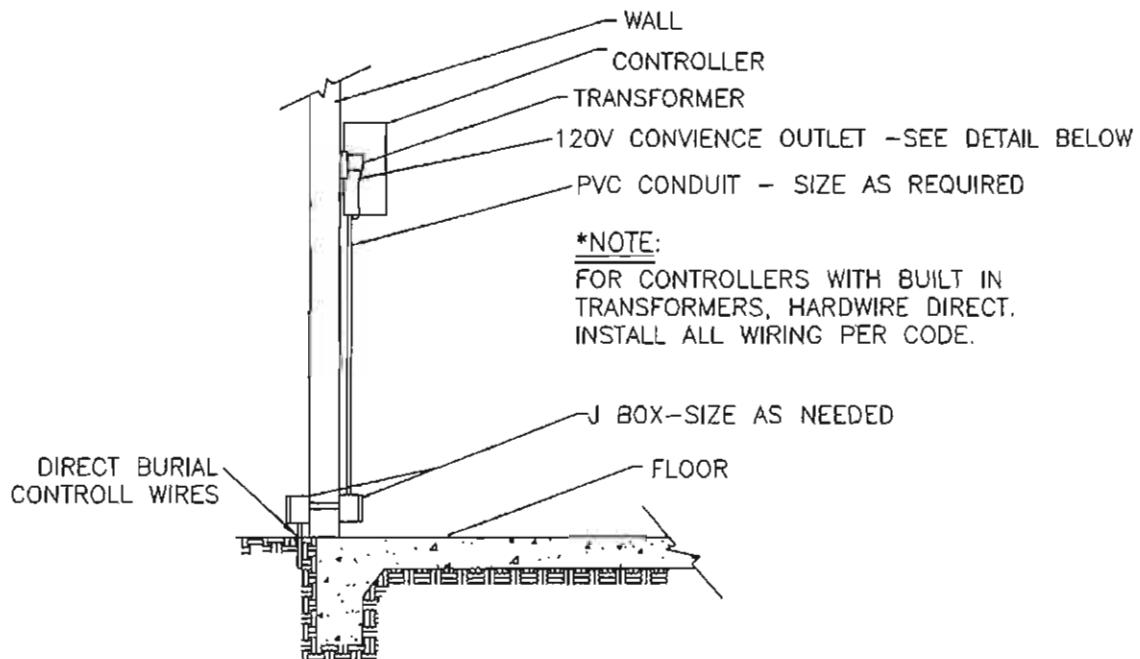
REVIEWED BY: Timothy RostedtDATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

TYP. HOUSE  
CONNECTION

STD. PLAN NO. 5001

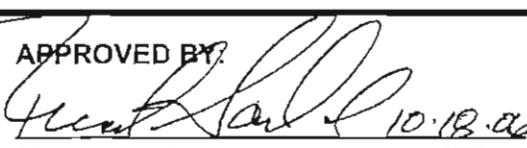
SHT 1 OF 1



NOTE:  
CONVENIENCE OUTLET TO BE  
PLACED NEAR CONTROLLER.

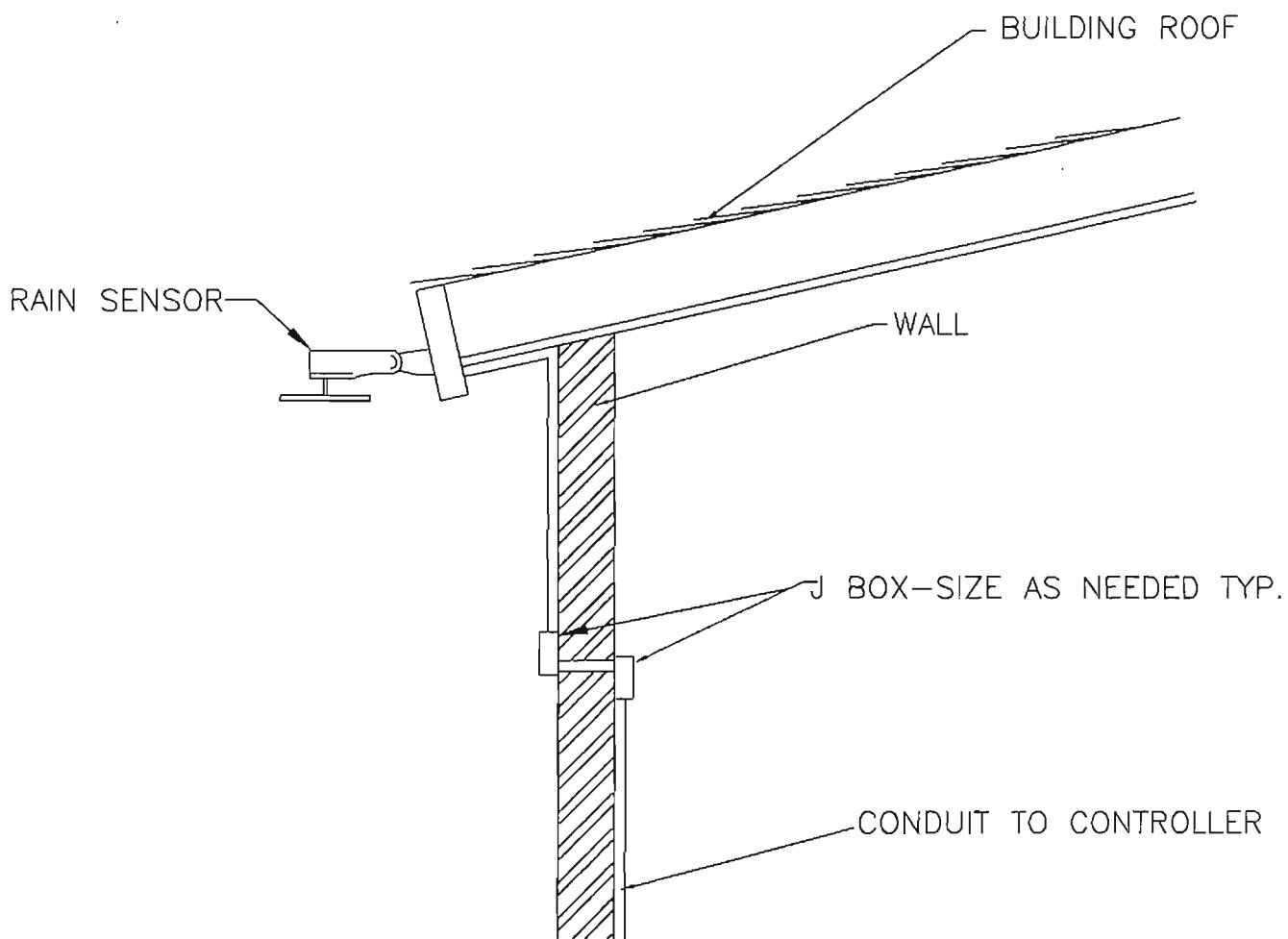
### CONTROL DETAIL



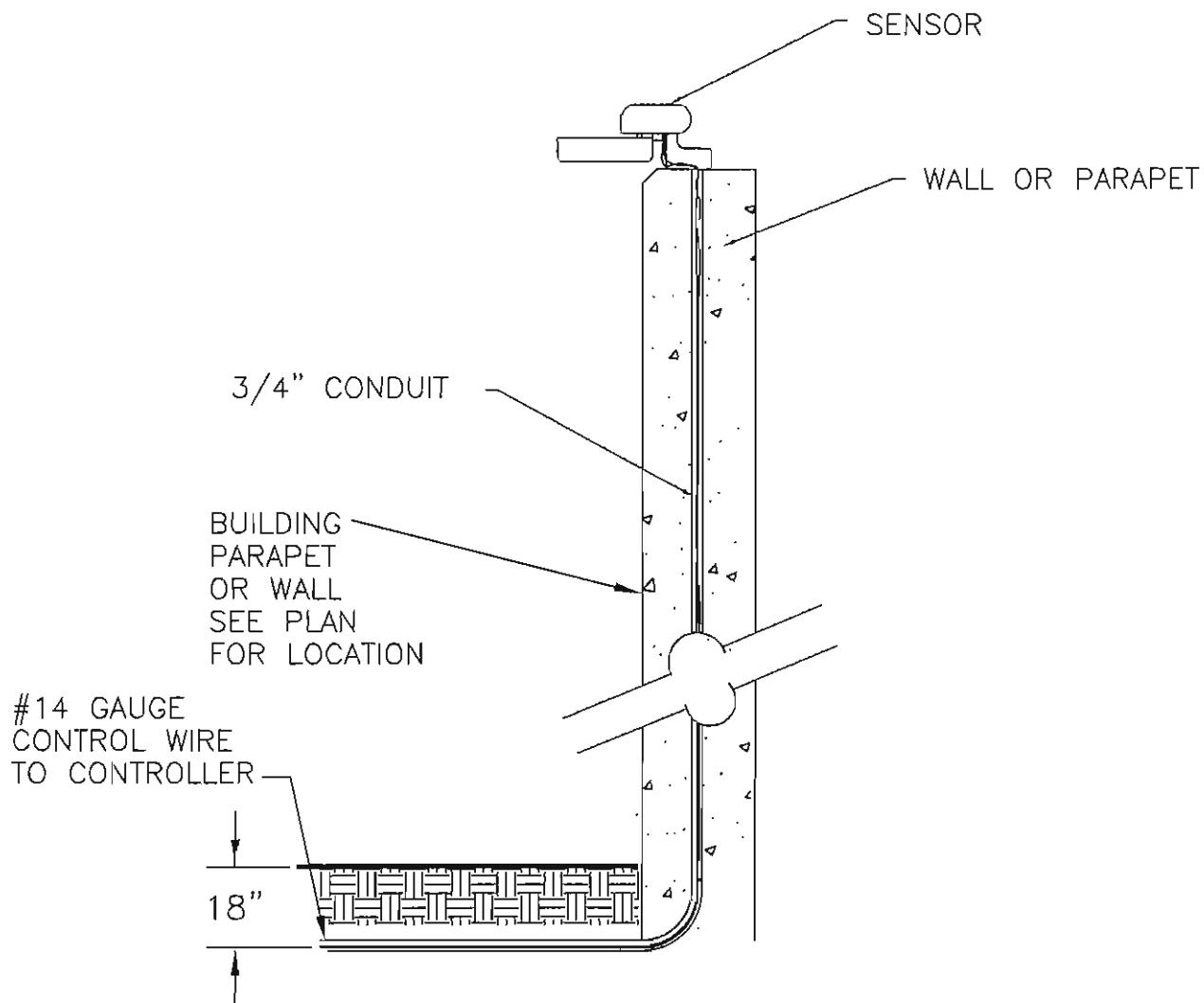
APPROVED BY:  
  
 CITY ENGINEER DATE  
**RICARDO SANDOVAL**  
 REVIEWED BY: Timothy Rastedt  
 DATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

### CONTROL PLACEMENT DETAIL



<p>REGISTERED PROFESSIONAL ENGINEER RICARDO SANDOVAL No. 51152 EXP. 9/30/05 CIVIL STATE OF CALIFORNIA</p>	APPROVED BY: <i>Ricardo Sandoval</i> 10.18.06	CITY OF FONTANA
	CITY ENGINEER <b>RICARDO SANDOVAL</b>	DATE
REVIEWED BY: <u>Timothy Rastedt</u>		
DATE OF LAST REVISION: <u>1-28-00</u>		STD. PLAN NO. 5003
		SHT 1 OF 1

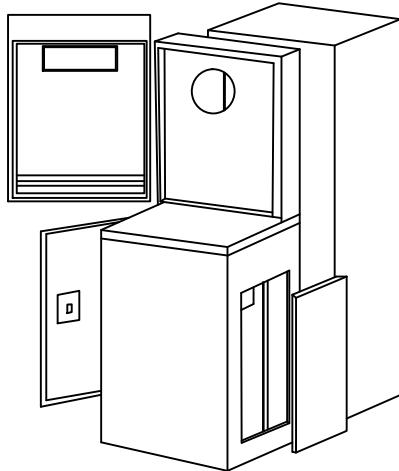


APPROVED BY:  
*Ricardo Sandoval* 10/18/06  
 CITY ENGINEER DATE  
**RICARDO SANDOVAL**  
 REVIEWED BY: Timothy Rostedt  
 DATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

RAIN GUARD

STD. PLAN NO. 5004 SHT 1 OF 1



EXACT LOCATION OF CONTROLLER SHALL BE AGREED UPON BY EDISON, CITY LANDSCAPE INSPECTOR AND CONTRACTOR PRIOR TO ANY TRENCHING OR WIRE PLACEMENT

GENERAL NOTES:

PROVIDE 100A METER AND 50A/2P MAIN C/B WHERE INDICATED ON DRAWINGS

PROVIDE PANELBOARD WHERE INDICATED ON DRAWINGS.

PROVIDE IRRIGATION CONTROLLER CABINET WHERE INDICATED ON DRAWINGS.

TERMINATE AT EXISTION HANDHOLE. PER S.C.E. COMPANY REQ. VERIFY EXACT LOCATION AND TERMINATION REQ. WITH S.C.E. CO. PRIOR TO TRENCHING

CONDUIT AND CONDUCTOR SIZES ARE BASED ON NONMETALLEC CONDUIT AND COPPER CONDUCTORS WITH TYPE "THHN/THWN" INSULATION.

ASSEMBLY MODEL # ISA5-T01-XX/DXI-GPRS/RMRX/RMPM/DXI-TRAN/DXI-OPB

NOTE: "XX" IS FOR STATION COUNT IN INCREMENTS OF 8  
(08, 16, 24,32, 40, 48,.....96)

LOCATION AND POSITIONING OF CABINETS NEED TO VERIFIED AND APPROVED BY THE ENGINEERING PUBLIC WORKS INSPECTOR PRIOR TO ANY INSTALLATIONS



APPROVED BY:

*Ricardo Sandoval* 3-15-22

CITY ENGINEER

**RICARDO SANDOVAL**

REVIEWED BY: KS

DATE OF LAST REVISION: 02-07-22

CITY OF FONTANA

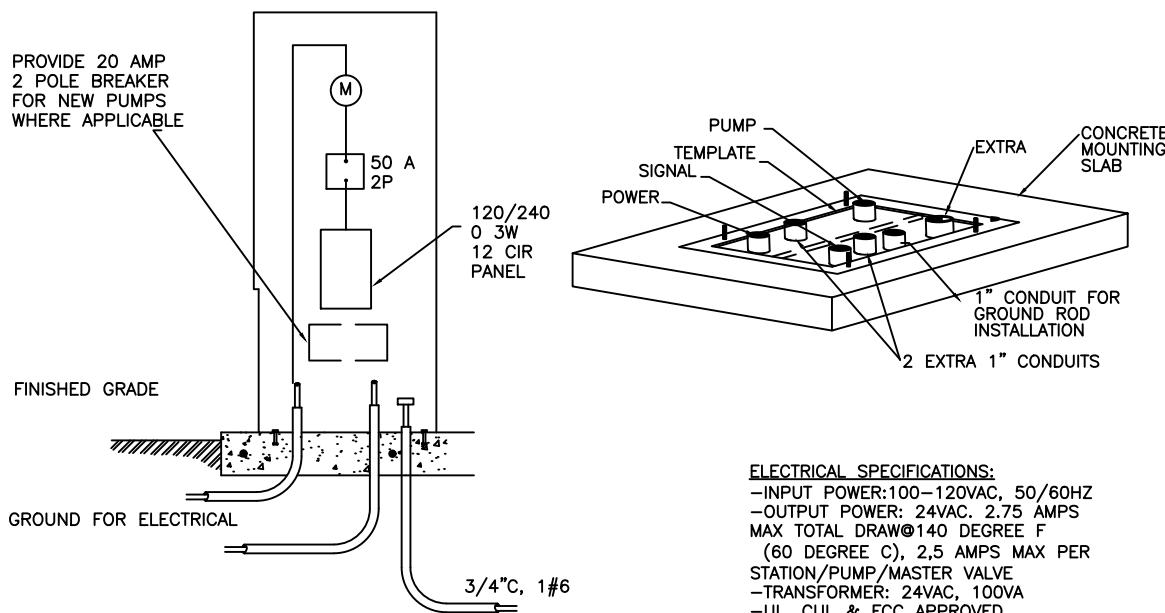
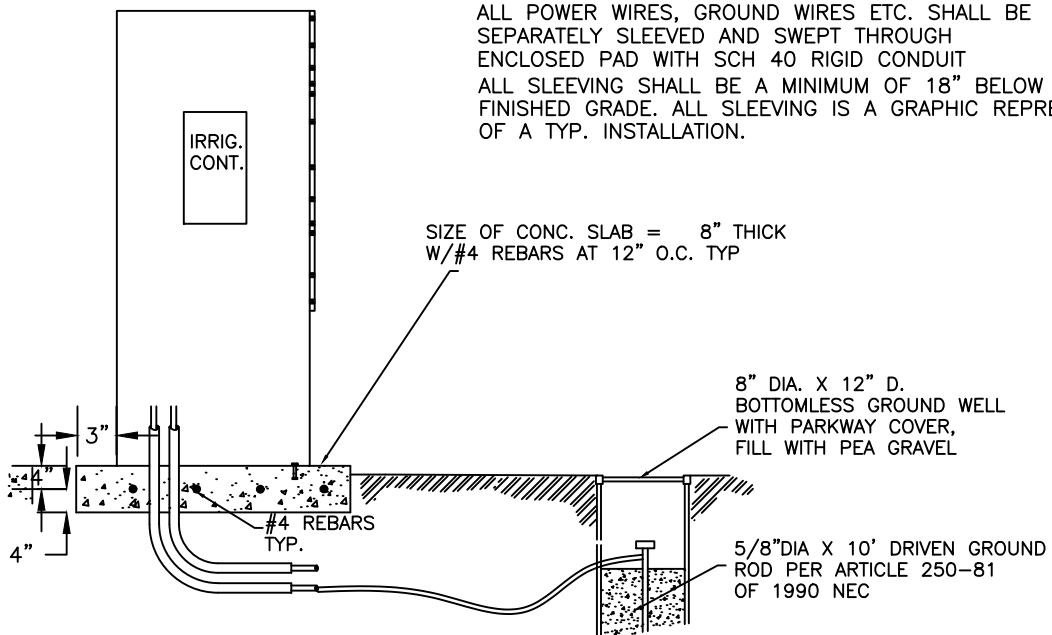
IRRIGATION CONTROLLER

STD. PLAN NO. 5005

SHT 1 OF 3

## NOTE:

ALL POWER WIRES, GROUND WIRES ETC. SHALL BE SEPARATELY SLEEVED AND SWEPT THROUGH ENCLOSED PAD WITH SCH 40 RIGID CONDUIT  
ALL SLEEVING SHALL BE A MINIMUM OF 18" BELOW FINISHED GRADE. ALL SLEEVING IS A GRAPHIC REPRESENTATION OF A TYP. INSTALLATION.



APPROVED BY:

3-15-22

CITY ENGINEER

RICARDO SANDOVAL

REVIEWED BY: KS

DATE OF LAST REVISION: 02-07-22

CITY OF FONTANA

IRRIGATION CONTROLLER

STD. PLAN NO. 5005

SHT 2 OF 3

City of Fontana  
 Irrigation Controller Standard  
 For Communities Facilities Districts

(CFD)

Toro DXi for Sentinel WMS controller installed in an approved stainless steel Edison meter box enclosure.

Contact Imperial Technical Services with the following numbers for the City of Fontana meter/controller. Phone: (714) 696-7535

Fontana Assembly Model # for controller:

ISA5-TO1-XX/DXI-GPRS/RMRX/RMRX/RMPM/DXI-TRAN/DXI-OPB

Note: "XX" is for station count in increments of 8 (08, 16, 24,32, 40, 48,.....96)

Required items to be included with each controller installed:

1. DXi-OPB08 Toro 8 station output board.
2. PROMAX: Rain Master Maintenance Remote Kit, coded "123" for City of Fontana
3. DXI-TRAN-120-60-50-50VA 24VAC Transformer
4. After controller installation contact Imperial Technical Services to schedule inspection for certification which is required prior starting 90 day maintenance

(Note: Items 1.,2., & 3.: No need to order these extra items-They are included in the Assembly Model #)

Contact:

Imperial Technical Services  
 Phone: (714) 696-7535



APPROVED BY:

  
 CITY ENGINEER  
 RICARDO SANDOVAL

3-15-22

DATE

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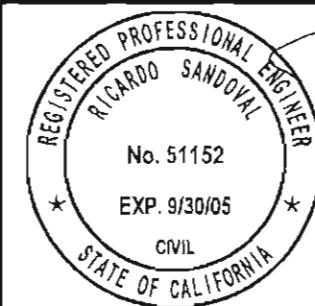
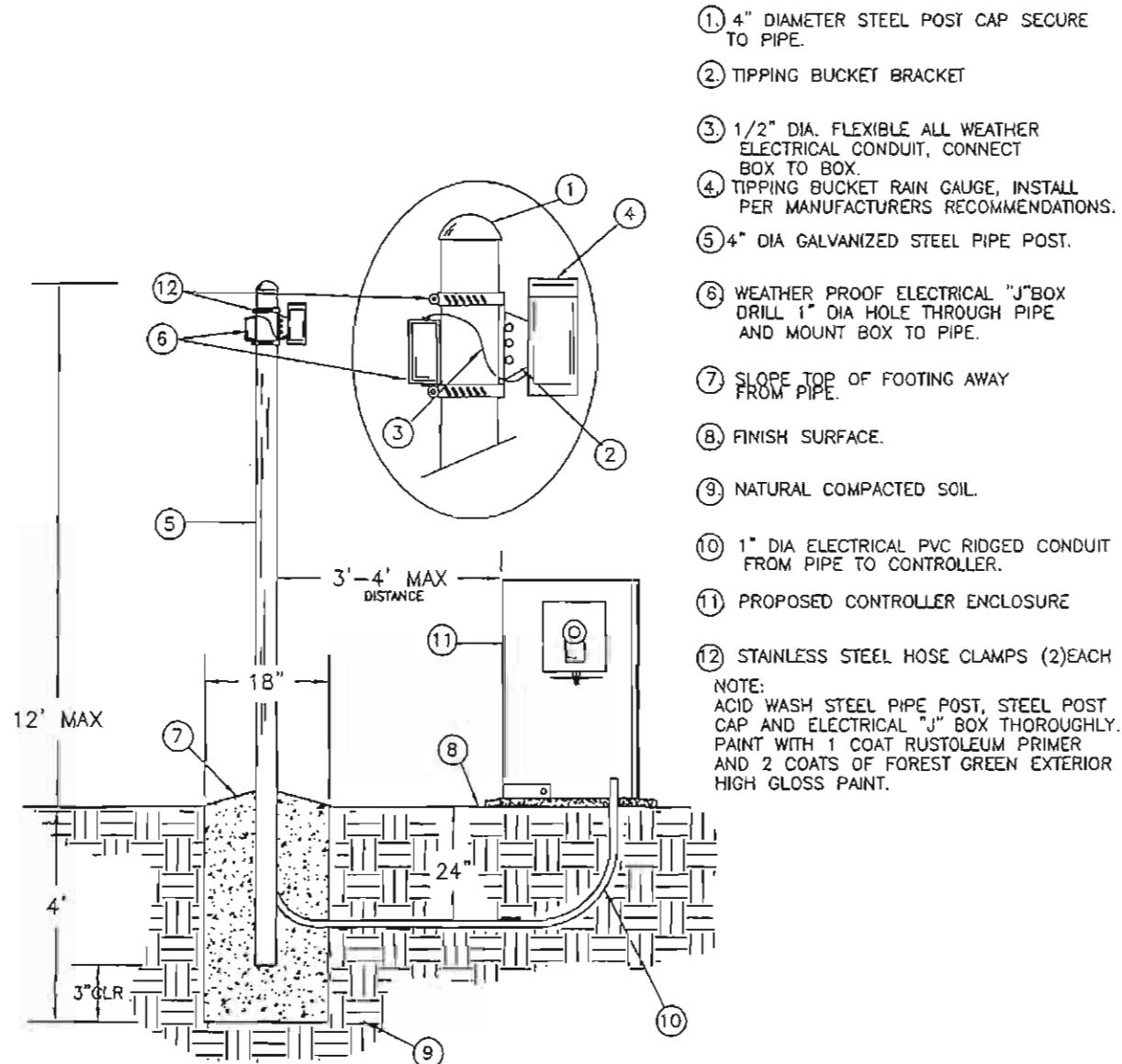
DATE OF LAST REVISION: 02-07-22

