



City of Albuquerque

December 8, 1999

Billy McCarty, P.E.
Chavez-Grieves
5639 Jefferson Street NE
Albuquerque, NM 87109

**RE: HEALTHCARE FOR THE HOMELESS(J14-D132).. ENGINEER'S
CERTIFICATION FOR CERTIFICATE OF OCCUPANCY APPROVAL.
ENGINEER'S STAMP DATED OCTOBER 1, 1999.**

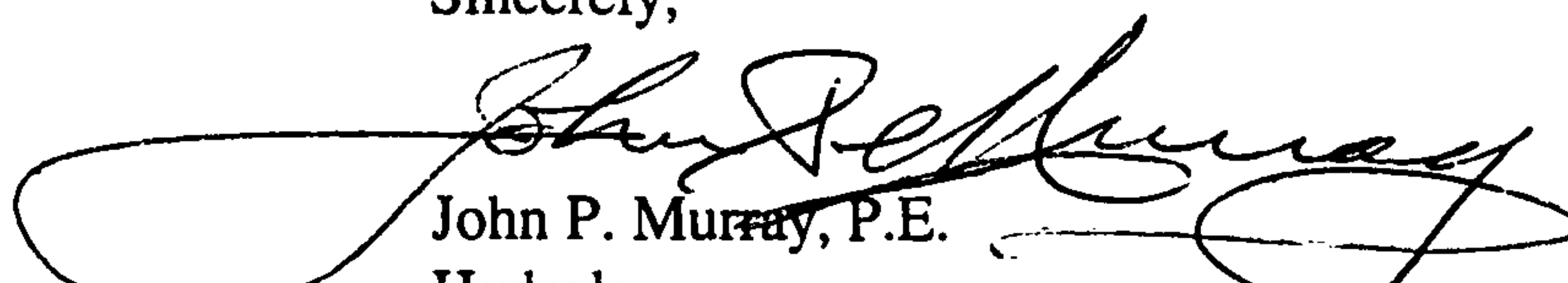
Dear Mr. McCarty:

Based on the information provided on your October 1, 1999 submittal, the above referenced project is approved for Certificate of Occupancy.

For the record, the File Copy of the G&D Plan should have both the 12/31/98 Engineer's Stamp Date and executed SO#19 Signature Block. It is clear that the 10/1/99 Engineer's Certification is for the 12/31/98 Plan.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,


John P. Murray, P.E.
Hydrology

c: WR
✓ File

Check
-04
SO #19

NEED
CO ON
STATE APPROVED
G&D PLAN

December 8, 1999

Billy McCarty, P.E.
Chavez-Grieves
5639 Jefferson Street NE
Albuquerque, NM 87109

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c: WR
File

DRAINAGE INFORMATION

PROJECT TITLE: HEALTHCARE FOR THE HOMELESS ZONE ATLAS/DRNG. FILE #: J-14/D132

DRB#: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: LOTS 5-A AND 13-A, BLOCK 15 OF PARIS ADDITION NO. 2

CITY ADDRESS: FIRST STREET AND MOUNTAIN ROAD 1217 First

ENGINEERING FIRM: CHAVEZ-GRIEVWS

ADDRESS: 5639 JEFFERSON, NE

OWNER: ALB. HEALTHCARE FOR THE HOMELESS, INC

ADDRESS: _____

ARCHITECT: WRIGHT AND HAMMER ARCHITECTS

ADDRESS: 1735 ALISO DR., NE

SURVEYOR: _____

ADDRESS: _____

CONTRACTOR: _____

ADDRESS: _____

CONTACT: BILLY MCCARTY

PHONE: 344-4080

CONTACT: _____

PHONE: _____

CONTACT: DENISE HAMMER

PHONE: 266-6764

CONTACT: _____

PHONE: _____

CONTACT: _____

PHONE: _____

TYPE OF SUBMITTAL:

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

PRE-DESIGN MEETING:

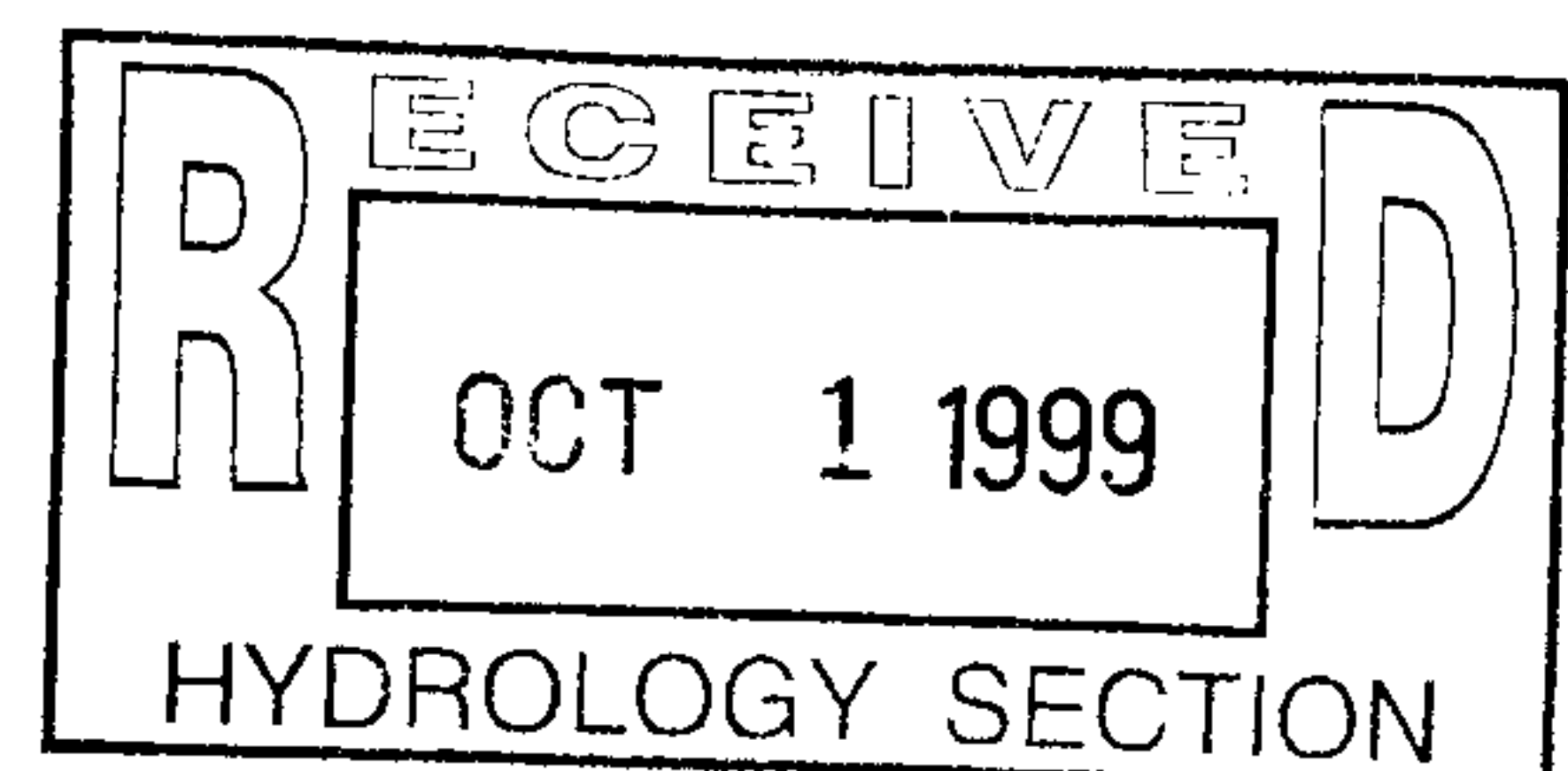
- ☐ YES
☒ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D. APPROVAL
☐ S. DEV. PLAN FOR BLDG. PRMT. 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

DATE SUBMITTED: SEPTEMBER 30, 1999

BY: BILLY MCCARTY





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 4, 1999

Billy McCarty
Chavez-Grieves
5639 Jefferson NE
Albuquerque, NM 87109

**RE: DRAINAGE REPORT FOR HEALTHCARE FOR THE HOMELESS (J-14/D132)
RECEIVED JAN 4, 1999 FOR BUILDING PERMIT
ENGINEER'S STAMP DATED 12/31/98**

Dear Mr. McCarty:

Based on the information included in the submittal referenced above, City Hydrology accepts the Drainage Report for Building Permit. Make sure the **north arrow, scale and existing drivepad** on 2nd Street are shown on Sheet C-5. Include a copy of the approved

A separate permit is required for construction of private drainage facilities within the City right of way. A copy of this letter must be on hand when applying for the excavation permit.

Engineer's Certification of grading & drainage per DPM checklist must be accepted by City Hydrology before any Certificate of Occupancy will be released.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.

Project Manager, PWD/Hyd

c: Arlene Portillo
Andrew Garcia


CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

February 4, 1999

INTEROFFICE CORRESPONDENCE

HYDROLOGY DIVISION

TO: Desiderio Salas, Street Maintenance Division

FROM: John P. Curtin, Hydrology Division/Development Section 

SUBJECT: **PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHT-OF-WAY
DRAINAGE FILE NUMBER J14-D132.**

Transmitted herewith, is a copy of the approved drainage plan for the referenced project incorporating the S.O.19 design.

This plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed off S.O.19 is required by this office Certificate of occupancy release; therefore your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation. If you should have any questions or comments, please call Andrew Garcia at 924-3330.

