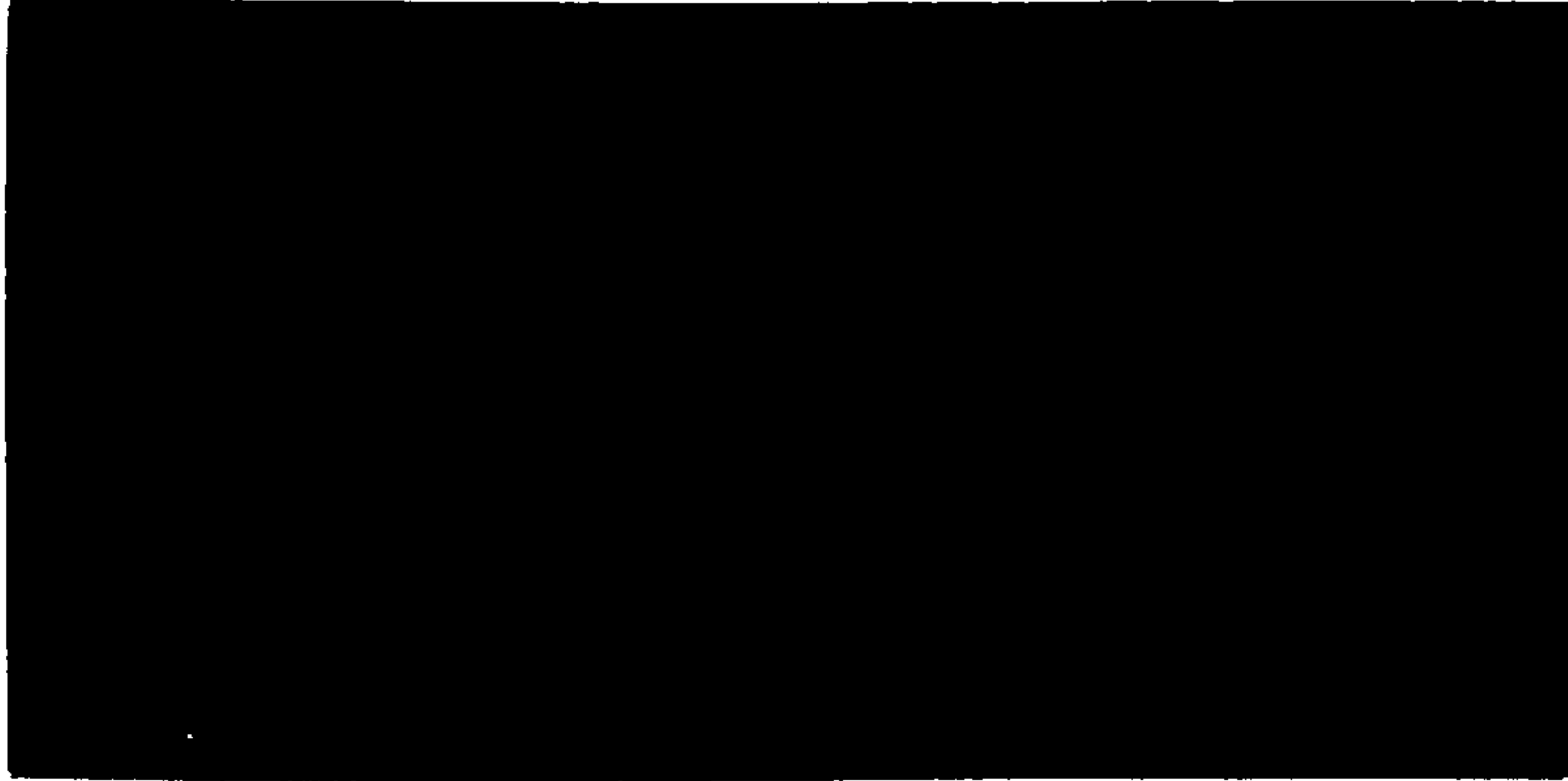

L-10/D018

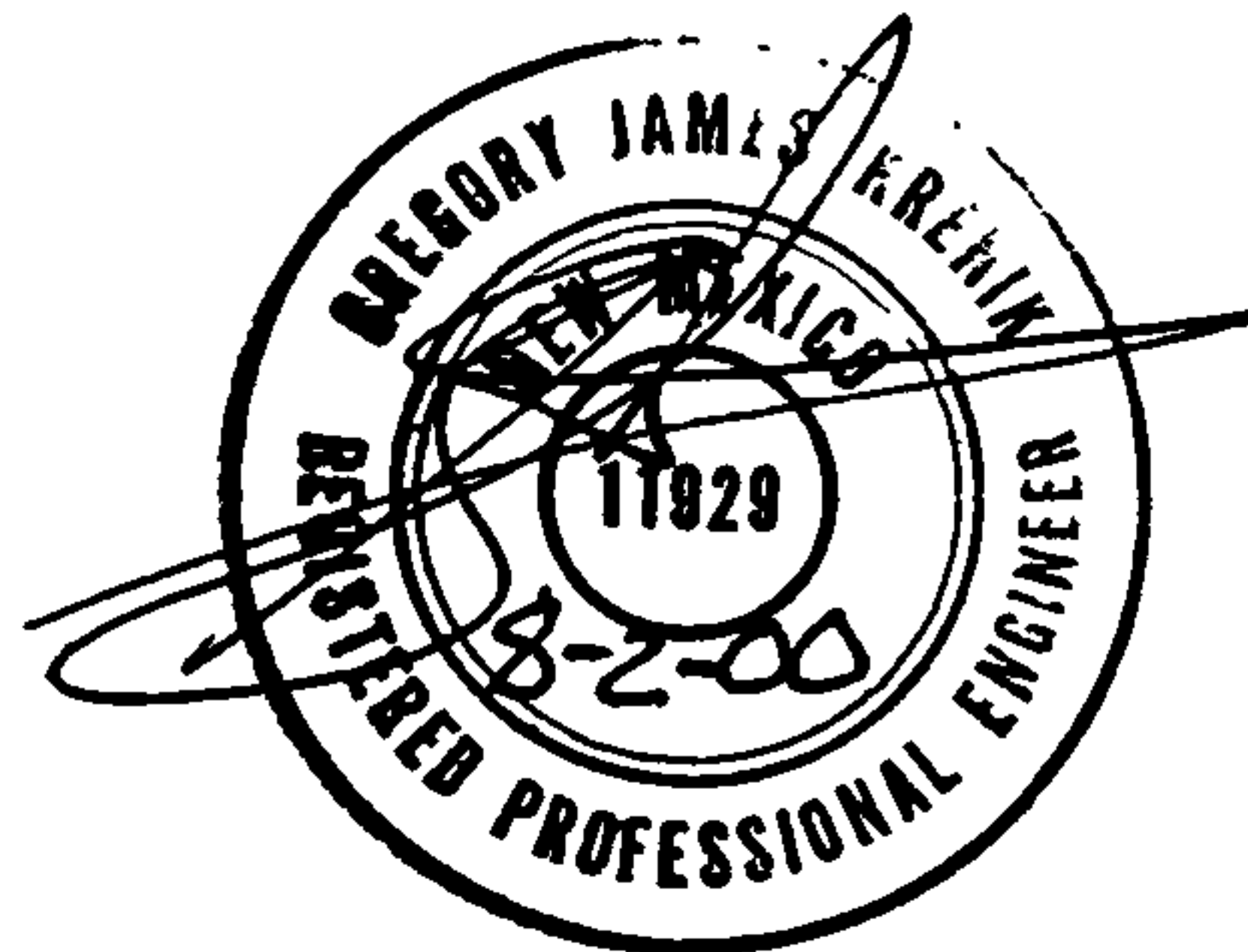


MARK GOODWIN

& ASSOCIATES
CONSULTING ENGINEERS

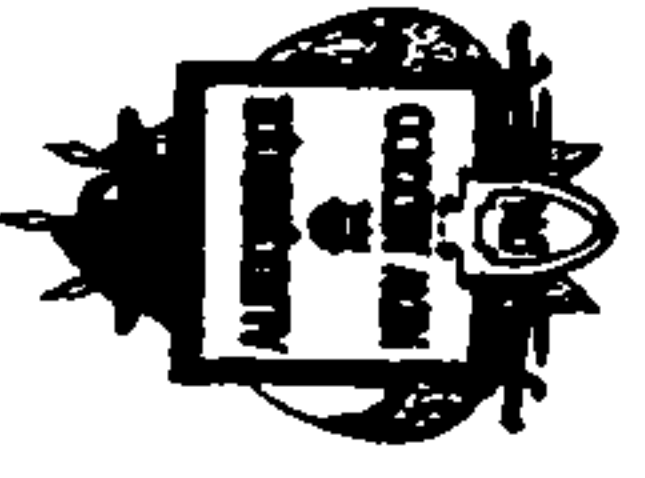
dmg

DRAINAGE REPORT
FOR
VALENCIA ESTATES



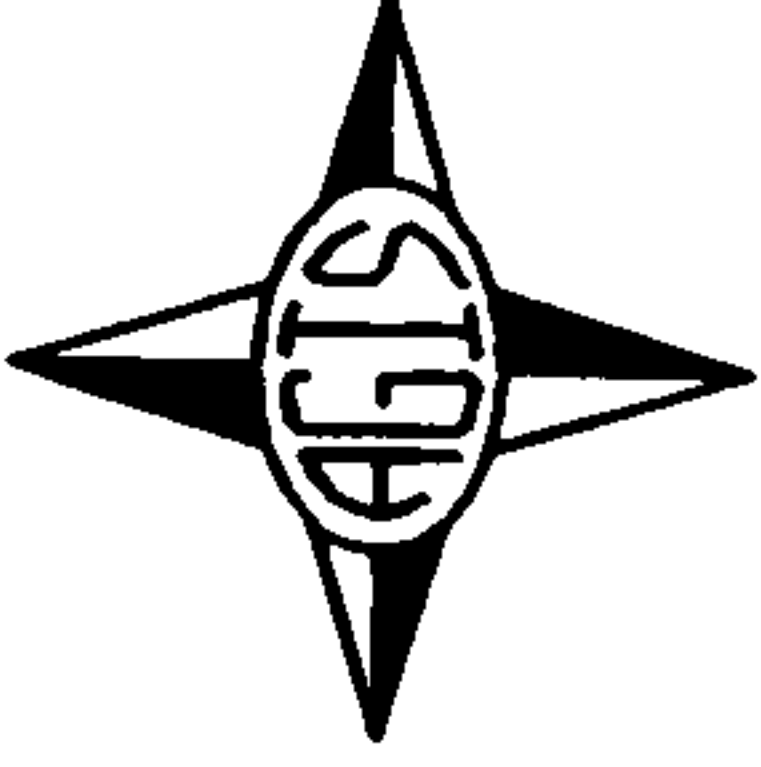
9-7-00

9-19-00

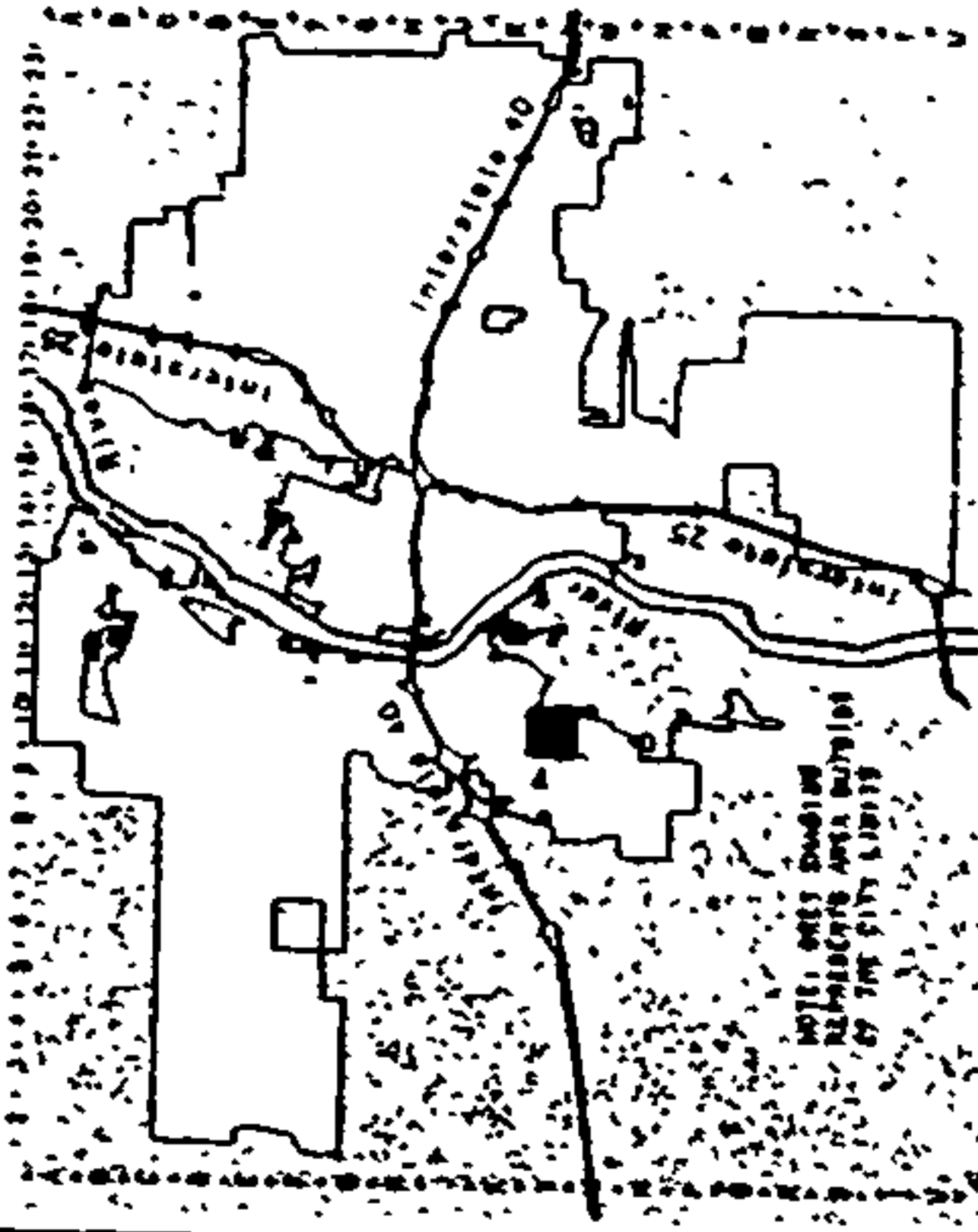
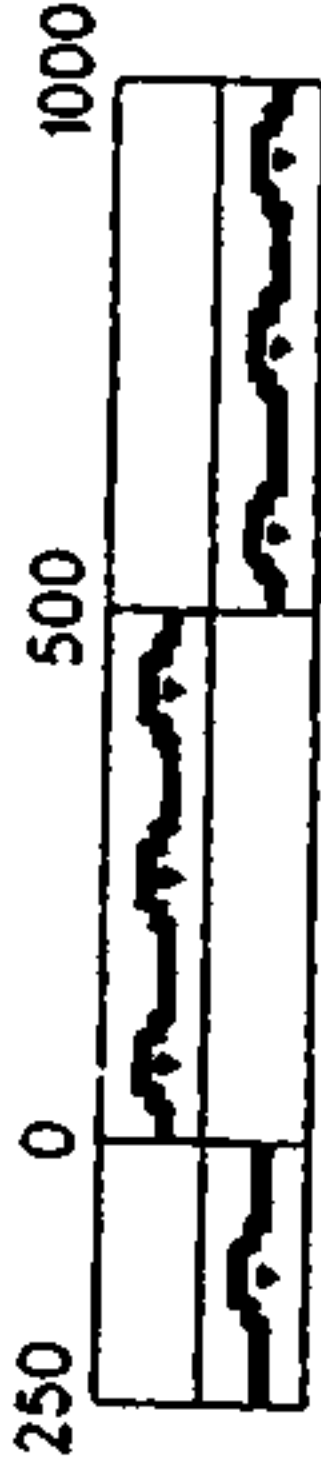


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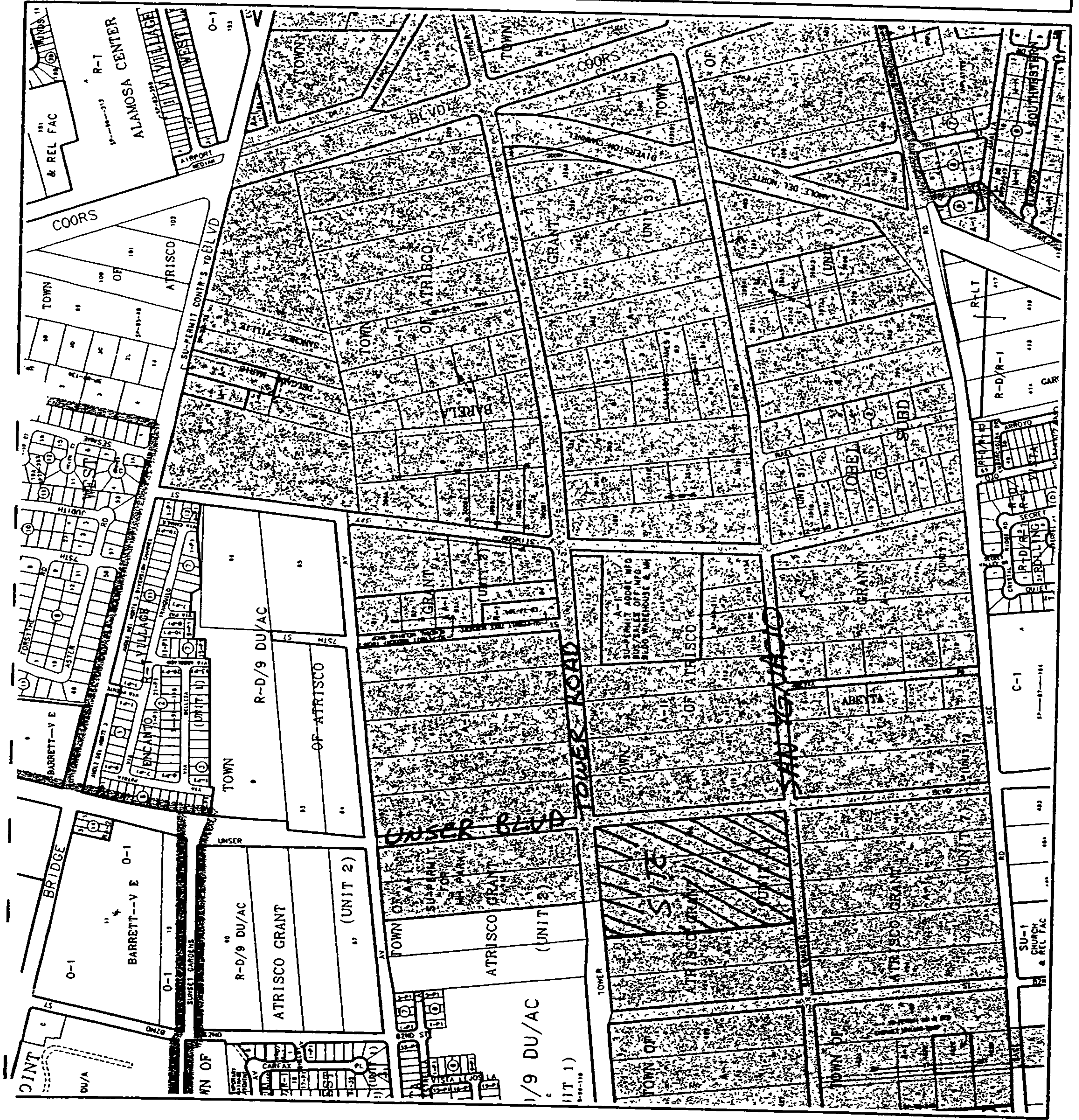


