



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 19, 2001

Paul Brasher, PE
Brasher & Lorenz, Inc.
2201 San Pedro NE, Bldg. 1, Suite 220
Albuquerque, NM 87110

**RE: PNM Prager Switching Station Expansion Grading Plan (H13-D20) Dated
December 14, 2001**

Dear Mr. Brasher:

The above referenced grading plan received December 14, 2001 is approved for Grading Permit. The engineer will submit grading certification per the DPM to Hydrology upon completion of the project.

If you have any questions please call me at 924-3982

Sincerely,

Carlos A. Montoya
City Floodplain Administrator

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

H-13/D20

PROJECT TITLE: PRAGER SWITCHING STATION (PNM) ZONE MAP/DRG. FILE #: H-13
DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: TRACTS 1 AND 2, PRAGER STATION ADDITION
CITY ADDRESS: 1800 1/2 12TH ST. NW

ENGINEERING FIRM: BRASHER & LORENZ, INC.
ADDRESS: 2201 SAN PEDRO NE BLDG 1, SUITE 220
CITY, STATE: ALBUQUERQUE, NM

CONTACT: PAUL BRASHER
PHONE: 888-6088
ZIP CODE: 87110

OWNER: PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM)
ADDRESS: ALVARADO SQUARE
CITY, STATE: ALBUQUERQUE, NM

CONTACT: _____
PHONE: _____
ZIP CODE: 87058

ARCHITECT: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

SURVEYOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CONTRACTOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

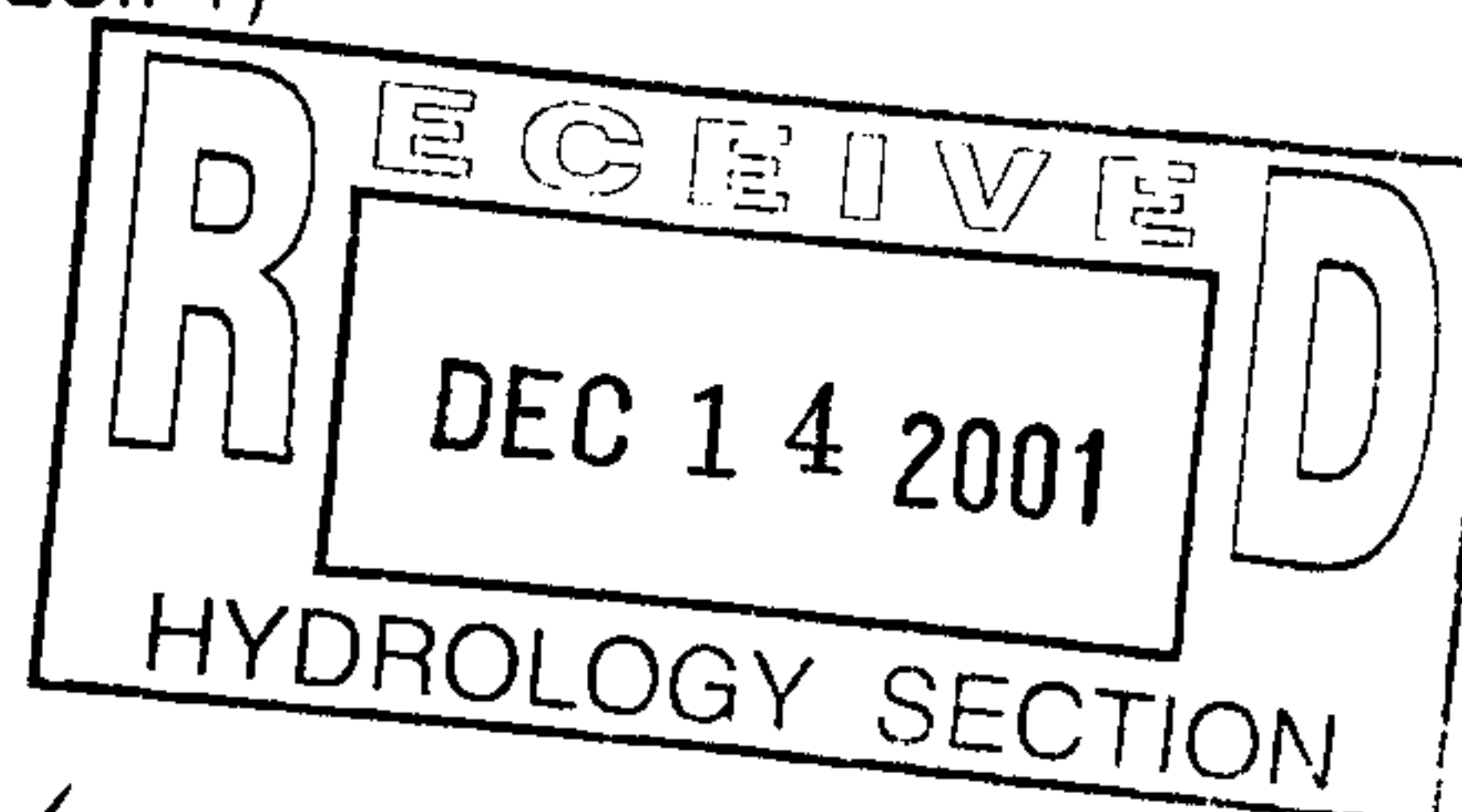
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN
- ☒ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM.)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP.)
- ☒ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☒ YES
- ☐ NO
- ☐ COPY PROVIDED



