



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

KEN SCHULTZ
MAYOR

August 15, 1989

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR MONTANO OFFICE BUILDING PARKING LOT EXAPANSION
(E-10/D5) ENGINEER'S STAMP DATED AUGUST 7, 1989

Dear Mr. Mortensen:

Based on the information provided on your submittal of August 7, 1989,
the above referenced plan is approved for Grading/Paving Permit.

Upon completion of the above referenced work, a field inspection must be
requested (give the file number when requesting inspection).

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

Cordially,

Bernie J. Montoya
Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+1179)

PUBLIC WORKS DEPARTMENT

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

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

DRAINAGE INFORMATION SHEET

MONTANO OFFICE BLDG.

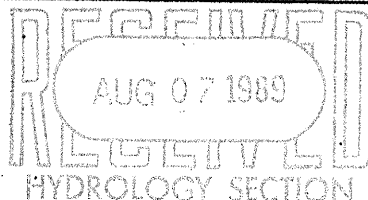
PROJECT TITLE PARKING LOT EXPANSION ZONE ATLAS/DRAINAGE FILE # E-10/DSLEGAL DESCRIPTION LOTS 0-22, 0-23 + 0-24 VOLCANO CLIFFS SUBD.CITY ADDRESS: NOT KNOWNENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: LEONARD P. UTTERADDRESS: 811 DALLAS N.E. PHONE: 265-5611OWNER: DLS ENTERPRISES CONTACT: DAVID SEVIERIADDRESS: 9935 ACADEMY KNOLLS NE PHONE: 294-1081ARCHITECT: _____ CONTACT: OWNER

ADDRESS: _____ PHONE: _____

SURVEYOR: JEFF MORTENSEN + ASSOC. CONTACT: LEONARD P. UTTERADDRESS: 811 DALLAS N.E. PHONE: 265-5611CONTRACTOR: _____ CONTACT: OWNER

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☐ YES☒ NO

DRB NO. _____

EPC NO. _____

PROJECT NO. _____

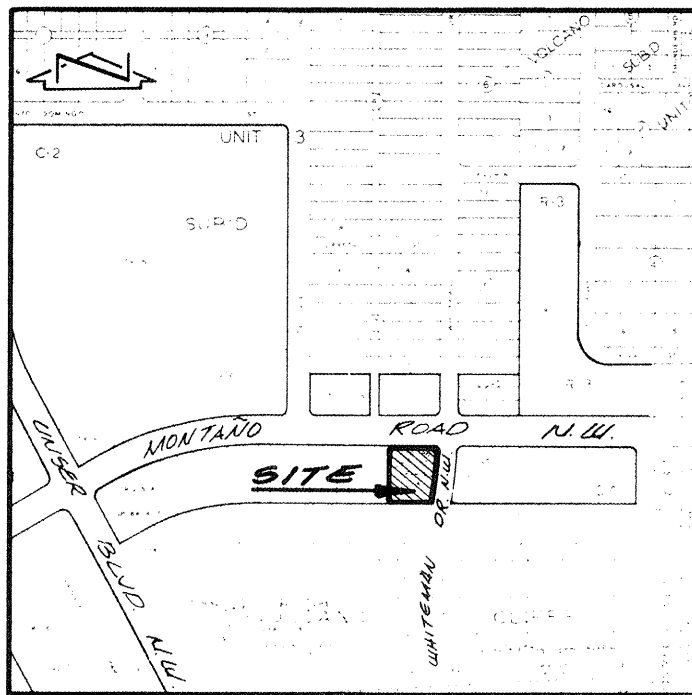
COPY OF CONFERENCE
RECAP SHEET PROVIDED

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT☒ DRAINAGE PLAN☐ CONCEPTUAL GRADING & DRAIN PLAN☒ GRADING PLAN☐ EROSION CONTROL PLAN☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SECTOR PLAN APPROVAL☐ SKETCH PLAT APPROVAL☐ PRELIMINARY PLAT APPROVAL☐ SITE DEVELOPMENT PLAN APPROVAL☐ FINAL PLAT APPROVAL☐ BUILDING PERMIT APPROVAL☐ FOUNDATION PERMIT APPROVAL☐ CERTIFICATE OF OCCUPANCY
APPROVAL☐ ROUGH GRADING PERMIT APPROVAL☒ GRADING/PAVING PERMIT APPROVAL☐ OTHER _____ (SPECIFY)DATE SUBMITTED: 08-07-89BY: [Signature]



VICINITY MAP E-10
SCALE: 1" = 800'

- LEGEND**
- 48 — EXISTING CONTOUR
 - 44.60 EXIST SPOT ELEVATION
 - EXIST SWALE
 - 48 — PROPOSED CONTOUR
 - 43.50 PROPOSED SPOT ELEVATION
 - PROPOSED SWALE
 - 1 FL TOP OF CURB / TOP OF ASPHALT
 - FLOWLINE
 - PROPOSED ASPHALT

LEGAL DESCRIPTION

LOTS 0-22, 0-23 & 0-24, VOLCANO CLIFFS SUBDIVISION, ALBUQUERQUE, NEW MEXICO

PROJECT BENCHMARK

STATION "B-810" AN "X" CUT ON THE BOUNDARY OF FIRE HYDRANT AT THE S.W. CORNER OF THE INTERSECTION OF WHITEMAN & MONTANO ROAD N.W. AS SHOWN HEREON, ELEVATION = 5143.13 FEET (M.S.L.D.)

