

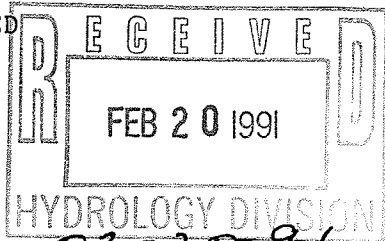
PROJECT TITLE: RANCHITOS VILLAGE ZONE ATLAS/DRNG. FILE #: D18/D13  
 DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: 4001.90  
 LEGAL DESCRIPTION: LOT X-1, U-A, TR-A, BLK 13, N. ALB. ACRES  
 CITY ADDRESS: RANCHITOS AVE NE  
 ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: JEFF MORTENSEN  
 ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250  
 OWNER: MISS ELDERLY HOUSING CONTACT: JOSEPH GLENN  
1800 CENTURY BLVD - SUITE 1260  
 ADDRESS: ATLANTA GA 30345 PHONE: 404-321-0232  
 ARCHITECT: WHITNEYBELL ARCHITECTS CONTACT: DOUG WHITNEYBELL  
1102 E. MISSOURI AVE.  
 ADDRESS: PHOENIX, AZ 85014 PHONE: 602-265-1891  
 SURVEYOR: JEFF MORTENSEN & ASSOC. CONTACT: JEFF MORTENSEN  
 ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250  
 CONTRACTOR: BRADBURY & STAMM CONTACT: GINA ZAMORA  
 ADDRESS: \_\_\_\_\_ PHONE: 765-1200

## TYPE OF SUBMITTAL:

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

## PRE-DESIGN MEETING:

- ☐ YES  
☐ NO  
☐ COPY PROVIDED



DATE SUBMITTED:

BY:

02-20-91  
JEFFREY G. MORTENSEN

## CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D. APPROVAL  
☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL  
☐ SECTOR PLAN APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ FOUNDATION PERMIT APPROVAL  
☒ BUILDING PERMIT APPROVAL  
☒ CERTIFICATE OF OCCUPANCY APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ S.A.D. DRAINAGE REPORT  
☐ DRAINAGE REQUIREMENTS  
☐ OTHER \_\_\_\_\_ (SPECIFY)

FILE COPY



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 1, 1991

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

RE: ENGINEER'S CERTIFICATION FOR RANCHITOS VILLAGE  
(MISS HANDICAP HOUSING) (D-18/D13) CERTIFICATION  
STATEMENT DATED FEBRUARY 19, 1991

Dear Mr. Mortensen

Based on the information provided on your submittal of February 20, 1991,  
Certification for the referenced site is acceptable.

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

Cordially,

*Fred J. Aguirre*  
Fred J. Aguirre, P.E.  
Hydrologist

xc: Alan Martinez

BJM:FJA/bsj  
(WP+1490)

PUBLIC WORKS DEPARTMENT

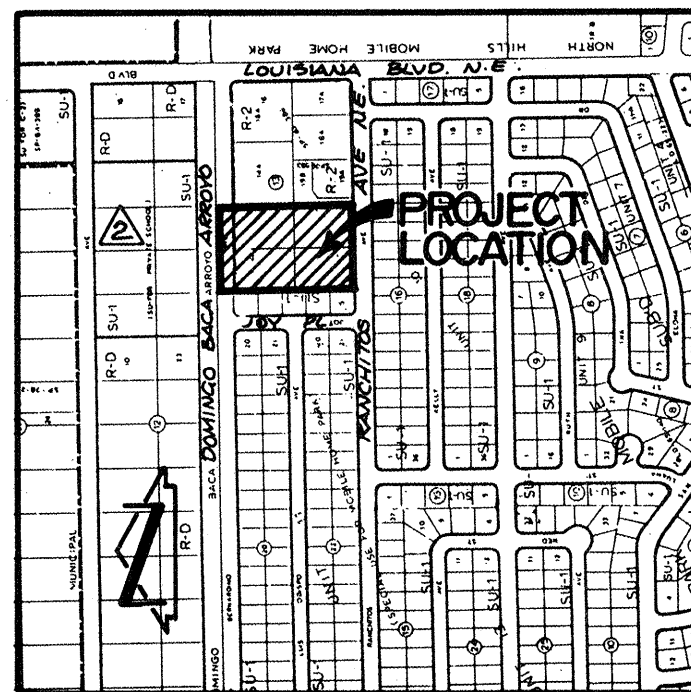
Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