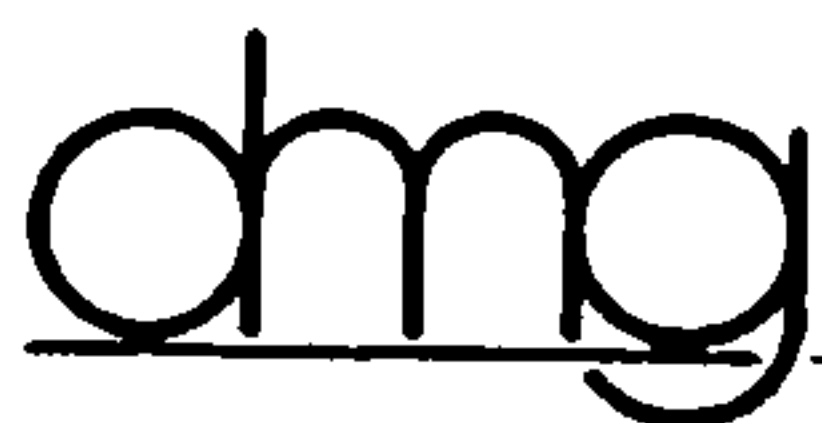
GRAPHIC SCALE IN FEET



Zone Atlas Page L-10-Z

Map Amended through
December 20, 1999





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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 7-13-00
CHECKED _____ DATE _____
REVISED 9-7-00 SHEET 1 OF _____
9-17-00

- SITE IS LOCATED ON THE WEST SIDE OF UNSER BLVD SW BETWEEN TOWER AND SAN YGNACIO. ZONE MAP L-10
- TOTAL AREA OF SITE = 13.7379 AC
- SITE DOES NOT LIE IN A 100YR FLOOD ZONE PER FIRM MAPS 35001C0328 D & 336 D
- THIS SITE IS JUST EAST OF THE TOWER RAGE DETENTION POND.
- FULL DISCHARGE IS ALLOWED ONCE THE STORMMAIN OUTFALL IN SAN YGNACIO IS COMPLETED. UNTIL THAT TIME A TEMPORARY RETENTION POND WILL BE REQUIRED PER SAD 222.
- NO RUNOFF FROM THE NORTH IMPACTS THE SITE. RUNOFF STAYS IN THE SWALES ALONG TOWER.
- SOME OVERLAND FLOWS FROM THE WEST IMPACT THE SITE. THESE FLOWS WILL NOT ENTER THE SITE BUT INSTEAD WILL FLOW SOUTH ALONG THE GARDEN WALL TO SAN YGNACIO WHERE THEY WILL CONTINUE EAST.
- DRAINAGE CALCS WILL BE ON A PER LOT BASIS

91 LOTS

$$\text{PAD SIZE} = 35 \times 61 = 2135 \text{ SF}$$

$$\text{DRIVE PAD} = 20 \times 20 = \underline{400 \text{ SF}}$$

$$2535 \text{ SF}$$

$$\times 91$$

$$230,685 \text{ SF} = 5.2958 \text{ AC TYPE "D"}$$

$$\text{AREA OF INTERIOR ROW} = 3.5392 \text{ AC}$$

$$77\% \text{ D} \quad 23\% \text{ B}$$

$$2.7252 \text{ AC} \quad 0.8140 \text{ AC}$$

$$\text{TYPE "D"} = 5.2958 + 2.7252 = 8.0210 \text{ AC} = 58.39\%$$

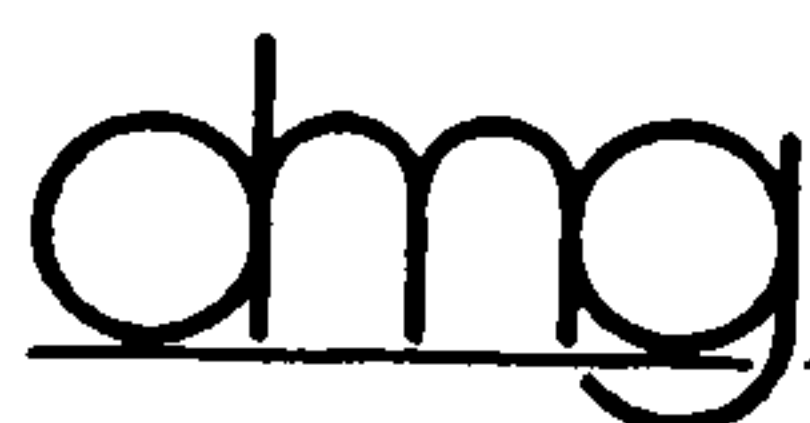
$$\text{TYPE "B"} = 13.7379 - 3.5392 - 5.2958 + 0.8140 = 5.7169 \text{ AC} = 41.61\%$$

$$P_1 = 1.90 \text{ IN}$$

$$P_2 = 2.20 \text{ IN}$$

$$P_{24} = 2.65 \text{ IN}$$

- FROM AHYMO OUTPUT SHEETS 15-17
 $Q = 47.30 \text{ CFS} \quad V = 1.6388 \text{ AC-FT}$



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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 2-13-00
CHECKED _____ DATE _____

SHEET 2 OF _____
REVISED 9-7-00
9-17-00

• PER LOT RUNOFF

$$Q = 47.30 \text{ CFS} / 91 = 0.51978 \text{ CFS/LOT}$$

$$V = 1.6388 \text{ AC-FT} / 91 = 0.018009 \text{ AC-FT/LOT}$$

• FIND STREET CAPACITIES - $S = 0.5\%$ $n = 0.017$

28' F-F
STD C+G

$$d = 0.67$$

$$WP = 29.34$$

$$A = 12.63$$

$$V = 3.52 \text{ F/S}$$

$$Q = 44.51 \text{ CFS}$$

$$d + \frac{V^2}{2g} = 0.86$$

28' F-F
MOUNT. C+G

$$d = 0.33$$

$$WP = 28.66$$

$$A = 4.735$$

$$V = 1.86 \text{ F/S}$$

$$Q = 8.81 \text{ CFS}$$

$$d + \frac{V^2}{2g} = 0.38$$

• FIND NUMBER OF LOTS PER CURB TYPE

STD C+G

$$44.51 / 0.51978 = 85.63 \text{ LOTS}$$

MOUNT. C+G

$$8.81 / 0.51978 = 16.95 \text{ LOTS}$$

• THE SITE IS SPLIT INTO FIVE DRAINAGE BASINS

BASIN 1 DRAINS TO SAN YGNACIO - 18 LOTS = 9.36 CFS

BASIN 2 DRAINS TO THE EAST TERMINUS OF
TIFFANY ROAD - 29 LOTS = 15.07 CFS

BASIN 3 DRAINS TO THE EAST TERMINUS OF
CHRISTOPHER ROAD - 44 LOTS = 22.87 CFS

BASIN 4 DRAINS LOTS 6 - 22 BLOCK 1 BACKYARDS
TO UNSER ALVD

BASIN 5 DRAINS LOTS 23 - 28 BLOCK 1 BACKYARDS
TO SAN YGNACIO

• FIND RUNOFF FROM BACKYARDS OF BASIN 4

$$935' \times 15' = 14,025 \text{ SF} = 0.3220 \text{ AC } 100\% \text{ B}$$

FROM AHYMO SHEETS 18-20

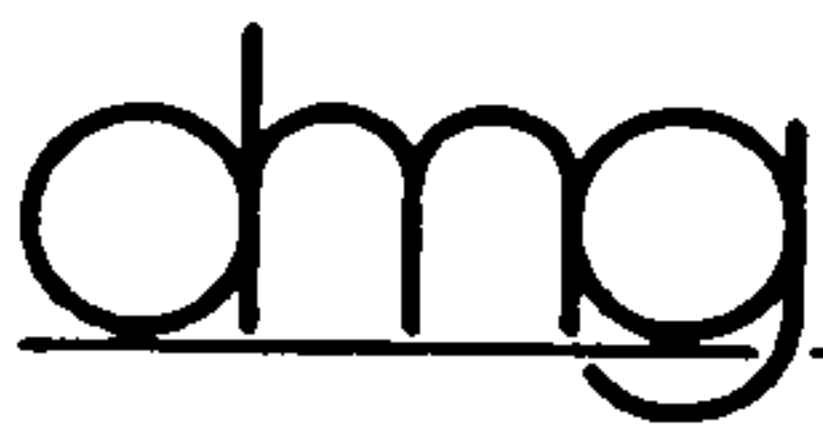
$$Q = 0.67 \text{ CFS} = 0.04 \text{ CFS/LOT}$$

• FIND RUNOFF FROM BACKYARDS OF BASIN 5

$$5 \text{ LOTS} \times 25' \times 45' = 5625 \text{ SF} = 0.1291 \text{ AC } 100\% \text{ B}$$

FROM AHYMO SHEETS 21-23

$$Q = 0.27 \text{ CFS} = 0.05 \text{ CFS/LOT}$$



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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 9-17-00
CHECKED _____ DATE _____
SHEET 3 OF _____

- THESE LOTS WILL HAVE ONE BLOCK OF THE GARDEN WALL TURNED SIDEWAYS AT THE LOW CORNER OF THE LOT. THIS BLOCK WILL BE 6" ABOVE FINISHED GRADE OF THE CORNER OF THE LOT TO PREVENT NUISANCE FLOWS FROM ENTERING THE ROW.
- PAVEMENT TRANSITIONS FROM MOUNTABLE TO STANDARD
 - BETWEEN LOTS 25+26 BLOCK 1 ON TIFFANY
 - BETWEEN LOTS 3+4 BLOCK 1 ON CHRISTOPHER
 - BETWEEN LOTS 16+17 BLOCK 1 ON NOAH
 - BETWEEN LOTS 11+12 BLOCK 1 ON NOAH

- TOTAL Q IN BASIN 2

$$Q = 15.07 - 0.27 - (8 \times 0.04) \\ = 14.48 \text{ CFS}$$

- TOTAL Q IN BASIN 3

$$Q = 22.87 - (9 \times 0.04) \\ = 22.51 \text{ CFS}$$

- DESIGN STORMDRAIN

STORMDRAIN WILL CONSIST OF 2 "DBL A" INLETS IN SUMP CONDITION AT THE EAST TERMINUS OF TIFFANY AND CHRISTOPHER.

- FIND CAPACITY OF THESE STREETS

$$S = 0.5\% \quad 25' \text{ F-F} \quad n = 0.017$$

USE 190 CROWN

$$d = 0.5 \\ WP = 26.00 \\ A = 8.52 \\ V = 2.938 \text{ F/S} \\ Q = 25.04 \text{ CFS} > 22.51 \text{ OK} \\ d + \frac{V^2}{2g} = 0.63 < 0.67 \text{ OK}$$

$$Q/P = 3.0 H^{3/2} \\ P = 17 \text{ per INLET}$$

TIFFANY

$$Q = 14.48 \text{ CFS} / 2 \\ H = 0.27 < 0.67 \text{ OK} \\ 2Q = 14.48 \text{ CFS} \\ H = 0.43 < 0.67 \text{ OK}$$

CHRISTOPHER

$$Q = 22.51 \text{ CFS} / 2 \\ H = 0.37 < 0.67 \text{ OK} \\ 2Q = 22.51 \text{ CFS} \\ H = 0.58 < 0.67 \text{ OK}$$



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SUBJECT DRAINAGE CALCS
BY GJK DATE 7-13-00
CHECKED _____ DATE _____

REVISED 9-17-00 SHEET 4 OF _____

• FIND Q IN SAN YGNACIO

60' R/W 80% D 20% B AREA = 2.3416 AC

DISTANCE FROM TOWER/SAGE POND = 1700 LF

FROM AHYMO OUTPUT SHEETS 24-26

$$Q = 9.28 \text{ CFS}$$

ADD BACK YARDS + BASIN 1

$$Q = 9.28 + 0.27 + 9.36 = 18.91 \text{ CFS}$$

• INSTALL 2 DBL "A" INLETS BEFORE UNSER

$$d = 0.50$$

$$w_p = 41.00$$

$$A = 8.77$$

$$V = 2.21 \text{ F/S}$$

$$d + V^2/2g = 0.58 < 0.87 \text{ OK}$$

$$Q = 19.39 \text{ CFS} \approx 18.91 \text{ CFS OK}$$

FROM SHEET 13

$$Q_{\text{GATE}} = 5.6 \text{ CFS}$$

$$Q_{\text{INTO UNSER}} = 18.91 - 2(5.6) = 7.71 \text{ CFS}$$

SOUTH OF SAN YGNACIO

• FIND Q IN TOWER

100' R/W 70% D 30% B

DISTANCE FROM TOWER/SAGE POND = 1270 LF

$$AREA = 2.9155 \text{ AC}$$

FROM AHYMO OUTPUT SHEETS 27-29

$$Q = 10.86 \text{ CFS} \quad Q_{1/2} = 5.43 \text{ CFS}$$

• HALF THE FLOW WILL ENTER THE
SUMP INLET AT THE NW QUAD OF
TOWER AND UNSER (SEE SHEET 7)

• HALF THE FLOW WILL TURN SOUTH AT
UNSER AND ENTER THE SUMP INLET
(SEE SHEET 7)



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SUBJECT DRAINAGE CALCS
BY GSK DATE 7-13-00
CHECKED _____ DATE _____

REVISED 9-17-00 SHEET 5 OF _____

- FIND Q IN UNSER - 10 YR STORM AT SAN YGNACIO

ADD A "DBL A" DBL THROAT INLET ON UNSER SOUTH OF SAN YGNACIO
IN SUMP CONDITION, 540 LF OF UNSER FROM NORTH
AND 440 LF FROM SOUTH, AREA NORTH = 2.72 AC AREA SOUTH = 1.58 AC

$$Q_n = 540 \times 0.006454 = 3.49 \text{ cfs} \quad Q_s = 440 \times 0.006454 = 2.84 \text{ cfs}$$

ADD Q FROM SAN YGNACIO = 7.71 cfs

$$Q = 3.49 + 2.84 + 7.71$$

$$Q_{\text{WESTSIDE}} = 14.04 \text{ cfs}$$

- FIND CAPACITY OF ONE LANE
SINCE THE 6' BIKE LANE IS BETWEEN
CURB AND LANE IT WILL BE INCLUDED
FOR CAPACITY

$$S = 0.5\%$$

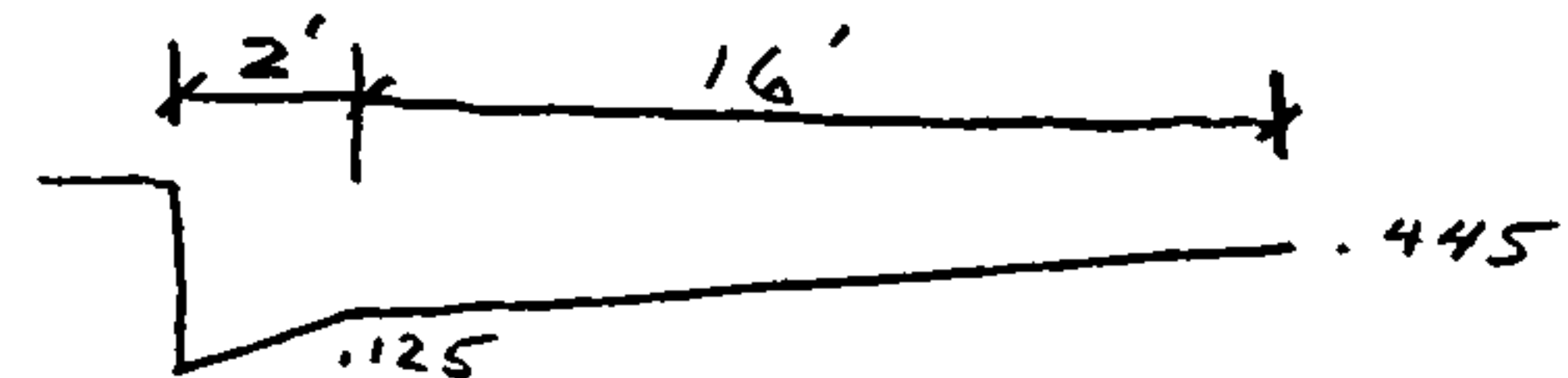
$$d = 0.445$$

$$WP = 18.445$$

$$A = 3.325$$

$$V = 1.97 \text{ F/S}$$

$$Q = 6.56 \text{ cfs}$$



- FIND H OF SUMP INLET

$$Q/p = 3.0 H^{1.5}$$

$$P = 17$$

$$H = 0.42' < 0.445' \text{ OK}$$

$$Q = 14.04 \text{ cfs}$$

- FLOW ON EASTSIDE WILL FLOW TO SAN YGNACIO
THEN TURN EAST AND FLOW DOWN SAN YGNACIO

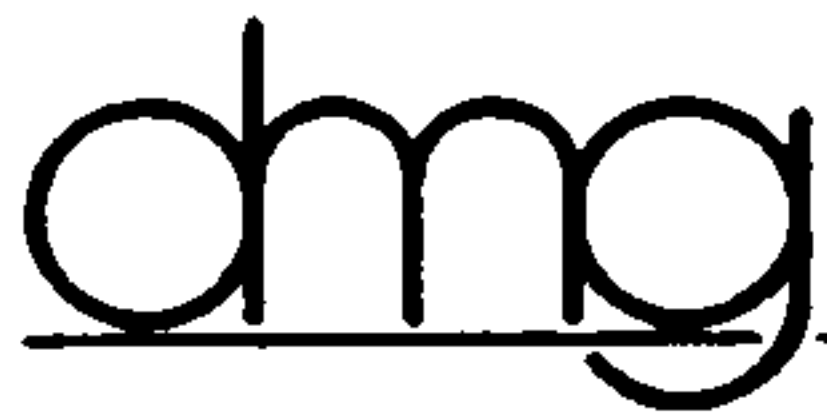
$$580 \text{ LF FROM NORTH} \quad Q = 3.74 \text{ cfs}$$

$$520 \text{ LF FROM SOUTH} \quad Q = 3.36 \text{ cfs}$$

- FIND Q IN UNSER AT SAGE ROAD

$$2 \times 580 \text{ LF} \times 0.006454 = 7.48 \text{ cfs}$$

THIS FLOW IS SPLIT ON THE EAST AND
WEST SIDES OF UNSER. 3.74 cfs



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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 7-13-00
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SHEET 6 OF _____
REVISED 9-17-00

- FIND Q IN UNSER AT TOWER ROAD

THIS WILL BE CALCULATED IN FOUR SEPARATE
AREAS - NORTH EAST + WEST { SOUTH EAST { WEST.

THE WEST AREA INCLUDES 1.1364 AC OF
EUCARIZ ROAD. 80% D 20% B NORTH OF TOWER
FROM AHYMO SHEETS 30-32.

$$Q_{10 \text{ YEAR}} = 4.58 \text{ CFS}$$

UNSER AREA = 4.6556 AC
38.46% B
61.54% D

FROM AHYMO SHEETS 33-35

$$Q_{10 \text{ year}} = 16.78 \text{ CFS}$$

$$Q_{1/2} = 8.39 \text{ CFS}$$

- FIND Q per LF OF $1/2$ UNSER

$$8.39 / 1300 = 0.006454 \text{ CFS / LF}$$

- FIND LOCATION OF INLET (DBL "A")
ON UNSER. CAPACITY OF ONE LANE
= 6.56 CFS (see sheet 5)

$$\frac{6.56 - 4.58}{0.006454} = 306.79 \text{ FT}$$

INLET WILL BE LOCATED 29' SOUTH
OF RETURN AT EUCARIZ.

