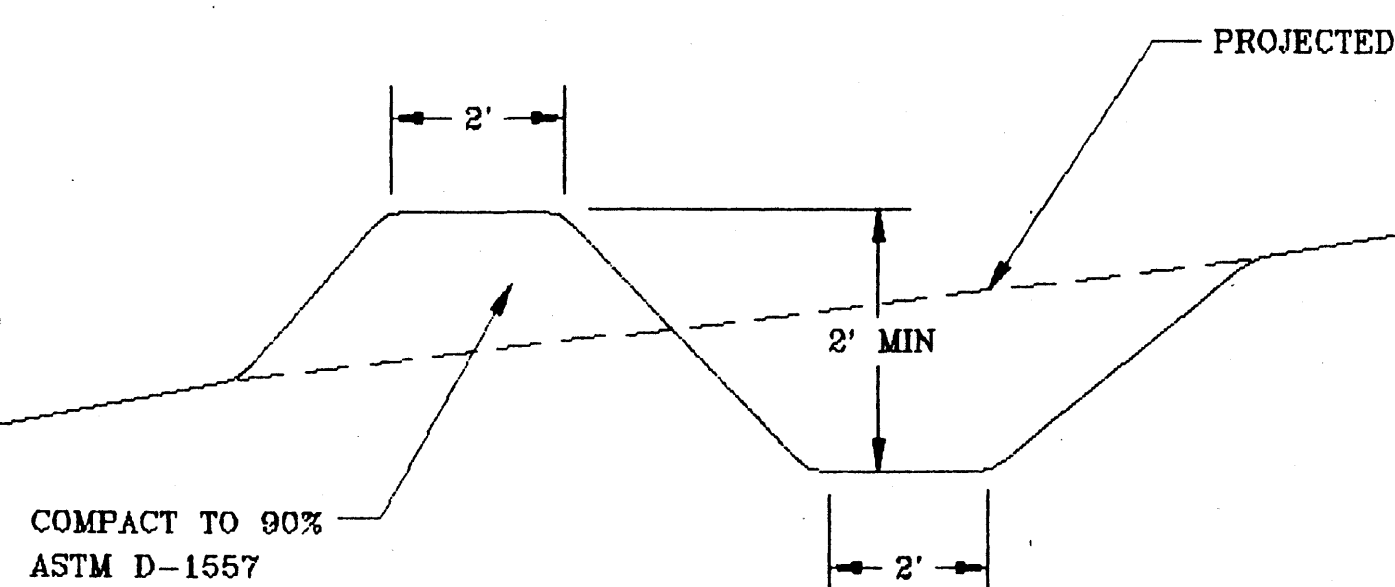
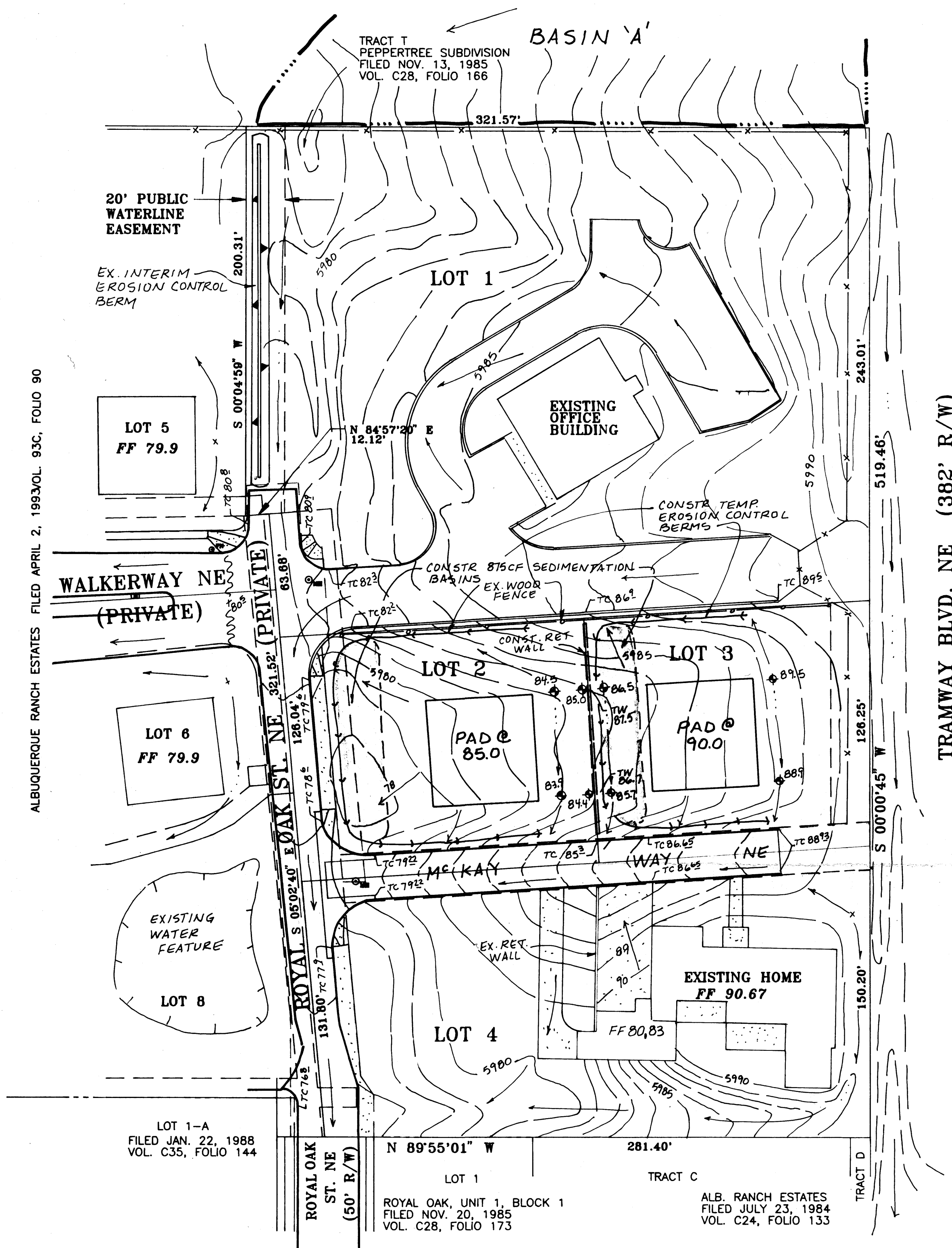
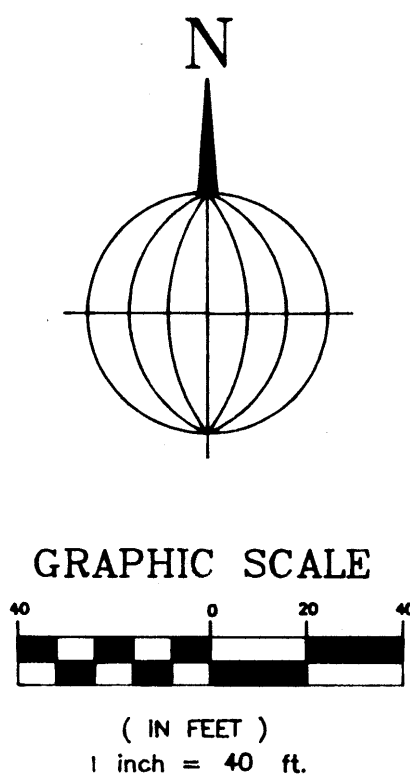