CITY OF FONTANA

IRRIGATION CONTROLLER

STD. PLAN NO. 5005

SHT 3 OF 3



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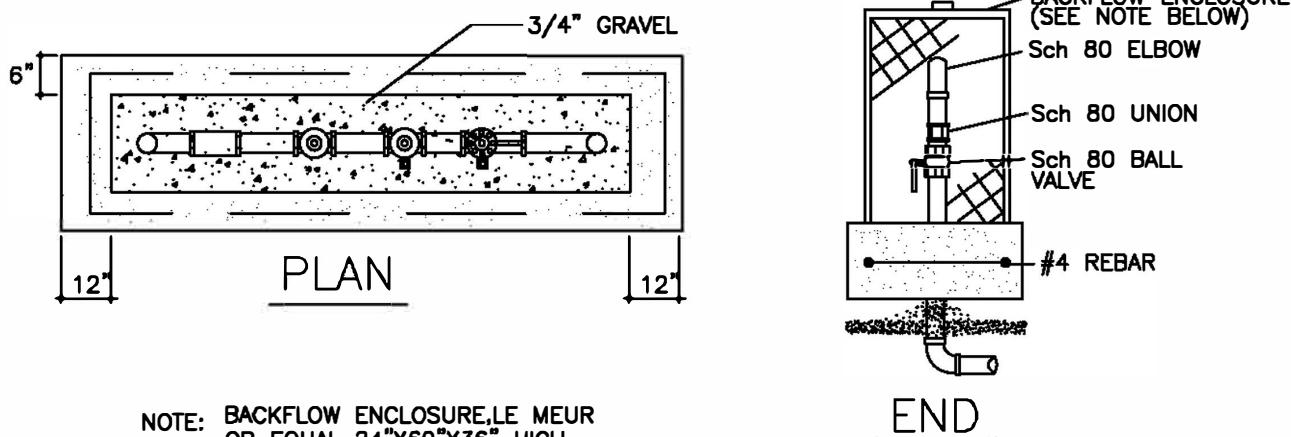
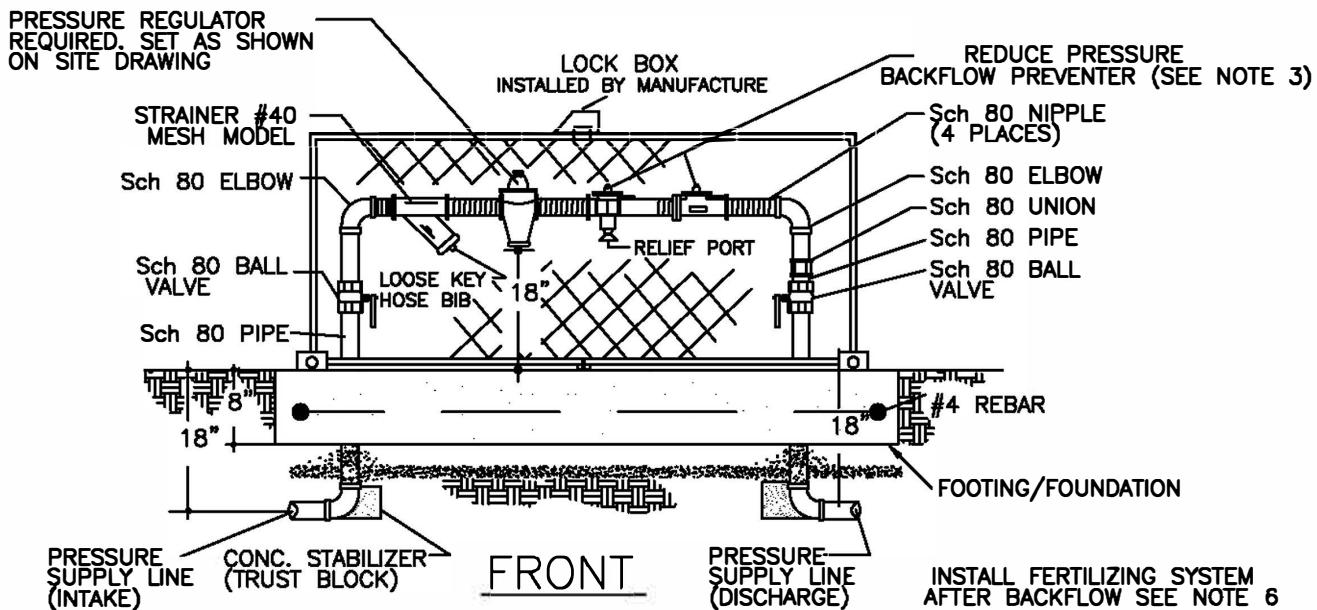
*Ricardo Sandoval* 10/18/06  
 CITY ENGINEER  
**RICARDO SANDOVAL**

REVIEWED BY: Timothy RostedtDATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

TIPPING BUCKET

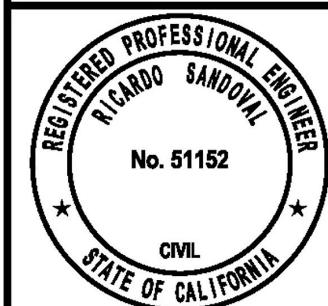
STD. PLAN NO. 5006 SHT 1 OF 1



NOTE: BACKFLOW ENCLOSURE, LE MEUR  
OR EQUAL 24"X60"X36" HIGH  
HINGED AT BOTH ENDS SECURE TO  
6"X8" FOOTING W/4" J BOLTS  
(EQUIPMENT TO BE CENTERED INSIDE HOUSING)  
COLOR OF ENCLOSURE: HUNTER GREEN

## GENERAL NOTES

1. CONTRACTOR SHALL FORM ENCLOSURE AND REQUEST INSPECTION PRIOR TO POURING FOOTING/FOUNDATION
2. CONTRACTOR SHALL USE 520-C-2500 CONCRETE
3. WILKINS 375XL LEAD FREE PLASTIC BACKFLOW PREVENTER
4. WILKINS 500XL REGULATOR LOW RANGE FOR PRESSURE'S FROM 0 PSI TO 75 PSI LEAD FREE  
WILKINS 600XL REGULATOR HIGH RANGE FOR PRESSURE'S FROM 75 PSI TO 120 PSI LEAD FREE
5. BACKFLOW CERTIFICATION REQUIRED BY A CERTIFIED PROFESSIONAL PRIOR TO CITY ACCEPTANCE
6. INSTALL EZ-FLO FERTILIZING SYSTEM EZ025-HC INSTALL DIRECTLY IN THE IRRIGATION MAINLINE  
AFTER THE BACKFLOW PREVENTER SEE DETAILS ON SHEET 2



APPROVED BY:

12-2-19

CITY OF FONTANA

CITY ENGINEER  
RICARDO SANDOVAL

DATE

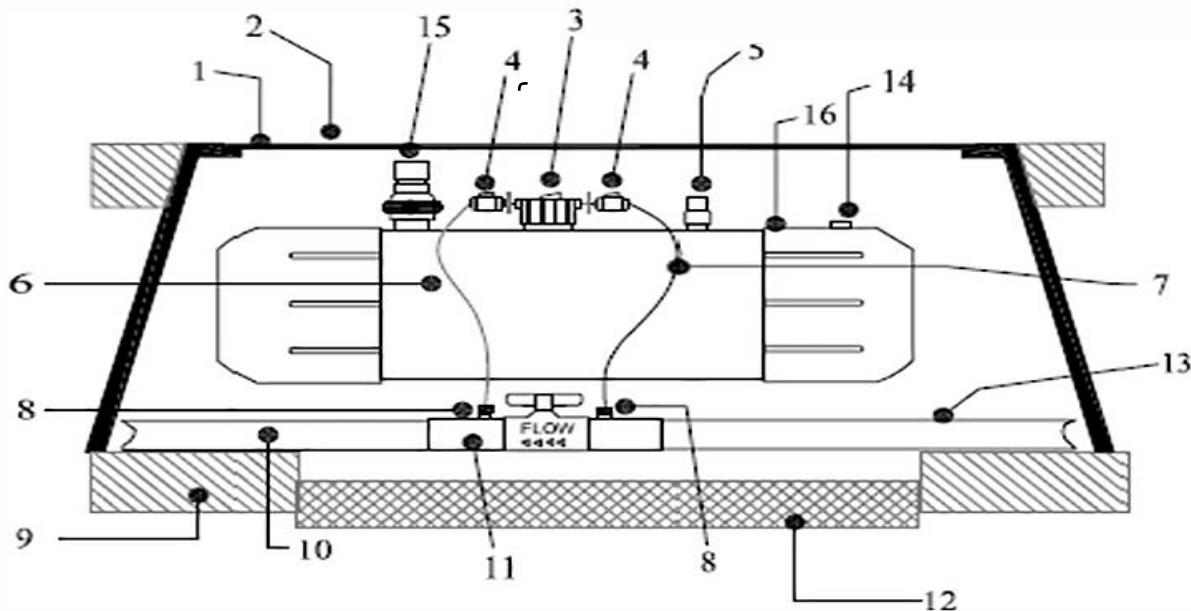
REVIEWED BY: KS

TYP. BACKFLOW

DATE OF LAST REVISION: 12-2-19

STD. PLAN NO. 5007

SHT 1 OF 2



1. FINISHED GRADE
2. VALVE BOX CARSON BRAND MODEL 2436 (SIZE DETERMINED BY TANK SIZE CHART BELOW)
3. PROPORTIONING CAP WITH FEED ADJUSTMENT KNOB
4. EZ-FLO SHUT OFF VALVES
5. AIR VENT VALVE
6. FERTILIZER OUT - CONNECT CLEAR TUBE TO GREEN CONNECTIONS ON PROPORTIONING CAP AND COUPLING
7. WATER IN- CONNECT BLACK TUBE TO BLUE CONNECTIONS ON PROPORTIONING CAP AND COUPLING
8. TUBING CLAMP - BOTH THE GREEN AND BLUE COUPLING TUBING CONNECTIONS
9. APPROVED BACKFILL
10. PVC MAINLINE TO VALVE MANIFOLD
11. EZ-BALL VALVE COUPLING CONNECTOR INSTALL ACCORDING TO WORKFLOW DIRECTION ARROW AND PER THE SIZE OF THE MAINLINE
12. PEA GRAVEL (3 CU FT)
13. PVC MAINLINE FROM BACKFLOW PREVENTER
14. PRESSURE RELIEF VALVE
15. FILL VALVE (DRAIN VALVE INCLUDED BUT NOT SHOWN)
16. EZ-FLO MODEL (SIZING BASED ON ATTACHED CHART)
17. FERTILIZER TO BE INSTALLED AFTER MASTER VALVE AND FLOW SENSOR

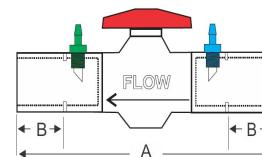
**NOTES:**  
ITEMS 3,4,5,6,7 & 8 ARE INCLUDED WITH THE EZ-FLO SYSTEM. ITEM 11 IS PURCHASED SEPARATELY (BASED ON THE ATTACHED BALL VALVE SIZE CHART)

#### Sizing the Tank

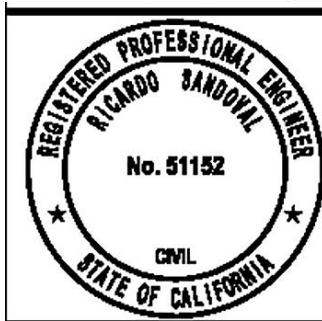
In the table below refer to the 4-6 week coverage columns to determine the tank size required for the irrigated area

Model	Capacity	Capacity	Coverage 4-6 Weeks		Unit Size	Valve Box Size
	Gallons	Pounds	Zones	Square Feet		
EZ001-CX	1.5	10	5 / 8	10,000	13" X 8" X 11"	15" X 10" X 12"
EZ003-CX	2.5	15	8 / 14	15,000	21" X 8" X 11"	20" X 16" X 12"
EZ005-FX	5.0	30		30,000	28" X 10" X 13"	30" X 18" X 17"
EZ010-FX	9.4	50		50,000	27" X 12" X 14"	30" X 18" X 17"
EZ010-HC	10.0	75		75,000	32" X 12" X 18"	36" X 24" X 24"
EZ017-HC	17.5	150		150,000	36" X 15" X 20"	36" X 24" X 24"
EZ025-HC	25.0	225		225,000	36" X 19" X 23"	36" X 24" X 24"

Tank sizing is based on 1 lb of product capacity required to service 1000 sqft of landscape for a 4 to 6 week period. This method is intended to simplify the sizing process and allow for a broad range of products to be used with the system while maintaining adequate capacity.



Part Number	Size	A	B
CBV-075	3/4" SOC	7"	1"
CBV-100	1" SOC	8"	1 1/4"
CBV-125	1 1/4" SOC	9 1/4"	1 1/4"
CBV-150	1 1/2" SOC	10 3/4"	1 1/4"
CBV-200	2" SOC	12 1/2"	1 3/4"
CBV-250	2 1/2" SOC	13"	1 3/4"
CBV-300	3" SOC	16 1/2"	1 3/4"
CBV-400	4" SOC	18 1/2"	2"
CBVT-075	3/4" THD	7"	1"
CBVT-100	1" THD	8"	1 1/4"
CBVT-125	1 1/4" THD	9 1/2"	1 1/4"



APPROVED BY:

*Ricardo Sandoval*

12-2-19

CITY ENGINEER  
RICARDO SANDOVAL

DATE

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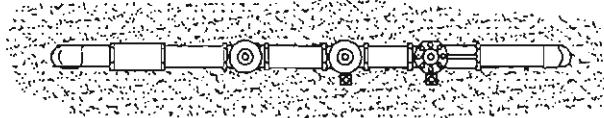
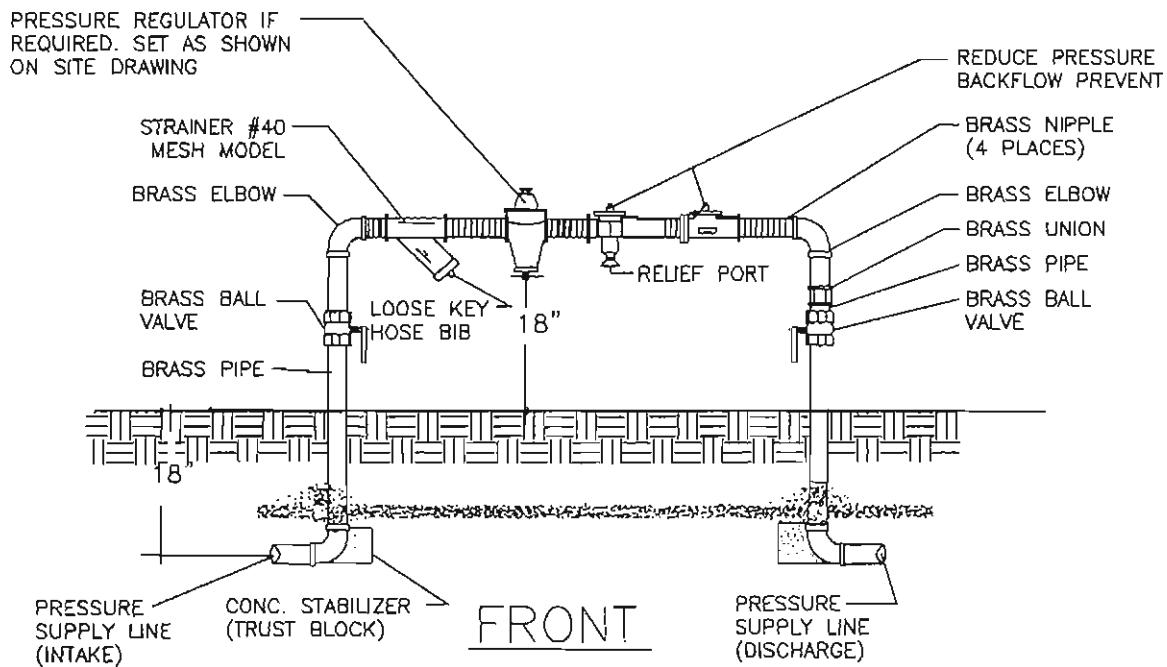
DATE OF LAST REVISION: 12-2-19

CITY OF FONTANA

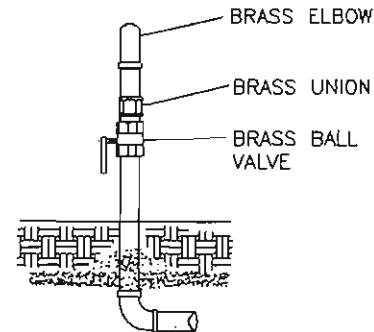
TYP. BACKFLOW

FERTILIZATION SYSTEM

STD. PLAN NO. 5007 SHT 2 OF 2



PLAN



END

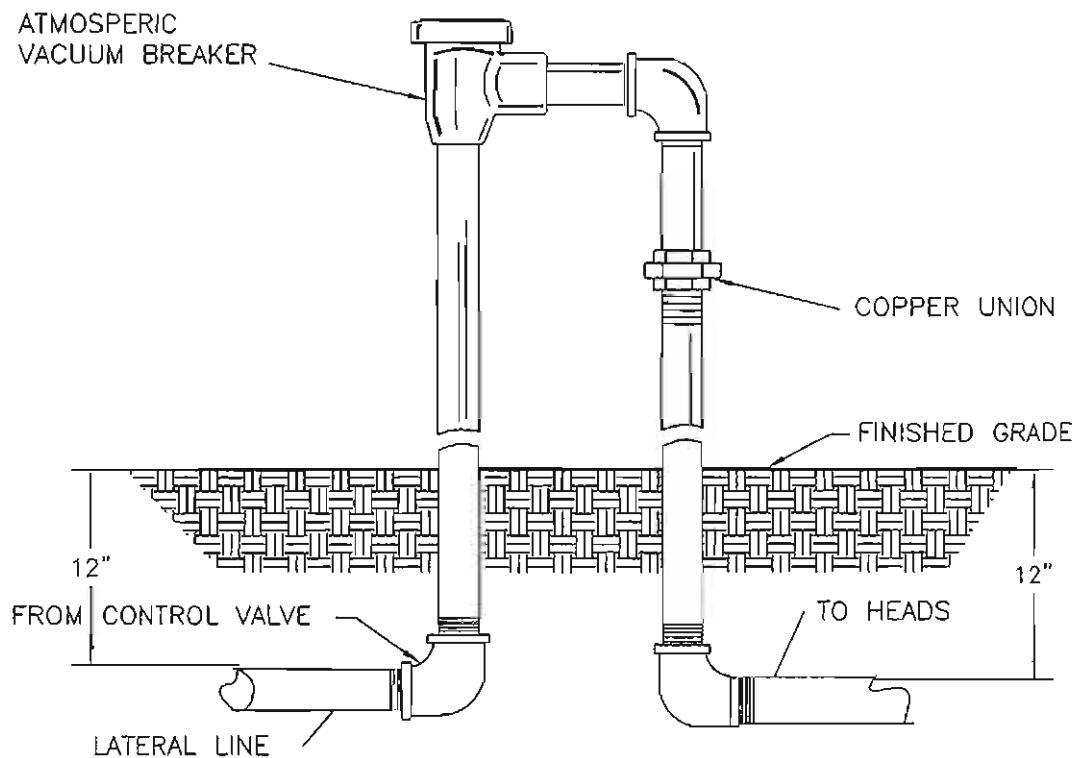
## GENERAL NOTES:

1. BACKFLOW TO BE USED ON PRIVATE PROJECTS ONLY.

	APPROVED BY:	10/18/06 CITY ENGINEER <b>RICARDO SANDOVAL</b>	CITY OF FONTANA
	REVIEWED BY: <u>Timothy Rastedt</u>		
DATE OF LAST REVISION: <u>1-28-00</u>		STD. PLAN NO. 5008	SHT 1 OF 1

TYP. BACKFLOW  
"PRIVATE"

NOTE:  
INSTALL BACKFLOW A MIN. 6" ABOVE  
HIGHEST HEAD



APPROVED BY:

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 CITY ENGINEER  
**RICARDO SANDOVAL**

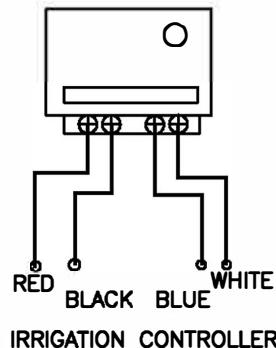
REVIEWED BY: Timothy RastedtDATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

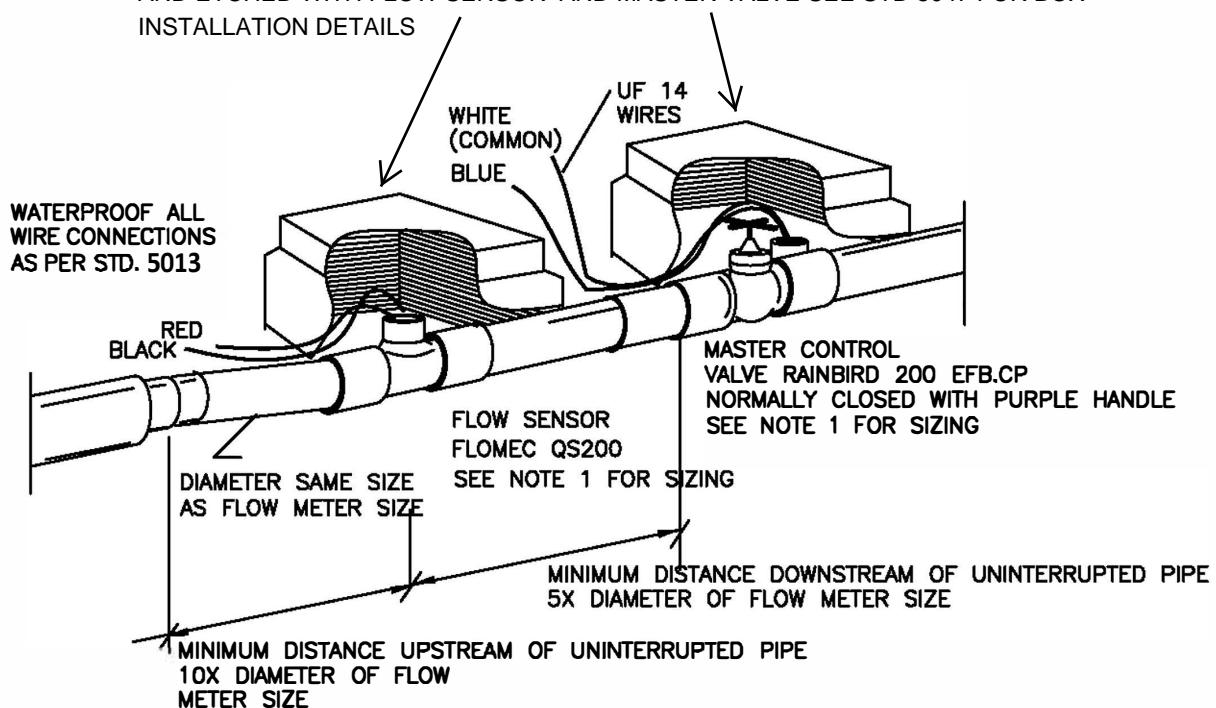
TYPICAL BACKFLOW

STD. PLAN NO. 5009

SHT 1 OF 1



INSTALL CARSON VALVE BOX MODEL 1419 VIOLET/LAVENDER  
WITH LID MODEL 1220-4 WITH STAINLESS STEEL BOLT (OR APPROVED EQUAL)  
AND ETCHED WITH FLOW SENSOR AND MASTER VALVE SEE STD 5047 FOR BOX  
INSTALLATION DETAILS



NOTES:

1. MASTER VALVE AND FLOW SENSOR TO MATCH MAINLINE SIZE
2. MAXIMIZE THE DISTANCE BETWEEN THE MASTER VALVE AND THE FLOW SENSOR



APPROVED BY:

3/15/22

CITY ENGINEER

**RICARDO SANDOVAL**

DATE

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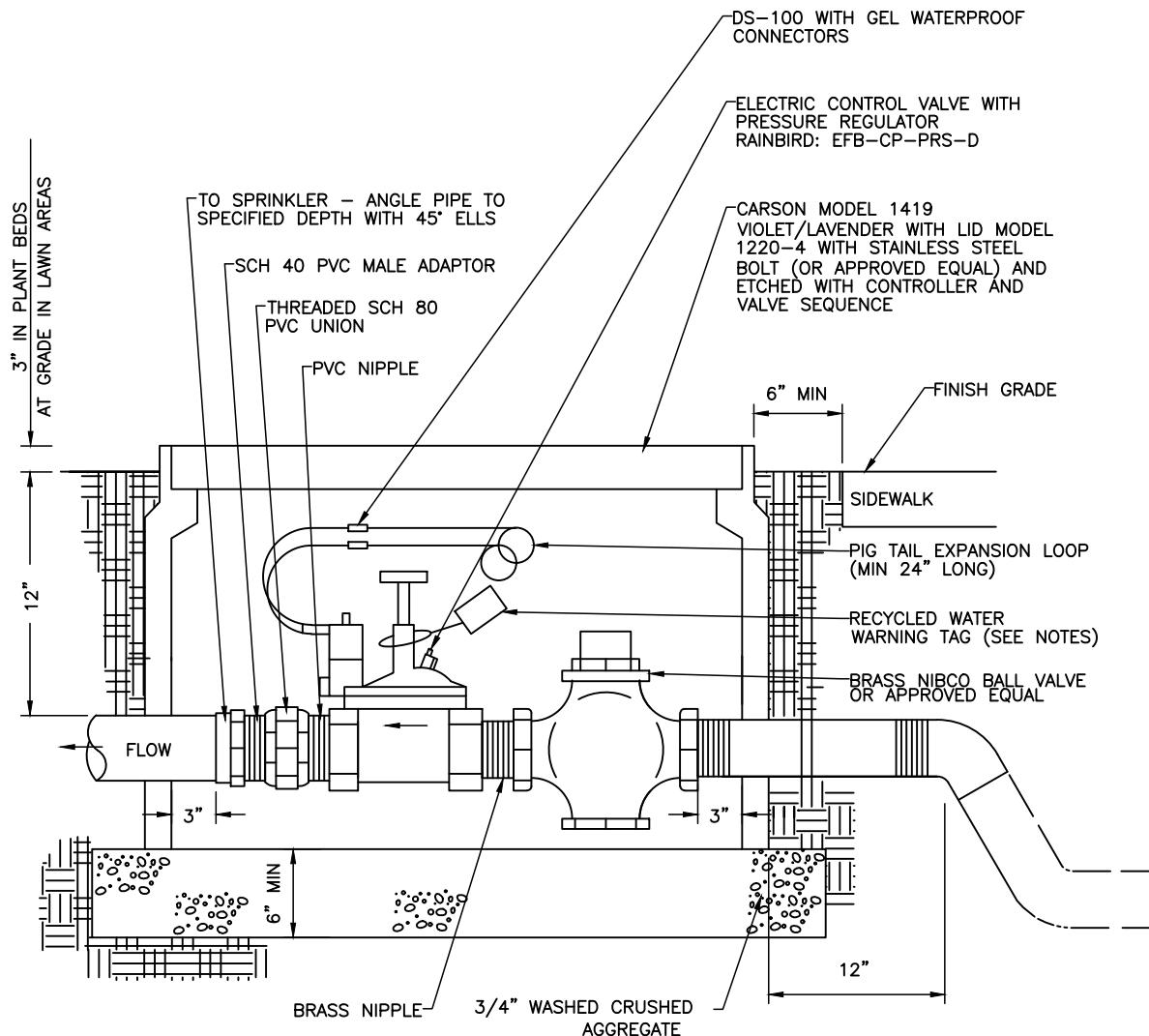
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CITY OF FONTANA

**FLOW METER/  
MASTER VALVE**

STD. PLAN NO. 5010

SHT 1 OF 1

NOTES:

1. INSTALL CONTROL VALVES A MINIMUM OF 12" FROM ANY STRUCTURES OR HARDCAPING WHENEVER POSSIBLE.
2. INSTALL VALVES IN PLANT BEDS WHEREVER POSSIBLE NEXT TO SIDEWALKS.
3. PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDCAPING.
4. PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX.
5. ATTACH PLASTIC IDENTIFICATION TAG WITH APPROPRIATE CONTROLLER AND VALVE NUMBER TO WIRE INSIDE  
VALVE BOX.
6. ALL VALVES MUST HAVE RECYCLED WATER VALVE TAGS (CHRISTY'S PURPLE MODEL NO. ID-MAX-P2-RC009)  
ATTACHED TO VALVES. ONLY WHEN RECYCLED WATER IS AVAILABLE AND CONNECTED.



APPROVED BY:

3-15-22

CITY ENGINEER  
RICARDO SANDOVAL

DATE

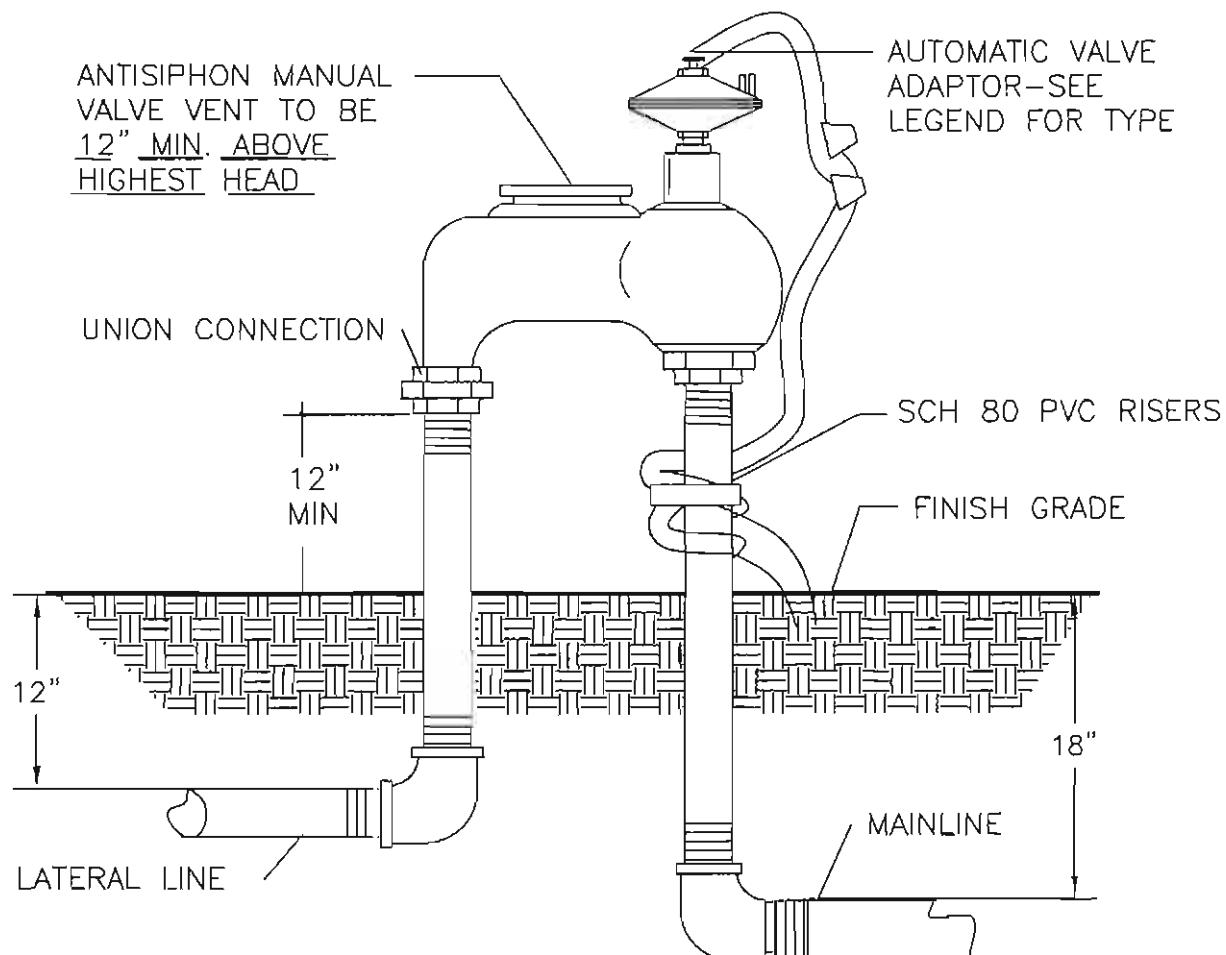
REVIEWED BY: KS

DATE OF LAST REVISION: 2-8-22

CITY OF FONTANA

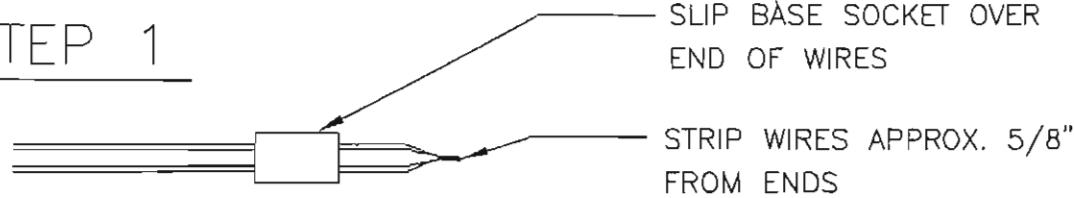
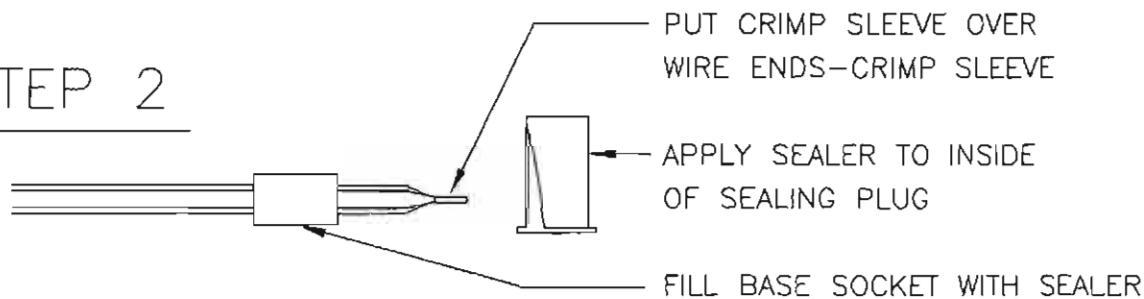
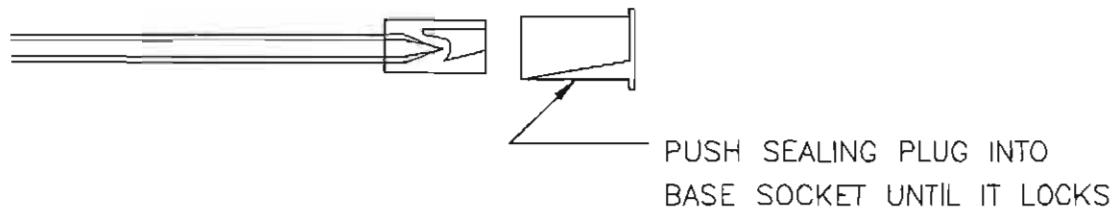
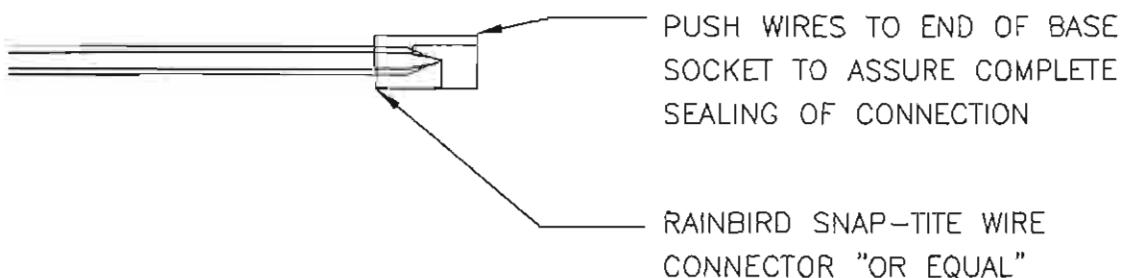
TYP. BRASS REMOTE  
CONTROL VALVE DETAIL

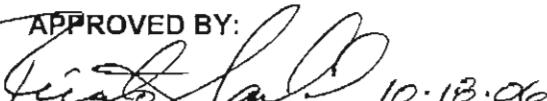
STD. PLAN NO. 5011 SHT 1 OF 1



APPROVED BY:  
*Ricardo Sandoval* 10.18.06  
 CITY ENGINEER  
**RICARDO SANDOVAL**  
 REVIEWED BY: Timothy Rastedt  
 DATE  
 DATE OF LAST REVISION: 1-28-00

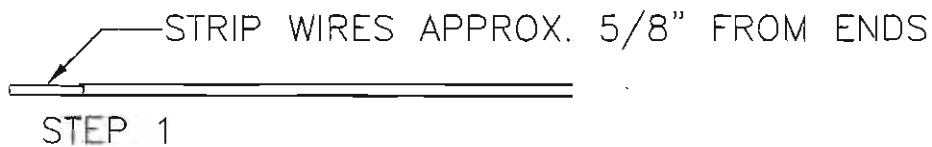
CITY OF FONTANA  
 AUTOMATIC ANTISIPHON  
 VALVE

STEP 1STEP 2STEP 3STEP 4

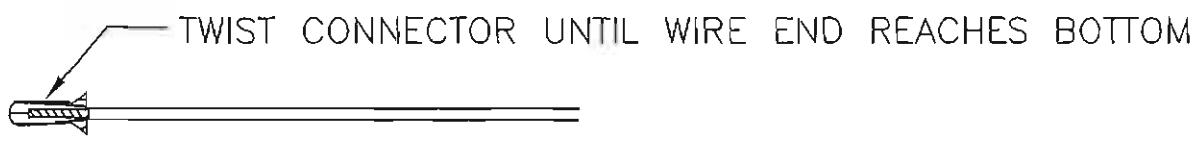
APPROVED BY:  
  
 10-18-06  
 CITY ENGINEER  
**RICARDO SANDOVAL**  
 REVIEWED BY: Timothy Rastedt  
 DATE  
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CITY OF FONTANA

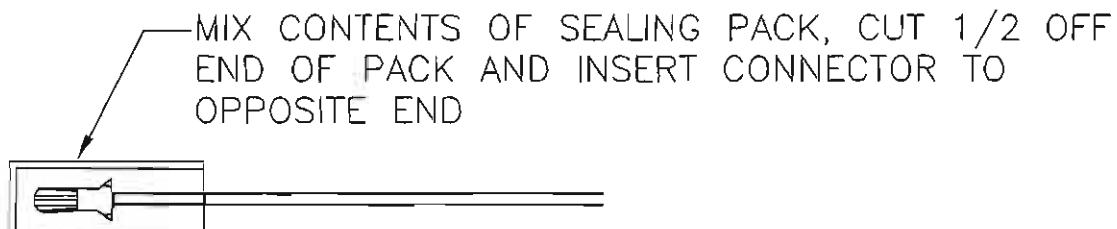
WIRE CONNECTOR



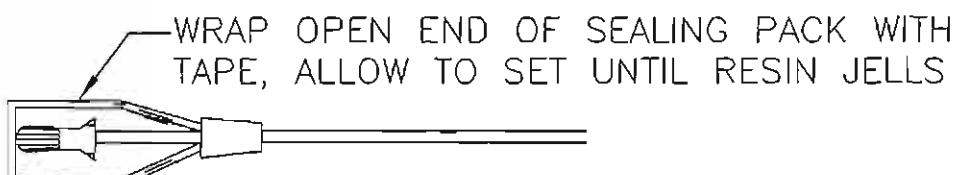
STEP 1



STEP 2



STEP 3



STEP 4

"SCOTCH" SEALING PACK



APPROVED BY:

*Ricardo Sandoval* 10-18-06

DATE

CITY ENGINEER  
RICARDO SANDOVAL

REVIEWED BY: Timothy Rastedt

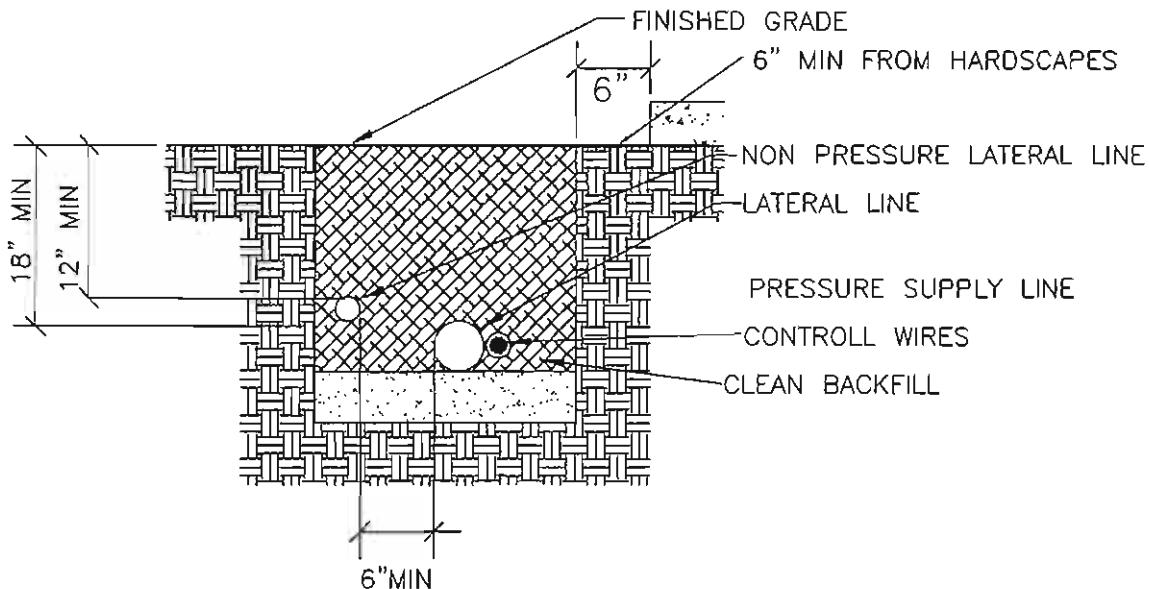
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CITY OF FONTANA

WIRE CONNECTOR

STD. PLAN NO. 5014

SHT 1 OF 1



FINE GRANULAR MATERIAL WILL BE PLACED ON ALL LINES, NO LARGER THAN 1/2" INCH IN SIZE. THIS WILL BE PERMITTED IN THE INITIAL BACKFILL MEASURED 6" FROM THE TOP OF PIPE. THE REMAINDER OF TRENCH CAN BE FILL WITH ROCK SCREENED 2" MINUS.

ALL BACK FILL IS TO BE SATURATED AND COMPACTED TO 90%  
INSTALL ALL PVC PIPE WITH LABEL UP.

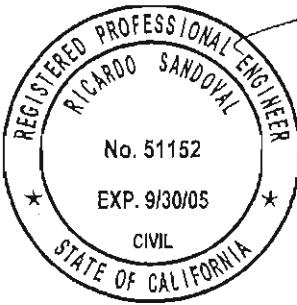
SNAKE ALL PIPE IN TRENCH.

BUNDLE AND TAPE ALL CONTROL WIRES AT 10' O.C. TO PRESSURE SUPPLY LINE AND PROVIDE A SERVICE LOOP AT ALL 90 DEGREE CHANGES IN DIRECTION.

PRESSURE MAIN 2" AND LARGER SHALL BE P.V.C. CLASS 315  
SMALLER THAN 2" SHALL BE P.V.C. SCHEDULE 40.

CONTRACTOR SHALL PROVIDE SLEEVES OR CONDUIT LINES WHEN MAINLINE INSTALLATION IS UNDER ASPHALT OR CONCRETE.

CONTRACTOR SHALL PROVIDE 24" INCHES OF COVER OVER PIPE SERVING A DRINKING FOUNTAIN OR PRESSURE MAINLINE 3" AND LARGER.



APPROVED BY:

*Ricardo Sandoval* 10-18-06  
CITY ENGINEER  
**RICARDO SANDOVAL**

REVIEWED BY: Timothy Rastedt

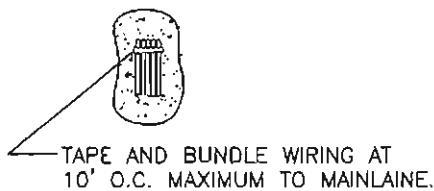
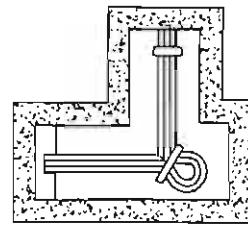
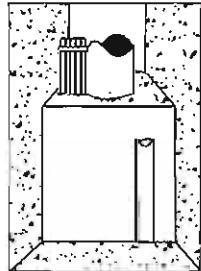
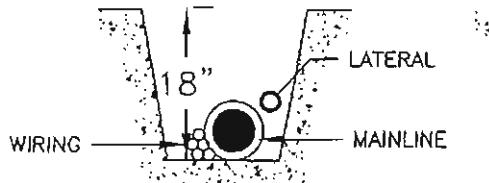
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CITY OF FONTANA

TRENCHING DETAIL

STD. PLAN NO. 5015

SHT 1 OF 1

MAIN SUPPLY, LATERAL  
AND WIRING

PROVIDE A 20" LOOP OF WIRE  
IN ALL CHANGES OF DIRECTION  
GREATER THAN 30 DEGREES REMOVE  
TIES AFTER ALL CONNECTIONS  
HAVE BEEN MADE

## PLAN VIEW

## NOTE:

DO NOT INSTALL 120 VOLTAGE OR HIGHER WIRE  
IN THE SAME TRENCH AS THE IRRIGATION  
CONTROL WIRING



APPROVED BY:

*Richard Hall* 10/18/06  
CITY ENGINEER  
RICARDO SANDOVAL

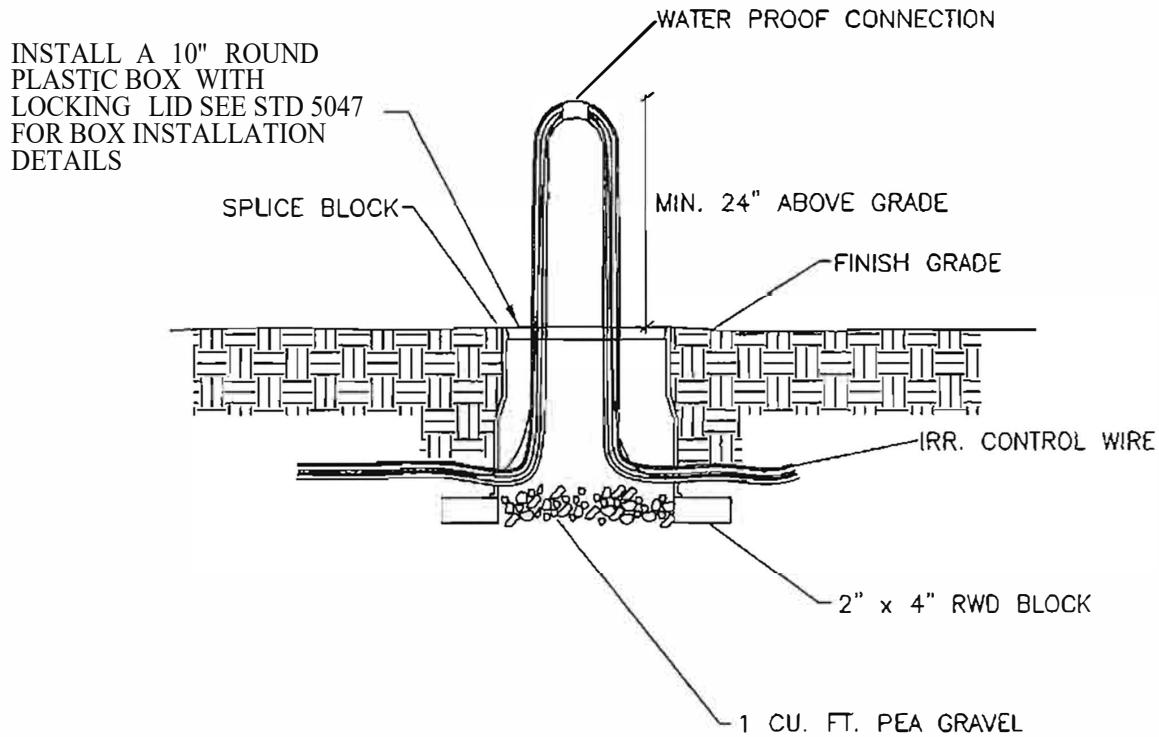
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CITY OF FONTANA

PIPING AND WIRING

STD. PLAN NO. 5016

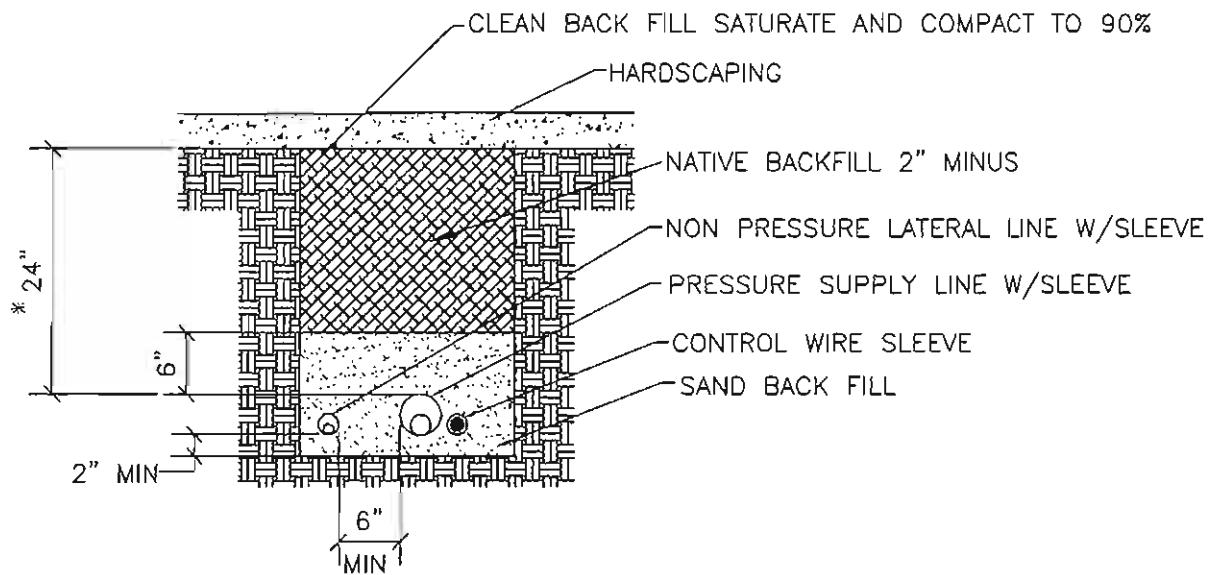
SHT 1 OF 1



## NOTE:

REMOTE CONTROL BOX MAY BE USED IN LIEU OF SPLICE BOX.  
SEE STD 5047 FOR BOX INSTALLATION DETAILS

 <p>REGISTERED PROFESSIONAL ENGINEER RICARDO SANDOVAL No. 51152 EXP. 9/30/05 CIVIL STATE OF CALIFORNIA</p>	<p>APPROVED BY: <i>Ricardo Sandoval</i> CITY ENGINEER RICARDO SANDOVAL</p>	<p>3-15-2022 DATE</p>	<p>CITY OF FONTANA</p>	
			<p>SPLICE BOX ASSEMBLY</p>	
		<p>STD. PLAN NO. 5017</p>		<p>SHT 1 OF 1</p>

NOTES:

INSTALL CONTROL WIRE SLEEVE ADJACENT TO THE PRESSURE SUPPLY LINE, SIZE PER SPEC.

