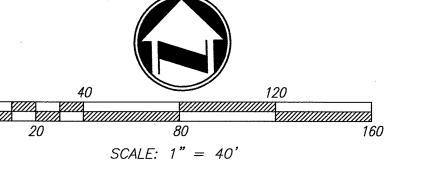


CONSTRUCTION NOTES

- (1A) PLACE \_\_\_\_\_\_\_" A.C. OVER \_\_\_\_\_\_" C.A.B. PER S.R. \_\_\_\_\_ R= \_\_\_\_\_
- 2 CONSTRUCT 6" CURB & GUTTER PER CITY STD. DWG NO. 200 (TYPE I)
- (3A) CONSTRUCT 5' P/L SIDEWALK PER CITY STD. DWG NO. 325
- 4 CONSTRUCT 8" CURB ONLY PER CITY STD. DWG. NO. 200 (TYPE II)
- 5 CONSTRUCT DRIVEWAY APPROACH PER CITY STD. DWG. NO. 302 (TYPE CURB-I)
- (6B) CONSTRUCT HANDICAPPED ACCESS RAMP PER CITY STD. DWG. NO. 304 (TYPE II)
- 6C) CONSTRUCT HANDICAPPED ACCESS RAMP MID BLOCK PER CITY STD. DWG. NO. 304 (TYPE II-A)
- (7) CONSTRUCT CATCH BASIN PER CITY STD. DWG. NO. 405.
- (8) CONSTRUCT CROSS GUTTER PER CITY STD. DWG. NO. 220
- 9) CONSTRUCT 6' BLOCK WALL PER RIVERSIDE BUILDING & SAFETY STANDARDS (SEPARATE PERMIT)
- (10) INSTALL 2" X 4" REDWOOD HEADER
- (13) CONSTRUCT BARRICADE PER CITY STD. DWG. NO. 180

JURUPA AVENUE



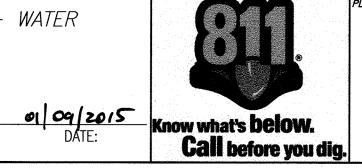


	LINE TABLE							
LINE	LENGTH	DIRECTION						
L1	176.55	N89°39'26"W						
L2	<i>57.17</i> ′	N89°39'26"W						
L3	196.36	N89*39'26"W						
L4	4.42'	N89°38'35"W						
<u>L5</u>	121.22	N89°39'26"W						
L6	91.30'	N89*39'26"W						
L7	132.30'	N89°39'26"W						

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TAN	
C1	54.98'	35.00'	90.00,00	35.00'	
C2	54.98'	35.00'	90.00,06	35.00'	
C3	54.98'	35.00'	90.00,00	35.00'	
C4	44.36'	103.50'	24°33'23"	22.53'	
C5	10.73'	4.00'	153*43'30"	17.14'	

RIVERSIDE PUBLIC UTILITIES— ELECTRIC RIVERSIDE PUBLIC UTILITIES— WATER

SEE SHEET 3



	TTY OF RIVERSIDE BUSINESS TAX ACCT.#058833 EXP.1/1/1	5
F	ANS PREPARED BY:	
		Ì
l	ENGINEERS	
ı	CIVIL ENGINEERING . SURVEYING . PLANNING	
1	6879 AIRPORT DRIVE, RIVERSIDE, CA 92504	
ı	TEL: (951) 688-0241 • FAX: (951) 343-9370	
	DATE: 6/29/9 UNDER THE SUPERVISION OF:	
L	R.C.E. 53390 6/30/15	

	B CITY					М	A	R	K	:	Н3	<b>—</b> [	).3
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0.3						<i>/</i>	RIVERSIDE
					PUBLIC	WORKS	S DEPARTMENT
_					APPROVED BY	DATE BY	APPROVED_BY
Ŀ		***************************************		. 8 . 6	ENGINEERING MANAGER	1/29/1+ 8.6.	
•		REVISED STREET DIESIGN DOE TO FIELD CONDITIONS	PH	105 4	CAPITAL PROJECTS	120/5 81	gang? d
29	MARK	REVISIONS	APPR.	DATE	TRAFFIC ENGINEERING		CITY ENGINEER / P.W. DIRECTOR
	DESIGN	ed by: <i>Rick</i> drawn by: <i>Rick</i> checked b	ry :C	2			DATE 2/5/2015

PW13-0370
R-3817

JURUPA AVENUE STA 42+00 TO STA 44+31.22 STORM DRAIN LINE "A", LATERAL "A-1"

SHEET **12** OF 1 HORIZ. SCALE: 1"= 40' VERT. SCALE: AS NOTED

File name: U:\PROJECTS\COX-FRA\STREET IMPROVEMENTS\8489 St.\_12

# **GENERAL NOTES:**

### **IRRIGATION SYSTEM DESIGN CRITERIA FOR CAPITAL PROJECTS;**

WATER SERVICE: Contractor shall contact the City of Riverside, Public Utilities, Water Department or Western Municipal Water District and obtain and pay for new water meter(s) as necessary to adequately serve the irrigation system as designed. Meter and backflow devices shall be located in the parkway (within public right-of-way) a minimum of 100' from any intersection or major driveway (curb return type driveway opening). Contractor shall be responsible for all water costs throughout the maintenance and plant establishment period if applicable.

ELECTRIC SERVICE: Contractor shall contact the City of Riverside, Public Utilities Electrical Division to obtain and pay for a new 'non-metered' electrical service as necessary to serve each new irrigation controller(s). Service shall be underground type. Coordinate location and obtain approval from the City's inspector.

IRRIGATION CONTROLLER: The irrigation controller(s) (one required at each point of connection, i.e. P.O.C.). Each shall be sized to accommodate the number of valves required to serve the entire project and to provide a minimum of two spare stations. The controller and enclosure shall the type and manufacturer as indicated on the plans and/or irrigation legend. Controller shall be weatherproof, per City specs, installed within a locking stainless steel metal enclosure to support controller manufacturer requirements, as well as City requirements, and shall be located a minimum of 100' from any intersection or major driveway (curb return driveway opening). A concrete pad the same width and thickness, as the controller pad shall be installed between the controller and the back sidewalk.

<u>ENRNJGW</u>: Sleeves shall be installed in straight lines (no turns or bends, either vertical or horizontal).

- All lines beneath street areas (i.e. <u>NOT</u> within the landscape planting areas) shall be constant pressure imes installed in sleeves with tracer tape (type of sleeve indicated on tape) installed six inches above each
- Main line sleeves under street areas shall be Class 315 PVC or SCH. 40.
- Controller wires installed within streets shall be sleeved in gray PVC SCH. 40 conduit, with 12" minimum separation from the mainline water sleeve.
- Main line, lateral lines and control wires installed beneath hardscape within the landscape area extending for five feet or more must be sleeved. The sleeve shall extend twelve inches beyond edge of hardscape.
- Main line and lateral lines shall be sleeved in SCH. 40 PVC.
- Controller wires shall be installed gray SCH. 40 PVC conduit.\

CONTROL WIRE: All control wire located under pavement of any type shall separately sleeved from main line and laterals. Provide a minimum of two spare control wires at each terminating end of the mainline, stubbed out in a valve box with the lid marked "SW". Station control wire shall be 14 gauge, common wire 12 gauge and spare wires 14 gauge. Spare wire shall be a different color from station and common wires.

MAINLINE: Size all mainlines as necessary to keep water velocity below 5 feet per second. Pressure supply lines 2 inches in diameter and up to 8 inches in diameter shall be either class 315 solvent weld PVC or gasket type PVC. Solvent weld and ring type pipe shall bit be used together on the same pressure supply line. Pressure supply lines 1-1/2" in diameter and smaller shall be SCH. 40 PVC. Provide a line size gate valve within a valve box immediately upstream of line entering a sleeve passing under the street area. Thrust blocks shall be installed per pipe manufacturer requirements or as directed by City inspector.

LATERAL LINES: Size all lateral lines as necessary to keep water velocity below 5 feet per second. Design lateral line placements at edges of planting specs to avoid conflict with plantings. The pipe shall be SCH. 40 PVC. All main line and lateral lines running parallel to the lines shall have a minimum horizontal separation of 12 inches.

CONTROL VALVES: All irrigation control valves shall be brass, pressure regulation (master valve non-pressure regulating), sized to provide the water volume required with pressure loss through the valve kept at below a maximum of 10% if the available static pressure. Install valves in "inline" configuration. All stations shall be sized to avoid 100 GP // demand or 50 heads per station, whichever is greater.

<u>VALVE BOXES</u>: All valve boxes shall be concrete body, with cast iron, hinged, locking lids. Lids shall be marked by manufacturer of lids (welded into top of lid) with numbers for station identification, "GV" for Gate Valve, "QC" for Quick Coupler, "MV" for Master Valve, "FM" for Flow Meter, "SW" for Spare Wire, "SB" for Wire Splice Box and "FI" for Fertilizer Injector.

QUICK COUPLERS: Provide quick coupler valves at a minimum of 50' from the end of the landscaped area in each island/parkways and spaced at a maximum of 100' O.C. in shrub and turf areas.

BUBBLERS: All bubblers shall be of the type and manufacturer indicated on the plans and shall be installed with triple swing joints in a 3" PVC perforated drain pipe, with a 3" PVC cap filled with crushed 1" rock as detailed. Two bubblers shall be installed at each tree, with a 48" minimum spacing between each bubbler. Trees shall be planted 50' minimum from each nose, then spaced 45' minimum between each tree.

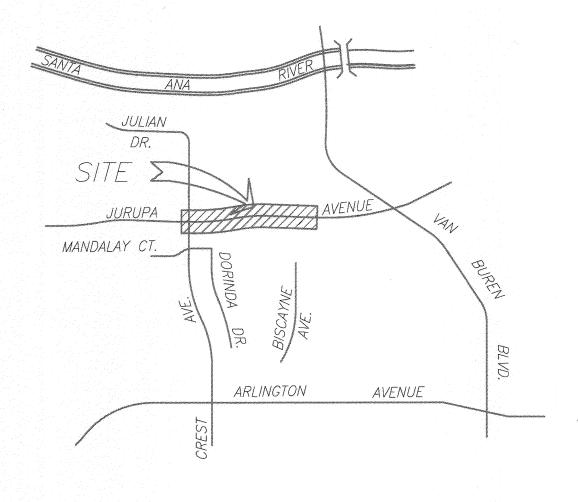
MISCELLANEOUS CURB MARKING: The rain bucket and the ET gauge shall be installed per manufacturer requirements. Stencil valve box markings to curb top along right-of-way with a commercial quality ALKYD marking paint (equal to Sherwin-Williams Setfast Premium ALKYD zone marking paint, A303 Yellow, A305 Black - (800) 524-5979. Paint black 3" markings atop a yellow background, which extends a minimum 1" beyond stenciled markings.

RECORD PRINTS: Initially shall be marked up blue line prints. All dimensions noted on a compact disc (CD) with all global positioning system (GPS) coordinates for each required item, and all information is to be transferred to either Sepia Mylar of Photo Mylar prints prior to turn-over to the City at final acceptance if the project.

