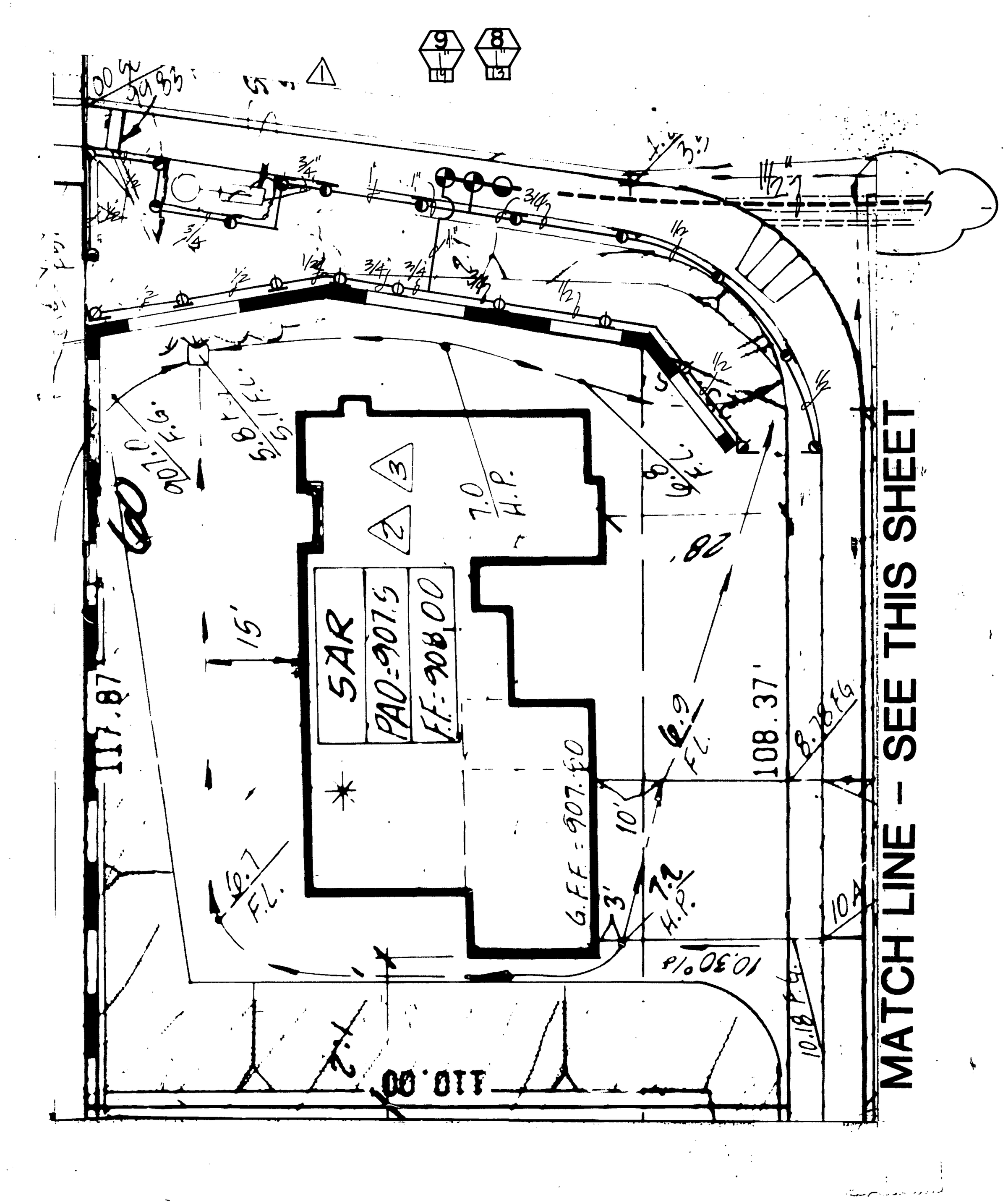

IRRIGATION LEGEND

SYMBOL	MANUFACTURER	MODEL NUMBER	DESCRIPTION	RADIUS	GPM.	PSI.	PATTERN
	RAINBIRD	1806-SAM-16Q-SLA 1806-SAM-16H-SLA	LOW ANGLE STREAM SPRAY W/6" POP-UP	16 FT.	0.81 1.61	30.0	90 180
		1806-SAM-22Q-SS 1806-SAM-22H-SS	STANDARD STREAM SPRAY W/ 6" POP-UP	20 FT.	0.81 1.61		90 180
	TORO	XP-300S-090-07 XP-300S-140-07 XP-300S-180-07 XP-300S-360-07 XP-300HP-090-07 XP-300HP-180-07	GEAR DRIVEN ROTOR W/ 12" POP-UP	36 FT.	1.43 2.22 2.85 5.70 1.43 2.85	35.0	90 140 180 360 90 180
	RAINBIRD	RB60-140 EMT6-M106 EMT6-M106	1-1/2"FILTER - 140 MESH W/60 GPM. MAXIMUM FLOW MULTI-OUTLET RAIN BUG DRIP EMITTER - 6 GPH. TOTAL FOR SHRUBS - USE W/RB-150 DISTRIBUTION TUBING MULTI-OUTLET RAIN BUG DRIP EMITTER - 6 GPH. TOTAL FOR TREES - USE W/RB-150 DISTRIBUTION TUBING				
	RAINBIRD RAINBIRD RAINBIRD GRISWOLD FEBCO NIBCO	ISC-16 33DLRC EFA-CP 2000L 825Y T-113	16 STATION AUTOMATIC CONTROLLER MOUNTED IN LEMEUR MODEL V 25"x13"x41" ENCLOSURE 3/4" QUICK COUPLING VALVE - INSTALL IN A VALVE BOX ELECTRIC REMOTE CONTROL VALVE - SIZE AS INDICATED 2" MASTER VALVE 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTOR GATE VALVE - LINE SIZE				
	NON-PRESSURE LATERAL LINE PIPING - MINIMUM CLASS 200 PVC (SIZES NOTED) NON-PRESSURE LATERAL LINE PIPING - MINIMUM CLASS 200 PVC (SIZES NOTED) PRESSURE MAIN LINE PIPING - 2" AND LARGER TO BE CLASS 315 PVC. - ALL OTHER TO BE SCH. 40 PVC. (SIZES NOTED) CONTROL WIRE SLEEVE - 3/4" SCH. 40 PVC. MAIN LINE SLEEVE - 2-1/2" SCH. 40 PVC. LATERAL LINE SLEEVE - 2" SCH. 40 PVC.						
	INDICATES CONTROLLER AND STATION NUMBER INDICATES ELECTRIC CONTROL VALVE SIZE INDICATES FLOW IN GALLONS PER MINUTE						

IRRIGATION NOTES

A. 120 VOLT/SINGLE PHASE ELECTRICAL POWER OUTLET FOR THE IRRIGATION CONTROLLER IS TO BE PROVIDED BY THE OWNER/DEVELOPER. THE IRRIGATION CONTRACT SHALL BE RESPONSIBLE FOR MAKING THE HOOK-UP FROM THE POWER OUTLET TO THE CONTROLLER.

B. ALL WIRE FROM THE CONTROLLER TO THE ELECTRIC CONTROL VALVES TO BE COPPER UF #14 DIRECT BURIAL. PILOT WIRE SHALL BE COLOR CODED BY CONTROLLER AND COMMON GROUND WIRE SHALL BE WHITE WITH IDENTIFYING COLOR STRIPE CODED FOR EACH CONTROLLER. INSTALL IN COMMON TRENCH WITH MAIN LINE PIPING WHEREVER POSSIBLE. PROVIDE A MINIMUM OF 18" OF COVER.

C. PROVIDE A MINIMUM OF 18" OF COVER OVER ALL PRESSURE MAIN LINE PIPPING AND 12" OVER ALL NON-PRESSURE LATERAL LINE PIPING. ALL PIPE UNDER PAVED AREAS IS TO BE SCH 40 PVC INSTALLED PRIOR TO PAVING.

D. SEE PLANS FOR LOCATION OF AUTOMATIC CONTROLLER.

E. THIS DESIGN IS DIAGRAMMATIC. THE EQUIPMENT SHOWN IN THE PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND IS TO BE INSTALLED WITHIN PLANTED AREAS WHEREVER POSSIBLE.

F. THE IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND ADJUST ALL HEADS FOR MAXIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO ALL WALKS, WALLS, FENCES, DRIVES, AND BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT ANY EXISTING SITE CONDITIONS.

G. THE IRRIGATION CONTRACTOR SHALL NOT WILLFULLY INSTALL THE SYSTEM AS DESIGNED WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT KNOWN DURING THE DESIGN PROCESS. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE, OR THE LANDSCAPE ARCHITECT, OTHERWISE THE IRRIGATION CONTRACTOR MUST ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.

H. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND/OR AS STATED IN THE WRITTEN SPECIFICATIONS.

I. THE SYSTEM DESIGN IS BASED ON A MINIMUM OPERATION PRESSURE SHOWN AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY ALL PRESSURES ON SITE PRIOR TO COMMENCING WITH THE INSTALLATION OF THE IRRIGATION SYSTEM.

J. UPON COMPLETION OF THE JOB, THE CONTRACTOR IS TO PROVIDE THE OWNER WITH A SEPIA MYLAR OF THE "AS-BUILT IRRIGATION PLANS".

K. THE SYSTEM SHALL BE FULLY GUARANTEED FOR A PERIOD OF ONE YEAR. ANY DEFECTIVE MATERIAL OR POOR WORKMANSHIP SHALL BE REPLACED OR CORRECTED BY THE IRRIGATION CONTRACTOR AT NO COST TO THE OWNER(S).

