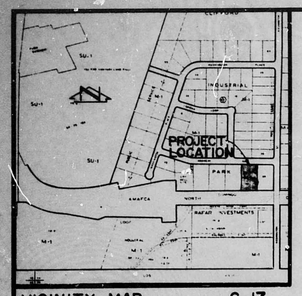
HYDROLOGY C17/D1C CLIFFORD INDUSTRIAL PARK

LOT 40

C17/DIC

CLIFFORD INDUSTRIAL PARK LOT 40

1 PLAN



VICINITY MAP C-17

SCALE : 1" = 800'

LEGEND

EXISTING CONTOUR	5101
PROPOSED CONTOUR	5103
EXISTING SPOT ELEV.	5106.0
PROPOSED SPOT ELEV.	05.30
EXISTING SWALE	
PROPOSED SWALE	
EXISTING CONCRETE	
PROPOSED CONCRETE	
ROOF DRAINAGE	
PROPOSED SPOT ELEV. PHASE II	(04.90)

PROJECT BENCHMARK:

A STANDARD A.C.S. BRASS CAP STAMPED (6-C17), LOCATED 7.6 MILES NORTHEAST OF DOWNTOWN ALBUQUERQUE AND 0.8 MILES NORTH OF THE INTERSECTION OF LOS ANGELES BLVD. N.W. AND WASHINGTON ST. N.W.
ELEVATION = 5111.03 FEET (M.S.L.D.)

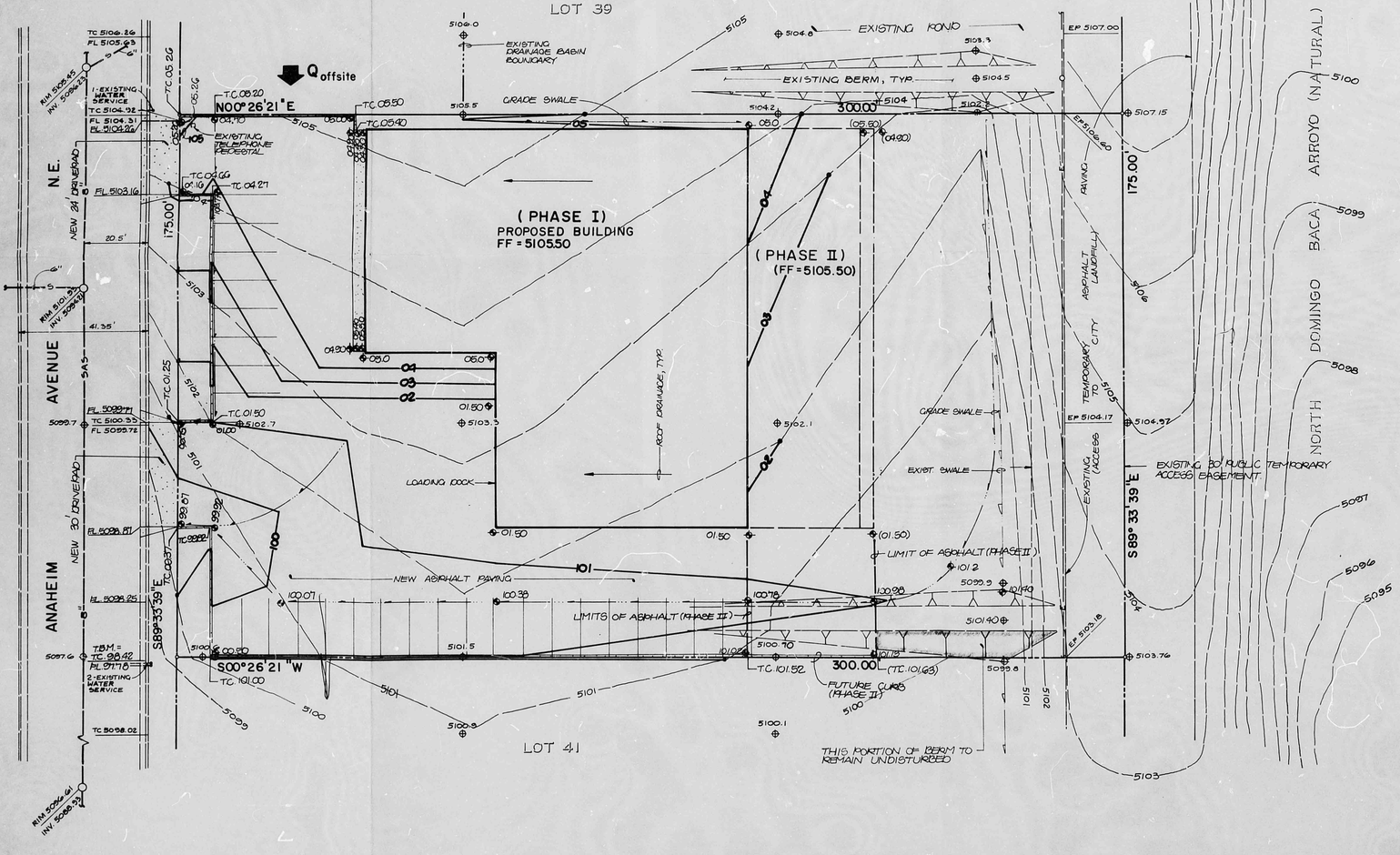
TEMPORARY BENCHMARK:

TOP OF CURB @ THE NORTHEAST CORNER OF THE PROJECT SITE.
ELEVATION = 5098.92 FEET (M.S.L.D.)

LEGAL DESCRIPTION:

LOT 40, CLIFFORD INDUSTRIAL PARK.

SCALE : 1"=20'



DRAINAGE PLAN

The following items concerning the McClintic Office Warehouse Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the south side of Anaheim Avenue N.E. west of Washington Street N.E. At present, the site is undeveloped. Much of the surrounding area is also undeveloped.

As shown by Panel 9 of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque-Bernalillo County, the site does not lie within a designated Flood Hazard Zone. At present, runoff generated by this site flows from east to west toward Lot 41. The northerly portion of the site drains onto Lot 41 and the south portion of the site drains to an existing pond located at the southwest corner of the site. In addition, some offsite sheet flow may enter the site along the northerly portion of the east boundary. This runoff, which has been quantified in the calculations, will be accepted and conveyed through the site and discharged to Anaheim Avenue N.E. Because Lot 39 is graded similar to Lot 40, a portion of the runoff generated by that lot is ponded at the southwest corner of Lot 39.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 2) continuity between existing and proposed grades, and 3) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements consist of the construction of a warehouse/office building along with adjacent paving and landscaping. Runoff generated by this site will be routed from south to north to Anaheim Avenue N.E. From this point, the runoff will flow in a westerly direction to an interim pond and will ultimately discharge to a downstream facility which is currently being designed by Leverton-Easterling. Information concerning this downstream facility has been obtained by conversations with Mr. Charles M. Easterling and Mr. Dan Hogan, City of Albuquerque Hydrology Section. According to Mr. Easterling, the downstream facility which is currently in the design stage will permit free discharge from the Clifford Industrial Park of which Lot 40 is a part. Also, Mr. Hogan has indicated that funds have been identified for the aforementioned project, and therefore it can be assumed that the downstream facility is in place in the design of this project.

The Calculations which appear below 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 result in a net increase of 2.2 cfs peak runoff.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 21:
EmB Embudo gravelly fine sandy loam
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84)\, T_c^{-0.51} = 4.65$ in/hr
$P_6 = 2.2$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.2$ in (DPM Plate 22.2D-1)
A = area, sf

Existing Condition

$A_{total} = 53,330$ sf $= 1.2$ Ac
$A_{IMP} = 0$ sf; % impervious = 0%
$C^{100} = 0.34$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.34)(4.65)(1.2) = 1.9$ cfs
$V_{100} = CP_6A = (0.34)(2.2/12)(53,300) = 3320$ cf

Developed Condition

Phase I (Partial Development)
$A_{total} = 53,300$ sf $= 1.2$ Ac
$A_{IMP} = 33,680$ sf; % impervious = 63%
$C^{100} = 0.65$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.65)(4.65)(1.2) = 3.6$ cfs
$V_{100} = CP_6A = (0.65)(2.2/12)(53,300) = 6352$ cf

Phase II (Full Development)
$A_{total} = 53,300$ sf $= 1.2$ Ac
$A_{IMP} = 40,520$ sf; % impervious = 76%
$C^{100} = 0.74$ (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.74)(4.65)(1.2) = 4.1$ cfs
$V_{100} = CP_6A = (0.74)(2.2/12)(53,300) = 7230$ cf

Comparison

$\Delta Q_{100} = 1.9 - 4.1 - 2.2$ cfs (increase)
$\Delta V_{100} = 3320 - 7230 = 3910$ cf (increase)

Offsite Flow

$Q_{100} = 0.34\ (4.65)(0.36) = 0.6$ cfs
$V_{100} = 0.34\ (2.2/12)(15,750) = 980$ cf

JEFFREY G. MONTEREY — NEW MEXICO — 7167 — REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	BY	REVISIONS

811 DALLAS, N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

DESIGNED BY: J.G.M. & L.P.U.
DRAWN BY: L.S.N.
APPROVED: J.G.M.
JOB NO. 40781
DATE 5/84

GRADING & DRAINAGE PLAN
McCLINTIC OFFICE WAREHOUSE

FILE NO. C17/D1C
SHEET 1 OF 1