HYDROLOGY

G10/D29A
3 PLANS

APSQ 1013
mal 9 E

DRAINAGE PLAN

OF

VOLCANO BUSINESS PARK

FOR

WESTLAND DEVELOPMENT CORPORATION

DRAINAGE REPORT

GENERAL: The 53.7 acre site is located at the south east corner of Unser Blvd. and Ouray Road. The zoning is SU-1 for industrial park and C-1. The land is within the Ladera Detention Facility watershed and slopes from west to east at between 2% and 3%. The soils are silty and loamy sands and support a fair grass cover when not overgraged or heavily trafficked.

OFF-SITE FLOWS:

Existing Conditions: The site is currently impacted by off-site flows only infrequently. Two significant areas (A and B) flow eastward from across future Unser Blvd. and across the site. There is little physical evidence of runoff crossing the site visible on the ground. Table I describes the existing flow rates and volumes. The flows from off-site traverse the site and are diverted northward along the east boundary in an existing ditch/dike and into the existing improved flood channel just north of Ouray Road. The ultimate destination is the Ladera Golf Course Detention Facility.

Developed Conditions: The areas west of future Unser Blvd. (A and B) will drain to Unser Blvd. and be contained by the disbanded ditch by the city drainage ordinance pertaining to arterial and collector streets. Runoff will not be allowed to cross Unser under that criteria. It is very likely that a storm drain system will be required for Unser Blvd. which will effectively shelter the site from flows originating west of Unser.

Area C flows will be intercepted in proposed Pindta Lumber Street and carried down to the proposed storm drain and into the Ladera Detention Facility. Provision has been made to accept 30 cfs in the developed condition from Area C compared to the existing condition 100-year discharge of 24 cfs.

Interim Conditions: Until such time as Unser Blvd. is constructed, the off-site flows will be diverted and detained within the 20.7 acre C-1 track and released at or below historic rates into the channel/storm drain system.

DEVELOPED CONDITIONS:

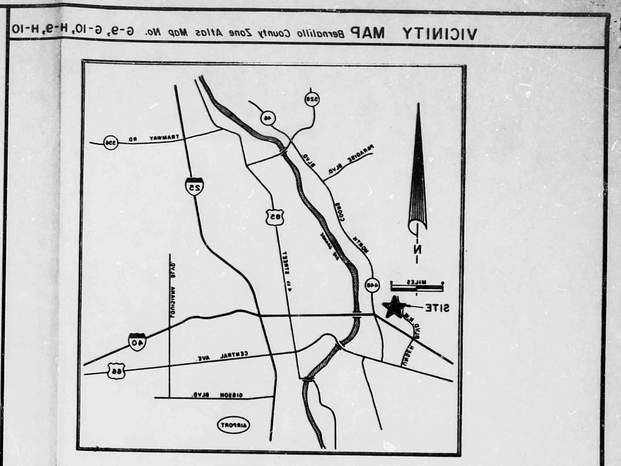
The proposed development for the site is as shown on Sheet 2 of 2. It is anticipated that the project will be phased from east to west with Lots 1-6 and 11-17 served by a paved street and storm drain system. Offsite flows would be directed through detention basins into the street or channel/storm drain system. The second phase would construct the balance of the streets and storm drainage facilities. The C-1 track lot 10 and the 6.5 acre SU-1 track would be the last to develop and would likely not be altered until the timing of the construction of Unser was firm.

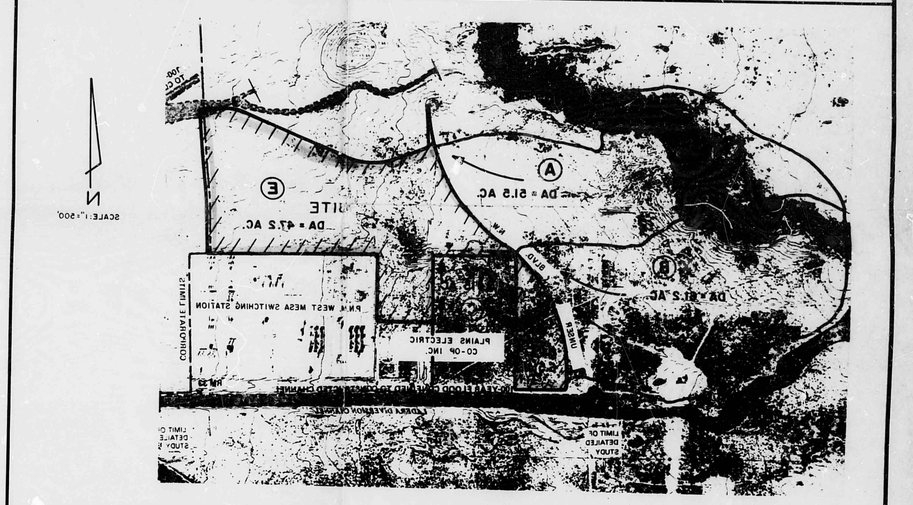
The drainage plan calls for runoff from the shaded areas to be ponded 100% and the non-shaded areas to free discharge. This scheme may not be practical in every instance and therefore those lots on the west side of streets can discharge at the rates shown on the plan. It is recommended that all runoff that flows to a street be routed through landscaping to reduce the frequency of runoff.

