



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 22, 1999

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

RE: ENGINEER'S CERTIFICATION FOR AMERICAN SQUARE/ DAVID'S BRIDAL
ENGINEER'S CERTIFICATION STAMP DATED 3/15/99

Dear Mr. Krenick:

Based on the information provided on your March 15, 1999 submittal, Engineer's Certification for the above referenced site is acceptable.

If I can be of any further assistance, please feel free to contact me at 924-3330.

Sincerely,

Andrew Garcia
Drainage Inspector

c: file

DRAINAGE INFORMATION SHEET

PROJECT TITLE: American Square - David's Bridal ZONE/ATLAS/DRNG, FILE#: H-16 1D83C
DRB#: _____ EPC# _____ WORK ORDER#: _____
LEGAL DESCRIPTION: American Square, Tract C
CITY ADDRESS: 3101 MENAL NE

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>David's Bridal</u>	CONTACT:	<u>Doug Heller</u>
ADDRESS:	<u>2325 San Pedro NE, Suite 2B, Albuquerque, NM 87110</u>	PHONE:	<u>884-9110</u>
ARCHITECT:	<u>George Rainhart</u>	CONTACT:	<u>Doug Heller</u>
ADDRESS:	<u>2325 San Pedro NE, Suite 2B, Albuquerque, NM 87110</u>	PHONE:	<u>884-9110</u>
SURVEYOR:	<u>N/A</u>	CONTACT:	_____
ADDRESS:	_____	PHONE:	_____
CONTACTOR:	<u>N/A</u>	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

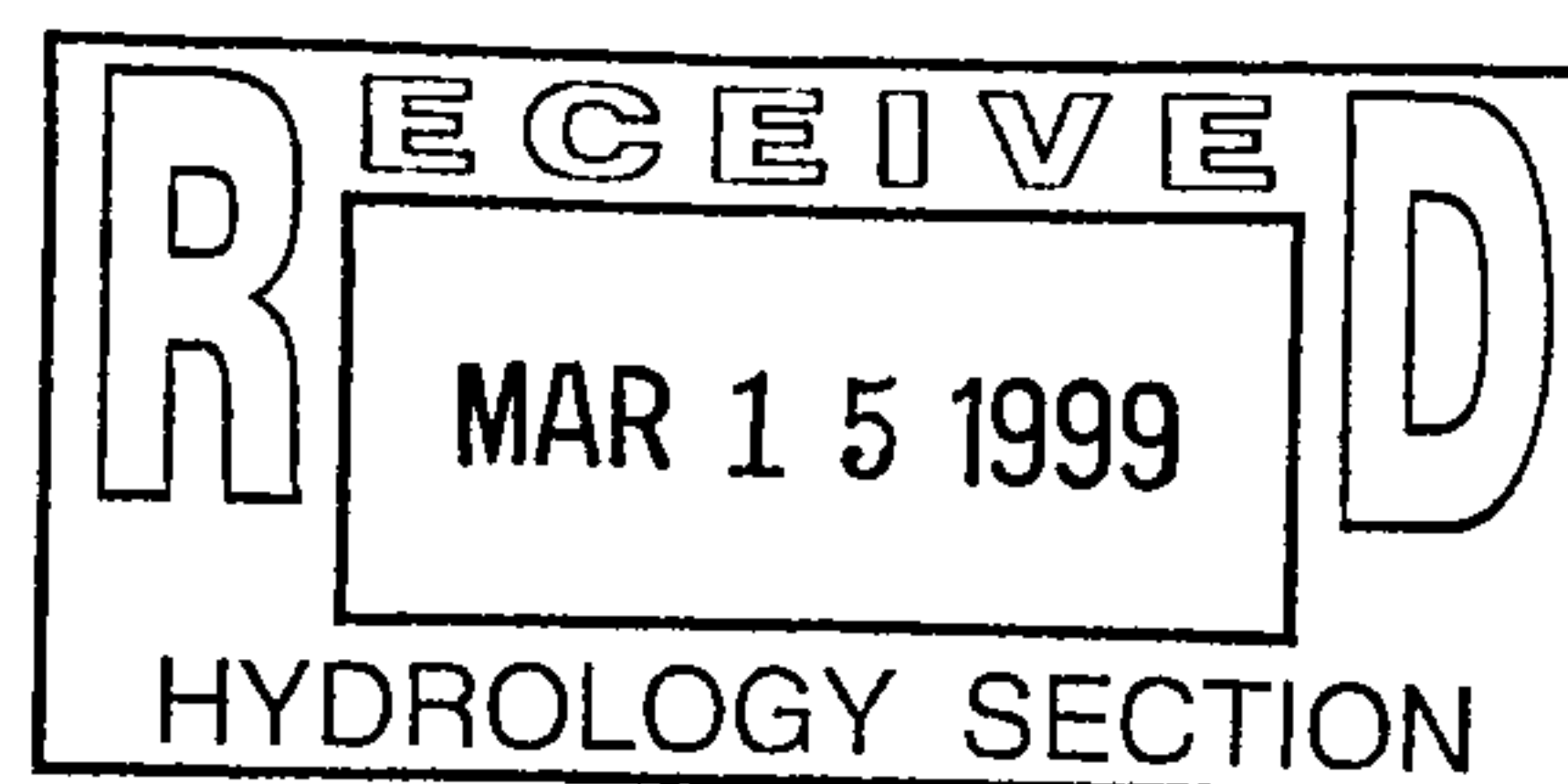
CHECK TYPE OF APPROVAL SOUGHT:

☐ 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 - 30 day IMMED. TEMP C.O.
☐ RELEASE OF FINANCIAL GUARANTY

DATE SUBMITTED: 3-15-99

BY: _____

Gregory J. Krenik, PE



Per 4/22/99
AG



November 27, 1998

Greg Krenik
Mark Goodwin & Associates Inc.
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: DRAINAGE PLAN FOR DAVID'S BRIDAL AT AMERICAN SQUARE (H16-D83C)
ENGINEER'S STAMP DATED 10/15/98

Dear Mr. Krenik:

Based on the information provided on your October 15, 1998 submittal, 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.

Also, Engineer Certification will be required prior to Certificate of Occupancy release.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File ✓

Sincerely

Bernie J. Montoya CE
Associate Engineer

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

PROJECT TITLE: American Square - David's Bridal

ZONE/ATLAS/DRNG, FILE#: H-16

DRB#: EPC#

WORK ORDER#: H16-D83C

LEGAL DESCRIPTION: American Square, Tract C

CITY ADDRESS:

ENGINEERING FIRM: Mark Goodwin & Associates, PA

CONTACT: Gregory J. Krenik, PE

ADDRESS: P.O. Box 90606, Albuquerque, NM 87199

PHONE: 828-2200

OWNER: David's Bridal

CONTACT: Doug Heller

ADDRESS: 2325 San Pedro NE, Suite 2B, Albuquerque, NM 87110

PHONE: 884-9110

ARCHITECT: George Rainhart

CONTACT: Doug Heller

ADDRESS: 2325 San Pedro NE, Suite 2B, Albuquerque, NM 87110

PHONE: 884-9110

SURVEYOR: N/A

CONTACT:

ADDRESS:

PHONE:

CONTACTOR: N/A

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

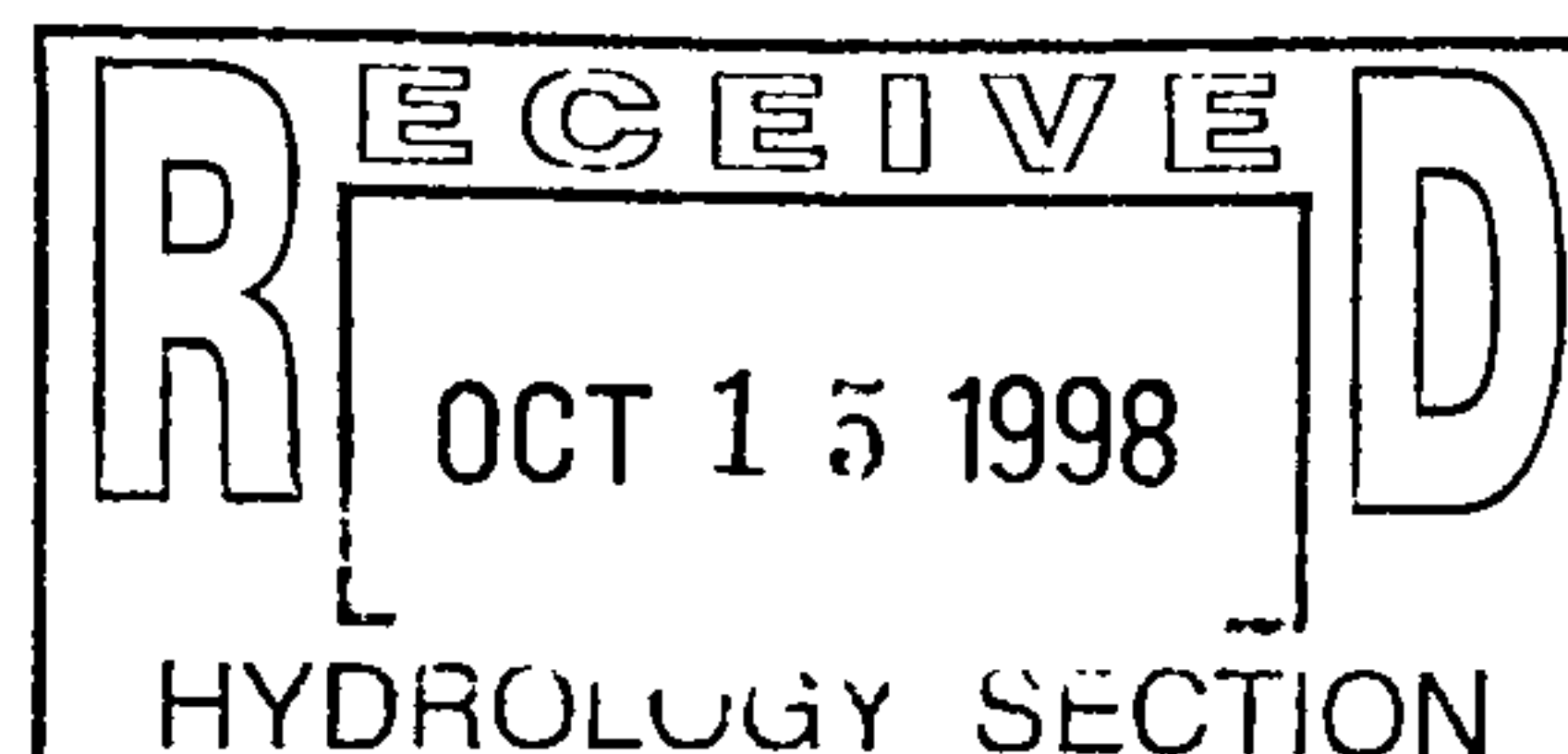
☐ OTHER

☐ RELEASE OF FINANCIAL GUARANTY

DATE SUBMITTED: 10-15-98

BY:

Gregory J. Krenik, PE



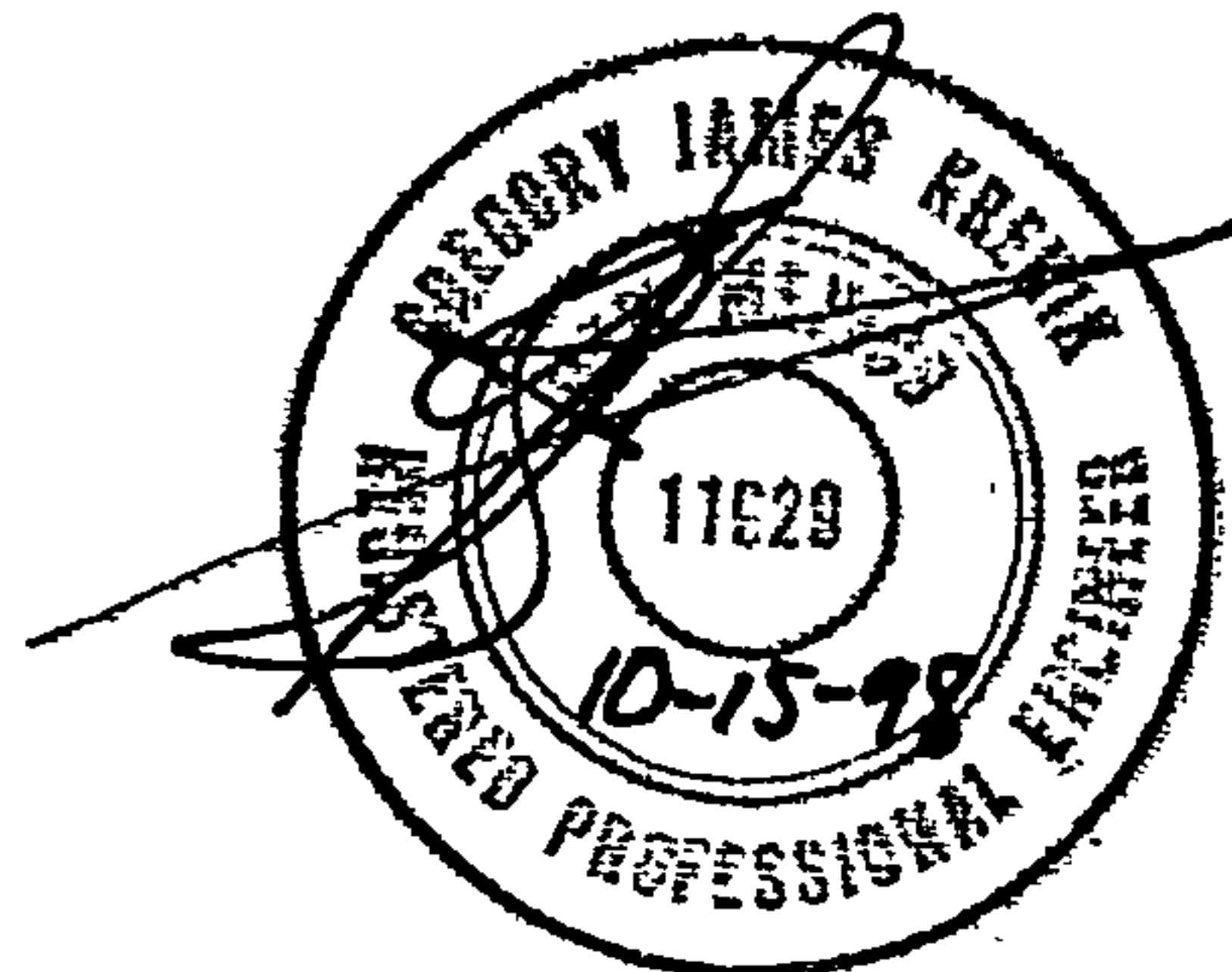
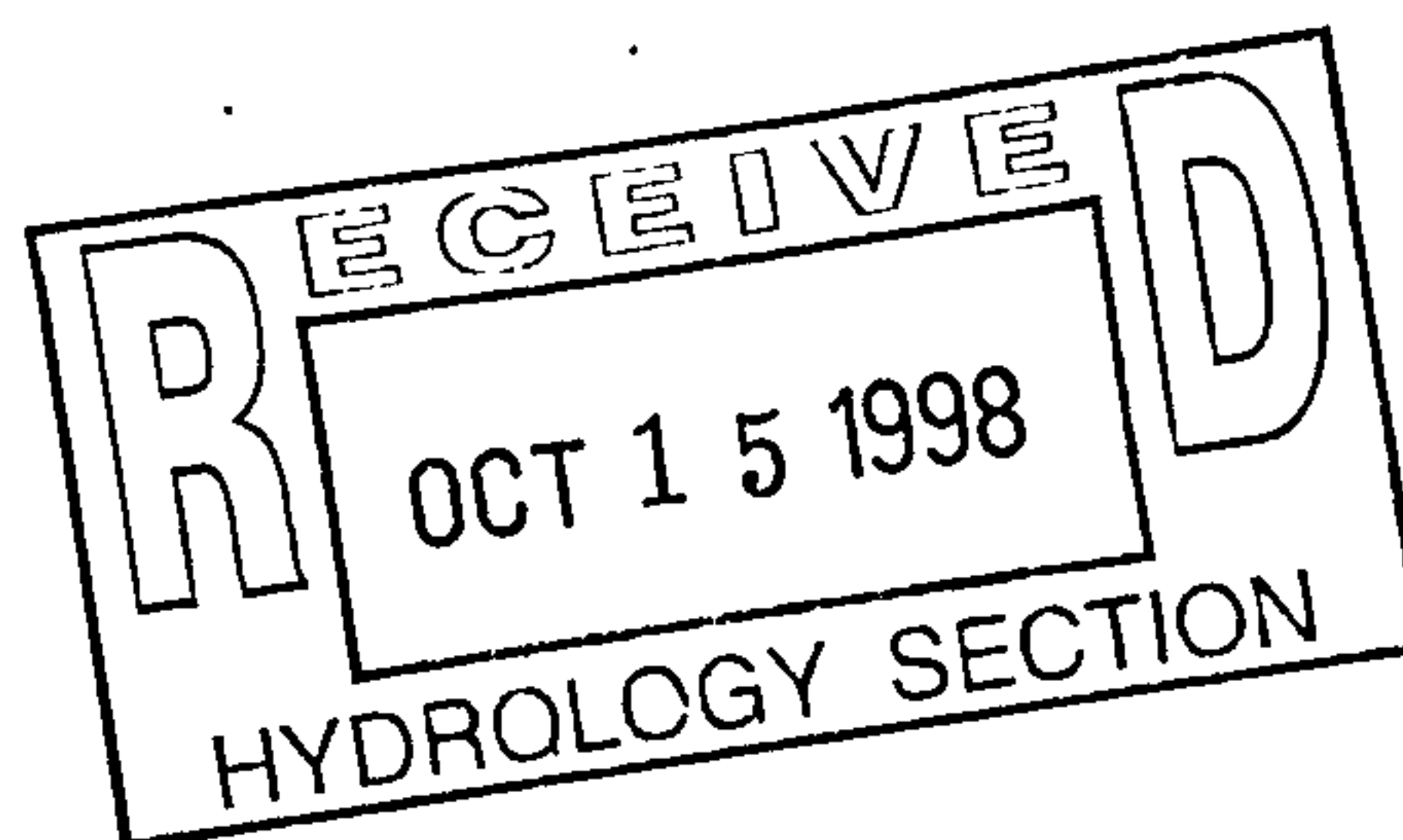


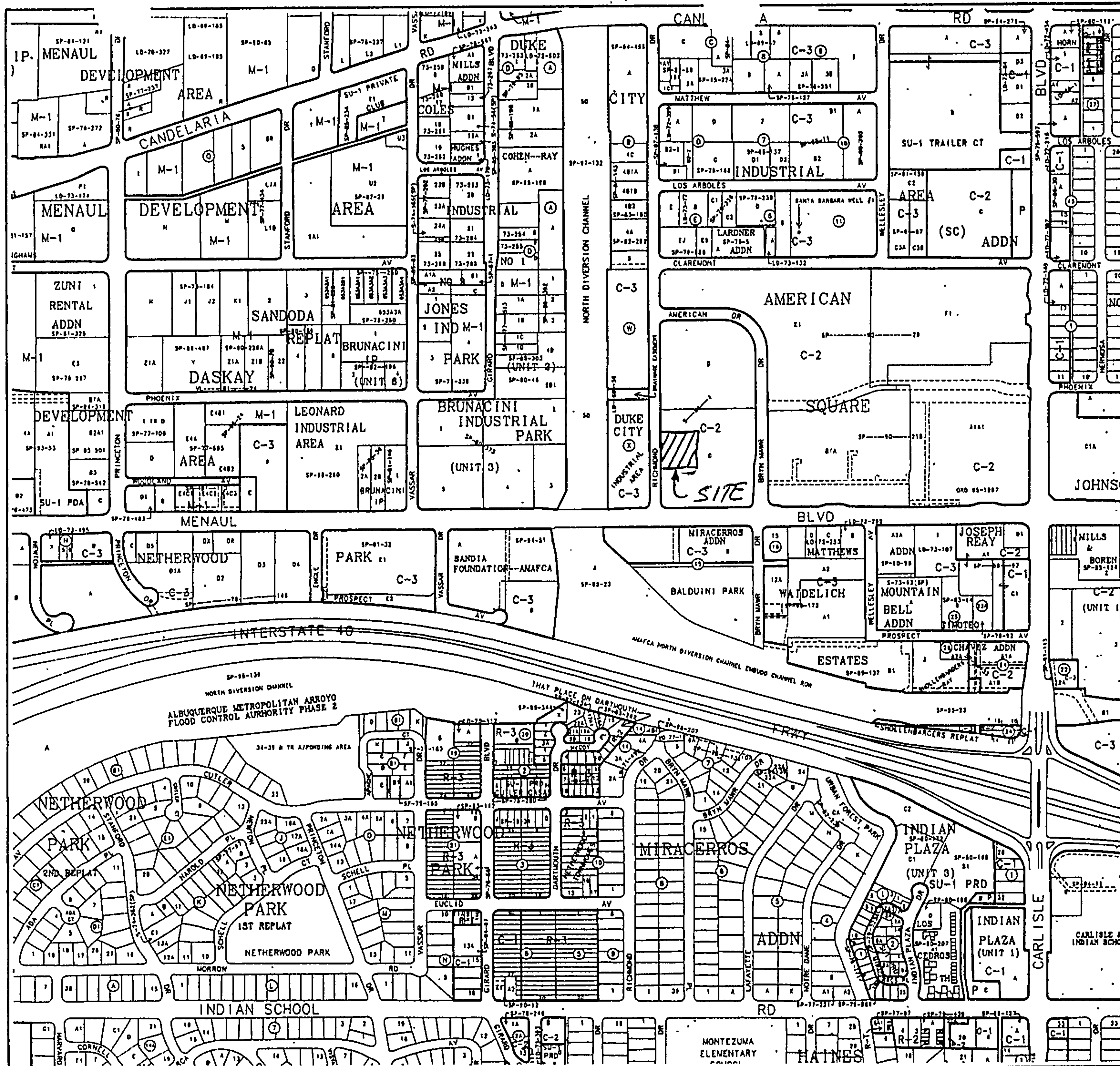
MARK GOODWIN

& ASSOCIATES
CONSULTING ENGINEERS

dmg

DRAINAGE CALCULATIONS
FOR
AMERICAN SQUARE
DAVID'S BRIDAL





GRAPHIC SCALE IN FEET

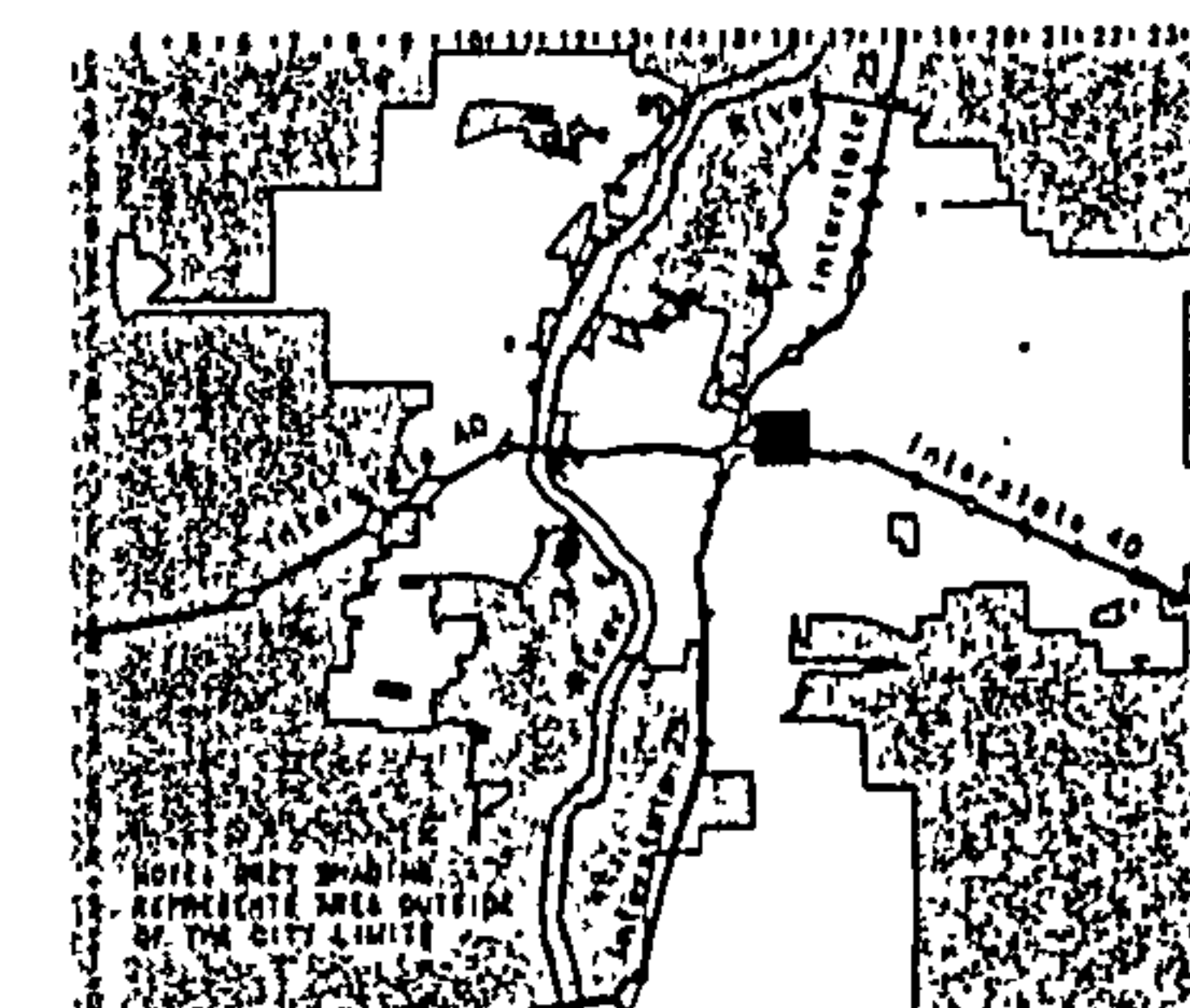


CITY OF
Albuquerque

Albuquerque Geographic Information System
PLANNING DEPARTMENT

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Map Amended through October 30, 1997