Attachment

DRAINAGE INFORMATION

PROJECT TITLE: HEALTHCARE FORTHE HOMELESS ZONE ATLAS/DRNG. FILE #: J-14/132

DRB#: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: LOTS 5-A AND 13-A, BLOCK 15 OF PARIS ADDITION NO. 2

CITY ADDRESS: FIRST STREET AND MOUNTAIN ROAD

ENGINEERING FIRM: CHAVEZ-GRIEVWS

ADDRESS: 5639 JEFFERSON, NE

OWNER: ALB. HEALTHCARE FOR THE HOMELESS, INC

ADDRESS: _____

ARCHITECT: WRIGHT AND HAMMER ARCHITECTS

ADDRESS: 1735 ALISO DR., NE

SURVEYOR: _____

ADDRESS: _____

CONTRACTOR: _____

ADDRESS: _____

CONTACT: BILLY MCCARTY Larry Read

PHONE: 344-4080 858-3165

CONTACT: 239-7692

PHONE: _____

CONTACT: DENISE HAMMER

PHONE: 266-6764

CONTACT: _____

PHONE: _____

CONTACT: _____

PHONE: _____

TYPE OF SUBMITTAL:

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

PRE-DESIGN MEETING:

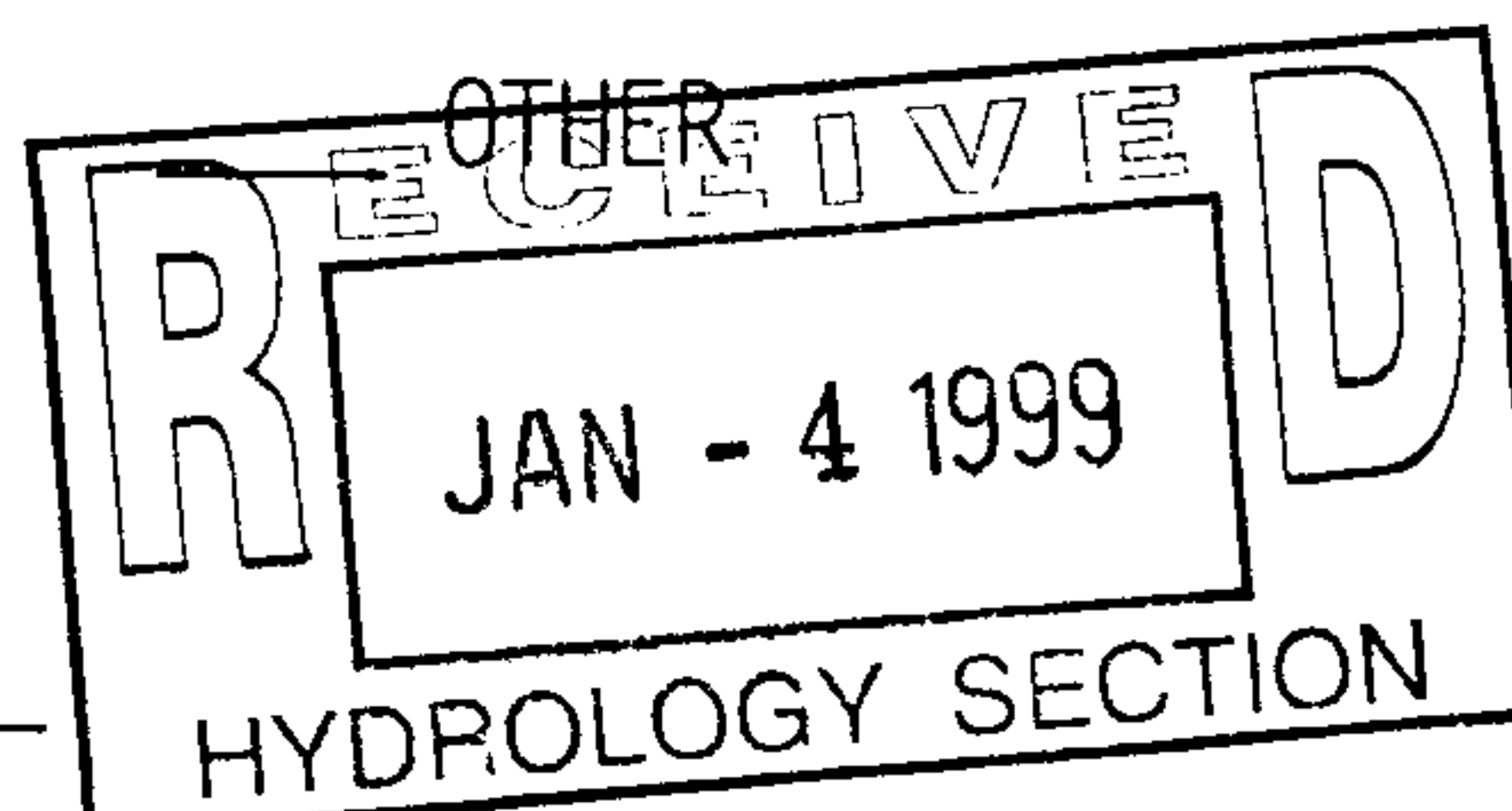
- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

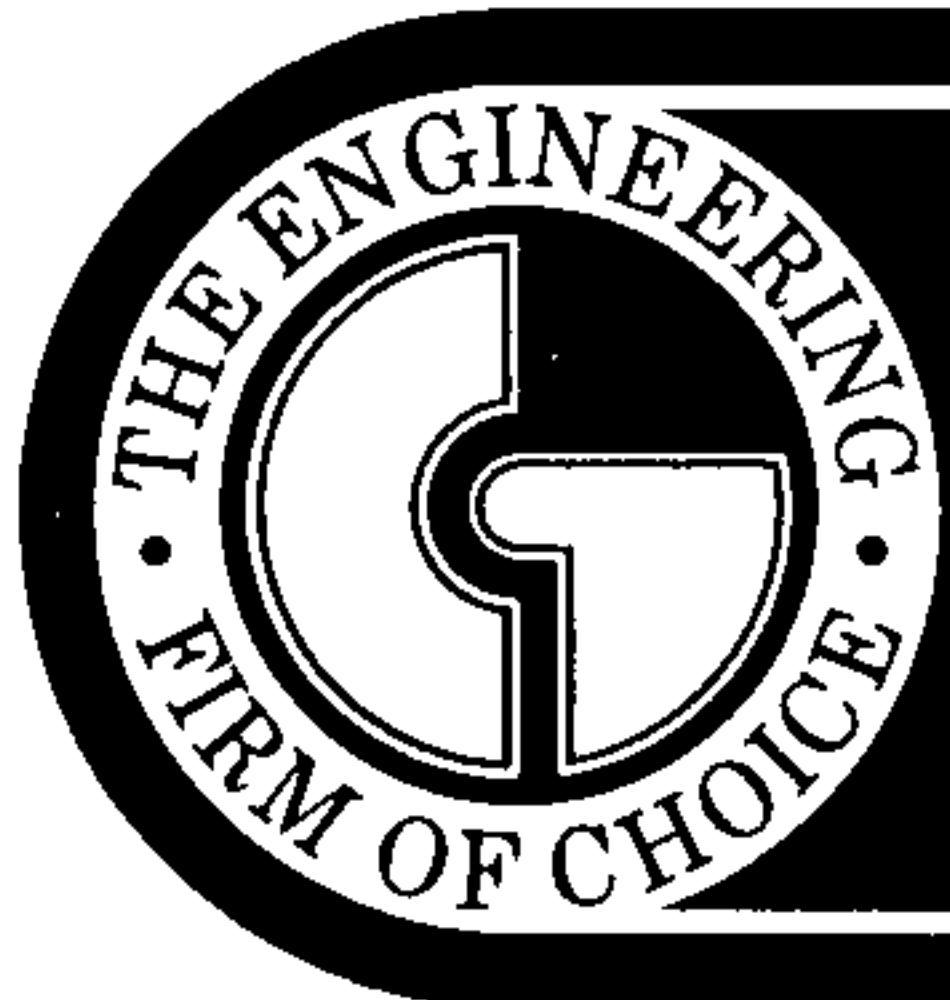
CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PRMT. APPROVAL
- ☐ 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

DATE SUBMITTED: JANUARY 4, 1999

BY: BILLY MCCARTY





CHAVEZ • GRIEVES

CONSULTING ENGINEERS, INC.

5639 JEFFERSON STREET NE • ALBUQUERQUE, NEW MEXICO 87109 • PHONE (505) 344-4080 • FAX (505) 343-8759

LETTER OF TRANSMITTAL

TO: COA Hydrology DATE: 1-4-99
JOB # W23-106-5098
RE: Healthcare for the Homeless
ATTN: _____

WE ARE SENDING YOU ☒ ATTACHED _____ UNDER SEPARATE COVER, THE FOLLOWING ITEMS:

____ SHOP DRAWINGS _____ PLANS _____ SPECIFICATIONS _____ DISKETTE
____ CHANGE ORDER _____ PRINTS _____ CALCULATIONS _____ PROPOSAL INFO
____ COPY OF LETTER _____ SAMPLES ☒ REPORT _____