L. ALL WIRE SPLICES TO BE MADE WITH "PEN-TITE" WIRE CONNECTORS OR "SCOTCH-LOC" #3577 SEALING PACKAGE.

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N. ALL VALVES SHALL BE INSTALLED IN A "BROOKS PRODUCTS" CONCRETE VALVE BOX WITH METAL NON-HINGED LOCKING LIDS PER CITY SPECIFICATIONS.

ROBERT MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTURE
22982 EL TORO ROAD SUITE B, EL TORO, CALIFORNIA 92630
(714) 581-2112

MARK	REVISIONS	APPR.	DATE
1	WALL CHANGES	MA	10.24.89

DESIGNED BY DS DRAWN BY DS CHECKED BY RAM

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER		
PARK DEPARTMENT	6-22-89	
TRAFFIC DIVISION		
CHIEF P. W. ENGINEER	6.27 6.23.89	WCK

APPROVED BY [signature]
PUBLIC WORKS DIRECTOR
DATE 6/27/89

IRRIGATION PLAN
OVERHEAD

PREMIER HOMES AT LA SIERRA
TRACT 22759
PREMIER HOMES
1787 POMONA ROAD, SUITE K, CORONA, CALIFORNIA 91720
(714) 272-8111

SCALE: 1"=20'-0"

R-3029 L

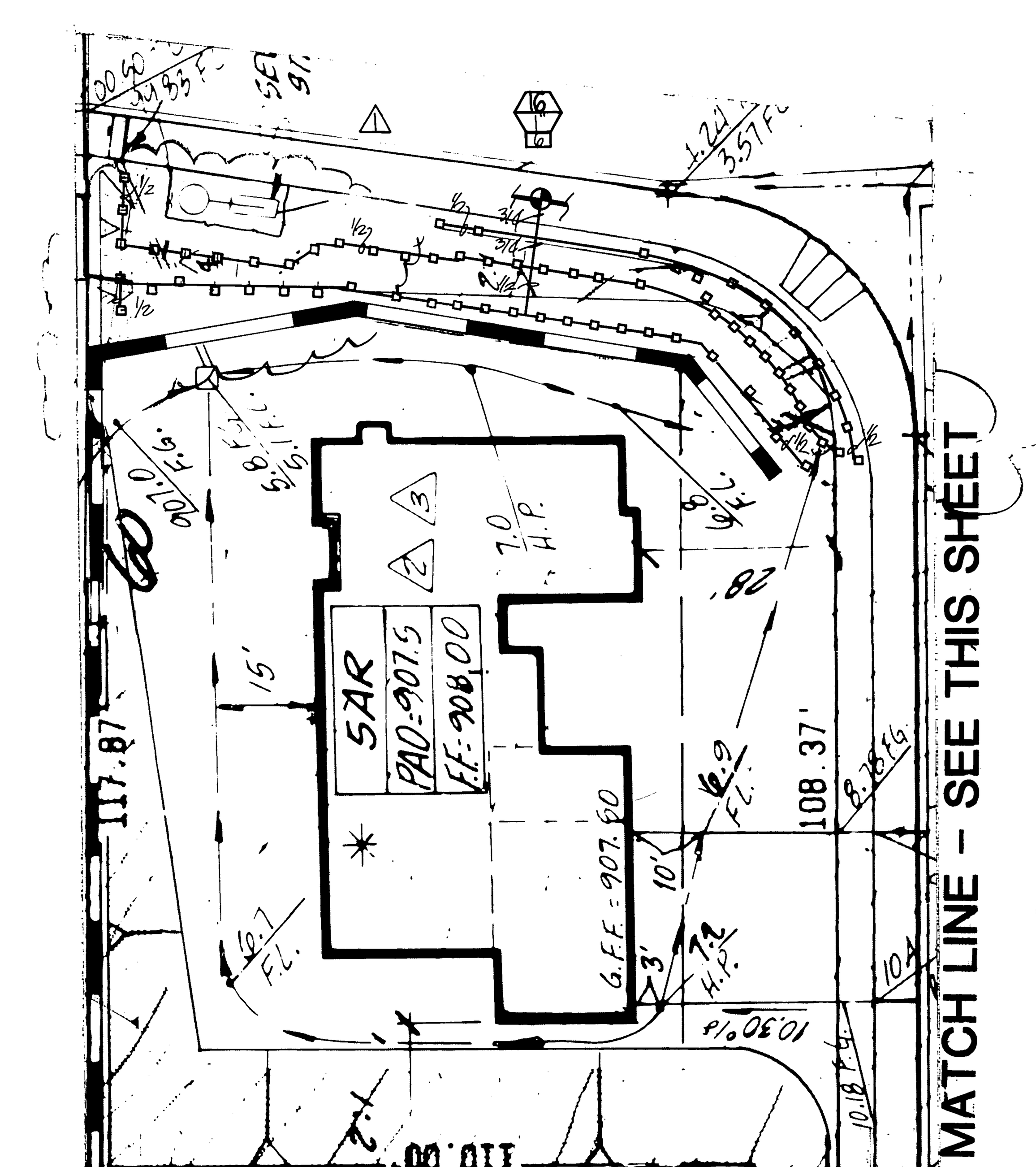
SHEET L-1 OF 7

JOB NO. 266

PC2641

NOTES:

- MULTIPLE OUTLET EMITTERS SHALL BE PROVIDED TO EACH SHRUB WITH TUBING NOT TO RUN IN LENGTHS GREATER THAN 6' PREFERABLY 4' OR LESS.
- –THREE (3) LOW SHRUBS SHALL BE IRRIGATED PER EMITTER.
  –TWO (2) MEDIUM SHRUBS SHALL BE IRRIGATED PER EMITTER.
  –ONE (1) LARGE SHRUB OR TREE SHALL BE IRRIGATED PER EMITTER.
- EMITTERS SHALL BE PLACED 1" ABOVE GRADE WITH TUBING ANCHORED BY HOLD DOWN CLIPS AT 18" O.C. HARD PVC LINES TO EACH EMITTER WITH BURIED SCHEDULE 80 RISERS.



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ROBERT MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTURE
22982 EL TORO ROAD SUITE B, EL TORO, CALIFORNIA 92630
(714) 581-2112

MARK	REVISIONS	APPR.	DATE
1	CHANGE WALL.		10.24.89

DESIGNED BY D.S. DRAWN BY D.S. CHECKED BY R.A.M.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER		
PARK DEPARTMENT	6-22-89	
TRAFFIC DIVISION		
CHIEF P. W. ENGINEER	6-23-89	

APPROVED BY [signature]
PUBLIC WORKS DIRECTOR
DATE 6/27/89

IRRIGATION PLAN
DRIP

PREMIER HOMES AT LA SIERRA
TRACT 22759
PREMIER HOMES
1787 POMONA ROAD, SUITE K, CORONA, CALIFORNIA 91720
(714) 272-8111

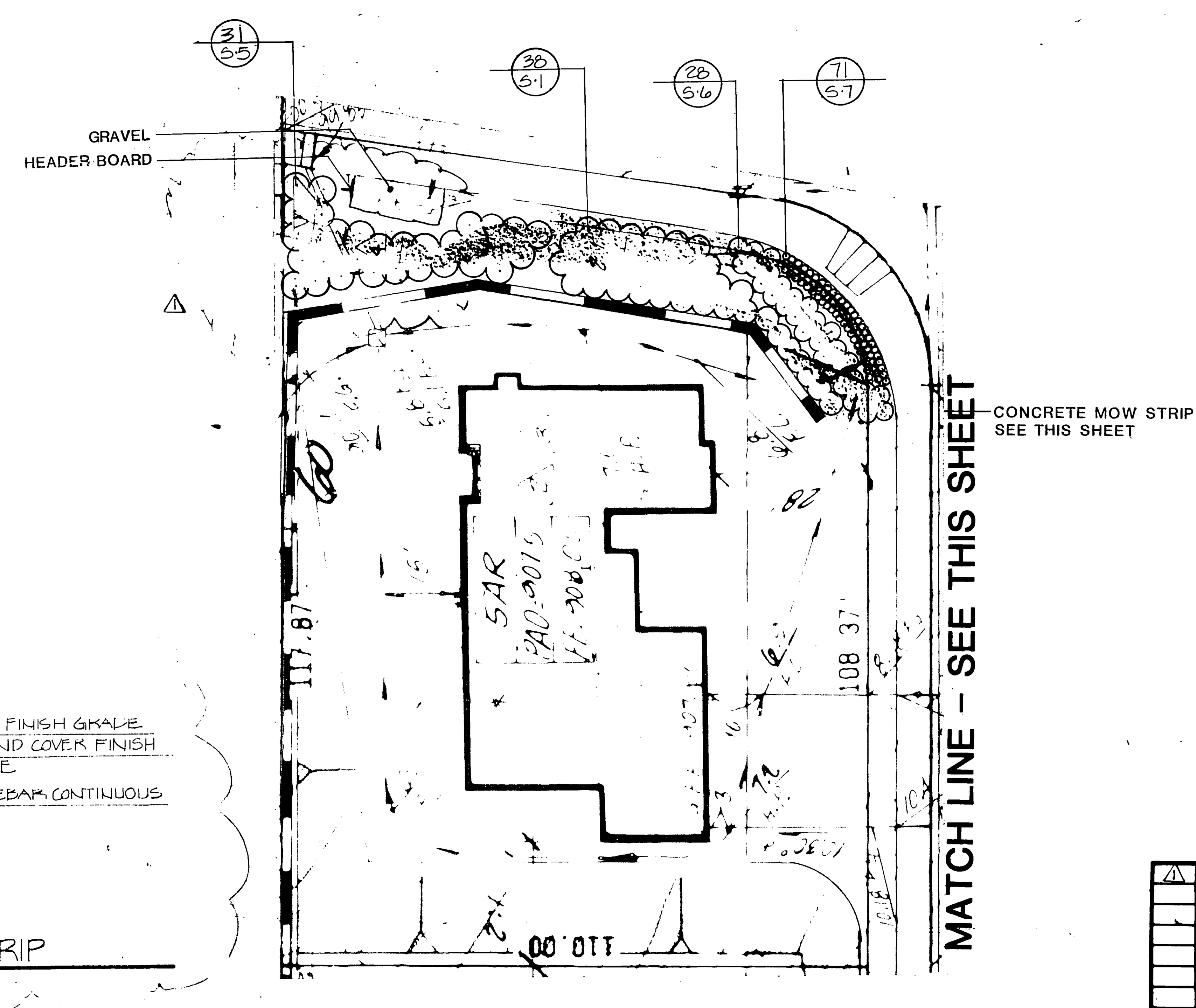
SCALE: 1"=20'-0"