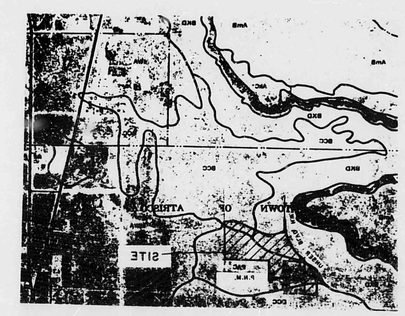
The large tracts will require some degree of detention ponding depending on how they are developed, but in any event, will be restricted to 2 cfs per acre release in the 100-year storm.

TABLE 1, HYDROLOGY

AP #	DA AC	H FT/MI	S FT	L FT	T_c MIN	SOIL TYPE	% IMP	CN	C	i_2 IN	P_{10} IN	i_{100} IN/HR	i_{10} IN/HR	i_{100} IN/HR	$V_{2.3}$ FT	V_{10} FT	V_{100} FT	Q_2 CFS	Q_{10} CFS	Q_{100} CFS
A	5.5	220.0	3150	10.7	20	A	65	26	1.0	1.5	2.2	3.1	2.0	4.5	—	9,350	27,390	—	4.5	12.3
B	6.2	200.0	2750	9.7	18	A	7	58	.20	1.0	1.5	2.2	1.9	3.1	4.7	—	8890	—	—	5.5
C	15.0	22	.02	950	6.9	B	0	70	.34	1.0	1.5	2.2	1.9	3.1	4.7	—	4,350	18,000	—	15.8	34.0
D	6.5	18	.02	1050	7.5	B	0	70	.34	1.0	1.5	2.2	1.9	3.1	4.7	—	1,890	7,770	—	6.9	10.4
E	47.2	88	.03	2700	13.2	B	0	70	.34	1.0	1.5	2.2	1.8	2.6	4.0	—	13,700	55,910	—	45.5	82.2







SOILS INFORMATION

Soil series and map symbols	Degree and kind of limitations for— Septic tank absorption fields	Sewage lagoons	Shallow excavations	Dwellings without basements	Sanitary landfill (trench type)	Local road and street	Road fill	Sand	Gravel	Topsoil	Soil features affecting— Road subgrade and base	Dike, levee, and other embankments	Hydrologic soil group
*Blueprint: BB, BEA, BCC, BdA, BKD. For Wink part of BdA, see Wink series. For Kokan part of BKD, see Kokan series.	Slight or slope 1 to 3 percent; moderate if slope 3 to 12.	Severe: seepage.	Severe: cuts, fills, slope 1 to 3 percent; moderate if slope 3 to 12.	Slight if slope 1 to 3 percent; moderate if slope 3 to 12.	Slight: low strength.	Slight if slope 1 to 3 percent; moderate if slope 3 to 12.	Good	Poor: too sandy.	Improbable	Poor: too sandy.	Seriously	Piping, seepage	A
Palanio: PAC, PB	Slight	Severe: seepage.	Slight	Slight	Severe: seepage.	Slight	Good	Poor: coarse fines.	Improbable	Good	Seriously	Piping	B

DESCRIPTIONS

BCC—Blueprint loamy fine sand, 1 to 9 percent slopes. This soil is nearly level to moderately sloping. It has the profile described as representative of the series, but on about 10 percent of the acreage the surface layer is sand. Included in mapping are areas of Jhabetez, Palanio, and Wink soils, which make up about 15 percent of the unit. Runoff is slow, and the hazard of soil blowing is severe. This soil is used for range, watershed, wildlife habitat, recreation, and community development. Dryland capability subclass VIIe; native plant community 2.

