HYDROLOGY L18/D4 ONE PLAN

L18-D4

1 PLAN

Covenant of Grace Church
11104 Hannett Ave, NE
Albuquerque, NM 87112
296-1926

Mr. Bryan Burnett

October 27, 1981

City Hydrology Section
Albuquerque, NM 87103

Dear Mr. Burnett:

We are writing you with regard to the decision of the Environmental Planning Commission on September 17, 1981 to grant us our zoning change request (File Z-81-108).

We were directed in thai decision to address the comments of City Engineering, among others, regarding our request. The Environmental Planning Commission also granted us a 24 month grace period on paving. In the light of this decision, we are requesting the the requirement for a grading and drainage plan be waived until such time as the parking area is paved.

We realize that the granting of this request is subject to the approval of City Engineering and are grateful for your time and consideration in this matter.

Sincerely,

Christopher H Wisdom

Christopher H. Wisdom
Pastor
Covenant of Grace Church

cc: L.D. Landis

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

October 28, 1981

Mr. Christopher H. Wisdom
Pastor, Covenant of Grace Church
11104 Hannett Ave. N.E.
Albuquerque, New Mexico 87112

Re: SITE DEVELOPMENT PLAN FOR ZONE CHANGE REQUEST Z-81-108

Dear Rev. Wisdom:

This letter is a follow-up to your correspondence dated October 27, 1981. Since no changes are planned for the site at this time a grading and drainage scheme will not be required by this office. However, plans for any future additions or changes to the paving surface should be submitted to this office for review and concurrence.

Concerning our discussion of the landscaped areas, we suggest that a gravel bed be placed in these areas as a means of controlling irrigation flows.

If I can be of further help, please call.

Very truly yours,

Brian G. Burnett

Brian G. Burnett
Civil Engineer/Hydrology

BGB/fs
8886A

Covenant of Grace Church
11104 Hannett Ave, NE
Albuquerque, NM 87112

October 28, 1981

City of Albuquerque
Municipal Development Department
Planning Division
P.O. Box 1293
Albuquerque, NM 87103

Re: Response to findings of Environmental Planning Commision of file number Z-81-108.

Dear Sirs:

On September 17, 1981, the Environmental Planning Commission approved our request for a zoning change on Lot 6 Block 7 of the Baronburg Heights Addition, located at 511 Madiera SE. As requested, we are responding to those findings.

1) "The zoning change is justified."

Thank you.

2) "Additional landscaping is required along the north, south and west property lines."

North: Pyracantha and Juniper bushes on five foot centers along 94 foot 11 inch property line. (See site plan).
South: Same as for north boundary.
West: Request variance from additional landscaping.
Grounds:
a. There is an existing six foot high solid fence extending along entire western property line.
b. The overhang of the building combined with the shading of the fence makes the growth of anything on the western boundary virtually impossible.
c. The owner of the property bordering the western boundary has no objection to the foregoing of landscaping on the western property line.
d. The church will be responsible for the maintenance of a fence on the western property line.

3) "Comments from Traffic Engineer, City Engineering and Zoning Enforcement must be addressed."

<u>Traffic Engineering</u>

"Parking should be paved."

See #6 of the Environmental Planning Commission Findings, 9/24/81

"Keyway must be provided for at end of parking bay."

See revised site development plan.

"Curb cut should be 24 feet."

We concur. See revised site plan.

3) Traffic, City Engineering and Zoning Enforcement continued.

City Engineering

Hydrology

"No objection to the zoning request; the site development plan must indicate the proposed grading of the parking lot and the proposed method for manamgement of the increased runoff generated by the new parking area."

Since the Environmental Planning Commission has granted a 24 month grace period on paving, and since we are not changing existing contours or permeability of the area in question, we are requesting a waver on the grading plan. At the time when the parking area must be paved, we will submit both a grading and drainage plan as per the request of Hydrology and Design of the City Engineering Department. (See below).

Design

"A drainage plan will be submitted for review and approval prior to the approval of development and building plans. Consideration must be given to the detention of waters."

See above under "hydrology".

Zoning Enforcement

"The north, south and west sides must have a five (5) foot landscape buffer."

We concur. with the variance requested under point #2.

"In addition, the eastern 94', 11", of the north and south property lines will have to be fenced with a 6' solid wall of fence."

