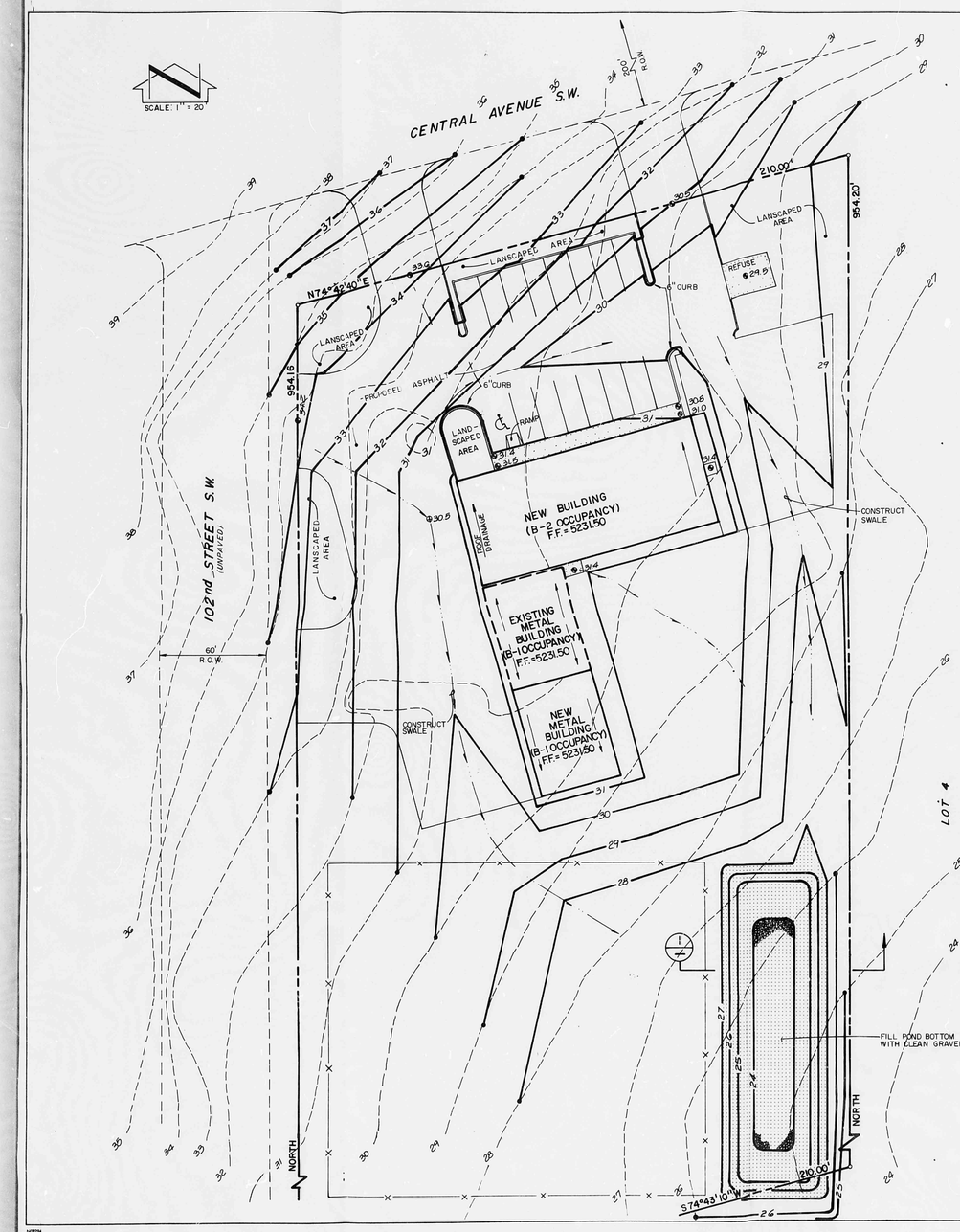
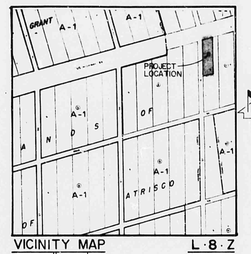
HYDROLOGY L8/D3 2 PLANS

L8/D3

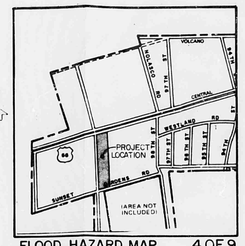
2 Plans

CITY OF ALBUQUERQUE





VICINITY MAP L-8-Z
SCALE: 1" = 800'



FLOOD HAZARD MAP 4 OF 9
SCALE: 1" = 1000'

DRAINAGE PLAN

The following items concerning the AGEX Drainage Plan are contained hereon:

1. Vicinity Map
2. Flood Hazard Map
3. Grading Plan
4. Calculations

This project consists of the construction of the following items: two (2) warehouse buildings, parking lot, sidewalks, landscaped areas and drainage facilities. The site is located in the southeast quadrant of the junction of Central Avenue S.W. and 102nd Street S.W.

