HYDROLOGY K22/D2 1 PLAN

K22/D2

1 Plan

K22/D2

D.R.B. Case No. 86-85
D.R.C. Project No. _____
Date Submitted 2-24-86
Revised 3-3-86

EXHIBIT "D"
to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.)
REQUIRED INFRASTRUCTURE LISTING
for Chelwood Park

RECEIVED
MAR 06 1986
HYDROLOGY SECTION

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development.

Size	*Type Improvement	Location	From	To
20'	Commercial Alley Paving	Public Alley	Georgene Dr.N.E.	Nakomis Dr.N.E.
20'	Alley intersection	Nakomis Dr. N.E. Right-of-way	S.E. Property Line Lot 2-F	Nakomis Dr.N.E.
20'	Alley intersection	Georgene Dr. N.E. Right-of-way	S.W. Property Line Lot 1	Georgene Dr.N.E.
6"	Waterline*	Public Alley	S.W. Property Line Lot 2-A	S.E. Property Line Lot 2-F
6"	Waterline*	Public Alley	S.W. Property Line Lot 2-A	Georgene Dr.N.E.
6"	Waterline*	Nakomis Dr. N.E.	S.E. Property Line Lot 2-F	Lomas Blvd.N.E.

* Includes all fittings, blocking, valves and fire hydrants as per the City of Albuquerque Development Process Manual.

Prepared by: Kim Smith
Print Name Kim L. Smith
Firm Tom Mann & Associates, Inc.

Page 1 of 1

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Development Review Board Member Approvals

Traffic 3-4-86 Date
WUD 3/4/86 Date
Parks & Rec. 3-4-86 Date
City Engineer/AMAFCA Date
DRB Chairman 3-4-86 Date

Rev. 10/85
ID3901D

5-77

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

February 6, 1980

F22-D2a

Mr. Christopher L. Weiss
President
1100-C Alvarado N.E.
Albuquerque, New Mexico 87110

Reference: City View Apartments

Dear Mr. Weiss:

I have received your letter dated January 30, 1980, and I find that it reflects the concern expressed, that all the runoff will inflow into the detention area. Therefore, the water proofing of the adjacent walls must, as you recommend, be executed taking this occurrence into account. The drainage report as amended by the reference letter is therefore, hereby, approved.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/lc
xc: Richard Leonard, AMAFCA
Richard Heller, City Engineer
Fred Aguirre, Civil Engineer
Drainage File

consultants, inc.
ENGINEERING - PLANNING

January 30, 1980

Copy to Fred
the file

RECEIVED
FEB 05 1980
CITY ENGINEER

K22-D2a

Municipal Development Department
Engineering Division
P. O. Box 1293
Albuquerque, New Mexico 87102

Attention: Mr. Bruno Conegliano

RE: Drainage Report for City View Apartments, your letter of January 25, 1980.

Dear Bruno:

I talked with Jim Lewis of Schlegel-Lewis Architects concerning your review comments for the above referenced project. He will adjust the grading plan to provide a 2 ft. high berm adjacent to Copper Ave. to protect the site. The access from Copper Ave. will also be raised to form an effective water block from the flows in Copper Ave.

In regard to the internal drainage, provisions will be made to waterproof the existing walls in the area of the proposed detention pond. The water surface elevations shown on the drainage plan reflect two conditions: 1.) the heights of water for the required pond volume assuming an open oriface condition, and, 2.) the height of water for the required pond volume assuming a plugged oriface. If the second condition occurs, the spillway at the outlet will be utilized. This elevation (5814.56) represents the approximate maximum height the water may rise. However, you requested the elevations for the water for a maximum condition of the developed 100 year volume of 13,756 ft^3 with no outlet. This elevation has been determined to be 5815.6. It would be unlikely that this elevation would ever be reached because of the available spillway condition, but waterproofing will be provided to the adjacent walls to match this elevation.

1100-C ALVARADO NE ■ ALBUQUERQUE, NEW MEXICO 87110 ■ (505) 268-2666

Schlegel-Lewis Architects are submitting the plans to the Building Inspection Department this week, so your prompt attention to the report approval will be appreciated.

Thank you.