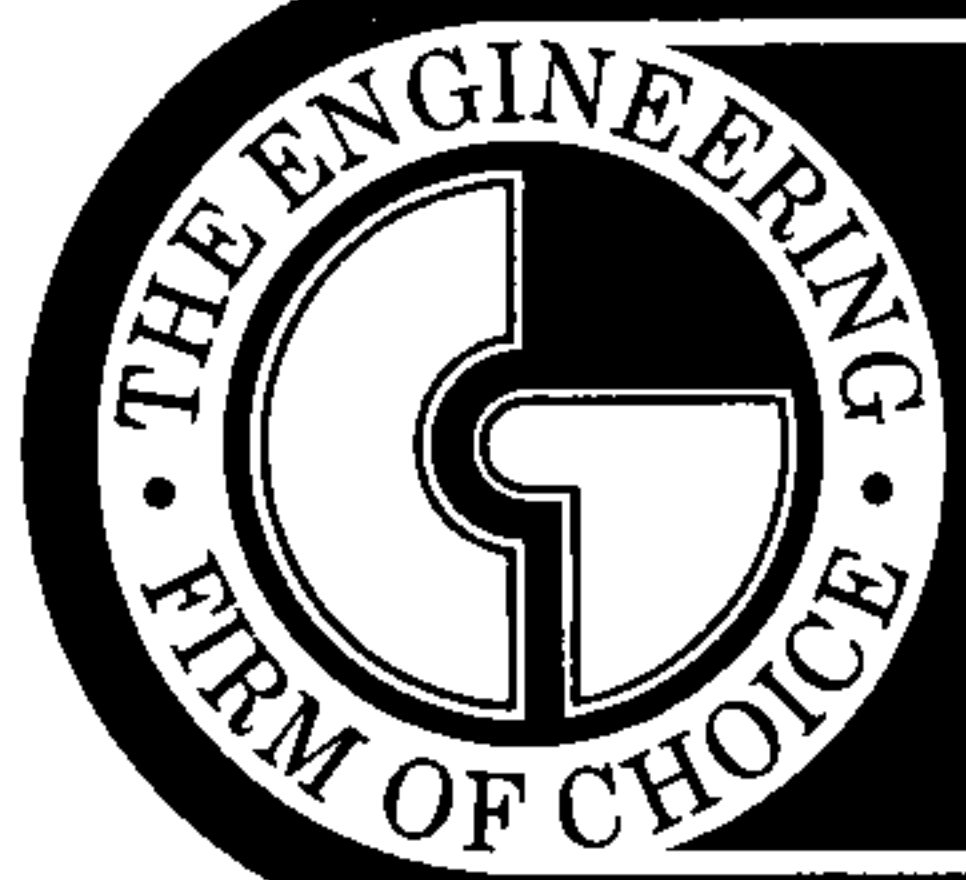
COPIES	DATE	NO.	DESCRIPTION
<u>2</u>	<u>12-31-98</u>		<u>Drainage Report</u>

THESE ARE TRANSMITTED AS CHECKED BELOW:

<input type="checkbox"/> FOR YOUR USE	<input checked="" type="checkbox"/> FOR REVIEW & COMMENT
<input type="checkbox"/> AS REQUESTED	<input type="checkbox"/> RETURNED AFTER LOAN TO US
<input type="checkbox"/> PLEASE CORRECT AND RESUBMIT	<input type="checkbox"/> SUBMIT _____ COPIES FOR DISTRIBUTION
<input type="checkbox"/> RESUBMITTAL IS NOT REQUIRED	<input type="checkbox"/> RETURN _____ CORRECTED PRINTS
CORRECTIONS, IF ANY, ARE NOTED	<input type="checkbox"/> BIDS/PROPOSALS DUE _____ 199__

REMARKS: _____

COPIES TO: Files, Wright and Hammer SIGNED: Billy O Mcarty



CHAVEZ • GRIEVES

CONSULTING ENGINEERS, INC.

5639 JEFFERSON STREET NE • ALBUQUERQUE, NEW MEXICO 87109 • PHONE (505) 344-4080 • FAX (505) 343-8759

GRADING AND DRAINAGE PLAN

FOR THE

HEALTH CARE FOR THE HOMELESS

LOCATED AT

1217 FIRST STREET N.W.

ALBUQUERQUE, NEW MEXICO

DECEMBER 1998

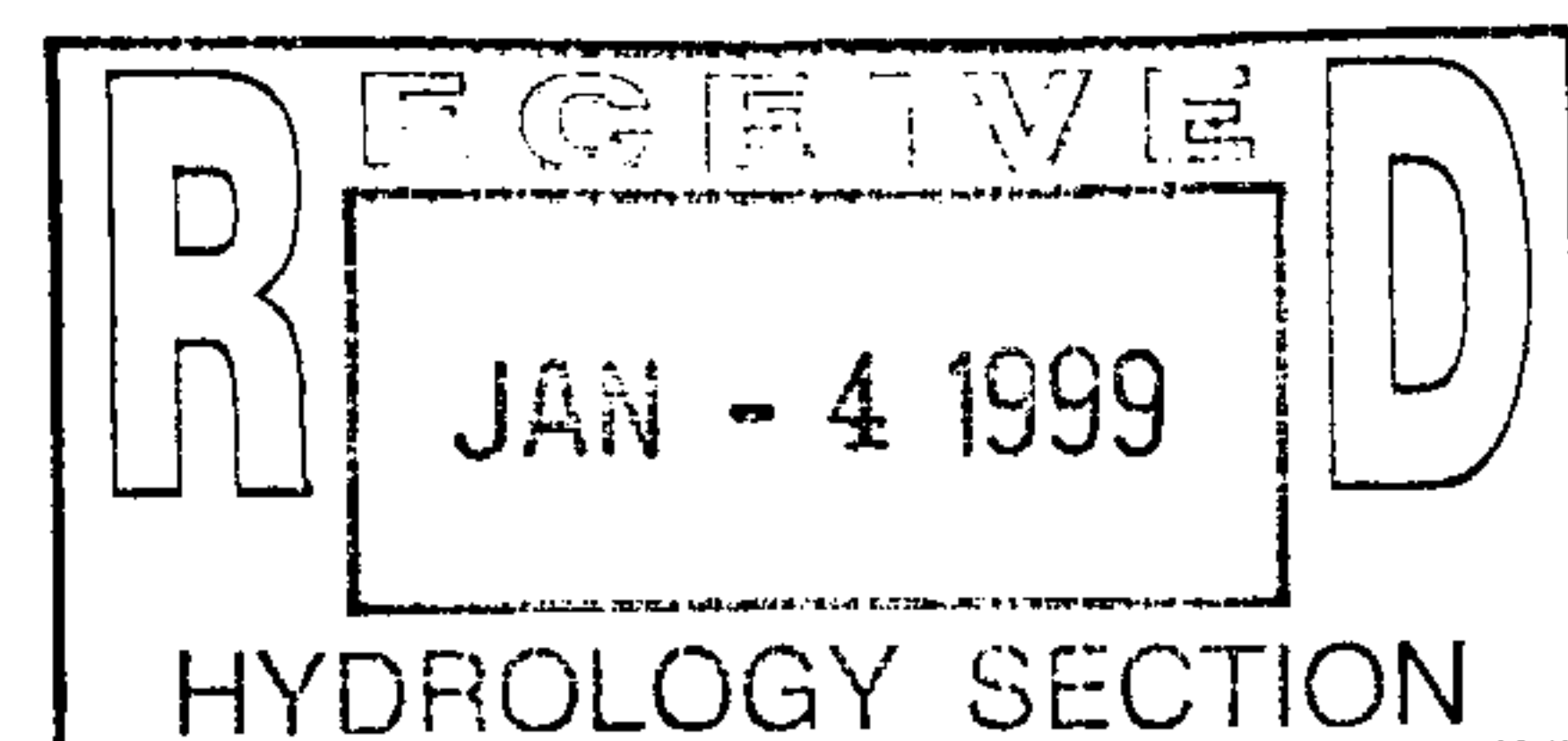
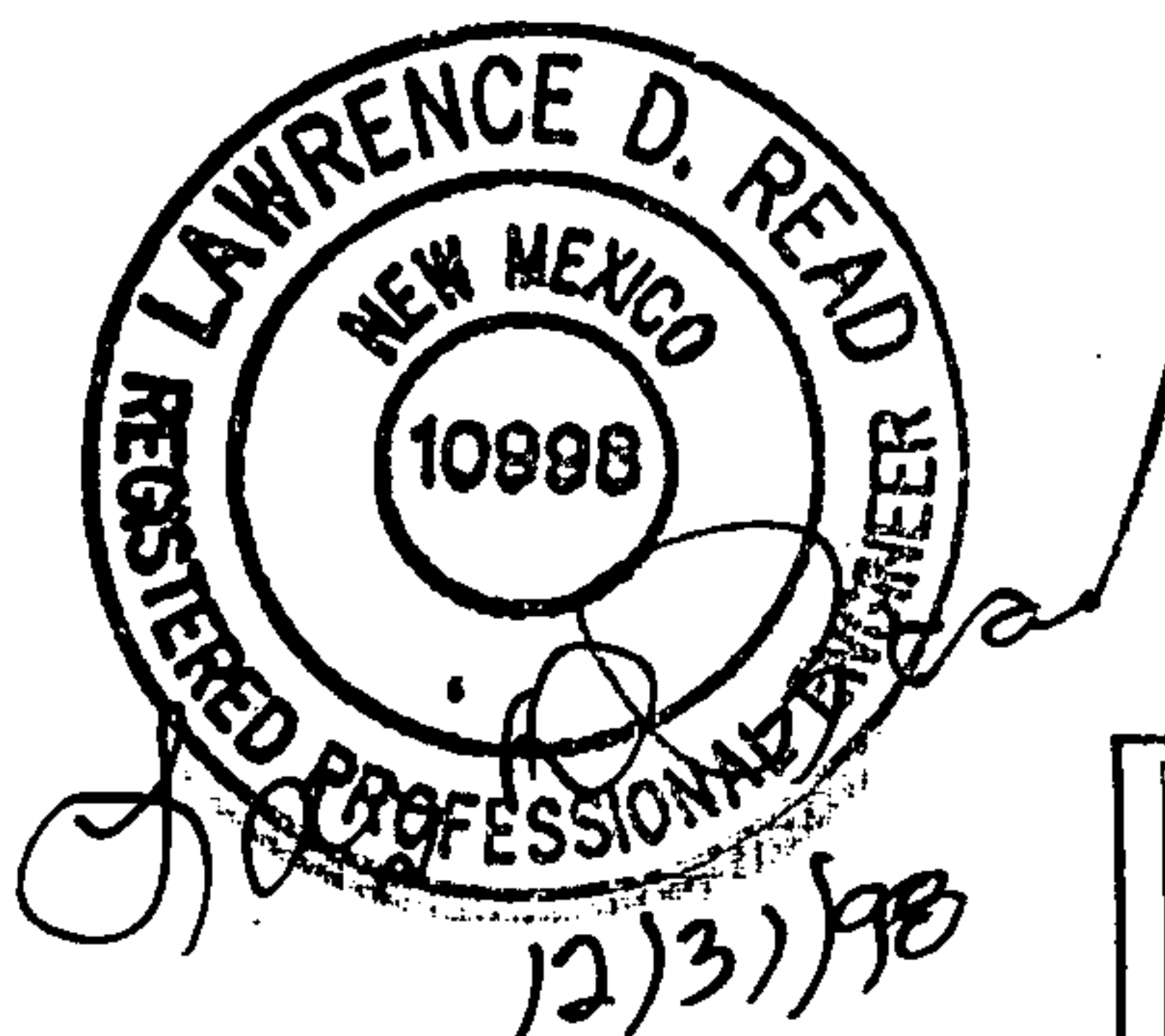


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I. PURPOSE OF THIS REPORT

This report has been prepared to submit to the City of Albuquerque Public Works - Hydrology Department for Building Permit Approval.

