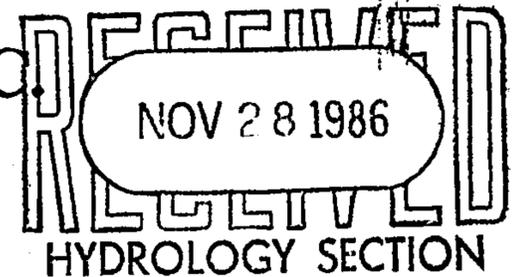


Melvyn D. Baron & Associates, P.C.

Attorneys at Law

110 Quincy, N.E.  
Albuquerque, New Mexico 87108



Melvyn D. Baron

Nov. 21, 1986

(505) 266-8739

(505) 255-4521

Mr. Willis Smith  
4004 Carlisle NE  
Albuquerque, New Mexico 87107

Dear Mr. Smith:

This firm has been retained by Mr. Naser Alikhani as a result of damage to his property east of your lot at 13812 Winterwood Way SE, Albuquerque, New Mexico. According to our records you have been notified of the problems at least twice by the City of Albuquerque Hydrology Section, once on April 2, 1986 and again on October 21, 1986. Apparently you have chosen to ignore the City's request for information.

Our review of the plats and official records concerning this matter reveal the following known problems as a result of your construction on this lot:

1. The structure is located upon the lot so as to encroach upon the 10 foot setback required in Paragraph 3a of the Protective Covenants and Restrictions of Winterwood Park, a Subdivision in the City of Albuquerque, New Mexico, recorded in the records of the Clerk of Bernalillo County on February 23, 1981 at Book 833, Pages 13-16.

2. Because of your fill work on the Lot, you have caused the drainage arroyo on the eastern side of the lot to shift farther eastward upon our client's property.

Our client estimates the fair market value of his property to have been about \$40,000.00 prior to the construction violations stated above. As a result of these violations, Mr. Alikhani's property has been rendered valueless, or nearly so. Therefore, demand is hereby made upon you to

Willis Smith  
Nov. 21, 1986  
Page 2

remit the sum of \$40,000.00 by cash or cashier's check payable to Mr. Naser Alikhani within fifteen (15) days of your receipt of this letter. If you fail to respond to this demand within the time allowed we shall have no alternative but to recommend that our client file an action in the Distrit Court to compel you to remove your structure on the Lot or to pay damages to Mr. Alikhani.

Very truly yours,

EARL J. WAITS

EJW:cgb

FILE

WINTERWOOD  
PARK

# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 16, 1981

L-23-D2



Mr. John Bettis  
Enchantment Engineering  
1529 Eubank Blvd. N.E.  
Albuquerque, New Mexico 87112

SUBJECT: DRAINAGE OF LOT 7, BLOCK 2, FOUR HILLS VILLAGE, UNIT 1  
ACROSS THE WINTERWOOD PARK SUBDIVISION

Dear Mr. Bettis:

This letter is to reiterate the substance of Mr. Conegliano's telephone conversation with you, of yesterday July 15, 1981.

The drainage of the lot indicated above and of those immediately surrounding it is being blocked by the construction of the embankment for Winterwood Park Dr. This potential problem was indicated to you at the time of plan review. At that time you indicated that the lot in question was owned by the developer of the Winterwood Subdivision, who was willing to accept ponding on his property and all other responsibilities.

Since to date our office has not received a scheme for solution, either in the form of a drain under the embankment, or a legal document acceptable to the City Attorney, work in this subdivision will not be allowed to continue. If the owner of the property chooses to provide the City with a legal document and bond to absolve his obligations, said document will have to contain both a description of the ponding area that will encumber his property and a commitment to indemnify the City for damages that may result to City property and all other liabilities.

The City considers this matter as very urgent; ten days ago your office was informed of this concern by Mr. Bruno Conegliano of my staff and again yesterday; the only indication received from you is that you will review this question with the owner. This letter is written to notify both you and the owner that in the absence of a resolution of this matter, all City work in Winterwood Park is temporarily suspended.

Very truly yours,

Richard S. Heller  
City Engineer

BC/RSH/fs

cc - H&H Investment Co.  
Mr. M. deVesty  
Dwayne Sheppard  
/ C. M. Easterling

MUNICIPAL DEVELOPMENT DEPARTMENT

# ENCHANTMENT ENGINEERING, INC.

CIVIL CONSULTING ENGINEERS  
J.W. BETTIS, REG. P.E. & L.S.

MAIL TO BOX 11571  
ALBUQUERQUE, NEW MEXICO 87192

1517 EUBANK N.E.  
PHONE 294-8859

June 24, 1980

To: City Engineer, City of Albuquerque, New Mexico

SUBJECT: Corrections and changes made to the plat and drainage plan of Winterwood Park with respect to comments made by the Assistant City Engineer/Hydrology in letter dated June 6, 1980.

(A) No extra right-of-way will need to be secured for the grading of Winterwood Way if the following changes of construction alignment within the existing right-of-way are made:

- 1) Move the centerline of construction of Winterwood Way north five feet from Sta. 0+00 (intersection of Four Hills Road) to Sta. 9+27.07 with a curve to the existing centerline at 10+57.21
- 2) Both major fills occur at the structures running under Winterwood Way. Slopes at both sides of the Roadway at structure 'A' will be covered with concrete and at structure 'B' side slopes will be lined with rip-rap. These changes are shown on the revised plan and profile sheets 3 and 4.

(B) Additional pipes under Winterwood Way at each of the two arroyo crossings will effectively drop the inlet heads at each. (By 3.12 feet at structure 'A' and 2.24 feet at structure 'B') Calculations are included with this letter.

(C) While a 10 foot fill is high, it is necessary if the maximum grade on Winterwood Way is to be held down to 8%.

(D) Some cut and fill operations may occur on private lots adjacent to roadways. The privilege of cut and fill and the necessary slope rights will be conveyed from the individual buyer of each lot to the contractor as each deed is drawn. This point is to appear in the covenants of Winterwood Park which will be filed with the plat.

(E) Providing easements as suggested would not be compatible with the idea of keeping the land within this subdivision as natural as possible. Such easements could feasibly grant to governing agencies the privilege of altering the watercourses. It is for the same reason that a covenant is being drawn up which will also prevent individual property owners within the subdivision from building within or otherwise altering the same watercourses.

(F) Tract 'H' is to be retained by the developer (Bill C. Henderson) for his own private use. It is adjacent to his property in Executive Hills.

623-02

Wint...

**CITY OF ALBUQUERQUE**

ALBUQUERQUE, NEW MEXICO

Copy to Mr. ...

INTER-OFFICE CORRESPONDENCE

July 6, 1981

REF. NO. \_\_\_\_\_

TO: R. S. Heller, City Engineer  
 THRU: Charles M. Easterling, Princ. Asst. City Eng./Hydrology  
 FROM: Bruno Conegliano, Civil Engineer

SUBJECT: DRAINAGE OF LOT 7, BLOCK 2, FOUR HILLS VILLAGE UNIT 1

The drainage from the referenced lot and from those immediately surrounding it is being blocked by the construction of the embankment for the roadway giving access to Winterwood Park (see attachment). This problem and similar concerns regarding the handling of offsite flows had been conveyed to the Engineer at the time of plan review. Since the embankment has been constructed and no relief has been provided, the City may find itself liable if a ponding easement is not obtained or if a drain is not installed.

After a field inspection with Mr. Barry Simmons of the Construction Section, this problem was discussed with the Technician, Ed Kiess, of Mr. Joh Bettis' Office, and he indicated his awareness of the problem. I think that some forceful indications from your office are necessary to avoid a costly installation at a later date.

BC/tsl

✓ cc: C. D. Sheppard, Princ. Asst./City Engineer

Chuck — Status? — Are we going to have any revisions that we need to provide for in current construction? Duwayne 7/14/81

APPLICATION FOR ZONE MAP AMENDMENT  
AND/OR DEVELOPMENT PLAN

Pinon Creek DR

L-23-D3

INSTRUCTIONS:

PRINT OR TYPE IN BLACK INK ONLY. Use additional sheets, if necessary. Thirty (30) copies (Annexation, forty copies) of all attachments must be submitted with the application and, after folding, shall not exceed 8 1/2 x 14 inches.

Applicant's Name: PINON VALLEY LTD. requests

Zone Map Amendment     CONCEPTUAL Development Plan Review     Annexation.  
Type of Plan

For Lot(s): 75 Block(s): \_\_\_\_\_ in Subdivision/Addition PINON CREEK  
Presently zoned SU-1 and proposed to be zoned as \_\_\_\_\_ located at:  
Street Address (No. If any): 300 PINON CREEK RD.  
Between NA Street and \_\_\_\_\_ Street

Total Land Area Covered by Application: Acres 4.8541 Square Feet 211,445

Number of DU's Proposed 140 DU's Per Gross Acre 28.84 DU's Per Net Acre 28.84

APPLICANT INFORMATION: (SEE ATTACHED SUPPLEMENTARY INFO)

Applicant's Mailing Address: 3825 ACADEMY PKWY No Phone: 345-8371  
HERKIMER QUE Zip Code: 87109

Applicant's Proprietary Interest in the Property: CWNER.

Agent if any: NEIL F. GARDNER Phone: 314-1433  
Mailing Address: 123 PUEBLO LINA NW Zip Code: 87109  
Signature of Applicant: [Signature] Date: 10-6-82

FOR PLANNING STAFF USE ONLY

Application Received By: [Signature] Date: 10-6-82

Fee: \$ \_\_\_\_\_ Paid: \$ \_\_\_\_\_ Method of Payment: \_\_\_\_\_

Cross-Ref.: AX- \_\_\_\_\_ Z- 70-37 S- \_\_\_\_\_ Other: \_\_\_\_\_

No. of Signs Issued: \_\_\_\_\_ ZHE or EPC? \_\_\_\_\_

1 Copy each to:  
Research Analyst  
Applicant  
Graphics

Hearing Date: 10-12-82  
Case Number \_\_\_\_\_  
Map Number: L-23

Comments m/cy  
10/12/82

## ZONE MAP AMENDMENT REASON FOR REQUEST FORM

Applicant must provide justification why the Zone Map should be amended.

The applicant's reason for request will be evaluated against the Policies for Zone Map Amendments. The following policy statements form the foundation for evaluation.

THE APPLICANT/AGENT, MUST PROVIDE A SOUND JUSTIFICATION FOR THE CHANGE OF ZONE. IT IS THE APPLICANT'S BURDEN, NOT THE CITY'S, TO SHOW WHY THE CHANGE SHOULD BE MADE.

