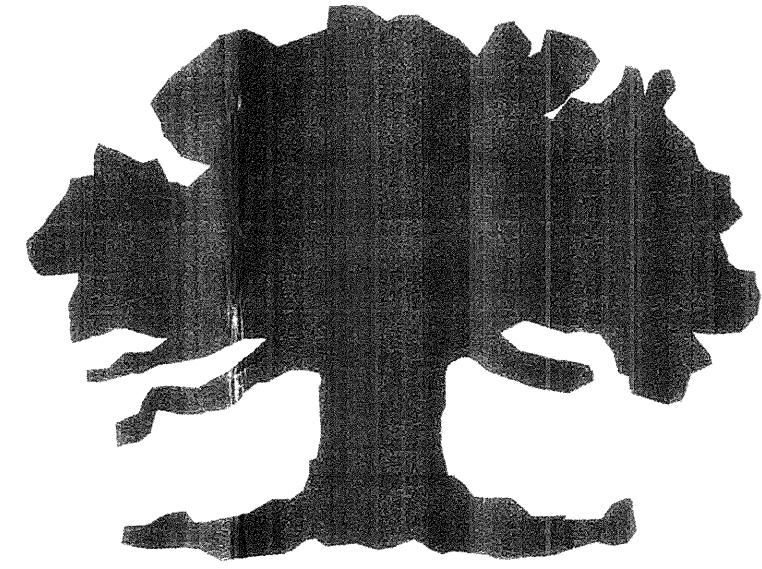


Artisan Collection at Mission Hills



OWNER/DEVELOPER

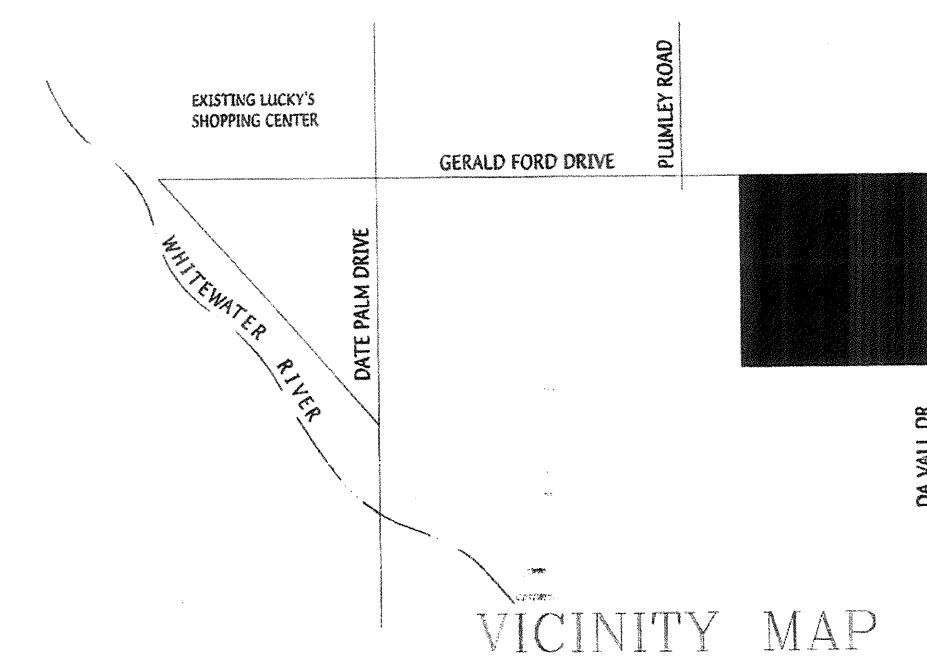
FORD DA VALL GROUP LLC.
68936 ADELINA ROAD
CATHEDRAL CITY, CA 92234
PHONE (760) 322-3422

PERIMETER LANDSCAPE PLANS

GERALD FORD DRIVE & DA VALL DRIVE

SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
PL-1	PLANTING PLAN - GERALD FORD DRIVE
PL-2	PLANTING PLAN - DA VALL ROAD
PL-3	PLANTING / LIGHTING DETAILS
PL-4	IRRIGATION PLAN - GERALD FORD DRIVE
PL-5	IRRIGATION PLAN - DA VALL ROAD
PL-6	IRRIGATION DETAILS
PL-7	LIGHTING PLAN
PL-8	LIGHTING PLAN
PL-9	ENTRY GATE - GERALD FORD DRIVE
PL-10	ENTRY GATE - DA VALL ROAD
PL-11	CORNER WATER FEATURE - DETAILS



A.P. NO: 674-020-014
TRACT NO. 29771

ZONING

EXISTING ZONING - R2
PROPOSED ZONING - R1

LAND USE

EXISTING - VACANT
PROPOSED - RESIDENTIAL

APPROVED FOR CONSTRUCTION
BY THE CITY OF CATHEDRAL CITY
DEPT. OF COMMUNITY DEVELOPMENT
PLANNING *[Signature]* DATE 9-13-01
BUILDING _____ DATE _____
ENGINEERING _____ DATE _____

JM 29771 w/s plans

THESE PLANS HAVE BEEN REVIEWED BY THE COACHELLA VALLEY WATER DISTRICT
IN ACCORDANCE WITH WATER CODE TITLE 7, DIVISION 1, CHAPTER 3, ARTICLE 10.8,
SECTION 85597 ET SEQ. REQUIRING EFFICIENT LANDSCAPE AND IRRIGATION DESIGN
IN COOPERATION WITH THE LOCAL GOVERNING AGENCY (CITY OR COUNTY).
DATE 07-12-01 BY *[Signature]*
WATER MANAGER/REGULATORY *[Signature]*
SERVICE DIRECTOR

R·M·D
RAY MARTIN DESIGN
Landscape Design Services
52-293 Avenida Madero
La Quinta, California
92253
(760) 771-2071 fax 771-3381

PLANTING, LIGHTING & IRRIGATION 2001

DATE	9-11-01
REVISIONS	
PER CITY COMMENTS	

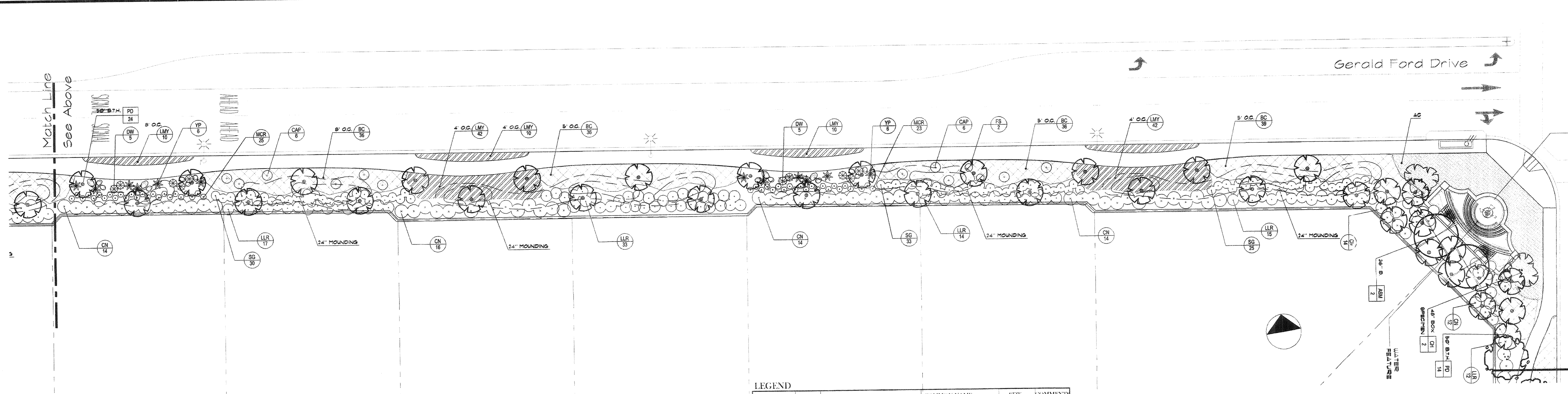
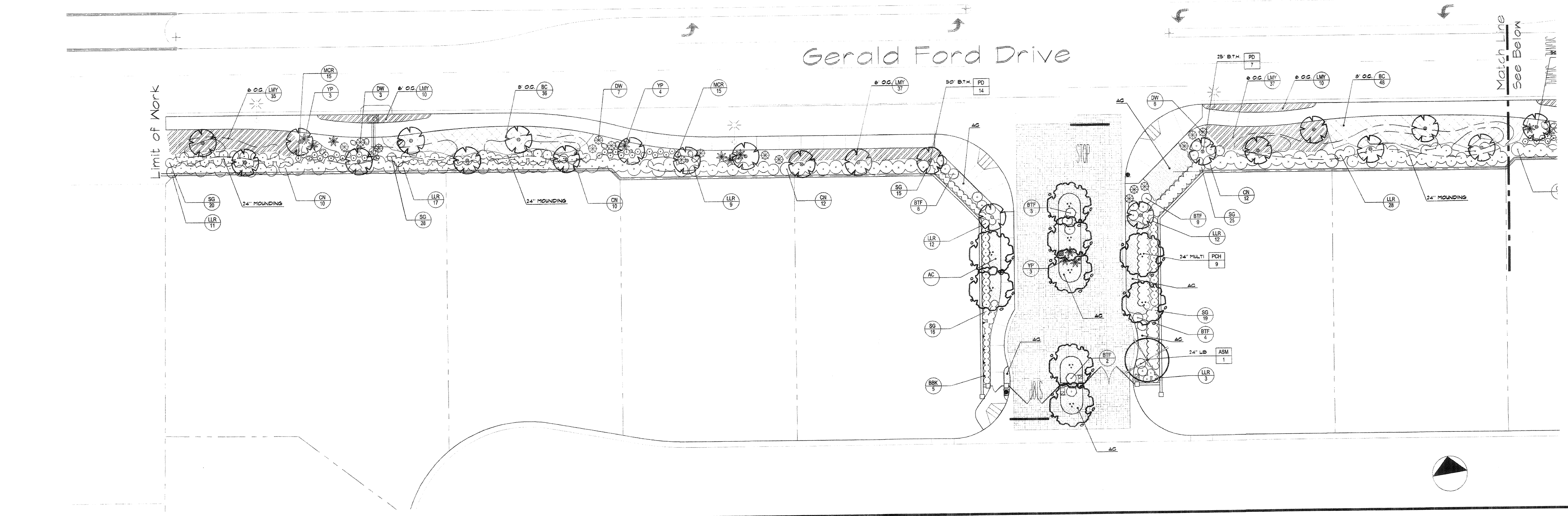
R·M·D
RAY MARTIN DESIGN
 Landscape Design Services
 52-293 Avenida Madro
 La Quinta, California
 (760) 773-3071 fax 773-3383

PLANTING PLAN

Artisan Collection
 Perimeter and Entrics
 Cathedral City, California

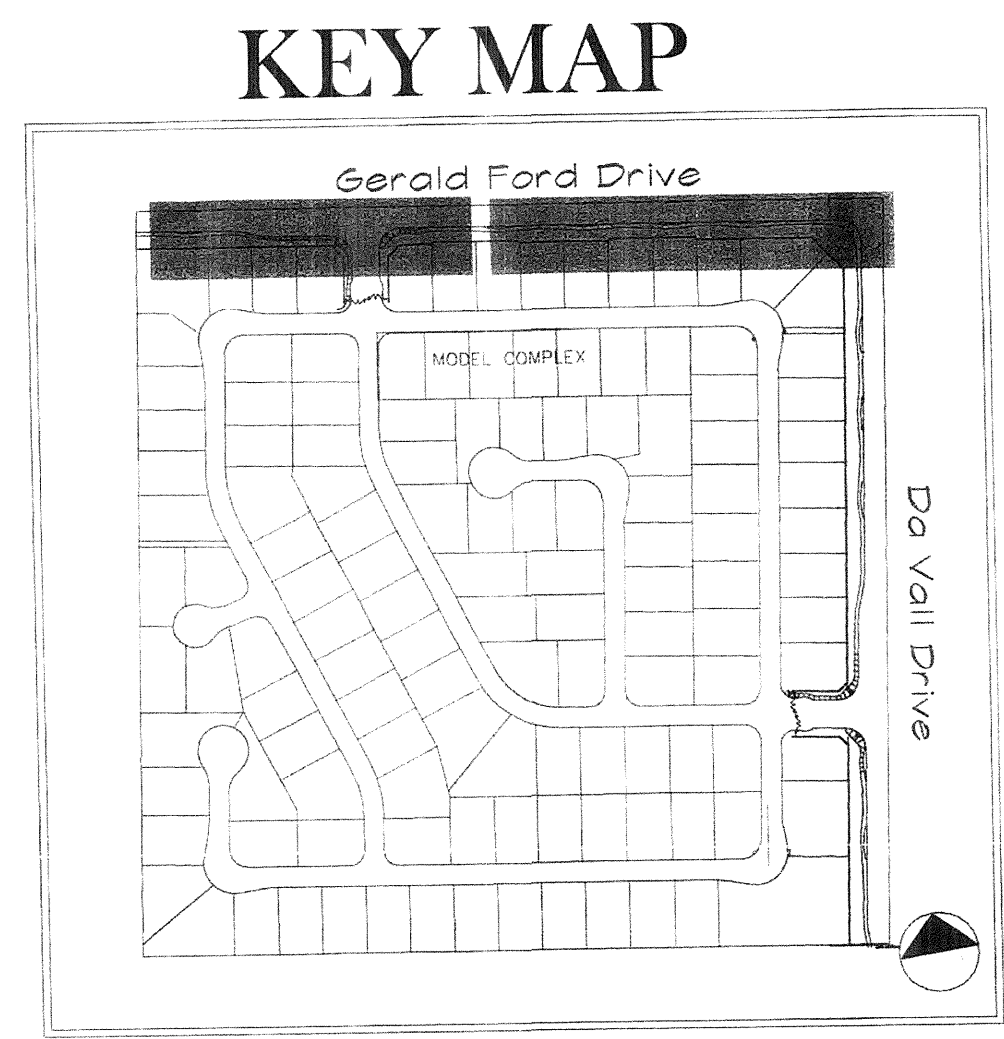
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 Date: 07-09-01
 Sheet No: **PL-1**

L-9109



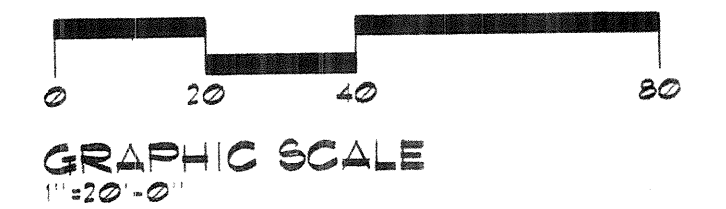
LEGEND

SYMBOL	ABBRV.	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
	PCT	Procasia hybrid - Multi Trunk	Thornless Mesquite	24" box	
	ASM	Acacia smali - Standard Trunk	Street Acacia	24" box	
	PD	Phoenix dactylifera	Date Palm	25' P.T.H.	
	AST	Acacia senegalensis - Standard Trunk	Showstring Acacia	24" box	
	BC	Baccharis confertiflora - Thompson	Thompson's Coyote Bush	1 gallon	5 occ.
	CN	Ceanothus leucanthus	Green Ceanoth	5 gallon	8 occ.
	LMY	Lantana m. 'New Gold'	New Gold Lantana	1 gallon	4 occ.
	SG	Salvia greggii	Red Sage	5 gallon	
	LIR	Leucosyrium leucanthum - Rio Bravo	Texas Renner	5 gallon	8 occ.
	BT	Bougainvillea 'Temple Fire'	Bougainvillea	5 gallon	
	DW	Dasylirion wheeleri	Grey Desert Spoon	5 gallon	
	FS	Fouquieria splendens	Occoillo	6" tall, 12" wide minimum	
	MCR	Mullein	Mullein	1 gallon	
	YP	Yucca pendula	Soft Tipped Yucca	5 gallon	
	BBK	Bougainvillea 'Barbara Kars'	Bougainvillea	5 gallon	Vine
	DC	Boulders to be granite	1.4 to 1.8 ton mix in each group		
	DC	Decorative Granite - Desert Dusk	2" thick in desert areas - 1" thick under shrub massing		



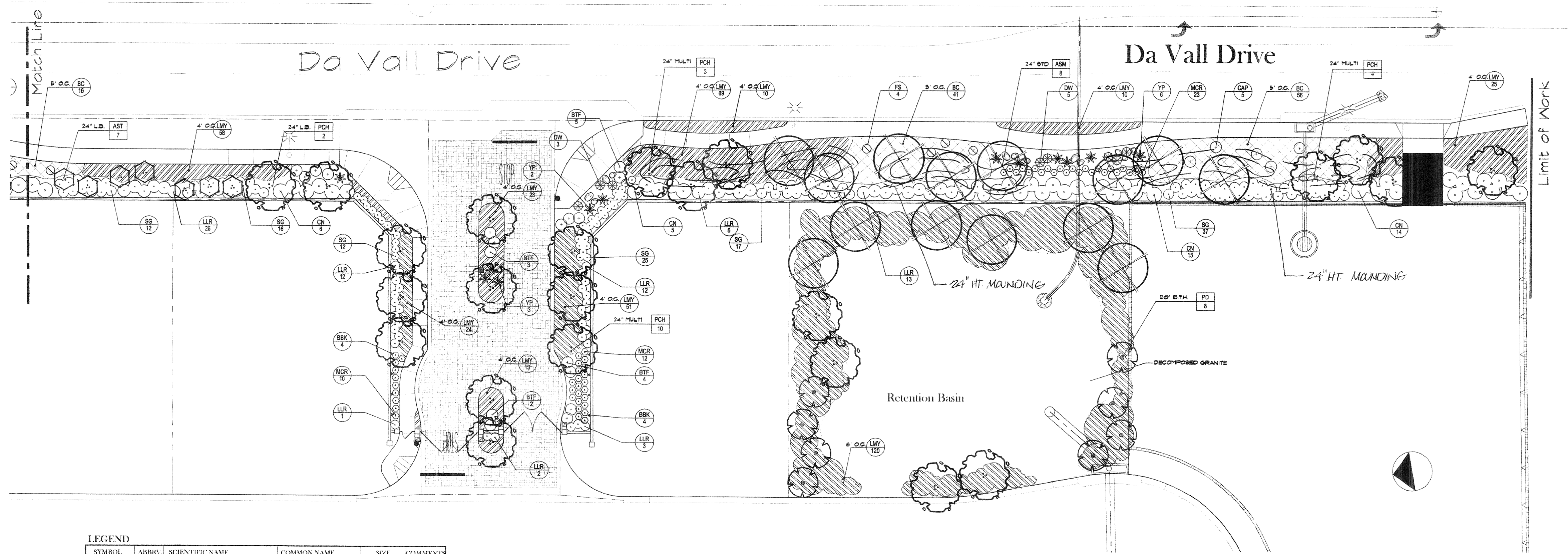
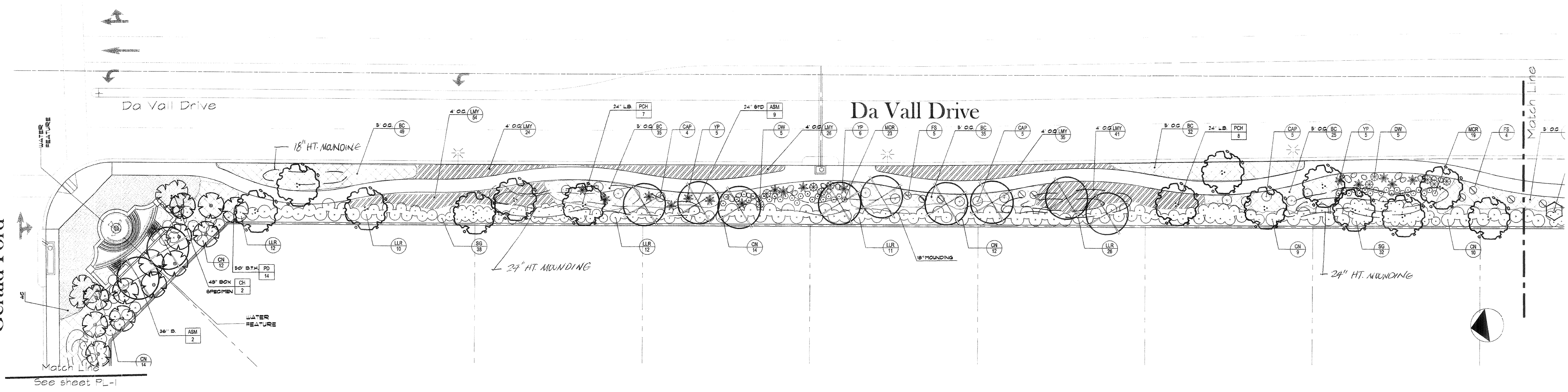
APPROVED FOR CONSTRUCTION
 BY THE CITY OF CATHEDRAL CITY
 DEPT. OF COMMUNITY DEVELOPMENT
 PLANNING *Maddox* DATE 9-13-01
 BUILDING _____ DATE _____
 ENGINEERING _____ DATE _____

DATE 07/12/01 BY *Donald H. Ashley*
 WATER MANAGEMENT SPECIALIST
Scott Carlson
 SERVICE DIRECTOR



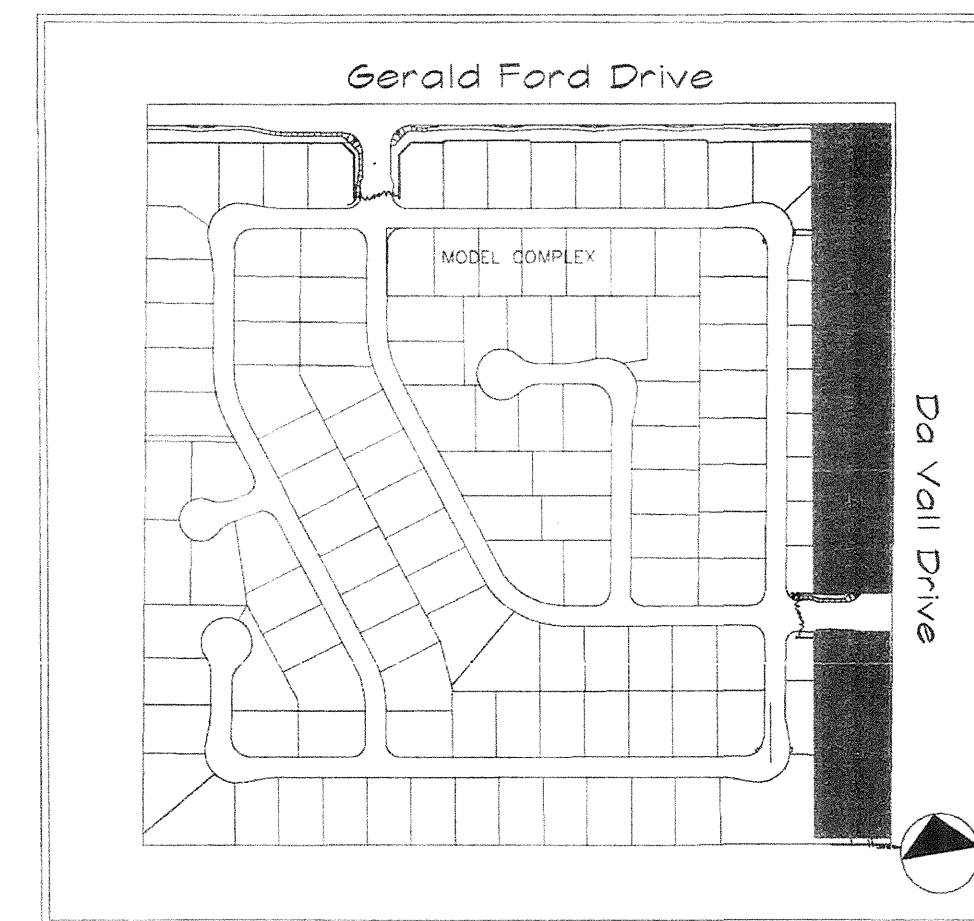
THESE PLANS HAVE BEEN REVIEWED BY THE COACHELLA VALLEY WATER DISTRICT IN ACCORDANCE WITH WATER CODE TITLE 7, DIVISION 1, CHAPTER 3, ARTICLE 10, SECTION 65997 ET SEQ. REQUIRING EFFICIENT LANDSCAPE AND IRRIGATION DESIGN IN COOPERATION WITH THE LOCAL GOVERNING AGENCY (CITY OR COUNTY).