ALBUQUERQUE RANCH ESTATES FILED APRIL 2, 1993 VOL. 93C, FOLIO 90



TEMPORARY EROSION CONTROL BERM
NOT TO SCALE



GRADING & DRAINAGE PLAN

PURPOSE AND SCOPE

The purpose of this Grading and Drainage Plan is to establish the drainage management criteria for controlling surface runoff from Lots 1-4, Tract A-1, Albuquerque Ranch Estates and contributing off-site areas in a manner which is acceptable to the City of Albuquerque and the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA). The Plan studies the existing and developed conditions of the project site and affected areas, and analyzes both conditions at the 100 year duration storm event. The plan outlines drainage criteria for development of the project site.

The scope of this Plan is to ensure that the project site will be protected from storm runoff and that the development of this project will not increase the flooding potential of adjacent and downstream properties.

Approval of this Plan will facilitate Preliminary and Final Subdivision Plat approval.

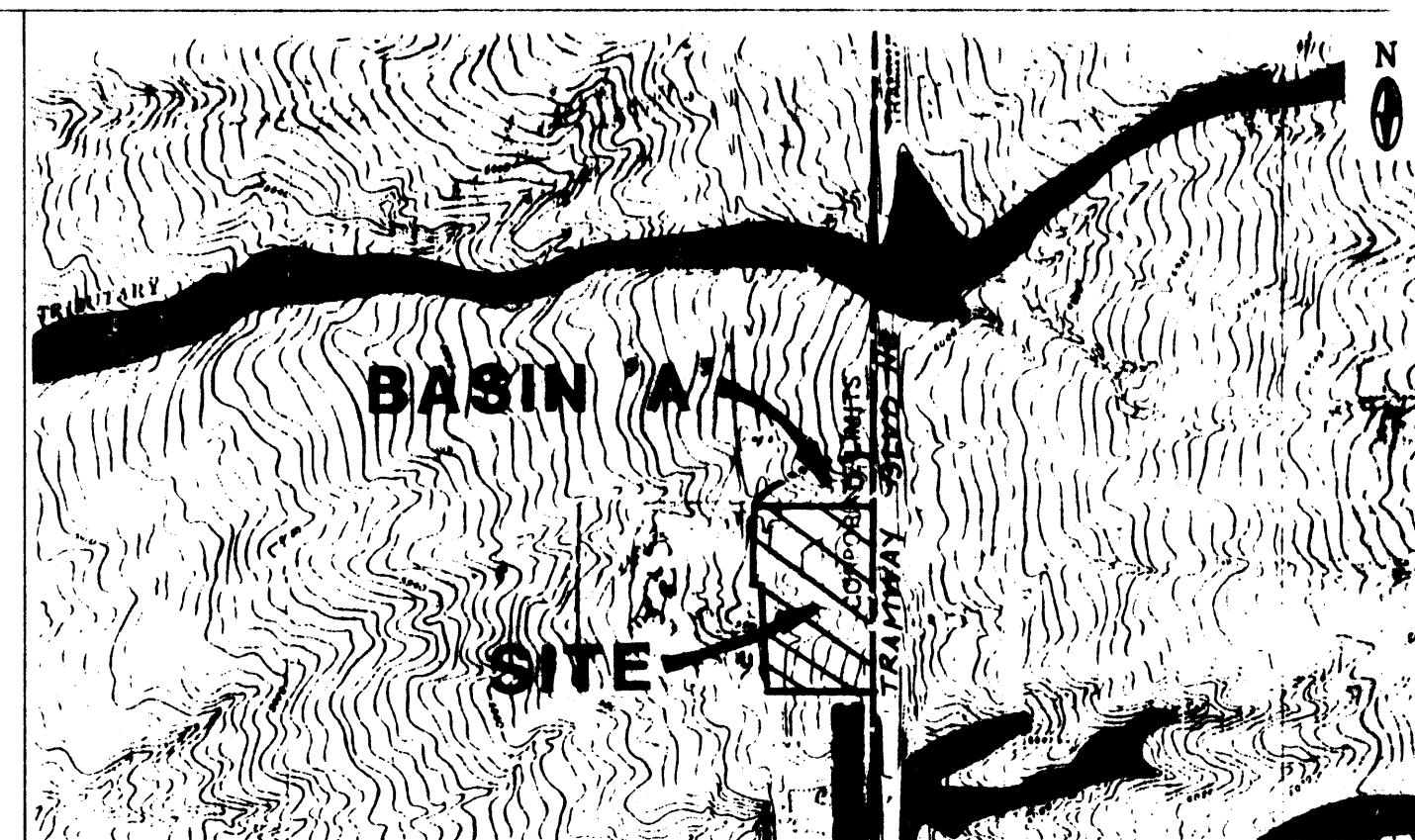
EXISTING DRAINAGE CONDITIONS

The project site, presently described as Tract A-1, Albuquerque Ranch Estates, is located on Royal Oak Street NE, within the Albuquerque Ranch Estates Subdivision. The site is presently partially developed. An existing building is located on Lot 1, which is being used as an office building. Lots 2 & 3 are vacant; an existing home is located on Lot 4. All properties have existing street, water, sanitary sewer and drainage improvements.

