HYDROLOGY

M15/D4A2

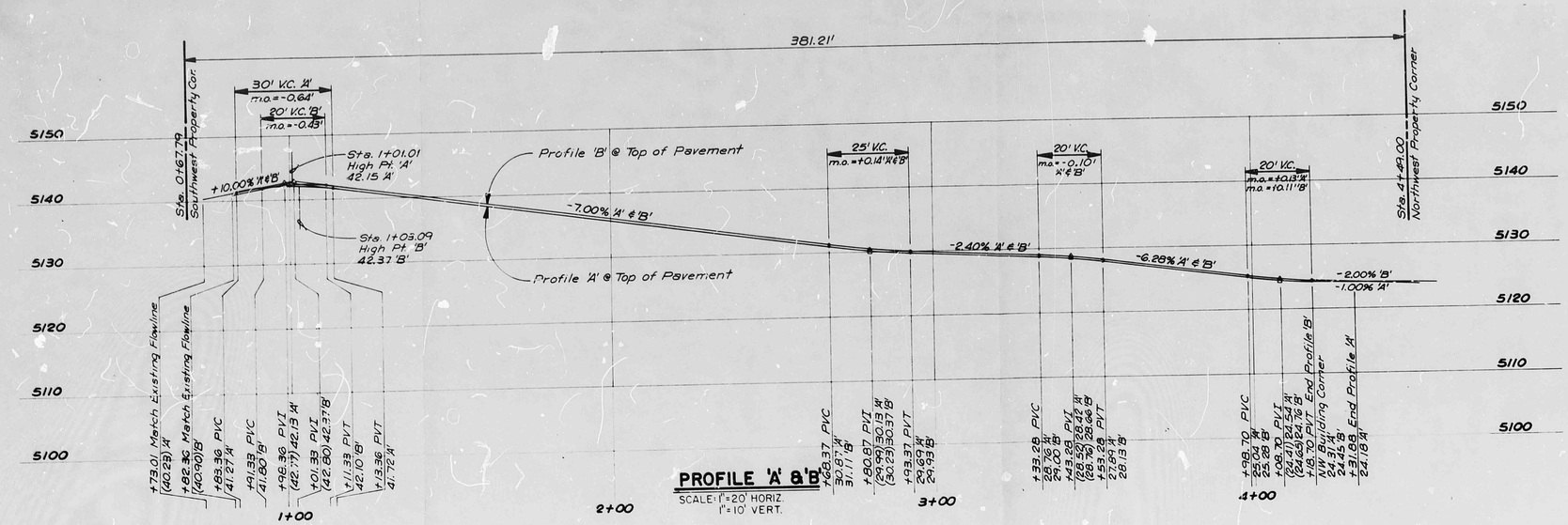
THREE PLANS

M15/D4A2

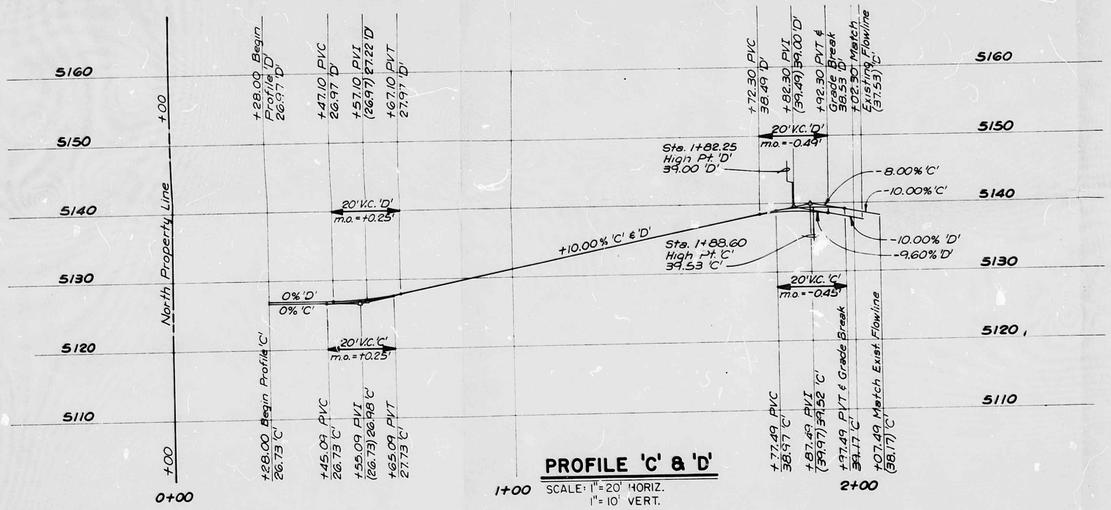
N-Z OFFICE

BLDG.