Gerald Ford

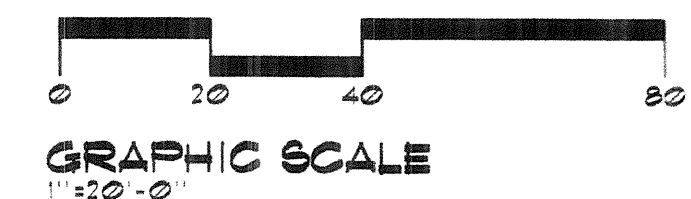


LEGEND					
SYMBOL	ABBRY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
	PCHI	Prosopis hybrid - Multi Trunk	Thornless Mesquite	2' box	
	ASMI	Acacia smulii - Standard Trunk	Sweet Acacia	2' box	
	PD	Phoenix dactylopera	Date Palm	25 B.T.H.	
	AST	Acacia stenophylla - Standard Trunk	Showstring Acacia	2' box	
	BC	Baccharis centennialii - Thompson	Thompson's Coast Bush	1 gallon	5' oc.
	CN	Cassia tetraphylla	Green Cassia	5 gallon	8' oc.
	LMY	Lantana m. 'New Gold'	New Gold Lantana	1 gallon	1' oc.
	SG	Salvia greggii	Red Sage	5 gallon	
	LLR	Leucodermis laurifolia 'Bo-Boss'	Texas Ranger	5 gallon	8' oc.
	BTFF	Bougainvillea 'Tempo Fire'	Bougainvillea	3 gallon	
	DW	Dawsonia strobilifera	Grey Desert Spoon	5 gallon	
	FS	Fouquieria splendens	Ocotillo	45 tall, 12 core minimum	
	MCR	Mitilobaea capillaris 'Regal Mix'	Mulley	1 gallon	
	YP	Yucca pendula	Soft Tipped Yucca	5 gallon	
	HBK	Bougainvillea 'Barbara Korf'	Bougainvillea	5 gallon	Vine
	DG	Decomposed Granite - 'Desert Dune'	2" thick, at desert areas - 1" thick under shrubs/mosses		

KEY MAP



APPROVED FOR CONSTRUCTION
BY THE CITY OF CATHEDRAL CITY
DEPT. OF COMMUNITY DEVELOPMENT
PLANNING *Knudsen* DATE: 9-13-01
BUILDING _____ DATE _____
ENGINEERING _____ DATE _____



DATE 07-12-01 BY *Donald R. Hedley*
WATER MANAGEMENT SPECIALIST
Scott Cowan
SERVICE DIRECTOR

REV.	REVISIONS	DATE
1	REV. CITY COMMENTS	7/10/01

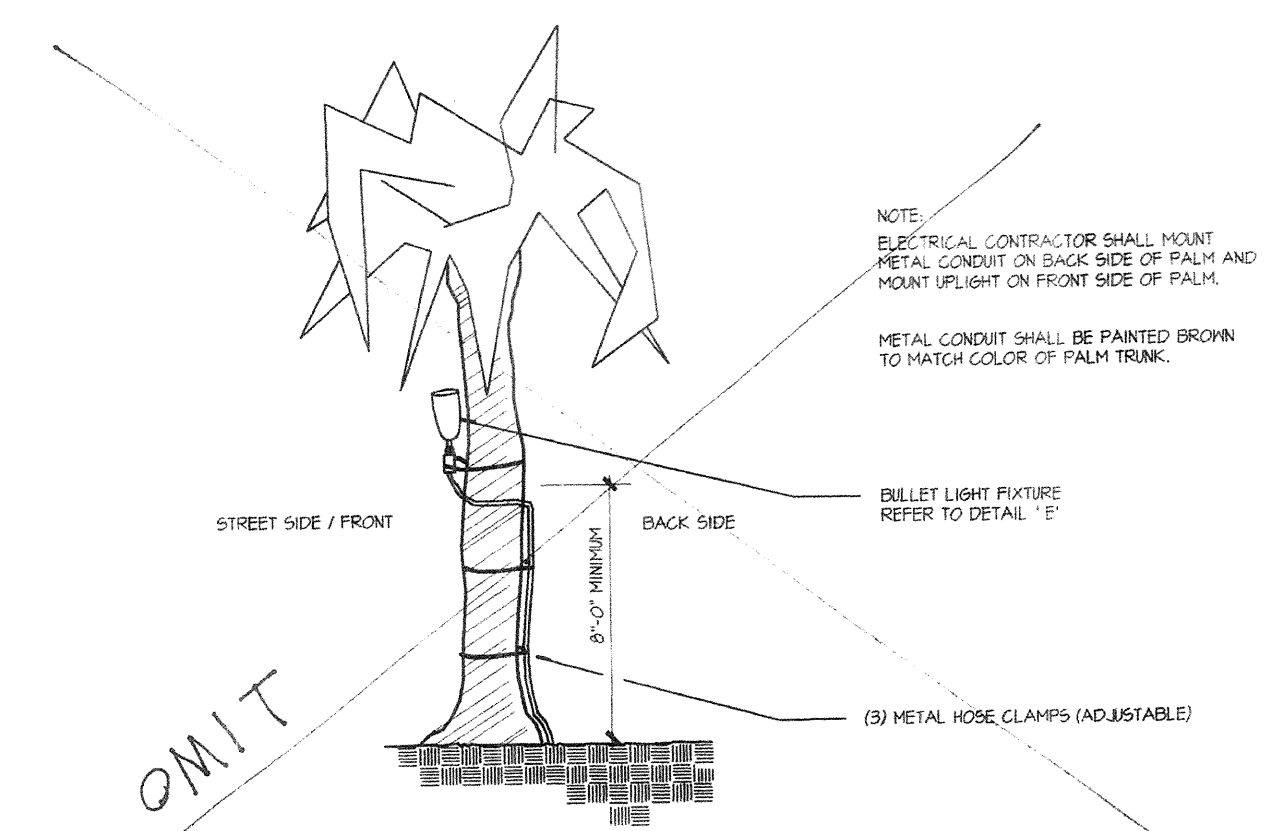
R.M.D.
RAY MARTIN DESIGN
Landscape Design Services
52-293 Avenida Madro
92256 Cathedral City, California
(760) 771-3071 Fax: 771-3381

PLANTING PLAN

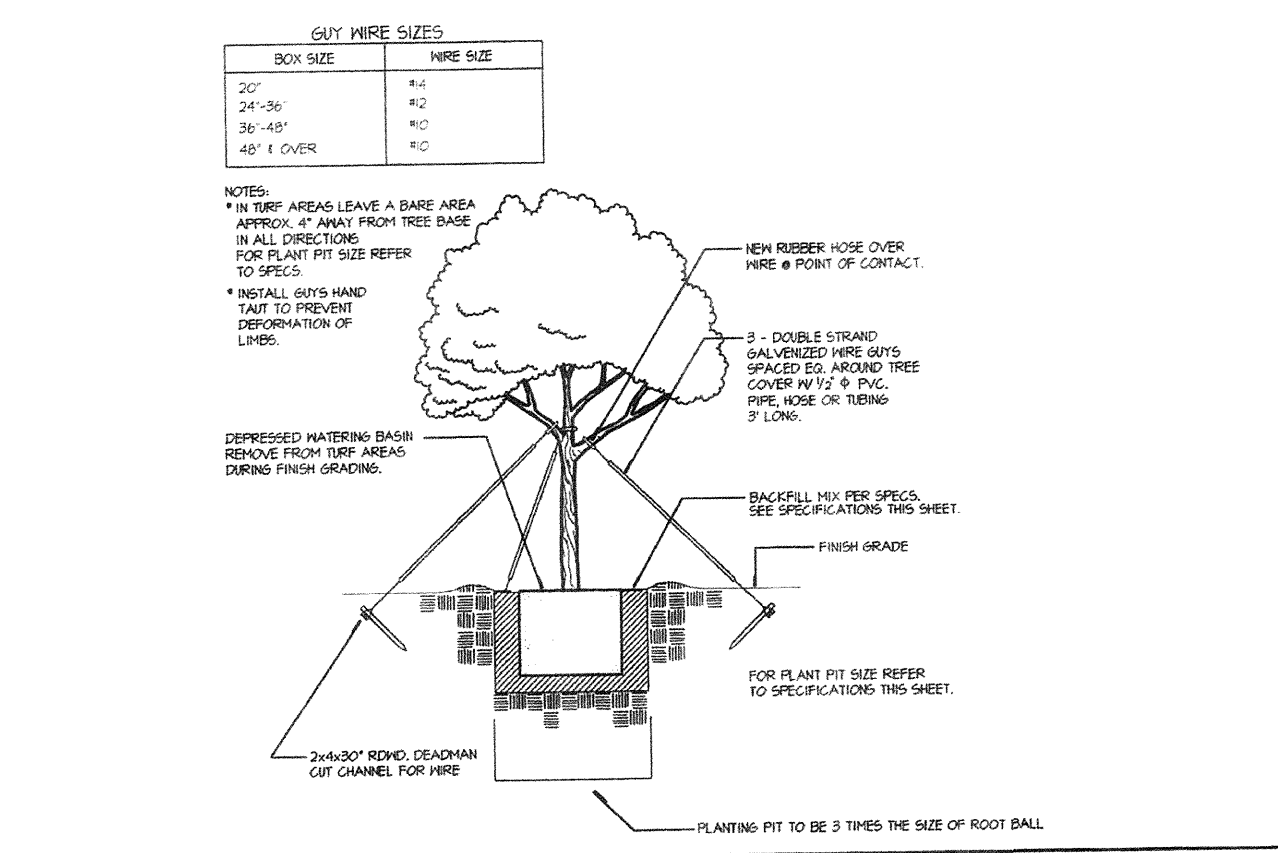
Artisan Collection
Perimeter and Entries
Cathedral City, California

Scale:
1" = 20'-0"
Date:
07-09-01

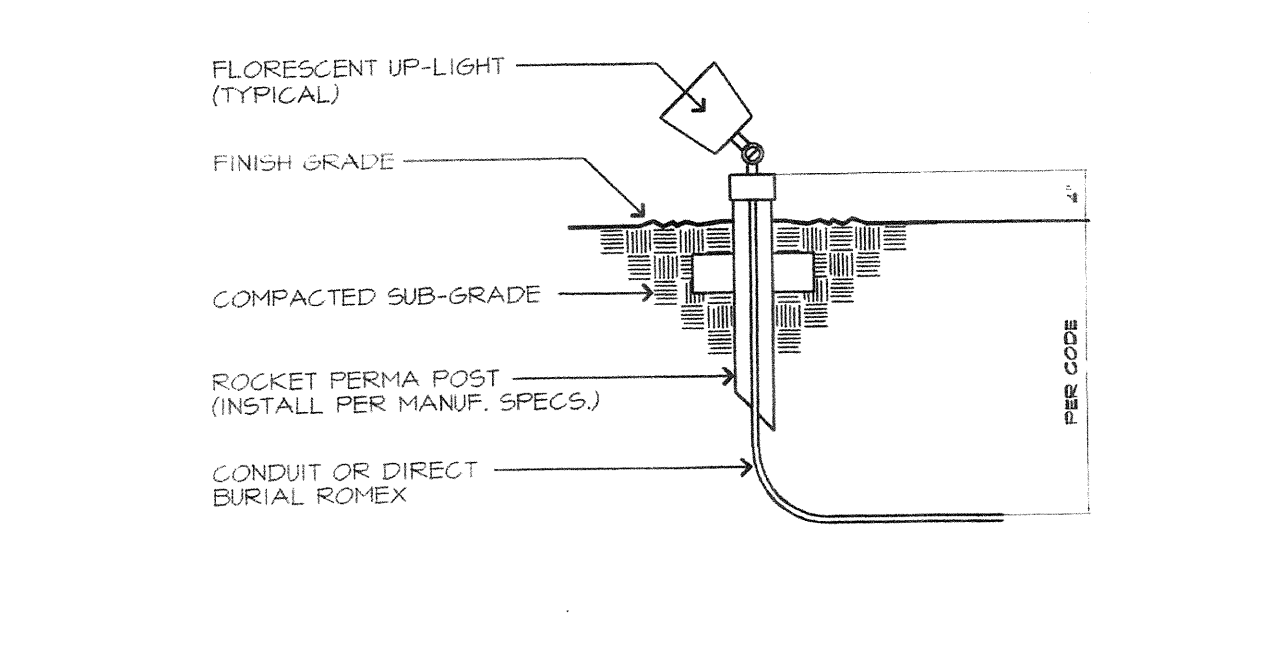
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PL-2



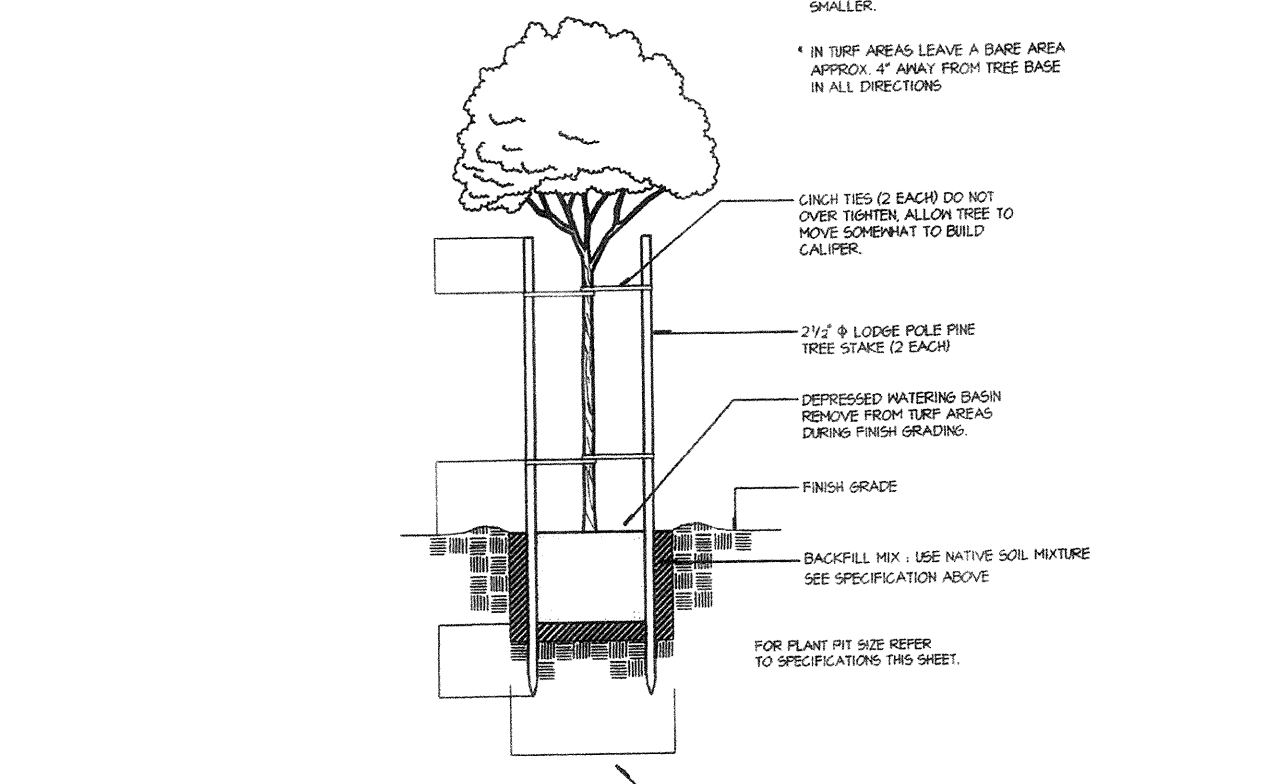
E UPLIGHT MOUNTED ON PALM
N.T.S.



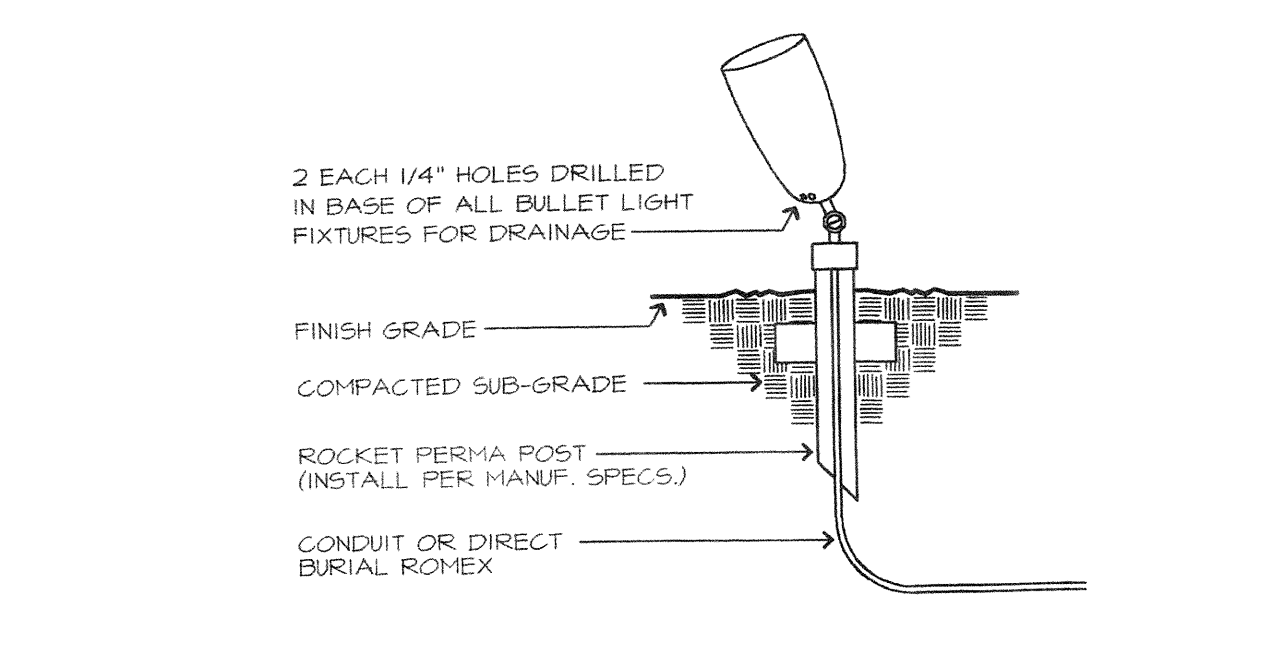
A SPECIMEN TREE PLANTING & GUYING
N.T.S.



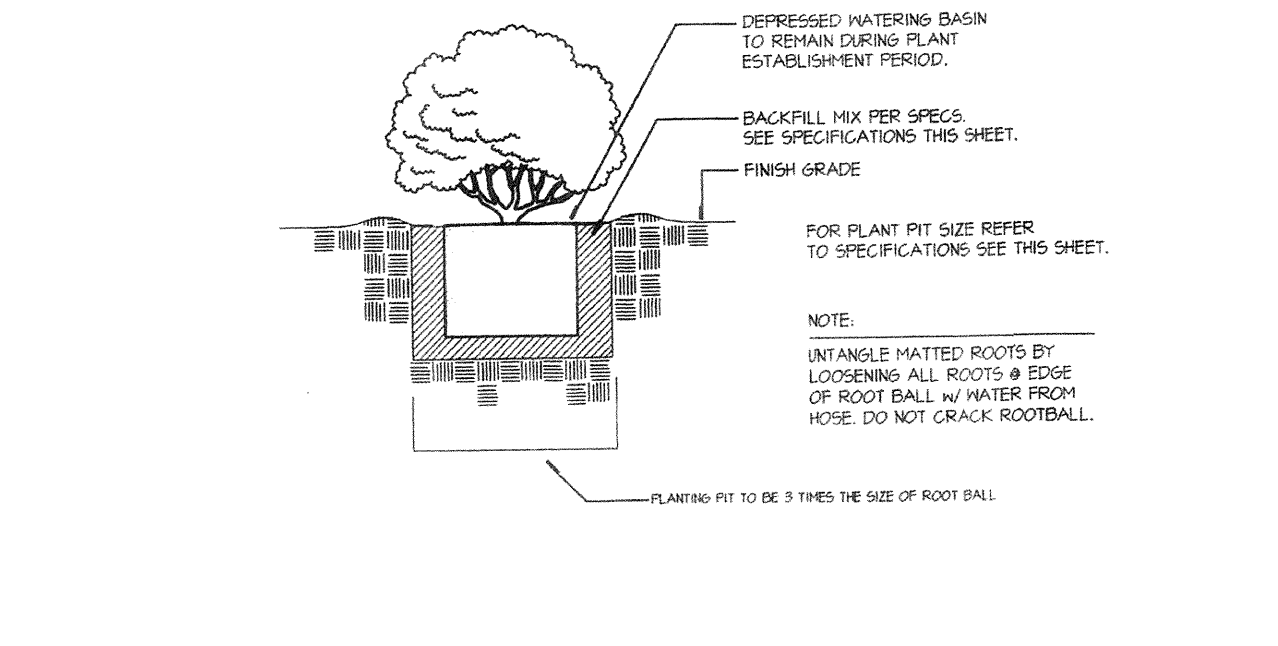
F FLOURESCENT LIGHT FIXTURE
N.T.S.