This project is an infill project that proposes to renovate the existing northeast and southeast on the site. The northwest building and numerous small buildings in the center portion of the site will be removed and replaced with a new building that will connect between the two remaining buildings. A landscaped courtyard will be constructed in the central portion of First Street frontage. Three paved parking lots are proposed, one will enter off mountain and will parallel the west side of the southern building, the second will enter off Rosemont Street and will parallel the west side of the northern building, the third will enter off Second Street and run perpendicular to Second Street. The remaining portions of the block, northwest and southwest corners are owned by third parties and are not part of this project.

II. LOCATION

This site is located at 1217 First Street NW. and includes most of the city block bounded by First Street on the east, Second Street on the west, Mountain Avenue on the south, and Rosemont Avenue on the north. The areas within this city block not included are the northwest and southwest corners as described above.

III. LEGAL DESCRIPTION

Lots 5-A and 13-A, Paris Addition No. 2

IV. ZONING AND SURROUNDING DEVELOPMENT

The present zoning of the site is M-1, Light Manufacturing. The proposed use, a healthcare clinic, is an approved usage under the existing zoning.

V. FLOOD HAZARD ZONES

As shown on panel 35001C0332 D, Dated September 20, 1996, all of Rosemont Ave, First Street, and Second Street adjacent to the parcel are in an AO 100-year floodplain, Flood Depths of 1 to 3 feet deep. This floodplain encroaches into the site at the drivepads on Rosemont Ave. and Mountain Ave. However, the existing and new buildings are not within the limits of the floodplain.

VI. EXISTING SITE CONDITIONS AND DRAINAGE PATTERNS

The existing site is developed as a Construction Company Office and Storage Yard.

There are four permanent buildings and numerous portable buildings and mobile buildings onsite. The only buildings proposed to remain are the buildings on the northeast and southeast corners of the site. The western half of the northeast building is proposed to be removed. The majority of the site that is used for drive access and storage has been graded and covered with material that appears to be asphalt millings and emulsion seal coat. The site is void of landscaping. The site has been graded to utilize the existing minimal vertical elevation differential to drain away from the permanent buildings. Therefore, the current discharge is via shallow sheet flow towards the nearest street - typically through a drivepad. There is an existing french drain located in the central area of the site that appears to be plugged by sediment and garbage. This plan proposes to remove the french drain.

VII. PROPOSED SITE CONDITIONS AND DRAINAGE PATTERN

The proposed modifications to the site, as shown on the Grading Plan in Appendix B, include removal of all the small structures, portable structures, and mobile buildings onsite leaving only the buildings at the northeast and southeast corner of the site. Additionally, the west half (approximately) of the building at the northeast corner of the site will be removed.

The proposed new construction includes a infill building between the two remaining buildings, a new landscaped patio between the existing and new building on First Street, and new parking lots perpendicular to both Mountain and Rosemont Ave. and west of the existing buildings, and a new parking lot perpendicular to Second Street and about half way between Rosemont and Mountain Ave.

The grading plan proposes to drain all of the remaining existing buildings, the new patio, and the east half of the new building to First Street via Two 24" sidewalk culverts located at the north and south sides of the new patio. To avoid an 8" dropoff at the back of the sidewalk, a 24" x 24" trench grate is proposed adjacent to the back of the sidewalk. This is shown as Basin 'C' on the Drainage Basin Map in Appendix B.

The northwest corner of the new building, the new north parking lot, and the landscape area between the northeast building and the north parking lot are proposed to drain north through a swale in the landscaping and 24" sidewalk culvert into Rosemont Ave. This area is shown as Basin 'D' on the Drainage Basin Map in Appendix B.

The remaining southeast building, south end of the new building, and south parking lot drain into Mountain Ave. via a swale in the parking lot and 24" sidewalk culvert into Mountain. This area is shown as Basin 'F' on the Drainage Basin Map in Appendix B.

The remaining west parking lot, on Second Street, drains into Second Street via a swale in the landscaping on the north side of the parking lot that briefly crosses the parking

lot and into a 24" sidewalk culvert into Second Street just north of the drivepad. This Basin is shown as Basin 'E' on the Drainage Basin Map in Appendix B.

The runoff discharge points discussed above are similar in location to the existing discharge points from the site. As noted in the Summary below, the runoff peak rates and volumes generated by the proposed construction are very close to those generated by the existing development.

VIII. OFFSITE RUNOFF

There are two offsite drainage basins that affect this project as shown on the Offsite Drainage Map in Appendix B. The first basin, Basin 'A' includes the block between Rosemont Ave. and Kinley Ave. and is bordered on the west about midway between First and Second Street and on the east by the railroad tracks. This report assumes that all runoff in First Street north of Kinley is intercepted in the existing four 'P' Type inlets at Kinley Ave and First Street. This appears to be a reasonable assumption since there is a high area in first at the south side of Kinley that would increase the interception capacity of those inlets. This basin includes several commercial and industrial type developments that are mostly buildings, paved parking lots, and compacted earth storage areas. The land treatment percentages used in the AHYMO runs included in Appendix A are based on Table A.5 in the DPM Section 22.2. Visual inspection of the sites and photogramitry based Floodway Maps appear to justify the assumptions for this basin.

The second offsite basin, Basin 'B', includes the area between First Street and the west side of the railroad tracks west of First. This basin begins at Kinley Ave. on the north and runs south to adjacent to Rosemont Ave. This area will discharge to First Street only after initial ponding has become deep enough to provide some head to drive the flow since the basin is almost flat. The land treatment percentages used in the AHYMO runs included in Appendix A are based on Table A.5 in the DPM Section 22.2. Although this basin is almost entirely compacted earth parking and stroage areas, the higher percentage of Type D land treatment have been used since the existing zoning would allow development of this basin similar to what is sugested in Table A.5.

The runoff from both offsite basin collects in First Street and runs south to the intersection at Rosemont where four 'P' Type inlets collect the runoff.

IX. SUMMARY OF RUNOFF

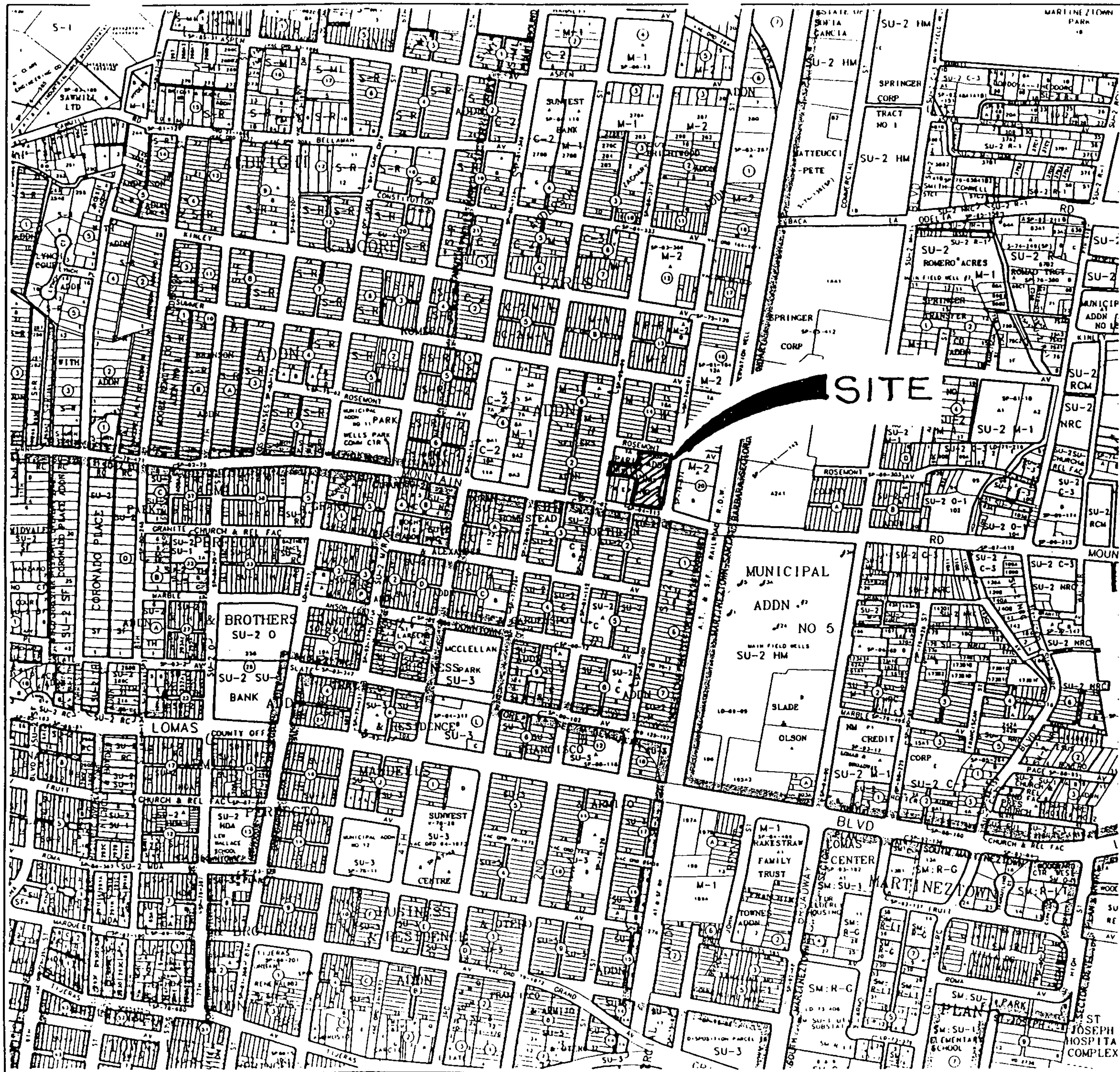
BASIN	100-Year Storm			
	EXISTING CONDITIONS		DEVELOPED CONDITIONS	
	Q ₁₀₀ (cfs)	V ₁₀₀ (cf)	Q ₁₀₀ (cfs)	V ₁₀₀ (cf)
A	14.36	25,574	14.36	25,574
B	8.94	15,899	8.94	15,899
C	2.50	4,661	2.42	4,400
D	0.84	1,481	0.84	1,481
E	0.89	1,525	0.88	1,568
F	1.41	2,526	1.43	2,614