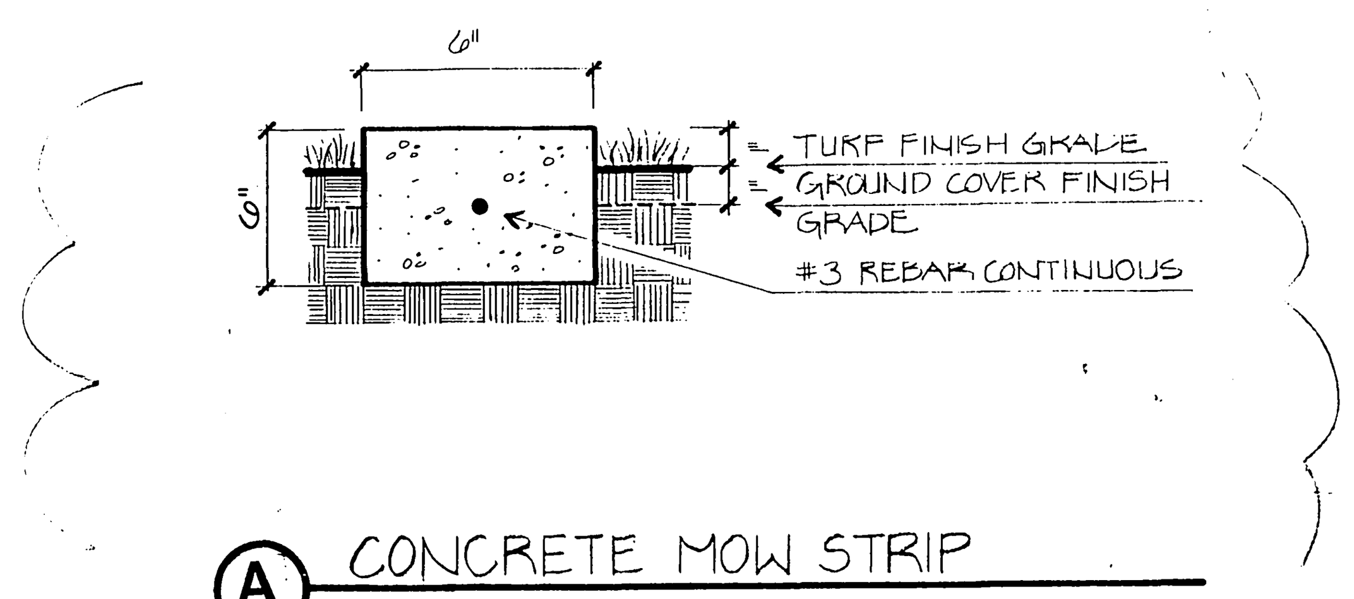
R-3029 L

SHEET L-2 OF 7

JOB NO. 266

PC2641





(A) CONCRETE MOW STRIP

PLANT LIST

TREES:

T-1	LIQUIDAMBAR STYRACIFLUA "PALO ALTO"	AMERICAN SWEET GUM	15 GAL.
T-2	PINUS CANARIENSIS	CANARY ISLAND PINE	15 GAL.
T-3	EUCALYPTUS NICHOLII	NICHOL'S WILLOW LEAVED PEPPERMINT	15 GAL.

SHRUBS:

S-1	NERIUM OLEANDER "PETITE PINK"	"PETITE PINK" OLEANDER	5 GALLON
S-2	CEANOTHUS GRISEUS "YANKEE POINT"	"YANKEE POINT"WILD LILAC	5 GALLON
S-3	PITTOSPORUM TOBIRA	TOBIRA	5 GALLON
S-4	TECOMARIA CAPENSIS	CAPE HONEYSUCKLE	5 GALLON
S-5	RAPHIOLEPIS INDICA "CLARA"	"CLARA" INDIA HAWTHORN	5 GALLON
S-6	PITTOSPORUM TOBIRA "WHEELERS DWARF"	"WHEELER'S DWARF" TOBIRA	5 GALLON
S-7	AGAPANTHUS AFRICANUS	LILY OF THE NILE	1 GALLON

VINES:

V-1	CLYTOSTOMA CALLISTEGOIDES	VIOLET TRUMPET VINE	5 GALLON

GROUND COVER:

LANTANA MONTEVIDENSIS 1 GALLON @ 6' O.C.

HYDROSEEDED GROUND COVER MIX:

10 LBS. GAZANIA SPLENDENS	15 %
4 LBS. ALYSSUM MARITIMA "CARPET OF SNOW"	7%
4 LBS. ALYSSUM MARITMA "PURPLE"	7%
8 LBS. ESCHSCHOLTZIA CALIFORNIA	12%
20 LBS. LUPINUS BICOLOR	30%
9 LBS. DIMORPHOTHECA SINUATA	14%
8 LBS. LOTUS SCOPARIUS	12%
2 LBS. DIANTHUS BARBATUS	3%
65 LBS./ACRE	

PLANTING NOTES

- REFER TO SPECIFICATIONS FOR ACCEPTABLE STANDARDS OF MATERIAL AND WORKMANSHIP.
- ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO GOVERNING CODES AND ORDINANCES.
- REMOVE VINES FROM STAKE OR TRELLIS AND ATTACH TO ADJACENT WALL.
- ASSUME SMALLEST SIZE FOR THE PLANT SHOWN ON PLANT LIST UNLESS OTHERWISE INDICATED ON THE PLAN.

ROBERT MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTURE
22982 EL TORO ROAD SUITE B, EL TORO CALIFORNIA 92630
(714) 581-2112

MARK	REVISIONS	APPR.	DATE
1	WALL CHANGES		10.24.89

DESIGNED BY J.J. DRAWN BY J.J. CHECKED BY R.A.M.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER		
PARK DEPARTMENT	6-22-89	
TRAFFIC DIVISION		
CHIEF P. W. ENGINEER	6	
	6.23.89	

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 6/29/89

PLANTING PLAN

PREMIER HOMES AT LA SIERRA
TRACT 22759
PREMIER HOMES
1787 POMONA ROAD, SUITE K, CORONA, CALIFORNIA 91720
(714) 272-8111

SCALE: 1"=20'-0"

R-3029 L

SHEET L-3 OF 7

JOB NO. 266

PC 2641

IRRIGATION SPECIFICATIONS

1.01 RELATED DOCUMENTS:

The provisions of the "Standard Specifications for Public Works Construction", current edition, shall apply except as modified herein.

1.02 SCOPE:

A. General:

The work of this section shall include the furnishing of all labor, materials, equipment and services necessary to provide complete operating irrigation systems as shown on the drawings and as specified.

B. Related Work Specified Elsewhere:

Landscape Planting 07480 *-10*

1.03 SUBMITTALS:

A. Materials List:

Contractor shall submit a complete materials list for approval by the City 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. Notarized certificate must be submitted by plastic pipe and fitting manufacturer indicating that material complies with specifications, unless material has been previously approved.

Material list shall be submitted using the following format:

Item	Description	Manufacturer	Model No.
1	Pressure Supply Line	Lasco	Sch. 40
2	Lawn Head	Rainbird	2400
etc.	etc.	etc.	etc.

B. "Record" Prints:

(1) Record accurately on one set of blue-line prints all changes in the work constituting departures from the original contract drawings, including changes in pressure and non-pressure line locations.

(2) The changes and ... be recorded in a legible and workmanlike manner to the satisfaction of the City. Prior to final inspection of work, submit record prints to City for approval.

(3) Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Data to be shown on record prints shall be recorded day-to-day as the project is being installed.

(4) Show locations and depths of the following items:

a. Point of connection.

b. Routing of sprinkler pressure lines (dimension maximum 100 feet along routing).

c. Gate valves.

d. Sprinkler control valves.

e. Quick coupling valves.

f. Routing of control wires.

g. Related equipment (as may be directed).

(5) Maintain record prints onsite at all times.

1.04 INSPECTIONS:

A. Inspections will be required for:

(1) Pressure test of irrigation main line.

(2) Coverage test.

(3) Final inspection-start of maintenance. Final inspection shall be performed by the City in the presence of owner or his representative.

(4) Final acceptance.

