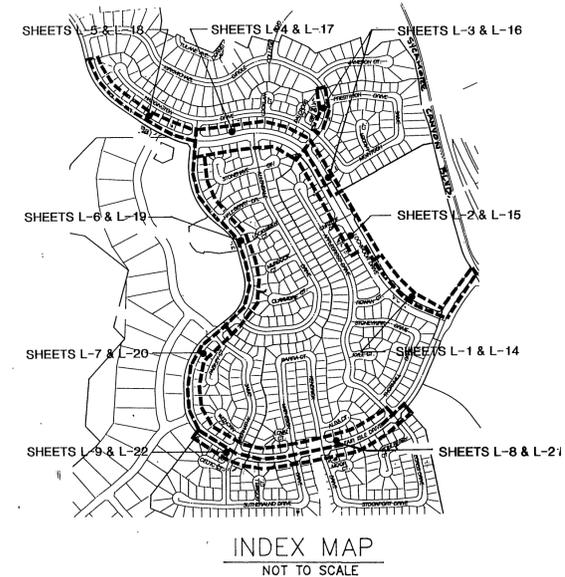


LANDSCAPE PLANS FOR:
SYCAMORE HIGHLANDS LMD
 RIVERSIDE, CALIFORNIA

PREPARED FOR:
WELLS FARGO BANK
 C/O TAVA DEVELOPMENT COMPANY
 15101 REDHILL AVENUE, SUITE 100
 TUSTIN, CALIFORNIA 92680
 (714) 258 - 1415



GENERAL NOTES

ALL WORK SHALL CONFORM TO ALL APPLICABLE CITY/COUNTY CODES. SEE CIVIL ENGINEERS PLANS FOR GRADES/ ELEVATIONS

LEGEND

APPROVALS

TITLE	SIGNATURE	DATE	TITLE	SIGNATURE	DATE
Park & Recreation - Sub Park Planner	<i>Michael W. Johnson</i>	12-12-95			

REVISIONS

NO.	DATE	REVISIONS BY:	APPROVAL	DATE	NO.	DATE	REVISIONS BY:	APPROVAL	DATE

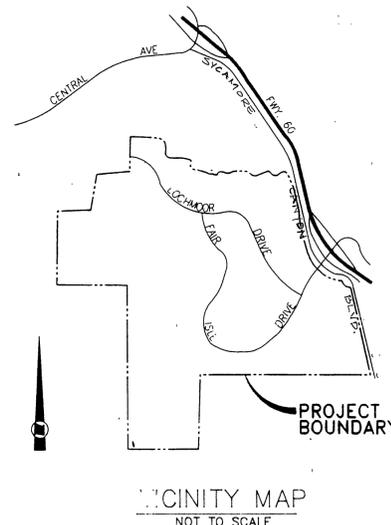
THIS APPROVAL IS FOR SHEETS 1-25

CITY OF RIVERSIDE
 PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY	APPROVED BY
PRINCIPAL ENGINEER	11/19/95	LHA	<i>Darryl Beck</i>
PARK DEPARTMENT	12/12/95	LHA	PUBLIC WORKS DIRECTOR
TRAFFIC DIVISION	12/12/95	LHA	
CHIEF P. W. ENGINEER	12/12/95	LHA	DATE 12/8/95

SHEET INDEX

DESCRIPTION	SHEET NO.	DESCRIPTION	SHEET NO.
COVER SHEET	L- 1	PLANTING PLAN	L-16
IRRIGATION PLAN	L- 2	PLANTING PLAN	L- 17
IRRIGATION PLAN	L- 3	PLANTING PLAN	L-18
IRRIGATION PLAN	L- 4	PLANTING PLAN	L-19
IRRIGATION PLAN	L- 5	PLANTING PLAN	L-20
IRRIGATION PLAN	L- 6	PLANTING PLAN	L-21
IRRIGATION PLAN	L- 7	PLANTING PLAN	L-22
IRRIGATION PLAN	L- 8	PLANTING PLAN	L-23
IRRIGATION PLAN	L- 9	PLANTING DETAILS	L-24
IRRIGATION PLAN	L-10	PLANTING SPECS	L-25
IRRIGATION NOTES	L-11		
IRRIGATION DETAILS	L-12		
IRRIGATION SPECS	L-13		
IRRIGATION SPECS	L-14		
PLANTING PLAN	L-15		



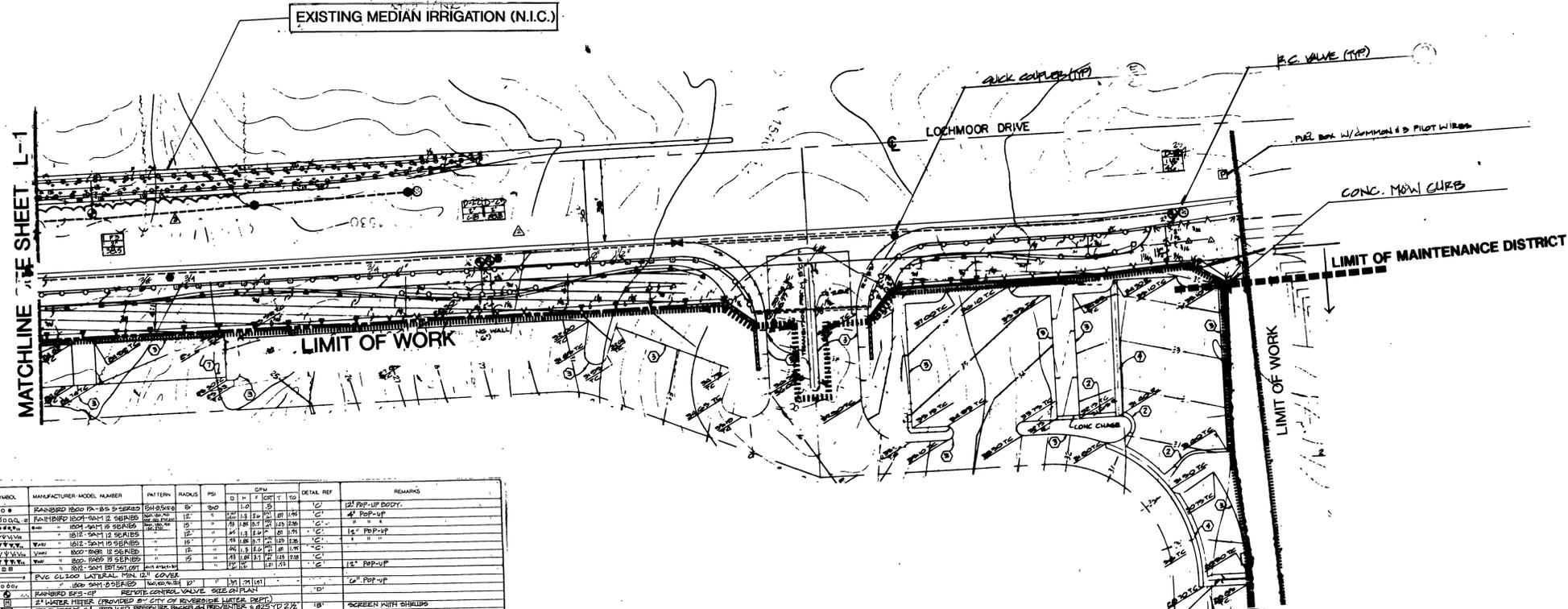
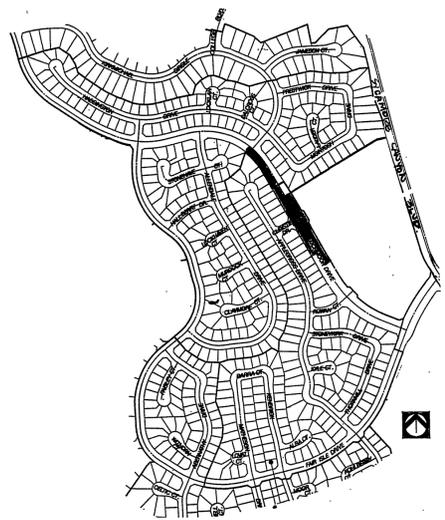
3612 SEVENTH STREET
 RIVERSIDE, CALIFORNIA
 92501
 (909) 781-1930
 LIC. #1512
 FAX (909) 686-8091

BASE SHEET INFORMATION DERIVED FROM:

THE KEITH COMPANIES
 22690 CACTUS DR. #300
 MORENO VALLEY, CALIFORNIA
 (909) 653 - 0234

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SYMBOL	MANUFACTURER MODEL NUMBER	PATTERN	RADIUS	PSI	GPM	DETAIL REF.	REMARKS
1	STANDARD 1800 PA-B5 5/8" SCHEDULE 40	5/8" SCHEDULE 40	18"	150	1.5	1/2"	1/2" POP-UP BODY
2	STANDARD 1800 PA-B5 5/8" SCHEDULE 40	5/8" SCHEDULE 40	18"	150	1.5	1/2"	1/2" POP-UP
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IRRIGATION LEGEND
THIS LEGEND FOR TOP OF SHEET DRAWING ONLY.

NOTE: WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANTS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. (TYPICAL)

NOTE: REFER TO SHEET L-10 FOR IRRIGATION LEGEND AND GENERAL NOTES. REFER TO SHEET L-12 AND SHEET L-13 FOR IRRIGATIONS SPECIFICATIONS. REFER TO SHEET L-11 FOR CONSTRUCTION DETAILS.

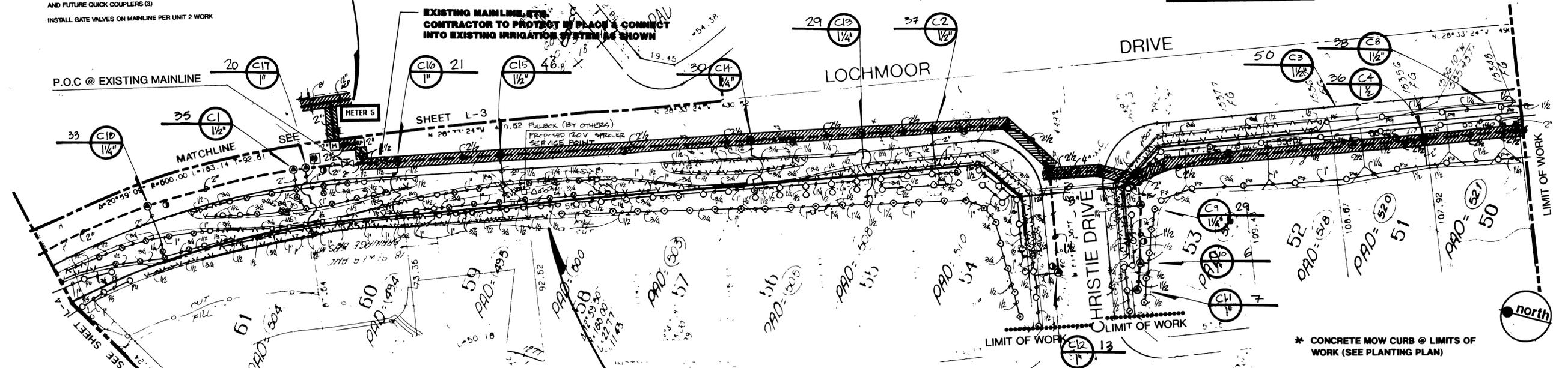
WATER LINES UPSTREAM OF IRRIGATION METERS ARE SHOWN FOR GENERAL INFORMATION ONLY, BECAUSE IT WAS REQUESTED BY THE CITY OF RIVERSIDE WATER DEPARTMENT. THEY ARE DIAGRAMMATIC AND APPROXIMATED. THE WATER METERS SHOULD BE INSTALLED FOLLOWING THE WATER PLANS AS PROVIDED BY THE ENGINEER (THE KEITH COMPANIES). TYPICAL FOR ALL IRRIGATION METERS SHOWN ON THESE PLANS.

MAKE POINT OF CONNECTION IMMEDIATELY DOWNSTREAM OF NEW 2" IRRIGATION METER TO BE PROVIDED BY COR. P.O.V. REFER TO WATER IMPROVEMENT PLANS FOR ADDITIONAL INFORMATION, AND EXTEND NEW PRESSURE LINE AS SHOWN. PIPE TO METER AND TO BACKFLOW UNIT TO BE TYPE 'K' COPPER OR AS PER LOCAL CODE.

STATIC WATER PRESSURE 88 PSI
SYSTEM DESIGN PRESSURE 88 PSI
PEAK IRRIGATION DEMAND 67 GPM

PROVIDE 2 1/2" MAINLINE SERVICE FROM P.O.C.
PROVIDE STUBOUTS IN VALVE BOXES FOR FUTURE VALVES C15-C19 & C2 AND FUTURE QUICK COUPLERS (3)
INSTALL GATE VALVES ON MAINLINE PER UNIT 2 WORK

ADJUST ALL SPRINKLER HEADS FOR HEAD TO HEAD COVERAGE.



AUTOMATIC IRRIGATION CONTROLLER: RAIN BIRD ISC-32, TO BE ENCLOSED IN A "LE MEUR" VANDAL RESISTANT CONTROLLER ENCLOSURE SEE CONSTRUCTION DETAIL NO. 4070 SHEET L-11 120 VOLT POWER STUB-OUT AT THIS LOCATION BY OTHERS.

* CONCRETE MOW CURB @ LIMITS OF WORK (SEE PLANTING PLAN)

UNAUTHORIZED CHANGES AND USES
CAUTION: SCALITER IRRIGATION WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THE IRRIGATION PLAN. ALL CHANGES TO THE IRRIGATION PLAN MUST BE IN WRITING AND MUST BE APPROVED BY SCALITER IRRIGATION.

SCALITER IRRIGATION
IRRIGATION DESIGN-WATER MANAGEMENT
REDLANDS, CALIFORNIA 92374
(714) 794-5811 (714) 794-5873

RA
LANDSCAPE ARCHITECTS PLANNERS, INC.
3612 SEVENTH STREET
RIVERSIDE, CALIFORNIA 92501
(909) 781-1930
FAX (909) 686-8091
LICENSE #1512

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT
APPROVED BY: DATE: BY: APPROVED BY: DATE: BY:
PRINCIPAL ENGINEER: 11/7/95: [Signature]: SEE APPROVAL
PUBLIC WORKS DIRECTOR: ON SHEET 1
TRAFFIC DIVISION: 12/7/95: [Signature]:
CHIEF P.W. ENGINEER: 1/7/96: [Signature]:

IRRIGATION PLAN
SYCAMORE HIGHLANDS TRACT #22408
RHA #95112
ACCOUNT NO.
R-3073-LP
SHEET L-3 OF 25
HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" = 10'

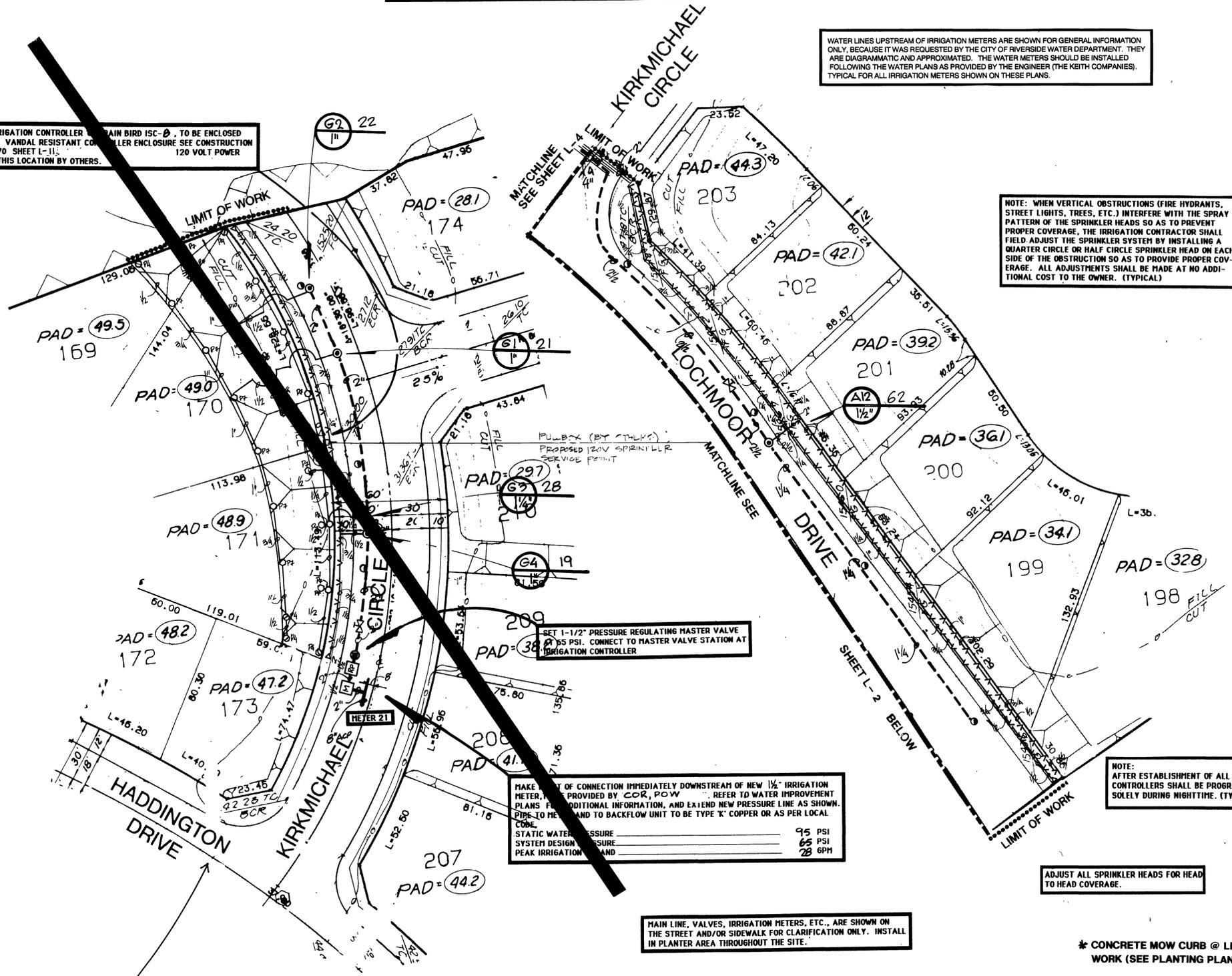
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NOTE:
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WATER LINES UPSTREAM OF IRRIGATION METERS ARE SHOWN FOR GENERAL INFORMATION ONLY, BECAUSE IT WAS REQUESTED BY THE CITY OF RIVERSIDE WATER DEPARTMENT. THEY ARE DIAGRAMMATIC AND APPROXIMATED. THE WATER METERS SHOULD BE INSTALLED FOLLOWING THE WATER PLANS AS PROVIDED BY THE ENGINEER (THE KEITH COMPANIES). TYPICAL FOR ALL IRRIGATION METERS SHOWN ON THESE PLANS.