The site is bounded on the north by Central Avenue; on the west by 102nd Street. Runoff from the north and west will be intercepted by roadside swales and diverted away from the site. The site is bounded on the south by Sunset Gardens Road and undeveloped land which drains away from the site. The site is bounded on the east by undeveloped land which drains away from the site. The project (1) does not lie within a flood hazard zone, (2) has no drainage easements on the property, and (3) has no natural watercourse passing through the property.

The Grading Plan shows (1) existing contours at 1'-0" intervals, (2) proposed grades indicated by spot elevations and contours, (3) swales, (4) continuity between existing and proposed elevations, (5) that all runoff generated from the development will be conveyed through swales into a retention pond at the south end of the development and (6) erosion will not result due to this development.

The total area of the parcels is approximately 4.82 acres. The portion of the parcel which is to be developed is approximately 1.70 acres in size and comprises the northern one-third (1/3) of the parcel. All runoff from the developed portion of the parcel will be retained. The retention pond is designed to hold the developed 100-year, 6-hour runoff with the 2-year, 6-hour volume being stored in a gravel sump to eliminate nuisance puddles. The remainder of the property will be allowed to drain naturally away from the site.

CALCULATIONS

Total Area = 4.82 ac
Ponded Area = 1.70 ac
Ponded Pervious Area = 1.07 ac
Ponded Impervious Area = 0.63 ac
Soil Type: Parajito
Soil Group: B
Curve Number: 79

ANALYSIS OF 100-YEAR, 6-HOUR STORM BY SCS METHOD

1. Undeveloped
   $C_N = 79$
   DC = 75
   Rainfall = 2.2 in
   Runoff = 0.44 in
   Discharge = 1.55 cfs/ac/in
   $Q_{100} = 1.6$ cfs
   $V_{100} = 3,900$ cf
2. Developed
   Composite $C_N = 79\left[\frac{1.96}{1.96}\right] + 95\left[\frac{0.94}{1.96}\right] = 85$
   DC = 75
   Rainfall = 2.2 in
   Runoff = 0.94 in
   Discharge = 1.55 cfs/ac/in
   $Q_{100} = 2.4$ cfs
   $V_{100} = 5,800$ cf

ANALYSIS OF 2-YEAR, 6-HOUR STORM BY SCS METHOD

1. Developed
   Composite $C_N = 85$
   DC = 75
   Rainfall = 0.9 in
   Runoff = 0.13 in
   Discharge = 1.55 cfs/ac/in
   $Q_2 = 0.3$ cfs
   $V_2 = 700$ cf

POND VOLUMES

1. Gravel Sump:
   By Average End Areas:
   Volume = $\frac{1}{3}\left[\frac{1,296 + 576}{2}\right](1.25) = 930$ cf
   where "1/3" is the fraction of voids in the gravel bed.
2. Free Water Pond
   By Average End Areas:
   Volume = $\frac{39 \times 36 + 33 \times 29 + 27 \times 23 + 15 \times 85}{3}(1) = 7079$ cf
   Actual Pond Volume = 8,630 cf
   Free Water Depth = 1.25' at elevation 5226.50

APPROVED FOR DRAINAGE
5/14/82
DATE
Bernie J. Montoya
TITLE
ADVISE DRAINAGE INSPECTOR WHEN GRADING EXECUTED

LEGAL DESCRIPTION

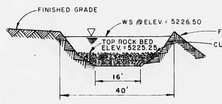
LOT 5, LANDS OF ATRISCO GRANT

ADDRESS

10120 CENTRAL AVE. S.W.

LEGEND

- 27 EXISTING CONTOURS
- 27 PROPOSED CONTOURS
- ⊕ EXISTING SPOT ELEVATIONS
- ⊕ PROPOSED SPOT ELEVATIONS
- DIRECTION OF FLOW
- PROPERTY LINE



POND SECTION 1/1
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

JOB No 2-017

REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO
THOMAS J. MONTOYA
5/14/82
REGISTERED LAND SURVEYOR

APPROVED FOR CONSTRUCTION
CITY ENGINEER DATE

AS BUILT INFORMATION

CONTRACTOR
WORK STAKED BY
FIELD CHANGES
ACCEPTANCE BY
FIELD
DATE
VERIFICATION BY
DRAWINGS
DATE
CORRECTED BY
MICRO-FILM INFORMATION
RECORDED BY
DATE
NO.

BENCH MARKS

CITY OF ALBUQUERQUE BENCHMARK 2-19, A 60-PENNY NAIL IN A ELECTRIC POWERLINE POLE LOCATED ON THE WEST SIDE OF 98TH STREET S.W. (0.20 MILES SOUTH OF THE JUNCTION WITH CENTRAL AVE.) APPROXIMATELY 100 FEET EAST OF A SMALL UTILITY BUILDING.
ELEVATION = 5295.192 FEET.