DRAINAGE PLAN

The following items concerning the Montano Office Building Parking Lot Expansion 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 on the southwest corner of the intersection of Montano Road N.W. and Whiteman Drive N.W. At present, the site is developed, making this a modification to an existing site. Much of the surrounding area is currently developed both residentially and commercially. As shown by Panel 14 of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, the site does not lie within a designated flood hazard zone. Downstream flooding is not shown and therefore does not appear to be a problem. At present, runoff generated by this site flows from north to south onto Whiteman Drive N.W. No offsite flows appear to enter the site along the north and east property lines because the existing streets appear to route runoff away from the project site. No offsite flows enter the site along the south property line because the site is topographically higher than the adjacent property. Some offsite flows are anticipated along the west property line which will be accepted and conveyed through the site.

The grading plan shows 1) existing grades as shown by the Grading Plan prepared by Frank D. Lovelady dated 8-16-85, 2) proposed grades indicated by spot elevations and contours at 1'0" intervals, 3) the limit and character of the existing improvements, 4) the limit and character of the proposed improvements, and 5) continuity between existing and proposed grades. As shown by this plan, the proposed improvements consist of the expansion of the parking lot along with adjacent landscaping. Runoff generated by the proposed improvements will be routed from north to south then east onto Whiteman Drive N.W. This pattern is consistent with existing site drainage. The approved drainage plan for this site prepared by Frank D. Lovelady dated 8-16-85 allows for the free discharge of runoff onto Whiteman Drive N.W. Because of this, the free discharge of runoff from this site is appropriate.

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 increase the peak discharge by approximately 0.4 cfs.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 20: Bkd - Blueprint - Kokan Association Hydrologic Soil Group: A
Existing Pervious CN = 39 (DPM Plate 22.2 C-2)
Pasture or Range Land: good condition
Developed Pervious CN = 39 (DPM Plate 22.2 C-2)
Pasture or Range Land: good condition

Time of Concentration/Time to Peak

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

$T_p = T_c = 10$ min.

Point Rainfall

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

Rational Method

Discharge: $Q = CiA$

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

$A_{total} = 42,580$ sf = 0.98 Ac
Roof area = 7,555 sf (0.18)
Paved area = 21,325 sf (0.50)
Landscape area = 2,700 sf (0.06)
Undeveloped area = 11,000 sf (0.26)
 $C = 0.78$ (Weighted average per Emergency Rule, 1/14/86)
 $Q_{100} = CiA = 0.75(4.65)(0.98) = 3.4$ cfs
 $A_{imp} = 28,880$ sf; % impervious = 68 %
Composite CN = 82.4 (DPM Plate 22.2 C-2)
DRO = 0.9 in (DPM Plate 22.2 C-4)
 $V_{100} = 3630 (DRO)A = 3,200$ cf

Developed Condition

$A_{total} = 42,580$ sf = 0.98 Ac
Roof area = 7,555 sf (0.18)
Paved area = 28,905 sf (0.68)
Landscape area = 6,120 sf (0.14)
 $C = 0.84$ (Weighted average per Emergency Rule, 1/14/86)
 $Q_{100} = CiA = 0.84(4.65)(0.98) = 3.8$ cfs
 $A_{imp} = 36,460$ sf; % impervious = 86 %
Composite CN = 89.5 (DPM Plate 22.2 C-2)
DRO = 1.6 in (DPM Plate 22.2 C-4)
 $V_{100} = 3630 (DRO)A = 5,690$ cf

Comparison

$Q_{100} = 3.8 - 3.4 = 0.4$ cfs (increase)
 $V_{100} = 5,690 - 3,200 = 2,490$ cf (increase)

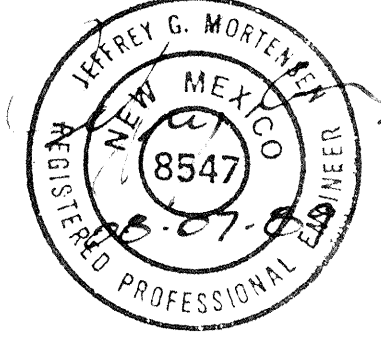
CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, 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 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 UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THEREOF, 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.

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 WEETING 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 "TOPSOILING PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

RECEIVED
JUL 07 1989
HYDROLOGY SECTION



JEFF MORTENSEN & ASSOCIATES, INC.
811 DALLAS, N.E. ALBUQUERQUE, NM 87110
ENGINEERS & TELEPHONE (505) 265-5611

GRADING AND DRAINAGE PLAN

MONTAÑO OFFICE BUILDING PARKING LOT EXPANSION

DESIGN BY	J.G.M.	No.	Date	By	Revision	JOB NO.	890831
DRAWN BY	C.V.M.					DATE	8-1989
APPROVED BY	J.G.M.					SHEET	OF
						1	1