

P.O. Box 1293 Albuquerque, NM 87103

October 10, 1996

Martin J. Chávez, Mayor

C.A. Coonce, PE
C.A. Coonce & Assoc
12324 Pineridge NE
Albuquerque, NM 87109

RE: GRADING & DRAINAGE PLAN FOR SUNSET VILLA (K-12/D3)
RECEIVED SEPTEMBER 16, 1996 FOR PRELIMINARY PLAT
ENGINEER'S STAMP DATED 8/14/96

Dear Mr. Coonce:

Based on the information included in the submittal referenced above, City Hydrology accepts the grading & drainage plan for preliminary plat. The following comments must be addressed before Final Plat:

Remove the 1' deep V ditch from the "Typical Lot Drainage". Even though the "flat grading" criteria has been formalized, a Private Facilities Drainage Covenant is still required to inform the home owners of their responsibilities.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer, Hydrology

c: Andrew Garcia
Fred Aguirre, DRB 96-367
Leo Sanchez, Sunset Villa Land Corp, 2800 San Joaquin SE 87102

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

PROJECT TITLE: SUNSET VILLA SUBDIVISION ZONE ATLAS/ DRNG. FILE #: K-12/D3

DRB #: 96-367 V-96-93 EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: SUNSET VILLA SUBDIVISION

CITY ADDRESS: POWELL ROAD, S.W., ALBUQUERQUE, NM

ENGINEERING FIRM: C.A. COONCE & ASSOC. CONTACT : C.A. COONCE

ADDRESS: 12324 PINERIDGE, N.E. PHONE: 296-1089

OWNER: SUNSET VILL LAND CORP. CONTACT: LEO SANCHEZ

ADDRESS: 2800 SAN JOAQUIN, S.E., 87102 PHONE: 268-0109

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: CONSERVE SURVEYING CONTACT: JERRY NICKELS

ADDRESS: SAN FIDEL, NM F87049 PHONE: (505) 247-4444

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT

☒ DRAINAGE PLAN

☐ CONCEPTUAL GRADING & DRAINAGE PLAN

☒ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL

☒ PRELIMINARY PLAT APPROVAL

☐ S. DEV. PLAN FOR SUB'D. APPROVAL

☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL

☐ SECTOR PLAN APPROVAL

☐ FINAL PLAT APPROVAL

☐ FOUNDATION PERMIT APPROVAL

☐ BUILDING PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY APPROVAL

☐ GRADING PERMIT APPROVAL

☐ PAVING PERMIT APPROVAL

☐ S.A.D. DRAINAGE REPORT

☐ DRAINAGE REQUIREMENTS

☐ OTHER _____ (SPECIFY)

PRE-DESIGN MEETING:

☒ YES

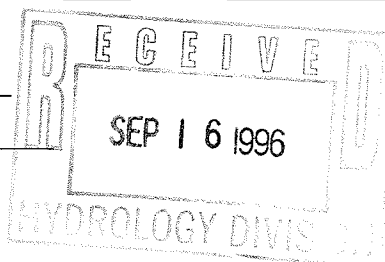
☐ NO

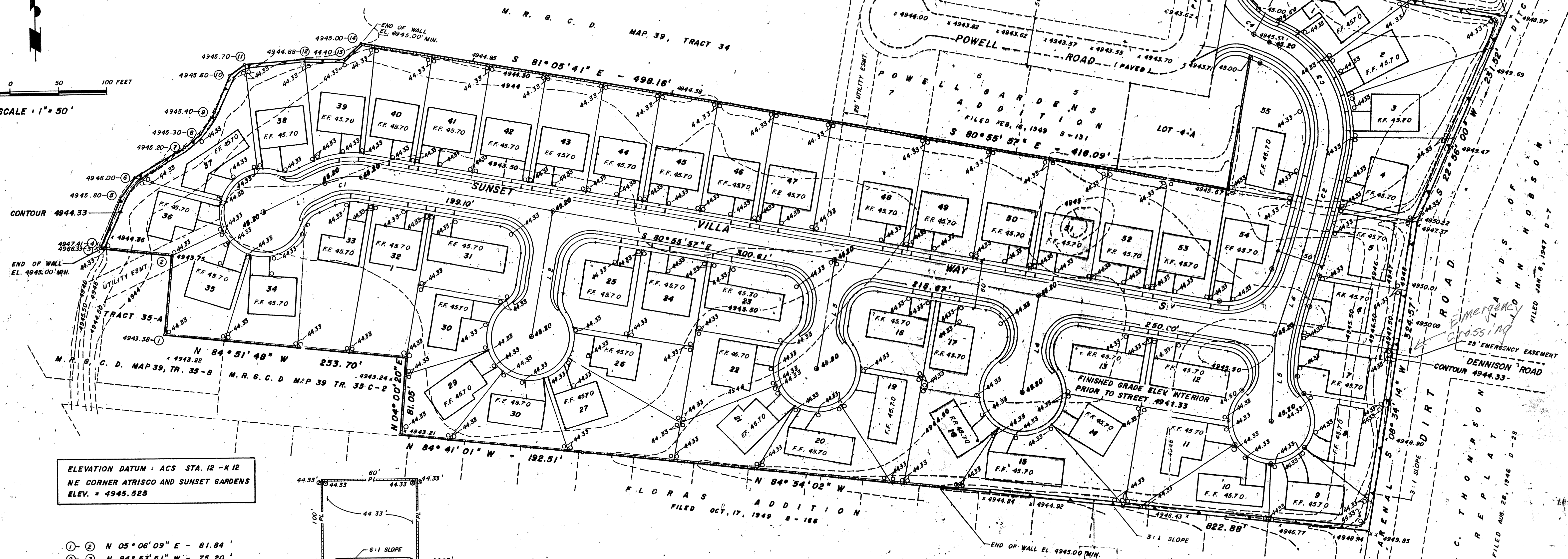
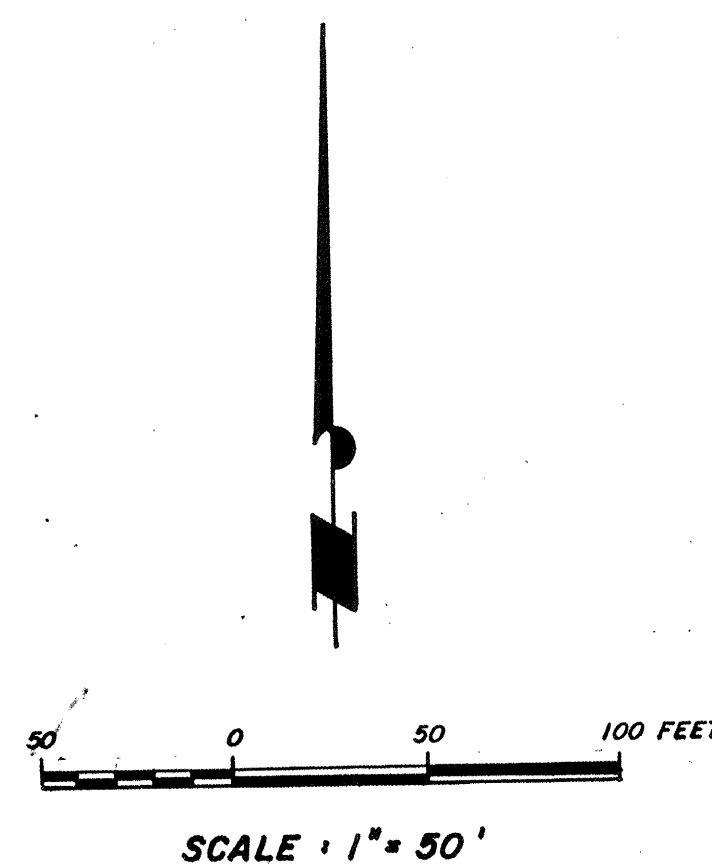
☐ COPY PROVIDED