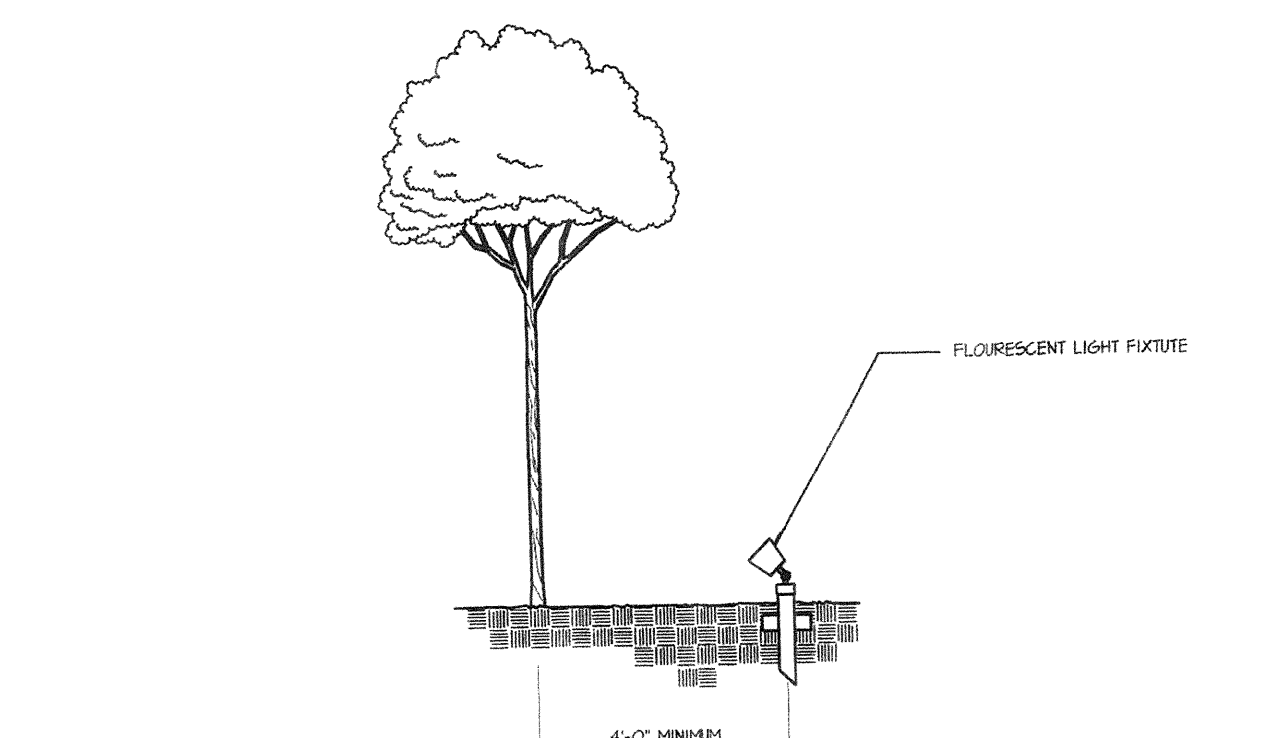
B TREE PLANTING W/ DOUBLE STAKING
N.T.S.



G BULLET LIGHT FIXTURE
N.T.S.



C SHRUB PLANTING
N.T.S.



D CANOPY TREE LIGHT SETBACK
N.T.S.

BACKFILL SPECIFICATIONS
B. Back fill (for plant holes):

Back Fill Mix

6 parts by volume on-site soil

4 parts by volume nitrogen stabilized organic amendment

1 lb. 16-20-0 per cubic yard of mix

2 lbs. iron sulfate per cubic yard of mix

The above materials should be thoroughly blended prior to use for backfill purposes. Also, the iron sulfate should not contact cement surfaces since severe staining could occur.

PIT SIZE FOR PLANTS
A. Excavate pits with vertical sides for all plants, shrubs, and trees.

- 1) Pits for trees shall be dug four (4) inches deeper than the ball and three (3) times wider than the average diameter of the ball.
- 2) Pits for shrubs and vines shall be dug two (2) inches deeper than the ball and three (3) times wider than the average diameter of the ball.

PLANTING NOTES

1. Before any plants are planted, all planted areas are to have been graded in an acceptable manner to ensure positive drainage per the grading notes.
2. Separate all shrub/ground cover areas from lawn areas with 1" x 2" redwood headerboards or 3 layers of redwood headerboards with staggered joints (refer to planting plans). Stake headerboards with 1" x 1" x 12" redwood stakes spaced 48" on center maximum.
3. Plant shrubs a minimum of 30" from all landscape light fixtures.
4. Where circumstances permit, plant no tree closer than 18" to an edge of paving or headerboard.
5. Remove all stakes from vines.
6. Refer to planting details.
7. Whenever possible, use plant materials acclimated to the Coachella Valley.
8. Landscape contractor when tying vines is to use a drill to establish the pilot hole to receive the rounded portion of the molly.
9. When tying vines or espalliers, wires should be spaced as follows: 1st (2) at 1'-6" apart from finish grade, the next (2) at 1'-0" apart to make 8'-0" long center on plants. When vines or espalliers are closer than 18" apart, use a continuous wire between both plants.
10. For protection of trees in turf areas leave a bare area approx. 4' away from tree base in all directions. For plant pit size refer to specs.
11. **WARNING:** Plant material listed may or may not have been approved by the Agricultural Commissioner's office. Landscape contractor, please contact the developer for status of Agricultural Commissioner's approval or denial. Plant material not conforming with quarantine laws may be destroyed and civil action taken. All plant material is subject to inspection at the discretion of the Agricultural Commissioner's office. All plant material must be free from Root Rot (Aphelidium blight!).
12. No shrubs are to be planted within 18" of hardscape, measured from center of shrub.

PALM TREE PLANTING NOTES

1. Palms shall be planted using established planting procedures. Refer to palm tree planting detail.
2. Palm tree root balls shall be trimmed or cut to ensure recovery from transplanting shock.
3. Palm trees must be in a healthy condition at time of delivery. Palm trees determined unhealthy or damaged at time of delivery or installation shall be rejected by contractor and replaced by subcontractor at his expense.
4. All palms shall be cleaned of excessive dead and ragged fronds or frond stubs. Cut fronds should be cut to a minimum length of 6".
5. Callied out height of palms shall be THE HEIGHT FROM TOP OF ROOT BALL TO BOTTOM OF LIVE FRONDS.
6. Palm trees to be properly watered in and soils properly tamped around the root balls when planting, leaving no voids of soil around root balls.
7. Palm trees shall be planted vertically unless noted otherwise.
8. Trunks should be cough with frond bases still securely attached.
9. Trunks may not be totally skinned unless noted to do so.
10. Skinned areas above the 6' level will be accepted, at the discretion of the Landscape Architect.
11. Care should be exercised in the cabling during transport and planting so as not to damage or loosen bark.
12. Severe cracking or holes in the basal trunk area will not be acceptable.
13. One initial watering will be performed by subcontractor. Basin will be left on each palm so subsequent watering can be performed by others. Basin is to be removed during finish grading.
14. Subcontractor to untie frond tops (60) days after planting.
15. Palm trees shall be planted a minimum of 18' away from building eaves. It is recommended any palm tree planted within 5' of any wall, wall or structure be planted with Deep Root root barrier to a depth of 2' minimum to protect against root damage.
16. Washingtonia rostrata trunks are to have a minimum diameter of 14" measured 4' high on trunk above finish grade.

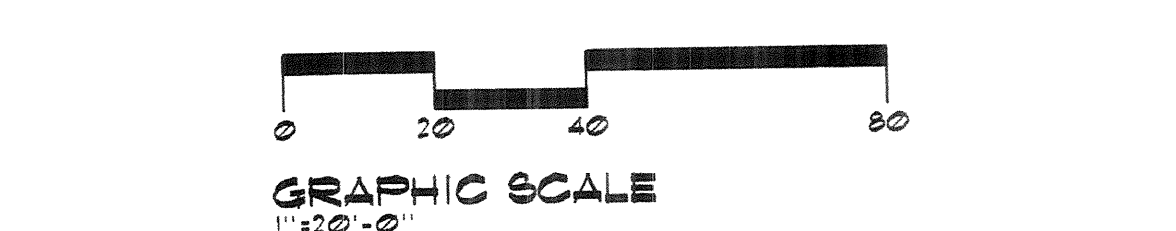
NOTE:
NO PALM TREE SHALL BE OUT OF THE ORIGINAL GROUND FOR MORE THAN (48) HOURS PRIOR TO RELOCATION AND PLANTING.

APPROVED FOR CONSTRUCTION
BY THE CITY OF CATHEDRAL CITY
DEPT. OF COMMUNITY DEVELOPMENT

PLANNING: Maddox DATE: 9-15-01

BUILDING: _____ DATE: _____

ENGINEERING: _____ DATE: _____



THESE PLANS HAVE BEEN REVIEWED BY THE COACHELLA VALLEY WATER DISTRICT IN ACCORDANCE WITH WATER CODE TITLE 7, DIVISION 1, CHAPTER 3, ARTICLE 10.8, SECTION 85597 ET SEQ. REQUIRING EFFICIENT LANDSCAPE AND IRRIGATION DESIGN IN COOPERATION WITH THE LOCAL GOVERNING AGENCY (CITY OR COUNTY).

DATE: 07/12/01 BY: David R. Achley
WATER MANAGEMENT REPRESENTATIVE
Scott Christian
SERVICE DIRECTOR

DATE	
REVISIONS	
NO.	
DATE	
DESCRIPTION	

RAY MARTIN DESIGN
Landscape Design Services
16000 La Quinta, California
92253
(760) 771-2071 Fax: 771-3381

**PLANTING / LIGHTING
DETAILS**

Artisan Collection
Perimeter and Entries
Cathedral City, California

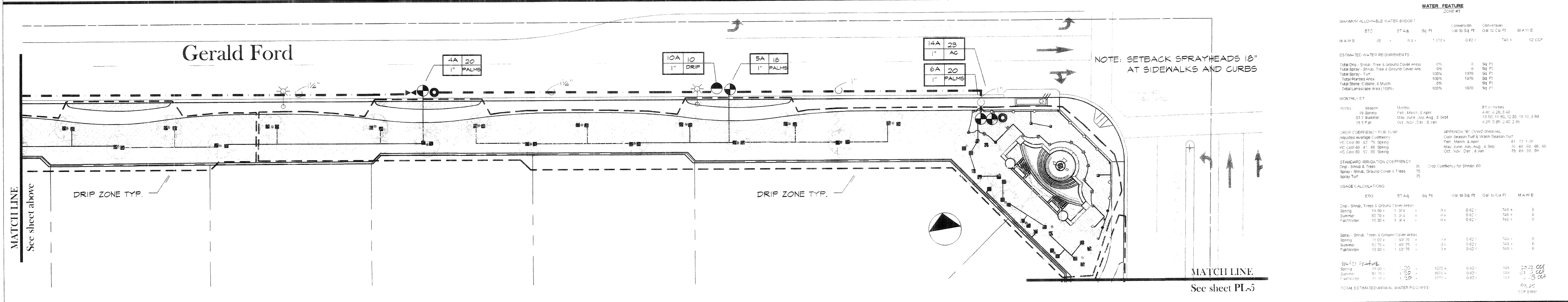
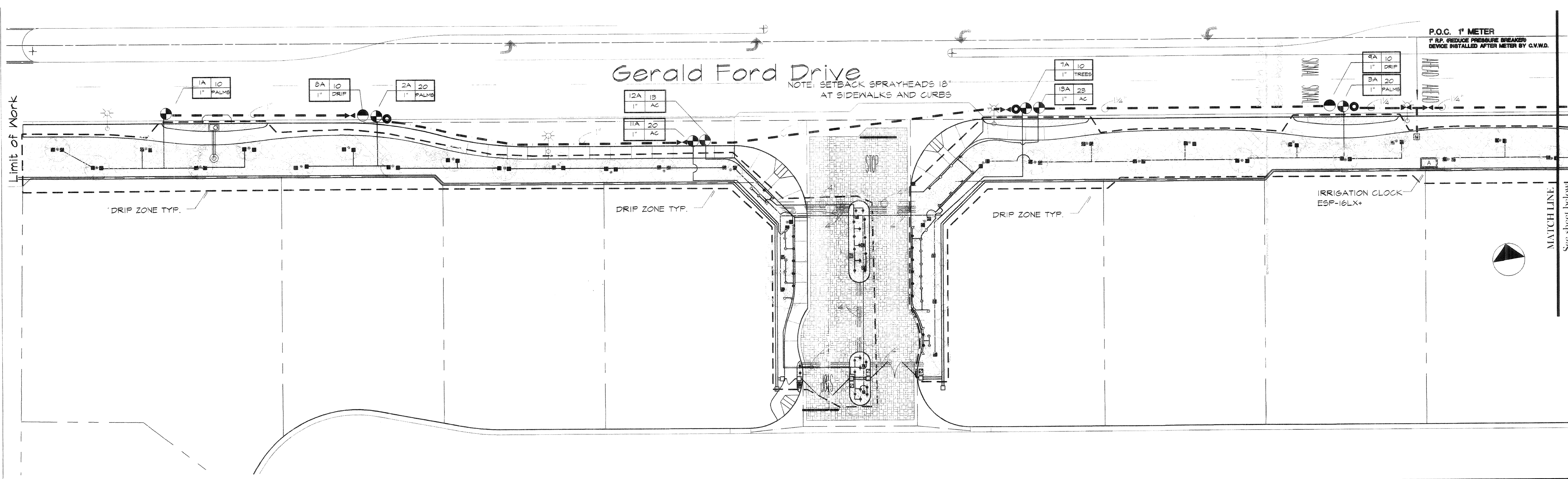
Scale:

Date: 07-09-01

Sheet No.

PL-3

L-9110



DATE
REVISIONS

R.M.D.
RAY MARTIN DESIGN
 Landscape Design Services
 52,299 Avenida Madrona
 La Quinta, California
 (760) 771-2021, fax: 771-1331

IRRIGATION PLAN

Artisan Collection
 Perimeter and Entries
 Cathedral City, California

WATER FEATURE						
ZONE #3						
MAXIMUM ALLOWABLE WATER BUDGET						
ETO	ET AQ	Sq. Ft.	Conversion Gal. to Sq. Ft.	Conversion Gal. to Cu. Ft.	MA.W.B.	
88	x	0.8 x	25,515 x	0.627	748 =	1,489 CCF
ESTIMATED WATER REQUIREMENTS						
Total Drip - Shrub, Tree & Ground Cover Area	99%	23,048	Sq. Ft.			
Total Spray - Turf	0%	0	Sq. Ft.			
Total Planting Area	100%	25515	Sq. Ft.			
Total Stone, Cobble & Mulch	0%	0	Sq. Ft.			
Total Landscape Area (100%)	100%	25515	Sq. Ft.			
MONTHLY ET						
Inches	Season	Months	ET in Inches			
19 Spring	19 Spring	Feb., March & April	4.46, 5.20, 8.40			
53.7 Summer	53.7 Summer	May, June, July, Aug. & Sept.	10.50, 11.90, 12.30, 10.10, 9.90			
16.3 Fall	16.3 Fall	Oct., Nov., Dec. & Jan.	6.20, 3.80, 2.40, 2.30			
CROP COEFFICIENT FOR TURF						
Adjusted Average Coefficient	19.00 x	1.3/4 x	2467 x	0.627	748 =	31,0816
KC Cool 80 62 76 Spring	53.70 x	1.3/4 x	2467 x	0.627	748 =	87,8463
KC Cool 60 41 68 Spring	15.30 x	1.3/4 x	23,048 x	0.627	748 =	25,0288
KC Cool 80 52 65 Spring	15.30 x	1.3/4 x	23,048 x	0.627	748 =	0
STANDARD IRRIGATION COEFFICIENT						
Drip - Shrub & Trees	90	Crop Coefficient for Shrub: 60				
Spray - Shrub, Ground Cover & Trees	75					
Spray Turf	75					
USAGE CALCULATIONS						
ETO	ET AQ	Sq. Ft.	Gal. to Sq. Ft.	Gal. to Cu. Ft.	MA.W.B.	
Drip - Shrub, Trees & Ground Cover Areas	19.00 x	1.60/75 x	2467 x	0.627	748 =	31,0816
Spring	19.00 x	1.60/75 x	2467 x	0.627	748 =	87,8463
Summer	53.70 x	1.60/75 x	2467 x	0.627	748 =	25,0288
Fall/Winter	15.30 x	1.60/75 x	2467 x	0.627	748 =	0
TOTAL ESTIMATED ANNUAL WATER REQUIRED						
					1264.72	CCF EWU

IRRIGATION LEGEND							
SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	NOZZLE	RADIUS	FLOW GPM	PSI PATTERN
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	6-WAN	6"	1.10	30 ADJUSTIBLE
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	8-WAN	8"	.55	30 HALF
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	80	8"	.26	30 QUARTER
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	8-WAN	8"	1.50	30 ADJUSTIBLE
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	10F	10"	1.6	30 FULL
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	10H	10"	.79	30 HALF
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	100	10"	.39	30 QUARTER
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	10-VAN	10"	1.02	30 ADJUSTIBLE
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	15F	15"	3.20	30 FULL
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	15H	15"	1.85	30 HALF
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	150	15"	.92	30 QUARTER
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	15-VAN	15"	2.7	30 ADJUSTIBLE
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	12H	12"	1.30	30 HALF
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	120	12"	.65	30 QUARTER
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	12VAN	12"	2.60	30 ADJUSTIBLE
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	10H	10"	.79	30 HALF
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	100	10"	.39	30 QUARTER
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	10VAN	10"	1.39	30 ADJUSTIBLE
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	8H	8"	.79	30 HALF
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	80	8"	.39	30 QUARTER
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	8VAN	8"	1.70	30 ADJUSTIBLE
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	12F	12"	2.60	30 FULL
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	12H	12"	1.30	30 HALF
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	120	12"	.65	30 QUARTER
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	10F	10"	1.57	30 FULL
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	10H	10"	.79	30 HALF
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	100	10"	.39	30 QUARTER
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	120	10"	.39	30 QUARTER
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	8F	8"	1.57	30 FULL
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	8H	8"	.79	30 HALF
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	80	8"	.39	30 QUARTER
∇	RANBRD	PA-B	STREAM BUBBLER	5CST-0	5"	.50	30 STREAM
∇	RANBRD	SCH-80 RISER	BUBBLER	1404	-	1.00	30 UMBRELLA

IRRIGATION LEGEND							
SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	NOZZLE	RADIUS	FLOW GPM	PSI PATTERN
∇	RANBRD	SCH-80 RISER	BUBBLER	1404	-	-	25 UMBRELLA
∇	RANBRD	PPR/FRA	1/2" BUBBLER	9E	-	-	25 DRIP
SYMBOL INDICATES BUBBLER GROUPING. REFER TO DETAIL ON SHEET.							
WHEN RADIUS OF SPRINKLER HEADS REQUIRED FOR PROPER COVERAGE IS LESS THAN RADIUS SHOWN ON LEGEND, THE CONTRACTOR SHALL EQUIP SPRINKLER HEAD WITH A "RAIN BIRD" - "PST" PRESSURE COMPENSATED SCREEN FOR FLOW AND RADIUS CONTROL. SELECT SCREEN FROM PCS NOZZLE SCREEN SELECTION GUIDE THIS SHEET FOR APPROPRIATE RADIUS.							
ESP-10LX+	RANBRD	ESP-10LX+	16 STATION RESIDENTIAL HYBRID CONTROLLER FOUR PROGRAM HYBRID CONTROLLERS				
ESP-12LX+	RANBRD	ESP-12LX+	12 STATION RESIDENTIAL HYBRID CONTROLLER FOUR PROGRAM HYBRID CONTROLLERS				
"DV" SERIES	RANBRD	"DV" SERIES	ELECTRIC CONTROL VALVE FOR TURF AREAS AND PALM TREE BUBBLERS. SIZE AS NOTED ON PLAN.				
"DV" SERIES	RANBRD	"DV" SERIES	ELECTRIC CONTROL VALVE KIT FOR DRIP AREAS PLUS PALM TREE BUBBLERS. SIZE AS NOTED ON PLAN.				
BMP-1000-T	HB	BMP-1000-T	BALL VALVE (LINE SIZE) REFER TO DETAIL ON IRRIGATION DETAIL SHEET				
3RC	RANBRD	3RC	3/4" QUICK COUPLER REFER TO DETAIL ON IRRIGATION DETAIL SHEET				
PRESSURE MAINLINE PIPING USE SCHEDULE 40 - SIZE AS NOTED							
NON-PRESSURE LATERAL LINE PIPING - PVC CLASS 200 FOR TURF AND PALM TREE BUBBLERS							
DRIP SYSTEM PIPING FOR ZONING INDICATOR LARGER DOT INDICATES END OF BACKSPOON LATERAL							
IRRIGATION POINT OF CONNECTION - 1" IRRIGATION POINT OF CONNECTION FROM WATER METER SOURCE							
PIPE SLEEVING SHALL OCCUR UNDER ALL MAJOR HARDSCAPE. SLEEVING SHALL BE 2X THE DIAMETER OF THE PIPE.							
INDICATES CONTROLLER NUMBER							
INDICATES FLOW IN GALLONS PER MINUTE							
INDICATES ZONE TYPE							
INDICATES ELECTRIC CONTROL VALVE SIZE							
* DENOTED TREES WITHIN 10 FEET OF HARDSCAPE, WALLS OR BUILDINGS TO RECEIVE DEEPROOT ROOT BARRIERS PER MANUFACTURER'S SPECIFICATIONS							
NOTE: GOLDEN BARREL AND COMPASS BARREL CAN SHARE EMITTERS IN GROUPS.							