IN ADDITION, THE COST OF LAND OR OTHER ECONOMIC CONSIDERATIONS OF THE APPLICANT WILL NOT BE THE DETERMINING FACTOR FOR A CHANGE OF ZONE.

LOCATION ON A MAJOR STREET IS NOT IN ITSELF SUFFICIENT JUSTIFICATION FOR APARTMENT, OFFICE, OR COMMERCIAL ZONING.

Assistance in completing the reason for request may be obtained by scheduling a pre-application discussion. Failure to state your reasons constitutes an unacceptable application. (Use additional sheet, if necessary)

Case Number

CITY OF ALBUQUERQUE  
MUNICIPAL DEVELOPMENT DEPARTMENT  
PLANNING DIVISION  
P.O. Box 1293, Albuquerque, New Mexico 87103

Cyrus Varan  
c/o 5220 Mariposa NW  
Albuquerque, NM 87120

DATE: May 23, 1979

NOTIFICATION OF DECISION

File: Z-78-138 (development plan)  
Location: Town & Country Village  
Addition

On May 17, 1979, the Environmental Planning Commission approved the above-mentioned request subject to the following conditions:

1. Summary subdivision plats are required for the residential areas.
2. A drainage study and compliance with all drainage requirements is required.
3. The ownership and maintenance responsibility of private conservation areas shall be included in form as part of the development plan, subject to City approval.
4. The pavement of the north/south cul-de-sac south of the arroyo shall be reduced to 26 ft.
5. The ownership and maintenance responsibility of private roads connecting several house sites with public roads shall be included in form, subject to City approval as part of the development plan.
6. Martingale Lane and the east/west road south of the arroyo shall be paved and dedicated.
7. The townhouse driveways shall be labeled as public or private.
8. The townhouse development shall specifically conform with the R-T zone requirements.
9. A sidewalk shall be included on the north side of the loop road separating the townhouses and the single-family home sites.
10. The commercial area shall have at least 25% of the square footage of the development designated for office use.
11. One free standing sign, 26 ft. high, advertising the center shall be allowed.
12. Buffering shall be provided between the commercial and residential development.
13. The area designated SU-1 for R-T uses shall have a maximum density of 8 DU/A, and shall have adequate on-street parking and/or guest parking in addition to Code-required off-street parking.

If you wish to appeal this decision, you must do so by 6-1-79 in the manner described below. A non-refundable filing fee of \$40 is required at the time the appeal is filed.

Appeal to the City Council. Any person aggrieved with any determination of the Environmental Planning Commission acting under this ordinance may file an appeal to the City Council by submitting written application on the Planning Division form to the Planning Division within 15 days of the Planning Commission's decision. The date the determination in question is issued is not included in the 15-day period for filing an appeal, and if the fifteenth day falls on a Saturday, Sunday or holiday as listed in the Merit System Ordinance, the next working day is considered as the deadline for filing the appeal. The City Council may decline to hear the appeal if it finds that all City plans, policies and ordinances have been properly followed. If it decides that all City plans, policies and ordinances have not been properly followed, it shall hear the appeal. Such appeal, if heard, shall be heard within 60 days of its filing.

You will receive notice if any other person files an appeal. If there is no appeal you can receive building permits any time after the appeal deadline quoted above provided all conditions imposed at the time of approval have been met. Successful applicants are reminded that other regulations of the City must be complied with, even after approval of the referenced application(s).

IF YOU RECEIVE APPROVAL FOR ANY REQUEST WHICH REQUIRES A SITE DEVELOPMENT PLAN, SEE ATTACHED SHEET FOR FURTHER INFORMATION.

Sincerely,

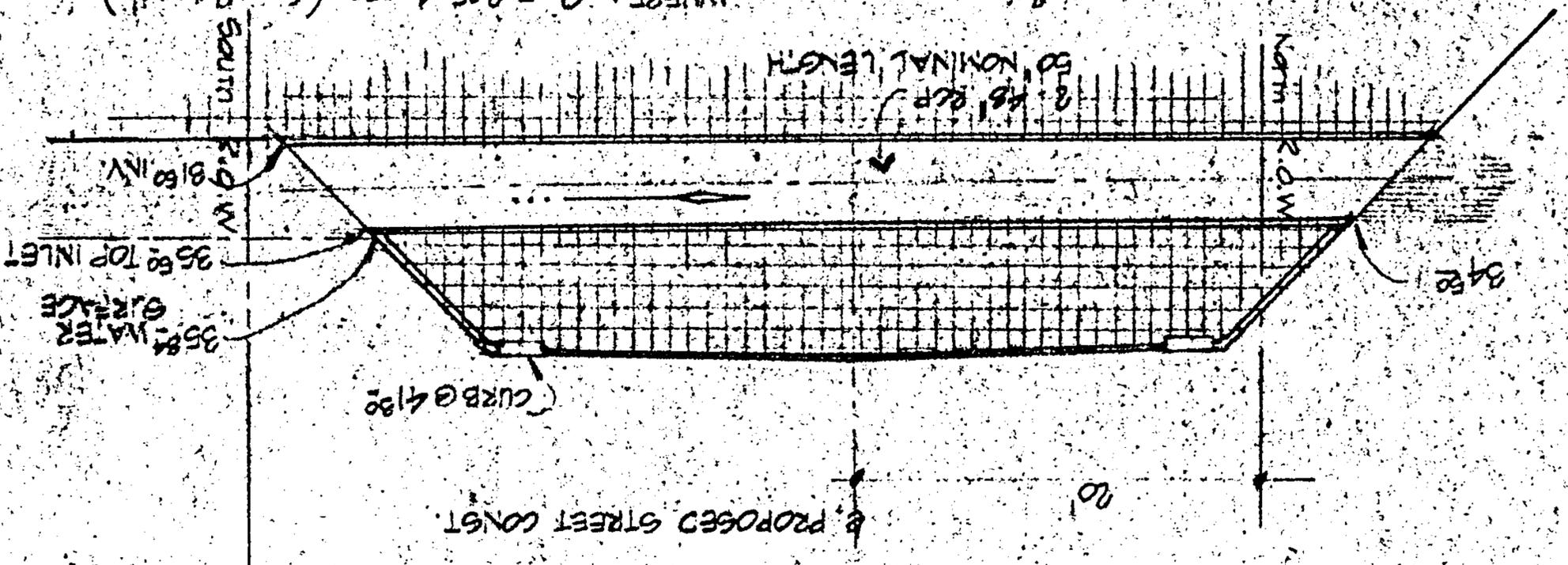
*Jill Danforth*  
Jill Danforth

Board Secretary

CC: MSM, Inc., 2601 Wyoming Blvd. NE, Suite F; 87110  
Bruce Wimer, 915 Warm Sands Dr. SE; 87123  
Nelson Spurling, 905 Warm Sands Dr. SE; 87123  
Howard Weitzman, Howard Hoffman Assoc.,  
122 E. 42nd St., New York City, NY 10017

Letter of  
Advice

STRUCTURE A  
WINTERWOOD WAY



WHERE:  $Q = 205.4$  cfs (see Report)  
 $C_d = .800$  (4 dia, beveled lip)  
 $a = 12.57$  sqft, per pipe

$$h = \frac{(205.4)^2}{(800)^2 (12.57)^2 (.8^2)} = 1.40 \text{ ft}$$

$$V = \frac{205.4 \text{ cfs}}{25.13 \text{ ft}^2} = 8.17 \text{ ft/sec}$$

$$\frac{V^2}{2g} = \frac{66.76}{64.32} = 1.03 \text{ ft}$$

$$h_e = 0.10 \left( \frac{2g}{V^2} \right) = 1.03 \text{ ft}$$

$$h_o = 1.00 \left( \frac{2g}{V^2} \right) = 1.03 \text{ ft}$$

WHERE  $f = .016$

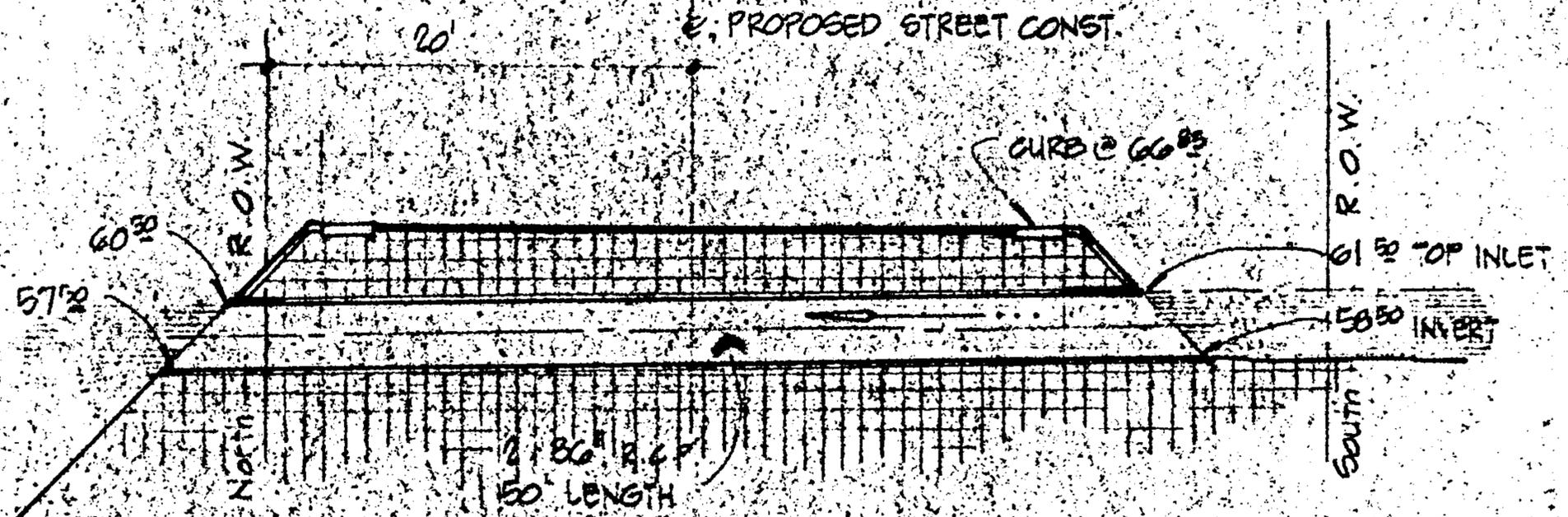
$$h = .016 \left( \frac{50}{4} \right) 1.03 = 2.06 \text{ ft}$$