AUTOMATIC IRRIGATION CONTROLLER MAIN BIRD ISC-Ø, TO BE ENCLOSED IN A "LE MEUR" VANDAL RESISTANT CONTROLLER ENCLOSURE SEE CONSTRUCTION DETAIL NO. 4070 SHEET L-11; STUB-OUT AT THIS LOCATION BY OTHERS. 120 VOLT POWER

NOTE: WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANTS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. (TYPICAL)



SET 1-1/2" PRESSURE REGULATING MASTER VALVE @ 35 PSI. CONNECT TO MASTER VALVE STATION AT IRRIGATION CONTROLLER

MAKE POINT OF CONNECTION IMMEDIATELY DOWNSTREAM OF NEW 1/2" IRRIGATION METER. REFER TO WATER IMPROVEMENT PLANS FOR ADDITIONAL INFORMATION, AND EXTEND NEW PRESSURE LINE AS SHOWN. PIPE TO METER AND TO BACKFLOW UNIT TO BE TYPE 'K' COPPER OR AS PER LOCAL CODE.
 STATIC WATER PRESSURE: 95 PSI
 SYSTEM DESIGN PRESSURE: 65 PSI
 PEAK IRRIGATION DEMAND: 28 GPM

MAIN LINE, VALVES, IRRIGATION METERS, ETC., ARE SHOWN ON THE STREET AND/OR SIDEWALK FOR CLARIFICATION ONLY. INSTALL IN PLANTER AREA THROUGHOUT THE SITE.

ADJUST ALL SPRINKLER HEADS FOR HEAD TO HEAD COVERAGE.

* CONCRETE MOW CURB @ LIMITS OF WORK (SEE PLANTING PLAN).

THIS DRAWING N.I.C.

SCALITER IRRIGATION
 IRRIGATION DESIGN-WATER MANAGEMENT
 902 AARON DRIVE
 REDLANDS, CALIFORNIA 92374
 (714) 794-5811 (714) 794-5873



3612 SEVENTH STREET
 RIVERSIDE, CALIFORNIA 92501
 (909) 781-1930
 FAX (909) 686-8091
 LICENSE #1512

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE		PUBLIC WORKS DEPARTMENT	
APPROVED BY	DATE	BY	DATE
PRINCIPAL ENGINEER	11/17/96		
PARK DEPARTMENT	12/2/96		
TRAFFIC DIVISION	12/19/96		
CHIEF P.W. ENGINEER	12/19/96		
APPROVED BY	DATE		

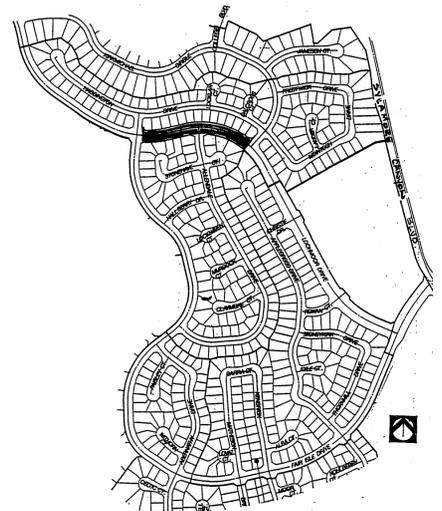
IRRIGATION PLAN RHA #95112

SYCAMORE HIGHLANDS TRACT #22408 ACCOUNT NO. R-3073-LP

SHEET L-4 OF 25

HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" = 10'

INDEXED 2/28/96 bth PC-2926-R

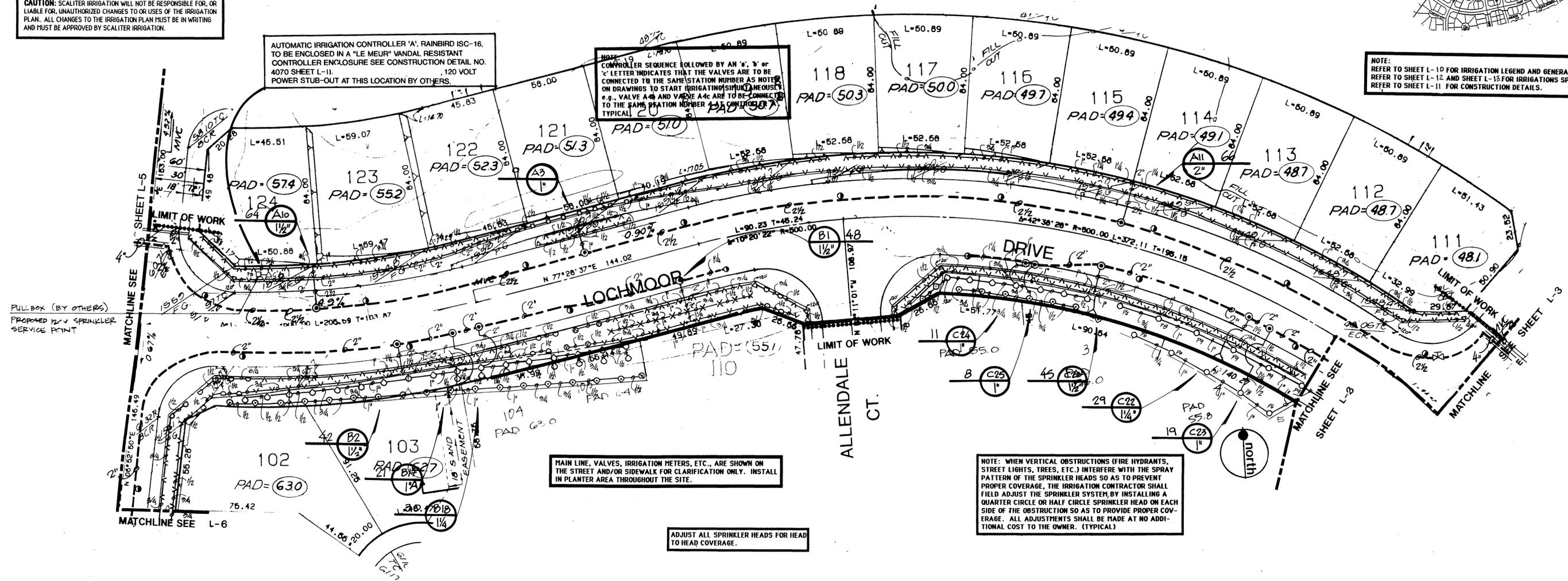


UNAUTHORIZED CHANGES AND USES
CAUTION: SCALITER IRRIGATION WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THE IRRIGATION PLAN. ALL CHANGES TO THE IRRIGATION PLAN MUST BE IN WRITING AND MUST BE APPROVED BY SCALITER IRRIGATION.

AUTOMATIC IRRIGATION CONTROLLER 'A', RAINEBIRD ISC-16, TO BE ENCLOSED IN A "LE MEUR" VANDAL RESISTANT CONTROLLER ENCLOSURE SEE CONSTRUCTION DETAIL NO. 4070 SHEET L-11. 120 VOLT POWER STUB-OUT AT THIS LOCATION BY OTHERS.

NOTE: 'a', 'b' or 'c' LETTER INDICATES THAT THE VALVES ARE TO BE CONNECTED TO THE SAME STATION NUMBER AS NOTED ON DRAWINGS TO START IRRIGATING SIMULTANEOUSLY. e.g., VALVE A4 AND VALVE A4c ARE TO BE CONNECTED TO THE SAME STATION NUMBER (A4 CONTROLLER) TYPICAL

NOTE: REFER TO SHEET L-10 FOR IRRIGATION LEGEND AND GENERAL NOTES. REFER TO SHEET L-12 AND SHEET L-13 FOR IRRIGATIONS SPECIFICATIONS. REFER TO SHEET L-11 FOR CONSTRUCTION DETAILS.



MAIN LINE, VALVES, IRRIGATION METERS, ETC., ARE SHOWN ON THE STREET AND/OR SIDEWALK FOR CLARIFICATION ONLY. INSTALL IN PLANTER AREA THROUGHOUT THE SITE.

ADJUST ALL SPRINKLER HEADS FOR HEAD TO HEAD COVERAGE.

NOTE: WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANTS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. (TYPICAL)

SI SCALITER IRRIGATION
 IRRIGATION DESIGN-WATER MANAGEMENT
 902 AARON DRIVE
 REDLANDS, CALIFORNIA 92374
 (714) 794-5811 (714) 794-5873

RA LANDSCAPE ARCHITECTS PLANNERS, INC.
 3612 SEVENTH STREET
 RIVERSIDE, CALIFORNIA 92501
 (909) 781-1930
 FAX (909) 686-8091
 LICENSE #1512

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE			
PUBLIC WORKS DEPARTMENT			
APPROVED BY	DATE	BY	DATE
PRINCIPAL ENGINEER	11/17/95	WJA	11/17/95
PARK DEPARTMENT	10/20/95	WJA	10/20/95
TRAFFIC DIVISION			
CHIEF P.W. ENGINEER	2/1/96	WJA	2/1/96
APPROVED BY		DATE	
SEE APPROVAL		ON SHEET 1	
PUBLIC WORKS DIRECTOR		DATE	

IRRIGATION PLAN		RHA #95112
SYCAMORE HIGHLANDS		ACCOUNT NO.
TRACT #22408		R-3073-LP
SHEET L-5 OF 25		SHEET L-5 OF 25
HORIZ. SCALE: 1" = 30'		VERT. SCALE: 1" = 10'

UNAUTHORIZED CHANGES AND USES

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MAKE POINT OF CONNECTION IMMEDIATELY DOWNSTREAM OF NEW 2" IRRIGATION METERS TO BE PROVIDED BY COR. POW REFER TO WATER IMPROVEMENT PLANS FOR ADDITIONAL INFORMATION, AND EXTEND NEW PRESSURE LINE AS SHOWN PIPE TO METER AND TO BACKFLOW LIMIT TO BE TYPE 'C' COPPER OR AS PER LOCAL CODE. STATE WATER PRESSURE SYSTEM DESIGN PRESSURE PEAK IRRIGATION DEMAND

ADJUST ALL SPRINKLER HEADS FOR HEAD TO HEAD COVERAGE.

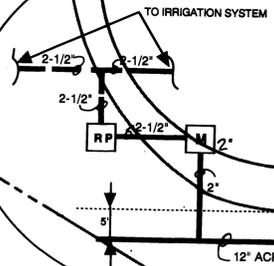
AUTOMATIC IRRIGATION CONTROLLER 'B', RAIN BIRD ISC-24, TO BE ENCLOSED IN A "LE MEUR" VANDAL RESISTANT CONTROLLER ENCLOSURE SEE CONSTRUCTION DETAIL NO. 4070 SHEET E-211 120 VOLT POWER STUB-OUT AT THIS LOCATION BY OTHERS.

NOTE: AFTER ESTABLISHMENT OF ALL PLANT MATERIAL CONTROLLERS SHALL BE PROGRAMMED TO IRRIGATE SOLELY DURING NIGHTTIME. (TYPICAL)

NOTE: WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANTS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. (TYPICAL)

NOTE: CONTROLLER SEQUENCE FOLLOWED BY AN 'a', 'b' or 'c' LETTER INDICATES THAT THE VALVES ARE TO BE CONNECTED TO THE SAME STATION NUMBER AS NOTED ON DRAWINGS TO START IRRIGATING SIMULTANEOUSLY. E.G., VALVE A4b AND VALVE A4c ARE TO BE CONNECTED TO THE SAME STATION NUMBER 4 AT CONTROLLER 'A'. TYPICAL.

METER 11 SCHEMATIC ENLARGEMENT NOT TO SCALE



MAIN LINE, VALVES, IRRIGATION METERS, ETC., ARE SHOWN ON THE STREET AND/OR SIDEWALK FOR CLARIFICATION ONLY. INSTALL IN PLANTER AREA THROUGHOUT THE SITE.

NOTE: REFER TO SHEET L-10 FOR IRRIGATION LEGEND AND GENERAL NOTES. REFER TO SHEET L-12 AND SHEET L-13 FOR IRRIGATIONS SPECIFICATIONS. REFER TO SHEET L-11 FOR CONSTRUCTION DETAILS.

#CONCRETE MOW CURB @ LIMITS OF WORK (SEE PLANTING PLAN)



SI SCALITER IRRIGATION
IRRIGATION DESIGN-WATER MANAGEMENT
902 AARON DRIVE
REDLANDS, CALIFORNIA 92374
(714) 794-5511 (714) 794-5573

RA LANDSCAPE ARCHITECTS PLANNERS, INC.
3612 S. BENTLEY STREET
RIVERSIDE, CALIFORNIA 92501
(909) 781-1930
FAX (909) 686-8091
LICENSE #1512

**CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT**

APPROVED BY: DATE: BY: APPROVED BY: DATE: BY:
PRINCIPAL ENGINEER: 11/17/95: [Signature]: SEE APPROVAL
PARK DEPARTMENT: 12/12/95: [Signature]: PUBLIC WORKS DIRECTOR
TRAFFIC DIVISION: ON SHEET 1
CHIEF P.W. ENGINEER: 12/12/95: [Signature]: DATE

IRRIGATION PLAN
SYCAMORE HIGHLANDS
TRACT #22408

RHA #95112
ACCOUNT NO.
R-3073-LP
SHEET L-7 OF 25

HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" =

INDEXED 2/28/96 GHL

PC-2926-R

UNAUTHORIZED CHANGES AND USES

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MAKE POINT OF CONNECTION IMMEDIATELY DOWNSTREAM OF NEW 2" IRRIGATION METER TO BE PROVIDED BY COR. POW. REFER TO WATER IMPROVEMENT PLANS FOR ADDITIONAL INFORMATION, AND EXTEND NEW PRESSURE LINE AS SHOWN. PIPE TO METER AND TO BACKFLOW UNIT TO BE TYPE 'K' COPPER OR AS PER LOCAL CODE.

STATIC WATER PRESSURE _____ 57 PSI
 SYSTEM DESIGN PRESSURE _____ 57 PSI
 PEAK IRRIGATION DEMAND _____ 45 GPM

ADJUST ALL SPRINKLER HEADS FOR HEAD TO HEAD COVERAGE.

NOTE:
 REFER TO SHEET L-10 FOR IRRIGATION LEGEND AND GENERAL NOTES.
 REFER TO SHEET L-12 AND SHEET L-13 FOR IRRIGATIONS SPECIFICATIONS.
 REFER TO SHEET L-11 FOR CONSTRUCTION DETAILS.