DATE SUBMITTED: 09/16/96

BY: C.A. COONCE

C.A. Coonce

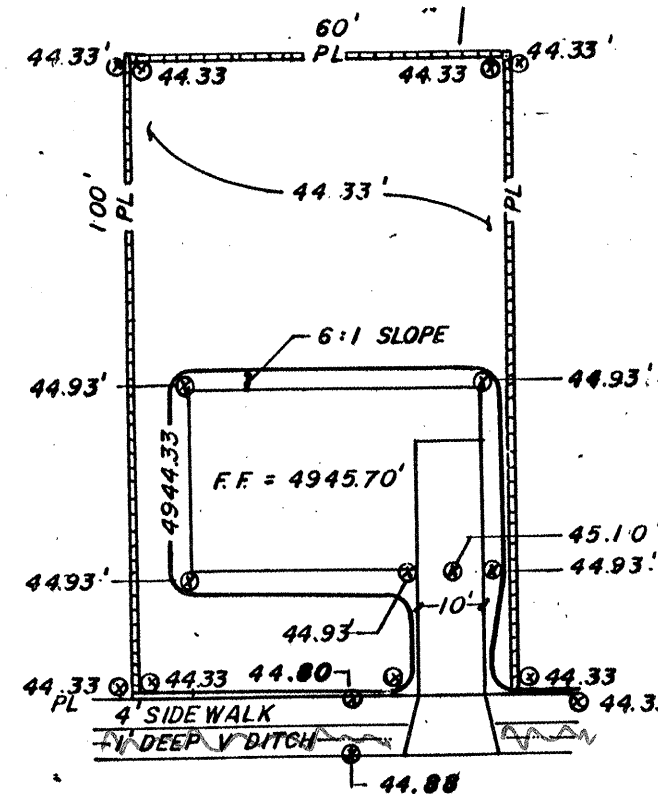




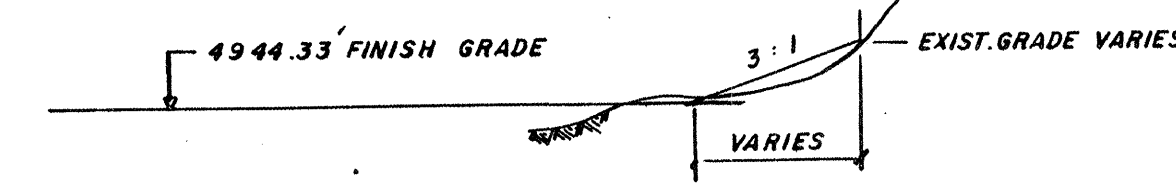
ELEVATION DATUM: ACS STA. 12 - K12
NE CORNER ATRISCO AND SUNSET GARDENS
ELEV. = 4945.525

- ① ② N 05°06'09" E - 81.84'
- ② ③ N 84°53'51" W - 75.20'
- ③ ④ N 84°03'16" E - 2.39'
- ④ ⑤ N 42°18'48" E - 57.63'
- ⑤ ⑥ N 36°14'53" E - 21.69'
- ⑥ ⑦ N 58°26'33" E - 61.29'
- ⑦ ⑧ N 50°02'54" E - 21.39'
- ⑧ ⑨ N 34°07'50" E - 24.76'
- ⑨ ⑩ N 21°26'30" E - 24.48'
- ⑩ ⑪ N 53°19'03" E - 19.47'
- ⑪ ⑫ N 85°11'52" E - 63.09'
- ⑫ ⑬ N 89°35'19" E - 42.43'
- ⑬ ⑭ N 45°18'01" E - 24.05'

- L 1 N 65°06'45" E - 67.10'
- L 2 S 09°04'03" W - 130.00'
- L 3 S 09°04'03" W - 114.45'
- L 4 S 09°04'03" W - 102.37'
- L 5 S 02°39'21" W - 90.11'
- L 6 N 17°30'45" E - 91.53'