BKD—Blueprint-Kokan association, hilly. This mapping unit is about 30 percent a Blueprint loamy fine sand that has 5 to 15 percent slopes and 40 percent a Kokan gravelly sand that has 15 to 40 percent slopes. The gently rolling to rolling Blueprint soil is on lava beneath gravelly ridges to the hilly to steep Kokan soil.

The Kokan soil has the profile described as representative of the Kokan series. On about 10 percent of the acreage, however, it has a high lime layer in the substratum.

On both soils, runoff is slow and the hazard of water erosion is moderate to severe.

This mapping unit is used for range, watershed, wildlife habitat, recreation, and community development. In Bernalillo County it is also a major source of sand and gravel. Dryland capability subclass VIIe; native plant community 2 for Blueprint soil and 3 for Kokan soil.

PAC—Palanio loamy fine sand, 1 to 9 percent slopes. This nearly level to moderately sloping soil is on the East and West Mesas. It has the profile described as representative of the series.

Included with this soil in mapping are areas of Blueprint, Jhabetez, and Wink soils. On about 30 percent of the acreage are areas where the surface layer is fine sandy loam.

Runoff is slow, and the hazard of soil blowing is severe. This soil is used for range, watershed, wildlife habitat, and community development. Dryland capability subclass VIIe; native plant community 6.

11-8-84

LEVERTON - EASTERLING, INC.

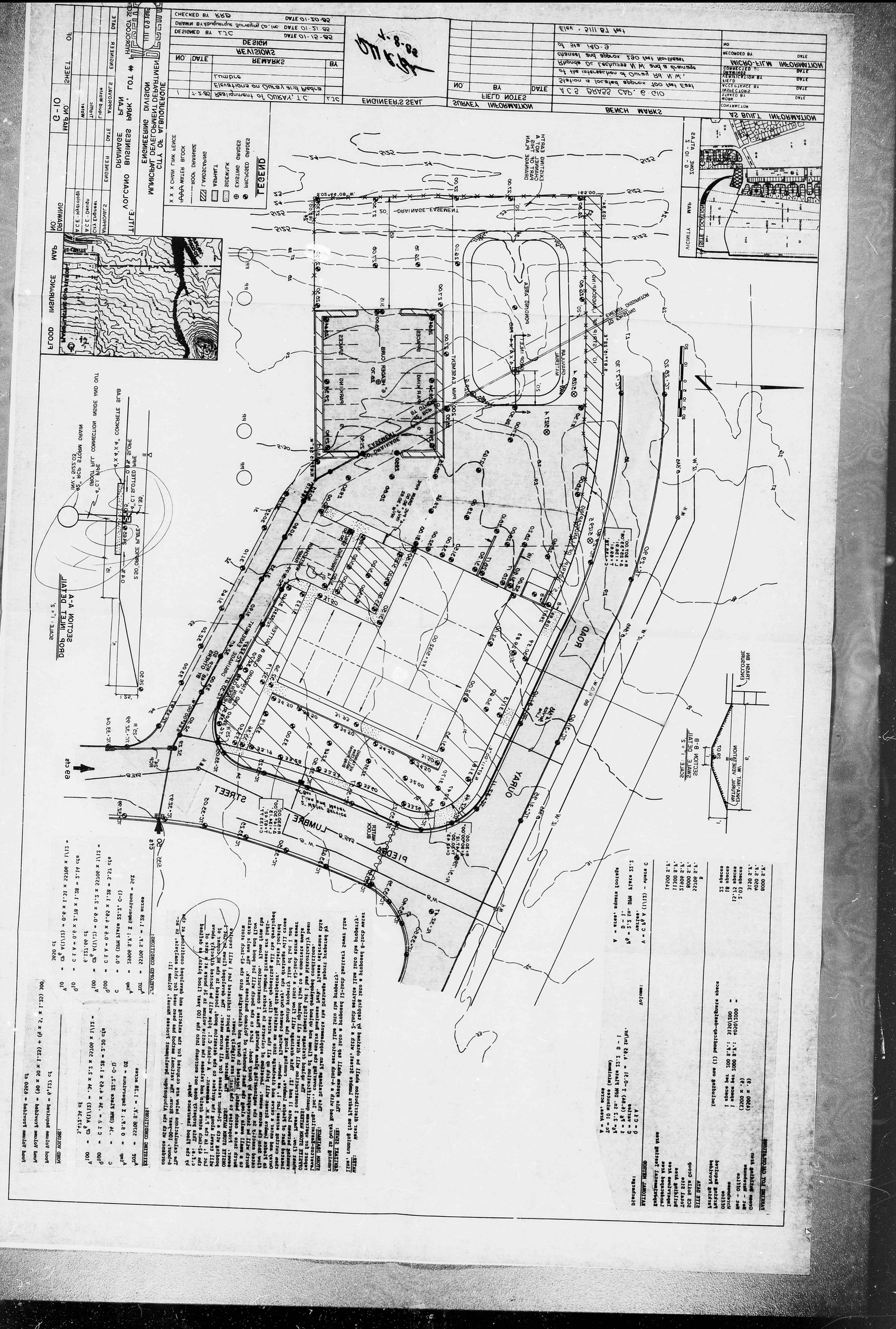
— CONSULTING ENGINEERS – SURVEYING – LAND PLANNING —