LEGAL DESCRIPTION

TION
R3E
SEC 10

UNIFORM PROPERTY CODE
1-018-088

H-16-Z



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT DAVIDS BRIDAL
SUBJECT DRAINAGE CALCS
BY GJK DATE 10-15-98
CHECKED _____ DATE _____
SHEET 1 OF _____

- THIS PLAN FOLLOWS THE AMERICAN SQUARE - JC PENNEY DRAINAGE REPORT PREPARED BY MARK GOODWIN AND ASSOCIATES - 3-28-97. "APPENDIX A"
 - ALL LOAD TREATMENTS REMAIN THE SAME.
 - ALL RUNOFF IS THE SAME.
 - THIS PLAN DEVELOPS THE AREA THAT WAS KNOWN AS "MAJOR 2" ON THE JC PENNEY PLAN. THIS AREA IS NOW DAVIDS BRIDAL, PROPOSED SHOPS AND AN OPTIONAL WAREHOUSE.
 - THERE IS AN EXISTING 12" DI PIPE WHICH RUNS UNDER THE PROPOSED WAREHOUSE AND DAVID'S BRIDAL, ALL PARTY'S ARE AWARE OF THIS AND IT WAS PREVIOUSLY APPROVED TO BE BUILT ON.

APPENDIX "A"

DRAINAGE CALCULATIONS

for

AMERICAN SQUARE

J.C. Penney

November 1996

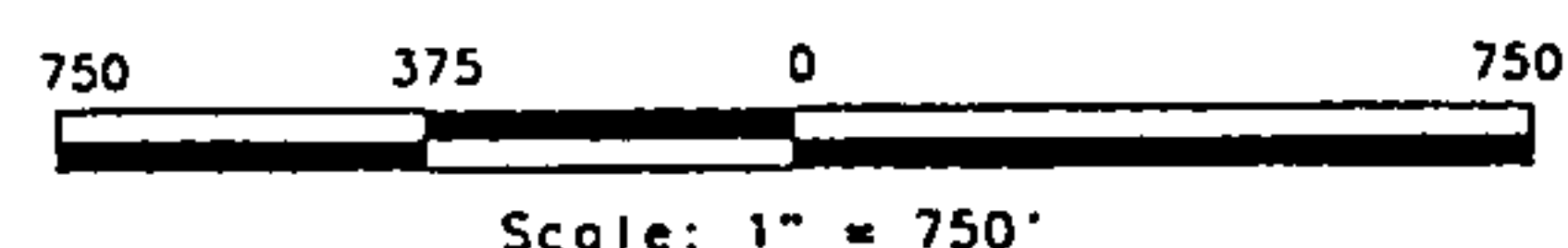
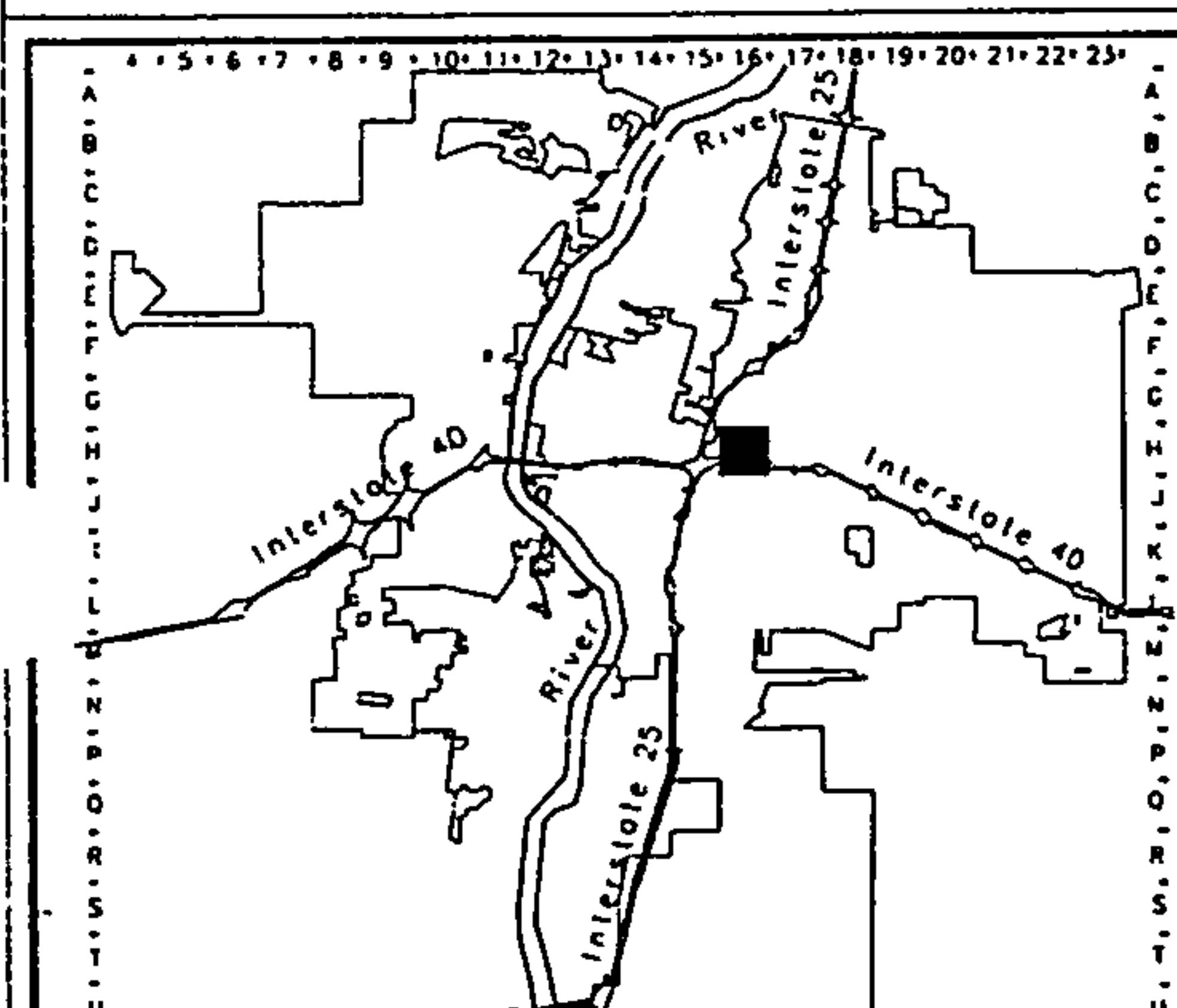
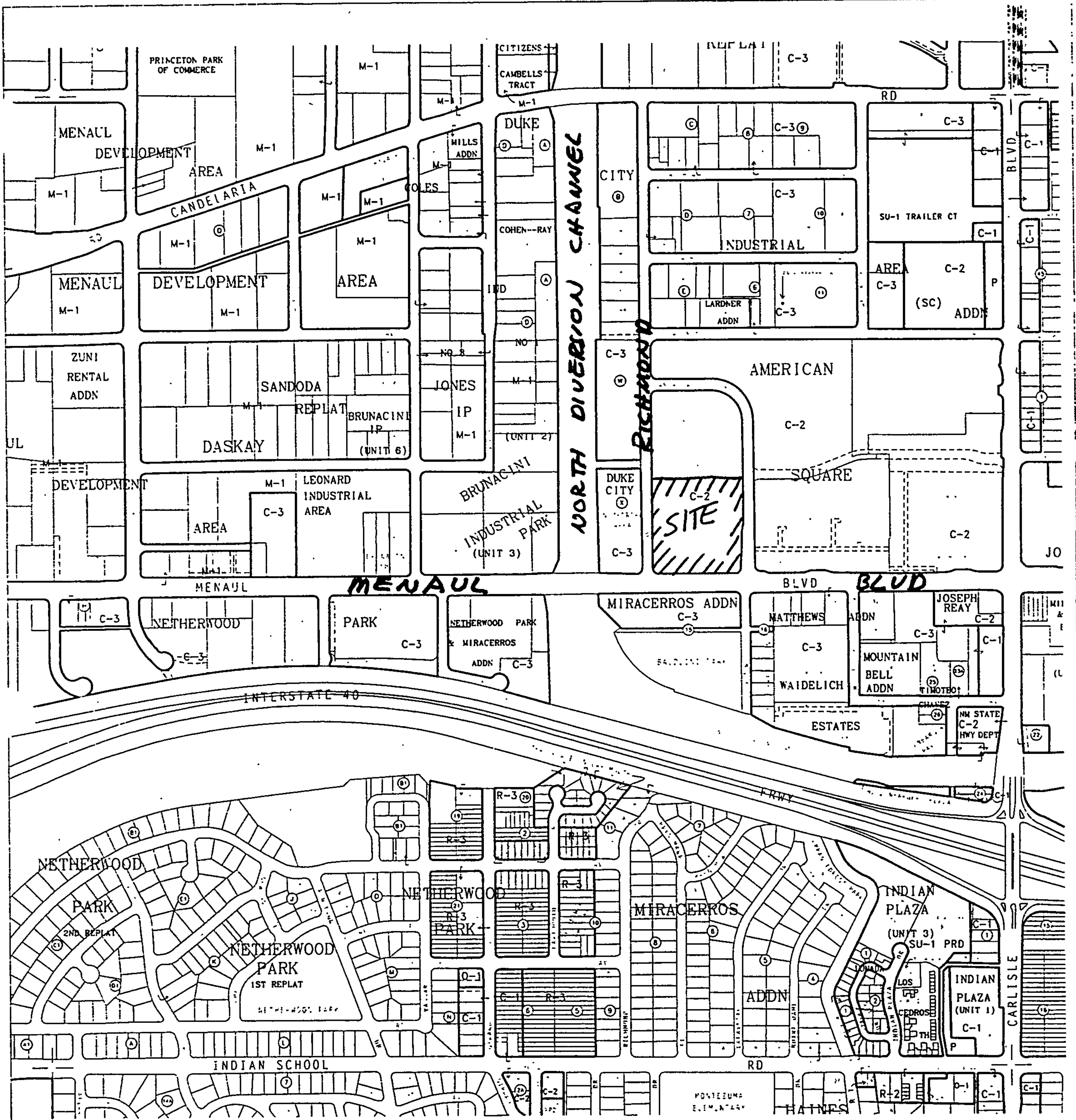