FROM SHEET 13

$$Q_{\text{gate}} = 4.2 \text{ CFS}$$

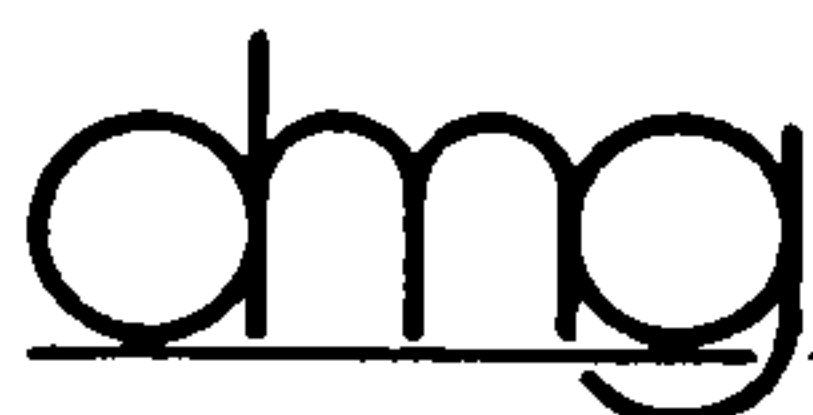
Q PAST INLET

$$Q = 6.56 - 4.2 \\ = 2.36 \text{ CFS}$$

- FIND NEXT INLET LOCATION

$$\text{DISTANCE} = 4.2 / 0.006454 \\ = 650.76 \text{ FEET}$$

$$Q_{\text{gate}} = 4.2 \text{ CFS}$$



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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GSK DATE 7-13-00
CHECKED _____ DATE _____
REVISED 9-17-00 SHEET 2 OF _____

$$Q_{\text{PAST INLET}} = 6.56 - 4.2 \\ = 2.36 \text{ cfs}$$

- INSTALL A DBL "A" IN SUMP CONDITION AT THE RETURN OF TOWER ROAD

$$Q = 2.36 + 350(0.006454) + 5.43 \left(\begin{smallmatrix} \text{GOWER RUNOFF} \\ \text{SEE SHEET 4} \end{smallmatrix} \right) \\ = 10.05 \text{ cfs}$$

- FIND H

$$Q/P = 3.0 H^{1.5} \quad P = 17 \\ H = 0.34' < 0.445' \text{ OK}$$

- FIND INLETS ON EAST SIDE OF UNSER NORTH OF TOWER

- DISTANCE TO FIRST INLET FROM HIGH POINT

$$6.56 / 0.006454 = 1016.42 \text{ FEET}$$

$$Q_{\text{GATE}} = 4.2 \text{ cfs}$$

FIND Q AT TOWER

$$Q = 2.36 + 290(0.006454) \\ = 4.23 \text{ cfs} < 6.56 \text{ cfs OK}$$

THIS FLOW WILL TURN EAST AND FLOW DOWN THE NORTH SIDE OF TOWER.

- FIND INLETS SOUTH OF TOWER ON WEST SIDE OF UNSER

$$Q = 750 \text{ LF} \times 0.006454 + 0.67 \left(\begin{smallmatrix} \text{BACKYARD} \\ \text{TOWER (SHEET 4)} \end{smallmatrix} \right) + 5.43 \\ = 10.94 \text{ cfs}$$

INSTALL A "DBL A" DBL THROAT IN SUMP CONDITION

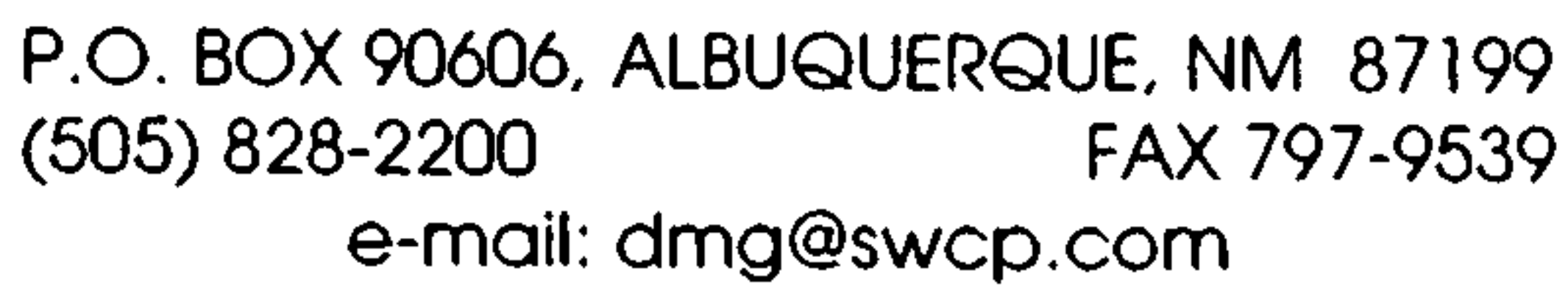
- FIND H

$$Q/P = 3.0 H^{1.5} \quad P = 17 \\ Q = 10.94 \text{ cfs} \\ H = 0.36' < 0.445' \text{ OK}$$

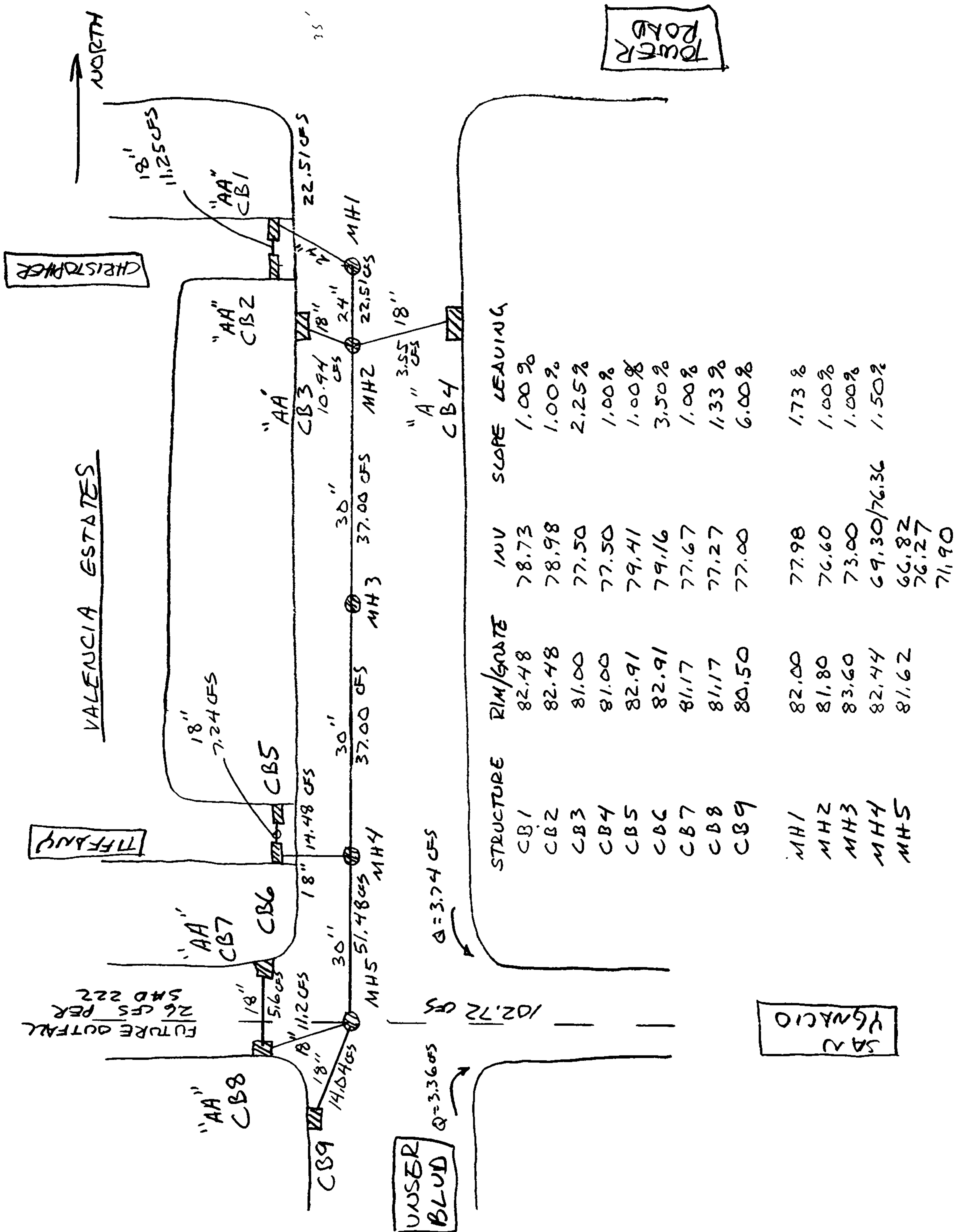
- FIND Q ON EAST SIDE OF UNSER SOUTH OF TOWER

$$Q = 550 \times 0.006454 = 3.55 \text{ cfs}$$

INSTALL A "SGL A" INLET IN SUMP P=11 Q=3.55
 $H = 0.23' < 0.445' \text{ OK}$



PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 9-17-00
CHECKED _____ DATE _____
SHEET 8 OF _____



SEE SHEETS 36-51 FOR HYDRAULIC DESIGN

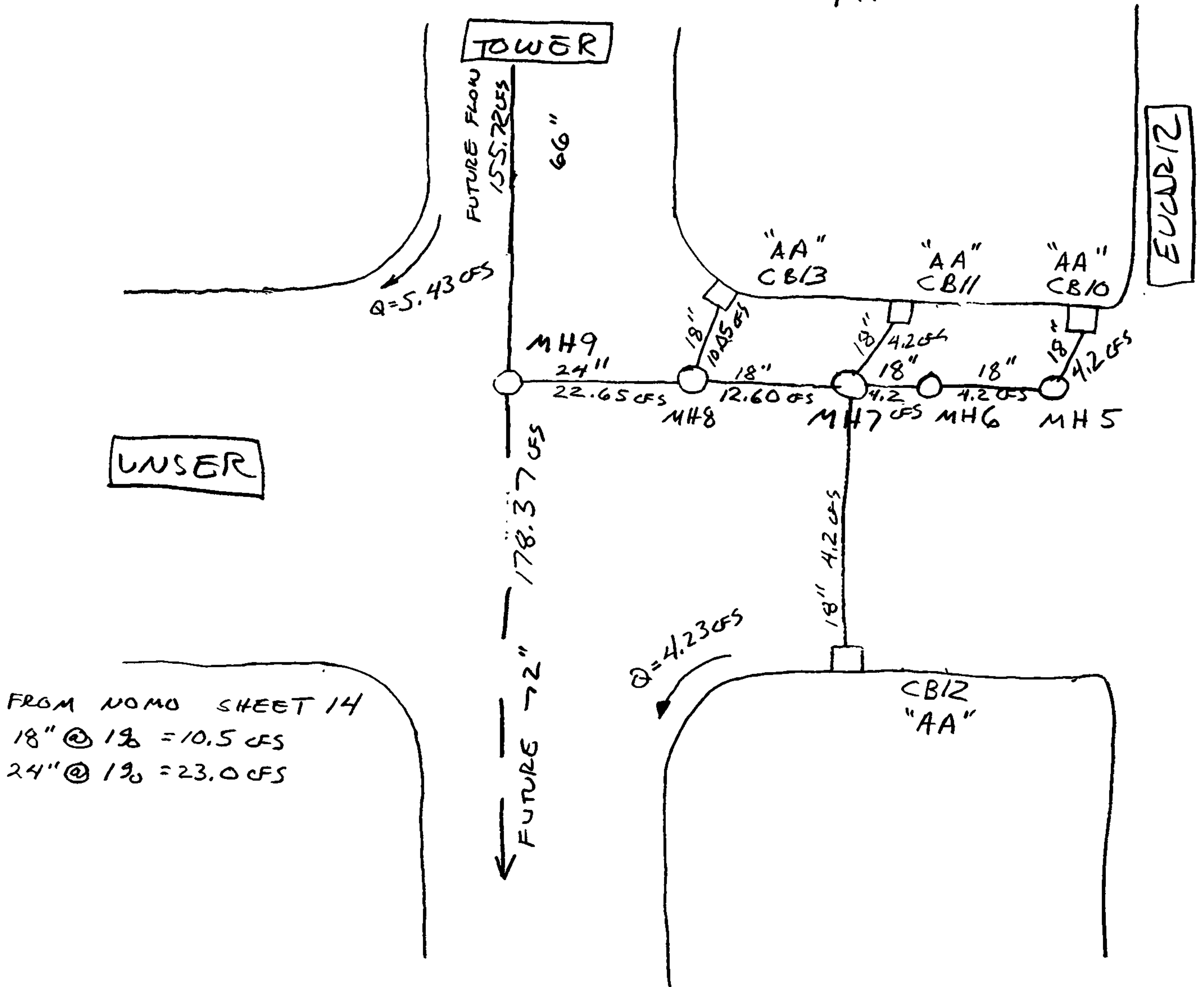


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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 7-13-00
CHECKED _____ DATE _____

Revised 9-7-00 SHEET 9 OF _____
9-17-00



STRUCTURE	RIM/GDATE	INV.	SLOPE LEAVING
CB10	87.14	83.64	1%
CB11	84.24	80.74	6.3%
CB12	83.95	80.45	4.2%
CB13	82.25	78.75	10.8%

MH9	82.85	73.89	1%
MH6	87.48	83.44	1%
MH7	85.94	80.09	1%
MH8	84.37	76.64	1%
MH10	82.40	72.84(N)	0.328%
		65.18 (W)	
		64.68 (E)	

DATA PER VISTA SANDIA SUBDIVISION PREPARED BY DAGGETT
ENGINEERING & SURVEYING 9-21-98 (L9-D16) SEE ATTACHED
STORM DRAIN DESIGN.



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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GSK DATE 9-17-00
CHECKED _____ DATE _____
SHEET 10 OF _____

- THIS PROJECT WILL REQUIRE TEMPORARY RETENTION UNTIL THE SAN YGNACIO STORMMAIN IS COMPLETED.
- WE WILL NEED TO DEFER CONSTRUCTION OF THE PAVING OF TOWER, UNSER AND SAN YGNACIO BECAUSE ALL THE RUNOFF FROM THAT PAVEMENT ENTERS THE STORMMAIN.
- SINCE THERE ARE THREE MAIN BASINS WE WILL NEED THREE RETENTION PONDS.

BASIN 1

$$V = 18 \text{ LOTS} \times 0.018009 \\ = 0.3242 \text{ AC-FT}$$

SIZE FOR 100yr-10day

$$V_{10d} = V_6 + A_0 \left(\frac{P_{10d} - P_6}{12} \right) \\ = 0.3242 + 1.5867 \left(\frac{3.67 - 2.20}{12} \right) \\ = 0.5186 \text{ AC-FT} \\ = 22,589 \text{ CF}$$

BASIN 2

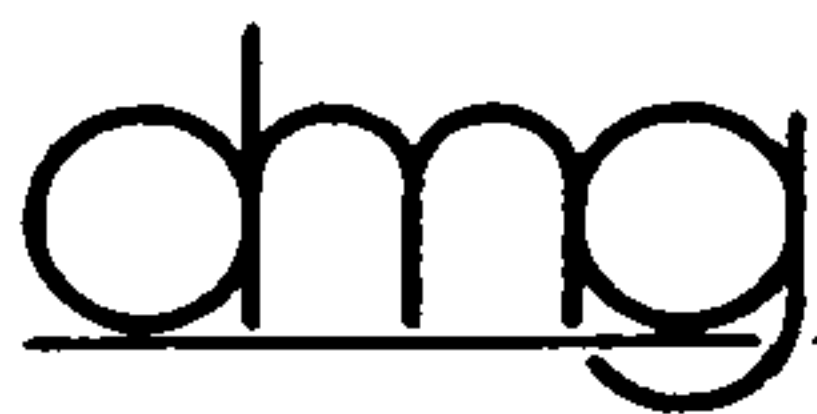
$$V = 29 \text{ LOTS} \times 0.018009 \\ = 0.5223 \text{ AC-FT}$$

$$V_{10d} = 0.5223 + 2.5563 \left(\frac{3.67 - 2.20}{12} \right) \\ = 0.8354 \text{ AC-FT} \\ = 36,392 \text{ CF}$$

BASIN 3

$$V = 44 \text{ LOTS} \times 0.018009 \\ = 0.7924 \text{ AC-FT}$$

$$V_{10d} = 0.7924 + 3.8786 \left(\frac{3.67 - 2.20}{12} \right) \\ = 1.2675 \text{ AC-FT} \\ = 55,213 \text{ CF}$$



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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 7-17-00
CHECKED _____ DATE _____
SHEET 11 OF 11

POND 1

ELEV.	AREA (SF)	VOLUME (CF)
78	2475	0
79	3109	2,792
80	3808	6,250.5
81	4572	10,440.5
82	5399	15,426
83	6291	21,271
84	7247	28,040

22,589 = 83.19 MAX WATER SURFACE

POND 2

ELEV.	AREA (SF)	VOLUME (CF)
77	2640	0
78	3293	2,966.5
79	4015	6,620.5
80	4804	11,030
81	5662	16,263
82	6588	22,388
83	7582	29,473
84	8644	37,586

36,392 = 83.85 MAX WATER SURFACE

POND 3

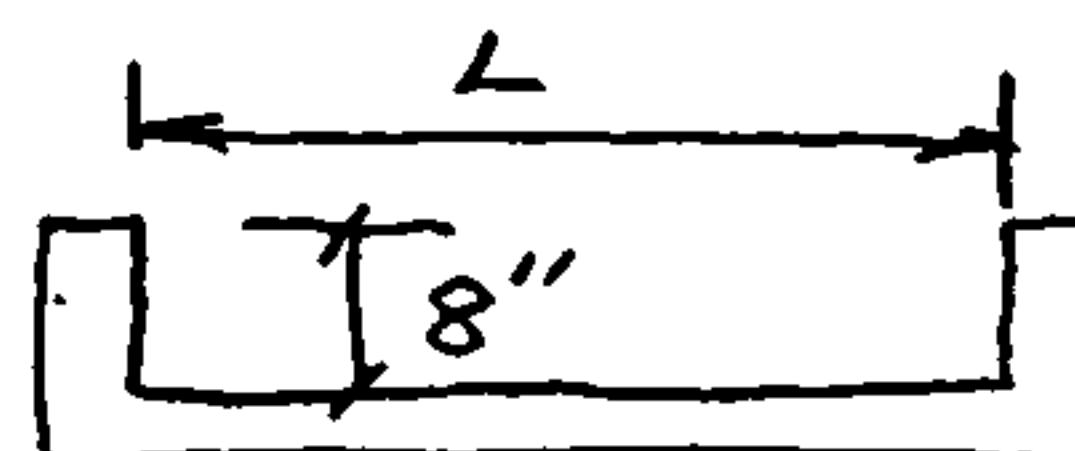
ELEV.	AREA (SF)	VOLUME (CF)
76	3400	0
77	4162	3781
78	4994	8359
79	5894	13,803
80	6860	20,180
81	7891	27,555.5
82	8988	35,995
83	10,149	45,563.5
84	11,376	56,326

55,213 = 83.90 MAX WATER SURFACE

• SIZE POND RUNDOWNS

OPENING WIDTH

$$Q = 2.95 L H^{1.5}$$



Pond 1 $9.36 = 2.95(L)^{1.5} \Rightarrow L = 5.79'$ SAY 6'

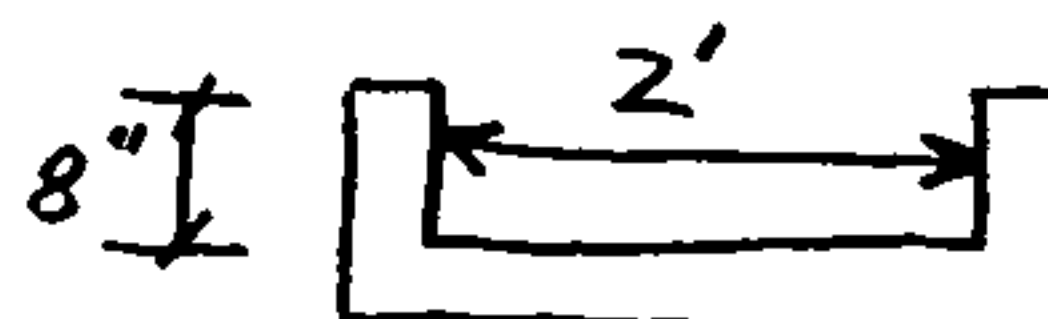
$$d = 0.25$$

$$WP = 2.5$$

$$A = 0.5$$

$$V = 22.56 \text{ F/S}$$

$$Q = 11.28 \text{ CFS} \approx 9.36 \text{ OK}$$



$$S = 33.3\%$$

$$n = 0.013$$



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PROJECT VALENCIA ESTATES
SUBJECT DRAINAGE CALCS
BY GJK DATE 9-17-00
CHECKED _____ DATE _____
SHEET 12 OF _____

