



# *City of Albuquerque*

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 1, 1993

Victor Chavez  
Chavez-Grieves Cons. Eng.  
4600-C Montgomery NE  
Albuquerque, NM 87109

RE: REVISED DRAINAGE PLAN FOR EMBUDO HILLS PARK (J23-D9C5) REVISION  
DATED 2/11/93.

Dear Mr. Chavez:

Based on the information provided on your February 11, 1993 resubmittal, the above referenced site is approved for Work Order.

Please be advised that Engineer Certification will be required after completion of the project.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

*Bernie J. Montoya*  
Bernie J. Montoya, CE  
Engineering Assistant

BJM/d1/WPHYD/7551

xc: Alan Martinez  
Dianne Sena  
File

PUBLIC WORKS DEPARTMENT

# DRAINAGE INFORMATION

PROJECT TITLE EMBUDO HILLS PARK ZONE ATLAS/DRNG. FILE #: J-23-7/D9C5  
DRB#: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: WITHIN SOUTH 1/2 OF SECTION 14, TOWNSHIP 10 NORTH,  
RANGE 4 EAST NEW MEXICO PRINCIPAL MERIDIAN.  
CITY ADDRESS: P.O. BOX 1293, ALBUQUERQUE, NEW MEXICO 87103  
ENGINEERING FIRM: CHAVEZ-GRIEVES CONS. ENG. CONTACT: MIKE WALLA  
ADDRESS: 4600-C MONTGOMERY NE, ALBO PHONE: 881-7376  
OWNER: CITY OF ALBUQUERQUE CONTACT: DIANNE SENA  
ADDRESS: P.O. BOX 1293, ALBUQUERQUE PHONE: 857-8632  
ARCHITECT: WARREN McCLUNG CONTACT: WARREN R. McCLUNG  
ADDRESS: 121 TIJERAS AVE. NE, SU.2200 PHONE: 764-8446  
SURVEYOR: CITY OF ALBUQUERQUE CONTACT: LAMONTE URBAN  
ADDRESS: P.O. BOX 1293, ALBUQUERQUE PHONE: 764-3612  
CONTRACTOR: N/A CONTACT: N/A  
ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

## TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT  
☒ DRAINAGE PLAN  
☒ CONCEPTUAL GRADING/DRNG.PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERTIFICATION  
☐ OTHER

## CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL  
☐ PRELIMINARY PLAT APPROVAL  
☐ SITE DEV. PLAN FOR SUB'D. APPROVAL  
☐ SITE DEV. PLAN FOR BLDG. PRMT. APPROVAL  
☐ SECTOR PLAN APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ FOUNDATION PERMIT APPROVAL  
☒ BUILDING PERMIT APPROVAL  
☐ CERTIFICATE OF OCCUPANCY APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ S.A.D. DRAINAGE REPORT  
☐ DRAINAGE REQUIREMENTS  
☐ OTHER SEE BELOW (SPECIFY)

