HYDROLOGY F18/D26 ONE PLAN

F 18 - D 26

1 PLAN

Kelly Construction Co.

F17-026

RECEIVED
OCT 13, 1981
CITY ENGINEER

October 9, 1981

Ryan Burnett, Engineer
Engineering and Drainage
4th Floor, City Hall
P.O. Box 1293
Albuquerque, New Mexico

Dear Mr. Burnett:

Thank you for the time you extended to review my project for Chi-Chi's Restaurant at the corner of San Mateo and Lumber Road in your fine city.

I have taken the following steps to pursue the necessary approvals. I have contacted Frank Wilson with the surveying company to handle the division of the parcel of land filling out our parcel. I have contacted the architect Michael Norton and he is preparing the plans for submission and is responsible for hiring a civil engineer to handle the drainage and hydrology study. It is my intention to comply with your requests to the utmost and upon the direction of the engineer we will submit the drawings for your approval.

Thank you in advance for your assistance.

Sincerely yours,

Mike Kelly

Mike Kelly

MK/tlm

4334 N.W. EXPRESSWAY • SUITE 187 • OKLAHOMA CITY, OKLAHOMA 73116 • (405) 84[illegible]57

ARMSTRONG ENGINEERING, INC.
CONSULTING ENGINEERS
2709-A PAN AMERICAN N.E.
ALBUQUERQUE, NEW MEXICO 87107
JOHN ARMSTRONG P.E.
(505) 345-2133
(505) 345-8463

November 30,1981

Brian G. Burnett
City of Albuquerque, Engineering Division
P.O. Box 1293
Albuquerque, NM 87103

Re: Review of Drainage Report for Chi-Chi's Restaurant
dated November 30,1981

Dear Brian:

Below is an item by item explanation of your questions:

Item 1: There has been no planning and zoning history to date which will affect this project.
Item 2: According to the master drainage plan there is no flood hazard at this site.
Item 3: The plan as shown was the only way to pond the required amount and keep the water depth on site to a minimum.
Item 4: There was no TBM set at the site by the surveyor. The City Brass Cap is just up the street.
Item 5: Special Order No.19 was submitted at the same time as the drainage report.
Item 6: The owner is:
JONES-KEJO PARNERSHIP
4334 Northwest Expressway,Suite 187
Oklahoma City, Oklahoma 73116

The Architect is:
NORTON & ASSOCIATES
1717 Louisiana Blvd. NE
Albuquerque, NM 87110

I hope this clarifies the report. If you have any questions, please call.

Thank You,

John Armstrong, P.E.

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

F17 - D20

November 30, 1981

Mr. John Armstrong
Armstrong Engineering, Inc.
2709 A Pan American N.E.
Albuquerque, N.M. 87107

RE: CHI-CHI'S RESTAURANT DRAINAGE REPORT

Dear John:

A review of the referenced report has resulted in the comments listed below. The numbers indicated refer to the Drainage Report (DR) and Con-Struction Plan (CP) Checklists.

1. DR # 2 - Planning and zoning action history.

2. DR # 4 - Delineation of site on pertinent Flood Hazard Boundary Map.

3. DR # 15 - Would there be a possibility of using a discharge pipe for draining the lot? By changing the grades slightly near the drivepad, the proposed channel may not be necessary. I suggest this because I am also concerned about the proposed grading in this area.

4. DR # 19 & CP # 15 - Was a temporary bench mark used on-site?

5. DR # 21M - Please be advised that construction on the public right-of-way must follow Special Order No. 19.

6. Please supply a completed Drainage Report Information Sheet.

If I can answer any questions concerning the above items, please call.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/csl

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

December 2, 1981

Mr. John Armstrong
Armstrong Engineering, Inc.
2709-A Pan American N.E.
Albuquerque, N.M. 87107

RE: CHI-CHI'S RESTAURANT DRAINAGE REPORT

Dear John:

The referenced drainage report is approved based on your submittal of December 1, 1981. Please see that a copy of the plans (dated 10/27/81) are placed in the construction set. Mr. Fred Aguirre will sign off for Hydrology when this is done.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl

KELLY JOHNSTON Enterprises, Inc.

April 13, 1982

TO: DRAINAGE INSPECTION DEPARTMENT
CITY OF ALBUQUERQUE, N.M.

