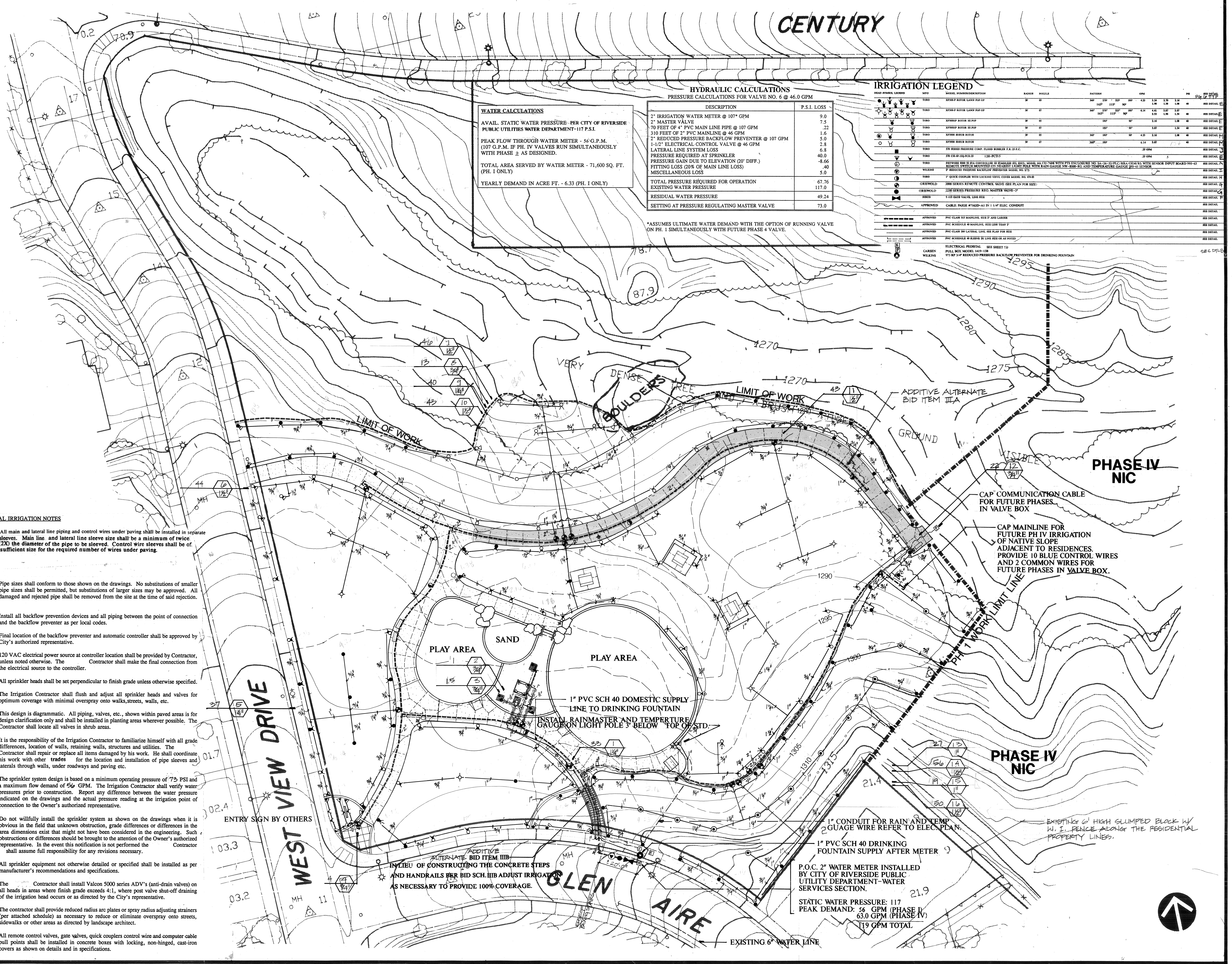

WATER CALCULATIONS

AVAIL. STATIC WATER PRESSURE PER CITY OF RIVERSIDE PUBLIC UTILITIES WATER DEPARTMENT–117 P.S.I.

PEAK FLOW THROUGH WATER METER - 56 G.P.M. (107 G.P.M. IF PH. IV VALVES RUN SIMULTANEOUSLY WITH PHASE ± AS DESIGNED.