$$h = 1.03 + 1.03 + 2.06 = 4.12 \text{ ft}$$

WATER SURFACE @ INLET = OUTLET ELEVATION + h  
 $= 34.80 + 1.34 = 36.14$

# STRUCTURE B

WINTERWOOD WAY



$$Q = 93.1 \text{ cfs (See Report)}$$

$$C_d = .830 \text{ (3' dia., 50 length, beveled lip)}$$

$$a = 7.07 \text{ SQFT, per pipe}$$

$$V = \frac{Q}{a} = \frac{93.1 \text{ cfs}}{14.14 \text{ ft}^2} = 6.59 \text{ ft/sec}$$

$$\frac{V^2}{2g} = \frac{43.43}{64.32} = .675 \text{ ft}$$

$$h_e = 0.10 \left( \frac{V^2}{2g} \right) = .068 \text{ ft}$$

$$h_o = 1.00 \left( \frac{V^2}{2g} \right) = .675 \text{ ft}$$

$$h_f = f \left( \frac{L}{d} \right) \left( \frac{V^2}{2g} \right) \quad (f = .016)$$

$$= .016 \left( \frac{50}{3} \right) .675 = .180 \text{ ft}$$

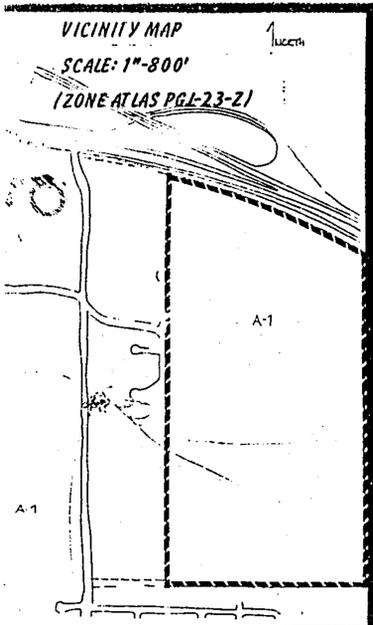
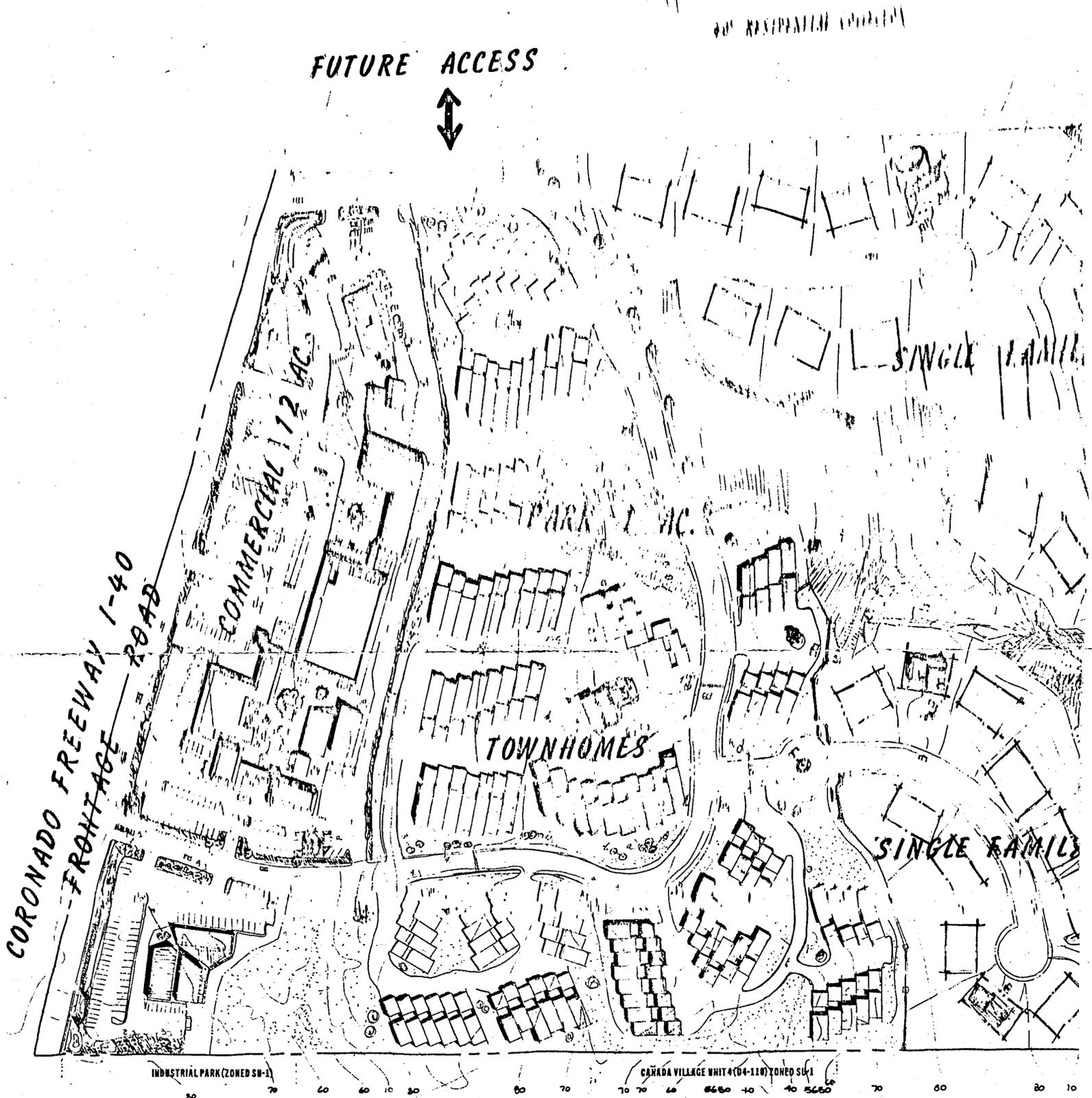
$$h = .675 + .068 + .180 = .923 \text{ ft}$$

$$\text{WATER SURFACE @ INLET} = \text{OUTLET ELEVATION} + h$$

$$= 61.50 + 0.92 = 62.42 < 63.50$$

[ BOTH PIPES MAY BE CONSIDERED TO BE RUNNING FULL @  $Q_{100}$  ]

FUTURE ACCESS



A final landscape plan will be submitted for City approval prior to development.

Trees:

1. Ponderosa Pine
2. Desert Willow
3. Flowering Crab
4. Purple Leaf Plum
5. Hackberry
6. Russian Olive (off-street only)

Note: Where applicable, minimum caliper will be 1.5".

Shrubs:

- a. Spirea
- b. Yucca
- c. Mockorange

Note: Minimum size will be 5 gallon.

Groundcover:

Seeded/sodded turf in townhouse commons.  
Decorative rock over weed inhibitor in restricted planting areas.

Existing vegetation will be preserved to the greatest extent possible.

Commercial/Office Area:

- 67,500 S.F. Gross Building Area
- 1 1/2 Storey Max. Bldg. Ht.
- 25' Minimum Setback from Property Line
- 2:1 Ratio Parking (500' Spaces)
- Signs Subject to Final City Approval

Townhouse Area:

- 2 Storey Max. Bldg. Ht.
- 800 S.F. Minimum Floor Area
- 4 Parking Spaces/Unit
- 20' Minimum Distance to Collector Street

Single Family Area:

- Modified "Cluster" Concept
- 0' Side Yard Setback
- 20' Minimum Front Setback to Public R.O.W.
- 15' Minimum Rear Setback
- Owner Will Provide Landscaping

Walkways/bikeways: In the Single Family Area, will be provided on one side of the local street; in the Townhouse Area will be provided internally for resident use and on one side of the collector street. An 8' asphalt mat is proposed.

GENERAL NOTES:

1. No development on North Side
2. No development on South Side
3. No off-street parking in Arroyo
4. Property Line shall be fenced no more than 6' high
5. Amenities, gre area will be privately owned
6. The Private portion of a corporation family lot shall be privately owned
7. Restrictive covenants shall be provided and maintained in the Single Family Area
8. Erosion control accomplished and revegetated

L23/D2

and includes a variety of plant types ranging from common weeds (ground cover) to cacti, grasses and scattered scrub evergreens and perennial bushes.

The soil is thin where it exists. The knolls and ridges are typically covered with larger rocks and boulders and the bottoms of the washes are covered with deposited sand. With consideration being given mainly to the rocky surface characteristics, some infiltration will naturally happen regardless of the slopes encountered. The natural plant life does seem to have stabilized the slopes and the free soil on them where it occurs.

Included within the legal boundaries of the site is a portion of Tijeras Arroyo. The arroyo bottom is from fifty feet below the minimum proposed development elevation on the east to seventy feet below on the west. It is filled with alluvial sand and is devoid of vegetation.

#### PROPOSED DEVELOPMENT

The proposed development included in this report shows the location of streets, private easements, contours resulting from street grading, and the 100-year flood limit of Tijeras Arroyo. Streets and the private drives (easements) will be asphalt with mountable-type concrete curb and gutter.

No residences or buildings are shown on the plan but are given consideration in the runoff coefficients in calculations which appear farther on in this report. All buildable areas on all of the lots are higher than the 5630 foot elevation specified in the planning notes. No building will be in any flood

Dwayne Sheppard  
6-5-80  
Page 2

(F) The function and use of Tract "H" should be specified.

(G) 10 ft. drainage easements are shown at the end of the private access drives. These easements should be specified as being private and should be continued to a natural watercourse.

(H) Regarding the culvert to be constructed to the south and west of Lot 5 Blk 2 of this subdivision, the same consideration is given in point B apply.

(I) No indication is given on the protection that will be provided over a small watercourse transversing Lots 2 and 1 in Blk. 3, of this subdivision. Some manner of conveyance under the roadway or a small concrete lined dip section should be provided to prevent damages to the roadway. The same consideration apply to the small watercourse crossing Lot 4 in the block.

(J) Construction appears to be indicated, east of Lot 5 Blk. 3, on adjacent property; since the natural course of the water is altered a drainage easement must be supplied accross the power line easement.

(K) According to the findings outlined in the zoning action Z-78-138, a drainage easement over the Tijeras Arroyo up to the 100 yr. flood level must be shown on the plat.

(L) Given the steepness of the terrain is it really feasible to construct effective septic tanks systems without affecting adjacent lots? (See first sentence Page 3, drainage report attached.)

