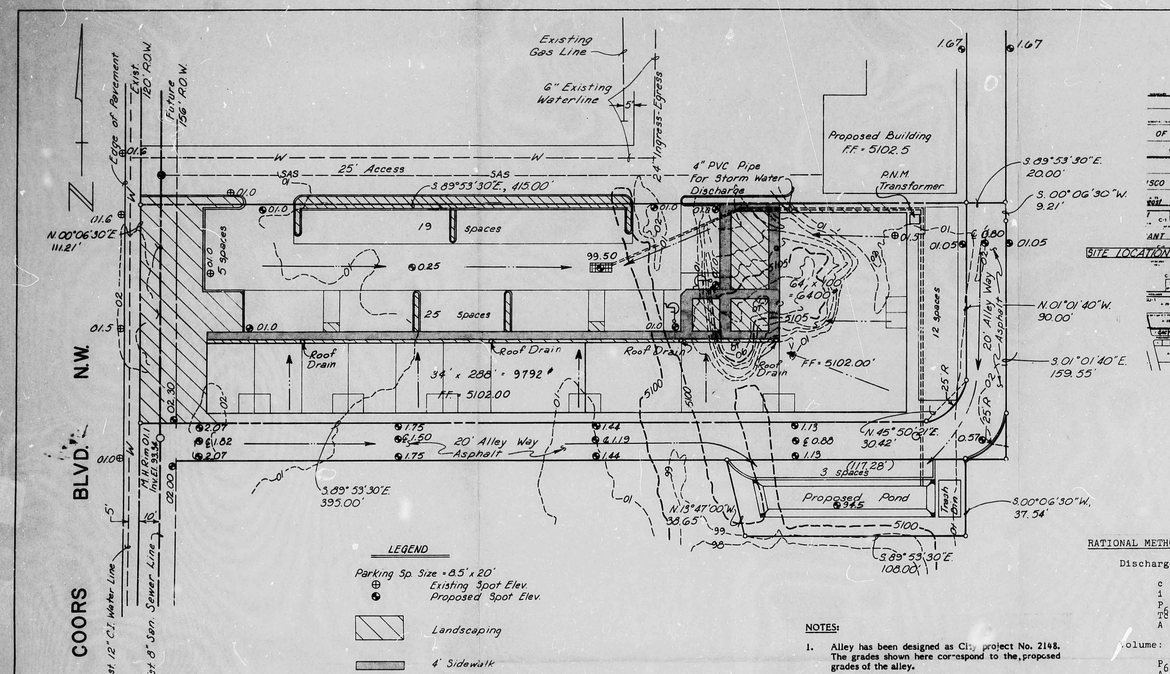
HYDROLOGY G11/D30 CORONA DEL SOL RETAIL SITE

G11 / D30

CORONA DEL SOL

RETAIL SITE

1 PLAN



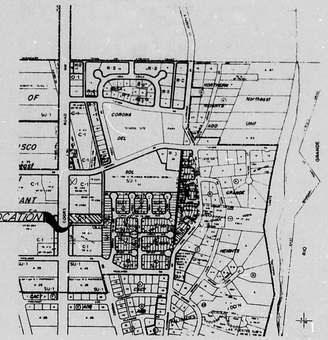
LEGEND

Parking Sp. Size = 8.5' x 20'
Existing Spot Elev.
Proposed Spot Elev.
Landscaping
4' Sidewalk

TRACT 24 - RETAIL OFFICES
Scale: 1" = 30'

NOTES:

1. Alley has been designed as City project No. 2148. The grades shown here correspond to the proposed grades of the alley.
2. All proposed grades are to top of asphalt.
3. Capacity of the 4" pvc pipe is .12 cfs.
4. Ponding limits fall within the boundaries of the parking lot.



VICINITY MAP

FLOOD INSURANCE MAP

Temp. Drainage

CALCULATIONS

RATIONAL METHOD

Discharge = CiA

c = varies
i = P_6 (6.84) $T_c^{-0.51}$ = 4.65 in/hr.
P_6 = 2.2 in. (DPM Plate 22.2 D-1)
T_c = 10 min. (minimum)
A = area, acres

Volume: V = C P_6 A (1/12) where C varies

P_6 = 2.2 in. (DPM Plate 22.2 D-1)
A = area, s.f.

EXISTING CONDITIONS

A_{TOT} = 46,041 s.f. = 1.057 acres
A_{imp} = 0 s.f.; % impervious = 0%
C = 0.34 (DPM Plate 22.2 C-1)
Q_{100} = CiA = .34(4.65) 1.057 = 1.67 cfs
V_{100} = C P_6 A = .34(2.2/12) 46,041 = 2,870 cf

DEVELOPED CONDITIONS

Tract 24:

A_{TOT} = 46,041 sf = 1.057 acres
A_{imp} = 41,267 s.f.; % impervious = 90%
C = 0.86 (DPM Plate 22.2 C-1)
Q_{100} = CiA = .86(4.65)1.057 = 4.23 cfs
V_{100} = C P_6 A = .86(2.2/12) 46,041 = 8,440 cf

Alley Way:

A_{TOT} = 16,400 sf = 0.3765 acres
A_{imp} = 16,184 sf = % impervious = 100%
C = 1.0 (completely paved)
Q_{100} = CiA = 1.0(4.65) 0.3765 = 1.75 cfs
V_{100} = C P_6 A = 1.0(2.2/12) 16,400 = 3,000 cf

TOTAL VOLUME = 11,440 cf.