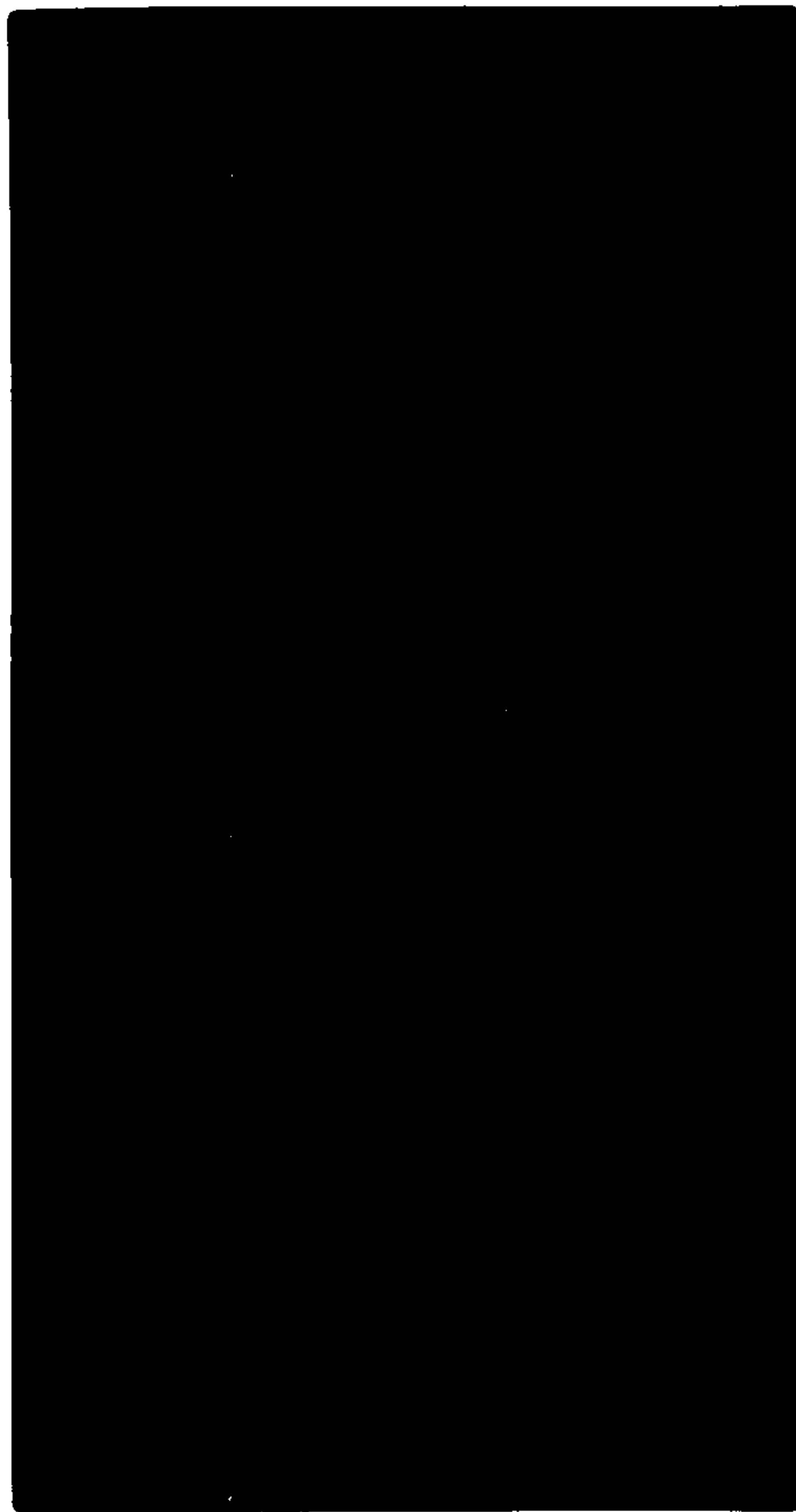
DATE SUBMITTED: 11.26.01

BY: _____

Paul Brasher
PAUL BRASHER

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

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



2400 Comanche Road, NE
Albuquerque, NM 87107
Telephone (505) 884-0696

dtm & associates, inc



Denney-Tibjag-McLean & Associates, Inc.
Consulting Engineers ■ Planners ■ Surveyors



FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

February 9, 1987

Gary Tibljas, P.E.
Denney-Tibljas-McLean & Associates, Inc.
2400 Comanche Road, NE
Albuquerque, New Mexico 87107

RE: CONCEPTUAL DRAINAGE REPORT FOR PRAGER STATION
(H-13/D20)

Dear Gary:

We have received information from the Design Section regarding a flooding problem on Twelfth Street. This problem will be partially corrected in the future. We believe that the problem in Twelfth Street indicates that there is no downstream capacity for your site to drain.

We are therefore requesting that the master plan be changed to indicate temporary retention on-site. This temporary retention pond would be changed by the owner in the future, depending on the downstream capacity of the new improvements. We are requesting that the plan be changed and approved prior to final plat approval.

If you have any questions call me at 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

PUBLIC WORKS DEPARTMENT

Walter Nickerson, P.E., City Engineer

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

D.R.B. Case No. 86-602
D.R.C. Project No. N/A
Date Submitted 12/16/86

FIGURE 11

EXHIBIT "D"
to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.)
REQUIRED INFRASTRUCTURE LISTING
for PRAGER STATION

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development.

<u>Size</u>	<u>*Type Improvement</u>	<u>Location</u>	<u>From</u>	<u>To</u>
<u>10"</u>	<u>Public Waterline</u> <u>& Appurtenances</u>	<u>Prager Station</u> <u>Tracts 2A, 2B, 2C</u> <u>& adjacent properties</u>	<u>12th Street</u>	<u>Mill Pond Road</u>
<u>8"</u>	<u>Public Sanitary</u> <u>Sewer and</u> <u>Appurtenances</u>	<u>Prager Station</u> <u>Tracts 2A, 2B, 2C</u> <u>& adjacent properties</u>	<u>12th Street</u>	<u>Tract 2A</u>
<u>24'</u> <u>Width</u>	<u>Private Access Rd.</u> <u>Residential Paving</u>	<u>Prager Station</u> <u>Tracts 2A, 2B, 2C</u>	<u>12th Street</u>	<u>Cul-de-Sac</u>
<u>40'</u> <u>Rad.</u>	<u>Private Access</u> <u>Temp. Turnaround</u>	<u>South end of</u> <u>Private Access Rd.</u>		
	<u>Concrete Curb &</u> <u>Gutter (Both Sides)</u>	<u>Prager Station</u> <u>Tract 2B</u>	<u>12th Street</u>	<u>Tract 2B</u>

Prepared by: Joe Jones
Print Name: Joe Jones
Firm: Denney-Fibljias-McLean & Assoc., Inc.

Page 1 of 1

Development Review Board Member Approvals

Robert A. Fung 12-16-86 Rhonda M. Fung 12-16-86 Janet Sauer 12-16-86
Traffic Date WUD Date Parks & Rec. Date
Frank J. Fung 12/16/86 Jack Cloud 12-16-86
City Engineer/AMAFCA Date DRB Chairman Date



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

December 22, 1986

Gary Tibljas, P.E.
Denney-Tibljas-McLean & Associates, Inc.
2400 Comanche Road, NE
Albuquerque, New Mexico 87107

RE: CONCEPTUAL DRAINAGE REPORT FOR PRAGER STATION
(H-13/D20) RECEIVED NOVEMBER 24, 1986

Dear Gary:

The above referenced plan is conceptually approved for the purpose of obtaining preliminary plat.

Prior to receiving any further approvals, a detailed drainage report per the DPM is required. If each tract is to come in separately for building permit, then a detailed drainage plan, per the DPM, will be required for approval prior to Hydrology sign-off.

Should you have any questions, comments, or if this office can be of further assistance, please call 768-2650.

