

C19/D049

File

December 19, 2006

Michael Smith, P.E.
5003 Dream Dancer Dr NE
Rio Rancho, NM 87144
505-771-8677

Post-It® Fax Note	7671	Date	# of pages 1 of 4
To	Brad Bingham	From	MICHAEL SMITH
Co./Dept.		Co.	
Phone #		Phone #	771-8677
Fax #		Fax #	

Re: New Covenant Church Grading Plan Comments for Site Development Plan and Preliminary/ Final Plat
Site: 7200 Holly NE (C19/D49)

Dear Mr. Cherne,

Thank you for your comments dated December 11, 2006. This letter will endeavor to address all of your concerns regarding the Site Development Plan and Preliminary/ Final plat for this project. Additional information will be sent to address the comments for Building Permit. If you still have remaining concerns or additional questions, feel free to contact me or Elizabeth Smith, P.E. at the above phone number.

The drainage in Holly Avenue is partitioned into three parts. The eastern reach adjacent to Wyoming Boulevard and east of our site drains to a low point in Holly and flows overland into the AMAFCA pond and dam. The ultimate plan, according to the North Albuquerque Acres Master Drainage Plan, is for the existing storm drain in Holly Avenue to be extended to this low point and for additional inlets to be installed. This reach of street does not contribute flow to Holly Avenue adjacent to our property, nor does our property contribute flow to this overland flow. The majority of the flow in Holly that enters the AMAFCA pond, all but 25 cfs, originates in this reach. Since there is a low point in the street at this point, all of the flow generated in this reach will enter the AMAFCA pond.

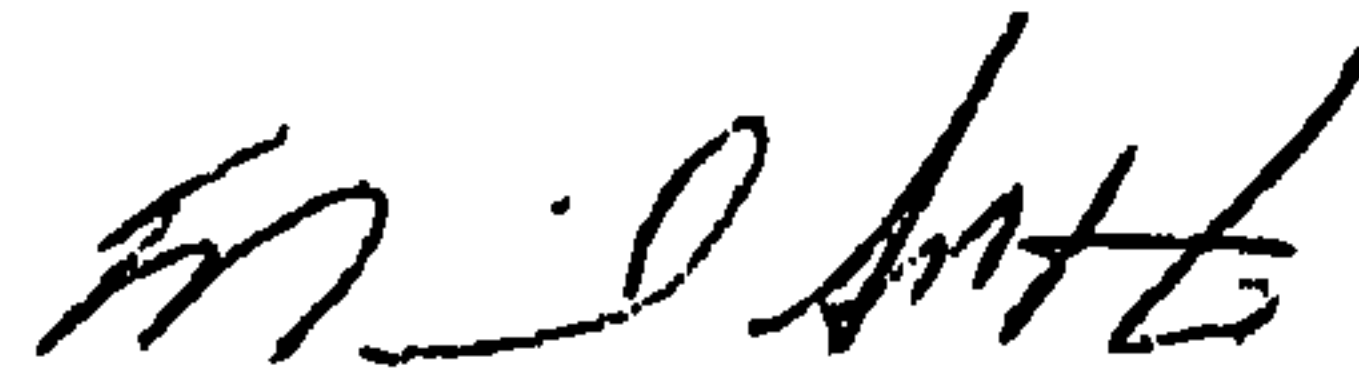
The central portion of Holly in which our site resides, drains into two existing type 'C' inlets and an existing 30" storm drain that discharges to the AMAFCA pond and dam. The existing storm drain was designed to convey the ultimate flow of 119 cfs into the pond (see North Albuquerque Acres table 5e page 33 excerpt in report). The fully developed Holly Avenue is capable of conveying 171 cfs, however, this reach will only need to convey 25 cfs to the inlets. The remaining flow is captured by the low point to the east. The two inlets are within a street sloped at 2.75%. Therefore, since they are not in a sump, it is not possible for these inlets to capture all of the flow in the street. There will be some bypass flow that will enter the two double 'A' inlets further west in Holly or the three existing inlets in Paseo del Norte at the Louisiana Boulevard intersection. These inlets drain into the Paseo del Norte storm drain. The existing inlets in Holly that discharge to the pond will capture 14 cfs and will allow 11 cfs to bypass. Therefore, of the 119 cfs generated, the pond will receive 103 cfs. The North Albuquerque Acres Master Drainage Plan does not suggest installing additional inlets within this reach.

To conclude, Holly Avenue adjacent to our property has sufficient capacity to convey the contributing flow to the existing inlets. The storm drain and inlets to serve this reach of Holly Avenue have been constructed. However, storm drain facilities are not in place to accommodate

drainage from properties east of our site on Holly Avenue. Holly Avenue is currently only developed on the south side of the street in the eastern reach. The properties on the north side of the street could construct a storm drain to serve them when they construct the north curb and gutter and complete the street paving.

Responses by comment:

- 1) The capacity of the inlets in Holly are 7 cfs each. The capacity of the 30" storm drain is 119 cfs.
- 2) The storm drain from the pond east has only been constructed to accommodate the central reach of Holly Avenue. The storm drain has not been constructed to the existing local low point east of our site. Our site does not contribute flow to this low point.
- 3) Holly Street Capacity = 171 cfs
- 4) The total developed runoff contributing to the AMAFCA pond per the North Albuquerque Acres Master Drainage Plan assumptions will be 119 cfs.



Engineer's Stamp
Michael D. Smith, P.E.
December 19, 2006



Worksheet Worksheet for Irregular Channel

Project Description

Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data

Slope	2.7500 %
Water Surface Elevation	0.67 ft

Options

Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results

Mannings Coefficient	0.016
Elevation Range	0.00 to 0.67
Discharge	171.20 cfs
Flow Area	18.8 ft ²
Wetted Perimeter	41.35 ft
Top Width	40.00 ft
Actual Depth	0.67 ft
Critical Elevation	1.03 ft
Critical Slope	0.4247 %
Velocity	9.11 ft/s
Velocity Head	1.29 ft
Specific Energy	1.96 ft
Froude Number	2.34
Flow Type	Supercritical

Roughness Segments

Start Station	End Station	Mannings Coefficient
0+00	0+40	0.016

Natural Channel Points

Station (ft)	Elevation (ft)
0+00	0.67
0+00	0.00
0+20	0.40
0+40	0.00
0+40	0.67

Cross Section

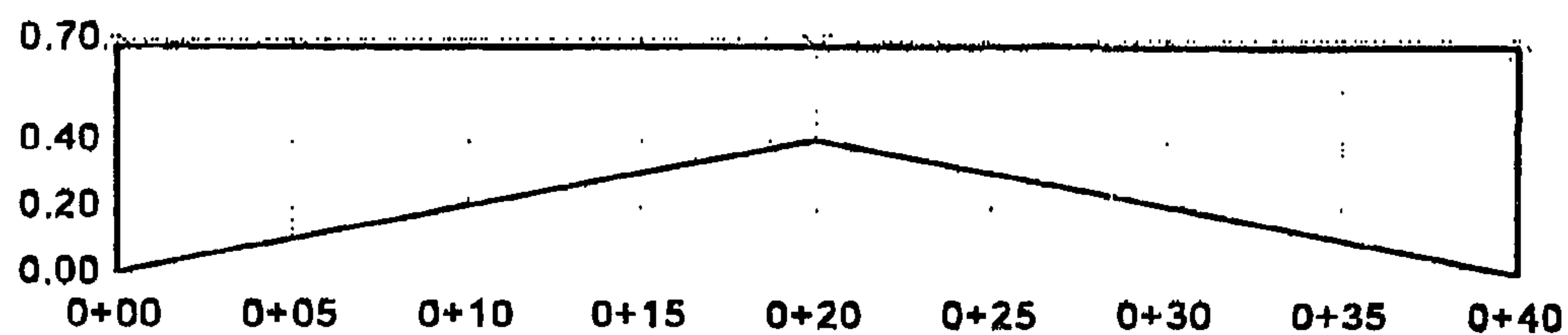
Cross Section for Irregular Channel

Project Description

Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data

Mannings Coefficient	0.016
Slope	2.7500 %
Water Surface Elevation	0.67 ft
Elevation Range	0.00 to 0.67
Discharge	171.20 cfs



