RAYMOND BABCOCK, Surveyor
3520 Pan American N.E.
Albuquerque, New Mexico 87107
Phone 344-2767

August 11, 1972

City of Albuquerque
P.O. Box 1249
Albuquerque, New Mexico

ATTENTION: City Engineer - Design

Enclosed here with is a copy of the proposed grading plan for Tract 1 & 1-A INDIAN RIDGE ADDTION.

Also enclosed here with is a copy of the drainge study for subject property.

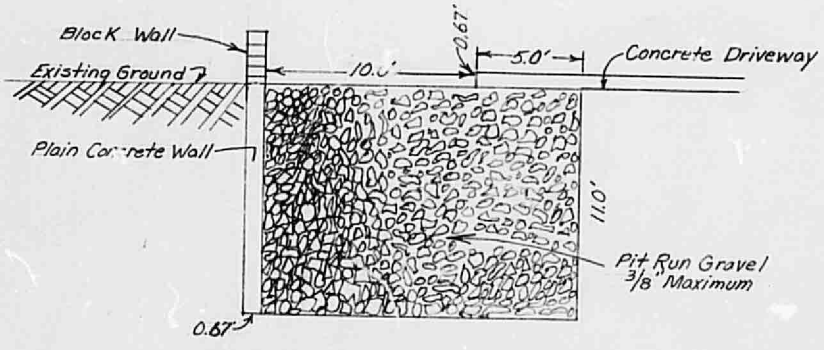
Raymond Babcock, Surveyor

Agent for Stilwell-Shaeffer
Development Company.

RB/ga
Enc. 2
Carbon Copy: Executive Engineer, AMAFCA

DRAINAGE PLAN
FOR
EL CABALLERRO TOWN HOUSES
TRACT 1 AND 1-A
INDIAN RIDGE SUBDIVISION
ALBUQUERQUE, NEW MEXICO

August 10, 1972



TYPICAL SECTION OF INFILTRATION AREA

Volume- 18000 Ft.^{3}

Percent Void- 40% Ft.

Water Volume- 7200 Ft.^{3}

Ponded Water At Top 500 Ft.^{3}

Total 7900 Ft.^{3}

% of Total $\frac{7900}{17887}$=0.44%

17887

Mr. Richard L. Burton
Professional Registered Engineer #4947
Albuquerque, New Mexico

LOCATION & DESCRIPTION

The property being developed is located between Juan Tabo and Chelwood Park Blvd. and has frontage on Menaul Blvd. The land is specifically described as Tracts 1 & 1-A of Indian Ridge Subdivision.

DRAINAGE CHARACTERISTICS

The soil is a decomposed granite in an alluvial fan which is typical of large areas of the land between the Rio Grande flood plain and the Sandia Mountains. The soil is very pervious and the vegetation sparse. The land generally slopes parallel to Menaul which has a slope in this area of 2 to 3 %. There is a small slope from front to back. The maximum difference from front to back is approximately 2'. Drainage of Tract 1-A is presently South down Deanna Street. Drainage of Tract 1 is onto Menaul Blvd.

RUNOFF

The area of Tract 1-A is 0.785 Ac. The runoff coefficient is about 0.35. After development the tract will have 0.553 acres of roof and concrete slabs and 0.232 acres of grass. This will increase the runoff coefficient to about 0.70. The time of concentration on the tract will not be changed significantly therefore, the runoff will be doubled.

The area of Tract 1 is 1.729 Ac. after development it will have 1.214 Ac. of roof area and 0.515 Ac. of grass. This will cause a similar increase in the runoff coefficient and in total runoff.

The total runoff for a 100-yr. 6-hr. precipitation will be $\frac{(2.8)}{12}(2.514)(43560)(0.70)^2 = 17887$ Ft.^{3}

CONCLUSIONS AND RECOMMENDATIONS

The flow from both tracts will be increased by 100 % by the proposed development. Although the drainage from the two tracts will go down two different streets the ponding of water on either tract will reduce the quantity of water to be removed by downstream flood protection works. Therefore it is proposed that Tract 1-A be drained to Deanna Street in a conventional manner and that an infiltration area be developed at the West end of Tract 1.