Cordially,

Billy J. Goolsby
Billy J. Goolsby, P.E.
C.E./Hydrology Section

BJG/bsj

PUBLIC WORKS DEPARTMENT

Walter Nickerson, P.E., City Engineer

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

MASTER DRAINAGE PLAN

FOR

PRAGER STATION

TRACTS 2A, 2B and 2C

NOVEMBER, 1986

DTM JOB NO. 902.12

PREPARED BY:

DENNEY-TIBLJAS-McLEAN & ASSOCIATES, INC.
CONSULTING ENGINEERS, SURVEYORS, PLANNERS
2400 COMANCHE ROAD NE
ALBUQUERQUE, NM 87107
(505) 884-0696

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Prager Station ZONE ATLAS/DRNG. FILE #: H-13/D20

LEGAL DESCRIPTION: Prager Station Tracts 2A, 2B and 2C

CITY ADDRESS: _____

ENGINEERING FIRM: DENNEY-TIBLJAS-McLEAN & ASSOC, INC. CONTACT: Joe Jones

ADDRESS: 2400 Comanche NE, Albuquerque, NM 87107 PHONE: 884-0696

OWNER: N/A CONTACT: N/A

ADDRESS: _____ PHONE: _____

ARCHITECT: N/A CONTACT: N/A

ADDRESS: _____ PHONE: _____

SURVEYOR: DENNEY-TIBLJAS-McLEAN & ASSOC, INC. CONTACT: Steven L. Youtsey

ADDRESS: 2400 Comanche NE, Albuquerque, NM 87107 PHONE: 884-0696

CONTRACTOR: _____ CONTACT: _____

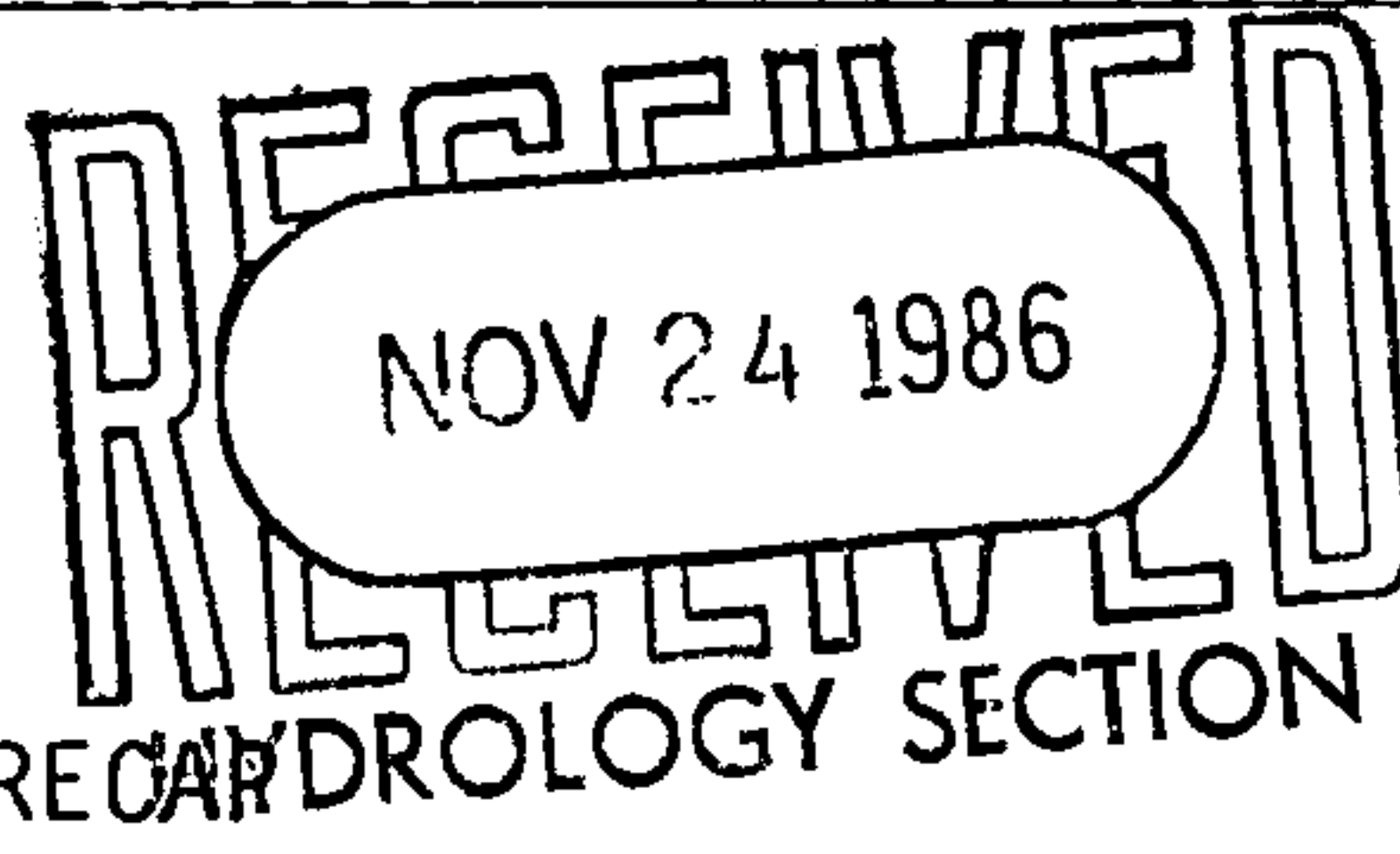
ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☒ YES