Gerald Ford Drive ZONE #3						
MAXIMUM ALLOWABLE WATER BUDGET						
ETO	ET AQ	Sq. Ft.	Conversion Gal. to Sq. Ft.	Conversion Gal. to Cu. Ft.	MA.W.B.	
88	x	0.8 x	25,515 x	0.627	748 =	1,489 CCF
ESTIMATED WATER REQUIREMENTS						
Total Drip - Shrub, Tree & Ground Cover Area	99%	23,048	Sq. Ft.			
Total Spray - Turf	0%	0	Sq. Ft.			
Total Planting Area	100%	25515	Sq. Ft.			
Total Stone, Cobble & Mulch	0%	0	Sq. Ft.			
Total Landscape Area (100%)	100%	25515	Sq. Ft.			
MONTHLY ET						
Inches	Season	Months	ET in Inches			
19 Spring	19 Spring	Feb., March & April	4.46, 5.20, 8.40			
53.7 Summer	53.7 Summer	May, June, July, Aug. & Sept.	10.50, 11.90, 12.30, 10.10, 9.90			
16.3 Fall	16.3 Fall	Oct., Nov., Dec. & Jan.	6.20, 3.80, 2.40, 2.30			
CROP COEFFICIENT FOR TURF						
Adjusted Average Coefficient	19.00 x	1.3/4 x	2467 x	0.627	748 =	31,0816
KC Cool 80 62 76 Spring	53.70 x	1.3/4 x	2467 x	0.627	748 =	87,8463
KC Cool 60 41 68 Spring	15.30 x	1.3/4 x	23,048 x	0.627	748 =	25,0288
KC Cool 80 52 65 Spring	15.30 x	1.3/4 x	23,048 x	0.627	748 =	0
STANDARD IRRIGATION COEFFICIENT						
Drip - Shrub & Trees	90	Crop Coefficient for Shrub: 60				
Spray - Shrub, Ground Cover & Trees	75					
Spray Turf	75					
USAGE CALCULATIONS						
ETO	ET AQ	Sq. Ft.	Gal. to Sq. Ft.	Gal. to Cu. Ft.	MA.W.B.	
Drip - Shrub, Trees & Ground Cover Areas	19.00 x	1.60/75 x	2467 x	0.627	748 =	31,0816
Spring	19.00 x	1.60/75 x	2467 x	0.627	748 =	87,8463
Summer	53.70 x	1.60/75 x	2467 x	0.627	748 =	25,0288
Fall/Winter	15.30 x	1.60/75 x	2467 x	0.627	748 =	0
TOTAL ESTIMATED ANNUAL WATER REQUIRED						
					1264.72	CCF EWU

PIPE SIZING CHART	
PIPE SIZE	MAX. ALLOWABLE FLOW
1/2"	5 GPM
3/4"	10 GPM
1"	16 GPM
1-1/4"	26 GPM
1-1/2"	40 GPM
2"	60 GPM

REFER TO EXAMPLE DRIP EMITTER LATERAL SYSTEM ON DETAIL SHEET.

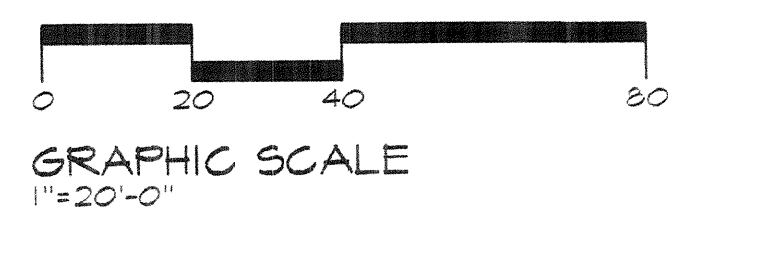
APPROVED FOR CONSTRUCTION BY THE CITY OF CATHEDRAL CITY DEPT. OF COMMUNITY DEVELOPMENT

DATE: 9/13/01

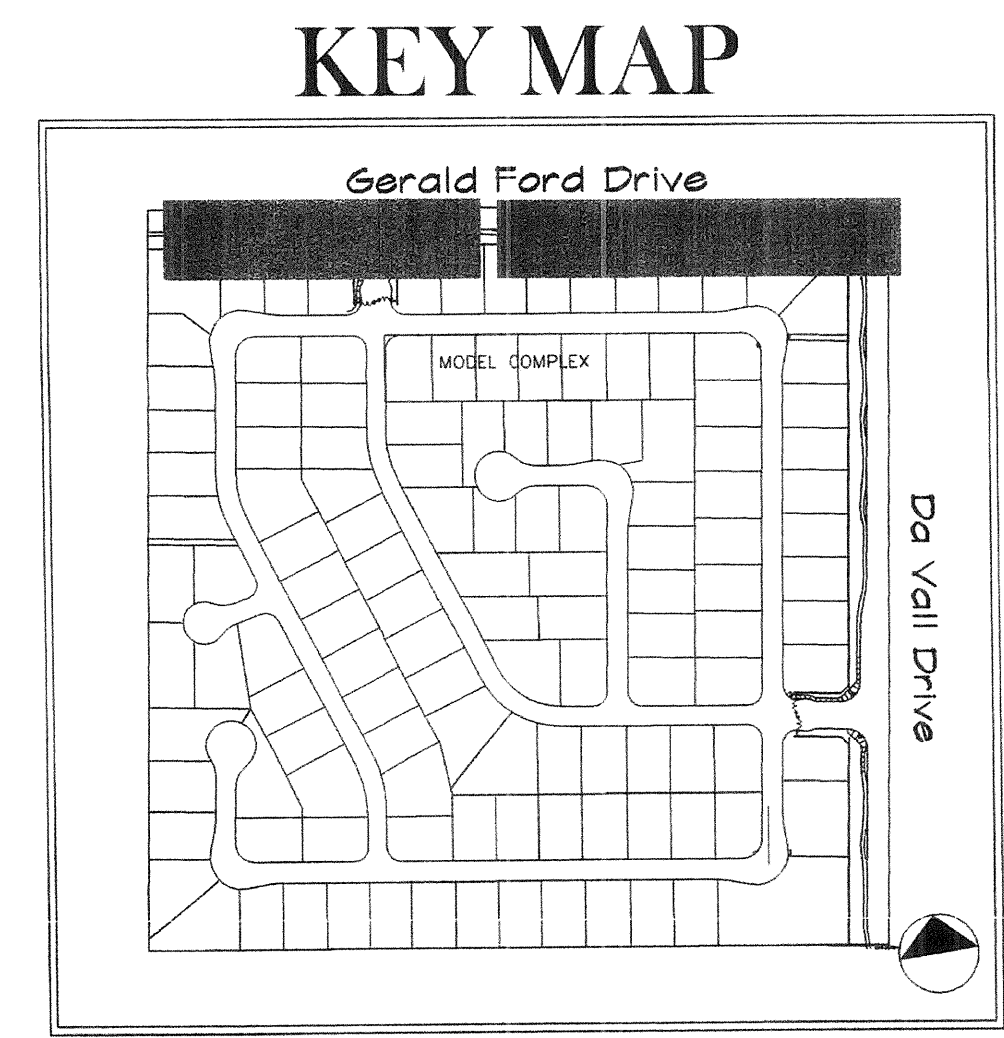
BUILDING: _____ DATE: _____

ENGINEERING: _____ DATE: _____

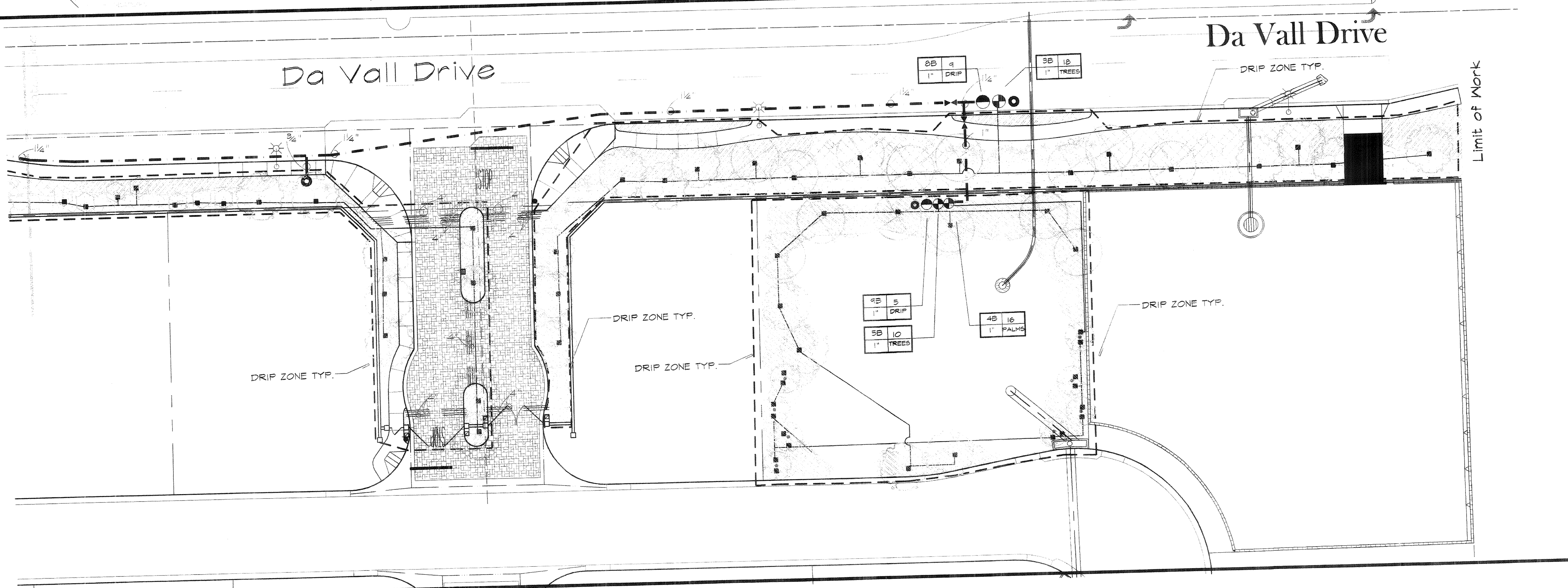
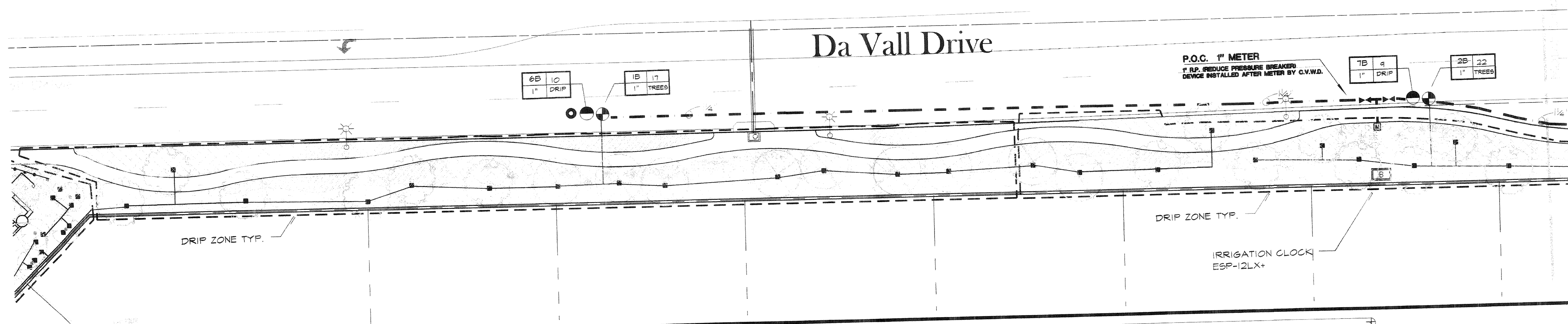
Underground Service Alert
 Call: TOLL FREE 1-800-422-4133
 TWO WORKING DAYS BEFORE YOU DIG



DATE: 09/13/01 BY: [Signature]
 THESE PLANS HAVE BEEN REVIEWED BY THE CATHEDRAL VALLEY WATER DISTRICT IN ACCORDANCE WITH WATER CODE TITLE 7, DIVISION 1, CHAPTER 3, ARTICLE 10.2, SECTION 85507 ET SEQ. REQUIRING EFFICIENT LANDSCAPE AND IRRIGATION DESIGN IN COOPERATION WITH THE LOCAL GOVERNING AGENCY (CITY OR COUNTY).



Scale: 1"=20'-0"
 Date: 6-12-01
 Sheet No. PL-4



DATE: _____
 REVISIONS: _____
R.M.D.
RAY MARTIN DESIGN
 Landscape Design Services
 52295 Avenida Buena Vista
 San Juan Capistrano, California
 92675
 (714) 771-2071 Fax: (714) 771-3883

IRRIGATION PLAN

Artisan Collection
 Perimeter and Entries
 Cathedral City, California

IRRIGATION LEGEND

SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	NOZZLE	RADIUS	FLOW GPM	PSI	PATTERN
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	6" VAN	6'	1.10	30	ADJUSTIBLE
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	8H	8'	5.2	30	HALF
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	80	8'	28	30	QUARTER
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	8-VAN	8'	1.55	30	ADJUSTIBLE
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	10F	10'	1.6	30	FEEL
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	10H	10'	39	30	HALF
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	100	10'	35	30	QUARTER
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	10-VAN	10'	1.02	30	ADJUSTIBLE
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	15F	15'	3.70	30	FULL
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	15H	15'	1.85	30	HALF
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	150	15'	92	30	QUARTER
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	15-VAN	15'	2.7	30	ADJUSTIBLE
∇	RANBRD	1804-SAM-PRS	4" POP-UP SPRAY HEAD	12H	12'	1.30	30	HALF
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	120W	12'	85	30	QUARTER
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	120W	12'	2.60	30	ADJUSTIBLE
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	104	10'	39	30	HALF
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	100	10'	39	30	QUARTER
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	120W	10'	1.79	30	ADJUSTIBLE
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	8H	8'	39	30	HALF
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	80	8'	39	30	QUARTER
∇	RANBRD	1806-SAM-PRS	6" POP-UP SHRUB HEAD	8-VAN	8'	1.70	30	ADJUSTIBLE
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	12H	12'	2.60	30	FULL
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	12H	12'	1.30	30	HALF
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	120	12'	65	30	QUARTER
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	104	10'	1.57	30	FULL
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	104	10'	39	30	HALF
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	100	10'	39	30	QUARTER
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	8F	8'	1.57	30	FULL
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	8H	8'	39	30	HALF
∇	RANBRD	PA-85	FIXED SHRUB SPRAY	80	8'	39	30	QUARTER
∇	RANBRD	PA-8	STREAM BUBBLER	5CST-B	5'	30	30	STREAM
∇	RANBRD	SCH. 80 RISER	BUBBLER	1404	-	1.00	30	UMBRELLA

• SYMBOL INDICATES BUBBLER GROUPING. REFER TO DETAIL ON SHEET.
 • WHEN RADIUS OF SPRINKLER HEADS REQUIRED FOR PROPER COVERAGE IS LESS THAN RADIUS SHOWN ON LEGEND, THE CONTRACTOR SHALL FOUR SPRINKLER HEAD WITH A "RAIN BIRD" - PCS PRESSURE COMPENSATED SCREEN FOR FLOW AND RADIUS CONTROL. SELECT SCREEN FROM PCS NOZZLE SCREEN SELECTION GUIDE THIS SHEET FOR APPROPRIATE RADIUS.

IRRIGATION LEGEND

SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	NOZZLE	RADIUS	FLOW GPM	PSI	PATTERN
•	RANBRD	SCH. 80 RISER	BUBBLER	1404	-	-	25	UMBRELLA
○	RANBRD	PFR/TBA	VERTI-BUBBLER	70	-	-	25	DRP

• SYMBOL INDICATES BUBBLER GROUPING. REFER TO DETAIL ON SHEET.
 • WHEN RADIUS OF SPRINKLER HEADS REQUIRED FOR PROPER COVERAGE IS LESS THAN RADIUS SHOWN ON LEGEND, THE CONTRACTOR SHALL FOUR SPRINKLER HEAD WITH A "RAIN BIRD" - PCS PRESSURE COMPENSATED SCREEN FOR FLOW AND RADIUS CONTROL. SELECT SCREEN FROM PCS NOZZLE SCREEN SELECTION GUIDE THIS SHEET FOR APPROPRIATE RADIUS.

16 STATION RESIDENTIAL HYBRID CONTROLLER
 FOUR PROGRAM HYBRID CONTROLLERS

12 STATION RESIDENTIAL HYBRID CONTROLLER
 FOUR PROGRAM HYBRID CONTROLLERS

TV SERIES
 ELECTRIC CONTROL VALVE FOR TURF AREAS AND PALM TREE BUBBLERS. SIZE AS NOTED ON PLAN.

TV SERIES
 ELECTRIC CONTROL VALVE KIT FOR DRIP AREAS PLUS PALM TREE BUBBLERS. SIZE AS NOTED ON PLAN.

RMP-1000-T
 BALL VALVE (LINE SIZE). REFER TO DETAIL ON IRRIGATION DETAIL SHEET.

3/4" QUICK COUPLER REFER TO DETAIL ON IRRIGATION DETAIL SHEET.

PRESSURE MAINLINE PIPING USE SCHEDULE 40 - SIZE AS NOTED
 NON-PRESSURE LATERAL LINE PIPING - PVC CLASS 200 FOR TURF AND PALM TREE BUBBLERS
 DRIP SYSTEM PIPING FOR ZONING INDICATION. LARGER DOT INDICATES END OF BACKSICE LATERAL
 IRRIGATION POINT OF CONNECTION - 1" IRRIGATION POINT OF CONNECTION FROM WATER METER SOURCE.

PIPE SLEEVING SHALL OCCUR UNDER ALL MAJOR HARDSCAPE. SLEEVING SHALL BE 2X THE DIAMETER OF THE PIPE.

INDICATES CONTROLLER NUMBER
 INDICATES FLOW IN GALLONS PER MINUTE
 INDICATES ZONE TYPE
 INDICATES ELECTRIC CONTROL VALVE SIZE

* DENOTED TREES WITHIN 10 FEET OF HARDSCAPE, WALLS OR BUILDINGS TO RECEIVE DEEPROOT ROOT BARRIERS PER MANUFACTURER'S SPECIFICATIONS.
 NOTE: GOLDEN BARREL AND COMPASS BARREL CAN SHARE EMITTERS IN GROUPS.

Da Vall Drive and Retention basin
 ZONE #3

MAXIMUM ALLOWABLE WATER BUDGET

ETO	ET Adj.	Sq. Ft.	Conversion Gal. to Sq. Ft.	Conversion Gal. to Cu. Ft.	M.A.W.B.
88	0.8	30,571	0.62 /	748	1,704 CCF

ESTIMATED WATER REQUIREMENTS

	100%	30571	Sq. Ft.
Total Drip - Shrub, Tree & Ground Cover Areas	100%	0	Sq. Ft.
Total Spray - Shrub, Tree & Ground Cover Areas	0%	0	Sq. Ft.
Total Spray - Turf	100%	30571	Sq. Ft.
Total Planted Area	0%	0	Sq. Ft.
Total Stone, Cobble, & Mulch	100%	30571	Sq. Ft.
Total Landscape Area (100%)	100%	30571	Sq. Ft.

MONTHLY ET

Inches	Season	Months	ET in Inches
19.3	Spring	Feb., March, & April	4.40, 8.20, 8.40
53.7	Summer	May, June, July, Aug. & Sept.	10.50, 11.50, 12.30, 10.10, 8.90
15.3	Fall	Oct., Nov., Dec. & Jan.	6.20, 3.80, 2.40, 2.90

CROP COEFFICIENT FOR TURF

Adjusted Average Coefficient	ET in Inches
KC Cool 60 82 75 Spring	81, 72, 1.00
KC Cool 60 41 68 Spring	76, 68, 69, 68, 60
KC Cool 60 52 65 Spring	75, 69, 58, 59

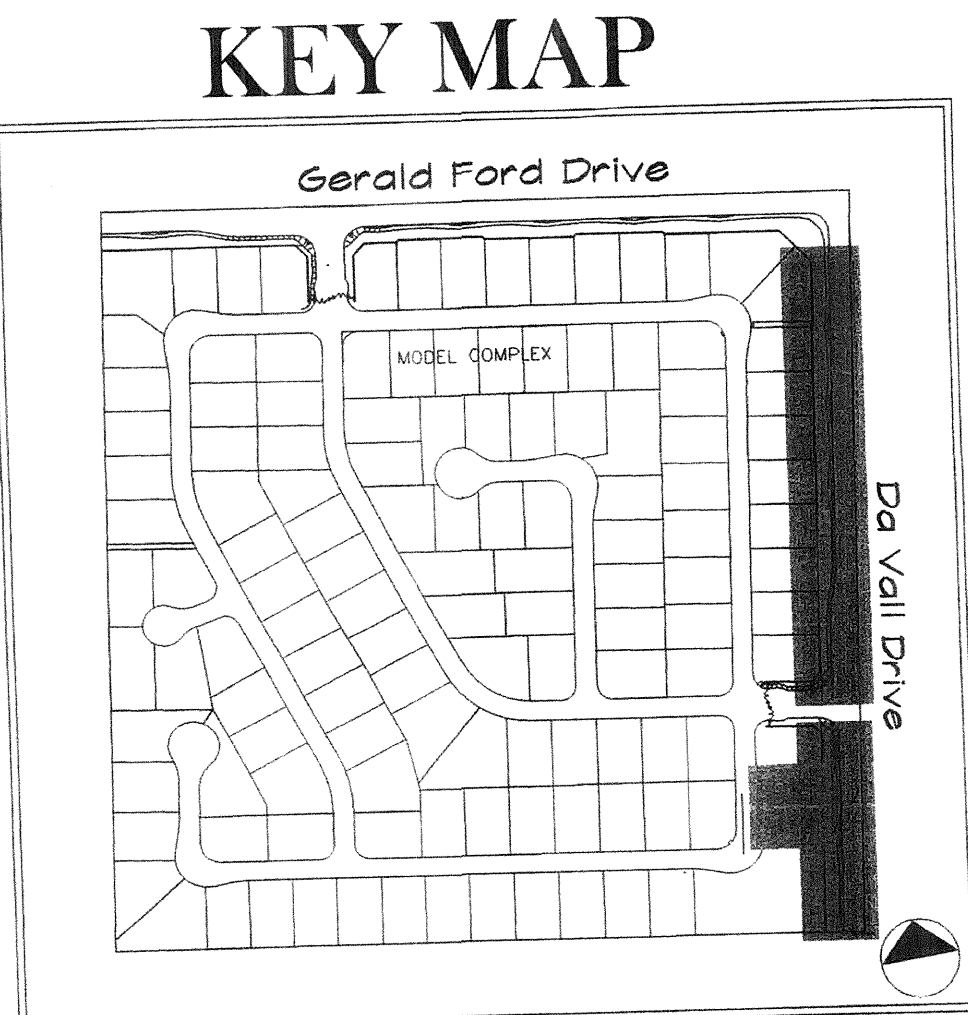
APPENDIX 10' CWMD MANUAL
 Cool Season Turf & Warm Season Turf
 Feb. March & April
 May, June, July, Aug. & Sep.
 Oct., Nov., Dec. & Jan.