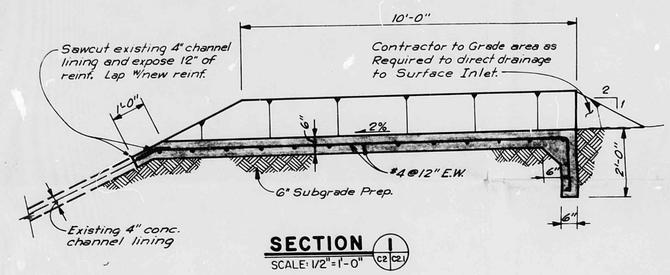
3 PLANS



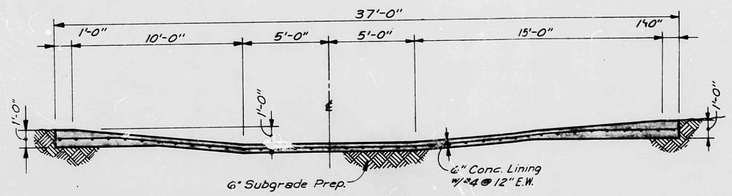

**PROFILE 'A' & 'B'**
SCALE: 1" = 20' HORIZ. 1" = 10' VERT.



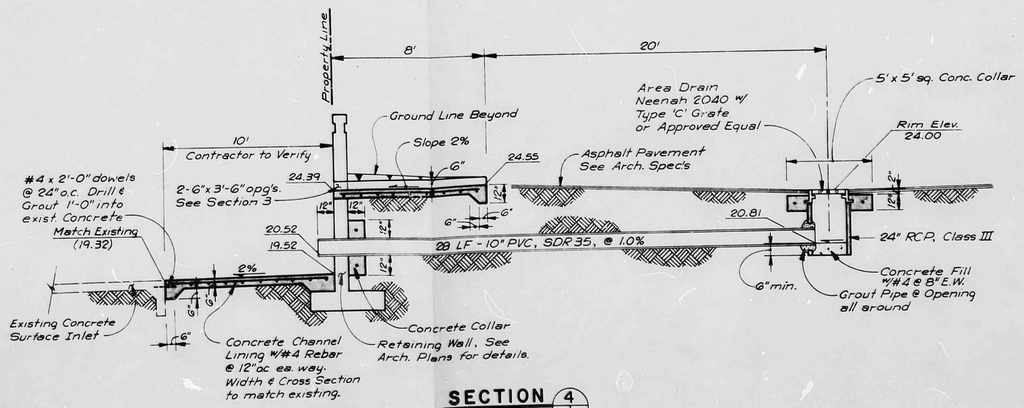

**PROFILE 'C' & 'D'**
SCALE: 1" = 20' HORIZ. 1" = 10' VERT.



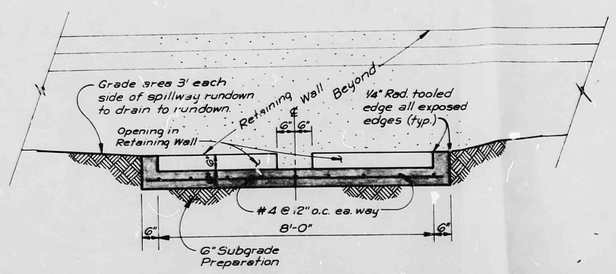

**SECTION 1** (C2 / C2.1)
SCALE: 1/2" = 1'-0"




**SECTION 2** (C2 / C2.1)
SCALE: 1/4" = 1'-0"




**SECTION 4** (C2 / C2.1)
SCALE: 1/4" = 1'-0"




**SECTION 3** (C2 / C2.1)
SCALE: 1/2" = 1'-0"

M15/D4A2

THE BURNS/PETERS GROUP
ARCHITECTS PLANNERS
8000 PENNSYLVANIA CIRCLE N.E. ; ALBUQUERQUE NM 87110 505/ 265 3645

## NOTES

1. ALL MATERIALS AND CONSTRUCTION METHODS DETAILED ON SHEET C2.1 SHALL CONFORM TO CITY OF ALBUQUERQUE PUBLIC WORKS CONTRACT NO. 85-1 UNLESS OTHERWISE SHOWN.

