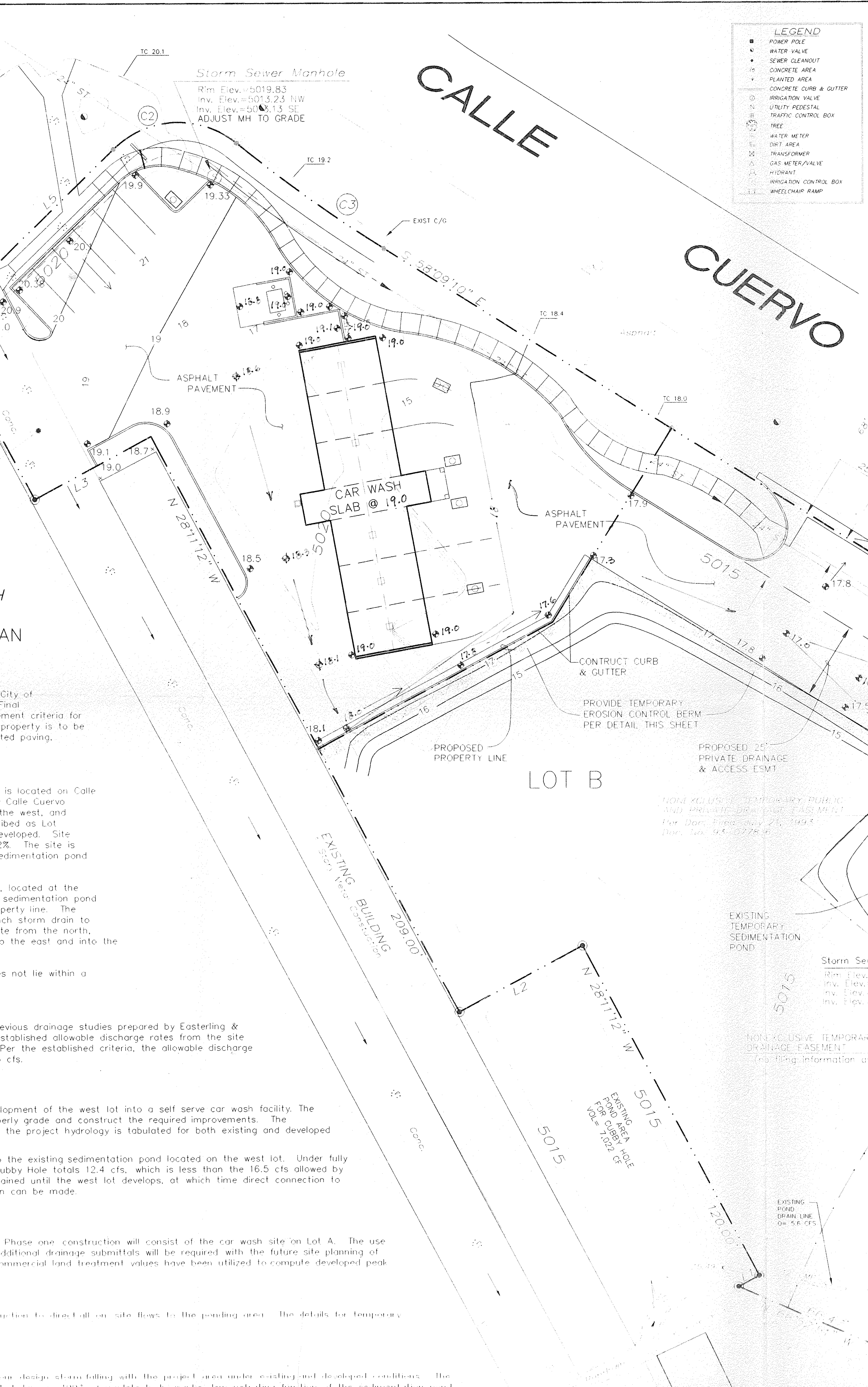


GRADING AND DRAINAGE PLAN

PURPOSE AND SCOPE

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Final Grading and Drainage Plan outlines the drainage management criteria for controlling developed runoff from the project site. The property is to be developed as a self serve car wash facility, with associated paving, landscaping, utility, grading, and drainage improvements.

EXISTING CONDITIONS

The project site is approximately 1.62 acres in size and is located on Calle Cuervo NW, at Ellison Drive NW. The site is bounded by Calle Cuervo on the north, Ellison on the east, undeveloped land on the west, and Cubby Hole Self Storage on the south. The site is described as Lot D-4-L-2 Seven Bar Ranch. Presently the site is undeveloped. Site topography slopes from west to east at approximately 2%. The site is covered with native grasses and weeds. A temporary sedimentation pond is located at the northeast corner of the site.