## PRE-DESIGN MEETING:

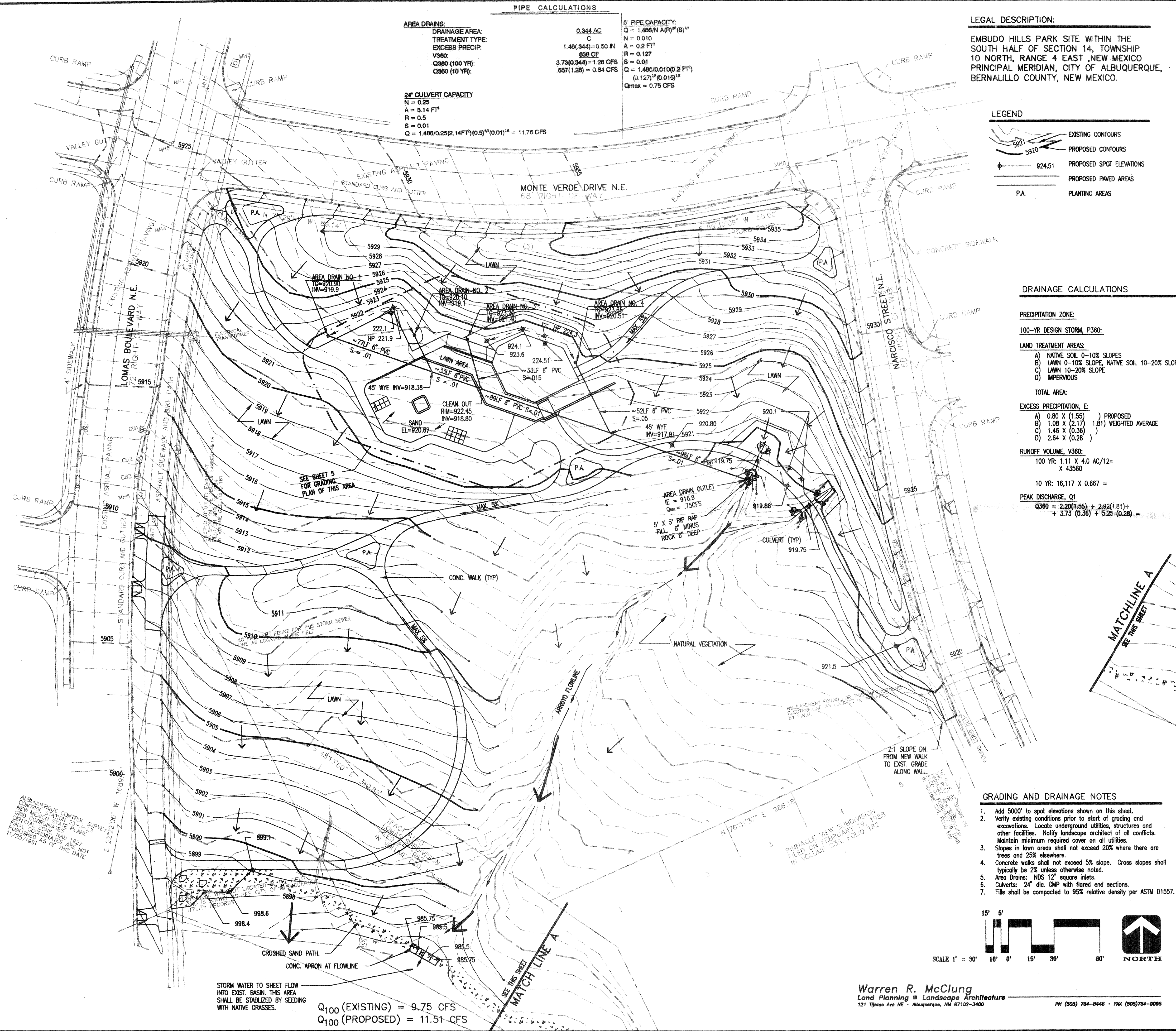
☒ YES  
☐ NO  
☐ COPY PROVIDED

DATE SUBMITTED: 2/11/93  
BY: [Signature]

FEB 11 1993

HYDROLOGY DIV.



