PLANS/PLATS ON FILE

FILE DESC: L-18/0044

PLANS/PLATS 3

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: L-18 DATE: 2/4/88 @ 9:00

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: _____

STREET ADDRESS (IF KNOWN): Ortiz Drive - S. of Kathryn

SUBDIVISION NAME: Lots 4,5,6 Block 2 Virginia Place Addition

APPROVAL REQUESTED:

____	PRELIMINARY PLAT	____	FINAL PLAT
____	SITE DEVELOPMENT PLAN	X	BUILDING PERMIT
X	OTHER lot line revisions	____	ROUGH GRADING

	WHO	REPRESENTING
ATTENDANCE:	Marvin Kortum	Marvin Kortum
	Bernie Montoya	Hydrology Section

FINDINGS:

1. Drainage plan per D.P.M. requirements prior to Building permit release.
2. Site is encroached by an AO-1' floodzone. Finish floor must be two feet above flow-line on Ortiz Dr. S.E.
3. Must address down stream capacity to warrant free discharge. Check the: Kirtland Detention Dam Study, San Mateo South Storm Sewer Study and the Highland Detention Study.
4. No storm sewer facilities on Ortiz nearest System is at the intersection of San Mateo & Kathryn.
5. Replat must provide for cross-lot-line drainage (blanket easement appropriate).
6. Approved drainage plan required prior to DRB sign-off on replat.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Bernie Montoya SIGNED: MWK

TITLE: Engineering Assistant TITLE: Civil Engineer

DATE: 2/4/88 DATE: Feb 4, 1988

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

PROJECT TITLE: Ortiz Apartments ZONE ATLAS/DRNG. FILE #: L-18 / D44

LEGAL DESCRIPTION: Lots B, C, D & E-1, Blk 2, Virginia Place Addition

CITY ADDRESS: Ortiz Drive SE (Between Kathryn and Anderson Ave)

ENGINEERING FIRM: Marvin R Kortum CONTACT: Marvin R Kortum

ADDRESS: 1605 Speakman Dr. SE Albuquerque, NM 87123 PHONE: (505) 299-0774

OWNER: Ortiz Apartments No. 1185 CONTACT:

ADDRESS: 1238 Ortiz Dr. SE PHONE: 265-6380

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: Southwest Survey Co., Inc. CONTACT: Dan Graney

ADDRESS: 333 Lomas Blvd. NE Albuquerque, NM 87102 PHONE: 247-4444

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

RECEIVED FEB 22 1988 HYDROLOGY SECTION

PRE-DESIGN MEETING:

x YES

___ NO

x COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ___

EPC NO. ___

PROJ. NO. ___

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

x DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

x GRADING PLAN

x EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

x PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

x 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: Feb 19, 1988

BY: Marvin R Kortum

PROJECT TITLE	Grading and Drainage Plan Lots B, C, D and E-1, Block 2, Virginia Place Addition
ZONE ATLAS	L-18
ADDRESS	Ortiz Drive SE
LEGAL DESCRIPTION	Lots B, C, D and E-1, Block 2, Virginia Place Addition (A replat of Lots 4,5, & 6) Within Sec 25, T. 10N., R. 3E. NMPM Feb____, 1988
ENGINEERING FIRM	Marvin R Kortum 1605 Speakman Drive SE Albuquerque, NM 87123 NMPE 6519 (505) 299-0774
OWNER	Ortiz Apts. No. 1185 1238 Ortiz Dr. SE Albuquerque NM
ARCHITECT	
CONTRACTOR	
SURVEYOR	Southwest Survey Company, Inc. 333 Lomas Blvd. NE Albuquerque, NM 87102
DATE SUBMITTED	February 19, 1988

RECEIVED
FEB 22 1988
HYDROLOGY SECTION

MARVIN R. KORTUM
NEW MEXICO
6519
2/19/88
REGISTERED PROFESSIONAL ENGINEER

GRADING AND DRAINAGE PLAN

Lots B, C, D and E-1, Block 2

(A Replat of Lots 4, 5 and 6) Block 2

Virginia Place Addition

Ortiz Drive S. E.