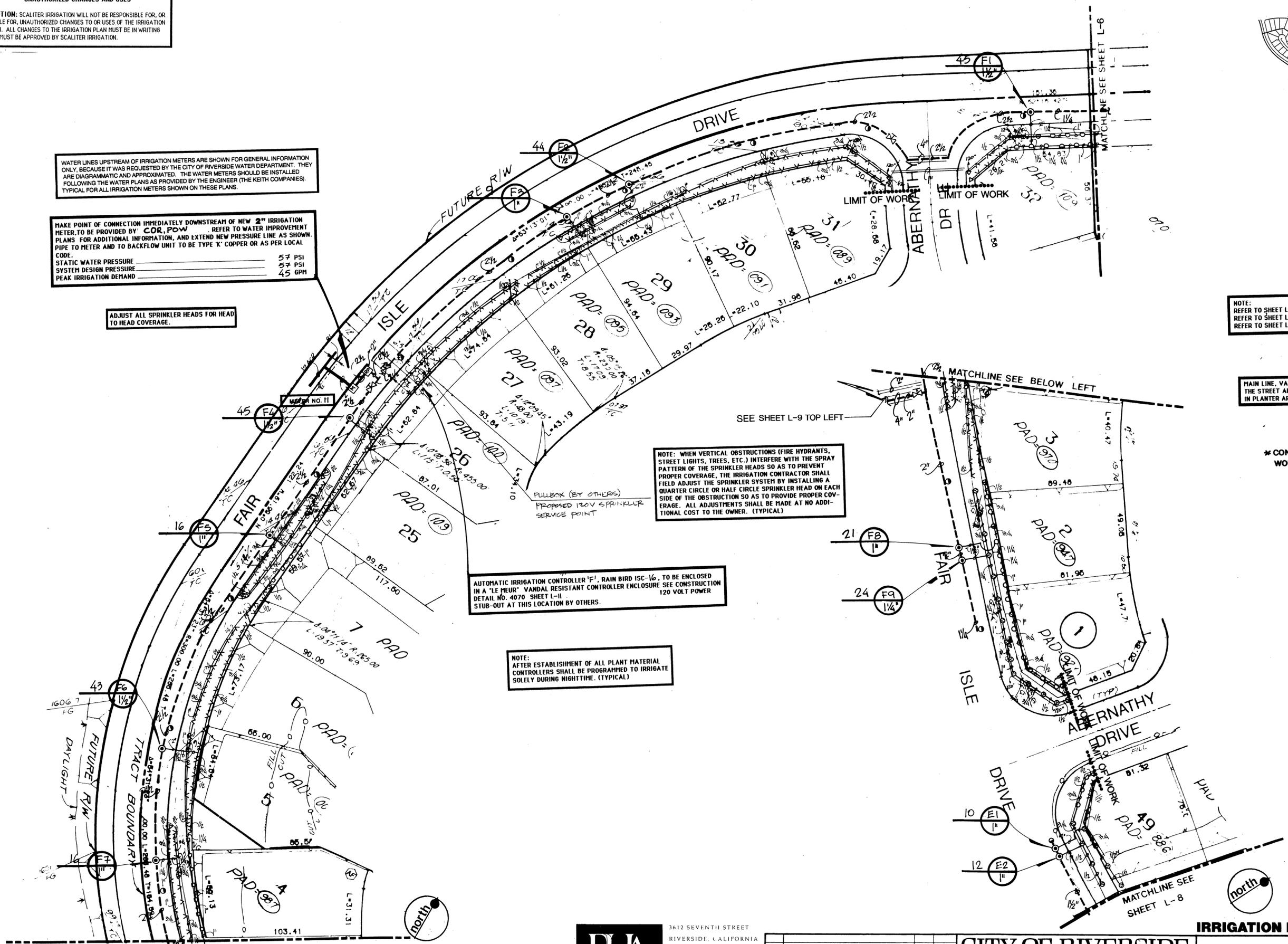
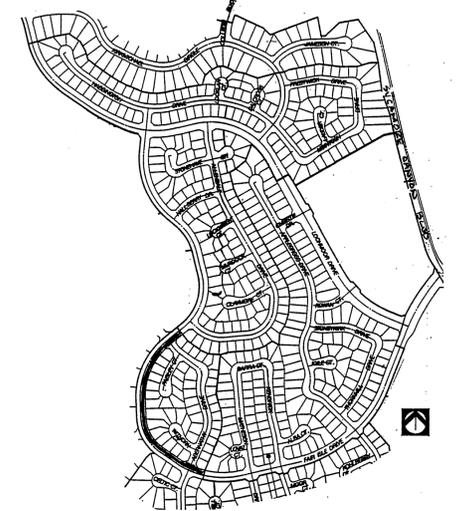
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* CONCRETE MOW CURB @ LIMITS OF WORK (SEE PLANTING PLAN)

NOTE: WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANTS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. (TYPICAL)

AUTOMATIC IRRIGATION CONTROLLER 'F', RAIN BIRD ISC-16, TO BE ENCLOSED IN A 'LE MEUR' VANDAL RESISTANT CONTROLLER ENCLOSURE SEE CONSTRUCTION DETAIL NO. 4070 SHEET L-11. STUB-OUT AT THIS LOCATION BY OTHERS.

NOTE:
 AFTER ESTABLISHMENT OF ALL PLANT MATERIAL CONTROLLERS SHALL BE PROGRAMMED TO IRRIGATE SOLELY DURING NIGHTTIME. (TYPICAL)



SCALITER IRRIGATION
 IRRIGATION DESIGN-WATER MANAGEMENT
 902 ALDRICH DRIVE
 REDLANDS, CALIFORNIA 92374
 (714) 794-5811 (714) 794-5873

3612 SEVENTH STREET
 RIVERSIDE, CALIFORNIA 92501
 (909) 781-1430
 FAX (909) 888-8191
 LICENSE #1512

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

MARK	REVISIONS	APPR.	DATE

APPROVED BY _____ DATE _____
 PRINCIPAL ENGINEER
 PARK DEPARTMENT
 TRAFFIC DIVISION
 CHIEF P.W. ENGINEER

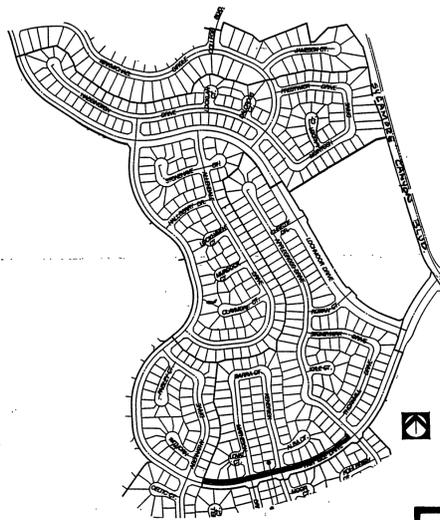
APPROVED BY _____ DATE _____
 PUBLIC WORKS DIRECTOR
 ON SHEET 1

IRRIGATION PLAN RHA #95112

SYCAMORE HIGHLANDS
TRACT #22408

ACCOUNT NO. _____
 R-3073-LP
 SHEET L-8 OF 25

HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" = _____



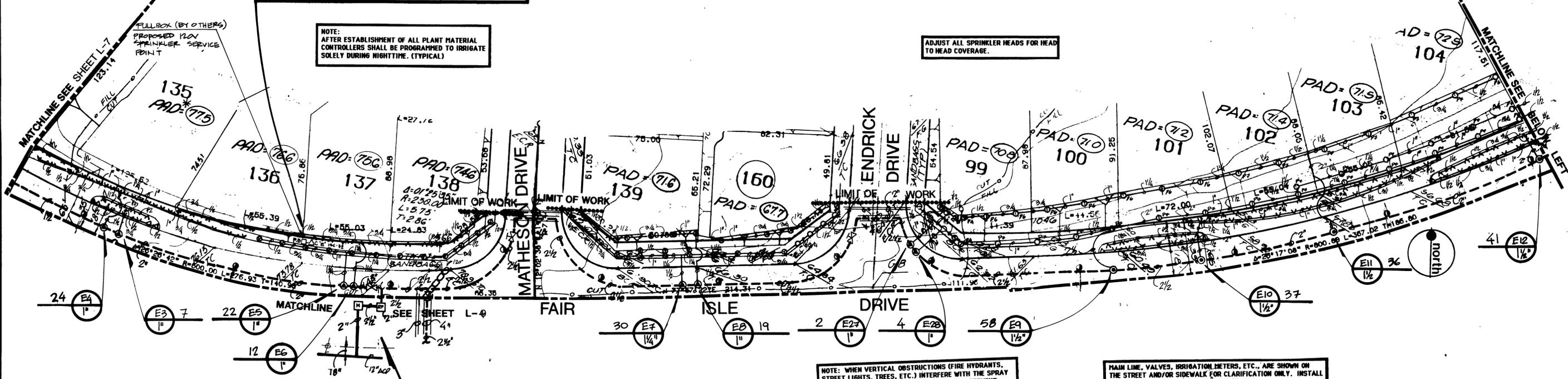
UNAUTHORIZED CHANGES AND USES
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 REFER TO SHEET L-12 AND SHEET L-13 FOR IRRIGATIONS SPECIFICATIONS.
 REFER TO SHEET L-11 FOR CONSTRUCTION DETAILS.

AUTOMATIC IRRIGATION CONTROLLER 'E', RAIN BIRD ISC-92, TO BE ENCLOSED IN A 'LE MEUR' VANDAL RESISTANT CONTROLLER ENCLOSURE SEE CONSTRUCTION DETAIL NO. 4070 SHEET L-11. 120 VOLT POWER STUB-OUT AT THIS LOCATION BY OTHERS.

NOTE:
 AFTER ESTABLISHMENT OF ALL PLANT MATERIAL CONTROLLERS SHALL BE PROGRAMMED TO IRRIGATE SOLELY DURING NIGHTTIME. (TYPICAL)

ADJUST ALL SPRINKLER HEADS FOR HEAD TO HEAD COVERAGE.



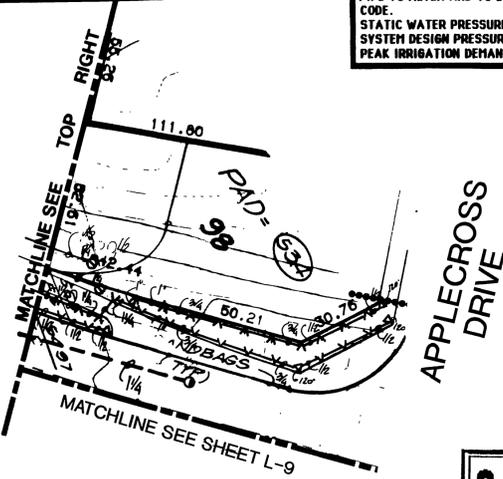
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METER #
 MAKE POINT OF CONNECTION IMMEDIATELY DOWNSTREAM OF NEW 2" IRRIGATION METER. TO BE PROVIDED BY COR, POW. REFER TO WATER IMPROVEMENT PLANS FOR ADDITIONAL INFORMATION. AND EXTEND NEW PRESSURE LINE AS SHOWN. PIPE TO METER AND TO BACKFLOW UNIT TO BE TYPE 'K' COPPER OR AS PER LOCAL CODE.
 STATIC WATER PRESSURE _____ 77 PSI
 SYSTEM DESIGN PRESSURE _____ 77 PSI
 PEAK IRRIGATION DEMAND _____ 58 GPM

NOTE: WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANTS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. (TYPICAL)

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* CONCRETE MOW CURB @ LIMITS OF WORK (SEE PLANTING PLAN)



SCALITER IRRIGATION
 IRRIGATION DESIGN-WATER MANAGEMENT
 902 AARON DRIVE
 REDLANDS, CALIFORNIA 92374
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RHA
 LANDSCAPE ARCHITECTS PLANNERS, INC.
 3612 SEVENTH STREET
 RIVERSIDE, CALIFORNIA 92501
 (909) 781-1930
 FAX (909) 686-8091
 LICENSE #1512

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT				IRRIGATION PLAN	RHA #95112
APPROVED BY	DATE	BY	APPROVED BY	SYCAMORE HIGHLANDS TRACT #22408	
PRINCIPAL ENGINEER	11/19/96	1/12/97	SEE APPROVAL		
PARK DEPARTMENT	10/12/95	1/4	PUBLIC WORKS DIRECTOR	R-3073-LP SHEET L-9 OF 25	
TRAFFIC DIVISION	11/16/95	1/12/97	ON SHEET 1		
DESIGNED BY	DRAWN BY	CHECKED BY	DATE	HORIZ SCALE: 1" = 30' VERT SCALE: 1" = 10'	

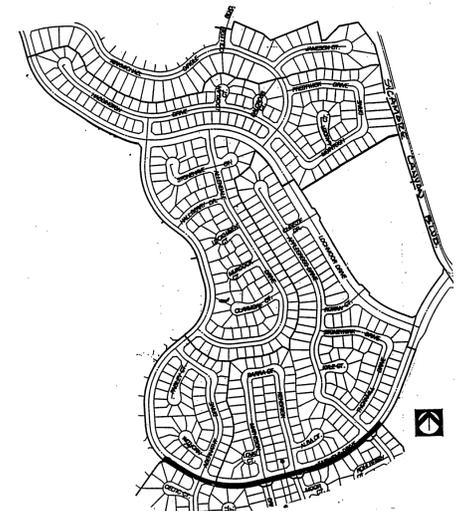
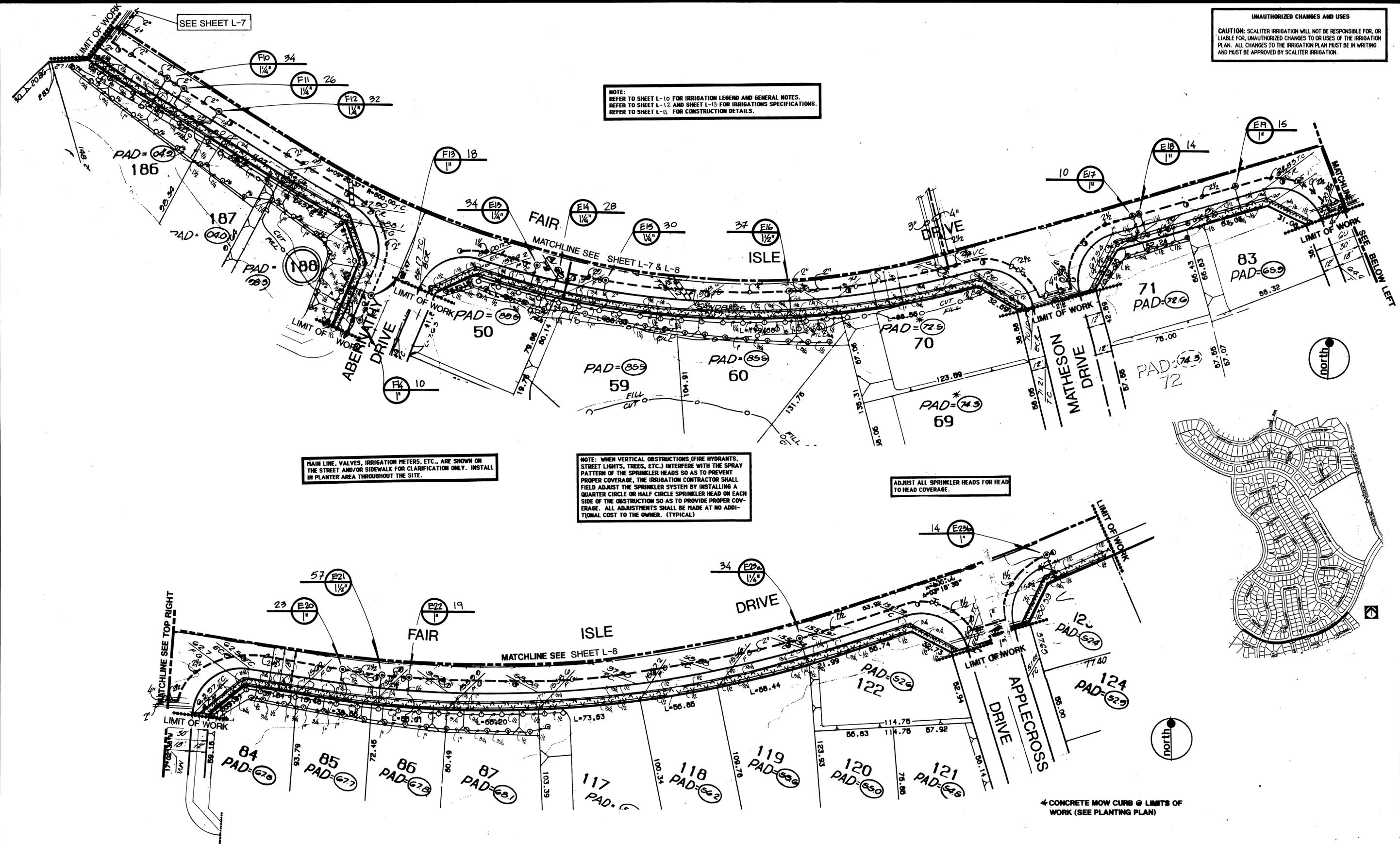
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ADJUST ALL SPRINKLER HEADS FOR HEAD TO HEAD COVERAGE.



SI SCALITER IRRIGATION
 IRRIGATION DESIGN-WATER MANAGEMENT
 902 AARON DRIVE
 REDLANDS, CALIFORNIA 92374
 (714) 794-5811 (714) 794-5873

R/A LANDSCAPE ARCHITECTS PLANNERS, INC.