BC/lc

# CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE

6/5/80

REF. NO. \_\_\_\_\_

TO: Dwayne Sheppard, Principal Assistant City Engineer  
FROM: Bruno Conegliano, Assistant City Engineer/Hydrology  
SUBJECT: Winterwood Park

The following comments pertain to the proposed subdivision:

(A) Access road from Four Hills Drive: ROW must be secured for the road and for the construction of the fill that is going to be necessary for the proper grading of same, together with a consent from the owner of Executive Hills Subdivision to the increase in the runoff discharged by the road.

(B) It must be demonstrated that no back-water will result from the construction of the culvert under the roadway. Lots 3&4 Blk. 2, Four Hills Village Unit I, must not be subjected to inundation as consequence of the proposed construction.

(C) Even though no hydrologic considerations are involved in this comment, I believe that the City would be negligent in allowing a 10 ft. high fill to be constructed in the immediate proximity of existing residential lots. I question the legality of adopting a plan that will impose a future financial liability on existing lots, following the construction of a roadway, adjacent to the boundary line of Four Hills Village Unit I.

(D) Even though the scale of the site grading plan is too small to obtain a clear perspective of the intentions of the Engineer, it would seem that cut and fill operations would be executed on private properties, adjacent to the roadway.

(E) Public waters are conveyed to the property through a 20 ft. drainage easement between Lot 11 Blk. 2 and Lot 1 Blk. 3, Four Hills Village Unit I. Therefore a public easement must be provided from the Four Hills Development, to the Tijeras Arroyo. It is recommended that a center-line description be supplied and a 15 ft. strip, on either side of said center-line, be defined as a drainage easement. This easement should not be discontinued across the powerline easement.

ENVIRONMENTAL PLANNING COMMISSION  
May 17, 1979  
Z-78-138

ADDITIONAL PLANNING DIVISION COMMENTS TO THE ENVIRONMENTAL PLANNING COMMISSION, 5/17/79 (Cont'd):

and dedicate Martingale Lane between Warm Sands Drive and the east/west road south of the Arroyo. Further, this east/west road must be paved and dedicated between this development and Four Hills Road.

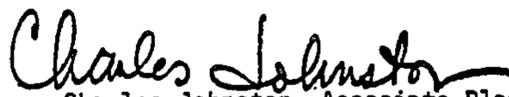
The townhouse portion of the development has a density of 5.5 DU/A. This density is significantly less than the approved 7.3 DU/A development west of this parcel. This submitted development should be revised to generally conform to the standard of the R-T zone. One of these requirements state that there shall be no more than 8 units per building. Several of the structures shown do not meet this standard. The driveways through the development should be clearly labeled as public or private and conform to the appropriate standards. Finally, sidewalks should be provided on the north side of the loop road separating the single-family and townhouse areas.

The findings of the Environmental Planning Commission in the rezoning case limited commercial development to that specified in the C-1 zone. This commercial area should fill the role of a neighborhood center. The projected full development population of the area south of I-40 and east of Juan Tabo is slightly over 20,000. A neighborhood center of 7.5 to 8 acres in size would meet the demand of this population. The development plan submitted shows 12 acres allocated for commercial and office use. Therefore, at least 25% of the square footage in this area should be shown as designated for office space.

The submitted development plan shows no free standing signs for the commercial area. If any are desired by the developer, only one should be allowed which advertises the center itself, and it should be no higher than 26 feet above the frontage road grade. Finally, the commercial development should be separated from the townhouse development by a 6 foot solid wall and have at least a 5 foot wide landscaped buffer strip on the residential side as required by the Buffer Landscape Regulations in the Zoning Ordinance.

- FINDINGS:
1. The submitted development plan is a good effort at making best use of the property.
  2. The apparent intent of the developer to provide a development that blends well with the setting should clearly be stated on the plan.
  3. The stipulations made in staff comments should be carried out. These stipulations include:
    - A. Submittal of summary subdivision plats for the residential areas.
    - B. Submittal of a drainage study and compliance with all drainage requirements.
    - C. Clearly labeling to ownership and maintenance responsibility of the private conservation area.
    - D. Reduce the pavement of the north/south cul-de-sac south of the Arroyo to 26 feet.
    - E. Clearly label the ownership and maintenance responsibility of the private ways connecting several house sites with public roads.
    - F. Martingale Lane and the east/west road south of the Arroyo should be paved and dedicated.
    - G. The townhouse driveways should be labeled as public or private.
    - H. The townhouse development should generally conform with the R-T zone requirements.
    - I. A sidewalk should be included on the north side of the loop road separating the townhouses and the single-family home sites.
    - J. The commercial area should have at least 25% of the square footage of the development designated for office use.
    - K. One free standing sign, 26 feet high advertising the center should be allowed.
    - L. Buffering should be provided between the commercial and residential development.

RECOMMENDATION: APPROVAL OF Z-78-138 SUBJECT TO STAFF FINDINGS.

  
Charles Johnston, Associate Planner

CJ/ss

cc: Cyrus Varan, c/o 5220 Mariposa, NW; 87120  
Meurer, Serafini & Meurer, Inc., 2601 Wyoming Blvd., NE, Suite F; 87110  
Mrs. Bruce Wimer, 915 Warm Sands Dr., SE; 87123  
Nelson Spurling, 905 Warm Sands Dr. NE; 87123

Howard Hoffman Assoc., Attn: Howard Weitzman, 122 E. 42nd St., New York City, NY; 10017

ADDITIONAL COMMENTS FROM OTHER DEPARTMENTS, 5-17-79: (cont'd)

Refuse: "Approved if Refuse trucks can turn around to get out, and don't have to back out at deadends. Also, grade can't be steep."  
Fire Dept.: "All cul-de-sacs shall have a minimum radius of 40 ft. No dead-ends accepted. Need more detail information for fire flow requirements and fire hydrant distribution, as well as for Fire Dept. accessibility."  
City Engineer: "Require drainage study prior to approval of plat, development plan, and building plans. Included in the study shall be the treatment of the arroyos and drainage courses within this area. Do not concur in the non-standard street configurations which provide access to single-family units and townhouses. The streets and parking areas must be considered as private access or roads. R.O.W. dedication of Tijeras arroyo floodway to the limits of 100 flood level. Protective easement overlaid subject to SPF."  
AMAFCA: "A drainage report will be required prior to development. A drainage easement sufficient to contain the 100 year flows should be a requirement for approval."  
COG: "This proposal imposes no conflict with the Long Range Major Street Plan, so have no adverse comment."

ADDITIONAL PLANNING DIVISION COMMENTS TO THE ENVIRONMENTAL PLANNING COMMISSION, 5/17/79:

On April 4, 1978, this parcel was annexed and zoned SU-1 for residential and commercial use. The submitted site plan shows 71 single-family units on 73 acres, 122 townhouses on 22 acres and 12 acres of commercial and office space.

Subdivision plats are required for the residential portion of this development. These subdivisions will go through the Summary Plat procedure. A drainage study is required. The arroyos should be left in their natural state, and any additional run-off generated from development should be ponded so that erosion of the arroyos is not increased. The dedicated drainage way in the Tijeras Arroyo should be sufficient for Standard Project Floods as defined by the Corp of Engineers. The limits of the SPF are greater than the 100 year flood limits, however the additional area will be provided in the private conservation area.

The requirement of the Parks & Recreation Department in regard to dedication and/or cash-in-lieu should be finalized before the final site plan is signed.

The single family portion of the development has an approximate ratio of 1 DU/A including the private conservation areas. The site plan should clearly state that these areas are held by a home owners association as is intended. The Environmental Planning Commission stated at the rezoning hearing that development west of the Arroyo should be above the 5,600 contour. These stipulations have been observed. The development plan should clearly state the owners intend to take maximum advantage of existing terrain and vegetation to provide house sites that blend with the environment and that will not require a significant amount of filling. The north/south cul-de-sac south of the Arroyo need only have 26 feet of paving and the apparent private ways between the public streets and houses along the arroyos should be clearly labeled as such and conform to the private way standards in the subdivision ordinance. The developer must pave

CITY OF ALBUQUERQUE  
PLANNING DEPARTMENT

ENVIRONMENTAL PLANNING COMMISSION  
May 17, 1979  
Z-78-138

Z-78-138 Meurer, Serafini, & Meurer, Inc., agent for Cyrus Varan, requests development plan approval for the southerly 68.3 acres of the Town & Country Village Addition, zoned SU-1 (Special Use for a Planned Residential & Commercial Development), located on the south side of I-40 approximately 200 feet east of Four Hills Road SE.

Pl. Map No.: C-23

Material: Report, Sketch, Aerial Photo, Application

COMMENTS FROM OTHER DEPARTMENTS:

Traffic Engineer:	"In view of the intensity and type of landuses to be served, the right-of-way for the west access road should be increased to 60 feet (40 foot paving width) from the I-40 frontage road to the intersection with the east-west street in the single-family residential area. Access for the lots south of the Tijeras Arroyo is questionable in the east-west street does not tie in to a public street."
Dept. of Transportation:	"Proposed access should be coordinated with the Traffic Engineer and the State Highway Dept. (I-40 Frontage Road)."
COG:	"This property is situated on the frontage road south of Central and I-40 and east of Tramway. Since access is via Four Hills Road, the effect on the Long Range Major Street Plan is expected to be minimal, therefore, have "no adverse comment."
City Engineer:	"Require drainage study prior to approval of plat and development plan. Drainage plan should include treatments of all drainage courses. Plat should indicate ownership of Tijeras Arroyo drainage course."
Environmental Health Dept.:	"No comments."
Fire Dept.:	"Will need a development plan for proposed townhouses and commercial development to determine adequate hydrant distribution and fire flow. Are cul-de-sacs 50' R.O.W. or 40' paved radii? Recommend access across Tijeras Arroyo to southern most residential development. Will street at south western end of residential development extend into Four Hills Road? Adequate hydrant distribution and fire flow will be required for entire area before City class fire protection can be provided."
AMAFCA:	"Not in AMAFCA area."
APS:	"Students will be bused to schools with available classroom space. No new schools are planned for the area."
Parks & Recreation:	"Under Ordinance 7-1976, as amended, the developer is requested to pay a development fee of \$78.00 per unit plus 170 sq. ft. of land per unit or cash-in-lieu of land."
Water Engineer:	No reply received.
Liquid Waste Engineer:	No reply received.