TOTAL AREA SERVED BY WATER METER - 71,600 SQ. FT. (PH. I ONLY)

YEARLY DEMAND IN ACRE FT. - 6.33 (PH. I ONLY)

HYDRAULIC CALCULATIONS

PRESSURE CALCULATIONS FOR VALVE NO. 6 @ 46.0 GPM

DESCRIPTION	P.S.I. LOSS
2" IRRIGATION WATER METER @ 107* GPM	9.0
2" MASTER VALVE	7.5
70 FEET OF 4" PVC MAIN LINE PIPE @ 107 GPM	.22
310 FEET OF 2" PVC MAINLINE @ 46 GPM	1.6
2" REDUCED PRESSURE BACKFLOW PREVENTER @ 107 GPM	5.0
1-1/2" ELECTRICAL CONTROL VALVE @ 46 GPM	2.8
LATERAL LINE SYSTEM LOSS	6.8
PRESSURE REQUIRED AT SPRINKLER	40.0
PRESSURE GAIN DUE TO ELEVATION (20' DIFF.)	-8.66
FITTING LOSS (20% OF MAIN LINE LOSS)	.40
MISCELLANEOUS LOSS	5.0
TOTAL PRESSURE REQUIRED FOR OPERATION	67.76
EXISTING WATER PRESSURE	117.0
RESIDUAL WATER PRESSURE	49.24
SETTING AT PRESSURE REGULATING MASTER VALVE	73.0

*ASSUMES ULTIMATE WATER DEMAND WITH THE OPTION OF RUNNING VALVE ON PH. 1 SIMULTANEOUSLY WITH FUTURE PHASE 4 VALVE.

IRRIGATION LEGEND

HEAD SYMBOL LEGEND	MFG	MODEL NUMBER/DESCRIPTION	RADIUS	NOZZLE	PATTERN	GPM	PSI	SEE DETAIL PG 6 TYP
	TORO	XP300-P ROTOR LAWN POP-UP	28'	05	360° 270° 225° 180° 165° 115° 90°	4.23 3.24 2.70 2.16 1.98 1.38 1.08	40	SEE DETAIL E
	TORO	XP300-P ROTOR LAWN POP-UP	38'	07	360° 270° 225° 180° 165° 115° 90°	6.14 4.61 3.87 3.07 2.32 1.96 1.54	40	SEE DETAIL E
	TORO	XP300HP ROTOR HI-POP	28'	05	180° 90°	2.16 1.08	40	SEE DETAIL E
	TORO	XP300HP ROTOR HI-POP	38'	07	180° 90°	3.07 1.54	40	SEE DETAIL E
	TORO	XP300S SHRUB ROTOR	28'	05	360° 180° 90°	4.23 2.16 1.08	40	SEE DETAIL M
	TORO	XP300S SHRUB ROTOR	38'	07	360° 180°	6.14 3.07 1.54	40	SEE DETAIL M
	TORO	570 SERIES PRESSURE COMP. FLOOD BUBBLER F.B.-25-P.C.				.25 GPM		SEE DETAIL J
	TORO	570 CSI-6P-12Q-PCD.25 12H-PCD.5				.25 GPM .5		SEE DETAIL E
	TORO	NETWORK 8000 32 STA CONTROLLER IN STAINLESS STL ENCL. MODEL NO. 132-7608 WITH PTS ENCLOSURE NO. SA-26-32/PLC/RRA/OEM/RS WITH SENSOR INPUT BOARD 995-63 REMOTE SWITCH MOUNTED ON NEAREST LIGHT POLE WITH RAIN GAUGE NW-8000-RG AND TEMPERATURE GAUGE 995-61 SENSOR						SEE DETAIL A
	WILKINS	2" REDUCED PRESSURE BACKFLOW PREVENTER MODEL NO. 975						SEE DETAIL I
	TORO	1" QUICK COUPLER WITH LOCKING VINYL COVER MODEL NO. 474-03						SEE DETAIL H
	GRISWOLD	2000 SERIES REMOTE CONTROL VALVE (SEE PLAN FOR SIZE)						SEE DETAIL G
	GRISWOLD	2230 SERIES PRESSURE REG. MASTER VALVE–2"						SEE DETAIL G
	NIBCO	T-113 GATE VALVE, LINE SIZE						SEE DETAIL F
	APPROVED	CABLE: PAIGE #7162D–A1 IN 1 1/4" ELEC. CONDUIT						SEE DETAIL
								SEE DETAIL
	APPROVED	PVC CLASS 315 MAINLINE, SIZE 2" AND LARGER						SEE DETAIL
	APPROVED	PVC SCHEDULE 40 MAINLINE, SIZE LESS THAN 2"						SEE DETAIL
	APPROVED	PVC CLASS 200 LATERAL LINE, SEE PLAN FOR SIZE						SEE DETAIL
	APPROVED	PVC SCHEDULE 40 SLEEVE 2X LINE SIZE OR AS NOTED						SEE DETAIL
E		ELECTRICAL PEDISTAL SEE SHEET 7.0						
P	CARSEN	PULL BOX MODEL 1419–13B						
	WILKINS	975 RP 3/4" REDUCED PRESSURE BACKFLOW PREVENTER FOR DRINKING FOUNTAIN						SEE DTL B