I, Jim McNulty (Superintendent of Chi-Chi's Mexican Restaurant), am now engaged in an as-built plan by The Albuquerque Civil Engineer, John Armstrong.

We will make adjustments at his instructions if needed within thirty (30) days.

Thank you,

Jim McNulty

Jim McNulty
Superintendent

4601 SAN MATEO BOULEVARD/ALBUQUERQUE, NM 87109

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

F17 - D26

April 27, 1982

Mr. John Armstrong
Armstrong Engineering
2709-A Pan American N.E.
Albuquerque, N.M. 87107

RE: AS-BUILT DRAINAGE REPORT FOR CHI-CHI'S RESTAURANT

Dear John:

I have reviewed the referenced plans and concur with the proposed changes. We request that the field changes be certified. A letter stating compliance with the as-built plan will be satisfactory.

If I can answer any questions concerning this matter, please call.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl

ARMSTRONG ENGINEERING, INC.
CONSULTING ENGINEERS
2709-A PAN AMERICAN N.E.
ALBUQUERQUE, NEW MEXICO 87107
(505) 345-2133
(505) 345-8463
JOHN ARMSTRONG P.E.

August 31, 1982

Mr. Bernie Montoya
Engineering Division, City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Re: As-Built drainage certification for Chi-Chi's Restaurant.

Dear Bernie;

This letter is to certify that the work has been done at Chi-Chi's Restaurant to bring it into compliance with the as-built report and plan (see attached drawing along with the approval letter from Brian Burnett dated 4/27/82).

Thank You

John Armstrong

AS-BUILT DRAINAGE REPORT
FOR
CHI-CHI'S RESTAURANT AT
San Mateo Ave. & Lumber Ave.
Albuquerque, New Mexico

JOHN T. ARMSTRONG
NEW MEXICO
6556
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
APR 23 1982
ENGINEERING

ARMSTRONG ENGINEERING, INC.
2709 A PAN AMERICAN NE
ALBUQUERQUE, NEW MEXICO
PHONE (505)345-2133

APRIL 1982

DISCUSSION

This project has been constructed and field checked by this office (see attached plan). There are several discrepancies between constructed grades and original plan grades. Part of this is due to the fact that the original survey datum was 0.68 ft high, but the problem is that the plan was not followed. This report proposes changes to correct the site work so that it is in compliance with the interim drainage guidelines.

The site drainage pattern is essentially as shown on the original plan. Therefore it is deemed adequate to convey the on-site flows to the ponding area at the west end of the project.

The ponding area, as constructed, is much too small to satisfy the guidelines. Therefore it is proposed to raise the grade of the curb at the west end of the parking area to a grade of 5197.30 feet which will give a pond volume of 6100 ft^3 (see volume and discharge vs. water elevation curves attached). From the flood routing, attached, the storage peaks at 5680.74 ft at 20 minutes into a 100-year storm.

CALCULATIONS

Drainage Area = 2.32 Acres

POSITIVE DISCHARGE

Q_r undeveloped = 3.55 cfs (see original drainage report)

We have two discharge points which were constructed too wide, but are proposed to be changed to 13 inches for the south, and 9.5 inches for the north one.

Analyze as weir:

$Q = 3.1\ Bh^{1.5}$ where North h_{max}=0.91 ft and South h_{max}=0.46 ft. See Pond Discharge vs. Water Elevation Plot attached.

POND EMERGENCY SPILLWAY

This was covered in the original report and will be very close to that configuration when the corrections are made to the curb.

RAINFALL DATA

Precipitation and intensity were taken from the NOAA Atlas 2, Volume IV and are shown on the enclosed graph.

POND VOLUME

The pond volume was calculated at various water elevations using average end areas at the sections where grades were shot (see Pond Volume vs. Water Discharge plot).

