HYDROLOGY F19/D6a TWO PLANS

F19/D6a

2 Plans

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

Turkey line

April 26, 1979

F19.D66

Mr. Fred C. Arfman
C.C.I.C.
3500 Indian School Rd. N.E.
Albuquerque, N.M. 87106

SUBJECT: TEST TURNKEY PROJECT WORK AUTHORIZATION #T44
Tierra Encantada Subdivision

Dear Mr. Arfman:

Under the provisions of the Test Turnkey Project procedures, this letter is the Work Authorization to begin field work on the project.

Sincerely,

Richard S. Heller

Richard S. Heller
City Engineer

RSH/fs

cc - H. R. Orr
Kent Nowlin Construction Co., Inc.
Ray Dawson
Water Resources
Dwayne Sheppard
Bob Kielich
LaMonte Urban
Bruno Conegliano
Jim Milton, Traffic Engineering

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

April 24, 1979

Mr. Fred Arfman
Chambers, Campbell, Isaacson & Chaplin
3500 Indian School Rd. N.E.
Albuquerque, New Mexico 87106

Re: Tierra Encantada Townhouses

Dear Mr. Arfman:

The amendment to the drainage report for the captioned subdivision is acceptable and approved. Please note that when construction plans for blocks of townhouses are submitted, larger scale grading plans (1" = 10 ft) will have to be included so that construction follows faithfully the conceptual plan and to allow verification of the facilities provided, both in the review process and by the field inspector. Particular importance is attached to the details that will be supplied for the retaining and garden walls along the boundary of the property and between the individual townhouses.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/ms

cc - Dick Heller
Rich Leonard
Fred Aguirre
Drainage File

March 1, 1979

RECEIVED

MAR 0 5 1979

CITY ENGINEERS

Mr. Bruno Conegliano
Hydrology Engineer
City of Albuquerque
Engineering Division
P.O. Box 1293
Albuquerque, NM 87103

REFERENCE: Tierra Encantada Townhouses

Dear Mr. Conegliano:

I am submitting this amendment to the Tierra Encantada drainage study for your review and acceptance. The drainage solution concept has not changed, but the boundaries which define the area that is to be 100% retained have been altered. The new limits are clearly marked on the accompanying exhibit.

The reason behind these boundary changes is to make the drainage study consistent with the architectural drawing. The drawings indicate that all of the runoff from the garages are to flow to the streets. Conversely, the majority of the remaining roof runoff shall be back or sideyard ponded. This shall make all of the roof drainage plans consistent with one another, simplifying future review processes.

Please contact CCIC if there are any questions or if future discussion is required.

Very truly yours,

Fred C. Arfman

Fred C. Arfman, for
CHAMBERS, CAMPBELL, ISAACSON & CHAPLIN, INC.

FCA:dd

Encl.

Chambers, Campbell, Isaacson, Chaplin, Inc.
architects engineers planners 3500 indian school road ne albuquerque new mexico 87106 505-266-5501

59
Bruno

November 14, 1978

RECEIVED
NOV 07 1978
CITY ENGINEERS

Mr. Richard Heller
City Engineer
City Engineering Department
P.O. Box 1293
Albuquerque, NM 87103

Reference: Tierra Encantada Townhouses

Dear Mr. Heller:

This letter was requested by Bruno Conegliano as a follow up to our conversation on November 13, 1978. It was concerning a problem with a drainage easement on the above referenced project. Enclosed, you will find a copy of our approved development plan with the easement in question clearly marked.

The problem is as follows: based on our plat calculations, there is only a distance of 7.39 feet between the north boundary and unit No. 1. This easement was sized to accommodate a lined 10 foot wide drainage channel. It's function was to provide relief for 6 cfs of storm water runoff from the Little Turtle Townhouses to the east. This runoff is from a totally impervious area (parking lots) therefore resulting in the transfer of no silts or debris usually associated with drainage channels. Considering these factors and the resulting flow rate, we offer the following alternate solutions.

One, the construction of a channel within the limits of a 7 foot drainage easement. This channel would not allow for the use of large street maintenance equipment, but it is our opinion that such cleaning maintenance would not be necessary based on the clean runoff that it transfers. Secondly, the use of a storm drain, sized to handle the 6 cfs of runoff. This drain would be located to the north side of a 7' wide drainage easement. We feel that this drainage facility would also be maintenance free.

Hopefully, one of the above alternates will satisfy your requirements for drainage. We would appreciate your expeditious review on this matter and will be available to help or receive your comments at any time.

Very truly yours,

Fred C. Arfman

Fred C. Arfman, for
CHAMBERS, CAMPBELL,
ISAACSON, CHAPLIN, INC.