V:10.0
H:1
NTS

CITY OF ALBUQUERQUE



December 16, 2008

Michael D. Smith, P.E.
5003 Dream Dancer Dr
Rio Rancho, NM 87144

Re: New Covenant Church, 7200 Holly Ave NE, Grading Plan
Engineer's Stamp dated 12-12-08 (C19/D049)

Dear Mr. Smith,

Based upon the information provided in your submittal received 12-15-08, the above referenced plan is approved for Building Permit and SO 19 Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

To obtain a temporary or permanent CO, Engineer Certification of the Grading Plan per the DPM is required and the sidewalk culverts in the City ROW must be inspected and accepted. Please contact Duane Schmitz, 235-8016, to schedule an inspection.

PO Box 1293

If you have any questions, you can contact me at 924-3695.

Albuquerque

NM 87103

www.cabq.gov

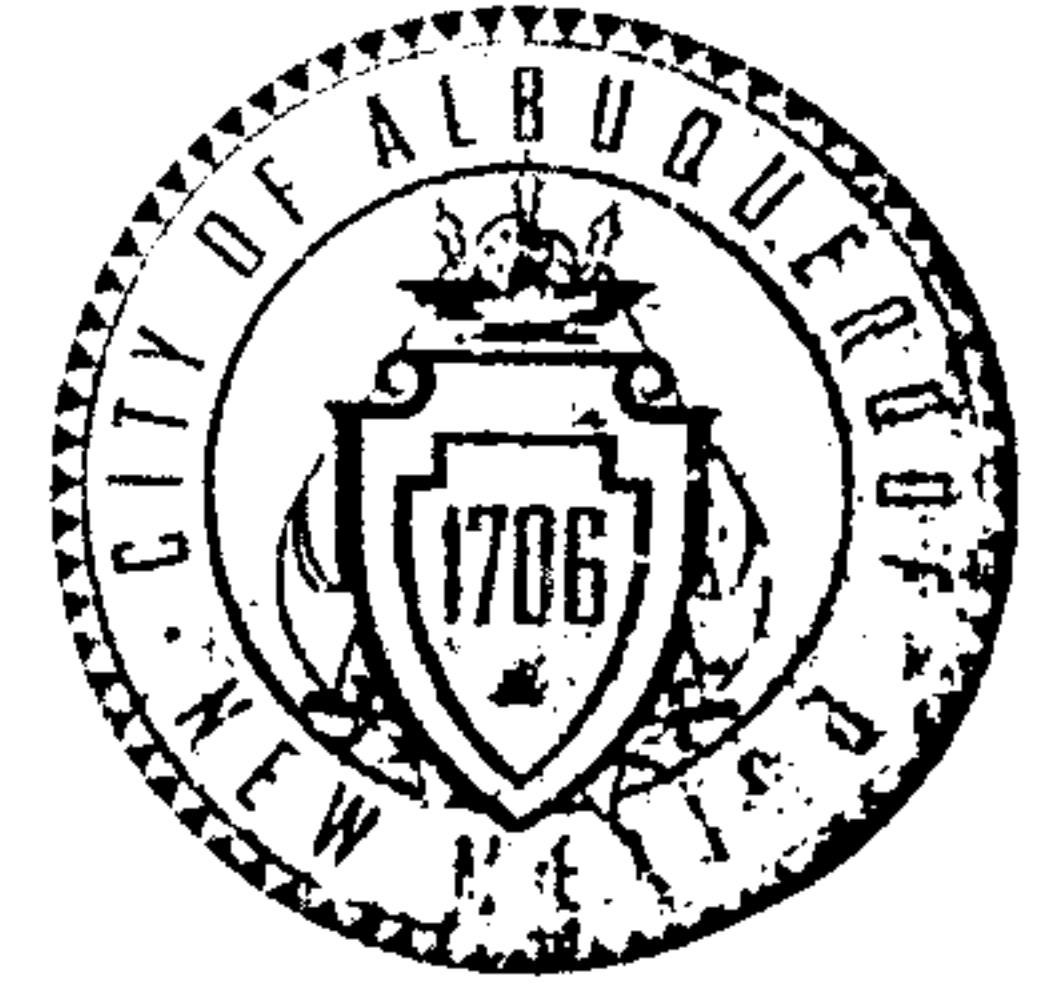
Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

Copy: file

Duane Schmitz, Street/Storm Drain Maintenance
Antoinette Baldonado, Excavation and Barricading

CITY OF ALBUQUERQUE



December 22, 2008

Michael D. Smith, P.E.
5003 Dream Dancer Dr
Rio Rancho, NM 87144

Re: New Covenant Church, 7200 Holly Ave NE
Permanent Certificate of Occupancy Approved
Engineer's Stamp dated 12/12/08 (C19/D049)
Certification dated 12/18/08

Based upon the information provided in your submittal received 12/22/2008, the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3695.

PO Box 1293

Sincerely,

Albuquerque

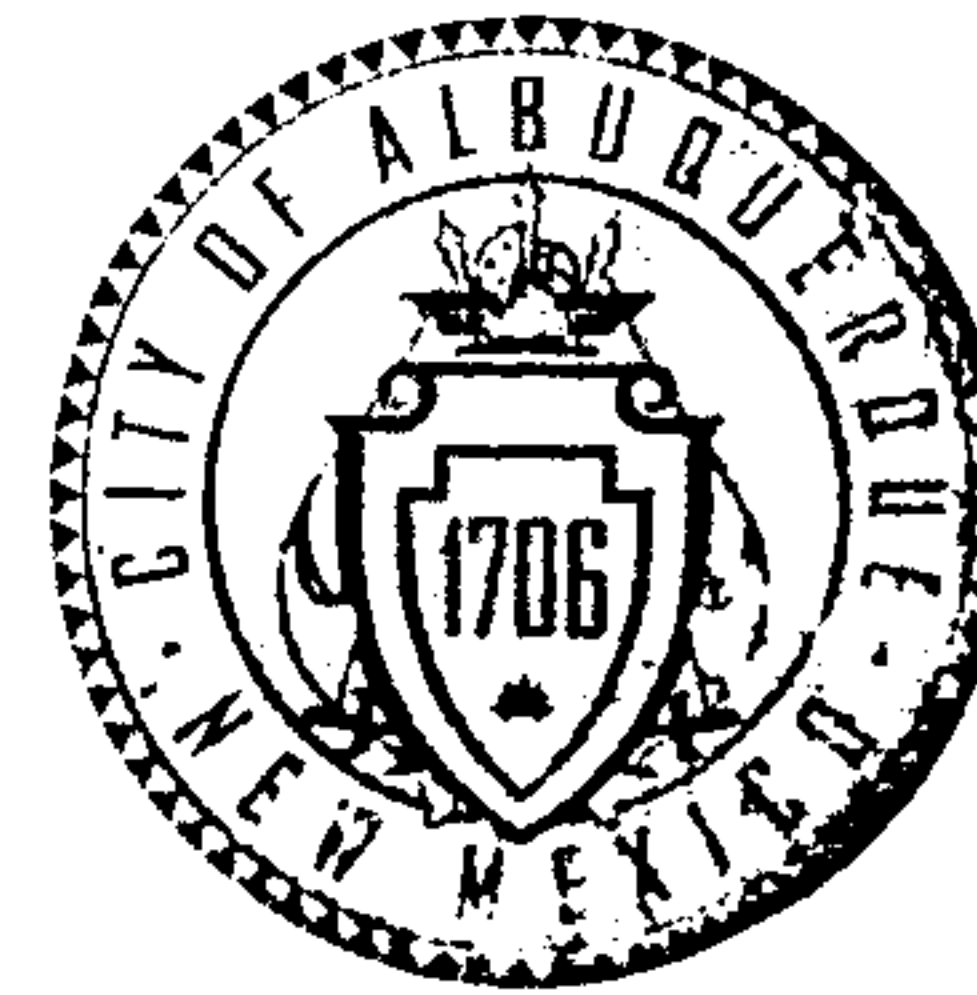
Curtis A. Cherne, P.E.
Senior Engineer
Development and Building Services