ALL SLEEVES TO BE SCH. 40 PVC AND TO BE 2X THE DIAMETER OF THE LINE TO BE SLEEVED.

\* INCREASE THIS DISTANCE TO 36" WHEN SLEEVING UNDER ROADWAYS AND COMMERCIAL TRAFFIC WAYS WHEN INSTRUCTED BY INSPECTOR.

SLEEVES SHALL BE EXTENDED BEYOND HARDSCAPE TO POINTS AS REQUESTED BY INSPECTOR

IF SLEEVES ARE TO BE USED AT A LATER DATE, CONTRACTOR SHALL TAPE ENDS AND PROVIDE A VERTICAL MARK AT ENDS OF SLEEVING VISIBLE AT GROUND LEVEL.

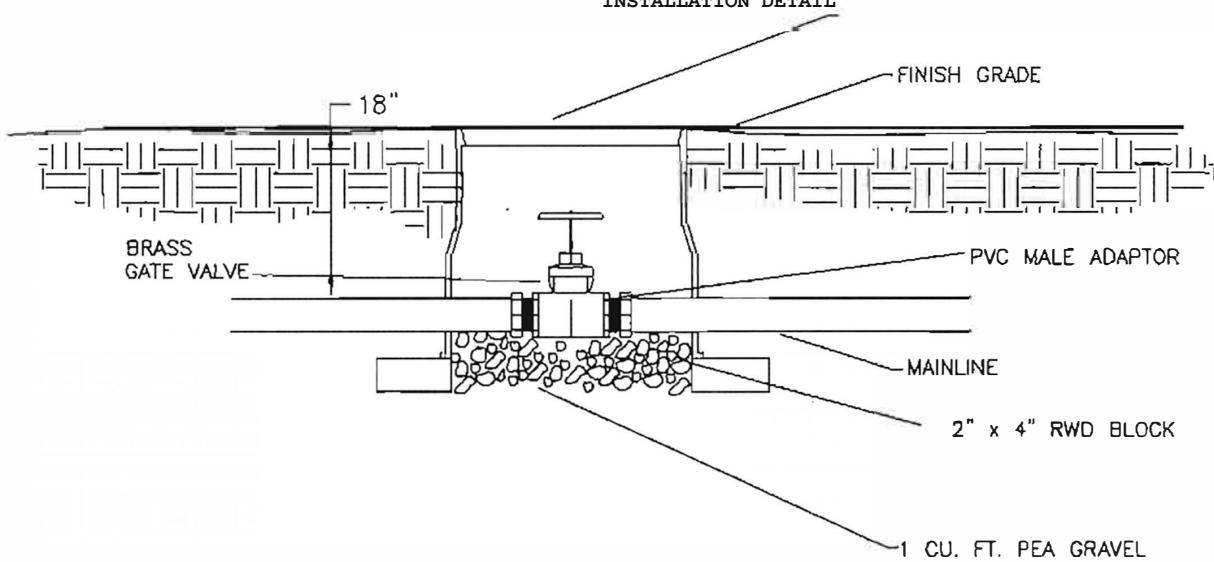


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 CITY ENGINEER  
**RICARDO SANDOVAL**  
 REVIEWED BY: Timothy Rastedt  
 DATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

SLEEVING DETAIL

INSTALL CARSON VALVE BOX MODEL 1419  
VIOLET/LAVENDER WITH LID MODEL 1220-4  
WITH STAINLESS STEEL BOLT (OR APPROVED  
EQUAL) AND ETCHED WITH FLOW SENSOR AND  
MASTER VALVE SEE STD 5047 FOR BOX  
INSTALLATION DETAIL



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*Ricardo Sandoval*  
 CITY ENGINEER  
**RICARDO SANDOVAL**  
 REVIEWED BY: KS

3-15-2022

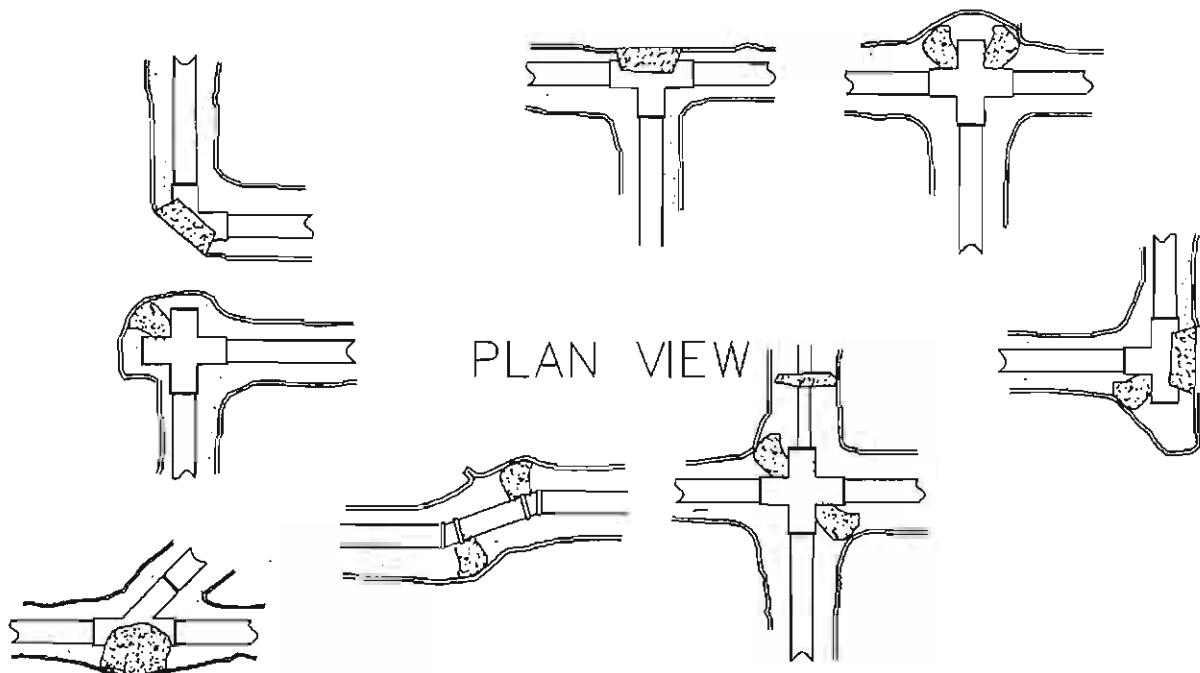
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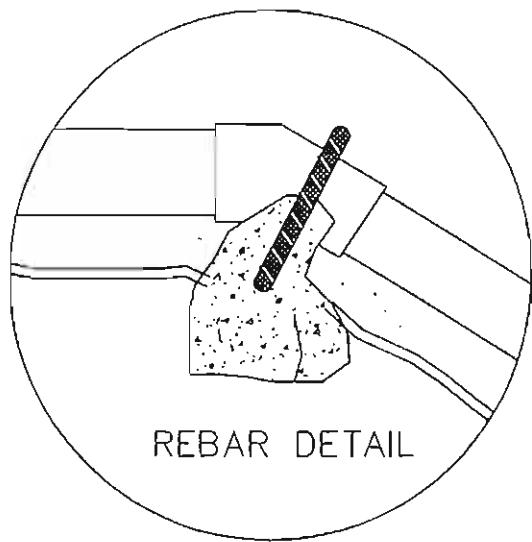
GATE VALVE

STD. PLAN NO. 5019

SHT 1 OF 1

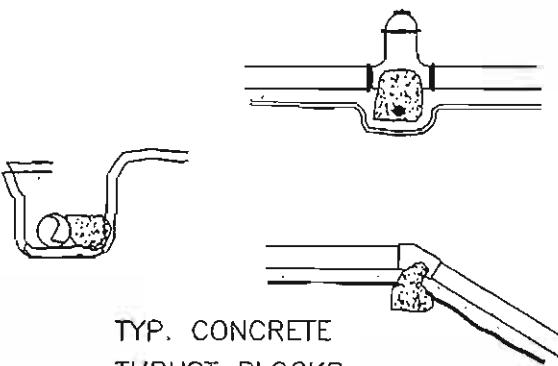


TYP. CONCRETE TO REST  
AGAINST UNDISTURBED  
SOIL



REBAR DETAIL

ELEVATION



TYP. CONCRETE  
THRUST BLOCKS

NOTE: THRUST BLOCKS SHALL BE INSTALLED IN ACCORDANCE WITH PIPE  
MANUFACTURER'S RECOMMENDATION FOR SIZE OF PIPING REQUIRED.

UTILIZED IN ALL (2 1/2" AND LARGER MAINLINE PIPE)

#3 REBAR TO BE PLACED AROUND PIPE INTO THRUST BLOCK TYP.



APPROVED BY:

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CITY ENGINEER  
**RICARDO SANDOVAL**

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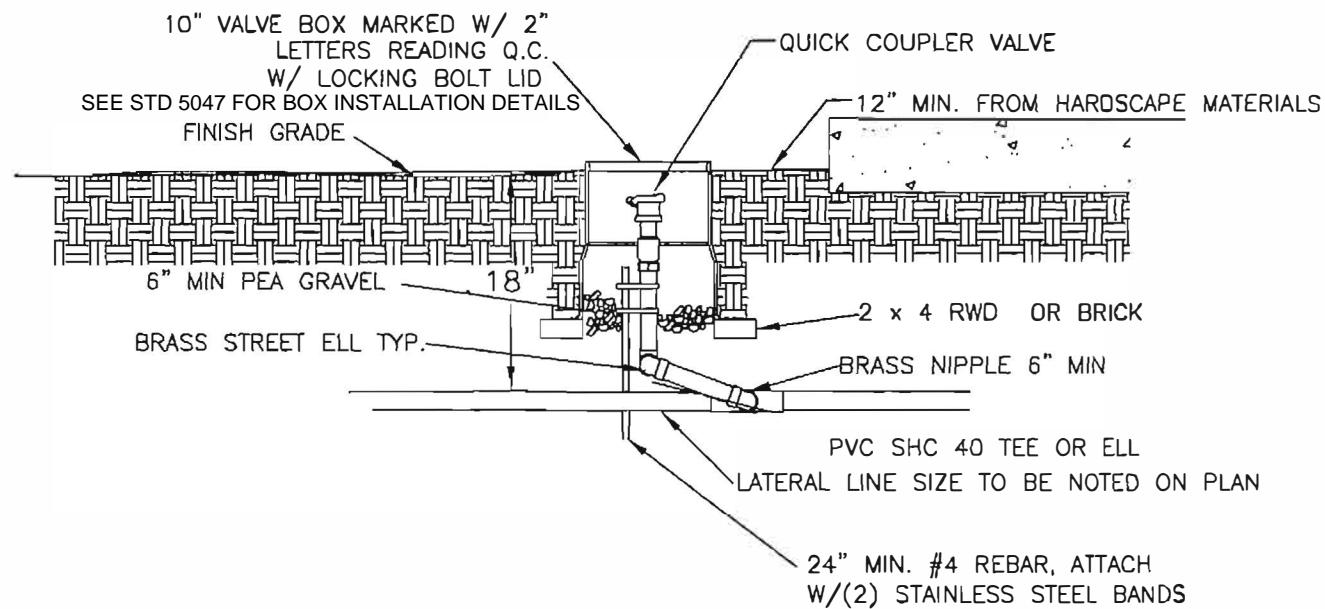
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CITY OF FONTANA

**THRUST BLOCK  
ASSEMBLY**

STD. PLAN NO. 5020

SHT 1 OF 1

NOTE:

USE TEFLON TAPE ON ALL THREADED FITTINGS



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3-15-2022

DATE

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**RICARDO SANDOVAL**

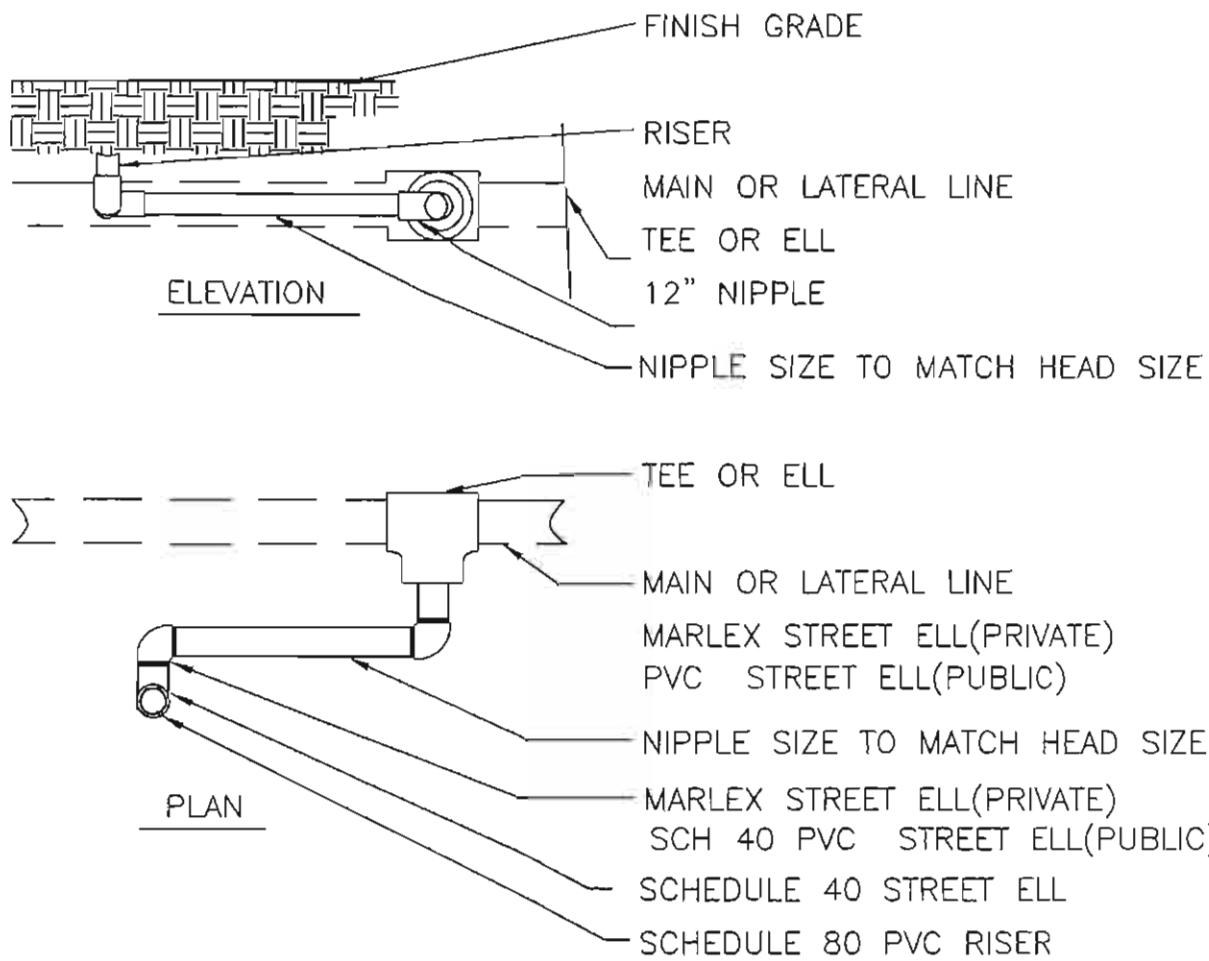
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CITY OF FONTANA

QUICK COUPLER

STD. PLAN NO. 5021

SHT 1 OF 1



NOTE: ALL PIPE AND FITTINGS SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE SPECIFIED

USE PVC STREET ELLS W/TEFLON TAPE FOR ALL PUBLIC JOBS



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*Ricardo Sandoval* 10/18/06

CITY ENGINEER  
RICARDO SANDOVAL

DATE

REVIEWED BY: Timothy Rostedt

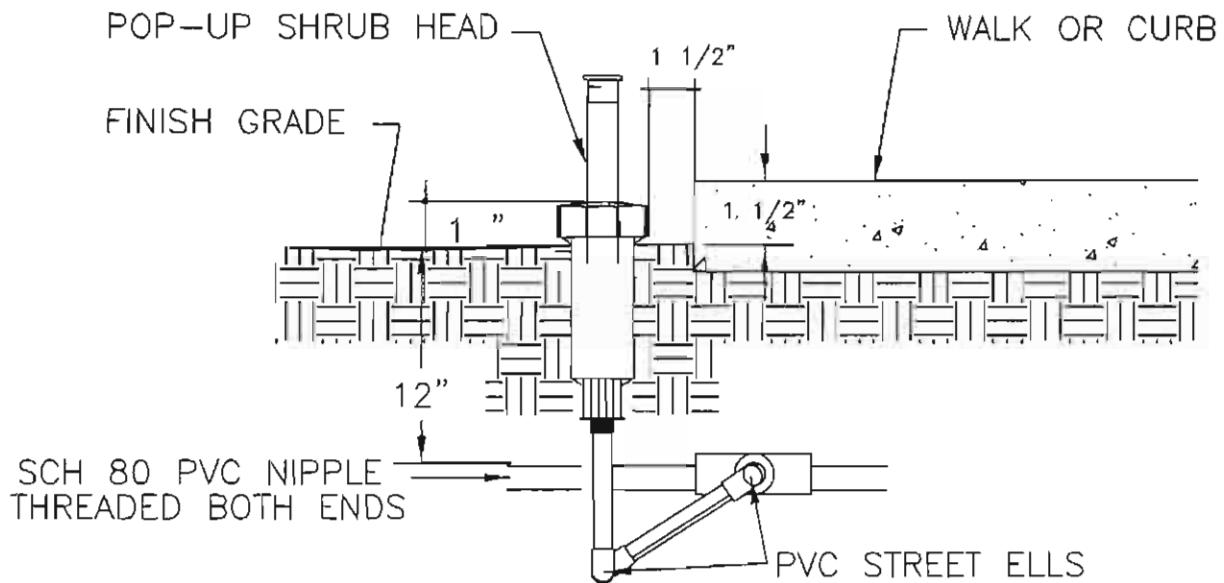
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CITY OF FONTANA

SWING JOINT

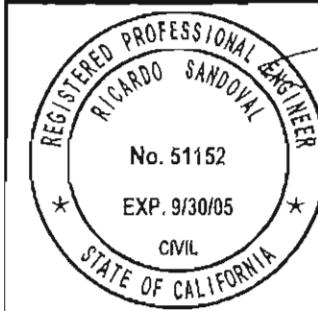
STD. PLAN NO. 5022

SHT 1 OF 1



## NOTE:

- INSTALL 12" SHRUB POP-UP HEAD 1 1/2" ABOVE F.G.
- F.G. - 1 1/2" BELOW WALK OR CURB
- CHECK VALVE FOR LOW HEAD DRAINAGE



APPROVED BY:

*Ricardo Sandoval* 10-18-06  
 CITY ENGINEER  
**RICARDO SANDOVAL**

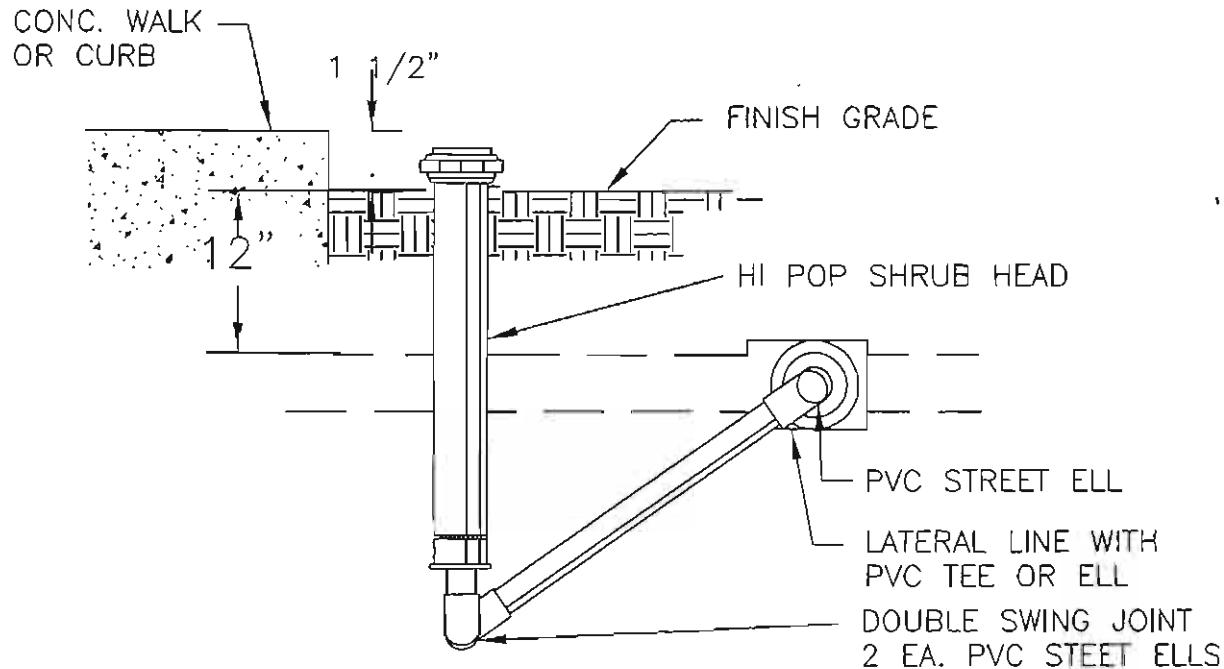
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CITY OF FONTANA

LAWN / 4" 6" 8"  
 SHRUB POP-UP HEAD

STD. PLAN NO. 5023

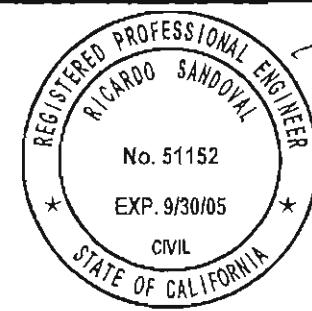
SHT. 1 OF 1



## NOTE:

INSTALL HI-POP IRR. HEAD 1 1/2" ABOVE F.G.  
F.G. 1 1/2" BELOW HARDSCAPE

INSTALL CHECK VALVES FOR LOW HEAD DRAINAGE



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*Ricardo Sandoval*  
CITY ENGINEER  
RICARDO SANDOVAL