PLANNING DEPARTMENT COMMENTS TO ENVIRONMENTAL PLANNING COMMISSION, 2-15-79:

The land for the proposed Town and Country Village development is in the process of being annexed by the City and receiving SU-1 zoning. In anticipation of the rezoning a site development plan has been submitted.

The plan is insufficient in detail and does not conform with all the Environmental Planning Commission's findings in the rezoning case. The site plan does not address the siting and size of the proposed structures for the commercial and townhouse development. Only lot lines are shown for the single family development. A complete site plan showing the development proposed for the entire parcel is necessary to insure a proper coordination of land uses.

Further, the general appearance of the structures, location and height of fences or walls, and the size, height, and location of all signs is not shown. Vehicular circulation is not dealt with in the townhouse or commercial areas, nor is pedestrian circulation addressed for the entire development. No parking lot design, landscape plan, or drainage study for the area is provided.

The findings of the Environmental Planning Commission in the rezoning case limited commercial development to that specified in the C-1 zone. This commercial area should fill the role of a neighborhood center. A higher level of activity would compete with existing commercial development to the east in the Tijeras area and the west along Juan Tabo and Central Avenues. The projected full development population of the area south of I-40 and east of Juan Tabo is slightly over 20,000. A neighborhood center of 7.5 to 8 acres in size would meet the demand of this population. The development plan submitted shows 17.5 acres allocated for commercial use.

The findings of the Environmental Planning Commission in regard to the proposed residential development of the property state that the townhouse density should be comparable for the approved development on the west. The submitted plan shows a density of 7.5 DU/A in the townhouse parcel. The adjoining townhouse development on the west had a density of 7.3 DU/A. The findings also state that the single family development shall have lot sizes

PLANNING DIVISION COMMENTS TO THE ENVIRONMENTAL PLANNING COMMISSION, 2/15/79:

of approximately .5 acres, and no development shall occur below an elevation of 5630 feet. The average size for the single family lots is approximately .75 DU/A. Lot lines for the single family units extend below the 5630 foot level and the 100 year floodplain limits. A note on the plat states development will be limited to above the 5630 foot elevation. Some parcels are shown with significant filled areas in order to meet this last requirement.

The Environmental Planning Commission's findings go on to require the developer to provide a refined development plan that adequately reflects the physical problems associated with the site and deal with the problems of access to this site and adjacent properties. The development plan submitted while meeting the basic limitations of the Commission's findings does not show an attempt to provide the type of quality development the site warrants and the Commission would expect.

Conclusion

This development plan should be deferred until such time as a revised plan is submitted that meets the basic requirements of the Planning Commission. Such a plan should:

1. Provide complete plans for the development of the entire parcel.
2. Follow closely the guidelines of the Foothills Development Policy.
3. Limit commercial development to a neighborhood center on 7.5 to 8 acres in the northwest corner of the parcel.
4. Provide for an appropriate arrangement of dwelling units. The Foothills Development Policy limits overall development of a parcel to 3 DU/A. This parcel would then be limited to a maximum total of 288 dwelling units. Using the density of 7.5 townhouses/acre and 1.28 single family houses/acre (.75 acre lots) shown on the submitted development plan, there could be a maximum of approximately 29 acres of townhouse development and 54 acres of single family development. These figures assume 8 acres of commercial activity as suggested and 8.5 acres of open space as shown on the submitted plan. This townhouse development should border the south and east sides of the commercial development with single family development beyond this. Only minimum grading for house sites should be allowed with appropriate steps taken not to concentrate runoff from surfaced areas. Maximum advantage should be taken of the existing terrain and vegetation to provide house sites that blends with the environment. No house lot should extend below the 100 year flood plain and specific house sites above the 5630 foot elevation should be shown.
5. Show the proposed direct access between the south half of this parcel and Four Hills Road. In addition provision for access from both the north and south halves of the parcel to land east of this development should be included.

Findings

1. The submitted site plan does not provide adequate information regarding this proposed development
2. The information provided does not indicate a development that would conform with all the requirements of the Foothills Development Policy and the Planning Commission's findings in the rezoning hearing.
3. The site should be deferred till such time as a new plan that meets the above requirements can be submitted.

ADDITIONAL COMMENTS FROM OTHER DEPARTMENTS, 5-17-79:

Water Engineer:

"The Comprehensive Plan indicates that the portion of this tract south of the Tijeras Arroyo lies in an area to remain open space. As a result, there is no master plan to serve this area, and although the water system has the capacity to do so, the Water Resources Department does not plan to serve the portion south of the Tijeras Arroyo. Water service is available to the portion of this tract which lies north of the Tijeras Arroyo subject to the extension of waterlines at the developer's expense."

Liquid Waste Engineer:

"The Tijeras Canyon Interceptor was not designed with capacity to serve the portion of the tract designated by the Comprehensive Plan to remain open space. As a result, sewer service is not available to the portion of this tract which lies south of the Tijeras Arroyo. Sanitary sewer service is available to the portion of this tract north of the Tijeras Arroyo, subject to the extension of sewerlines at the developer's expense."

Parks & Recreation:

"Under Ordinance 7-1976, as amended, the developer is required to pay a development fee, plus dedicate land or cash-in-lieu of land."

Environmental Health:

No adverse comments. Top soil disturbance permit required prior to grading start."

5 Z-78-138 Meurer, Serafini, & Meurer, Inc., agent for Cyrus Varan, requests development plan approval for the Town & Country Village Addition, zoned SU-1 (Special Use for a Planned Residential & Commercial Development), located on the south side of I-40 approximately 200 ft. east of Four Hills Road SE. (Deferred from 4-19-79)

There were no objectors present.

Person Speaking For The Request: Don Gilmer, agent, presented the proposed site development plan, and stated he feels it conforms to the concerns of staff and the Planning Commission, and is environmentally sensitive. He stated he is in agreement, and will comply with staff Findings.

Commissioner Burns stated he generally supports the plan which he feels is sensitive to the land. He feels that the density proposed for the townhouse area is appropriate provided adequate parking is allowed. He feels comfortable with allowing staff to review the detailed site plans in accordance with Commission action. He feels that maintenance and ownership of the private conservation areas, private roads, and open spaces should be made a part of the approved plan in written form. Also, he feels R-T zone requirements should be strictly adhered to in the townhouse area.

Commissioners Sanchez and Gregory concurred with the plan subject to staff findings.

Commissioner Ashcraft expressed support of the plan subject to staff findings and also subject to Commissioner Burns' suggestions concerning the R-T zoning.

Commissioner Martin stated she is opposed to the proposed density, and reminded the Commission she opposed the zone change initially. She feels a second access to the Four Hills area is essential prior to any further development in the area. She feels the density should remain as low as possible, that the commercial development should be of a neighborhood nature, and that the area should remain as undeveloped as possible. However, in general, she feels the plan is sensitive to the conditions placed on the original zone change.

Commissioner Barker voiced support of the plan stating he feels the densities are totally appropriate and that the proposed commercial/office provides a buffer between the freeway and the residential.

Chairman Fritz also stated he supports the plan.

- FINDINGS:
1. Summary subdivision plats are required for the residential areas.
  2. A drainage study and compliance with all drainage requirements is required.
  3. The ownership and maintenance responsibility of private conservation areas shall be included in form as part of the development plan, subject to City approval.

Z-78-138 (cont'd)

4. The pavement of the north/south cul-de-sac south of the arroyo shall be reduced to 26 ft.
5. The ownership and maintenance responsibility of private roads connecting several house sites with public roads shall be included in form, subject to City approval as part of the development plan.
6. Martingale Lane and the east/west road south of the arroyo shall be paved and dedicated.
7. The townhouse driveways shall be labeled as public or private.
8. The townhouse development shall specifically conform with the R-T zone requirements.
9. A sidewalk shall be included on the north side of the loop road separating the townhouses and the single-family home sites.
10. The commercial area shall have at least 25% of the square footage of the development designated for office use.
11. One free standing sign, 26 ft. high, advertising the center shall be allowed.
12. Buffering shall be provided between the commercial and residential development.
13. The area designated SU-1 for R-T uses shall have a maximum density of 8 DU/A, and shall have adequate on-street parking and/or guest parking in addition to Code required off-street parking.

THEREFORE, BE IT RESOLVED THAT Z-78-138 (development plan) be approved subject to the above Findings.

Moved by Commissioner Burns  
Seconded by Commissioner Ashcraft

Motion Carried Unanimously

6. Z-921 Gathman-Matotan, agent for R. P. Tinnin, requests approval  
Z-79-2 of a site development plan for the Tinnin Shopping Center, and a change of zone from P to C-2 for a 2.81 acre portion thereof, located at the northeast corner of Juan Tabo Boulevard and Candelaria Road N.E., containing approximately 14.69 acres. (Deferred from 3-15-79)

The applicant's request for deferral to July was acknowledged. It was pointed out that this request has been pending since January; therefore, the following motion was made:

BE IT RESOLVED THAT Z-921, Z-79-2 be deferred indefinitely.

Moved by Commissioner Ashcraft  
Seconded by Commissioner Burns

Motion Carried Unanimously

CONCEPTUAL

PINON CREEK - PHASE II ----- APPLICATION FOR DEVELOPMENT PLAN APPROVAL

SUPPLEMENTARY INFORMATION

10-6  
SEPT. 27, 1982

REASON FOR REQUEST

The SU-1 Zoning for this project was based upon a Development Concept Plan that included the development density; but that required the approval of a Site Development Plan before development. This request is submitted in accordance with that requirement for Pinon Creek - Phase II.

PROJECT BACKGROUND

Pinon Creek was originally a part of Canada Village Second Unit as platted in 1950. In 1970 a Special Use Permit (Z-70-37) and a replat known as Canada Village Unit 4 (S-70-12) was approved by the City Planning Commission and the City Commission. The concept plan of that approval included a number of townhouse lots in Phase I; and 150 apartments in a high rise building (12 stories +) along with 60 + low rise apartments in Phase II. Thus the Special Use Zoning in 1970 established the development density for the project.

Phase I subsequently had a development plan and plat of townhouse lots approved followed by various construction activities leading to its present status.

This application is for Development Plan Approval of Phase II pursuant to the concepts of the original Special Use Plan.