NM 87103

C: File
Katrina Sigala- CO Clerk

www.cabq.gov

CITY OF ALBUQUERQUE



August 22, 2008

Michael D. Smith, P.E.
5003 Dream Catcher Dr
Rio Rancho, NM 87144

**Re: New Covenant Church, 7200 Holly Ave NE, Grading Plan
Engineer's Stamp dated 8-5-08 (C19/D049)**

Dear Mr. Smith,

Based upon the information provided in your submittal received 8-5-08, the above referenced plan is approved for Building Permit and SO 19 Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

It is not apparent that you intend to build standard curb and gutter along Holly Ave. Standard curb and gutter is required to build a sidewalk culvert per COA STD DWG 2236.

PO Box 1293

To obtain a temporary or permanent CO, Engineer Certification of the Grading Plan per the DPM is required and the storm drain work in the City ROW must be inspected and accepted. Please contact Duane Schmitz, 235-8016, to schedule an inspection.

Albuquerque

If you have any questions, you can contact me at 924-3695.

NM 87103

Sincerely,

Curtis A. Cherne, P.E.

Senior Engineer, Planning Dept.

Development and Building Services

www.cabq.gov

Copy: file

Antoinette Baldonado, Excavation and Barricading
Duane Schmitz, Street/Storm Drain Maintenance

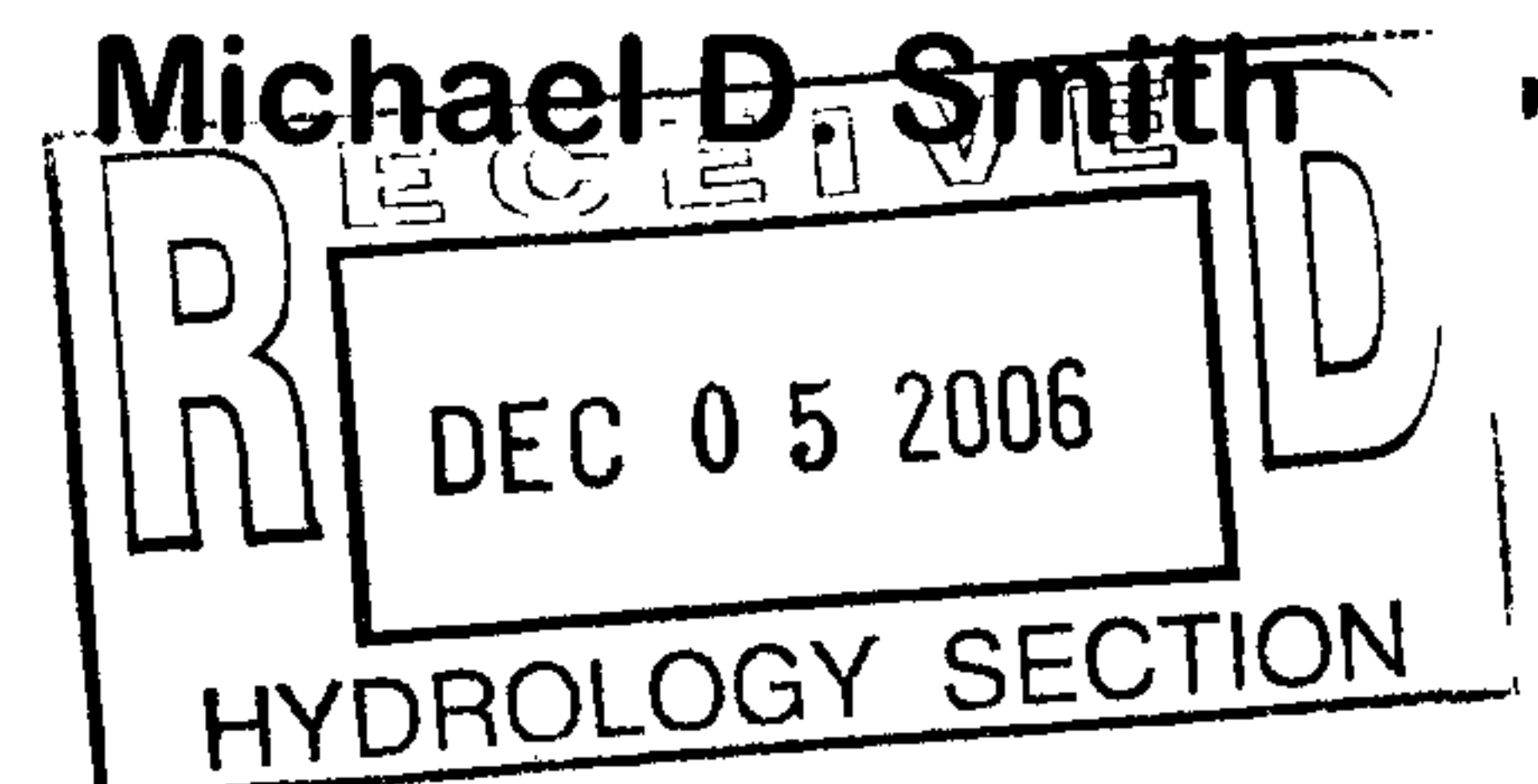
NEW COVENANT CHURCH DRAINAGE PLAN

DECEMBER 5, 2006

Engineer's Seal



Michael D. Smith



I. INTRODUCTION

A. Purpose and Scope of Report

The purpose of this drainage plan is to analyze and assess the impacts of the proposed New Covenant Church development. This report has been submitted for Preliminary and Final Plat review and Site Development Plan for Building Permit. This report includes graphical description of the onsite drainage area, estimates quantities of water discharged from the site before and after development, and presents a graphic description of the direction of water flow and points of discharge from the site after development. In addition, a discussion of the impact of the development on downstream properties is provided including capacity analysis of current facilities to handle the design flow.

B. Site Location

The New Covenant Church property is located in North Albuquerque Acres within the City of Albuquerque, Bernalillo County, New Mexico. The property is located west of Wyoming Boulevard and north of Paseo del Norte on Holly Avenue. The address is 7200 Holly Avenue and is legally lot 7A, block 10 of North Albuquerque Acres Tract 2, Unit 3. See the attached Zone Atlas map for more detail.