☐ NO

☒ COPY OF CONFERENCE RECORD SHEET PROVIDED



DRB No. 86-602

EPC No. _____

PROJ. No. _____

TYPE OF SUBMITTAL:

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

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SECTOR PLAN APPROVAL
- ☐ SKETCH PLAT APPROVAL
- ☒ PRELIMINARY PLAT APPROVAL
- ☐ SITE DEVELOPMENT PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY APPROVAL
- ☐ ROUGH GRADING PERMIT APPROVAL
- ☐ GRADING/PAVING PERMIT APPROVAL

DATE SUBMITTED: November 21, 1986


BY: Joe Jones

JOE JONES

REV. 10/85

OTHER _____ (SPECIFY)

I, Gary W. Tibljas, hereby certify that the enclosed documents and drawings were prepared under my supervision and are true and correct to the best of my knowledge and belief.


New Mexico Professional Engineer No. 8117



CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

902.12

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: H13 DATE: 8-18-86

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Prager Station Addn

STREET ADDRESS (IF KNOWN): Tract 1 & 2 of Prager

SUBDIVISION NAME: Station Addn

APPROVAL REQUESTED:

☒ PRELIMINARY PLAT

_____ SITE DEVELOPMENT PLAN

_____ OTHER _____

_____ FINAL PLAT

_____ BUILDING PERMIT

_____ ROUGH GRADING

ATTENDANCE: ^{WHO} Richard Dorste ^{REPRESENTING} _____
Carlo A. Montz _____

FINDINGS:

- ① Drainage plan per DPM
- ② Existing condition - (A) AMD'S has small flooding areas on site (B) site is 2-3' lower than 12th St. (C) Area is in a swamp condition
- ③ Can only use Retention pond if future outfall is proposed and funded.
- ④ Need Master plan for the three tracts showing
 - (A) ponding requirements
 - (B) discharge & rates
 - (C) grades contours
 - (D) show drainage easements
- ⑤ Pumps can be an alternative to discharge site runoff.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlo A. Montz

TITLE: _____

DATE: 8-18-86

SIGNED: Richard A. Dorste

TITLE: _____

DATE: 8-18-86

T A B L E O F C O N T E N T S

	<u>Page</u>
1. PURPOSE	1
2. GENERAL	1
3. DRAINAGE.	1
4. CONCLUSION.	2
5. CALCULATIONS	

EXHIBITS

- Exhibit I - Location Map
- Exhibit II - F.E.M.A. Flood Plain Map
- Exhibit III - Master Drainage Plan

DENNEY-TIBLJAS-M^CLEAN & ASSOC., INC.

2400 COMANCHE ROAD N.E.

ALBUQUERQUE, N.M. 87107

TELEPHONE: (505) 884-0696

RECEIVED
NOV 24 1986

LETTER OF TRANSMITTAL

TO CITY HYDROLOGY

DATE <u>11/24/86</u>	DTM JOB NO. <u>902.12</u>
ATTENTION <u>CARLOS MONTAÑA</u>	
RE: <u>PRAGER STATION</u>	

GENTLEMEN:

WE ARE SENDING YOU

☐ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:☐ SHOP DRAWINGS☐ PRINTS☒ PLANS☐ PROJECT ESTIMATE☐ SPECIFICATIONS☐ COPY OF LETTER☐ CHANGE ORDER☐ _____

COPIES	DATE	NO.	DESCRIPTION
		1	MASTER DRAINAGE PLAN

THESE ARE TRANSMITTED as checked below.

☒ FOR APPROVAL☐ APPROVED AS SUBMITTED☐ RETURN _____ COPIES FOR DISTRIBUTION☐ FOR YOUR USE☐ APPROVED AS NOTED☐ RETURN _____ SIGNED ORIGINALS☐ AS REQUESTED☒ FOR REVIEW AND COMMENT ☐ _____☐ FOR BIDS DUE _____

19 _____

☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

CARLOS,

ENCLOSED IS THE PROPOSED MASTER DRAINAGE
PLAN FOR PRAGER STATION. PRELIMINARY PLAT APPROVAL
IS SCHEDULED FOR DRB ON DEC. 9TH. IT WOULD BE GREATLY
APPRECIATED IF THIS REPORT COULD BE REVIEWED
BY THEN.