Respectfully,

Christopher L. Weiss

Christopher L. Weiss, P. E.
President

CLW/bl

Attachments

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

January 25, 1980

K-22-D2a

Mr. Christopher L. Weiss
President
1100-C Alvarado NE
Albuquerque, New Mexico 87110

Reference: Drainage Report for City View Apartments

Dear Mr. Weiss:

I have reviewed the drainage report for the reference development, and I find that some additional considerations must be entertained in preparing the construction plans for this development.

Recent studies indicate that a flow of 700 c.f.s. to 800 c.f.s., may flow down the existing and inadequate Copper channel and Copper Avenue. At this time, it is unknown when the City will be able to concrete line the Copper channel so that the properties adjacent to Copper Avenue will be protected. It is therefore my recommendation, that a 2 ft. high protective wall be constructed along the north property line of this development.

It is also recommended that the access to the property from Copper Avenue be designed so to form an effective water block and protect the property from the flows in Copper Avenue.

In regard to the provisions for the internal drainage, I want to point out that the computation performed were made on the basis of the difference between the undeveloped and the developed flows. In reality, the total flows and volumes must be considered and the height of the water surface produce by the extreme event needs to be evaluated.

It is in fact necessary to determine the height at which the water surface may rise, in order to provide sufficient protection to the existing garden walls along the south and west property lines. Water proofing or other such provisions must be made to preserve the intergrity of the foundations of the existing walls.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/lc

xc: Richard Leonard, AMAFCA

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SOIL CONDITION - SANDY LOAM

(AREA$_T$) × (RUN-OFF FACTOR) × (100 YR. RAIN) = RUN-OFF

LOT H BLOCK 8A - CHELLWOOD PARK

(6435 □)(.3)(2.8"/12) = 450. cu. ft. WATER (NATURAL RUN-OFF)

AREA	SQ. FT.	RUN-OFF FACTOR	100 YR. RAIN	÷12	RUN-OFF
PAVING	2857	.92	2.8"	1/12	613.[illegible]
ROOF (BUILDING)	1818	.87	2.8"	1/12	369.[illegible]
OPEN AREA	1760	.30	2.8"	1/12	123
TOTALS	6435 □				1105 CU. FT.

DIFFERENCE = 655 CU. FT.

LOT E BLOCK 8A - CHELLWOOD PARK

(6258.9 □)(.3)(2.8"/12) = 438.12

AREA	SQ. FT.	RUN-OFF FACTOR	100 YR. RAIN	÷12	RUN-OFF
PAVING	2788.845	.92	2.8"	1/12	67[illegible]
ROOF (BLDG.)	1812.393	.87	2.8"	1/12	8[illegible]
OPEN AREAS	1657.6665	.30	2.8"	1/12	[illegible]
TOTALS	6259.9 □				[illegible]

DIFFERENCE = 644.5 CU. FT.

POND A$_E$ = 86' × 11' × .5' = 308 cu. ft. > 240.625 cu. ft. OK

ROOF	875 □	×	.87	×	2.8"	×	1/12	= 177.625
GROUND	900 □	×	.30	×	2.8"	×	1/12	= 63.000
	1775 □							240.625 cu. ft.

REMAINDER = ~~841.975~~ 403.875 404 (2 × .3) = 673.33 < 684 = 3' × 8' × 28.5'

TOTAL DRAINAGE AREA = 992 cu. FT. 100 = 992/644.5

154 % REQ.

POND A$_H$ = 61' × 11' × .5' = 335.5 cu. ft. > 245.875 cu. ft.

ROOF	875 □	×	.87	×	2.8"	×	1/12	= 177.625
GROUND	975 □	×	.30	×	2.8"	×	1/12	= 68.250
	1850 □							245.875 cu. ft.

REMAINDER = ~~857.125~~ 409.125 410 (2 × .3) = 685.333 < 684 = 3' × 8' × 28.5'

TOTAL DRAINAGE AREA = 1019.5

156 % REQ.