### **PUBLIC LANDSCAPING:**

- 1. All related work shall conform to the City of Riverside Public Works Department standards and specifications for planting and irrigation work (Sections 02441 and 02483).
- 2. A "Public Landscape" permit, as issued by the Public Works Department is required. Contact Public Works Landscape at (951) 351-6313 to schedule a pre-construction meeting and to obtain a permit.
- 3. When calling for inspections contact the Public Works Landscape Inspector a minimum of 48 hours in advance to schedule an inspection. A written approval will be provided on the Public Landscape Permit Card for each stage of inspection. A verbal approval will not be acceptable. Inspections are required per the standard specifications, and include, but are not necessarily limited to the following:
  - 3.1. After completion of final grading and when all utility services have been marked, but prior to initiating any landscape work within the public right-of-way;
  - 3.2. At time of installation of irrigation sleeves and constant pressure mainlines, but prior to backfill of trenches for same (Note: mainlines must be pressure tested in the presence of the Public Works Landscape Inspector);
- 3.3. At the time of installation of irrigation valves, laterals and heads;
- 3.4. For spotting of all trees prior to digging planting pits;
- 3.5. While digging plant pit sand planting/relocating trees;
- 3.6. After planting and all other indicated work has been completed, for start of maintenance.
- 3.7. At substantial completion of the project for City's acceptance to start the maintenance period;
- 3.8. At the end of the maintenance period, the contractor/developer shall call the Public Works Landscape Inspector at the number listed above for a final acceptance inspection in order to be released from Maintenance. Contractor's bond will not be released until after the City's issuance of written notifications that the project has passed final inspection and the Public Works Department is assuming maintenance responsibilities.
- 4. The developer shall be responsible to acceptably maintain all plantings for a minimum period as specified In the bid documents.

NOTE: In the interest of public safety and maintenance the Public Works Landscape Inspector shall have the authority to revise the tree qualities and locations shown on approved plans based upon field conditions found at the time of installation of the trees.





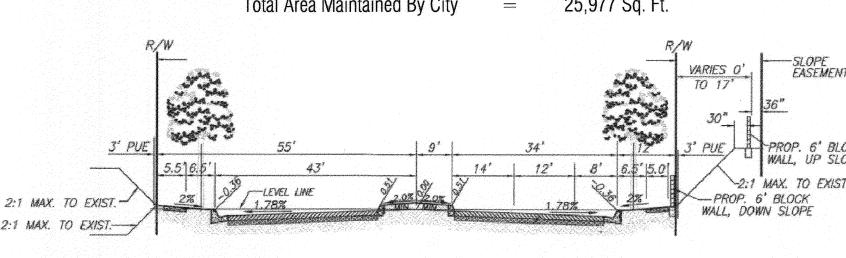
# AND ASSOCIATES Landscape Architecture

Jurupa Avenue 22,623 Sq. Ft. Total Irrigated Area

LANDSCAPE QUANTITIES:

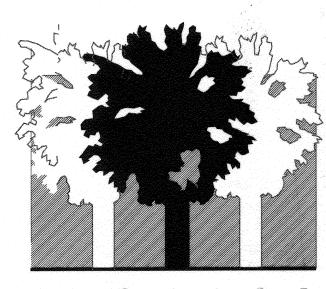
22,623 Sq. Ft. Total Landscape Planted Area Total Number of Trees 3,354 Sq. Ft. **Total Decorative Pavement** 

75 L. Ft. Total Length of Mow Curb Total Area Maintained By City 25.977 Sq. Ft



TYPICAL SECTION - JURUPA AVENUE NOT TO SCALE

# JURUPA AVENUE EXTENSION PHASE



San Bernardino, CA 92408 phone: (909) 888-5568

1585 S. 'D' Street, Suite 103

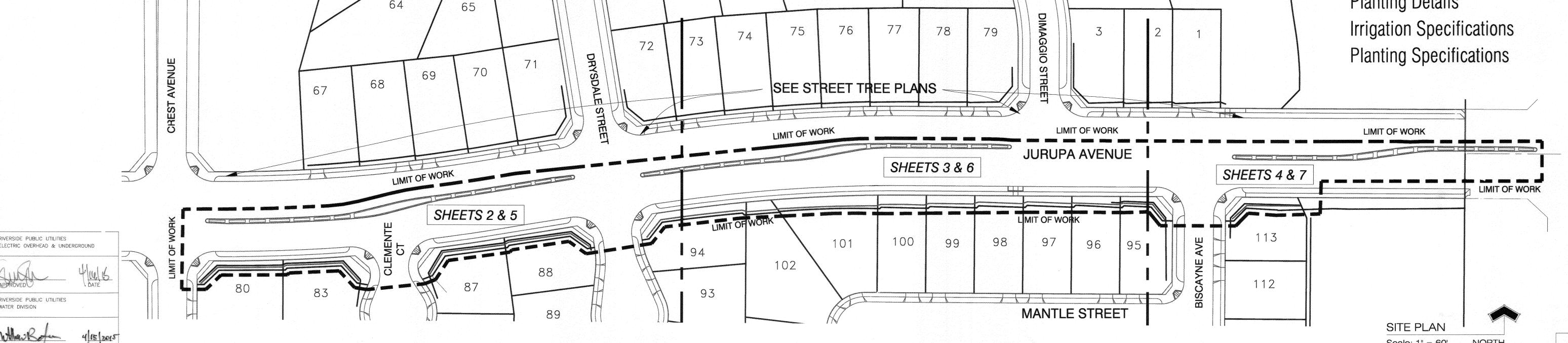
fax: (909) 384-9854

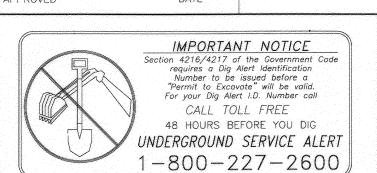
e-mail: rpa.la@verizon.net

Richard Pope Landscape Architect CA# 2664

# **Sheet Index**

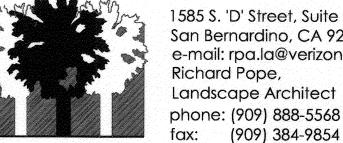
Title Sheet Irrigation Plan Irrigation Plan Irrigation Plan Planting Plan Planting Plan Planting Plan Irrigation Details Planting Details Irrigation Specifications Planting Specifications











1585 S. 'D' Street, Suite 103 San Bernardino, CA 92408 e-mail: rpa.la@verizon.net .andscape Architect CA# 2664 phone: (909) 888-5568

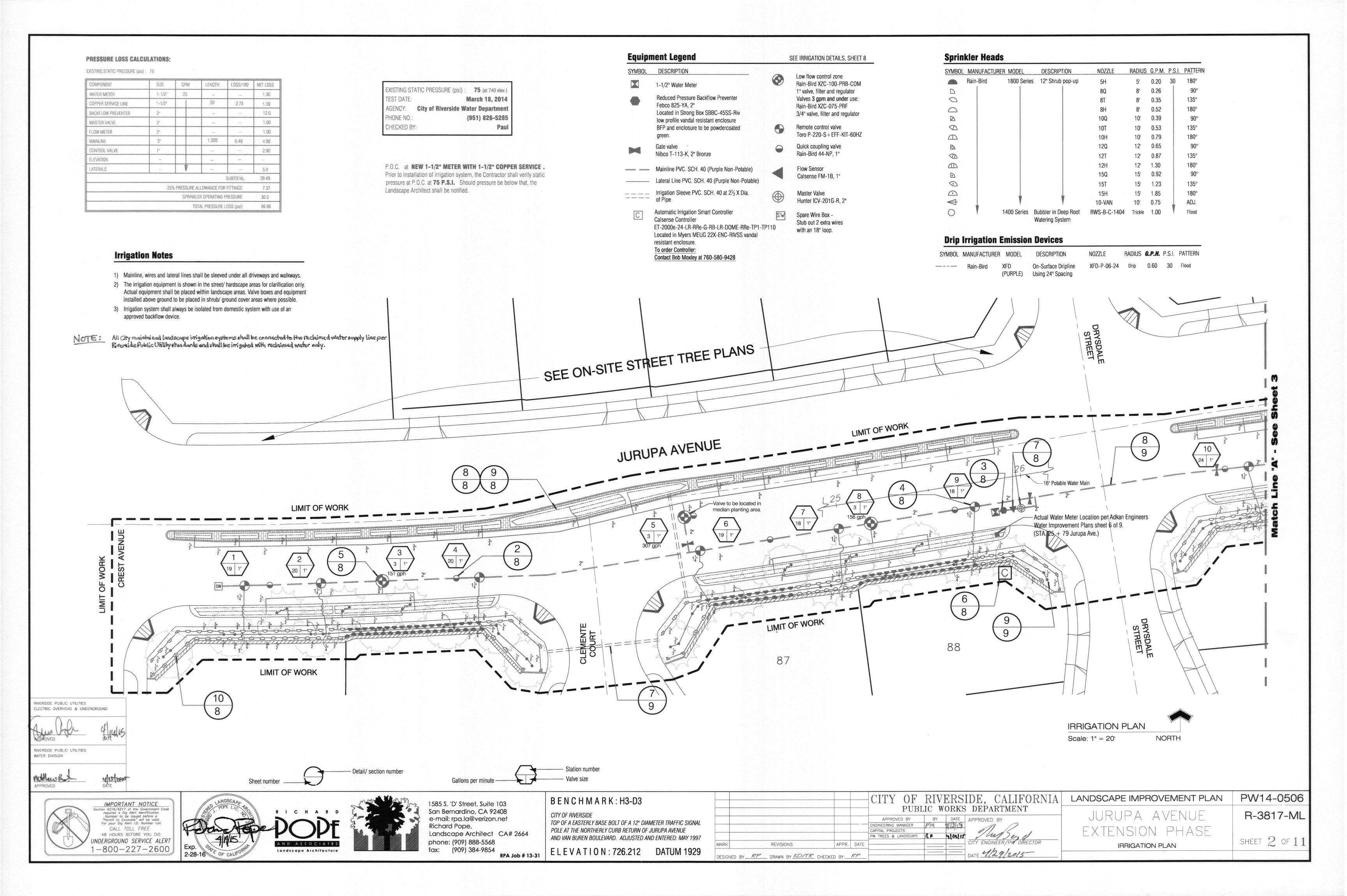
BENCHMARK: H3-D3 CITY OF RIVERSIDE TOP OF A EASTERLY BASE BOLT OF A 12" DIAMETER TRAFFIC SIGNAL POLE AT THE NORTHERLY CURB RETURN OF JURUPA AVENUE AND VAN BUREN BOULEVARD. ADJUSTED AND ENTERED: MAY 1997