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

REFERENCES

MAP NO. L-8
EST. NO.
W.O. NO.

NO.	DATE	REMARKS	BY
1	4/28/82	REVISED TO REFLECT "AS-BUILT"	

BI DALLAS N.I. - ALBUQUERQUE - NEW MEXICO - 87110
ENGINEERS

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: **AGEX**
DRAINAGE PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E.-Design			Traffic		
A.C.E.-Hydrology			Water		

DRAWING NO.
SHEET 1 OF 1

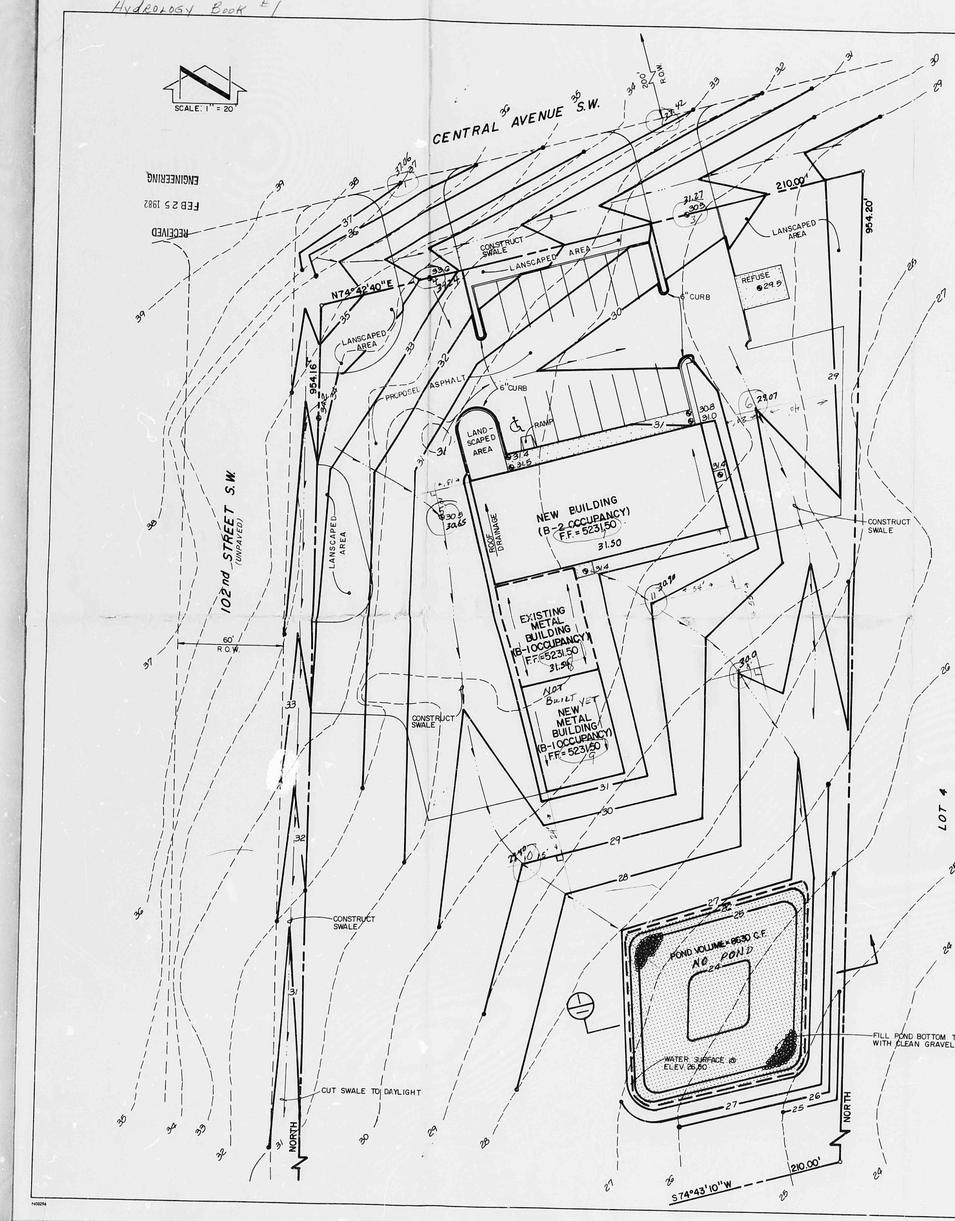
10120 Central S.W.

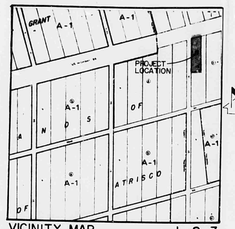
D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE

C D

Hydrology Book #1




GRANT
A-1
PROJECT LOCATION
A-1
A-1
A-1