BASIN	10-Year Storm			
	EXISTING CONDITIONS		DEVELOPED CONDITIONS	
	Q ₁₀₀ (cfs)	V ₁₀₀ (cf)	Q ₁₀₀ (cfs)	V ₁₀₀ (cf)
A	9.57	17,050	9.57	17,050
B	5.96	10,593	5.96	10,593
C	1.67	3,107	1.61	2,933
D	0.56	987	0.56	987
E	0.59	1,017	0.59	1,045
F	0.94	1,684	0.95	1,743

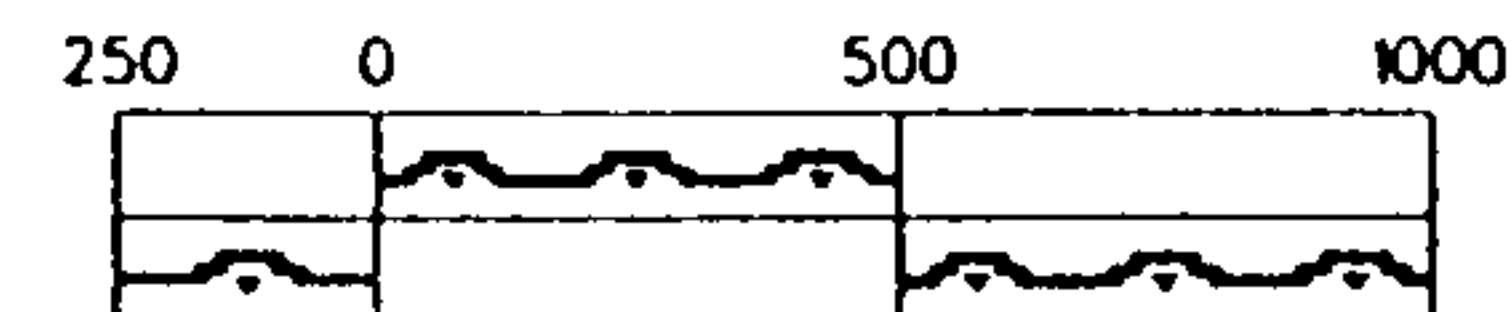
X. CONCLUSION

Since this area is included in a 100-year floodplain with designation Zone AO, it is assumed that the inlets and storm drain do not have the capacity to handle the runoff generated from more intense storm events. However, the floodplain boundaries appear to place the depth of flooding within the right-of-way on First Street and in the parking areas on Rosemont Ave. and Mountain Ave. By inspection of the surveyed elevations in the areas of the floodplain boundaries, it would appear that the flood elevations in a 100-year event will be about 3" below the finished floor elevation of the existing and proposed new building.

Please note that this project is an infill and renovation project in nature and that the adjacent parcels and offsite drainage basins contributing flows to this site are developed similar to there zoning and capacity. Therefore, the amount of flooding in current conditions should not become worst. Also, the proposed renovations of this site have not increased the peak runoff rates or volumes above current rates and therefore should not increase the flood level downstream of the site.

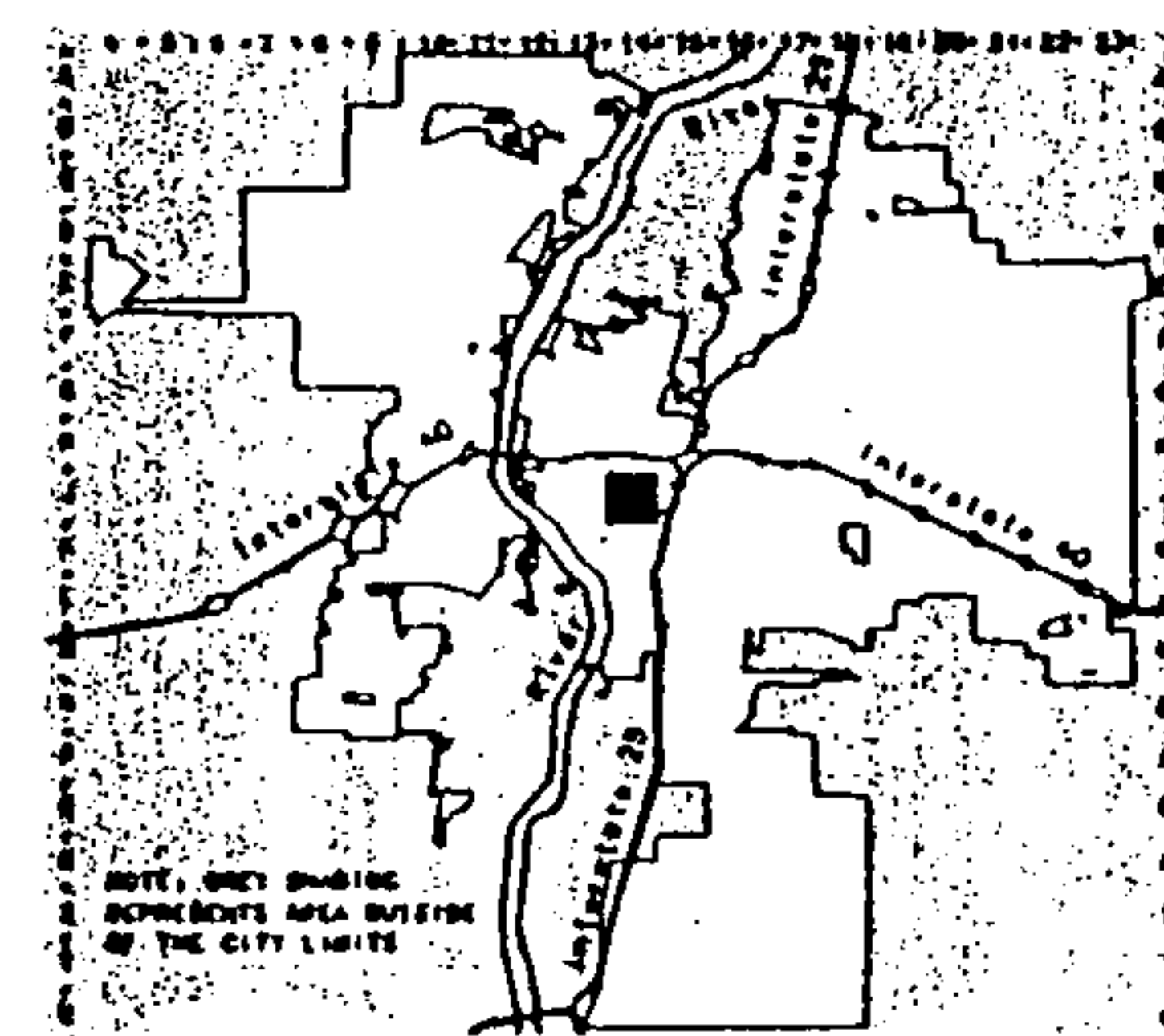


GRAPHIC SCALE IN FEET



CITY OF
Albuquerque
AGL S
PLANNING DEPARTMENT
©Copyright 1996

Map Amended through April 18, 1996



LEGAL DESCRIPTION

T10N
R10E
SEC 17

UNIFORM PROPERTY CODE
1-014-068

J-14-Z

APPENDIX A

RUN DATE (MON/DAY/YR) =12/30/1998
USER NO.= AHYMO-I-9702a0100001A-SH

ADD HYD	151.10	1& 2	51	.00829	23.31	.952	2.15427	1.500	4.393
ADD HYD	151.20	51& 4	52	.00858	24.14	.986	2.15471	1.500	4.396

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 2 NOTATION
*S										
*S										
*S	EXISTING CONDITIONS - RUNOFF TO MOUNTAIN AND FIRST									
*S										
*S	ADD HYD	154.10	3& 6 54	.00131	3.92	.165	2.36406	1.500	4.675	
*S	TOTAL EXISTING RUNOFF TO INTERSECTION									
*S										
*S										
*S	EXISTING CONDITIONS - RUNOFF TO MOUNTAIN AND SECOND									
*S										
*S	TOTAL EXISTING RUNOFF TO INTERSECTION									
*S										
*S	DEVELOPED CONDITIONS									
*S										
*S	DEVELOPED CONDITIONS - RUNOFF TO ROSEMONT AND FIRST									
*S										
*S	ADD HYD	161.10	1&-2 61	.00829	23.31	.952	2.15427	1.500	4.393	
*S	ADD HYD	161.20	51&-8 --62	.00858	24.14	.987	2.15598	1.500	4.397	
*S	TOTAL DEVELOPED RUNOFF TO INTERSECTION									
*S										
*S	DEVELOPED CONDITIONS - RUNOFF TO MOUNTAIN AND FIRST									
*S										
*S	ADD HYD	163.10	7&10 63	.00131	3.85	.161	2.30424	1.500	4.587	
*S	TOTAL DEVELOPED RUNOFF TO INTERSECTION									
*S										
*S	DEVELOPED CONDITIONS - RUNOFF TO MOUNTAIN AND SECOND									
*S										
*S	TOTAL DEVELOPED RUNOFF TO INTERSECTION									
*S										
*S	FINISH									