C. Development Concept

This property will be developed as a new church facility for New Covenant Church. The facility has been designed in three phases. The first phase is a 13,000 square foot worship center. The second phase is a 6000 square foot single story classroom wing to the north of the worship center. Finally, phase three is a 6000 square foot office wing to the east of the worship center. This building will be located on a 2.8 acre parcel of land. The property is zoned SU-2.

D. Drainage Concept

The drainage from this property has been accounted for in the North Albuquerque Acres Master Drainage Plan prepared by Resource Technology Inc. The runoff from the site will enter Holly Avenue and flow west to the AMAFCA pond to the north of Holly and then to

the Lower North Domingo Baca Dam. The flow from this site was included in the design of this pond and dam.

The Flood Insurance Rate Map indicates that the property is in unshaded Zone X.

II. EXISTING CONDITIONS

The New Covenant site is currently undeveloped and drains from south-east to north-west at a slope of approximately 4%. The property to the east has been developed with a metal building and a parking lot. Flow from this neighboring site enters Holly Avenue and diverts all offsite flow away from the site. The property to the west is currently undeveloped.

The existing flow from the New Covenant Site enters Holly Avenue to the west of the property and is captured by existing storm drain inlets in Holly Avenue east of Louisiana Boulevard. These inlets deposit the flow into the AMAFCA pond and subsequently into the Lower North Domingo Baca Dam. These facilities were designed to accommodate developed flow from this site. Please refer to the Basin Map drawings.

III. DEVELOPED CONDITIONS

The runoff from this site will flow within the paved parking lot and enter Holly Avenue at the two entrances. It will then flow west on Holly Avenue to the existing storm drain inlets and into the AMAFCA pond. Please refer to the attached grading plan for detailed grading.

The proposed developed conditions were analyzed for the 100-year, 6 hour storm event in accordance with the revised Section 22.2, Hydrology, of the Development Process Manual (DPM) for the City of Albuquerque, January, 1993 and were compared with the original design for the AMAFCA pond that accepts the flow. Since this site is less than 2 acres, the 40 Acre and Smaller Basins method was employed.

The AMAFCA pond was originally designed to accept 112.5 cfs from 28.9 acres of land and convey the flow into the Lower North Domingo Baca Dam. A storm drain system, including inlets, was designed and constructed within Holly Avenue that will accommodate 119 cfs. (See excerpts from the North Albuquerque Acres Master Drainage Plan in Appendix C.) The contributing land was assumed to have 60% impervious area when these facilities

were designed. Therefore, the New Covenant site was expected to produce 11.5 cfs of runoff. In actuality, this site will produce 13.0 cfs during the 100-year event due to an increased impervious percentage of 82%. (See spreadsheets in Appendix B.) This modification will increase the expected runoff by 1.5 cfs. This minimal increase in runoff will not adversely affect the downstream system because the storm drain system was designed with an excess of 6.5 cfs and the pond discharges directly into the Dam. It is not likely that all of the basins contributing to the Dam will receive the 100-year flow at the same time. This extra flow is well within the safety capacity that was built into the system.

IV. CONCLUSIONS

The primary purpose of this report is to evaluate impacts to the downstream system due to the proposed development. The development of the New Covenant Church Facility does not adversely impact the downstream system. The existing storm drain, pond, and dam were designed to accommodate the flow from this development.

V. REFERENCES

Development Process Manual, City of Albuquerque, Planning Development and Public Works Department, January, 1993.

North Albuquerque Acres Master Drainage Plan, Resource Technology Inc., October 1998.

PROJECT: Title NCC
BASIN : Description NW corner of ex. Property
CONDITION: Description

