

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Parkland Hills Shopping Center ZONE ATLAS/DRNG. FILE #: L-18/045
 LEGAL DESCRIPTION: Lots 1-24 Blk 1 Virginia Place Add & Lots 1-5, 16-20 Blk 9 Woods Sub of Virginia Place
 CITY ADDRESS: 1100 San Mateo SE

ENGINEERING FIRM: The Mann Company Inc CONTACT: Tom Mann

ADDRESS: 5372 Noreen Dr NE PHONE: 298-4651

OWNER: Alvarado Realty CONTACT: Luis Abruzzo

ADDRESS: _____ PHONE: _____

ARCHITECT: de la torre rainhart CONTACT: Jorge de la Torre

ADDRESS: 700 Lomas NE suite 200 PHONE: 842-9500

SURVEYOR: Tyree Surveying CONTACT: Ken Tyree

ADDRESS: 201-C Eubank NE PHONE: _____

CONTRACTOR: Unknown CONTACT: _____

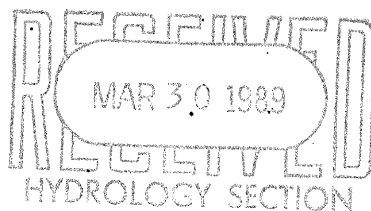
ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☒ YES

☐ NO

☐ COPY OF CONFERENCE RECAP
SHEET PROVIDED



DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT

☐ DRAINAGE PLAN

☒ CONCEPTUAL GRADING & DRAINAGE PLAN

☐ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ 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: 3/28/89

BY: Tom Mann

FILE COPY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 12, 1989

Tom Mann, P.E.
The Mann Company, Inc.
5312 Noreen Drive, NE
Albuquerque, New Mexico 87111

RE: CONCEPTUAL GRADING AND DRAINAGE PLAN FOR PARKLAND HILLS
SHOPPING CENTER (L-18/D45) ENGINEER'S STAMP DATED MARCH 30, 1989

Dear Mr. Mann:

Based on the information provided on your submittal of March 30, 1989, the conceptual drainage plan is approved for site development.

Please be advised that prior to building permit approval, the following concerns must be addressed.

1. New AMDS Area II report on file will give you sufficient information to:
 - a. determine the downstream capacity;
 - b. discharge rate required; and to
 - c. develop your hydrograph.
2. Elevation along the property line on Ortiz Drive, SE will need to be one foot (1') above the flow line.
3. Hydrographs showing the ponding requirements along with the appropriate discharge rates.
4. Outline with the elevation shown for the 100 year water surface elevation for each pond.
5. Six notes and sign-off blocks from the S.O. #19 format within plan drawing.
6. Follow the ponding requirements from the D.P.M. for ponds adjacent to a public street.
7. Indicate top of curb and flow line elevation on all the bordering streets.
8. Location and direction of roof drains.

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9. All other applicable items from the D.P.M. drainage check list.
10. Replatting may be required by Zoning.

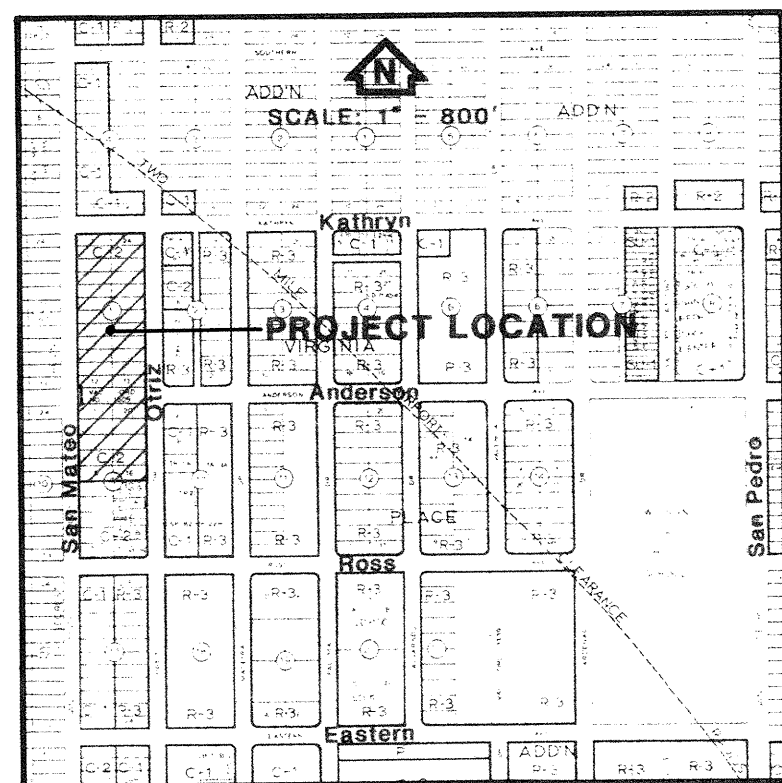
If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,



Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj
(WP+1073)



VICINITY MAP L-18

DESCRIPTION

Lots 1 through 24 Block 1 Virginia Place Addition and Lots 1 through 5 and 16 through 20 Block 9 Woods Subdivision of Virginia Place Addition.

ADDRESS

1100 San Mateo Boulevard S.E.

LEGEND

EXISTING	NEW	DESCRIPTION
=====	=====	CURB & GUTTER
=====	=====	CURB
45.5	46.8	SPOT ELEVATION
45	45	CONTOUR
[Symbol]	[Symbol]	BUILDING
-----	-----	DRAINAGE PIPE
-----	-----	PROPERTY LINE
-----	-----	BASIN DIVISION LINE
o		ROOF DRAINS

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 NETTING 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 A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

CONSTRUCTION NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE 1-800-1234, FOR THE 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.