REVISIONS

ANDREWS, ASBURY & ROBERT, INC.
CONSULTING ENGINEERS
ALBUQUERQUE 85-- 36 NEW MEXICO

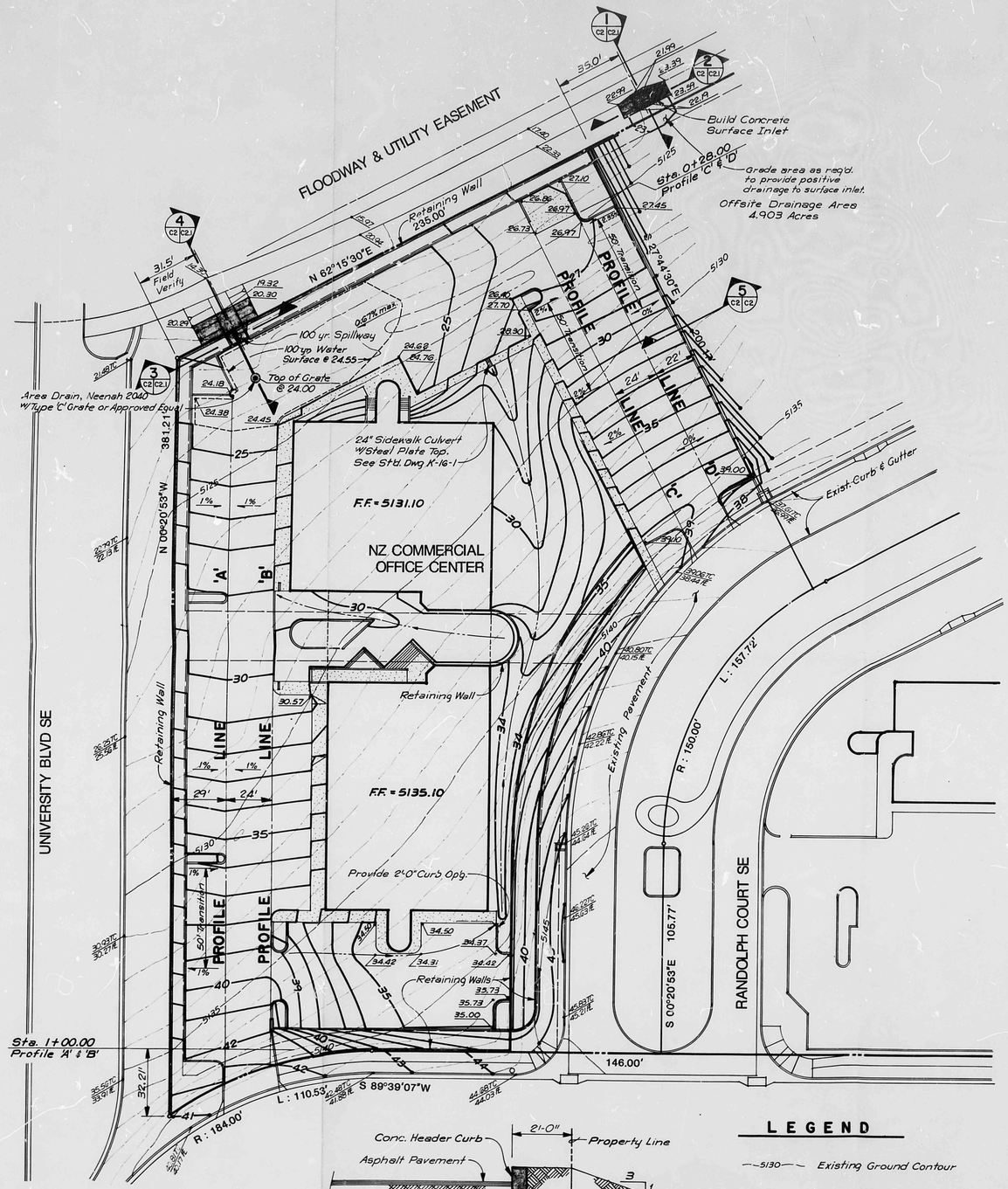
REGISTERED PROFESSIONAL ENGINEER STATE OF NEW MEXICO No. 3960 JOHN A. ANDREWS
ENGINEER

