PUBLIC WORKS/HYDROLOGY

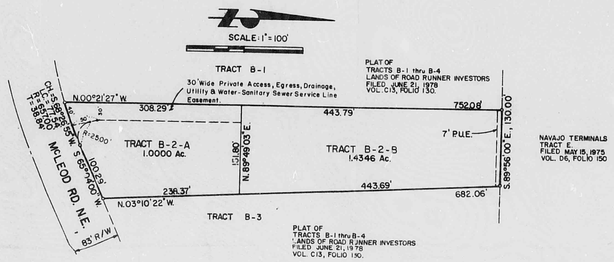
1 OF 2

F17/D45

SP-03-08-0615

PLAT OF
TRACTS B-2-A & B-2-B
LANDS OF ROAD RUNNER INVESTORS
WITHIN THE ELENA GALLEGOS GRANT
BERNALILLO COUNTY, NEW MEXICO
A REPLAT OF TRACT B-2
MARCH 1984

State of New Mexico
County of Bernalillo } SS
This instrument was filed for record
APR 3 1984
at 9:00 o'clock A.M. and recorded in Vol. 903
Records of Bernalillo County Folio 53
DOLORES C. WALTER Clerk & Recorder
Deputy Clerk



DESCRIPTION:

Replat of Tract "B-2" of the Plat of Tracts "B-1" thru "B-4", LANDS OF ROAD RUNNER INVESTORS, within the Elena Gallegos Grant, Bernalillo County, New Mexico, as the same is shown and designated on said Plat, filed in the office of the County Clerk of Bernalillo County, New Mexico, on June 21, 1978. (Now being Tract "B-2-A" and Tract "B-2-B", Lands of Road Runner Investors)

FREE CONSENT, DEDICATION

The undersigned owner(s) and proprietor(s) of the property described hereon, do hereby consent to the replatting of the property as shown hereon, and the same is with their free consent and in accordance with their desires.

Don Dean
Don Dean

ACKNOWLEDGEMENT

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS

On this 15th day of March, 19 84, the foregoing instrument was acknowledged before me by DON DEAN.

My commission expires 7-27-86

Kelly Trujillo
Notary Public

SURVEYOR'S CERTIFICATE

I, Verlon E. Hall, New Mexico Registered Land Surveyor No. 3241, do hereby certify that this Plat was prepared by me or under my supervision, meets the minimum requirements of the Albuquerque Subdivision Ordinance, shows all easements of record, (unless otherwise noted on this Plat), and is true and correct to the best of my belief and knowledge.

Verlon E. Hall
Verlon E. Hall, N.M.L.S. No. 3241

REGISTERED LAND SURVEYOR NO. 3241 STATE OF NEW MEXICO VERLON E. HALL

DISCLOSURE STATEMENT

The purpose of this Plat is to Replat Tract "B-2", Lands of Road Runner Investers filed June 21, 1978 into 2 Tracts as shown hereon, meeting the required zoning and set-back requirements of the Bernalillo County Subdivision Ordinance. Bearings are from said Plat of Lands of Road Runner Investors. No property corners have been set. NOTE: This Plat is subject to recorded and unrecorded easements that are not shown on the filed plat, and no attempt to locate said easements has been made by Hall Surveying Co. Present zonning is C-3

APPROVED AND ACCEPTED BY:

SUBDIVISION NO.

Planning Director	3/28/84 Date	Chief City Surveyor	032684 Date
City Engineer NA	Date	Property Management	3/27/84 Date
A.M.A.F.C.A.	Date	Water Resources NA	Date
Traffic Engineer	3-27-84 Date	Parks & Recreation	Date

SP-84-136

LOCATION MAP
NOT TO SCALE
ZONE ATLAS PAGE F-17-Z

HALL SURVEYING CO.
2625 Pennsylvania Ave. N.E., Suite 350
Albuquerque, New Mexico 87110
Phones (505) 884-6200 & 884-6444
R-2275 | N.F.D.