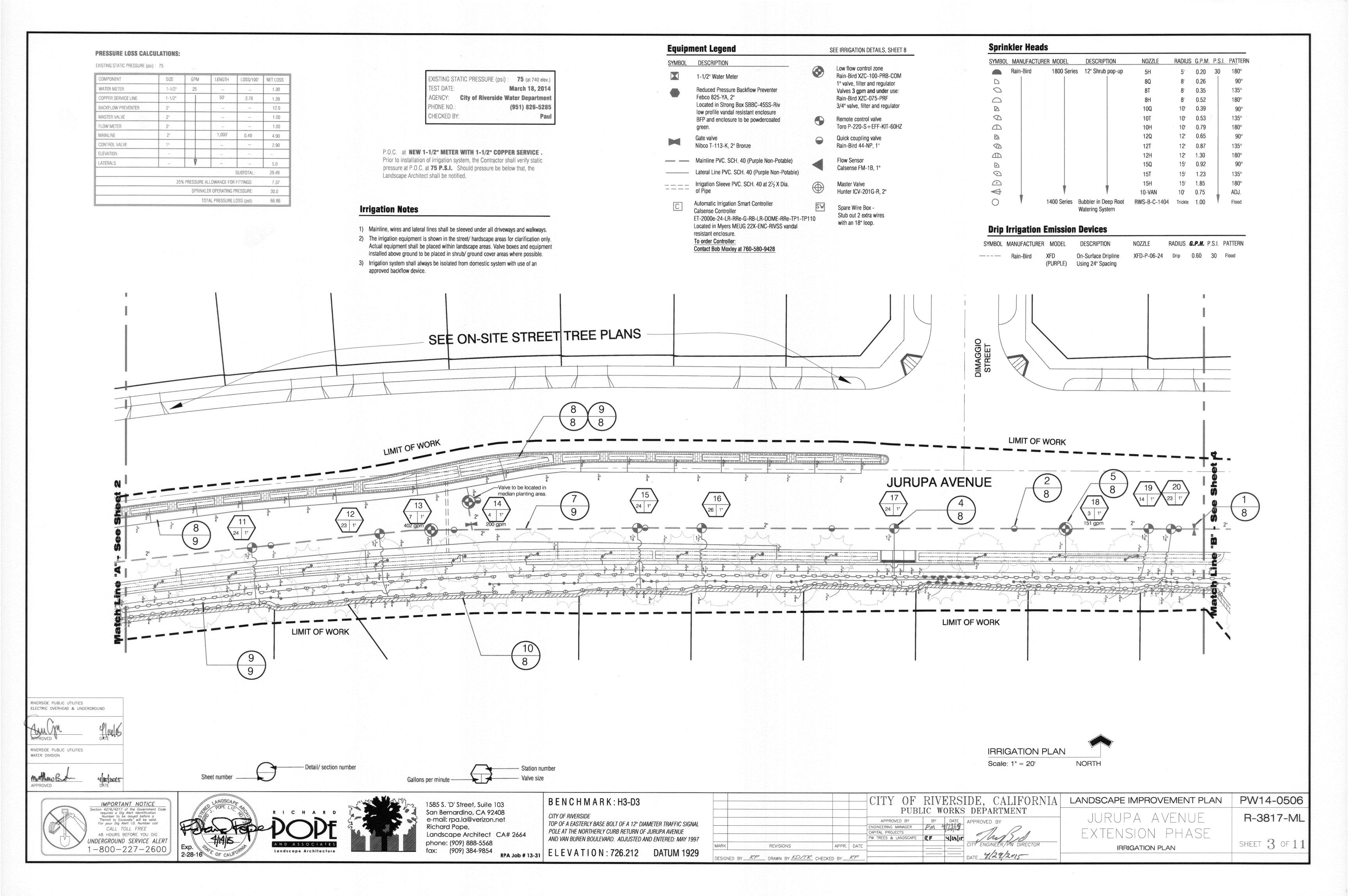
ELEVATION: 726.212 DATUM 1929

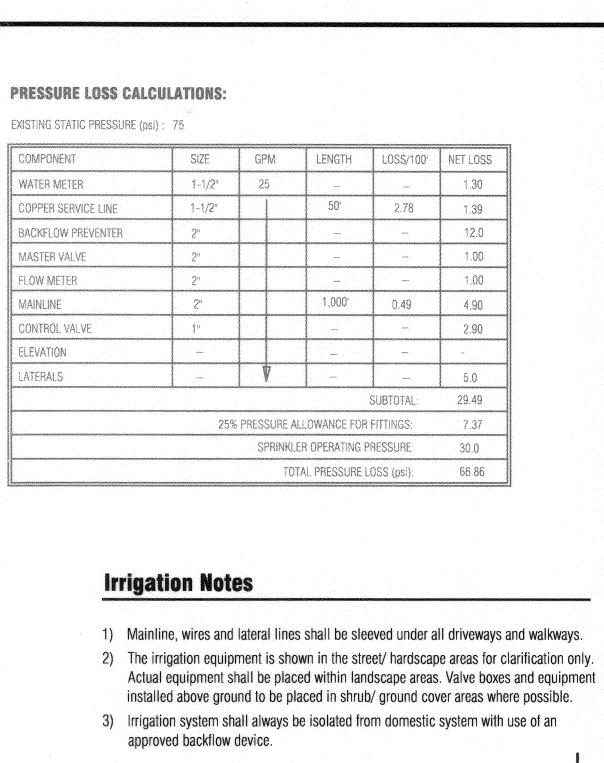
CITY OF RIVERSIDE, CALIFORNIA PUBLIC WORKS DEPARTMENT **REVISIONS** RP DRAWN BY KD/TR CHECKED BY RP

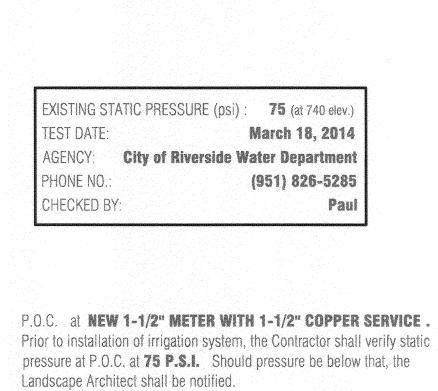
PW14-0506 NORTH Scale: 1" = 60' LANDSCAPE IMPROVEMENT PLAN R-3817-ML JURUPA AVENUE EXTENSION PHASE TITLE SHEET

SHEET 1 OF 1









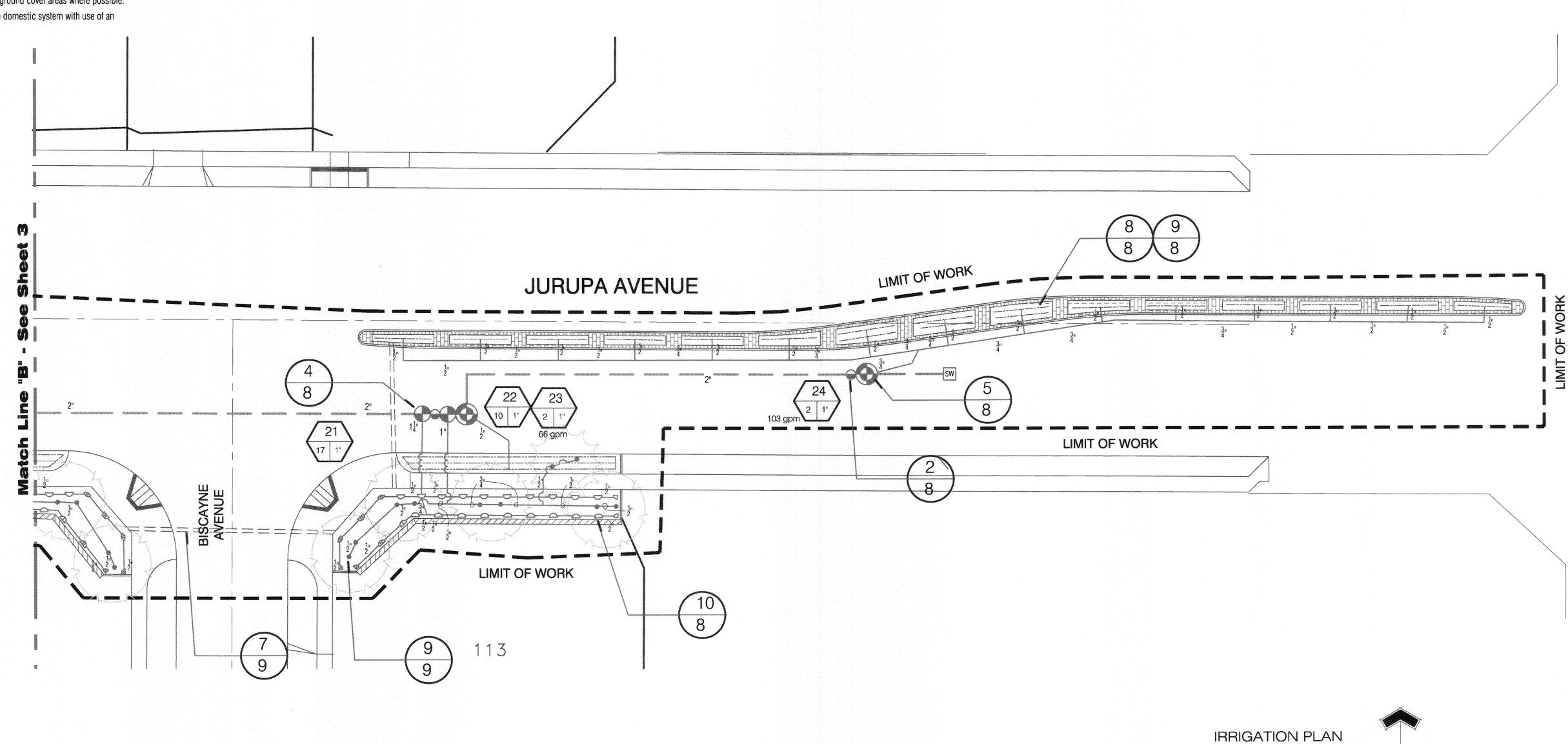
Equipi	ment Legend	SEE IRRIGATION DETAILS, SHEET	
SYMB0L	DESCRIPTION		
M	1-1/2" Water Meter	(3)	Low flow control zone Rain-Bird XZC-100-PRB-COM 1" valve, filter and regulator
	Reduced Pressure Backflow Preventer Febco 825-YA, 2" Located in Strong Box SBBC-45SS-Riv low profile vandal resistant enclosure		Valves 3 gpm and under use: Rain-Bird XZC-075-PRF 3/4" valve, filter and regulator
	BFP and enclosure to be powdercoated green.	9	Remote control valve Toro P-220-S+EFF-KIT-60HZ
	Gate valve Nibco T-113-K, 2" Bronze	•	Quick coupling valve Rain-Bird 44-NP, 1"
	Mainline PVC. SCH. 40 (Purple Non-Potable)  Lateral Line PVC. SCH. 40 (Purple Non-Potable)	1	Flow Sensor Calsense FM-1B, 1"
regenturia argundus, refusivos a accessidas mensistrato menicas.	Irrigation Sleeve PVC. SCH. 40 at 2½ X Dia. of Pipe	<b>(D)</b>	Master Valve Hunter ICV-201G-R, 2"
C	Automatic Irrigation Smart Controller Calsense Controller ET-2000e-24-LR-RRe-G-RB-LR-DOME-RRe-TP1-TF Located in Myers MEUG 22X-ENC-RIVSS vandal resistant enclosure. To order Controller: Contact Bob Moxley at 760-580-9428	<b>∑</b> ₩ 2110	Spare Wire Box - Stub out 2 extra wires with an 18" loop.