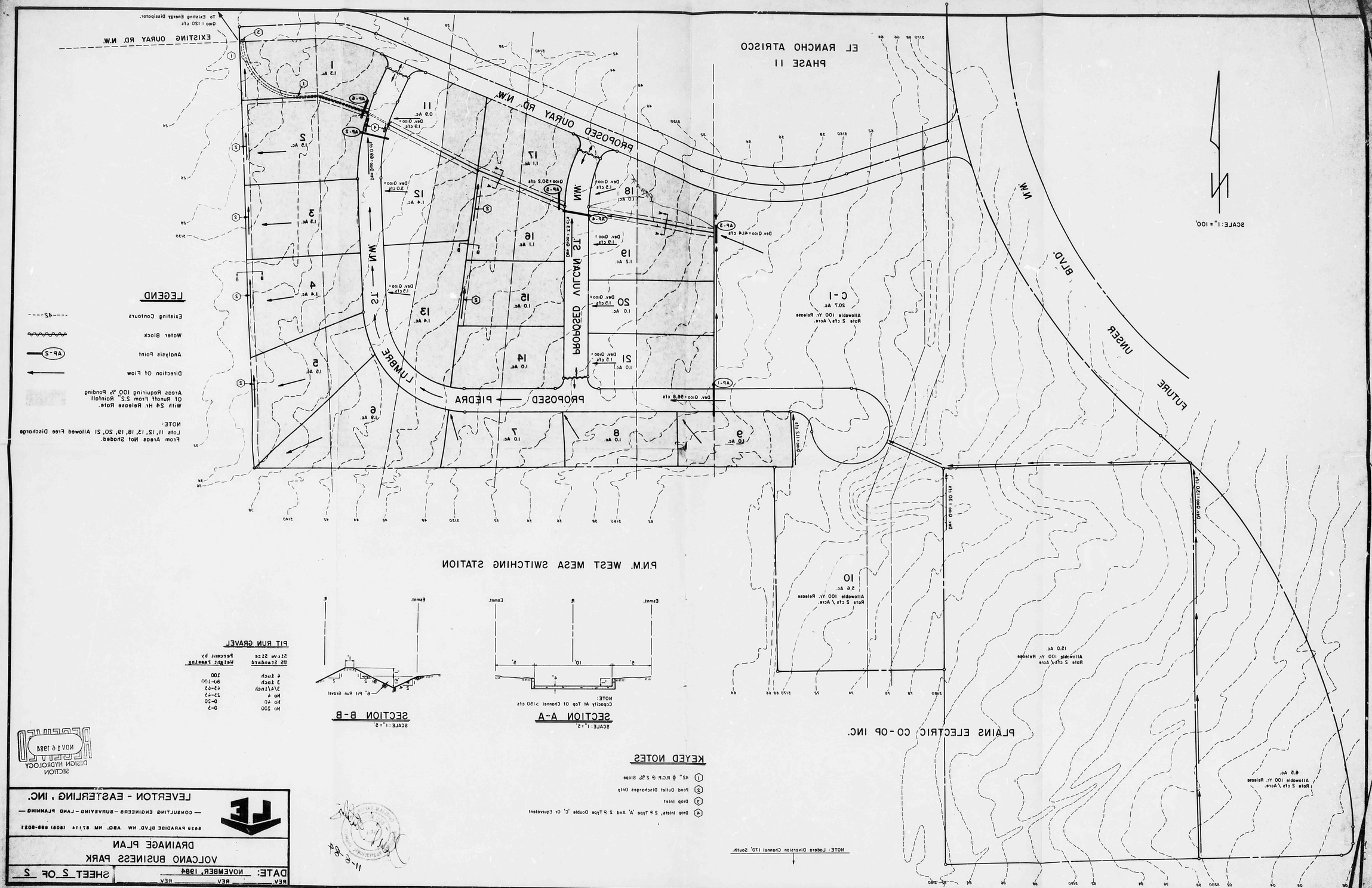
5629 PARADISE BLVD. NW ABQ. NM 87114 (505) 898-8021

DRAINAGE PLAN
VOLCANO BUSINESS PARK

DATE: NOVEMBER, 1984 SHEET 1 OF 2

REV. REV. REV.