12-19-96

2-7-97

3-28-97

D. MARK GOODWIN & ASSOCIATES



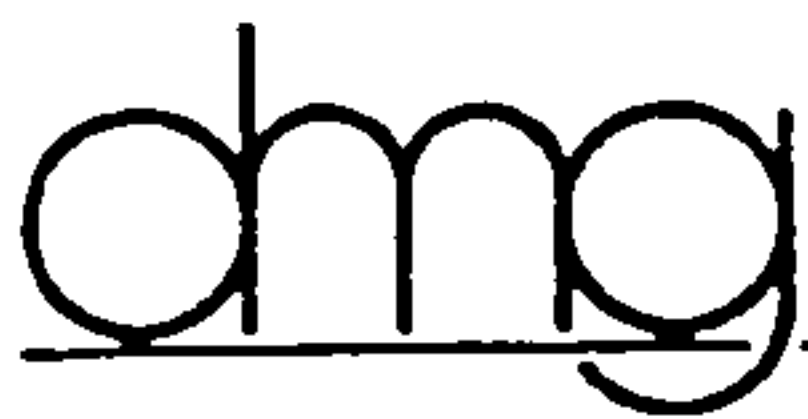
A G I S
 Albuquerque Geographic Information System
 City of Albuquerque

© Planning Department July 07, 1993

LEGAL DESCRIPTION
 T10N
 R3E
 SEC 10

UNIFORM PROPERTY CODE
 1-016-059

H-16-Z



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT AMERICAN SQUARE - AC
SUBJECT DRAINAGE CALCS
BY GJSK DATE 11-1-96
CHECKED _____ DATE _____

SHEET 1 OF _____

REVISED 12-19-96

2-6-97
3-27-97

- TOTAL SITE = 5.9220 AC.
- THIS SITE IS BASIN "A6" PER THE DRAINAGE REPORT FOR AMERICAN SQUARE PREPARED BY ESPEY, HUSTON & ASSOCIATES, INC. - DATED 4-5-89.
- THERE ARE NO OFFSITE FLOWS THAT ENTER THIS SITE.
- IT DOES NOT LIE WITHIN A 100 YR FLOOD ZONE.
- THIS SITE IS TO DRAIN TO MENAUL BLVD THROUGH SIDEWALK CULVERTS PER THE E, H & ASSOC. REPORT.
- THE ALLOWABLE DISCHARGE IS 22.8 CFS DIRECT DISCHARGE
- THE SITE WILL BE SPLIT INTO FIVE DRAINAGE BASINS.
 - BASIN 1 - DRAINS OFFSITE TO THE NW TO THE CHANNEL AT RICHMOND THAT DRAINS TO THE N. DIVERSION CHANNEL.
 - BASIN 2 - DRAINS TO THE TRUCK WELL THEN IS PUMPED BY A SUMP PUMP TO BASIN 1.
 - BASIN 3 - DRAINS TO THE WEST PARKING LOT INLET
 - BASIN 4 - DRAINS TO THE EAST PARKING LOT INLET
 - BASIN 5 - DRAINS TO MENAUL THROUGH THE SOUTH ENTRANCE

$$P_1 = 1.97 \text{ in}$$

$$DT = 0.03333 \text{ HR}$$

$$P_6 = 2.30 \text{ in}$$

$$TP = 0.1333 \text{ HR}$$

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

BASIN	AREA	TYPE "B"	TYPE "D"
1	0.9989 AC	0.0878 AC = 8.79%	91.21%
2	0.4220 AC	0.0730 AC = 17.30%	82.70%
3	1.2700 AC	0.1151 AC = 9.07%	90.93%
4	2.3656 AC	0.1159 AC = 4.90%	95.10%
5	0.8655 AC	0.2279 AC = 26.34%	73.66%
	<u>5.9220</u>		

FROM AHYMO OUTPUT - SHEETS 8-22

BASIN	Q (CFS)
1	4.41
2	1.78
3	5.59
4	10.63
5	3.45
	<u>25.86</u>

$$\text{TOTAL THAT DRAINS TO MENAUL} \\ 25.86 - 4.41 - 1.78 = 19.67 \text{ CFS} < 22.8 \text{ CFS}$$

OK

$$\text{TOTAL THAT DRAINS TO RICHMOND} \\ 4.41 + 1.78 = 6.19 \text{ CFS}$$



PROJECT AMERICA
SUBJECT DRAINAGE
BY GSK
CHECKED _____

८१२

• RUN OLD REPORT WITH NEW HYMNOLOGY
FROM THE REPORT TYPE "D" = 83% } DEVELOPE
(E, H & A) (SHEET 4) TYPE "B" = 17% } PER E, H

FROM THE AHYMO OUTPUT SHEETS 23-25

$Q = 142.23 \text{ CFS}$

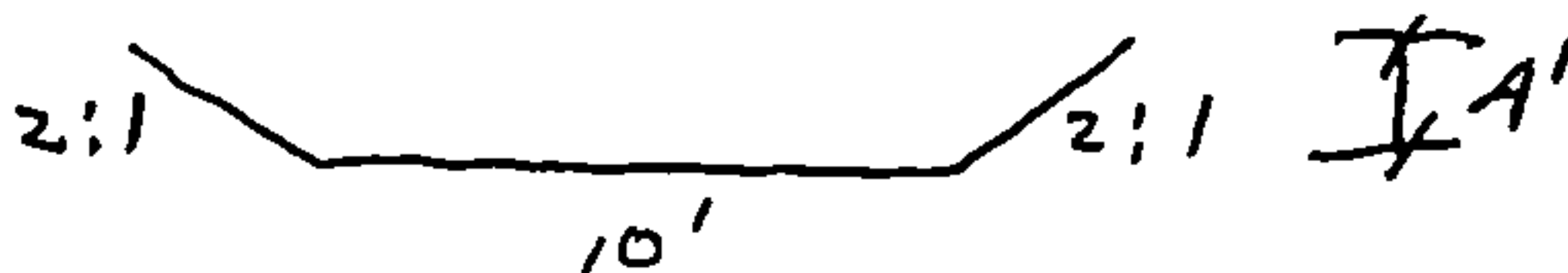
THIS IS LARGER THAN THE 113.1 CFS PE
REPORT. (SEE SHT 4)

SINCE THE CAPACITY OF THE CHANNEL
THE FLOW IS WELL WITHIN LIMITS. (S

- ALL FLOW FOR THIS BASIN WILL GET TO THE DIVERSION CHANNEL.
- THE INLET IN MENAUL TIES INTO A 30" S THAT RUNS TO THE WEST AND DISCHARGES TO DIVERSION CHANNEL
- THE CHANNEL RUNNING EAST-WEST ACROSS THE PROPERTY (WHICH IS UNDEVELOPED) RUNS FROM RIC WEST TO THE DIVERSION CHANNEL. THIS EX CHANNEL IS ALREADY ACCEPTING RUNOFF FROM AND CLAREMONT.
- FIND d in the channel from Richmond THE NORTH DIVERSION CHANNEL.

USE UPDATED FLOW

$$\zeta = 0,009 \quad \eta = 0,013$$



$$d = 1.12$$

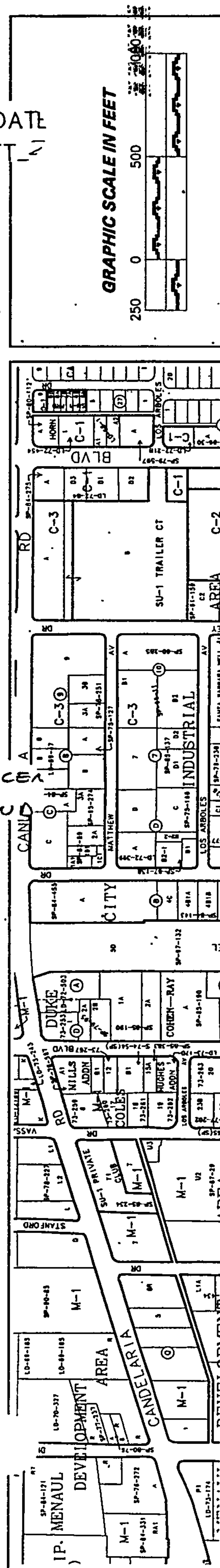
$$w_p = 14,48$$

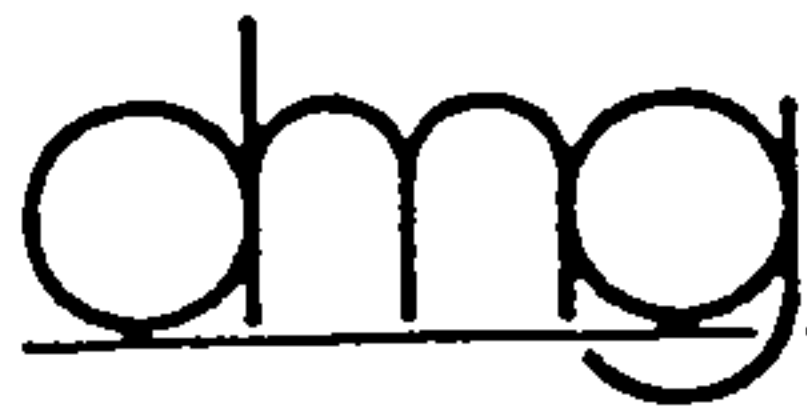
$$\Delta = 13.7088$$

$$V = 10.4556 \text{ m/s}$$

$$Q = 143,33 \text{ Cs} \approx 142,23 \text{ OK}$$

this leaves $4 - 1.12 = 2.88'$ OF FREE B





D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT AMERICAN SQUARE - JC
SUBJECT DRAINAGE CALCS
BY GSK DATE 12-19-96
CHECKED _____ DATE _____

SHEET 2 OF _____
REVISED 2-6-97

- RUN OLD REPORT WITH NEW HYDROLOGY
FROM THE REPORT TYPE "D" = 83% } DEVELOPED CONDITIONS
(E, H & A) (SHEET 4) TYPE "B" = 17% } PER E, H & ASSOC. REPORT

FROM THE AHYMO OUTPUT SHEETS 23-25

$$Q = 142.23 \text{ CFS}$$

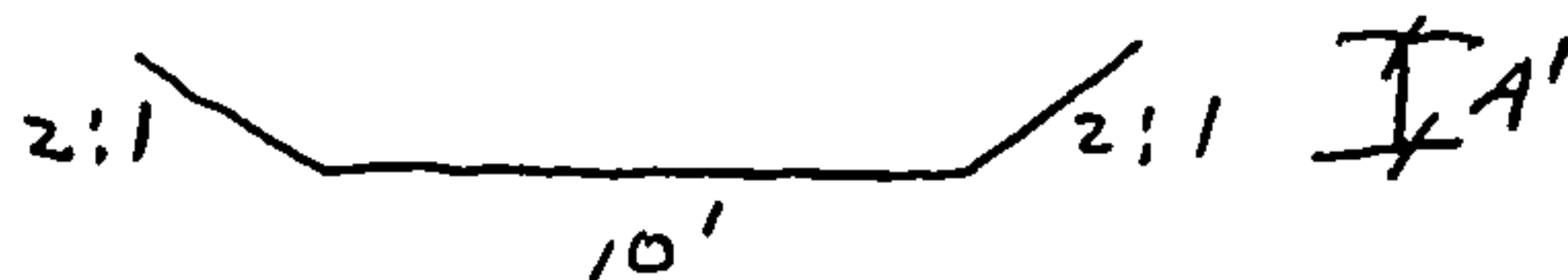
THIS IS LARGER THAN THE 113.1 CFS PER THE E, H & ASSOC REPORT. (SEE SHT 4)

SINCE THE CAPACITY OF THE CHANNEL IS 842 CFS THE FLOW IS WELL WITHIN LIMITS. (SEE SHT 5)

- ALL FLOW FOR THIS BASIN WILL GET TO THE NORTH DIVERSION CHANNEL.
- THE INLET IN MENAUL TIES INTO A 30" STORMDRAIN THAT RUNS TO THE WEST AND DISCHARGES TO THE DIVERSION CHANNEL
- THE CHANNEL RUNNING EAST-WEST ACROSS THE ADJACENT PROPERTY (WHICH IS UNDEVELOPED) RUNS FROM RICHMOND WEST TO THE DIVERSION CHANNEL. THIS EXISTING CHANNEL IS ALREADY ACCEPTING RUNOFF FROM RICHMOND AND CLAREMONT.
- FIND d IN THE CHANNEL FROM RICHMOND TO THE NORTH DIVERSION CHANNEL.