PHASE II

This phase (Lot 75, Pinon Creek) contains just under five acres and consists of some fairly rough terrain. The present owners/developers believe that a somewhat lower density than the 210 units originally approved along with a lower building would be more appropriate for the site. Therefore the proposed plan includes only 140 units grouped into five, 4-story buildings with a clubhouse and pool. This results in approximately 46% of the site being open space and a floor area ratio of about 56% (0.5575)

LANDSCAPING

In addition to the roughness of the terrain the site contains several areas of rock formation. Thus the surface finishing of the site becomes a structural design problem that must be resolved in close harmony with the buildings, driveway and parking areas, etc. The buildings will be "stepped" to follow the ground slope and the grades of the parking areas. Building foundations and footings for stairs and lifts will require special design treatment. Grades on parking areas relative to adjacent open areas will require retaining walls or other special treatment in some areas; and will result in some exposed rock slopes in other places. Therefore the finish surface treatment becomes, in large part, an integral part of the structural engineering design of the whole project. Since it cannot be known which areas will in fact be plantable or to what degree until such structural design has been worked out, no landscaping plan has been shown. The developer fully intends to install "Southwest" type of landscaping where appropriate and standard green landscaping where appropriate; all in accordance with City guidelines and approvals. The developer proposes to submit a fully detailed landscape plan for staff review and approval at such time as structural design permits those appropriate areas to be identified.

DRAINAGE

In connection with plat approval of Phase I; a Drainage Report was prepared in accordance with applicable policies, for the entire Pinon Creek Project (Phase I and Phase II). That report and its included drainage management plan was approved by the City on August 22, 1979.

REFUSE CONTAINERS

Five refuse container locations have been shown on the proposed plan. These locations must be subject to modification according to final structural design of the site grades and in accordance with the wishes of the City Refuse Department.

# CITY OF ALBUQUERQUE DRAINAGE COMPLAINT REPORT

Location L-23 Winter Wood Park Sheet ..... of .....

Lot 3A-4A-4B (13812 Winter Wood Way)

Reported by: Alikhani Naser Phone 255 2730

Address: 312 Turbine SE Ext. 294 2048

Complainant ..... Phone .....

Address ..... Ext. ....

Taken by: ..... Date .....

COMPLAINT Filling in arroyo & shifting  
arroyo to adjoining property

Referred to: .....

INVESTIGATION — CAUSE .....

Recommendation: .....

Investigated by: ..... Date .....

Action taken: .....

Taken by: ..... Date .....

Follow Up: .....

Taken by Carol A. Murt Date .....

Zone Atlas .....

Drainage Map .....

Plan No. ....

Project No. ....

Date .....

Complaint Report No. ....

Date .....

Approved .....

COMPLAINT FORM

PUBLIC WORKS DEPARTMENT  
UTILITY DEVELOPMENT DIVISION  
HYDROLOGY SECTION  
768-2650

Complainant: \_\_\_\_\_ Phone #: \_\_\_\_\_

Address/Location: \_\_\_\_\_

Complaint: \_\_\_\_\_

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Referred to: \_\_\_\_\_

Investigation-Comments: \_\_\_\_\_

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Follow-up: \_\_\_\_\_

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Resolved by: \_\_\_\_\_ Date: \_\_\_\_\_

COMPLAINT FILE NO.:

ZONE ATLAS/DRAINAGE FILE NO.:

DATE COMPLAINT RECEIVED:

COMPLAINT FORM

PUBLIC WORKS DEPARTMENT  
UTILITY DEVELOPMENT DIVISION  
HYDROLOGY SECTION  
768-2650

Complainant: \_\_\_\_\_ Phone #: \_\_\_\_\_

Address/Location: \_\_\_\_\_

Complaint: \_\_\_\_\_

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Referred to: \_\_\_\_\_

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Investigation-Comments: \_\_\_\_\_

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Follow-up: \_\_\_\_\_

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Resolved by: \_\_\_\_\_ Date: \_\_\_\_\_

COMPLAINT FILE NO.:

ZONE ATLAS/DRAINAGE FILE NO.:

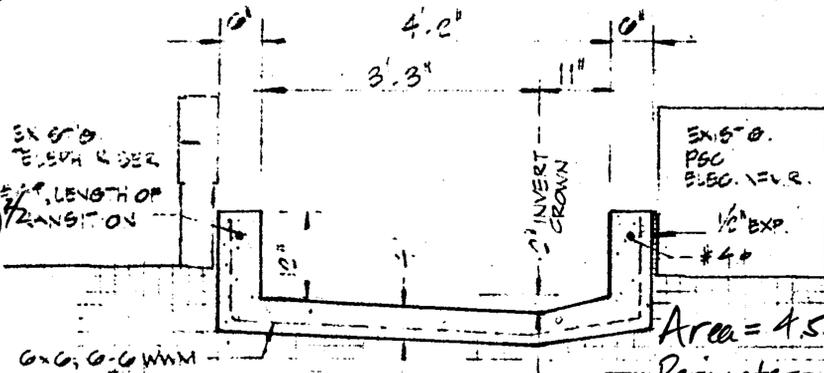
DATE COMPLAINT RECEIVED:

**ENCHANTMENT ENGINEERING Inc.**

9910 INDIAN SCHOOL RD. NE  
ALBUQUERQUE, NM Ph. 294-8859  
APRIL 22, 1982

BGB 4/27/82

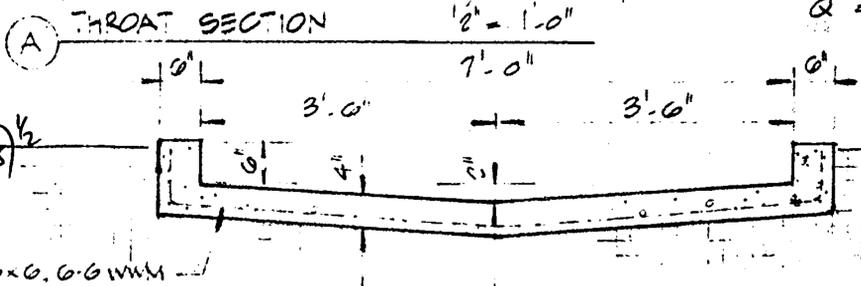
$Q_{max} = \frac{1.49}{.013} (4.51) \left(\frac{4.51}{6.17}\right)^{2/3} (.4)^{5/2}$   
= 265 cfs



SLOPE (CURB TO THROAT) 1:23 AND  
N. TYPICAL CONC. .03  
AREA OF THROAT (A) 4.51 SQ FT  
WETTED PER METER (P) 6.17 FT

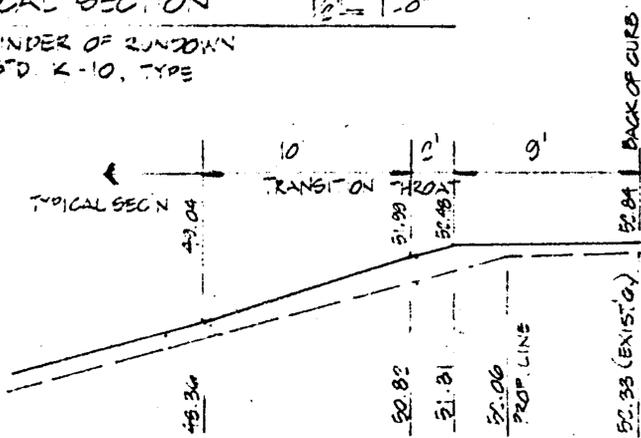
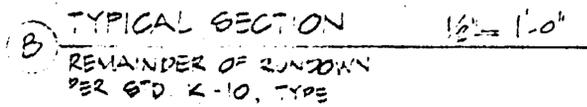
$Q = \frac{1.49}{.013} \times 1.03 \times \left(\frac{4.51}{6.17}\right)^{2/3} \times (.4)^{5/2}$   
= 28.08 FT<sup>3</sup> SEC. MAX.

$Q = 4.5 \times 28.08 > 34.04$  PER DEV. DRAINAGE PLAN REPORT



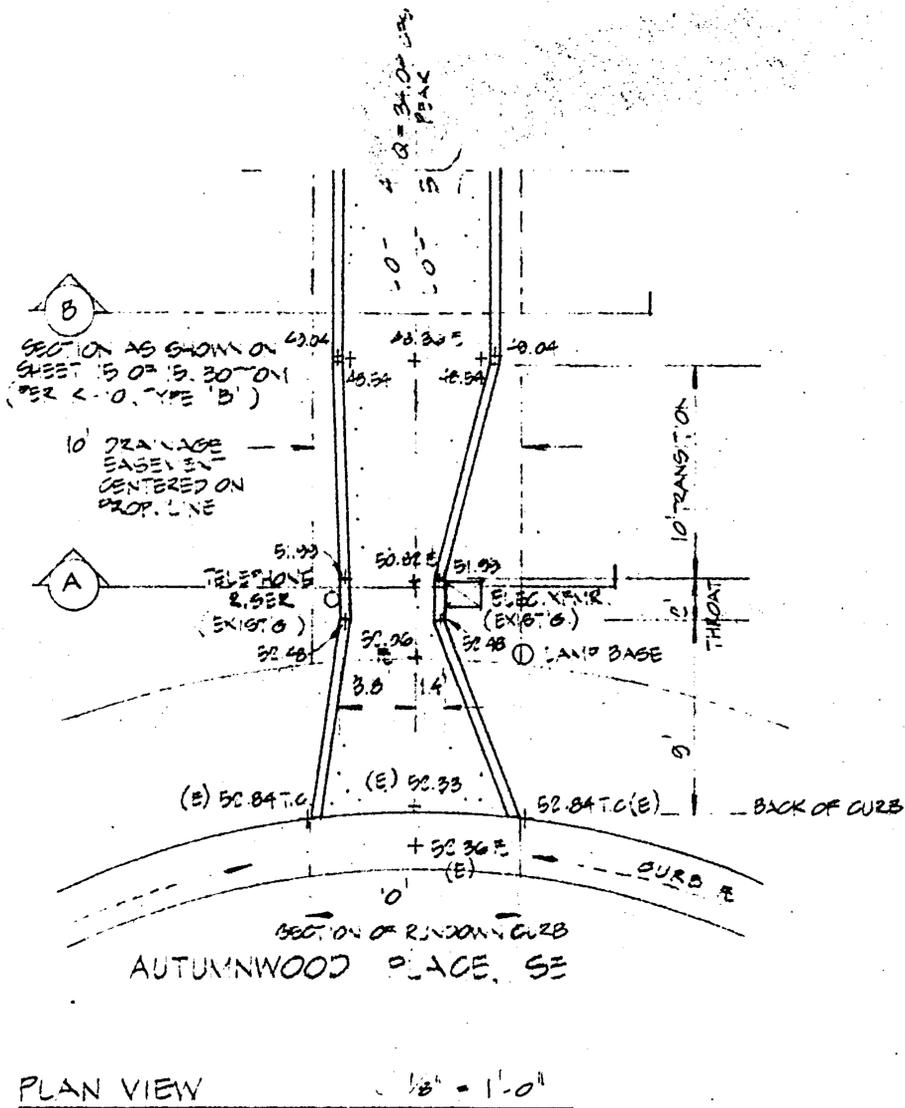
Area = 4.08'  
Perimeter = 8.01'