We request a variance from this requirement for the following reasons:

a. There is already a 6' fence on the south property line. This fence is solid, and extends to within 30' of the curb. To erect another fence parallel to that fence would seem redundant, and would block visibility of northbound traffic on Madeira if it were extended to the curb.

b. We are also interested in maintaining the residential character and appearance of the property in a way that will cause it to blend in and not clash with the neighborhood. We feel that the additional landscape buffers on the north and south property lines will contribute more to the maintenance of such an atmosphere than the erection of a 6' solid wall of fence. Such walls might be more objectionable to the neighbors because they would fail to contribute to the maintenance of a residential atmosphere in the neighborhood.

c. These walls would also not serve the church's interest in ministering to the community. A church worshipping on such a small piece of property surrounded by such high walls would be at best a curiosity in the community.

"The parking area must be paved - gravel will not be acceptable."

See #6 of the findings of the EPC, 9/24/81.

4) "A revised site plan is required."

Please find enclosed the revised site plan as requested.

5) "The size of the sign shall be limited to 15 square feet and shall not be more than 3 feet in height."

We concur.

6) "There will be a 24 month grace period on the paving requirements."

Thank you.

If there are any other matters that need to be addressed before final approval, please contact us at your earliest convenience. Thank you for your service to us in this matter.

Sincerely,

Christopher H Wisdom

Christopher H. Wisdom
Pastor
Covenant of Grace Church

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

Chris Wisdom
Covenant of Grace Church
11104 Hannetta Avenue, N.E.
Albuquerque, NM 87112

DATE: September 24, 1981

NOTIFICATION OF DECISION

File: Z-81-103
Location: Site Development Plan approval for Lot 6, Block 7, Baronburg Heights Addition, located at 511 Maderia, S.E.

On September 17, 1981, the Environmental Planning Commission approved the above-mentioned request; thereby changing the zoning to SU-1 (Church and Related Facilities), based on the following Findings:

1. The zone change is justified.
2. Additional landscaping is required along the nrth, south, and west property lines.
3. Comments from Zoning Enforcement, City Engineering and the Traffic Engineer must be addressed. [redacted]
4. A revised site plan is required.
5. The size of the sign shall be limited to 15 square feet and shall not be more than 3 feet in height.
6. There will be a 24 month grace period on the paving requirements.

If you wish to appeal this decision, you must do so by 10-2-81 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,

Elizabeth Marquez
Secretary

Letter of Advice

L 13-DX 03-23

Goldberg - Mann & Associates, Inc.
Engineers - Planners
811 Dallas St., N.E. Albuquerque, New Mexico 87110 (505) 265-5611

March 12, 1981 1-016

RECEIVED
MAR 12 1981
CITY ENGINEER

Mr. Bruno Coneglia-o
Asst. City Engineer/Hydrology
Division of Engineering
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Siesta Hills Shopping Center Drainage Plan

Dear Bruno:

Transmitted herewith for review are two copies of the drainage plan for the subject project. The Blanchard Corporation is concurrently submitting the site plan for EPC review and approval.

If you have any questions or comments concerning this matter, do not hesitate to call. Your prompt attention to the review of this drainage plan will be greatly appreciated.

Sincerely,

GOLDBERG-MANN & ASSOCIATES, INC.

Thomas T. Mann, Jr., P.E.
President

JGM:bb
Encs.
xc: Joe Almers, Blanchard Corporation w/enc.

RSH RSH ADM
HRO SUR
CDS COUN
DES SEC
INSP FILE
HYDRO RETURN
Review & Evaluate

Goldberg - Mann & Associates, Inc.
Engineers - Planners
811 Dallas St., N.E. Albuquerque, New Mexico 87110 (505) 265-5611

April 15, 1981 1-016

Mr. Charles M. Easterling
Hydrology Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

RECEIVED
APR 20 1981
CITY ENGINEER

Re: Siesta Hills Shopping Center

Dear Chuck:

This letter is to summarize our findings to date concerning the Siesta Hills Shopping Center.

During our first discussion concerning this project, you showed me a copy of Bohannan's master drainage plan which indicated that our project site was in a flood plain. At that time I agreed to obtain additional data along the north curbline of Gibson Boulevard S.E. to determine if, in fact, the water was not exiting Gibson prior to reaching the project site. Our survey data indicates that the low point in Gibson is at Cardenas Drive. That is one block east of the project site. The flowline is approximately 1.6 feet below the flowline of Valencia.

If you analyze the intersection of Cardenas and Gibson as a weir that is approximately 500 feet long, theoretically more than 2,000 cfs will pass through the weir; however, if you reduce the weir width to 44 feet, which is the width of Cardenas, the depth of flow would be 2.12 feet in order to pass 450 cfs which is the flow in Gibson. To carry it one step further, the depth of flow in Cardenas, assuming a 44-foot street, would normally be approximately 1.42 feet which is less than the depth of flow crossing our theoretical weir.