DATE

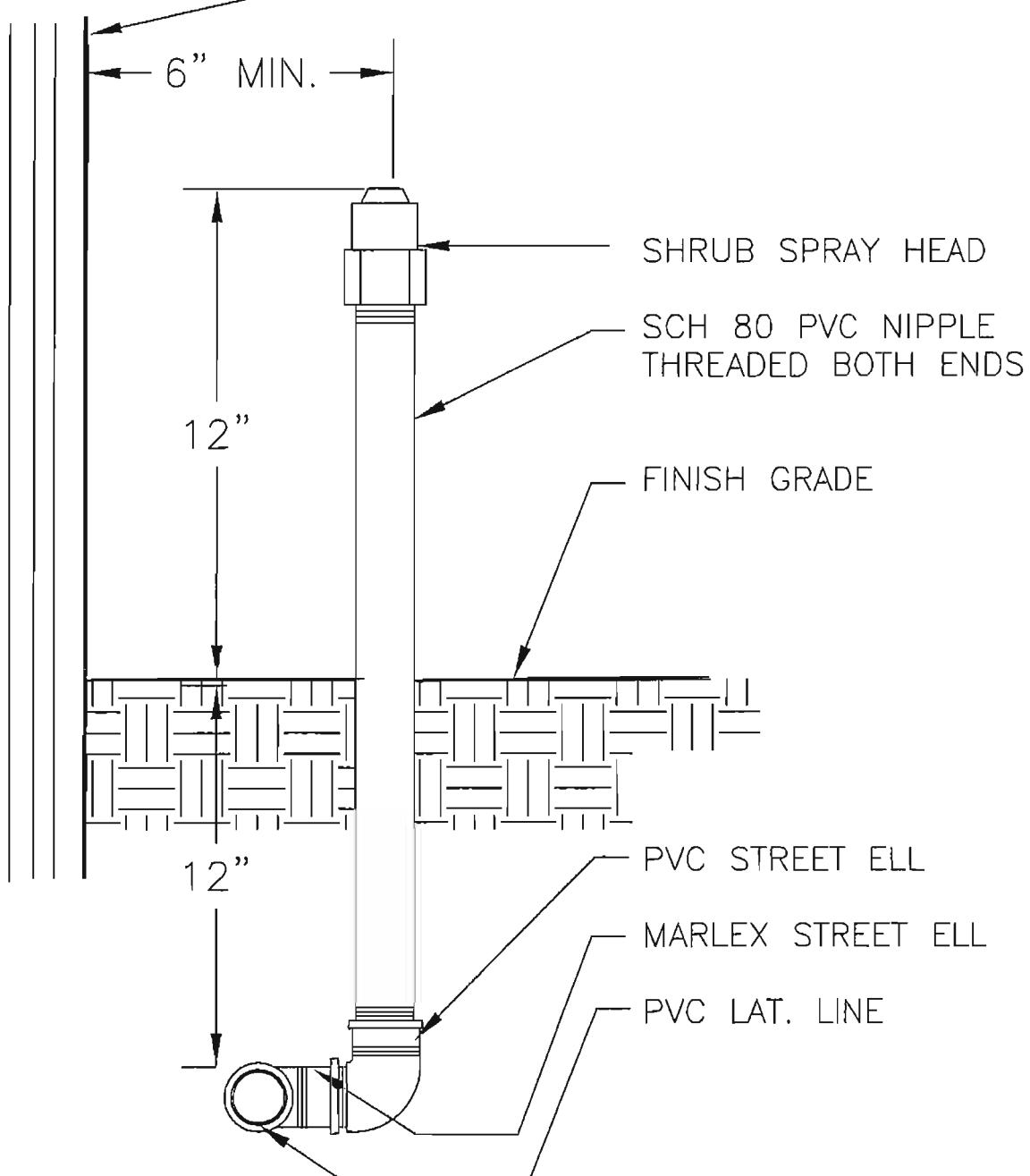
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CITY OF FONTANA

HI POP SHRUB HEAD

STD. PLAN NO. 5024

SHT 1 OF 1



NOTE: FIXED RAISERS ALLOWED ONLY AGAINST BUILDINGS  
WALLS, FENCES, ETC.



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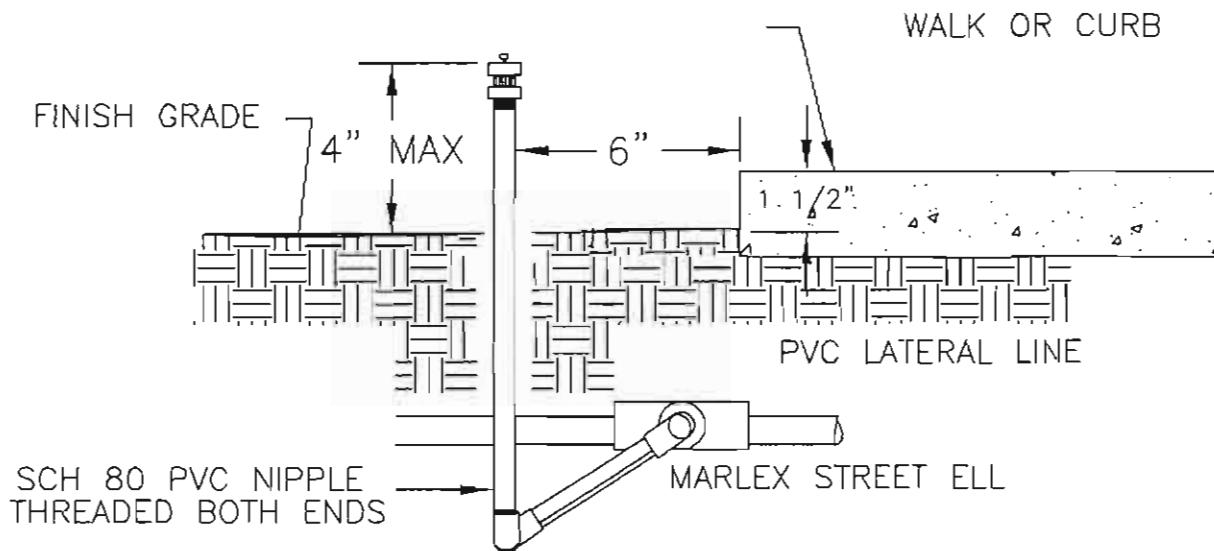
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CITY OF FONTANA

SHRUB SPRAY HEAD

STD. PLAN NO. 5025

SHT 1 OF 1



## NOTE:

- ALL BUBLERS TO BE INSTALLED  
WITH TRIPLE SWING JOINTS
- F.G. - 1 1/2" BELOW WALK OR CURB



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 CITY ENGINEER  
**RICARDO SANDOVAL**

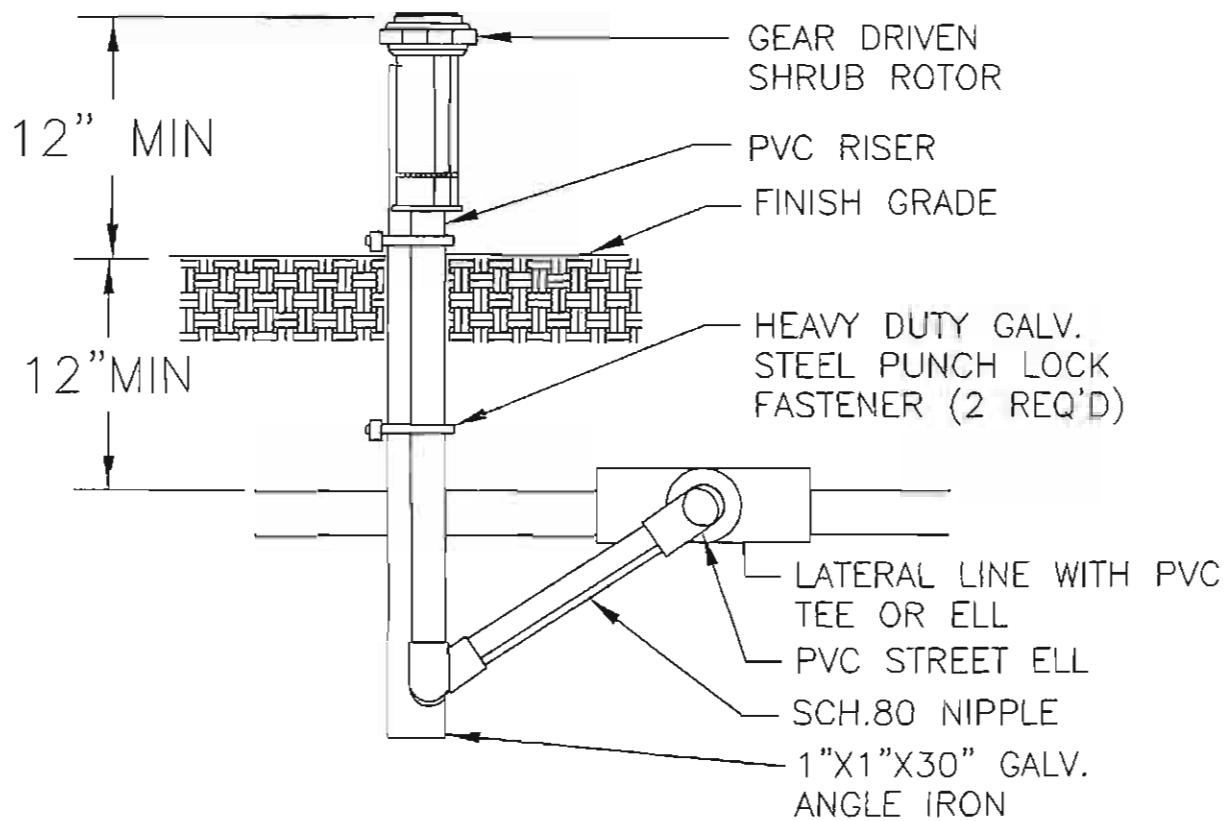
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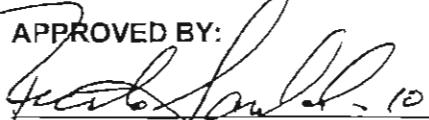
CITY OF FONTANA

BUBLER HEAD

STD. PLAN NO. 5026

SHT 1 OF 1



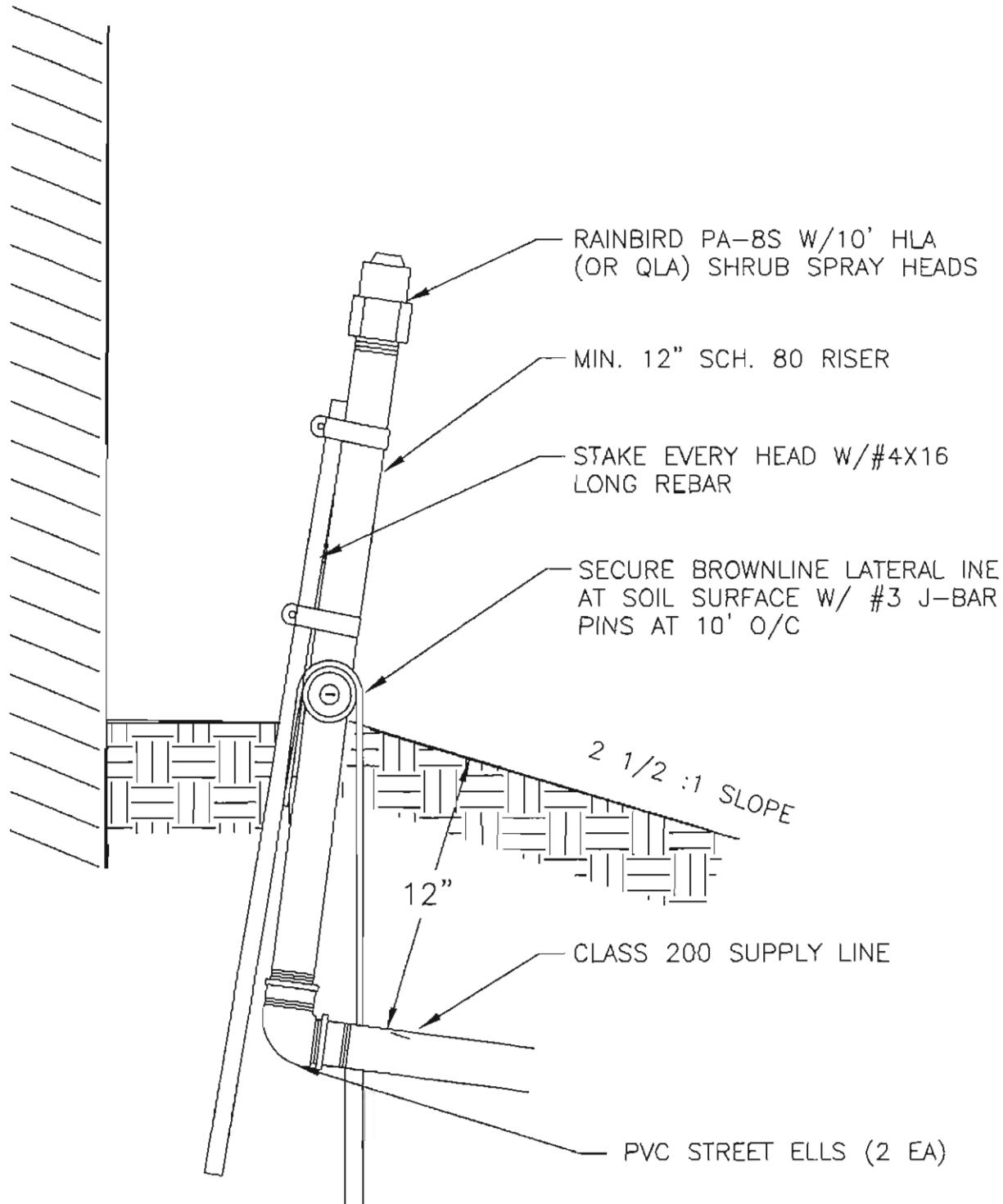
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**RICARDO SANDOVAL**  
 REVIEWED BY: Timothy Rastedt  
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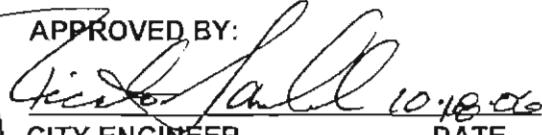
CITY OF FONTANA

SHRUB ROTOR

STD. PLAN NO. 5027

SHT 1 OF 1

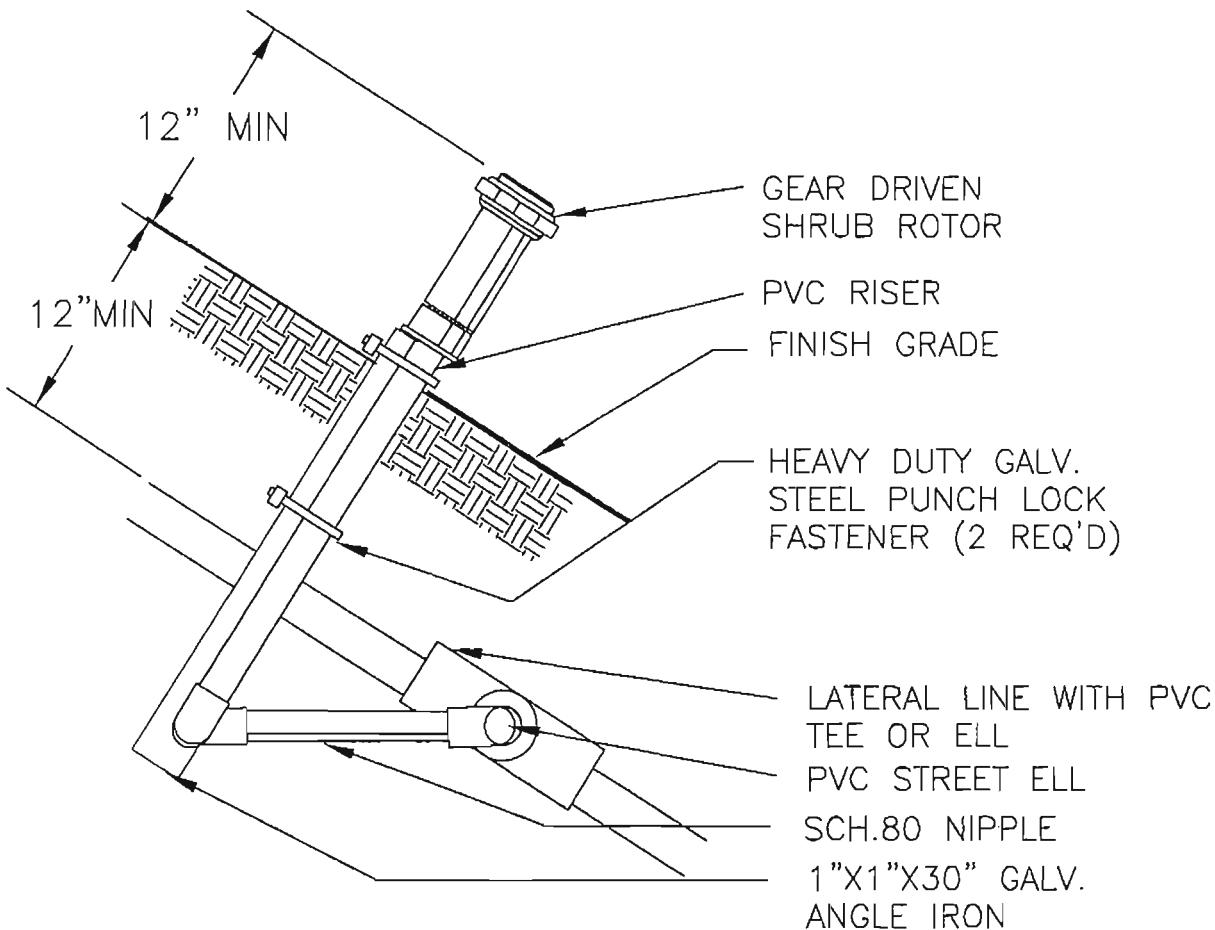


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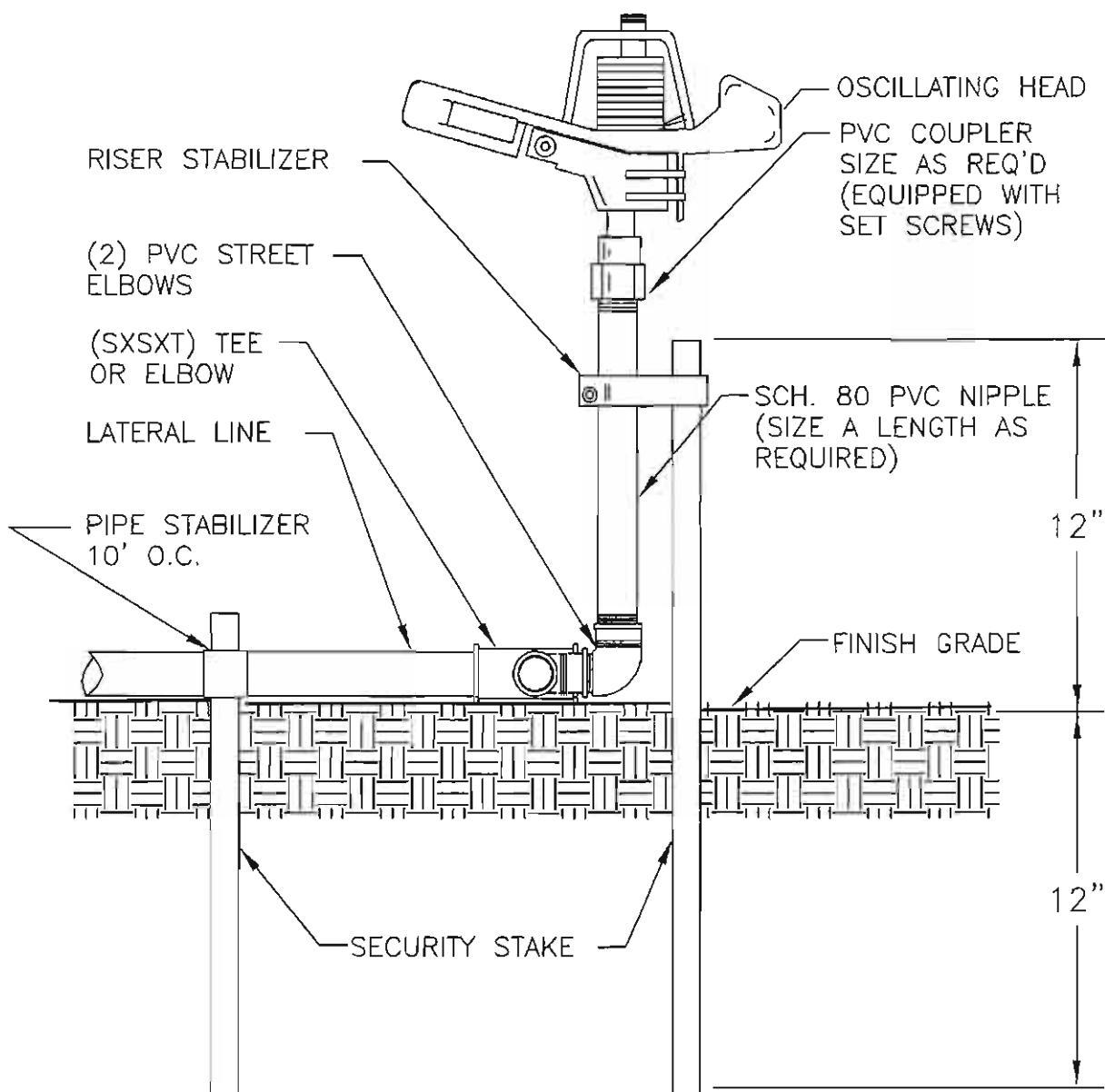
CITY OF FONTANA

IRRIGATION AT  
TOP OF SLOPE

STD. PLAN NO. 5028 SHT 1 OF 1



<p>REGISTERED PROFESSIONAL RICARDO SANDOVAL ENGINEER No. 51152 EXP. 9/30/05 CIVIL STATE OF CALIFORNIA</p>	<p>APPROVED BY: <i>Ricardo Sandoval</i> 10.18.06</p> <p>CITY ENGINEER <b>RICARDO SANDOVAL</b></p>	<p>CITY OF FONTANA</p>
	<p>REVIEWED BY: <u>Timothy Rastedt</u></p> <p>DATE OF LAST REVISION: <u>1-28-00</u></p>	<p>SHRUB ROTOR ON SLOPE</p>
		<p>STD. PLAN NO. 5029</p>
		<p>SHT 1 OF 1</p>



NOTE: CONTRACTOR SHALL TILT HEAD AS REQUIRED  
TO BEST SUIT SITE COVERAGE



APPROVED BY:

*Ricardo Sandoval* 10-18-06  
CITY ENGINEER  
RICARDO SANDOVAL

REVIEWED BY: Timothy Rostedt

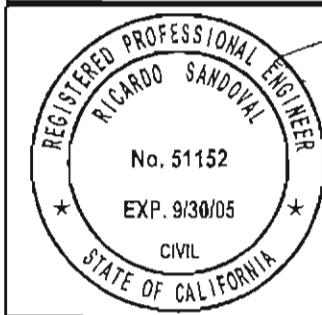
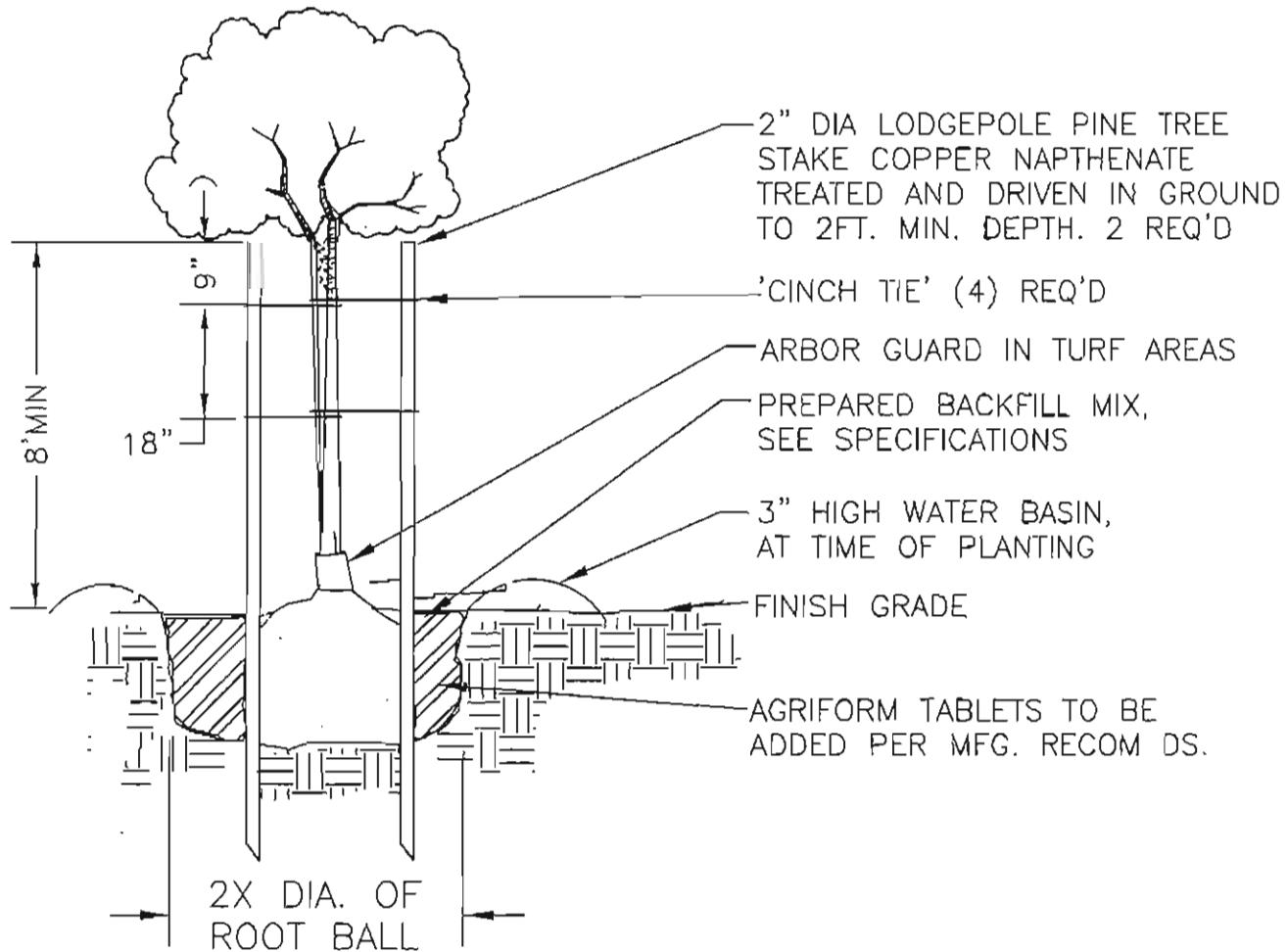
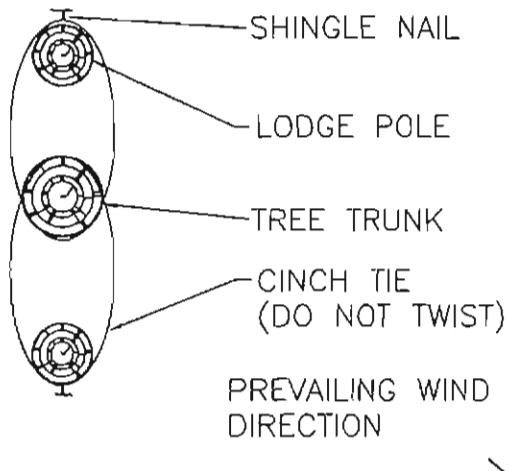
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CITY OF FONTANA

OSCILLATING HEAD  
ASSEMBLY

STD. PLAN NO. 5030

SHT 1 OF 1

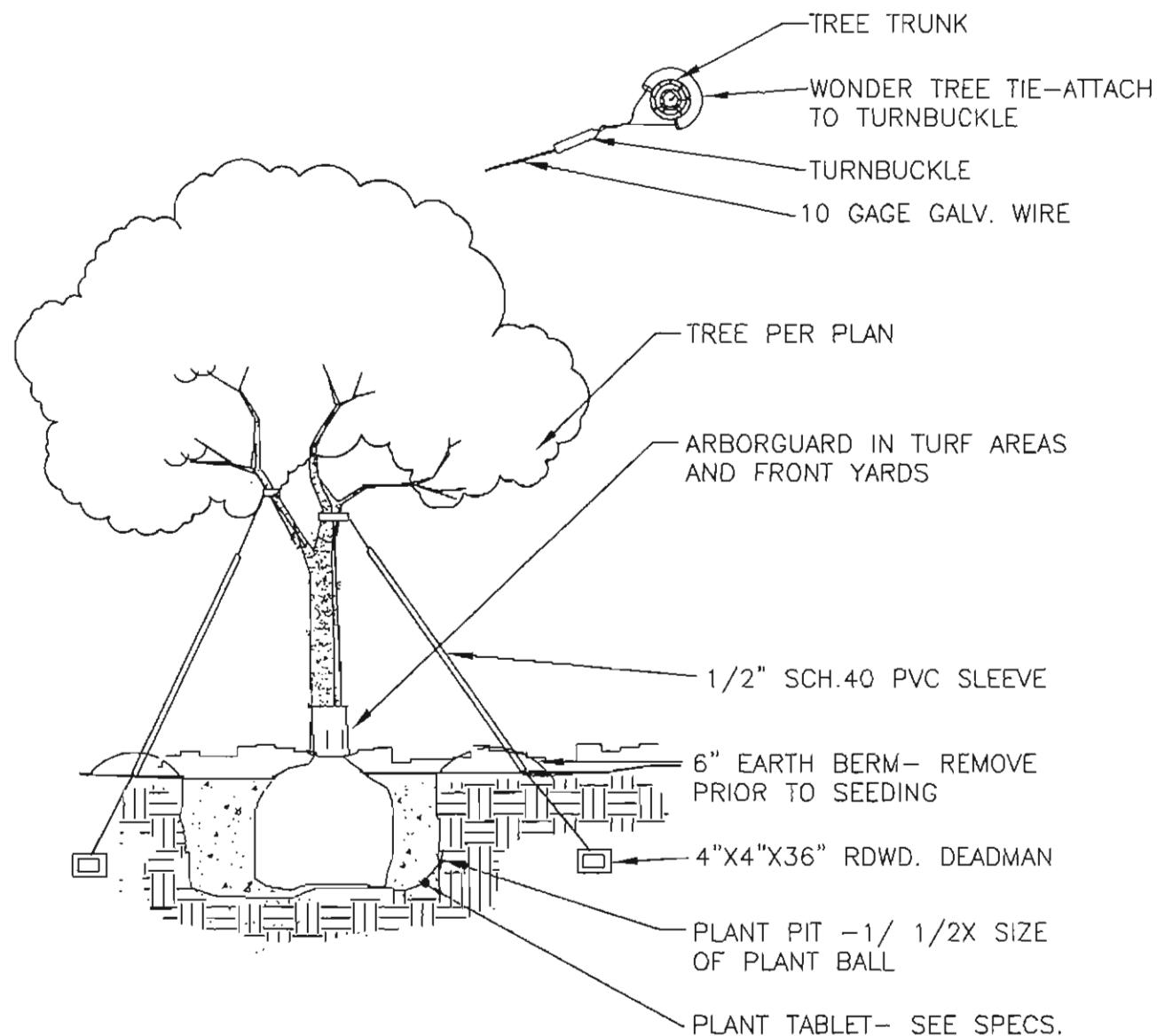


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CITY ENGINEER  
**RICARDO SANDOVAL**  
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CITY OF FONTANA

TREE STAKING

STD. PLAN NO. 5031 SHT 1 OF 1



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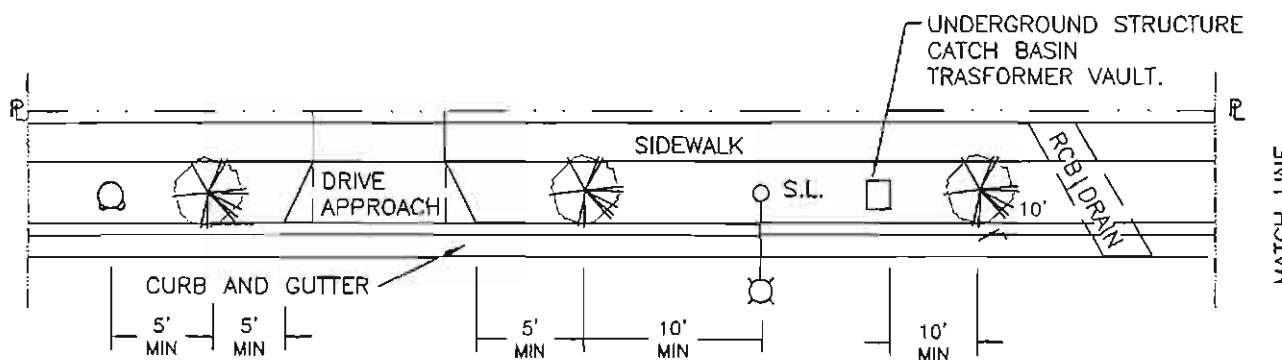
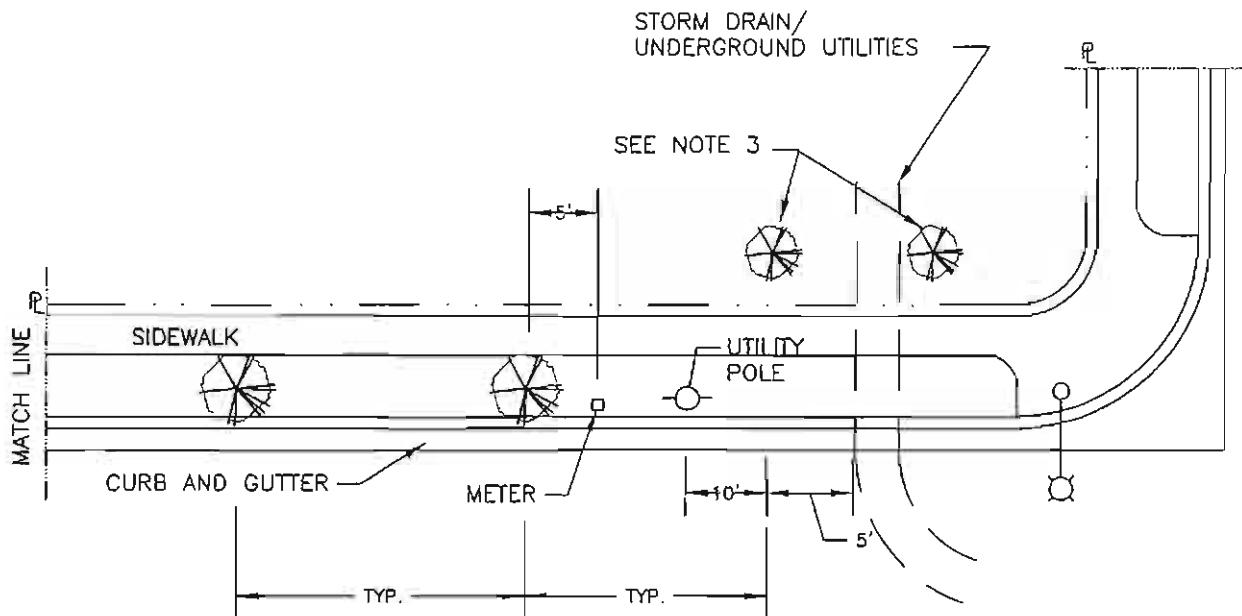
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**RICARDO SANDOVAL**

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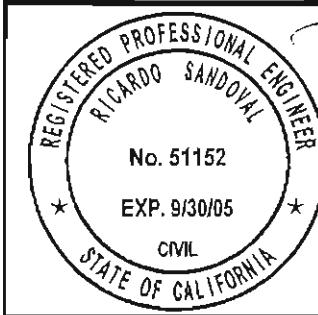
TREE GUYING

STD. PLAN NO. 5032 SHT 1 OF 1



## NOTES:

1. TREE SPACING SHALL CONFORM TO PLANS APPROVED BY THE CITY ENGINEER
2. ALL TREES IN THE R.O.W. ARE SUBJECT TO LINE.OF.SIGHT CRITERIA AS APPROVED BY TRAFFIC ENGINEER.
3. AT ALL LOCAL RESIDENTIAL INTERSECTIONS THE FIRST TWO PARKWAY TREES AT ALL APPROACHES TO BE PLACED BEHIND SIDEWALK.
4. MAINTAIN 10 FEET FROM CENTER OF STREET TO EDGE OF ALL UNDERGROUND FACILITIES.
4. MAINTAIN 10 FEET FROM ALL STREET LIGHTS, UTILITIES STRUCTURES AND VALVE BOXES.



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*Ricardo Sandoval* 10-18-06  
 CITY ENGINEER  
**RICARDO SANDOVAL**  
 DATE

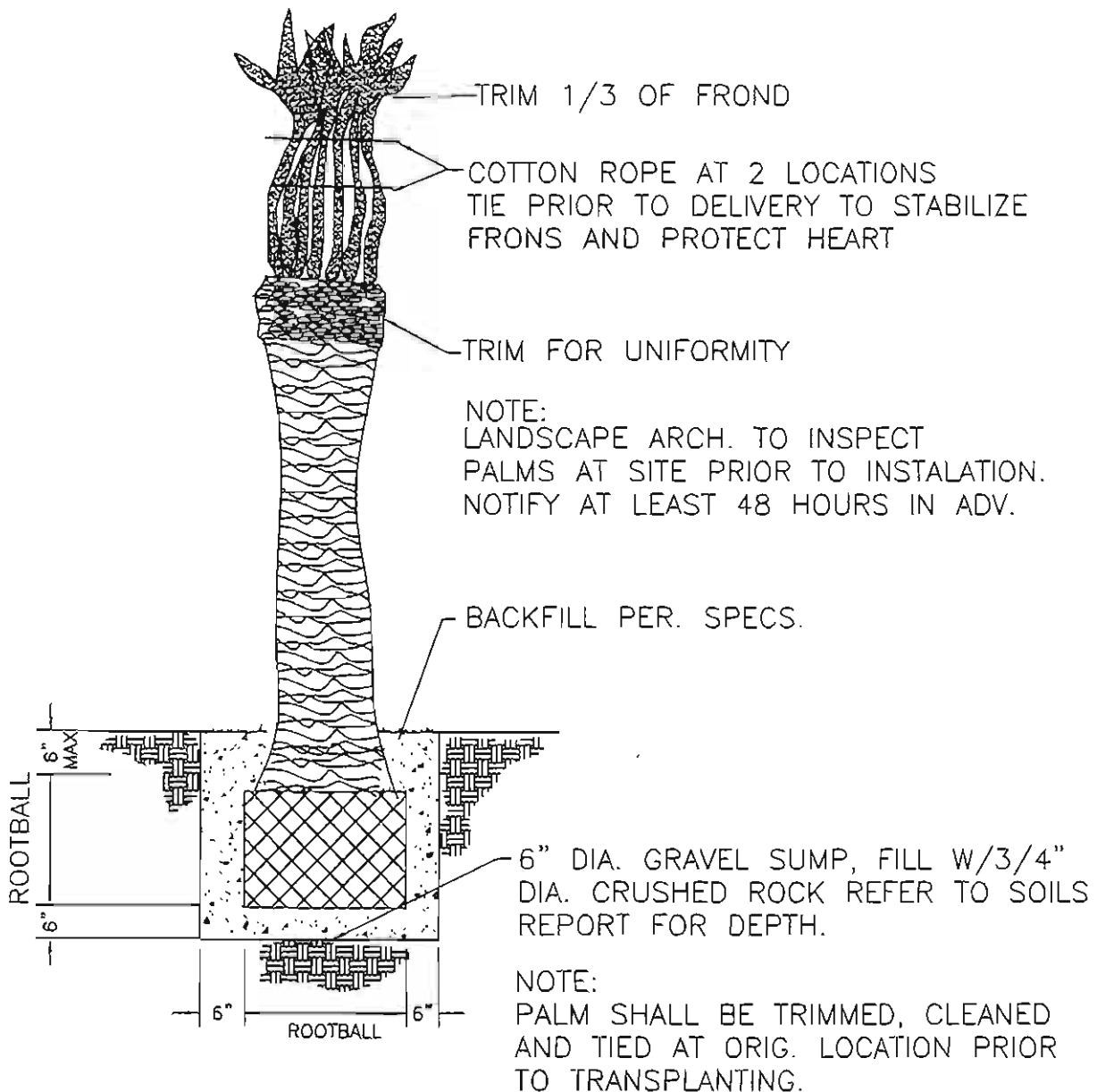
CITY OF FONTANA

TREE PLACEMENT

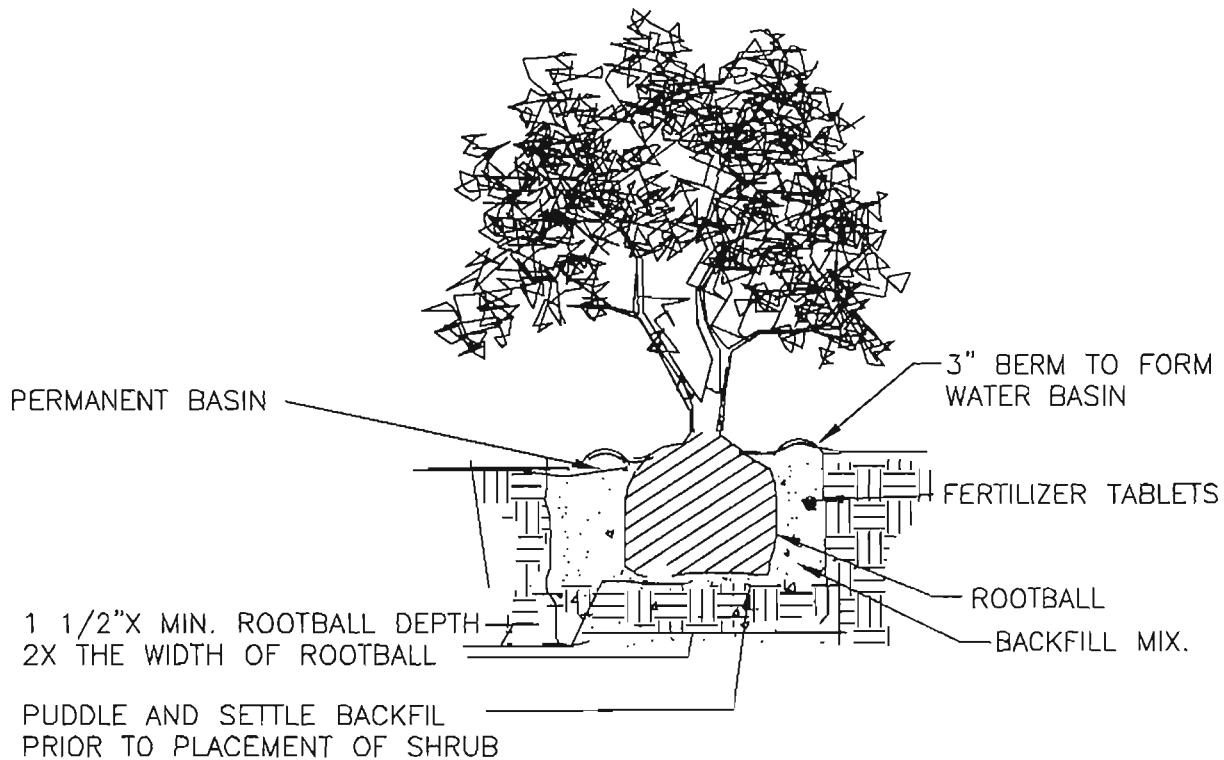
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STD. PLAN NO. 5033

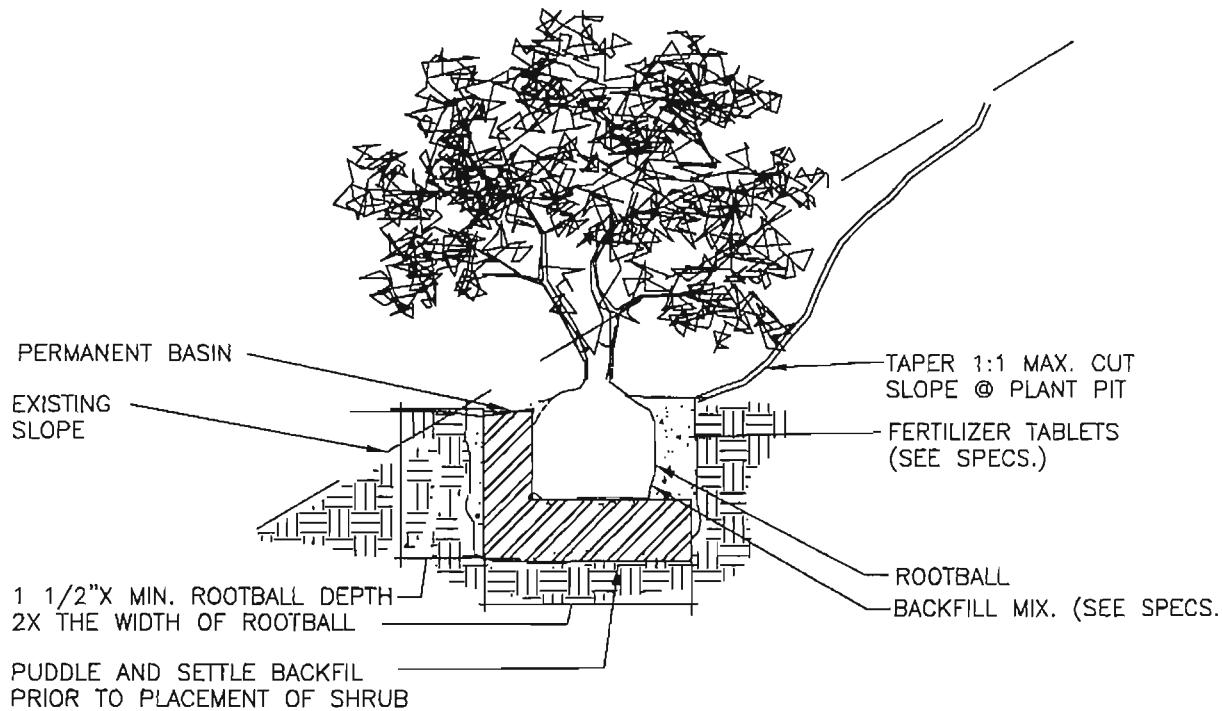
SHT 1 OF 1



<p>REGISTERED PROFESSIONAL ENGINEER RICARDO SANDOVAL No. 51152 EXP. 9/30/05 CIVIL STATE OF CALIFORNIA</p>	<p>APPROVED BY: <i>Ricardo Sandoval</i> 10/18/06</p> <p>CITY ENGINEER <b>RICARDO SANDOVAL</b></p> <p>REVIEWED BY: <u>Timothy Rostedt</u></p> <p>DATE OF LAST REVISION: <u>1-28-00</u></p>	<p>CITY OF FONTANA</p> <p><b>PALM TREE INSTALLATION</b></p>	
	<p>STD. PLAN NO. 5034</p> <p>SHT 1 OF 1</p>		



	APPROVED BY:		CITY OF FONTANA
	CITY ENGINEER <b>RICARDO SANDOVAL</b>		DATE
REVIEWED BY: <u>Timothy Rostedt</u>	SHRUB PLANTING		
DATE OF LAST REVISION: <u>1-28-00</u>	STD. PLAN NO. 5035	SHT 1 OF 1	