Developed off-site flow from Cubby Hole detention pond, located at the southwest corner of the site is directed to the on-site sedimentation pond by an existing earthen swale located along the east property line. The on-site sedimentation pond drains by means of a 36 inch storm drain to the Cabezon Channel. No off-site flows impact the site from the north, east or west. On-site, all flow drains as sheet flow to the east and into the existing pond.

As shown by the attached Floodway Panel, this site does not lie within a designated flood hazard zone.

DRAINAGE MASTERPLANS

The drainage criteria for this site was established by previous drainage studies prepared by Easterling & Associates, Inc., and Bordenave Designs. These plans established allowable discharge rates from the site and determined the capacity of the Cabezon Channel. Per the established criteria, the allowable discharge rate from the existing detention located on-site is 16.5 cfs.

DEVELOPED CONDITIONS

As shown by the Plan, the project consists of the development of the west lot into a self serve car wash facility. The Plan shows the contours and elevations required to properly grade and construct the required improvements. The direction of drainage flows are given by flow arrows and the project hydrology is tabulated for both existing and developed conditions.

All drainage flows will be managed on-site and drain to the existing sedimentation pond located on the west lot. Under fully developed conditions runoff from the project site and Cubby Hole totals 12.4 cfs, which is less than the 16.5 cfs allowed by the masterplans. The sedimentation pond will be maintained until the west lot develops, at which time direct connection to which time direct connection to the 36 inch storm drain can be made.

PHASING PLAN

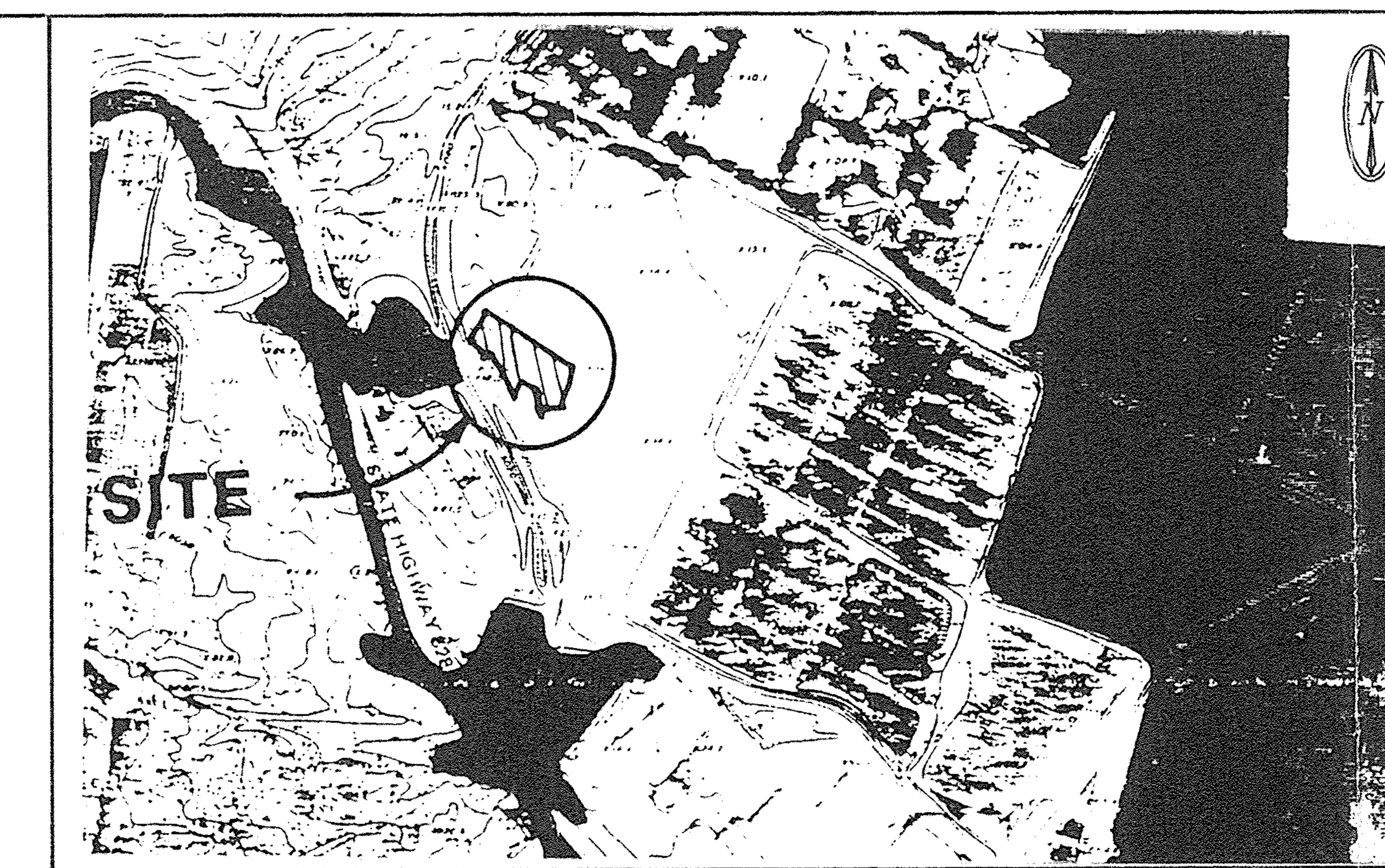
The project is scheduled to be developed in 2 phases. Phase one construction will consist of the car wash site on Lot A. The use for Phase 2 (Lot B) is not yet determined, therefore, additional drainage submittals will be required with the future site planning of the parcel. For purposes of drainage masterplanning commercial land treatment values have been utilized to compute developed peak runoff for Lot B.