3612 SEVENTH STREET
 RIVERSIDE, CALIFORNIA 92501
 (909) 781-1930
 FAX (909) 686-8091
 LICENSE #1512

DESIGNED BY		DRAWN BY		CHECKED BY	
REVISIONS		APPR.		DATE	
MARK		CITY OF RIVERSIDE		PUBLIC WORKS DEPARTMENT	
APPROVED BY		DATE		APPROVED BY	
PRINCIPAL ENGINEER		11/7/95		SEE APPROVAL	
PARK DEPARTMENT		10/24/95		PUBLIC WORKS DIRECTOR	
TRAFFIC DIVISION		DATE		ON SHEET 1	
CHIEF P.W. ENGINEER		11/7/95		DATE	

IRRIGATION PLAN		RHA #95112
SYCAMORE HIGHLANDS		ACCOUNT NO.
TRACT #22408		R-3073-LP
HORIZ. SCALE: 1" = 30'		SHEET L-10 OF 25
VERT. SCALE: 1" =		

IRRIGATION SYSTEM CALCULATION
METER 16 VALVE SECTION A12 FLOW 62 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 315	0.716	10	0.79	0.79	0.214	0.63
2	150	PVC class 315	0.716	10	0.79	1.58	0.05	1.26
3	150	PVC class 315	0.716	10	0.79	2.37	0.11	1.89
4	150	PVC class 200	0.93	10	0.79	3.16	0.05	1.49
5	150	PVC class 200	0.93	10	0.79	3.95	0.08	1.86
6	150	PVC class 200	0.93	10	0.79	4.74	0.11	2.24
7	150	PVC class 200	0.93	10	0.79	5.53	0.144	2.61
8	150	PVC class 200	1.189	10	0.79	6.32	0.06	1.82
9	150	PVC class 200	1.189	10	0.79	7.11	0.07	2.05
10	150	PVC class 200	1.189	10	0.79	7.9	0.08	2.28
11	150	PVC class 200	1.189	10	0.79	8.69	0.1	2.51
12	150	PVC class 200	1.189	10	0.79	9.48	0.12	2.74
13	150	PVC class 200	1.189	10	0.79	10.27	0.144	2.97
14	150	PVC class 200	1.502	10	0.79	11.06	0.05	2
15	150	PVC class 200	1.502	10	0.79	11.85	0.06	2.14
16	150	PVC class 200	2.023	5	18.96	30.81	0.039	3.07
MAIN I	150	PVC CLASS 315	2.449	1200	62.01	62.01	13.65	4.22
SUPP. I	140	Type K copper	1.959	50	62.01	62.01	1.91	6.59
METER LOSS 2.9								
BACKFLOW PREVENTER 10								
FITTINGS 0.84								
GATE VALVE 0.2								
CONTROL VALVE 5.3								
ELEVATION CHANGES -6.1								
TOTAL SYSTEM LOSSES 29.88								
PRESSURE NEEDED AT FARTHEST HEAD 30								
PRESSURE NEEDED AT P.O.C. 59.88								
EXISTING STATIC WATER PRESSURE 82								
DYNAMIC PRESSURE AT P.O.C. 77.19								
SET 1-1/2" PRESSURE REGULATING MASTER VALVE AT 65								

IRRIGATION SYSTEM CALCULATION
METER 8 VALVE SECTION E11 FLOW 36 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 315	0.716	15	1.4	1.4	0.061	1.11
2	150	PVC class 315	0.716	20	1.4	2.8	0.29	2.23
3	150	PVC class 200	0.93	20	2.2	5	0.24	2.36
4	150	PVC class 200	0.93	20	2.2	7.2	0.47	3.4
5	150	PVC class 200	1.189	25	2.2	9.4	0.29	2.71
6	150	PVC class 200	1.189	25	2.2	11.6	0.43	3.35
7	150	PVC class 200	1.502	25	2.2	2.2	0.006	0.4
8	150	PVC class 200	1.502	25	2.2	16	0.25	2.89
9	150	PVC class 200	1.502	25	2.2	18.2	0.32	3.29
10	150	PVC class 200	1.72	25	2.8	21	0.21	2.9
11	150	PVC class 200	1.72	20	2.8	23.8	0.22	3.28
MAIN I	150	PVC CLASS 315	2.023	140	36.4	36.4	1.5	3.63
MAIN II	150	PVC CLASS 315	2.449	560	36.4	36.4	2.37	2.48
SUPP. I	140	Type K copper	1.959	50	36.4	36.4	0.71	3.87
METER LOSS 1								
BACKFLOW PREVENTER 10								
FITTINGS 0.37								
GATE VALVE 0.2								
CONTROL VALVE 2.1								
ELEVATION CHANGES 0								
TOTAL SYSTEM LOSSES 21.04								
PRESSURE NEEDED AT FARTHEST HEAD 35								
PRESSURE NEEDED AT P.O.C. 56.04								
EXISTING STATIC WATER PRESSURE 77								
DYNAMIC PRESSURE AT P.O.C. 75.29								

IRRIGATION SYSTEM CALCULATION
METER 11 VALVE SECTION F12 FLOW 32 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 315	0.716	20	2.2	2.2	0.186	1.75
2	150	PVC class 200	0.93	20	2.2	4.4	0.19	2.08
3	150	PVC class 200	0.93	20	2.8	7.2	0.47	3.4
4	150	PVC class 200	1.189	20	2.2	9.4	0.23	2.71
5	150	PVC class 200	1.189	20	2.2	11.6	0.34	3.35
6	150	PVC class 200	1.502	20	2.2	13.8	0.15	2.5
7	150	PVC class 200	1.502	20	2.2	16	0.2	2.89
8	150	PVC class 200	1.502	20	2.2	18.2	0.25	3.29
9	150	PVC class 200	1.72	10	2.2	20.4	0.08	2.81
10	150	PVC class 200	1.72	25	11.9	32.3	0.47	4.45
MAIN I	150	PVC CLASS 315	2.023	330	32.3	32.3	2.84	3.22
MAIN II	150	PVC CLASS 315	2.449	290	32.3	32.3	0.99	2.2
SUPP. I	140	Type K copper	1.959	50	32.3	32.3	0.57	3.43
METER LOSS 0.8								
BACKFLOW PREVENTER 10								
FITTINGS 0.35								
GATE VALVE 0.2								
CONTROL VALVE 4.5								
ELEVATION CHANGES -5								
TOTAL SYSTEM LOSSES 17.82								
PRESSURE NEEDED AT FARTHEST HEAD 35								
PRESSURE NEEDED AT P.O.C. 52.82								
EXISTING STATIC WATER PRESSURE 57								
DYNAMIC PRESSURE AT P.O.C. 55.63								

IRRIGATION SYSTEM CALCULATION
METER 21 VALVE SECTION G1 FLOW 21 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 315	0.716	15	1.4	1.4	0.061	1.11
2	150	PVC class 315	0.716	30	1.4	2.8	0.44	2.23
3	150	PVC class 200	0.93	30	2.8	5.6	0.44	2.64
4	150	PVC class 200	1.189	30	2.8	8.4	0.28	2.42
5	150	PVC class 200	1.189	30	2.8	11.2	0.48	3.23
6	150	PVC class 200	1.72	50	9.8	21	0.43	2.9
MAIN I	150	PVC CLASS 315	2.023	180	21	21	0.7	2.09
SUPP. I	140	Type K copper	1.481	50	21	21	1.01	3.91
METER LOSS 1								
BACKFLOW PREVENTER 10								
FITTINGS 0.19								
GATE VALVE 0.2								
CONTROL VALVE 2.2								
ELEVATION CHANGES 9								
TOTAL SYSTEM LOSSES 26.43								
PRESSURE NEEDED AT FARTHEST HEAD 35								
PRESSURE NEEDED AT P.O.C. 61.43								
EXISTING STATIC WATER PRESSURE 95								
DYNAMIC PRESSURE AT P.O.C. 92.99								
SET 1-1/2" PRESSURE REGULATING MASTER VALVE AT 65								

IRRIGATION SYSTEM CALCULATION
METER 23 VALVE SECTION H1 FLOW 49 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 200	0.93	30	2.8	2.8	0.122	1.32
2	150	PVC class 200	0.93	30	2.8	5.6	0.44	2.64
3	150	PVC class 200	1.189	30	2.8	8.4	0.28	2.42
4	150	PVC class 200	1.189	30	2.8	11.2	0.48	3.23
5	150	PVC class 200	1.502	30	2.8	14	0.23	2.53
6	150	PVC class 200	1.502	30	2.8	16.8	0.33	3.04
7	150	PVC class 200	1.502	30	2.8	19.6	0.44	3.54
8	150	PVC class 200	1.72	30	2.8	22.4	0.29	3.09
9	150	PVC class 200	1.72	30	2.8	25.2	0.36	3.48
MAIN I	150	PVC CLASS 315	2.023	140	49	49	2.61	4.88
SUPP. I	140	Type K copper	1.959	50	49	49	1.24	5.21
METER LOSS 1.9								
BACKFLOW PREVENTER 10								
FITTINGS 0.34								
GATE VALVE 0.2								
CONTROL VALVE 3.7								
ELEVATION CHANGES 14								
TOTAL SYSTEM LOSSES 36.96								
PRESSURE NEEDED AT FARTHEST HEAD 35								
PRESSURE NEEDED AT P.O.C. 71.96								
EXISTING STATIC WATER PRESSURE 118								
DYNAMIC PRESSURE AT P.O.C. 114.86								
SET 1-1/2" PRESSURE REGULATING MASTER VALVE AT 75								

IRRIGATION SYSTEM CALCULATION
METER 15 VALVE SECTION B15 FLOW 33 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 200	0.93	20	1.7	1.7	0.032	0.8
2	150	PVC class 200	0.93	20	1.7	3.4	0.12	1.6
3	150	PVC class 200	1.189	20	1.7	5.1	0.07	1.47
4	150	PVC class 200	1.189	30	2.8	7.9	0.25	2.28
5	150	PVC class 200	1.502	30	5.5	13.4	0.2	2.42
6	150	PVC class 200	1.502	15	5.5	18.9	0.2	3.42
7	150	PVC class 200	1.72	60	13.8	32.7	1.164	4.51
MAIN II	150	PVC CLASS 315	2.449	550	33	33	1.94	2.24
SUPP. I	140	Type K copper	1.959	50	33	33	0.6	3.51
METER LOSS 1								
BACKFLOW PREVENTER 10								
FITTINGS 0.23								
GATE VALVE 0.2								
CONTROL VALVE 1.8								
ELEVATION CHANGES 18.6								
TOTAL SYSTEM LOSSES 36.43								
PRESSURE NEEDED AT FARTHEST HEAD 35								
PRESSURE NEEDED AT P.O.C. 71.43								
EXISTING STATIC WATER PRESSURE 72								
DYNAMIC PRESSURE AT P.O.C. 70.4								

IRRIGATION SYSTEM CALCULATION
METER 5 VALVE SECTION C4 FLOW 64 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 315	0.716	10	1.7	1.7	0.067	1.35
2	150	PVC class 200	0.93	20	2.2	3.9	0.15	1.84
3	150	PVC class 200	0.93	25	2.2	6.1	0.43	2.88
4	150	PVC class 200	1.189	25	4.5	10.6	0.36	3.06
5	150	PVC class 200	1.502	30	2.8	13.4	0.22	2.42
6	150	PVC class 200	1.502	30	2.8	16.2	0.31	2.95
7	150	PVC class 200	1.72	30	2.8	19	0.213	2.62
8	150	PVC class 200	1.72	30	2.8	21.8	0.27	3.01
9	150	PVC class 200	1.72	30	2.8	24.6	0.34	3.39
10	150	PVC class 200	2.023	20	2.8	27.4	0.13	2.73
11	150	PVC class 200	2.449	40	36.4	63.8	0.48	4.34
MAIN I	150	PVC CLASS 315	2.449	900	63.8	63.8	10.79	4.34
SUPP. I	140	Type K copper	1.959	50	63.8	63.8	2.92	6.78
METER LOSS 3.2								
BACKFLOW PREVENTER 10								
FITTINGS 0.79								
GATE VALVE 0.2								
CONTROL VALVE 5.2								
ELEVATION CHANGES 3								
TOTAL SYSTEM LOSSES 38.19								
PRESSURE NEEDED AT FARTHEST HEAD 35								
PRESSURE NEEDED AT P.O.C. 73.19								
EXISTING STATIC WATER PRESSURE 88								
DYNAMIC PRESSURE AT P.O.C. 82.78								

IRRIGATION SYSTEM CALCULATION
METER 1 VALVE SECTION D17 FLOW 41 GPM

SECTION	HW 'C'	PIPE TYPE	IN. DIA. (INCHES)	PIPE LENGTH (FEET)	GPM	ACCUM. G.P.H.	PRESSURE LOSS (PSI)	v (ft/s)
1	150	PVC class 315	0.716	10	0.79	0.79	0.014	0.63
2	150	PVC class 315	0.716	10	0.79	1.58	0.05	1.26
3	150	PVC class 315	0.716	10	0.79	2.37	0.11	1.89
4	150	PVC class 200	0.93	10	0.79	3.16	0.05	1.49
5	150	PVC class 200	0.93	10	0.79	3.95	0.08	1.86
6	150	PVC class 200	0.93	10	0.79	4.74	0.11	2.24
7	150	PVC class 200	0.93	10	0.79	5.53	0.144	2.61
MAIN I	150	PVC CLASS 315	2.023	750	41.34	41.34	10.2	4.12
SUPP. I	140	Type K copper	1.959	50	41.34	41.34	0.9	4.4
METER LOSS 1.4								
BACKFLOW PREVENTER 10								
FITTINGS 0.58								
GATE VALVE 0.2								
CONTROL VALVE 3.5								
ELEVATION CHANGES 11.2								
TOTAL SYSTEM LOSSES 38.54								
PRESSURE NEEDED AT FARTHEST HEAD 30								
PRESSURE NEEDED AT P.O.C. 68.54								
EXISTING STATIC WATER PRESSURE 98								
DYNAMIC PRESSURE AT P.O.C. 95.7								
SET 1-1/2" PRESSURE REGULATING MASTER VALVE AT 75								

GENERAL IRRIGATION NOTES:

- THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE DRAWINGS AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
- THIS DESIGN IS DIAGNOSTIC. ALL PIPING, VALVES, ETC. SHOWN WITH IN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. BELOW PAVED AREAS A MINIMUM OF 6" LAYER OF CLEAN FILL SAND SHALL BE INSTALLED ABOVE AND BELOW PIPING.
- BEFORE ANY WORK COMMENCES, A CONFERENCE SHALL BE HELD WITH THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR REGARDING GENERAL REQUIREMENTS OF THIS WORK.
- THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT UTILITIES AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS, AND HE IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.
- IRRIGATION CONTRACTOR AGREES THAT

PART 1 - GENERAL

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, including 120 volt electrical service to the controller, all as shown on the drawings and as specified.

B. Related Work Specified Elsewhere:

Site Clear and Grub	02110
Site Grading	02210
Selected Site Demolition	02111
Planting	02400
Electrical	16530

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 certificates 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 etc.	Rainbird etc.	2400 etc.

B. "Record" Prints:

- 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.
- The changes and dimensions shall 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.
- 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.
- Show locations and depths of the following items:
 - Point of connection.
 - Routing of sprinkler pressure lines (dimension maximum 100 feet along routing).
 - Gate valves.
 - Sprinkler control valves.
 - Quick coupling valves.
 - Routing of control wires.
 - Related equipment (as may be directed).
- Maintain record prints onsite at all times.

1.04 INSPECTIONS:

A. Inspections will be required for:

- Pressure test of irrigation main line.
- Coverage test.
- Final inspection/start of maintenance.
- 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 (1-1/2 working days)
System layout - 36 hours (1-1/2 working days)
Coverage tests - 36 hours (1-1/2 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 must be accepted by the City before planting can commence.

E. Hydrostatic test:

- 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.
- All hydrostatic tests shall be made in the presence of the City. No pressure line shall be backfilled until it has been inspected, tested, approved in writing, and the mainline and valve locations have been noted on the "as-built" record drawings.
- Contractor shall furnish necessary force pump and all other test equipment.

1.05 TURNOVER ITEMS:

A. Controller Charts:

- Record prints must be approved by City before charts are prepared.
- Provide one controller chart (of the maximum size controller door will allow) for each automatic controller. Chart shall show the area covered by controller.
- 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.
- Chart shall be marked with a different color to show the area of coverage for each station.
- 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.
- 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 identify, 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:

- Index sheet stating Contractor's address and telephone number, including names and addresses and telephone numbers of local manufacturer's representatives.
 - Complete operating and maintenance instructions on all major equipment.
- C... Materials to be furnished:
- Supply as part of this contract the following items:
 - 45 additional sprinkler heads of each type and spray pattern shown.
 - Two (2) wrenches for disassembly and adjustment of each type sprinkler head installed.
 - Two keys for each automatic controller.
 - Two couplers with a 3/4" bronze hose bib, bent nose type with hand wheel and two coupler keys.
 - One valve box cover key.
 - "As-built" record drawings.
 - Remove and turn over backflow device valve handles.
 - Documentation of Water Department's inspection and acceptance of backflow device.