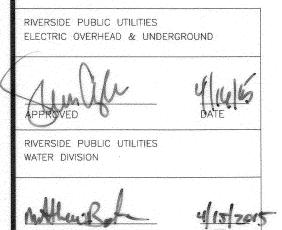
<b>SYMBOL</b>	MANUFACTURER	MODEL	DESCRIPTION	NOZZLE	RADIUS	G.P.M.	P.S.I.	PATTER
	Rain-Bird	1800 Series	12" Shrub pop-up	5H	5'	0.20	30	180°
	· expression in the contract of the contract o			8Q	8'	0.26		90°
	no la companya de la		A CONTRACTOR OF THE CONTRACTOR	8T	8'	0.35		135°
Commenda	Secretaria			8H	8'	0.52		180°
<b>D</b>				10Q	10'	0.39		90°
Q	and a second sec			10T	10'	0.53		135°
				10H	10'	0.79	alan managaran	180°
Δ	- Assaulter - Assa		*	12Q	12'	0.65		90°
			in the state of th	12T	12'	0.87		135°
ΔD			gipanananan	12H	12'	1.30	899 P.	180°
			Section 1	15Q	15'	0.92	s to the second	90°
		- North Control of the Control of th	references and the second seco	15T	15'	1.23		135°
Communication	rice de la constant d		State of the state	15H	15'	1.85		180°
All francisco				10-VAN	10'	0.75		ADJ.
	1	400 Series	Bubbler in Deep Root Watering System	RWS-B-C-1404	Trickle	1.00		Flood

# **Drip Irrigation Emission Devices**

SYMBOL MANUFACTURER MODEL DESCRIPTION RADIUS **G.P.H.** P.S.I. PATTERN — -- Rain-Bird XFD On-Surface Dripline XFD-P-06-24 Drip 0.60 30 Flood (PURPLE) Using 24" Spacing

NORTH



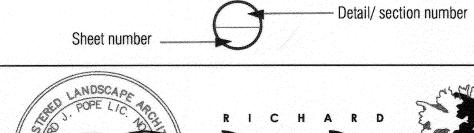


IMPORTANT NOTICE
Section 4216/4217 of the Government Co
requires a Dig Alert Identification
Number to be issued before a
"Permit to Excavate" will be valid.
For your Dig Alert I.D. Number call
CALL TOLL FREE

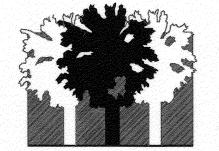
48 HOURS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT

1-800-227-2600



Landscape Architecture



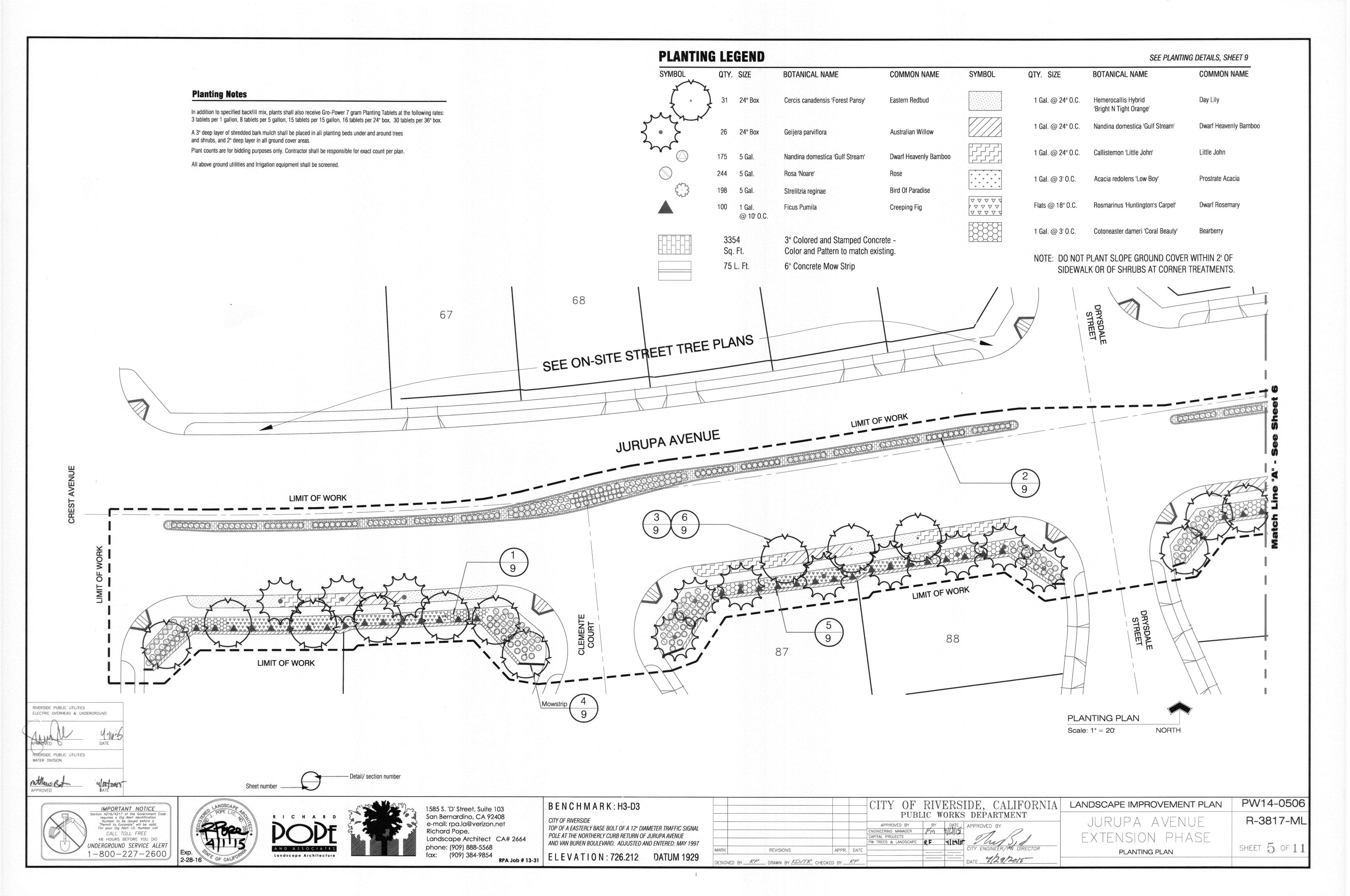
Gallons per minute ----

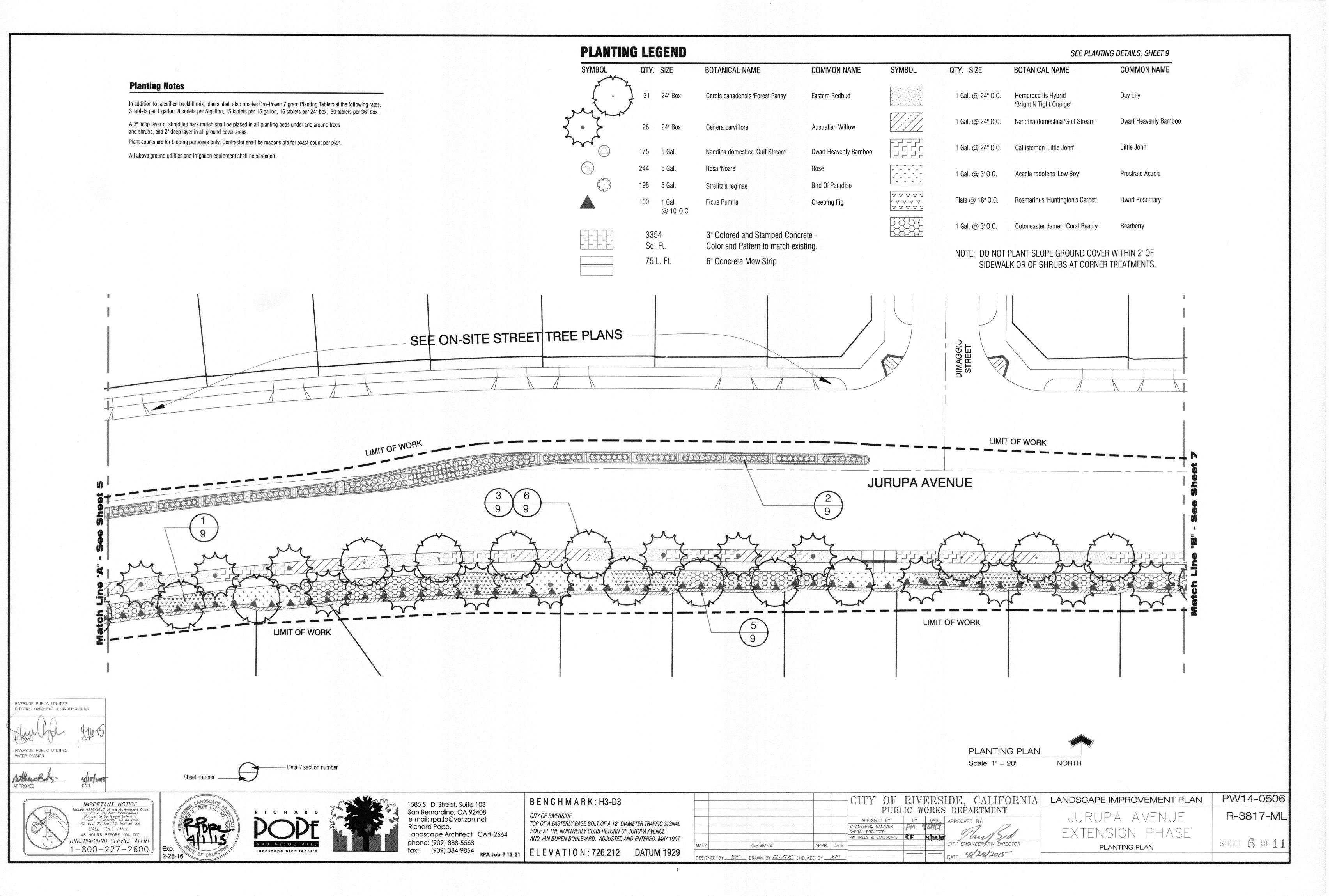
1585 S. 'D' Street, Suite 103	BENCHMARK: H3-D3
San Bernardino, CA 92408 e-mail: rpa.la@verizon.net Richard Pope, Landscape Architect CA# 2664 phone: (909) 888-5568	CITY OF RIVERSIDE TOP OF A EASTERLY BASE BOLT OF A 12" DIAMETER TRAFFIC SIGNAL POLE AT THE NORTHERLY CURB RETURN OF JURUPA AVENUE AND VAN BUREN BOULEVARD. ADJUSTED AND ENTERED: MAY 1997
fax: (909) 384-9854 <b>RPA Job # 13-31</b>	ELEVATION: 726.212 DATUM 1929