Part A -- Procedure for 40 Acre and Smaller Basins*

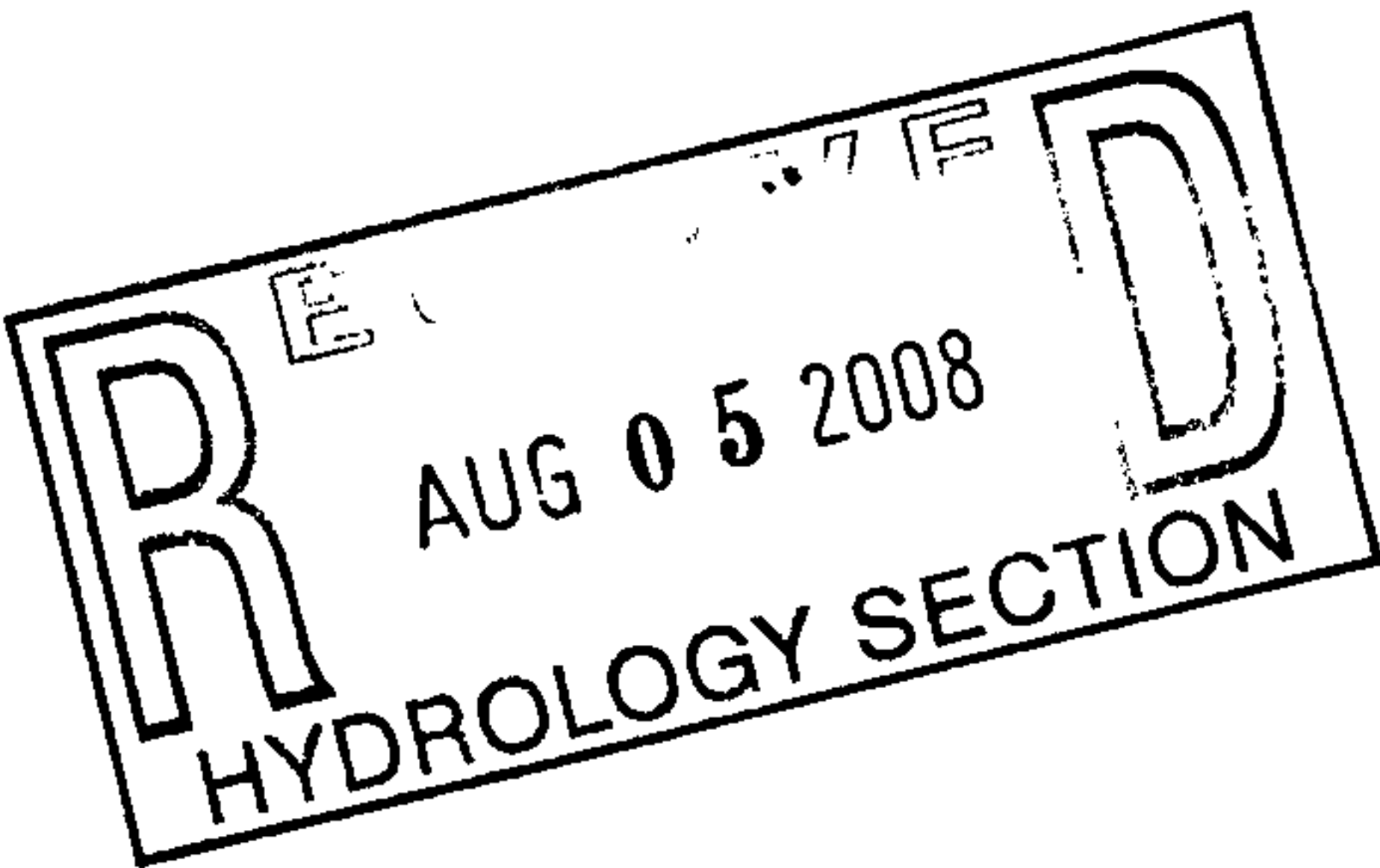
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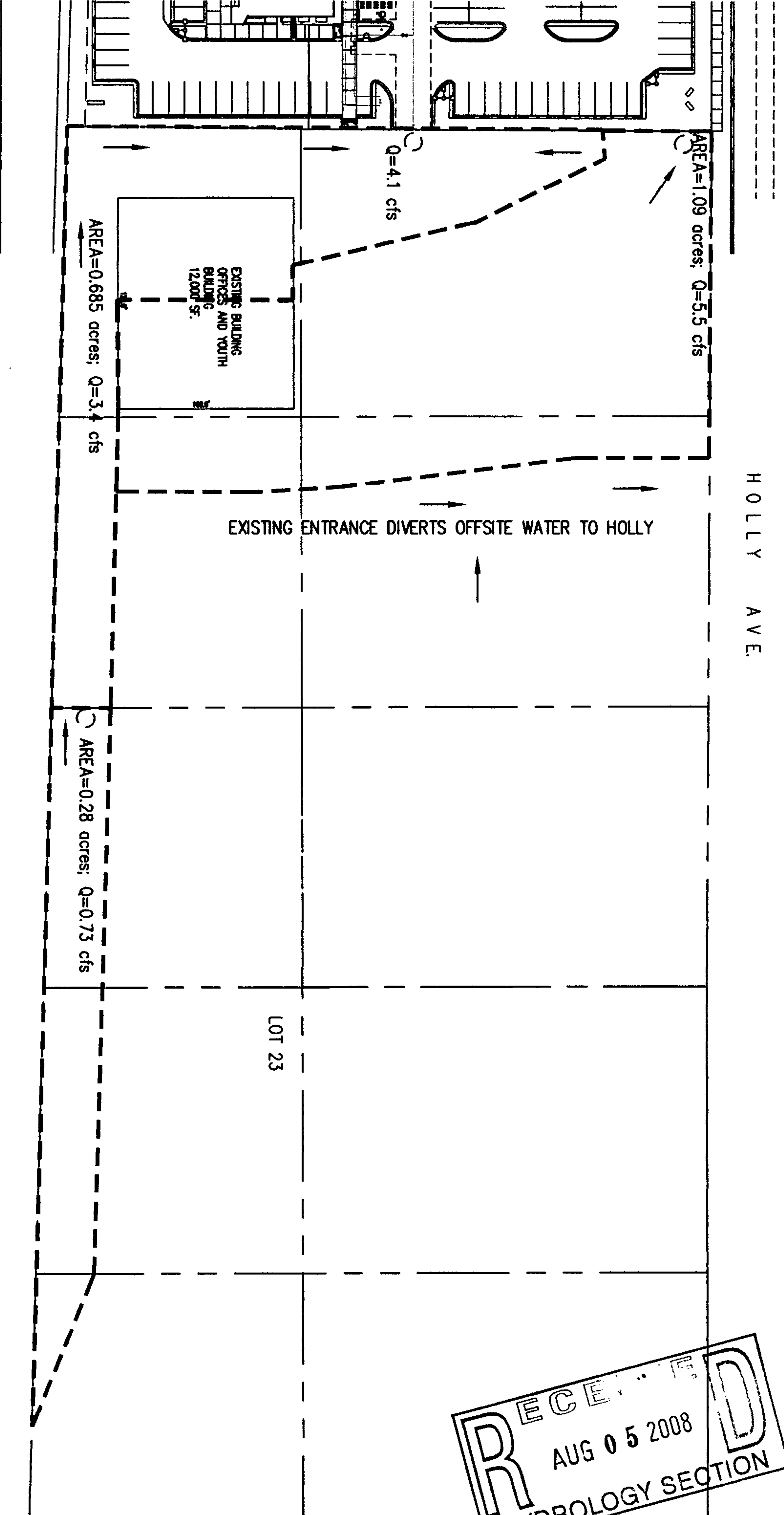
zone (x)	area (acres)	land treatment (%)
1	1.0900	A
2		B 0.00
3 x		C
4		D 100.00

Output

Output		(ac-ft)				(cfs)		
Volume	2-YR	6-hr	0.081	Q-Peak	2-YR	2.224		
		24-hr	0.126		10-YR	3.695		
		4-day	0.158		100-YR	5.472		
		10-day	0.167					
	10-YR	6-hr	0.136					
		24-hr	0.182					
		4-day	0.213					
		10-day	0.223					
	100-YR	6-hr	0.214					
		24-hr	0.260					
		4-day	0.337					
		10-day	0.423					

* City of Albuquerque Development Process Manual, Volume 1, 1997 Revision, pages 22-7 to 22-16.





RECEIVED
AUG 05 2008
HYDROLOGY SECTION

NEW COVENANT CHURCH
OFFSITE BASINS
COA# 664482 C19/D49

PROJECT: Title NCC
BASIN : Description South offsite flow east of Existing church property
CONDITION: Description