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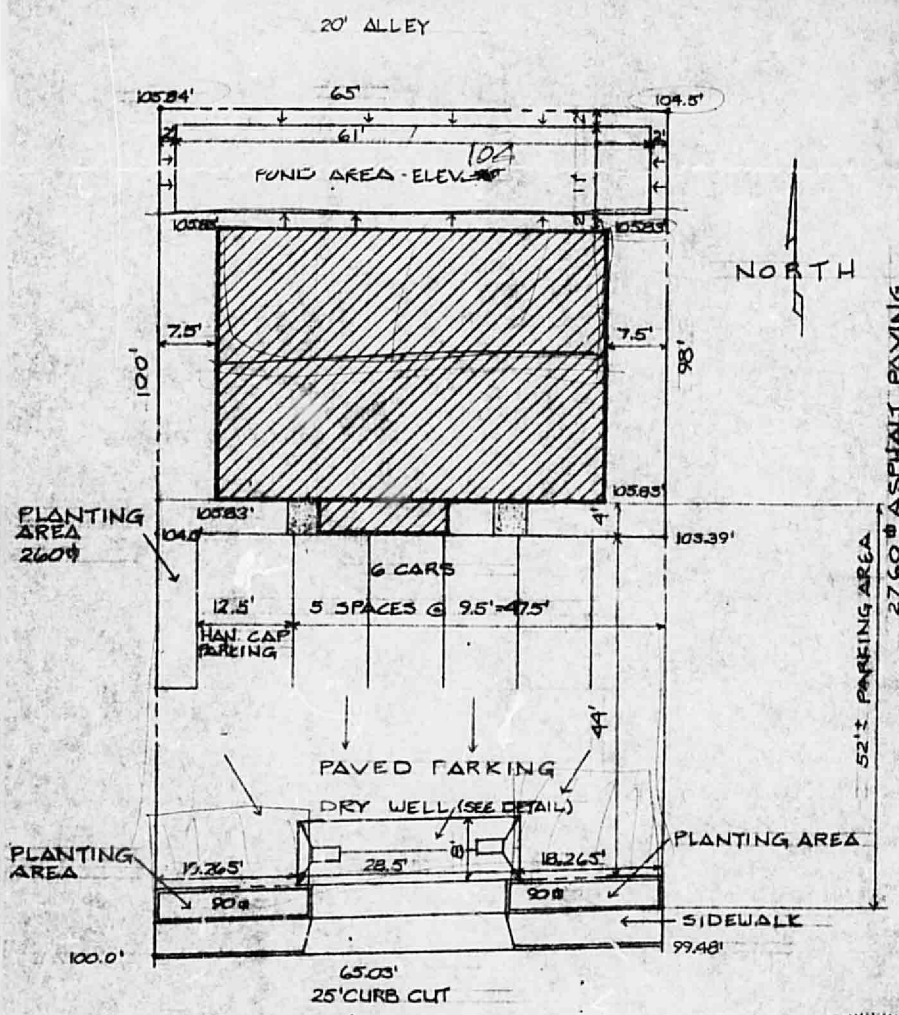


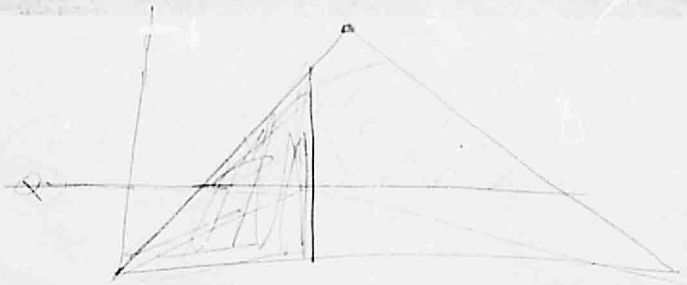
CHELWOOD PARK BLVD. NE

PLOT PLAN

SCALE 1/16" = 1'-0"
AREA - BUILDING = 1818□'
PAVING = 2857□'
GROUND = 1760□'