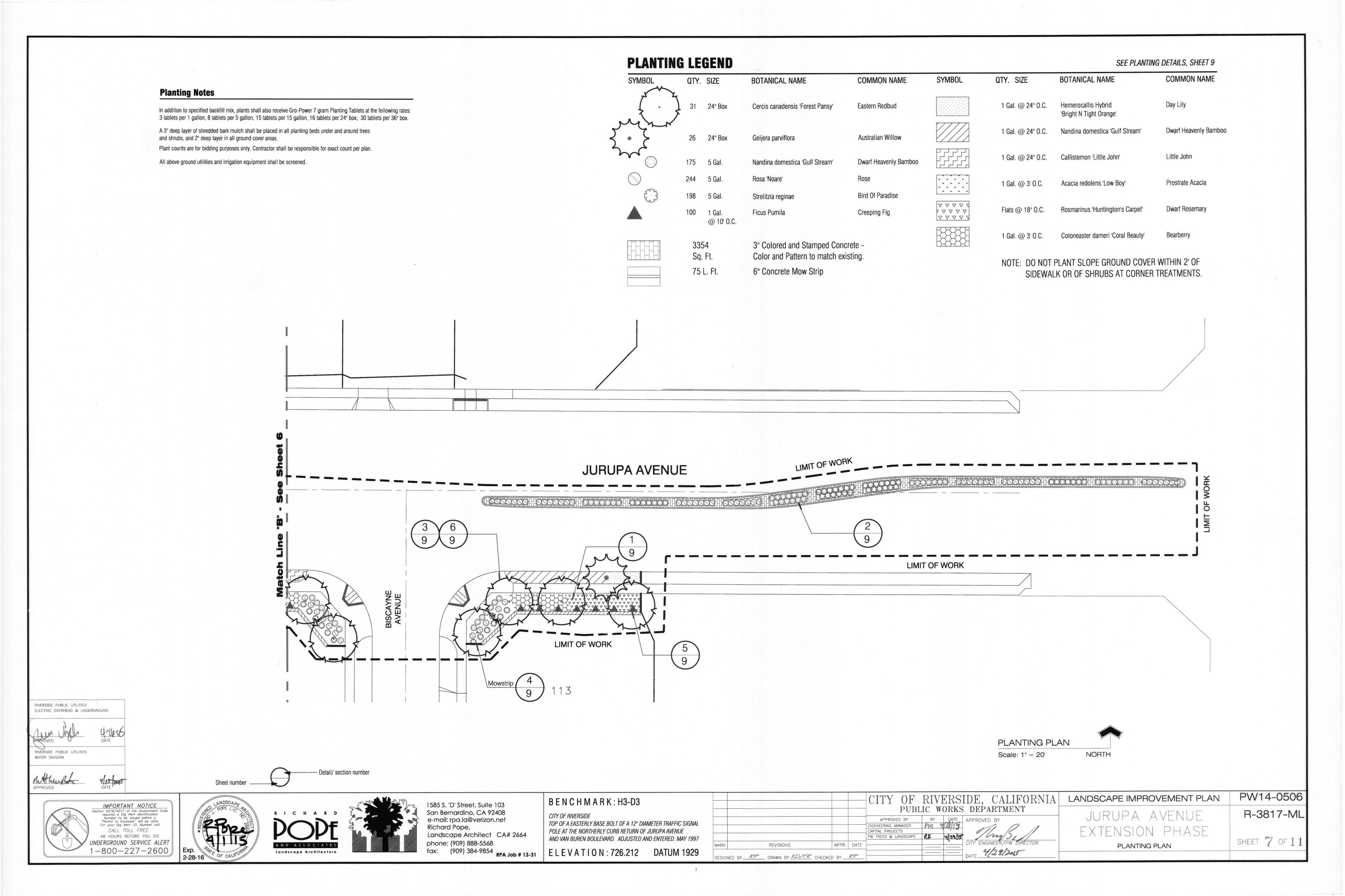
Station number

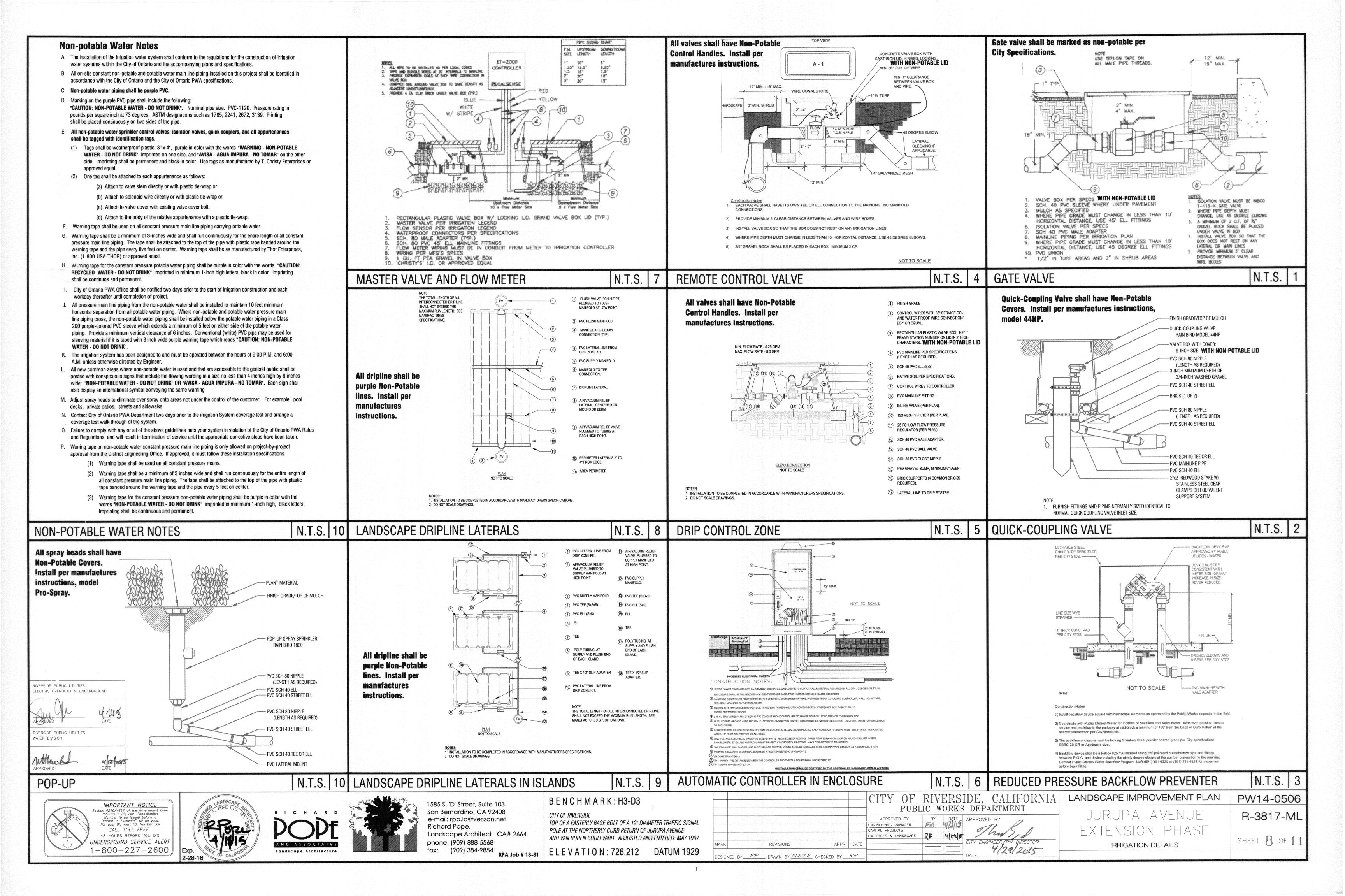
			SIDE, CALIFORNIA	LANDSCAPE IMPROVEMENT PLAN	PW14-0506
		PUBLIC WORKS	S DEPARTMENT  APPROVED BY	JURUPA AVENUE	R-3817-ML
		ENGINEERING MANAGER CAPITAL PROJECTS PW TREES & LANDSCAPE (F 4)24)	11/12/	EXTENSION PHASE	4
MARK	REVISIONS APPR. DATE		CITY ENGINEER/PW DIRECTOR	IRRIGATION PLAN	SHEET $4$ OF $11$
DESIGNED	BY RP DRAWN BY KD/TR CHECKED BY RP		DATE 4/29/20/5		

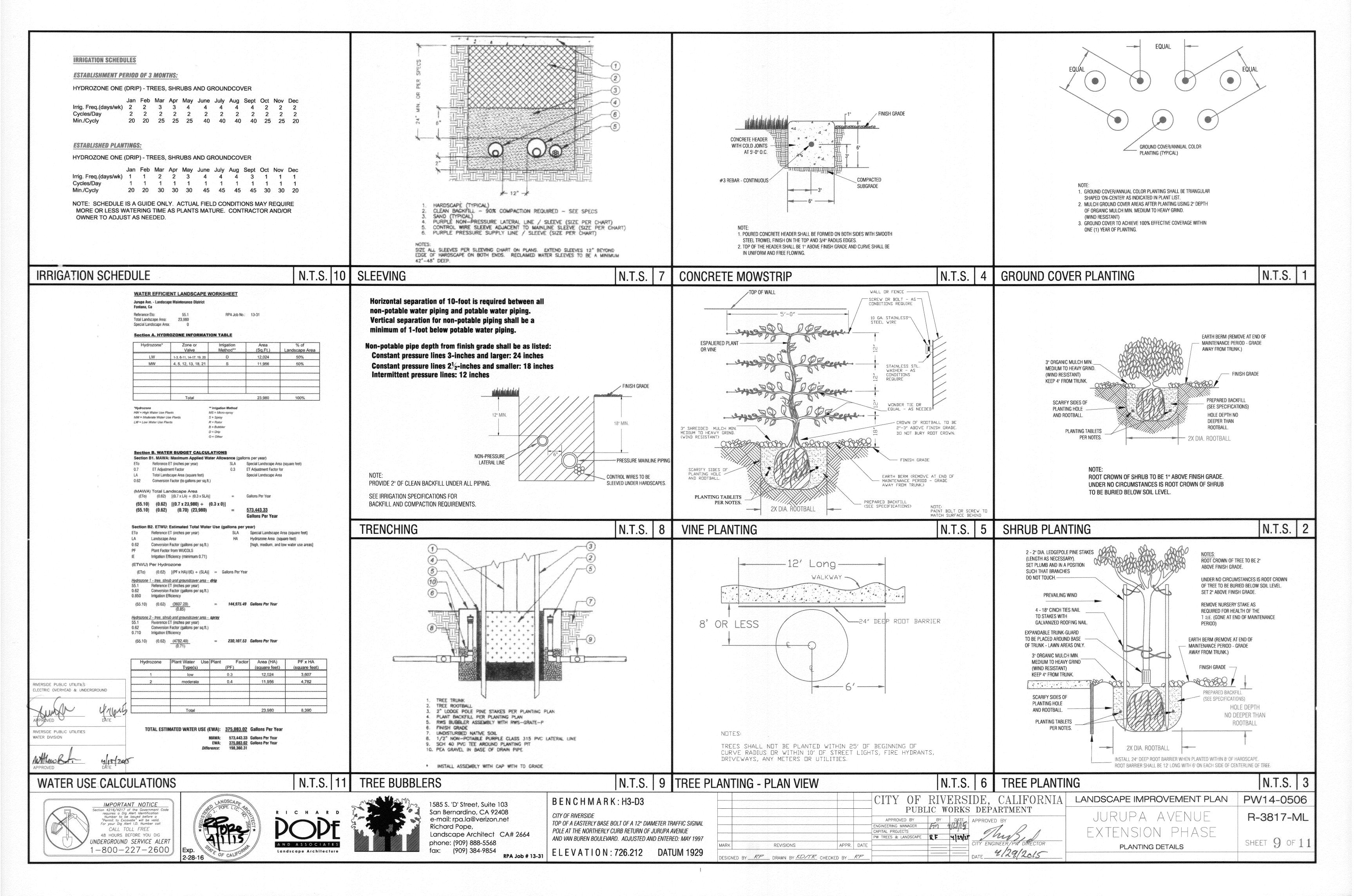
Scale: 1" = 20











# **Irrigation Specifications**

# Part I - General

### 1.01 Scope of Work

All work shall be performed by a contractor with a C-27 license or greater. The work required is indicated on the drawings and includes, but is not limited to new irrigation systems in medians and retrofitted irrigation systems on each side of roadway, automatic controller, remote control valves, quick coupler valves, water connections, and electric connections.

### 1.02 Inspections and Tests

- A. It is the landscape contractors responsibility to contact the Owner's Representative, 48 hours prior to desired inspection of an item at extension (909) 350-6653.
- B. Prior to release of utilities or maintenance period commencement, the following inspections are required: Construction of irrigation system in open trench condition (prior to backfill). Pressure test 150 PSI for - a three (3) hour continuous period.
- An irrigation coverage test. Planting, including street trees. Contact the Owner's Representative, Engineering Division for species
- and locations.
- Finish grade prior to seeding.
- Compliance with approved landscape plans.
- Any special conditions of approval attached to project.
- Final inspection.
- C. The owner's representative and landscape contractor shall be present at this inspection.

