

**DRAINAGE REPORT  
FOR  
MCT INDUSTRIAL PARK  
PHASE I**

*(Zone Map B-18)*



*January 1997*

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## PROJECT DESCRIPTION

*The site is comprised of approximately 21.3 acres of vacant land. The property is bounded by I-25 frontage road to the east, Balloon Fiesta Parkway (formerly Balboa Avenue) to the south, San Mateo Road to the west (under construction) and roughly the North El Camino Arroyo and future Elena Drive 60' right-of-way to the north. The entire property slopes at an average of 3.0% in a westerly direction. The North El Camino Arroyo meanders back and forth across the north property boundary several times. The site is mostly covered by sage brush type vegetation.*

*The proposed development is for an approximate 80,000 square foot Industrial Park building surrounded by a parking area with two entrances onto Balloon Fiesta Parkway covering an area of approximately 5.2 acres for Phase I development.*

## DESIGN CRITERIA AND ASSUMPTIONS

*In September of 1996 a draft report titled **North Camino, El Camino and La Cueva Arroyo Drainage Management Plan** was prepared by Resource Technology Inc. From their report and discussions with AMAFCA staff, a peak 100-year discharge rate of 2,400 cfs was used in this report's flood plain analysis. This peak discharge value includes an 8 percent bulking factor. A total of 24 cross sections were used to model the North El Camino floodplain from I-25 Frontage Road west to San Mateo Road using the HEC-RAS hydraulic analysis computer program. At ten of the cross sections, topographic information did not extend far enough north to estimate the floodplain cross section elevations and stations. At these locations, identified by a "limits of study" note on the flood study sheet C2, a vertical ground slope was assumed, which is a conservative assumption for determination of the water surface elevation and floodplain limits. The Mannings 'n' values used in the analysis was 0.045.*

*The HEC-RAS model was manipulated to keep the runoff within top of bank until the model showed that water exceeded top of bank at some location and spread out into the adjacent floodplain. Several times within the analysis the water surface elevation exceeded the top of the north bank and/or the top of the south bank.*

*As agreed upon by the MCT developers and the staff at AMAFCA, for Phase I of the MCT Industrial Park, the parking lot will have a setback distance requirement of 2 feet per 100 cfs or 48 feet from the 100-year water surface elevation and the building structure will have a setback distance requirement of 6 feet per 100 cfs or 144 feet from the 100-year water surface elevation.*

## EXISTING DRAINAGE CONDITIONS

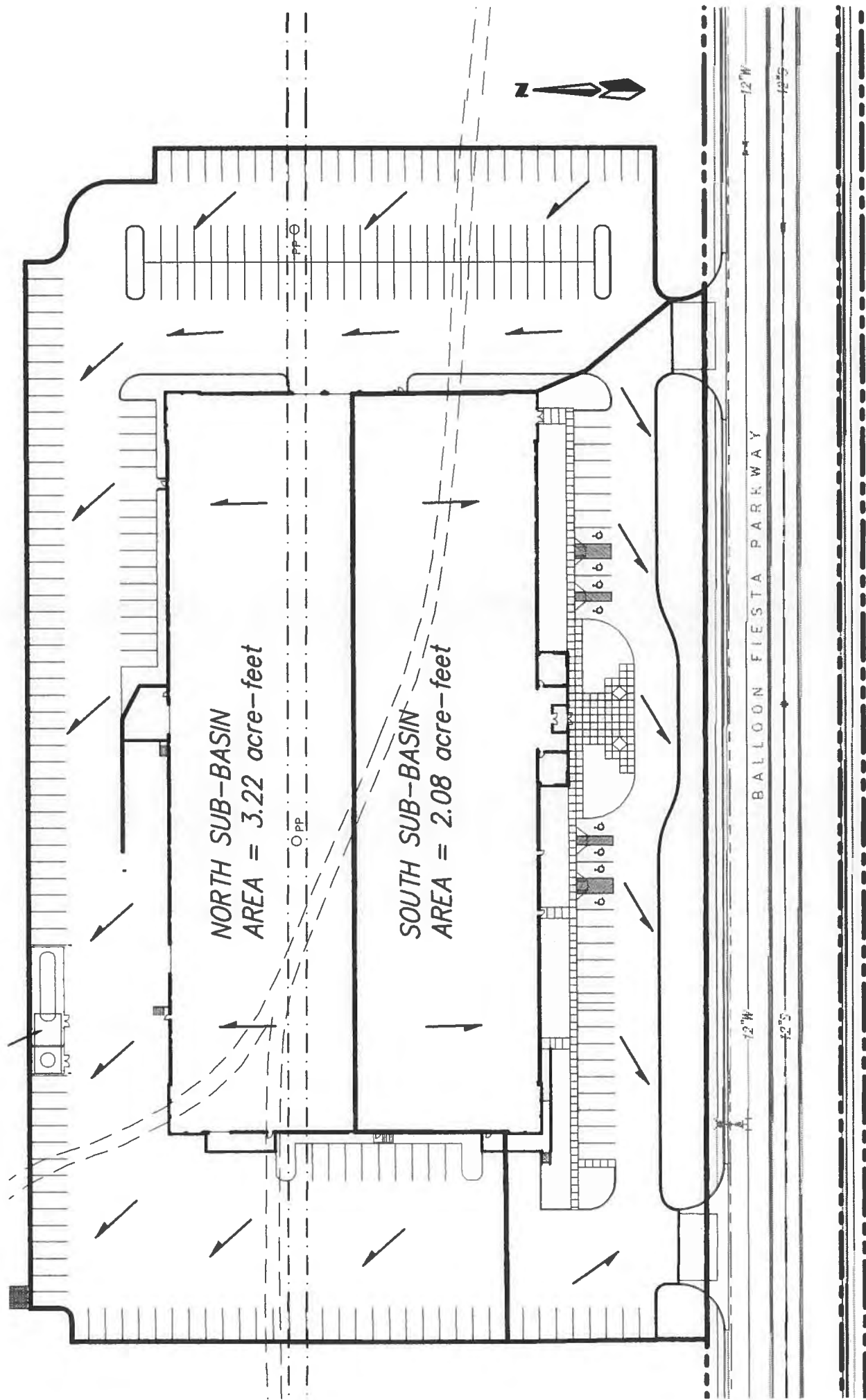
*Under existing drainage conditions the North El Camino Arroyo is the primary runoff conveyance system in the area. Runoff that doesn't find its way to the arroyo flows as sheet flow or through smaller arroyos across the property in a westerly direction. The existing drainage conditions through the North El Camino arroyo were modeled and the water surface elevations for each cross section are exhibited in Appendix B as well as are*