Albuquerque, New Mexico

I. ON SITE CHARACTERISTICS:

A. Description:

Lots B, C, D and E-1 consist of a rectangular tract 150 feet north to south and 125 feet east to west, containing .4305 acres. The east boundary is an alleyway. Across the alleyway is a large three-story apartment building. The north boundary is common with a Dairy Queen restaurant. The south boundary is common with a residential townhouse development. The west boundary is the east right-of-way line of Ortiz Drive S. E. The south boundary is adjacent to a four feet high block wall running along 100 feet of the property line. The east and north property lines are adjacent to the paved alleyway and the paved parking on the Dairy Queen lot. Ortiz Drive is paved, with curb, gutter and sitewalks.

B. Soils:

The soils, as identified on the Bernalillo County Soils Survey by the Soil Conservation Service, U. S. Department of Agriculture, are Wink-Embudo complex (WeB), 0 to 5 percent slopes. The Wink Series consists of deep, well drained soils that formed in old unconsolidated alluvium modified by wind on piedmonts. The embudo soil is in shallow depressions. On about 70 percent of the wink soils, the exchangeable sodium is more than 15 percent. On both soils, runoff is medium and the hazard of water erosion is moderate. The engineering characteristics of the WeB soils are well suited for the proposed use for two story residential buildings. Caution is required to provide for adequate footings and soil treatment to prevent settlement in the event of water infiltration. Grading should also be designed to reduce accumulation of water along footing walls. The soil is identified as hydrologic Group B, those soils which absorb more water than is typical. The surface vegetation is sparse. The surface appears to be generally native soil, with several large piles of fill materials and some trash placed on the lot. Proper treatment of the materials with water and compaction will be required prior to placing pavement and structures.

C. Undeveloped Runoff:

Runoff from the tract in its present condition (not including newly placed fill materials) is computed below. Presently the runoff if from east edge toward the southwest corner, there running over the curb and into the gutter of Ortiz Drive.

D. Direct Runoff Volume Undeveloped Land:

The six hour, 100 year frequency rainfall for the tract is 2.4 inches, per 1973 N.O.A.A. Atlas 2, Volume IV (Plate 22.2, D-1). The present surface is equivalent to range land in poor condition, with a CN = 79 (Plate 22.2, C-2). For CN = 79, the direct runoff volume is .8 inches (Plate 22.2, C-4), for a total volume of (.4305 acres x 43560 ft.^{2}/acre x .8 inches x 1 ft./12 inches) = 1,250 ft.^{3}.

E. Peak Runoff, Undeveloped Land:

Peak runoff can be estimated by use of the rational formula, Q = CIA, where C is a factor which incorporates surface characteristics of the drainage basin, I is the intensity of rainfall for a storm which is determined to give the maximum rate of runoff for the drainage basin, the basin characteristics being expressed as a time of concentration, TC. A is the area in acres.

From Kirpich, $TC = .0078\frac{L^{0.77}}{S^{0.385}}$. For the tract, L = 195 ft., and S = 1.3/195 = .0067, for which TC = 3.1 minutes. Use the rainfall intensity factor of 2.15 for ten minutes (Plate 22.2, D-2) and a C = .34 (Plate 22.2, C-1). From the above, peak runoff is computed as Q = (.34)(2.15)(2.4)(.4305) = .75 ft.^{3}/sec.

F. Developed Site Runoff:

In the developed state, it is proposed that the tract be developed as a townhouse development, with 12 separate residential units contained in three buildings. Hardstand, parking and sidewalks will be the bulk of the remaining area, with some landscaped areas. All surface runoff will be collected within the tract and channelled out of the new drive pad into the Ortiz Drive right-of-way.

G. Direct Runoff Volume for Developed property:

The proposed surface conditions are as follows:

	Area Ft.^{3}	Percent	CN	CN
Asphalt Drive and Parking	6630	35	98	34.3
Sidewalks	1100	6	98	5.9
Roof	6110	33	98	32.3
Landscape area	4910	26	61	15.9
Total	18750			88.4
Impervious	13840 = 74%			

For the CN of 88.4, the direct runoff is 1.4 inches (Plate 22.2, C-4), for a total volume of (.4305 acre x 43560 ft.^{2}/acre x 1.4 in. x 1 ft./12 in.) = 2,190 ft.^{3}.