USE UPDATED FLOW

$$S = 0.009 \quad n = 0.013$$



$$d = 1.12$$

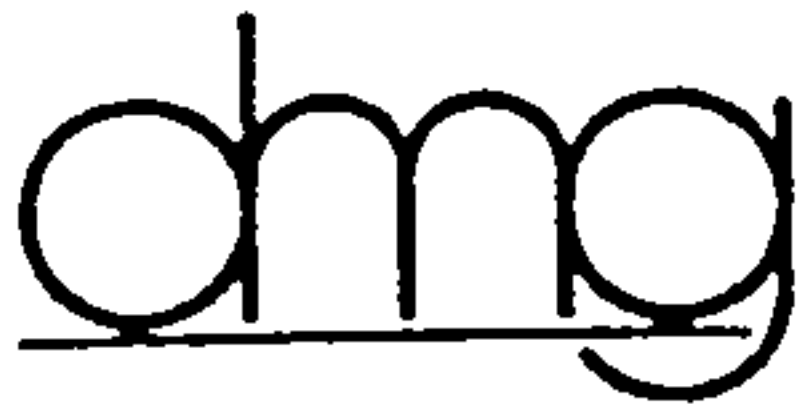
$$w_p = 14.48$$

$$A = 13.7088$$

$$V = 10.4556 \text{ ft/s}$$

$$Q = 143.33 \text{ CFS} \approx 142.23 \text{ OK}$$

THIS LEAVES $4 - 1.12 = 2.88'$ OF FREE BOARD.



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT AMERICAN SOURCE - SC
SUBJECT DRAINAGE CALCS
BY GSK DATE 11-1-96
CHECKED _____ DATE _____

SHEET 3 OF _____

REVISED 12-19-96 3-27-97
2-6-97

- SIZE INLETS FOR SUMP CONDITIONS

BASIN 3
 $Q = 5.59 \text{ CFS}$

BASIN 4
 $Q = 10.63$

$Q/P = 3.0 H^{1.5}$
ASSUME 50% clogged

- USE A DOUBLE "0" INLET $P = 17$

BASIN 3
 $H = 0.36' < 0.5' \text{ OK}$

- USE TWO DOUBLE "0" INLETS $P = 34$

BASIN 4
 $H = 0.35' < 0.5' \text{ OK}$

- ADDED FLOW TO RICHMOND WILL NOT AFFECT THE CAPACITY OF THE CHANNEL.

EXISTING Q PER EHA REPORT BUT REVISED
WITH NEW HYDROLOGY SEE PAGE 2

$$Q = 142.23 \text{ CFS}$$

$$\text{ADDED FLOW} = 6.19 \text{ CFS}$$

$$\text{TOTAL } Q = 148.42 \text{ CFS}$$

FIND NEW d IN CHANNEL

$$d = 1.14$$

$$WP = 14.56$$

$$A = 13.999$$

$$V = 10.56 \text{ F/S}$$

$$Q = 147.88 \text{ CFS} \approx 148.42 \text{ OK}$$

THIS LEAVES 2.86' OF FREEBOARD.

- SIZE INLET IN SUMP IN TRUCK WELL

$$Q = 1.78 \text{ CFS}$$

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

USE A 2.5 x 3.0 OPENING

$$H = 0.23' \text{ OK}$$

- SIZE STORMDRAIN PIPES

18" RCP AT 1% CARRIES 10.5 CFS

18" RCP AT 3% CARRIES 18.0 CFS

SEE NOMO SHEET 6

h

ESPEY, HUSTON & ASSOCIATES INC.

Engineering & Environmental Consultants

SUBJECT CALCULATIONS

AMERICAN SQUARE

SHEET 3 OF 10 BY DL
DATE 8-7-86 CK BY _____

REVISED AP#13 8-26-86 DL
* UPDATED: 4-5-89 DL

DEVELOPED CONDITIONS														
AP#	BASIN	AREA ACT	L FT.	H FT.	t _c MIN.	%IMP.	'C'	Q ₁₀₀ CFS	Q ₁₀ CFS	CN	RO ₁₀₀ IN.	RO ₁₀ IN.	V ₁₀₀ CF.	V ₁₀ CF.
1	A1	2.2	800	10	10	100	0.90	9.2	6.0	89	1.2	0.6	9580	4790
2	A2	3.7	710	10	10	82	0.82	14.1	9.3	89	1.2	0.6	16,120	8060
3	A3	8.0	900	14	10	85	0.83	30.9	20.3	92	1.45	0.75	42,108	21,780
4	A4	6.4	945	17	10	89	0.87	25.9	17.0	89	1.2	0.6	27,880	13,940
5	A5	3.9	715	23	10	90	0.88	16.0	10.5	89	1.2	0.6	16,990	8495
6	A6	5.9	500	12	10	85	0.83	22.8	15.0	89	1.2	0.6	25,700	12,850
7	B1	2.6	820	15	10	88	0.84	10.2	6.7	89	1.2	0.6	11,330	5665
8	B2	4.0	1000	23	10	82	0.82	15.3	10.0	90	1.3	0.65	18,876	9438
9	B3	5.6	600	20	10	88	0.86	22.4	14.7	90	1.3	0.65	26,430	13,215
10	B4	5.3	600	23	10	75	0.76	18.7	12.3	89	1.2	0.6	23,090	11,545
11	B5	4.2	950	25	10	86	0.84	16.4	10.8	92	1.45	0.75	22,110	11,055
12	B1-3 B6	16.5	1345	28	10	85	0.84	64.4	42.3	90	1.3	0.65	77,864	38,932
13	B1-6 OFFSITE	33.9	2000	33	13	83	0.82	113.1	74.3	90	1.3	0.65	159,974	79,987
4	A3-4	14.4	1845	34	12	87	0.87	53.1	34.9	91	1.4	0.7	73,180	36,590
14	B6	4.3	725	14	10	85	0.83	16.6	10.9	92	1.45	0.75	22,633	11,707

*

SC
PENNEY

*

*

TOTAL
CHANNEL

*

*

eh

ESPEY, HUSTON & ASSOCIATES INC.
Engineering & Environmental Consultants

SUBJECT CALCULATIONS

AMERICAN SQUARE

SHEET 8 OF 10 BY DL
DATE 8-7-86 CK BY

* UPDATED 4-6-89

C. CHECK EXISTING CHANNEL AT RICHMOND
FOR CAPACITY (AP# 13)

CHECK CHANNEL :

* $Q_{100} = 113.1$ CFS

WITH FB = 1' :

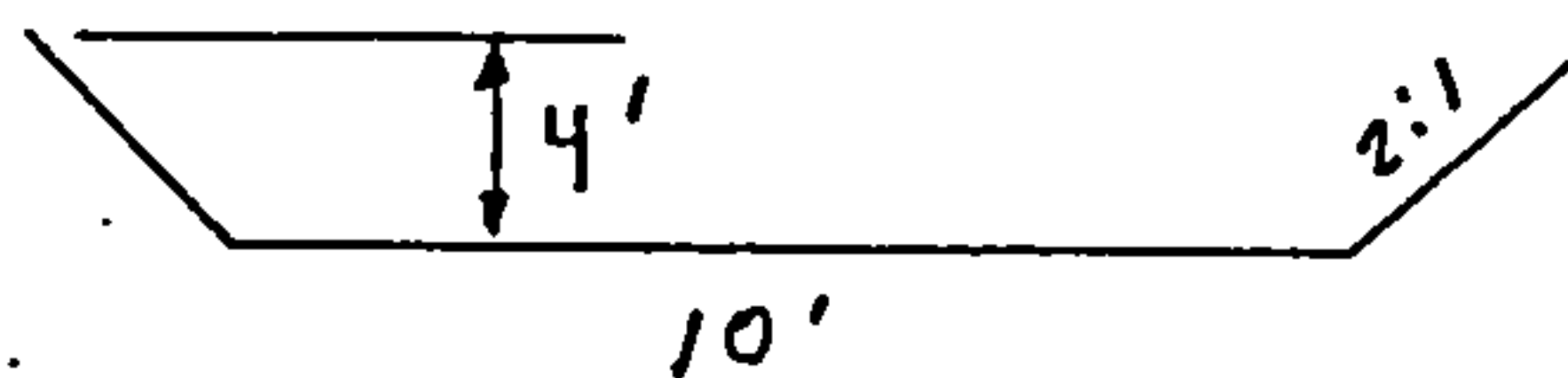
$A = 48$ SF

$P = 10 + 2\sqrt{45} = 23.4$

$R = A/P = 2.05$

$n = 0.013$

$S = 0.009$



SECTION

$$Q = \frac{1.49}{0.013} (48) (2.05)^{2/3} (0.009)^{1/2}$$

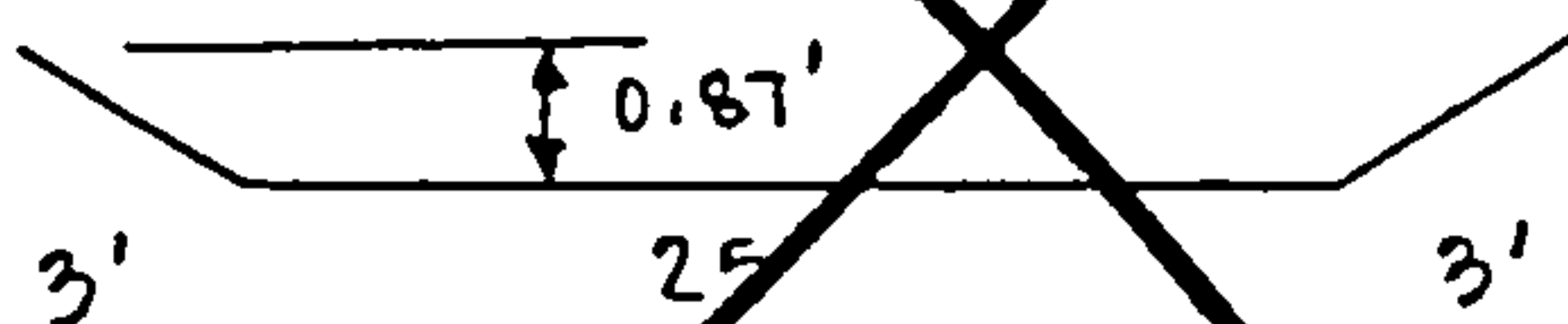
$Q_{max} = \underline{842 \text{ CFS}} \gg Q_{100} (113.1)^* \checkmark$