ENGINEERING GROUP

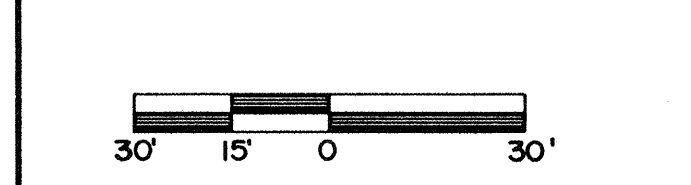
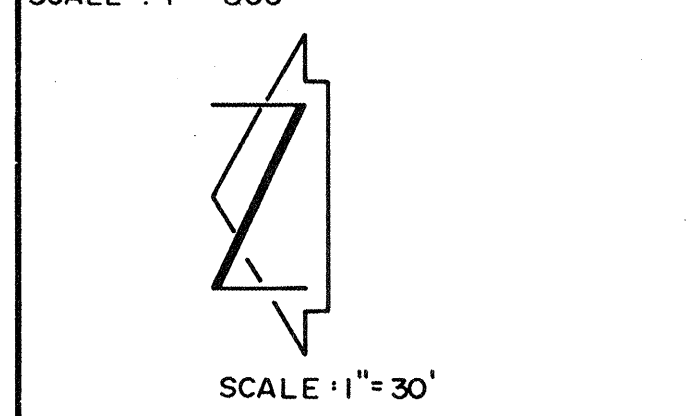
Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER





VICINITY MAP D-18  
SCALE: 1" = 800'



LEGEND

- PROPERTY CORNER
- PROPERTY LINE
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- EXISTING FLOWLINE
- EXISTING SLOPE
- FLOWLINE
- WATER
- C.I.
- SAG
- VCP
- T.C.
- F.L.
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- BASIN BOUNDARY LINE
- AS-BUILT ELEVATION
- AS-BUILT CORRECTION
- DESIGN GRADE - AS-BUILT GRADE

ENGINEER'S CERTIFICATION

As indicated by the as-built grades shown hereon, the subject project has been constructed in substantial compliance with the approved grading and drainage plan. The minor regrading of several of the landscaped areas was required as part of the preliminary review of the as-built conditions. Subsequent field review of the project status on February 19, 1991, indicates that all areas where regrading was required have been corrected. It is based on the corrected work that the completed project is now in substantial compliance with the approved design. The completed project is hereby recommended for issuance of permanent Certificate of Occupancy.

Jeffrey G. Mortensen  
Professional Engineer  
No. 8547  
Date 02-19-91

T.B.M. # 1  
TOP OF #5 REBAR W/ CAP. REBAR IS LOCATED AT THE NORTHEAST PROPERTY CORNER AS SHOWN ON THE DRAWING.  
ELEVATION = 5297.31 FEET (M.S.L.D.)

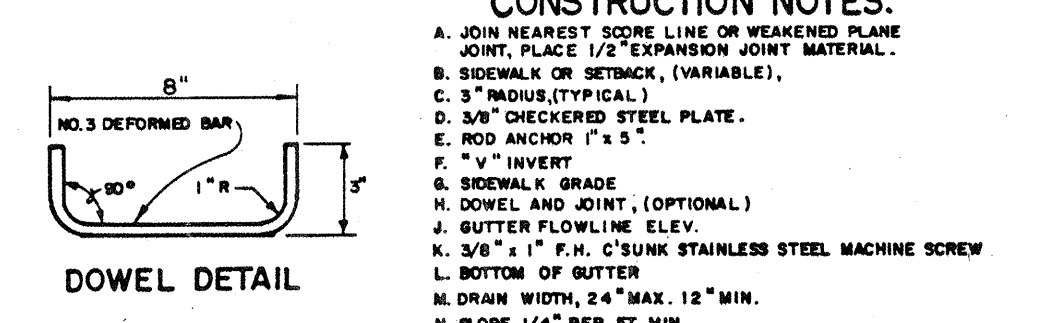
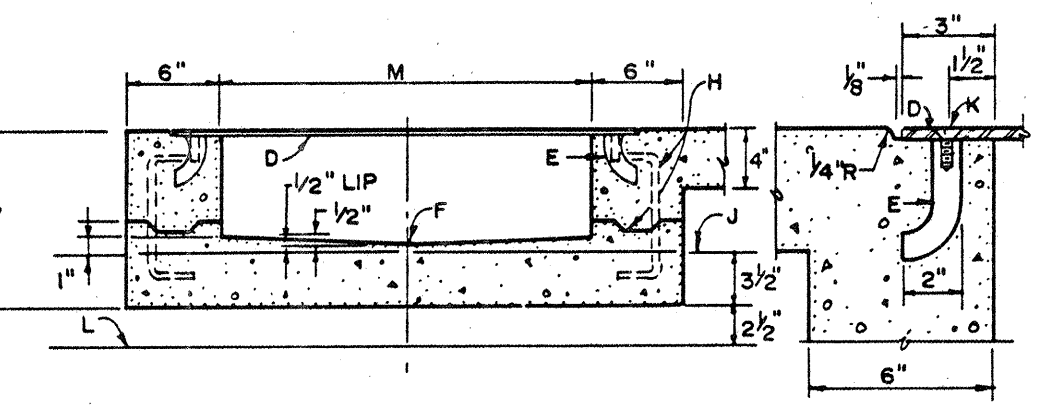
PROJECT BENCHMARK  
A.C.S. BRASS TABLE STAMPED "1-C19 N.A.A. LOT 32' B'K. 10" SET IN TOP OF A CONCRETE POST SET FLUSH WITH GROUND. THE STATION IS LOCATED 25' EAST OF CENTERLINE OF LOUISIANA BLVD. N.E. & 30' NORTH OF CENTERLINE OF LOS ANGELES DR. N.E. IN THE NORTHEAST QUADRANT OF THE INTERSECTION.  
ELEVATION = 5318.20 FEET (M.S.L.D.)