### 1.33 Maintenance Guidelines

- A Landscape shall be maintained in a neat, clean, weed-free and healthy condition. This shall include but not limited to:
- Cultivation of planted beds at intervals not to exceed 10 days.
- Regular mowing to maintain a lawn height not to exceed 2" (may vary per species).
- Regular pruning of plants as necessary to control and direct growth.
- Scheduled maintenance of irrigation controller to assure proper application rate of water necessary for proper plant growth. Drip irrigation may require specialized landscape maintenance care.
- Immediate replacement of plant material as needed due to death, disease, or lack of growth.
- Fertilization on a regular schedule as recommended by the manufacturer to provide proper plant growth. Stakes, guys, and ties on trees shall be checked regularly for correct function. Ties are to be adjusted to avoid abrasions or girdling of trunks or branches.
- Upon completion of the maintenance period, an inspection shall be made by the Owner's Representative. The landscape shall be maintained in accordance with these landscape maintenance standards. Maintenance bonding shall be released at the end of the appropriate period if the landscape is maintained according to plans and specifications.
- The principal bond holder is responsible to contact the Owner/Owner's Representative and schedule the maintenance inspection.

### 1.04 Turnover Irrigation Items

- A. Controller charts:
- Provide one controller chart (of the maximum size the inside of the controller door will allow) for each automatic controller. The chart shall diagram the area covered by the controller and shall be prepared from record drawings.
- Operation and maintenance manuals:
- Two individually bound copies of operation and maintenance manuals shall be delivered.
- C. Supply as part of this contract the following items:
- Two keys for each automatic irrigation controller One valve box cover wrench.
- D. Materials list:
  - 1) Complete material list shall be submitted to the on-site Construction Manager prior to performing any work. Catalog data and full descriptive literature must be submitted whenever the use of items different than those specified is requested.
  - 2) Material list shall be submitted using the following example:
  - Item Description Manufacturer
  - Pressure supply lines Lasco
  - - Lawn spray head Toro
- Schedule 40 570-GP
- E. Record drawings for new systems- Contractor shall provide completed as-built drawings which shall be mylar copies of the project plans and shall conform to the following:
- 1) Record accurately on one set of contract drawings all changes in the work constituting departures from the original contract drawings.
- 2) The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the Inspectors. Prior to final inspection of work, submit record drawings to Inspectors for approval.
- 3) Dimensions from two permanent points of reference (walls, sidewalks, curbs, etc.). Data shown on record drawings shall be recorded day to day as the project is being installed. All lettering on drawings shall be a minimum of  $\frac{1}{8}$ " in size.
- 4) Show locations and depths of the following items for new systems:
- Point of connection for water and electrical service.
- Routing of sprinkler pressure lines. Dimension maximum 100 feet along routing,. - Gate valves.
- Sprinkler control valves.
- Quick coupling valves.
- Routing of control wires.
- Electrical service lines.
- Sprinkler heads.
- Lateral lines.
- Related equipment (as may be directed).
- 5) Maintain record drawings on site at all times.

IMPORTANT NOTICE

All irrigation piping shall be non-potable purple PVC. All non-potable piping and components shall be purple and marked very clearly with "CAUTION: NON-POTABLE WATER - DO NOT DRINK".

### 1.05 Guarantee

- A. The entire sprinkler system, including all work done under this contract, shall be guaranteed by the contractor against all defects, fault of material, and workmanship, for one year from the date of final
- B. The contractor shall instruct the Owner's Representative in the operation and maintenance of the system and shall furnish a complete set of operating instructions.

# Part II - Materials

### 2.01 General

Materials and equipment installed or furnished that do not meet these standards will be rejected and shall be removed from the site at no expense.

- 2.02 Galvanized Steel Pipe and Fittings (if applicable) A. All galvanized steel pipe shall be Schedule 40, threaded, coupled, and hot-dipped galvanized, and shall
- comply with the requirements of ASTM A120-66 or ASTM A53-67. B. All fittings for galvanized steel pipe shall be 150 pound rated galvanized malleable iron, banded pattern.

C. Pipe sizes indicated on the drawings are nominal inside diameter, unless otherwise noted.

## 2.03 Brass Pipe and Fittings (if applicable)

- A. All brass pipes and fittings to be IPS standard weight, 125 UBS, 85% red brass, and are to be used as standpipes on backflow preventer.
- B. Where galvanized risers and/or fittings are required, a dielectric union shall be installed at connection point of galvanized and bronze material.

### 2.04 Plastic Pipe and Fittings

- A. All plastic pipe shall bear the following markings: manufacturer's name, nominal pipe size, schedule or class, type of material, pressure rating in PSI, NSF seal of approval, and the date of extrusion.
- B. Pressure supply lines 1½" or smaller in diameter located downstream from the backflow prevention device shall be Schedule 40 PVC. Pressure supply lines 2" or larger shall be either Class 315 solvent weld PVC or Class 200 rubber gasket type PVC. Solvent weld and ring type pipe shall not be used together on the same pressurized line.
- C. Non-pressure lines shall be Class 200 PVC.
- D. All fittings shall be standard weight Schedule 40 and shall be injection molded of an improved PVC fitting
- compound. Threaded plastic fittings shall be injection molded. E. All threaded nipples shall be standard weight Schedule 80 with molded threads unless otherwise specified.
- F. All solvent cementing of plastic pipe and fittings shall be a two-step process, using primer and solvent cement applied per manufacturer's specifications. Cement shall be of a fluid consistency, not gel-like or ropy. Primer and solvent shall be applied to both mating surfaces.

### 2.05 Backflow Prevention Devices

Backflow preventer shall be as shown on drawings.

# 2.06 Valves

- A. Gate valves:
  - 1) Gate valves 2" or smaller shall have screwed joints and brass bodies.
  - 2) All gate valves shall have a maximum working pressure of no less than 150 PSI and shall conform to
- B. Remote control valves:
  - Valves shall be as shown on the drawings. Connect to the controller in the operating sequence indicated on the drawings.

# 2.07 Valve boxes

- A. Valve boxes shall be fabricated from a durable, weather resistant plastic material, resistant to sunlight and chemical actions of soil.
- B. The valve box cover shall be secured with a hidden latch mechanism or bolts.
- C. The cover and box shall be capable of sustaining a load of 1,500 pounds.
- D. Valve box extensions shall be by the same manufacturer as the valve box. E. Gate valve boxes shall be round plastic boxes with bolt-down covers marked "GATE VALVE".
- Remote control valve boxes shall be rectangular plastic boxes with bolt-down covers marked with the valve identification numbers stenciled in 2" high letters/ numbers using epoxy resin base paint of a contrasting color.

# 2.08 Automatic controller

Automatic controllers shall be as indicated on the drawings complete with hookup to electrical sources. All controllers shall be enclosed in a vandal-resistant, waterproof enclosure, LeMeur or approved equal, or as shown on the drawings. All wiring from electrical meter to pedestal mount controller to be underground and sleeved through concrete pads.

# 2.09 Electrical-primary

- A. All electrical equipment shall be NEMA Type 3, waterproofed for exterior installations.
- B. All electrical work shall conform to local codes and ordinances. Above ground wires shall be conduit enclosed.

# 2.10 Wiring- Low Voltage

- A. Remote control wire shall be direct burial AWG-UF type, 14 gauge as per manufacturer's specifications.
- B. Connections shall be either epoxy-sealed packet type or Scotch Lock connectors.
- C. Ground wires shall be white in color. Control wires shall be of same color for a given controller. Where more than one controller occupies a single trench, each controller shall have different color control wires.

# 2.11 Sprinkler heads

Sprinkler heads shall be as indicated on the drawings. Anti-drain valves shall be installed as required for elimination of low head drainage.

### 2.12 Irrigation sleeves

Irrigation sleeves shall be Schedule 40 PVC. Size shall be twice the diameter of the size of pipe, electrical wiring and pipes to be sleeved separately. Sleeving is required under all paved surfaces.

### 2.13 Water saving system

The water saving system shall be as indicated on the drawings. It shall consist of one main component: the rain collection unit.

# Part III - Execution

### 3.01 General Installation

## A. Water supply:

- Connections to proposed water meter (meter installation by others) shall be at the location shown on the drawings. Minor changes caused by actual site conditions shall be made at no additional cost to the city. B. Lavout:
- Layout irrigation systems and make minor adjustments required due to differences between site and drawings. Where piping is shown on drawings under paved areas, but running parallel and adjacent to planted areas, install the piping in the planted areas.
- C. Diagrammatic intent:

The drawings are essentially diagrammatic. The size and location of equipment and fixtures are drawn to scale where possible. Provide offsets in piping and changes in equipment locations as necessary to conform with structures and to avoid obstructions or conflicts with other work.

D. Grades:

Before starting work, carefully check all grades to determine that work may safely proceed, keeping within the specified material depths with respect to finish grade.

### Inspection:

Before starting work, carefully check all grades to determine that work may safely proceed, keeping within the specified material depths with respect to finish grade.

- 1) Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence without conflicts.
- 2) Verify that the irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the various manufacturer's
- 3) Verify pressure in pounds per square inch (PSI) prior to any work. Contact Landscape Architect if pressure varies from that indicated on plans.
- F. Discrepancies:
- Do not proceed with installation in areas of discrepancy until all discrepancies have been resolved.
- G. Field Measurements:

Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design.

# 3.02 Trenching

- A. Contractor shall notify UNDERGROUND SERVICE ALERT (800) 422-4133 at least two working days before beginning to dig.
- B. Dig trenches and support pipe continuously on bottom of ditch. Lay pipe to an even grade. Trenching excavation shall follow layout indicated on drawings to the depths below finished grade and as noted.
- C. Tree roots shall be protected. Cut no roots over ½" diameter. Reroute pipe above or below all roots. Preservation of all roots to take precedence over pipe depth requirement. All trenching to maximize distance from existing mature trees. Hand digging is required where trenching might impact existing tree
- D. Provide minimum cover of 30 inches over pressure supply lines under paved areas.
- E. Provide minimum cover of 18 inches over pressure supply lines  $2\frac{1}{2}$ " in diameter or smaller.
- F. Provide minimum cover of 18 inches over control wires.
- G. Provide minimum cover of 12 inches over non-pressure lines.

# 3.03 Backfilling

- A. Initial backfill on all lines shall be of fine granular material with no foreign matter larger than  $\frac{1}{2}$  " in size,
- B. Backfill shall be tamped in 4" layers under the pipe and uniformly on both sides for the full width of the trench and the full length of the pipe. Materials shall be sufficiently damp to permit thorough compaction, free of voids. Backfill shall be compacted to dry density equal to adjacent undisturbed soil and shall conform to adjacent grades.
- C. Flooding in lieu of tamping is not allowed without specific prior approval.
- D. Under no circumstances shall truck wheels be used to compact soil.
- E. Provide sand backfill a minimum of 6" over and under all piping routed under paving areas.

# 3.04 Piping

- A. Piping under existing concrete pavement must be installed in sleeves 2½ times the outer diameter of the pipe which is being sleeved. No hydraulic driving is permitted under any concrete pavement.
- B. Cutting or breaking of existing pavement is not permitted without written permission from the owner.
- C. Install pipe with all marking up for visual inspection and verification. D. Remove all dented and damaged pipe sections.
- E. Contractor shall install concrete thrust blocking at all changes of direction and terminal points of pressure
- F. All lines shall have a minimum clearance of 4 inches from each other and 6 inches from lines of other

- G. Parallel lines shall not be installed directly over one another.
- H. Make all joints in strict accordance with the manufacturer's recommended methods; allow solvent welds at least 15 minutes setup time before moving or handling and 24 hours curing time before filling.
- I. All threaded plastic-to-plastic connections shall be assembled using Teflon tape.
- J. For plastic-to-metal connections, use non-hardening pipe dope on all threaded plastic-to-metal connections, except where noted otherwise.
- K. Piping shall be snaked from side to side in trench bottom to allow for expansion and contraction

### 3.05 Assemblies

- A. Install all assemblies specified herein according to the respective detail drawings or specifications, using best standard practice.
- B. Install backflow assemblies in shrub areas and/ or adjacent to other hardscape items rather than turf areas, when possible, and at height required by local codes.
- C. Valves shall be installed in shrub areas whenever possible.
- D. Each valve box shall be installed on a foundation of pea gravel, backfill one cubic foot minimum. Valve boxes shall be installed with the box tops one inch above the surface of surrounding finish grade in shrub area, and flush with turf areas.