D. 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:

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 excepted, and that the work, materials, and equipment as installed will fulfill the requirements of the guarantee included in the specifications. We agree to repair or replace any or all of our work, together with any other adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or materials within a period of ONE (1) year from date of acceptance of the above named project by the City of Riverside, California, at no additional cost to the City. We shall make such repairs or replacements within 10 calendar days following written notification by the City. When the immediate repair or replacement of the work is necessary to ensure the public safety and welfare, which would be endangered by continued usage of the facility, such circumstance will be deemed an operational emergency. In the event of such an emergency after the City contacts our firm and after authorizing 24 hours to initiate repairs, if we fail to initiate and diligently complete such repairs in a timely manner, the Director may direct City forces to perform such functions as he may deem necessary to correct the work and immediately place the facility back in operational condition. If such procedure is implemented, we shall bear all expenses incurred by the City. In all cases, the judgement of the Director shall be final in determining whether an operational emergency exists. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from the City (other than an operational emergency), we authorize the City to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefor 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:

- 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.
- Pressure supply lines 1-1/2 inches in diameter and smaller shall be minimum schedule 40 PVC.
- 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,....", and add: "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: 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 plastic pipe 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 elbows shall be manufactured in injection molds that are side gated. All threaded nipples shall be standard weight schedule 40 with molded threads.

Amend first sentence of 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; and add the following to the section: "Couplings, rubber gaskets, and fittings shall be as approved by the pipe manufacturer. Ring-type rubber gasket couplings shall permit a five (5) degree deflection of the pipe at each coupling (2-1/2 degrees 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:

- 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.
- Tapped A.C.P. couplings with brass inserts may be used for connections of 3/4, 1, 1-1/4, 1-1/2 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 diaphragm 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 body 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 stenciled 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 of the size, manufacture, and model number as indicated on the drawings. If not indicated, the device shall be the same size as the water service and the manufacturer and model number shall be as approved by the City.

2.05 ELECTRICAL MATERIALS

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.

C. Electrical Service:

Materials for electrical service shall comply with the standard specifications, governing utility agency standards, and requirements of all applicable codes.

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 case 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. No work of this section other than sleeving under paving shall commence prior to the completion and acceptance of all grading work specified in Section 02210.

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 provide electrical service as necessary and make 120V connection to the irrigation controllers.

IRRIGATION SPECIFICATIONS

RHA #95112

3612 SEVENTH STREET
RIVERSIDE, CALIFORNIA
92501
(909) 781-1930
FAX (909) 686-8091
LICENSE #1512

SCALITER IRRIGATION
IRRIGATION DESIGN-WATER MANAGEMENT
902 AARON DRIVE
REDLANDS, CALIFORNIA 92374
(714) 794-5811 (714) 794-5873

RIA
LANDSCAPE
ARCHITECTS
PLANNERS, INC.

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT

APPROVED BY	DATE	BY	DATE
PRINCIPAL ENGINEER	11/15/98	WJG	11/15/98
PARK DEPARTMENT	10/23/98	WJG	10/23/98
TRAFFIC DIVISION			
CHIEF P. W. ENGINEER	11/15/98	WJG	11/15/98

DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____

SYCAMORE HIGHLANDS
TRACT #22408

ACCOUNT NO.

R-3073-LP

SHEET L-13 OF 25

HORIZ. SCALE: 1" = 10'

VERT. SCALE: 1" = 10'

INDEXED 2/28/98 LPH PC-2926-R

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 of this section, the contractor shall obtain the written acceptance of the City of the fine grades, and written authorization for the work of this section to proceed. Contractor is to keep within the specified material depths with respect to finish grade. Failure to obtain such written acceptance may subject the contractor to adjusting the grades or depth of lines in order to achieve acceptable depths of cover, all as directed by the City and at no additional cost to the City.

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 versus tree and shrub locations and sleeve locations versus pavement installation to avoid conflicts.

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

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. Concrete pavement shall be removed and replaced in "full panels" with no horizontal dimension less than five (5) feet. Contractor shall review the planned limits and lines of concrete removal and replacement with the Park Projects Inspector prior to sawcutting for removal work.

B. Backfill:

Amend Standard Specifications Section 308-2.2 to read: Backfill shall be uniformly tamped in 4-inch layers under and around the pipe 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 Soils Engineer and the Park Projects Inspector.

Under no circumstances shall the wheels of any vehicle not designed for the purpose of soils compaction be used to compact backfill.

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 Park Projects Inspector. 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) Do not install multiple assemblies ("manifold") on plastic lines. Provide each equipment assembly (e.g. RCV, quick coupler, gate valve, head, backflow device) with its own connection to its service line.

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 2-1/2 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 Projects 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. Valves shall be installed a minimum of three feet in horizontal distance apart, each with its own connection to the pressure main line.

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 controller location, as shown on the plans, is diagrammatic. The final location of the controller shall be as approved by the Park Projects Inspector before installation. The Contractor shall coordinate the electrical service with this location. The controller shall be wall mounted within a Le Mans vandal resistant 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. A 4" thick concrete slab for maintenance access shall be provided, size approximately 15 sq. ft., line, grade and dimensions as directed by the Park Projects Inspector.

Following establishment of the turf, the irrigation system shall be programmed to operate during the periods of minimal use of the project area (i.e., 11:00 p.m. through 6:00 a.m.).

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.

END OF SECTION

BJ/00170/c
05/12/87

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RIVERSIDE, CALIFORNIA
92501
(909) 781-1930
FAX (909) 686-8091
LICENSE #1512

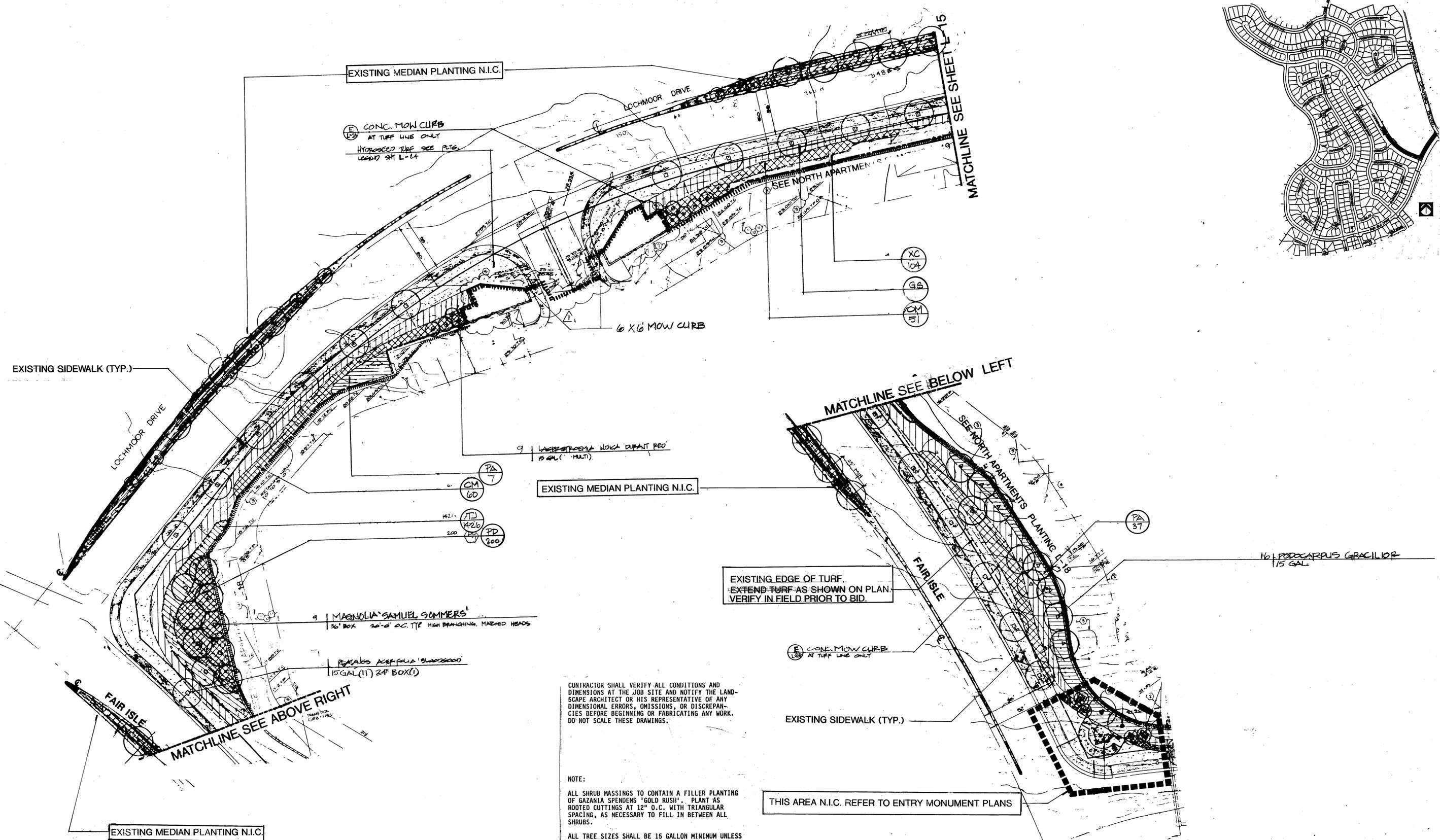
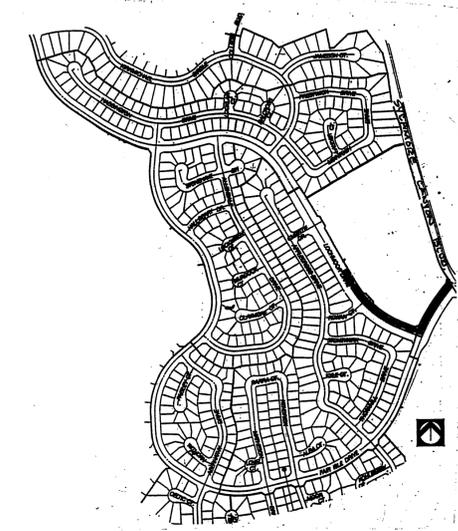
S SCALITER IRRIGATION
IRRIGATION DESIGN-WATER MANAGEMENT
902 AARON DRIVE
REDLANDS, CALIFORNIA 92374
(714) 794-5811 (714) 794-5873

RHA
LANDSCAPE
ARCHITECTS
PLANNERS, INC.

IRRIGATION SPECIFICATIONS

RHA #95112

<p>CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT</p>		<p>SYCAMORE HIGHLANDS TRACT #22408</p>		<p>ACCOUNT NO. R-3073-LP</p>
<p>APPROVED BY PRINCIPAL ENGINEER TRAFFIC DIVISION CHIEF P.W. ENGINEER</p>	<p>DATE 11/18/85 12-25-85 1/17/86</p>	<p>BY [Signature] [Signature] [Signature]</p>	<p>APPROVED BY PUBLIC WORKS DIRECTOR ON SHEET 1</p>	<p>SHEET L-14 OF 25</p>
<p>MARK</p>	<p>REVISIONS</p>	<p>APPR. DATE</p>	<p>DATE</p>	<p>HORIZ. SCALE: 1" = VERT. SCALE: 1" =</p>



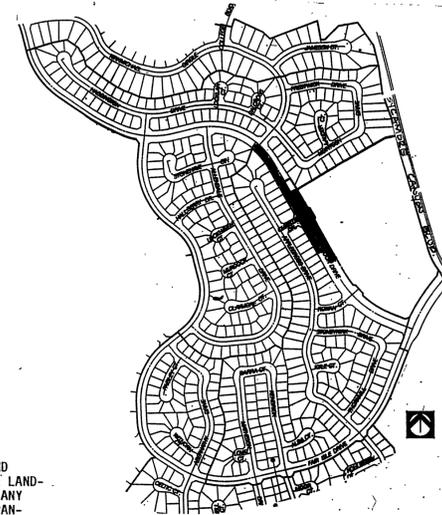
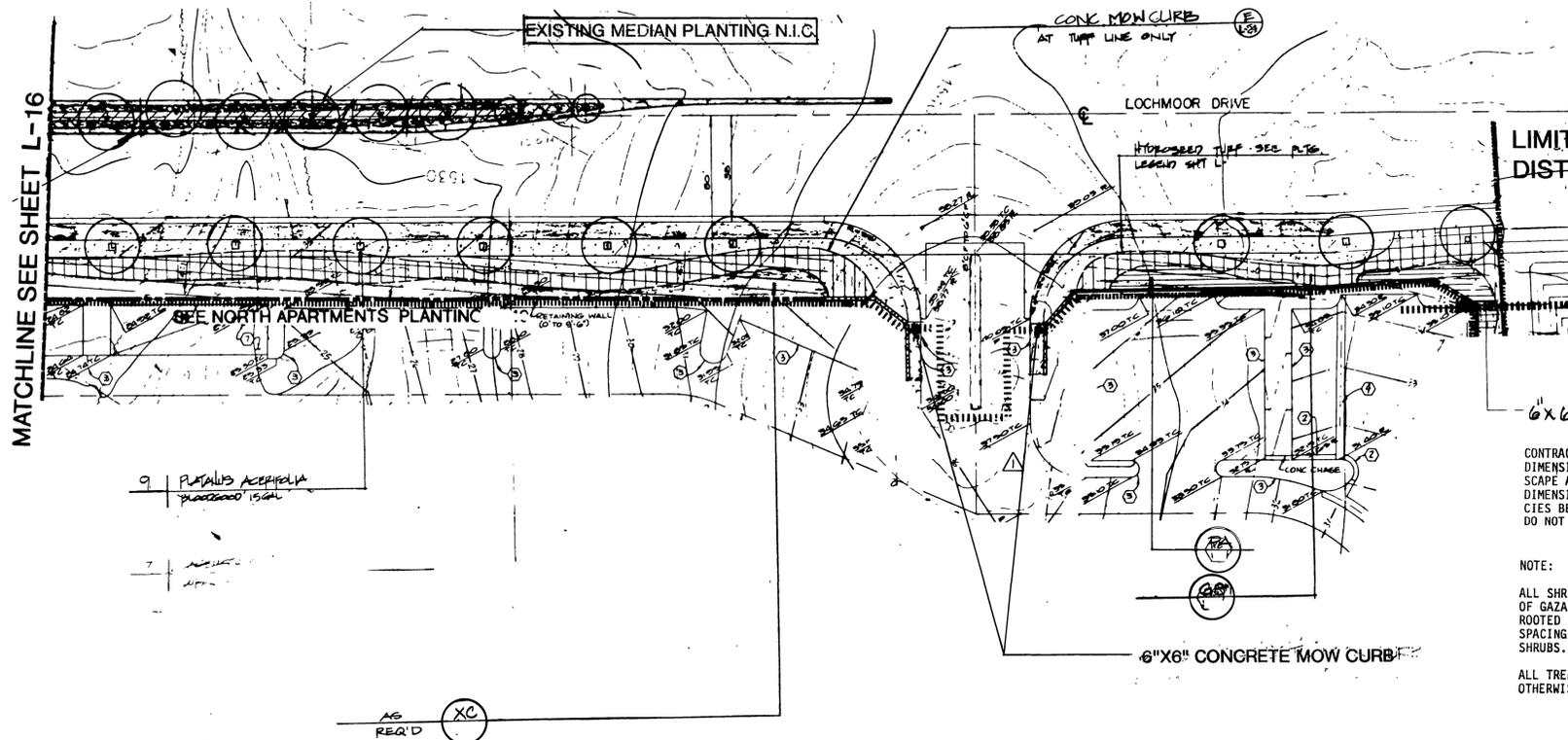
CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE AND NOTIFY THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE OF ANY DIMENSIONAL ERRORS, OMISSIONS, OR DISCREPANCIES BEFORE BEGINNING OR FABRICATING ANY WORK. DO NOT SCALE THESE DRAWINGS.

NOTE:
 ALL SHRUB MASSINGS TO CONTAIN A FILLER PLANTING OF GAZANIA SPENDENS 'GOLD RUSH'. PLANT AS ROOTED CUTTINGS AT 12" O.C. WITH TRIANGULAR SPACING, AS NECESSARY TO FILL IN BETWEEN ALL SHRUBS.
 ALL TREE SIZES SHALL BE 15 GALLON MINIMUM UNLESS OTHERWISE NOTED ON PLANS.

REFER TO SHEET L-24 FOR LEGEND & DETAILS.