B. Inspection Requests:

Contractor shall notify the Park Projects Inspector in advance for requesting all inspections as follows:

Pressure supply line installation and testing - 36 hours (1½ working days;
System layout - 36 hours (1½ working days)
Coverage tests - 36 hours (1½ working days)
Final inspection - 48 hours (two working days)

When inspections have been conducted by other than the Park Projects Inspector, the Contractor shall show evidence of when and by whom these inspections were made.

No inspection will commence without "record" prints. In the event the Contractor calls for an inspection without up to date "record" prints, without completing previously noted corrections, or without preparing the system for inspection, the inspection will be cancelled and the Contractor back charged for the direct costs of all City personnel time and consultant time lost.

C. Closing in uninspected work:

Do not allow or cause any of the work of this section to be covered up or enclosed until it has been inspected, tested and approved by the City.

D. Coverage test:

When the sprinkler system is completed, Contractor shall perform a coverage test in the presence of the City to determine if the water coverage for planting areas is complete and adequate. This test shall be accomplished before any planting.

E. Hydrostatic test:

(1) Prior to the installation of any valves, all pressure lines shall be tested under a hydrostatic pressure of 150 psi for a period of not less than two hours, with all ends of lines capped and the line fully charged with water after all air has been expelled from the line.

(2) All hydrostatic tests shall be made in the presence of the City. No pressure line shall be backfilled until it has been inspected, tested and approved in writing.

(3) Contractor shall furnish necessary force pump and all other test equipment.

1.05 TURNOVER ITEMS:

A. Controller Charts:

(1) Record prints must be approved by City before charts are prepared.

(2) Provide one controller chart (of the maximum size controller door will allow) for each automatic controller. Chart shall show the area covered by controller.

(3) The chart is to be a reduced copy of the actual "record" print. In the event the controller sequence is not legible when the print is reduced, it shall be enlarged to a readable size.

(4) Chart shall be marked with a different color to show the area of coverage for each station.

(5) When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being minimum 20 mils in thickness. Chart shall be installed in the controller enclosure using velcro fasteners.

(6) Controller charts shall be completed prior to final inspection.

B. Operation and Maintenance Manuals:

Within 10 calendar days prior to acceptance of construction, prepare and deliver to the City all required descriptive materials, properly prepared in two individually bound copies of the operation and maintenance manual. The manual shall describe the material installed and shall be in sufficient detail to permit operating personnel to understand, operate, and maintain all equipment. Spare parts lists and related manufacturer's information shall be included for each equipment item installed. Each complete, bound manual shall include the following information:

(1) Index sheet stating Contractor's address and telephone, including names and addresses of local manufacturer's representatives.

(2) Complete operating and maintenance instructions on all major equipment.

C. Materials to be furnished:

(1) Supply as part of this contract the following items:

a. 4% additional sprinkler heads of each type and spray pattern shown.

b. Two (2) wrenches for disassembly and adjustment of each type sprinkler head installed.

c. Two keys for each automatic controller.

d. Two couplers with a 3/4" bronze hose bib, bent nose type with hand wheel and two coupler keys.

e. One valve box cover key.

f. "As-built" record drawings.

g. A backflow device valve handles and Water Department inspection documentation.

(2) The above items shall be turned over to the City at the conclusion of the project - final inspection.

1.06 GUARANTEE:

A. General: The entire sprinkler system, including all work done under this contract, shall be guaranteed against all defects and fault of material and workmanship for a period of one (1) year following the filing of the Notice of Completion. All materials used shall carry a manufacturer's guarantee of one (1) year.

Should any problem with the irrigation system be discovered within the guarantee period, it shall be corrected by the Contractor at no additional expense to the City within ten (10) calendar days of receipt of written notice from the City. When the nature of the repairs as determined by the City constitute an emergency (e.g. broken pressure line) the City may proceed to make repairs at the Contractor's expense. Any and all damages to existing improvement resulting either from faulty materials or workmanship, or from the necessary repairs to correct same, shall be repaired to the satisfaction of the City by the Contractor, all at no additional cost to the City.

B. Form of Guarantee: Guarantee shall be submitted on Contractors own letterhead as follows:

FORM OF:
GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM

We hereby guarantee that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications, ordinary wear and tear and unusual abuse, or neglect expected. We agree to repair or replace any defects in materials or workmanship which may develop during the period of one year from date of filing of the Notice of Completion and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the City. We shall make such repairs or replacements within 10 calendar days following written notification by the City. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from the City, we authorize the City to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

PROJECT: _____
LOCATION: _____
_____

SIGNED: _____
ADDRESS: _____
_____
PHONE: _____

C. After the system has been completed, the Contractor shall instruct the Parks Department Representative in the operation and maintenance of the system and shall furnish a complete set of operating instructions.

D. Any settling of trenches which may occur during the one-year period following acceptance shall be repaired to City's satisfaction by the Contractor without any additional expense to the City. Repairs shall include the complete restoration of all damage to planting, paving or other improvements of any kind as a result of the work.

PART 2 - MATERIALS

2.01 GENERAL:

All materials shall conform with Section 212 of the Standard Specification except as modified herein.

2.02 PIPE AND FITTINGS:

A. Pipe - General:

(1) Pressure supply lines 8 inches in diameter and larger shall be A.C.P.

(2) Pressure supply lines 2 inches in diameter and up to 8 inches in diameter 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 pressure supply line.

(3) Pressure supply lines 1½ inches in diameter and smaller shall be minimum schedule 40 solvent weld PVC.

(4) Non-pressure lines shall be minimum Class 200 PVC.

B. Steel Pipe:

Amend Standard Specifications Section 212-2.1.2 to read: "All steel pipe shall be hot-dipped galvanized,...." All fittings for steel pipe shall be 250 pound rated galvanized malleable iron, banded pattern. Pipe sizes indicated on the drawings are nominal inside diameter, unless otherwise noted.

C. Plastic Pipe:

Add the following to Standard Specifications Section 212-2.1.3 and (d): 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 date of extrusion.

Amend Standard Specification Section 212-2.1.3 to read: All fittings shall be standard weight schedule 40 and shall be injection molded of an improved PVC fitting compound. All threaded plastic fittings shall have injection molded threads. No cut threads will be accepted on PVC pipe and fittings. All tees and ells shall be side gated. All threaded nipples shall be standard weight schedule 80 with molded threads.

Amend Standard Specification Section 212-2.1.4 to read: All rubber gasket PVC pipe, couplings, and fittings shall conform to ASTM D 2241 Type 1, Grade 1, 2000-PSI design stress. Couplings, rubber gaskets, and fittings shall be as approved by the pipe manufacturer. (Add the following to same.) Ring-type rubber gasket couplings shall permit a 5° deflection of the pipe at each coupling (2½° each side) without exfiltration or infiltration, cracking or breaking.

D. Asbestos Cement Pipe: Add the following to Standard Specifications Section 212-2.1.6: Fittings for A.C.P. connection laterals shall be cast iron tees and bossed couplings except as follows:

(1) Double strap service clamps with rubber seals and flat bronze straps may be used for connections of 50 percent or less than the diameter of pipe.

(2) Tapped A.C.P. couplings with brass inserts may be used for connections of 3/4, 1, 1¼, 1½ and 2 inches.

2.03 VALVES AND VALVE BOXES:

A. Manual Control Valves:

Add the following to Standard Specifications Section 212-2.2.3: Anti-siphon-type valves shall be all bronze with swivel-type replaceable seating members and an approved vacuum breaker as an integral part of assembly.

B. Remote Control Valves:

Add the following to Standard Specifications Section 212-2.2.4: Valves shall be spring-loaded, self-cleaning, packless diaphram activated, of a normally closed type. Valves shall be of the same manufacturer and series as the automatic controller.

Valve solenoid shall be corrosion-proof and constructed of stainless steel molded in epoxy to form one integral unit and shall be 24 volt A.C., 2.0 watt maximum (2" and smaller valves).

Valve shall close against flow without chatter and with minimum closing surge pressure (minimum 5 seconds closing time per valve).

Valve shall be completely serviceable in the field without removing valve bcoy from line.

C. Quick-Coupling Valves:

Add the following to Standard Specifications Section 212-2.2.6: Quick coupling valves shall have locking vinyl cover and shall be 1" in size.

D. Gate Valves:

All gate valves shall be capable of withstanding a minimum working pressure of not less than 150 psi.

E. Valve Boxes:

Add the following to Standard Specifications Section 212-2.2.7: All remote control valve boxes shall be rectangular concrete boxes with non-hinged locking cast-iron covers. Valve station number shall be stencilled in two-inch-high (2") numerals on cover using epoxy resin base paint of a contrasting color. Gate valve boxes shall be round concrete boxes with non-hinged locking cast iron covers marked either "Gate Valve" or "G. V." with letters cast or tooled in the cover.

2.04 BACKFLOW PREVENTER:

Add the following to Standard Specifications Section 212-2.3: The backflow prevention unit shall be a reduced pressure type vacuum breaker as approved by the Public Utilities Department, Water Division, Backflow Technician, and as indicated on the drawings.

2.05 ELECTRICAL MATERIALS (LOW VOLTAGE):

A. Conduit:

Amend Standard Specifications Section 212-3.2.1 to read: Conduit below paving shall be schedule 40 PVC of sufficient size to carry all proposed wiring. Wiring shall be in a separate sleeve.

B. Wire:

Add the following to Standard Specifications Section 212-3.2.2:

All common wire shall be white with a colored stripe. Stripe color shall be different for each controller installed. All control wire shall be of one color other than white or green. A different color control wire shall be used for each controller installed.