$Q_{max} = \frac{1.49}{.013} (4.08) \left(\frac{4.08}{8.01}\right)^{2/3} (.043)^{5/2}$   
= 63 cfs



PROFILE 1/8" = 1.0' V+H  
BACK OF EXIST'G. CURB TO END OF TRANSITION

Approved for Construction  
4/27/82  
BGB



PLAN VIEW 1/8" = 1.0'



**RUNDOWN REVISION L23/D2**  
BETWEEN LOTS 4 AND 5  
BLOCK 1  
WINTERWOOD PARK  
ALBUQUERQUE, NEW MEXICO  
SUPPLEMENT TO DETAILS ON SHEET 5 OF 5  
CITY DRAWING NO. C-29-193

DRAINAGE REPORT

WINTERWOOD PARK

A Residential Development within  
Sec. 26, T-10-N, R-4-E, N.M.P.M.

for

H & H INVESTMENTS

**RECEIVED**

**MAR 3 1 1980**

**CITY ENGINEER**

PREPARED BY

ENCHANTMENT ENGINEERING  
1517 Eubank Blvd., NE  
Albuquerque, New Mexico 87111

March 1980

## PURPOSE

The purpose of this report is to present to governing agencies an outline of the methods used in the disposal of stormwaters from the area under study and the provisions for conveyance of upstream flows through the site. The coverage of this report will include background information which directly sets the parameters for the specific design proposals, the topography of the development site and its immediate surroundings, vegetation, upstream drainage tributaries, internal drainage and any calculations which pertain to specific designs.

## LOCATION

The proposed development, which has been named WINTERWOOD PARK, occupies a 35-acre tract of land within Section 26, Township 10 North, Range 4 East, N.M.P.M. in the foothills of the Manzano Mountains. It is bounded on the north by Tijeras Arroyo, on the south by FOUR HILLS VILLAGE, and on the west by three private residences which lie between it and Four Hills Road, S.E. (See Vicinity Map) The land to the east is totally undeveloped foothills.

## BACKGROUND INFORMATION

This is not the first time that a proposal for the development of this site has been made. However, this particular plan is final in concept. WINTERWOOD PARK is a portion of a total development plan which was approved in concept by the City of Albuquerque Planning Department in April of 1979. It includes

only the single family part south of Tijeras Arroyo. As designed, in part as a result of the relief, this section was and is intended to be a cluster development of sorts with access to some of the residences being provided by mutual permanent private access easements. The plan covered by this report does not deviate from this concept. The following are a few of the general notes included on the development plan which pertain directly to this report:

1. No development will occur below 5630' elevation on the south side of Tijeras Arroyo
2. No obstructions will be permitted within the Tijeras Arroyo 100-year flood plain.
3. Property lines adjacent to the Private Conservation Area shall have over 50% open-type fencing
4. Erosion control of cut and fill areas shall be accomplished through the use of erosion control fabric and be revegetated with native species.

In addition to these points, it was also agreed that the existing vegetation and land will be preserved to the greatest extent possible.

#### TERRAIN

In its present state, the site shows no evidence of previous earthwork. The area is characterized by numerous small knolls, ridges and flow lines. Slopes vary from two percent to nearly thirty percent in some places. The flow lines traverse the site from southeast to northwest generally and drop at rates of between ten and fifteen percent. Vegetation is moderate

and includes a variety of plant types ranging from common weeds (ground cover) to cacti, grasses and scattered scrub evergreens and perennial bushes.

The soil is thin where it exists. The knolls and ridges are typically covered with larger rocks and boulders and the bottoms of the washes are covered with deposited sand.

With consideration being given mainly to the rocky surface characteristics, some infiltration will naturally happen regardless of the slopes encountered. The natural plant life does seem to have stabilized the slopes and the free soil on them where it occurs.

Included within the legal boundaries of the site is a portion of Tijeras Arroyo. The arroyo bottom is from fifty feet below the minimum proposed development elevation on the east to seventy feet below on the west. It is filled with alluvial sand and is devoid of vegetation.

#### PROPOSED DEVELOPMENT

The proposed development included in this report shows the location of streets, private easements, contours resulting from street grading, and the 100-year flood limit of Tijeras Arroyo. Streets and the private drives (easements) will be asphalt with mountable-type concrete curb and gutter.

No residences or buildings are shown on the plan but are given consideration in the runoff coefficients in calculations which appear farther on in this report. All buildable areas on all of the lots are higher than the 5630 foot elevation specified in the planning notes. No building will be in any flood

hazard area. Also shown on the development plan are the breaks in drainage areas which will be created by the development. It can be seen that although the breaks may not be in exactly the same places they are in now, the actual difference between the natural (existing) tributary areas and the proposed areas is small. The primary changes are in minor tributary areas and no attempt has been made to alter the courses of the two largest tributaries. (Shown on the Plan as **A** and **B** )

#### UPLAND DRAINAGE

Four main watercourses traverse the site. The sources of these lie to the east and south of FOUR HILLS VILLAGE and the farthest limit of watershed is 4/5 of a mile southeast of the site. In determining the extent of these areas an orthophoto map of the Four Hills area (Atlas Index M-23, Flown on March 26, 1976) was used. Where subsequent upstream development has taken place in the four years between the photo and this writing, field checking supplanted any information needed but not available from photo inspection alone. These tributary areas are outlined on the prints of the photo included with this report. Two of the areas (**A** and **B** ) are of major importance. Area **A** covers about 104 acres and includes the longest flow line. Although it does not directly flow across WINTERWOOD PARK, it does cross the right-of-way of the primary access road into the development from Four Hills Road. Having a length of some 4600 feet total from its farthest reaches to the inlet point at Winterwood Way, it is a natural water course through Four Hills. The only improvements made to

this water course are some rip rap or concrete used to stabilize side slopes at crossings. A small lake has been built on the golf course some 2000 feet upstream. This lake seems to be cosmetic only and does not serve any runoff control purpose. nor has it been given any consideration in the runoff computations for this tributary area.

In our general survey of tributary area  $\text{\textcircled{A}}$ , inspection and measurements of pipes under the three nearest crossings to the design inlet point. At each of the three crossings - Stagecoach Road, Warm Sands Trail, and Warm Sands Drive - there is one 48" pipe. Those on Stagecoach Road and Warm Sands Trail were found to be clean and free of debris. The pipe under Warm Sands Drive is not in good shape. It is clogged badly on the downstream side. Only about 2 square feet of opening was visible. Judging from the algae growth in the water course, it appears that this is a living, spring-fed stream.

For the purposes of determining the rate of flow at the inlet point, the Drainage Criteria Manual of the City of Albuquerque was used (July draft). The duration time was figured from the nomograph on page 33 and overland flow velocities interpolated from the figures set forth on page 45.

Duration time (i) :

1000 lin.ft @ 32% avg.	=	5.8 min.
3600 lin.ft @ 7.5% avg.	=	22.2 min.

---

28 min. total  $T_c$

$$i = \frac{189}{28 + 25} = 3.57 \text{ in/hr}$$

Coefficient of Runoff :

.55 was used after taking into consideration the

projected low density housing and the amount of sodding and landscaping within the area.

$Q_{100}$  at the Winterwood Way crossing (assuming unobstructed flows and debris-free pipes upstream)

$$104.6 \times .55 \times 3.57 = \underline{205.4} \text{ cubic feet/second}$$

Area B is similar to A. There was a trickle of water in the flowline of this area around the Warm Sands Drive crossing. No pipe was found, but the water was observed under the concrete slope stabilizer on the south side of the crossing and seeping out from under the stabilizer on the north. This could mean that there is a pipe under this crossing. Our computations are done with the assumption that such a pipe could in the future be cleaned and allow relatively unobstructed flows.

Duration time (i) :

$$\begin{array}{l} 1000 \text{ lin.ft @ } 17\% \\ 2500 \text{ lin.ft @ } 12\% \text{ avg.slope} \end{array} \quad \begin{array}{l} = 6.5 \text{ min.} \\ = 15.5 \text{ min.} \end{array}$$

---

$$22.0 \text{ min. total } T_c$$

$$i = \frac{189}{22 + 25} = 4.02 \text{ in/hr}$$

Coefficient of Runoff : .55 for the same reasons as given for area A

$Q_{100}$  at Winterwood Way

$$42.1 \times .55 \times 4.02 = \underline{93.1} \text{ cfs}$$

Areas C and D are by comparison of relatively minor importance but are given separate considerations because of potential flows which they can contribute to the streets and private easements in WINTERWOOD PARK.

Area C discharges onto the site 290 feet to the southeast of the proposed intersection of Winterwood Way and Autumnwood Place. Over a 700 foot run at an average drop of 14%, the duration time will be 6.6 minutes.

$$i = \frac{189}{6.6 + 25} = 6.0 \text{ in/hr}$$

C = .50 (relatively few impervious surfaces)

Area - 2.6 acres

$$Q_{100} = 2.6 \times .50 \times 6.6 = \underline{7.8 \text{ cfs}}$$

This is the rate of flow at the southerly boundary of Winterwood Park.

Area D includes 3.9 acres upstream. Its length of run is 800 feet falling at an average rate of 23%. This results in a duration time of 5.5 minutes.

$$i = \frac{189}{5.5 + 25} = 6.2 \text{ in/hr}$$

C = .50

$$Q_{100} = 3.9 \times .50 \times 6.2 = \underline{12 \text{ cfs}}$$

Again, this is the rate of flow at the southerly boundary.

Two other very minor areas contribute flows to the site from the south. Neither covers more than .7 acre and neither can possibly contribute any flows to the site than common nuisance flows. No calculations were made on these and their flows do not affect the design of this subdivision.

#### INTERNAL DRAINAGE

A comparison of the two plates showing Existing Topography and Proposed Development will clearly show the intended changes to the flow lines. The rates of outflow into Tijeras Arroyo were determined in the same manner as the

rates of inflow. That is to say, the entire runs were broken down into lengths of flow over open ground, through natural channels and through paved channels (gutters). The nomograph was used to determine the individual concentration times and these times were then summed. These areas are delineated on the Proposed Development by the heavy dashes and are lettered

◇ A thru ◇ E.