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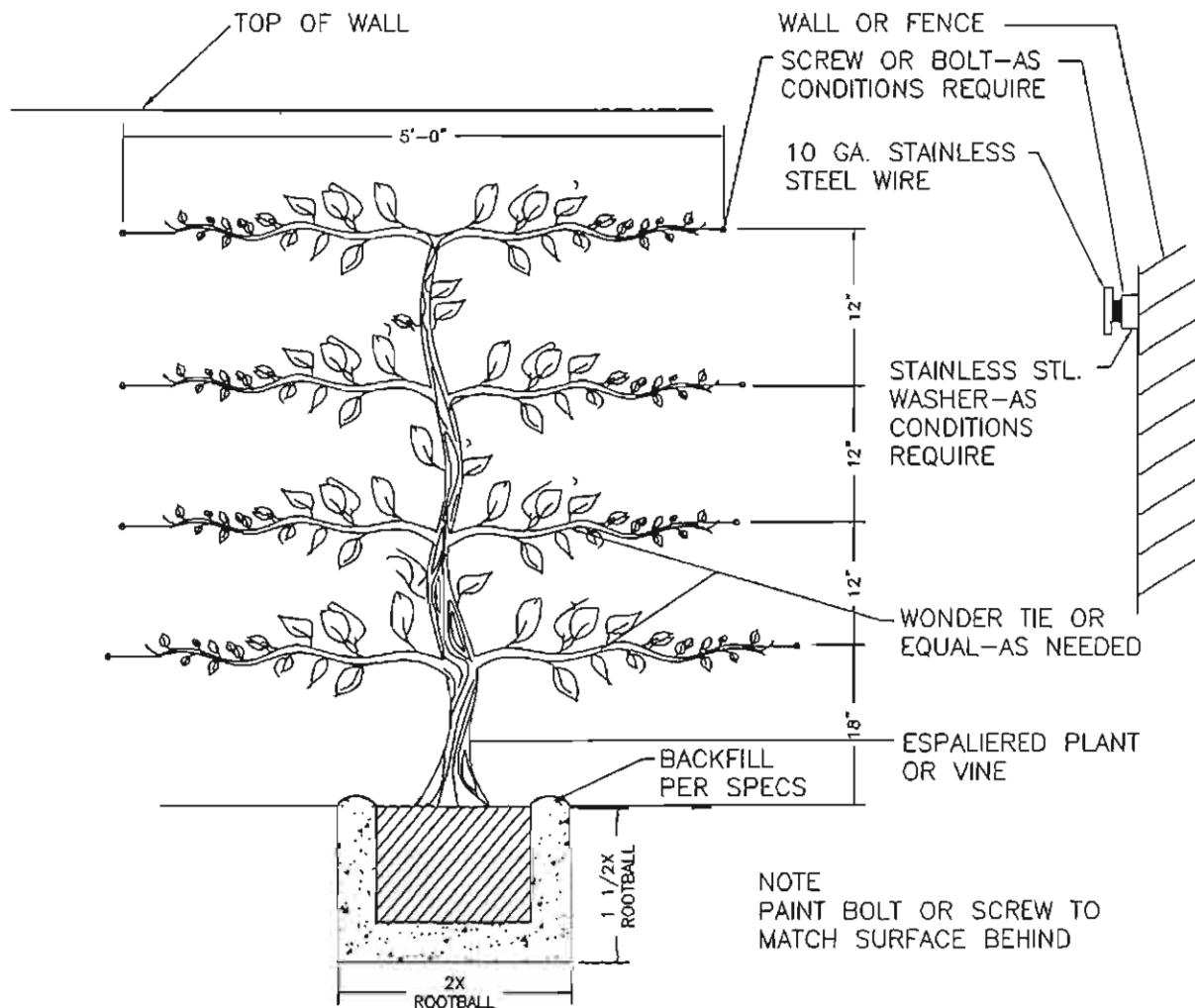
*Ricardo Sandoval*  
10-13-06  
CITY ENGINEER  
**RICARDO SANDOVAL**

REVIEWED BY: Timothy RastedtDATE OF LAST REVISION: 1-28-00

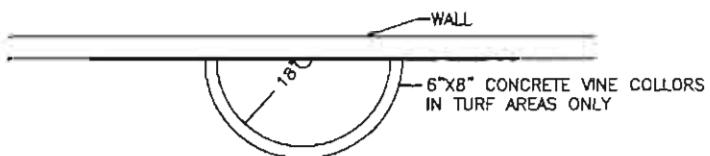
CITY OF FONTANA

SHRUB ON SLOPE

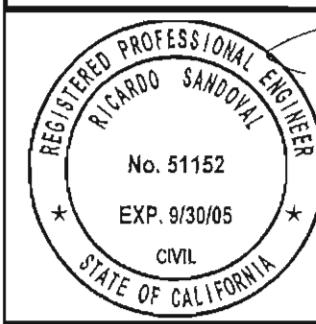
STD. PLAN NO. 5036 SHT 1 OF 1



ELEVATION VIEW



PLAN VIEW



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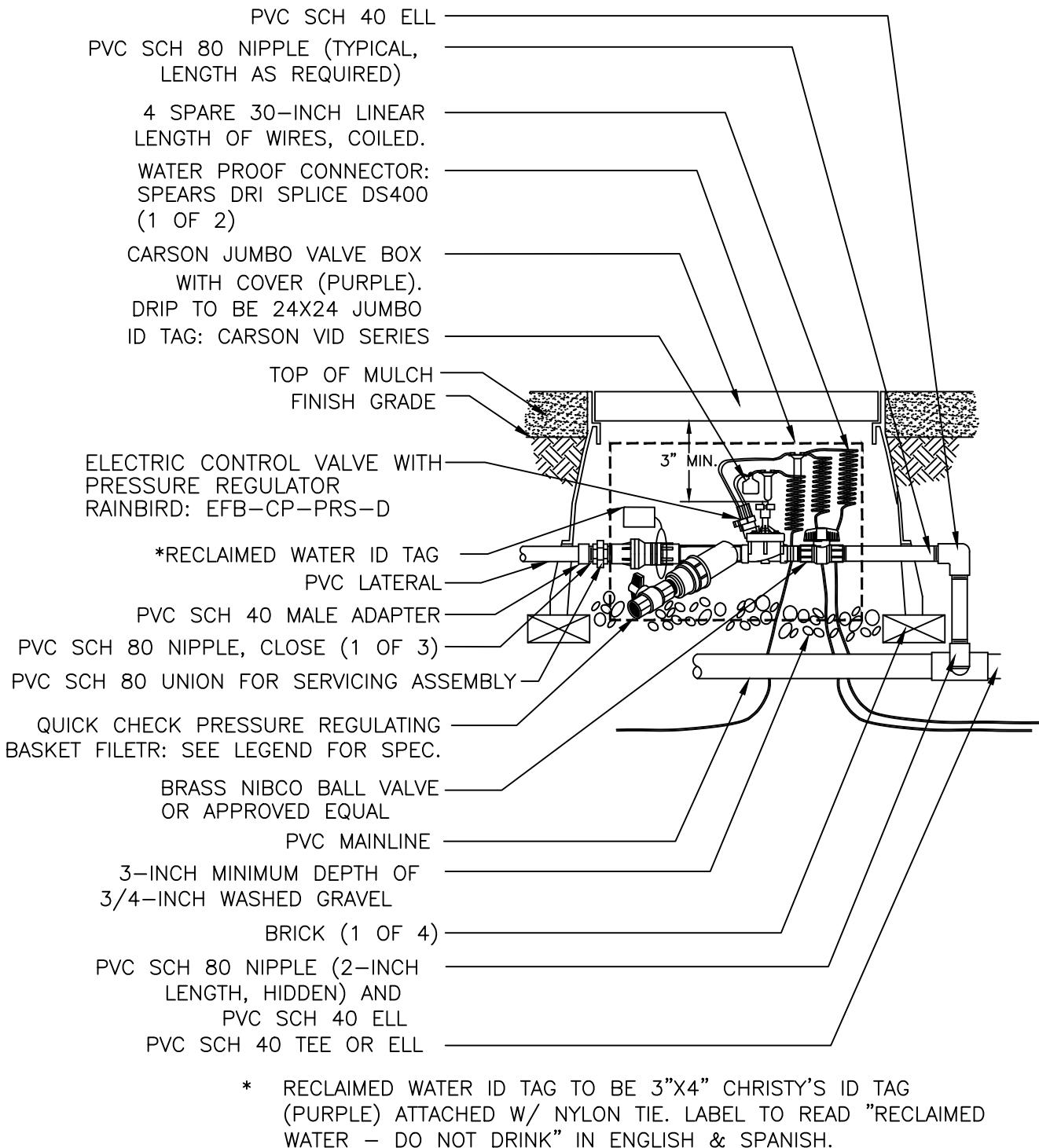
CITY ENGINEER  
RICARDO SANDOVALREVIEWED BY: Timothy RastedtDATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

VINE PLANTING

STD. PLAN NO. 5037

SHT 1 OF 1



APPROVED BY

3-15-22

CITY ENGINEER  
**RICARDO SANDOVAL**  
REVIEWED BY: KS

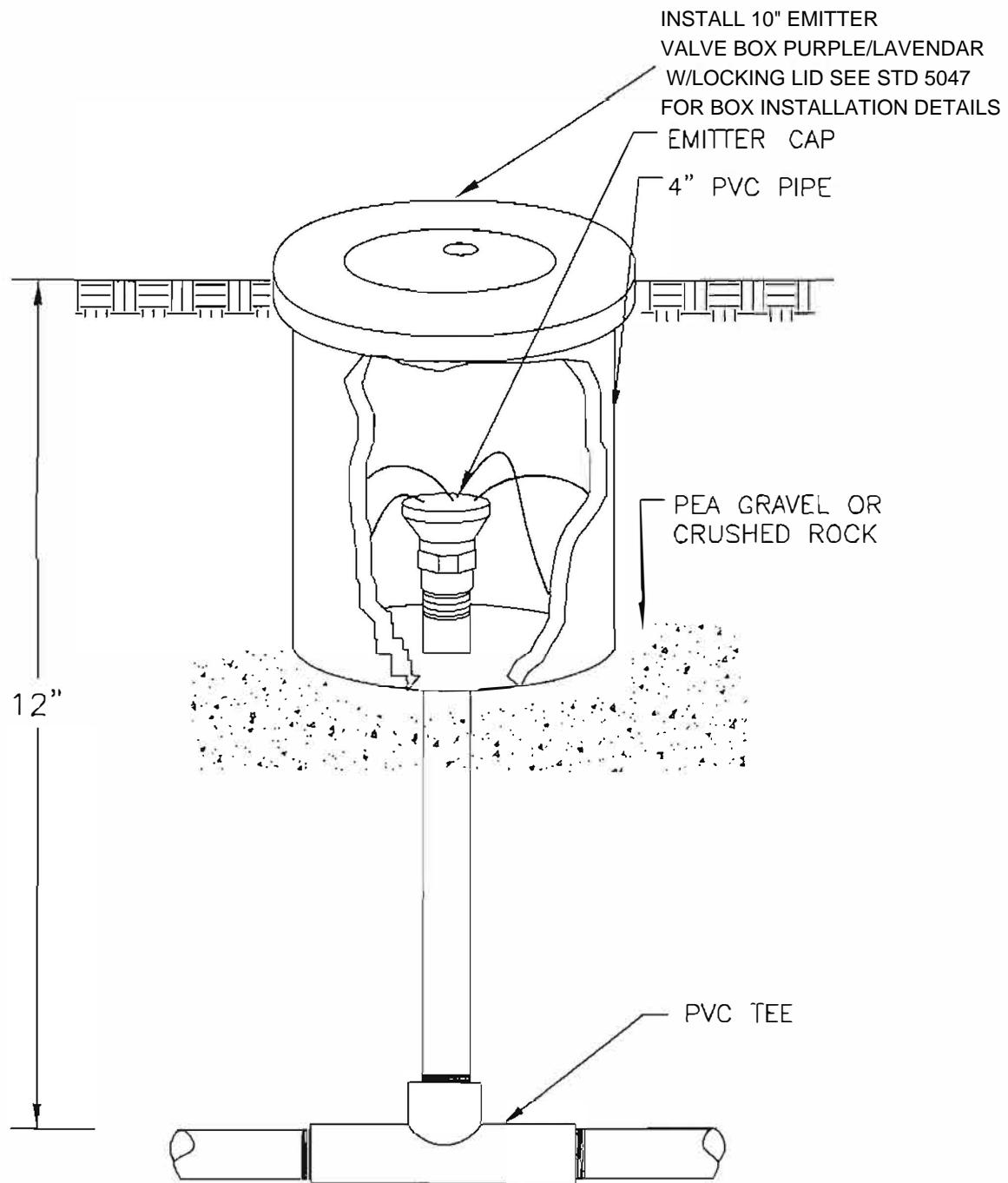
DATE OF LAST REVISION: 2-8-22

CITY OF FONTANA

AUTOMATIC DRIP VALVE

STD. PLAN NO. 5038

SHT 1 OF 1



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CITY ENGINEER  
**RICARDO SANDOVAL**

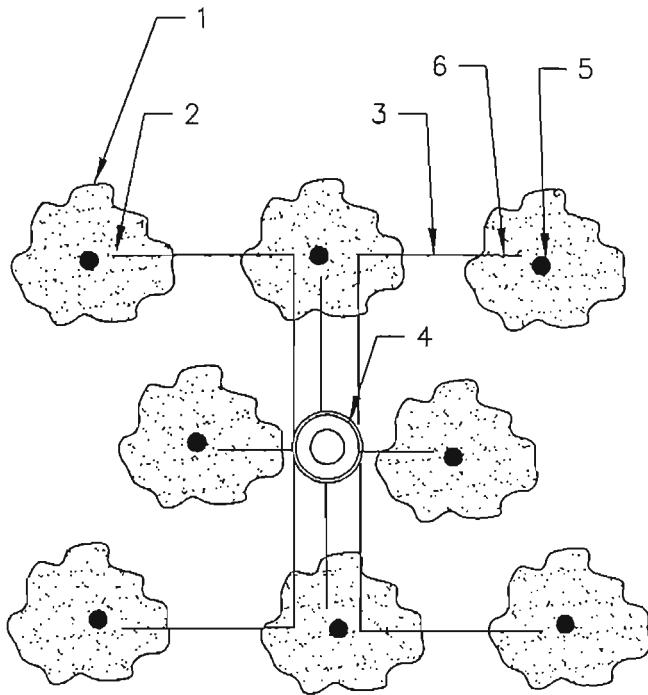
REVIEWED BY: KS

3-15-2022

CITY OF FONTANA

EMITTER

STD. PLAN NO. 5039 SHT 1 OF 1



## LEGEND:

1. PLANT MATERIAL TYP.
2. EMISSION POINT, SEE XERI-DETAILS
3. RAIN BIRD MODEL #DT-025 1/4 DISTRIBUTION TUBING. MAX LENGTH PER SPECS.
4. RAIN BIRD XERI-BIRD 8 UNIT FLOW PORT PER IRRI. EQUIP. LEGEND
5. RAIN BIRD MODEL # DAC-025 DIFFUSURE BUG CAP(TYP.)
6. RAIN BIRD MODEL #TS-025 TURNING STAKE (TYP.)

## NOTE

THE RAINBIRD PRODUCTS LISTED ABOVE ARE SUGESTED ONLY. PRODUCTS OF EQUAL QUALITY CAN BE USED.

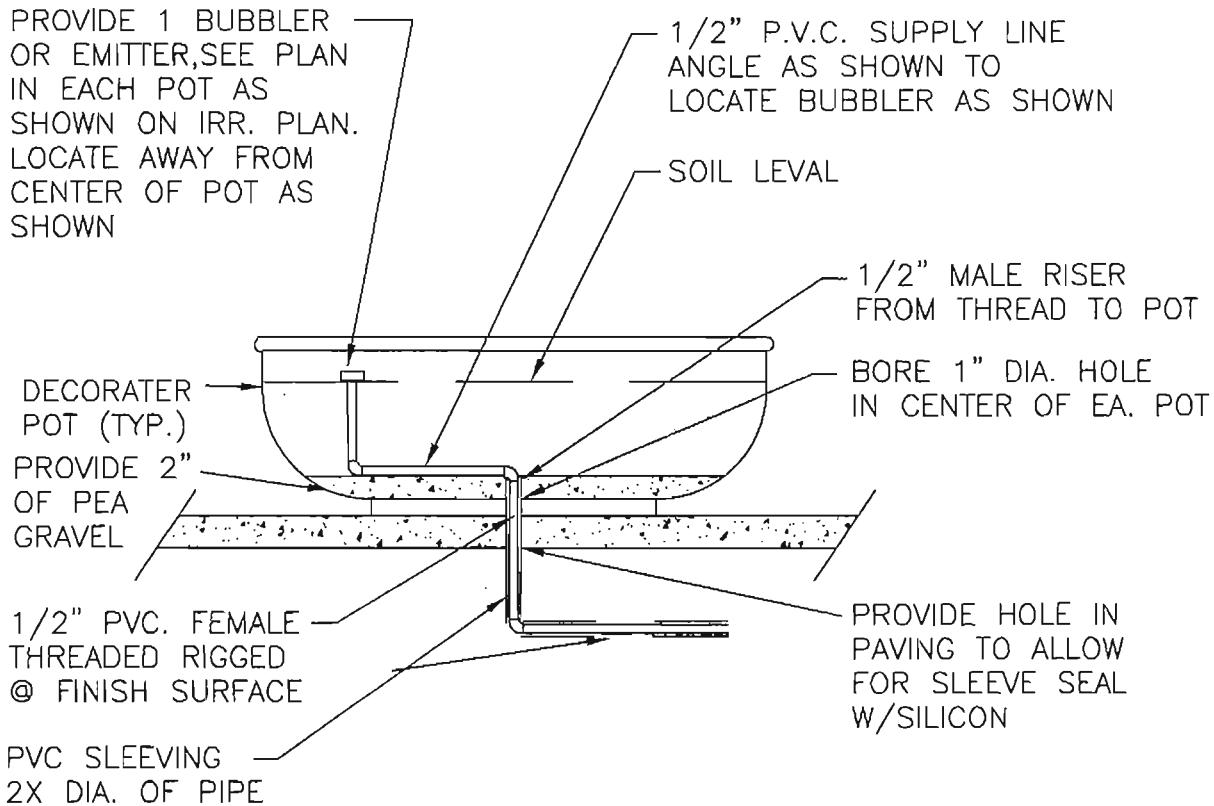


APPROVED BY:  
*Ricardo Sandoval* 10-18-06  
 CITY ENGINEER DATE  
**RICARDO SANDOVAL**  
 REVIEWED BY: Timothy Rastedt  
 DATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

EMITTER LAYOUT

STD. PLAN NO. 5040 SHT 1 OF 1



APPROVED BY:

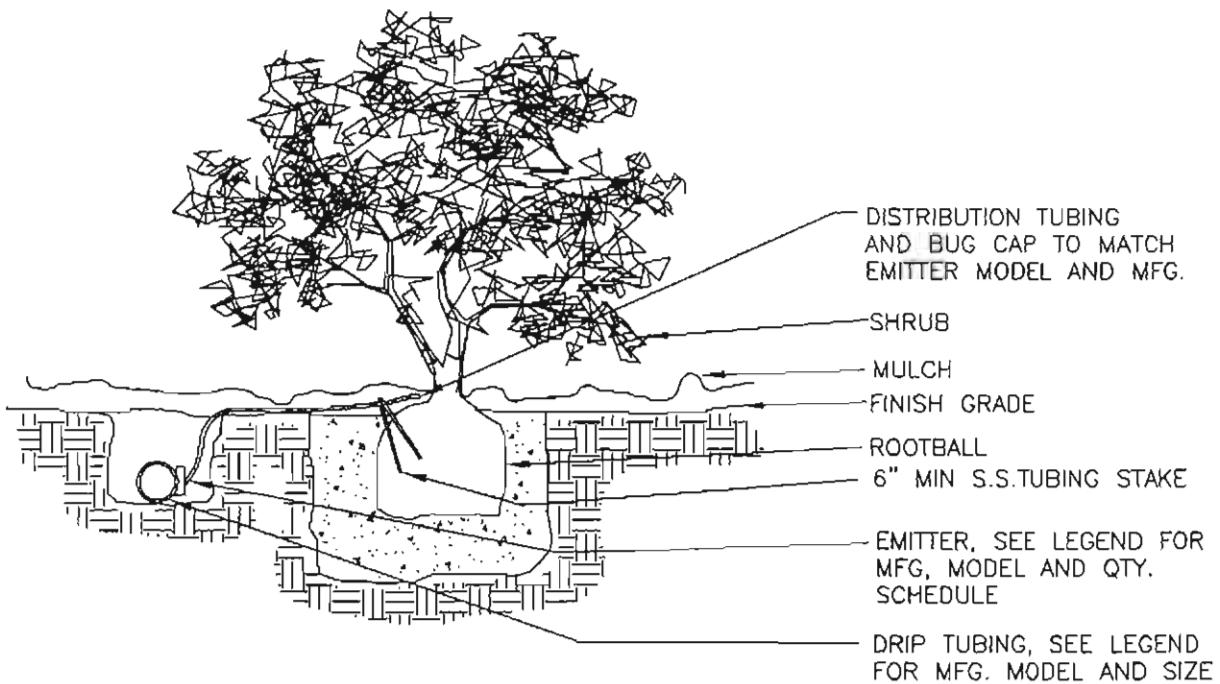
CITY ENGINEER  
RICARDO SANDOVALREVIEWED BY: Timothy RastedtDATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

POT IRRIGATION

STD. PLAN NO. 5041

SHT 1 OF 1



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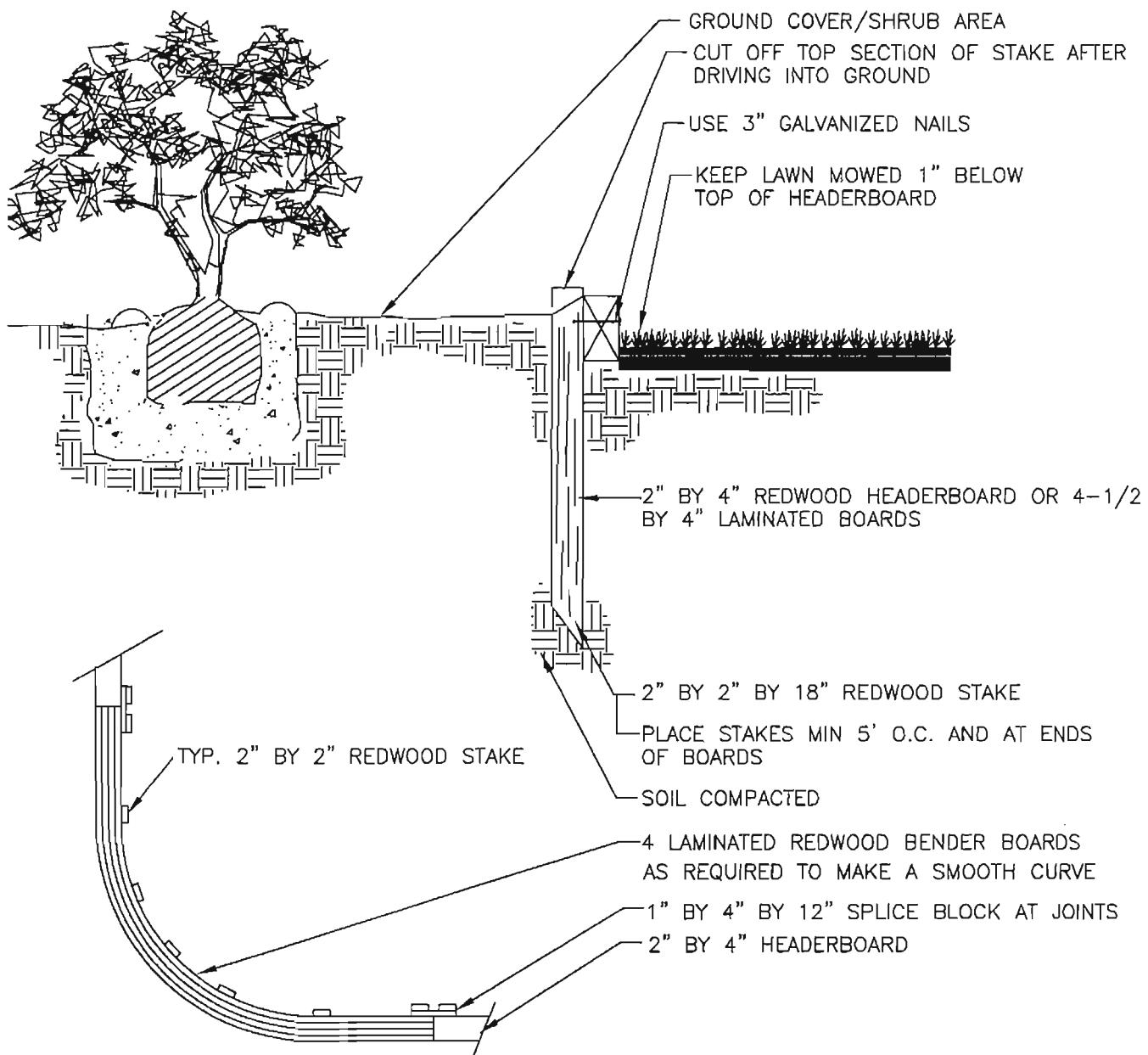
*Ricardo Sandoval* 10/18/06  
CITY ENGINEER  
**RICARDO SANDOVAL**  
REVIEWED BY: Timothy Rostedt  
DATE OF LAST REVISION: 1-28-00