FCA:pw

Encl.

cc: Bruno Conegliano

Chambers, Campbell, Isaacson, Chaplin, Inc.
architects, engineers, planners, 3500 indian school road ne albuquerque new mexico 87106, 505-266-5521

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Date: October 26, 1978

Mr. Jack Stahl
Jack Stahl, Inc.
200 Lomas Blvd. N.W., Suite 918
Albuquerque, N.M. 87102

F19.D6b

SUBJECT: SUBDIVISION REQUEST FOR USE OF TEST TURNKEY PROCEDURE
Tierra Encantada Subdivision

Dear Mr. Stahl:

We are in receipt of your letter of October 24, 1978 requesting the use of the Test Turnkey Procedures. Enclosed is a copy of the "Test Turnkey Project Flow Chart and Test Turnkey Operational Instructions" which will be followed in using this test procedure.

A very important element in this procedure and one which must be rigidly observed is the "Start of Construction Work" stage following Steps 18,19,20 and 21. No field work may commence under this test procedure until this point.

Therefore, your request to design and construct this subdivision is approved, subject to following the procedures enclosed.

Sincerely,

C. W. Sheppard, P.E.
City Engineer - Acting

Copy to: H. R. Orr
Q. R. Kielich
Dwayne Sheppard
LaMonte Urban
~~Bruno~~ Conegliano

Enclosures

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 11, 1978

See also little turtle

Mr. Fred Arfman
Chambers, Campbell, Isaacson
and Chaplin, Inc.
3500 Indian School Rd. N.E.
Albuquerque, New Mexico 87106

RE: TIERRA ENCANTADA TOWNHOUSES

Dear Mr. Arfman:

I have reviewed the drainage report for "La Tierra Encantada" and I am in agreement with the concept. The drainage solution is contingent upon the capability of providing total retention for 4.59 acres of the entire tract and a detailed site grading plan will have to be supplied to verify that the suggested design solution is implemented. I recommend that your office work closely with the Design Section of the City Engineers Office in order to develop acceptable grades for Gene Ave. N.E., presently unimproved. The design of the rundown along the Western property line within Novella Park will also set some constraints on the site grading of the Westernmost portion of this development. Again, the design section should be able to assist you in the establishment of the grades necessary for the implementation of the design concept.

Yours Truly,

Bruno Conegliano

Bruno Conegliano
Asst. City Engineer-Hydrology

BC/tl

cc: C. D. Sheppard, Acting City Engineer
Rick Leonard, AMAFCA
File

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 11, 1978

See also Little Turtle

Mr. Fred Arfman
Chambers, Campbell, Isaacson
and Chaplin, Inc.
3500 Indian School Rd. N.E.
Albuquerque, New Mexico 87106

RE: TIERRA ENCANTADA TOWNHOUSES

Dear Mr. Arfman:

I have reviewed the drainage report for "La Tierra Encantada" and I am in agreement with the concept. The drainage solution is contingent upon the capability of providing total retention for 4.59 acres of the entire tract and a detailed site grading plan will have to be supplied to verify that the suggested design solution is implemented. I recommend that your office work closely with the Design Section of the City Engineers Office in order to develop acceptable grades for Gene Ave. N.E., presently unimproved. The design of the rundown along the Western property line within Novella Park will also set some constraints on the site grading of the Westernmost portion of this development. Again, the design section should be able to assist you in the establishment of the grades necessary for the implementation of the design concept.

Yours Truly,

Bruno Conegliano
Asst. City Engineer-Hydrology

BC/tl

cc: C. D. Sheppard, Acting City Engineer
Rick Leonard, AMAFCA
File

A

DRAINAGE STUDY

FOR

TIERRA ENCANTADA

TOWNHOUSES

Prepared By:

CHAMBERS, CAMPBELL, ISAACSON, & CHAPLIN, INC.

3500 Indian School Road N.E.

Albuquerque, New Mexico 87106

September 13, 1978

Chambers, Campbell, Isaacson, Chaplin, Inc.
architects engineers planners 3500 indian school road ne albuquerque new mexico 87106 505-266-5521

A

DRAINAGE STUDY

FOR

TIERRA ENCANTADA

TOWNHOUSES

Prepared By:

CHAMBERS, CAMPBELL, ISAACSON, & CHAPLIN, INC.
3500 Indian School Road N.E.
Albuquerque, New Mexico 87106

September 13, 1978

INTRODUCTION

The purpose of this study is to analyze the 100-year storm drainage characteristics of a SU-1 development known as Tierra Encantada. The site is located on both sides of Prairie Road, west of Pennsylvania Avenue N.E., an existing paved street.