RECEIVED APR 05 1985 HYDROLOGY SECTION
ARCHITECT

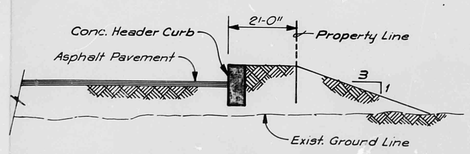
NZ COMMERCIAL OFFICE CENTER
**GRADING & DRAINAGE DETAILS**
ALBUQUERQUE, NEW MEXICO

PROJECT NO 84-35
DATE

**C2.1**
SHEET OF



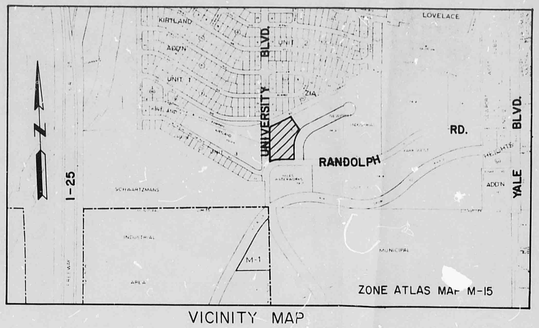

SITE PLAN
SCALE: 1" : 30'-0"




SECTION 5 (C2/C2)
SCALE: 1/2"=1'-0"

## LEGEND

- 5130 — Existing Ground Contour
- 45 — Finish Grade Contour
- 27.64 — Spot Elevation
- Existing Curb & Gutter




VICINITY MAP

## DRAINAGE CALCULATIONS

DESIGN DATA:

HYDROLOGIC SOIL GROUP A
ALLOWABLE DISCHARGE Q (ALLOW) = CIA
WHERE C = 0.40
I = 5.4 IN/HR
100 YEAR - 6 HR PRECIPITATION = 2.3 IN,
FROM PLAT 22.2 D-1, DPM

FROM APPROVED "DRAINAGE REPORT FOR NZ COMMERCIAL-OFFICE CENTER" (M15-D8)

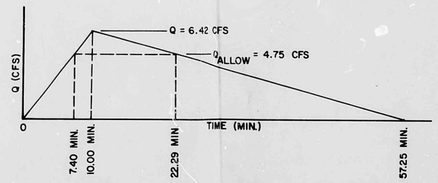
OFF-SITE CONDITIONS

AREA = 4.903 ACRES
C = 0.16, UNDEVELOPED, FROM PLATE 22.2 C-1, DPM
$t_c$ / 10 MINS, THEREFORE USE 10 MINS.
$I_{100}$ = 4.86 IN/HR;
$I_{10}$ = $I_{100}$ x .657 = 3.19 IN/HR
THEN;
$Q_{100}$ = CIA = 0.16 x 4.86 x 4.903 = 3.81 CFS
$Q_{10}$ = CIA = 0.16 x 3.19 x 4.903 = 2.50 CFS

ON-SITE CONDITIONS

UNDEVELOPED CONDITIONS
C = 0.16
$t_c$ / 10 MINS, THEREFORE USE 10 MINS.
$I_{100}$ = 4.86 IN/HR
THEN
$Q_{100}$ = CIA = 0.16 x 4.86 x 2.201 = 1.71 CFS
$V_{100} = \frac{2.3}{12} \times 0.16 \times 2.201 = 0.068$ AC. FT.