LOT H BLOCK 8A
CHELWOOD PARK

REGISTERED PROFESSIONAL ARCHITECT
JERRY R. TORR
No. 475
STATE OF NEW MEXICO



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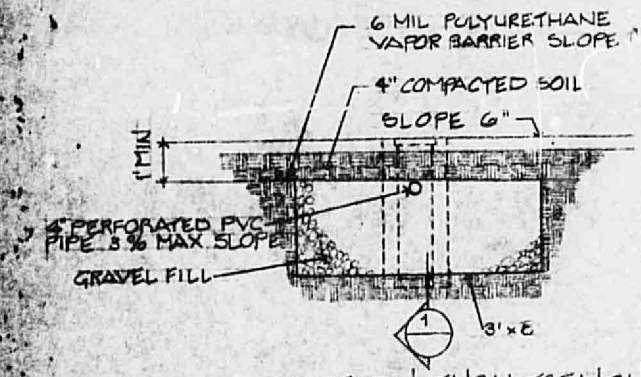
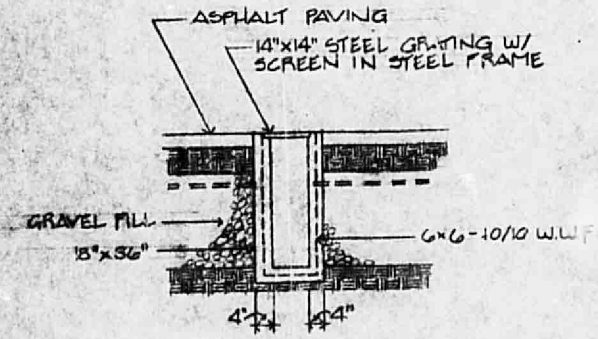


SECTION THRU TRENCH



SECTION 1

DRY WELL DETAILS	
SCALE:	1/4"=1'-0"

Cover
6th Floor

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HALL SURVEYING CO.

PHONE: 256-0853

ALBUQUERQUE, NEW MEXICO 87108

511 ~~807~~ SAN MATEO, N. E.

February 21, 1974

RECEIVED
FEB 25 1974
CITY ENGINEERS

City Engineer
Albuquerque, New Mexico

Dear Sir:

Attached, please find a copy of a drainage study made by this office for Best Brand Homes.

Would you please inform me if the City has a solution to the drainage coming into Tramway Blvd. in the area described in the drainage study and if you agree with the findings in the drainage study.

Do you have any information on the quantity of runoff that Lomas Blvd. will carry?

Sincerely,

Verlon E. Hall

Verlon E. Hall

D15 APPROVED FOR DRAINAGE

DATE

G Kielich ACE

SIGNATURE TITLE

CONTINGENCIES

Not made by Civil Engineer.

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DRAINAGE REPORT

Chelwood Park Subdivision
Blocks 8, 9, 12 & 13
Albuquerque, New Mexico

For: Best Brand Homes
505 San Pedro, S.E.
Albuquerque, N.M.

Prepared by:
Hall Surveying Co.
511 San Mateo, N.E.
Albuquerque, New Mexico

To: Federal Housing Administration
625 Truman, N.E.
Albuquerque, New Mexico

Dear Sirs:

The following exhibits are a part of the Drainage Report:

1. A general location map with contours showing the watershed areas adjacent to and East of the Subdivision.

2. A topographic and grading map showing proposed finished house grades, lot grades, drainage, points of concentration of runoff and arrows indicating the drainage plan.

3. Final and Recorded Plat of Chelwood Park Subd. Blocks 1-19 inclusive.

4. Report of explanation of the Drainage.

The following report is hereby submitted:

Chelwood Park Subdivision (Blocks 1-19 inclusive) is an existing filed subdivision located in the N½ NE¼, Section 22, T-10N., R-4E., N.M.P.M., lying East of Chelwood Park Blvd.- West of Tramway Blvd.- South of Lomas Blvd.- and North of Marquette Ave. in the City of Albuquerque, New Mexico.

The Subdivision lies in the foothills of the Sandia Mountains and is within or just to the West of Drainage area 4a as shown on Plate 7 of "Flood Plain Information, Part 2", prepared by the Corp. of Engineers, Dept. of the Army, Albuquerque District, Albuquerque, New Mexico.

This report is compiled from the following data:

1. Flood Plain Information, Albuquerque Arroyos, Part 2, Albuquerque, New Mexico (compiled by Albuquerque Corp. of Engineers, July, 1971).