LEGAL DESCRIPTION  
LOT X-1, TRACT A, UNIT A, BLOCK 13, NORTH ALBUQUERQUE ACRES.  
FILED 2-19-1987; C32-198

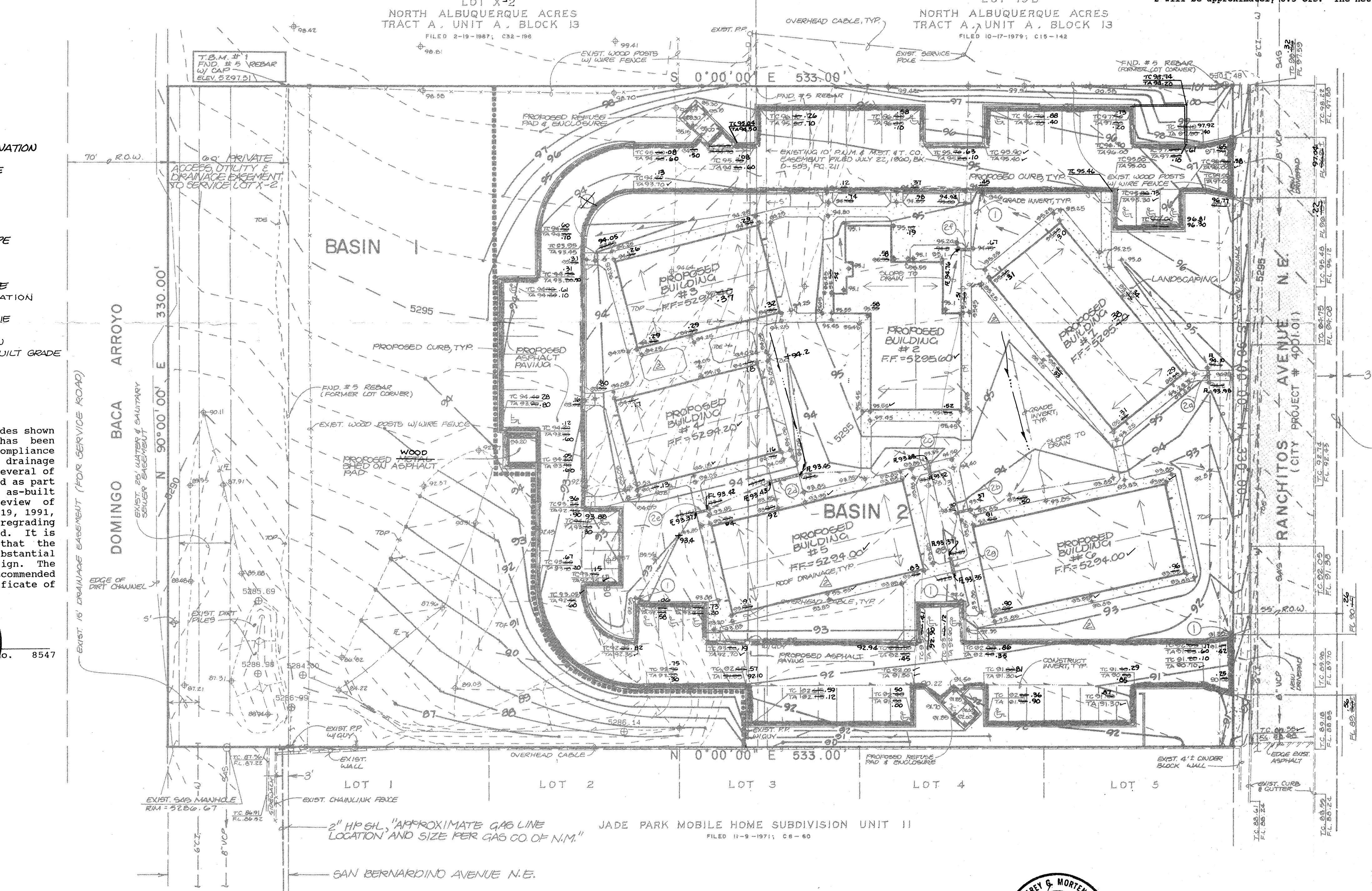
KEYED NOTES:

1. CONSTRUCT 2'-0" CURB OPENING.
2. CONSTRUCT 1'-0" SIDEWALK CULVERT PER DETAIL, SEE THIS SHEET.

- a. Inv (in) = 94.30  
Inv (out) = 94.20  
h = 1'-3"±
- b. Inv (in) = 93.30  
Inv (out) = 93.25  
h = 12"±
- c. Inv (in) = 93.35  
Inv (out) = 93.30  
h = 1'-2"±
- d. Inv (in) = 93.60  
Inv (out) = 93.55  
h = 8'-3/4"±
- e. Inv (in) = 93.20  
Inv (out) = 93.15  
h = 12'-1/2"±
- f. Inv (in) = 94.80  
Inv (out) = 94.75  
h = 9"±
- g. Inv (in) = 92.85  
Inv (out) = 92.80  
h = 1'-4"±



SIDEWALK CULVERT SECTION  
N.T.S.



JADE PARK MOBILE HOME SUBDIVISION UNIT II  
FILED 11-9-1971; C6-60

ENGINEER'S CERTIFICATION  
RANCHITOS VILLAGE

JEFF MORTENSEN & ASSOCIATES, INC.  
6010-B MIDWAY PARK BLVD. N.E.  
ALBUQUERQUE, NEW MEXICO 87109  
ENGINEERS & SURVEYORS (505)345-4250

△ DRAINAGE PLAN  
The following items concerning the MISS Handicap Housing Grading and Drainage Plan are contained hereon:  
1. Vicinity Map  
2. Grading Plan  
3. Calculations

As shown by the Vicinity Map, this site is located on the north side of Ranchitos Avenue N.E., between Louisiana Boulevard N.E. and Joy Place N.E. At present, the site is undeveloped. Much of the surrounding area is currently developed. As shown by Panel 10 of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, this 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 southeast to northwest to the Domingo Baca Arroyo. No offsite flows enter the site along the south property line because the existing block wall routes runoff away from the project site. The Domingo Baca Arroyo located north of the site, intercepts potential runoff from the north, therefore, no offsite flows are anticipated from that direction. No offsite flows are anticipated from the south because the existing road is topographically lower than the site. Also, new curb and gutter and additional paving will be constructed in Ranchitos Avenue N.E. by City Work Order. Some offsite flows are anticipated from the east which have been quantified below, will be accepted and conveyed through the project site.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals, 2) the limit and character of the proposed improvements, and 3) continuity between existing and proposed grades. As shown by this plan, the proposed improvements consist of the construction of new apartment buildings along with adjacent paving and landscaping. Runoff generated by Basin 1 will continue to drain in its existing condition to the Domingo Baca Arroyo. Runoff generated by Basin 2 will be routed from north to south onto Ranchitos Avenue N.E. From that point, runoff flows south along the north edge of Ranchitos Avenue N.E. to San Pedro Boulevard N.E. San Pedro Boulevard N.E. drains in a northerly direction to the Domingo Baca Arroyo which is the outfall for this site. Based upon the fact that this site is an infill site and the apparent lack of downstream flooding, the free discharge of flooding 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 in Basin 1 will decrease the discharge by approximately 5.1 cfs. The increase in runoff from Basin 2 will be approximately 8.5 cfs. The net increase in runoff will be 3.4 cfs.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,  
Plate 11: EUC - Embudo - Tijeras Complex  
Hydrologic Soil Group: B  
Existing Pervious CN = 70 (DPM Plate 22.2 C-2)  
Pasture or Range Land: fair condition  
Developed Pervious CN = 61 (DPM Plate 22.2 C-2)  
Pasture or Range Land: good condition

Time of Concentration/Time to Peak

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

$T_p = T_c = 10$  min.