DEVELOPED CONDITIONS
TOTAL AREA = 2.201 ACRES
ROOFED AREA = 0.516 ACRES
PAVED AREA = 1.060 ACRES
LANDSCAPED = 0.625 ACRES
PERCENT IMPERVIOUS = $\frac{(0.516 + 1.060)}{2.201} \times 100 = 72$
C = 0.60, FROM PLAT 22.2 C-1, DPM
$t_c$ / 10 MINS, THEREFORE USE 10 MINS.
$I_{100}$ = 4.86 IN/HR
$Q_{100}$ = CIA = 0.60 x 4.86 x 2.201 = 6.42 CFS
$V_{100} = \frac{2.3}{12} \times 0.60 \times 2.201 = 0.253$ AC. FT. = 11026 $FT^3$
$Q_{ALLOW}$ = CIA = 0.4 x 5.4 x 2.201 = 4.75 CFS
THEN




HENCE, REQUIRED VOLUME OF DETENTION POND
= 1/2 (22.29 - 7.40) (6.42 - 4.75) x 60 = 746.0 $FT^3$
VOLUME OF DETENTION PROVIDED
V = 1/3 hA
A = SURFACE AREA = 4100 $FT^2$
h = DEPTH = 24.55 - 27.00 = 0.55 FT
V = 1/3 X 0.55 X 4100 = 752 $FT^3$

ON-SITE HYDRAULICS
AREA DRAIN (SEE DETAILS SHEET C2.1)
$Q = c\,a\sqrt{2gh}$
$Q = Q_{ALLOW}$ = 4.75 CFS
h = DEPTH = 0.55 FT
c = 0.61 FROM TABLE 4-6, P. 4-32 KING & BRATER, 6TH ED.
THEN a = 1.33 SF
USE NEENAH R-2040 W/TYPE "C" GRATE
AREA PROVIDED = 1.3 SF

100 YEAR - OVERFLOW (SEE DETAILS SHEET C2.1)

$Q = CLH^{3/2}$ AT ENTRANCE
$Q = Q_{100}$ = 6.42 CFS
L = 8 FT
C = 2.95 FROM TABLE 5-5 P. 5-41 KING & BRATER, 6TH ED.
H = 0.42 FT.

OFF-SITE HYDRAULICS
CONCRETE SURFACE INLET

$Q = CLH^{3/2}$
Q = 3.81 CFS
L = 10 FT
C = 2.95 "IBID"
THEN H = 0.26 FT

M15/D4A2

THE BURNS/PETERS GROUP
ARCHITECTS PLANNERS
8000 PENNSYLVANIA CIRCLE N.E. ALBUQUERQUE, NEW MEXICO

## NOTES

LEGAL DESCRIPTION

LOT 1A OF NZ COMMERCIAL OFFICE CENTER, A REPLAT OF TRACT 3, AMENDED NEUPORT INDUSTRIAL PARK WEST, UNIT 1, OCTOBER, 1981. FILED FEBUARY 6, 1985, VOL. 26, FOLIO 63.

BENCH MARK

ACS STA. 1-M15 ELEVATION = 5119.33
BRASS TABLET SET IN TOP OF CONCRETE POST @ SW CORNER OF UNIVERSITY BOULEVARD SE & SAN JOSE AVENUE SE