.785
1.729
2.514

RAYMOND BABCOCK, Surveyor
3520 Pan American N.E.
Albuquerque, New Mexico 87107
Phone 344-2767

RECEIVED
AUG 24
CITY ENGINEER

August 22, 1972

City of Albuquerque
P.O. Box 1249
Albuquerque, New Mexico

ATTENTION: City Engineer-Design

Enclosed here with is a copy of the revised proposed grading plan for Tract 1 & 1-A Indian Ridge Addition.

Also enclosed here with is a copy of the revised drainage study for subject property.

Raymond Babcock, Surveyor

Agent for Stilwell-Sheeffer
Development Company.

RB/ga
Enc. 2
Carbon Copy: Executive Engineer, AMAFCA

REVISED

DRAINAGE PLAN

FOR

MENAUL VILLAGE APARTMENTS

TRACT 1 AND 1-A

INDIAN RIDGE SUBDIVISION

ALBUQUERQUE, NEW MEXICO

LOCATION & DESCRIPTION

The property being developed is located between Juan Tabo and Chelwood Park Blvd. and has frontage on Menaul Blvd. The land is specifically described as Tracts 1 & 1-A of Indian Ridge Subdivision.

DRAINAGE CHARACTERISTICS

The soil is a decomposed granite in an alluvial fan which is typical of large areas of the land between the Rio Grande flood plain and the Sandia Mountains. The soil is very pervious and the vegetation sparse. The land generally slopes parallel to Menaul which has a slope in this area of 2 to 3 %. There is a small slope from front to back. The maximum difference from front to back is approximately 2'. Drainage of Tract 1-A is presently South down Deanna Street. Drainage of Tract 1 is onto Menaul Blvd.

RUNOFF

The area of Tract 1-A is 0.785 Ac. The runoff coefficient is about 0.35. After development the tract will have 0.553 acres of roof and concrete slabs and 0.232 acres of grass. This will increase the runoff coefficient to about 0.70. The time of concentration on the tract will not be changed significantly therefore, the runoff will be doubled.

The area of Tract 1 is 1.729 Ac. after development it will have 1.214 Ac. of roof area and 0.515 Ac. of grass. This will cause a similar increase in the runoff coefficient and in total runoff.