STANDARD IRRIGATION COEFFICIENT

Drip - Shrub & Trees	Crop Coefficient for Shrub: 60
90	
Spray - Shrub, Ground Cover & Trees	75
Spray Turf	75

USAGE CALCULATIONS

ETO	ET Adj.	Sq. Ft.	Gal. to Sq. Ft.	Gal. to Cu. Ft.	M.A.W.B.
Drip - Shrub, Tree & Ground Cover Areas	18.00 x 1.3/4	x	30,571 x	0.62 /	748 # = 321
Spring	63.70 x 1.3/4	x	30,571 x	0.62 /	748 # = 907
Summer	15.30 x 1.3/4	x	30,571 x	0.62 /	748 # = 258
Fall/Winter	15.30 x 1.60/75	x	0 x	0.62 /	748 # = 0
Spray - Shrub, Trees & Ground Cover Areas	19.00 x 1.62/75	x	0 x	0.62 /	748 # = 0
Spring	53.70 x 1.41/75	x	0 x	0.62 /	748 # = 0
Summer	15.30 x 1.52/75	x	0 x	0.62 /	748 # = 0
Fall/Winter	15.30 x 1.60/75	x	0 x	0.62 /	748 # = 0
Spray - Turf	19.00 x 1.62/75	x	0 x	0.62 /	748 # = 0
Spring	53.70 x 1.41/75	x	0 x	0.62 /	748 # = 0
Summer	15.30 x 1.52/75	x	0 x	0.62 /	748 # = 0
Fall/Winter	15.30 x 1.60/75	x	0 x	0.62 /	748 # = 0
TOTAL ESTIMATED ANNUAL WATER REQUIRED					1498.59 CCF EWU



PIPE SIZING CHART

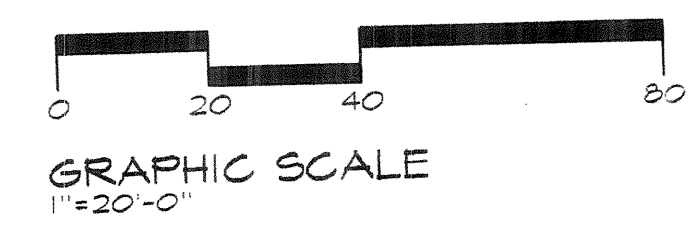
PIPE SIZE	MAX. ALLOWABLE FLOW
1/2"	5 GPM
3/4"	10 GPM
1"	16 GPM
1-1/4"	26 GPM
1-1/2"	40 GPM
2"	60 GPM

-REFER TO EXAMPLE DRIP EMITTER LATERAL SYSTEM ON DETAIL SHEET.

Underground Service Alert

CALL TOLL FREE 1-800-422-4133

TWO WORKING DAYS BEFORE YOU DIG



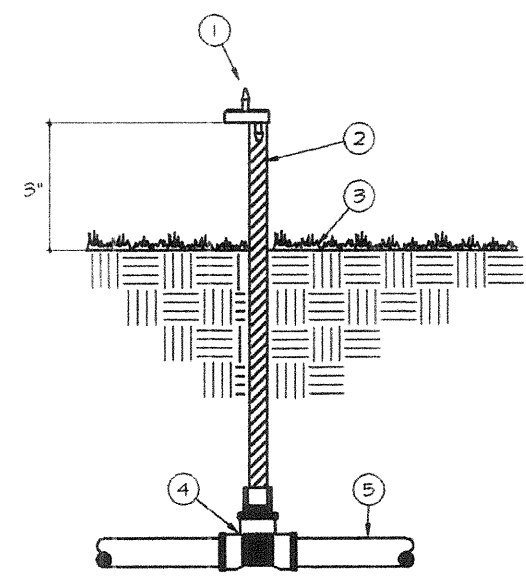
THESE PLANS HAVE BEEN REVIEWED BY THE COACHELLA VALLEY WATER DISTRICT IN ACCORDANCE WITH WATER CODE TITLE 7, DIVISION 1, CHAPTER 3, ARTICLE 10.2 SECTION 85097 ET SEQ. REQUIRING EFFICIENT LANDSCAPE AND IRRIGATION DESIGN IN COOPERATION WITH THE LOCAL GOVERNING AGENCY (CITY OR COUNTY).

DATE 07-12-01 BY *J. David R. Ackley*
 SOUTH CALIFORNIA SERVICE DIRECTOR

Scale: 1"=20'-0"
 Date: 07-09-01
 Sheet No.

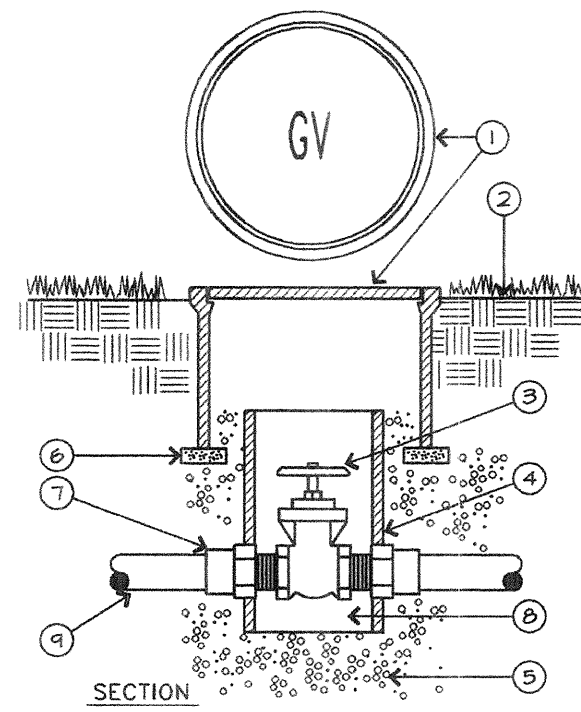
PL-5

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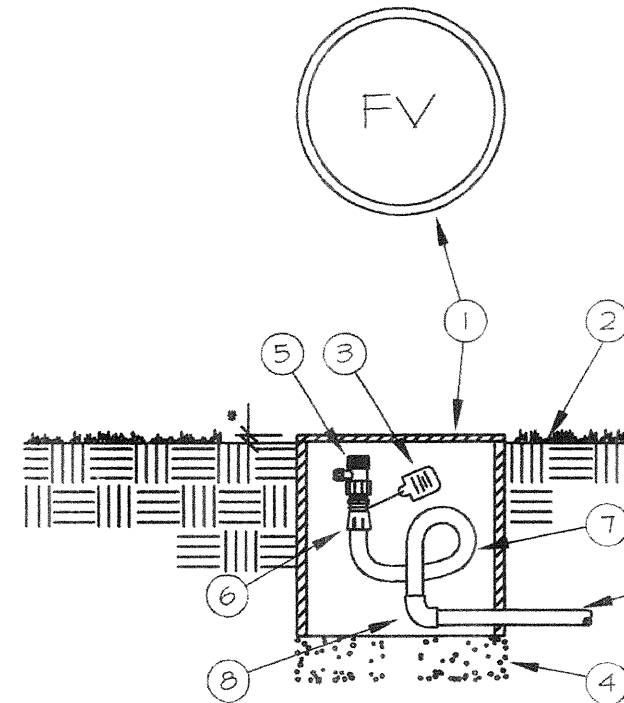
- LEGEND**
1. RAIN BIRD XB-10 EMITTER
 2. BOMBSHIT POLYFLEX RISER (LENGTH AS REQUIRED)
 3. FINISH GRADE
 4. PVC FITTINGS (5 x 5 x 1/2" F.I.P.T.)
 5. PVC PIPE (DEPTH PER DETAIL)

K DRIP EMITTER ASSEMBLY
N.T.S.



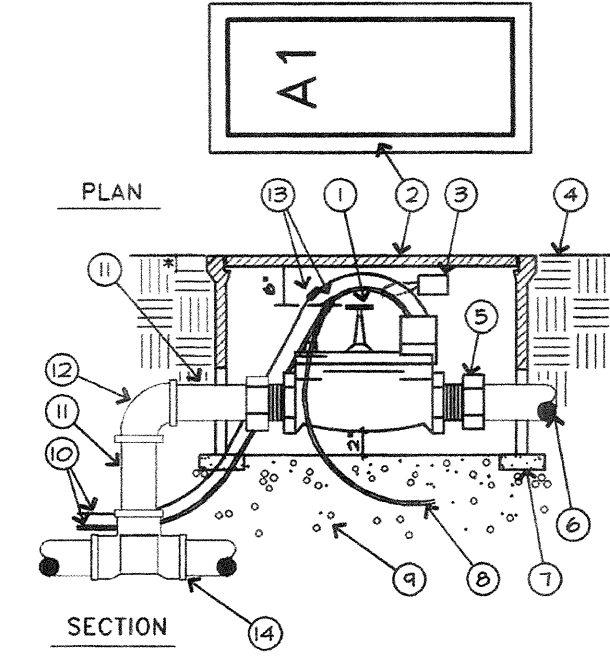
- LEGEND**
1. ROUND VALVE BOX WITH GREEN BOLT-DOWN COVER - HEAT BRAND "GV" ON VALVE BOX COVER IN 2" HIGH CHARACTERS.
 2. FINISH GRADE
 3. GATE VALVE WITH BRONZE WHEELHANDLE OR CROSSHANDLE
 4. 6" DIA. SCH. 40 PVC PIPE EXTENSION - LENGTH AS REQUIRED
 5. 3/4" CRUSHED ROCK - 8" DEPTH
 6. COMMON BRICK (2 REQUIRED)
 7. PVC MALE ADAPTER (TYPICAL)
 8. 2" CLEARANCE
 9. PVC MAIN LINE PIPE
- * 1" IN TURF AREAS,
2" IN SHRUB AREAS.

G GATE VALVE
N.T.S.



- LEGEND**
1. BROOKS #100 10"x10" ROUND VALVE BOX - HEAT BRAND "FV" ON LID IN 2" HIGH CHARACTERS.
 2. FINISH GRADE
 3. CHRISTY'S I.D. TAG - (SEE NOTES)
 4. 3/4" CRUSHED ROCK - 6" DEPTH
 5. A6 PRODUCTS 3/4"-B BALL VALVE
 6. PVC SCH. 40 MALE ADAPTER
 7. SALCO AIR FLEXIBLE PVC HOSE MINIMUM 3 FOOT LENGTH
 8. SCH 40 - 90 DEGREE ELBOW
 9. RIGID PVC PIPE
- * 1" IN LAWN AREAS,
2" IN SHRUB AREAS.
- NOTE: USE TEFLON TAPE ON ALL MALE PIPE THREADS.

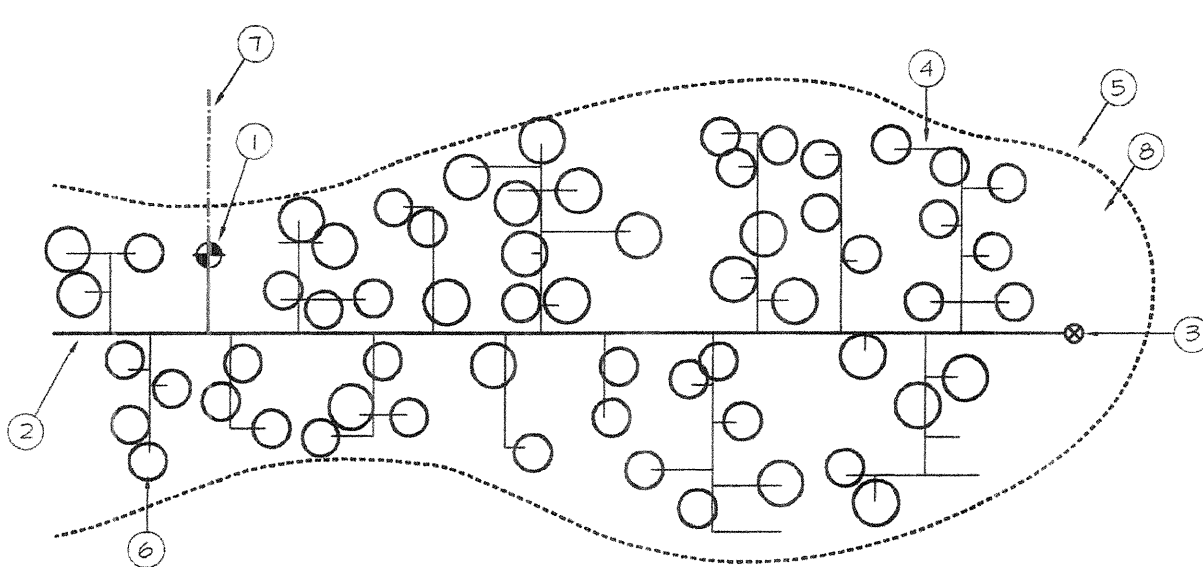
C FLUSH VALVE
N.T.S.



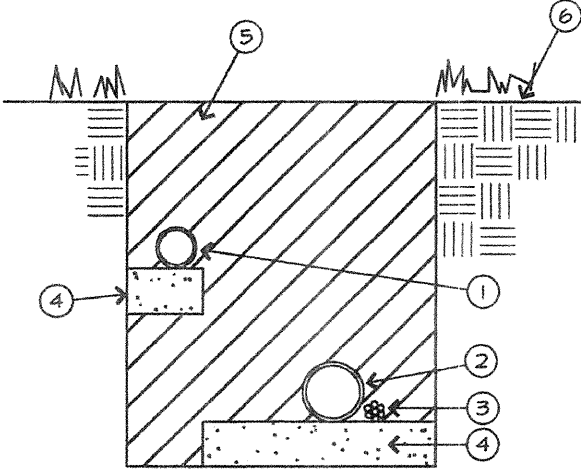
- LEGEND**
1. ELECTRIC CONTROL VALVE
 2. RECTANGULAR VALVE BOX IN GREEN BOLT-DOWN COVER - HEAT BRAND VALVE STATION NO. ON LID IN 2" HIGH CHARACTERS.
 3. CHRISTY'S I.D. TAG - NUMBERED TO MATCH DRAWINGS
 4. FINISH GRADE
 5. PVC MALE ADAPTER (TYP)
 6. PVC PIPE TO SYSTEM - ANGLE PIPE TO SPECIFIED DEPTH WITH 45 DEG. ELLS.
 7. COMMON BRICK (4 REQUIRED)
 8. COMMON WIRE TO OTHER VALVES ON SAME CONTROLLER
 9. 3/4" CRUSHED ROCK - 8" DEEP
 10. CONTROL/COMMON WIRE FROM CONTROLLER
 11. PVC SCHED. 40 PIPE
 12. PVC 90 DEG. ELL
 13. WIRE CONNECTOR
 14. MAIN LINE FITTINGS W/SOLVENT WELD OUTLET
- * 1" IN TURF AREAS,
2" IN SHRUB AREAS.

A ELECTRIC CONTROL VALVE
N.T.S.

- LEGEND**
1. ELECTRIC EMITTER CONTROL VALVE ASSEMBLY
 2. BACKSPORE LATERAL - PVC CLASS 200 PIPE
 3. FLUSH VALVE - SEE DETAIL C THIS SHEET
 4. DRIP LATERAL - PVC CLASS 310 PIPE
 5. BOUNDARY FOR DRIP VALVE ZONE
 6. SHRUB EMITTER DETAIL (TYPICAL)
 7. MAINLINE

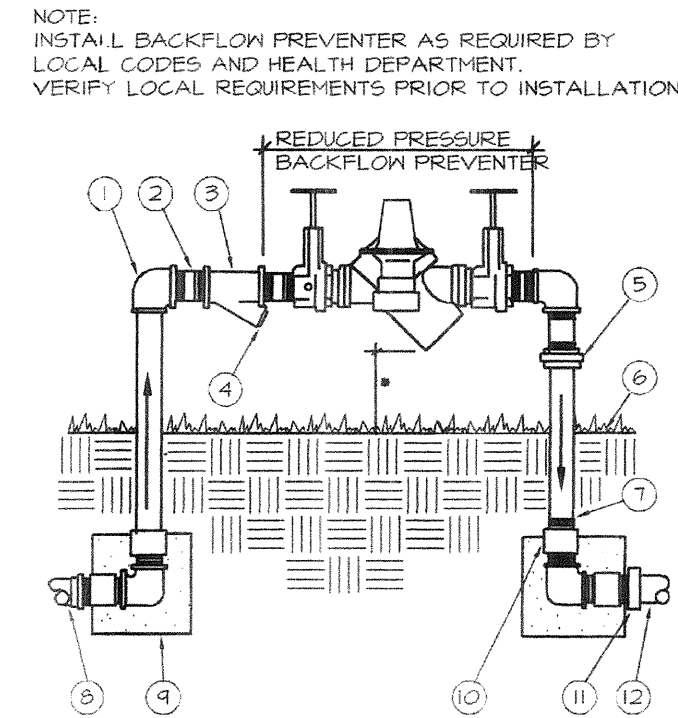


L DRIP LAYOUT
N.T.S.



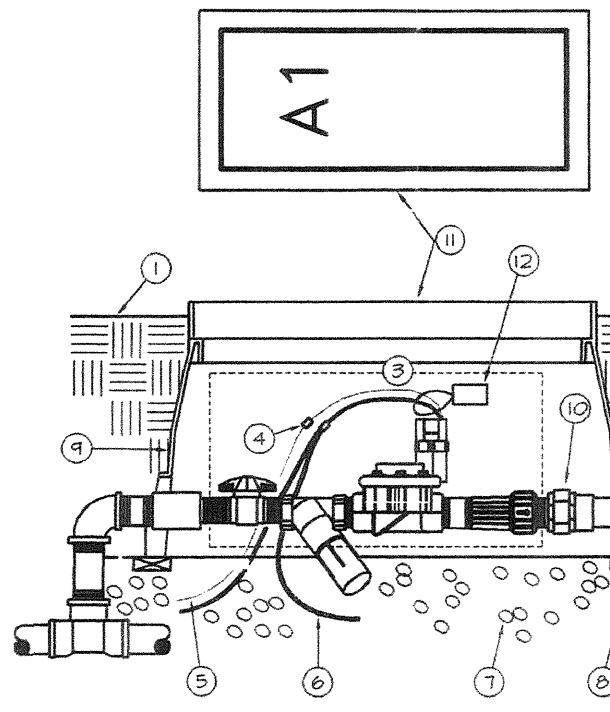
- LEGEND**
1. NON-PRESSURE LATERAL LINE PIPING
 2. PRESSURE MAIN LINE PIPING
 3. CONTROL WIRES - TAPE AND BUNDLE EVERY 10 FEET INSTALL ADJACENT TO PRESSURE MAIN LINE
 4. PROVIDE 2" DEPTH OF CLEAN BACKFILL
 5. SEE IRRIGATION SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIREMENTS
 6. FINISH GRADE
- * MINIMUM BACKFILL DEPTHS FROM FINISH GRADE TO TOP OF MAINLINE:
24" FOR PIPE SIZES 3" AND LARGER
18" FOR PIPE SIZES 2 1/2" AND SMALLER

H TRENCHING
N.T.S.



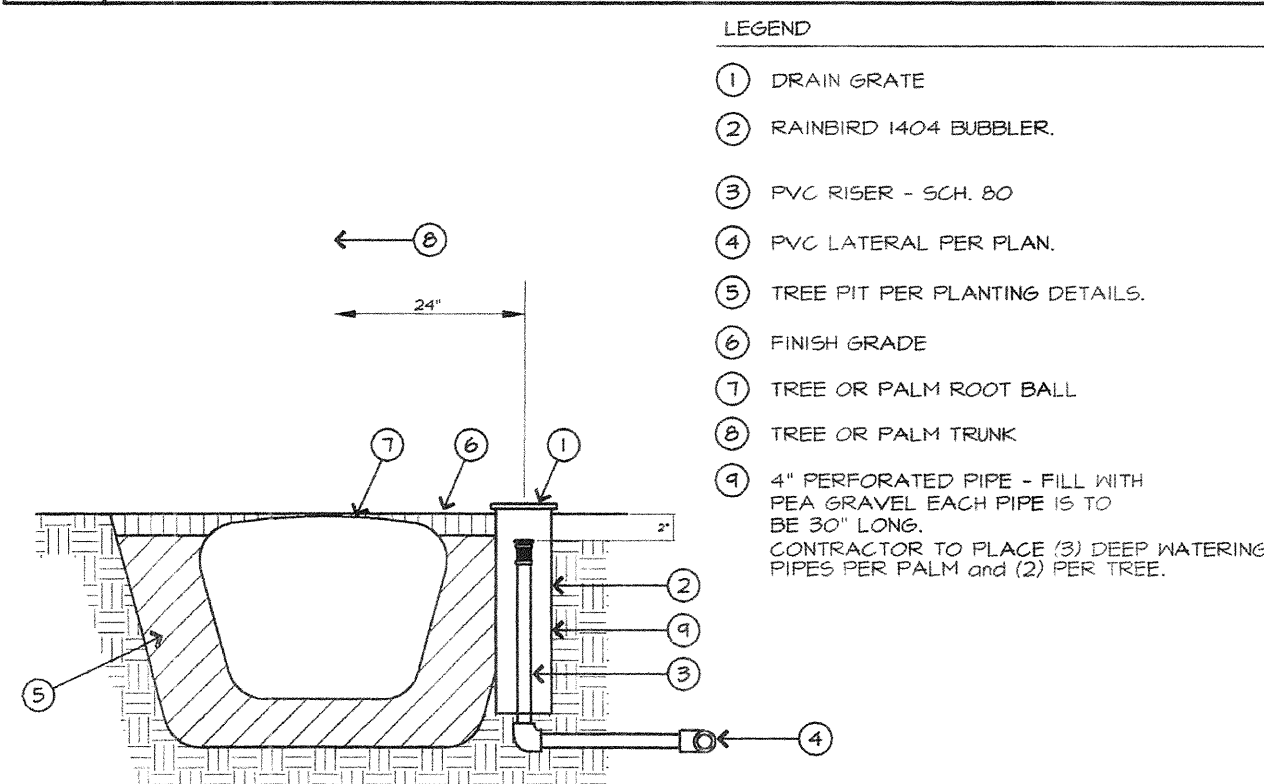
- NOTE: INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.
- LEGEND**
1. BRASS 90 DEG. ELL (TYP)
 2. BRASS NIPPLE-4" MIN. LENGTH (TYP)
 3. BRASS NYE STRAINER W/60 MESH MONEL SCREEN
 4. BRASS PLUG
 5. BRASS UNION
 6. FINISH GRADE
 7. BRASS NIPPLE (TYP)
 8. FROM POINT OF CONNECTION ADAPT AS REQ'D
 9. 12" x 12" x 12" CONCRETE THRUST BLOCK (TYP)
 10. BRASS COUPLING, SET FLUSH W/ CONCRETE (TYP)
 11. PVC MALE ADAPTER
 12. PVC MAINLINE
- * 12" MIN/24" MAX.