2. Tramway Blvd. Corridor and Drainage Study (compiled by Bohannan-Westman-Huston, Sept, 1972).

3. A Drainage Study of the Proposed Subd. of Cuidad Vista, (compiled by Gebb Engineering Co., Albuquerque, N.M., May, 1973).

As proposed in the Sandia Foothills Drainage Study, there is to be built a flood control retention dam below the Sandia Foothills.

The runoff from the foothills will be diverted into a channel and carried to the drainage channel at U.S. Interstate 40. The channel is to be constructed to the East of Tramway Blvd. There is a proposed Subdivision, "Cuidad Vista" comprising 40 acres, more or less, lying adjacent to and East of Tramway Blvd., South of Lomas Blvd. and being adjacent to the proposed drainage channel and dam.

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The area designated as area 4c on Plate 7 of the Albuquerque Arroyos, Part 2, shows to have a runoff quantity of 600 cfs at the intersection of Lomas and Tramway Blvd's., as indicated on Sheet No. 1 & 3 of this report. There is an existing subdivision of about 40 acres, Foot Hills North, lying to the North of Lomas and to the East of Tramway Blvds. The runoff is diverted on the East side of the subdivision to the South into Lomas Blvd., then West on Lomas. None of this runoff goes into the Subject Subdivision. There is also an area 4b, as indicated on Plate 7 of the Albuquerque Arroyos, Part 2, that has a runoff quantity of 650 cfs. This runoff goes into Tramway Blvd. and into small arroyos that go to the South of the Subject Subdivision as shown on Sheet No. 1 of this report. There is also an area shown as 4a on Plate 7 of the Albuquerque Arroyos, Part 2, and has a runoff from the East of approximately 1010 cfs. However this area is to the South of Chelwood Park and need not be considered. Since there is a water block on Eastridge Drive, Pawnee Street, Nakomis Drive and Georgene Drive at Lomas Blvd. the drainage to be considered is the runoff within the Subdivision. The natural drainage is to the West and to the South as indicated by arrows on Sheet Nos 1,2 & 3 of this report. The runoff to be considered concenstrated at the intersection of Nakomis with San Juan, Roma and Fruit Ave. The areas and quantities are shown on Sheet No. 3 of this report.

This drainage report is not conclusive in the fact that the City of Albuquerque does not have an accepted drainage plan for this area and has not approved this report. However, since the plat is a filed plat and the streets and grades are existing, the runoff should be as described and shown herein.

Sincerely,

Verlon E. Hall

Verlon E. Hall

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4

ON SITE DRAINAGE AREAS AND QUANTITIES
Q = CIA (Rational Method)

Concentration Point No. 1
San Juan & Nakomis

A = 5.7 Ac.
L = 600'
H = 5705 - 5735 = 30'
Q = 0.6 x 6.75 x 5.7 = 21 cfs.

Concentration Point No. 2
San Juan & Landman

A = 5.7 Ac.
L = 600'
H = 5705 - 5690 = 15'
Q = 0.6 x 5.89 x 5.7 = 20 cfs.

Concenstration Point No. 3
San Juan & La Charles

A = 4.1 Ac.
L = 600'
H = 5690 - 5675 = 15
Q = 0.6 x 5.89 x 4.1 = 15 cfs.

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DRAIAGE REPORT

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Blocks 8, 9, 12 & 13
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The area designated as Area 4c on Plate 7 of the Albuquerque Arroyos, Part 2, shows to have a runoff quantity of 600 cfs at the intersection

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of Lomas and Tramway Blvd's., as indicated on Sheet No._____ of this report. Since there is no visible water block on either Lomas or Tramway Nlvd"s., the runoff appears to split at this point, at any rate non of the runoff of this area appears to go into the subject Subdivision. There is also an Area 4b, as indicated on Plate 7

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ON SITE DRAINAGE AREAS AND QUANTITIES
Q = CIA (Rational Method)

Concentration Point No. 1
San Juan & Nakomis

A = 5.7 Ac.
L = 600'
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Concentration Point No. 2
San Juan & Landman

A = 5.7 Ac.
L = 600'
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Concenstration Point No. 3
San Juan & La Charles

A = 4.1 Ac.
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