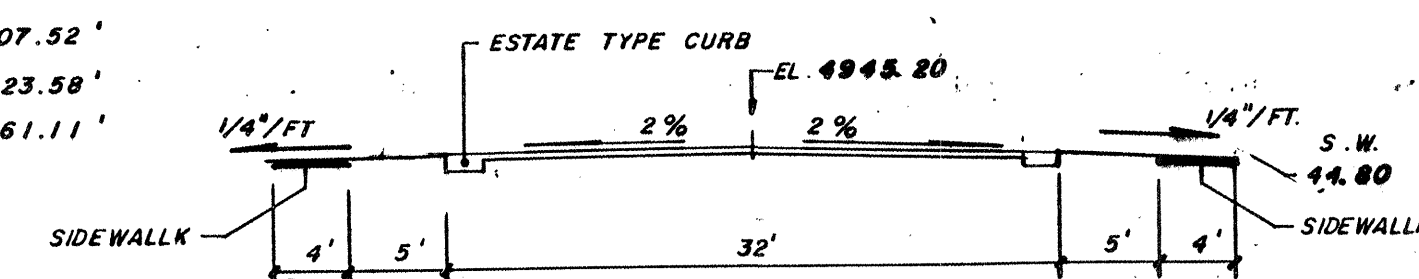


TYPICAL LOT DRAINAGE



TYPICAL TRANSITION TO PL ELEV. ABOVE 4945.50'

C	A	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD
C 1	33°57'18"	75.00'	22.90'	44.45'	N 82°05'24"E	43.80'
C 2	09°11'46"	670.59'	53.93'	107.63'	N 12°54'52"E	107.52'
C 3	76°19'35"	100.00'	78.59'	133.22'	N 29°50'49"W	123.58'
C 4	35°35'05"	100.00'	32.09'	62.11'	N 50°13'04"W	61.11'



TYPICAL ACCESS ROAD

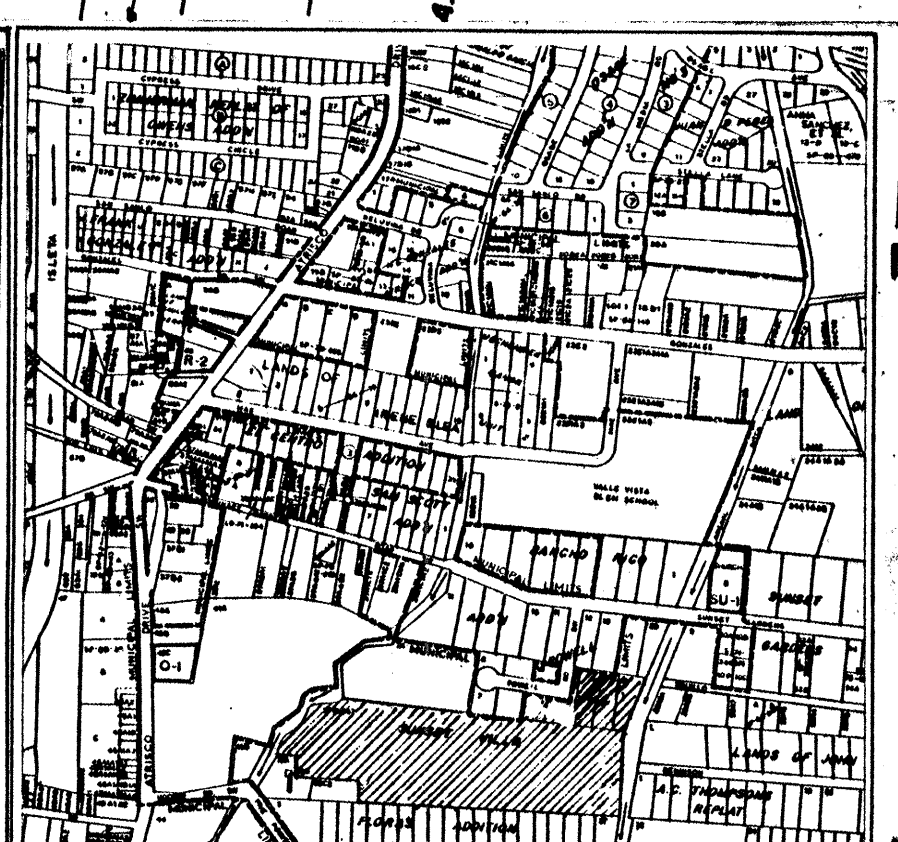
DISCUSSION: (UPDATE SEPTEMBER, 1998)