FLOOD INSURANCE MAP
NO DAMAGE
MAP NO. C-10
TITLE: AOLCANO BUSINESS PARK, LOT # HARDTOCA ZONE
DRAINAGE PLAN
MUNICIPAL DEVELOPMENT DIVISION
CITY OF ALBUQUERQUE
LEGEND
EXISTING GRADES
PROPOSED GRADES
PAVEMENT
LANDSCAPING
SIDEWALK
WOOD DRAINAGE
CHAIN LINK FENCE
DRAINAGE EASEMENT
DRAINAGE PATH
DRAINAGE DIRECTION
EXISTING 100 YEAR FLOOD
DROP INLET
SECTION A-A
SCALE: 1" = 5'
SECTION B-B
SCALE: 1" = 5'
BENCH MARKS
SURVEY INFORMATION
FIELD NOTES
ENGINEER'S SEAL
REVISIONS
DESIGN
DRAWN BY
CHECKED BY
AS BUILT INFORMATION
MICRO-FILM INFORMATION
CONTRACTOR
ZONE
PLATE
VICINITY MAP
PARKING
BUILDING
LUMBRE STREET
BIELDA ROAD
VARUO ROAD


EL RANCHO ATRISCO
PHASE II
PROPOSED OURAY RD. N.W.
EXISTING OURAY RD. N.W.
To Existing Energy Dissipator.
Qmax = 120 cfs
PROPOSED LUMBRE ST. N.W.
PROPOSED PIEDRA
PROPOSED VULCAN ST. N.W.
FUTURE UNSER BLVD. N.W.
SCALE: 1" = 100'
P.N.M. WEST MESA SWITCHING STATION
PLAINS ELECTRIC CO-OP INC.
LEGEND
Existing Contours
Water Block
Analysis Point
Direction Of Flow
Areas Requiring 100 % Ponding Of Runoff From 2.2" Rainfall With 24 Hr. Release Rate.
NOTE:
Lots 11, 12, 13, 18, 19, 20, 21 Allowed Free Discharge From Areas Not Shaded.
C-1
20.7 Ac.
Allowable 100 Yr. Release Rate 2 cfs / Acre.
10
5.6 Ac.
Allowable 100 Yr. Release Rate 2 cfs / Acre.
15.0 Ac.
Allowable 100 Yr. Release Rate 2 cfs / Acre
6.5 Ac.
Allowable 100 Yr. Release Rate 2 cfs / Acre.
Dev. Qmax = 56.8 cfs
Dev. Qmax = 20 cfs
Dev. Qmax = 120 cfs
Qmax = 112 cfs
Qmax = 120 cfs
Qmax = 30.2 cfs
Qmax = 41.4 cfs
Qmax = 32.2 cfs
Qmax = 68.0 cfs
NOTE: Lodera Diversion Channel 170' South.
SECTION A-A
SCALE: 1" = 5'
NOTE:
Capacity At Top Of Channel >130 cfs
SECTION B-B
SCALE: 1" = 5'
6" Pit Run Gravel
PIT RUN GRAVEL
Sieve Size US Standard — Percent by Weight Passing
4 Inch — 100
3 Inch — 80-100
3/4 Inch — 45-65
No 4 — 25-45
No 40 — 0-20
No 200 — 0-5
KEYED NOTES
1 42" ϕ R.C.P. @ 2 % Slope
2 Pond Outlet Discharges Only
3 Drop Inlet
4 Drop Inlet, 2 @ Type 'A' And 2 @ Type Double 'C' Or Equivalent
NOV 16 1984
DESIGN HYDROLOGY SECTION
LEVERTON - EASTERLING, INC.
— CONSULTING ENGINEERS – SURVEYING – LAND PLANNING —
8029 PARADISE BLVD. NW ABQ. NM 87114 (505) 888-8031
DRAINAGE PLAN
VOLCANO BUSINESS PARK
DATE: NOVEMBER, 1984
SHEET 2 OF 2
REV
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