~~* CHECK INLET - CONCRETE RUNDOWN:~~

~~$Q_{100} = 113.1$ CFS~~

~~USE WEIR EQN: $Q = 3.33 L H^{3/2}$~~

~~$H_{max} = 0.87'$ PER ORDINANCE~~

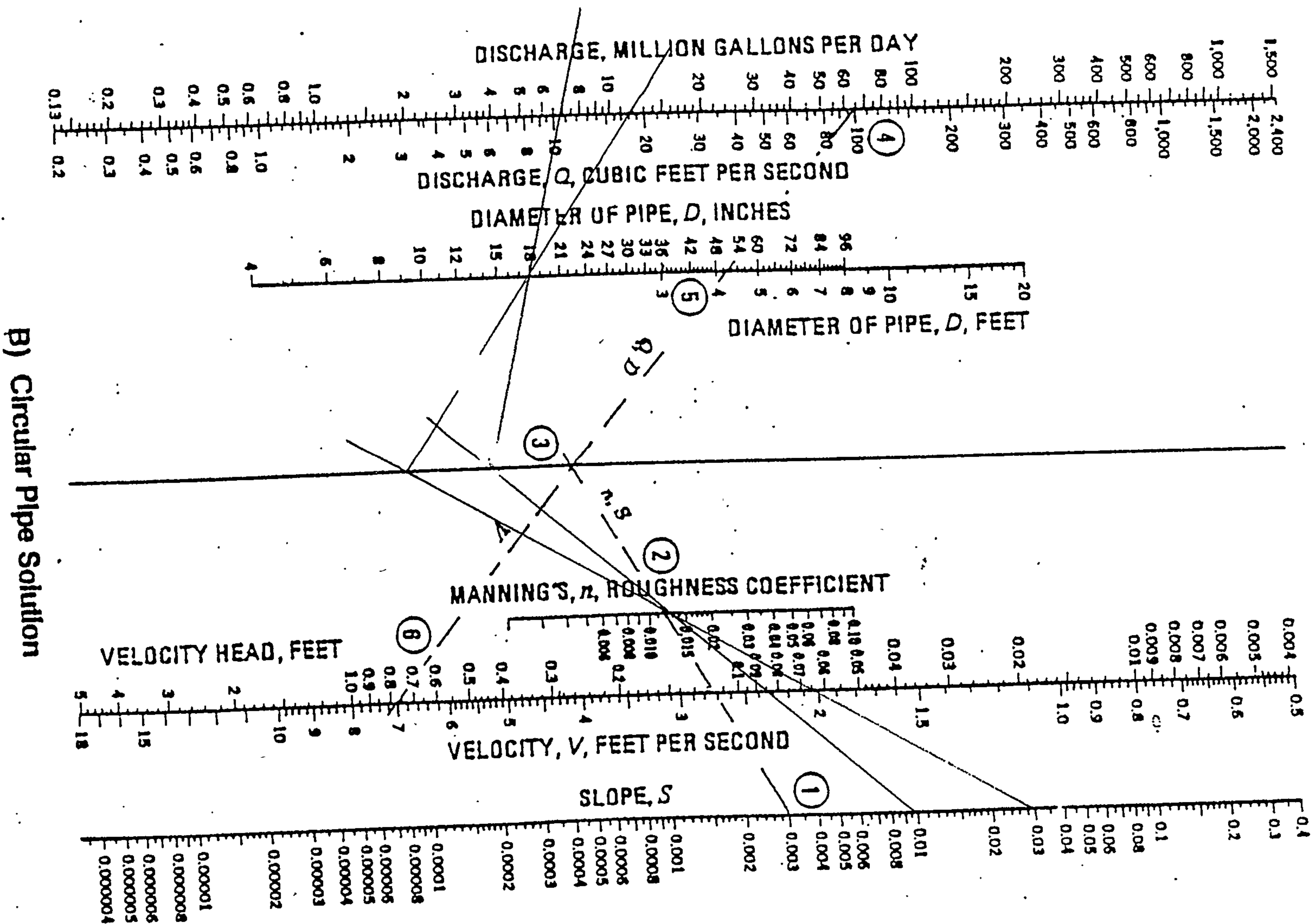


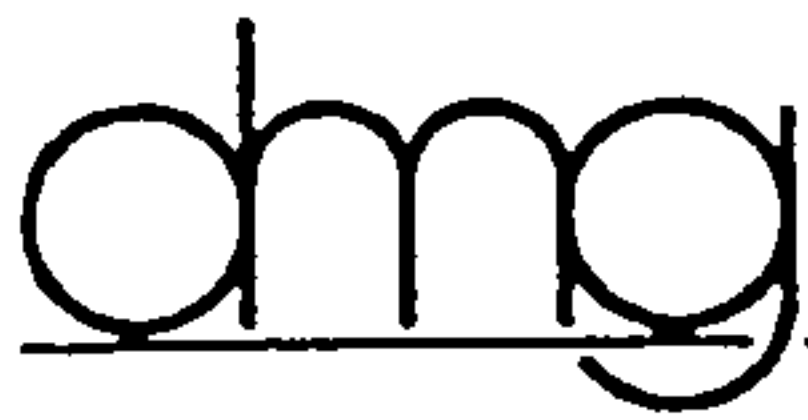
SECTION

~~$Q_{max} = 3.33 (25) (0.87)^{3/2} = \underline{67.6 \text{ CFS}} < Q_{100} (113.1)$~~

~~TO NEW RUNDOWN REQ'D FOR DEVELOPED FLOWS~~

Reference: American Concrete Pipe Association (1980).





D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT AMERICAN SQUARE - JO
SUBJECT DRAINAGE CALCS
BY GSK DATE 2-6-97
CHECKED _____ DATE _____

SHEET 7 OF _____
REVISED 3-27-97

SIZE SUMP IN TRUCK WELL

$$V = 0.0646 \text{ AC-FT} \\ = 2814 \text{ CF}$$

SUMP TO BE 6' x 6' x 5' DEEP

A DUPLEX PUMP STATION WITH 2-300 GPM PUMPS

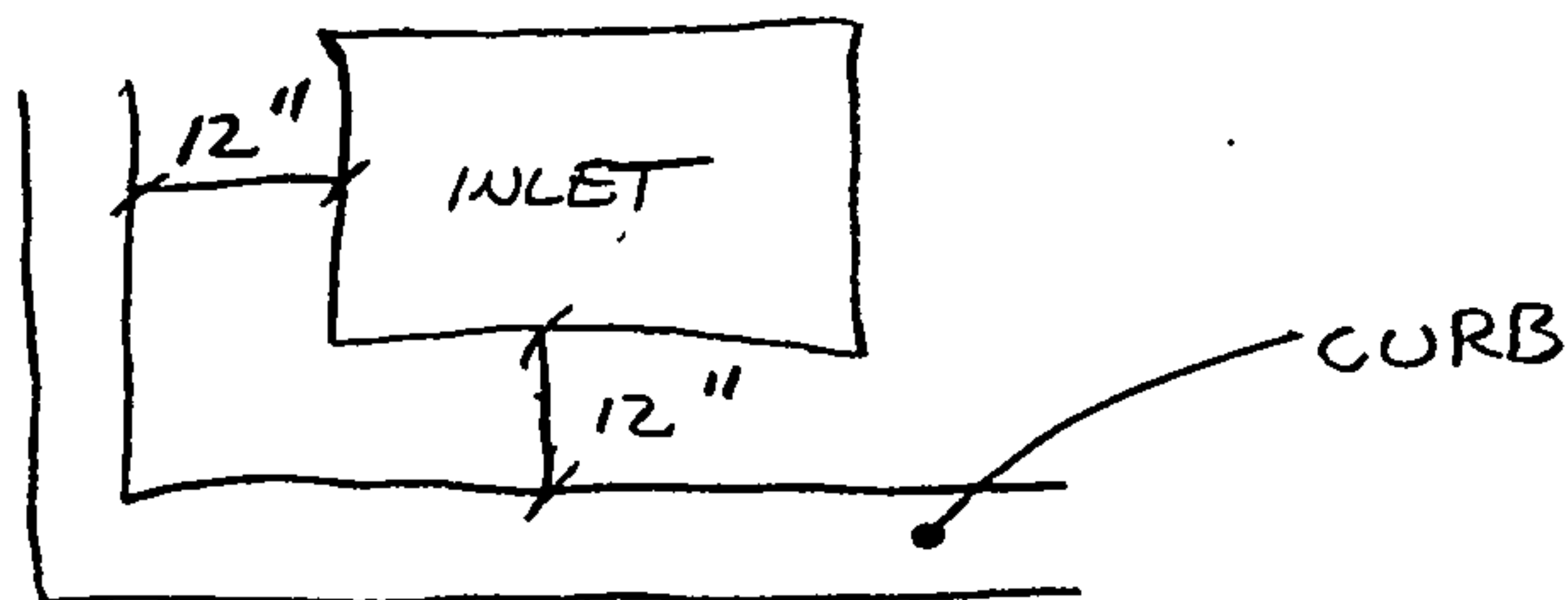
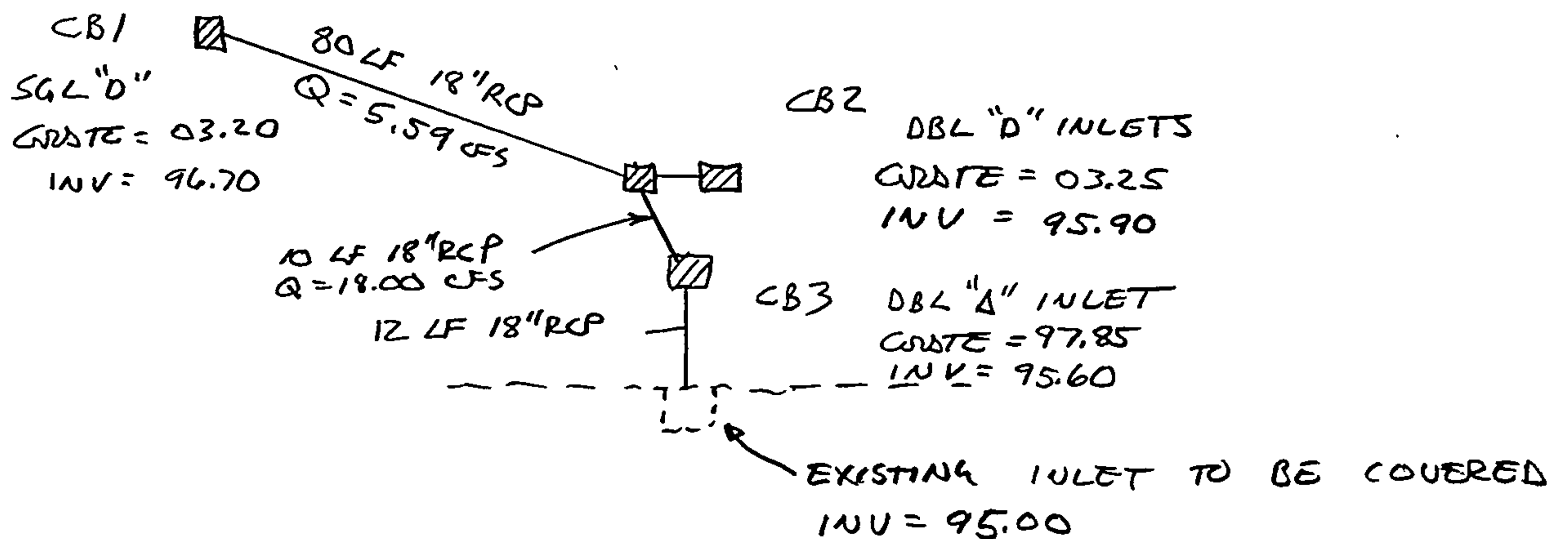
ELEV	OUTFLOW	STORAGE
1.0	0.0	0.0
2.0	0.001	0.000826
3.0	0.01	0.001653
4.0	0.68	0.002479
5.0	0.69	0.003306
6.0	1.32	0.004132
7.0	1.33	0.007415
8.0	1.34	0.016024

FROM AH440 OUTPUT
SHEETS 26-29

PEAK DISCHARGE = 1.33 CFS
MAXIMUM WATERSURFACE
= 7.019

OK

STORM DRAIN SYSTEM LAYOUT



TYPICAL INLET PLACEMENT

TART TIME=0.0
*** HYDROGRAPH FOR AMERICAN SQUARE BASIN 1
INFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.97 IN RAIN SIX=2.30 IN
RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.001561 SQ MI
PER A=0 B=8.79 C=0.0 D=91.21
TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD ID=1 CODE=1
ISH

AHYMD PROGRAM (AHYMD194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 02/06/1997
START TIME (HR:MIN:SEC) = 16:07:20 USER NO. = M_GOODWN.101
INPUT FILE = AMSQB1.DAT

START TIME=0.0
***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 1
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.97 IN RAIN SIX=2.30 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	.0015	.0031	.0047	.0064	.0081	.0098
.0116	.0134	.0152	.0171	.0191	.0211	.0232
.0253	.0275	.0297	.0320	.0345	.0369	.0395
.0422	.0450	.0478	.0508	.0540	.0573	.0607
.0644	.0682	.0723	.0777	.0835	.0897	.1031
.1330	.1790	.2450	.3352	.4538	.6049	.7931
1.0228	1.2360	1.3250	1.4002	1.4670	1.5278	1.5838
1.6358	1.6844	1.7299	1.7728	1.8132	1.8514	1.8875
1.9218	1.9543	1.9851	2.0143	2.0421	2.0485	2.0544
2.0600	2.0654	2.0705	2.0754	2.0801	2.0846	2.0889
2.0931	2.0972	2.1011	2.1049	2.1086	2.1122	2.1157
2.1191	2.1224	2.1256	2.1288	2.1319	2.1349	2.1379
2.1408	2.1436	2.1464	2.1491	2.1518	2.1544	2.1570
2.1595	2.1620	2.1644	2.1668	2.1692	2.1715	2.1738
2.1761	2.1783	2.1805	2.1827	2.1848	2.1869	2.1890
2.1911	2.1931	2.1951	2.1971	2.1990	2.2009	2.2028
2.2047	2.2066	2.2084	2.2102	2.2120	2.2138	2.2156
2.2173	2.2190	2.2207	2.2224	2.2241	2.2257	2.2274
2.2290	2.2306	2.2322	2.2338	2.2353	2.2369	2.2384
2.2399	2.2414	2.2429	2.2444	2.2459	2.2474	2.2488
2.2502	2.2517	2.2531	2.2545	2.2559	2.2572	2.2586
2.2600	2.2613	2.2627	2.2640	2.2653	2.2666	2.2679
2.2692	2.2705	2.2718	2.2730	2.2743	2.2755	2.2768
2.2780	2.2792	2.2804	2.2816	2.2828	2.2840	2.2852
2.2864	2.2876	2.2887	2.2899	2.2910	2.2922	2.2933
2.2944	2.2956	2.2967	2.2978	2.2989	2.3000	

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.001561 SQ MI

PER A=0 B=8.79 C=0.0 D=91.21

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 5.6212 CFS UNIT VOLUME = .9973 B = 526.28

P60 = 1.9700

AREA = .001424 SQ MI IA = .10000 INCHES INF = .04000 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033330

K = .131605HR TP = .133300HR K/TP RATIO = .987285 SHAPE

CONSTANT, N = 3.576399

UNIT PEAK = .33543 CFS UNIT VOLUME = .9608 B = 325.86

P60 = 1.9700

AREA = .000137 SQ MI IA = .50000 INCHES INF = 1.25000 I

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 = 1.94952 INCHES = .1623 ACRE-FEET

PEAK DISCHARGE RATE = 4.41 CFS AT 1.500 HOURS BASIN AREA =

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 16:07:27

0
10
20
30
40
50
60
70
80
90
100

START TIME=0.0
***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 2
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.97 IN RAIN SIX=2.30 IN
RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.000659 SQ MI
PER A=0 B=17.30 C=0.0 D=82.70
PRINT HYD TP=0.1333 HR MASS RAINFALL=-1
FINISH ID=1 CODE=1

W/

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 02/06/1997
START TIME (HR:MIN:SEC) = 16:07:53 USER NO.= M_GOODWN.101
INPUT FILE = AMSQB2.DAT

START

TIME=0.0

***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 2

RAINFALL

TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.97 IN RAIN SIX=2.30 IN

RAIN DAY=2.65 IN DT=0.03333 HR

PEAK AT 1.40 HR.