-(s0p10h4099T-&16D

AHYMO PROGRAM (AHYMO 97) - - Version: 1997.02c
RUN DATE (MON/DAY/YR) = 12/30/1998
START TIME (HR:MIN:SEC) = 09:43:28 USER NO.= AHYMO-I-9702a0100001A-SH
INPUT FILE = D:\AHYMO\HOME100.TXT

START TIME=0 PUNCH=0 PRINT LINES=-6
*S COMPUTE 100 YR. 24 HR. HYDROGRAPHS FOR HEALTHCARE/HOMELESS
*S HOME100.DAT - HYMO PER JAN 1993 DPM REVISIONS
*S
*S PRECIPITATION ZONE 2 PER FIGURE A-1
*S

RAINFALL TYPE=-2 RAIN QUAR=0 RAIN ONE=2.01 RAIN SIX=2.35
RAIN DAY=2.75 DT=0.03

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .030000 HOURS END TIME = 17.970000 HOURS

*S
*S COMPUTE RUNOFF FOR EXISTING CONDITIONS - OFFSITE BASINS
*S

*S
*S OFFSITE - BASIN A
*S
*S USE 80% TYPE D - HEAVY INDUSTRIAL PER TABLE A-5
*S

COMPUTE NM HYD ID=1 HYD NO= 101.1 DA=0.00511 SQ MI
PER A=0 PER B=0 PER C=20 PER D=80 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 16.176 CFS UNIT VOLUME = .9992 B = 526.28 P60 = 2.0100
AREA = .004088 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = 2.9473 CFS UNIT VOLUME = .9955 B = 383.55 P60 = 2.0100
AREA = .001022 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=1 CODE=10

PARTIAL HYDROGRAPH 101.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.1	7.200	.1	10.800	.1	14.400	.1
.300	.0	3.900	.1	7.500	.1	11.100	.1	14.700	.1
.600	.0	4.200	.1	7.800	.1	11.400	.1	15.000	.1
.900	.0	4.500	.1	8.100	.1	11.700	.1	15.300	.1
1.200	.2	4.800	.1	8.400	.1	12.000	.1	15.600	.1
1.500	14.4	5.100	.1	8.700	.1	12.300	.1	15.900	.1
1.800	5.0	5.400	.1	9.000	.1	12.600	.1	16.200	.1
2.100	2.4	5.700	.1	9.300	.1	12.900	.1	16.500	.1
2.400	.6	6.000	.1	9.600	.1	13.200	.1	16.800	.1
2.700	.3	6.300	.1	9.900	.1	13.500	.1	17.100	.1
3.000	.1	6.600	.1	10.200	.1	13.800	.1	17.400	.1
3.300	.1	6.900	.1	10.500	.1	14.100	.1	17.700	.1

RUNOFF VOLUME = 2.15427 INCHES = .5871 ACRE-FEET
PEAK DISCHARGE RATE = 14.36 CFS AT 1.500 HOURS BASIN AREA = .0051 SQ. MI.

*S
*S OFFSITE - BASIN B
*S
*S USE 80% TYPE D - HEAVY INDUSTRIAL PER TABLE A-5
*S

COMPUTE NM HYD ID=2 HYD NO= 102.1 DA=0.00318 SQ MI
PER A=0 PER B=0 PER C=20 PER D=80 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 10.067 CFS UNIT VOLUME = .9987 B = 526.28 P60 = 2.0100
AREA = .002544 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = 1.8341 CFS UNIT VOLUME = .9929 B = 383.55 P60 = 2.0100

AREA = .000636 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=2 CODE=10

PARTIAL HYDROGRAPH 102.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.1	7.200	.1	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.1	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.1	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.1	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	8.9	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	3.1	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	1.5	5.700	.1	9.300	.0	12.900	.0	16.500	.0
2.400	.4	6.000	.1	9.600	.0	13.200	.0	16.800	.0
2.700	.2	6.300	.1	9.900	.0	13.500	.0	17.100	.0
3.000	.1	6.600	.1	10.200	.0	13.800	.0	17.400	.0
3.300	.1	6.900	.1	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.15428 INCHES = .3654 ACRE-FEET
PEAK DISCHARGE RATE = 8.94 CFS AT 1.500 HOURS BASIN AREA = .0032 SQ. MI.

*S
*S
*S ONSITE - BASIN C
*S

COMPUTE NM HYD ID=3 HYD NO= 103.1 DA=0.00083 SQ MI
PER A=0 PER B=0 PER C=0 PER D=100 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 3.2843 CFS UNIT VOLUME = .9962 B = 526.28 P60 = 2.0100
AREA = .000830 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=2 CODE=10

PARTIAL HYDROGRAPH 102.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.1	7.200	.1	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.1	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.1	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.1	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	8.9	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	3.1	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	1.5	5.700	.1	9.300	.0	12.900	.0	16.500	.0
2.400	.4	6.000	.1	9.600	.0	13.200	.0	16.800	.0
2.700	.2	6.300	.1	9.900	.0	13.500	.0	17.100	.0
3.000	.1	6.600	.1	10.200	.0	13.800	.0	17.400	.0
3.300	.1	6.900	.1	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.15428 INCHES = .3654 ACRE-FEET
PEAK DISCHARGE RATE = 8.94 CFS AT 1.500 HOURS BASIN AREA = .0032 SQ. MI.

*S
*S ONSITE - BASIN D
*S

COMPUTE NM HYD ID=4 HYD NO= 104.1 DA=0.00029 SQ MI
PER A=0 PER B=0 PER C=19 PER D=81 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = .92949 CFS UNIT VOLUME = .9873 B = 526.28 P60 = 2.0100
AREA = .000235 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
UNIT PEAK = .15890 CFS UNIT VOLUME = .9199 B = 383.55 P60 = 2.0100
AREA = .000055 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=4 CODE=10

PARTIAL HYDROGRAPH 104.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	.8	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.3	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.1	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.0	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.16725 INCHES = .0335 ACRE-FEET
 PEAK DISCHARGE RATE = .84 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

*S
 *S ONSITE - BASIN E
 *S

COMPUTE NM HYD ID=5 HYD NO= 105.1 DA=0.00031 SQ MI
 PER A=0 PER B=0 PER C=21 PER D=79 TP=-.133
 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = .96906 CFS UNIT VOLUME = .9873 B = 526.28 P60 = 2.0100
 AREA = .000245 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
 UNIT PEAK = .18774 CFS UNIT VOLUME = .9270 B = 383.55 P60 = 2.0100
 AREA = .000065 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=5 CODE=10

PARTIAL HYDROGRAPH 105.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	.9	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.3	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.1	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.0	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.14157 INCHES = .0354 ACRE-FEET
 PEAK DISCHARGE RATE = .89 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

*S
 *S ONSITE - BASIN F
 *S

COMPUTE NM HYD ID=6 HYD NO= 106.1 DA=0.00048 SQ MI
 PER A=0 PER B=0 PER C=10 PER D=90 TP=-.133
 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.7094 CFS UNIT VOLUME = .9926 B = 526.28 P60 = 2.0100
 AREA = .000432 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .107204HR TP = .133000HR K/TP RATIO = .806046 SHAPE CONSTANT, N = 4.440701
 UNIT PEAK = .13842 CFS UNIT VOLUME = .9035 B = 383.55 P60 = 2.0100
 AREA = .000048 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=6 CODE=10

PARTIAL HYDROGRAPH 106.10

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
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HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	1.4	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.5	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.2	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.0	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.28275 INCHES = .0584 ACRE-FEET
 PEAK DISCHARGE RATE = 1.41 CFS AT 1.500 HOURS BASIN AREA = .0005 SQ. MI.

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 *S COMPUTE RUNOFF FOR DEVELOPED CONDITIONS
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 *S ONSITE - BASIN C
 *S
 COMPUTE NM HYD ID=7 HYD NO= 107.1 DA=0.00083 SQ MI
 PER A=0 PER B=4 PER C=5 PER D=91 TP=-.133
 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 2.9887 CFS UNIT VOLUME = .9962 B = 526.28 P60 = 2.0100
 AREA = .000755 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .118131HR TP = .133000HR K/TP RATIO = .888206 SHAPE CONSTANT, N = 3.993617
 UNIT PEAK = .19924 CFS UNIT VOLUME = .9339 B = 354.74 P60 = 2.0100
 AREA = .000075 SQ MI IA = .41667 INCHES INF = 1.01667 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=7 CODE=10

PARTIAL HYDROGRAPH 107.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	2.4	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.9	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.4	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.1	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.28020 INCHES = .1009 ACRE-FEET
 PEAK DISCHARGE RATE = 2.42 CFS AT 1.500 HOURS BASIN AREA = .0008 SQ. MI.