THANKS

COPY TO _____

SIGNED: Joe Jones

IF ENCLOSURES ARE NOT AS NOTED, KINDLY NOTIFY US AT ONCE

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: H13 DATE: 8-18-86

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Prager Station Addition

STREET ADDRESS (IF KNOWN): Tract 152 of Prager

SUBDIVISION NAME: Station Addition

APPROVAL REQUESTED:

☒ PRELIMINARY PLAT

_____ FINAL PLAT

_____ SITE DEVELOPMENT PLAN

_____ BUILDING PERMIT

_____ OTHER

_____ ROUGH GRADING

ATTENDANCE: ^{WHO} Richard Dorote ^{REPRESENTING} _____
Carlo A. Monty _____

FINDINGS:

- ① DRAINAGE plan per DPM
- ② Existing conditions - (A) AMD'S has small flooding areas on site (B) site is 2-3' lower than 12th St. (C) Area is in a swamp condition
③ NO storm drain on area
- ③ Can only use retaining pond if future outfall is proposed and funded.
- ④ Need master plan for the three tracts showing
(A) pond - no general
(B) discharge @ site
(C) road contour
(D) show drainage easements
- ⑤ Pump can be an alternative to discharge site runoff.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlo A. Monty

SIGNED: Richard H. Dorote

TITLE: _____

TITLE: _____

DATE: 8-18-86

DATE: 8-18-86

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

MASTER DRAINAGE PLAN
PRAGER STATION
TRACTS 2A, 2B and 2C

I. PURPOSE:

The purpose of this report is to determine an economical and effective Master Storm Water Management Plan for subject project.

II. GENERAL:

The development site consists of approximately 8 acres and is located at the Southeast Corner of the intersection of 12th Street and Interstate 40 (see Exhibit I). Presently the site is in a sump condition and is located within the 500-year flood plain; however, the site is not within the 100-year flood plain (see Exhibit II).

The development site presently exists as Tract 2. The site is being replatted into Tracts 2A, 2B and 2C, and access and drainage easements are being provided for each new tract.

III. DRAINAGE:

Presently the site is located in a sump condition approximately 3 feet lower than 12th Street. Due to this sump condition, each tract will be required to construct a detention pond and discharge via a pump to the proposed access road (see Exhibit III). The maximum discharge each tract will be allowed is 0.5 cfs per acre.

The discharge onto the proposed access road will surface flow to 12th Street. At the present time, there is no flooding on 12th Street and there is a small storm drain in the street just north of the railroad tracks. Due to the small size of the storm drain, only the above defined controlled discharge rate will be allowed.

MASTER DRAINAGE PLAN
PRAGER STATION
TRACTS 2A, 2B and 2C

III. DRAINAGE: (CONTINUED)

Since the proposed development is unknown at this time, the exact pond locations as shown on Exhibit III will not be required to be adhered to at the time development occurs. Cross lot easements have been granted such that each parcel will have drainage access to the outfall point.

IV. CONCLUSION:

The Prager Station Master Drainage Plan comprises Prager Station Tracts 2A, 2B and 2C. All drainage considerations established within this report will be required to be adhered to at the time development occurs with the exception of the actual pond locations. Onsite pond locations may vary in order to accommodate future development.

This is a Master Drainage Plan establishing minimum drainage requirements for development. At the time of development, each tract will be required to submit a detailed Drainage and Grading Plan to the City of Albuquerque for approval.

HYDROGRAPH COMPUTATION WORKSHEET

DEVELOPED CONDITION

DATE _____
 COMPUTED BY _____
 CHECK BY _____

Soil Gb (Gila) Type "B"

PAGE 1

PROJECT Prager Station

LOCATION Tract 2A

ANALYSIS POINT # _____

(DR. AREA) A = 2.9 ACRES

T_c 10 MIN

POINT RAINFALL 2.2 IN. FROM PLATE 22.2 D-1

CN = 88 FROM PLATES 22.2 C-2, 22.2 C-3

RUNOFF VOLUME R = 1.2 IN. FROM PLATE 22.2 C-4

COMPUTED T_p = 10 MIN. $T_p = T_c$
 (Rounded to even minute)