2.06 CONTROLLER UNIT:

Add the following to Standard Specifications Section 212-3.3:

Controllers shall be wall mounted type, as indicated on the drawings, with a heavy duty watertight cast and locking hinged cover.

2.07 IRRIGATION HEADS:

All irrigation heads shall be as shown on the plans and shall conform with Section 212-2.4 of the Standard Specifications.

PART 3 - EXECUTION

3.01 GENERAL:

All work shall conform with Section 308 of the Standard Specifications except as modified herein.

Add the following to Standard Specifications Section 308-5.1:

A. Water Supply: Connections to or the installation of the water supply shall be at the locations shown on the drawings. Minor changes caused by actual site conditions shall be made at no additional cost to the City.

B. Electrical Service: Contractor shall make 120V connection to the irrigation controllers.

C. Code Requirements: 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. Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

In the event any equipment or methods indicated on the drawings or in specifications is in conflict with local codes, immediately notify the inspector prior to installing. If this notification is not provided, the Contractor shall assume full responsibility for the cost of all revisions necessary to comply with code.

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

E. Coordination with work of other trades: Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design. Contractor shall coordinate the installation of all irrigation materials with all other work. Special attention shall be given to coordination of piping locations and tree and shrub locations to avoid conflicts.

F. Contractor shall maintain record drawing blueprint on site at all times. Upon completion of work, transfer all as-built information and dimensions to reproducible sepia prints. The changes and dimensions shall be recorded in a legible and workmanlike manner, to the satisfaction of the Parks Department Representative.

3.02 TRENCHING AND BACKFILLING:

A. Trenching:

(1) Add the following to Standard Specifications Section 308-2.2: Dig trenches and support pipe continuously on bottom of ditch. Where lines occur under paved areas, depth dimensions shall be considered below subgrade.

(2) Amend Standard Specifications Section 308-2.2(2) to read: Water lines continuously pressurized - minimum 18 inches, maximum 24 inches. (These measurements are to be from subgrade elevation for piping under pavement.)

(3) Amend Standard Specifications Section 308-2.2, paragraph 3) to read: Lateral sprinkler lines - minimum 12 inches and maximum 16 inches.

(4) Add the following to Standard Specifications Section 308-2.2: Where it is necessary to excavate adjacent to existing trees, the contractor shall avoid injury to trees and tree roots. Excavation in areas where 2-inch and larger roots occur shall be done by hand. All roots 2 inches and larger in diameter shall be tunneled under and shall be heavily wrapped with wet burlap to prevent scarring or drying. Where trenching machine is run close to trees having roots smaller than 2 inches in diameter, the wall of the trench adjacent to the tree shall be hand trimmed, making a clean cut through the roots. Roots 1 inch and larger in diameter shall be painted with two coats of tree seal or approved equal. Trenches adjacent to trees shall be closed within 24 hours.

(5) Permanent Resurfacing: Add the following to Standard Specifications Section 308-5.1: All surface improvements damaged or removed as a result of the contractor's operations shall be reconstructed by the contractor to the same dimensions, except for pavement thickness, and with the same type materials used in the original work. Trench resurfacing shall be 1 inch greater in thickness than existing pavement.

B. Backfill:

(1) Add the following to Standard Specifications Section 308-5.2: Provide sand backfill a minimum of 6 inches over and under all piping under paved areas.

(2) Amend Standard Specifications Section 308-2.2 to read: Backfill shall be tamped in 4-inch 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.

Flooding in lieu of tamping is not allowed without specific prior written approval of the Park and Recreation Department.

Under no circumstances shall truck wheels be used to compact soil.

3.03 PIPE INSTALLATION:

A. General: Add the following to Standard Specifications Section 308-5.2.1:

(1) Piping under existing pavement may be installed by jacking, boring, or hydraulic driving. However, no hydraulic driving is permitted under asphaltic concrete pavement.

(2) Cutting or breaking of existing pavement is not permitted except as approved by Parks Department Representative. When approved, all necessary repairs and replacements will be made at no additional cost to the City.

(3) Carefully inspect all pipe and fittings before installation, removing all dirt, scale and burrs and reaming; install pipe with all markings up for visual inspection and verification.

(4) Contractor shall install concrete thrust blocking per the manufacturer's recommendations at all changes of direction and terminal points of pressure pipe.

(5) Parallel lines shall not be installed directly over one another. Provide a minimum of 12" horizontal separation for all parallel lines.

(6) For plastic-to-metal connections, work the metal connections first. Use a non hardening pipe dope on all threaded plastic-to-metal connections, except where noted otherwise.

(7) All piping under pavement shall be sleeved using schedule 40 PVC sleeves. Each line shall be separately sleeved.

(8) Install no multiple assemblies on plastic lines. Provide each assembly with its own outlet.

B. Plastic Pipe: Add the following to Standard Specifications Section 308-5.2.3:

(1) Exercise care in handling, loading, unloading and storing plastic pipe and fittings. Store plastic pipe and fittings under cover until ready to install; transport plastic pipe on a vehicle with a bed long enough to allow pipe to lay flat, avoid undue bending and any concentrated external load.

(2) 360° applicators shall be used to apply primer and solvent on pipe sizes 2½ inches and larger.

3.04 BACKFLOW INSTALLATION:

Add the following to Standard Specifications Section 308-5.3: Install backflow assemblies at locations approved in the field by the Park Department Inspector and at heights required by local codes.

3.05 VALVE AND VALVE BOX INSTALLATION:

Amend Standard Specifications Section 308-5.3 to read: Valves shall be the same size as the pipeline in which they are installed unless otherwise specified on plans.

Amend Standard Specifications Section 308-5.3 to read: Install quick couplers and valve boxes per Parks and Recreation Department standard details.

Add the following to Standard Specifications Section 308-5.3: Valves shall be installed in shrub areas whenever possible. No valves or valve boxes shall be installed within a designated athletic playing field.

3.06 SPRINKLER HEAD INSTALLATION:

Amend Standard Specifications Section 308-5.4.1 to read: Sprinkler heads shall be installed as designated on the drawings and per Parks and Recreation standard details.

3.07 CONTROLLER INSTALLATION:

Add the following to Standard Specifications Section 308-5.3: The exact location of the controllers shall be as approved by the City before installation. The Contractor shall coordinate the electrical service with this location. The controllers shall be wall mounted within a Le Mour vandal resistent enclosure, unless noted otherwise on the plan. Controller enclosure shall be located in shrub areas and/or adjacent to other hardscape items. Enclosure shall be painted with two coats of paint, color as approved; submit samples. Maintenance access shall be provided.

The irrigation system shall be programmed to operate during the periods of minimal use of the design area.

3.08 WIRING:

Add the following to Standard Specifications Section 308-5.5: All splice connections shall occur in a valve box. All wire runs between the valve and the controller shall be a continuous run with no splices unless noted otherwise on the plan.

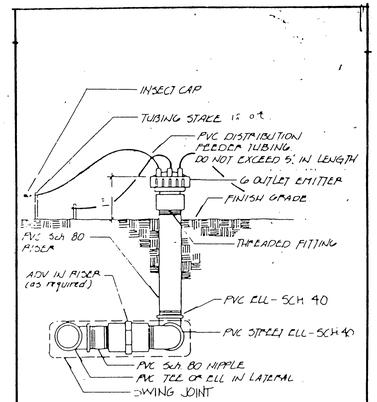
All low voltage wiring splices shall be made-up as soldered connections, wrapped with a minimum of two (2) layers of electrical tape and sealed with Scotch-coat. Scotch-lok, Uni-pack, Penn-tite, or other similar type connectors are not acceptable.

3.09 FINISHING AND TESTING:

Add the following to Standard Specifications Section 308-5.6.2: Centerload all plastic pipe prior to pressure testing. Amend Standard Specifications Section 308-5.6.2 to read: Pressure test the mains - minimum 2 hours at 150 PSI. Add the following to Standard Specifications Section 308-5.6.2: The entire system shall be operating properly before any planting operations commence.

3.10 COMPLETION CLEANING:

Add the following to Standard Specifications Section 308: Upon completion of the 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.



EMITTER ON RISER

ROBERT MITCHELL & ASSOCIATES
LANDSCAPE ARCHITECTURE
22982 EL TORO ROAD, SUITE B, EL TORO, CALIFORNIA 92630
(714) 581-2112

MARK	REVISIONS	APPR.	DATE

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER		
PARK DEPARTMENT	5-22-90	
TRAFFIC DIVISION		
CHIEF F.W. ENGINEER		

APPROVED BY _____
PUBLIC WORKS DIRECTOR
DATE 6.27.90

IRRIGATION SPECIFICATIONS

PREMIER HOMES AT LA SIERRA
TRACT 22759
PREMIER HOMES
1787 POMONA ROAD, SUITE K, CORONA, CALIFORNIA 91720
(714) 272-8111

HORIZ. SCALE: 1" = — VERT. SCALE: 1" = —

ACCOUNT NO.
R-3029 L
SHEET L-4 OF 7
JOB # 2060

FC22H1

PLANTING SPECIFICATONS

1.01 RELATED DOCUMENTS:

The provisions of the "Standard Specifications for Public Works Construction," Current Edition, shall apply except as modified herein.

1.02 SCOPE:

The work required is indicated on the drawings and includes, but is not necessarily limited to: planting trees; guying and staking trees; maintenance; guarantees; and replacement. The plan quantities are approximate; the actual quantity of trees to be planted will be determined on-site by the inspector to conform with site constraints while providing a minimum of one tree per lot and an average spacing of 45' O.C. whichever results in the greater number of trees.

