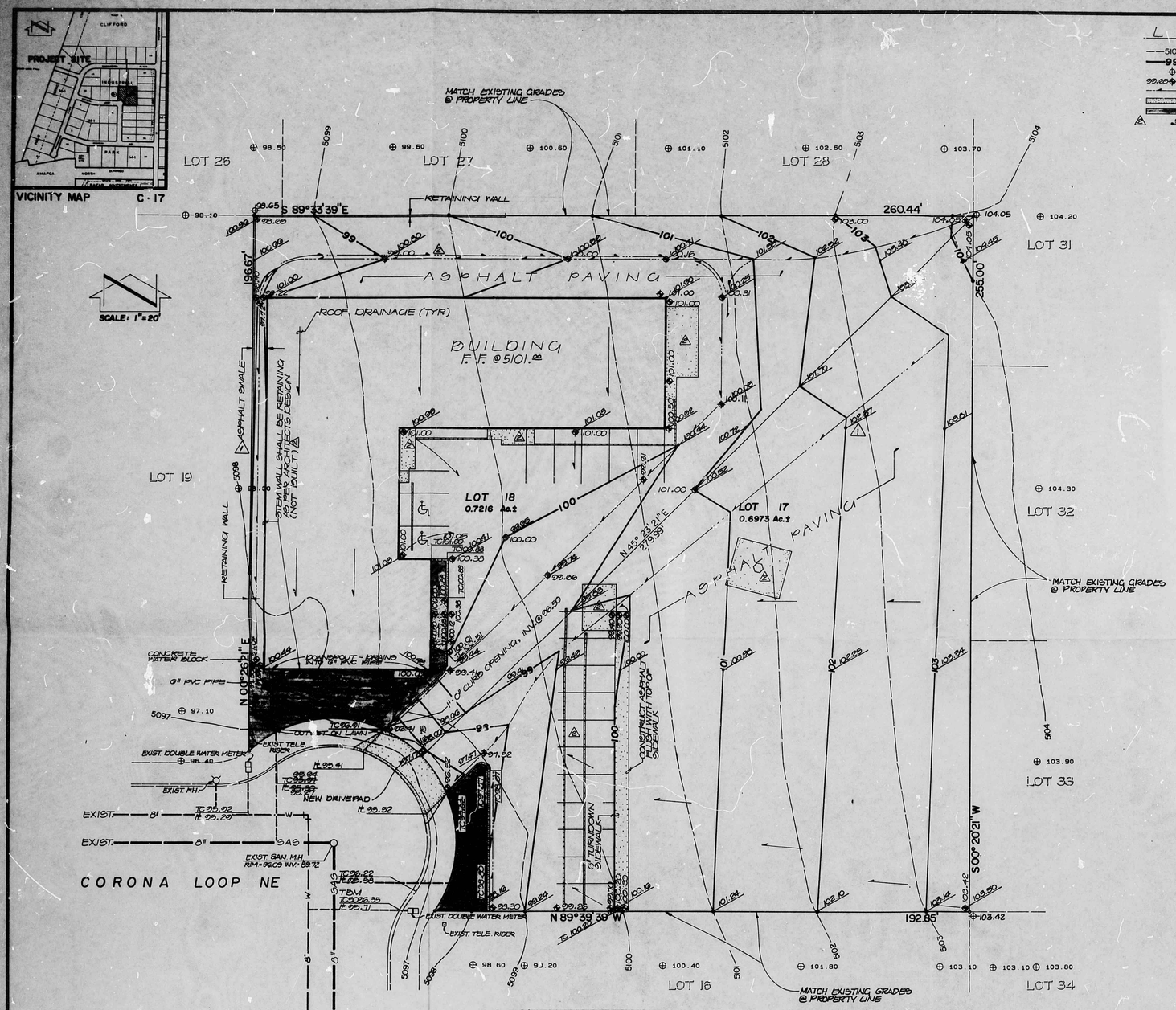
HYDROLOGY C17/D1f LOBO/VIVA OFFICE-WAREHOUSE

C17 / DIF

LOBO / VIVA OFFICE-
WAREHOUSE

1 PLAN



LEGEND

- 5101 — EXIST. CONTOUR
- 99 — PROPOSED CONTOUR
- ⊕101.10 EXIST. SPOT ELEVATION
- 99.60⊕ PROPOSED SPOT ELEVATION
- SWALE
- CONCRETE
- LANDSCAPING
- ⚠ .9999 AS-BUILT SPOT ELEVATION

PROJECT BENCHMARK

A STANDARD A.C.S. BRASS CAP STAMPED 6_C11, LOCATED 7.5 MI. NORTHEAST OF DOWNTOWN ALBUQUERQUE AND 0.3 MI. NORTH OF THE INTERSECTION OF LOS ANDALES DR. NE AND WYOMING BLVD. NE, ELEV. @ 5111.03 FEET (MSLD)

TEMPORARY BENCHMARK

TOP OF CURB @ PROPERTY LINE PROJECTION OF THE SOUTH-WEST CORNER OF LOT 17. ELEV. @ 5096.35 FEET (MSLD)

LEGAL DESCRIPTION

LOT 17 & 18, CLIFFORD INDUSTRIAL PARK

DRAINAGE PLAN

The following items concerning the Lobo-Viva Office/Warehouse Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the site is located at the northeast quadrant of the Corona Loop cul-de-sac knuckle. Presently, the site is undeveloped. To the west of the site is an office building currently under construction. The adjacent sites to the north, east and south of the subject site presently are undeveloped. Offsite flows are expected to enter the site from the east, however, future development of those sites, will eliminate the offsite flows.