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 *S ONSITE - BASIN D
 *S
 COMPUTE NM HYD ID=8 HYD NO= 108.1 DA=0.00029 SQ MI
 PER A=0 PER B=7 PER C=7 PER D=86 TP=-.133
 RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = .98687 CFS UNIT VOLUME = .9873 B = 526.28 P60 = 2.0100
 AREA = .000249 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .119497HR TP = .133000HR K/TP RATIO = .898476 SHAPE CONSTANT, N = 3.944947
 UNIT PEAK = .10729 CFS UNIT VOLUME = .8785 B = 351.48 P60 = 2.0100
 AREA = .000041 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=8 CODE=10

PARTIAL HYDROGRAPH 108.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	.8	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.3	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.1	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.0	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.20492 INCHES = .0341 ACRE-FEET
PEAK DISCHARGE RATE = .84 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

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*S ONSITE - BASIN'E
*S

COMPUTE NM HYD ID=9 HYD NO= 109.1 DA=0.00031 SQ MI
PER A=0 PER B=8 PER C=9 PER D=83 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.0181 CFS UNIT VOLUME = .9889 B = 526.28 P60 = 2.0100
AREA = .000257 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .118774HR TP = .133000HR K/TP RATIO = .893039 SHAPE CONSTANT, N = 3.970534
UNIT PEAK = .13995 CFS UNIT VOLUME = .9064 B = 353.20 P60 = 2.0100
AREA = .000053 SQ MI IA = .42059 INCHES INF = 1.02765 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD ID=9 CODE=10

PARTIAL HYDROGRAPH 109.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	.9	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.3	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.1	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.0	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.16242 INCHES = .0358 ACRE-FEET
PEAK DISCHARGE RATE = .88 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

*S
*S ONSITE - BASIN F
*S

COMPUTE NM HYD ID=10 HYD NO= 110.1 DA=0.00048 SQ MI
PER A=0 PER B=4 PER C=0 PER D=96 TP=-.133
RAIN=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 1.8234 CFS UNIT VOLUME = .9936 B = 526.28 P60 = 2.0100
AREA = .000461 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

K = .131790HR TP = .133000HR K/TP RATIO = .990905 SHAPE CONSTANT, N = 3.563124
UNIT PEAK = .46904E-01CFS UNIT VOLUME = .8638 B = 324.91 P60 = 2.0100
AREA = .000019 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .030000

PRINT HYD

ID=10

CODE=10

PARTIAL HYDROGRAPH 110.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	1.4	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.5	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.3	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.1	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.34581 INCHES = .0601 ACRE-Feet
 PEAK DISCHARGE RATE = 1.43 CFS AT 1.500 HOURS BASIN AREA = .0005 SQ. MI.

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*S EXISTING CONDITIONS - RUNOFF TO ROSEMONT AND FIRST

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ADD HYD ID 51 HYD 151.1 ID I 1 ID II 2

ADD HYD ID 52 HYD 151.2 ID I 51 ID II 4

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*S TOTAL EXISTING RUNOFF TO INTERSECTION

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PRINT HYD ID=52 CODE 10

PARTIAL HYDROGRAPH 151.20

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.1	7.200	.1	10.800	.1	14.400	.1
.300	.0	3.900	.1	7.500	.1	11.100	.1	14.700	.1
.600	.0	4.200	.1	7.800	.1	11.400	.1	15.000	.1
.900	.0	4.500	.1	8.100	.1	11.700	.1	15.300	.1
1.200	.4	4.800	.1	8.400	.1	12.000	.1	15.600	.1
1.500	24.1	5.100	.1	8.700	.1	12.300	.1	15.900	.1
1.800	8.5	5.400	.1	9.000	.1	12.600	.1	16.200	.1
2.100	4.0	5.700	.1	9.300	.1	12.900	.1	16.500	.1
2.400	1.0	6.000	.1	9.600	.1	13.200	.1	16.800	.1
2.700	.4	6.300	.2	9.900	.1	13.500	.1	17.100	.1
3.000	.2	6.600	.1	10.200	.1	13.800	.1	17.400	.1
3.300	.2	6.900	.1	10.500	.1	14.100	.1	17.700	.1

RUNOFF VOLUME = 2.15471 INCHES = .9860 ACRE-Feet
 PEAK DISCHARGE RATE = 24.14 CFS AT 1.500 HOURS BASIN AREA = .0086 SQ. MI.

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*S EXISTING CONDITIONS - RUNOFF TO MOUNTAIN AND FIRST

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ADD HYD ID 54 HYD 154.1 ID I 3 ID II 6

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*S TOTAL EXISTING RUNOFF TO INTERSECTION

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PRINT HYD ID=54 CODE 10

PARTIAL HYDROGRAPH 154.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.1	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	3.9	5.100	.0	8.700	.0	12.300	.0	15.900	.0

1.800	1.4	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.7	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.2	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.1	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.36406 INCHES = .1652 ACRE-FEET
 PEAK DISCHARGE RATE = 3.92 CFS AT 1.500 HOURS BASIN AREA = .0013 SQ. MI.

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*S EXISTING CONDITIONS - RUNOFF TO MOUNTAIN AND SECOND

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*S TOTAL EXISTING RUNOFF TO INTERSECTION

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PRINT HYD ID=5 CODE 10

PARTIAL HYDROGRAPH 105.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	.9	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.3	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.1	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.0	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.14157 INCHES = .0354 ACRE-FEET
 PEAK DISCHARGE RATE = .89 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

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*S DEVELOPED CONDITIONS

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*S DEVELOPED CONDITIONS - RUNOFF TO ROSEMONT AND FIRST

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ADD HYD ID 61 HYD 161.1 ID I 1 ID II 2

ADD HYD ID 62 HYD 161.2 ID I 51 ID II 8

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*S TOTAL DEVELOPED RUNOFF TO INTERSECTION

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PRINT HYD ID=62 CODE 10

PARTIAL HYDROGRAPH 161.20

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.1	7.200	.1	10.800	.1	14.400	.1
.300	.0	3.900	.1	7.500	.1	11.100	.1	14.700	.1
.600	.0	4.200	.1	7.800	.1	11.400	.1	15.000	.1
.900	.0	4.500	.1	8.100	.1	11.700	.1	15.300	.1
1.200	.4	4.800	.1	8.400	.1	12.000	.1	15.600	.1
1.500	24.1	5.100	.1	8.700	.1	12.300	.1	15.900	.1
1.800	8.5	5.400	.1	9.000	.1	12.600	.1	16.200	.1
2.100	4.1	5.700	.1	9.300	.1	12.900	.1	16.500	.1
2.400	1.0	6.000	.1	9.600	.1	13.200	.1	16.800	.1
2.700	.4	6.300	.2	9.900	.1	13.500	.1	17.100	.1
3.000	.2	6.600	.1	10.200	.1	13.800	.1	17.400	.1
3.300	.2	6.900	.1	10.500	.1	14.100	.1	17.700	.1

RUNOFF VOLUME = 2.15598 INCHES = .9866 ACRE-FEET
PEAK DISCHARGE RATE = 24.14 CFS AT 1.500 HOURS BASIN AREA = .0086 SQ. MI.

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*S DEVELOPED CONDITIONS - RUNOFF TO MOUNTAIN AND FIRST

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ADD HYD ID 63 HYD 163.1 ID I 7 ID II 10

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*S TOTAL DEVELOPED RUNOFF TO INTERSECTION

*S

PRINT HYD ID=63 CODE 10

PARTIAL HYDROGRAPH 163.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.1	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	3.8	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	1.4	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.7	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.1	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.1	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.30424 INCHES = .1610 ACRE-FEET
PEAK DISCHARGE RATE = 3.85 CFS AT 1.500 HOURS BASIN AREA = .0013 SQ. MI.

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*S DEVELOPED CONDITIONS - RUNOFF TO MOUNTAIN AND SECOND

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*S TOTAL DEVELOPED RUNOFF TO INTERSECTION

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PRINT HYD ID=9 CODE 10

PARTIAL HYDROGRAPH 109.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	3.600	.0	7.200	.0	10.800	.0	14.400	.0
.300	.0	3.900	.0	7.500	.0	11.100	.0	14.700	.0
.600	.0	4.200	.0	7.800	.0	11.400	.0	15.000	.0
.900	.0	4.500	.0	8.100	.0	11.700	.0	15.300	.0
1.200	.0	4.800	.0	8.400	.0	12.000	.0	15.600	.0
1.500	.9	5.100	.0	8.700	.0	12.300	.0	15.900	.0
1.800	.3	5.400	.0	9.000	.0	12.600	.0	16.200	.0
2.100	.1	5.700	.0	9.300	.0	12.900	.0	16.500	.0
2.400	.0	6.000	.0	9.600	.0	13.200	.0	16.800	.0
2.700	.0	6.300	.0	9.900	.0	13.500	.0	17.100	.0
3.000	.0	6.600	.0	10.200	.0	13.800	.0	17.400	.0
3.300	.0	6.900	.0	10.500	.0	14.100	.0	17.700	.0

RUNOFF VOLUME = 2.16242 INCHES = .0358 ACRE-FEET
PEAK DISCHARGE RATE = .88 CFS AT 1.500 HOURS BASIN AREA = .0003 SQ. MI.