Point Rainfall

$P_6 = 2.3$  in. (DPM Plate 22.2 D-1)

Rational Method

Discharge:  $Q = CIA$   
where C varies  
 $1 = P_6 (6.84) T_c^{-0.51} = 4.86$  in/hr  
 $P_6 = 2.3$  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

Basin 1  
A total = 175,890 sf = 4.04 Ac  
C = 0.40 (Weighted average per Emergency Rule, 1/14/86)  
 $Q_{100} = CIA = 0.40(4.86)(4.04) = 7.9$  cfs  
Aimp = -0 sf; % impervious = -0 %  
Composite CN = 70 (DPM Plate 22.2 C-2)  
DRO = 0.40 in (DPM Plate 22.2 C-4)  
 $V_{100} = 3630 (DRO)A = 5,870$  cf

Basin 2  
A total = -0 sf = -0 Ac  
C = -0 (Weighted average per Emergency Rule, 1/14/86)  
 $Q_{100} = CIA = -0$   
Aimp = -0 sf; % impervious = -0 %  
Composite CN = -0 (DPM Plate 22.2 C-2)  
DRO = -0 in (DPM Plate 22.2 C-4)  
 $V_{100} = 3630 (DRO)A = -0$  cf

Developed Condition

Basin 1  
A total = 61,000 sf = 1.40 Ac  
C = 0.40 (Weighted average per Emergency Rule, 1/14/86)  
 $Q_{100} = CIA = 0.40(4.86)(1.40) = 2.8$  cfs  
Aimp = -0 sf; % impervious = -0 %  
Composite CN = 70 (DPM Plate 22.2 C-2)  
DRO = 0.40 in (DPM Plate 22.2 C-4)  
 $V_{100} = 3630 (DRO)A = 2,030$  cf

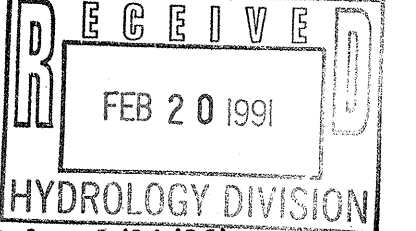
Basin 2  
A total = 114,890 sf = 2.64 Ac  
Roof area = 23,850 sf (0.20)  
Paved area = 45,400 sf (0.40)  
Landscaped area = 45,640 sf (0.40)  
C = 0.66 (Weighted average per Emergency Rule, 1/14/86)  
 $Q_{100} = CIA = 0.66(4.86)(2.64) = 8.5$  cfs  
Aimp = 69,250 sf; % impervious = 60 %  
Composite CN = 83 (DPM Plate 22.2 C-2)  
DRO = 0.9 in (DPM Plate 22.2 C-4)  
 $V_{100} = 3630 (DRO)A = 8,625$  cf

Comparison

Basin 1  
 $\Delta Q_{100} = 7.9 - 2.8 = 5.1$  cfs (decrease)  
 $\Delta V_{100} = 5,870 - 2,030 = 3,840$  cf (decrease)  
Basin 2  
 $\Delta Q_{100} = 8.5 - 0 = 8.5$  cfs (increase)  
 $\Delta V_{100} = 8,625 - 0 = 8,625$  cf (increase)

△ Offsite Flows

A total = 74,050 sf = 1.7 Ac  
C = 0.40 (Weighted average per Emergency Rule, 1/14/86)  
 $Q_{100} = CIA = 0.40(4.86)(1.7) = 3.3$  cfs  
Aimp = -0 sf; % impervious = -0 %  
Composite CN = 70 (DPM Plate 22.2 C-2)  
DRO = 0.40 in (DPM Plate 22.2 C-4)  
 $V_{100} = 3630 (DRO)A = 2,470$  cf



DESIGN BY L.P.U.  
DRAWN BY S.G.H./R.A.R.  
APPROVED BY J.G.M.

No.	Date	By	Revision
1	12/11/89	L.P.U.	REVISE TEXT, CALCS & LEGAL DESCRIPTION
2	12/21/89	L.P.U.	REVISE PROJECT LOCATION, GRADES AROUND BLDGS. & ADD T.O.S. & F.L.S. IN RANCHITOS RD.
3	02/91	J.G.M.	AS-BUILT & CERTIFY

JOB NO. 900834  
DATE 02/1991  
SHEET 1 OF 1