



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 9, 1993

Bob Ryals
Ryals Engineering
4929 Idlewilde SE
Albuquerque, NM 87108

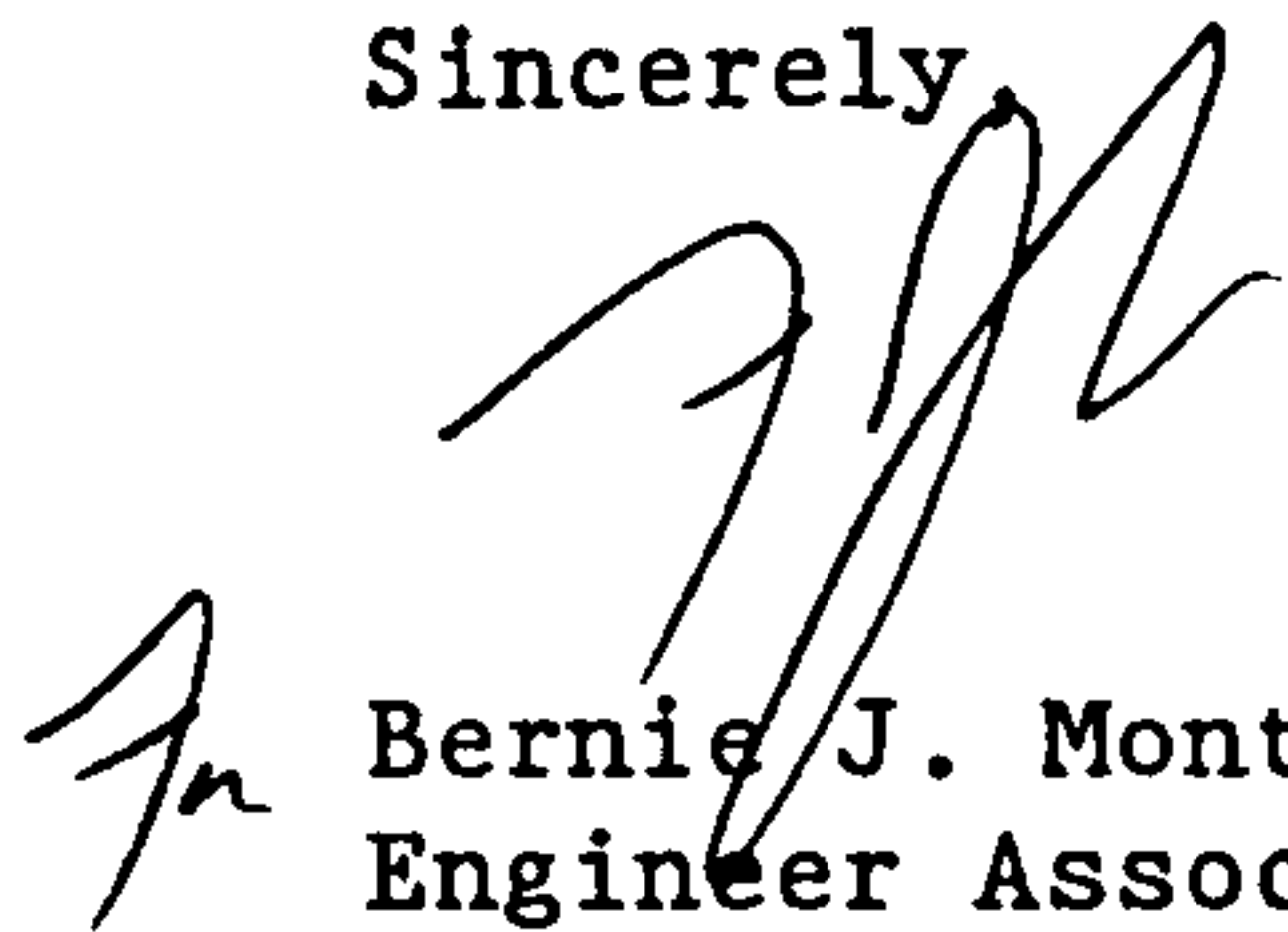
RE: ENGINEER CERTIFICATION FOR 3617 YUCCA NW (G11-D52) CERTIFICATION
STATEMENT DATE 5/11/93.