RIA
 LANDSCAPE ARCHITECTS PLANNERS, INC.
 3612 SEVENTH STREET
 RIVERSIDE, CALIFORNIA 92501
 (909) 781-1930
 FAX (909) 686-8091
 LICENSE #1512

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT		APPROVED BY: <i>[Signature]</i> DATE: 11/19/95 PRINCIPAL ENGINEER		APPROVED BY: <i>[Signature]</i> DATE: 11/19/95 PUBLIC WORKS DIRECTOR	RHA #95112 ACCOUNT NO.
		PARK DEPARTMENT TRAFFIC DIVISION			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:	DATE:	R-3073-LP SHEET L-15 OF 25



LIMIT OF MAINTENANCE
DISTRICT WORK

6"X6" CONCRETE MOW STRIP

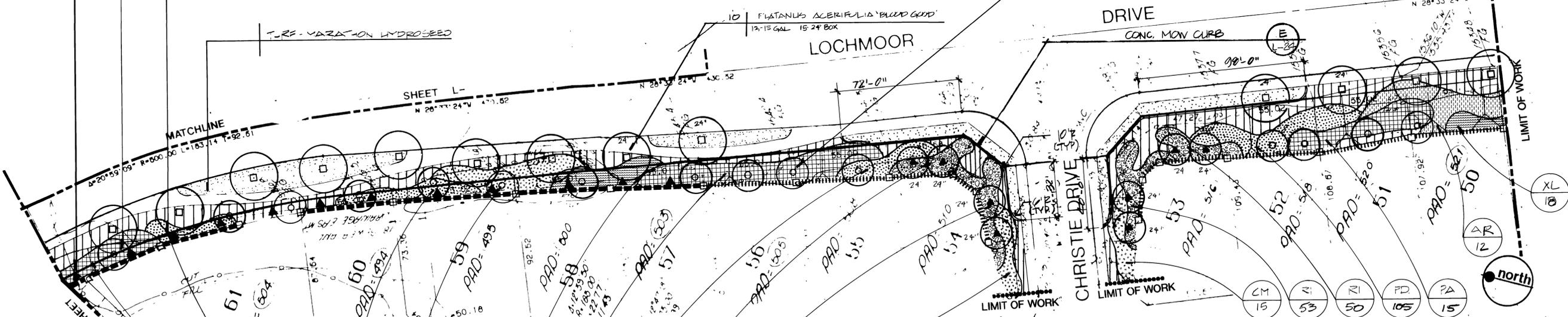
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- 20 | PARTHENOCESSUS TRICUSPIDATA
5 GAL | PLANT @ 30' O.C.
- 80 | PLUMBAGO AURICULATA
5 GAL | PLANT AT 10' O.C.
- 456 | PITTOSPORUM TOBIRA WHEELERS DWARF
5 GAL | PLANT AT 3' O.C.



- LEGEND**
- VIEW FENCE
 - PERIMETER BLOCK WALL
 - PLANT TYPE
 - PLANT QUANTITY

NOTE: INSTALL 6"X6" CONCRETE MOW CURB AT ALL LIMIT OF WORK LINES TO SEPARATE DISTRICT MAINTAINED AREAS FROM PRIVATELY MAINTAINED AREAS.



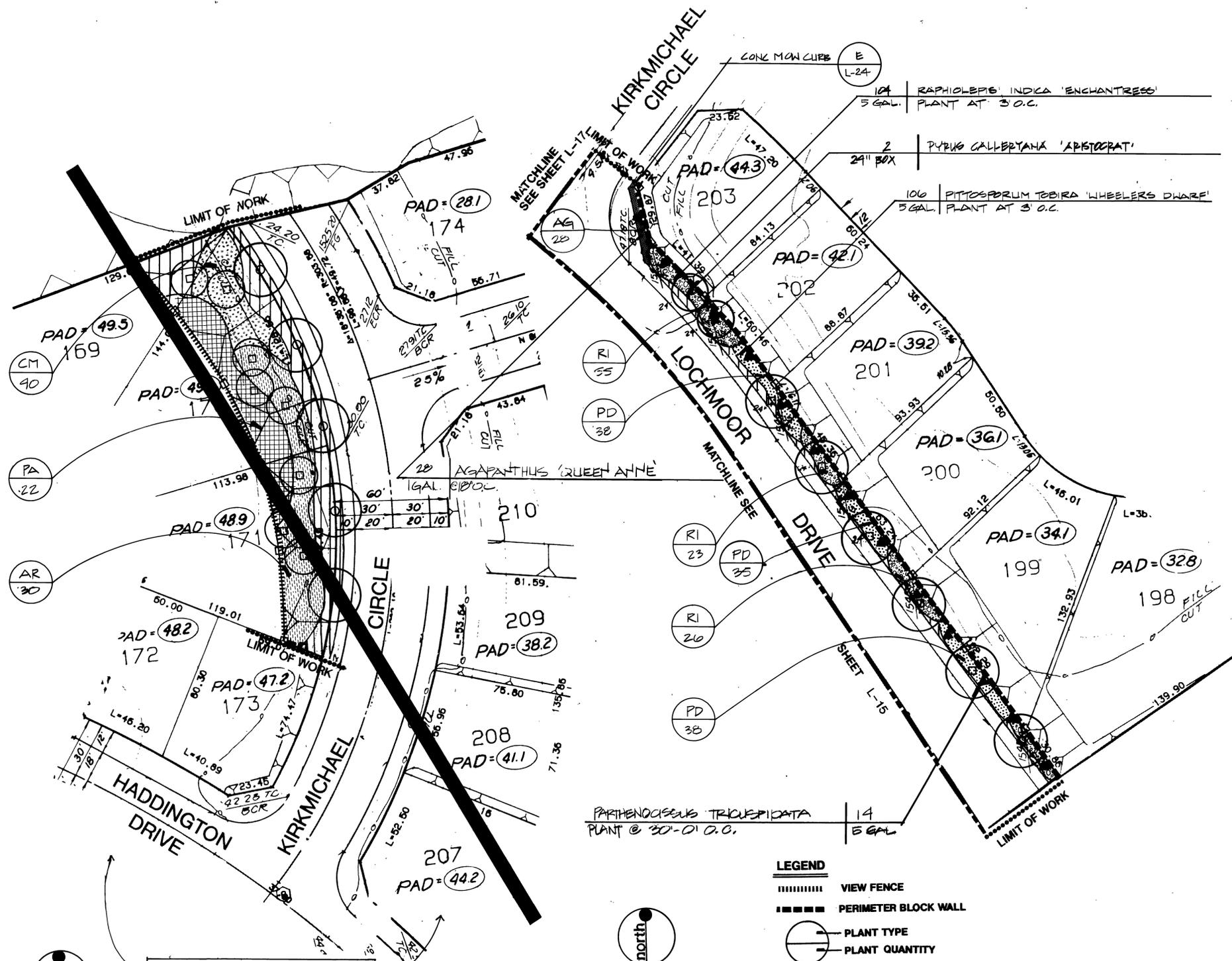
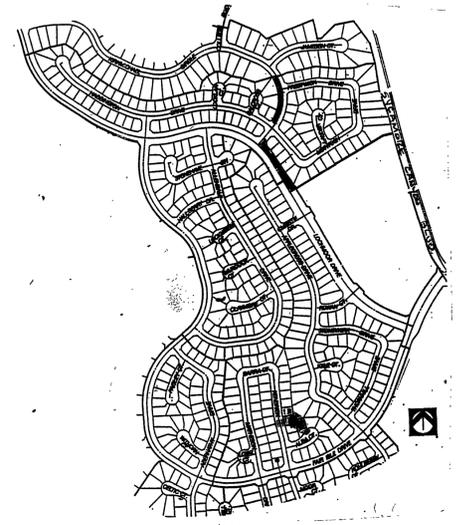
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NOTE: REFER TO STREET IMPROVEMENT PLANS FOR LOCATION & CONSTRUCTION OF PERIMETER WALLS, PILASTERS & VIEW FENCES. (R-3073A)
PLACEMENT OF WALLS ON THESE PLANS ARE SCHEMATIC.

THE PARTICULAR SPACING OF SHRUBS SHALL PREVAIL OVER A NUMERICAL QUANTITY. ADJUST AS REQUIRED.

REFER TO SHEET L-24 FOR LEGEND & DETAILS.

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT		SYCAMORE HIGHLANDS TRACT #22408		RHA #95112 ACCOUNT NO.
APPROVED BY: [Signature] PRINCIPAL ENGINEER DATE: 10/2/95	APPROVED BY: [Signature] SEE APPROVAL DATE: 10/2/95	ON SHEET 1		R-3073-LP SHEET L-16 OF 25
DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]	REVISIONS: [Table] APPR. DATE:	HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" =		INDEXED 2/28/96 4/11 PC-2926-R



THIS DRAWING N.I.C.

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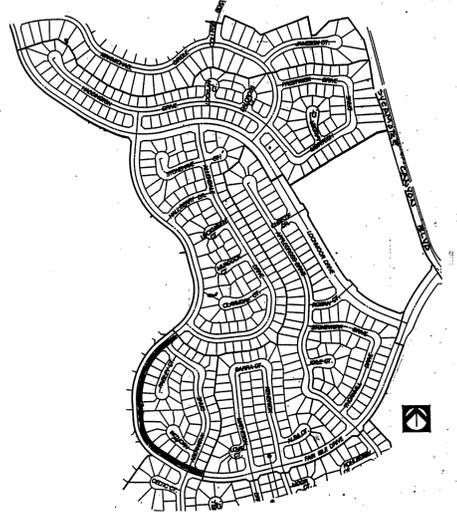
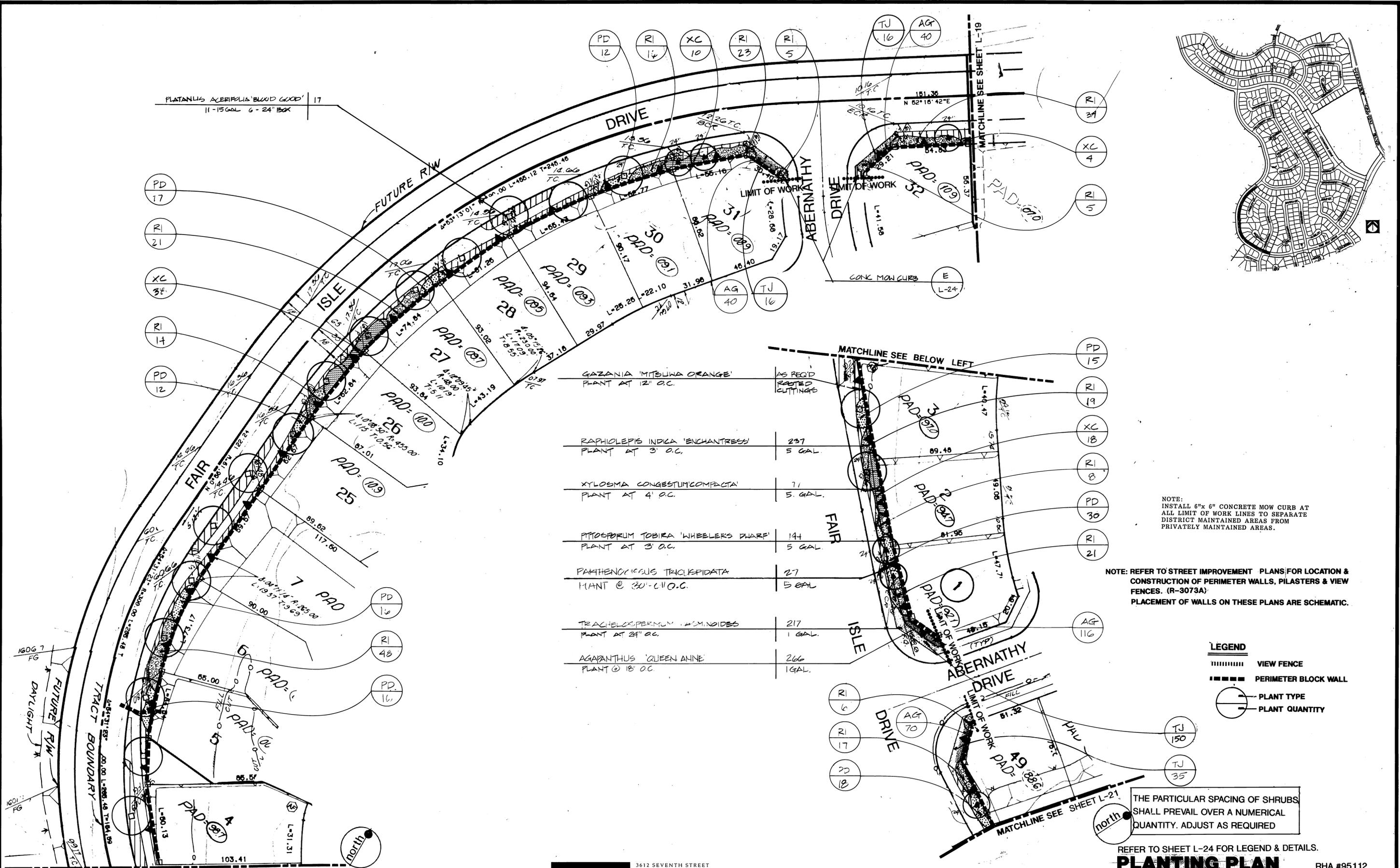
CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT	
APPROVED BY PRINCIPAL ENGINEER PARK DEPARTMENT TRAFFIC DIVISION CHIEF P.W. ENGINEER	DATE 11/19/95 12/2/95 1/17/96 1/17/96
APPROVED BY PUBLIC WORKS DIRECTOR ON SHEET 1	
MARK	DATE
DESIGNED BY	CHECKED BY

PLANTING PLAN

SYCAMORE HIGHLANDS
TRACT #22408

RHA #95112
ACCOUNT NO.
R-3073-LP
SHEET L-17 OF 25

HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" = 10'



GAZANIA 'MITSUBA ORANGE'	AS REQ'D ROOTED CUTTINGS
RAPHIOLEPIS INDICA 'ENCHANTRESS'	237 5 GAL.
XYLOSMA CONGESTUM COMPACTA	71 5 GAL.
PTISOPORUM TOBIRA 'WHEELERS DWARF'	144 5 GAL.
PANTHENOCYCLUS TRICUSPIDATA	27 5 GAL.
TRACHELOSPERMUM 'MEXICANIDES'	217 1 GAL.
AGAPANTHUS 'QUEEN ANNE'	266 1 GAL.

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LEGEND
 [Symbol] VIEW FENCE
 [Symbol] PERIMETER BLOCK WALL
 [Symbol] PLANT TYPE
 [Symbol] PLANT QUANTITY

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PLANTING PLAN

RHA #95112

3612 SEVENTH STREET
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MARK	REVISIONS	APPR. DATE	CHECKED BY

CITY OF RIVERSIDE
 PUBLIC WORKS DEPARTMENT

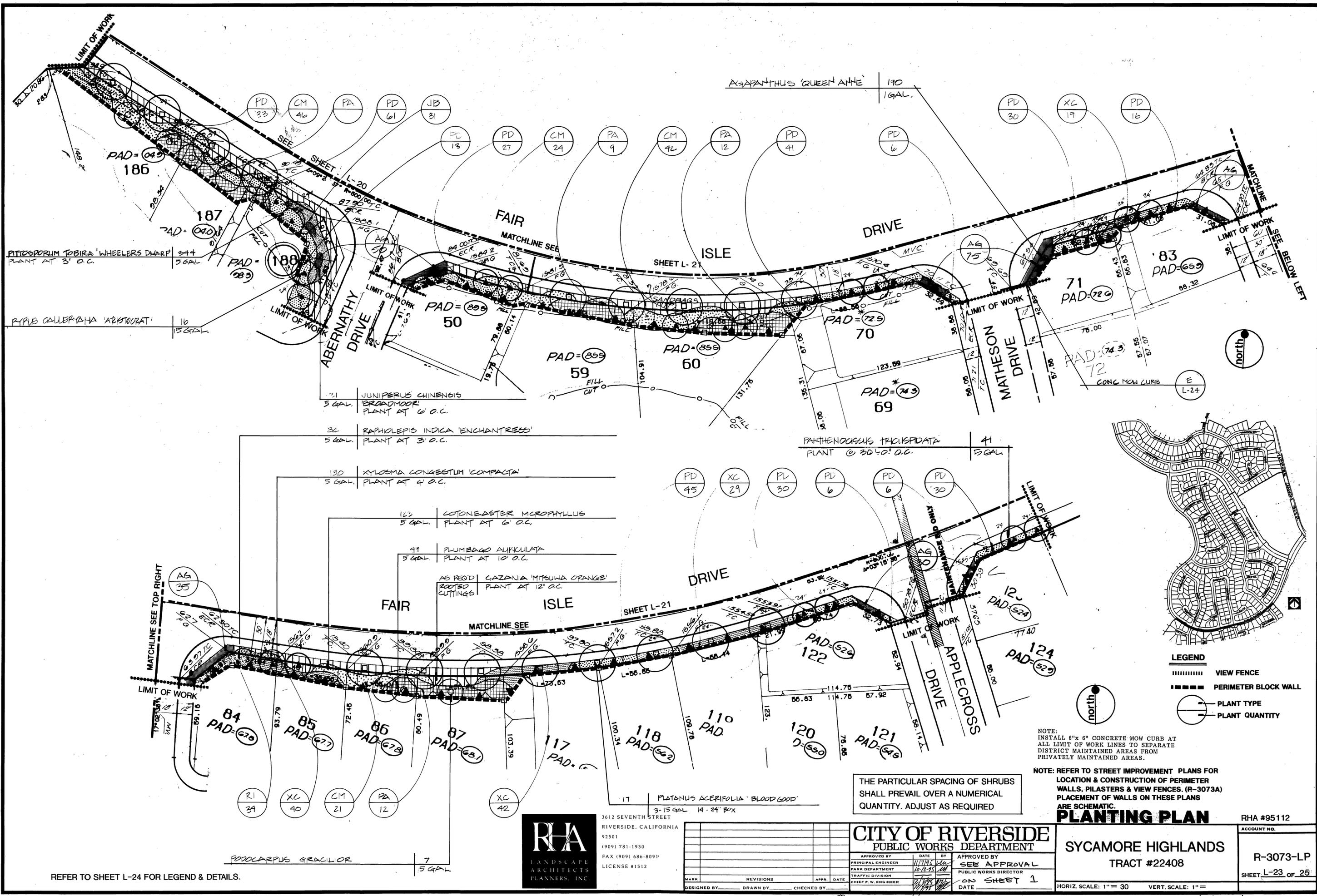
APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	10/17/95	WJH
PARK DEPARTMENT	10/17/95	WJH
TRAFFIC DIVISION	10/17/95	WJH
CHIEF P.W. ENGINEER	10/17/95	WJH