PONDS 2 AND 3 WILL USE THE INLETS AND
A TEMP. OUTFALL PIPE INTO THE PONDS

POND 2

$$Q = 15.07 \text{ cfs}$$

$$S = 2.78/35 = 7.94\%$$

FROM NOMO SHEET 14

$$18" \text{ RCP} = 28 \text{ cfs}$$

POND 3

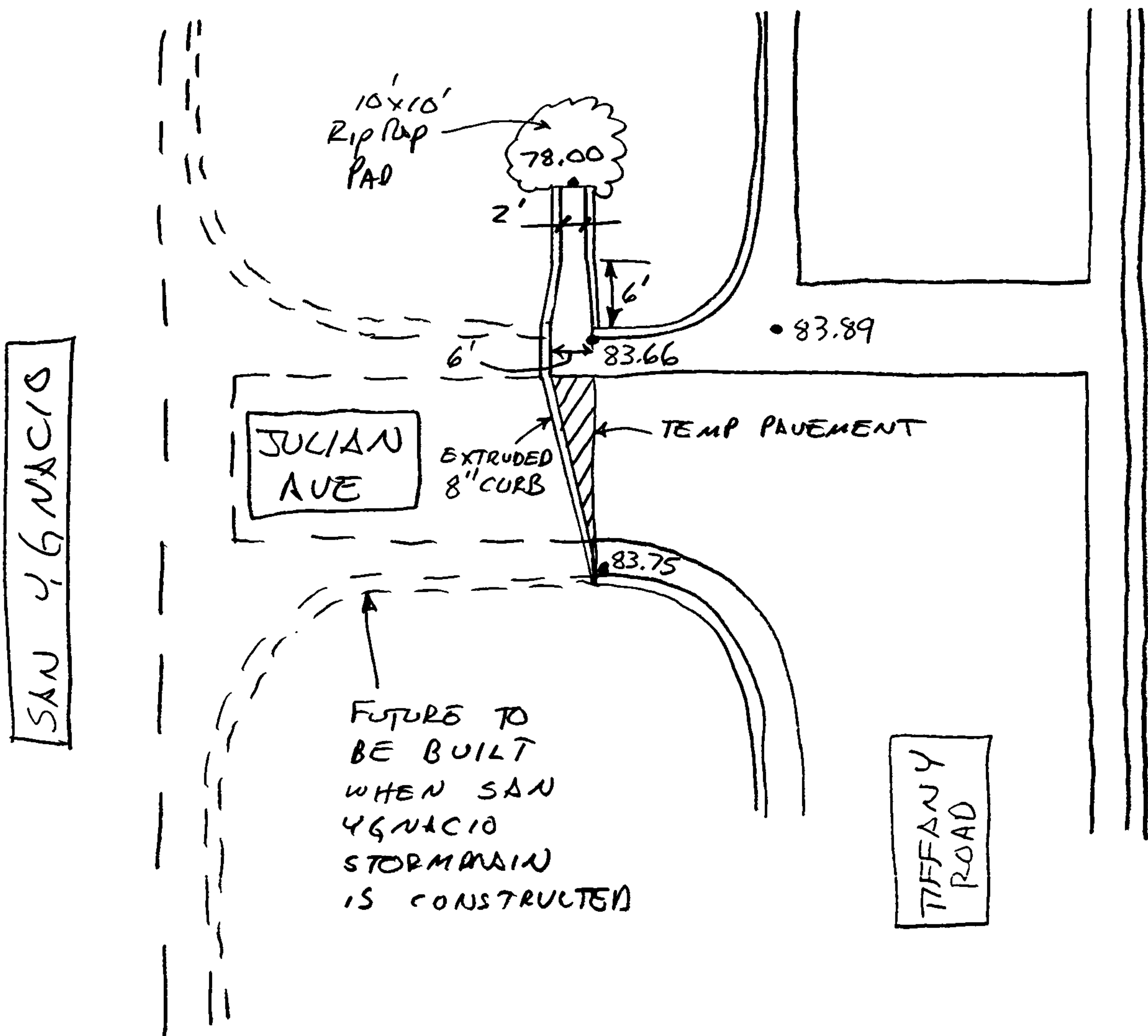
$$Q = 22.87 \text{ cfs}$$

$$S = 2.16/35 = 6.17\%$$

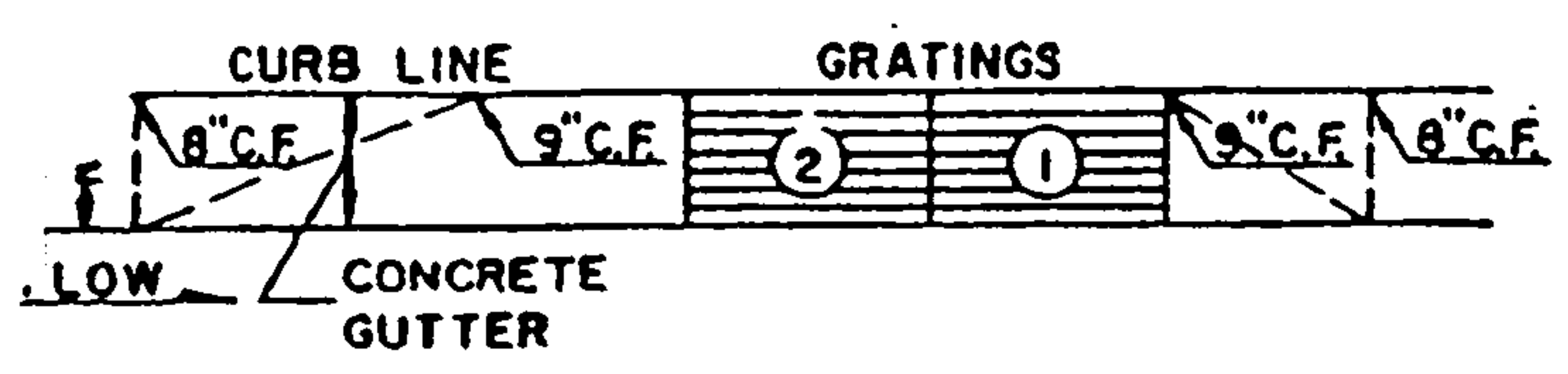
FROM NOMO SHEET 14

$$18" \text{ RCP} = 24.5 \text{ cfs}$$

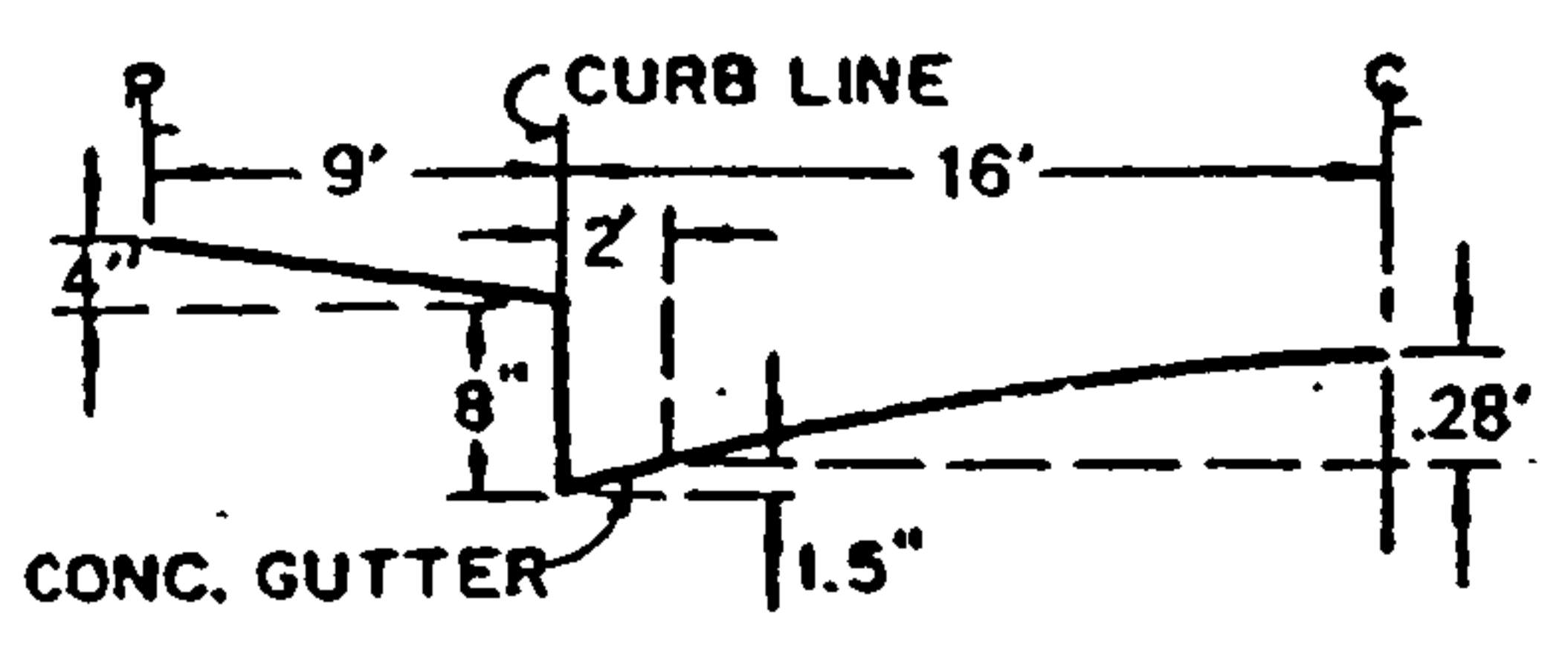
POND 1 OUTFALL



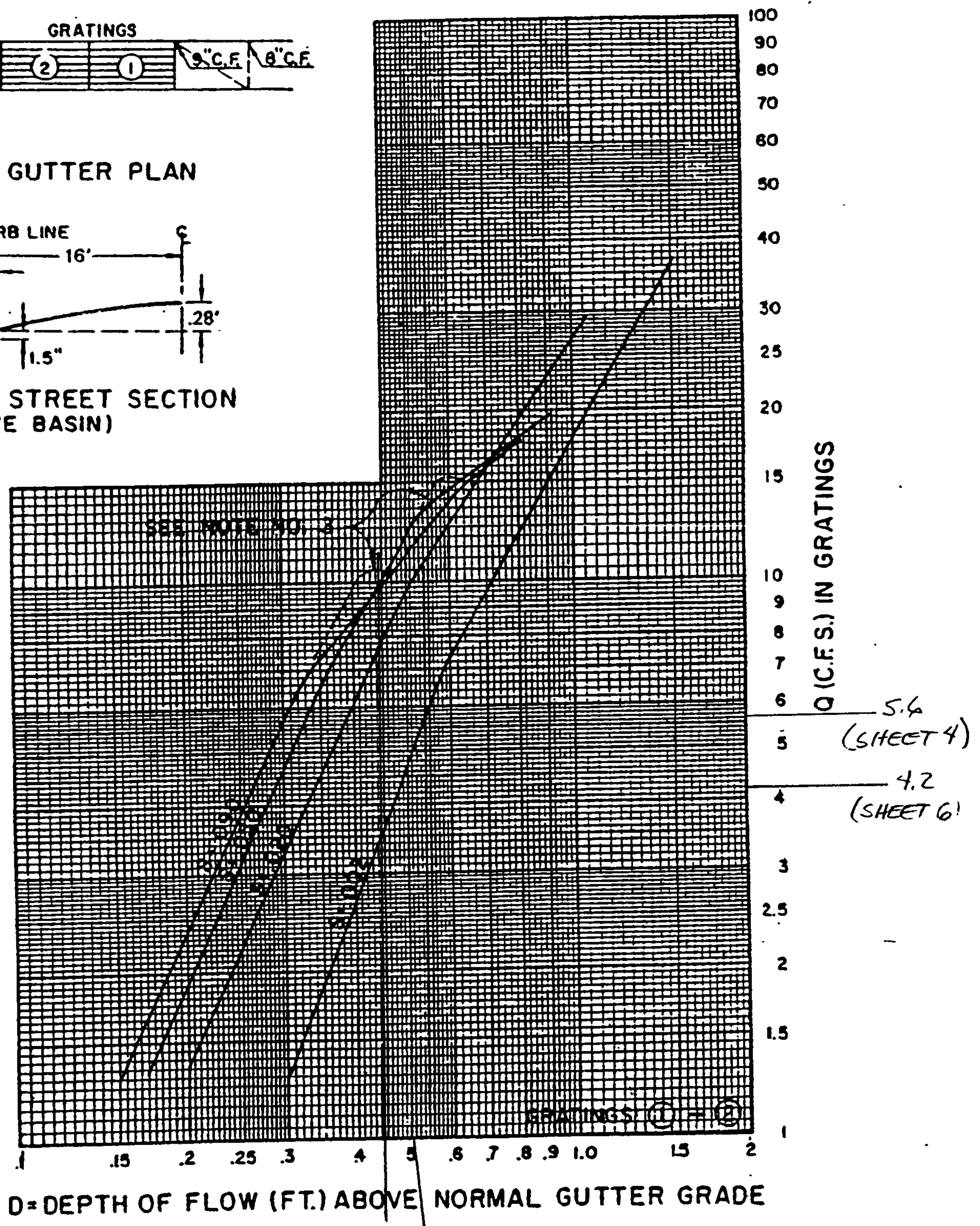
GRATING CAPACITIES FOR TYPE DOUBLE "A", "C," AND "D"



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION (ABOVE BASIN)



0.445
(SHEET 6)

0.50
(SHEET 4)

Figure 3-29a Nomograph for solution of Manning's formula.


```
START                TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES DEVELOPED CONDITIONS
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=1.90 IN RAIN SIX=2.20 IN
                     RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.021465 SQ MI
                     PER A=0 B=41.61 C=0 D=58.39
                     TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD            ID=1 CODE=1
FINISH .
```


AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January,
1994

RUN DATE (MON/DAY/YR) = 09/18/2000

START TIME (HR:MIN:SEC) = 12:38:57

USER NO. =

M_GOODWN.I01

INPUT FILE = VALEST.DAT

START TIME=0.0

***** HYDROGRAPH FOR VALENCIA ESTATES DEVELOPED CONDITIONS

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.90 IN RAIN SIX=2.20 IN

RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.
DT = .033330 HOURS END TIME = 5.999400

HOURS	.0000	.0013	.0027	.0041	.0055	.0069
.0084	.0099	.0115	.0131	.0147	.0164	.0181
.0199	.0217	.0236	.0256	.0276	.0296	.0318
.0340	.0363	.0387	.0412	.0438	.0465	.0493
.0523	.0554	.0587	.0622	.0675	.0731	.0791
.0920	.1208	.1651	.2289	.3159	.4302	.5759
.7574	.9790	1.1846	1.2704	1.3429	1.4074	1.4661
1.5201	1.5702	1.6171	1.6610	1.7023	1.7413	1.7781
1.8130	1.8460	1.8774	1.9071	1.9353	1.9621	1.9681
1.9736	1.9789	1.9839	1.9887	1.9932	1.9976	2.0018
2.0059	2.0098	2.0136	2.0172	2.0208	2.0242	2.0275
2.0308	2.0339	2.0370	2.0400	2.0430	2.0458	2.0486
2.0514	2.0540	2.0567	2.0592	2.0617	2.0642	2.0666
2.0690	2.0714	2.0737	2.0759	2.0781	2.0803	2.0825
2.0846	2.0867	2.0887	2.0907	2.0927	2.0947	2.0966
2.0985	2.1004	2.1023	2.1041	2.1059	2.1077	2.1095
2.1112	2.1130	2.1147	2.1164	2.1180	2.1197	2.1213
2.1229	2.1245	2.1261	2.1277	2.1292	2.1307	2.1322
2.1337	2.1352	2.1367	2.1382	2.1396	2.1410	2.1425
2.1439	2.1452	2.1466	2.1480	2.1494	2.1507	2.1520
2.1533	2.1547	2.1560	2.1572	2.1585	2.1598	2.1611
2.1623	2.1635	2.1648	2.1660	2.1672	2.1684	2.1696

2.1708						
	2.1720	2.1731	2.1743	2.1754	2.1766	2.1777
2.1789						
	2.1800	2.1811	2.1822	2.1833	2.1844	2.1855
2.1866						
	2.1876	2.1887	2.1897	2.1908	2.1918	2.1929
2.1939						
	2.1949	2.1960	2.1970	2.1980	2.1990	2.2000

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.021465 SQ MI
 PER A=0 B=41.61 C=0 D=58.39
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 49.483 CFS UNIT VOLUME = .9991 B =
 526.28 P60 = 1.9000
 AREA = .012533 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

K = .130761HR TP = .133300HR K/TP RATIO = .980950
 SHAPE CONSTANT, N = 3.599930
 UNIT PEAK = 21.947 CFS UNIT VOLUME = .9997 B =
 327.55 P60 = 1.9000
 AREA = .008932 SQ MI IA = .50000 INCHES INF =
 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.43154 INCHES = 1.6388 ACRE-FEET
 PEAK DISCHARGE RATE = 47.30 CFS AT 1.500 HOURS BASIN
 AREA = .0215 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 12:38:57


```
START          TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES BACKYARDS TO UNSER
RAINFALL      TYPE=1 RAIN QUARTER=0.0 IN
              RAIN ONE=1.90 IN RAIN SIX=2.20 IN
              RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.000503 SQ MI
              PER A=0 B=100 C=0 D=0
              TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD     ID=1 CODE=1
FINISH
```


AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January,
1994

RUN DATE (MON/DAY/YR) = 09/18/2000

START TIME (HR:MIN:SEC) = 12:51:59 USER NO.=

M_GOODWN.I01

INPUT FILE = VALBYU.DAT

START TIME=0.0

***** HYDROGRAPH FOR VALENCIA ESTATES BACKYARDS TO UNSER
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.90 IN RAIN SIX=2.20 IN

RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.
DT = .033330 HOURS END TIME = 5.999400

HOURS	.0000	.0013	.0027	.0041	.0055	.0069
.0084	.0099	.0115	.0131	.0147	.0164	.0181
.0199	.0217	.0236	.0256	.0276	.0296	.0318
.0340	.0363	.0387	.0412	.0438	.0465	.0493
.0523	.0554	.0587	.0622	.0675	.0731	.0791
.0920	.1208	.1651	.2289	.3159	.4302	.5759
.7574	.9790	1.1846	1.2704	1.3429	1.4074	1.4661
1.5201	1.5702	1.6171	1.6610	1.7023	1.7413	1.7781
1.8130	1.8460	1.8774	1.9071	1.9353	1.9621	1.9681
1.9736	1.9789	1.9839	1.9887	1.9932	1.9976	2.0018
2.0059	2.0098	2.0136	2.0172	2.0208	2.0242	2.0275
2.0308	2.0339	2.0370	2.0400	2.0430	2.0458	2.0486
2.0514	2.0540	2.0567	2.0592	2.0617	2.0642	2.0666
2.0690	2.0714	2.0737	2.0759	2.0781	2.0803	2.0825
2.0846	2.0867	2.0887	2.0907	2.0927	2.0947	2.0966
2.0985	2.1004	2.1023	2.1041	2.1059	2.1077	2.1095
2.1112	2.1130	2.1147	2.1164	2.1180	2.1197	2.1213
2.1229	2.1245	2.1261	2.1277	2.1292	2.1307	2.1322
2.1337	2.1352	2.1367	2.1382	2.1396	2.1410	2.1425
2.1439	2.1452	2.1466	2.1480	2.1494	2.1507	2.1520
2.1533	2.1547	2.1560	2.1572	2.1585	2.1598	2.1611
2.1623	2.1635	2.1648	2.1660	2.1672	2.1684	2.1696

2.1708						
	2.1720	2.1731	2.1743	2.1754	2.1766	2.1777
2.1789						
	2.1800	2.1811	2.1822	2.1833	2.1844	2.1855
2.1866						
	2.1876	2.1887	2.1897	2.1908	2.1918	2.1929
2.1939						
	2.1949	2.1960	2.1970	2.1980	2.1990	2.2000

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.000503 SQ MI
 PER A=0 B=100 C=0 D=0
 TP=0.1333 HR MASS RAINFALL=-1

K = .130761HR TP = .133300HR K/TP RATIO = .980950
 SHAPE CONSTANT, N = 3.599930
 UNIT PEAK = 1.2360 CFS UNIT VOLUME = .9894 B =
 327.55 P60 = 1.9000
 AREA = .000503 SQ MI IA = .50000 INCHES INF =
 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = .68101 INCHES = .0183 ACRE-FEET
 PEAK DISCHARGE RATE = .67 CFS AT 1.533 HOURS BASIN
 AREA = .0005 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 12:51:59


```
START          TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES BACKYARDS TO SAN YGNACIO
RAINFALL      TYPE=1 RAIN QUARTER=0.0 IN
              RAIN ONE=1.90 IN RAIN SIX=2.20 IN
              RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.000202 SQ MI
              PER A=0 B=100 C=0 D=0
              TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD     ID=1 CODE=1
FINISH
```


AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January,
1994

RUN DATE (MON/DAY/YR) = 09/18/2000

START TIME (HR:MIN:SEC) = 12:57:08

USER NO.=

M_GOODWN.I01

INPUT FILE = VALBYSY.DAT

START TIME=0.0

***** HYDROGRAPH FOR VALENCIA ESTATES BACKYARDS TO SAN YGNACIO

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.90 IN RAIN SIX=2.20 IN

RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.