Dear Mr. Ryals:

Based on the information provided on your May 17, 1993 submittal, Engineer
Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,


Bernie J. Montoya, CE
Engineer Associate

BJM/d1/WPHYD/7575

xc: Alan Martinez
File

PUBLIC WORKS DEPARTMENT



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 18, 1993

Bob Ryals
Ryals Engineering
4929 Idlewilde SE
Albuquerque, NM 87108

RE: REVISED DRAINAGE PLAN FOR 3617 YUCCA NW (G11-D52) REVISION DATED
3/9/93.

Dear Mr. Ryals:

Based on the information provided on your March 10, 1993 resubmittal, the
above referenced site is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to
sign-off by Hydrology.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Assistant

BJM/d1/WPHYD/7575

xc: Alan Martinez
<File>

PUBLIC WORKS DEPARTMENT

DRAINAGE INFORMATION SHEET

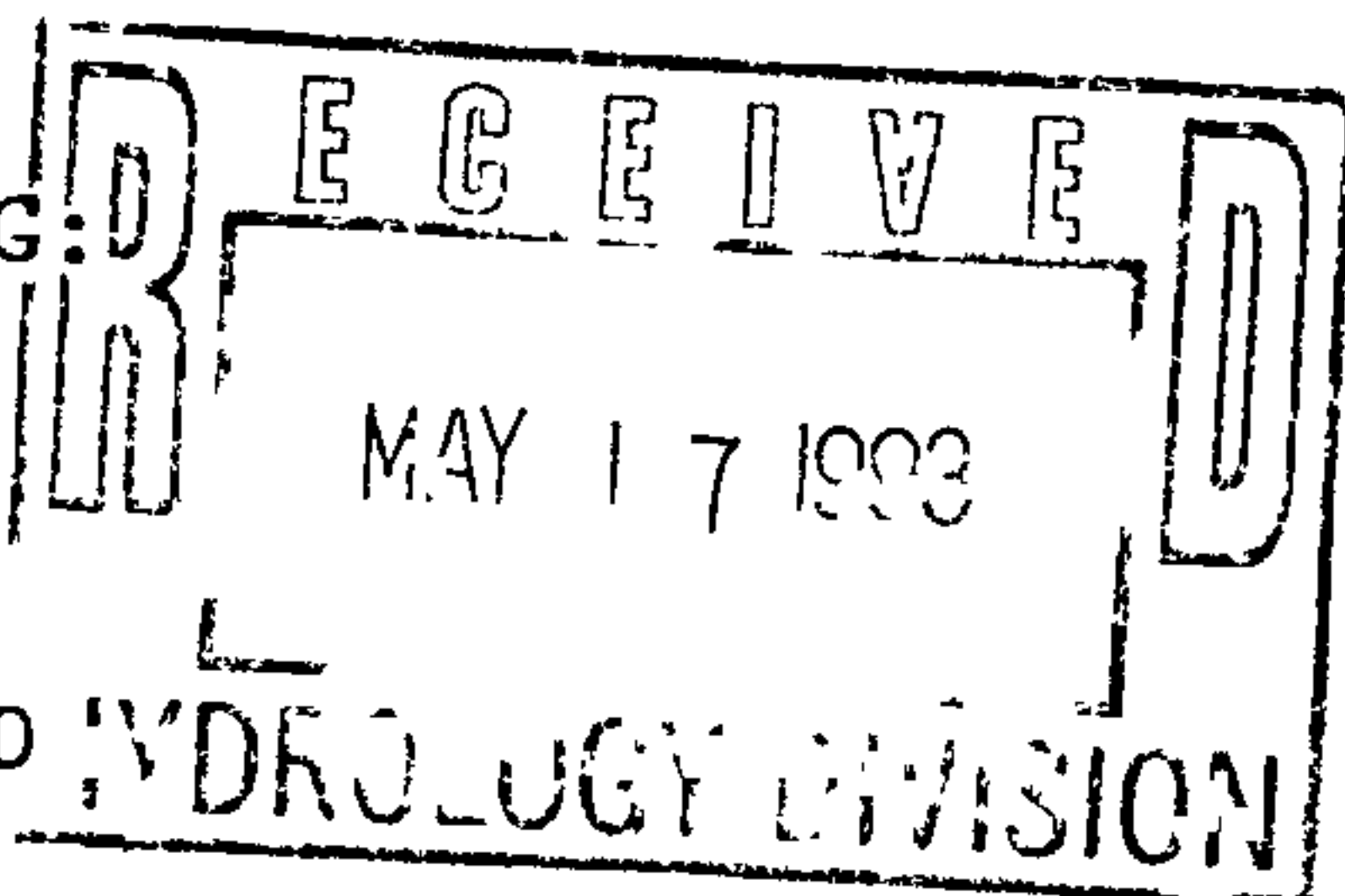
PROJECT TITLE: GRADING & DRAINAGE PLAN ZONE ATLAS/DRNG. FILE #: 611-052
DRB #: N/A EPC #: _____ WORK ORDER #: N/A
LEGAL DESCRIPTION: LOT 18E - REPLAT of LOT 18B CORONA DEL SOL SUBD
CITY ADDRESS: 3617 YUCCA DR NW
ENGINEERING FIRM: RYALS ENGINEERING CONTACT: BOB RYALS
ADDRESS: 4929 Idkwilde SE PHONE: 265-8267
OWNER: ART LUJAN CONTACT: ART LUJAN
ADDRESS: 3617 YUCCA DR PHONE: 898-7756
ARCHITECT: WILLIAM DURAN ASS CONTACT: ART LUJAN
ADDRESS: _____ PHONE: _____
SURVEYOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