GENERAL IRRIGATION NOTES

1. All main and lateral line piping and control wires under paving shall be installed in separate sleeves. **Main line and lateral line sleeve size shall be a minimum of twice (2X) the diameter of the pipe to be sleeved. Control wire sleeves shall be of sufficient size for the required number of wires under paving.**

3. Pipe sizes shall conform to those shown on the drawings. No substitutions of smaller pipe sizes shall be permitted, but substitutions of larger sizes may be approved. All damaged and rejected pipe shall be removed from the site at the time of said rejection.

4. Install all backflow prevention devices and all piping between the point of connection and the backflow preventer as per local codes.

5. Final location of the backflow preventer and automatic controller shall be approved by City's authorized representative.

6. 120 VAC electrical power source at controller location shall be provided by Contractor, unless noted otherwise. The Contractor shall make the final connection from the electrical source to the controller.

7. All sprinkler heads shall be set perpendicular to finish grade unless otherwise specified.

8. The Irrigation Contractor shall flush and adjust all sprinkler heads and valves for optimum coverage with minimal overspray onto walks, streets, walls, etc.

9. This design is diagrammatic. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas wherever possible. The Contractor shall locate all valves in shrub areas.

10. It is the responsibility of the Irrigation Contractor to familiarize himself with all grade differences, location of walls, retaining walls, structures and utilities. The Contractor shall repair or replace all items damaged by his work. He shall coordinate his work with other **trades** for the location and installation of pipe sleeves and laterals through walls, under roadways and paving etc.

11. The sprinkler system design is based on a minimum operating pressure of 73 PSI and a maximum flow demand of 56 GPM. The Irrigation Contractor shall verify water pressures 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.

12. Do not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that unknown obstruction, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed the Contractor shall assume full responsibility for any revisions necessary.

13. All sprinkler equipment not otherwise detailed or specified shall be installed as per manufacturer's recommendations and specifications.

14. The Contractor shall install Valcon 5000 series ADV's (anti-drain valves) on all heads in areas where finish grade exceeds 4:1, where post valve shut-off draining of the irrigation head occurs or as directed by the City's representative.

15. The contractor shall provide reduced radius arc plates or spray radius adjusting strainers (per attached schedule) as necessary to reduce or eliminate overspray onto streets, sidewalks or other areas as directed by landscape architect.

16. All remote control valves, gate valves, quick couplers control wire and computer cable pull points shall be installed in concrete boxes with locking, non-hinged, cast-iron covers as shown on details and in specifications.

REGISTERED LANDSCAPE ARCHITECT
ROBERT B. CLARK NO. 2105
Signature
5/23/93
Date
STATE OF CALIFORNIA

CLARK & GREEN Associates Landscape Architecture
3070 Bristol Street, Suite 150, Costa Mesa, California 92626
(714) 434-9803 • FAX (714) 434-9109
Lic. # CA 2105, 2311; AZ 19864

REVISIONS | BY

PROJECT

CASTLEVIEW PARK

1410 Via Vista Drive, Riverside, CA 92522

City of Riverside Park and Recreation Department

SHEET TITLE

IRRIGATION PLAN

PHASE I

DRAWN: PMH

CHECKED:

DATE: 11/3/94

SCALE: 1"=20'-0"

JOB NO.: 91-085

SHEET: 4.0

8 OF 11 SHEETS

PLAN NO. P-0924

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