POND VOLUME

Vol. required = 10,490 c.f.

Vol. pond = (80X10.5X5.0) + 102 (½X(4.5)²) + 78 (½X3X4 + ½ X 10 X 0.5) + (260 X 64 X .75 X ½)

Vol. pond = 12,140 c.f.

GROUND COVER INFORMATION

From SCS Bernalillo County Soil Survey
Hydrologic Soil Group B

WATER: Water Distribution shall be obtained by tapping into an existing 12-inch C.I. water line running parallel to Coors Boulevard as shown on this plan. Pipe sizes shall be determined at the time of final engineering drawing.

SANITARY SEWER: This system shall also tap into a proposed 8-inch sewer line which runs parallel to Coors Boulevard as shown on this plan.

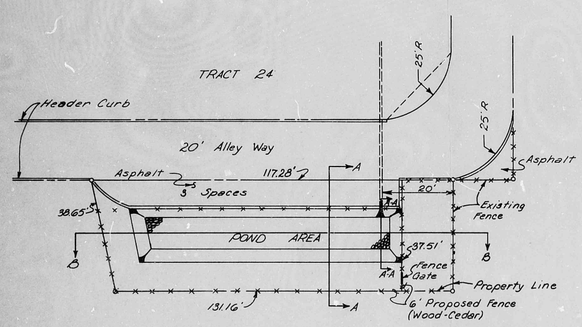
STORM DRAINAGE

OFFSITE STORM WATERS: These flows are historically from the West. Any runoff from the West and from Coors Boulevard roadway will be intercepted by the ditch which runs parallel to Coors Boulevard. The parcel to the North is half-developed and shall contain its runoff. The other undeveloped half is roughly parallel while the land to the East is slightly higher. Runoff from the East will be negligible since that land is undeveloped as residential lots. Runoff from 300' of alley way North of the site will be accepted into proposed pond.

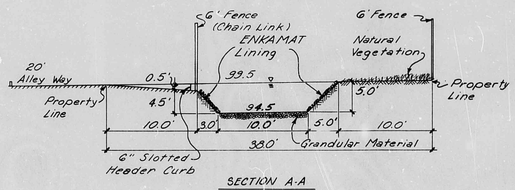
ONSITE STORM WATERS: Presently, there is no comprehensive drainage study for the West side, thus, this parcel must contain 100% of its runoff within its boundaries. Because the site must have total retention, an area designated as Tract "A" will be used for ponding. The runoff from the building will drain towards the parking lot. The runoff from the parking lot will be collected at the N.E. corner of the parking lot and thus transmitted through a pipe to the ponding area. In the near future, a 72-inch storm sewer pipe is planned for the alley way located just East of the site. At that time, our drainage will tap into this system.

The Southeastern portion of the site encroaches slightly into the 100-year flood plain as defined by the Flood Insurance Maps. This will be remedied by backfilling and raising the ground elevation out of the flood plain. Any volume of flood water displaced by the backfill will be compensated for by the volume of water kept on site and not contributing to the problem.

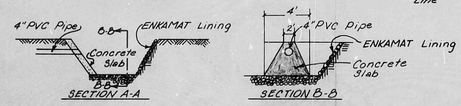
The calculations above are computed for the existing and the developed conditions at the 6-hour, 100-year storm. The rational method has been used for this analysis in accordance with the Albuquerque Development Process Manual, Volume II.



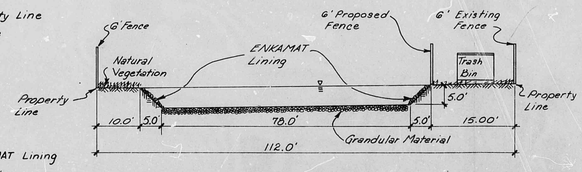
POND DESIGN
Not to Scale



SECTION A-A
Not to Scale



DISCHARGE DETAIL
NOT TO SCALE



SECTION B-B
Not to Scale

POND DIMENSIONS

RECEIVED
JAN 23 1985
HYDROLOGY SECTION

NO.	DATE	REMARKS	BY
1	1/23/85	Relocation of C.D.S. basin	J.T.C.

REVISIONS

DESIGNED BY J.T.C. DATE 11-21-84
DRAWN BY Albuquerque Surveying Co., Inc. DATE 10-19-84
CHECKED BY [illegible] DATE 11-21-84

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS

N.M.S.H.C. ACS BRASS CAP, NM 448-X3
Station is located South of Redlands Rd. N.W. on the East side of State Road 448 (Coors Rd. N.W.) in the West edge of a parking lot at the "West Mesa Bowl" bowling alley.
Elev. = 5099.527 feet

AS BUILT INFORMATION

	DATE
WORK STAKED BY	
FIELD TIES VERIFIED BY	
ACCEPTANCE BY	
CERTIFICATION BY	
CORRECTED BY	
RECORDED BY	
NO.	

MICRO-FILM INFORMATION

ENGINEER'S SEAL

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: CORONA DEL SOL
SITE AND DRAINAGE PLAN

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

DRAWING NO. | MAP NO. G-11 | SHEET 1 OF 1