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

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
☒ CERTIFICATE OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☒ OTHER CO (SPECIFY)

DATE SUBMITTED:

BY:

8/13/93
[Signature]

DRAINAGE INFORMATION SHEET

PROJECT TITLE: CORONA DEL SOL
LOT 18-E ZONE ATLAS/DRNG. FILE #: G-11 D-52

DRB #: N/A EPC #: N/A WORK ORDER #: N/A

LEGAL DESCRIPTION: LOT 18 E CORONA DEL SOL SUBD

CITY ADDRESS: 3617 YUCCA DR

ENGINEERING FIRM: Ryals CONTACT: Bob Ryals

ADDRESS: 4529 Idlen. Ids PHONE: 265-8267

OWNER: Art Lujan CONTACT: Art Lujan

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: AMS Builders Inc CONTACT: _____

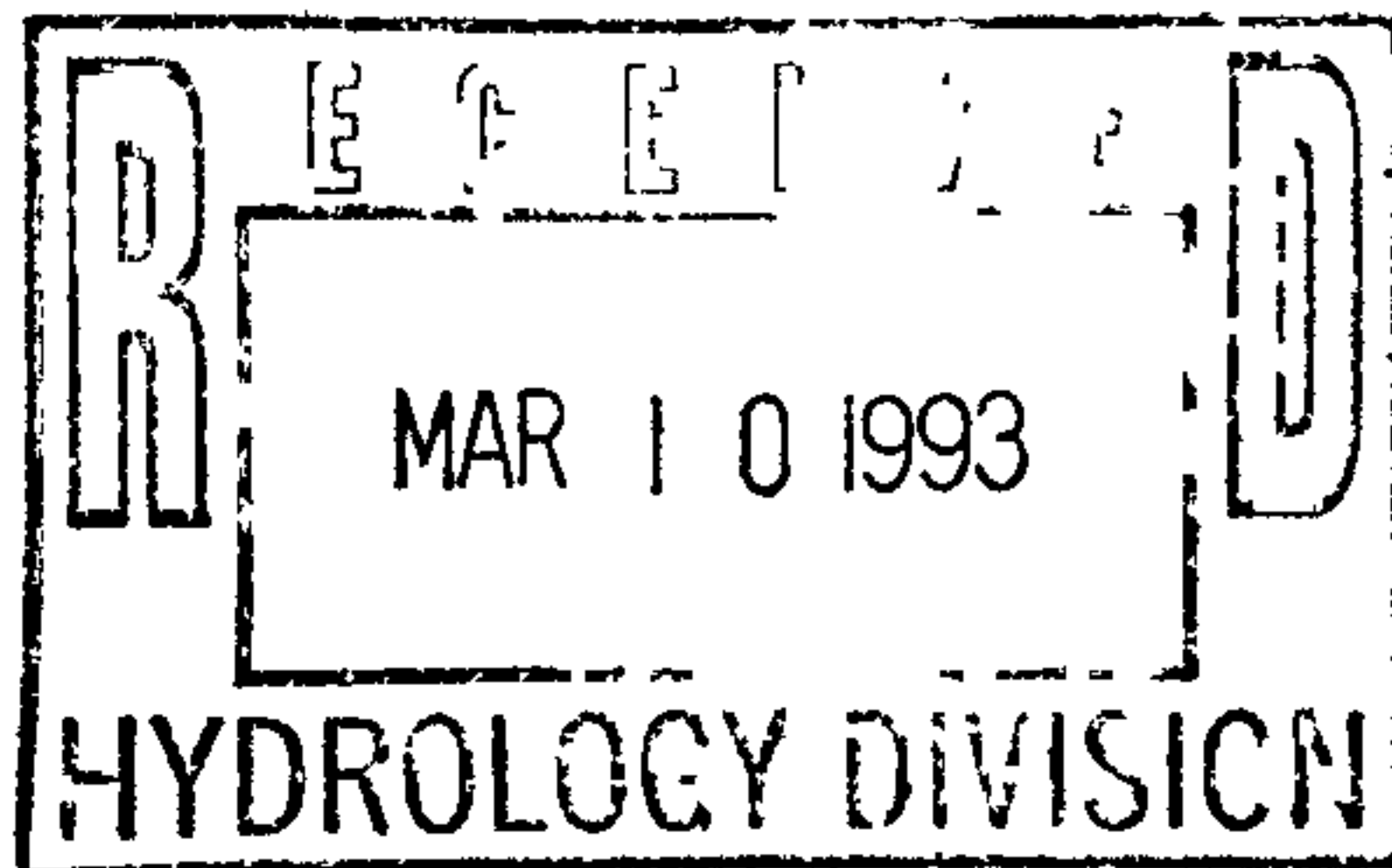
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