D BACKFLOW PREVENTOR BY C.V.W.D.
N.T.S.



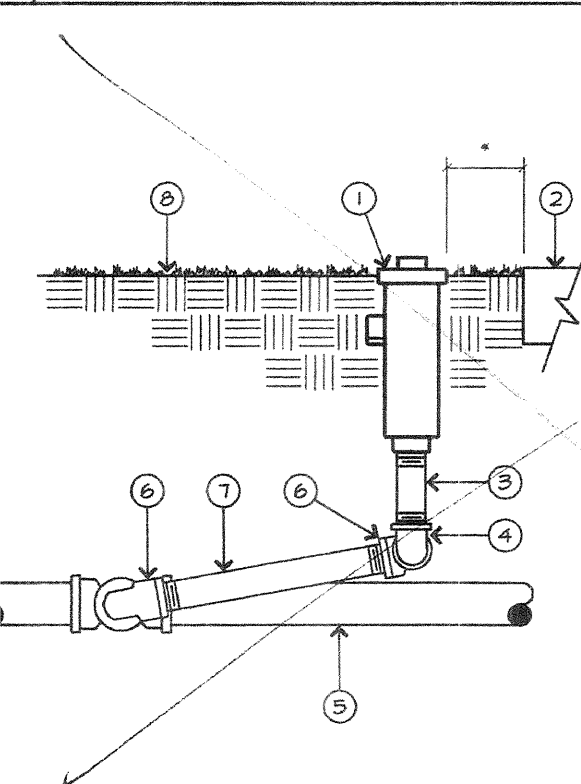
- LEGEND**
1. FINISH GRADE
 2. PVC PIPE (DEPTH PER DETAIL)
 3. RAIN BIRD MODEL # XZ-075 XERIGATION CONTROL ZONE ASSEMBLY
 4. WIRE CONNECTOR
 5. PILOT WIRE
 6. COMMON WIRE
 7. 3/4" CRUSHED ROCK
 8. (4) 2" x 4" x 12" REDWOOD FOR SUPPORT
 9. 12" x 18" RECTANGULAR VALVE BOX
 10. PVC UNION FOR SERVICING ASSEMBLY
 11. RECTANGULAR VALVE BOX IN GREEN BOLT-DOWN COVER - HEAT BRAND VALVE STATION NO. ON LID IN 2" HIGH CHARACTERS
 12. CHRISTY'S I.D. TAG - NUMBERED TO MATCH DRAWINGS

B XERIGATION CONTROL VALVE
N.T.S.



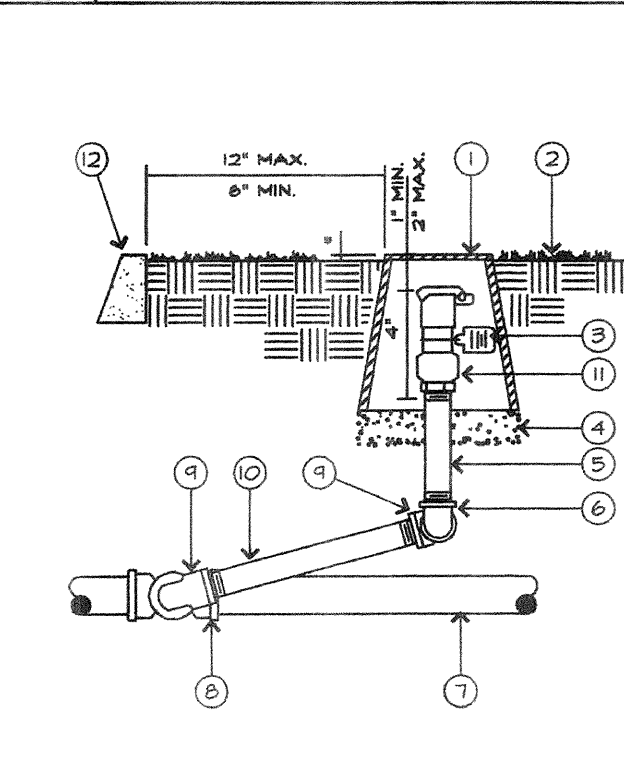
- LEGEND**
1. DRAIN GRATE
 2. RAINBIRD 1404 BUBBLER
 3. PVC RISER - SCH. 80
 4. PVC LATERAL PER PLAN
 5. TREE PIT PER PLANTING DETAILS
 6. FINISH GRADE
 7. TREE OR PALM ROOT BALL
 8. TREE OR PALM TRUNK
 9. 4" PERFORATED PIPE - FILL WITH FEA GRAVEL. EACH PIPE IS TO BE 30" LONG. CONTRACTOR TO PLACE 2" DEEP WATERING PIPES PER PALM and 12" PER TREE

M TREE/PALM IRRIGATION
N.T.S.



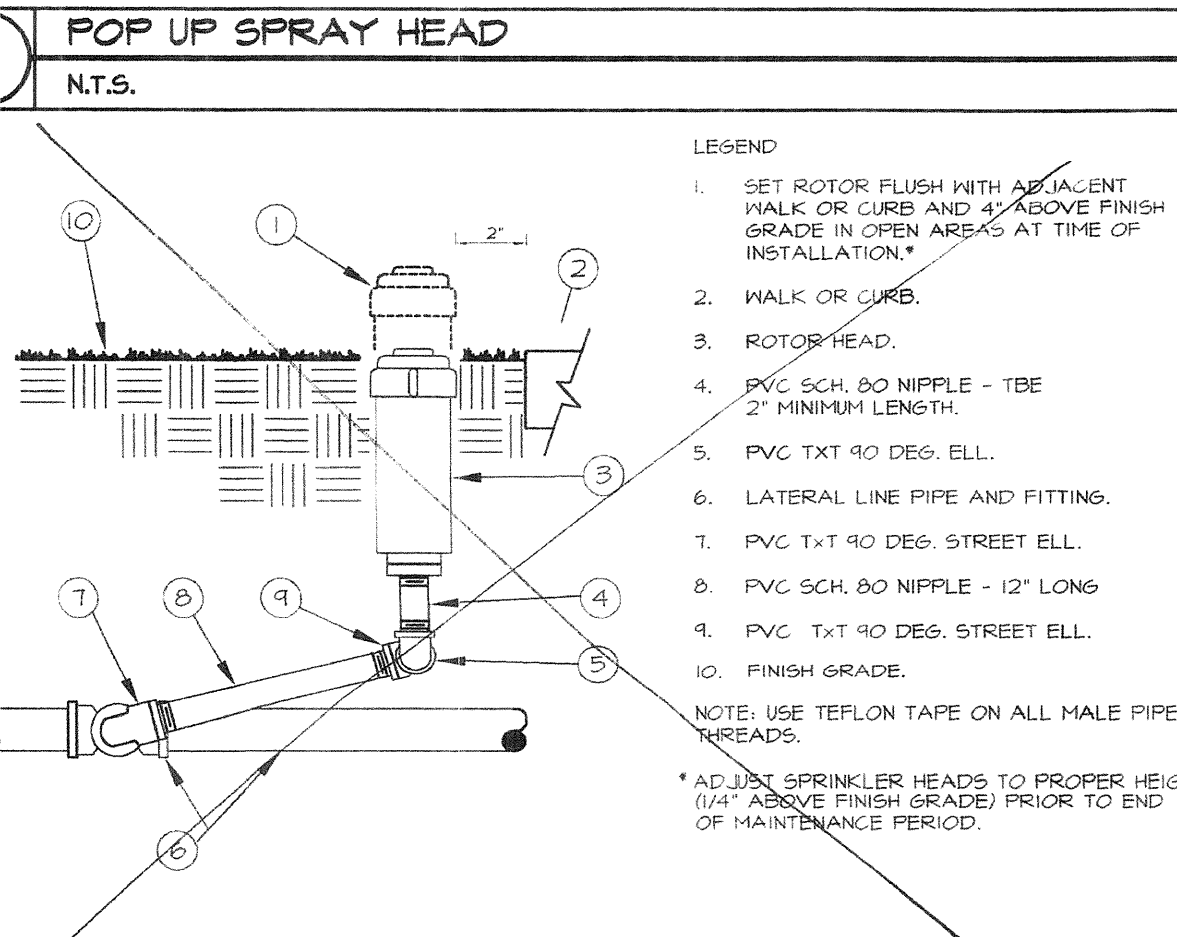
- LEGEND**
1. POP-UP SPRAY HEAD
 2. WALK OR CURB
 3. PVC SCH. 80 NIPPLE-4" MIN. LENGTH
 4. PVC T x T 90 DEG. ELL
 5. LATERAL LINE PIPE AND FITTINGS
 6. 90 DEG. STREET ELL
 7. PVC SCH. 80 NIPPLE-6" LONG
 8. FINISH GRADE
- NOTE: USE TEFLON TAPE ON ALL MALE PIPE THREADS.
- * 3" IN TURF AREAS

I POP UP SPRAY HEAD
N.T.S.



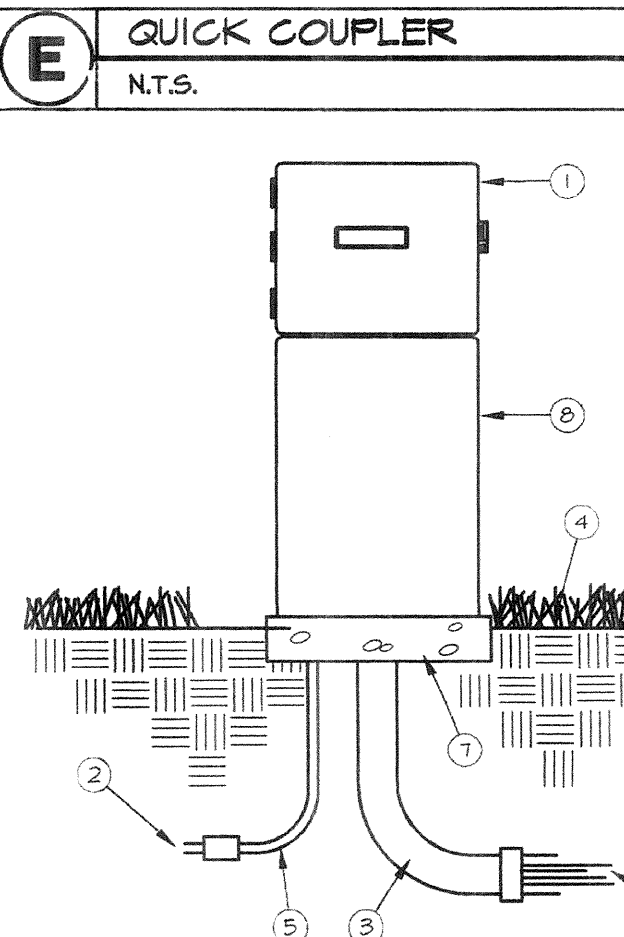
- LEGEND**
1. BROOKS ECONOMY VALVE BOX - HEAT BRAND "QV" ON LID IN 2" HIGH CHARACTERS
 2. FINISH GRADE
 3. CHRISTY'S I.D. TAG
 4. 3/4" CRUSHED ROCK - 6" DEPTH
 5. BRASS NIPPLE
 6. BRASS 90 DEG. ELL
 7. MAIN LINE PIPING
 8. MAIN LINE FITTINGS
 9. BRASS 90 DEG. STREET ELL
 10. BRASS NIPPLE - 6" LONG
 11. QUICK COUPLING VALVE
 12. WALK OR CURB
- * 1" IN LAWN AREAS,
2" IN SHRUB AREAS.
- NOTE: USE TEFLON TAPE ON ALL MALE PIPE THREADS.

E QUICK COUPLER
N.T.S.



- LEGEND**
1. SET ROTOR FLUSH WITH ADJACENT WALK OR CURB AND 4" ABOVE FINISH GRADE IN OPEN AREAS AT TIME OF INSTALLATION*
 2. WALK OR CURB
 3. ROTOR HEAD
 4. PVC SCH. 80 NIPPLE - TBE 2" MINIMUM LENGTH
 5. PVC T x T 90 DEG. ELL
 6. LATERAL LINE PIPE AND FITTINGS
 7. PVC T x T 90 DEG. STREET ELL
 8. PVC SCH. 80 NIPPLE - 12" LONG
 9. PVC T x T 90 DEG. STREET ELL
 10. FINISH GRADE
- NOTE: USE TEFLON TAPE ON ALL MALE PIPE THREADS.
- * ADJUST SPRINKLER HEADS TO PROPER HEIGHT (1/4" ABOVE FINISH GRADE) PRIOR TO END OF MAINTENANCE PERIOD.

J ROTOR HEAD
N.T.S.



- LEGEND**
1. AUTOMATIC CONTROLLER (SEE LEGEND)
 - 120-VOLT POWER SUPPLY WIRES IN CONDUIT
 3. PVC CONDUIT-2 1/2"
 4. FINISH GRADE
 5. SHEEP ELL-2 1/2"
 6. DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES
 7. 4" THICK CONCRETE FOOTINGS
 8. STAINLESS STEEL PEDESTAL (SEE LEGEND)
- NOTE: INSTALL ALL WIRING PER LOCAL CODE.

F CONTROLLER CLOCK
N.T.S.

GENERAL IRRIGATION NOTES

1. ALL POP-UP TYPE SPRINKLER HEADS INSTALLED IN SHRUB OR GROUND COVER AREAS SHALL BE INSTALLED SO THAT THE TOP OF THE SPRINKLER HEAD IS 1" ABOVE FINISH GRADE.
2. ALL POP-UP TYPE SPRINKLER HEADS INSTALLED IN LAWN AREAS SHALL BE INSTALLED SO THAT THE TOP OF THE SPRINKLER HEAD IS FLUSH WITH ADJACENT SIDEWALK OR CURB.
3. IN OPEN SEEDED LAWN AREAS SET TOP OF POP-UP TYPE SPRINKLER HEADS 3" ABOVE FINISH GRADE UNTIL LAWN IS ESTABLISHED. LOWERING OF ALL LAWN HEADS BY THE IRRIGATION CONTRACTOR SO THAT THE TOP OF THE SPRINKLER HEAD IS 1/2" ABOVE FINISH GRADE SHALL BE ACCOMPLISHED WITHIN TEN (10) DAYS AFTER NOTIFICATION BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
4. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE DESIGNATED ON THE PLANS.
5. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT THE METER OR 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 READINGS AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
6. 120 VOLT ELECTRICAL POWER OUTLET AT THE AUTOMATIC CONTROLLER LOCATION SHALL BE PROVIDED BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE TINE HOOK-UP FROM THE ELECTRICAL OUTLET TO THE AUTOMATIC CONTROLLER.
7. THIS DESIGN IS DIAGNOMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
8. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO ALLOW FOR NO OVERSPRAY ONTO WALKS, ROADWAYS AND/OR BUILDINGS. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE 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 IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
9. DO NOT WILLFULLY FIELD THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, 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 IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
10. INSTALL ALL PIPE MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE OR TERLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON ALL SPRINKLER SWING JOINT AND VALVE ASSEMBLIES.
11. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, ETC. HE SHALL COORDINATE HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, STRUCTURES, ETC.
12. IN ADDITION TO THE CONTROL WIRE SLEEVES SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONTROL WIRE SLEEVES OF SUFFICIENT SIZE UNDER ALL OTHER PAVED AREAS.

DRAINAGE NOTE

DRAINAGE OF IRRIGATION WATER THROUGH SPRINKLER HEADS WILL NOT BE ALLOWED. SOME PORTIONS OF THE IRRIGATION SYSTEM WILL REQUIRE THE INSTALLATION OF RAINBIRD 1804-SAM, 1806-SAM, AND 1812-SAM IN LIEU OF RAINBIRD 1804, 1806, AND 1812 SPRINKLER HEADS TO PREVENT DRAINAGE. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL RAINBIRD POP-UP SPRAY HEADS WITH "SAM" FEATURE AS REQUIRED AT ANY SPRINKLER HEAD SHOWING SIGNS OF DRAINAGE AFTER THE IRRIGATION SYSTEM HAS OPERATED FROM AN ON TO OFF POSITION. INSTALLATION OF "SAM" FEATURE SHALL BE INCLUDED IN THE BID PRICE WITHOUT ADDITIONAL COST TO THE OWNER.

DATE	
REVISIONS	
NO.	

R.M.D.
RAY MARTIN DESIGN
Landscape Design Services
52295 Avenida Kalerdo
La Quinta, California
92253
(609) 771-2052, fax 771-5481

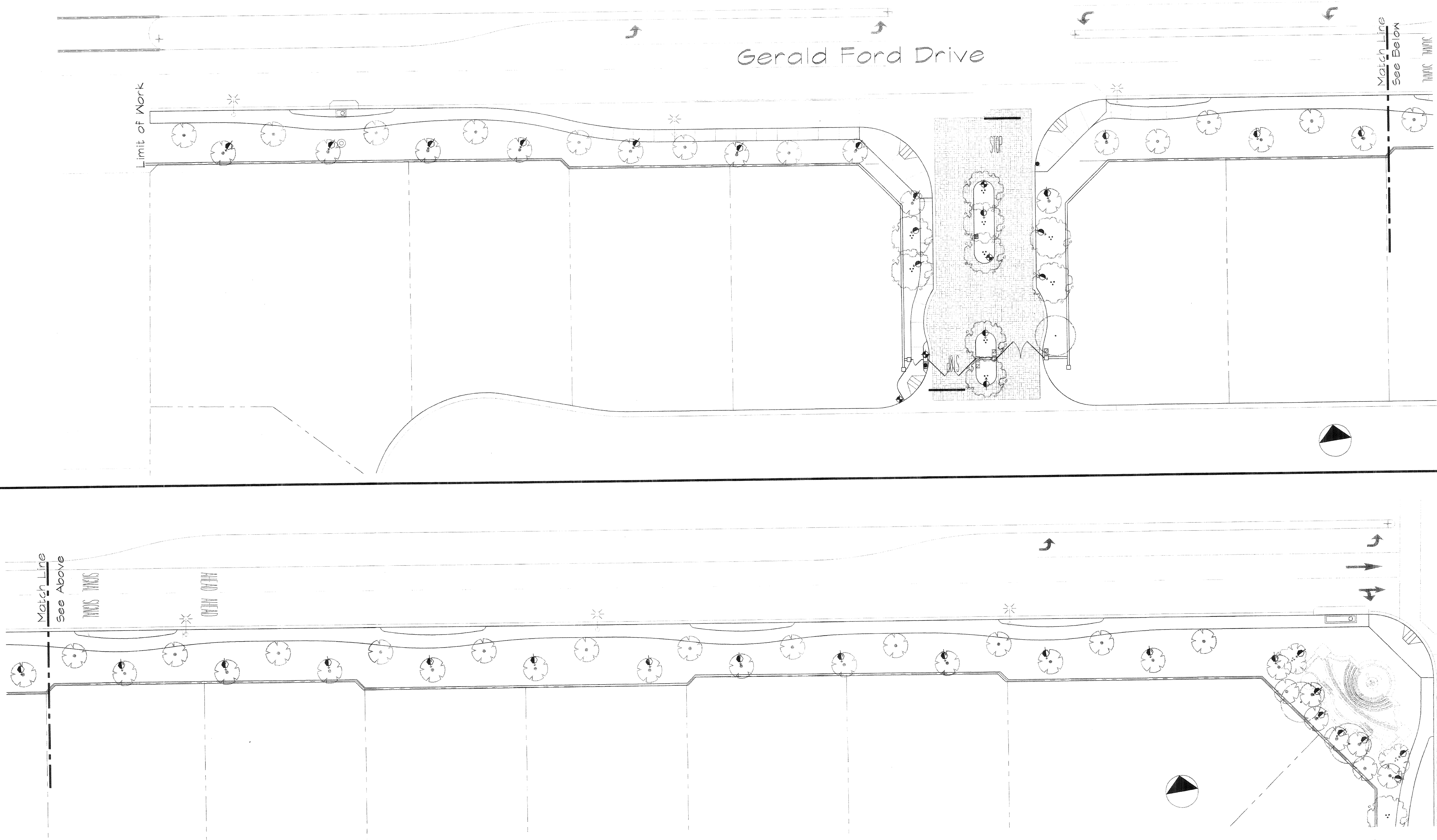
IRRIGATION DETAILS

Artisan Collection
Perimeter and Entries
Cathedral City, California

Scale:	
Date:	6-12-01
Sheet No.	

THESE PLANS HAVE BEEN REVIEWED BY THE COACHELLA VALLEY WATER DISTRICT IN ACCORDANCE WITH WATER CODE TITLE 7, DIVISION 1, CHAPTER 3, ARTICLE 10.0, SECTION 85597 ET SEQ. REQUIRING EFFICIENT LANDSCAPE AND IRRIGATION DESIGN IN COOPERATION WITH THE LOCAL GOVERNING AGENCY (CITY OR COUNTY).

