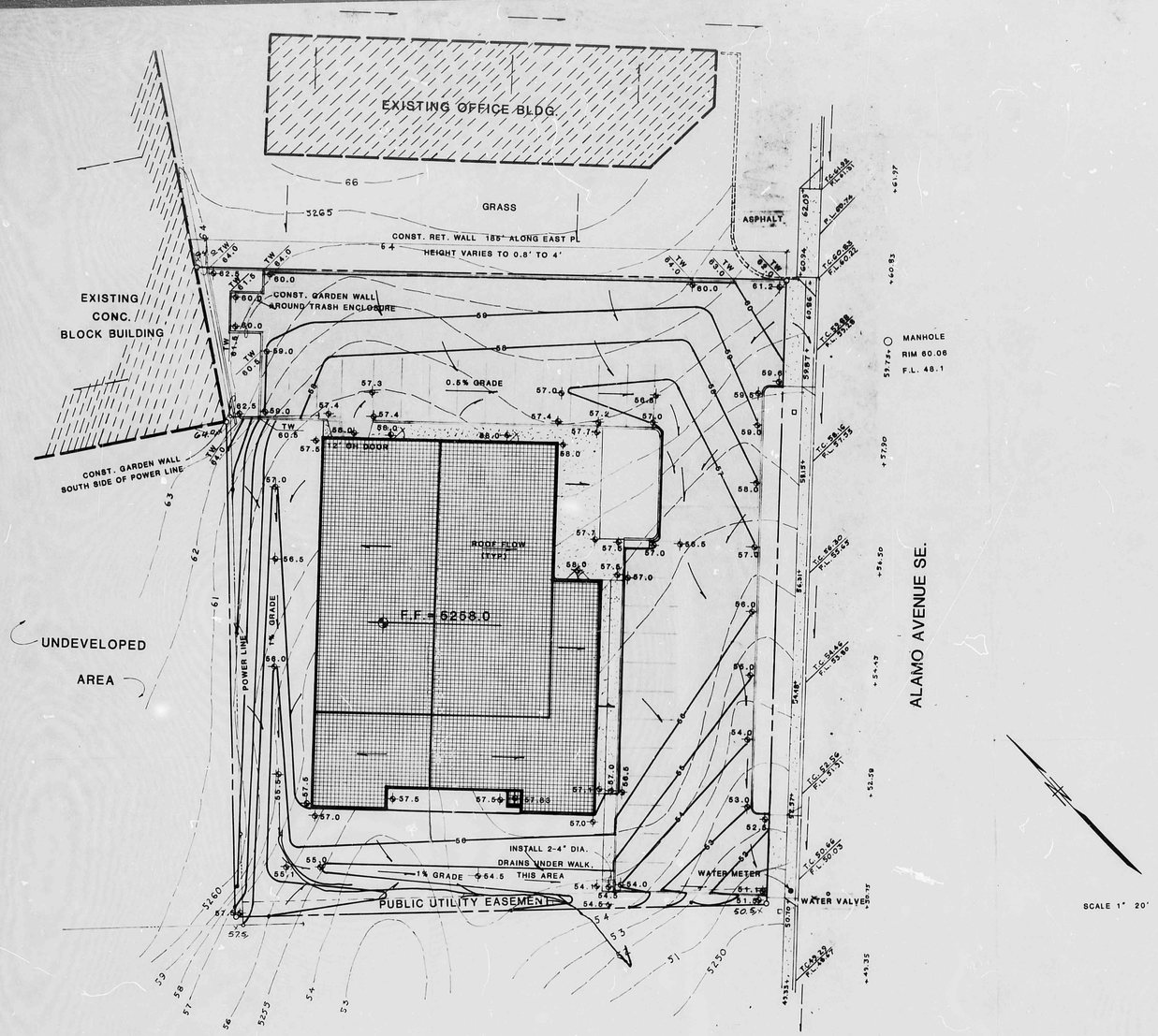
IYDROLOGY M16/D20 OFFICE & WAREHOUSE

M16/D20

OFFICE &
WAREHOUSE

1 PLAN

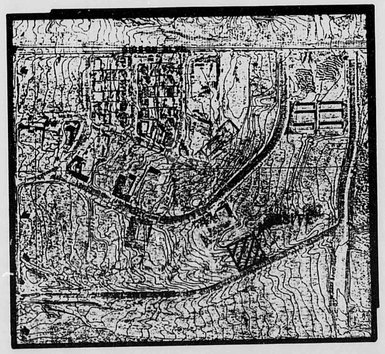


SCALE 1" 20'

LEGEND

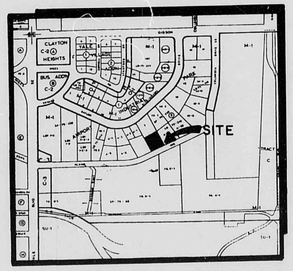
- SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
- PROPOSED ASPHALT
- BUILDING (EXISTING, PROPOSED)
- PROPERTY LINE
- X12.7 — EXISTING SPOT ELEVATION
- 10 — EXISTING CONTOUR
- 12.5 — PROPOSED SPOT ELEVATION
- 10 — PROPOSED CONTOUR
- SURFACE FLOW DIRECTION (EXISTING, PROPOSED)
- TELEPHONE PEDESTAL

FLOOD HAZARD MAP



(FOR MAPS)

VICINITY MAP M-16



SCOPE:

The proposed improvements, comprised of an office building and paved parking, is located in the Albuquerque Airport Industrial Park on Alamo Avenue, east of Yale Blvd.