Existing site drainage flows westward to Royal Oak Street, which conveys runoff south through Royal Oak Subdivision. Off-site flow from a small undeveloped basin located north of Lot 1 drains into the site and is conveyed to Royal Oak Street by a recently constructed erosion control berm located along the west property line of Lot 1. Existing street and drainage improvements carry flows to the watershed outfall, a storm drain located in Lowell Street which drains to the Juan Tabo Dam. Off-site flow from the Tramway right-of-way is conveyed south to the 888 channel by a swale located east of the site. No flows enter the site from the east, west or south.

DEVELOPED DRAINAGE CONDITIONS

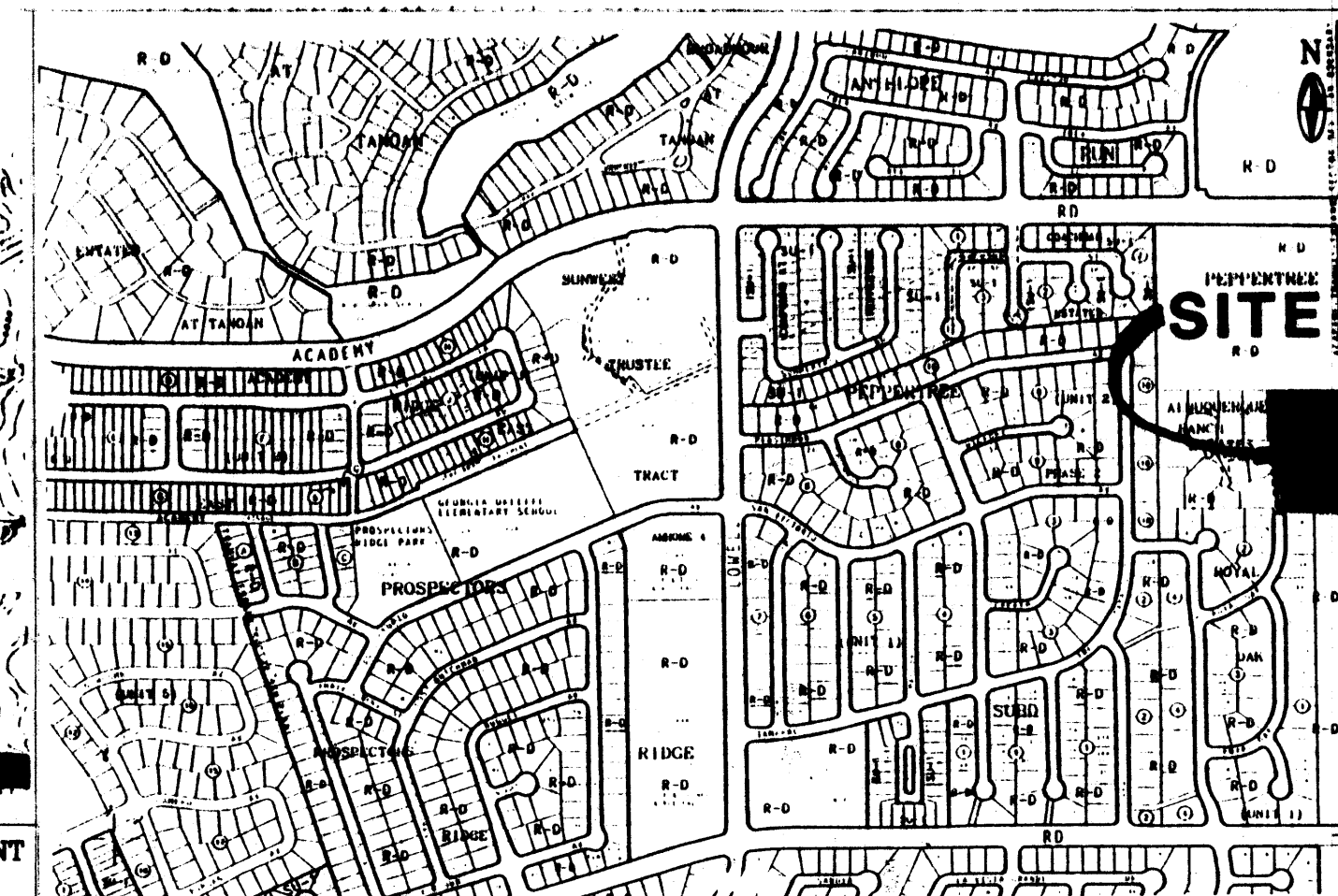
The drainage management criteria for this project is outlined in the "Drainage Report for Albuquerque Ranch Estates", prepared by Brasher Engineering, dated 3-11-93. In accordance with the approved report, drainage improvements were constructed by City project No. 4310.90 to manage developed runoff from Albuquerque Ranch Estates, which includes Tract A-1. In order to