THE TIME FOR AN AUTOMATIC RENEWAL FOR THE SUNSET VILLA SUBDIVISION, DRB-95-224, HAS EXPIRED. AS HAS V-96-81. A REQUEST FOR PRELIMINARY PLAT APPROVAL, DRB-96-367, AND V-96-93 HAS BEEN RESUBMITTED. THAT THE FINISHED FLOOR ELEVATIONS AND STREET C/L ELEVATIONS HAVE BEEN CHECKED IN LINE WITH THE NOW FORMALIZED FLAT GRADING SCHEME, DPM 22.5.2.

THE PREVIOUSLY SUBMITTED DRAINAGE AND GRADING PLAN FOR THIS 11.8059 ACRE SITE PLAN RESULTS IN AN IMPERVIOUS AREA OF 229,600 S.F. AND A PERVIOUS AREA OF 284,665 S.F., WITH A TOTAL AREA OF 514,265.04 S.F. THE IMPERVIOUS AREA INCLUDES STREETS, CURBS, GUTTER, SIDEWALKS, BUILDINGS, AND DRIVEWAY. THE RATIO OF PERVIOUS AREA TO TOTAL AREA IS 44.6%. USING THE EXCESS PRECIPITATION FOR ZONE 1 AND SOIL TREATMENTS B AND D,
THE 100YEAR V360 = $[(0.67)(284,665) + (1.97)(229,600)] / 12 = 53,586.5$ C.F.

THE 10 DAY 100 YEAR VOLUME FOR RAINFALL ZONE 1 IS:
V10DAYS = V360 + AD (P10DAYS - P360) / 12 IN.
= 53,586.5 C.F. + 229,600 (3.67 - 2.20) / 12
= 53,586.5 + 28,126 = 81,712.5 C.F.

THE DEPTH IN THE PERVIOUS AREA IS 81,712.5 C.F. / 284,665 S.F. = 0.287' (USE 0.28').
THE F.F. ELEVATION SHOULD BE A MINIMUM OF ONE FOOT ABOVE THIS LEVEL. THE LEVEL PERVIOUS AREA IS 4,944.33. THEREFORE THE F.F. EL. SHOULD BE 4944.33 + 0.29 + 1.0 = 4945.62. A F.F. EL. OF 4945.70 AS SELECTED IS THEREFORE SUITABLE. THE ROADWAY C/L SHOULD BE AT LEAST 0.33' ABOVE THE W/L OR 4944.33 + 0.31 + 0.33 = 4944.97. THE FLAT ROADWAY C/L HAS BEEN CHANGED FROM 4944.93 TO 4945.20. THE SIDEWALK WILL HAVE AN ELEVATION AT ITS LOWEST POINT OF 4944.80. THIS IS ABOVE THE LEVEL OF THE 100 YEAR 10 DAY MAXIMUM WS ELEVATION. AN IMPERVIOUS MASONRY WALL WITH A MINIMUM ELEVATION OF 4945 WILL BE INCLUDED AROUND THE ENTIRE SITE WHERE THE EXISTING ELEVATION IS LESS THAN 4945.00.