CHI-CHI'S RESTAURANT

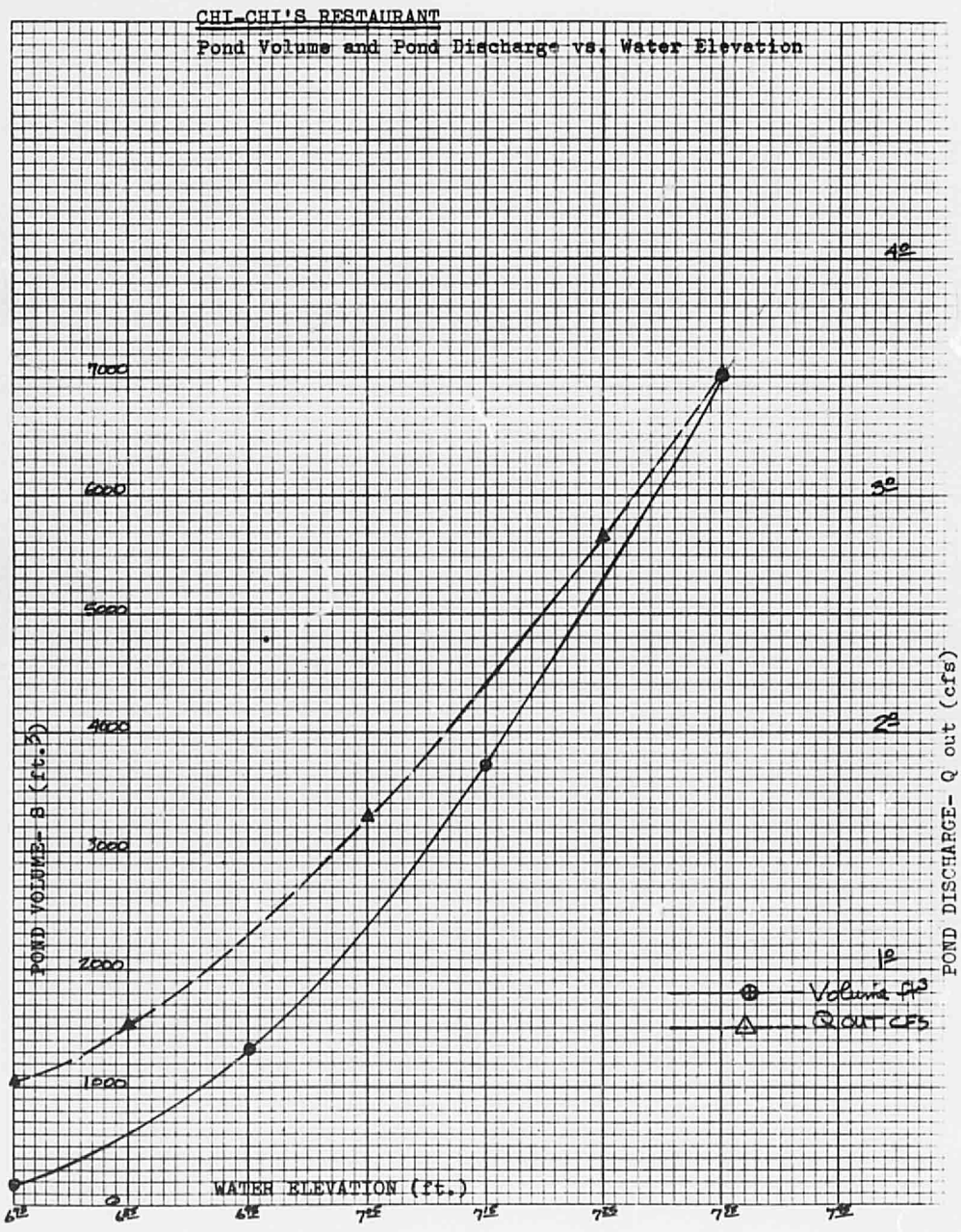
100 YEAR STORM ROUTED THROUGH POND