DATE 07/12/01 BY *Donald R. Ashley*
WATER MANAGEMENT/SPECIALIST
Scott Conlan
SERVICE DIRECTOR



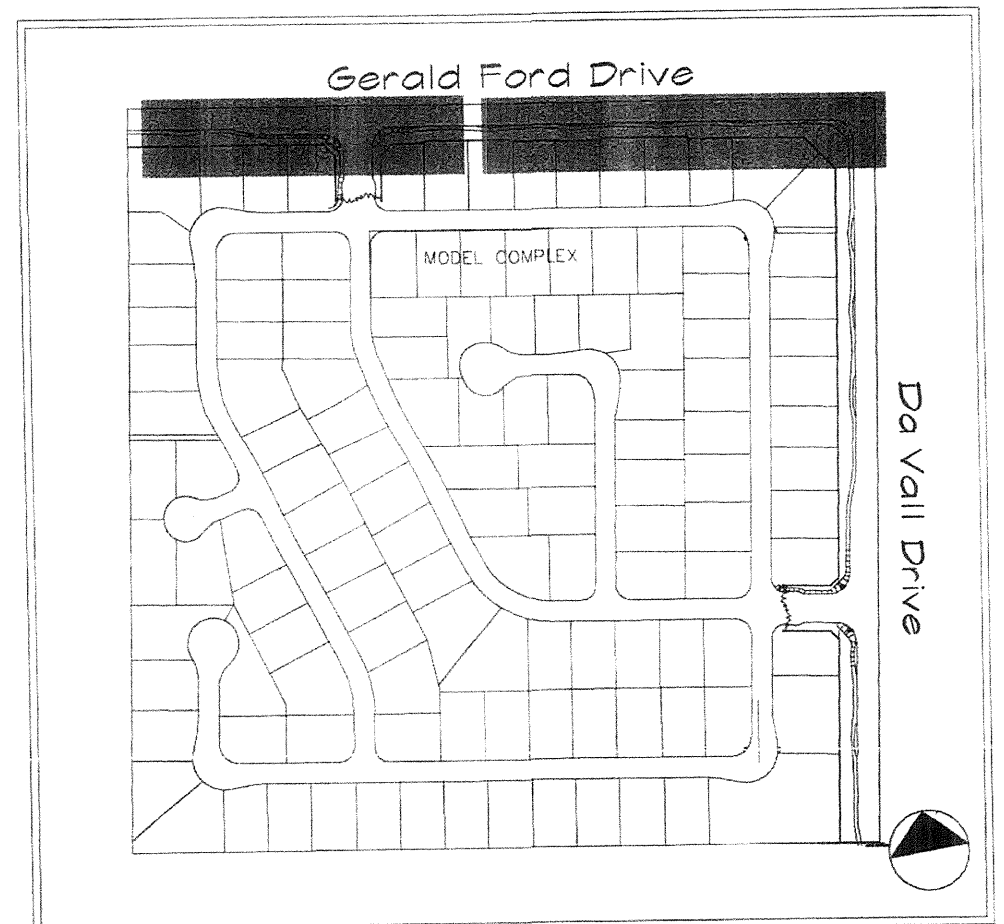
Gerald Ford Drive

Limit of Work

Match Line
See Below

Match Line
See Above

KEY MAP



LIGHTING LEGEND

SYM.	FIXTURE	COMMENTS
⬆	SPJ LIGHTING INC - SPJ-13-00 50N MR-16 CAST ALUMINUM (TWIST & LOCK COVER)	PALM TREE BULLET TYPE UP-LIGHT W/ BLACK FINISH
⬆	SPJ LIGHTING INC - SPJ5-05 13 W	UP-LIGHT FOR TREE CANOPY / FLOOD LIGHT W/ BLACK FINISH
⬆	SPJ LIGHTING SPJ10-01 10W FLUORESCENT LAMP PROVIDE GRILL INSIDE FIXTURE	WALKLIGHT DIRECT TOWARDS PATH/ DRIVE W/ BLACK FINISH
Q	TRANSFORMER BY JUSTIN, INC. MODEL NO. MTR-350 TP 300 WATT - 11-5V - BUILT IN PHOTO-CELL AND TIMER	STAINLESS STEEL ENCLOSURE 10" X 12" H X 6" DEEP

APPROVED FOR CONSTRUCTION
BY THE CITY OF CATHEDRAL CITY
DEPT OF COMMUNITY DEVELOPMENT
PLANNING *Madoff* DATE 9-12-01
BUILDING _____ DATE _____
ENGINEERING _____ DATE _____

DATE	
REVISIONS	
NO.	
DESCRIPTION	

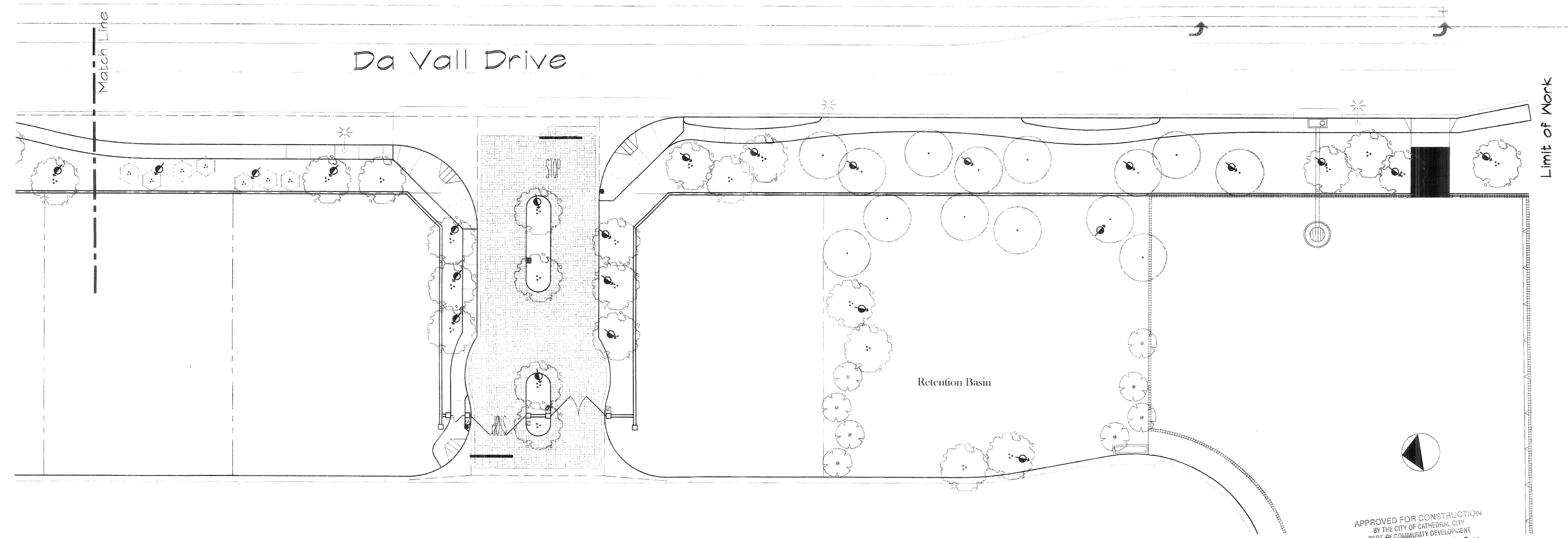
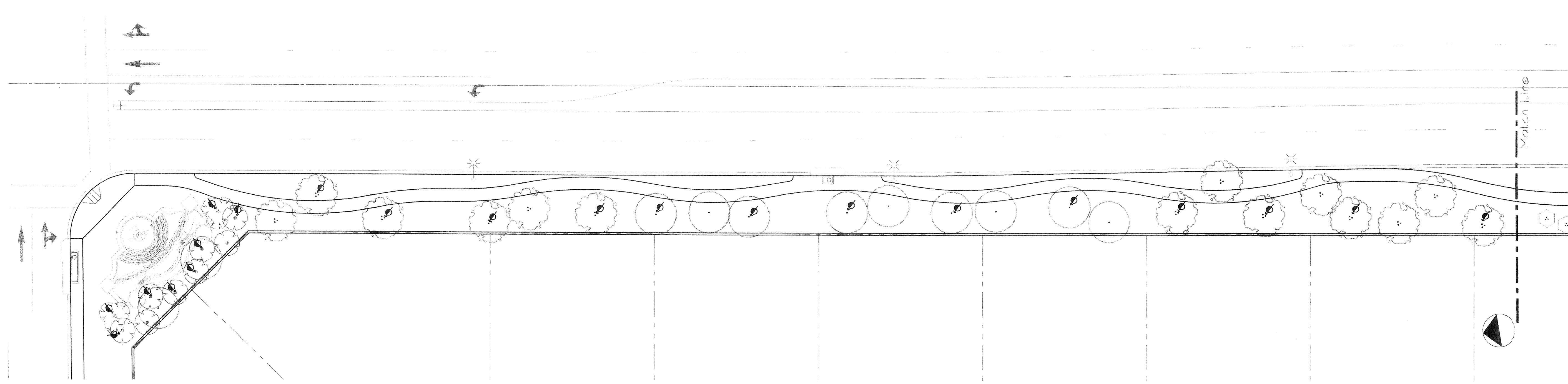
R-M-D
RAY MARTIN DESIGN
Landscape Design Services
52 293 Avenida Mendocino
Cathedral City, California
92003
(760) 771-2071 Fax 771-3381

LIGHTING PLAN

Artisan Collection
Perimeter and Entries
Cathedral City, California

Scale:
1"=20'-0"
Date:
6-12-01
Sheet No.
PL-7

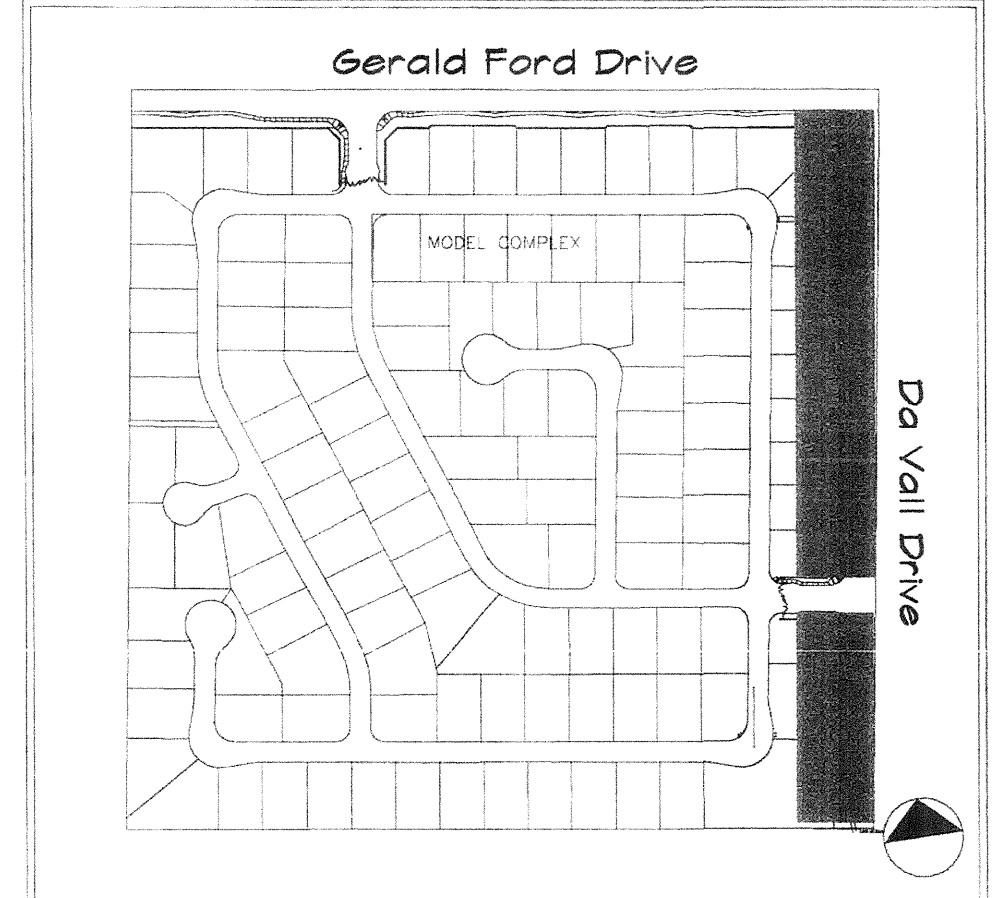
PERIMETER LIGHTING & CONSTRUCTION PLANS 2001



LIGHTING LEGEND

SYM.	FIXTURE	COMMENTS
⬆	SPJ LIGHTING INC. - SPJ-13-05 - 50W MR-16 CAST ALUMINUM (TWIST & LOCK COVER)	PAV. TREE BULLET TYPE UP-LIGHT IV/BLACK FINISH
⬆	SPJ LIGHTING INC. - SPJ15-05 - 13 W	UP-LIGHT FOR TREE CANOPY / FLOOD LIGHT IV/BLACK FINISH
⬆	SPJ LIGHTING SPJ10-01 - 18W FLOURESCENT LAMP, PROVIDE GRILL INSIDE FIXTURE.	WALKLIGHT DIRECT TOWARDS PATH/ DRIVE IV/BLACK FINISH
Q	TRANSFORMER BY JUSTIN, INC. MODEL NO.MTF-350-1P - 300 WATT - II-15V - BUILT IN PHOTO-CELL AND TIMER	STAINLESS STEEL ENCLOSURE 10"X 12"HT X 6" DEEP

KEY MAP



APPROVED FOR CONSTRUCTION
 BY THE CITY OF CATHEDRAL CITY
 DEPT. OF COMMUNITY DEVELOPMENT
 PLANNING *[Signature]* DATE 9-13-01
 BUILDING _____ DATE _____
 ENGINEERING _____ DATE _____

APPROVED FOR CONSTRUCTION
 BY THE CITY OF CATHEDRAL CITY
 DEPT. OF COMMUNITY DEVELOPMENT
 PLANNING _____ DATE _____
 BUILDING _____ DATE _____
 ENGINEERING _____ DATE _____

NO.	REVISIONS	DATE

R·M·D
 RAY MARTIN DESIGN
 Landscape Design Services
 52,293 Avenida Malibu
 Encinitas, California
 92024
 (760) 771-2071, fax 771-3381

LIGHTING PLAN

Artisan Collection
 Perimeter and Entries
 Cathedral City, California

Scale:
 1"=20'-0"
 Date:
 6-12-01
 Sheet No.

PL-8

Gerald Ford Drive

DATE	
REVISIONS	
NO.	DESCRIPTION

R.M.D.
RAY MARTIN DESIGN
 Landscape Design Services
 12295 Avenida Madro
 La Quinta, California
 92053
 (760) 773-8071 fax 773-3381

CONSTRUCTION PLAN
GERALD FORD DRIVE
ENTRY GATES

Artisan Collection
 Perimeter and Entries
 Cathedral City, California

Scale:
 Date: 6-12-01
 Sheet No.
PL-9

Automatic Gate Notes:

Gate controllers to be ELITE model #CSW-200-UL-DM Dual Motor System (1/2 HP).

Telephone entry system to be ELITE DIAL CODE LC Two line LCD Display telephone.

Gate contractor to order two (2) catalogs from ELITE Access Systems Inc. and provide one to the Property Owner for approval of Dial Code packages including all necessary software, hardware and available entry devices (ie card readers, transmitters, receivers etc.).

Gate contractor to locate free out loop for each pair of outbound gates prior to installation of pavers.

Safety loops to be installed below street paving prior to installation of pavers.

Gate contractor is responsible for procuring all necessary permits and approvals for the installation of gates.

Gate contractor to ensure Fire Marshall's requirements are met (ie Knox boxes, emergency vehicle access loops etc.).

Gate contractor to field measure existing rough openings in masonry walls prior to fabrication of gates.

Pedestrian Gate Notes:

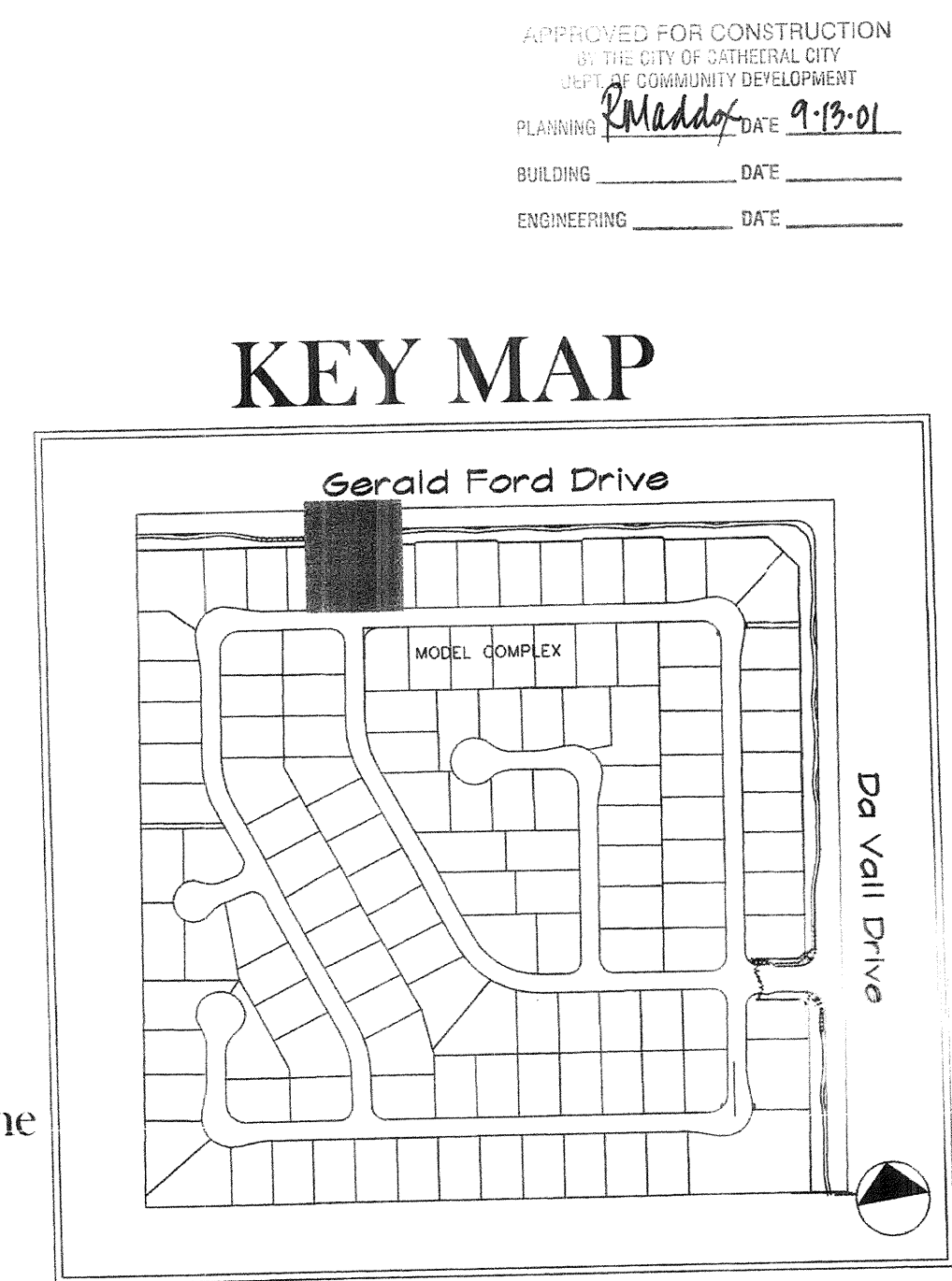
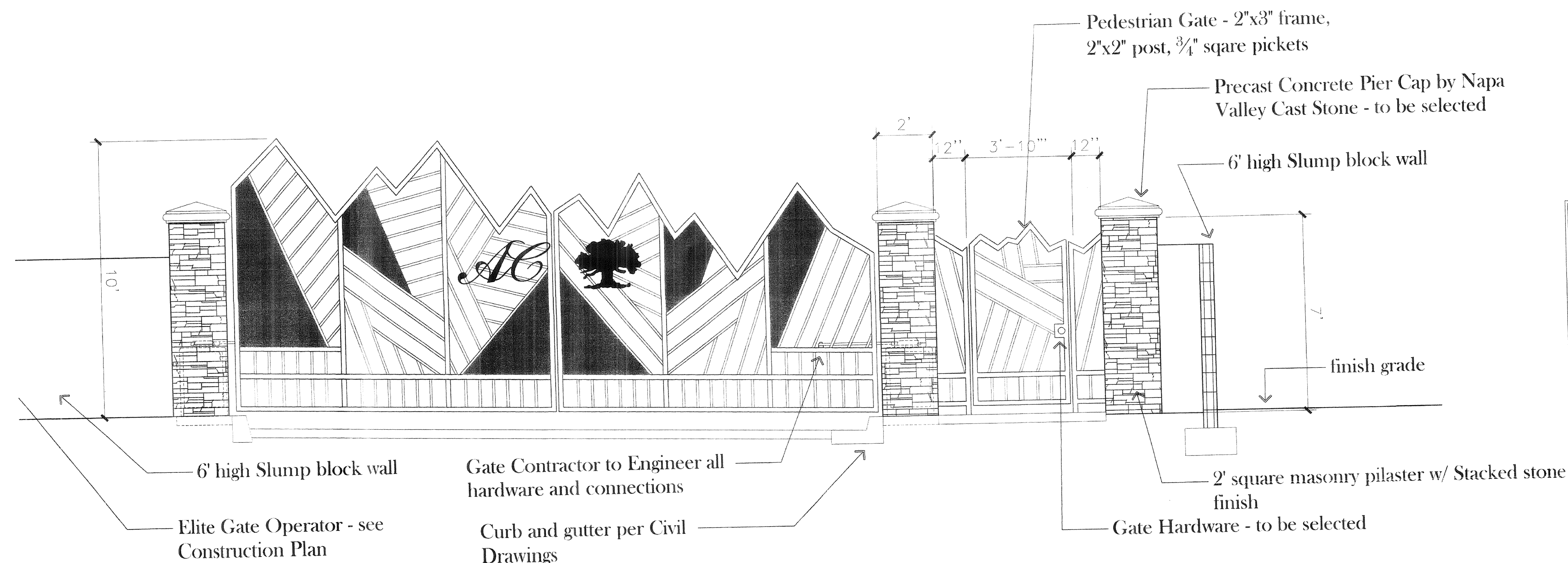
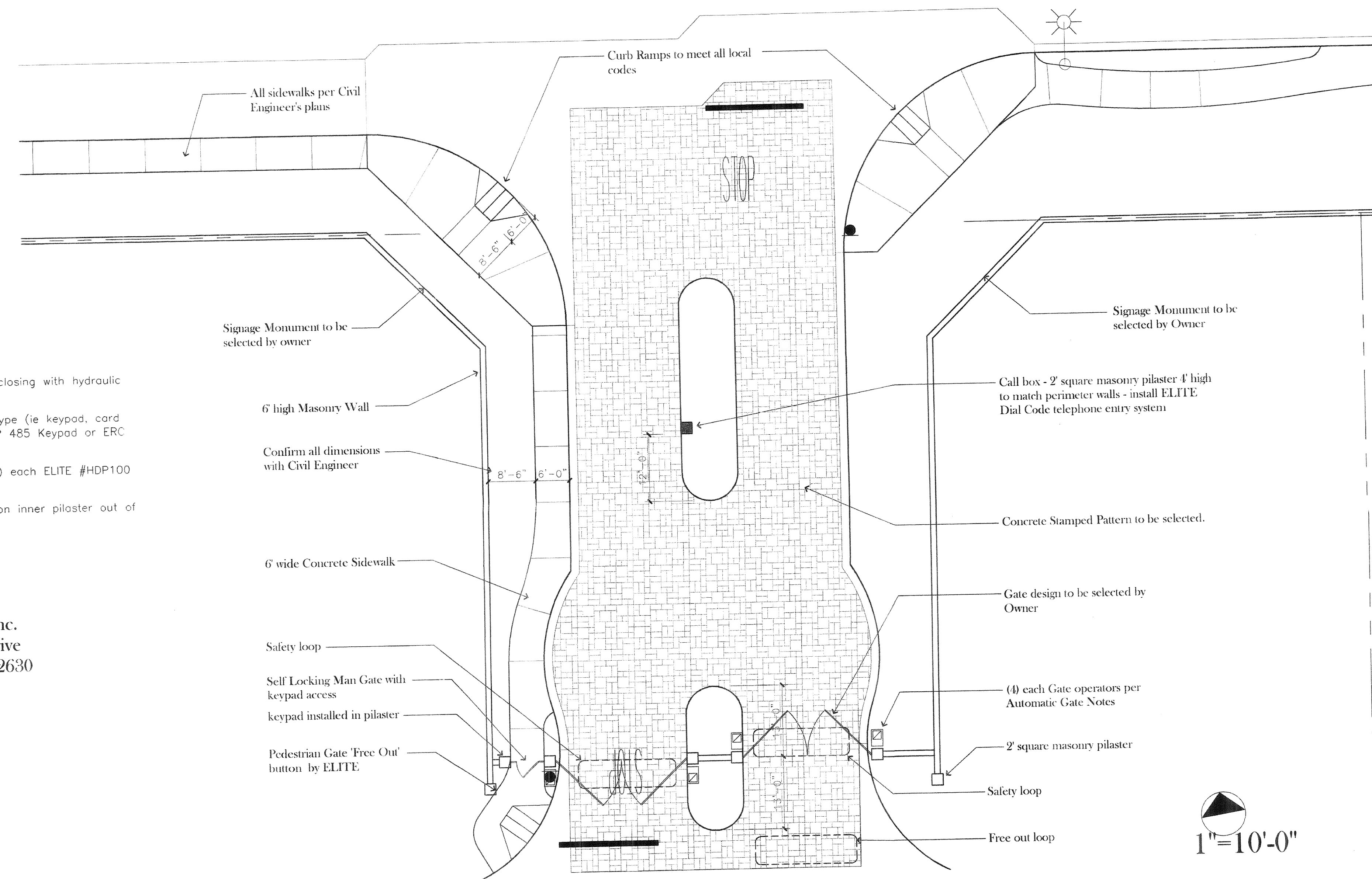
Pedestrian gates are to be self closing with hydraulic closers.