1.03 GUARANTEE:

A. All trees installed under the contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for a period of one (1) year. Guarantee period shall run concurrently with maintenance period.

B. During the guarantee period, any material found to be dead, missing, or in poor condition, whether or not due to the fault of the contractor, shall be replaced by the contractor within ten (10) days of written notification. Park and Recreation Department shall be the sole judge as to the condition of the material.

C. Replacement shall be made in accordance with City standards.

D. Material and labor involved in replacing plant material shall be provided by the contractor at no additional cost to the City.

1.04 INSPECTIONS:

Inspections will be required. The Contractor shall contact the Park Department Representative at least 48 hours (2 working days) in advance of an anticipated inspection. An inspection will be required at each of the steps listed below:

A. When plants are spotted for planting, but before planting holes are excavated.

B. When planting and all other indicated or specified work has been completed.

C. At start of plant establishment and maintenance period.

D. Final inspection (end of maintenance) prior to release of project. This release will be confirmed in writing by the Park and Recreation Department.

PART 2 - MATERIALS

2.01 GENERAL:

All materials shall conform with Section 212 of the Standard Specifications except as modified herein.

2.02 FERTILIZER, SOIL AMENDMENTS AND CONDITIONERS:

Add the following to Standard Specifications Section 212-1.2.3:

A. Planting Tablets: Tightly compressed long-lasting, slow-release fertilizer tablets weighing 21 grams, with a potential acidity of not more than 5 percent by weight and having an analysis of 20-10-5 derived from the sources listed in the following guaranteed analysis:

GUARANTEED ANALYSIS

Total Nitrogen (N) 20%
Derived from urea formaldehyde
7.0% water soluble nitrogen
13.0% water insoluble nitrogen

Available Phosphoric Acid (P_2O_5) 10%
Derived from calcium phosphate

Soluable Potash (K_2O) 5%

Combined Calcium (Ca) 2.6%
Derived from calcium phosphates

Combined Sulfur (S) 1.6%
Derived from ferrous and potassium sulfates

Iron (expressed as elemental Fe) 35%
Derived from ferrous sulfate

B. Commercial fertilizer shall bear the manufacturer's guaranteed statement of analysis and shall meet the following minimum requirements: 14 - 16% nitrogen, 7% phosphoric acid, and 5% potash.

C. Organic Soil Amendment:

Type 1 organic soil amendment, nitrogen stabilized, shall be used.

D. Soil Conditioners:

Add to Standard Specifications, new Section 212-1.2.6: Inorganic conditioners shall be agricultural grade gypsum, soil sulfur and iron sulfate.

2.03 PLANTS:

A. Add the following to Standard Specifications Section 212-1.4.1:

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. The root condition of plants furnished in containers may be determined by removal of earth from the roots of not less than two plants nor more than 2% of the total number of plants of each species or variety except when container-grown plants are from several different sources; in which case, the roots of not less than two plants of each species or variety from each source may be checked by the Parks Department Representative at his option. The selection of plants to be checked will be made by the Park Representative. All plants rendered unsuitable for planting shall be considered as samples, and replacements shall be provided at no additional cost. In case the sample plants are found to be defective, the entire lot or lots of plants represented by the defective samples will be rejected.

B. Amend the Standard Specifications Section 212-1.4.2 and 212-1.4.3. All trees 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 six (6) inches above the crown roots. The trees shall stand erect without support.

C. Bare root stock shall conform to the American Nurseryman's Association standards. Minimum caliper shall be 2"O' and minimum height shall be 12 feet.

D. All palm trees shall be of a minimum overall height of 8 to 12 feet as measured from the crown of the rootball to the tips of the fronds, or four feet of brown trunk whichever is greater.

D. All container grown plants shall be of a minimum 15 gallon container size, with minimum calipre and height in accordance with the American Association of Nurserymen standards for container plants.

2.04 BACKFILL MATERIAL:

Add the following to the Standard Specifications section 212:

A. Top soil shall be free of noxious weed seed and shall be of a loam characteristic, fertile and friable.

B. Wood shavings shall be leached nitrogen fortified and shall be free of foreign matter.

C. Soil used for backfill of planting pits for container plants shall be enriched using the following blend per cubic yard:

60% site soil — 3 lbs. gypsum
40% wood shavings — 2 lbs. iron sulphate
2 lbs. commercial fertilizer

D. Bare root stock backfill shall consist of 10% wood shavings and 90% site soil with fertilizer and soil conditioners as specified for container plants.

2.05 STAKES AND TIES:

Add the following to Standard Specifications Section 212-1.5.3:

(1) Tree stakes shall be straight-grained lodgepole pine or approved equal. Stakes shall be free from knots, checks, split, or disfigurements.

(2) Tree ties shall be made from tire casing, 22" long by 3/4" wide, fastened to tree stake with two galvanized 5d roofing nails each.

PART 3 - EXECUTION

3.01 GENERAL:

All work shall conform with Section 308 of the Standard Specification except as modified herein.

3.02 PLANTING:

A. Amend the Standard Specifications Section 308-4.5 to coordinate with Section 2.04 herein for specified backfill mix.

B. Add the following to the Standard Specification Section 308-4.5:

(1) Soil surrounding planting pit shall be in a friable condition and moist to a depth of 8".

(2) Backfill using specified soil mix to within 8" of finish grade. At this depth, place the plant fertilizer tablets Agriform 20-10-5, 21 grams each or equal. A minimum of 3 tablets for bare root stock, 5 tablets for 15 gallons, and 8 tablets for a 24" box. Complete backfilling to finish grade.

(3) Trees shall be planted at such a depth that the crown roots bear the same relative position to finish grade as they did to the soil's where they were grown. 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.

3.03 TREE STAKING:

Amend the Standard Specifications Section 308-4.6.1 and 308-4.6.2 to read: Stake trees as per Parks and Recreation Department standard detail.

3.04 WATERING:

Add the following to Standard Specifications Section 308-4.9.5:

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 plant. 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. Apply water in sufficient quantities and as often as seasonal conditions require to keep the planted areas moist at all times, well below the root system of plants.

3.05 MAINTENANCE:

Amend the Standard Specifications Section 308-6 to read: All trees planted by the Contractor under this contract shall be maintained by him for a period of not less than one calendar year from the date of written acceptance for start of maintenance. Start of maintenance date will be confirmed in writing by the Park and Recreation Department.

A. Add the following to Standard Specifications Section 308-6: Start of maintenance criteria:

(1) Maintenance period shall not start until all elements of the project are completed in accordance with the contract documents. Projects will NOT be segmented into phases.

(2) Written acceptance of the City must be obtained prior to the beginning of the maintenance period.

(3) If the project maintenance fails to continuously meet standards required for start of maintenance, the project will be placed on extended maintenance. The required one year maintenance period will not resume until Contractor has corrected all deficiencies.

B. End of Maintenance:

(1) On completion of the maintenance period and meeting of the criteria required for the start of maintenance, the Contractor shall call for inspection of the project.

(2) Deficiencies noted during inspection shall extend the maintenance period until all are corrected.

(3) The contractor's responsibility for maintenance shall end only upon receipt of the City's written acceptance of the project.

C. During the maintenance period provide all watering, weeding, fertilizing, cultivation, and spraying necessary to keep the plants in a healthy growing condition and to keep the planted areas neat, edged, and attractive. All trees shall be pinched pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old wilted flowers and dead foliage shall be immediately pinched or cut off. Do no major tree pruning without prior written approval of the City.

D. 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.

E. During the maintenance period, should the appearance of any plant indicate weakness, or should any plant be missing, 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.

F. Damage to planting shall be repaired immediately and throughout the maintenance period.

(1) Depressions caused by vehicles, bicycles, or foot traffic shall be filled and leveled.

(2) Exterminate gophers and moles, and repair damage as above.

G. Any plants that do not show a prompt establishment shall be replaced at 30-day intervals until plantings show evidence of establishment as accepted by the Park Department Representative.

3.06 DISEASE AND PEST CONTROL:

Add the following to Standard Specifications Section 308-6: 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.

3.07 CLEAN UP:

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.

20-2.07A HYDROSEEDING MATERIALS:

Add the following new Section 20-2.07A to Standard Specifications.

Hydroseeding Materials:

A. Water: All water used shall be potable domestic water as drawn from the City pressure main. See General Provisions regarding temporary construction meter and charges for water drawn from City fire hydrants.

B. Seed: Turf seed mix as specified.

C. Fiber: Shall conform with Section 20-2.07 of the Standard Specifications. The fiber shall be of such character that when used in the applied mixture, an absorptive or porous mat, but not a membrane, will result on the surface of the ground. Materials which inhibit germination or growth shall not be present in the mixture.

D. Binding Agent: Dry powder organic concentrate, Ecology Controls M-Binder or equal, as available from Robinson Fertilizer Company 714/538-3575.

E. Fertilizer: 16-7-12 (+Iron) resin coated prills, Agriform or approved equal.

20-4 PLANTING

20-4.01 GENERAL:

All work shall conform with Section 20-4 of the Standard Specification except as modified herein.

20-4.03 PREPARING PLANTING AREAS: Add the following new sections to the Standard Specifications:

20-4.03A LANDSCAPE GRADING AND WEED CONTROL MEASURES:

A. The Contractor shall fine grade all planting areas 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. All fill material placed within the top 12" from finish grade elevations in all planting areas shall be topsoil.

B. Upon completion of all landscape grading and installation of the irrigation system, and prior to soil preparation, perform weed control measures as follows:

(1) Irrigate all areas designated to be planted for a minimum of 10 minutes per setting, two settings per day for seven days to germinate all weed seed possible.

