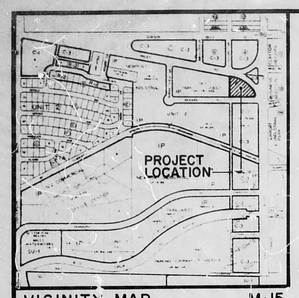
HYDROLOGY M15/D5A CRADDOCK OFFICE BUILDING NO. 8

M15/D5A

CRADDOCK OFFICE

BUILDING NO. 8

1 PLAN



VICINITY MAP M-15
SCALE: 1" = 800'

LEGEND
- 5180 — EXISTING CONTOUR
- 90 — PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONCRETE
- PROPOSED ASPHALT

SCALE: 1" = 20'

TEMPORARY BENCHMARK

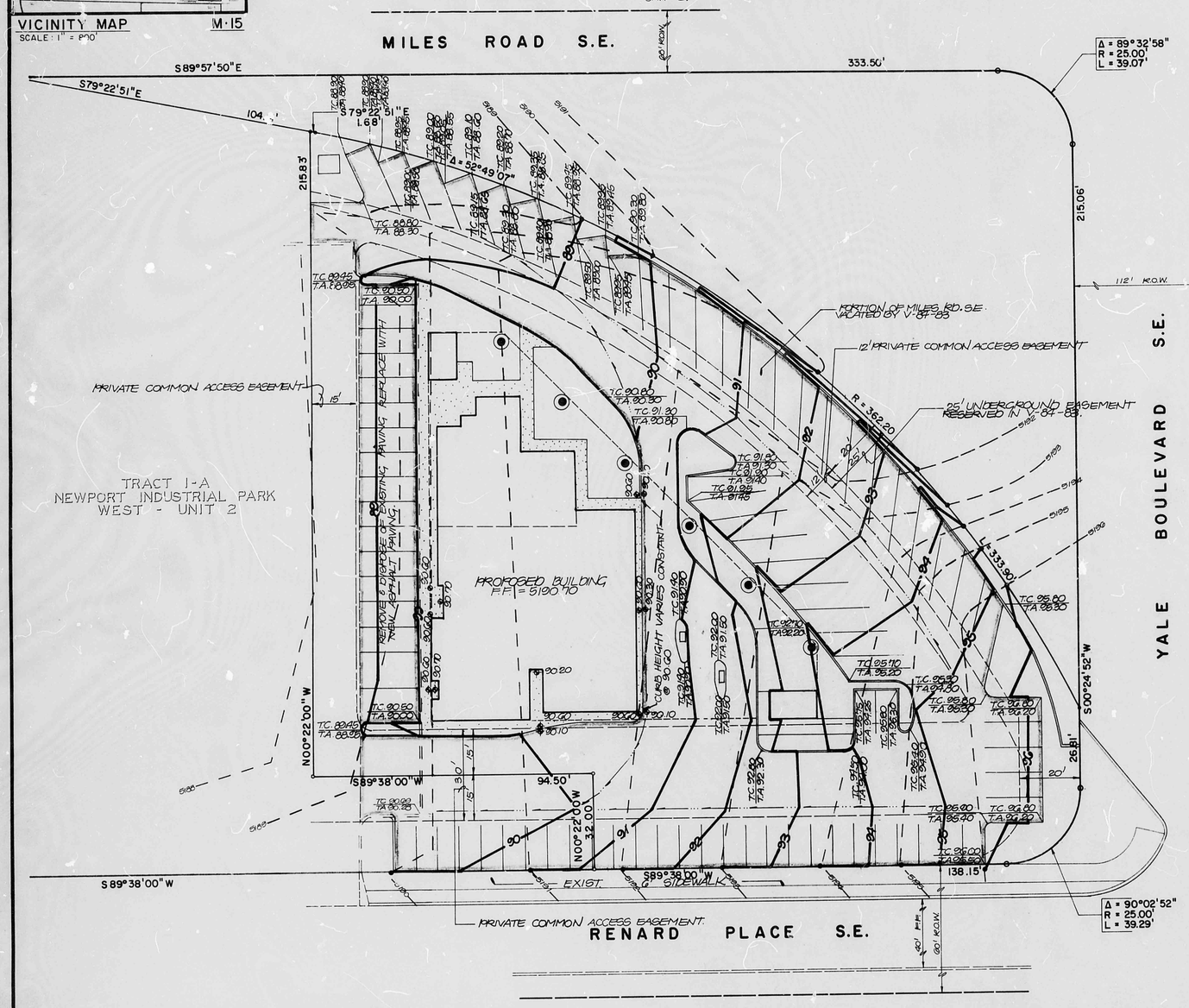
FINISH FLOOR OF EXISTING OFFICE BUILDING No. 9 LOCATED WEST OF PROPOSED OFFICE BUILDING No. 8.
ELEVATION = 5116.30 FEET (M.S.L.D.)