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

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
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- ☐ 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)

DATE SUBMITTED

BY:

3-9-93

B Gal

PIPE CULVERT ANALYSIS
COMPUTATION OF CULVERT PERFORMANCE CURVE

March 9, 1993
4" PVC CULVERTS
3617 YUCCA DRIVE

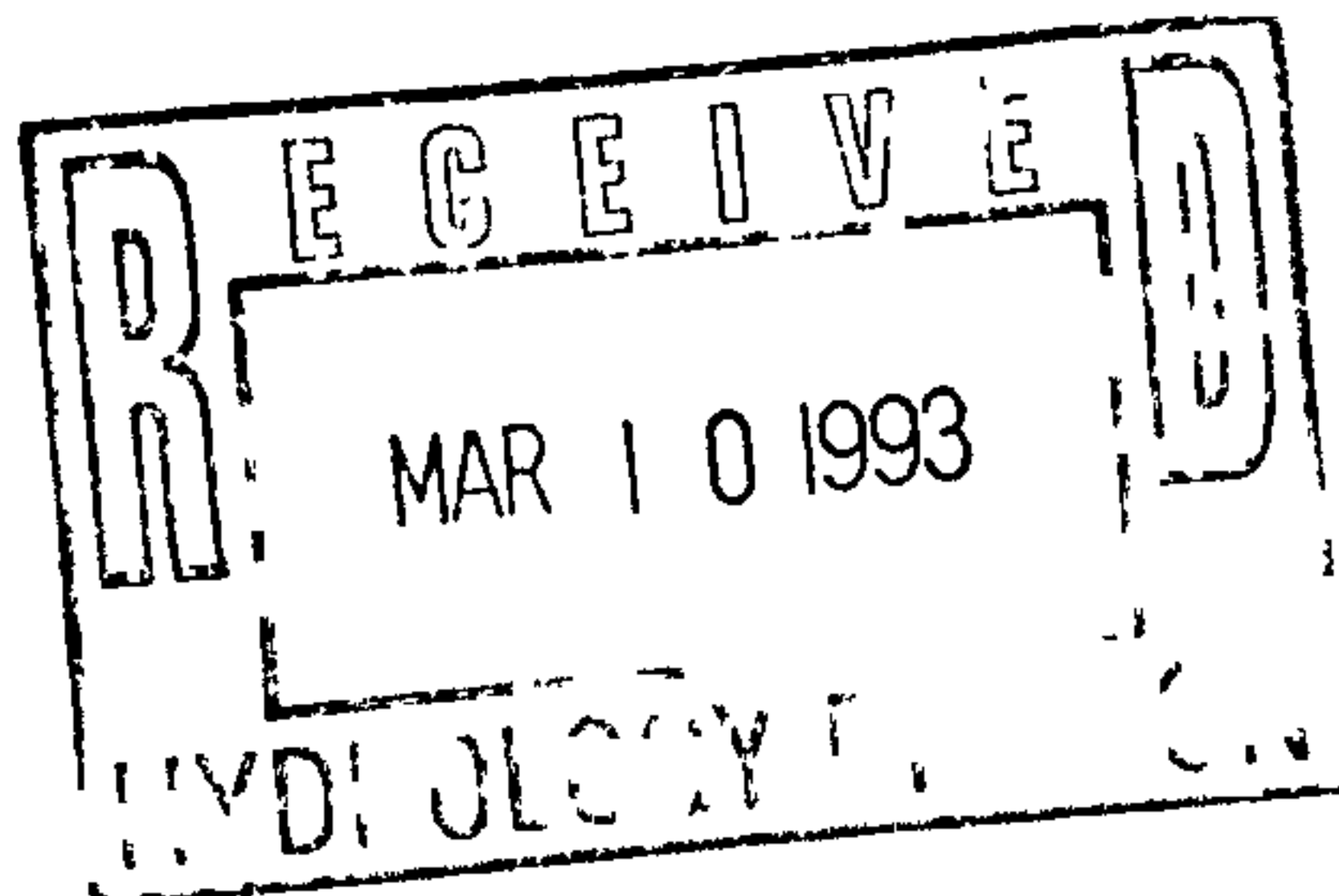
PROGRAM INPUT DATA:
DESCRIPTION

DESCRIPTION	VALUE
Culvert Diameter (feet).....	0.33
FHWA Chart Number (1,2 or 3).....	1
Scale Number on Chart (Type of Culvert Entrance).....	3
Manning's Roughness Coefficient (n-value).....	0.0150
Entrance Loss Coefficient of Culvert Opening.....	0.50
Culvert Length (feet).....	15.0
Culvert Slope (feet per foot).....	0.0040

PROGRAM RESULTS:

Flow Rate (cfs)	Tailwater Depth (ft)	Headwater Inlet Control	Headwater Outlet Control	Normal Depth (ft)	Critical Depth (ft)	Depth at Outlet (ft)	Outlet Velocity (fps)
0.0	0.33	0.17	0.29	0.16	0.12	0.33	0.57
0.1	0.33	0.12	0.31	0.20	0.08	0.33	0.80
0.1	0.33	0.38	0.36	0.26	0.25	0.26	1.36
0.1	0.33	0.25	0.37	0.29	0.18	0.33	1.26
0.1	0.33	0.27	0.40	0.33	0.19	0.33	1.44
0.1	0.33	0.34	0.44	0.33	0.23	0.33	1.61

PIPE CULVERT ANALYSIS COMPUTER PROGRAM Version 1.7 Copyright (c)1986
