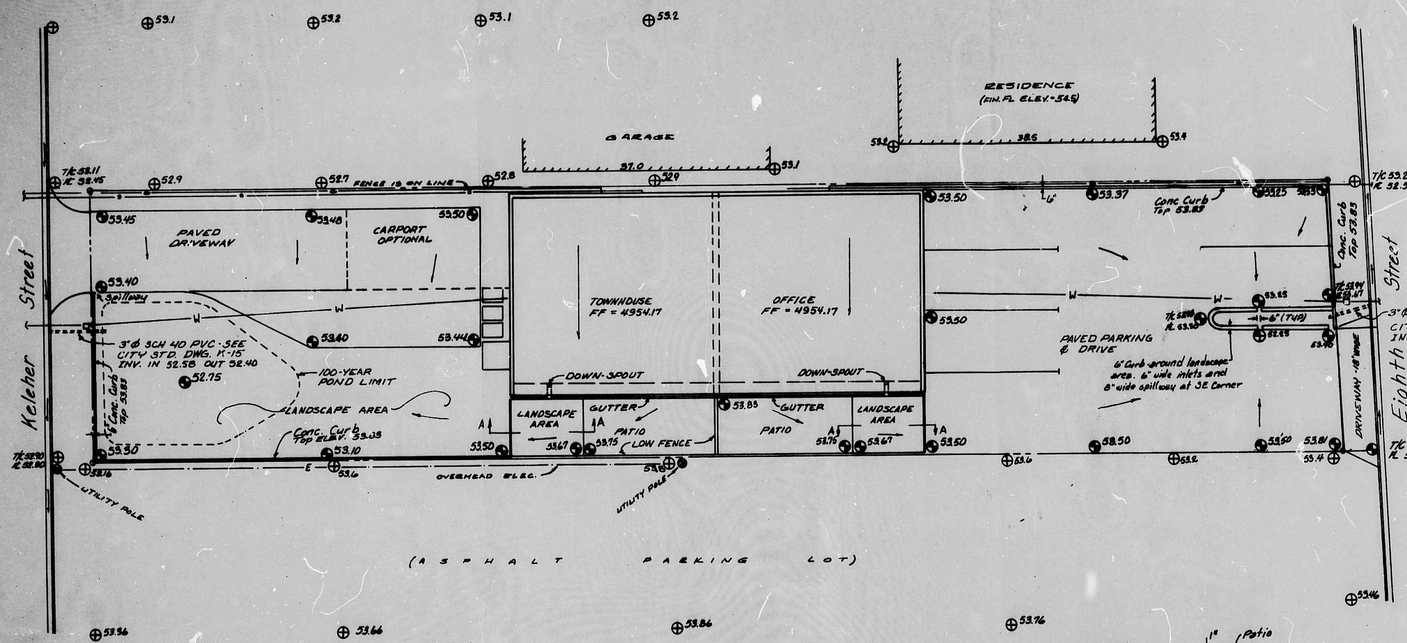
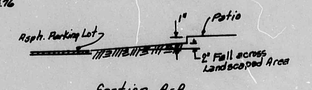
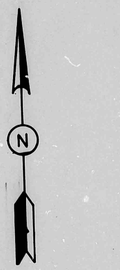


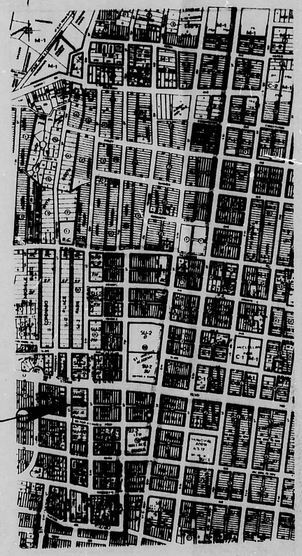
DRAINAGE PLAN

SCALE 1" = 10'



Section A-A
NTS





VICINITY MAP

J-14-Z

LEGEND

	EXISTING	NEW
SPOT ELEVATION	⊕	●
DIRECTION OF FLOW	←	

LEGAL DESCRIPTION

Lot numbered Fourteen (14) of the Revised and Corrected Plat of NICHOLS AND BOWDEN ADDITION, Albuquerque, New Mexico, filed in the Office of the Probate Clerk and Ex-officio Recorder of Bernalillo County, New Mexico on March 4, 1882 together with a portion of a 10-foot wide abandoned alley and a portion of an abandoned water ditch and being more particularly described by metes and bounds as follows:

BEGINNING at the Northwest corner of Lot 14, said point being on the West line of Keleher Street, NW, and running from said beginning point thence, S87°02'00"E., a distance of 184.32 feet to the Northeast corner, said point being on the west line of Eighth Street, NW; thence, running along Eighth Street, S.00°42'41"E., a distance of 40.05 feet to the Southeast corner; thence, N.87°02'00"W., a distance of 186.04 feet to the Southwest corner, said point being on the East line of Keleher Street, NW; thence, running along Keleher Street, N.02°25'00"E., a distance of 40.00 feet to the place of beginning, and containing 0.170 acre, more or less.