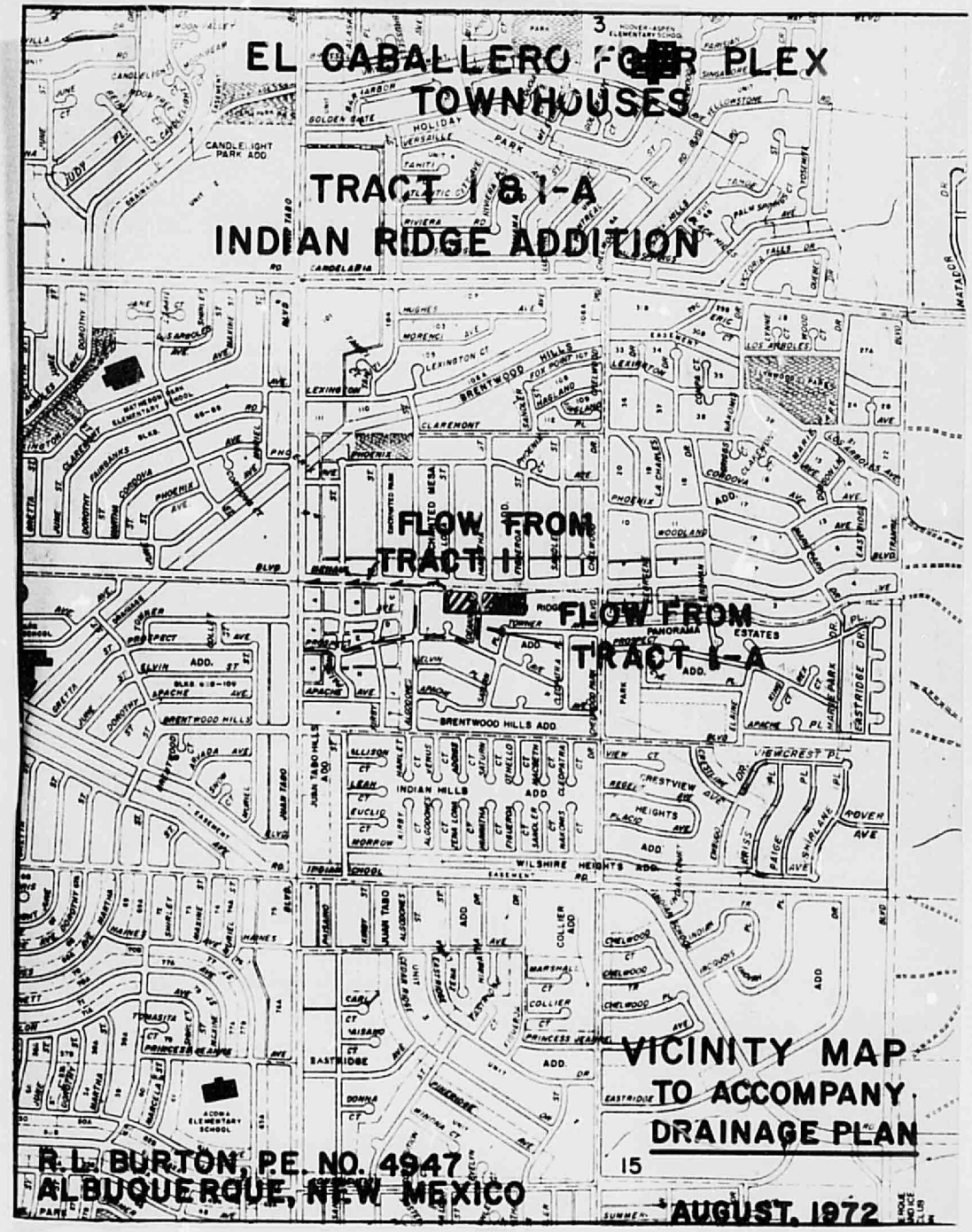
The total runoff for a 100-yr. 6-hr. precipitation will be $\frac{(2.6)}{12}(2.514)(43560)(0.70)^2 = 17887 \text{ Ft.}^3$

CONCLUSIONS AND RECOMMENDATIONS

We propose that the storm water be ponded on the property in the areas shown on the grading plan. The surface area provided for ponding on the property is approximately 14,500 Ft.^{2} . The ponding areas are 1 to 2' deep at an average depth of 1' this would provide 14,500 Ft.^{3} of water storage. The ponding areas are graded in such a manner as to allow our flow of the most Easterly ponds to flow to the Westerly ones. By directing the downspouts from the houses to the East side of each house the water should be trapped, in the ponding areas. The drainage is also directed to the numberous planters on the property and the center drive way on the property is directed to a large planter at the West end. These considerations should pond approximately 3/4 of the storm water in a 100 yr. storm. This plan would reduce the amont of storm water that is presently being drained from the property.

R. L. Burton

N.M.R.P.E. No. 4947
August 22, 1972


EL CABALLERO FOUR PLEX
TOWNHOUSES
TRACT 1 & 1-A
INDIAN RIDGE ADDITION
FLOW FROM
TRACT 1
FLOW FROM
TRACT 1-A
VICINITY MAP
TO ACCOMPANY
DRAINAGE PLAN
15
R. L. BURTON, P.E. NO. 4947
ALBUQUERQUE, NEW MEXICO
AUGUST, 1972