PROJECT BENCHMARK

A STANDARD ACS BRASS TABLET STAMPED "1-M15" SET IN THE TOP OF A CONCRETE POST & LOCATED APPROXIMATELY 65 FEET SOUTH OF THE INTERSECTION OF SAN JOSE AVE. S.E. & UNIVERSITY BLVD. S.E. IN THE SOUTHWEST QUADRANT ON THE NORTH EDGE OF THE CONCRETE CHANNEL.
ELEVATION = 5118.33 FEET (M.S.L.D.)

LEGAL DESCRIPTION

TRACT 1-A, NEWPORT INDUSTRIAL PARK WEST - UNIT 2.



DRAINAGE PLAN

The following items concerning the Office Building No. 8 Drainage Plan are contained hereon:

1. Vicinity Map 2. Grading Plan 3. Calculations

The proposed improvements, as shown by the Vicinty Map, are located at the southwest corner of the intersection of Miles Road S.E. and Yale Boulevard S.E. At present, the site is undeveloped. Much of the surrounding area is currenly developed, thereby making this an infill site.

As shown by Plate M-15 of the Albuquerque Master Drainage Study, the site does not lie within a designated Flood Hazard Zone. The finish floor elevation of the proposed office building has been determined to avoid flooding. At present, the majority of the runoff generated from this site flows from east to west onto the adjoining parking lot of Office Building No. 6. No offsite flows enter the site since the site is bounded by Miles Road S.E. and Yale Boulevard S.E.

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 new office building along with adjacent paving and landscaping.

In January, 1980, an agreement was reached between the City of Albuquerque and Craddock Development Company resolving the drainage requirements for portions of the Newport Industrial Park - West. Tract 1 of the Newport Industrial Park - West, Unit 2, is included in this agreement. The agreement provides for the direct discharge of runoff from the site. This runoff will be conveyed through Renard Place and a drainage channel connecting Renard Place and the existing concrete-lined channel.

As mentioned above, flows generated onsite will be routed from east to west onto the adjoining parking lot of Office Building No. 6. From that point, the runoff will flow to the aforementioned drainage channel which is the outfall for this site.

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 result in a net increase in peak runoff of approximately 2.1 cfs.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 31:
Wab - Wink fine sandy loam
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies

$i = P_6(6.84)T_c^{-0.51} = 4.8$ in/hr
$P_6 = 2.29$ in (DPM Plate 22.2 D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies

$P_6 = 2.29$ in (DPM Plate 22.2 D-1)
A = area, sf

Existing Condition

$A_{total} = 37,270$ sf $= 0.86$ Ac
$A_{imp} = 0$ sf; % impervious = 0%
'C' = 0.34 (DPM Plate 22.2 C-1)
$Q_{100} = CiA = (0.34)(4.8)(0.86) = 1.4$ cfs
$V_{100} = CP_6A = (0.34)(2.29/12)(37,270) = 2,420$ cf

Developed Condition

$A_{total} = 37,270$ sf $= 0.86$ Ac
$A_{imp} = 33,280$ sf; % impervious = 89%
'C' = 0.85 (DPM Plate 22.2 C-1)
$Q_{100} = CiA = (0.85)(4.8)(0.86) = 3.5$ cfs
$V_{100} = CP_6A = (0.85)(2.29/12)(37,270) = 8,060$ cf

Comparison

$\Delta Q_{100} = 3.5 - 1.4 = 2.1$ cfs (increase)
$\Delta V_{100} = 6,060 - 2,420 = 3,640$ cf (increase)

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JAN 13 1986
HYDROLOGY SECTION

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.
3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

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.

JEFFREY G. MORTENSEN
NEW MEXICO
6847
REGISTERED PROFESSIONAL ENGINEER
11-27-85

Bohannan-Huston, Inc.
811 DALLAS N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

NO.	DATE	BY	REVISIONS
1	12/85	RAD	REVISE PLAN FOR SITE PLAN CHANGES.

DESIGNED BY: L.P.U.
DRAWN BY: T.M.A.
APPROVED: J.C.M.

JOB NO. 91018
DATE 5/85

CONCEPTUAL GRADING & DRAINAGE PLAN
OFFICE BUILDING NO. 8

M15/D5a

FILE NO.
SHEET 1 OF 1