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(713) 895-8322. All Rights Reserved.



G-52



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 8, 1993

Bob Ryals
Ryals Engineering
4929 Idlewilde SE
Albuquerque, NM 87108

RE: DRAINAGE PLAN FOR 3617 YUCCA NW (G11-D52) ENGINEER'S PLAN DATED
2/26/93.

Dear Mr. Ryals:

Based on the information provided on your March 3, 1993 submittal, listed are some concerns that will need to be addressed prior to final approval:

1. Finish floor elevation to full mean sea level.
2. what type of sediment control do you propose?
3. Basin that is being routed to each proposed p.v.c. pipe. Capacity of the 4" p.v.c. pipe.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya
Bernie J. Montoya, CE
Engineering Assistant

BJM/d1/WPHYD/7575

xc: File

PUBLIC WORKS DEPARTMENT

DRAINAGE INFORMATION SHEET

CORONA DEL SOL LOT 18-E

PROJECT TITLE: DRAINAGE PLAN - 3617 YUCCA DR ZONE ATLAS/DRNG. FILE #: G-11/052DRB #: N/A EPC #: N/A WORK ORDER #: N/ALEGAL DESCRIPTION: LOT 18-E CORONA DEL SOL SUBDIVISIONCITY ADDRESS: 3617 YUCCA DRIVEENGINEERING FIRM: RYALS ENGINEERING CONTACT: BOB RYALSADDRESS: 4929 Idlewilde SE PHONE: 265-8267OWNER: ART LUJAN CONTACT: ART LUJAN