Part A -- Procedure for 40 Acre and Smaller Basins*

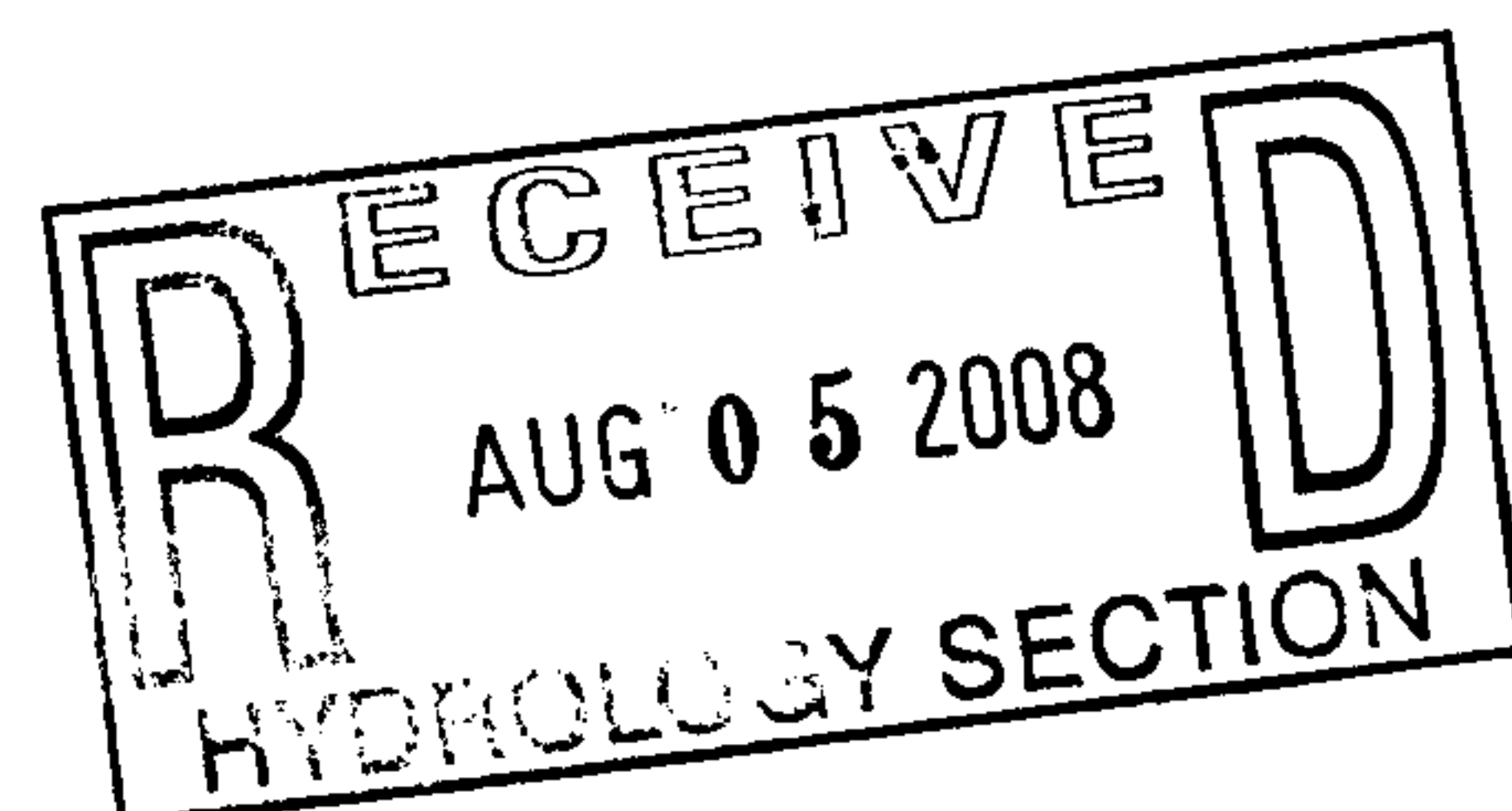
Input

zone (x)	area (acres)	land treatment (%)
1	0.2800	A
2		B 100.00
3 x		C
4		D 0.00

Output

Output		(ac-ft)				(cfs)		
Volume	2-YR	6-hr	0.001	Q-Peak	2-YR	0.059		
		24-hr	0.001			10-YR	0.333	
		4-day	0.001				100-YR	0.728
		10-day	0.001					
	10-YR	6-hr	0.008		10-YR			
		24-hr	0.008			100-YR		
		4-day	0.008					
		10-day	0.008					
	100-YR	6-hr	0.021		100-YR			
		24-hr	0.021					
		4-day	0.021					
		10-day	0.021					

* City of Albuquerque Development Process Manual, Volume 1, 1997 Revision, pages 22-7 to 22-16.



PROJECT: Title NCC
BASIN : Description Existing church property going to cross-access
CONDITION: Description

Part A -- Procedure for 40 Acre and Smaller Basins*

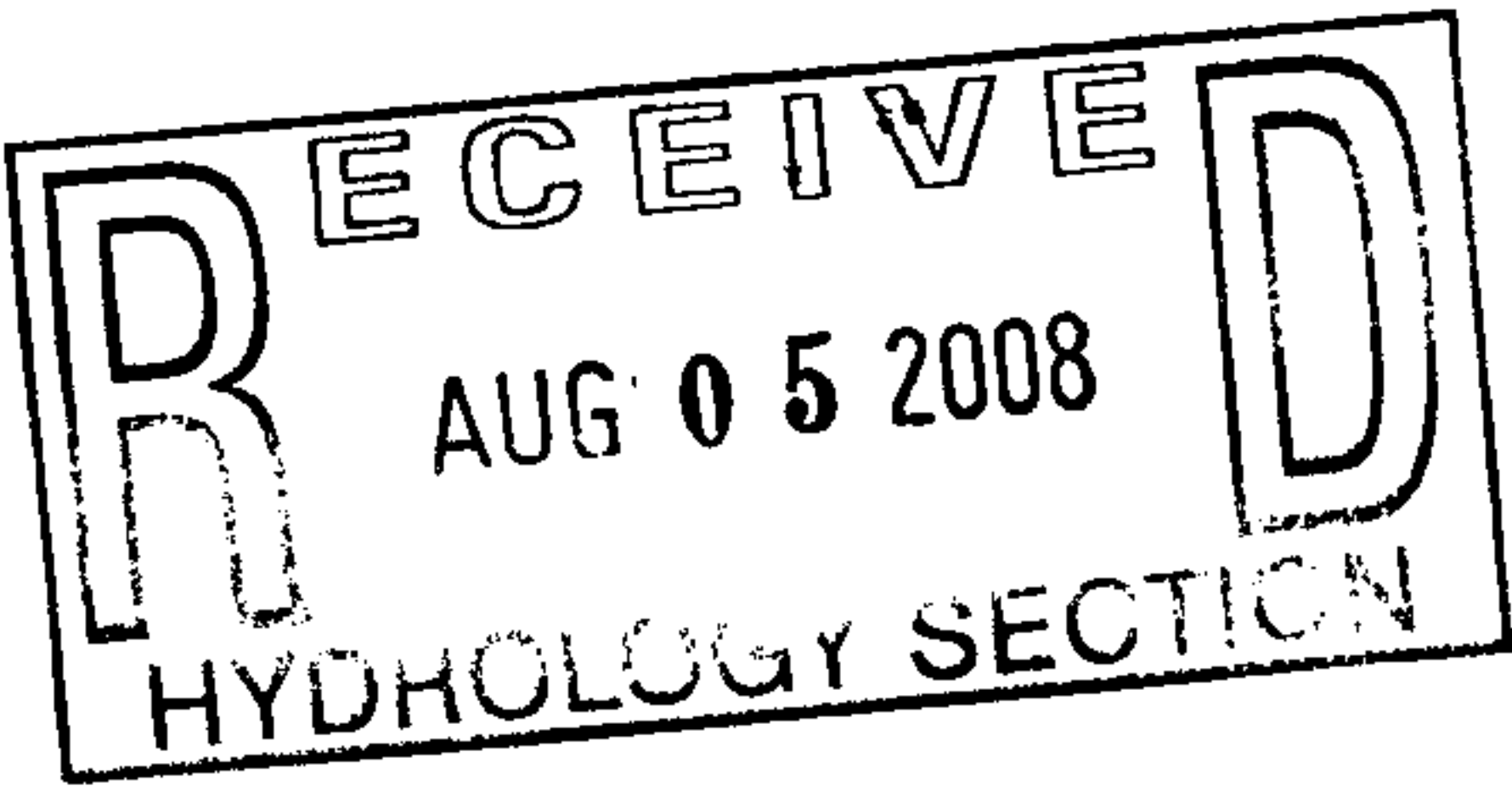
Input

zone (x)	area (acres)	land treatment (%)
1	0.6850	A
2		B 0.00
3 x		C
4		D 100.00

Output

Output			(ac-ft)	Q-Peak			(cfs)
Volume	2-YR	6-hr	0.051	2-YR	1.397		
		24-hr	0.079	10-YR	2.322		
		4-day	0.099	100-YR	3.439		
		10-day	0.105				
	10-YR	6-hr	0.086				
		24-hr	0.114				
		4-day	0.134				
		10-day	0.140				
	100-YR	6-hr	0.135				
		24-hr	0.163				
		4-day	0.212				
		10-day	0.266				

* City of Albuquerque Development Process Manual, Volume 1, 1997 Revision, pages 22-7 to 22-16.