FOODWAY
OD BOUNDARY AND
FLOODWAY MAP
PANEL NUMBER 350002 0028 K-12/D3
LOCATION MAP K-12-Z
DRB-96-367 V-96-93
DRB-87-0799



C.A. COONCE & ASSOC.
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089

TITLE: **DRAINAGE & GRADING PLAN**

PROJECT: **SUNSET VILLA**

DATE: 11-27-93 REVISED: 02-20-94
DRAWN: J.W. 12-11-93 CHECKED: C.A.C. 12-17-93
SHEET 1 of 2

NUMBER	CURVE TABLE	RADIUS	LENGTH
C1	1451'24"	310.00'	80.38'
C2	335'71"	75.00'	44.48'
C3	725'11"	310.00'	40.14'
C4	728'13"	310.00'	40.24'
C5	61'08'24"	27.00'	28.90'
C6	114'08'24"	119.08'	28.32'
C7	18'47'04"	119.08'	39.04'
C8	19'07'27"	119.08'	39.75'
C9	85'28'53"	119.08'	17.58'
C10	448'14"	693.59'	56.15'
C11	423'33"	693.59'	53.17'
C12	632'56"	287.00'	32.80'
C13	81'82"	287.00'	41.61'
C14	422'58"	25.00'	18.50'
C15	78'33'53"	40.00'	54.85'
C16	51'58'53"	40.00'	36.28'
C17	59'28'39"	40.00'	38.71'
C18	401'53'0"	40.00'	28.11'
C19	38'33'28"	40.00'	28.92'
C20	422'58"	25.00'	18.50'
C21	831'12'3"	25.00'	36.30'
C22	90'00'00"	25.00'	39.27'
C23	422'58"	25.00'	18.50'
C24	31'48'55"	40.00'	22.19'
C25	49'29'21"	40.00'	34.55'
C26	75'53'42"	40.00'	52.98'
C27	47'38'06"	40.00'	33.28'
C28	59'59'32"	40.00'	41.88'
C29	422'58"	25.00'	18.50'
C30	90'00'00"	25.00'	39.27'
C31	90'00'00"	25.00'	39.27'
C32	422'58"	25.00'	18.50'
C33	27'55'19"	40.00'	19.49'
C34	61'53'28"	40.00'	43.21'
C35	64'38'03"	40.00'	45.10'
C36	37'38'06"	40.00'	26.24'
C37	62'08'28"	40.00'	43.38'
C38	10'39'33"	40.00'	7.44'
C39	422'58"	25.00'	18.50'
C40	90'00'00"	25.00'	39.27'
C41	90'00'00"	25.00'	39.27'
C42	422'58"	25.00'	18.50'
C43	62'48'19"	40.00'	43.85'
C44	60'01'51"	40.00'	25.15'
C45	58'44'32"	40.00'	41.01'
C46	38'48'12"	40.00'	27.09'
C47	62'23'02"	40.00'	47.78'
C48	422'58"	25.00'	18.50'
C49	90'00'00"	25.00'	39.27'
C50	35'57'34"	40.00'	30.82'
C51	422'58"	25.00'	18.50'
C52	84'39'05"	40.00'	59.10'
C53	47'44'39"	40.00'	33.33'
C54	39'31'15"	40.00'	27.28'
C55	92'52'58"	40.00'	64.84'
C56	422'58"	25.00'	18.50'
C57	95'74'07"	98.00'	17.04'
C58	23'53'03"	98.00'	40.85'
C59	81'23'52"	25.00'	35.52'
C60	408'14"	647.59'	48.39'
C61	705'33"	647.59'	57.68'
C62	60'27'58"	73.08'	77.12'
C63	118'52'08"	20.00'	41.49'

DISCUSSION

DRB-95-224 REQUESTED AND RECEIVED PERMISSION TO USE P1 ZONE-ING FOR THE SUNSET VILLA SUBDIVISION, WITH A 28' F-F STREET ON A 48' R-O-W, AND 40' CUL-DE-SACS. CONSEQUENTLY THE IMPER-VIOUS AREAS ARE SLIGHTLY REDUCED AND A NEW SITE-GRADING PLAN WITH THE ANTICIPATED STREET DESIGN IS PRESENTED IN CONFORM-ITY WITH PROCEDURES OUTLINED IN DPM 22.5.2.