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: A.M.S. BUILDERS CONTACT: ART LUJANADDRESS: 3617 YUCCA DR PHONE: 878-7756

TYPE OF SUBMITTAL:

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

PRE-DESIGN MEETING:

- ☐ YES
☐ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

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☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D. APPROVAL
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☐ SECTOR PLAN APPROVAL
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☐ 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)

DATE SUBMITTED: 3/2/93BY: BRyals

AHYMO PROGRAM (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992
 RUN DATE (MON/DAY/YR) = 03/01/1993
 START TIME (HR:MIN:SEC) = 16:29:44 USER NO.= RYALS_NM.I01
 INPUT FILE =

3617 YUCCA DR.
 HISTORICAL ON SITE ANALYSIS

* THIS HYDROGRAPH IS THE UNDEVELOPED AREA OF 0.1653 ACRES PERVIOUS
 * LAND TREATMENT.
 * THIS ANALYSIS IS DONE USING A 6-HOUR RAINFALL DISTRIBUTION BASED ON
 * NOAA ATLAS 2 WITH PEAK INTENSITY AT 1.4 HOURS (APPENDIX A).THE TIME OF
 * CONCENTRATION IS 12 MINUTES. INITIAL ABSTRACTION AND INFILTRATION ARE
 * FROM TABLES 6 AND 7 RESPESTIVELY. RAINFALL VALUES FOR P60, P360
 * AND P1440 ARE FROM FIGURES FIGURES D,E &F DPM SECTION 22.2, 8-91.

START TIME=0.00

PUNCH CODE=0 PRINT LINES=-2

LAND FACTORS

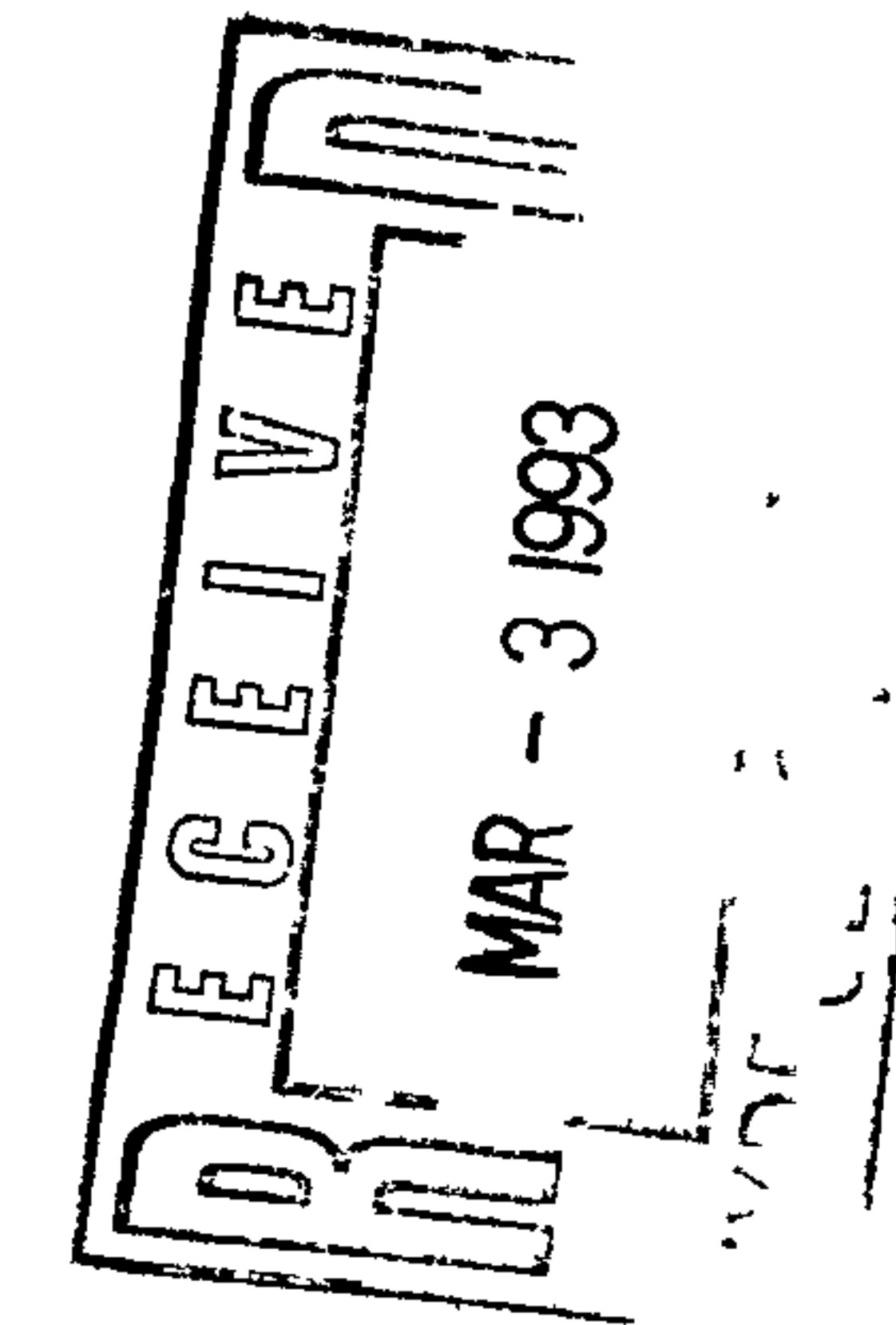
TYPE=1
 TREATMENT A IA=0.40 INF=2.10
 TREATMENT B IA=0.32 INF=1.63
 TREATMENT C IA=0.25 INF=1.15
 TREATMENT D IA=0.10 INF=0.04