EROSION CONTROL

Temporary erosion control will be required during construction to direct all on site flows to the ponding area. The details for temporary erosion control are provided on this Plan.

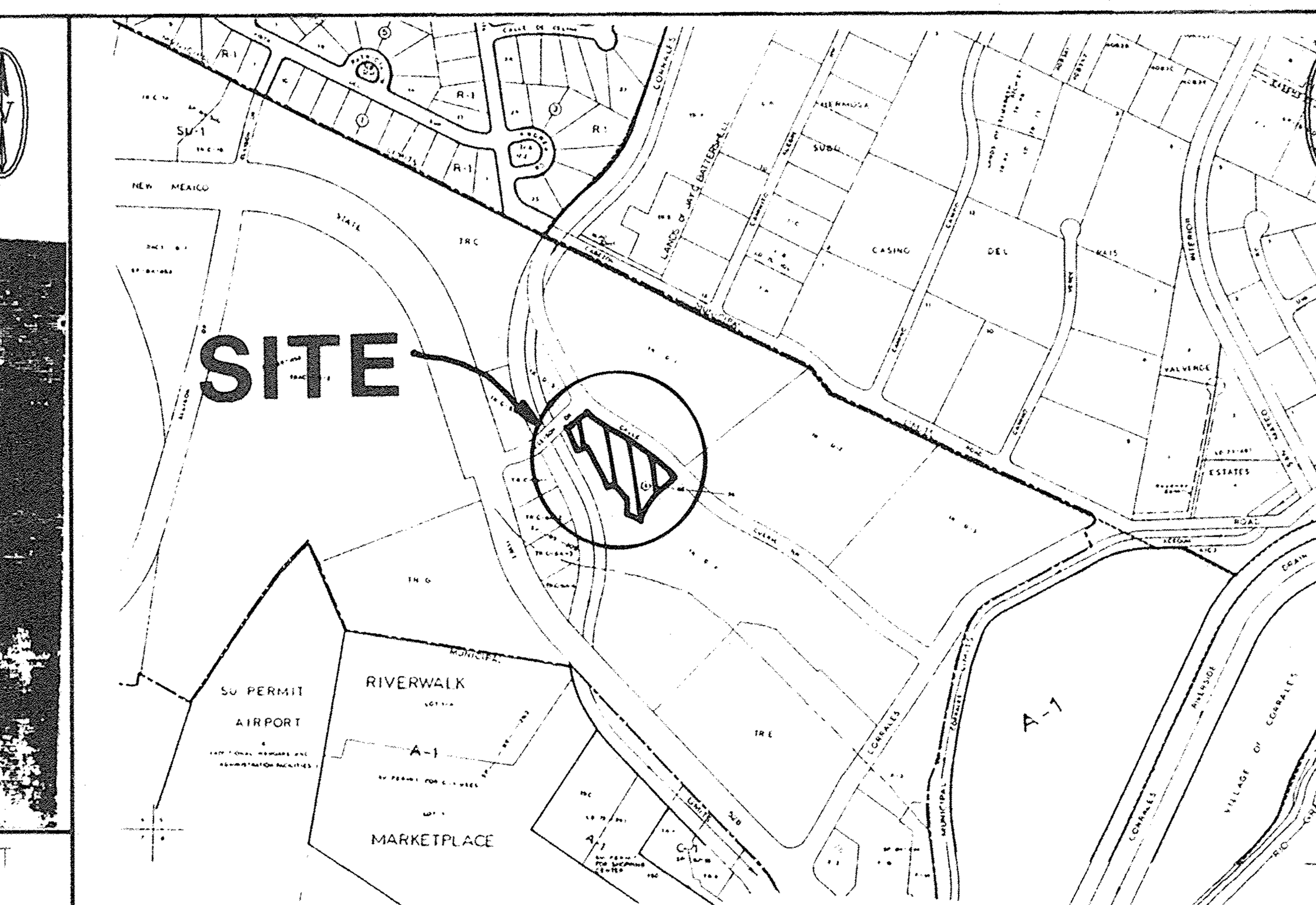
CALCULATIONS

The calculations shown hereon define the 100 year 6 hour design storm falling with the project area under existing and developed conditions. The Hydrology is per "Section 22.2, Part A, DPM, Vol 2" Dated January, 1993. Complete hydrographs demonstrating function of the sedimentation pond are submitted separately.



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

FLOODWAY & OFFSITE DRAINAGE MAP 1"=500'

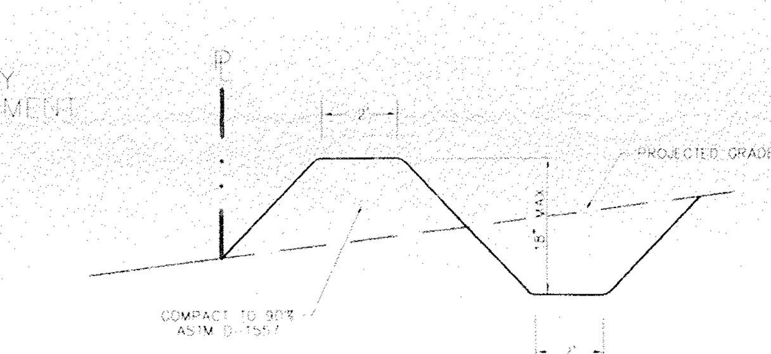


A-14 LOCATION MAP 1"=800'

HYDROLOGY - HYMO

Precipitation Zone 1 — P360 = 2.260 inches

BASIN	AREA	Aa	Ab	Ac	Ad	E	Q100	VOL100
	acres	acres	acres	acres	acres	inches	cfs	af
EXISTING CONDITION:								
SITE	1.62	1.62	0.00	0.00	0.00	0.44	2.1	0.06
Lot A	0.65	0.65	0.00	0.00	0.00	0.44	0.8	0.02
Lot B	0.97	0.97	0.00	0.00	0.00	0.44	1.3	0.04
DEVELOPED CONDITION:								
SITE	1.62	0.00	0.08	0.08	1.46	1.86	6.8	0.25
Lot A	0.65	0.00	0.03	0.03	0.59	1.86	2.7	0.10