THE TOTAL PLAT AREA IS 11.8059 ACRES, OF WHICH 0.2747 AC. IS A DEVELOPED LOT (TRACT A), WHICH IS THE OLD LOT 4 OF POWELL GARDENS ADDITION, FROM WHICH A SMALL SECTION FOR ACCESS TO SUNSET VILLA SUBDIVISION WAS PURCHASED. THE NET AREA IS 11.8059 - 0.2747 = 11.5312 ACRES, OR 502,299.1 S.F.

THE COMPUTER-MEASURED AREAS ARE: R-O-W = 101,512.8 S.F., ESTATE CURB AND PAVING = 71,432.6 S.F., SIDEWALKS = 16,381.9 S.F., WHEELCHAIR RAMPS = 160 S.F., AND LOT DRIVEPADS THROUGH THE PARKING STRIPS = 2,724.8 S.F. THE TOTAL IMPERVIOUS AREA WITHIN THE R-O-W = 90,699.3 S.F.

THE OWNERS PLAN TO ERECT AN AVERAGE 1800 S.F. DWELLING UNIT FOR THIS DEVELOPMENT. IN ORDER TO INCLUDE THE UNIT, DRIVEPADS, PATIOS PORCHES AND ON-LOT SIDEWALKS, AN AVERAGE 2400 S.F. PER LOT OF IMPERVIOUS AREA WAS ASSUMED. THIS RESULTS IN A TOTAL LOT IMPERVIOUS AREA OF (55) (2400) = 132,000 S.F. AND A TOTAL SITE IMPERVIOUS AREA OF 90,699.3 S.F. = 132,000 S.F. = 222,699.2 S.F. THE PERCENTAGE OF IMPERVIOUS AREA IS (222,699.2 / 502,299.1) (100) = 44.3%, OR LESS THAN 45%. THIS IS AS EXPECTED, SINCE THE CALCULATIONS USING THE ORIGINAL 50' R-O-W AND 32' F-F RESULTED IN A PERCENTAGE OF 44.8% IMPERVIOUS TO TOTAL AREA. THE PERVIOUS AREA IS 502,299.1 - 222,699.2 = 279,599.9 S.F.

ONLY B AND D SOIL TREATMENTS ARE USED FOR THE ZONE 1 PRECIPITA-TION, USING $E_p = 0.67$ AND $E_o = 1.97$.

THE 100 YEAR $V_{100} = [(0.67) (279,599.9) + (1.97) (222,699.2)] / 12 = 52,170.8$ C.F.

THE 10 DAY 100 YEAR VOLUME FOR RAINFALL ZONE 1 IS:

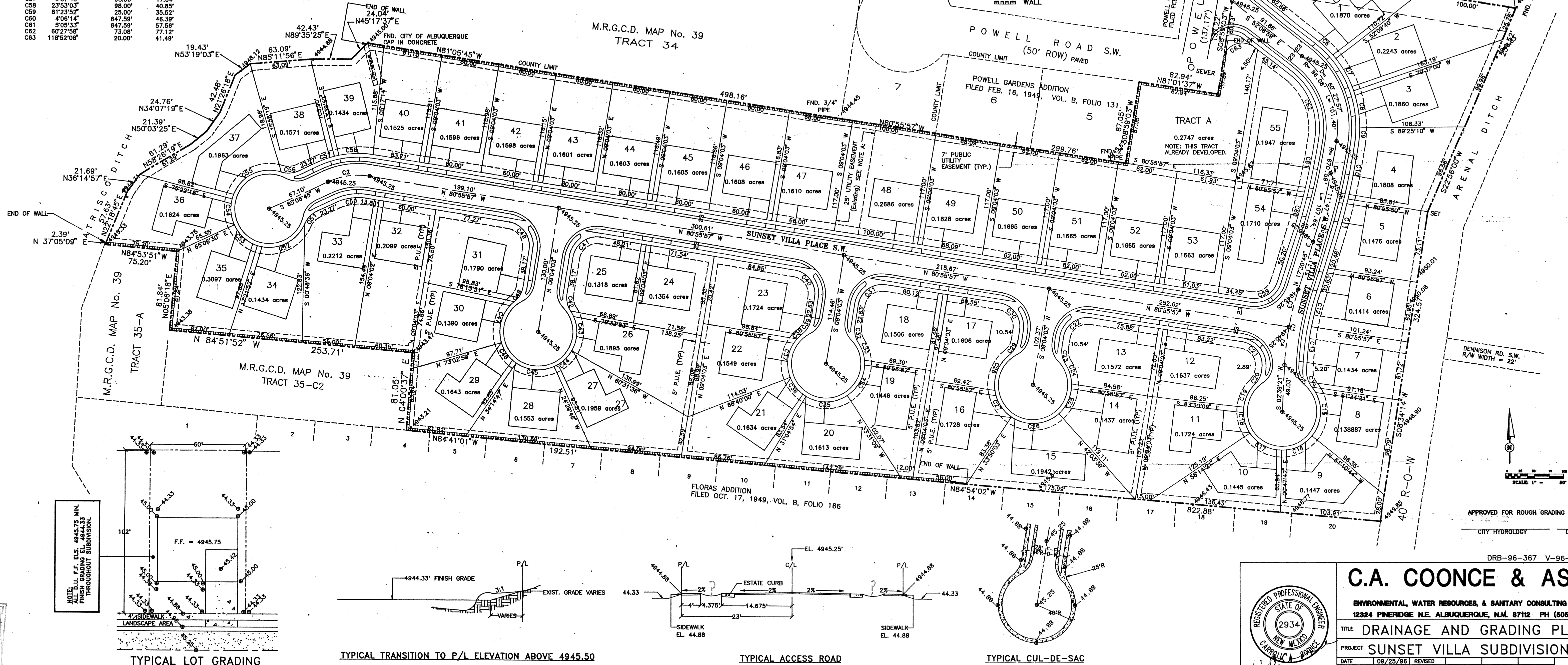
$$V_{10 \text{ DAYS}} = V_{100} + A_D (P_{10 \text{ DAYS}} - P_{100}) / 12 \text{ IN.}$$

$$= 52,170.8 \text{ C.F.} + 222,699.2 (3.67 - 2.20) / 12$$

$$= 52,170.8 + 27,280.7 = 79,451.5 \text{ C.F.}$$

THE DEPTH IN THE PERVIOUS AREA IS 79,451.5 C.F. / 279,599.9 S.F. = 0.284'.

THE F.F. ELEVATION SHOULD BE A MINIMUM OF ONE FOOT ABOVE THIS LEVEL. THE LEVEL PERVIOUS AREA IS 4,944.33', THEREFORE THE F.F. EL. SHOULD BE 4944.33 + 0.28 + 1.0 = 4945.61'. F.F. EL. OF 4945.75 IS SELECTED. THE ROADWAY C/L SHOULD BE AT LEAST 0.33' ABOVE THE WL OR 4944.33 + 0.28 + 0.33 = 4944.94. THE PLAT ROADWAY C/L HAS BEEN CHANGED FROM 4944.93 TO 4945.25. THE SIDEWALK WILL HAVE AN ELEVATION AT ITS LOWEST POINT OF 4944.88. THIS IS ABOVE THE LEVEL OF THE 100 YEAR 10 DAY MAXIMUM WS ELEVATION, WHICH IS 4944.33 + 0.28 = 4944.61'. AN IMPERVIOUS MASONRY WALL WITH A MINIMUM ELEVATION OF 4945 IS INCLUDED AROUND THE ENTIRE SITE WHERE THE EXISTING ELEVATION IS LESS THAN 4945.00.



TYPICAL LOT GRADING

TYPICAL TRANSITION TO P/L ELEVATION ABOVE 4945.50

TYPICAL ACCESS ROAD

TYPICAL CUL-DE-SAC



C.A. COONCE & ASSOC.
 ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
 12824 PIERDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 298-1088

TITLE **DRAINAGE AND GRADING PLAN**

PROJECT **SUNSET VILLA SUBDIVISION**

DATE 08/25/96 REVISED
 DRAWN LSC
 CHECKED CAC

SHEET 1 of 2