DT = .033330 HOURS END TIME = 5.999400

HOURS	.0000	.0013	.0027	.0041	.0055	.0069
.0084	.0099	.0115	.0131	.0147	.0164	.0181
.0199	.0217	.0236	.0256	.0276	.0296	.0318
.0340	.0363	.0387	.0412	.0438	.0465	.0493
.0523	.0554	.0587	.0622	.0675	.0731	.0791
.0920	.1208	.1651	.2289	.3159	.4302	.5759
.7574	.9790	1.1846	1.2704	1.3429	1.4074	1.4661
1.5201	1.5702	1.6171	1.6610	1.7023	1.7413	1.7781
1.8130	1.8460	1.8774	1.9071	1.9353	1.9621	1.9681
1.9736	1.9789	1.9839	1.9887	1.9932	1.9976	2.0018
2.0059	2.0098	2.0136	2.0172	2.0208	2.0242	2.0275
2.0308	2.0339	2.0370	2.0400	2.0430	2.0458	2.0486
2.0514	2.0540	2.0567	2.0592	2.0617	2.0642	2.0666
2.0690	2.0714	2.0737	2.0759	2.0781	2.0803	2.0825
2.0846	2.0867	2.0887	2.0907	2.0927	2.0947	2.0966
2.0985	2.1004	2.1023	2.1041	2.1059	2.1077	2.1095
2.1112	2.1130	2.1147	2.1164	2.1180	2.1197	2.1213
2.1229	2.1245	2.1261	2.1277	2.1292	2.1307	2.1322
2.1337	2.1352	2.1367	2.1382	2.1396	2.1410	2.1425
2.1439	2.1452	2.1466	2.1480	2.1494	2.1507	2.1520
2.1533	2.1547	2.1560	2.1572	2.1585	2.1598	2.1611
2.1623	2.1635	2.1648	2.1660	2.1672	2.1684	2.1696

2.1708						
	2.1720	2.1731	2.1743	2.1754	2.1766	2.1777
2.1789						
	2.1800	2.1811	2.1822	2.1833	2.1844	2.1855
2.1866						
	2.1876	2.1887	2.1897	2.1908	2.1918	2.1929
2.1939						
	2.1949	2.1960	2.1970	2.1980	2.1990	2.2000

```

COMPUTE NM HYD      ID=1 HYD NO=101.1 AREA=0.000202 SQ MI
                    PER A=0 B=100 C=0 D=0
                    TP=0.1333 HR MASS RAINFALL=-1

      K = .130761HR    TP = .133300HR    K/TP RATIO = .980950
SHAPE CONSTANT, N = 3.599930
      UNIT PEAK = .49636 CFS    UNIT VOLUME = .9726    B =
327.55    P60 = 1.9000
      AREA = .000202 SQ MI    IA = .50000 INCHES    INF =
1.25000 INCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT = .033330

```

```

PRINT HYD          ID=1 CODE=1

```

PARTIAL HYDROGRAPH 101.10

```

      RUNOFF VOLUME = .68101 INCHES    = .0073 ACRE-FEET
      PEAK DISCHARGE RATE = .27 CFS    AT 1.533 HOURS    BASIN
AREA = .0002 SQ. MI.

```

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 12:57:08


```
START                TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES SAN YGNACIO RUNOFF
***** FROM TOWER/SAGE DETENTION POND
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=1.90 IN RAIN SIX=2.20 IN
                     RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.003659 SQ MI
                     PER A=0 B=20 C=0 D=80
                     TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD            ID=1 CODE=1
FINISH
```


AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January,
1994

RUN DATE (MON/DAY/YR) = 08/01/2000
START TIME (HR:MIN:SEC) = 14:29:57 USER NO.=

M_GOODWN.I01

INPUT FILE = VALSY.DAT

START TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES SAN YGNACIO RUNOFF
***** FROM TOWER/SAGE DETENTION POND
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.90 IN RAIN SIX=2.20 IN
RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.
DT = .033330 HOURS END TIME = 5.999400

HOURS	.0000	.0013	.0027	.0041	.0055	.0069
.0084	.0099	.0115	.0131	.0147	.0164	.0181
.0199	.0217	.0236	.0256	.0276	.0296	.0318
.0340	.0363	.0387	.0412	.0438	.0465	.0493
.0523	.0554	.0587	.0622	.0675	.0731	.0791
.0920	.1208	.1651	.2289	.3159	.4302	.5759
.7574	.9790	1.1846	1.2704	1.3429	1.4074	1.4661
1.5201	1.5702	1.6171	1.6610	1.7023	1.7413	1.7781
1.8130	1.8460	1.8774	1.9071	1.9353	1.9621	1.9681
1.9736	1.9789	1.9839	1.9887	1.9932	1.9976	2.0018
2.0059	2.0098	2.0136	2.0172	2.0208	2.0242	2.0275
2.0308	2.0339	2.0370	2.0400	2.0430	2.0458	2.0486
2.0514	2.0540	2.0567	2.0592	2.0617	2.0642	2.0666
2.0690	2.0714	2.0737	2.0759	2.0781	2.0803	2.0825
2.0846	2.0867	2.0887	2.0907	2.0927	2.0947	2.0966
2.0985	2.1004	2.1023	2.1041	2.1059	2.1077	2.1095
2.1112	2.1130	2.1147	2.1164	2.1180	2.1197	2.1213
2.1229	2.1245	2.1261	2.1277	2.1292	2.1307	2.1322
2.1337	2.1352	2.1367	2.1382	2.1396	2.1410	2.1425
2.1439	2.1452	2.1466	2.1480	2.1494	2.1507	2.1520
2.1533	2.1547	2.1560	2.1572	2.1585	2.1598	2.1611
2.1623						

	2.1635	2.1648	2.1660	2.1672	2.1684	2.1696
2.1708						
	2.1720	2.1731	2.1743	2.1754	2.1766	2.1777
2.1789						
	2.1800	2.1811	2.1822	2.1833	2.1844	2.1855
2.1866						
	2.1876	2.1887	2.1897	2.1908	2.1918	2.1929
2.1939						
	2.1949	2.1960	2.1970	2.1980	2.1990	2.2000

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.003659 SQ MI
 PER A=0 B=20 C=0 D=80
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 11.557 CFS UNIT VOLUME = .9984 B =
 526.28 P60 = 1.9000
 AREA = .002927 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

K = .130761HR TP = .133300HR K/TP RATIO = .980950
 SHAPE CONSTANT, N = 3.599930
 UNIT PEAK = 1.7982 CFS UNIT VOLUME = .9926 B =
 327.55 P60 = 1.9000
 AREA = .000732 SQ MI IA = .50000 INCHES INF =
 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.70931 INCHES = .3336 ACRE-FEET
 PEAK DISCHARGE RATE = 9.28 CFS AT 1.500 HOURS BASIN
 AREA = .0037 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 14:29:57


```
START                TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES TOWER ROAD RUNOFF
***** FROM TOWER/SAGE DETENTION POND
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=1.90 IN RAIN SIX=2.20 IN
                     RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.004555 SQ MI
                     PER A=0 B=30 C=0 D=70
                     TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD            ID=1 CODE=1
FINISH
```


AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January,
1994

RUN DATE (MON/DAY/YR) = 08/01/2000
START TIME (HR:MIN:SEC) = 14:41:11 USER NO.=

M_GOODWN.I01

INPUT FILE = VALT.DAT

START TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES TOWER ROAD RUNOFF
***** FROM TOWER/SAGE DETENTION POND
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.90 IN RAIN SIX=2.20 IN
RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.
DT = .033330 HOURS END TIME = 5.999400

HOURS	.0000	.0013	.0027	.0041	.0055	.0069
.0084	.0099	.0115	.0131	.0147	.0164	.0181
.0199	.0217	.0236	.0256	.0276	.0296	.0318
.0340	.0363	.0387	.0412	.0438	.0465	.0493
.0523	.0554	.0587	.0622	.0675	.0731	.0791
.0920	.1208	.1651	.2289	.3159	.4302	.5759
.7574	.9790	1.1846	1.2704	1.3429	1.4074	1.4661
1.5201	1.5702	1.6171	1.6610	1.7023	1.7413	1.7781
1.8130	1.8460	1.8774	1.9071	1.9353	1.9621	1.9681
1.9736	1.9789	1.9839	1.9887	1.9932	1.9976	2.0018
2.0059	2.0098	2.0136	2.0172	2.0208	2.0242	2.0275
2.0308	2.0339	2.0370	2.0400	2.0430	2.0458	2.0486
2.0514	2.0540	2.0567	2.0592	2.0617	2.0642	2.0666
2.0690	2.0714	2.0737	2.0759	2.0781	2.0803	2.0825
2.0846	2.0867	2.0887	2.0907	2.0927	2.0947	2.0966
2.0985	2.1004	2.1023	2.1041	2.1059	2.1077	2.1095
2.1112	2.1130	2.1147	2.1164	2.1180	2.1197	2.1213
2.1229	2.1245	2.1261	2.1277	2.1292	2.1307	2.1322
2.1337	2.1352	2.1367	2.1382	2.1396	2.1410	2.1425
2.1439	2.1452	2.1466	2.1480	2.1494	2.1507	2.1520
2.1533	2.1547	2.1560	2.1572	2.1585	2.1598	2.1611
2.1623						

	2.1635	2.1648	2.1660	2.1672	2.1684	2.1696
2.1708	2.1720	2.1731	2.1743	2.1754	2.1766	2.1777
2.1789	2.1800	2.1811	2.1822	2.1833	2.1844	2.1855
2.1866	2.1876	2.1887	2.1897	2.1908	2.1918	2.1929
2.1939	2.1949	2.1960	2.1970	2.1980	2.1990	2.2000

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.004555 SQ MI
 PER A=0 B=30 C=0 D=70
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 12.588 CFS UNIT VOLUME = .9984 B =
 526.28 P60 = 1.9000
 AREA = .003189 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

K = .130761HR TP = .133300HR K/TP RATIO = .980950
 SHAPE CONSTANT, N = 3.599930
 UNIT PEAK = 3.3578 CFS UNIT VOLUME = .9964 B =
 327.55 P60 = 1.9000
 AREA = .001367 SQ MI IA = .50000 INCHES INF =
 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.58077 INCHES = .3840 ACRE-FEET
 PEAK DISCHARGE RATE = 10.86 CFS AT 1.500 HOURS BASIN
 AREA = .0046 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 14:41:11


```
START                TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES EUCARIZ RUNOFF
***** NORTH OF TOWER ROAD WEST SIDE - 10 YR STORM
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=1.90 IN RAIN SIX=1.474 IN
                     RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.001776 SQ MI
                     PER A=0 B=20 C=0 D=80
                     TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD            ID=1 CODE=1
FINISH
```


AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January,
1994

RUN DATE (MON/DAY/YR) = 07/31/2000
START TIME (HR:MIN:SEC) = 10:59:19 USER NO.=

M_GOODWN.I01

INPUT FILE = VALEUC.DAT

START TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES EUCARIZ RUNOFF
***** NORTH OF TOWER ROAD WEST SIDE - 10 YR STORM
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.90 IN RAIN SIX=1.474 IN
RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.
DT = .033330 HOURS END TIME = 5.999400

HOURS	.0000	.0030	.0061	.0092	.0125	.0158
.0192	.0228	.0264	.0302	.0340	.0380	.0422
.0465	.0509	.0555	.0603	.0653	.0705	.0759
.0815	.0874	.0936	.1002	.1070	.1143	.1220
.1301	.1388	.1481	.1581	.1634	.1690	.1750
.1878	.2167	.2610	.3248	.4117	.5261	.6718
.8533	1.0748	1.2805	1.3663	1.4388	1.5033	1.5620
1.6160	1.6661	1.7130	1.7569	1.7982	1.8372	1.8740
1.9089	1.9419	1.9733	2.0030	2.0312	2.0580	2.0277
2.0003	1.9756	1.9531	1.9325	1.9136	1.8961	1.8798
1.8647	1.8506	1.8374	1.8250	1.8133	1.8022	1.7917
1.7818	1.7724	1.7634	1.7548	1.7466	1.7388	1.7313
1.7241	1.7172	1.7105	1.7042	1.6980	1.6921	1.6864
1.6808	1.6755	1.6703	1.6653	1.6605	1.6558	1.6512
1.6468	1.6425	1.6383	1.6343	1.6303	1.6265	1.6227
1.6191	1.6155	1.6120	1.6086	1.6053	1.6021	1.5990
1.5959	1.5929	1.5899	1.5870	1.5842	1.5814	1.5787
1.5761	1.5735	1.5710	1.5685	1.5660	1.5636	1.5613
1.5589	1.5567	1.5544	1.5523	1.5501	1.5480	1.5459
1.5439	1.5419	1.5399	1.5380	1.5361	1.5342	1.5323
1.5305	1.5287	1.5270	1.5252	1.5235	1.5218	1.5202
1.5185						

	1.5169	1.5153	1.5138	1.5122	1.5107	1.5092
1.5077	1.5063	1.5048	1.5034	1.5020	1.5006	1.4992
1.4979	1.4965	1.4952	1.4939	1.4926	1.4914	1.4901
1.4889	1.4877	1.4864	1.4853	1.4841	1.4829	1.4817
1.4806	1.4795	1.4784	1.4773	1.4762	1.4751	1.4740

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.001776 SQ MI
 PER A=0 B=20 C=0 D=80
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 5.6094 CFS UNIT VOLUME = .9973 B =
 526.28 P60 = 1.9000
 AREA = .001421 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

K = .130761HR TP = .133300HR K/TP RATIO = .980950
 SHAPE CONSTANT, N = 3.599930
 UNIT PEAK = .87282 CFS UNIT VOLUME = .9850 B =
 327.55 P60 = 1.9000
 AREA = .000355 SQ MI IA = .50000 INCHES INF =
 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.67639 INCHES = .1588 ACRE-FEET
 PEAK DISCHARGE RATE = 4.58 CFS AT 1.500 HOURS BASIN
 AREA = .0018 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 10:59:19


```
START                TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES UNSER AND RUNOFF
***** NORTH OF TOWER ROAD WEST SIDE - 10 YR STORM
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=1.90 IN RAIN SIX=1.474 IN
                     RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.007274 SQ MI
                     PER A=0 B=38.46 C=0 D=61.54
                     TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD            ID=1 CODE=1
FINISH
```


AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January,
1994

RUN DATE (MON/DAY/YR) = 07/31/2000
START TIME (HR:MIN:SEC) = 15:07:10 USER NO.=

M_GOODWN.I01

INPUT FILE = VALUNSNT.DAT

START TIME=0.0
***** HYDROGRAPH FOR VALENCIA ESTATES UNSER AND RUNOFF
***** NORTH OF TOWER ROAD WEST SIDE - 10 YR STORM
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.90 IN RAIN SIX=1.474 IN
RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.

	DT =	.033330	HOURS	END TIME =	5.999400	
HOURS						
	.0000	.0030	.0061	.0092	.0125	.0158
.0192	.0228	.0264	.0302	.0340	.0380	.0422
.0465	.0509	.0555	.0603	.0653	.0705	.0759
.0815	.0874	.0936	.1002	.1070	.1143	.1220
.1301	.1388	.1481	.1581	.1634	.1690	.1750
.1878	.2167	.2610	.3248	.4117	.5261	.6718
.8533	1.0748	1.2805	1.3663	1.4388	1.5033	1.5620
1.6160	1.6661	1.7130	1.7569	1.7982	1.8372	1.8740
1.9089	1.9419	1.9733	2.0030	2.0312	2.0580	2.0277
2.0003	1.9756	1.9531	1.9325	1.9136	1.8961	1.8798
1.8647	1.8506	1.8374	1.8250	1.8133	1.8022	1.7917
1.7818	1.7724	1.7634	1.7548	1.7466	1.7388	1.7313
1.7241	1.7172	1.7105	1.7042	1.6980	1.6921	1.6864
1.6808	1.6755	1.6703	1.6653	1.6605	1.6558	1.6512
1.6468	1.6425	1.6383	1.6343	1.6303	1.6265	1.6227
1.6191	1.6155	1.6120	1.6086	1.6053	1.6021	1.5990
1.5959	1.5929	1.5899	1.5870	1.5842	1.5814	1.5787
1.5761	1.5735	1.5710	1.5685	1.5660	1.5636	1.5613
1.5589	1.5567	1.5544	1.5523	1.5501	1.5480	1.5459
1.5439	1.5419	1.5399	1.5380	1.5361	1.5342	1.5323
1.5305	1.5287	1.5270	1.5252	1.5235	1.5218	1.5202
1.5185						

	1.5169	1.5153	1.5138	1.5122	1.5107	1.5092
1.5077						
	1.5063	1.5048	1.5034	1.5020	1.5006	1.4992
1.4979						
	1.4965	1.4952	1.4939	1.4926	1.4914	1.4901
1.4889						
	1.4877	1.4864	1.4853	1.4841	1.4829	1.4817
1.4806						
	1.4795	1.4784	1.4773	1.4762	1.4751	1.4740

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.007274 SQ MI
 PER A=0 B=38.46 C=0 D=61.54
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000
 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 17.673 CFS UNIT VOLUME = .9988 B =
 526.28 P60 = 1.9000
 AREA = .004476 SQ MI IA = .10000 INCHES INF =
 .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

K = .130761HR TP = .133300HR K/TP RATIO = .980950
 SHAPE CONSTANT, N = 3.599930
 UNIT PEAK = 6.8744 CFS UNIT VOLUME = .9983 B =
 327.55 P60 = 1.9000
 AREA = .002798 SQ MI IA = .50000 INCHES INF =
 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
 METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.46204 INCHES = .5672 ACRE-FEET
 PEAK DISCHARGE RATE = 16.78 CFS AT 1.500 HOURS BASIN
 AREA = .0073 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:07:10

1

HYDRAULIC REPORT FOR

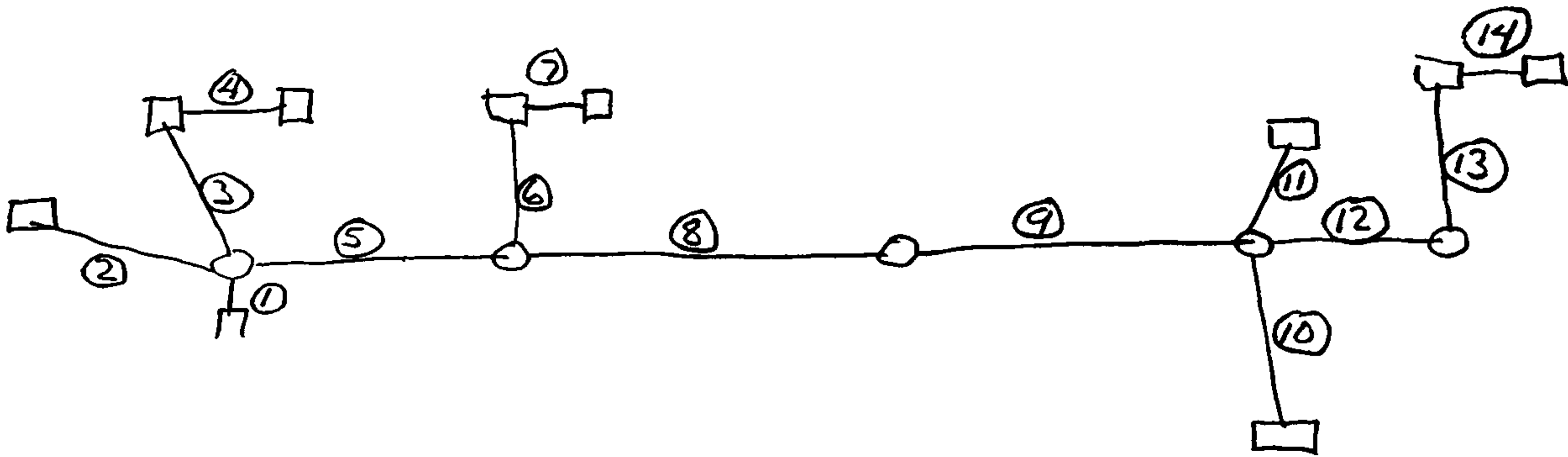
0

VALENCIA ESTATES

UNSER STORMDRAIN DESIGN

FROM TOWER TO SAN YGNACIO

(TOWER/SAGE POND OUTFALL)



LINE	Qact (cfs)	Qcap (cfs)	HT (in)	WID (in)	HGDN (ft)	HGUP (ft)	DNLN	INV DN (ft)	INV UP (ft)
1	102.7	196.7	54	54	69.04	69.14	0	66.72	66.82
2	14.0	25.7	18	18	72.69	78.65	1	71.90	77.00
3	11.2	12.1	18	18	77.41	78.41	1	76.27	77.27
4	5.6	10.5	18	18	78.65	78.71	3	77.27	77.67
5	51.5	50.3	30	30	69.74	72.34	1	66.82	69.30
6	14.5	19.6	18	18	77.33	80.13	5	76.36	79.16
7	7.2	10.5	18	18	80.69	80.84	6	79.16	79.41
8	37.0	41.0	30	30	72.77	75.78	5	69.30	73.00
9	37.0	41.0	30	30	76.00	78.66	8	73.00	76.60
10	3.5	10.5	18	18	78.95	79.02	9	76.60	77.50
11	10.9	15.8	18	18	78.95	79.53	9	76.60	77.50
12	22.5	29.7	24	24	78.95	79.66	9	76.60	77.98
13	22.5	22.6	24	24	79.91	80.42	12	77.98	78.73
14	11.3	10.5	18	18	80.66	81.11	13	78.73	78.98

Calc Option = 1
Graphics mode = VGA

☐ F.M.