PLANS/PLATS ON FILE

FILE DESC: F17/D45

PLANS/PLATS 4

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R# 25 DATE 3-17-92 OP KRP

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The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS1A5-1977)

1/15/92
DIRECTOR

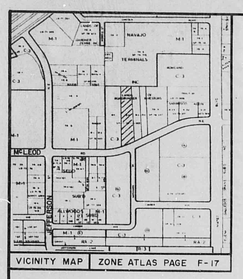
Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/03/92

D 24 C 20 B 16 A 12 | CITY OF ALBUQUERQUE C D

DRAINAGE PLAN
TRACTS B-2-A & B-2-B
LANDS OF ROAD RUNNER INVESTORS
BERNALILLO, NEW MEXICO

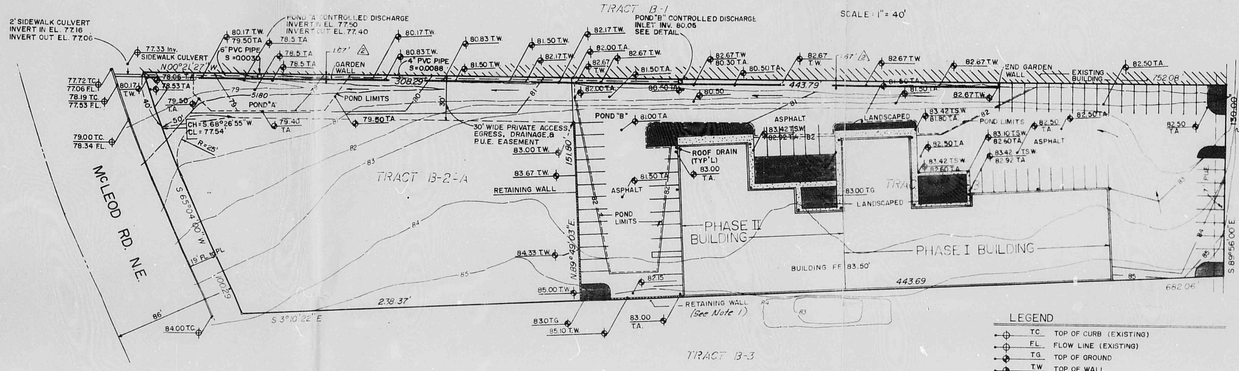
AUGUST 1984

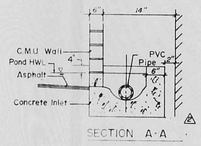


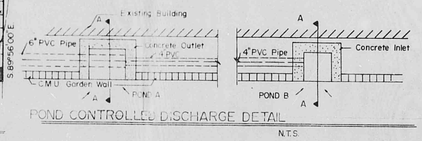
VICINITY MAP | ZONE ATLAS PAGE F-17

HYDROLOGY SECTION
OCT 17 1984

SCALE: 1" = 40'







LEGEND

TC	TOP OF CURB (EXISTING)
FL	FLOW LINE (EXISTING)
TG	TOP OF GROUND
TW	TOP OF WALL
TA	TOP OF ASPHALT
TSW	TOP OF SIDEWALK
	LANDSCAPING

DRAINAGE CALCULATIONS

I. Areas

A. Site

Buildings	22,272 SF
Asphalt Paving	34,931
Landscaping	3,165
Sidewalk	2,123
Total	62,491 SF = 1.4346 acres

B. Access Easement

Paving 410' x 27.5	8,250 SF
Landscaping 30' x 2.5	750
Total	9,000 SF = 0.2066 acres

II. Soil Type

E_L C, Embudo Tijeras Complex, Hydrologic Soil Type B

III. "A" Factor

From Plate 22.2 G-1, the undeveloped "A" Factor is 0.34. The following "A" Factors are assumed for impervious surfaces:

Paving	0.9
Buildings	1.0
Sidewalk	1.0
Landscaping	0.34

Weighted "C" Factor:

$$C = \frac{22,272 \times 1.0 + 34,931 \times 0.9 + 3,165 \times 0.34 + 2,123 \times 0.9}{62,491}$$

C = 0.91 (for site)

C = 0.85 (for access easement)

IV. Intensity

6-hour, 100-year rainfall from Plate 22.2 D-1 is 2.2 inches. Time of concentration is by Kirpich equation.

$T_c = 0.0078\,(L^{0.77}/S^{0.385})$

L = 435'

Delta Elevation = 85 - 80.3 = 4.7

S = 4.7/435 = 0.0103

= 5.06 minutes

$T_c = 0.0078\,(435^{0.77}/0.0103^{0.385})$

Use minimum T_c = 10 minutes

$I = 2.2\,(6.84)(10)^{-0.51}$ = 4.65 inches per hour.