$q_p = \frac{45.4A}{T_p} = \frac{13.2}{10}$ CFS./INCH OF RUNOFF

$(R \times q_p) = Q_{peak} = \frac{15.8}{10}$ CFS

$t(COLUMN) = (t/T_p) \quad t = T_p(t/T_p)$

$y = \frac{Q}{Q_{peak}} \quad Q = y(Q_{peak})$

$V = RA$
 $V = (1.2)/12(2.9)(43560)$
 $V = 12,600$ CF Developed

	(t/T_p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1		.03	
3	.2		.10	
4	.3		.190	
5	.4		.310	
6	.5		.470	
7	.6		.660	
8	.7		.820	
9	.8		.930	
10	.9		.990	
11	1.0		1.00	
12	1.1		.990	
13	1.2		.930	
14	1.3		.860	
15	1.4		.780	
16	1.5		.680	
17	1.6		.560	
18	1.7		.460	
19	1.8		.390	
20	1.9		.330	
21	2.0		.280	
22	2.2		.207	
23	2.4		.147	
24	2.6		.107	
25	2.8		.077	
26	3.0		.055	
27	3.2		.040	
28	3.4		.029	
29	3.6		.021	
30	3.8		.015	
31	4.0		.011	
32	4.5		.005	
33	5.0		.000	

PLATE 22.2 F-1

HYDROGRAPH COMPUTATION WORKSHEET

DEVELOPED CONDITION

DATE _____
COMPUTED BY _____
CHECK BY _____

PAGE 2

Soil Gb (Gila) Type "B"

PROJECT Prager Station

LOCATION Tract 2C

ANALYSIS POINT # _____

(DR. AREA) A = 2.0 ACRES

T_c 10 MIN

POINT RAINFALL 2.2 IN. FROM PLATE 22.2 D-1

CN = 88 FROM PLATES 22.2 C-2, 22.2 C-3

RUNOFF VOLUME R = 1.2 IN. FROM PLATE 22.2 C-4

COMPUTED T_p = 10 MIN. $T_p = T_c$
(Rounded to even minute)

$q_p = \frac{45.4A}{T_p} = \frac{91.8}{10} = 9.18$ CFS./INCH OF RUNOFF

$(R \times q_p) = Q_{peak} = 10.9$ CFS

$t(COLUMN) = (t/T_p) \quad t = T_p(t/T_p)$

$y = \frac{Q}{Q_{peak}} \quad Q = y(Q_{peak})$

V = RA

V = (1.2)/12(2.0)(43560)

V = 8700 CF Developed

	(t/T _p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1		.03	
3	.2		.10	
4	.3		.190	
5	.4		.310	
6	.5		.470	
7	.6		.660	
8	.7		.820	
9	.8		.930	
10	.9		.990	
11	1.0		1.00	
12	1.1		.990	
13	1.2		.930	
14	1.3		.860	
15	1.4		.780	
16	1.5		.680	
17	1.6		.560	
18	1.7		.460	
19	1.8		.390	
20	1.9		.330	
21	2.0		.280	
22	2.2		.207	
23	2.4		.147	
24	2.6		.107	
25	2.8		.077	
26	3.0		.055	
27	3.2		.040	
28	3.4		.029	
29	3.6		.021	
30	3.8		.015	
31	4.0		.011	
32	4.5		.005	
33	5.0		.000	

PLATE 22.2 F-1

HYDROGRAPH COMPUTATION WORKSHEET

DEVELOPED CONDITION

DATE _____
COMPUTED BY _____
CHECK BY _____

Soil Gb (Gila) Type "B"

PAGE 3

PROJECT Prager Station

LOCATION Tract 2B

ANALYSIS POINT # _____

(DR. AREA) A = 3.1 ACRES

T_c 10 MIN

POINT RAINFALL 2.2 IN. FROM PLATE 22.2 D-1

CN = 88 FROM PLATES 22.2 C-2, 22.2 C-3

RUNOFF VOLUME R = 1.2 IN. FROM PLATE 22.2 C-4

COMPUTED T_p = 10 MIN. - $T_p = T_c$
(Rounded to even minute)

$q_p = \frac{45.4A}{T_p} = \frac{14.1}{10}$ CFS./INCH OF RUNOFF

$(R \times q_p) = Q_{peak} = \frac{16.9}{10}$ CFS

$t(\text{COLUMN}) = (t/T_p) \quad t = T_p(t/T_p)$

$y = \frac{Q}{Q_{peak}} \quad Q = y(Q_{peak})$

V = RA

V = (1.2)/12(3.1)(43560)