REVISIONS

ANDREWS, ASBURY & ROBERT, INC.
CONSULTING ENGINEERS
ALBUQUERQUE 85-406 NEW MEXICO

REGISTERED PROFESSIONAL ENGINEER STATE OF NEW MEXICO No. 3960 JOHN A. ANDREWS 4-3-85
ENGINEER

RECEIVED APR 05 1985 HYDROLOGY SECTION
ARCHITECT

NZ COMMERCIAL OFFICE CENTER
**GRADING & DRAINAGE PLAN**
ALBUQUERQUE, NEW MEXICO

PROJECT NO. 84-35
DATE

**C2**
SHEET OF

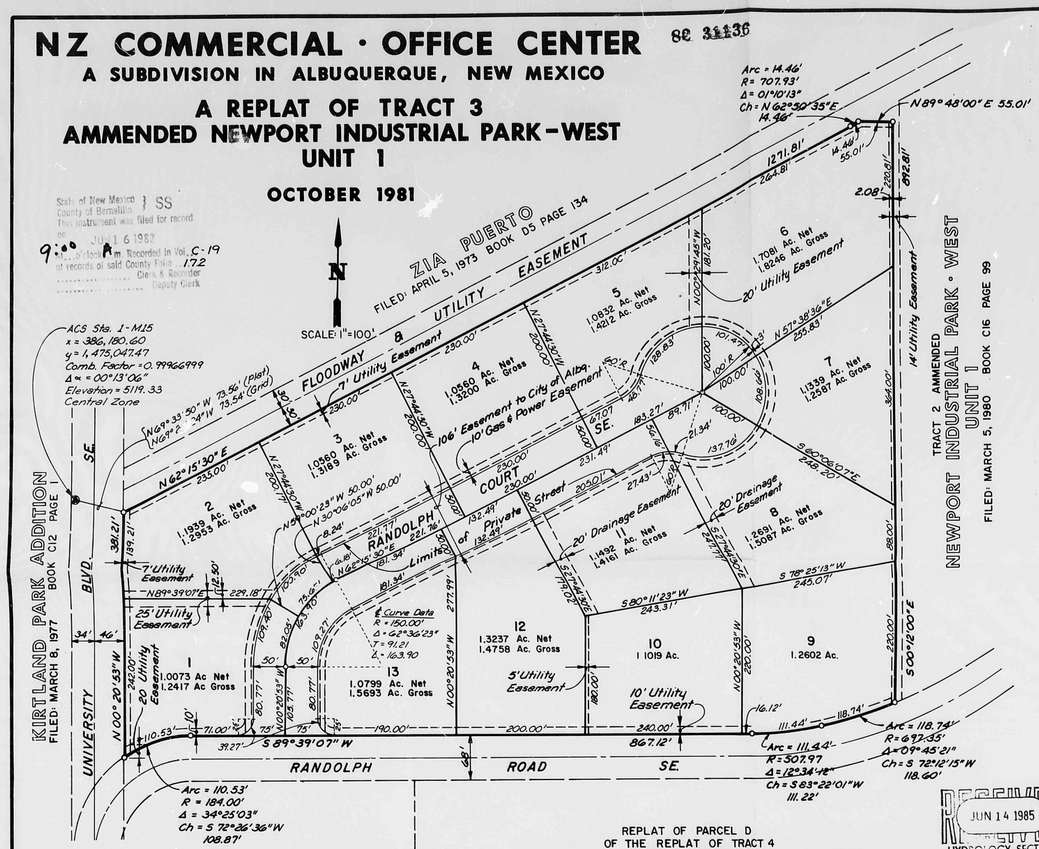
# NZ COMMERCIAL · OFFICE CENTER

## A SUBDIVISION IN ALBUQUERQUE, NEW MEXICO

## A REPLAT OF TRACT 3 AMMENDED NEWPORT INDUSTRIAL PARK-WEST UNIT 1

**OCTOBER 1981**

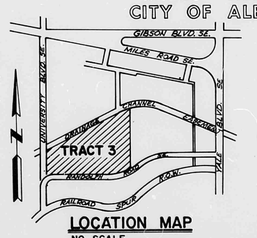
State of New Mexico } SS
County of Bernalillo
This instrument was filed for record
9:00 o'clock A.M. JUL 6 1982 Recorded in Vol. C-19
of records of said County Folio 172
Clerk & Recorder
Deputy Clerk




MILES WATERWORKS
CITY OF ALBUQUERQUE

REPLAT OF PARCEL D
OF THE REPLAT OF TRACT 4
NEWPORT INDUSTRIAL PARK • WEST
UNIT 1
FILED: AUGUST 24, 1981 BOOK C18, PAGE 168

RECEIVED JUN 14 1985 HYDROLOGY SECTION




**LOCATION MAP**
NO SCALE
ZONE ATLAS MAP No. M15

### SURVEYOR'S CERTIFICATE

I, John B. Robert, do hereby certify that I am a Registered Professional Engineer and Land Surveyor licensed in the State of New Mexico and that this plat was prepared by me or under my supervision, shows all easements of records, conforms to the requirements of the City of Albuquerque Standards for Surveying and is true and correct to the best of my knowledge and belief.