NORMAL DEPTH

The normal depth of flow in Gibson, 450 cfs, is approximately 0.9 feet. The froude number is 1.61; therefore, a hydraulic jump may or may not occur. If a jump were to occur, my calculations indicate that the downstream depth of the jump would be approximately 1.5 feet deep. This depth is less than the depth that would be required for a weir as I discussed above.

To summarize my findings to this point, it is my opinion that the majority of the water in Gibson will turn and flow down Cardenas. It is possible that some of the water might overflow the Cardenas intersection and reach Valencia; however, the total depth from flow line at Cardenas to top-of-curb at Valencia is approximately 2.3 feet which is higher than our maximum calculation utilizing the weir. Therefore, I feel that little, if any, water would spill out of Valencia and cross our project site.

Also, by your request, we rated Eastern. My calculations indicate that the normal depth in Eastern would be approximately 9 inches above the top-of-curb between Cardenas and Alvarado. This is assuming a flow of 500 cfs. Between Alvarado and Palomas the depth of water would be approximately 1 foot above the top-of-curb for the same flow. This also assumes that the street width be held at 32 feet and imaginary side walls constructed above the top of the curb to contain the water; therefore, in reality the water surface would probably be less since the water will overflow the curb and spread out onto adjacent properties.

Our design requires that the finished floor of the buildings be 2 feet or higher above the top-of-curb where the buildings are adjacent to Eastern; therefore, we have at least 1 foot of free board to prevent the water from coming into the stores. We do not have any objections to the water overflowing the street and entering the parking lot from an engineering standpoint.

In conclusion, I request that the Siesta Hills Shopping Center flood plain be modified to reflect our findings. The only portion of the site that would be affected would be the northerly portion which is a parking lot now and will continue to be a parking lot in the future. All building areas and parking areas north of the existing facilities would be deleted from the flood plain. Also, I request that you approve our drainage plan as attached so that we may obtain a development plan and consequently a building permit. If you have any questions or comments, please do not hesitate to call. Thank you.

Yours truly,

GOLDBERG-MANN & ASSOCIATES, INC.

Thomas T. Mann, Jr., P.E.
President

TTM:bb
Encls.
xc: Paul Blanchard
R. J. Schaefer

Goldberg - Mann & Associates, Inc.
Engineers - Planners
811 Dallas St., N.E. Albuquerque, New Mexico 87110 (505) 265-5611

May 5, 1981

1-016

Mr. Charles M. Easterling
Hydrology Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Floodplain Revisions for Siesta Hills Shopping Center

Dear Chuck:

As per your request, transmitted herewith is the revised floodplain for the subject project. This revision shows the area to be removed from the presently designated floodplain.

At Alvarado Drive and Eastern Avenue, the water surface elevation for the 100-year flood is approximately one (1) foot above the top-of-curb. This is demonstrated by Mr. Tom Mann's calculations as shown to you on the afternoon of April 20, 1981. Adding one (1) foot to the top-of-curb elevation referenced above yields a water surface elevation of 5295.5. The finish floor of the proposed Allwoods store, the building in the northwest corner of the site, will be at least one (1) foot above 5295.5. These elevations have been referenced to City of Albuquerque B.M. 11-L18.

If you have any questions concerning this information, do not hesitate to call. The revised drainage plan for this project will be forthcoming in the very near future.

Sincerely,

GOLDBERG-MANN & ASSOCIATES, INC.

Jeffrey G. Mortensen
Project Engineer

JGM:bb
Enc.

Goldberg - Mann & Associates, Inc.
Engineers - Planners
811 Dallas St., N.E. Albuquerque, New Mexico 87110 (505) 265-5611

May 6, 1981

1-016

Mr. Charles M. Easterling
Hydrology Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Siesta Hills Shopping Center
Grading and Drainage Plan

Dear Chuck:

Transmitted herewith for your approval are two (2) copies of the grading and drainage plan for the Siesta Hills Shopping Center. As you will note, the site layout and grading have changed slightly since the previous submittal. The concept of the drainage plan, however, has remained unchanged.

As per our previous correspondence, the finished floor for the proposed building at the northwest corner of the site has been established two (2) feet above the level of the corresponding 100-year flood plain. The limits of this flood plain as demonstrated by previous correspondence have been delineated on this plan.

Of utmost concern at this time is the approval of the development plan for the Siesta Hills Shopping Center. If the development plan is not approved in the very near future, the owners will be posed with financial and contractual problems. Hopefully, the submission of this drainage plan will enable you to approve the aforementioned development plan.