Owner to select access control type (ie keypad, card reader) from ELITE catalog. EKP 485 Keypad or ERC 485 Series Card Reader.

Pedestrian gates to have two (2) each ELITE #HDP100 Heavy Duty hinges.

Free out button to be installed on inner pilaster out of reach from gate.

ELITE Access Systems Inc.
 25741 Commercenter Drive
 Lake Forest, California 92630
 949 580 1700
 www.eliteaccess.com



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 BY THE CITY OF CATHEDRAL CITY
 DEPT. OF COMMUNITY DEVELOPMENT
 PLANNING *R. Meddy* DATE 9-13-01
 BUILDING _____ DATE _____
 ENGINEERING _____ DATE _____

Da Vall Drive

DATE	
REVISIONS	
NO.	

R.M.D.
RAY MARTIN DESIGN
 Landscape Design Services
 10000 Wilshire Blvd
 Suite 1000
 Los Angeles, California
 90024
 (310) 771-3071 Fax: 771-3381

CONSTRUCTION PLAN
DA VALL DRIVE
ENTRY GATES

Artisan Collection
 Perimeter and Entries
 Cathedral City, California

Scale: _____
 Date: 6-12-01
 Sheet No. _____
PL-10

Automatic Gate Notes:

Gate controllers to be ELITE model #CSW-200-UL-DM Dual Motor System (1/2 HP).

Telephone entry system to be ELITE DIAL CODE LC Two line LCD Display telephone.

Gate contractor to order two (2) catalogs from ELITE Access Systems Inc. and provide one to the Property Owner for approval of Dial Code packages including all necessary software, hardware and available entry devices (ie card readers, transmitters, receivers etc.).

Gate contractor to locate free out loop for each pair of outbound gates prior to installation of pavers.

Safety loops to be installed below street paving prior to installation of pavers.

Gate contractor is responsible for procuring all necessary permits and approvals for the installation of gates.

Gate contractor to ensure Fire Marshall's requirements are met (ie Knox boxes, emergency vehicle access loops etc.)

Gate contractor to field measure existing rough openings in masonry walls prior to fabrication of gates.

Pedestrian Gate Notes:

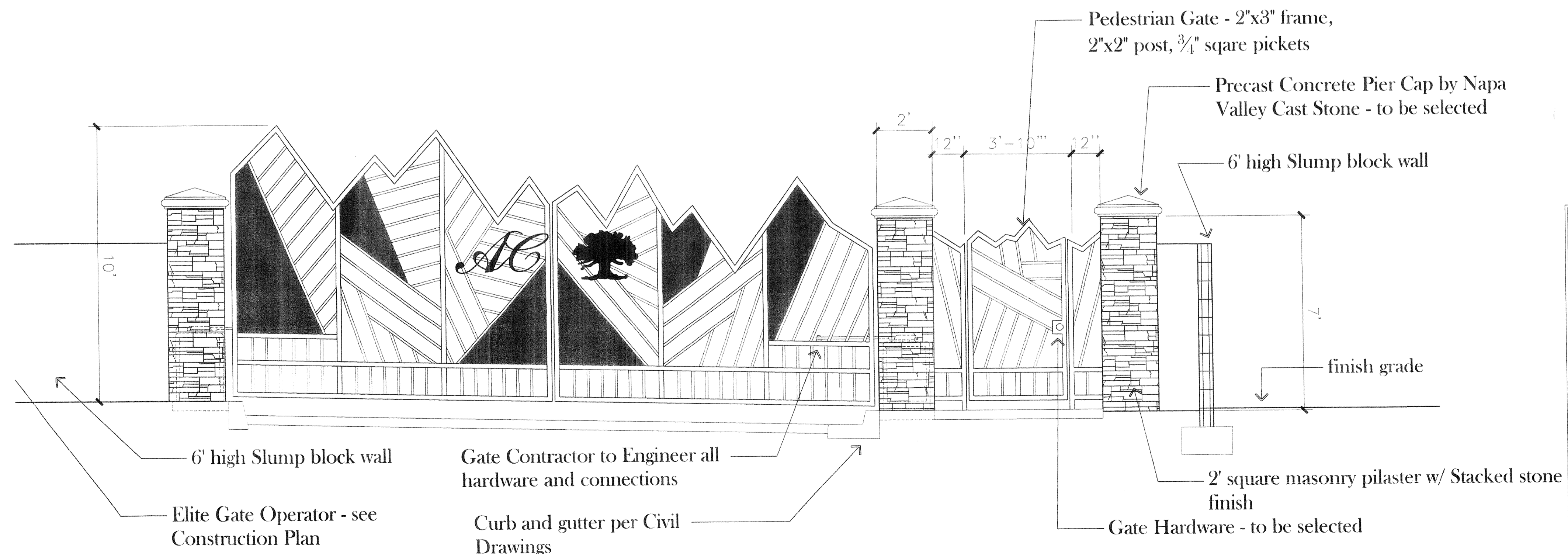
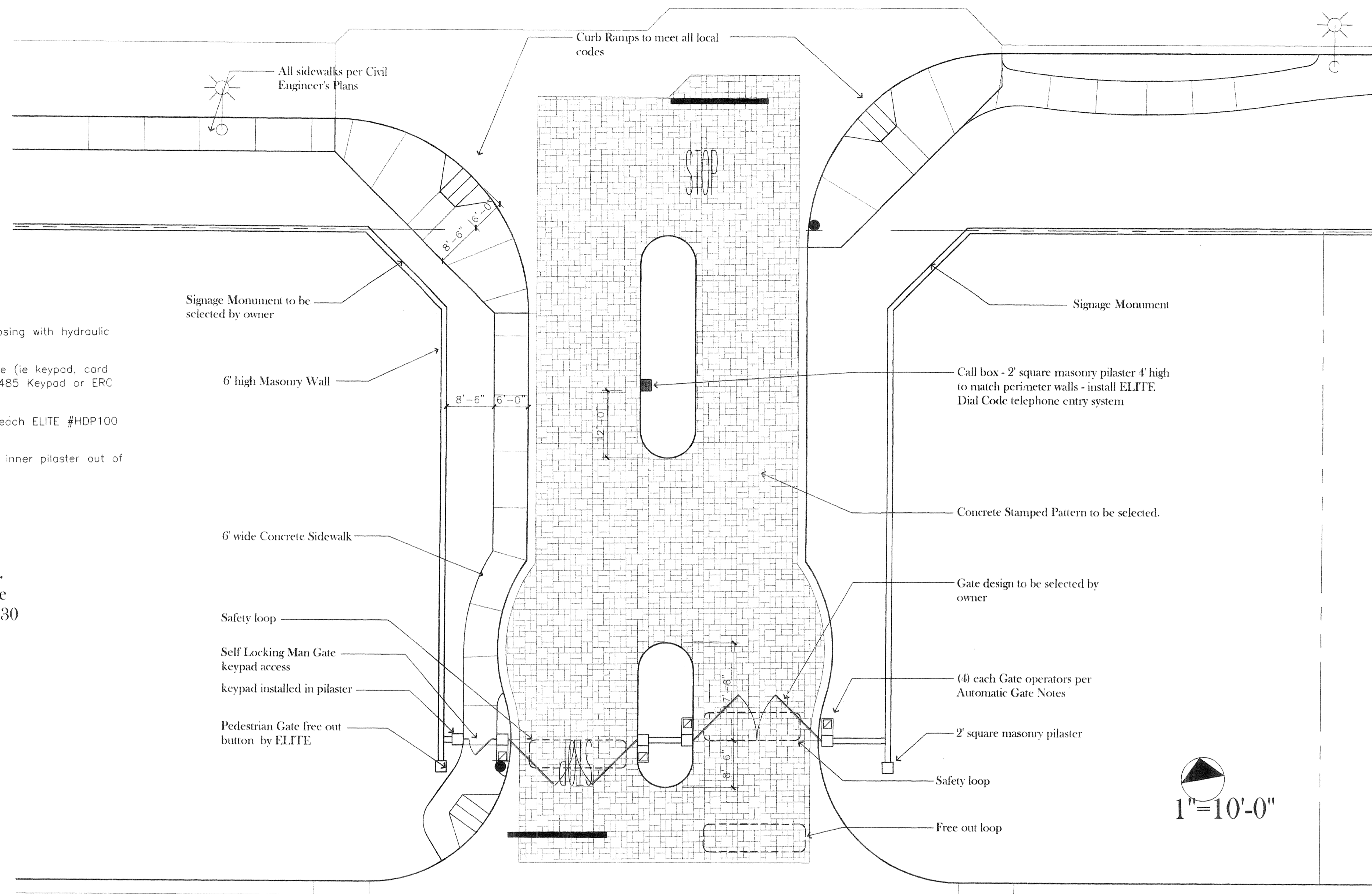
Pedestrian gates are to be self closing with hydraulic closers

Owner to select access control type (ie keypad, card reader) from ELITE catalog. EKP 485 Keypad or ERC 485 Series Card Reader.

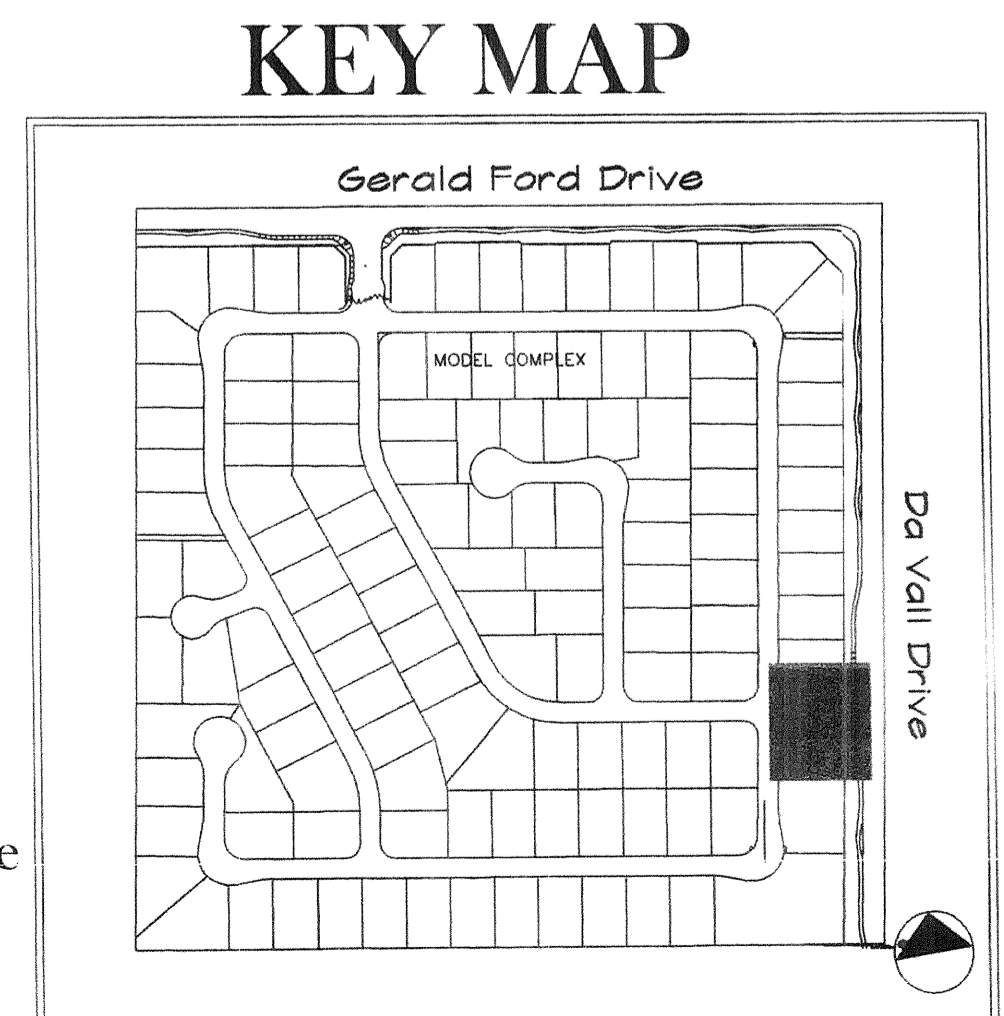
Pedestrian gates to have two (2) each ELITE #HDP100 Heavy Duty hinges.

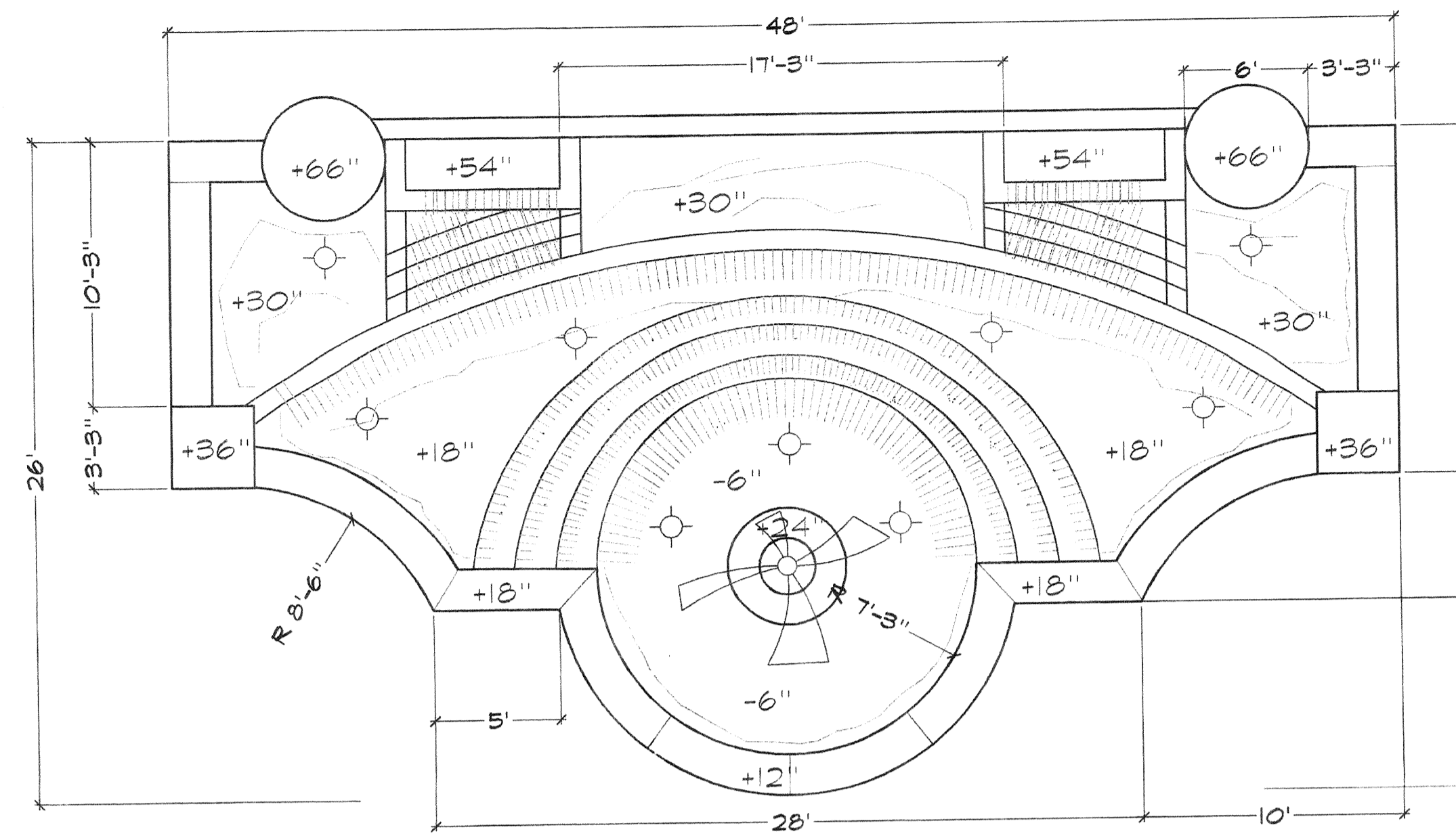
Free out button to be installed on inner pilaster out of reach from gate.

ELITE Access Systems Inc.
 25741 Commercenter Drive
 Lake Forest, California 92630
 949 580 1700
 www.eliteaccess.com

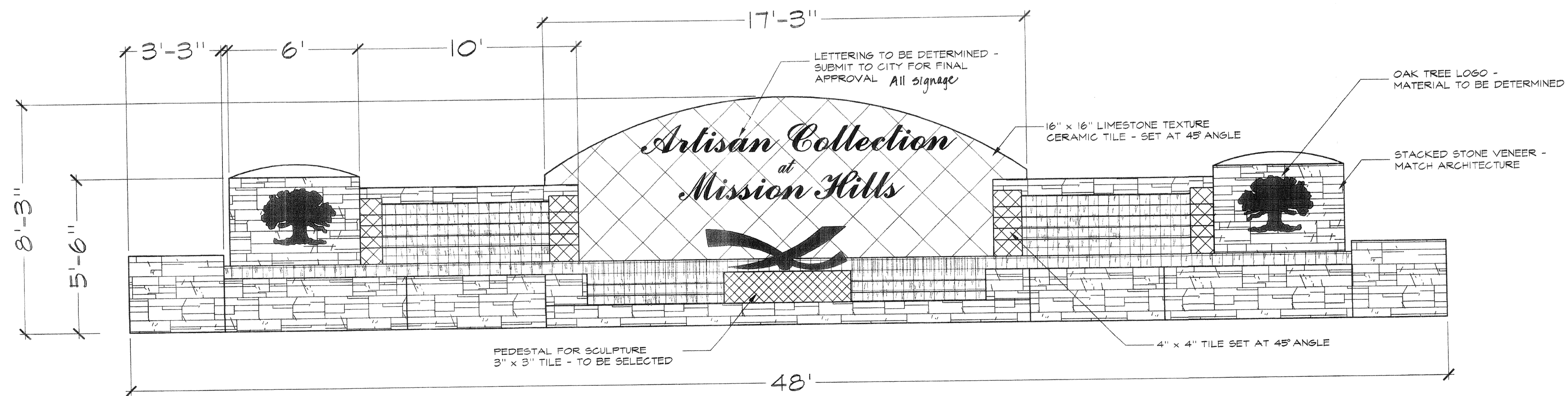


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 BY THE CITY OF CATHEDRAL CITY
 DEPT. OF COMMUNITY DEVELOPMENT
 PLANNING *R. Maddox* DATE 9-13-01
 BUILDING _____ DATE _____
 ENGINEERING _____ DATE _____





WATER FEATURE - PLAN VIEW 1/4"=1'-0"



WATER FEATURE - ELEVATION 1/2"=1'-0"

APPROVED FOR CONSTRUCTION
 BY THE CITY OF CAHERSAL CITY
 DEPT. OF COMMUNITY DEVELOPMENT
 PLANNING *Maddox* DATE 6-18-01
 BUILDING _____ DATE _____
 ENGINEERING _____ DATE _____

REV.	REVISIONS

R.M.D.
 RAY MARTIN DESIGN
 Landscape Design Services
 52293 Avenida Nubero
 La Quinta, California
 92253
 (609) 773-8051, fax: 773-8241

CONSTRUCTION DETAILS
 CORNER WATER FEATURE

Artisan Collection
 Perimeter Corner Feature
 Gerald Ford Drive and Da Vall Drive

Scale:
 Date: 6-18-01
 Sheet No.

PL-11