◇ A	Exist. for area north of south bdy.	proposed
Area	13.8	13.1
T <sub>c</sub>	7 min.	6.6 min.
i	5.9 in/hr	5.98 in/hr
C <sub>avg</sub>	.50	.55
Q <sub>100</sub>	48.5 cfs	48.0 cfs
◇ B		
Area	4.00	1.7
T <sub>c</sub>	6.5 min	4.5 min.
i	6.0 in/hr	6.3 in/hr
C <sub>avg</sub>	.50	.55
Q <sub>100</sub>	12.00 cfs	5.3 cfs
◇ C		
Area	2.3	7.0
T <sub>c</sub>	4.0 min.	10.8
i	6.4 in/hr	5.27 in/hr
C <sub>avg</sub>	.50	.65 (incl. street)
Q <sub>100</sub>	7.3 cfs	26.24 cfs

$\diamond$ D	Existing	Proposed
Area	1.7	1.7
$T_c$	5.3 min.	4.3 min.
$i$	6.2 in/hr	6.3 in/hr
$C_{avg}$	.50	.55
$Q_{100}$	5.3 cfs	5.9 cfs
$\diamond$ E		
Area	9.8	8.1
$T_c$	8.5 min	6.7 min.
$i$	5.64 in/hr	5.94 in/hr
$C_{avg}$	.50	.55
$Q_{100}$	27.6 cfs	26.5 cfs
$Q_{total}$	100.7 cfs	111.9 cfs

As can be seen, the total net increase in the runoff from the development is about 11 cfs. The coefficients of runoff were determined by assuming 3000 square feet of impervious area per lot (@C 1.00) with 1200 sq.ft. of lot sodded or otherwise landscaped (@C .17).

Note also that a considerable portion of Natural area  $\diamond$  B has been diverted into Developed area  $\diamond$  C.

The figures which appear on the two plans are the sum of the rates of discharge from the internal drainage areas and the upstream rates tributary to them.

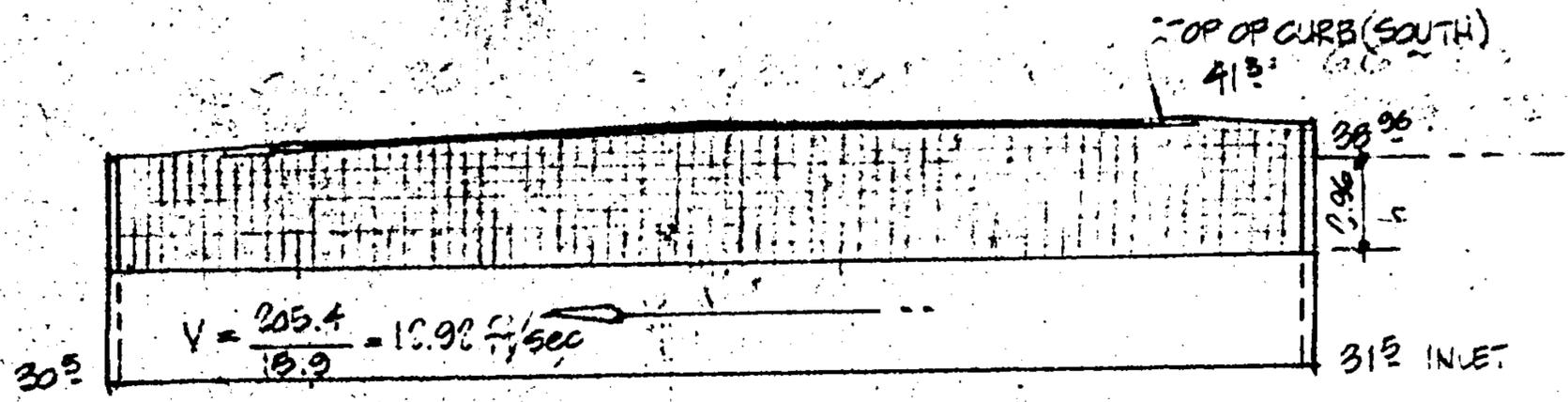
STRUCTURE A (UNDER WINTERWOOD WAY)

54" RCP, 50' LENGTH, COEFF. (C<sub>d</sub>) = .935 (Urquhart p. 4-40)

$$Q = C_d \sqrt{2gh}$$

$$\therefore h = \frac{Q^2}{C_d^2 a^2 2g}$$

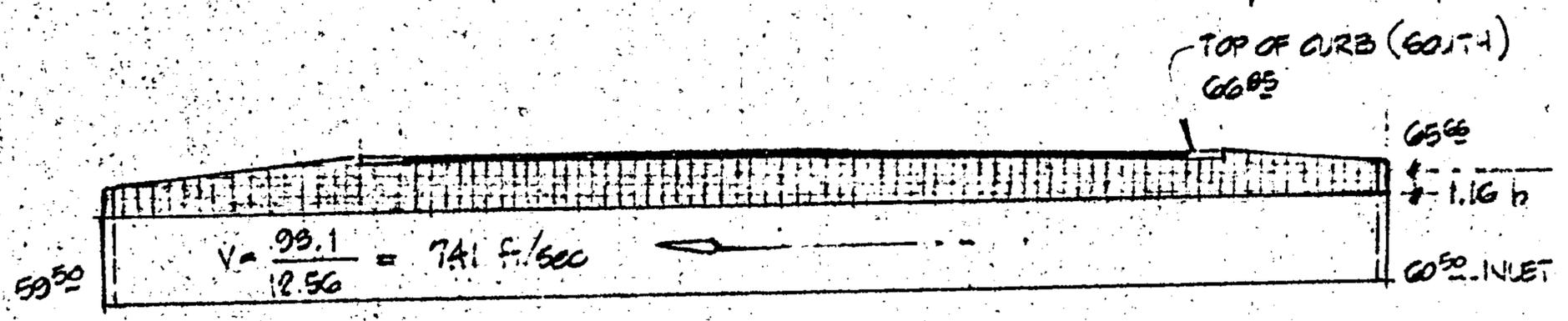
$$= \frac{205.4^2}{(.935)^2 (15.90)^2 (64.4)} = 2.96 \text{ ft.}$$



STRUCTURE B (ALSO UNDER WINTERWOOD WAY)

48" RCP, 60' LENGTH, C<sub>d</sub> = .855

$$Q = \frac{93.1^2}{(.855)^2 (12.56)^2 (64.4)} = 1.16 \text{ ft.}$$



RICHARD E. LEONARD  
EXECUTIVE ENGINEER

B. H. SWINBURNE, CHAIRMAN  
WILLIAM V. HEREFORD, VICE-CHAIRMAN  
FRANCES MCCOY, SECRETARY-TREASURER  
VERNON DOAK, DIRECTOR  
KLESTON LAWS, DIRECTOR

**Albuquerque  
Metropolitan  
Arroyo  
Flood  
Control  
Authority**

2600 PROSPECT AVE. N.E.  
P. O. BOX 25851 - ALBUQUERQUE, N. M. 87125  
TELEPHONE 344-3516



RECEIVED  
JUL 29 1980  
CITY ENGINEER

July 28, 1980

Mr. Chuck Johnston  
Planning Division  
City of Albuquerque

L23-D2

Dear Chuck:

Ref. Z-78-138, Proposed plat of Winterwood Park, A Portion of  
Town and Country Village.

AMAFCA Comments:

- a. 100-year Flood Limit does not include all land shown on Corps of Engineers Flood Plain Information Maps.
- b. Drainage easement must be described by metes and bounds.
- c. Dedication statement should include the following sentence:  
AMAFCA and other public agencies have the right of access, the right to remove obstructions, and the right to construct and maintain drainage facilities within drainage easements.

Sincerely,

*Richard E Leonard*

Richard E. Leonard  
Executive Engineer

ic

cc: R. Heller ✓  
Enchantment Engineering  
Mr. Henderson

RSH <u>RSA</u>	ADM _____
HRO _____	SUR _____
CDS _____	COUN _____
DES _____	SEC _____
INSP _____	<b>FILE</b> _____
<b>HYDRO</b> _____	RETURN _____

ENCHANTMENT ENGINEERING, INC.

CIVIL CONSULTING ENGINEERS

J.W. BETTIS, REG. P.E. & L.S.

1517 EUBANK N.E.  
PHONE 294-8859

MAIL TO BOX 11571  
ALBUQUERQUE, NEW MEXICO 87192

June 25, 1980

City of Albuquerque, New Mexico,  
Albuquerque, New Mexico.

Att: Richard Heller, City Engineer

In order to satisfy and clarify certain requests made by your Department covering drainage, access road and streets within the Winterwood Park Subdivision, covenants to be filed with this Plat will require necessary slope rights for street grading and will stipulate that no construction will in any way interfere with the natural flow of drainage thru the Subdivision.

The access road to this Subdivision from Four Hills Road S. E. is thru the Henderson properties and slope rights along the road will apply as above and nothing will be constructed on these lands to interfere with the natural drainage.

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APPROVED;

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# ENCHANTMENT ENGINEERING, INC.

CIVIL CONSULTING ENGINEERS

J.W. BETTIS, REG. P.E. & L.S.

1817 EUBANK N.E.  
PHONE 294-8859

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ALBUQUERQUE, NEW MEXICO 87192

(G) Request that the 10' drainage easements from the ends of the private access easements be also shown as private drainage easements has been done. Where platted, these easements do extend to the nearest watercourse.

(H) Structure 'B' is 2 - 36" pipes. See calculations and design included.

(I) The same restriction mentioned in "E" will apply. (No alteration of watercourses will be allowed) A 10 foot wide dip section has been added to the paving plans and crosses Winterwood Way at Sta. 15+06.09.

(J) Due to the difference in elevation along the east side of Lot 5, Block 3, the 16 foot wide drive within the 25 foot permanent access easement will be constructed abutting the westerly easement line. This location will keep the grading for the drive and rundown within the exterior boundary of Winterwood Park.

(K) Tijeras Arroyo has been shown as a natural drainage easement within the 100-year flood limit per zoning action Z-78-138.

(L) We have received no adverse comments concerning the septic tanks from environmental health.



# WILLIS A. SMITH & ASSOCIATES

CONSTRUCTION

BUILDERS, REALTORS,  
PROPERTY MANAGEMENT

3613 HIGH STREET N.E.

ALBUQUERQUE, N.M. 87107

345-3427

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WILLIS A. SMITH