APPROVED BY: SEE APPROVAL
 PUBLIC WORKS DIRECTOR
 ON SHEET 1
 DATE: 10/17/95

SYCAMORE HIGHLANDS
 TRACT #22408

ACCOUNT NO. R-3073-LP
 SHEET L-21 OF 25

HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" = 30'



PITZOPORUM TOBIRA 'WHEELERS DWARF'
PLANT AT 3' O.C. 244
5 GAL

RYPUB GALLERATA 'ARISTOCRAT'
16
15 GAL

21 JUNIPERUS CHINENSIS
'BROADMOOR'
PLANT AT 6' O.C.
5 GAL

34 RAPHOLEPIS INDICA 'ENCHANTRESS'
5 GAL
PLANT AT 3' O.C.

130 XYLOEMA LONGESTUM 'COMPACTA'
5 GAL
PLANT AT 4' O.C.

123 COTONEASTER MICROPHYLLUS
5 GAL
PLANT AT 6' O.C.

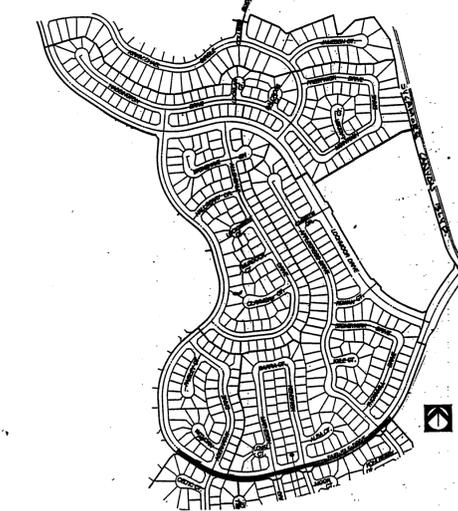
99 PLUMBAGO AURICULATA
5 GAL
PLANT AT 10' O.C.

AS REQ'D GAZANIA 'MITSUWA ORANGE'
ROOTED CUTTINGS
PLANT AT 12' O.C.

PODOLARPUS GRACILIOR
7
5 GAL

PANTHENOCYGUS THUCSPDATA
PLANT @ 30'-0" O.C. 41
15 GAL

17 PLATANUS ACERIFOLIA 'BLOOD GOOD'
3-15 GAL 14-24" BOX



- LEGEND**
- VIEW FENCE
 - PERIMETER BLOCK WALL
 - PLANT TYPE
 - PLANT QUANTITY

NOTE:
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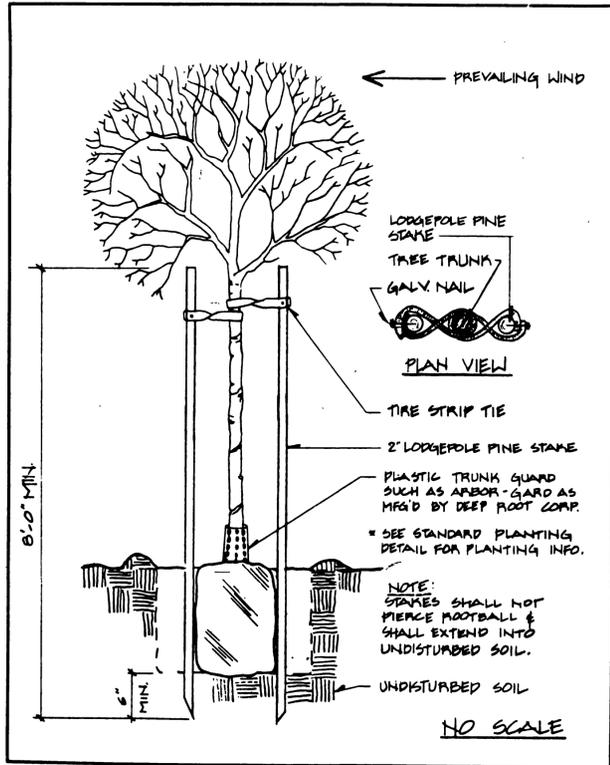


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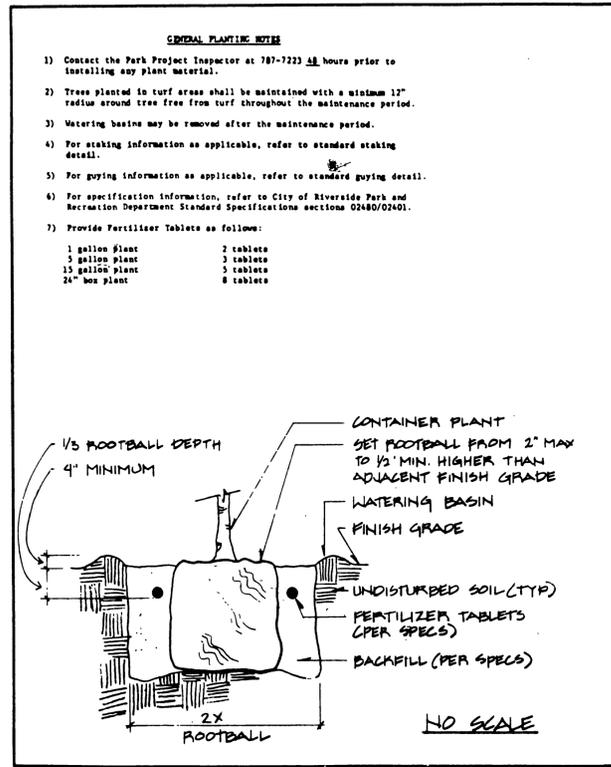
CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT			
APPROVED BY	DATE	BY	DATE
PRINCIPAL ENGINEER	11/17/95	SEE APPROVAL	
PARK DEPARTMENT	10/12/95	PUBLIC WORKS DIRECTOR	
TRAFFIC DIVISION		ON SHEET 1	
CHIEF P. W. ENGINEER	11/17/95	DATE	
DESIGNED BY	DRAWN BY	CHECKED BY	

PLANTING PLAN		RHA #95112
SYCAMORE HIGHLANDS TRACT #22408		ACCOUNT NO.
		R-3073-LP
		SHEET L-23 OF 25

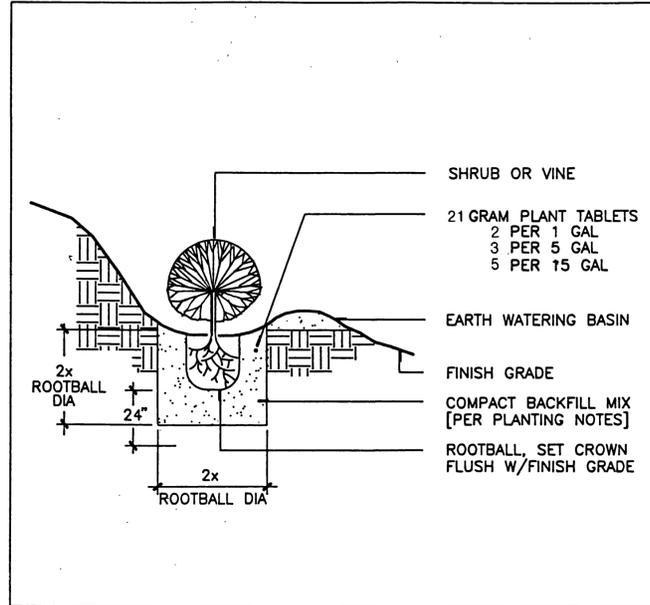
HORIZ. SCALE: 1" = 30' VERT. SCALE: 1" = 10'
INDEXED 2/28/96 471 PC-2926-R



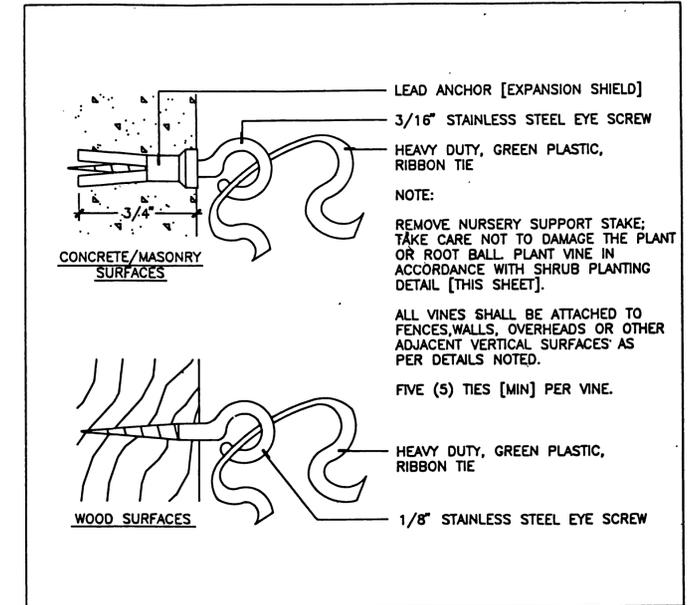
A TREE DETAIL



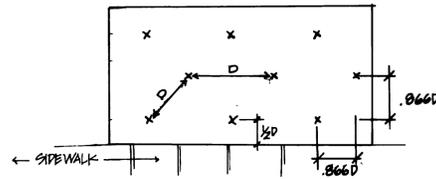
B PLANTING DETAIL



C SHRUB DETAIL



D VINE TIES



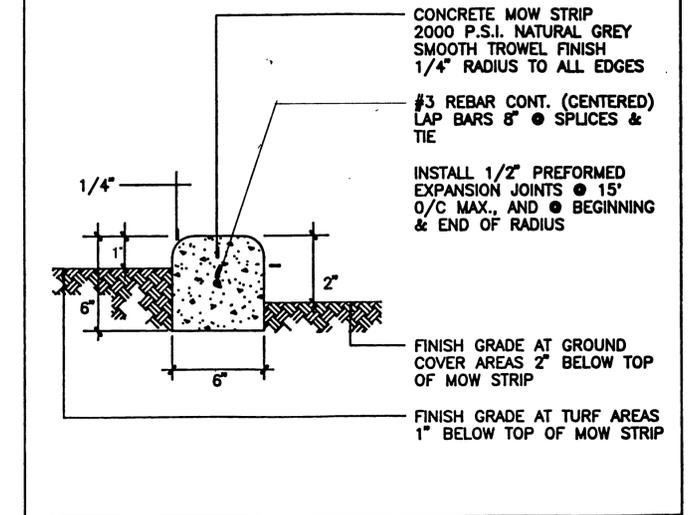
H SHRUB SPACING DETAIL

Minimum % Purz/Germ	LBS/ACRE	SPECIES
90 50	4	Gazania 'Tangerine Dwarf'
95 80	2	Alyssum 'Carpet of Snow'
95 80	3	Alyssum 'Royal Carpet'
95 85	6	Lotus corniculatus 'Kalo'
95 50	2	Chrysanthemum mutabile
95 75	2	Helianthemum mutabile
19		Total pounds per acre

F HYDROSEED MIX 'A'

Lasthenia chrysostoma	3 LBS. PER ACRE	8%
Eriophyllum confertiflorum	6 LBS. "	14%
Eucelia farinosa	4 LBS. "	10%
Eriogonum fasciculatum	5 LBS. "	4%
Salvia apiana	6 LBS. "	20%
Zorro Fescue	5 LBS. "	20%

G HYDROSEED MIX 'B'



E CONC. MOW CURB

BOTANICAL NAME	SIZE	DETAIL REFERENCE	REMARKS	ABBR.
TREES:				
PINUS CANADENSIS	15 GAL.	A, B	MIN. HT. 7'-0" x MIN. WIDTH 2'-3" CALIPER 1-1/2"	
LAGERSTROEMIA INDICA 'DURANT RED STD'	15 GAL.	A, B	7'-8" x 2'-3" 1-1/2"	
PLATANUS ACERIFOLIA 'BLOODGOOD'	15 GAL.	A, B	7'-9" x 2'-3" 1-1/2"	
PODOLCARPUS GRACILIOR STD.	15 GAL.	A, B	7'-8" x 2'-3" 1-1/2"	
PYRUS CALLERYANA 'ARISTORAT'	15 GAL.	A, B	7'-8" x 2'-3" 1/2-2"	
MAGNOLIA GRANDIFLORA 'SAMUEL SOMMERS'	24 BOX	A, D	7'-8" x 4'-5" 1 3/4-2"	
TRISTANIA CONFERTA	15 GAL.	A, B	7'-8" x 2'-3" 1-1/2"	
SHRUBS:				
ACACIA REDOLENS	5 GAL.	C	PULL & BUSHY PLANT 10' O.C.	AR
PLUMBAGO AURICULATA	5 GAL.	C	10' O.C.	PA
PITISPORUM TOBIRA 'WHEELERS DWARF'	5 GAL.	C	3' O.C.	PD
RAPHIOLEPIS INDICA 'ENCHANTRESS'	5 GAL.	C	3' O.C.	RI
XYLOSMA CONGESTUM COMPACTA	5 GAL.	C	4' O.C.	XC
COTONEASTER MYROPHYLLUS	5 GAL.	C	6' O.C.	CM
JUNIPERUS CHINENSIS 'BROADMOOR'	5 GAL.	C	6' O.C.	JB
AGAPANTHUS 'QUEEN ANNE'				AG
GROUND COVER:				
TRACHELOSPERMUM JASMINOIDES	1 GAL.		2' O.C. TRI-SPACE	TJ
GAZANIA 'MITSUNA ORANGE'	ROOTED CUT.		12' O.C. TRI-SPACE	
TURF - MARATHON	HYDROSEED		APPLY @ 12 LBS./1000 SF. SEE SPECS	
HYDROSEED MIX 'A'		F	HYDROSEED NOTE - SHEET L-20 APPLY TO PLANTING AREAS UNDER SHRUB MASSES	
HYDROSEED MIX 'B'		G	APPLY TO GRADED SLOPE SOUTH OF RESERVOIR	

PLANTING LEGEND

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT				PLANTING DETAILS	RHA #95112
APPROVED BY	DATE	APPROVED BY	DATE	SYCAMORE HIGHLANDS TRACT #22408	ACCOUNT NO. R-3073-LP
PRINCIPAL ENGINEER	11/17/95	SEE APPROVAL			SHEET L-24 OF 25
PARK DEPARTMENT	10/2/95	PUBLIC WORKS DIRECTOR			
TRAFFIC DIVISION		ON SHEET 1			
CHIEF P.W. ENGINEER	11/17/95	DATE		HORIZ. SCALE: 1" =	VERT. SCALE: 1" =

SECTION 0240 - PLANTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS: The provisions of the "Standard Specifications for Public Works Construction" 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: soil preparation; finish grading (as distinguished from fine grading per Section 0210); planting trees; staking and staking trees; planting shrubs and groundcover; spraying turf; soil erosion control; maintenance; plant establishment; quantities; and replacements.

1.03 SOILS TEST: The Contractor shall notify the Park Projects Inspector upon completion of fine grading and prior to commencement of soil preparation work. The City will obtain agronomic soils tests for all planting areas after completion of fine grading and prior to start of soil preparation work. Tests will be performed by an approved agronomic soils testing laboratory and will include a fertility and suitability analysis with written recommendations for soil preparation, planting backfill mix, and other requirements. Each post-plant fertilization program. The soils report recommendations shall take precedence over the minimum amendment and fertilizer application rates specified herein only when they exceed the specified minimums. Contractor shall allow a minimum two week period for the soils testing work commencing upon acceptance of the fine grading work per Section 0210 by the Park Projects Inspector.

1.04 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 following final acceptance. B. During the guarantee period, any material found to be dead, missing, or in poor condition 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.