V. Peak Discharge

Rational Equation Q = CIA

C = 0.91

I = 4.65

A = 1.4346 ac

Q = 0.91 x 4.65 x 1.4346 = 6.07 cfs (site)

Q = 0.85 x 4.65 x 0.2066 = 0.82 cfs (access easement)

VI. Volume

A. Site	0.91 (2.2/12) 1.4346 x 43560	= 10,311 cf
B. Access Easement	0.85 (2.2/12) 9000	= 1,402 cf
C. Total Volume		11,713 cf

VII. Ponding

A. Required T = V/A = 2 (11713)/(6.89 x 60) = 56.67 minutes

See Hydrograph. Pond Volume = 11,713 - 3282 = 7431

B. Actual Volume (by Planimeter)

Pond	Contour	Planimeter	Area	Avg. Area	Depth	Volume
A	78.3	0	0			
				115	0.2	23
	78.5	0.143	229			
				864	0.5	432
	79.0	0.937	1,499			
				2,062	0.3	619
	79.5	1.640	2,624			
					Total Volume = 1,074	cf
B	80.3	0	0			
				96	0.2	19
	80.5	0.12	192			
				1,280	0.5	640
	81.0	1.48	2,368			
				4,816	0.5	2,408
	81.5	4.54	7,264			
				10,228	0.5	5,114
	82.0	8.24	13,184			
				Total Volume = 8,181		cf

VIII. Controlled Discharge

A. Allowable

1. Site - Total allowable 1.4346 x 0.5 = 0.72 cfs
2. Access easement 0.2066 x 0.5 = 0.10 cfs
3. Total allowable discharge from both sites 2.4346 x 0.5 = 1.22 cfs

B. Actual

1. Site - Spring line elevation = 80.30

Overflow elevation = 82.00

Total head = 80.30 - 80.30 = 1.7 feet - Try 4" pipe

By Orifice Equation:

$Q = C\,a\sqrt{2\,g\,h}$ C = 0.6

a = 0.0873 SF

h = 1.7 feet

$Q = 0.6 \times 0.0873 \sqrt{2 \times 32.2 \times 1.7} = 0.55$ cfs < 0.72 cfs

When pond bend is only 3" ... Q = 0.21 cfs

Average Q = (0.55 + 0.21)/2 = 0.38 cfs

Total time to empty pond T = 8,180 / (0.38 x 3600) = 5.97 Say 6 hours

2. Discharge from Pond A (both Tracts) 1.22 cfs Spring line elevation = 77.9

Overflow elevation = 79.5

Try 6" pipe

By Orifice Equation

$Q = C\,a\sqrt{2\,g\,h}$ C = 0.6

a = 0.1963 SF

h = 1.6 feet

$Q = 0.6 \times 0.1963 \sqrt{2 \times 32.2 \times 1.6} = 1.20$ cfs < 1.22 cfs

IX. Off-site Drainage - Accept historical (undeveloped) flow

640' x 930' / 43560 = 9.6 acres

Time of Concentration L = 930'

Change in Elevation = 3214 - 5185 = 39'

Slope = 39 / 930 = 0.03

$T_c = 0.0078\,(930^{0.77}/0.03^{0.385}) = 5.9$ minutes

Q = CIA = 0.34 x 4.65 x 9.6 = 15.2 cfs

This amount of flow is not expected as upstream property is developed and drainage has largely been accomodated.

X. Capacity of Access Easement

Use Kiro Equation for pavement west of Pond A.

C = 2.7

h = 0.4

L = 15 (See page 21-79 CE Handbook, Fredrick S. Merritt)

$Q = C\,L\,h^{3/2} = 2.7 \times 27.5 \times 0.4^{3/2} = 34.5$ cfs

Actual Flow = On-site plus Off-site

On-site = 0.91 x 4.65 x 2.4346 = 10.3 cfs

Off-site = = 15.2 cfs

Total Q = = 25.5 cfs

34.5 > 25.5 cfs. The wall next to the access road must be a minimum of 2.6 feet at the pond overflow points. Use 8" min.

Bench Mark

G-F17, Intersection of Jefferson St N.E. & Montgomery Blvd N.E.

Elev 5162.232

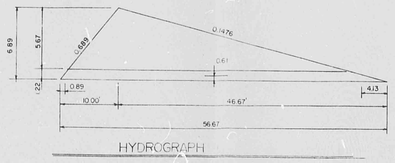
EROSION CONTROL NOTE:

The Contractor shall be responsible for insuring the following:

1. No Sediment bearing water leaves the site during construction.
2. During Grading operations adjacent property is protected from flooding.
3. Any and all eroded material entering public right-of-way is promptly cleaned up.

GENERAL NOTES:

1. At upper ground level of retaining wall turn every seventh block w/ holes horizontally to allow off-site drainage to pass.