PROJECT: New Covenant Church
BASIN : Church and parking lot
CONDITION: As designed NAA

Part A -- Procedure for 40 Acre and Smaller Basins*

Input

zone (x)	area (acres)	land treatment (%)
1	2.7500	A 0.00
2		B 25.00
3 x		C 15.00
4		D 60.00

Output

			(ac-ft)				(cfs)
Volume	2-YR	6-hr	0.133	Q-Peak	2-YR	3.832	
		24-hr	0.201		10-YR	7.237	
		4-day	0.250		100-YR	11.494	
		10-day	0.263				
	10-YR	6-hr	0.248				
		24-hr	0.317				
		4-day	0.365				
		10-day	0.379				
	100-YR	6-hr	0.422				
		24-hr	0.490				
		4-day	0.607				
		10-day	0.738				

* City of Albuquerque Development Process Manual, Volume 1, 1997 Revision, pages 22-7 to 22-16.

PROJECT: New Covenant Church
BASIN : Church and parking lot
CONDITION: Final buildout

Part A -- Procedure for 40 Acre and Smaller Basins*

Input

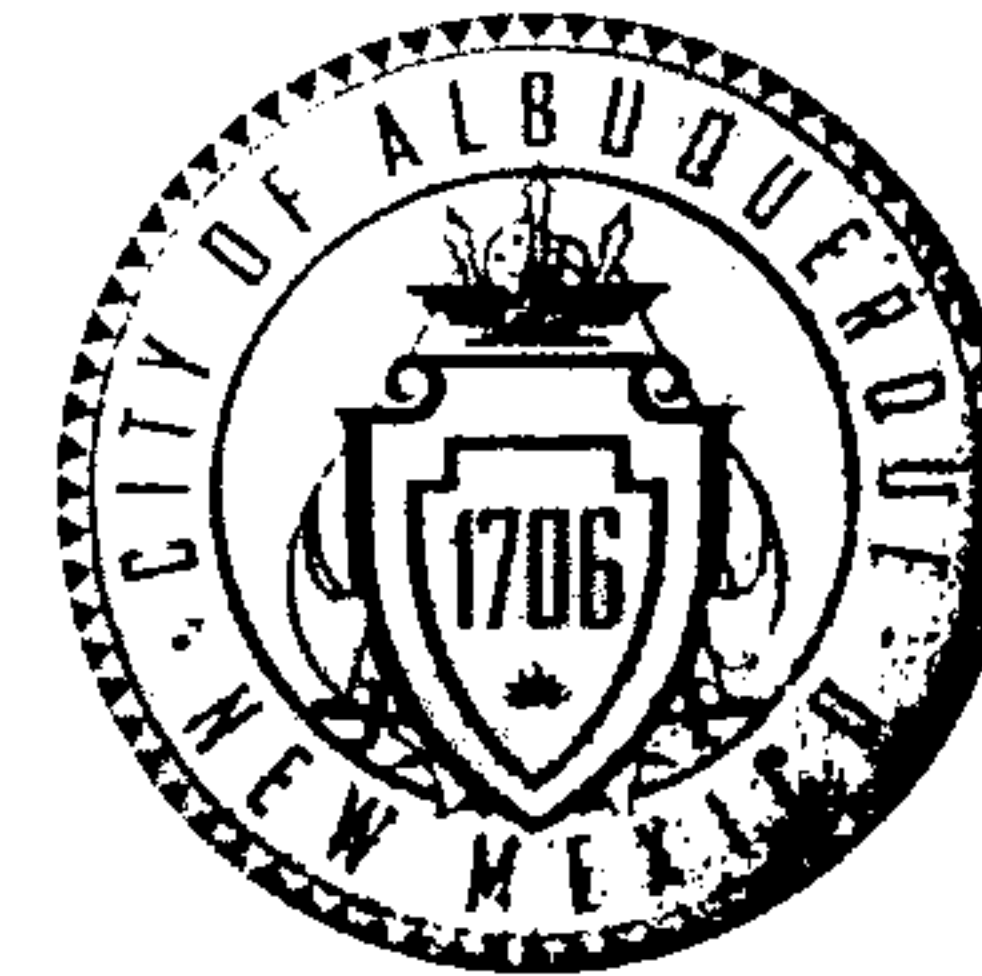
zone (x)	area (acres)	land treatment (%)
1	2.7500	A 0.00
2		B 0.00
3 x		C 18.00
4		D 82.00

Output

Output		(ac-ft)	Q-Peak		(cfs)
Volume	2-YR			2-YR	
	6-hr	0.175			4.986
	24-hr	0.269		10-YR	8.634
	4-day	0.335		100-YR	13.028
	10-day	0.354			
	10-YR				
	6-hr	0.307			
	24-hr	0.401			
	4-day	0.467			
	10-day	0.486			
	100-YR				
	6-hr	0.497			
	24-hr	0.591			
	4-day	0.750			
	10-day	0.929			

* City of Albuquerque Development Process Manual, Volume 1, 1997 Revision, pages 22-7 to 22-16.

CITY OF ALBUQUERQUE



**Planning Department
Transportation Development Services Section**

January 13, 2008

Joe Slagle, Registered Architect,
Slagle Herr Architects
1600 Rio Grande NW
Albuquerque, NM 87104

Re: Approval of Permanent (Final) Certificate of Occupancy (C.O.) for
New Covenant Church, [C-19 / D049]
7200 Holly NE
Architect's Stamp Dated 01/08/00

Dear Mr. Slagle:

The TCL/Letter of Certification submitted on January 13, 2009 is sufficient for acceptance by this office for Permanent, Final, Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

January 8, 2009

Mr. Nilo Salgado-Fernandez, P.E.
City of Albuquerque
Transportation Development Department
600 2nd Street SW
Albuquerque, NM 87102

C-19/DO49

RE: NEW COVENANT CHURCH - WEST DRIVEWAY
7200 Holly NE

Nilo,

Per our phone conversation, this letter shall serve to clarify our position regarding the west driveway serving the property listed above from Holly Ave. NE.

The driveway was installed at a steeper grade than originally intended because of some unforeseen grading and accessibility issues. However, the existing condition has been reviewed by the civil engineer for the project as well as the ownership and our office and we are all in agreement that the condition is acceptable.