RAINFALL

TYPE=1
 RAIN QUARTER=0.00 RAIN ONE=1.87 RAIN SIX=2.20
 RAIN DAY=0.00 DT=0.033333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
 DT = .033333 HOURS END TIME = 5.999940 HOURS

.0000	.0016	.0033	.0050	.0067	.0085	.0103
.0122	.0141	.0160	.0180	.0201	.0222	.0243
.0266	.0289	.0312	.0337	.0362	.0388	.0415
.0443	.0472	.0502	.0534	.0567	.0601	.0637
.0675	.0715	.0758	.0810	.0865	.0924	.1051
.1335	.1773	.2400	.3257	.4384	.5820	.7607
.9789	1.1808	1.2652	1.3365	1.4000	1.4577	1.5108
1.5602	1.6063	1.6495	1.6902	1.7285	1.7648	1.7991
1.8316	1.8624	1.8917	1.9194	1.9458	1.9519	1.9576
1.9631	1.9683	1.9732	1.9780	1.9826	1.9870	1.9912
1.9953	1.9993	2.0031	2.0068	2.0105	2.0140	2.0174
2.0207	2.0240	2.0272	2.0303	2.0333	2.0363	2.0392
2.0420	2.0448	2.0476	2.0502	2.0529	2.0554	2.0580
2.0605	2.0629	2.0653	2.0677	2.0701	2.0724	2.0746
2.0769	2.0791	2.0812	2.0834	2.0855	2.0876	2.0896
2.0916	2.0936	2.0956	2.0976	2.0995	2.1014	2.1033
2.1052	2.1070	2.1088	2.1106	2.1124	2.1142	2.1159
2.1176	2.1193	2.1210	2.1227	2.1244	2.1260	2.1276
2.1292	2.1308	2.1324	2.1340	2.1355	2.1371	2.1386
2.1401	2.1416	2.1431	2.1446	2.1461	2.1475	2.1489
2.1504	2.1518	2.1532	2.1546	2.1560	2.1573	2.1587
2.1601	2.1614	2.1627	2.1641	2.1654	2.1667	2.1680



COMPUTE NM HYD ID=1 HYD NO=101.20 DA=0.00026 SQ MI
PER A=100.00 PER B=0.00 PER C=0.00 PER D=0.00
TP=-0.13333 MASS RAINFALL=-1

K = .179996HR TP = .133330HR K/TP RATIO = 1.350000 SHAPE CONSTANT, N = 2.667659
UNIT PEAK = .49434 CFS UNIT VOLUME = .9693 B = 253.50 P60 = 1.8700
AREA = .000260 SQ MI IA = .40000 INCHES INF = 2.10000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = .49265 INCHES = .0068 ACRE-Feet
PEAK DISCHARGE RATE = .23 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 16:29:44