DRAINAGE PLAN

The following items concerning the Parkland Hills Shopping Center Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the east side of San Mateo Boulevard S.E. from Kathryn Avenue S.E. to Anderson Avenue S.E. The site has previously been developed. The site does lie within a designated Flood Hazard Zone. The area surrounding the site is fully developed.

At the present time the project site is fully covered with buildings and asphalt. The existing buildings will be removed and the asphalt will be reused where possible. The site slopes from southeast to northwest. The slope is minimal so there is ponding throughout the site. Stormwater runoff exits the site onto San Mateo Boulevard. The New Mexico State Highway Department is currently reconstructing San Mateo. The improvements include new curb gutter and storm drainage facilities. The project site is bordered on three sides by streets. The project site is higher than the streets. A retaining wall separates the project site from the apartments to the south. Therefore, offsite flows are negligible.

The Grading Plan shows 1) the existing and proposed grades indicated by spot elevations and contours at 1'0" intervals, 2) continuity between existing and proposed elevations, 3) the limit and character of existing improvements and 4) the limit and character of proposed improvements. As shown by this plan, the proposed improvements consist of new buildings, asphalt parking areas and landscaping. The site will be graded to drain to the west where the runoff will be collected in three ponding areas and then conveyed into the storm drainage system in San Mateo through inlets. The finished floors of all buildings will be at least one foot above the existing ground to allow for flood proofing. Due to the increase of landscaping with this project, there will be a decrease in runoff exiting the site.

The calculations which appear below, analyze the existing and developed conditions for the 100 year, 6 hour rainfall event. The Rational and SCS Methods have been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a decrease in the runoff discharged from the site.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate: 31 Madurez MWA
Hydrologic Soil Group: B
Existing Pervious CN = 79 (DPM Plate 22.2 C-2 Pasture
or Range Land: poor condition)
Developed Pervious CN = 61 (DPM Plate 22.2 C-2)

Time of Concentration/Time to Peak

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

$$T_p = T_c = 10 \text{ min.}$$

Point Rainfall

$$P_6 = 2.3 \text{ in. (DPM Plate 22.2 D-1)}$$

Rational Method

$$\text{Discharge: } Q = CiA$$

where C varies
 $i = P_6 (6.84) T_p^{-0.51} = 4.86 \text{ in/hr}$
 $P_6 = 2.3 \text{ in (DPM Plate 22.2 D-1)}$
 $T_p = 10 \text{ min (minimum)}$
 $A = \text{area, acres}$

SCS Method

$$\text{Volume: } V = 3630(\text{DRO}) A$$

Where DRO = Direct runoff in inches
 $A = \text{area, acres}$

Existing Condition

$A_{\text{total}} = 234,239 \text{ sf} = 5.38 \text{ ac}$
 $\text{Roof area} = 72,510 \text{ sf} = 1.69 \text{ ac}$
 $\text{Paved area} = 160,729 \text{ sf} = 3.69 \text{ ac}$
 $\text{Landscaped area} = 0 \text{ sf} = 0.00 \text{ ac}$
 $C = 0.94 \text{ (Weighted average per Emergency Rule, 01/14/86)}$

$Q_{100} = CiA = 0.94(4.86)5.38 = 24.6 \text{ cfs}$
 $A_{\text{total}} = 234,239 \text{ sf}; \% \text{ impervious} = 100\%$
 $\text{Composite CN} = 98 \text{ (DPM Plate 22.2 C-3)}$
 $\text{DRO} = 2.3 \text{ in (DPM Plate 22.2 C-4)}$
 $V_{100} = 3630(\text{DRO}) A = 44,918 \text{ cf}$

Developed Condition

$A_{\text{total}} = 234,239 \text{ sf} = 5.38 \text{ ac}$
 $\text{Roof area} = 58,957 \text{ sf} = 1.33 \text{ ac}$
 $\text{Paved area} = 148,227 \text{ sf} = 3.36 \text{ ac}$
 $\text{Landscaped area} = 27,155 \text{ sf} = 0.62 \text{ ac}$
 $C = 0.86 \text{ (Weighted average per Emergency Rule, 01/14/86)}$

$Q_{100} = CiA = 0.86(4.86)5.38 = 22.5 \text{ cfs}$
 $A_{\text{total}} = 207,984 \text{ sf}; \% \text{ impervious} = 88\%$
 $\text{Composite CN} = 93 \text{ (DPM Plate 22.2 C-3)}$
 $\text{DRO} = 1.6 \text{ in (DPM Plate 22.2 C-4)}$
 $V_{100} = 3630(\text{DRO}) A = 31,247 \text{ cf}$

Comparison

$Q_{100} = 24.6 - 22.5 = 2.1 \text{ cfs decrease}$
 $V_{100} = 44,918 - 31,247 = 13,671 \text{ cf decrease}$

RECEIVED
MAR 30 1989
HYDROLOGY SECTION

NO.	DESCRIPTION	DATE
REVISIONS		
PARKLAND HILLS SHOPPING CENTER CONCEPTUAL GRADING AND DRAINAGE PLAN		
THE MANN COMPANY		
JOB NO.	DATE	DESIGNED BY
	3/89	TTM
		LAH
		TTM
		1 OF 2