DT = .033330 HOURS END TIME = 5.999400 HOURS

.0000	.0015	.0031	.0047	.0064	.0081	.0098
.0116	.0134	.0152	.0171	.0191	.0211	.0232
.0253	.0275	.0297	.0320	.0345	.0369	.0395
.0422	.0450	.0478	.0508	.0540	.0573	.0607
.0644	.0682	.0723	.0777	.0835	.0897	.1031
.1330	.1790	.2450	.3352	.4538	.6049	.7931
1.0228	1.2360	1.3250	1.4002	1.4670	1.5278	1.5838
1.6358	1.6844	1.7299	1.7728	1.8132	1.8514	1.8875
1.9218	1.9543	1.9851	2.0143	2.0421	2.0485	2.0544
2.0600	2.0654	2.0705	2.0754	2.0801	2.0846	2.0889
2.0931	2.0972	2.1011	2.1049	2.1086	2.1122	2.1157
2.1191	2.1224	2.1256	2.1288	2.1319	2.1349	2.1379
2.1408	2.1436	2.1464	2.1491	2.1518	2.1544	2.1570
2.1595	2.1620	2.1644	2.1668	2.1692	2.1715	2.1738
2.1761	2.1783	2.1805	2.1827	2.1848	2.1869	2.1890
2.1911	2.1931	2.1951	2.1971	2.1990	2.2009	2.2028
2.2047	2.2066	2.2084	2.2102	2.2120	2.2138	2.2156
2.2173	2.2190	2.2207	2.2224	2.2241	2.2257	2.2274
2.2290	2.2306	2.2322	2.2338	2.2353	2.2369	2.2384
2.2399	2.2414	2.2429	2.2444	2.2459	2.2474	2.2488
2.2502	2.2517	2.2531	2.2545	2.2559	2.2572	2.2586
2.2600	2.2613	2.2627	2.2640	2.2653	2.2666	2.2679
2.2692	2.2705	2.2718	2.2730	2.2743	2.2755	2.2768
2.2780	2.2792	2.2804	2.2816	2.2828	2.2840	2.2852
2.2864	2.2876	2.2887	2.2899	2.2910	2.2922	2.2933
2.2944	2.2956	2.2967	2.2978	2.2989	2.3000	

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.000659 SQ MI

PER A=0 B=17.30 C=0.0 D=82.70

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 2.1517 CFS UNIT VOLUME = .9941 B = 526.28

P60 = 1.9700

AREA = .000545 SQ MI IA = .10000 INCHES INF = .04000 I

CES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

.033330

K = .131605HR TP = .133300HR K/TP RATIO = .987285 SHAPE

CONSTANT, N = 3.576399

UNIT PEAK = .27870 CFS UNIT VOLUME = .9494 B = 325.86

P60 = 1.9700

AREA = .000114 SQ MI IA = .50000 INCHES INF = 1.25000 I

CES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

.033330

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.83704 INCHES = .0646 ACRE-FEET

PEAK DISCHARGE RATE = 1.78 CFS AT 1.500 HOURS BASIN AREA =

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 16:07:59

13

START TIME=0.0
***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 3
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.97 IN RAIN SIX=2.30 IN
RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.001984 SQ MI
PER A=0 B=9.07 C=0.0 D=90.93
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) = 02/06/1997
START TIME (HR:MIN:SEC) = 16:09:29 USER NO.= M_GOODWN.I01
INPUT FILE = AMSQB3.DAT

START

TIME=0.0

***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 3

RAINFALL

TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.97 IN RAIN SIX=2.30 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	.0015	.0031	.0047	.0064	.0081	.0098
.0116	.0134	.0152	.0171	.0191	.0211	.0232
.0253	.0275	.0297	.0320	.0345	.0369	.0395
.0422	.0450	.0478	.0508	.0540	.0573	.0607
.0644	.0682	.0723	.0777	.0835	.0897	.1031
.1330	.1790	.2450	.3352	.4538	.6049	.7931
1.0228	1.2360	1.3250	1.4002	1.4670	1.5278	1.5838
1.6358	1.6844	1.7299	1.7728	1.8132	1.8514	1.8875
1.9218	1.9543	1.9851	2.0143	2.0421	2.0485	2.0544
2.0600	2.0654	2.0705	2.0754	2.0801	2.0846	2.0889
2.0931	2.0972	2.1011	2.1049	2.1086	2.1122	2.1157
2.1191	2.1224	2.1256	2.1288	2.1319	2.1349	2.1379
2.1408	2.1436	2.1464	2.1491	2.1518	2.1544	2.1570
2.1595	2.1620	2.1644	2.1668	2.1692	2.1715	2.1738
2.1761	2.1783	2.1805	2.1827	2.1848	2.1869	2.1890
2.1911	2.1931	2.1951	2.1971	2.1990	2.2009	2.2028
2.2047	2.2066	2.2084	2.2102	2.2120	2.2138	2.2156
2.2173	2.2190	2.2207	2.2224	2.2241	2.2257	2.2274
2.2290	2.2306	2.2322	2.2338	2.2353	2.2369	2.2384
2.2399	2.2414	2.2429	2.2444	2.2459	2.2474	2.2488
2.2502	2.2517	2.2531	2.2545	2.2559	2.2572	2.2586
2.2600	2.2613	2.2627	2.2640	2.2653	2.2666	2.2679
2.2692	2.2705	2.2718	2.2730	2.2743	2.2755	2.2768
2.2780	2.2792	2.2804	2.2816	2.2828	2.2840	2.2852
2.2864	2.2876	2.2887	2.2899	2.2910	2.2922	2.2933
2.2944	2.2956	2.2967	2.2978	2.2989	2.3000	

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.001984 SQ MI

PER A=0 B=9.07 C=0.0 D=90.93

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 7.1225 CFS UNIT VOLUME = .9978 B = 526.28

P60 = 1.9700

AREA = .001804 SQ MI IA = .10000 INCHES INF = .04000 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033330

K = .131605HR TP = .133300HR K/TP RATIO = .987285 SHAPE

CONSTANT, N = 3.576399

UNIT PEAK = .43990 CFS UNIT VOLUME = .9697 B = 325.86

P60 = 1.9700

AREA = .000180 SQ MI IA = .50000 INCHES INF = 1.25000 I

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 = 1.94582 INCHES = .2059 ACRE-FEET

PEAK DISCHARGE RATE = 5.59 CFS AT 1.500 HOURS BASIN AREA =

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 16:09:36

16

START TIME=0.0
***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 4
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.97 IN RAIN SIX=2.30 IN
RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.003696 SQ MI
PER A=0 B=4.90 C=0.0 D=95.10
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) = 02/07/1997
START TIME (HR:MIN:SEC) = 09:01:27 USER NO. = M_GOODWN.101
INPUT FILE = AMSQB4.DAT

START

TIME=0.0

***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 4

RAINFALL

TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.97 IN RAIN SIX=2.30 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	.0015	.0031	.0047	.0064	.0081	.0098
.0116	.0134	.0152	.0171	.0191	.0211	.0232
.0253	.0275	.0297	.0320	.0345	.0369	.0395
.0422	.0450	.0478	.0508	.0540	.0573	.0607
.0644	.0682	.0723	.0777	.0835	.0897	.1031
.1330	.1790	.2450	.3352	.4538	.6049	.7931
1.0228	1.2360	1.3250	1.4002	1.4670	1.5278	1.5838
1.6358	1.6844	1.7299	1.7728	1.8132	1.8514	1.8875
1.9218	1.9543	1.9851	2.0143	2.0421	2.0485	2.0544
2.0600	2.0654	2.0705	2.0754	2.0801	2.0846	2.0889
2.0931	2.0972	2.1011	2.1049	2.1086	2.1122	2.1157
2.1191	2.1224	2.1256	2.1288	2.1319	2.1349	2.1379
2.1408	2.1436	2.1464	2.1491	2.1518	2.1544	2.1570
2.1595	2.1620	2.1644	2.1668	2.1692	2.1715	2.1738
2.1761	2.1783	2.1805	2.1827	2.1848	2.1869	2.1890
2.1911	2.1931	2.1951	2.1971	2.1990	2.2009	2.2028
2.2047	2.2066	2.2084	2.2102	2.2120	2.2138	2.2156
2.2173	2.2190	2.2207	2.2224	2.2241	2.2257	2.2274
2.2290	2.2306	2.2322	2.2338	2.2353	2.2369	2.2384
2.2399	2.2414	2.2429	2.2444	2.2459	2.2474	2.2488
2.2502	2.2517	2.2531	2.2545	2.2559	2.2572	2.2586
2.2600	2.2613	2.2627	2.2640	2.2653	2.2666	2.2679
2.2692	2.2705	2.2718	2.2730	2.2743	2.2755	2.2768
2.2780	2.2792	2.2804	2.2816	2.2828	2.2840	2.2852
2.2864	2.2876	2.2887	2.2899	2.2910	2.2922	2.2933
2.2944	2.2956	2.2967	2.2978	2.2989	2.3000	

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.003696 SQ MI

PER A=0 B=4.90 C=0.0 D=95.10

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 13.877 CFS UNIT VOLUME = .9985 B = 526.28

P60 = 1.9700

AREA = .003515 SQ MI IA = .10000 INCHES INF = .04000 I

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033330

K = .131605HR TP = .133300HR K/TP RATIO = .987285 SHAPE

CONSTANT, N = 3.576399

UNIT PEAK = .44272 CFS UNIT VOLUME = .9697 B = 325.86

P60 = 1.9700

AREA = .000181 SQ MI IA = .50000 INCHES INF = 1.25000 I

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033330

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 2.00094 INCHES = .3944 ACRE-FEET

PEAK DISCHARGE RATE = 10.63 CFS AT 1.500 HOURS BASIN AREA =

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 09:01:34

19

START TIME=0.0
***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 5
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.97 IN RAIN SIX=2.30 IN
RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.001352 SQ MI
PER A=0 B=26.34 C=0.0 D=73.66
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) = 02/07/1997
START TIME (HR:MIN:SEC) = 09:02:01 USER NO. = M_GOODWN.101
INPUT FILE = AMSQES.DAT