AHYMO PROGRAM (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992
 RUN DATE (MON/DAY/YR) = 03/01/1993
 START TIME (HR:MIN:SEC) = 21:34:42 USER NO.= RYALS_NM.I01
 INPUT FILE = YUCCA2.DAT

* 1566 BLOCK 15 DEL NORTE SUBDIVISION
 * DEVELOPED ON SITE ANALYSIS
 *
 * THIS HYDROGRAPH IS THE DEVELOPED AREA OF 0.1653 ACRES(.00102 SQ MI),
 * .0511 AC (.00008SQ MI)LANDSCAPED AND .11419 AC(.00018 SQ MI) OF
 * PAVED AND BLDG. LAND TREATMENT.
 * THIS ANALYSIS IS DONE USING A 6-HOUR RAINFALL DISTRIBUTION BASED ON
 * NOAA ATLAS 2 WITH PEAK INTENSITY AT 1.4 HOURS (APPENDIX A).THE TIME OF
 * CONCENTRATION IS 12 MINUTES. INITIAL ABSTRACTION AND INFILTRATION ARE
 * FROM TABLES 6 AND 7 RESPESTIVELY. RAINFALL VALUES FOR P60, P360
 * AND P1440 ARE FROM FIGURES FIGURES D,E &F DPM SECTION 22.2, 8-91.

START TIME=0.00

PUNCH CODE=0 PRINT LINES=-2

LAND FACTORS

TYPE=1
 TREATMENT A IA=0.40 INF=2.10
 TREATMENT B IA=0.32 INF=1.63
 TREATMENT C IA=0.25 INF=1.15
 TREATMENT D IA=0.10 INF=0.04

RAINFALL

TYPE=1
 RAIN QUARTER=0.00 RAIN ONE=1.87 RAIN SIX=2.20
 RAIN DAY=0.00 DT=0.033333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
 DT = .033333 HOURS END TIME = 5.999940 HOURS

.0000	.0016	.0033	.0050	.0067	.0085	.0103
.0122	.0141	.0160	.0180	.0201	.0222	.0243
.0266	.0289	.0312	.0337	.0362	.0388	.0415
.0443	.0472	.0502	.0534	.0567	.0601	.0637
.0675	.0715	.0758	.0810	.0865	.0924	.1051
.1335	.1773	.2400	.3257	.4384	.5820	.7607
.9789	1.1808	1.2652	1.3365	1.4000	1.4577	1.5108
1.5602	1.6063	1.6495	1.6902	1.7285	1.7648	1.7991
1.8316	1.8624	1.8917	1.9194	1.9458	1.9519	1.9576
1.9631	1.9683	1.9732	1.9780	1.9826	1.9870	1.9912
1.9953	1.9993	2.0031	2.0068	2.0105	2.0140	2.0174
2.0207	2.0240	2.0272	2.0303	2.0333	2.0363	2.0392
2.0420	2.0448	2.0476	2.0502	2.0529	2.0554	2.0580
2.0605	2.0629	2.0653	2.0677	2.0701	2.0724	2.0746
2.0769	2.0791	2.0812	2.0834	2.0855	2.0876	2.0896
2.0916	2.0936	2.0956	2.0976	2.0995	2.1014	2.1033
2.1052	2.1070	2.1088	2.1106	2.1124	2.1142	2.1159
2.1176	2.1193	2.1210	2.1227	2.1244	2.1260	2.1276
2.1292	2.1308	2.1324	2.1340	2.1355	2.1371	2.1386
2.1401	2.1416	2.1431	2.1446	2.1461	2.1475	2.1489

COMPUTE NM HYD ID=1 HYD NO=101.20 DA=0.00026 SQ MI
PER A=0.00 PER B=30.91 PER C=0.00 PER D=69.09
TP=-0.13333 MASS RAINFALL=-1

K = .072665HR TP = .133330HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .70904 CFS UNIT VOLUME = .9840 B = 526.28 P60 = 1.8700
AREA = .000180 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .152629HR TP = .133330HR K/TP RATIO = 1.144743 SHAPE CONSTANT, N = 3.093826
UNIT PEAK = .17443 CFS UNIT VOLUME = .9150 B = 289.38 P60 = 1.8700
AREA = .000080 SQ MI IA = .32000 INCHES INF = 1.63000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.55734 INCHES = .0216 ACRE-FEET
PEAK DISCHARGE RATE = .62 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 21:34:42