PG. 1

2.07 HEADERS, STAKES AND TIES:

A. Add the following to Standard Specifications Section 212-1.3.3: (1) Tree stakes shall be straight-grained lodgepole pine, or City approved equal. Stakes shall be free from knots, checks, splits, or other imperfections. (2) Tree stakes shall be made from fire casing, 2 1/2" long by 3/4" wide, fastened to tree stake with two galvanized 5d roofing nails each. B. Add the following new section to Standard Specifications Section 212-1.3(4). Concrete Curbing - Concrete shall be 5 sack mix with a maximum slump test of four inches (4"). Provide sufficient concrete forming and stakes (maximum 3' o.c.) to provide continuous line without weaving.

2.08 JUTE NETTING: Jute netting shall be new and shall be of uniform, plain-weave, flame-retardant mesh. The mesh shall be dyed green and shall be made from unbleached single jute yarn. The yarn shall be of loosely twisted construction and shall not vary in thickness by more than one-half its nominal diameter. Jute netting shall be furnished in rolled strips and shall meet the following requirements: Width - 48 inches, with a tolerance of one inch wider or narrower. Minimum 78 warp ends per width of roll. Minimum 41 weft ends per yard of length. Weight shall average 1.22 pounds per linear yard, with a tolerance of 5 percent heavier or lighter.

PART 3 - EXECUTION

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

3.02 FINE GRADING: Add the following to Standard Specifications Section 308-2.4: A. Upon completion of all fine grading work per Section 0210 Grading, 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.

PG. 6

3.10 MAINTENANCE: Amend the Standard Specifications Section 308-6 to read: All areas within the work limits of this contract shall be maintained by the contractor for the duration of the contract until final acceptance.

3.11 START OF PLANT ESTABLISHMENT: Add the following to Standard Specifications Section 308-5:

- A. Criteria for Start of Plant Establishment Period: (1) The plant establishment period shall not start until all elements of the project that impact the landscape are completed in accordance with the contract documents. Projects will not be segmented into phases. (2) Permanent power to remote controllers shall be established. (3) The plant establishment period for the project shall not begin until after the first mowing of the newly planted turf areas. New turf shall not be mowed until attaining a minimum height of 2 inches. All turf shall be maintained at a mowing height of 1-1/2 inches. (4) Written acceptance of the City must be obtained to start the plant establishment period. (5) If the project maintenance fails to continuously meet standards required, the plant establishment period "stay count" will be suspended and will not recommence until the Contractor has corrected all deficiencies.

3.12 MAINTENANCE TASKS: Add the following to Standard Specifications Section 308-4:

A. General: During the contract 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 shrubs planted by the contractor shall be staked and pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old staked flowers and dead foliage shall be immediately placed or cut off. Do not prune trees without written approval of the City.

PG. 11

1.05 INSPECTIONS:

- Inspections will be required. The Contractor shall contact the Park Projects Inspector at least 48 hours (4 working days) in advance of an anticipated inspection. An inspection will be required at each of the steps listed below: A. Upon completion of fine grading and prior to commencement of soil preparation, for acceptance of fine grading work and taking of soils samples. B. Inspection of completed finish grading work following soil amendment work. C. When container plants and/or bare root stock are spotted for planting, but before planting holes are excavated. D. When planting and all other indicated or specified work has been completed. E. During application of pre-emergent chemical. F. At start of plant establishment period. G. At end of the plant establishment period, prior to final acceptance of the project for maintenance by the City. Final acceptance for maintenance will be confirmed in writing by the City and RECREATION DEPARTMENT.

1.06 SUBMITTALS: A. The following written certifications are required to be submitted to the Park Projects Inspector upon delivery of the respective materials to the job sites: Total Quantity of commercial fertilizers, by type Total Quantity of soil amendments and conditioners, by type Total Quantity of seeds, by type Total Quantity of mulch Total Quantity of iron sulfate

1.07 PLANT ESTABLISHMENT PERIOD: The length of the Plant Establishment Period shall be as specified in Section 6-7.4 of the Standard Specifications; see also Subsection 3.06 of this section regarding start of plant establishment period.

PART 2 - MATERIALS

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

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.

3.03 SOIL PREPARATION:

- Add the following to Standard Specifications Section 308-2.3: A. All fine grading and mounding per Section 0210 and weed control measures shall be completed prior to soil preparation. B. This work shall not commence until the agronomic soils test has been completed. Should 30 calendar days elapse between completion of soil preparation and commencement of planting, all areas shall be prepared again. C. Planting areas with slopes 3:1 and steeper shall not be soil prepared. In lieu of soil preparation, such slopes shall be covered with fertilizer tablets for all plantings per Section 3.05, C, below. 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. 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. (3) 100 pounds gypsum. (4) Soil sulfur per soils report.

3.04 FINISH GRADING:

The Contractor shall finish grade all planting areas filling as needed or removing surplus dirt, raking to remove all rocks and debris over 1/2 inch in diameter, and finishing to a smooth uniform grade. All areas shall slope to drain. Flow lines shall be established to existing roads, curbs, gutters, 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.

3.05 PLANTING:

- A. Amend the Standard Specifications Section 308-4.5 to coordinate with Section 2.06 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 City approved equal, 1 tablet for 1 gallon, 3 tablets for 3 gallons, 5 tablets for 15 gallons, and 6 tablets for a 24" tree. Complete backfilling to finish grade. (3) Trees (other than relocated palms) 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. 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. Add the following to Standard Specifications Section 308-4.7: (1) On slopes exceeding 3:1 ratio, apply 5 gram Agriform tablets, one per plant in lieu of soil preparation work.

3.06 PLANTING:

- A. Amend the Standard Specifications Section 308-4.5 to coordinate with Section 2.06 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 City approved equal, 1 tablet for 1 gallon, 3 tablets for 3 gallons, 5 tablets for 15 gallons, and 6 tablets for a 24" tree. Complete backfilling to finish grade. (3) Trees (other than relocated palms) 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. 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. Add the following to Standard Specifications Section 308-4.7: (1) On slopes exceeding 3:1 ratio, apply 5 gram Agriform tablets, one per plant in lieu of soil preparation work.

3.07 TREE STAKING:

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

3.08 TURF PLANTING:

Add the following to Standard Specifications Section 308-4.8.2, B: 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 mix proportions.

3.09 MAINTENANCE:

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. D. Irrigation: (1) Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper germination and growth until final acceptance of the work. Plants which cannot be watered sufficiently with the irrigation system shall be watered by means of a hose.

3.10 MAINTENANCE:

Amend the Standard Specifications Section 308-6 to read: All areas within the work limits of this contract shall be maintained by the contractor for the duration of the contract until final acceptance.

3.11 START OF PLANT ESTABLISHMENT:

Add the following to Standard Specifications Section 308-5:

- A. Criteria for Start of Plant Establishment Period: (1) The plant establishment period shall not start until all elements of the project that impact the landscape are completed in accordance with the contract documents. Projects will not be segmented into phases. (2) Permanent power to remote controllers shall be established. (3) The plant establishment period for the project shall not begin until after the first mowing of the newly planted turf areas. New turf shall not be mowed until attaining a minimum height of 2 inches. All turf shall be maintained at a mowing height of 1-1/2 inches. (4) Written acceptance of the City must be obtained to start the plant establishment period. (5) If the project maintenance fails to continuously meet standards required, the plant establishment period "stay count" will be suspended and will not recommence until the Contractor has corrected all deficiencies.

3.12 MAINTENANCE TASKS:

A. General: During the contract 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 shrubs planted by the contractor shall be staked and pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old staked flowers and dead foliage shall be immediately placed or cut off. Do not prune trees without written approval of the City.

PG. 12

2.02 FERTILIZER, SOIL AMENDMENTS AND CONDITIONS:

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:

Table with 2 columns: Component and Percentage. Includes Total Nitrogen (20%), Available Phosphoric Acid (10%), Combined Calcium (2.6%), Combined Sulfur (5%), and Iron (3%).

- B. Commercial Fertilizer shall bear the manufacturer's guaranteed statement of analysis and shall meet the following minimum requirements: 16% nitrogen, 6% phosphoric acid, and 8% potash. C. Organic Soil Amendment: Shall be type 1 organic soil amendment, wood based product, nitrogen stabilized. 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. Iron sulfate shall be ferric sulfate or ferrous sulfate in pelletized or granular form containing not less than 18.5% iron, expressed as metallic iron, and shall be registered as an agricultural mineral with the State Department of Agriculture in compliance with Article 2 "Fertilizing Materials", Section 1000 of the Agriculture Code.

PG. 3

All landscape areas shall be finish graded, (as distinguished from fine grading specified in Section 0210) to "dress out", maintain, and/or re-establish finish grades and flow lines as approved prior to amending the soil. Contractor shall call for inspection upon completion of finish grading work. Contractor shall not proceed with planting work until finish grades have been inspected and accepted by the Park Projects Inspector.

3.05 INSPECTION CONTROL:

Add new section to the Standard Specifications: 308-4.6(f) Jute Netting: All slopes areas exceeding 3:1 shall receive jute netting. Netting shall also be provided during the maintenance period, when and as directed by the Park Projects Inspector, along flow lines and other locations where erosion is evident. Jute netting shall be installed loosely, up and down the slope. The installed netting shall fit the soil surface contour and shall be held in place by 3/4-inch long, 1/8-inch diameter steel wire staples driven vertically into the soil at approximately 24-inch spacing. Jute netting strips shall overlap along the sides at least 6 inches. Ends of strips shall be buried into the soil at least 4 inches. Tap all ends of rolls a minimum of 24".

3.06 PLANTING:

- A. Amend the Standard Specifications Section 308-4.5 to coordinate with Section 2.06 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 City approved equal, 1 tablet for 1 gallon, 3 tablets for 3 gallons, 5 tablets for 15 gallons, and 6 tablets for a 24" tree. Complete backfilling to finish grade. (3) Trees (other than relocated palms) 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. 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. Add the following to Standard Specifications Section 308-4.7: (1) On slopes exceeding 3:1 ratio, apply 5 gram Agriform tablets, one per plant in lieu of soil preparation work.

3.07 TREE STAKING:

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

3.08 TURF PLANTING:

Add the following to Standard Specifications Section 308-4.8.2, B: 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 mix proportions.

3.09 MAINTENANCE:

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. D. Irrigation: (1) Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper germination and growth until final acceptance of the work. Plants which cannot be watered sufficiently with the irrigation system shall be watered by means of a hose.

3.10 MAINTENANCE:

Amend the Standard Specifications Section 308-6 to read: All areas within the work limits of this contract shall be maintained by the contractor for the duration of the contract until final acceptance.

3.11 START OF PLANT ESTABLISHMENT:

Add the following to Standard Specifications Section 308-5:

- A. Criteria for Start of Plant Establishment Period: (1) The plant establishment period shall not start until all elements of the project that impact the landscape are completed in accordance with the contract documents. Projects will not be segmented into phases. (2) Permanent power to remote controllers shall be established. (3) The plant establishment period for the project shall not begin until after the first mowing of the newly planted turf areas. New turf shall not be mowed until attaining a minimum height of 2 inches. All turf shall be maintained at a mowing height of 1-1/2 inches. (4) Written acceptance of the City must be obtained to start the plant establishment period. (5) If the project maintenance fails to continuously meet standards required, the plant establishment period "stay count" will be suspended and will not recommence until the Contractor has corrected all deficiencies.

3.12 MAINTENANCE TASKS:

A. General: During the contract 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 shrubs planted by the contractor shall be staked and pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old staked flowers and dead foliage shall be immediately placed or cut off. Do not prune trees without written approval of the City.

3.13 END OF PLANT ESTABLISHMENT PERIOD:

- A. When the contractor believes he has completed the plant establishment period and the entire project is ready for final acceptance, he shall request inspection of the project. The City will inspect the project for final acceptance. Deficiencies noted during inspection shall be corrected by the contractor. 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 plantings from plants 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 the plant establishment period and shall have roots "knot-in" to the native soil. C. Final acceptance shall occur only upon written acceptance of the project for maintenance by the City.

3.14 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; wash down all walkways, and drains; and remove construction equipment from the premises.

PG. 13

RIA LANDSCAPE ARCHITECTS PLANNERS, INC. 3612 SEVENTH STREET, RIVERSIDE, CALIFORNIA 92501 (909) 781-1930 FAX (909) 686-8091 LICENSE #1512

Table with columns: MARK, REVISIONS, APPR, DATE, DESIGNED BY, DRAWN BY, CHECKED BY. Includes handwritten entries for dates and initials.

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT. APPROVED BY: DATE: 11/7/85. APPROVED BY: DATE: 10/28/85. ON SHEET 1

2.03 SEED:

Add the following to Standard Specifications Section 212-1.3:

Table with 3 columns: Turf Seed Mix, Proportion, Purity Germination. Includes MARATHON with 100% proportion and 97% purity.

Seeding rate: 522 pounds per acre (122 pounds per 1,000 square feet)

2.04 HYDROSEEDING MATERIALS:

Add the following to Standard Specifications Section 212-1.3:

Mix: All water used shall be potable domestic water as drawn from the City pressure main. See General Provisions section 7-6.3 regarding temporary construction meter and charges for water drawn from City fire hydrants. Seed: Turf seed mix as specified. Mulch: 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. The fiber shall be of such character that when used in the applied mixture, an absorbent 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.

2.05 PLANTS:

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. In containers, the root condition of plants shall be determined by removal of earth from the roots of not less than two plants nor more than 25 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 shall be checked by the Park Projects Inspector at his option. The selection of plants to be checked will be made by the Park Projects Inspector. 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. Amend the Standard Specifications Section 212-1.4.2 and 212-1.4.3: 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 six (6) inches above the crown roots. The trees shall stand erect without support. Amend the Standard Specifications, new Section 212-1.4.6: Rooted cuttings will also be acceptable. Amend the Standard Specifications Section 212-1.4.6: Rooted cuttings shall conform to the American Nurseryman's Association standards. Minimum caliper shall be two (2) inch diameter and minimum height shall be twelve (12) feet. Amend the Standard Specifications Section 212-1.4.6: Rooted cuttings shall be of a loose characteristic, friable and friable. Amend the Standard Specifications Section 212-1.4.6: Rooted cuttings shall be, leached nitrogen fertilized and shall be free of foreign matter. Amend the Standard Specifications Section 212-1.4.6: Rooted cuttings shall be of a loose characteristic, friable and friable. Amend the Standard Specifications Section 212-1.4.6: Rooted cuttings shall be, leached nitrogen fertilized and shall be free of foreign matter. Amend the Standard Specifications Section 212-1.4.6: Rooted cuttings shall be of a loose characteristic, friable and friable. Amend the Standard Specifications Section 212-1.4.6: Rooted cuttings shall be, leached nitrogen fertilized and shall be free of foreign matter.

PG. 4

(2) Mulch and fertilize groundcover areas using 1.5 cubic yards of wood shavings and 5 lbs. of the specified commercial fertilizer per 1,000 square feet. Repeat fertilization at 30 day intervals throughout the duration of the contract up to 4 applications, after which decrease frequency to once every 90 days. (3) All groundcover and bare dirt areas are to be treated with a pre-emergent chemical (subject to approval by the Park Inspector prior to application). Chemicals are to be applied by a licensed Pest Control Agent. This treatment shall be applied at the following times during the contract: a) before planting, b) at beginning of plant establishment period, and c) at end of plant establishment period. The Park Projects Inspector, (714) 782-5223, shall be given a minimum of 48 hours (2 working days) notice prior to such application. No chemicals shall be applied other than in the presence of the Inspector.

3.07 TREE STAKING:

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

3.08 TURF PLANTING:

Add the following to Standard Specifications Section 308-4.8.2, B: 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 mix proportions.

3.09 MAINTENANCE:

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. D. Irrigation: (1) Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper germination and growth until final acceptance of the work. Plants which cannot be watered sufficiently with the irrigation system shall be watered by means of a hose.

3.10 MAINTENANCE:

Amend the Standard Specifications Section 308-6 to read: All areas within the work limits of this contract shall be maintained by the contractor for the duration of the contract until final acceptance.

3.11 START OF PLANT ESTABLISHMENT:

Add the following to Standard Specifications Section 308-5:

- A. Criteria for Start of Plant Establishment Period: (1) The plant establishment period shall not start until all elements of the project that impact the landscape are completed in accordance with the contract documents. Projects will not be segmented into phases. (2) Permanent power to remote controllers shall be established. (3) The plant establishment period for the project shall not begin until after the first mowing of the newly planted turf areas. New turf shall not be mowed until attaining a minimum height of 2 inches. All turf shall be maintained at a mowing height of 1-1/2 inches. (4) Written acceptance of the City must be obtained to start the plant establishment period. (5) If the project maintenance fails to continuously meet standards required, the plant establishment period "stay count" will be suspended and will not recommence until the Contractor has corrected all deficiencies.

3.12 MAINTENANCE TASKS:

A. General: During the contract 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 shrubs planted by the contractor shall be staked and pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old staked flowers and dead foliage shall be immediately placed or cut off. Do not prune trees without written approval of the City.

PG. 9

PLANTING SPECIFICATIONS RHA #95112. SYCAMORE HIGHLANDS TRACT #22408. ACCOUNT NO. R-3073-LP SHEET L-25 OF 25. HORIZ. SCALE: 1" = ... VERT. SCALE: 1" = ... INDEXED 2/28/96 GH PC-2926-R