(2) Apply a contact weed killer and allow sufficient time to obtain complete kill of all weeds germinated.

(3) Repeat step one above.

(4) Repeat step two above.

20-4.03B SOIL PREPARATION:

A. All fine grading and mounding shall be completed prior to soil preparation.

B. This work shall not commence until the agronomic soils test has been completed and planting is ready to proceed. Should 30 calendar days elapse between completion of soil preparation and commencement of planting, all areas shall be prepared again.

C. All landscape grading and mounding shall be done prior to the adding of any soil amendments. Planting areas with slopes 3:1 and steeper shall not be soil prepared. In all planting areas with gradients less than 3:1, a layer of soil amendments shall be spread and rototilled into the soil to a minimum depth of 4 inches, or as recommended by the soils report, so that the soil shall be loose, friable, and free from rocks, sticks, and other objects undesirable to planting. After incorporating the soil amendments, all landscape areas shall be "dressed out" to maintain and/or reestablish finish grades and flow lines as approved prior to amending the soil. Finish grades will be reinspected upon completion of soil amendment work. Contractor shall not proceed with planting work until finish grades have been reinspected and accepted by the Park Projects Inspector.

D. The following soil amendments shall be added per 1,000 square feet to all planting areas with gradients less than 3:1 (agronomic soil test recommendations shall take precedence where these minimum amounts are exceeded):

(1) 6 cubic yards organic amendment.

(2) 15 pounds commercial fertilizer 14-7-5.

(3) 100 pounds gypsum.

(4) Soil sulfur per soils report.

20-4.05A TURF PLANTING:

Add the following new Section 20-4.05A TURF PLANTING to the Standard Specifications:

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

Fiber	1,000 lbs. per acre/1,500 lbs. per acre on slopes exceeding 3:1
Fertilizer	870 lbs./acre 14-7-5
Seed	As per plan
M-Binder	100 lbs. per acre on slopes
Water	3,000 gal. per acre
Single superphosphate	0-18-0 @ 200 lb./acre
Agricultural Grade Gypsum	500 lb./acre

with agitation system operating 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 1/3 filled with water:

Add binding agent - 1/2 acre requirement.
Add 3 - 50 pound bales of fiber.
Add seed - 1/2 acre requirement.
Add NPK fertilizer - 1/2 acre requirement.

Agitate mixture at full speed when the tank is half-filled with water.

Add remainder fiber requirement, 7 bales before tank is 3/4 full. Slurry distribution should begin immediately.

Area to be hydroseeded shall be moistened to a depth of six 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 application. Slurry shall be immediately removed from walks, structures, trees, shrubs, that are inadvertently sprayed.

All bare spots shall be reseeded by the Contractor within 10 days. The Contractor shall be responsible for all reseeded areas for as long after seeding as necessary until acceptable germination and establishment is realized and approved by the City.

The slurry shall not be sprayed on undesignated areas. Any slurry spilled or sprayed into areas other than those designated to receive spray shall be cleaned up at the Contractor's expense to the satisfaction of the City.

20-4.08 PLANT ESTABLISHMENT:

Amend the Standard Specifications Section 20-4.08 to read: All areas landscaped by the Contractor under this contract shall be maintained by him for a plant establishment period of not less than ninety (90) Calendar days from the date of written acceptance for start of plant establishment.

20-4.08A START OF PLANT ESTABLISHMENT:

Add the following to Standard Specifications Section 20-4.08:

A. Start of Plant Establishment Criteria:

(1) The Plant Establishment period shall not start until all elements of the project are completed in accordance with the contract documents. Projects will NOT be segmented into phases.

(2) Permanent electrical power connection to remote controllers shall be provided prior to the beginning of the plant establishment.

(3) The plant establishment period for the project shall not begin until after the first mowing of the turf area. New turf shall not be mowed until attaining a height of 2 inches. Turf shall be maintained at a mowing height of 2 inches.

(4) written acceptance of the City of Riverside Park and Recreation Department must be obtained prior to the beginning of the plant establishment period.

(5) If the project maintenance fails to continuously meet standards required for start of plant establishment, the plant establishment period will be suspended the project will be placed on extended maintenance and the plant establish period will not recommence until Contractor has corrected all deficiencies

20-4.08B PLANT ESTABLISHMENT TASKS:

Add the following to Standard Specifications Section 20-4.08:

A. General: During the plant establishment period provide all watering, weeding, mowing, fertilizing and 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 pinched pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old wilted flowers and dead foliage shall be immediately pinched or cut off. Do no major tree pruning without proper approval of the City.

B. Iron Chlorosis: After planting and during the plant establishment period, in the event that any plantings exhibit iron chlorosis symptoms, apply FE 138 Geigy or equivalent at manufacturer's recommended rates.

C. Replacement Plantings: During the plant establishment period, should the appearance of any plant indicate weakness, that plant shall be replaced immediately with a new, healthy plant. At the end of the plant establishment period, all plant materials shall be in a healthy, growing condition and spaced as indicated on the plans.

D. Fertilization: The Contractor shall apply commercial fertilizer to all turf areas at a rate of 10 pounds per 1000 square feet, and all groundcover areas at a rate of 5 pounds per 1,000 square feet, at 30-day intervals, for 3 applications as a minimum, above and beyond the original soil preparation application.

E. Planting Establishment: Any plantings that do not show a prompt establishment of plant material shall be replaced at 30-day intervals until accepted by the Park Department Representative. If a good rate of growth has not been demonstrated within 30 days of first planting/hydroseeding, the Contractor shall be responsible to determine the appropriate horticultural practices necessary to obtain good growth. The Contractor shall obtain agronomic soils testing of all areas not showing good growth and shall provide copies of the test results to the City to verify the appropriateness of all plant establishment work performed. If additional soil amendments are needed, up to a maximum 25% beyond the amount specified, such amendments shall be provided by the Contractor at no additional cost to the City.

F. Grading and Drainage: During the plant establishment period all flow lines shall be maintained to allow for free flow of surface water. Displaced material which interferes with drainage shall be removed and placed as directed. Low spots and pockets shall be graded to drain properly. Jute netting shall be installed at flow lines and other locations where erosion is evident, when directed by the inspector.

(1) Damage to planting areas shall be repaired immediately and throughout the plant establishment period. Depressions caused by vehicles, bicycles, or foot traffic shall be filled and leveled. Replant damaged areas.

(2) All paved areas shall be washed and maintained in a neat and clean condition at all times.

(3) All subsurface drains shall be periodically flushed with clear water to avoid build up of silt and debris. Keep all drain inlets clear of leaves, trash, and other debris.

(4) Debris and trash shall be removed from the site weekly at a minimum.

G. Disease and Pest Control: Throughout the plant establishment 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, exterminate gophers, moles, and all other rodents, and repair damage.

20-4.08C END OF PLANT ESTABLISHMENT PERIOD:

A. When the contractor believes he has completed the plant establishment period and the plantings meet all of the criteria required for the end of plant establishment as defined below, he shall request inspection of the project. The City will inspect the project for end of plant establishment. Deficiencies noted during inspection shall extend the plant establishment period until all are corrected.

B. All planting areas shall show a good rate of growth and shall be well established "filled in" plantings free of voids. Bare areas will be unacceptable. Contractor shall provide sod or planting from flats as necessary to fill in all bare areas. Such sod or plantings shall be planted a minimum of 10 days prior to the end of plant establishment and shall have roots "knit-in" to the native soil.

C. End of the plant establishment period shall occur only upon written acceptance of the project for maintenance by the City.

20-4.08D CLEAN UP:

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.

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(714) 581-2112

MARK	REVISIONS	APPR	DATE

DESIGNED BY____ DRAWN BY____ CHECKED BY____

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY
PRINCIPAL ENGINEER		
PARK DEPARTMENT	6-22-89	CS
TRAFFIC DIVISION		
CHIEF P.W. ENGINEER		

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 6/27/89

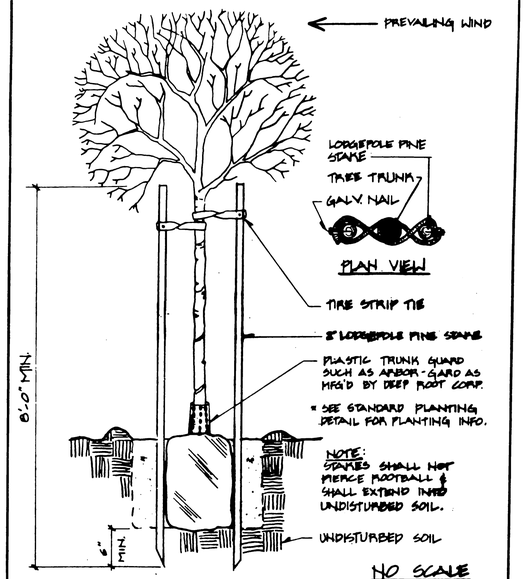
PLANTING SPECIFICATIONS

PREMIER HOMES AT LA SIERRA
TRACT 22759
PREMIER HOMES
1787 POMONA ROAD, SUITE K, CORONA, CALIFORNIA 91720
(714) 272-8111

HORIZ. SCALE: 1"= — VERT. SCALE: 1"= —

ACCOUNT NO
R-3029 L
SHEET L-5 OF 7
JOB #2160

PC 2641

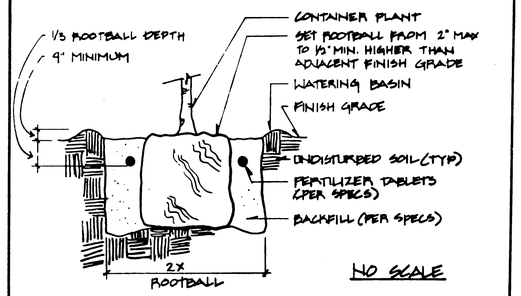


Approved / Date	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date 4-10-86	DOUBLE STAKING DETAIL	1002