BENCH MARK DATA

BENCH MARK USED - 12-J14 - Located at the intersection of Mountain Road and Seventh Street, NW, in the southwest quadrant of the intersection. A square, ☑, chiseled on top of concrete curb at the west southwest curb return. Elevation 4957.71 (1511.110). ADD 4900 TO TOPO SHOTS FOR CITY DATUM.

DRAINAGE CALCULATIONS

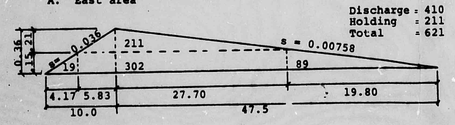
I. PEAK RUNOFF
- A. Time of concentration - Use minimum Tc of 10 Min.
- B. Intensity - 6-hour, 100-year rainfall is 2.25"(P1.22.2 D-1)
  $I = (2.25)(6.84)(10)^{-0.51} = 4.76$ inches per hour
- C. Area
  1. East area 3720 SF Landscaped area = 269 SF
  2. West Area 3720 SF Landscaped area = 1,494 SF
- D. Runoff coefficient (C) (See Plate 22.2 C.1)
  Soil type - Glendale (Gk) Hydrologic soils group B.
  1. East area - percent impervious = 3720-269/3720 = 0.93
     C factor = 0.89
  2. West area - percent impervious = 3720-1494/3720= 0.60
     C factor = 0.63
- E. Runoff (Q = CIA)
  1. East area 0.89x4.76x3720/43560 = 0.36 cfs
  2. West area 0.63x4.76x3720/43560 = 0.26 cfs
     Total discharge from the site = 0.62 cfs

II. CAPACITY OF 3" DISCHARGE PIPE (ORIFICE EQUATION)
- A. East area. Overflow El. = 53.28 Centerline El. = 52.88
  $Q = Ca\sqrt{2gh} = 0.6(0.0491)\sqrt{2 \times 32.2 \times 0.4} = 0.15$ cfs
- B West area. Overflow El. = 53.00 Centerline El. = 52.70
  $Q = Ca\sqrt{2gh} = 0.6(0.0491)\sqrt{2 \times 32.2 \times 0.3} = 0.13$ cfs

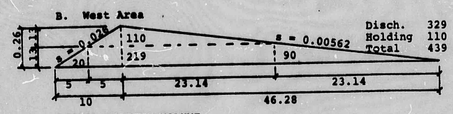
III. RAINFALL VOLUME
- A. East area V = (2.25/12)3720 x 0.89 = 621 CF
- B. West area V = (2.25/12)3720 x 0.63 = 439 CF

IV. TOTAL DURATION
- A. East area T = 2V/60Q = 2 x 621/60 x 0.36 = 57.50 min.
- B. West area T = 2V/60Q = 2 x 439/60 x 0.26 = 56.28 min.

V. REQUIRED HOLDING VOLUME
- A. East area



- B. West Area



VI. ACTUAL HOLDING VOLUME
- A. East area - 6" deep planting area
  1. Planting area (53.28 - 52.63)269 = 174.9 CF
  2. Parking lot (53.28 - 53.15)450/2 =29.3
     Total = 204.2 CF ≈ 211 CF
- B. West area - Depressed area 22' x 20' x 3" deep
  22 x 20 x 0.25 = 110 CF Volume is adequate.

VII. OFF-SITE FLOWS
Existing property north and south of the site drain east and west to 8th Street and Keleher Street.

VIII. DISCHARGE LEAVING SITE
Discharge leaving the site is so minimal that it does not warrant analysis of the gutter capacity or catch basin capacity . The storm sewer system is System 128 - 72" RCP in 8th Street, S = 0.0033, Capacity is 211 cfs. Flow from east area flows to catch basin on 8th at Lomas. Flow from west area flows south on Keleher Street.

IX. CONCLUSION
This drainage plan will not obstruct off-site flows from property north or south of the site. Nuisance flows will be retained in the depressed landscaped areas.

APPROVED
MAR 07 1984
HYDROLOGY SECTION

FRANK D. LOVELADY
NEW MEXICO
6512
REGISTERED PROFESSIONAL ENGINEER

FEBRUARY 23, 1984

For Permit

J14/D39