CITY OF
Albuquerque

Martin J. Chávez, Mayor

October 16,1997

Jackie McDowell
McDowell Engineering Inc.
7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122

RE: REVISED DRAINAGE PLAN FOR HERNANDEZ BUILDING (K10-D32B)
ENGINEER'S STAMP DATED 5/30/97

Dear Ms. McDowell:

Based on the information provided on your June 4,1997 and September 23,1997 submittals, the above referenced site is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, any development which drains into the NMSHD R/W will require that they review the concept also. I have spoken to Raymunda Van Hoven from the NMSHD Hydrology section and have advised her that the amount that is being released into their R/W is held to the historic rate. She indicated that any further development would require their approval.

Please be advised that prior to Certificate of Occupancy release, Engineer Certification will be required.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely

Bernie J. Montoya CE
Associate Engineer

27-May-97

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 1

Depth at 100-year, 6-hour storm: (Table A-2) P = 2.20 inches

Land Treatments:

From Table 5 - Percent Treatment D
Single Family Residential =
7*SQR((N*N) +(5*N))
where N = units/acre
N = ---------- = ------, ok < 6 N = 0.00
Therefore Percent Treatment D = 0.00%
(includes local streets)

Areas: (acres)	Existing	Proposed
Treatment A	2.45	1.94
Treatment B	0.00	0.05
Treatment C	0.00	0.12
Treatment D	0.00	0.34
Total (acres) =	2.45	2.45

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.09	0.14	0.02	0.05	0.00	0.02
Volume (cubic feet) =	3,913	6,083	711	2,325	0	943

VOL. TO POND = 2170 cu.ft.

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	3.16	2.50	0.59	0.47	0.00	0.00
Treatment B	0.00	0.10	0.00	0.04	0.00	0.00
Treatment C	0.00	0.34	0.00	0.18	0.00	0.06
Treatment D	0.00	1.49	0.00	0.98	0.00	0.57
Total Q (cfs) =	3.16	4.43	0.59	1.67	0.00	0.63

VOLUME PROVIDED = 5250 cu.ft.

RECEIVED JUN 04 1997 HYDROLOGY SECTION

McDowell Engineering, Inc.

7200 Valley Forge Pl. NE
Albuquerque, New Mexico 87109
Tele: (505)828-2430

Project: HERNANDEZ POOLS DEV.
Project No.: HER@97L Date: 5-27-97
Subject: RETENTION POND CALCS
By: JSM Sheet 1 of 1

POND VOLUME:

ELEVATION	AREA	DEPTH	VOL. (C.F.)
05.5	4130		
		1.0	3749
04.5	3367		
		0.5	1507
04.0	2662		

TOTAL = 5256 cf. ✓

SPILLWAY:

$$Q = CLH^{3/2}$$

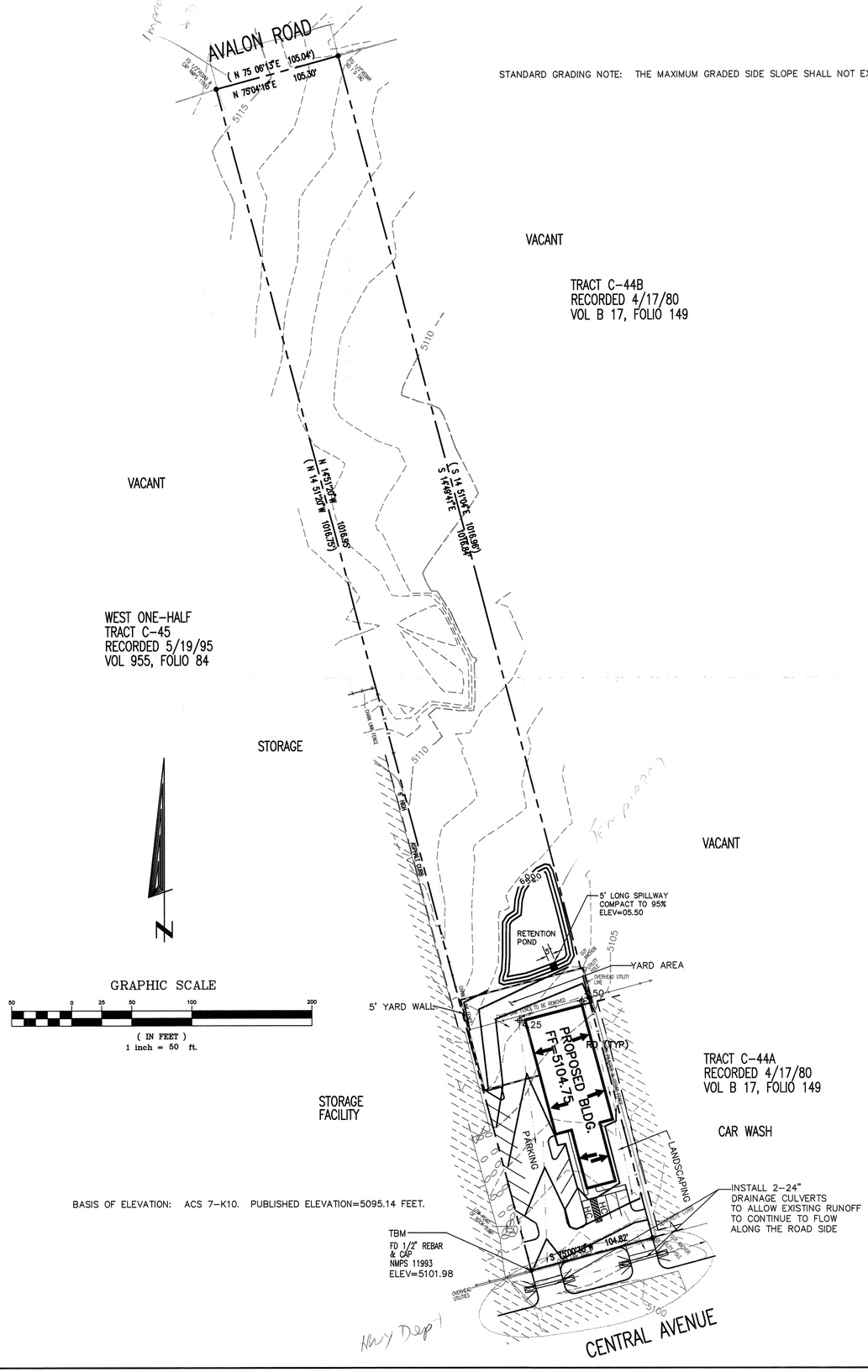
where $C = 3.0$

$H = 0.5$

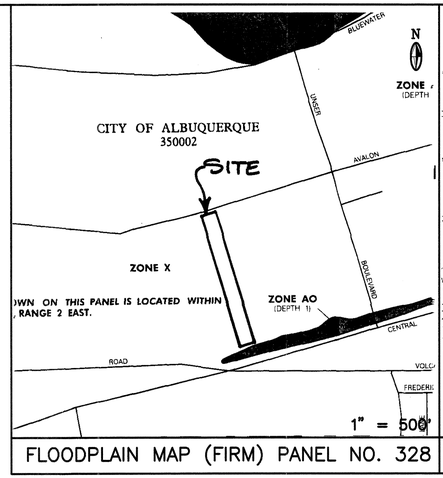
$Q = 4.43$

$\therefore L = 4.2' \Rightarrow$ use 5' ✓

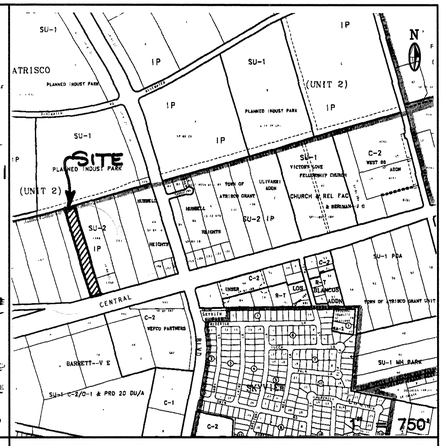
STANDARD GRADING NOTE: THE MAXIMUM GRADED SIDE SLOPE SHALL NOT EXCEED 3 FEET (HORIZONTALLY) TO 1 FOOT (VERTICALLY).



BASIS OF ELEVATION: ACS 7-K10. PUBLISHED ELEVATION=5095.14 FEET.



FLOODPLAIN MAP (FIRM) PANEL NO. 328



VICINITY MAP ZONE ATLAS: K-10

DRAINAGE PLAN

SCOPE:

Pursuant to the latest City of Albuquerque Ordinance, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. One building is proposed for the subject property, with associated access, parking and landscaping.

EXISTING CONDITIONS:

Presently the 2.45 acre site is undeveloped. The site is bounded on the east and west by IP zoned property with a storage facility west of the site and a car wash east of the site. Central Avenue is located south of the site and Avalon Road is located north of the site. The site is vegetated with native grasses and shrubs. Site topography slopes from the northwest to the southeast at approximately 2 percent. As shown by the FEMA Map Panel No. 328, dated 1986, the site is not located in a 100-year floodplain. Offsite flows historically enter the site from the west and the site historically drains to the east.

PROPOSED CONDITIONS:

As shown by the plan, the building site is located at the south end of the lot. Flows from the west will continue to cross the site as are presently doing so. On site flows will drain around the structure and flow to the southeast. All roof drainage will discharge from the roof to the lot and be directed around the structure to existing drainage paths. A retention pond will be constructed north of the proposed improvements. The retention pond will have a volume of 5256 cu. ft. (see attached calculations). The volume of storm water generated due to the development of the site is 2170 cu. ft., therefore, the retention pond will be over twice the volume required. Access will be taken from Central Avenue.

Supplemental calculation have been provided to the City of Albuquerque Hydrology Department identified as Attachment No. 1.

CALCULATIONS:

The calculations shown hereon define the 100 year-6 hour design storm falling within the project area under existing and developed conditions. The Hydrology is per "Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, New Mexico in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority.

PROPERTY ADDRESS:

Central Avenue

TOPOGRAPHY:

Topographic information provided by Maxwell Doak, dated February 14, 1997.

LEGEND

	EXISTING	PROPOSED
CONTOUR	5900	5850
PROPERTY LINE		
ROAD		
SETBACK		
WALL		
ROCKS		
ASPHALT		
CURB		

JACKIE S. McDOWELL
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER
5-30-97

REVISED

CITY OF ALBUQUERQUE, BERNALILLO COUNTY NEW MEXICO

East 1/2 of Tract C-45, Unit 4
Proj. Section 22, T10N, R2E NMPM

HERNANDEZ POOLS GRADING & DRAINAGE PLAN

McDowell Engineering Inc.

Designed	Drawn	Checked	Sheet	of
JSM	STAFF	JSM	1	1
File HER0197L	Date MAY,1997			

GRADING
5-30-97
1=50
HER0197L