☐ Box

☐ Circular

1) Screen 2) Printer 3) Screen plot [PgUp] ↑ [PgDn] ↓ [Esc] Menu

HYDRAULIC ANALYSIS

Run date: 09-19-2000
File: VALUNS.ST3

Return Period = 100 Yrs
Rainfall file: Your_County

LINE 1 / Q = 102.7 / HT = 42 / WID = 42 / N = .013 / L = 10 / JLC = .25

1 / Outfall

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	69.67	35.38	66.72	11.88	71.86	30.61	11.4	8.65
UPSTRM	69.77	35.38	66.82	11.88	71.96	30.61	11.3	8.65

Drainage area (ac)	= 0	Slope of invert (%)	= 1.000
Runoff coefficient	= 0	Slope energy grade line (%)	= 1.000
Time of conc (min)	= 6	Critical depth (in)	= 37.82
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 94.1
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 27.0
Cumulative C*A	= 0.0	Depth at inlet opening (in)	= 6
Flow contrib (cfs)	= 102.7	Confluence angle (deg)	= 0
Default Q (cfs)	= 102.72	Natural ground elev (ft)	= 81.62
Line capac. (cfs)	= 100.6	Line storage (cuft)	= 86

LINE 2 / Q = 14.0 / HT = 18 / WID = 18 / N = .013 / L = 85 / JLC = .25

2 / DNLN = 1

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	72.69	9.49	71.90	14.87	76.12	17.97	8.22	0.94
UPSTRM	78.65	9.49	77.00	14.87	82.08	17.97	2	0.94

Drainage area (ac)	=	0	Slope of invert (%)	=	6.000
Runoff coefficient	=	0	Slope energy grade line (%)	=	7.009
Time of conc (min)	=	0	Critical depth (in)	=	16.71
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	12.9
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	3.7
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	14	Confluence angle (deg)	=	45
Default Q (cfs)	=	14.04	Natural ground elev (ft)	=	80.5
Line capac. (cfs)	=	25.7	Line storage (cuft)	=	80

LINE 3 / Q = 11.2 / HT = 18 / WID = 18 / N = .013 / L = 75 / JLC = .25

 3 / DNLN = 1

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	77.41	13.74	76.27	7.74	78.34	15.31	3.85	1.45
UPSTRM	78.41	13.74	77.27	7.74	79.34	15.31	2.4	1.45

Drainage area (ac) = 0	Slope of invert (%) = 1.333
Runoff coefficient = 0	Slope energy grade line (%) = 1.333
Time of conc (min) = 0	Critical depth (in) = 15.64
Inlet time (min) = 0	Req'd length curb inlet (ft) = 10.3
Intensity (in/hr) = 0.00	Req'd grate area (sf) = 2.9
Cumulative C*A = 0.0	Depth at inlet opening (in) = 6
Flow contrib (cfs) = 11.1	Confluence angle (deg) = 30
Default Q (cfs) = 11.2	Natural ground elev (ft) = 81.17
Line capac. (cfs) = 12.1	Line storage (cuft) = 109

LINE 4 / Q = 5.6 / HT = 18 / WID = 18 / N = .013 / L = 40 / JLC = .25

 4 / DNLN = 3

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	78.65	16.53	77.27	3.27	78.81	9.28	2.4	1.71
UPSTRM	78.71	11.48	77.67	4.71	79.06	17.30	2	1.19

Drainage area (ac)	=	0	Slope of invert (%)	=	1.000
Runoff coefficient	=	0	Slope energy grade line (%)	=	0.608
Time of conc (min)	=	0	Critical depth (in)	=	10.84
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	5.1
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	1.5
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	5.5	Confluence angle (deg)	=	-120
Default Q (cfs)	=	5.6	Natural ground elev (ft)	=	81.17
Line capac. (cfs)	=	10.5	Line storage (cuft)	=	58

LINE 5 / Q = 51.5 / HT = 30 / WID = 30 / N = .013 / L = 165 / JLC = .25

 5 / DNLN = 1

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	70.32	30.00	66.82	10.49	72.02	0.00	12.3	4.91
UPSTRM	72.92	30.00	69.30	10.49	74.62	0.00	10.63	4.91

Drainage area (ac)	=	0	Slope of invert (%)	=	1.503
Runoff coefficient	=	0	Slope energy grade line (%)	=	1.576
Time of conc (min)	=	5	Critical depth (in)	=	28.22
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	47.2
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	13.5
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	51.4	Confluence angle (deg)	=	90
Default Q (cfs)	=	51.48	Natural ground elev (ft)	=	82.44
Line capac. (cfs)	=	50.3	Line storage (cuft)	=	810

LINE 6 / Q = 14.5 / HT = 18 / WID = 18 / N = .013 / L = 80 / JLC = .25

 6 / DNLN = 5

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	77.33	11.70	76.36	11.91	79.54	17.17	4.58	1.22
UPSTRM	80.13	11.70	79.16	11.91	82.34	17.17	2.25	1.22

Drainage area (ac)	=	0	Slope of invert (%)	=	3.500
Runoff coefficient	=	0	Slope energy grade line (%)	=	3.500
Time of conc (min)	=	0	Critical depth (in)	=	16.93
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	13.3
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	3.8
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	14.4	Confluence angle (deg)	=	90
Default Q (cfs)	=	14.48	Natural ground elev (ft)	=	82.91
Line capac. (cfs)	=	19.6	Line storage (cuft)	=	97

LINE 7 / Q = 7.2 / HT = 18 / WID = 18 / N = .013 / L = 25 / JLC = .25

 7 / DNLN = 6

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	80.69	18.00	79.16	4.10	80.95	0.00	2.25	1.77
UPSTRM	80.84	16.32	79.41	4.30	81.13	10.48	2	1.68

Drainage area (ac)	=	0	Slope of invert (%)	=	1.000
Runoff coefficient	=	0	Slope energy grade line (%)	=	0.729
Time of conc (min)	=	0	Critical depth (in)	=	12.32
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	6.6
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	1.9
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	7.2	Confluence angle (deg)	=	90
Default Q (cfs)	=	7.24	Natural ground elev (ft)	=	82.91
Line capac. (cfs)	=	10.5	Line storage (cuft)	=	43

LINE 8 / Q = 37.0 / HT = 30 / WID = 30 / N = .013 / L = 370 / JLC = .25

8 / DNLN = 5

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	73.34	30.00	69.30	7.54	74.23	0.00	10.63	4.91
UPSTRM	76.36	30.00	73.00	7.54	77.24	0.00	8.09	4.91

Drainage area (ac)	=	0	Slope of invert (%)	=	1.000
Runoff coefficient	=	0	Slope energy grade line (%)	=	0.814
Time of conc (min)	=	3	Critical depth (in)	=	24.39
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	33.9
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	9.7
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	37	Confluence angle (deg)	=	0
Default Q (cfs)	=	37	Natural ground elev (ft)	=	83.6
Line capac. (cfs)	=	41.0	Line storage (cuft)	=	1816

LINE 9 / Q = 37.0 / HT = 30 / WID = 30 / N = .013 / L = 360 / JLC = .25

9 / DNLN = 8

|--|

LINE 10 / Q = 3.5 / HT = 18 / WID = 18 / N = .013 / L = 90 / JLC = .25

 10 / DNLN = 9

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	79.73	18.00	76.60	2.01	79.79	0.00	3.7	1.77
UPSTRM	79.85	18.00	77.50	2.01	79.91	0.00	2	1.77

Drainage area (ac)	= 0	Slope of invert (%)	= 1.000
Runoff coefficient	= 0	Slope energy grade line (%)	= 0.132
Time of conc (min)	= 0	Critical depth (in)	= 8.63
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 3.3
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.9
Cumulative C*A	= 0.0	Depth at inlet opening (in)	= 6
Flow contrib (cfs)	= 3.5	Confluence angle (deg)	= 75
Default Q (cfs)	= 3.55	Natural ground elev (ft)	= 81
Line capac. (cfs)	= 10.5	Line storage (cuft)	= 159

LINE 11 / Q = 10.9 / HT = 18 / WID = 18 / N = .013 / L = 40 / JLC = .25

 11 / DNLN = 9

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	79.73	18.00	76.60	6.19	80.32	0.00	3.7	1.77
UPSTRM	80.31	18.00	77.50	6.19	80.91	0.00	2.	1.77

Drainage area (ac) =	0	Slope of invert (%) =	2.250
Runoff coefficient =	0	Slope energy grade line (%) =	1.457
Time of conc (min) =	0	Critical depth (in) =	15.14
Inlet time (min) =	0	Req'd length curb inlet (ft) =	10.0
Intensity (in/hr) =	0.00	Req'd grate area (sf) =	2.9
Cumulative C*A =	0.0	Depth at inlet opening (in) =	6
Flow contrib (cfs) =	10.9	Confluence angle (deg) =	-75
Default Q (cfs) =	10.94	Natural ground elev (ft) =	81
Line capac. (cfs) =	15.8	Line storage (cuft) =	71

LINE 12 / Q = 22.5 / HT = 24 / WID = 24 / N = .013 / L = 80 / JLC = .25

12 / DNLN = 9

	HGL	DEPTH	INVERT J	VEL	EGL	T WID	COVER	AREA
DNSTRM	79.73	24.00	76.60	7.17	80.53	0.00	3.2	3.14
UPSTRM	80.52	24.00	77.98	7.17	81.32	0.00	2.01	3.14

Drainage area (ac)	=	0	Slope of invert (%)	=	1.725
Runoff coefficient	=	0	Slope energy grade line (%)	=	0.991
Time of conc (min)	=	1	Critical depth (in)	=	20.16
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	20.6
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	5.9
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	22.5	Confluence angle (deg)	=	0
Default Q (cfs)	=	22.51	Natural ground elev (ft)	=	82
Line capac. (cfs)	=	29.7	Line storage (cuft)	=	251

LINE 13 / Q = 22.5 / HT = 24 / WID = 24 / N = .013 / L = 75 / JLC = .25

 13 / DNLN = 12

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	80.72	24.00	77.98	7.17	81.52	0.00	2.01	3.14
UPSTRM	81.46	24.00	78.73	7.17	82.26	0.00	1.75	3.14

Drainage area (ac)	=	0	Slope of invert (%)	=	1.000
Runoff coefficient	=	0	Slope energy grade line (%)	=	0.991
Time of conc (min)	=	0	Critical depth (in)	=	20.16
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	20.6
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	5.9
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	22.5	Confluence angle (deg)	=	90
Default Q (cfs)	=	22.51	Natural ground elev (ft)	=	82.48
Line capac. (cfs)	=	22.6	Line storage (cuft)	=	236

LINE 14 / Q = 11.3 / HT = 18 / WID = 18 / N = .013 / L = 25 / JLC = .25

 14 / DNLN = 13

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	81.66	18.00	78.73	6.37	82.29	0.00	2.25	1.77
UPSTRM	82.11	18.00	78.98	6.37	82.74	0.00	2	1.77

Drainage area (ac)	=	0	Slope of invert (%)	=	1.000
Runoff coefficient	=	0	Slope energy grade line (%)	=	1.148
Time of conc (min)	=	0	Critical depth (in)	=	15.64
Inlet time (min)	=	0	Req'd length curb inlet (ft)	=	10.3
Intensity (in/hr)	=	0.00	Req'd grate area (sf)	=	3.0
Cumulative C*A	=	0.0	Depth at inlet opening (in)	=	6
Flow contrib (cfs)	=	11.2	Confluence angle (deg)	=	90
Default Q (cfs)	=	11.25	Natural ground elev (ft)	=	82.48
Line capac. (cfs)	=	10.5	Line storage (cuft)	=	44



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 26, 2001

Greg Krenik, P.E.
Mark Goodwin & Assoc.
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: **VALENCIA ESTATES (L-10/D18)**
Engineers Certification For Release of Financial Guaranty
Engineers Stamp dated 4/25/2001
Engineer's Certification dated 10/18/2001

Dear Mr. Krenik:

Based upon the information provided in your submittal dated 12/21/2001, the above referenced plan is adequate to satisfy the Grading and Drainage Certification requirements for release of financial guaranty for the above mentioned project.

If you have any questions, please call me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BLS

C: Arlene Portillo, PWD – #661781
File

DRAINAGE INFORMATION SHEET
(REV. 11/01/2001)

L-10/D18

PROJECT TITLE: VALENCIA ESTATES

DRB #: _____ EPC#: _____ ZONE MAP/DRG. FILE #: L-10

WORK ORDER#: _____

LEGAL DESCRIPTION: VALENCIA ESTATES SUBDIVISION

CITY ADDRESS: _____

ENGINEERING FIRM: MARK GOODWIN & ASSOCIATES, PA
ADDRESS: PO BOX 90606
CITY, STATE: ALB NM

CONTACT: GREGORY J. KRENK, PE
PHONE: 828-2200
ZIP CODE: 87199

OWNER: SIVAGE-THOMAS HOMES, INC
ADDRESS: 7445 PAN AMERICAN HWY NE
CITY, STATE: ALB NM

CONTACT: ROBERT LUPTON
PHONE: 341-6811
ZIP CODE: 87109

ARCHITECT: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

SURVEYOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CONTRACTOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CHECK TYPE OF SUBMITTAL

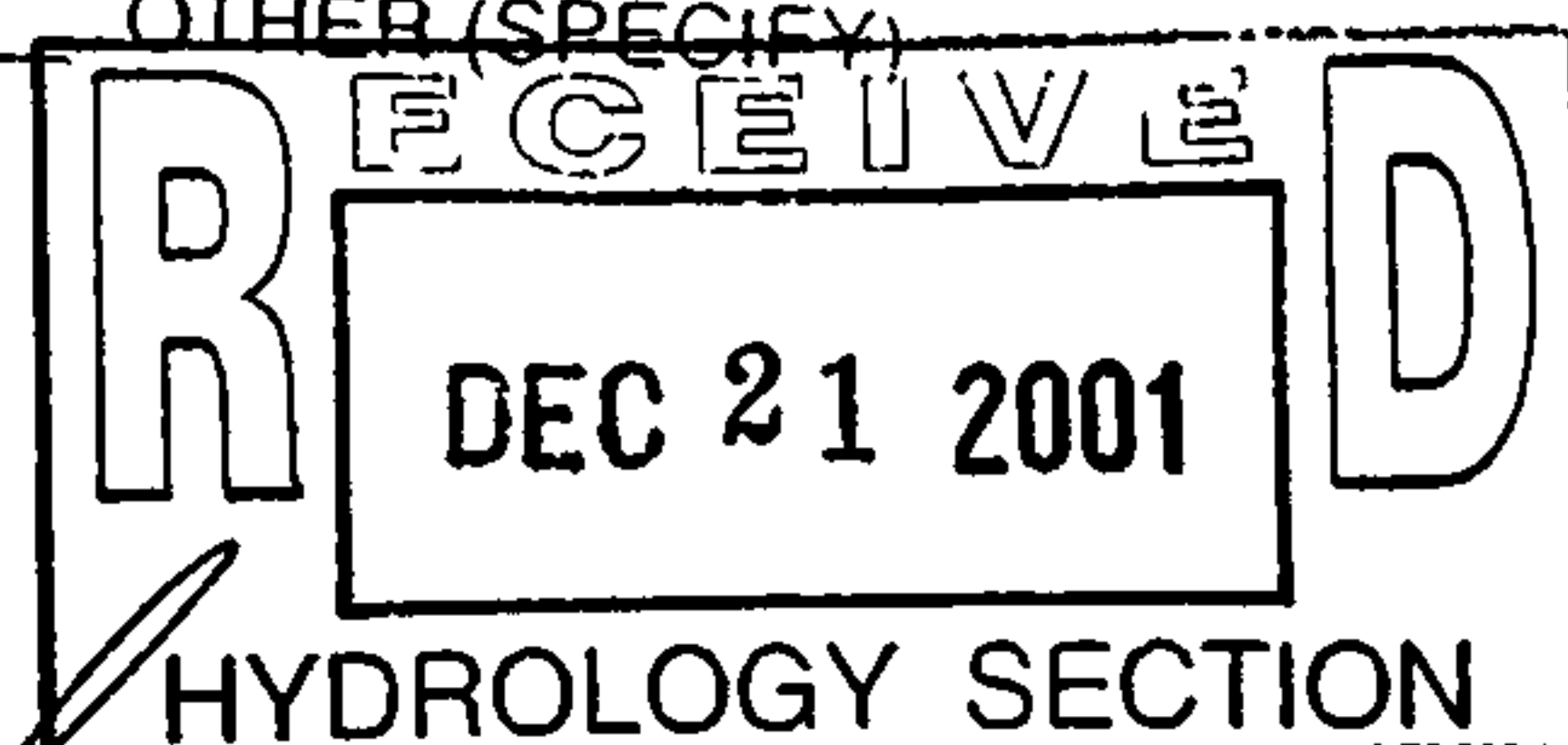
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☒ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR SITE PLAN)
- ☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT

- ☒ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ 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 (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP)
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED.

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED



DATE SUBMITTED: 12-21-01

BY: _____

GREGORY J. KRENK

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following.