John B. Robert, P.E. & L.S.
No. 1817

REGISTERED PROFESSIONAL ENGINEER & L.S. STATE OF NEW MEXICO No. 1817 JOHN B. ROBERT

### LEGAL DESCRIPTION

A parcel of land situate in Section 33, Township 10 North, Range 3 East, N.M.P.M., and being and comprising Tract 3 of Amended Newport Industrial Park-West, Unit 1, as shown and designated on the plat filed in the office of the County Clerk of Bernalillo County, New Mexico on March 8, 1980, and being more particularly described as follows:

Beginning at the northwest corner of the aforesaid Tract 3 and the northwest corner of the parcel herein described; thence,

N 62°15'30" E, 1271.81 feet to a point of curvature; thence, northeasterly 14.46 feet along the arc of a curve bearing to the right, having a radius of 707.93 feet and a chord bearing N 62°50'35" E, 14.46 feet to a point on curve; thence,

N 89°48'00" E, 55.01 feet to a point; thence, S 00°12'00" E, 892.81 feet to a point on curve; thence, southwesterly, 118.74 feet along the arc of a curve bearing to the right, having a radius of 697.35 feet and a chord bearing S 72°12'15" W, 118.60 feet to a point of compound curvature; thence, southwesterly, 111.44 feet along the arc of a curve bearing to the right, having a radius of 507.97 feet and a chord bearing S 83°22'01" W, 111.22 feet to a point of tangency; thence, S 89°39'07" W, 867.12 feet to a point of curvature; thence southwesterly, 110.53 feet along the arc of a curve bearing to the left, having a radius of 184.00 feet and a chord bearing S 72°26'36" W, 108.87 feet to a point on curve; thence, N 00°20'53" W, 381.21 feet to the northwest corner of the parcel herein described and the point of beginning, containing 18.0122 acres, more or less.

### FREE CONSENT, DEDICATION

The undersigned owners of the parcel of land hereon shown, do hereby certify that this plat is in accordance with their wishes and desires and do hereby dedicate and grant drainage, utility, power and communication easements where shown by dashed lines, and grant to the City of Albuquerque an easement for public utilities including the private street shown hereon together with a strip of land 3 feet in width on each side of, and adjacent to, said private street, including the right of ingress and egress for the installation and maintenance of said utilities and the right to trim or remove interfering trees. The filing of this plat does not dedicate to the public the private street hereon shown. The access to and the use thereof, shall remain an exclusive and private right of the owners and proprietors, and the employees thereof, of the Lots shown hereon.

NZ DEVELOPMENT CORPORATION

Donald J. Tea, Vice President

ATTEST:
W. Michael Kelley, Jr., Vice President Law and Secretary

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } ss,

SUBSCRIBED AND SWORN TO before me this [illegible] day of [illegible], 1981, by Donald J. Tea, Vice President of NZ DEVELOPMENT CORPORATION, a [illegible] corporation.

My Commission Expires:

Notary Public

OFFICIAL SEAL
Blanche [illegible]
ADELINA TORRES
Notary Public - State of New Mexico
My Commission Expires [illegible]

NOTES:

1. Subdivision corners designated by the symbol o indicate a ½" diameter rebar with aluminum cap survey monument set in the field.
2. Bearings as shown hereon are based on the bearings as shown on previously recorded plats.
3. A drainage report for NZ Commercial-Office Center, approved the by City Engineer on November 16, 1981, is presently on file at the City Engineer's office. Grading and drainage plans meeting the approval of the City Engineer and Albuquerque Metropolitan Arroyo Flood Control Authority will be prepared for each individual site prior to actual development of each individual property.
4. 20-foot wide permanent drainage easements shown hereon and across Lots numbered 8 and 11 are to remain for the disposal of the storm runoff by surface or underground facilities from Lots numbered 9 and 10. Installation and maintenance of said drainage facilities within these easements will be permanently assigned to Lots 9 and 10 respectively.

### APPROVALS

| | | | |
|---|---|---|---|
| Mountain Bell | 2/[illegible]/82 Date | A.M.A.F.C.A. | 1/15/82 Date |
| Public Service Co. of New Mexico | 1/26/82 Date | City Engineer, City of Albuquerque | 6/10/82 Date |
| Gas Company of New Mexico | 1-28-82 Date | Traffic Engineer, City of Albuquerque | 1-18-82 Date |
| Property Management, City of Albuquerque | 2/1/82 Date | Director of Parks & Recreation, City of Albuquerque | 1/20/82 Date |
| Director of Water Resources, City of Albuquerque | 1/20/82 Date | Planning Director, City of Albuquerque | 6-11-82 Date |
| Chief Surveyor, City of Albuquerque | 2/1/82 Date | | |

SP-82-156

ANDREWS, ASBURY & ROBERT, INC.
CONSULTING ENGINEERS
ALBUQUERQUE 81-267 NEW MEXICO