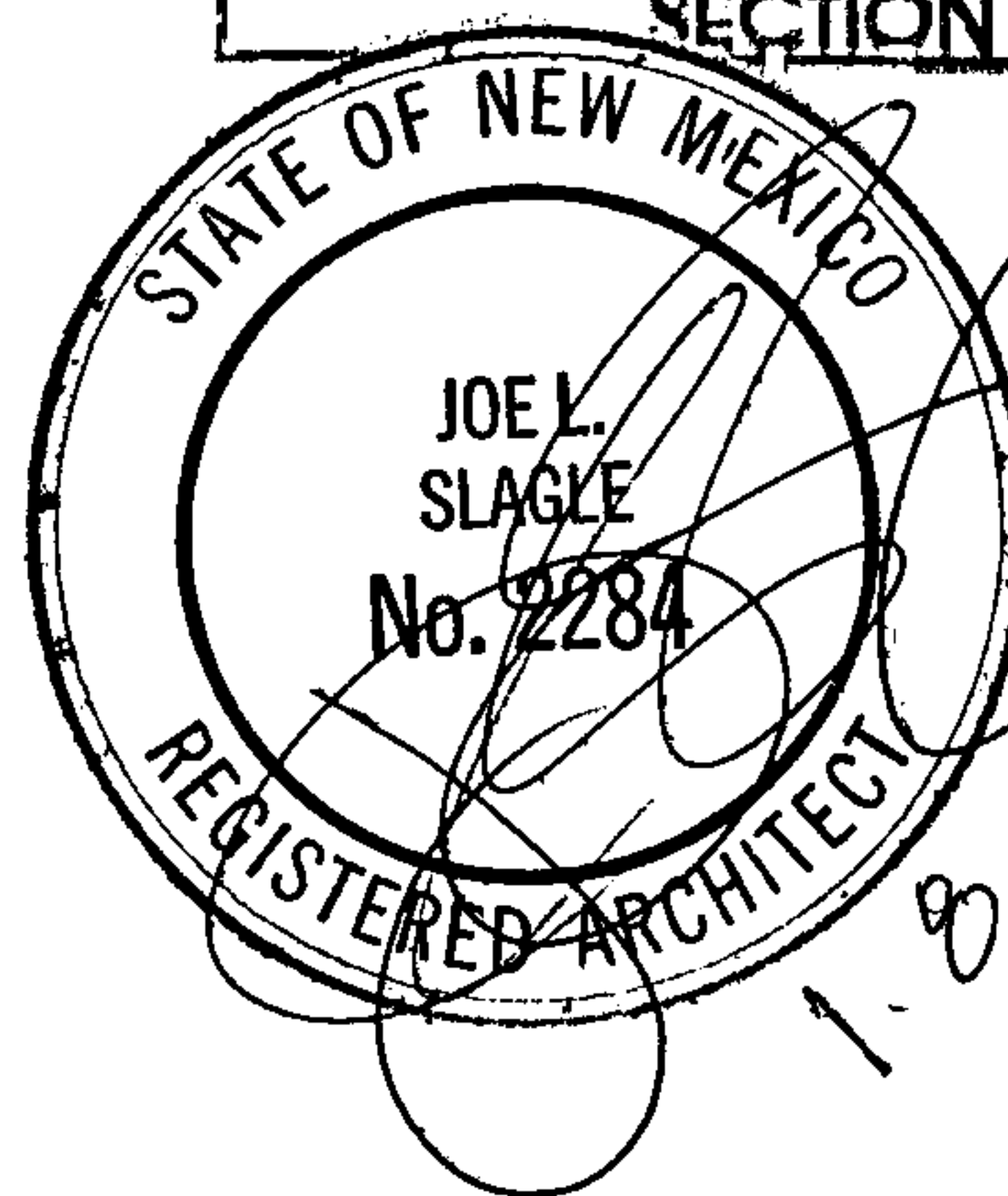
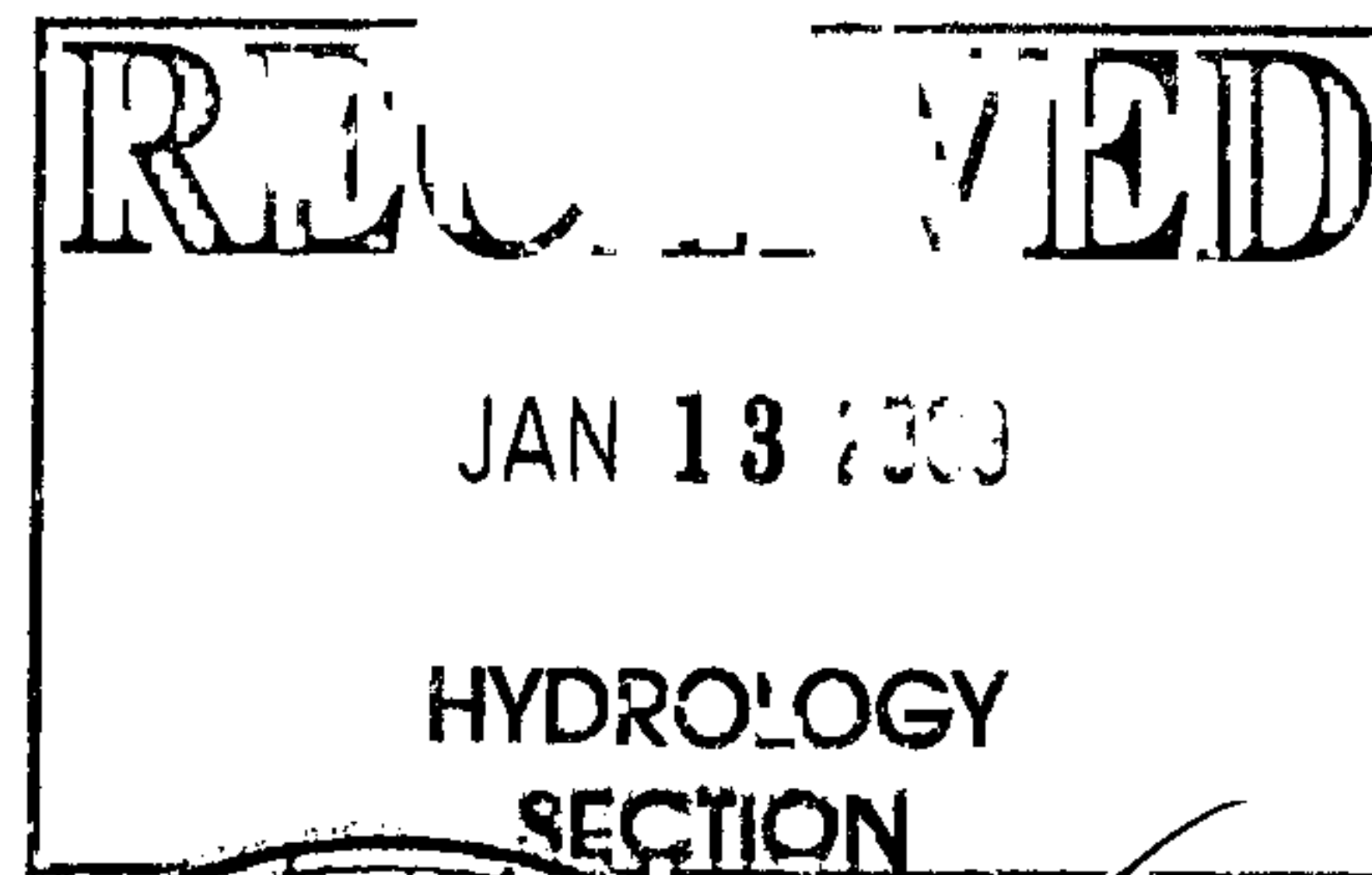
If you are in agreement that this is consistent with our conversation, please issue a letter of approval for permanent C.O.

Thank you for your attention to this matter.

Sincerely,



Joe L. Slagle
President
SlagleHERR Architects Inc.



slagle

HERR

Architects

1600 rio grande nw
fax 505 246 0437

albuquerque
new mexico 87104

505 246 0870

January 8, 2009

Mr. Nilo Salgado-Fernandez, P.E.
City of Albuquerque
Transportation Development Department
600 2nd Street SW
Albuquerque, NM 87102

RE: NEW COVENANT CHURCH – WEST DRIVEWAY
7200 Holly NE

Nilo,

Per our phone conversation, this letter shall serve to clarify our position regarding the west driveway serving the property listed above from Holly Ave. NE.

The driveway was installed at a steeper grade than originally intended because of some unforeseen grading and accessibility issues. However, the existing condition has been reviewed by the civil engineer for the project as well as the ownership and our office and we are all in agreement that the condition is acceptable.

If you are in agreement that this is consistent with our conversation, please issue a letter of approval for permanent C.O.

Thank you for your attention to this matter.

Sincerely,


Joe L. Slagle
President
SlagleHERR Architects Inc.



slagle

HERR

Architects