CITY OF FONTANA

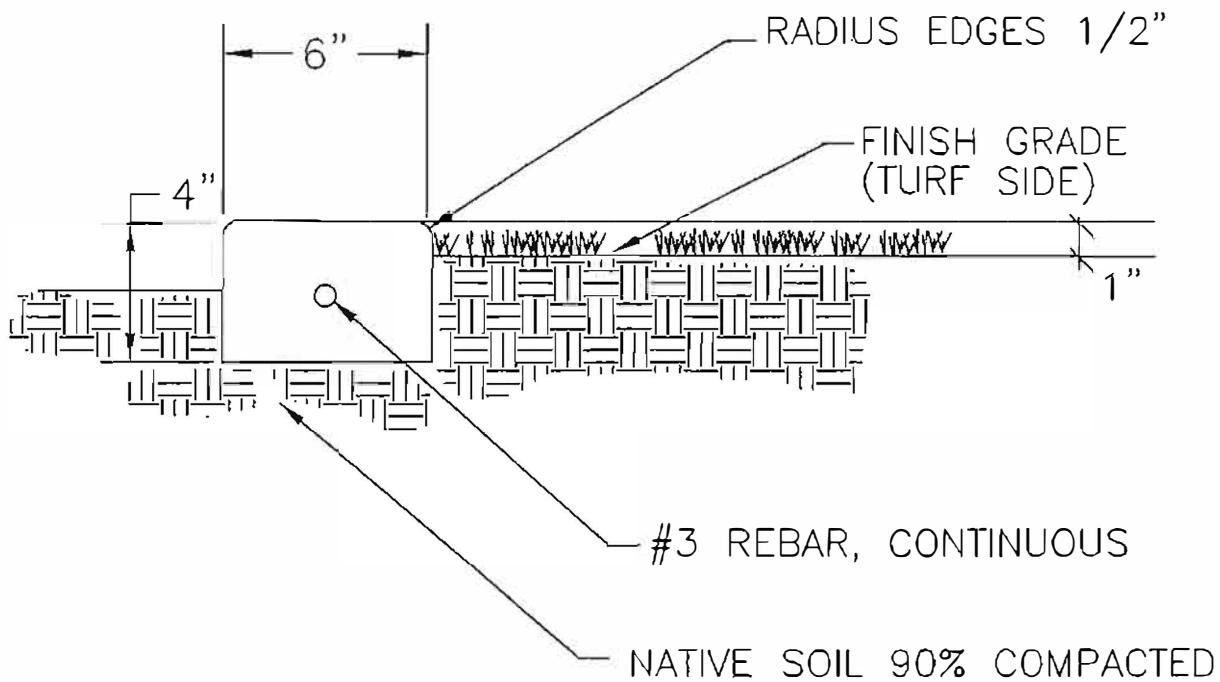
DRIP Emitter

STD. PLAN NO. 5042

SHT 1 OF 1



	APPROVED BY:	10-18-06 CITY ENGINEER <b>RICARDO SANDOVAL</b>	DATE	CITY OF FONTANA	
	REVIEWED BY: <u>Timothy Rastedt</u>			REDWOOD HEADERBOARD	
	DATE OF LAST REVISION: <u>1-28-00</u>	STD. PLAN NO. <u>5043</u>	SHT <u>1</u> OF <u>1</u>		



NOTE: MOW CURBS SHALL BE PLACED BETWEEN ALL GRASS, PLANTER AREAS, MULCH, DECOMPOSED GRANITE, AND ANYWHERE A LANDSCAPE MATERIAL TRANSITIONS OR ABUTS A DIFFERING MATERIAL UNLESS OTHERWISE NOTED



APPROVED BY:

3-15-2022

CITY ENGINEER  
RICARDO SANDOVAL

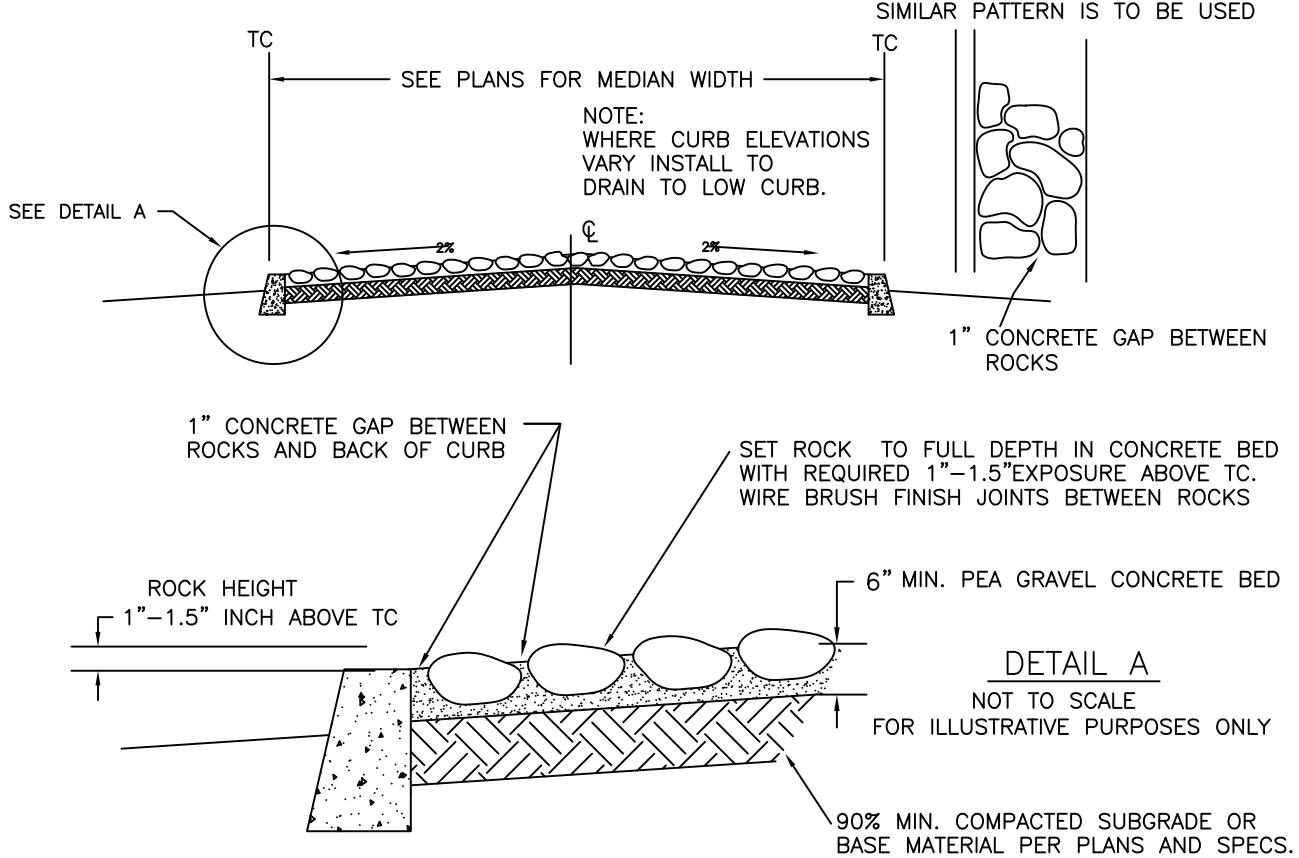
REVIEWED BY: KS

CITY OF FONTANA

CONCRETE MOW CURB

STD. PLAN NO. 5044

SHT 1 OF 1



1. ROCK SIZES UNLESS OTHERWISE SPECIFIED SHALL BE:  
COBBLESTONES: MAX. 12" TO MIN. 6", NO MORE THAN 50% OF ANY ONE SIZE.
2. A SAMPLE AREA, MIN. 10 SQ. FT. SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO PROCEEDING WITH THE REMAINING ROCK WORK.
3. FINAL RESTING POSITION OF ALL ROCKS SHALL BE APPROVED BY THE CITY INSPECTOR.
4. ROCKS SHALL BE SMOOTH, ROUNDED, FREE OF OBJECTIONABLE DISFIGURATIONS AND IRON CONTENT AS APPROVED BY THE CITY INSPECTOR
5. CONCRETE SHALL BE 2500 PSI PEA GRAVEL PUMP MIX CONCRETE.
6. WIRE BRUSH ALL JOINTS AFTER THE INSTALLATION OF THE ROCKS. AFTER CONCRETE HAS SET, CLEAN THE RESIDUE FROM SURFACES OF ROCKS.
7. NO JOINTS GREATER THAN 1" BETWEEN ROCKS WILL BE ACCEPTABLE. 4" FILLER ROCKS WILL BE ACCEPTED TO MAINTAIN THE 1" JOINT.
8. WHERE ROCK BORDERS TURF AREA, PLACE 1" CONCRETE EDGE BETWEEN BACK OF ROCK AND TURF.



APPROVED BY:

12-2-19

CITY ENGINEER  
RICARDO SANDOVAL

DATE

REVIEWED BY: \_\_\_\_\_

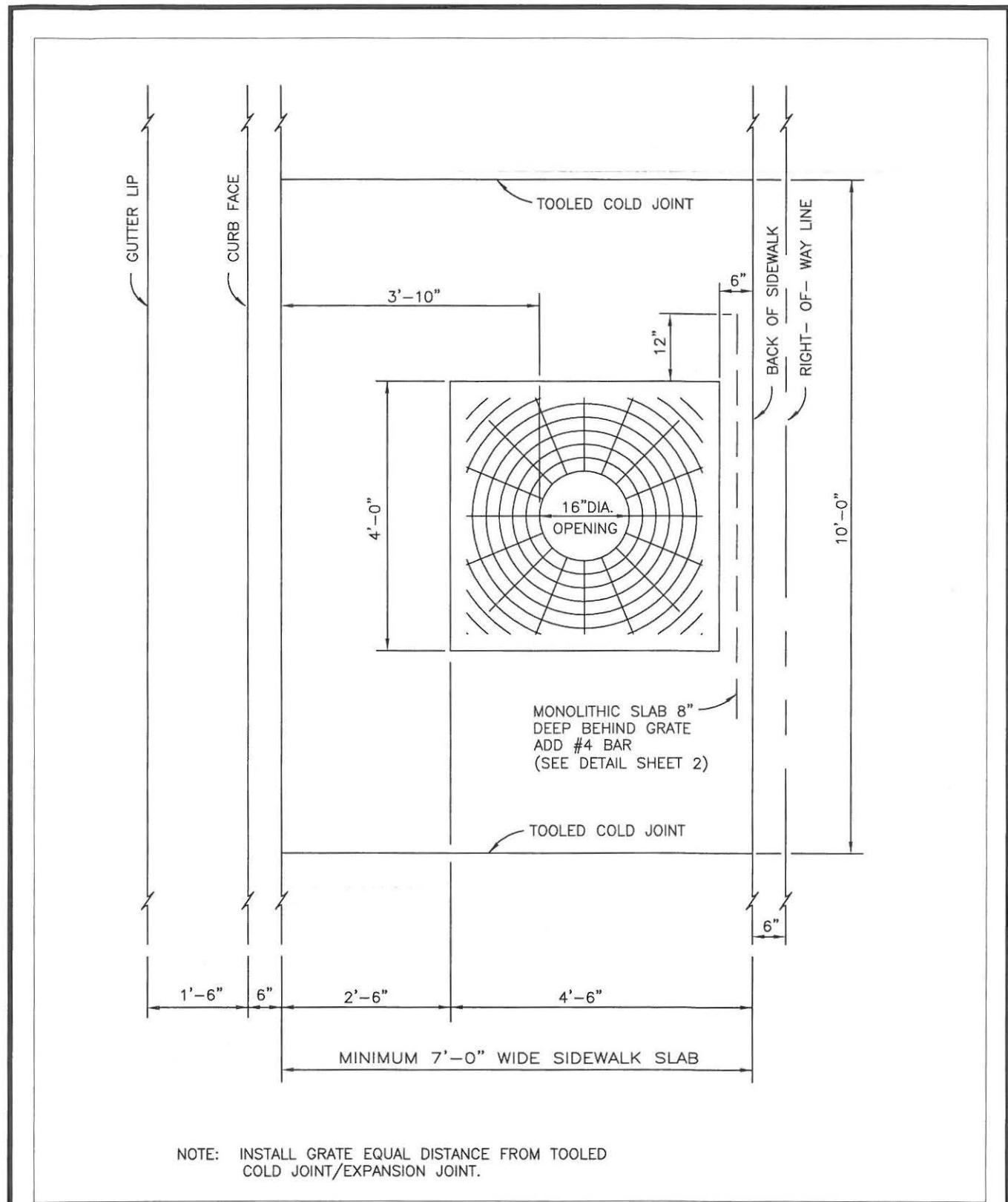
DATE OF LAST REVISION: 10-15-19

CITY OF FONTANA

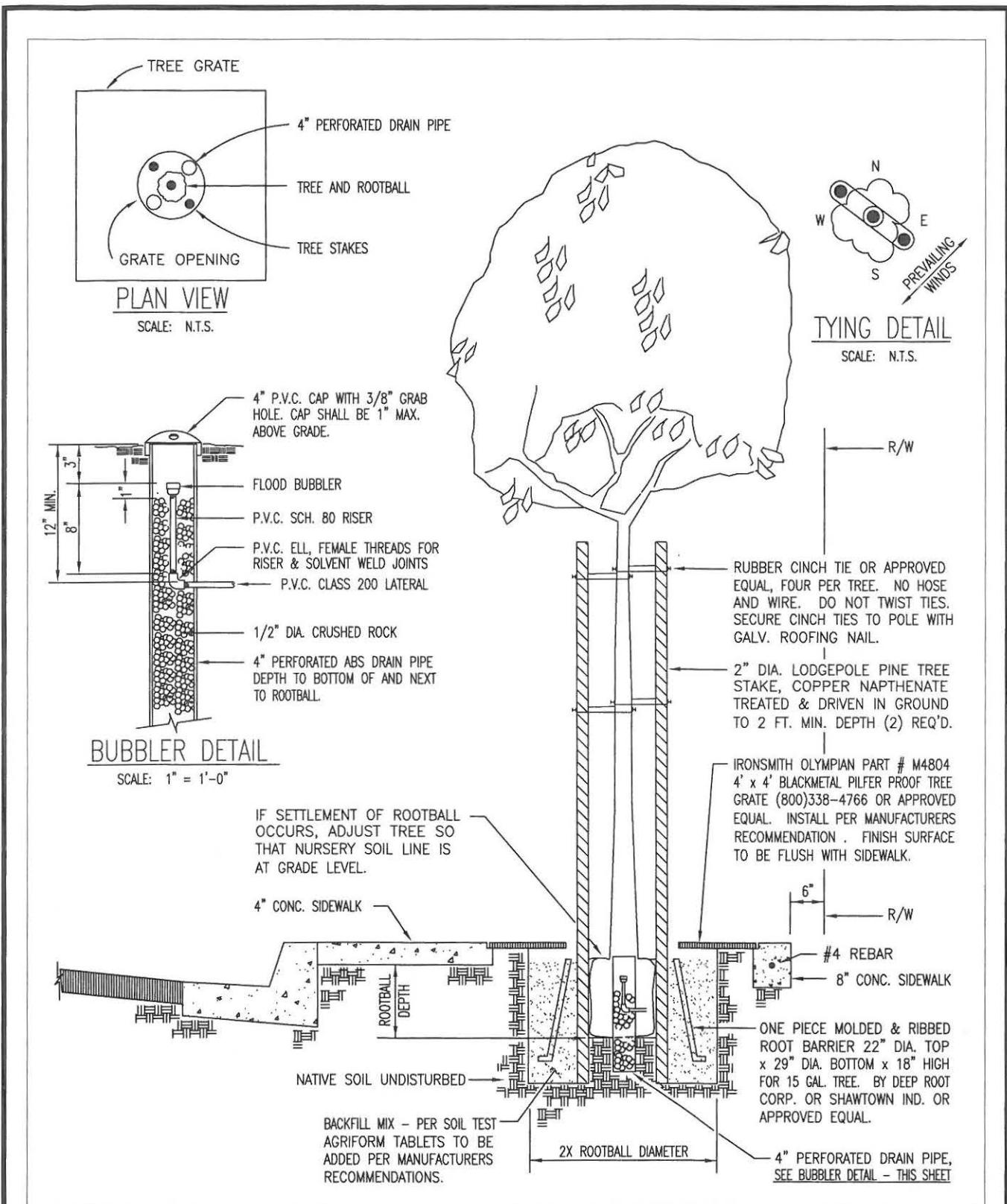
TYP. ROCK TREATMENT

STD. PLAN NO. 5045

SHT 1 OF 1



	APPROVED BY:	 1-16-15	CITY OF FONTANA
	<b>CITY ENGINEER</b> <b>RICARDO SANDOVAL</b>		
REVIEWED BY:	Kyle Scribner		TREE GRATES
DATE OF LAST REVISION:	1-14-15		STD. PLAN NO. 5046
			SHT 1 OF 3



APPROVED BY:

CITY ENGINEER  
RICARDO SANDOVAL

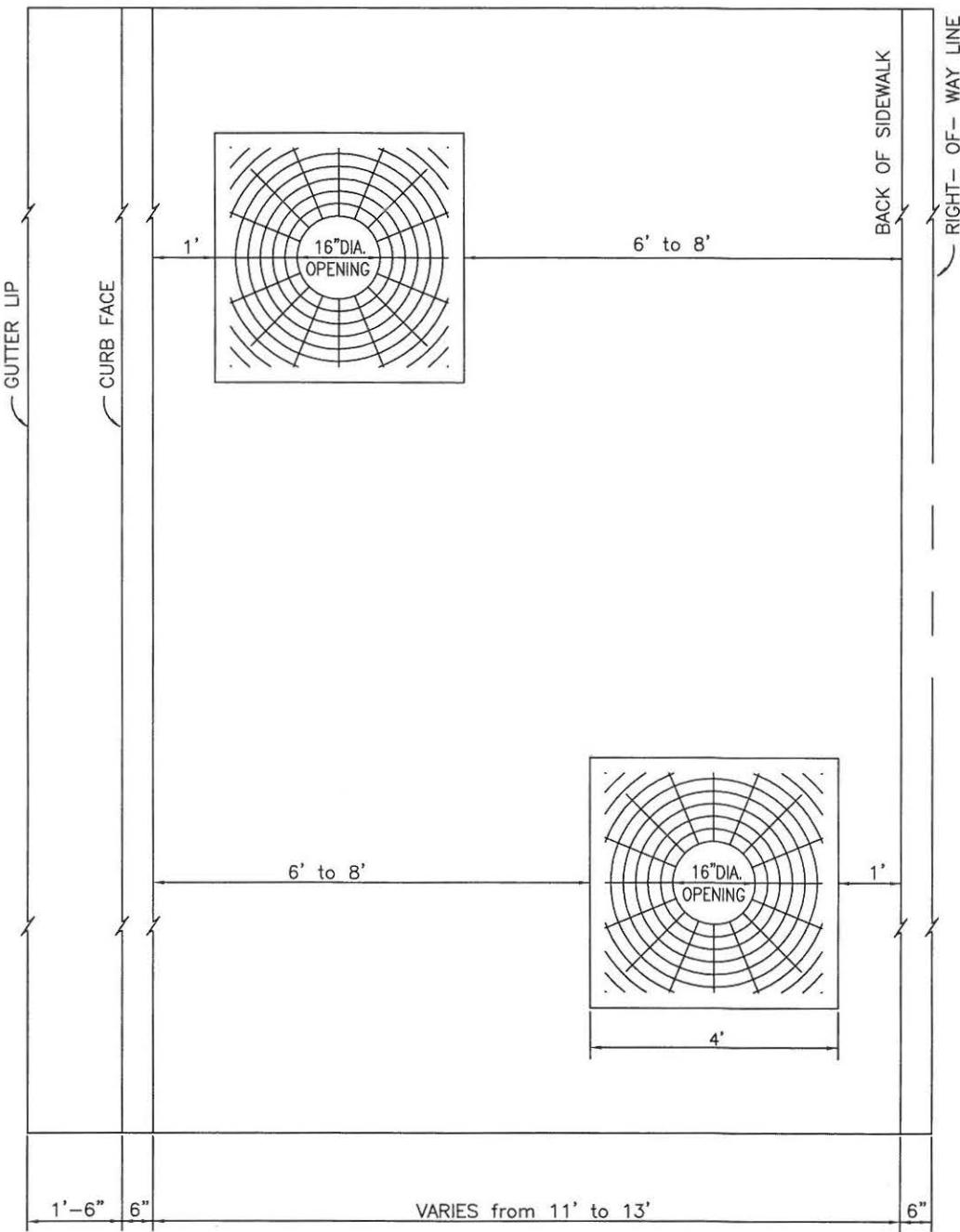
REVIEWED BY: Kyle Scribner

DATE OF LAST REVISION: 1-14-15

CITY OF FONTANA

TREE GRATES

STD. PLAN NO. 5046 SHT 2 OF 3



## 2 ALTERNATIVE TREE/GRADE LOCATIONS FOR COMMERCIAL AREA PARKWAY SIDEWALKS



APPROVED BY:

CITY ENGINEER  
RICARDO SANDOVALREVIEWED BY: Kyle ScribnerDATE OF LAST REVISION: 1-14-15

CITY OF FONTANA

DATE

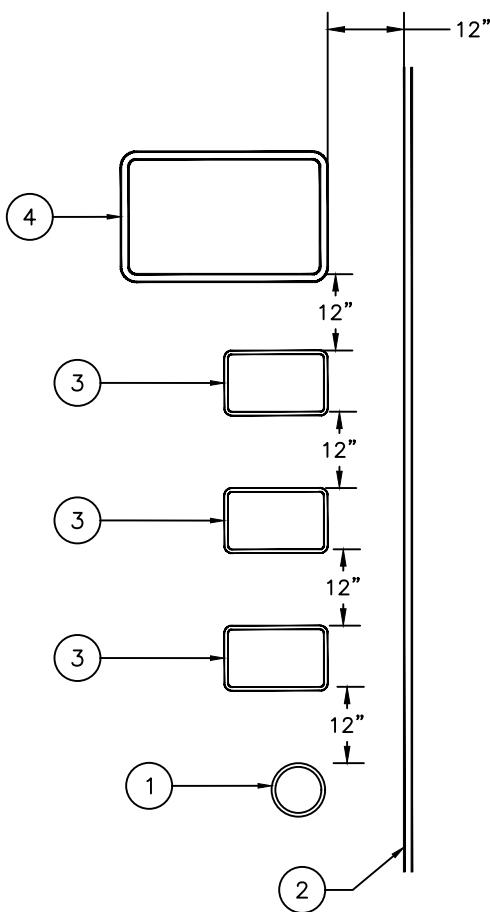
TREE GRATES

STD. PLAN NO. 5046

SHT 3 OF 3

VALVE BOX LABELING NOTE:

HEAT BRAND ALL VALVE BOX COVERS IN 2" HIGH LETTER PER EQUIPMENT LOCATED WITHIN VALVE BOXES.  
 LABEL "GV" FOR ALL GATE VALVES  
 LABEL "QCV" FOR ALL QUICK COUPLING VALVES  
 LABEL "MV" FOR ALL MASTER VALVES  
 LABEL "VALVE STATION" FOR ALL CONTROL VALVES  
 LABEL "FM" FOR ALL FLOW MASTER VALVES  
 LABEL "FV" FOR ALL FLUSH VALVES  
 LABEL "AR" FOR ALL AIR RELIEF VALVES



LEGEND – USE CARSON VALVE BOXES.

1. 10" DIAMETER CIRCULAR VALVE BOX.
2. EDGE OF LAWN, WALK, FENCE, CURB, ETC
3. 14" x 19" RECTANGULAR VALVE BOX.
4. 20" x 30" RECTANGULAR VALVE BOX.

## NOTES

- A. CENTER VALVE BOX OVER VALVE TO FACILITATE SERVICING OF VALVE.
- B. SET VALVE BOXES 2" MAXIMUM ABOVE GRADE IN MULCH COVER OR GROUNDCOVER/SHRUB AREAS – SET FLUSH WITH FINISH GRADE IN TURF AREAS.
- C. SET VALVE BOX AND VALVE ASSEMBLY IN GROUNDCOVER/SHRUB AREA WHERE POSSIBLE – INSTALL IN TURF ONLY IF THERE IS NO ADJACENT GROUNDCOVER.
- D. SET VALVE BOXES PARALLEL TO ONE ANOTHER AND PERPENDICULAR TO EDGE.
- E. AVOID HEAVY COMPACTION OF SOIL AROUND VALVE BOXES TO PREVENT THEIR DEFORMATION/COLLAPSE
- F. ALL BOXES TO BE PURPLE IN COLOR.

PLAN VIEW

NOTE: CONTRACTOR TO USE PURPLE LIDS WHEN NON-POTABLE WATER SOURCE IS USED (SEE PLAN)



APPROVED BY:

Ricardo Sandoval

3-15-22

CITY ENGINEER

RICARDO SANDOVAL

DATE

REVIEWED BY: KS

DATE OF LAST REVISION: 2-10-22

CITY OF FONTANA

VALVE  
BOX  
INSTALLATION

STD. PLAN NO. 5047 SHT 1 OF 1