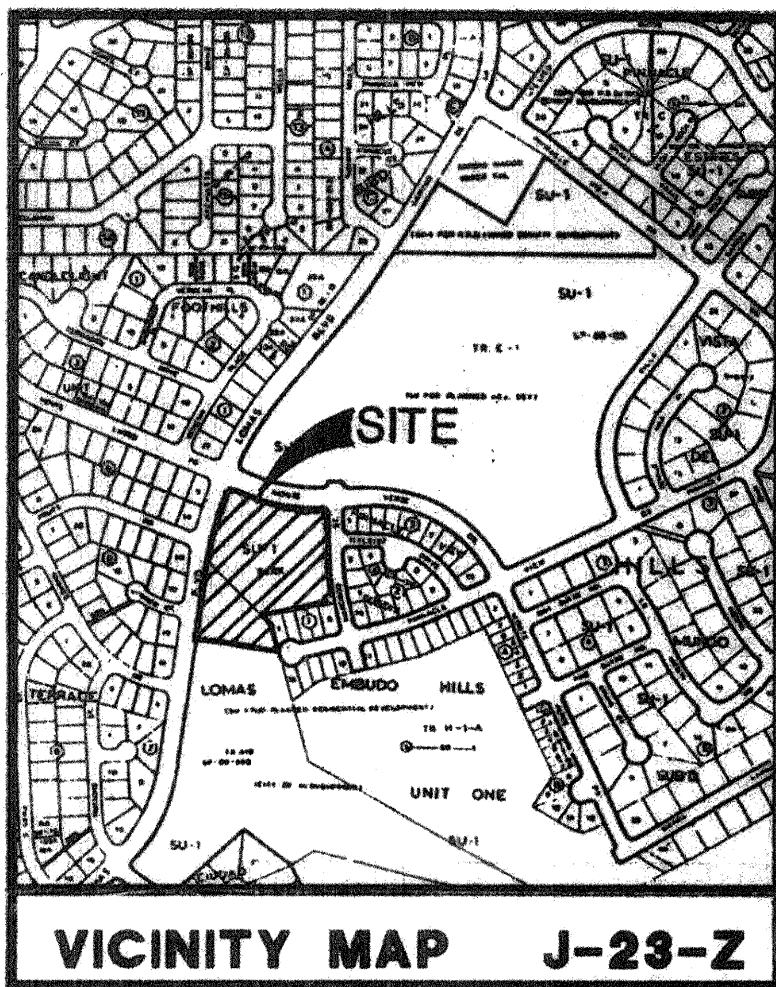


# LEGAL DESCRIPTION:

EMBUDO HILLS PARK SITE WITHIN THE SOUTH HALF OF SECTION 14, TOWNSHIP 10 NORTH, RANGE 4 EAST, NEW MEXICO PRINCIPAL MERIDIAN, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

## LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED SPOT ELEVATIONS
- PROPOSED PAVED AREAS
- PLANTING AREAS

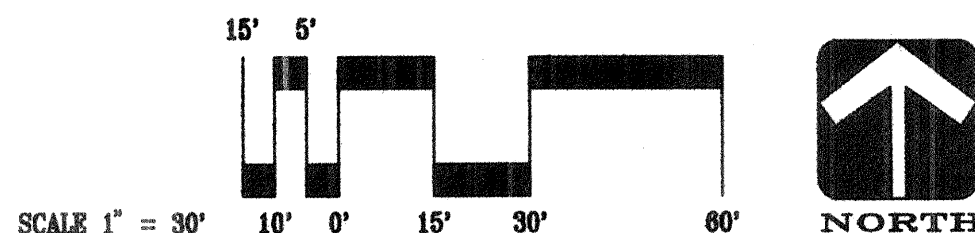


## DRAINAGE CALCULATIONS

PRECIPITATION ZONE:	PROPOSED	EXISTING
100-YR DESIGN STORM, P360:	2.90 IN	2.90 IN
LAND TREATMENT AREAS:		
A) NATIVE SOIL 0-10% SLOPES	1.55 AC	2.68
B) LAWN 0-10% SLOPE, NATIVE SOIL 10-20% SLOPE	1.81 AC	1.32 AC
C) LAWN 10-20% SLOPE	0.36	0
D) IMPERVIOUS	0.28 AC	0
TOTAL AREA:	4.00 AC	4.00 AC
EXCESS PRECIPITATION, E:		
A) 0.80 X (1.55)	1.24	[2.68(0.80)+1.32(1.08)]/2
B) 1.08 X (2.17)	2.34	=0.89 IN
C) 1.46 X (0.36)	0.53	
D) 2.64 X (0.28)	0.74	
WEIGHTED AVERAGE	1.11 IN	
RUNOFF VOLUME, V360:		
100 YR: 1.11 X 4.0 AC/12 =	0.37 AC/FT	0.89 X 4.0 AC/12 = 0.297 AC/FT
X 43560	16,117 CF	X 43,560 = 12,958 CF
10 YR: 16,117 X 0.667 =	10,750 CF	15,682 X 0.667 = 10,438 CF
PEAK DISCHARGE, Q1:		
Q360 = 2.20(1.55) + 2.92(1.81) +		
+ 3.73 (0.36) + 5.25 (0.28) =	11.51 CFS	Q360 = 2.20 (2.68) +
		2.92(1.32) = 9.75 CFS

## GRADING AND DRAINAGE NOTES

- Add 5000' to spot elevations shown on this sheet.
- Verify existing conditions prior to start of grading and excavations. Locate underground utilities, structures and other facilities. Notify landscape architect of all conflicts. Maintain minimum required cover on all utilities.
- Slopes in lawn areas shall not exceed 20% where there are trees and 25% elsewhere.
- Concrete walks shall not exceed 5% slope. Cross slopes shall typically be 2% unless otherwise noted.
- Area Drains: NDS 12" square inlets.
- Culverts: 24" dia. CMP with flared end sections.
- Fills shall be compacted to 95% relative density per ASTM D1557.



Warren R. McClung  
Land Planning & Landscape Architecture  
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PROGRESS PRINT.  
NOT FOR CONSTRUCTION

CITY OF ALBUQUERQUE  
PARKS/GENERAL SERVICES  
DESIGN & DEVELOPMENT

TITLE:	EMBUDO HILLS PARK	JANUARY 27, 1993
GRADING AND DRAINAGE PLAN		
APPROVALS ENGINEER	DATE	APPROVALS ENGINEER
CHAIRPERSON		WATER
TRANSPORTATION		WASTE WATER
HYDROLOGY		
PARKS		
PROJECT NO. 4354.90	MAP NO. J23	SHEET 4 OF 10