



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 19, 1990

Jeff Mortensen, P.E.  
Jeff Mortensen & Associates, Inc.  
6010-B Midway Park Boulevard, NE  
Albuquerque, New Mexico 87109

RE: REVISED DRAINAGE PLAN FOR PANTHO'S MEXICAN BUFFET  
(G-17/6C) REVISION DATED OCTOBER 10, 1990

Dear Mr. Mortensen:

Based on the information provided on your resubmittal of October 12, 1990, the above referenced plan is approved for Building Permit.

If the building permit has been released, it will be your responsibility to provide the contractor with an updated copy of the revised plan.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

for *Bernie Matya*  
Fred J. Aguirre, P.E.  
Hydrologist

BJM:FJA/bsj  
(WP+1318)

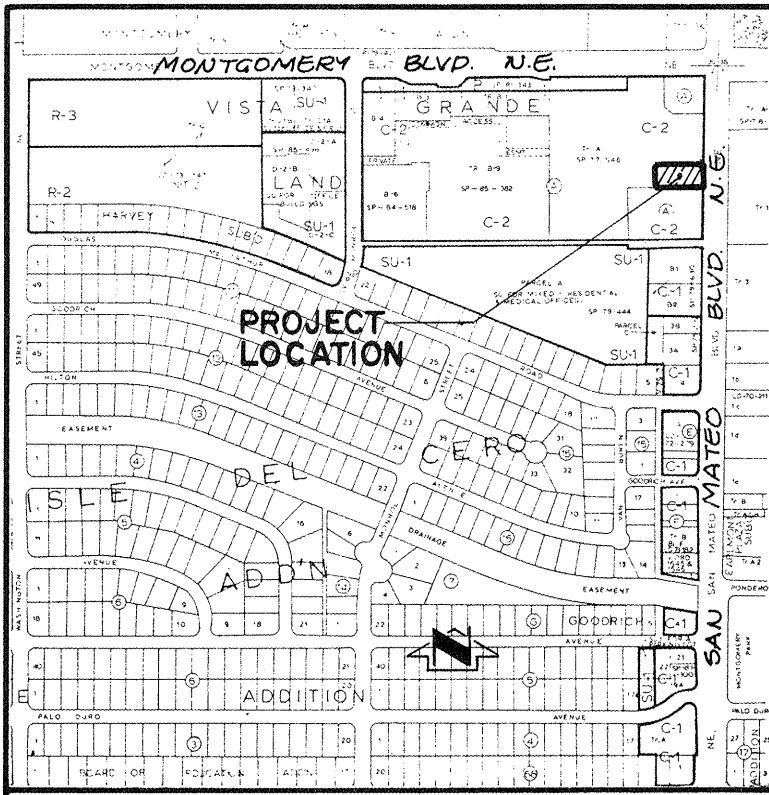
PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER



VICINITY MAP  
SCALE: 1" = 800'

### PROJECT BENCHMARK

A CHISELED SQUARE IN THE TOP OF CURB, 15' FROM THE EAST NORTHEAST CORNER AT THE INTERSECTION OF SAN MATEO BLVD. AND MONTGOMERY BLVD.  
ELEVATION: 5201.28 FT. (M.S.L.D.)

### T.B.M.

NAI AND SHINER SET FOR THE SOUTHEAST PROPERTY CORNER OF TRACT A-3.  
ELEVATION: 5188.92 FT. (M.S.L.D.)

### LEGAL DESCRIPTION

A PORTION OF TRACT A, BLOCK A, VISTA GRANDE ADDITION, UNIT ONE

### LEGEND

+	EXISTING SPOT ELEVATION
---	EXISTING CONTOUR
---	EXISTING CONCRETE
T.C.	TOP OF CURB
F.L.	FLOWLINE
+	PROPOSED SPOT ELEVATION
---	PROPOSED CONTOUR
---	PROPOSED CONCRETE
---	PROPOSED ASPHALT

### DRAINAGE PLAN

The following items concerning the Pancho's Mexican Buffet Grading and Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map the site is located at the southwest corner of the intersection of Montgomery Boulevard NE and San Mateo Boulevard NE. At present the site is developed. Much of the surrounding area is currently developed commercially thereby making this a modification to an existing site within an in-fill area. As shown by Plate C-17 of the Albuquerque Master Drainage Study, this site does not lie within a designated flood hazard zone. Downstream flooding is shown in Montgomery Boulevard NE. At present, runoff generated by this site flows from southeast to northwest, then west to an existing detention pond located along the west side of Tract A-1. No off-site flows are anticipated from the east because the existing street appears to route runoff away from the project site. No offsite flows are anticipated from the south because the existing curb routes runoff away from the project site. No offsite flows enter the site along the north and west because the site is topographically higher than the adjacent property.