The present site is undeveloped and boardered by an existing building on the east and N.E. corner, and Alamo Avenue on the south. Undeveloped land boarders the remainder of the site.

The intent of this plan is to show:

a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.

b) The extent of proposed site improvements, including buildings, walks and pavement.

c) The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.

d) The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

CONSTRUCTION NOTES:

1. Before beginning construction, the Contractor shall check and verify pertinent figures shown here on and all applicable field measurements. Should any conflict, error or discrepancy be discovered, the Contractor shall notify the Engineer at once to resolve the problem. It is recommended that the contractor meet with the Engineer for a pre-design conference to determine the scope of work and critical areas involved.

2. The Contractor shall be responsible for following the plans using his best skill and attention. Any departure from the plans must be approved by the Engineer and the City Hydrology Department prior to construction.

3. The Contractor shall check the site plan for locations of existing utilities within or adjacent to streets and shall take all necessary precautions and efforts to locate and protect these utilities. He shall give 48 hours notice to Line Locating Service, 765-1234, for any work that he contemplates would interfere with said utilities.

GENERAL NOTES:

LEGAL:
Lot A-8A, Airport Industrial Park, Albuquerque, New Mexico.

SURVEYOR:
Ron Forstbauer Survey Company, November 12, 1984.

B.M.:
BM-I-M16 A std. ACS Brass Tablet located in the middle of the intersection of Gibson Blvd. and Yale Blvd, set flush with pavement. Elevation 5190.03.

T.B.M.:
MH rim in Alamo Ave. near SE corner of site, Elevation 5260.06

SOILS:
SCS Soils Map Page #41, Soil Type "Cu", Hydrologic Group "A".

FLOOD HAZARD:
Site is not located in a Flood Hazard Area. (AM'S M-16).

OFF-SITE DRAINAGE:
Site experiences minor offsite from grassed area to the east and peripheral drainage from open area to the north. Total offsite area = 0.27 Ac = 0.2 cfs sheet flow, to be routed thru site.

EROSION CONTROL:
Site will be developed in one phase with controlled earthwork establishing construction grades over entire site to follow final grading plan flow patterns. Contractors to construct temporary holding pond/berm at outflow point if stockpiled fill left on site for any length of time.

CALCULATIONS:
Based on a pre-design meeting with City of Albuquerque Hydrology, on 11-16-84, the following criteria was established.

A. Discharge to be determined by analysis of downstream capacity.

Calculations are based on the City of Albuquerque D.P.M. Manual, Vol. II for the 100 year-6 hour storm, using the Rational Formula to compare the existing and proposed runoff rates.

RATIONAL METHOD- Q = CIA

Area of site: 35,322 sq.ft.= 0.81 Ac.

Run-off Coefficient:

Existing site:	Developed Site:
A imp. = 0 Ac	A imp. = 0.60 Ac
% imp. = 0 %	% imp. = 0.74 %
"C" = 0.16 (DPM 22.2 C-1)	"C" = 0.60(DPM 22.2 C-1)

Rainfall Intensity:

$I = P_6 (6.84)\ Tc^{-0.34} = 4.86"$ per hour
where $P_6 = 2.3"$ (DPM 22.2 D-1)
Tc = 10 minutes

Existing Condition:	Developed Condition:
Q100 = (0.16)(4.86)(0.81) = 0.6 cfs	Q100 = (0.60)(4.86)(0.81) = 2.4 cfs
V100 = (Q100)(5 Tc)(60 sec/in)/2 = 900 cu. ft. sq.	V100 = (2.4)(50)(60)/2 = 3542 cu. ft. sq.

SUMMARY:

ΔQ100 = (0.6)-(2.4) = 1.8 cfs (increase)
ΔV100 = (900)-(3542) = 2642cu. ft. (increase)

DOWNSTREAM CAPACITY:

AMDS M-16-AP 4201, Hydrograph #464.9
Peak Flow = 153 cfs @ Tc 0.22 hrs
Storm Capacity = 140 cfs @ AP4201
Tc from site to AP4201
$Tc=(0.0078)(1500)^{0.77}/(5265-5204)^{0.385} = 0.5$ min.

Therefore, time for site drainage to reach the inlet at AP4201 is substantially less than peak time of basin to reach same inlet, so capacity for free discharge from site is available.

RECEIVED
DEC 06 1984
DESIGN HYDROLOGY SECTION

M16/D20

CTS INC.
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ALBUQUERQUE, NEW MEXICO 87110
(505) 266 - 3444

REVISIONS	DATE
DESIGNED CWS	12-84
DRAWN	12-84
CHECKED CWS	12-84

DRAINAGE / GRADING PLAN
OFFICE AND WAREHOUSE
2501 ALAMO S.E.

SHEET 1 OF 1