City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

January 9, 1985

Jeffrey Mortensen
Tom Mann & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR NEW VECTOR COMMUNICATIONS - SITE A
(F-22/D25) RECEIVED DECEMBER 6, 1984

Dear Jeff:

The referenced plan dated December 5, 1984, is approved.

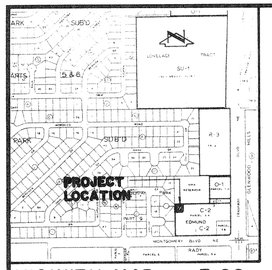
Please attach a copy of this approved plan to the construction set prior to Hydrology sign-off.

If I can be of further assistance, please call me at 766-7644.

Cordially,

Carlos A. Montoya
City/County Floodplain Administrator

CAM/bsj



VICINITY MAP F-22

SCALE: 1" = 800'

SCALE: 1"=10'

PROJECT BENCHMARK

A STANDARD ACS BRASS TABLET STAMPED "10-F22-A", SET FLUSH WITH THE CURB LOCATED @ THE INTERSECTION OF MONTGOMERY BLVD N.E. AND SHENANDOAH PL. N.E. 420.1' EAST OF THE CENTERLINE OF BERMUDA DR. N.E. & 49.8' NORTH OF CENTERLINE OF MONTGOMERY BLVD N.E.
ELEV. = 5901.93 FT. (M.S.L.D.)

T.B.M.

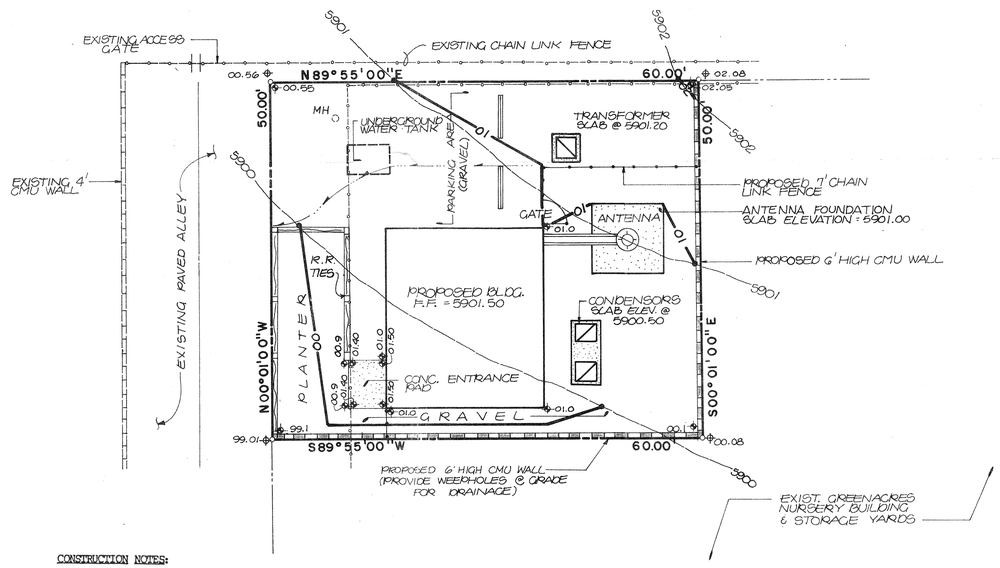
A SET P.K. NAIL & SHINER, A PROJECTION OF THE N.W. PROPERTY CORNER.
ELEV. = 5900.56 FT. (M.S.L.D.)

LEGAL DESCRIPTION

"LEASE PARCEL WITHIN PARCEL 2A OF THE EDMUND I. RADY ADDITION."

LEGEND

⊕	PROPOSED SPOT ELEVATION
⊕	EXISTING SPOT ELEVATION
5G	PROPOSED CONTOUR
5955G	EXISTING CONTOUR
	SWALE
	PROPERTY LINE
	CONCRETE
	PROPOSED ASPHALT
	PROPOSED FENCE
x x	EXISTING FENCE
T.C 02.00	TOP OF CURB
FL 01G5	FLOW LINE



CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

DRAINAGE PLAN

The following items concerning the New Vector Communications - Site A Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located at the northwest corner of the intersection of Montgomery Boulevard N.E. and Tramway Boulevard N.E. At present, the site is developed as a tree nursery. The proposed improvements will only affect the northwest corner of the nursery.

As indicated by a Predesign Conference held with Mr. Fred J. Aguirre on November 8, 1984, this site does not lie within a designated Flood Hazard Zone. Because of the small scale of the proposed development, no interim ponding will be required. In addition, the analysis of offsite flows is not required; no major flows are expected to impact this site. This, too, was determined during said Predesign Conference.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 2) the limit and character of existing and proposed improvements, and 3) continuity between existing and proposed grades. The proposed improvements, as shown hereon, are compatible with those shown on the approved site development plan. Due to the limited nature of the proposed improvements, they will have negligible impact on downstream conditions.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will increase the peak discharge from the site by 0.1 cfs, a negligible increase.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 22:
EtC - Embudo - Tijeras Complex
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84) T_c^{-0.51} = 5.41$ in/hr
$P_6 = 2.56$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.56$ in (DPM Plate 22.2D-1)
A = area, sf

Existing Condition

$A_{total} = 3{,}000$ sf $= 0.07$ Ac
$A_{imp} = 0$ sf; 5 impervious = 0%
$C = 0.34$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.34)(5.41)(0.07) = 0.1$ cfs
$V_{100} = CP_6A = (0.34)(2.56/12)(3{,}000) = 220$ cf

Developed Condition

$A_{total} = 3{,}000$ sf $= 0.07$ Ac

A_{perv}/A_{total} (% imp) + A_{gravel}/A_{total} (% imp) +

A_{imp}/A_{total} (% imp) = 300/3,000 (0) + 1980/3,000 (0.54) +

720/3,000 (1.0) = % impervious = 60%

$Q_{100} = (0.63)(5.41)(0.07) = 0.2$ cfs

$V_{100} = (0.63)(2.56/12)(3{,}000) = 400$ cf

Comparison

$\Delta Q_{100} = 0.2 - 0.1 = 0.1$ cfs (increase)
$\Delta V_{100} = 400 - 220 = 180$ cf (increase)

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER 12-05-84

RECEIVED DEC 06 1984 DESIGN HYDROLOGY SECTION

Tom Mann Associates, Inc.
811 DALLAS, N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

NO.	DATE	BY	REVISIONS

DESIGNED BY: J.G.M.
DRAWN BY: J.M.C.
APPROVED: J.G.M.

JOB NO. 41591
DATE 11-84

GRADING & DRAINAGE PLAN
NEW VECTOR COMMUNICATIONS - SITE A

FILE NO.
SHEET 1 OF 1

N40867