GENERAL PLANTING NOTES

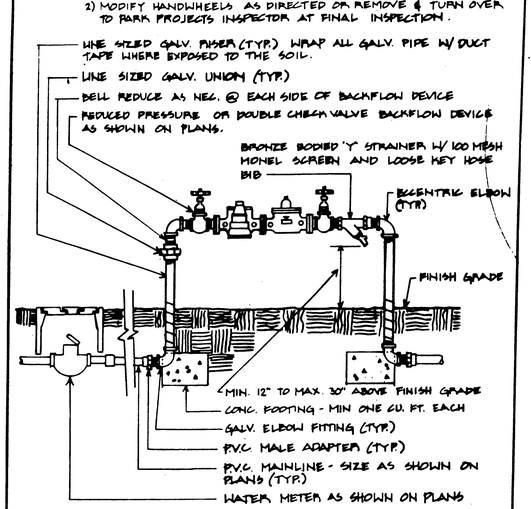
1) Contact the Park Project Inspector at 787-7223 48 hours prior to installing any plant material.
2) Trees planted in turf areas shall be maintained with a minimum 12" radius around tree free from turf throughout the maintenance period.
3) Watering basins may be removed after the maintenance period.
4) For staking information as applicable, refer to standard staking detail.
5) For guying information as applicable, refer to standard guying detail.
6) For specification information, refer to City of Riverside Park and Recreation Department Standard Specifications sections 02480/02401.
7) Provide Fertilizer Tablets as follows:

1 gallon plant	2 tablets
5 gallon plant	3 tablets
15 gallon plant	5 tablets
24" box plant	8 tablets

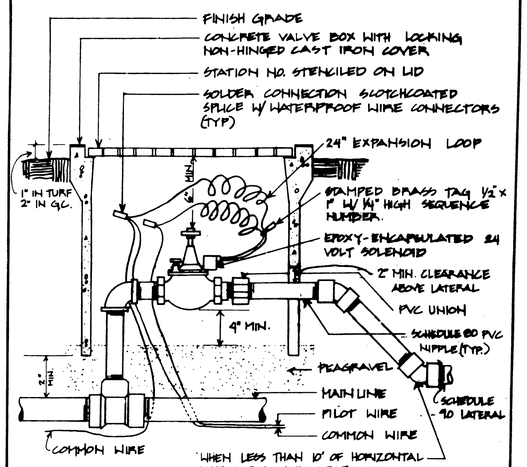


Approved / Date 4/18/86	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date	PLANTING DETAIL	1001

NOTES: 1) INSTALL BACKFLOW DEVICE SQUARE WITH HARDSCAPE ELEMENT AS APPROVED BY THE PARK PROJECTS INSPECTOR IN THE FIELD.
2) MODIFY HANDWHEELS AS DIRECTED OR REMOVE & TURN OVER TO PARK PROJECTS INSPECTOR AT FINAL INSPECTION.



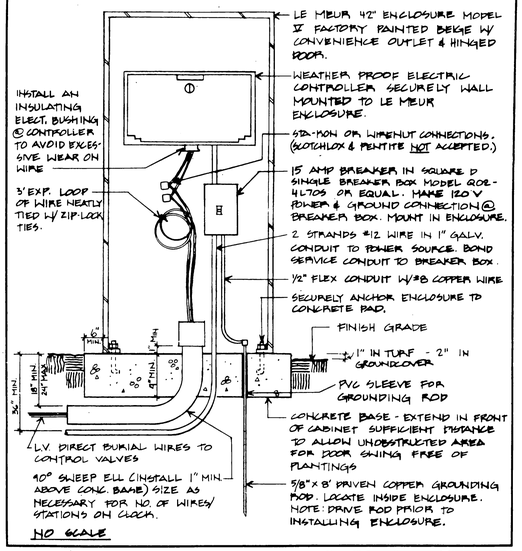
Approved / Date 7/2/86	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date	REDUCED PRESSURE/DOUBLE CHECK VALVE BACKFLOW DEVICE	4011



NOTES: 1) EACH VALVE SHALL HAVE ITS OWN TEE OR ELL CONNECTION TO THE MAINLINE. NO MANIFOLD CONNECTIONS
2) PROVIDE MINIMUM 3' CLEAR DISTANCE BETWEEN VALVES.
3) INSTALL VALVE BOX IN A MANNER THAT BOX DOES NOT REST ON ANY IRRIGATION LINE.

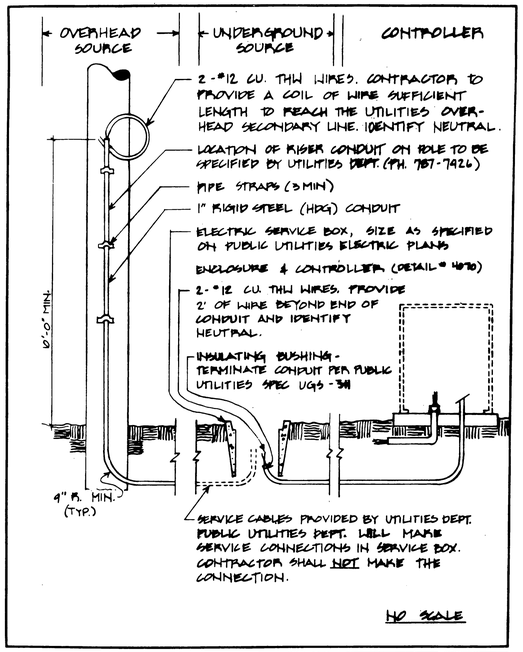
NO SCALE

Approved / Date 10-27-86	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date	AUTOMATIC VALVE	4030



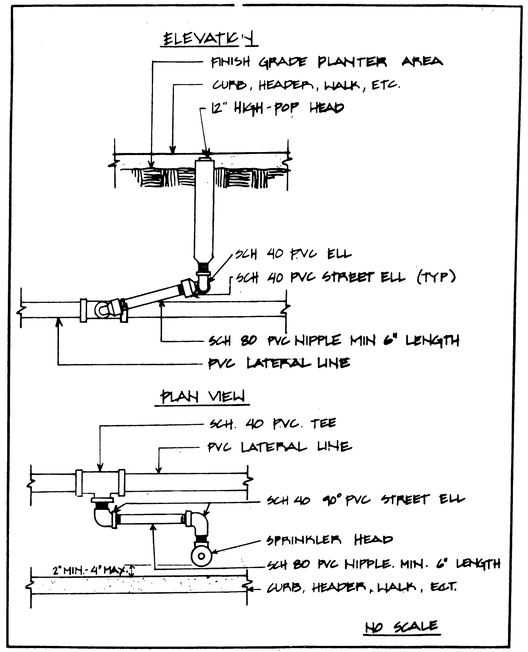
NO SCALE

Approved / Date 10-27-86	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date	CONTROLLER	4070



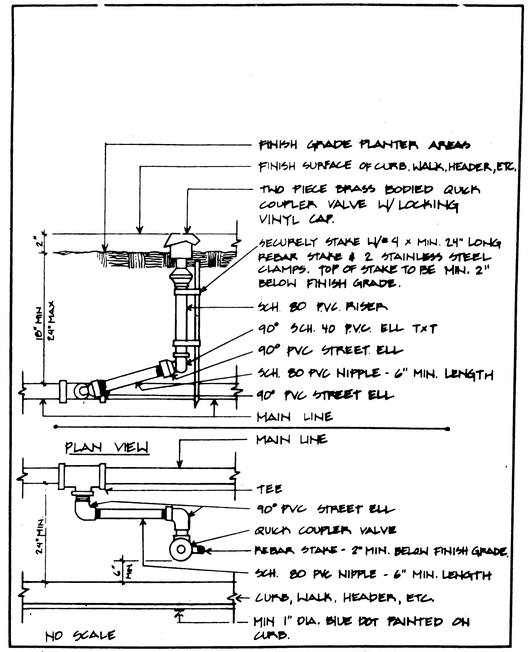
NO SCALE

Approved / Date 10-27-86	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date	UTILITY SERVICE	4060



NO SCALE

Approved / Date 10-27-86	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date	SPRAY HEAD	4040



NO SCALE

Approved / Date 10-27-86	Park & Recreation Department CITY OF RIVERSIDE	Detail No.
Revised / Date	QUICK COUPLER	4050

SEE SHEET L-4 FOR THE EMITTER ON RISER DETAIL

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CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

	APPROVED BY	DATE	BY
	PRINCIPAL ENGINEER		
	PARK DEPARTMENT	6-27-89	
	TRAFFIC DIVISION		
	CHIEF P. W. ENGINEER		

MARK REVISIONS APPR DATE

DESIGNED BY ____ DRAWN BY ____ CHECKED BY ____

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 6-27-89

PLANTING AND IRRIGATION DETAILS

PREMIER HOMES AT LA SIERRA
TRACT 22759
PREMIER HOMES
1787 POMONA ROAD, SUITE K, CORONA, CALIFORNIA 91720
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ACCOUNT NO. R-3029 L

SHEET L-6 OF 7

HORIZ. SCALE: 1" = — VERT. SCALE: 1" = —

JOB # 2060

PC 2641