H. Peak Runoff from Developed Property:

Peak runoff for the site can be estimated as above. For the 74% impervious surface, the C factor is .72 (Plate 22.2, C-1). The time of concentration will remain at or below ten minutes, so use the intensity factor of 2.15, for a Q = CIA = (.72)(2.15)(2.4)(.4305) = 1.6 ft.^{3}/sec.

II. OFF-SITE FLOWS:

A. Major Terrain Features:

Lots B, C, D and E-1 are at the edge of the Campus Draw flood plain. The Albuquerque Master Drainage Study estimates the 100 year design storm to flood in the vicinity of the tract to the elevation of about 5282.5, thus covering over two-thirds of the tract as it presently exists.

The AMDS identifies System 206-02A as improvements which will eliminate flooding on and in the vicinity of the tract. A key element of the system has been constructed, the construction of a detention basin near the corner of Gibson Blvd. and Louisiana Blvd. The purpose of the detention basin is to collect and release at a reduced rate that runoff from Kirtland AFB. Other portions of System 206-02A consist of a subsurface system to route this detained water through the flooded area and to collect surface runoff through the flooded area. Portions of this system have been completed, and others are under construction.

Downstream from the tract are other areas along Campus Draw which are in the flood plain. A major improvement designed to alleviate the flooding is the Highland Detention Basin, now constructed near the intersections of Jefferson Street and Silver Avenue S. E. This basin will detain storm runoff for later release, effectively reducing downstream peak flows. Improvements identified in the south San Mateo storm sewer study will also relieve flooding downstream from the Ortiz Drive tract.

B. Minor and Nuisance Flows:

The tract is subjected to very little in the way of off site nuisance flows. Flow from the south is effectively blocked by the block wall from the south. Flow to the north is downstream away from the tract. Some flow presently crosses from the alleyway to the east. The shape of the alley is such that the flow goes both north and south from a high point along the east side of the tract. Placing a wall and curb along the east property line of the tract will eliminate any nuisance flow from that direction, and the present slope of the alley will direct the flow to Kathryn Avenue on the north, or to Anderson Avenue on the south, without contributing flow to other private property. The north wall of the developed tract will also prevent flow from the site to the adjacent Dairy Queen parking area.

III. PROPOSED GRADING AND DRAINAGE:

All storm runoff interior to the tract will be directed to the common driveway, and then into Ortiz Drive. The elevations of the buildings on the tract can be elevated to a level of 5083.0 to raise them above the identified level of the flood plain.

IV. CONCLUSIONS AND RECOMMENDATIONS:

A. Lots B, C, D and E-1 are within an area identified as at the edge of a 100 year flood. Construction of major portions of systems that will correct this flooding is underway or has been completed.

B. Lots B, C, D and E-1 will contribute an additonal (2190 - 1250) = 940 ft.^{3} to downstream flooded areas. Major improvements downstream have been constructed, so the additional flow will be relatively insignificant.

C. Finished floow elevations for the new buildings should be set at an elevation of 5283 or above.

D. Subsurface soil treatment (compaction, etc.) should be sufficient to withstand periodic saturation of the soil without structural failure.

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR	CHIEF ADMINISTRATIVE OFFICER	DEPUTY CAO PUBLIC SERVICES	DEPUTY CAO PLANNING/DEVELOPMENT
KEN SCHULTZ	GENE ROMO	FRANK MARTINEZ	BILL MUELLER

March 1, 1988

Marvin R. Kortum, P.E.
1605 Spearman Drive, SE
Albuquerque, New Mexico 87123

RE: DRAINAGE PLAN FOR ORTIZ APARTMENTS
(L-18/D44) ENGINEER'S STAMP DATED FEBRUARY 19, 1988

Dear Mr. Kortum:

Based on the information provided on your submittal of February 22, 1988, the above referenced plan is approved for Building Permit.

Please be advised that the building permit will not be issued until an approved, filed copy of the replat is submitted to our office.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

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

Cordially,

Carlos A Montoya
for Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

Plat submitted on 4/7/88 approved for Building permit

AN EQUAL OPPORTUNITY EMPLOYER

PLAN/PLATS

ON

FILE