Lot B	0.97	0.00	0.05	0.05	0.87	1.86	4.1	0.15



TEMPORARY EROSION CONTROL BERM DETAIL
NTS

PROJECT BENCH MARK
Set Conc. Nail
w/Disk L.S. 9750
Elev.= 5016.08

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N 61°48'48" E	7.50'
L2	S 61°48'48" W	45.00'
L3	S 61°48'48" W	42.50'
L4	N 28°11'12" W	64.50'
L5	N 45°52'16" E	78.16'

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	343.47'	139.03'	70.48'	138.08'	S 34°42'55" W	23°11'30"
C2	30.00'	43.38'	26.47'	39.70'	N 87°17'41" E	82°50'50"
C3	484.00'	58.04'	29.06'	58.01'	S 54°43'02" E	06°52'16"
C4	466.00'	117.64'	59.13'	117.33'	S 50°55'15" E	14°27'50"

PROPERTY ADDRESS:

Calle Cuervo NW

LEGAL DESCRIPTION:

Tract D-4-L-2, Seven Bar Ranch

SURVEY:

ALTA survey by Surv-Tek, Inc., May 1995

PROJECT BENCHMARK:

NE property corner, Elevation 5016.08

RECEIVED MAR 8 1996 HYDROLOGY DIVISION

GRADING AND DRAINAGE PLAN

FASON SELF-SERVICE CAR WASH
ALBUQUERQUE, NEW MEXICO
PROJECT # 8195

REVISION DATE
03-07-96
03-04-96

rick bennett architect
1118 Park Avenue SW
Albuquerque, New Mexico 87102
(505) 242-1859

DATE 9-21-95

SHEET NUMBER. C-1

BRASHER & LORENZ, INC.
Consulting Engineers

N

1 inch = 20 ft