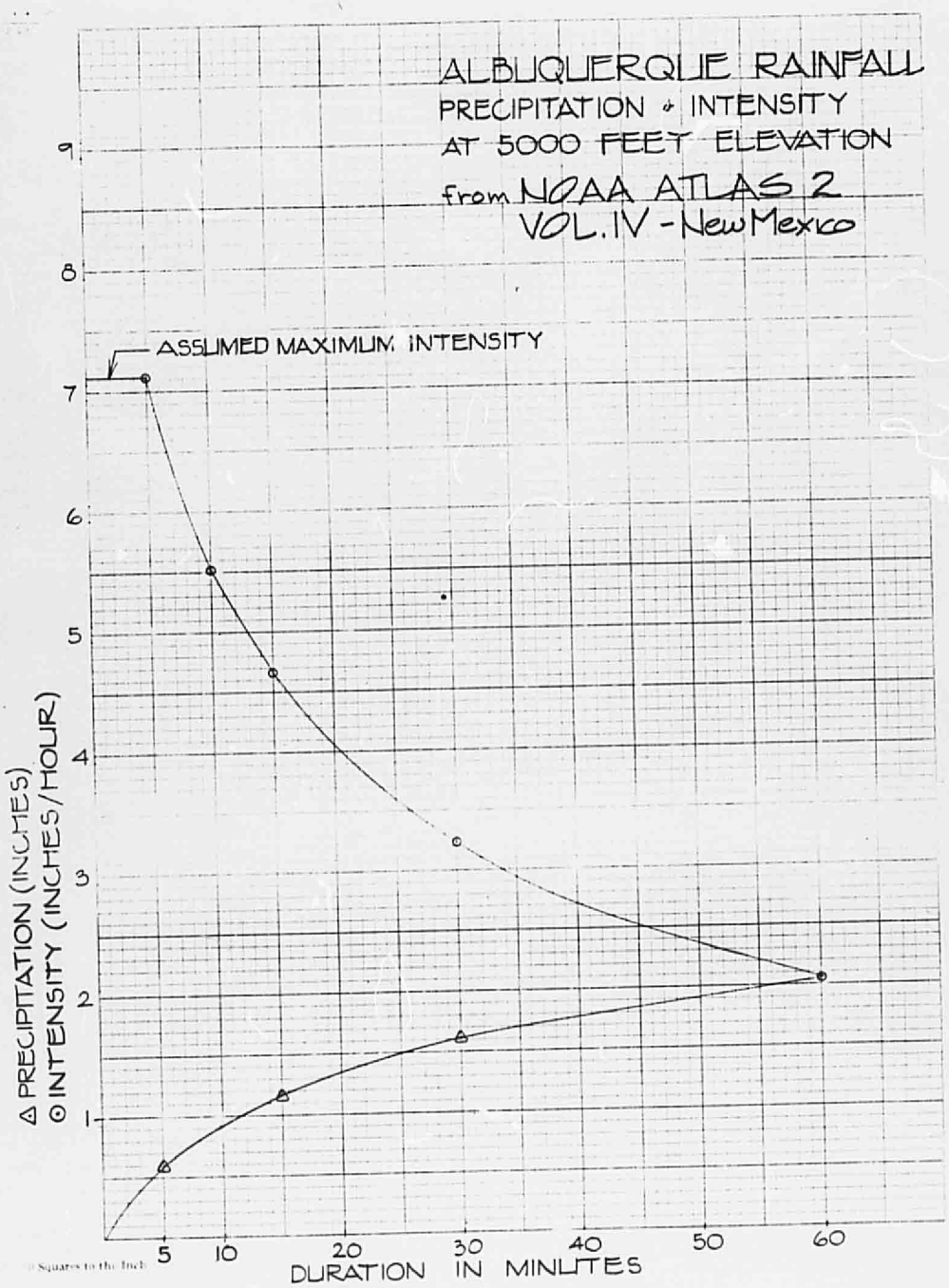
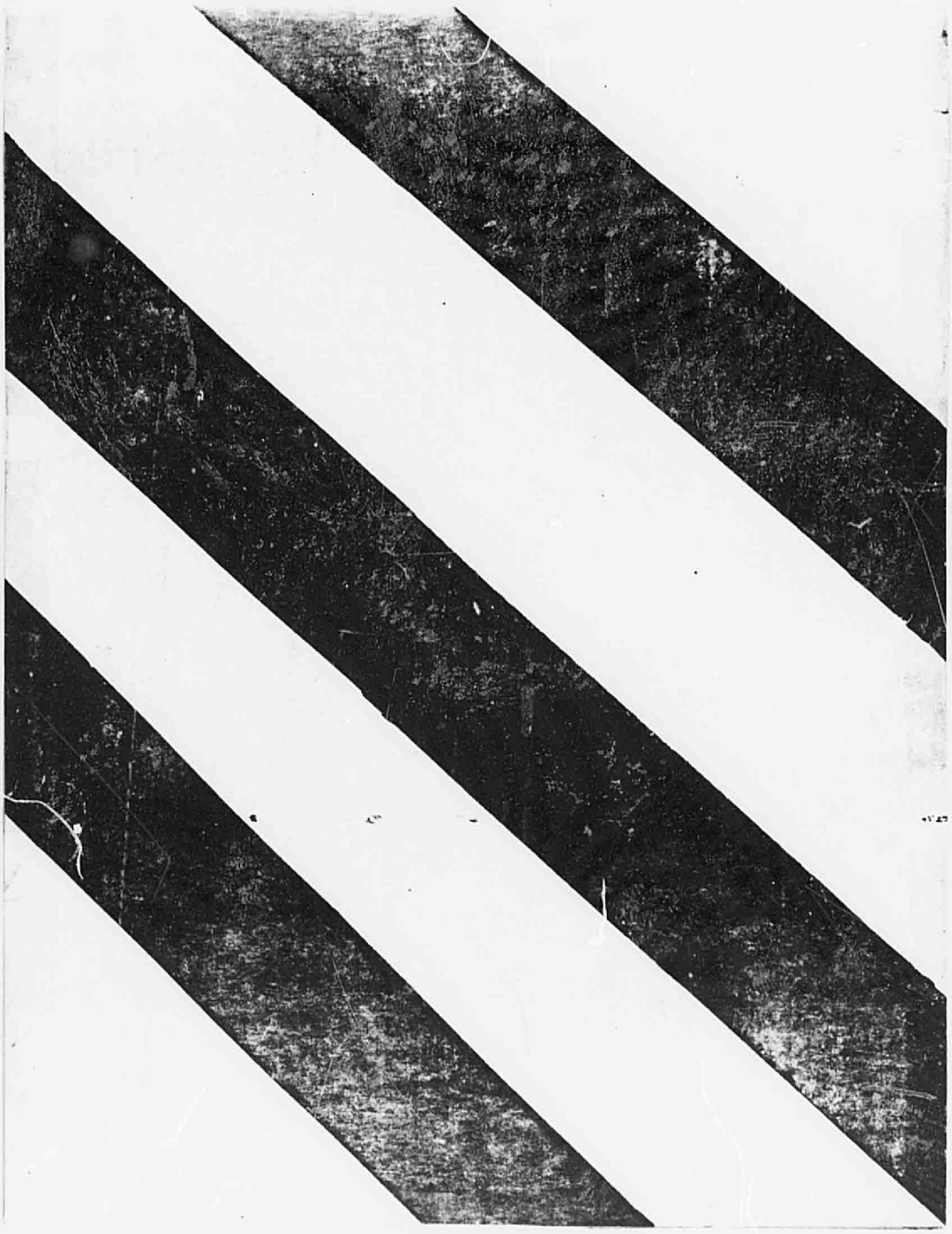
I (inflow) - O (outflow) = ΔS (change in storage)