### 3.06 Controller

- A. Controller shall be located behind shrubs and/or adjacent to other hardscape items. Maintenance access
- B. The irrigation system shall be programmed to operate during the periods of minimal use of the design area and at time of least evaporation and wind turbulence, generally 2:00 am to 6:00 am.
- C. The controller shall be programmed so that each valve operates separately.

# 3.07 Wiring

- A. Wiring shall occupy the same trench and shall be installed along the same route as the pressure supply
- lines wherever possible. B. Where more than one wire is placed in a trench, the wiring shall be taped together at intervals of 12 feet.
- C. All connections shall be of an approved type and shall occur in a valve box. Provide an 18 inch service loop at each connection.
- D. An expansion loop of 12 inches shall be provided at each wire connection and/ or directional turn, and one of 24 inches shall be provided at each remote control valve.
- E. A continuous run of wire shall be used between the controller and each remote control valve. Under no circumstances shall splices be used without prior approval.

F. Wire running from controller to control valves shall be AWG-UF 600V, No. 14 minimum, solid core,

single conductor copper wire, and style Br. (direct burial type). G. Spare control wires shall be run to valve box locations as shown on the plans. Provide an 18 inch

expansion loop at valve box.

- 3.08 Flushing the System A. Prior to installation of sprinkler heads, the valves shall be opened and full head of water used to flush out

# B. Sprinkler heads shall be installed after system flush has been completed.

- 3.09 Water Saving System
  - A. The water saving system shall have one rain collection unit connected to the time clock. B. The system shall have one or more rain collection units per time clock and one rain collection unit per
- three designated valves, and will use irrigation wiring. C. The rain collection unit shall be wired to the existing solenoid wires, and allow switch of use of time clock
- wires from power of valve to part of water saving system. D. The rain collection unit shall not require any down time field maintenance.

- 3.10 Sprinkler Heads
- A. Sprinkler heads shall be installed as designated on the drawings. B. Spacing of heads shall not exceed maximum indicated on the drawings or in manufacturer's directions.
- C. Head height in relation to finish grades shall be as indicated on the drawings at the time of completion.

### Contractor shall adjust valves, align sprinkler heads of each system to maximize coverage to 100% and minimize overspray prior to planting.

3.11 Adjusting the System

- 3.12 Irrigation Sleeving
  - A. Provide minimum cover of 18 inches on irrigation sleeves to be provided under all paving. B. See 3.02 (Trenching) and 3.03 (Backfilling) for further information.

# 3.13 Completion Cleaning

Upon completion of work, Contractor shall smooth all ground surfaces; remove excess materials, rubbish, debris, etc.; sweep adjacent streets, curbs, gutters, walkways, and trails; and remove construction equipment from the premises.

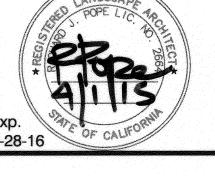
RIVERSIDE PUBLIC UTILITIES ELECTRIC OVERHEAD & UNDERGROUND APPROVED RIVERSIDE PUBLIC UTILITIES WATER DIVISION

PW14-0506 LANDSCAPE IMPROVEMENT PLAN

R-3817-ML

IRRIGATION SPECIFICATIONS

Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call CALL TOLL FREE 48 HOURS BEFORE YOU DIG NDERGROUND SERVICE ALERT 1-800-227-2600







San Bernardino, CA 92408 e-mail: rpa.la@verizon.net Richard Pope, phone: (909) 888-5568 (909) 384-9854

Landscape Architect CA# 2664

1585 S. 'D' Street, Suite 103

AND VAN BUREN BOULEVARD. ADJUSTED AND ENTERED: MAY 1997

CITY OF RIVERSIDE

BENCHMARK: H3-D3

TOP OF A EASTERLY BASE BOLT OF A 12" DIAMETER TRAFFIC SIGNAL

POLE AT THE NORTHERLY CURB RETURN OF JURUPA AVENUE

ELEVATION: 726.212 DATUM 1929

REVISIONS DESIGNED BY RP DRAWN BY KD/TR CHECKED BY RP

BY DATE APPROVED BY CITY ENGINEER/PW DIRECTOR 4/29/2015

CITY OF RIVERSIDE, CALIFORNIA

PUBLIC WORKS DEPARTMENT

APPROVED BY

CAPITAL PROJECTS

JURUPA AVENUE EXTENSION PHASE

SHEET 100 OF 11

# **Planting Specifications**

# Part I - General

### 1.01 Scope of Work

All work shall be performed by a contractor with a C-27 license or greater. Work shall consist of furnishing all materials, services, and equipment necessary to completely install all landscape work as indicated on the drawings and herein specified.

### 1.02 Inspections and Tests

A. Inspections shall be performed by a Owner's Representative at the following times. A 48-hour notice shall be given prior to anticipated inspections. Notify City or County of commencement of landscaping- give anticipated timeline from start to finish.

### Inspections shall be as follows:

- 1) Upon completion of finished grade, soil preparation and final rake out.
- 2) When trees and shrubs are spotted for planting, with the examples of planting holes for trees and
- 3) Final Inspection when planting and all other specified work has been completed.
- B. All landscaping, irrigation, and street trees shall be installed and maintained in accordance with Local Codes, Ordinances, and Standard Requirements
- C. Material requirement for all plant material shall be #1 grade of the California Nursery Industry Certificate as issued by the agricultural commissioner of the county of origin.

## 1.03 Guarantee

- A. All plant materials installed and workmanship performed under the contract shall be guaranteed against any and all poor, inadequate, or inferior materials, and/ or workmanship for a period of 365 days from the date of written final acceptance by an Owner's Representative.
- B. During the guarantee period, any material found to be dead, missing, or in poor condition shall be replaced by the Contractor within 10 days of written notification.
- C. Replacement shall be made in accordance with the original contract drawings and specifications.
- D. Material and labor involved in replacing plant material shall be provided by the Contractor at no additional cost.

### 1.04 Soils Test

Contractor shall obtain agronomic soils tests covering all planting areas after completion of finish grading and prior to start of soil preparation work. Tests shall be performed by an approved agronomic soils testing laboratory and shall include a fertility and suitability analysis with written recommendations for soil preparation and planting backfill mix. The soils report recommendations shall take precedence over minimum amendment and fertilizer application rates specified herein only when they exceed the specified minimums.

# Part II - Materials

# 2.01 Fertilizers, Organic Soil Amendments, and Inorganic Soil Amendments

Fertilizers and soil amendments may include any or all of the specific materials specified herein and shall be applied at the rates indicated on the plans or in Part 2.06, Backfill Material, and Part 3.02, Soil Preparation,

- A. Fertilizer: Shall be 'Gro-Power Plus' and 'Gro Power' 20 gram planting tablets as manufactured by Southern California Organic Fertilizer Co, Inc., (714) 750-3830, or equal.
- B. Organic Soil Amendment: Shall be nitrogen fortified redwood or cedar wood shavings and shall contain a minimum of 1% available nitrogen. Material containing manure or pine is unacceptable.
- C. Inorganic Soil Amendment: Shall be agricultural grade iron sulfate.

# 2.02 Topsoil

All soil imported for backfill or as fill soil (if required) shall meet the following requirements: Backfill or fill soil shall be from a source outside the limits of the project, selected by the Contractor and in compliance with the requirements specified herein. The Contractor shall coordinate with the grading or general contractor in the case of fill soil and submit a written report of a testing agency, per 1.04 Soil Test, registered by the State prior to movement of soil. Soil shall have the same relative composition and structure, a friable sandy loam character, and be free of roots, clods, and stones larger than 1 inch in greatest dimension, pockets of coarse sand, noxious weeds, sticks, brush, and other litter. It shall not be infested with nematodes or other undesirable insects and plant disease organisms. Soil shall meet the following additional requirements:

- A. Gradation Limits. Sand=65%, Silt=25%, Clay=10% maximum. The sand, silt, and clay gradation limits shall be as defined in ASTM D422.
- B. Permeability Rate. Not less than 0.5 inches (13 mm) per hour nor more than 2 inches (51 mm) per hour when tested in accordance with ASTM D2434 or other approved methods.
- C. Agricultural Suitability. The topsoil shall be suitable to sustain the growth of plants specified.

# 2.03 Seed (if applicable, see legend)

All seed used for lawn and/or ground cover plantings shall be labeled and shall be furnished in sealed standard containers. Seed which has become wet, moldy, or otherwise damaged in transit or storage will not be accepted.

A. Lawn: Seed mix shall be per plan.

Note: Thoroughly blend seed varieties prior to application.

### 2.04 Hydromulch Materials (if applicable, see legend)

- Water: General precautions should be observed when drawing water from sources other than pressure main. Such water must be free of impurities.
- Seed as specified in 2.03 above.
- Fiber shall be produced from cellulose such as wood pulp or similar organic material and shall be of such character that it will disperse into a uniform slurry when mixed with water. Materials which inhibit germination or growth shall not be present in the mixture.
- Fertilizer: 'Gro-Power' organic fertilizer per 2.01-A, above, or equal.
- Binding: Dry powder organic concentrate, Ecology Controls M-Binder or equal.
- Available from Robinson Fertilizer Co. (714) 538-3575.

### 2.05 Plants

All plants shall be true to name, and one of each bundle or lot shall be tagged with the name and size of plants in accordance with the standards of practice recommended by the American Association of Nurserymen, and be No. 1 grade, healthy, disease free, and have no physical damage.

Plant ground cover in areas shown on plans. Ground cover plants (rooted cuttings) shall have been grown in flats, and remain in those flats until transplanting.

All trees and shrubs supplied by Contractor shall be of the specified standard height and diameter set by the American Standard for Nursery Stock. The height of the trees shall be measured from the root crown to the last division of the terminal leader and the diameter shall be measured 6 inches above the crown roots. The trees shall stand erect without support. Root bound material is not acceptable. All plants of like species shall be of uniform height, spread, and form.

### 2.06 Backfill Material

- A. Topsoil used in the backfill material shall be a loamy, fertile, and friable soil and shall be free of weeds and seed. Topsoil shall conform to Section 2.02. Topsoil, of these specifications.
- B. Backfill material shall be prepared by blending the following materials and shall be used during planting as shown in the planting details:
- 1) 75% approved topsoil
- 2) 25% organic soil amendment, nitrogen stabilized (wood shavings)
- 3) 15 pounds 'Gro-Power Plus' organic fertilizer per cubic vard
- 4) 2 pounds iron sulfate
- 5) 'Gro-Power' planting tablets per manufacturer's specifications
- C. All backfill material shall be bulk mixed, not individually mixed at each plant pit.

### 2.07 Headers, Stakes, and Ties

- A. Tree stakes shall be 2" diameter x 10 foot long straight grained treated lodgepole pine.
- B. Tree ties shall be "Cinch Ties" manufactured by V.I.T. Co., Cerritos, California. (714) 871-2309, or equal.
- C. Root barriers shall be 'Root Booster', manufactured by Showtown Industry, Inc. or equal.
- D. Arbor guards shall be 'Trunk Cover- TP 128', manufactured by Showtown Ind., Inc., or equal.