Your prompt attention to these matters will be greatly appreciated. If you have any further questions or comments, please do not hesitate to call.

Sincerely,

GOLDBERG-MANN & ASSOCIATES, INC.

Jeffrey G. Mortensen
Project Engineer

JGM:bb
Encs. (2)
xc: Joe Almers w/enc.

Goldberg - Mann & Associates, Inc.
Engineers - Planners
811 Dallas St., N.E. Albuquerque, New Mexico 87110 (505) 265-5611

1-016

May 12, 1981

Mr. Charles M. Easterling
Hydrology Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

RECEIVED
MAY 12 1981
CITY ENGINEER

Re: Siesta Hills Shopping Center
Drainage and Grading Plan

Dear Chuck:

Transmitted herewith for your approval are two copies of the revised grading and drainage plan for the Siesta Hills Shopping Center. This plan has been revised as per our meeting held on May 11, 1981. Also returned herewith is your mark-up of the previous submittal.

Your prompt attention to the approval of this drainage plan will be greatly appreciated. If you have further questions or comments, do not hesitate to call.

Sincerely,

GOLDBERG-MANN & ASSOCIATES, INC.

Jeffrey G. Mortensen
Project Engineer

JGM:bb
Encs.
xc: Joe Almers w/enc.

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

July 15, 1981

Mr. Jeff Mortenson
Tom Mann & Associates
811 Dallas N.E.
Albuquerque, New Mexico 87110

Re: Siesta Hills (O-016) dated 6-11-81
Ashcraft, Sandia Office Building (1-047) dated 6-28-81

Dear Jeff:

The drainage reports and grading plans referenced above are approved.

Sincerely,

Fred Aguirre
Civil Engineer/Hydrology

FA/fs

811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

Tom Mann Associates, Inc.
Engineers

10161
December 21, 1981

Mr. Brian Burnett
Hydrology Division
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Re: Revised Drainage Plan for the Siesta Hills Shopping Center

Dear Brian:

Transmitted herewith for your review and subsequent approval is the revised drainage plan for the subject project. The plan has been revised to reflect revised grades due to as-built conditions, and retaining wall design changes necessitated by the re-grading.

Your signature below will signify your approval of the revised drainage plan for the Siesta Hills Shopping Center as dated 12/18/81. Your prompt attention to the review and approval of this plan will be greatly appreciated because construction for this project is in progress.

Sincerely,

TOM MANN & ASSOCIATES, INC.

Jeffrey G. Mortensen
Project Engineer

JGM:jj
Enc.

APPROVED BY
Brian Burnett

Tom Mann Associates, Inc.
Engineers
811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

10161
January 21, 1982

RECEIVED
JAN 22 1982

Mr. Fred Aguirre
Engineering/Hydrology Division
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Siesta Hills Shopping Center
Grading and Drainage Plan

Dear Fred:

Transmitted herewith for your review are three (3) copies of the revised plan for the subject project. This most recent revision clarifies the existing drainage pattern at the northeast corner of the site.

As I mentioned in our telephone conversation on January 20, 1982, the northeast corner of the site was overlaid with approximately one inch of asphalt paving. This area, both before and after the overlay, is rather flat and therefore difficult to evaluate with respect to surface runoff. In the existing condition, such an assessment was even more difficult due to the cracked and deteriorated nature of the pavement. In fact, several areas were potholed. It is because of these items that my initial description of the drainage pattern at the northeast corner of the site was not entirely accurate. Hopefully, the revised plan will rectify the situation.

If you have any further questions or comments concerning this project, do not hesitate to call.

Sincerely,

TOM MANN & ASSOCIATES, INC.

Jeffrey G. Mortensen
Project Engineer

JGM:bb
Encs.
xc: George Gardner w/enc.

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

February 11, 1982

Goldberg-Mann & Associates, Inc.
C/O Mr. Jeff Mortenson
811 Dallas NE
Albuquerque, New Mexico 87110

RE: Siesta Hills Shopping Center, File No. L-18-D4 - dated 1/21/82

Dear Jeff,

Your revised plan dated 1-21-82 is approved. Please see that the copy of this plan is attached to the City building plans.