*shown on the Flood Study - Plan View sheet C2. The required 48' setback for the parking lot and the 144' setback for the building structure are also shown on the Flood Study sheet C2. A summary printout of the HEC-RAS results and input file are in Appendix A.*

### **DEVELOPED DRAINAGE CONDITIONS**

*At some point in the future, the El Camino Arroyo is going to become a concrete lined channel. The exact location of this channel has yet to be determined. However, its alignment will probably follow what is presently the 60' right-of-way for the future Elena Drive. The AMAFCA staff has prepared preliminary cost sharing options for the concrete lining of the North El Camino Arroyo between adjacent property owners and AMAFCA. See Appendix C for the North El Camino Channel Project Cost Matrix and Memo distributed by AMAFCA.*

*The proposed drainage plan for the building and parking area in Phase I is shown schematically in the Sub-Basin Boundary Exhibit. Most of the site will drain towards the northwest corner of the parking lot. The "developed conditions" peak discharge reaching this location is 15.4 cfs. The runoff will be conveyed to the North El Camino Arroyo through a temporary rip-rap lined channel. The channel will be approximately 9.0' wide, 1.0' deep at a general slope of 3.0%. Runoff from the remaining portion of the site will flow to the south exit and into Balloon Fiesta Parkway. The developed conditions peak discharge at this location is 9.2 cfs.*



**MCT INDUSTRIAL PARK  
 SUB-BASIN BOUNDARY EXHIBIT  
 1-13-97 DMG**

Post-it® Fax Note	7671	Date	7/16/96	# of pages	5
To	Mark Goodwin	From	Larry Blair		
Co./Dept.	MGA	Co.	AMAFCA		
Phone #		Phone #			
Fax #	345-2010	Fax #			

# MEMO

To: See Distribution  
 From: Larry A. Blair, P.E. *Larry A. Blair*  
 Subject: Proposed Cost-sharing of Improvements to the North Camino Arroyo West of I-25  
 Date: July 15, 1996

1. Improvements to the North Camino Arroyo west of I-25 have been contemplated for some time; however, planning for the Balloon Fiesta Park have raised the priority.
2. Under usual circumstances, adjacent landowners would bear all or a substantial portion of the cost of improving (lining) the arroyo at the time the owners improve their properties. However, the need to concrete line the arroyo to meet drainage needs of the Balloon Fiesta Park, and concurrent improvements (widening) of I-25, means that public agencies (such as AMAFCA and the City of Albuquerque) may be willing to bear some of the cost.
3. Accordingly, I would like to have a meeting with affected landowners and other agencies to explore such issues as possible channel alignments, channel features, roadway access, and cost-sharing. This meeting is scheduled for Tuesday, July 23, at 9:00 a.m. at AMAFCA (2600 Prospect, NE).
4. A sketch map showing the affected properties, the current arroyo, and possible channel alignments is attached.
5. Please attend this meeting or send a knowledgeable representative. If you need directions to our office, please call 884-2215.
6. If you have questions, please call me at 884-2215.

LAB:ij

attachment

copy: AMAFCA Directors  
 Jay Czar, Deputy CAO  
 Diane Scena, COA Parks and General Services