The Grading Plan shows (1) existing and proposed grades indicated by spot elevations and contours at 1'0" intervals, (2) continuity between existing and proposed grades, (3) the limit and character of the existing improvements, and (4) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements consist of the removal of existing paving and the construction of a new restaurant building along with adjacent paving and landscaping. Runoff generated by the proposed improvements will be routed from southeast to northwest, then west to the aforementioned detention pond. This pattern is consistent with the existing site drainage.

The calculations which appear hereon analyze both the existing and developed conditions for the 100-year 6-hour rainfall event. The Rational Method has been used to quantify the peak rate of discharge and the SCS Method has been used to quantify the volume of runoff. Both methods have been used in accordance with the City of Albuquerque Development Process Manual Volume II and the Mayor's Emergency Rule adopted January 14, 1986. As shown by these calculations, the proposed improvements will decrease the discharge by approximately 0.2 cfs.

### CALCULATIONS

#### Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 21: EmB - Embudo gravelly fine sandy loam  
Hydrologic Soil Group: B  
Existing alluvial CN 61 (DPM Plate 22.2 C-2)  
Pasture or Range Land: good condition  
Developed Pervious CN = 61 (DPM Plate 22.2 C-2)  
Pasture or Range Land: good condition

#### Time of Concentration/Time to Peak

$T_c = 0.0078 L^{0.77} / g^{0.385}$  (Kirpich Equation)

$T_p = T_c = 10$  min.

#### Point Rainfall

$P_6 = 2.2$  in. (DPM Plate 22.2 D-1)

#### Rational Method

Discharge:  $Q = C i A$

where C varies

$i = P_6 (6.84) T_c^{-0.51} = 4.65$  in/hr  
 $P_6 = 2.2$  in (DPM Plate 22.2D-1)  
 $T_c = 10$  min (minimum)  
 $A =$  area, acres

#### SCS Method

Volume:  $V = 3630(DRO) A$

Where DRO = Direct runoff in inches  
 $A =$  area, acres

#### Existing Condition

$A_{total} = 23,955$  sf = 0.55 Ac  
Paved area = 23,605 sf (0.99)  
Landscaped area = 350 sf (0.01)  
 $C = 0.94$  (Weighted average per Emergency Rule, 1/14/86)  
 $Q_{100} = C i A = (0.94)(4.65)(0.55) = 2.4$  cfs  
 $A_{imp} = 23,605$  sf; % impervious = 99%  
Composite CN = 97 (DPM Plate 22.2 C-2)  
DRO = 1.9 in (DPM Plate 22.2 C-4)  
 $V_{100} = 3630 (DRO) A = 3,795$  cf

#### Developed Condition

$A_{total} = 23,955$  sf = 0.55 Ac  
Roof area = 6,280 sf (0.26)  
Paved area = 14,775 sf (0.62)  
Landscaped area = 2,900 sf (0.12)  
 $C = 0.85$  (Weighted average per Emergency Rule, 1/14/86)  
 $Q_{100} = C i A = (0.85)(4.65)(0.55) = 2.2$  cfs  
 $A_{imp} = 21,055$  sf; % impervious = 88%  
Composite CN = 94 (DPM Plate 22.2 C-2)  
DRO = 1.6 in (DPM Plate 22.2 C-4)  
 $V_{100} = 3630 (DRO) A = 3,195$  cf

#### Comparison

$\Delta Q_{100} = 2.4 - 2.2 = 0.2$  cfs (decrease)  
 $\Delta V_{100} = 3,795 - 3,195 = 600$  cf (decrease)

### CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SERVICE, 260-1990, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

### EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