START

TIME=0.0

***** HYDROGRAPH FOR AMERICAN SQUARE BASIN 5

RAINFALL

TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.97 IN RAIN SIX=2.30 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	.0015	.0031	.0047	.0064	.0081	.0098
.0116	.0134	.0152	.0171	.0191	.0211	.0232
.0253	.0275	.0297	.0320	.0345	.0369	.0395
.0422	.0450	.0478	.0508	.0540	.0573	.0607
.0644	.0682	.0723	.0777	.0835	.0897	.1031
.1330	.1790	.2450	.3352	.4538	.6049	.7931
1.0228	1.2360	1.3250	1.4002	1.4670	1.5278	1.5838
1.6358	1.6844	1.7299	1.7728	1.8132	1.8514	1.8875
1.9218	1.9543	1.9851	2.0143	2.0421	2.0485	2.0544
2.0600	2.0654	2.0705	2.0754	2.0801	2.0846	2.0889
2.0931	2.0972	2.1011	2.1049	2.1086	2.1122	2.1157
2.1191	2.1224	2.1256	2.1288	2.1319	2.1349	2.1379
2.1408	2.1436	2.1464	2.1491	2.1518	2.1544	2.1570
2.1595	2.1620	2.1644	2.1668	2.1692	2.1715	2.1738
2.1761	2.1783	2.1805	2.1827	2.1848	2.1869	2.1890
2.1911	2.1931	2.1951	2.1971	2.1990	2.2009	2.2028
2.2047	2.2066	2.2084	2.2102	2.2120	2.2138	2.2156
2.2173	2.2190	2.2207	2.2224	2.2241	2.2257	2.2274
2.2290	2.2306	2.2322	2.2338	2.2353	2.2369	2.2384
2.2399	2.2414	2.2429	2.2444	2.2459	2.2474	2.2488
2.2502	2.2517	2.2531	2.2545	2.2559	2.2572	2.2586
2.2600	2.2613	2.2627	2.2640	2.2653	2.2666	2.2679
2.2692	2.2705	2.2718	2.2730	2.2743	2.2755	2.2768
2.2780	2.2792	2.2804	2.2816	2.2828	2.2840	2.2852
2.2864	2.2876	2.2887	2.2899	2.2910	2.2922	2.2933
2.2944	2.2956	2.2967	2.2978	2.2989	2.3000	

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.001352 SQ MI

PER A=0 B=26.34 C=0.0 D=73.66

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE

CONSTANT, N = 7.106420

UNIT PEAK = 3.9318 CFS UNIT VOLUME = .9965 B = 526.28

P60 = 1.9700

AREA = .000996 SQ MI IA = .10000 INCHES INF = .04000 I

INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

.033330

K = .131605HR TP = .133300HR K/TP RATIO = .987285 SHAPE

CONSTANT, N = 3.576399

UNIT PEAK = .87056 CFS UNIT VOLUME = .9847 B = 325.86

P60 = 1.9700

AREA = .000356 SQ MI IA = .50000 INCHES INF = 1.25000 I

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 = 1.71755 INCHES = .1238 ACRE-FEET

PEAK DISCHARGE RATE = 3.45 CFS AT 1.500 HOURS BASIN AREA =

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 09:02:07

22

```

START          TIME=0.0
***** HYDROGRAPH FOR AMERICAN SQUARE TOTAL BASIN B
RAINFALL      TYPE=1 RAIN QUARTER=0.0 IN
              RAIN ONE=1.97 IN RAIN SIX=2.30 IN
              RAIN DAY=2.65 IN DT=0.03333 HR
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.052969 SQ MI
              PER A=0 B=17 C=0.0 D=83
              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) = 12/18/1996
 START TIME (HR:MIN:SEC) = 15:36:04 USER NO.= M_GOODWN.101
 INPUT FILE = AMSQTOT.DAT

START TIME=0.0

***** HYDROGRAPH FOR AMERICAN SQUARE TOTAL BASIN B

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=1.97 IN RAIN SIX=2.30 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	.0015	.0031	.0047	.0064	.0081	.0098
.0116	.0134	.0152	.0171	.0191	.0211	.0232
.0253	.0275	.0297	.0320	.0345	.0369	.0395
.0422	.0450	.0478	.0508	.0540	.0573	.0607
.0644	.0682	.0723	.0777	.0835	.0897	.1031
.1330	.1790	.2450	.3352	.4538	.6049	.7931
1.0228	1.2360	1.3250	1.4002	1.4670	1.5278	1.5838
1.6358	1.6844	1.7299	1.7728	1.8132	1.8514	1.8875
1.9218	1.9543	1.9851	2.0143	2.0421	2.0485	2.0544
2.0600	2.0654	2.0705	2.0754	2.0801	2.0846	2.0889
2.0931	2.0972	2.1011	2.1049	2.1086	2.1122	2.1157
2.1191	2.1224	2.1256	2.1288	2.1319	2.1349	2.1379
2.1408	2.1436	2.1464	2.1491	2.1518	2.1544	2.1570
2.1595	2.1620	2.1644	2.1668	2.1692	2.1715	2.1738
2.1761	2.1783	2.1805	2.1827	2.1848	2.1869	2.1890
2.1911	2.1931	2.1951	2.1971	2.1990	2.2009	2.2028
2.2047	2.2066	2.2084	2.2102	2.2120	2.2138	2.2156
2.2173	2.2190	2.2207	2.2224	2.2241	2.2257	2.2274
2.2290	2.2306	2.2322	2.2338	2.2353	2.2369	2.2384
2.2399	2.2414	2.2429	2.2444	2.2459	2.2474	2.2488
2.2502	2.2517	2.2531	2.2545	2.2559	2.2572	2.2586
2.2600	2.2613	2.2627	2.2640	2.2653	2.2666	2.2679
2.2692	2.2705	2.2718	2.2730	2.2743	2.2755	2.2768
2.2780	2.2792	2.2804	2.2816	2.2828	2.2840	2.2852
2.2864	2.2876	2.2887	2.2899	2.2910	2.2922	2.2933
2.2944	2.2956	2.2967	2.2978	2.2989	2.3000	

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.052969 SQ MI

PER A=0 B=17 C=0.0 D=83

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TF = .133300HR K/TF RATIO = .545000 SHAPE
 CONSTANT. N = 7.106420

P60 = 1.9700

AREA = .043964 SQ MI IA = .10000 INCHES INF = .04000 I

CHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

.033330

K = .131605HR TP = .133300HR K/TP RATIO = .987285 SHAPE

CONSTANT, N = 3.576399

UNIT PEAK = 22.013 CFS UNIT VOLUME = .9997 B = 325.86

P60 = 1.9700

AREA = .009005 SQ MI IA = .50000 INCHES INF = 1.25000 I

CHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

.033330

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.84100 INCHES = 5.2008 ACRE-FEET

PEAK DISCHARGE RATE = 142.23 CFS AT 1.500 HOURS BASIN AREA =

.0530 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:36:11

```

TIME=0.0
HYDROGRAPH FOR DEPLETION AQUATIC TRUCK WELL
ATNFALL
TYPE=1 RAIN QUANTER=0.0 IN
RAIN DAY=2.65 YL DTE=1.000000 IN
COMPUTE NM HYD
TYPE=1 HYD NO=101.1 100.000000 50.00
PER 100 PER 5=17.50 PER 100 PER 5=52.00
TYPE=0.1332 100 MASS RAINFALL=-1
TOTAL CORR=1
RESERVOIR SOLITE THE DEVELOPED TURN
RESERVOIR
TYPE=2 HYD NO=101.2 TABLE ID=1 CDEF=06
TABLED (CFS) STORAGE (AC FT) ELEVATION (FT)
0.0 0.0 1.0
0.01 0.000000 2.0
0.07 0.001553 3.0
0.48 0.002479 4.0
0.64 0.00209 5.0
1.02 0.004132 6.0
1.33 0.007415 7.0
1.24 0.015224 8.0
FINISH

```

```
A:VND:1P0572" (ANY*0194) = ANAFCA Hydrologist: NAFCA = January, 1994
RUN DATE (MM/DD/YY) = 02/22/1997
START TIME (HR:MIN:SEC) = 08:51:04      USER NO. = "_GCDMA1.01
INPUT FILE = GMSR*ID.CAT
```

ET 4:17 TIME=00 0

* * * * *

"BUT" ALL TYPE-1 PAIN QUARTER=0.0 IN

0000 SNE-1.97 TO RPTN GTX=0.30 IN

MAIN LOG=7.55 IN LT=0.02883 UP

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2

PEAK AT 1.40 MIN

DT =		.032330 HOURS		END TIME A		E.999400 HOURS	
.0000	.0015	.0031	.0047	.0064	.0081	.0098	
.0115	.0134	.0152	.0171	.0191	.0211	.0232	
.0253	.0275	.0297	.0320	.0345	.0369	.0395	
.0422	.0450	.0478	.0508	.0540	.0573	.0607	
.0644	.0682	.0723	.0777	.0835	.0897	.1031	
.1230	.1750	.2450	.3352	.4538	.6049	.7931	
1.0228	1.2260	1.3250	1.4302	1.4670	1.5278	1.5838	
1.6358	1.6844	1.7299	1.7728	1.8132	1.8514	1.8875	
1.9218	1.9544	1.9851	2.0143	2.0421	2.0685	2.0944	
2.0600	2.0854	2.0705	2.0754	2.0801	2.0846	2.0889	
2.0931	2.0972	2.1011	2.1049	2.1086	2.1122	2.1157	
2.1191	2.1234	2.1256	2.1288	2.1319	2.1349	2.1379	
2.1408	2.1428	2.1464	2.1491	2.1518	2.1544	2.1570	
2.1595	2.1630	2.1644	2.1668	2.1690	2.1713	2.1738	
2.1761	2.1783	2.1805	2.1827	2.1848	2.1869	2.1890	
2.1911	2.1931	2.1951	2.1971	2.1990	2.2009	2.2028	
2.2047	2.2066	2.2084	2.2102	2.2120	2.2138	2.2156	
2.2175	2.2190	2.2207	2.2224	2.2241	2.2257	2.2274	
2.2290	2.2305	2.2323	2.2339	2.2353	2.2369	2.2384	
2.2395	2.2414	2.2429	2.2444	2.2459	2.2474	2.2490	
2.2501	2.2517	2.2531	2.2545	2.2559	2.2572	2.2585	
2.2600	2.2615	2.2627	2.2640	2.2653	2.2666	2.2679	
2.2692	2.2705	2.2718	2.2730	2.2743	2.2755	2.2768	
2.2780	2.2792	2.2804	2.2816	2.2828	2.2840	2.2852	
2.2864	2.2876	2.2887	2.2899	2.2910	2.2922	2.2933	
2.2944	2.2956	2.2967	2.2979	2.2990	2.2999		

[illegible]

02 00 55 R=17.50 FEB 0=0 153 h=22.70

REF ID: A65861

1. = 00046302 NO = 03210042 1000 00/70 00/70 00/70

STALIN K = 7.10645

[illegible]

50. 1. 1991

[illegible]

28

Abstract

K = 1.13E-05:12 TP = 1.12E+00:12 K/TP RATIO = 967695 SHARP

[illegible]

UNIT PEAK = .27970 CFE UNIT VOLUME = .9494 R = 729.45

LEO # 12370

4934 = .000114 50 MI TA = 1.2000 (ABH3) WGT = 1.25000 "

FOUO - CONTAINED IN TALLIA. ASSURED TOWN/INTEGRATION NUMBER METHOD - IN

043330

SECRET

UD=1 CODE=1

PARTIAL - 08/11/84 10:10

PUNNET VOLUME = 1.82704 INCHES = 1.0645 ACRE-FOOT
 PEAK DISCHARGE RATE = 1.73 CFS AT 1.500 HOUR DRAIN AREA =
 1.0007 SQ. MI.

***RESERVOIR ROUTE THE DEVELOPED STORM

ROUTE RESERVOIR (ID=2 VVF NO=101.2 INFLOW IN=1 CODE=08)

INFLOW (CFS)	STORAGE (AC-FT)	ELEVATION (FT)
0.0	0.0	1.0
0.01	0.000927	2.0
0.02	0.001653	3.0
0.50	0.002479	4.0
0.69	0.003706	5.0
1.10	0.004132	6.0
1.23	0.007417	7.0
1.71	0.015024	8.0

* * * * *

TIME (HRS)	INFLW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
1.00	1.00	1.00	1.000	1.00
1.30	1.00	1.00	1.000	1.00
1.50	1.34	2.02	1.008	1.33
2.40	1.05	3.07	1.002	1.07
3.20	1.01	3.59	1.002	1.02
4.00	1.01	2.41	1.001	1.01
4.80	1.01	2.41	1.001	1.01
5.60	1.01	2.00	1.001	1.01
6.40	1.00	1.64	1.001	1.01
7.20	1.00	1.36	1.000	1.00

PEAK DISCHARGE = 1.330 CFS - PEAK OCCURS AT HOUR 1.50
 MAXIMUM WATER SURFACE ELEVATION = 7.019
 MAXIMUM STORAGE = 1.0076 AC-FT INCREMENTAL TIME = 0.00000000

FINISH