# Part III - Execution

# 3.01 Landscape Grading

The Contractor shall bring all planting areas to finished grades, filling as needed or removing surplus dirt, removing rocks and debris over 1 inch in diameter, and floating to a smooth uniform grade. All areas shall slope to drain. Flow lines shall be established to existing road curbs and/or a sidewalk as shown on the plans and as directed. Final grade of all turf and ground cover areas shall be \( \frac{1}{2} \) below adjacent surfaces after establishment.

# 3.02 Soil Preparation

- A. All landscape mounding, rough grading, and finished grading shall be completed prior to beginning soil
- B. Soil preparation shall begin with rototilling of all planting areas under grades of 2:1 to a minimum depth of 8" prior to distributing soil amendments.
- C. The following soil amendments shall be added per 1,000 square feet to all planting areas under grades of
  - 3 cubic yards nitrogen stabilized organic amendment derived from redwood shavings, fir, or cedar

## 200 lbs. organic soil amendment: 'Gro-Power Plus' (5-3-1) organic fertilizer (to be incorporated to a minimum 9" depth following leaching).

# 3.03 Planting

- A. Planting is not recommended from December through February in all areas and also is not recommended from July through August. The Contractor assumes all responsibility for planting at these times.
- B. Trees and Shrubs:

Plant holes shall be dug to size as indicated in the detail drawings. Before trees are set in the holes, a water test should be made as follows: all plant holes shall be filled to the brim with water and allowed to drain before any planting is done. If water does not drain out of hole within 24 hours, conduct soil test. Plants shall be planted at such a depth that the crown roots bear the same relative position to finish grade as they did to the soils where they were grown. When Maintenance Period ends and watering basin's earth berms are removed, under no circumstances shall dirt be leveled in a manner which buries crown roots. Backfill after planting shall be compacted carefully into place without injuring the roots of the tree or breaking up the ball of earth surrounding the roots.

### C. Ground Cover:

Ground cover plants shall be planted in staggered rows, evenly spaced and at intervals called out on the drawings. Each plant shall be planted with its proportionate amount of the flat soil in a manner that will insure a minimum disturbance to the root systems. The cuttings shall be planted sufficiently deep to cover all roots. Root crown should bear the same relationship to soil as it did in the flat. Immediately sprinkle after each planting until entire area is soaked to the full depth of each hole.

D. Mulch: Ground Cover and Shrub Areas

Apply mulch in all ground cover and shrub areas after planting to 3 inch depth of medium barkchips or shavings of sufficient size not to be affected by wind.

### 3.04 Tree Staking

Stake trees as per planting details. No metal wire shall circle any part of any tree.

### 3.05 Weed Eradication

- A. Weed Eradication procedures prior to hydroseeding new areas and planting of ground cover areas infested with bermuda grass or other weed infestations:
- 1) Manually remove all existing vegetation completely (grub out roots) unless otherwise shown on the plans and legally dispose of it off-site.
- 2) Fertilize all planting areas with urea 35-0-0 commercial fertilizer at the rate of .5 lbs. (½ lb.) per 1,000 square feet.
- 3) Water all planting areas thoroughly to a minimum depth of 6" for a period of 2 consecutive weeks to germinate all residual weed seeds.
- 4) Discontinue watering for 2 consecutive days, then apply a non-selective broad spectrum systemic herbicide per manufacturer's specifications. No water shall be applied for a minimum of 4 days following application of contact weed killer.
- 5) Allow a sufficient period of time to insure that all weeds are dead and remove.
- 6) Begin the hydroseeding operations or planting on all areas as specified herein.
- All specified materials shall be delivered to the site in the supplier's original unopened containers bearing proper and accurate labeling.

### 3.06 Hydroseeding

### A. Mixing of hydroseed:

Mixing shall be performed in a tank, with a built-in continuous agitation and recirculation system of sufficient operation capacity to produce a homogeneous slurry of fiber, M-binder, seed, fertilizer, and water in the designated unit proportions.

Fiber	1,800 lbs. per acre
Ecology M-Binder	100 lbs. per acre
Seed (see plant legend)	(see plant legend) lbs. per acre
Water	3,000 gal. per acre
'Gro-Power' organic fertilizer	1,000 lbs, per acre

With agitation system operation at part speed, water shall be added to the tank, good recirculation shall be established. Materials shall be added in such a manner that they are uniformly blended into the mixture in the following sequence.

# When tank is \( \frac{1}{3} \) filled with water:

Add binding agent -  $\frac{1}{2}$  acre requirement Add 3 - 50 lb. bales of fiber

Add 'Gro-Power' - ½ acre requirement

Add seed- ½ acre requirement

Agitate mixture at full speed when the tank is half-filled with water. Add remainder fiber requirement before tank is \(^3\)/2 full, and add remainder seed, M-binder, and

'Gro-Power' per amounts listed above. Slurry distribution should begin immediately. Area to be hydroseeded shall be moistened to a depth of 6 inches just prior to application.

# Application:

Hydroseed slurry shall be applied under high pressure evenly and result in a uniform coat on all areas to be treated. Care shall be exercised to assure that plants in place are not subjected to the direct force of an

Slurry shall be immediately removed from walks, pavement, structures, and ground cover areas that are inadvertently sprayed.

All bare spots shall be reseeded by the Contractor within 15 days. The Contractor will be responsible for all reseeded areas for as long after seeding as necessary until acceptable germination and establishment

# 3.07 Watering

- A. It shall be the Contractor's responsibility to maintain a balanced watering program to ensure proper growth until final acceptance of the work.
- B. Immediately after planting, apply water to each tree, shrub, or vine. Apply water in a moderate stream in the planting hole until the material about the roots is completely saturated from the bottom of the hole to the top of the ground.
- C. Irrigation:
- 1) Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper growth until final acceptance of the work. Over watering is as unacceptable as under watering.
- 2) All controllers are to have each station individually adjusted on a monthly basis. System shall be set considering the application rate each area is capable of receiving. The system shall operate on short intervals, with the cycle repeating at a later time to reduce runoff.
- 3) Controller shall be programmed to operate during time of least evaporation and wind turbulence, generally 2 am to 10 am.

## 3.08 Maintenance

All areas landscaped by the Contractor under this contract shall be maintained by the Contractor for a period of not less than 90 days from the date of written acceptance for start of maintenance.

- A. Start of maintenance criteria:
- 1) Maintenance period shall not start until all elements of the project are completed in accordance with
- 2) Power to remote controllers shall be established prior to the beginning of the maintenance period.
- 3) Written acceptance by the Owner's Representative must be obtained prior to the beginning of the maintenance period.
- B. End of Maintenance:
- 1) On satisfactory completion of the 90 day (minimum) maintenance period, the Owner's Representative will inspect the project for final acceptance.
- 2) Deficiencies noted during inspection shall extend the maintenance period until all are corrected.
- 3) End of maintenance shall occur only on written acceptance by the Owner's Representative
- 4) Pre-emergent herbicide should be applied at end of maintenance period after hydroseed completes germination in all areas.
- C. During the maintenance period, provide all watering, weeding, fertilizing, cultivation and spraying necessary to keep the plants and turf in a healthy growing condition and to keep the planted areas neat, edged, and attractive. All trees and shrubs shall be pruned as necessary to encourage new growth and eliminate rank sucker growth. All pruning to be per NAA Standards. Old wilted flowers and dead foliage shall be immediately pinched or cut off. Shrubs shall not be sheared.
- D. The Contractor shall retain a Certified Arborist to inspect conditions of mature trees impacted by roadway widening. Arborist shall make monthly report to City or County regarding condition of trees during maintenance period.
- E. After planting and during the maintenance period, in the event that trees exhibit iron chlorosis symptoms, apply FE 138 Geigy or equivalent at manufacturer's recommended rates.
- F. Should the appearance of any plant indicate weakness, that plant shall be replaced immediately with a new healthy plant. At the end of the maintenance period, all plant materials shall be in a healthy, growing condition and spaced as indicated on the plans.
- G. Lawns (if applicable) shall be moved and clippings removed on a weekly basis. Cut lawns at least 2-1/2 inches during warm seasons and reduce to 2 inches during winter or cooler season. Avoid removing more than  $\frac{1}{3}$  of the leaf area of blade at any one time. Alternate moving pattern to avoid rutting lawns.
- H. Trim lawn edges (if applicable) adjacent to walks, curbs, paved areas, buildings, shrub and tree areas
- every two weeks, or more often if needed to maintain a neat and well defined appearance. I. Damage to planting areas shall be repaired immediately and throughout the maintenance period.
- J. Remove watering basin's earth berms. Under no circumstances shall the soil be leveled in a manner that buries the plant's crown roots.
- K. Miscellaneous Maintenance Items:
- 1) Depressions caused by vehicles, bicycles, soil settling or foot traffic shall be filled and leveled. Replant damaged areas.
- 2) Exterminate gophers and moles, and repair damage as above.
- 3) The Contractor shall apply 'Gro-Power' organic fertilizer at a rate of 25 pounds per 1,000 square feet, for a minimum of 2 applications. The first application shall be between the 25th and 30th day of the maintenance period and the second application between the 75th and 80th day.
- 4) Debris and trash shall be removed from the site weekly at a minimum.
- 5) Further herbicide applications and hand weeding will be required if major weed infestation occurs, to be at the descretion of the Owner's Representative.

# 3.09 Disease and Pest Control

Throughout the maintenance period, all plants shall be maintained in a disease and pest free condition. A licensed pest control operator shall be retained by the Contractor to recommend and apply all pesticides. herbicides, and fungicides. All pesticides, herbicides, and fungicides must be reported to the Inspector, with documentation stating which pest and/or fungus was treated. Report quantity of materials used in gallons or

# 3.10 Clean Up

CITY OF RIVERSIDE, CALIFORNIA

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Upon completion of the work, the Contractor shall smooth all ground surfaces, remove excess materials, rubbish, debris, etc.; sweep adjacent streets, curbs, gutters, walkways, and trails, and remove construction equipment from the premises.

> RIVERSIDE PUBLIC UTILITIES ELECTRIC OVERHEAD & UNDERGROUND

> > DATE

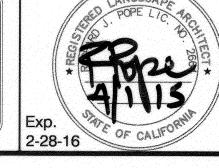
APPROVED RIVERSIDE PUBLIC UTILITIES WATER DIVISION

PW14-0506 R-3817-ML

PLANTING SPECIFICATIONS

LANDSCAPE IMPROVEMENT PLAN

IMPORTANT NOTICE tion 4216/4217 of the Government C requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert 1.D. Number call CALL TOLL FREE 48 HOURS BEFORE YOU DIG JNDERGROUND SERVICE ALERT 1-800-227-2600







1585 S. 'D' Street, Suite 103 San Bernardino, CA 92408 e-mail: rpa.la@verizon.net Richard Pope, phone: (909) 888-5568 (909) 384-9854

Landscape Architect CA# 2664

CITY OF RIVERSIDE TOP OF A EASTERLY BASE BOLT OF A 12" DIAMETER TRAFFIC SIGNAL POLE AT THE NORTHERLY CURB RETURN OF JURUPA AVENUE AND VAN BUREN BOULEVARD. ADJUSTED AND ENTERED: MAY 1997

BENCHMARK: H3-D3

ELEVATION: 726.212

NGINEERING MANAGER PW TREES & LANDSCAPE REVISIONS DESIGNED BY RP DRAWN BY KDITR CHECKED BY RP

PUBLIC WORKS DEPARTMENT JURUPA AVENUE BY DATE APPROVED BY ney TITY ENGINEER / PW DIRECTOR 4/29/2015

EXTENSION PHASE

SHEET 1 1 OF 11