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 northeast to southwest toward the street. Offsite flows generated from the site to the east will be accepted and conveyed through the site and discharged to Corona Loop N.E. These offsite flows are quantified in the calculations.

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 an office/warehouse building, paving and landscaping. Runoff generated by this site will drain from northeast to southwest and discharge into Corona Loop N.E. From this point, the runoff will flow in a westerly direction to Washington Place N.E. and ultimately discharge to a downstream facility which is currently being designed by Leverton-Easterling. According to Mr. Charles M. Easterling, the downstream facility which is currently in the design stage will permit the free discharge of runoff from the Clifford Industrial Park of which Lots 17 and 18 are a part. Also, Mr. Dan Hogan, City of Albuquerque Hydrology Section, has indicated that funds have been identified for the aformentioned project, and therefore it can be assumed that the downstream facilities are in place in the design of this project.

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 of Lots 17 and 18 will increase the peak discharge by 2.0 cfs from each lot.

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 ACCUKANCE 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 CERTIFICATION

As shown by the as-built spot elevations shown hereon, this site was constructed in substantial compliance with the approved grading and drainage plan. One major deviation from the approved plan is an asphalt swale along the north edge of the building. The approved plan showed runoff flowing to the west. In the as-built condition, the runoff is flowing to the east. This is an acceptable means of storm water conveyance. This change was necessitated by the construction of a retaining wall along the west property line in lieu of constructing the stem wall of the building as the retaining wall. Because of this, the pavement grades at the northwest corner of the building were held as a high point and the water swaled to the south and east from this point. It is interesting to note that it appears that the parallel swales along the common lot line between Lots 17 and 18 have been constructed as evidenced by the as-built spot elevations. This evidence should eliminate the need for a lot line removal or drainage covenant. If any runoff should cross this common lot line, it should be of such small quantity that its effect should be negligible and of no consequence to this plan. Based upon the information presented above and on the accompanying plan, a certificate of occupancy is hereby requested.

JEFFREY G. MORTENSEN NEW MEXICO 5547 REGISTERED PROFESSIONAL ENGINEER
5-22-85

CALCULATIONS

Ground Cover Information
From SCS Bernalillo County Soil Survey, Plate 11:
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. Lot 17
$A_{total} = 30{,}490$ sf $= 0.70$ Ac
$A_{imp} = 0$ sf; % impervious = 0%
'C' = 0.34 (DPM Plate 22.2C-1)
$Q_{100} = CiA = 0.34 (4.65)(0.70) = 1.1$ cfs
$V_{100} = CP_6A = 0.34 (2.2/12)(30{,}490) = 1900$ cf

B. Lot 18
$A_{total} = 31{,}365$ sf $= 0.72$ Ac
$A_{imp} = 0$ sf; % impervious = 0%
'C' = 0.34 (DPM Plate 22.2C-1)
$Q_{100} = CiA = 0.34 (4.65)(0.72) = 1.1$ cfs
$V_{100} = CP_6A = 0.34 (2.2/12)(31{,}365) = 1955$ cf

Developed Condition
A. Lot 17
$A_{total} = 30{,}490$ sf $= 0.70$ Ac
$A_{imp} = 29{,}805$ sf; % impervious = 98%
'C' = 0.96 (DPM Plate 22.2C-1)
$Q_{100} = CiA = 0.96 (4.65)(0.70) = 3.1$ cfs
$V_{100} = CP_6A = 0.96 (2.2/12)(30{,}490) = 5365$ cf

B. Lot 18
$A_{total} = 31{,}365$ sf $= 0.72$ Ac
$A_{imp} = 30{,}045$ sf; % impervious = 96%
'C' = 0.93 (DPM Plate 22.2C-1)
$Q_{100} = CiA = 0.93 (4.65)(0.72) = 3.1$ cfs
$V_{100} = CP_6A = 0.93 (2.2/12)(31{,}365) = 5350$ cf

Comparison
A. Lot 17
$Q_{100} = 3.1 - 1.1 = 2.0$ cfs (increase)
$V_{100} = 5365 - 1900 = 3465$ cf (increase)

B. Lot 18
$Q_{100} = 3.1 - 1.1 = 2.0$ cfs (increase)
$V_{100} = 5350 - 1955 = 3395$ cf (increase)

Offsite Flows
$A_{total} = 0.7$ Ac
$A_{imp} = 0$ Ac; % impervious = 0%
'C' = 0.34 (DPM Plate 22.2C-1)
$Q_{100} = 0.34 (4.65)(0.75) = 1.2$ cfs

RECEIVED MAY 22 1985 HYDROLOGY SECTION

NO.	DATE	BY	REVISIONS
1	11/26/84	JTO	Revised asphalt and landscaped swale grades, revised paving grades.
2	5/85	JGM	As-Built & Certification.

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

DESIGNED BY: J.T.O.
DRAWN BY: C.G.C.
APPROVED: J.G.M.
JOB NO. 4-1361
DATE 10/84

GRADING & DRAINAGE PLAN
LOBO - VIVA OFFICE / WAREHOUSE

FILE NO.
SHEET 1 of 1