ALTHOUGH THE TOPOGRAPHY SHOWN HEREON DOES NOT REFLECT RECENT DEVELOPMENT THE DRAINAGE BASINS REMAIN ESSENTIALLY UNCHANGED

FLOODWAY & OFFSITE DRAINAGE MAP

1"=500'



E-22 LOCATION MAP

1"=800'

LEGEND

- 6001 — EXISTING CONTOUR ELEVATION
- 02.5 x EXISTING SPOT ELEVATION
- 01 — PROPOSED CONTOUR ELEVATION
- — — — — PROPERTY LINE
- 01.5 x PROPOSED SPOT ELEVATION
- ← DIRECTION OF FLOW
- — — — — DRAINAGE SWALE
- — — — — DRAINAGE BASIN DIVIDE

PROPERTY ADDRESS

Royal Oak Street NE

LEGAL DESCRIPTION

Lots 1-4, Tract A-1, Albuquerque Ranch Estates

PROJECT BENCHMARK

TBM: Top of north mountable curb, located at the east end of McKay Way. Elevation 5988.93 feet

SURVEY

Topographic and Improvement survey by Professional Contracting Services
Dated August, 1992

HYDROLOGY RATIONAL METHOD												
PRECIPITATION ZONE 4 P360 = 2.90" I100 = 4.61 in/hr												
Basin	Area ac.	Aa ac.	Ab ac.	Ac ac.	Ad ac.	C	E100 in.	E2 in.	Q100 cfs.	V100 af.	V2 af.	
EXISTING CONDITION												
Site	3.65	0.73	0.73	1.46	0.73	0.63	1.49	0.34	10.6	0.45	0.10	
A	0.73	0.73	0	0	0	0.39	0.80	0.02	0.3	0.05	.001	
DEVELOPED CONDITION												
Site	3.65	0	1.28	1.28	1.09	0.69	1.68	0.43	11.6	0.51	0.13	
Lot 1	1.85	0	0.65	0.65	0.55	0.69	1.68	0.43	5.9	0.26	0.06	
Lot 2	0.45	0	0.16	0.16	0.13	0.69	1.68	0.43	1.4	0.06	0.02	
Lot 3	0.42	0	0.15	0.15	0.12	0.69	1.68	0.43	1.3	0.06	0.02	
Lot 4	0.93	0	0.32	0.32	0.29	0.69	1.68	0.43	3.0	0.13	0.03	
A	0.73	0.73	0	0	0	0.39	0.80	0.02	0.3	0.05	.001	

LAND TREATMENT ASSUMPTIONS

EXISTING CONDITIONS:

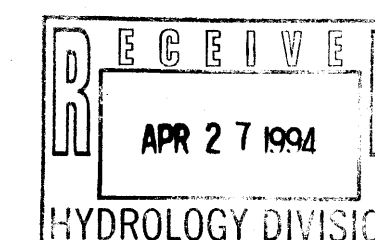
Aa = 20% Ab = 20% Ac = 40% Ad = 20%

DEVELOPED CONDITIONS:

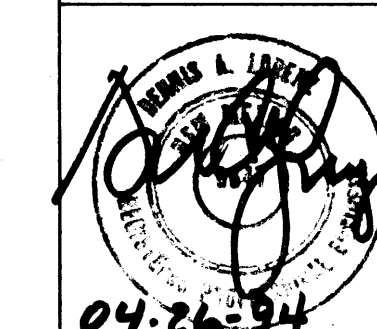
Assume possible future subdivision of Lot 1
This projects to 2.5 DU/acre

Per DPM, Vol II, Chp 22.2, Table A.5 @ N = 2.5: Ad = 30%

Aa = 0% Ab = 35% Ac = 35% Ad = 30%



LOTS 1-4, TRACT A-1 ALBUQUERQUE RANCH ESTATES GRADING & DRAINAGE PLAN



BRASHER ENGINEERING, INC.
4425 JUAN TABO BLVD. N.E., SUITE 202
ALBUQUERQUE, NEW MEXICO 87111
(505)296-0422

DRAWN BY: STAFF DATE: APRIL 1994
CHECKED BY: D.A.L. SHEET 1 OF 1