Sincerely,

Fred Aguirre, PE
Civil Engineer/Hydrology

FA/el

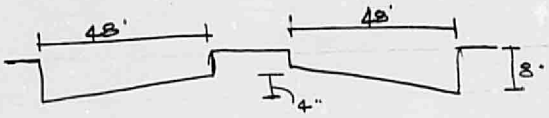
cc: Drainage File
Reading File

1-01C

4/14/81

II

Gibson



$S = \frac{6}{700} = .0086$ $\quad S^{1/2} = 0.0926$

$A = 0.33 \times 48 + 0.33 \times 48 = 24 \times 2 = 48$

$P = 49.0 \quad R^{2/3} = \left(\frac{24}{49}\right)^{2/3} = 0.62$

$Q = \frac{1.49}{0.013}(48)\,0.62\,(0.0926) = 316$ cfs.

increase depth to 3" above T/C

$A = 24.0 + 0.25 \times 48 = 36.0 \times 2 = 72$

$P = 49.50 \quad R^{2/3} = \left(\frac{36}{49.5}\right)^{2/3} = 0.81$

$Q = \frac{1.49}{0.013}(72)\,0.81\,(0.0926) = 619$ cfs

∴ water surface is 2" to 3" above T/C

$V_n = \frac{619}{72} = 8.60 \quad F_r = \frac{8.60}{\sqrt{32.2 \times 0.88}} = 1.61$

$y_2/y_1 \square = 0.88(1.7) = 1.50 \quad y_2/y_1 \Delta = 0.88(1.7) = 1.50 + 1.89 = 3.39$ w.s.

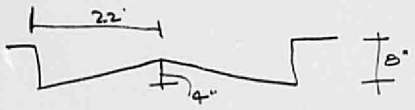
5303.39'

Cardinas

$Q = 3.33\ LH^{1.5}$

$450 = 3.33\ (44)\ H^{1.5}$

$H = 2.12' + 1.89 = 4.01$ w.s. Elev @ Cardinas. by weir.



$A = 0.33 \times 22 \times \frac{1}{2} + 0.33 \times 22 = 10.89 \times 2 = 21.78$ $S = 0.005$

$P = 22.67$ $R^{2/3} = \left(\frac{10.89}{22.67}\right)^{2/3} = 0.61$ $S^{1/2} = 0.0707$

$Q = \frac{1.49}{0.013}(0.61)\ 21.78\ (0.0707) = 108$ cfs

increase depth to 6" above T/C

$A = \cancel{10.89} + 0.5(44) = 43.78$

$P = 46.34$ $R^{2/3} = \left(\frac{43.78}{46.34}\right)^{2/3} = 0.96$

$Q = \frac{1.49}{0.013}(43.78)\ 0.96\ (0.0707) = 341$ cfs.

increase depth to 9" above T/C

$A = 43.78 + 0.25 \times 44 = 54.78$

$P = 46.34 + 0.5 = 46.84$ $R^{2/3} = \left(\frac{54.78}{46.84}\right)^{2/3} = 1.11$

$Q = \frac{1.49}{0.013}(54.78)\ 1.11\ (0.0707) = 493$ cfs. > 450

$d_n \approx$ 9" above T/C total depth $1.42' + 1.89 = 3.31$

5303.31

Eastern

$S = 8'/700 = 0.0114$ $\qquad S^{1/2} = 0.1069$

$A = .33(16)\,\tfrac{1}{2} \times 2 + 32 \times .33 = 15.84$

$P = 33.33 \qquad R^{2/3} = \left(\frac{15.84}{33.33}\right) = 0.61$

$Q = \frac{1.49}{0.013}(15.84)\,0.61\,(0.1069) = 118$ cfs.

increase depth to 6" above T/C.

$A = 15.84 + 0.5(32) = 31.84$

$P = 34.33 \qquad R^{2/3} = \left(\frac{31.84}{34.33}\right)^{2/3} = 0.95$

$Q = \frac{1.49}{0.013}(31.84)\,0.95\,(0.1069) = 371$ cfs.

increase depth to 9" above T/C.

$A = 31.84 + 32 \times 0.25 = 39.84$

$P = 34.83 \qquad R^{2/3} = \left(\frac{39.84}{34.83}\right)^{2/3} = 1.09$

$Q = \frac{1.49}{0.013}(39.84)\,1.09\,(0.1069) = 532$ cfs.

532 > 500 therefore water is approx 0.75' above T/C

change slope to $S = \frac{2}{320} = 0.0063 \qquad S^{1/2} = 0.0791$

increase depth to 1.0' above T/C

$A = 47.84 \qquad P = 35.33 \qquad R^{2/3} = \left(\frac{47.84}{35.33}\right)^{2/3} = 1.23$

$Q = \frac{1.49}{0.013}(47.84)\,1.23\,(0.0791) = 533$ cfs.

Rating of Eastern Cardenas to Alvarado 532 cfs @ 0.75 above T/C

" " " Alvarado to Palomas 533 cfs @ 1.00 above T/C