V = 13,500 CF Developed

	(t/T _p)	t (min.)	y	Q (cfs)
1	0	0	0	0
2	.1		.03	
3	.2		.10	
4	.3		.190	
5	.4		.310	
6	.5		.470	
7	.6		.660	
8	.7		.820	
9	.8		.930	
10	.9		.990	
11	1.0		1.00	
12	1.1		.990	
13	1.2		.930	
14	1.3		.860	
15	1.4		.780	
16	1.5		.680	
17	1.6		.560	
18	1.7		.460	
19	1.8		.390	
20	1.9		.330	
21	2.0		.280	
22	2.2		.207	
23	2.4		.147	
24	2.6		.107	
25	2.8		.077	
26	3.0		.055	
27	3.2		.040	
28	3.4		.029	
29	3.6		.021	
30	3.8		.015	
31	4.0		.011	
32	4.5		.005	
33	5.0		.000	

PLATE 22.2 F-1

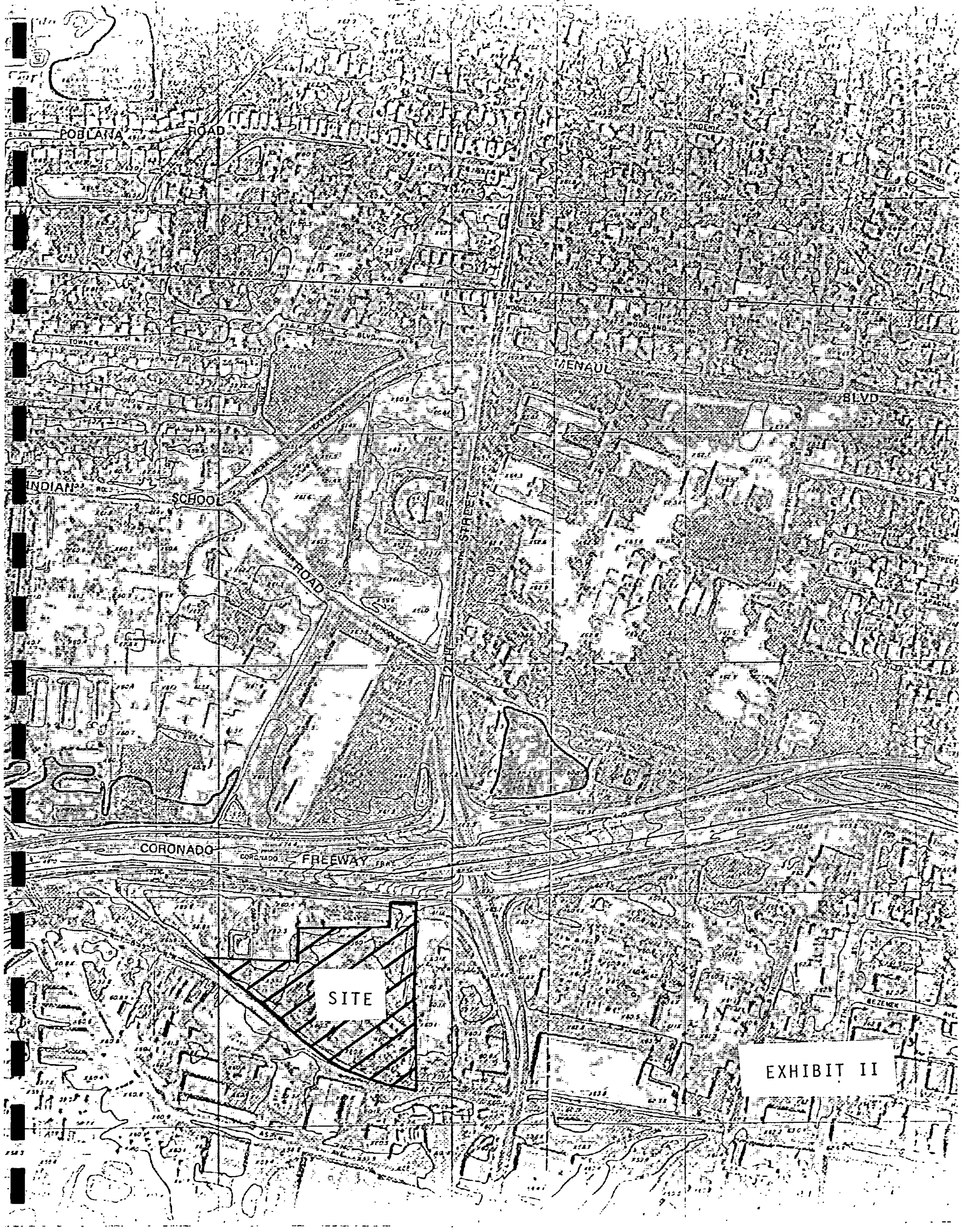


EXHIBIT II