HYDROGRAPH

△2 REVISED 10/17/84

RELOCATED WALL ON WEST SIDE OF PROPERTY

Richard J. Hall

August 28, 1984

Revised October 3, 1984

HALL ENGINEERING COMPANY INC.
337 EUBANK N.E., SUITE 103
ALBUQUERQUE, NEW MEXICO 87123
Phones: (505) 292-1115 & 292-1116

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 25 DATE 3-19-02 OP ESP

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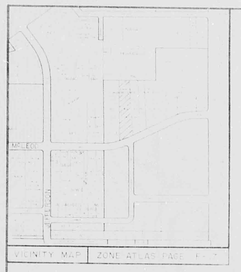
DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/02/02

D 24 C 20 B 16 A 12 | CITY OF ALBUQUERQUE C D

DRAINAGE PLAN
TRACTS B-2-A & B-2-B
LANDS OF ROAD RUNNER INVESTORS
BERNALILLO, NEW MEXICO



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DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
07/02/82

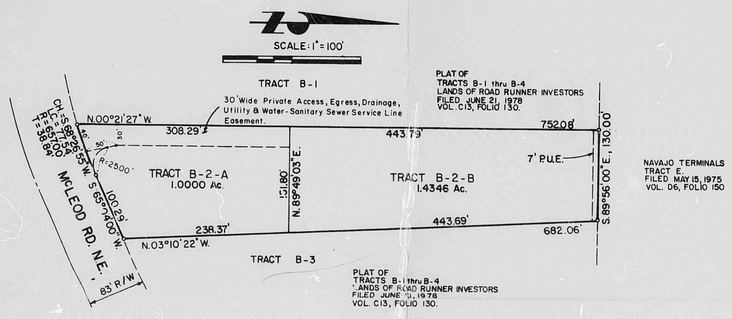
D 24 C 20 B 16 A 12 CITY OF ALBUQERQUE C D

SP-03-08-0615

PLAT OF
TRACTS B-2-A & B-2-B 84-47882
LANDS OF ROAD RUNNER INVESTORS
WITHIN THE ELENA GALLEGOS GRANT
BERNALILLO COUNTY, NEW MEXICO
A REPLAT OF TRACT B-2
MARCH 1984

State of New Mexico
County of Bernalillo } SS
This instrument was filed for record
on APR 3 1984
at 8 o'clock A.M. Recorded in Vol. ..... of records of said County Folio .....
DOLORES C. WALL ..... Clerk & Recorder
..... Deputy

RECEIVED
OCT 24 1984
HYDROLOGY SECTION



DESCRIPTION:

Replat of Tract "B-2" of the Plat of Tracts "B-1" thru "B-4", LANDS OF ROAD RUNNER INVESTORS, within the Elena Gallegos Grant, Bernalillo County, New Mexico, as the same is shown and designated on said Plat, filed in the office of the County Clerk of Bernalillo County, New Mexico, on June 21, 1978. (Now being Tract "B-2-A" and Tract "B-2-B", Lands of Road Runner Investors)

FREE CONSENT, DEDICATION

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Don Dean
Don Dean

ACKNOWLEDGEMENT

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS

On this 13th day of March, 19 84, the foregoing instrument was acknowledged before me by Don Dean.

My commission expires 2-27-86

Kathy Lovelli
Notary Public

SURVEYOR'S CERTIFICATE

I, Verlon E. Hall, New Mexico Registered Land Surveyor No. 3241, do hereby certify that this Plat was prepared by me or under my supervision, meets the minimum requirements of the Albuquerque Subdivision Ordinance, shows all easements of record, (unless otherwise noted on this Plat), and is true and correct to the best of my belief and knowledge.

Verlon E. Hall
Verlon E. Hall, N.M.L.S. No. 3241

REGISTERED LAND SURVEYOR STATE OF NEW MEXICO NO. 3241 VERLON E. HALL

DISCLOSURE STATEMENT

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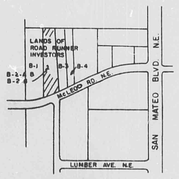
APPROVED AND ACCEPTED BY:

SUBDIVISION NO.			
Eugene Moore, Planning Director	3/28/84 Date	David C Mutz, Chief City Surveyor	032660 Date
NA, City Engineer	Date	Rosie Edwell, Property Management	3/27/84 Date
A.M.A.F.C.A.	Date	NA, Water Resources	Date
Robert A. Tuttle, Traffic Engineer	3-27-84 Date	Parks & Recreation	Date

F17-D45

SP-84-136



LOCATION MAP
NOT TO SCALE
ZONE ATLAS PAGE F-17-Z

HALL SURVEYING CO.
2625 Pennsylvania Ave. N.E., Suite 350
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R-2275 | N.R.D.

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Thos. T. Atkins 3/15/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/02/02

C 20 B 16 A 12 CITY OF ALBUQUERQUE C