time min.	P_{tot} in.	ΔP in.	I ft.³	Q_{OUT} @ t cfs	Q_{OUT} AVE. cfs	O ft.³	ΔS ft.³	S_{tot} ft.³
2.5	0.2971	0.2971	1951.60	1.47	0.74	110.25	1841.35	1841.35
5	0.5933	0.2962	1945.69	2.20	1.84	275.25	1670.44	3511.79
10	0.92	0.3267	2146.04	3.00	2.60	780	1366.04	4877.83
15	1.17	0.25	1642.31	3.33	3.17	949.5	692.71	5570.54
20	1.34	0.17	1116.70	3.38	3.36	1006.5	110.20	5680.74
25	1.50	0.16	1051.02	3.40	3.39	1017.0	-34.02	5646.72
30	1.625	0.125	821.11	3.30	3.35	1005.0	-183.89	5462.83
60	2.05	0.425	2791.76	1.73	2.85	5130.0	-2338.24	3124.59

CHI-CHI'S RESTAURANT

Pond Volume and Pond Discharge vs. Water Elevation




ALBUQUERQUE RAINFALL
PRECIPITATION & INTENSITY
AT 5000 FEET ELEVATION
from NOAA ATLAS 2
VOL. IV - New Mexico
ASSUMED MAXIMUM INTENSITY
△ PRECIPITATION (INCHES)
⊙ INTENSITY (INCHES/HOUR)
1
2
3
4
5
6
7
8
9
5
10
20
30
40
50
60
DURATION IN MINUTES
Squares to the Inch

0 4 5 2