1. **Conceptual Grading and Drainage Plan** Required for approval of Site Development Plans greater than five
2. **Drainage Plans** Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or



City of Albuquerque

September 27, 2000

Gregory J. Krenik, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

Re: Valencia Estates Subdivision Drainage Report
Engineer's Stamp dated 9-19-00 (L10/D18)

Dear Mr. Krenik,

Based upon the information provided in your submittal dated 9-21-00, the above referenced site is approved for Preliminary Plat action by the DRB. You will need to include a provision for the temporary retention ponds and include an agreement and covenant on the Infrastructure List.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Sr. Engineer, Hydrology

C: file

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Valencia Estates ZONE ATLAS#: L-10 / 0018
DRB#: _____ EPC# _____ WORKORDER#: _____
LEGAL DESCRIPTION: Town of Atrisco Grant, Unit 3, Tracts 420, 421 & 422
CITY ADDRESS: Unser SW, Between Tower and San Ygnacio

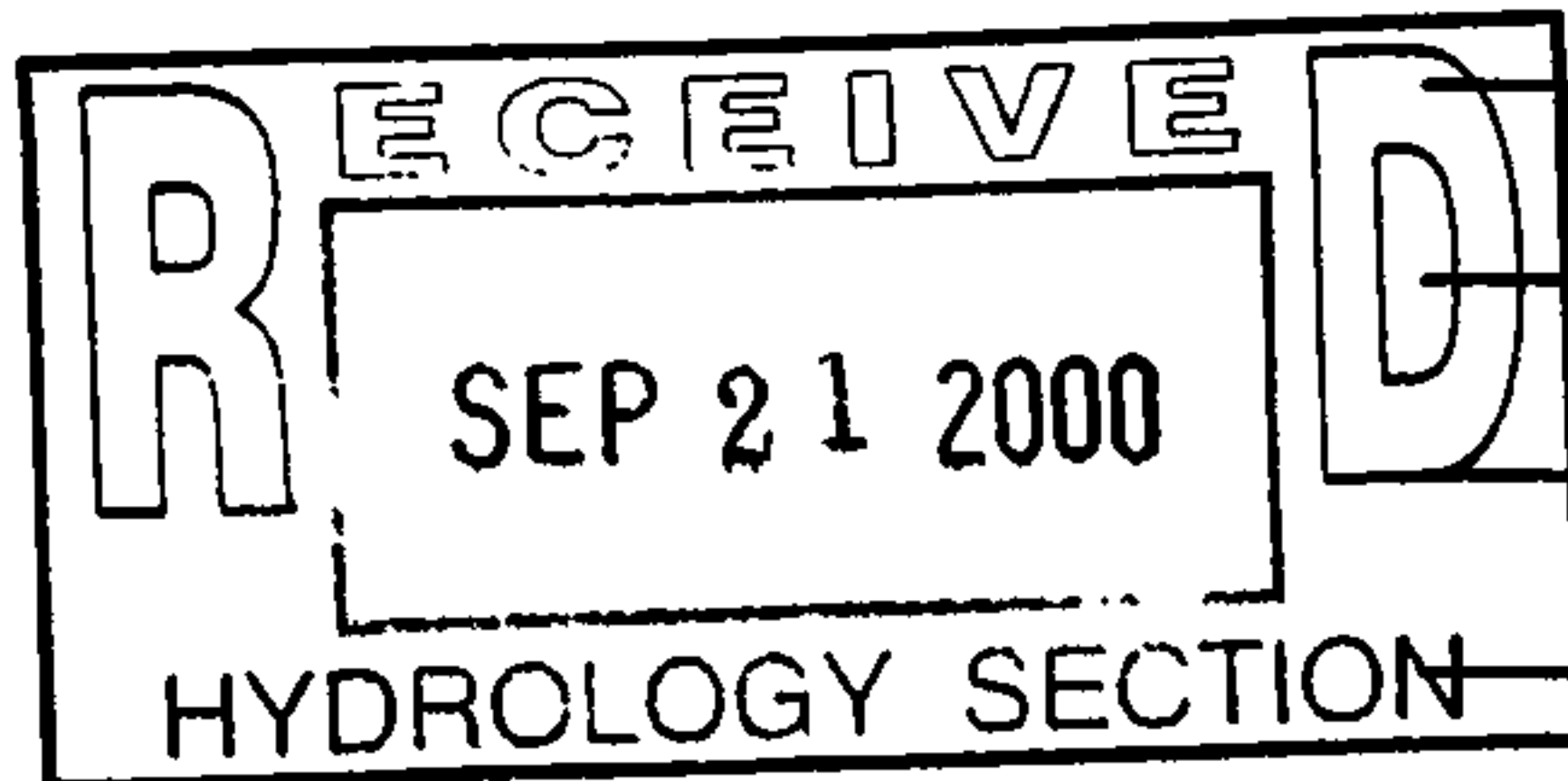
ENGINEERING FIRM:	<u>Mark Goodwin & Associates, PA</u>	CONTACT:	<u>Gregory J. Krenik, PE</u>
ADDRESS:	<u>P.O. Box 90606, Albuquerque, NM 87199</u>	PHONE:	<u>828-2200</u>
OWNER:	<u>Vista del Mundo Corp.</u>	CONTACT:	<u>Sam Valencia</u>
ADDRESS:	<u>P.O. Box 6984, Santa Fe, NM 87502</u>	PHONE:	<u>920-4679</u>
ARCHITECT:	_____	CONTACT:	_____
ADDRESS:	_____	PHONE:	_____
SURVEYOR:	_____	CONTACT:	_____
ADDRESS:	_____	PHONE:	_____
CONTRACTOR:	_____	CONTACT:	_____
ADDRESS:	_____	PHONE:	_____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL
☐ ENGINEER'S CERTIFICATION
☐ OTHER
☐ EASEMENT VACATION

PRE-DESIGN MEETING:

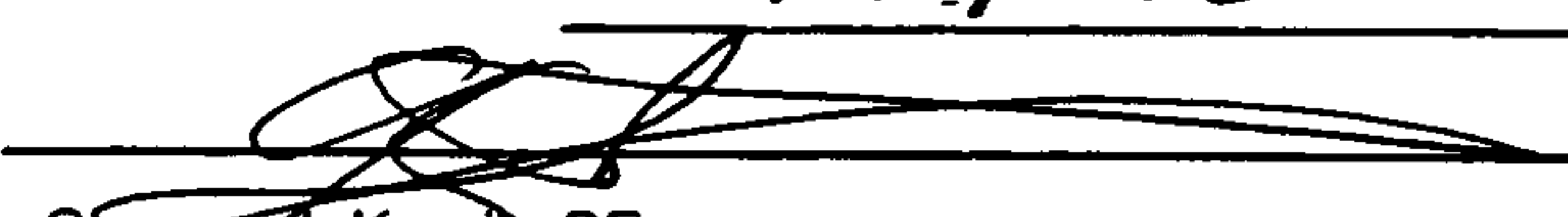
☐ YES
☒ NO
☐ COPY PROVIDED



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
☐ CERTIFICATION OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER
☐ RELEASE OF FINANCIAL GUARANTY
☐ TRAFFIC CIRCULATION LAYOUT

DATE SUBMITTED: 9-19-00

BY: 
Gregory J. Krenik, PE



City of Albuquerque

August 28, 2000

Gregory J. Krenik, P.E.
Mark Goodwin & Associates, PA
P. O. Box 90606
Albuquerque, New Mexico 87199

RE: *Drainage Report and Grading and Drainage Plan for Valencia Estates Subdivision (L10/D18), Engineer's Stamp Dated 8/2/00.*

Dear Mr. Krenik:

The above referenced report is incomplete, therefore a comprehensive review will not be made. No information was provided regarding the ultimate storm drain systems in San Ignacio or Tower Road. Is this system to be constructed by the City, or has it been bonded by others? This site does not appear to be within the SAD 222 area, therefore, provide the pertinent information, including the drainage basin map, from the master drainage plan that allows this site free discharge. It was my understanding from the Amole/Hubbell DMP that free discharge was not allowed. The design for the downstream storm drain system must be provided. This site is adjacent to FEMA floodplains in both Tower Road and at the corner of San Ygnacio and Unser. These floodplains were not addressed. The report states that off-site runoff from the north stays in "swales" in Tower Road, but this site is responsible for the storm drain extension in Tower Road. Provide the basin maps for the runoff analysis for the perimeter streets. This report proposes to drain backyards directly onto Tower, Unser and San Ygnacio, which is not allowed without individual sidewalk culverts. These backyards must either drain to the front, or the runoff that falls in the backyard may pond there. Is the temporary retention pond designed to retain the runoff from all of the adjacent streets in the interim condition? Why are all of the inlets in Unser in a sump condition? Does City Transportation concur with the proposed street grades?

Please be aware that additional comments may be warranted with the resubmittal. If you have any questions, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c:

File

EXHIBIT A (REVISED 5/10/99)
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LIST
(LEGAL DESCRIPTION OF SUBDIVISION)

Valencia Estates Subdivision
(NAME and UNIT OF SUBDIVISION)

Case No.: _____
D.R.C. Project No.: _____
Prelim. Plat Approved: _____
Prelim. Plat Expires: _____
Site Plan Approved: _____

Date Submitted: 8-3-00

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of the project acceptance and close out by the City.

<u>SIZE</u>	<u>TYPE IMPROVEMENT</u>	<u>LOCATION</u>	<u>FROM</u>	<u>TO</u>
28' F-F	Res Pvmnt Std C & G (both sides) *4' Sdwk (both sides)	Noah Avenue	Tiffany Road	Stephan Road
28' F-F	Res Pvmnt Mount C & G (both sides) *4' Sdwk (both sides)	Tiffany Road	Libby Avenue	Noah Avenue
28' F-F	Rest Pvmnt Mount C & G (both sides) *4' Sdwk (both sides)	Christopher Road	Libby Avenue	Noah Avenue
26' F-F	Res Pvmnt Mount C & G (both sides) *4' Sdwk (both sides)	Stephan Road	Libby Avenue	Noah Avenue
26' F-F	Res Pvmnt Std C & G (both sides) *4' Sdwk (both sides)	Amberly Road	Libby Avenue	Noah Avenue
28' F-F	Res Pvmnt Mount C & G (both sides) *4' Sdwk (both sides)	Libby Avenue	Tiffany Road	Christopher Road
— —	1/4 of Signal Requirements at Tower and Unser. Modified Procedure "C" - \$25,000.00			

EXHIBIT A (REVISED 5/10/99)
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LIST
(LEGAL DESCRIPTION OF SUBDIVISION)

Valencia Estates Subdivision
(NAME and UNIT OF SUBDIVISION)

Case No.: _____
D.R.C. Project No.: _____
Prelim. Plat Approved: _____
Prelim. Plat Expires: _____
Site Plan Approved: _____

Date Submitted: 8-3-00

<u>SIZE</u>	<u>TYPE IMPROVEMENT</u>	<u>LOCATION</u>	<u>FROM</u>	<u>TO</u>
28' F-F	Res Pvmt Mount C & G (both sides) *4' Sdwk (both sides)	Noah Avenue	Stephan Road	Christopher Road
25' F-F	Res Pvmt Mount C & G (both sides) *4' Sdwk (north side)	Christopher Road	Libby Avenue	Terminus
25' F-F	Res Pvmt Mount C & G (both sides) *4' Sdwk (north side)	Christopher Road	Noah Avenue	Terminus
25' F-F	Res Pvmt Mount C & G (both sides) *4' Sdwk (south side)	Tiffany Road	Libby Avenue	Terminus
25' F-F	Art Pvmt Std C & G (both sides) *4' Sdwk (south side)	Tiffany Road	Noah Avenue	Terminus
28' F-F	Art Pvmt Std C & G (both sides) *4' Sdwk (both sides)	Libby Avenue	San Ygnacio Road	Tiffany Road
28' F-F	Art Pvmt Std C & G (both sides) *4' Sdwk (both sides)	Noah Avenue	Tower Road	Christopher Road
25' F-F	Art Pvmt Std C & G (west side) 6' Sdwk (west side) Extruded Conc Curb (west side)	Unser Blvd	San Ygnacio Road	Tower Road
29' F-F	Art Pvmt Std C & G (south side) 6' Sdwk (south side) Extruded Conc Curb (south side)	Tower Road	Unser Blvd	W. Prop. Line

EXHIBIT A (REVISED 5/10/99)
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LIST
(LEGAL DESCRIPTION OF SUBDIVISION)

Valencia Estates Subdivision
 (NAME and UNIT OF SUBDIVISION)

Case No.: _____
 D.R.C. Project No.: _____
 Prelim. Plat Approved: _____
 Prelim. Plat Expires: _____
 Site Plan Approved: _____

Date Submitted: 8-3-00

<u>SIZE</u>	<u>TYPE IMPROVEMENT</u>	<u>LOCATION</u>	<u>FROM</u>	<u>TO</u>
24' F-E * *	Art Pvmt Std C & G (north side) 4' Sdwk (north side)	San Ygnacio Road	Unser Blvd	West Property Line
8"	Waterline	Tower Road	Noah Avenue (exist stub)	Unser Blvd
8"	Waterline	San Ygnacio Road	Unser Blvd	West Property Line
10"	Waterline	Unser Blvd	Sage Road	Tower Road
6"	Waterline	Tiffany Road	Entire Length	
6"	Waterline	Christopher Road	Entire Length	
6"	Waterline	Amberly Road	Entire Length	
6"	Waterline	Stephan Road	Entire Length	
6"	Waterline	Libby Avenue	San Ygnacio Road	Christopher Road
6"	Waterline	Noah Avenue	Tiffany Road	Tower Road
8"	SAS	San Ygnacio Road	Unser Blvd	West Property Line
8"	SAS	Libby Avenue	Tiffany Road	Christopher Road
8"	SAS	Noah Avenue	Tiffany Road	Christopher Road
8"	SAS	Amberly Road	Entire Length	
8"	SAS	Stephan Road	Entire Length	
8"	SAS	Christopher Road	Entire Length	
8"	SAS	Tiffany Road	Entire Length	
8"	SAS	Libby Avenue	San Ygnacio Road	Tiffany Road
18"	RCP Stormdrain	Noah Avenue	At Tiffany Road	
24"	RCP Stormdrain	Noah Avenue	At Tiffany Road	
24" **	RCP Stormdrain	Tiffany Road	Noah Avenue	Terminus
36"	RCP Stormdrain	Tiffany Road	Terminus	Unser Blvd
36"	RCP Stormdrain	Unser Blvd	Tiffany Road	San Ygnacio Road
18"	RCP Stormdrain	Unser Blvd	At Tower Road	
18" **	RCP Stormdrain	San Ygnacio Road	At Unser Blvd	
18"	RCP Stormdrain	Tower Road	At Unser Blvd	
66"	RCP Stormdrain	Tower Road	Noah Avenue	Unser Blvd

EXHIBIT A (REVISED 5/10/99)
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LIST
(LEGAL DESCRIPTION OF SUBDIVISION)

Valencia Estates Subdivision
 (NAME and UNIT OF SUBDIVISION)

Case No.: _____
 D.R.C. Project No.: _____
 Prelim. Plat Approved: _____
 Prelim. Plat Expires: _____
 Site Plan Approved: _____

Date Submitted: 8-3-00

* Deferred sidewalk.

** Deferred construction until SAD 222 stormdrain is in place.

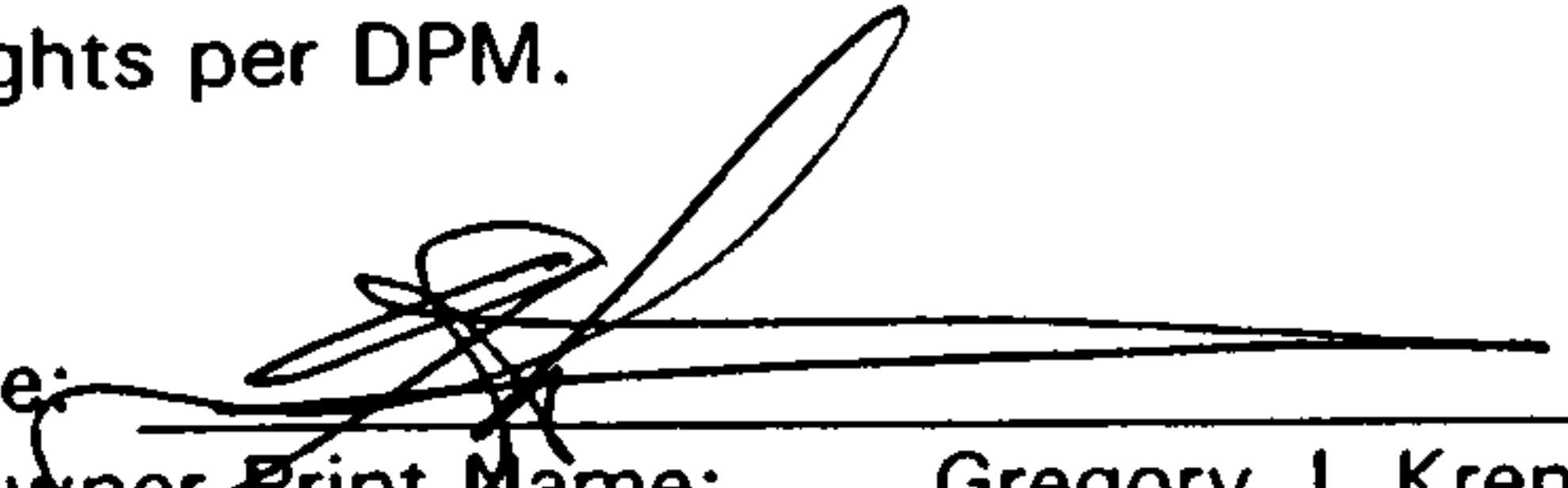
Stormdrain to include manholes, inlets, rip-rap and outfall.

Grading and Drainage Certification per DPM including Retaining Walls as shown on the Grading Plan required for Release of SIA and Financial Guarantees for each unit. Financial Guarantee is not required for this item.

Water infrastructure to include valves, fittings, valve boxes and fire hydrants.

Sanitary sewer to include manholes and service connections.

Street lights per DPM.