General background information concerning the site is as follows: The site is terraced, due to previous earthmoving activities, with a 3% slope running from the northeast to the southwest corners. The site contains approximately 9.443 acres and is covered with a light weed growth. The area immediately to the east is a townhouse development known as Little Turtle and to the south is an apartment complex. North of the site is half R-1 homes and half empty Albuquerque Public Schools lands. Finally, to the west is a dedicated public park and an abutting R-1 lot.

DRAINAGE CONDITIONS

UNDEVELOPED CHARACTERISTICS: This site must accept offstie flows at four (4) distinct points (Exhibit I). These flows currently meander thru the site until they are intercepted by means of a drainage facility located at the site's western boundary and Novella Park. Flows are then diverted southward to Montgomery Blvd.

The undeveloped onsite flows merge with these described above and also exit onto Montgomery Blvd. These flow quantities and their accompanying directions are shown on Exhibit I.

DEVELOPED CHARACTERISTICS: After development, all offsite runoff that enters onto the site will be routed by means of rundowns located within

10' drainage easements and the newly constructed streets. Open area between dwelling unit will be used for onsite ponding to enable the meeting of the AMAFCA runoff requirements.

RECOMMENDATIONS

1. A 10' drainage easement should be platted along the north boundary from the northeast corner to Tierra Encantada Court to intercept flows from the Little Turtle developments (Study pt. III).

2. The drainage rundown mentioned above, shall be constructed in such a way as to allow offsite flows from the north to enter onto the site. This is shown as study pt. II on Exhibit I.

3. An easement be located at the half-way-point of the northern boundary. (Study pt. I). This 10' easement rundown shall also allow flows to enter onto the site and empty into Prairie Road.

4. A 10' drainage easement[1] rundown is to be located between Tierra Encantada Ct. and Gene Ave. This is to allow an excape of flows otherwise trapped on Tierra Encantada Ct. The outlet point shall be at the elbow of Gene Ave.

5. A water block be designed into the intersection of Gene Ave. and Prairie Road and Tierra Encantada Ct. (S) and Prairie Road.

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[1]Cross section of drainage easement shown on Exhibit II.

This shall be done by means of a vertical curve such that no flows from Prairie Road will be permitted to flow down these two streets. Location of these blocks are shown on Exhibit I.

6. An onsite area of 5.4 acres, whose limits are defined on Exhibit I, be 100% ponded. Ponding areas to be in all open areas between dwelling units.

APPENDIX

Site Soils Conditions

Lot Drainage Plan

Drainage Easements Rundown

SITES SOIL CONDITIONS

This site's soil conditions are being presented as a supplement to the drainage data,[1] to help determine how the ponds will affect the dwelling units.

A Embudo - Tijeras gravelly sandy loam (Embudo-70%, Tijeras-25%) soil is dominate on this site. This soil's top 2.0 feet has the capacity to pass 0.63-2.0 in./hr. From 2-5 feet in depth, the permeability is 6.3 - 20.0 in./hr. It can be assumed that water ponding in the back and side yard will infilitrate in less than one days time.

This soil has a low shrink-swell potential and seems ideal for ponding.

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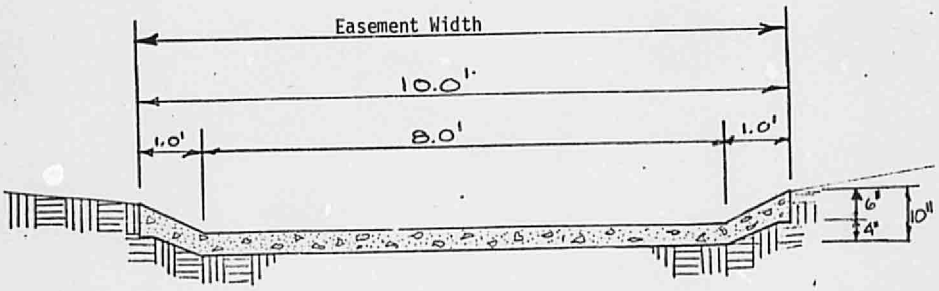
[1]Information obtained from Soil Data Handbook, The Middle Rio Grande Council of Governments, Feb, 1974.

DRAINAGE RUNDOWN:

Typical cross-section of drainage rundown located within the limits of the 10.0 foot easement.



A = 4.50 P = 8.24' R - .546

$R^{2/3}$ = .667

Min. So = 0.040 $S^{1/2}$ - 0.20

Q = 4.50 x 99.07 x .667 x 0.20 = 59.5 C.F.S.

Q = 297.36 $S^{1/2}$

CCIC
ALBUQUERQUE, NEW MEXICO

SUBJECT EXHIBIT II JOB NO.___
BY_____ DATE_____ SHEET NO.___ OF___