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FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 09:43:29

-(s0p10h4099T-&l6D

SIDEWALK CULVERT CAPACITY

AS A CHANNEL PER MANNING EQN

$$\text{USE } n = 0.013 \quad d = 0.5' \quad s = 2\%$$

$$Q_{CAP} = 1.8 \text{ cfs} \Rightarrow Q_{100} = \frac{2.42}{2} = 1.2 \text{ cfs}$$

(WORST CASE $\frac{1}{2}$ BASIN A)

AS A WEIR

$$Q = K L H^{3/2} \quad \begin{array}{l} K = 2.6 \text{ Broad Crest} \\ H = 0.5' \end{array}$$

$$= (2.6)(2')(0.5')^{3/2}$$

$$= 1.84 \text{ cfs} \Rightarrow Q_{100} = \frac{2.42}{2} = 1.2 \text{ cfs}$$

(WORST CASE $\frac{1}{2}$ BASIN A)

NOTE: 24" culverts have been used as the outlet for Basins C, D, E, & F

$$Q_{100}(C) = 2.42 \text{ cfs} - 2 \text{ culverts installed}$$

$$Q_{100}(D) = 0.84 \text{ cfs}$$

$$Q_{100}(E) = 0.88 \text{ cfs}$$

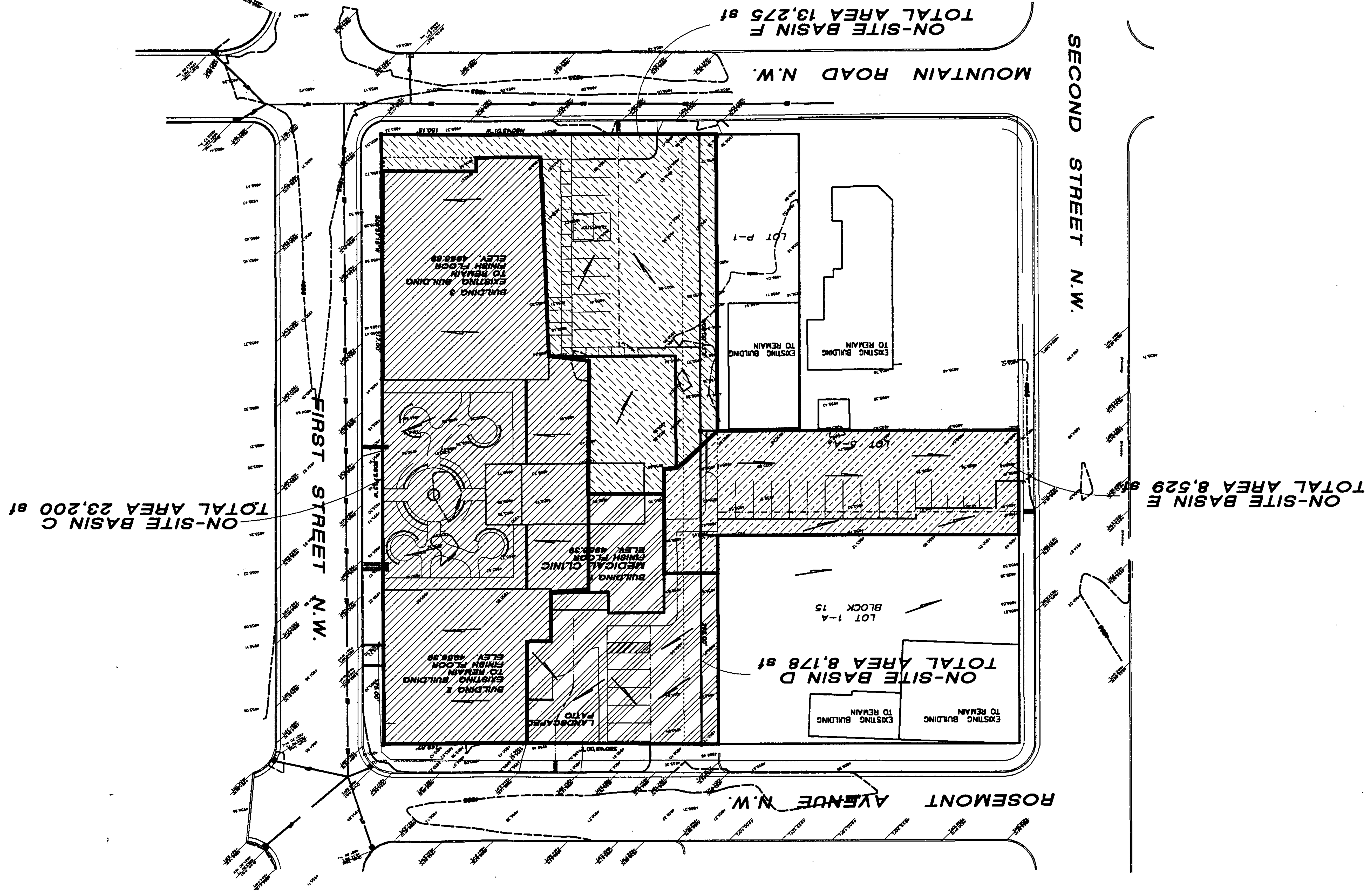
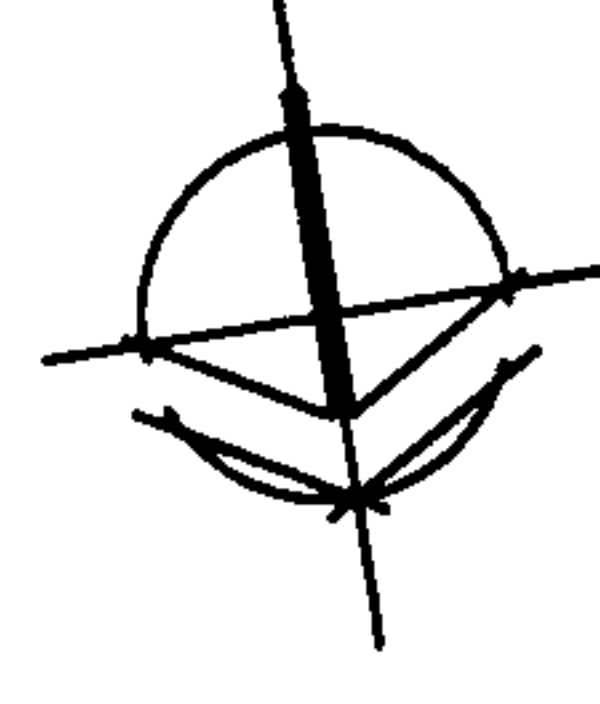
$$Q_{100}(F) = 1.43 \text{ cfs}$$

$$\text{All } Q_{100} < Q_{CAP} = 1.8 \text{ cfs} \quad \text{OK}$$

APPENDIX B

ONSITE DRAINAGE MAP
FIGURE A

SCALE: 1"=50'
NORTH





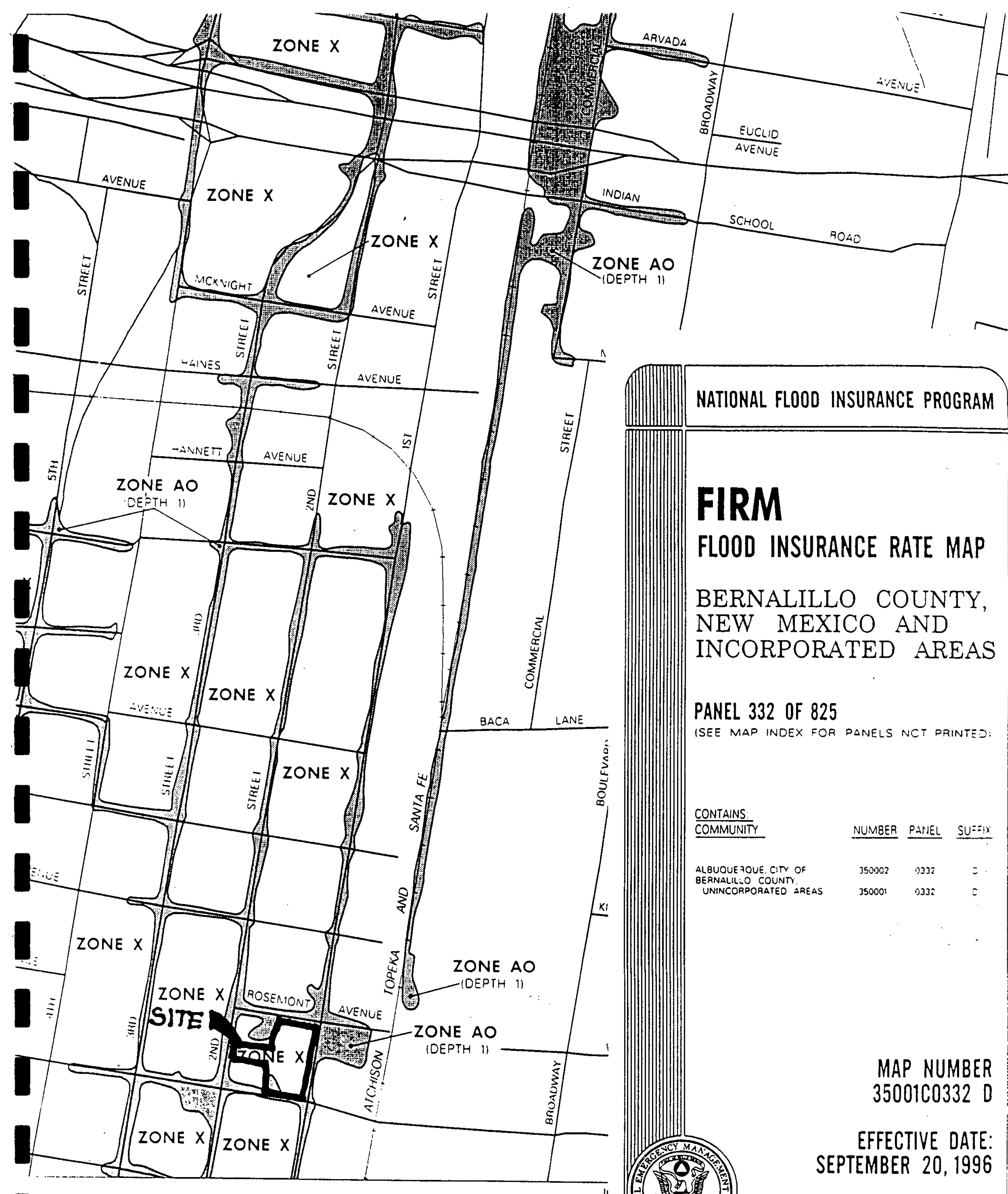
OFF-SITE BASIN A
TOTAL AREA 25,570 sf

SITE

OFF-SITE BASIN B
TOTAL AREA 15,900 sf

NORTH
SCALE: 1" = 500'

OFFSITE DRAINAGE MAP
FIGURE B



NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 332 OF 825
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	350002	0332	D
BERNALILLO COUNTY, UNINCORPORATED AREAS	350001	0332	D

MAP NUMBER
35001C0332 D

EFFECTIVE DATE:
SEPTEMBER 20, 1996



Federal Emergency Management Agency