Signature:  8-3-00
 Agent/Owner Print Name: Gregory J. Krenik, PE
 Firm: Mark Goodwin & Associates, PA

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

_____ Transportation Dev.	_____ Date	_____ Utility Dev.	_____ Date	_____ Parks & Recreation	_____ Date
_____ Date	_____ Date	_____ Engineer/AMAFCA	_____ Date	_____ DRB Chairman	_____ Date

DRC REVISIONS

REVISIONS	DATE	DRC CHAIR	USER DEPT	AGENT/OWNER
①				
②				

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Valencia Estates ZONE ATLAS#: L-10 / D018 *
DRB#: _____ EPC# _____ WORKORDER#: _____
LEGAL DESCRIPTION: Town of Atrisco Grant, Unit 3, Tracts 420, 421 & 422
CITY ADDRESS: Unser SW, Between Tower and San Ygnacio

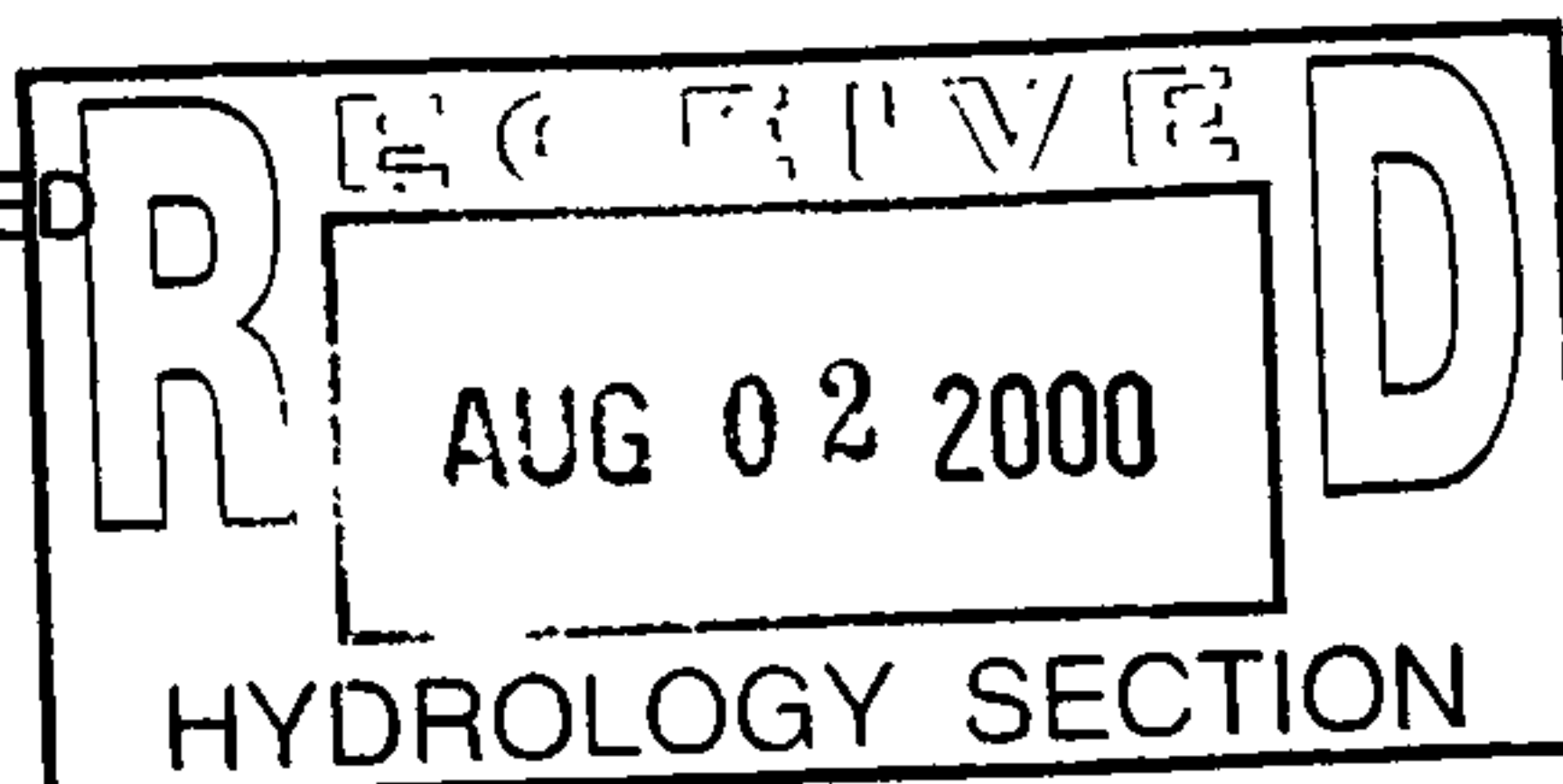
ENGINEERING FIRM:	<u>Mark Goodwin & Associates, PA</u>	CONTACT:	<u>Gregory J. Krenik, PE</u>
ADDRESS:	<u>P.O. Box 90606, Albuquerque, NM 87199</u>	PHONE:	<u>828-2200</u>
OWNER:	<u>Vista del Mundo Corp.</u>	CONTACT:	<u>Sam Valencia</u>
ADDRESS:	<u>P.O. Box 6984, Santa Fe, NM 87502</u>	PHONE:	<u>920-4679</u>
ARCHITECT:	_____	CONTACT:	_____
ADDRESS:	_____	PHONE:	_____
SURVEYOR:	_____	CONTACT:	_____
ADDRESS:	_____	PHONE:	_____
CONTRACTOR:	_____	CONTACT:	_____
ADDRESS:	_____	PHONE:	_____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL
☐ ENGINEER'S CERTIFICATION
☐ OTHER
☐ EASEMENT VACATION

PRE-DESIGN MEETING:

☐ YES
☒ NO
☐ COPY PROVIDED



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
☐ CERTIFICATION OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER
☐ RELEASE OF FINANCIAL GUARANTY
☐ TRAFFIC CIRCULATION LAYOUT

DATE SUBMITTED: 8-2-00

BY: _____

Gregory J. Krenik, PE

**EXHIBIT A (REVISED 5/10/99)
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LIST
(LEGAL DESCRIPTION OF SUBDIVISION)**

Valencia Estates Subdivision
(NAME and UNIT OF SUBDIVISION)

Case No.: _____
D.R.C. Project No.: _____
Prelim. Plat Approved: _____
Prelim. Plat Expires: _____
Site Plan Approved: _____

Date Submitted: 9-20-00

* Deferred sidewalk.

** Deferred construction until SAD 222 stormdrain is in place.

Stormdrain to include manholes, inlets, rip-rap and outfall.

Grading and Drainage Certification per DPM including Retaining Walls as shown on the Grading Plan required for Release of SIA and Financial Guarantees for each unit. Financial Guarantee is not required for this item.

Water infrastructure to include valves, fittings, valve boxes and fire hydrants.

Sanitary sewer to include manholes and service connections.

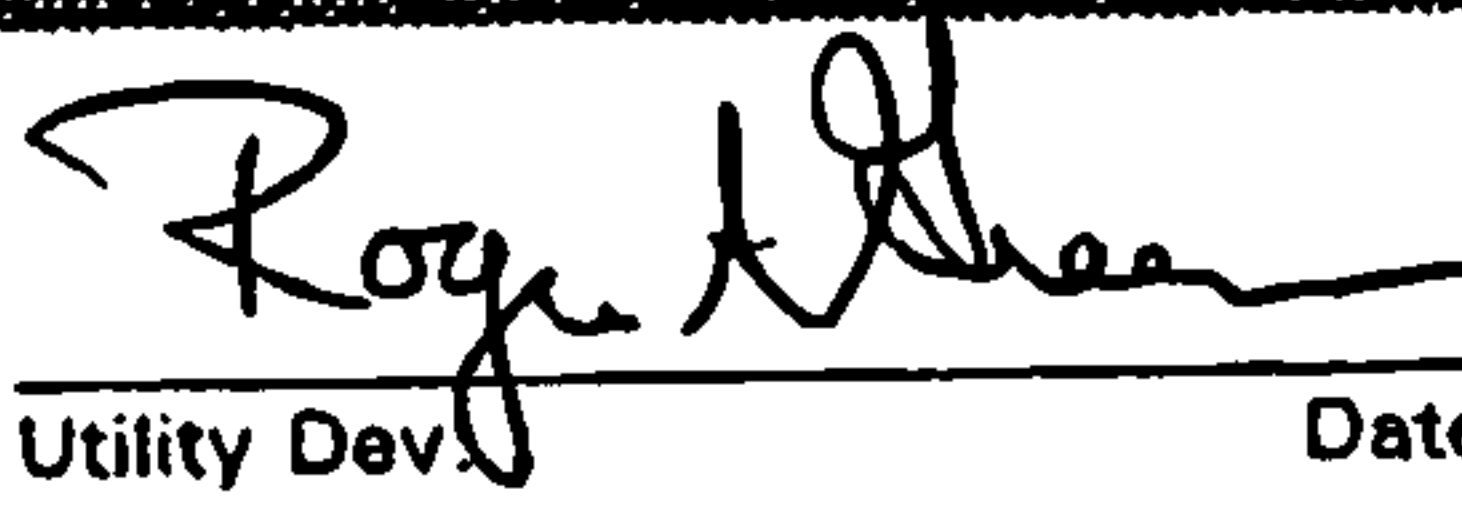
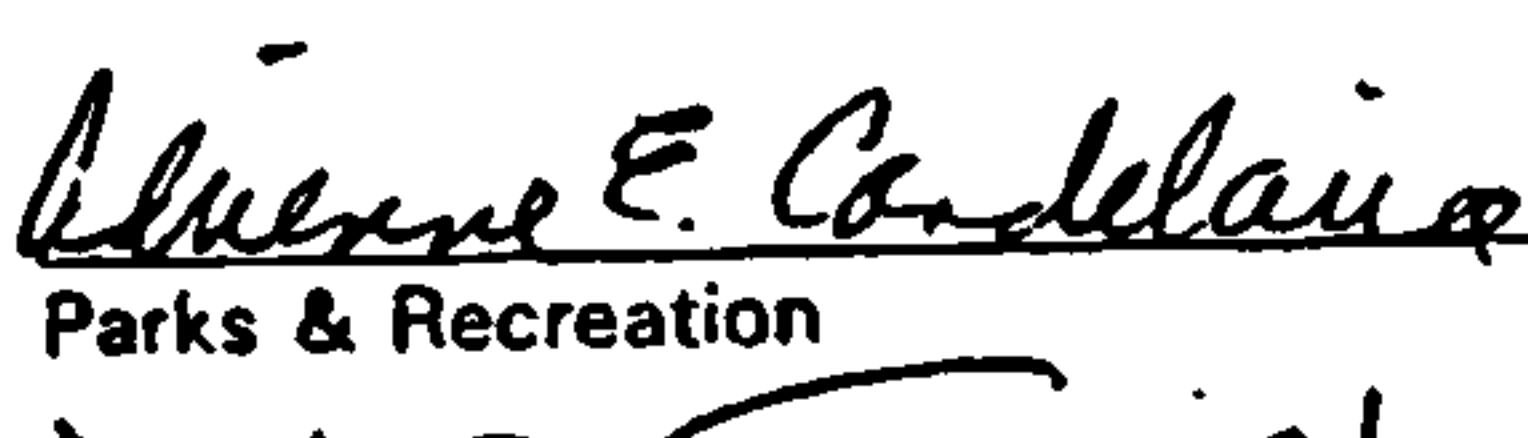
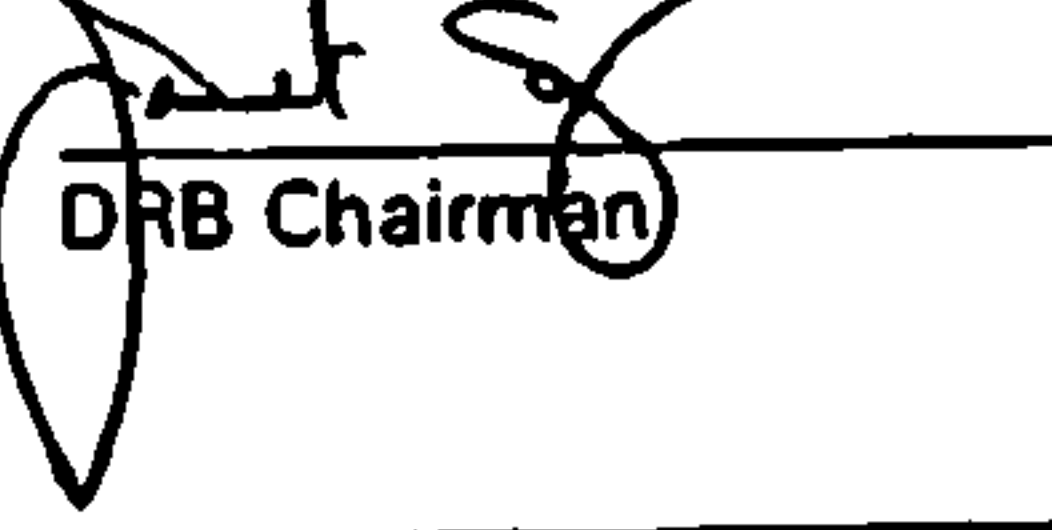
Street lights per DPM.

Signature: _____

Agent/Owner Print Name: Gregory J. Krenik, PE

Firm: Mark Goodwin & Associates, PA

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

 Transportation Dev.	<u>9-27-00</u> Date	 Utility Dev.	<u>9/27/00</u> Date	 Parks & Recreation	<u>9/27/00</u> Date
 Engineer/AMAFCA	<u>9-27-00</u> Date			 DRB Chairman	<u>9/27/00</u> Date

DRC REVISIONS

REVISIONS	DATE	DRC CHAIR	USER DEPT	AGENT/OWNER
①				
②				

Construction Completion deadline date Sept 27, 2002

EXHIBIT A (REVISED 5/10/99)
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Valencia Estates Subdivision
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Case No.: _____
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 Site Plan Approved: _____

Date Submitted: 9-20-00

<u>SIZE</u>	<u>TYPE IMPROVEMENT</u>	<u>LOCATION</u>	<u>FROM</u>	<u>TO</u>
24' F-E **	Art Pvmnt Std C & G (north side) 4' Sdwk (north side)	San Ygnacio Road	Unser Blvd	West Property Line
10"	Waterline	Unser Blvd	Sage Road	Tower Road
8"	Waterline	Tower Road	Julian Avenue (exist stub)	Unser Blvd
8"	Waterline	San Ygnacio Road	Unser Blvd	West Property Line
6"	Waterline	Tiffany Road	Entire Length	
6"	Waterline	Christopher Road	Entire Length	
6"	Waterline	Amberly Road	Entire Length	
6"	Waterline	Stephan Road	Entire Length	
6"	Waterline	Julian Avenue	San Ygnacio Road	Christopher Road
6"	Waterline	Julian Avenue	Tiffany Road	Tower Road
6"	Waterline	Libby Avenue	Entire Length	
8" **	SAS	San Ygnacio Road	Unser Blvd	West Property Line
8"	SAS	Libby Avenue	Tiffany Road	Christopher Road
8"	SAS	Noah Avenue	Tiffany Road	Christopher Road
8"	SAS	Amberly Road	Entire Length	
8"	SAS	Stephan Road	Entire Length	
8"	SAS	Christopher Road	Entire Length	
8"	SAS	Tiffany Road	Entire Length	
8"	SAS	Julian Avenue	San Ygnacio Road	Tiffany Road
18" **	RCP Stormdrain	San Ygnacio Road	At Unser Blvd	
18" **	RCP Stormdrain	Unser Blvd	At Christopher Road	
18"	RCP Stormdrain	Tiffany Road	East Terminus	Unser Blvd
24"	RCP Stormdrain	Christopher Road	East Terminus	Unser Blvd
24" **	RCP Stormdrain	Unser Blvd	Christopher Road	Lot 7, Blk 1
30" **	RCP Stormdrain	Unser Blvd	Lot 7, Blk 1	San Ygnacio Road
66"	RCP Stormdrain	Tower Road	Julian Avenue	Unser Blvd

Revised

3-TEMPORARY RETENTION PONDS WITH AGREEMENTS } COVENANTS ON
 TEMPORARY LEFT TURN LANE ON TOWER AT UNSER (12'x75') 1,2,3

EXHIBIT A (REVISED 5/10/99)
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LIST
(LEGAL DESCRIPTION OF SUBDIVISION)

Valencia Estates Subdivision
 (NAME and UNIT OF SUBDIVISION)

Case No.: _____
 D.R.C. Project No.: _____
 Prelim. Plat Approved: _____
 Prelim. Plat Expires: _____
 Site Plan Approved: _____

Date Submitted: 9-20-00

<u>SIZE</u>	<u>TYPE IMPROVEMENT</u>	<u>LOCATION</u>	<u>FROM</u>	<u>TO</u>
28' F-F	Res Pvmnt Mount C & G (both sides) *4' Sdwk (both sides)	Noah Avenue	Stephan Road	Christopher Road
25' F-F	Res Pvmnt Mount C & G (both sides) *4' Sdwk (north side)	Christopher Road	Libby Avenue	Terminus
25' F-F	Res Pvmnt Mount C & G (both sides) *4' Sdwk (north side)	Christopher Road	Noah Avenue	Terminus
25' F-F	Res Pvmnt Mount C & G (both sides) *4' Sdwk (south side)	Tiffany Road	Libby Avenue	Terminus
25' F-F	Res Pvmnt Std C & G (both sides) *4' Sdwk (south side)	Tiffany Road	Noah Avenue	Terminus
28' F-F **	Res Pvmnt Std C & G (both sides) *4' Sdwk (both sides)	Julian Avenue	San Ygnacio Road	Tiffany Road
28' F-F	Res Pvmnt Std C & G (both sides) *4' Sdwk (both sides)	Julian Avenue	Tower Road	Christopher Road
30' 25' F-F **	Art Pvmnt Std C & G (west side) 6' Sdwk (west side) Extruded Conc Curb (west side)	Unser Blvd	San Ygnacio Road	Tower Road
29' F-F **	Art Pvmnt Std C & G (south side) 6' Sdwk (south side) Extruded Conc Curb (south side)	Tower Road	Unser Blvd	W. Prop. Line
150' ** 125' **	Eastbound Channelized Right Turn Lane Eastbound Left Turn Lane		Tower Road at Unser Blvd Tower Road at Unser Blvd	

ORIGINAL

EXHIBIT A (REVISED 5/10/99)
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LIST
(LEGAL DESCRIPTION OF SUBDIVISION)

Valencia Estates Subdivision
 (NAME and UNIT OF SUBDIVISION)

Case No.: 1000563

D.R.C. Project No.: _____

Prelim. Plat Approved: 9/27/00Prelim. Plat Expires: 9/27/01Site Plan Approved: N/ADate Submitted: 9-20-00

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of the project acceptance and close out by the City.

<u>SIZE</u>	<u>TYPE IMPROVEMENT</u>	<u>LOCATION</u>	<u>FROM</u>	<u>TO</u>
28' F-F	Res Pvmt Std C & G (both sides) *4' Sdwk (both sides)	Noah Avenue	Tiffany Road	Stephan Road
28' F-F	Res Pvmt Mount C & G (both sides) *4' Sdwk (both sides)	Tiffany Road	Libby Avenue	Noah Avenue
28' F-F	Rest Pvmt Mount C & G (both sides) *4' Sdwk (both sides)	Christopher Road	Libby Avenue	Noah Avenue
26' F-F	Res Pvmt Mount C & G (both sides) *4' Sdwk (both sides)	Stephan Road	Libby Avenue	Noah Avenue
26' F-F	Res Pvmt Std C & G (both sides) *4' Sdwk (both sides)	Amberly Road	Libby Avenue	Noah Avenue
28' F-F	Res Pvmt Mount C & G (both sides) *4' Sdwk (both sides)	Libby Avenue	Tiffany Road	Christopher Road

— — 1/4 of Signal Requirements at Tower and Unser. Modified Procedure "C" - \$25,000.00

FIGURE 6
CITY OF ALBUQUERQUE
NOTICE OF D.R.C. MEETING

DRB NO: _____
PROJECT NO: 661781
ZONE ATLAS: L-10 D18

Valencia Estates
PROJECT NAME: _____
LOCATION: Dover & Unser SW

TYPE OF PROJECT: AHBA ☒ CIP _____ PWC _____ SAD _____ ALL PRIVATE _____

Contact Person: Greg Krenik Phone: 828-2200
Firm: Mark Goodwin & Assoc.

☒ Scheduled with the D.R.C. on 4/5/01 at 1:30 Plaza Del Sol/2nd Fl.
_____ No DRC Meeting Scheduled. Please return any comments by _____

The Project Is Scheduled For:

/ / Design Report Review	/ / Final Plan Review
/ / Pre-Design Meeting	/ / Signoff of Plans
/ ☒ Preliminary Plan Review	/ / _____

The Project Relates To:

☒ Water ☒ San. Sewer ☒ Paving ☒ Storm Drainage ☒ _____

The Attached Package Includes:

/D/ Drawings /S/ Spec's /E/ Estimate /R/ Report /M/ Memo Only

Indicated below are the Departments/Divisions that have received project documents and/or are invited to attend. It will be the Project Managers responsibility to notify consulting engineering firms of date and time of scheduled meetings.

☒ DRC Chairman	Project Review Section	All Drawings
☒ Traffic Repres.	Transportation Development	All Drawings
☒ Utility Dev.	Utility Design	All AHBA Drawings
☒ Utility Dev. (Billy G.)	Utility Design	All CIP Drawings
☒ Hydro Repres. <u>BAGHAKA</u>	Hydrology	All Drawings
☒ Const. Repres.	Construction	All Drawings
☒ Dave Harmon	Traffic Operations	All Drawings
/ / Sergio Miranda	Water (Shutoff Plan)	All Water Shutoff
☒ Parks Repres.	Parks & Recreation	ALL Landscaping
/ / Andre Houle	Street Maintenance	All Paving
/ / Kevin Broderick	Utility Coordinator	ALL PWC & CIP
/ / Tom Murphy	Transit Department	All Drawings
☒ Joe Luehring	Construction Coordinator	CIP/Memo
/ / Jim Fink	Line Maintenance	CIP & SAS/Memo
/ / George Gee	City Architect	Arch. Drawings
/ /	SAD Engineer	SAD/Memo
/ / Tom Ellis	Park Management	Parks/Community Ctrs/APS
/ / Gene Bustamante	General Services Dept.	Arch. Drawings
/ / Greg Smith	PWD/Legal	Specs Only
/ / Richard Sertich	Planning Department	CIP/Memos
/ / CIP Project Manager	CIP	CIP/Memos
/ / Donald Bartlett	Risk Management	Arch. Drawings
/ /	_____	_____
/ /	_____	_____