HYDROLOGY

K19/D60

K19/D60

Assumption

CHURCH ADD'N.

1 PLAN

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING D. VISION/DESIGN HYDROLOGY SECTION

PRE-DESIGN CONFERENCE RECAP

HYDROLOGY SECTION PROJECT NO.: K 19 DATE: 4-3-85

PLANNING DIVISION NOS. EPC: _____ DRB: _____

SUBJECT: CLASSROOM For St Assumption Church

LEGAL DESCRIP.: _____

APPROVAL REQUESTED

_____ PRELIMINARY PLAT _____ FINAL PLAT

_____ SITE DEVELOPMENT PLAN X BUILDING PERMIT

_____ ROUGH GRADING

	WHO:	REPRESENTING:
ATTENDANCE:	Tucker Green	
	Carlos A Montoya	

_____ Conceptual Drainage Plan/Report required for Preliminary Plat and/or Site Development Plan sign-off.

X Approved Drainage Plan/Report required for Final Plat and/or Building Permit sign-off.

_____ Subdivision Improvements Agreement or Financial Security required.

FINDINGS: ① DRAINAGE PLAN PER DPM ② DRAINAGE PLAN ENCOMPASSES ONLY The CLASS Room runoff & where it goes. ③ Free discharge.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlos A Montoya SIGNED: [illegible]

TITLE: CE/Hydrology TITLE: CE

DATE: 4-3-85 DATE: 4-3-85

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Assumption Church Addition ZONE ATLAS / DRNG FILE: K-19 / D60

LEGAL DESCRIPTION: Lot 37, Block N, Bosque Redondo Addition

CITY ADDRESS: 811 Guaymas Pl. NE

ENGINEERING FIRM: Engineering Associates CONTACT: Tucker Green

ADDRESS: 532 Adams NE 87102 PHONE: ~~865~~ 268-6545

OWNER: Our Lady of the Assumption Church CONTACT: Father Bruckner

ADDRESS: 811 Guaymas Pl. NE PHONE: PHONE: 256-9818

ARCHITECT: Rick Bennett CONTACT: Rick Bennett call

ADDRESS: 3803 Riverview Pl.NW PHONE: 831-3150

SURVEYOR: Alpha Surveying Group CONTACT: Gary Gritsko

ADDRESS: 623 Amherst NE 87108 PHONE: 265-5538

CONTRACTOR: Steve Fraker CONTACT: Steve Fraker

ADDRESS: 141 Stutz Dr. NE PHONE: 293-0467

PREDESIGN MEETING:

_X_YES
___NO
_X_COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO.
EPC NO.
PROJ. NO.

TYPE OF SUBMITTAL:
___DRAINAGE REPORT
_X_DRAINAGE PLAN
___CONCEPTUAL GRADING & DRAINAGE PLAN
_X_GRADING PLAN
___EROSION CONTROL PLAN
___ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:
___SKETCH PLAT
___PRELIMINARY PLAT
___SITE DEVELOPMENT PLAN
___FINAL PLAT APPROVAL
_X_BUILDING PERMIT APPROVAL
___CERTIFICATE OF OCCUPANCY
___ROUGH GRADING PERMIT
___GRADING/PAVING PERMIT
___OTHER (SPECIFY)

DATE SUBMITTED:

BY:

AUGUST F. MOSIMANN STATE OF NEW MEXICO NO. 6148 REGISTERED PROFESSIONAL ENGINEER

RECEIVED MAY 08 1985 HYDROLOGY SECTION

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

May 13, 1985

Tucker Green
Engineering Associates
532 Adams, NE
Albuquerque, New Mexico 87102

RE: ASSUMPTION CHURCH ADDITION - DRAINAGE/GRADING PLAN
(K-19/D60) RECEIVED MAY 8, 1985

Dear Mr. Green:

The referenced plan dated May 8, 1985, is approved for building permit sign-off.

Please attach a copy of this approved plan to both sets of construction plans prior to Hydrology sign-off.

If you have any questions or comments regarding this project, please call me at 766-7644.

Cordially,

Carlos A. Montoya

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

DRAINAGE REPORT
FOR
OUR LADY OF THE ASSUMPTION CHURCH CLASSROOM ADDITION

811 GUAYMAS PL. NE MAP K-19
LOT 37, BLOCK N, BOSQUE REDONDO ADDITION

RECEIVED
MAY 08 1985
HYDROLOGY SECTION

PROJECT DESCRIPTION

The U-shaped convent at Our Lady of the Assumption Church has approximately 4650 sq. ft. of floor area. The interior of the U is currently an open, grassed courtyard. The owner proposes building 1700± sq. ft. of classrooms in this space and putting a small enclosed courtyard at the northwest corner of the building to complete a roughly square shape.

Although a drainage plan is required, the pre-design conference requires addressing only the classroom runoff and where it goes. Free discharge is permitted.

RUNOFF CALCULATIONS - RATIONAL FORMULA

The native soil is type TgB (Tijeras), hydrologic group B (SCS Map 31). The existing courtyard is 0 % impervious and the C factor is 0.34 (DPM Pl 22.2 C-1). C for the roof areas - essentially flat - is taken as 0.95.

The 100-yr 6-hr rainfall amount is 2.3 inches (Pl 22.2 D-1). Since the area under discussion is only 62 ft long the time of concentration used is the minimum 10 minutes and the 100-yr intensity becomes 4.95 in/hr (Pl 22.2 D-2).

The flow area is approximately 1700 sq. ft. = 0.03903 acre.

EXISTING: Qp100 = (0.34)(1700)(4.95/43560) = 0.066 cfs
V100 = (0.34)(1700)(2.3/12) = 111 cu ft

PROPOSED: Qp100 = (0.95)(1700)(4.95/43560) = 0.184 cfs
V100 = (0.95)(1700)(2.3/12) = 310 cu ft

DIFFERENCE: Qp100 = 0.184 - 0.66 = 0.118 cfs (See text below
V100 = 310 - 111 = 199 cu ft & appendix)

RUNOFF CONTROL

Presently there are eight roof drains, one at the bottom of the U, two at the front of the building, and five at the sides. The front two drain toward Guaymas Pl. although some of the runoff appears to remain in the front yard. All the others flow toward an existing swale situated about 30 ft inside the block wall at the rear (west) of the site. See plan. The swale flows north for about 220 ft. and west 170 ft through packed-dirt playground then into the streey gutter in Dallas St. NE.

As part of the classroom addition, the roof drain at the bottom of the U will be closed off and the downspout removed. The existing roof will be built up with a cricket as required to direct flow to the front and sides of the existing building. As shown in the appendix, this effectively reduces the change in peak runoff rate, from the rear of the building, to +0.06 cfs. The classrom area will drain to the rear and to the existing swale. Rain falling in the new courtyard will be retained to help water the landscaping.

Although the area involved is much less than an acre and very little earth work is required, the plans direct the contractor to control erosion by constructing an 8 inch berm around the work area. The plans also direct him to control dust from construction activities.

END OF REPORT

APPENDIX

THE 4-11 ASSUMPTION DRAINAGE

BY DATE CLIENT JOB NO.

engineering associates, inc. • 532 Adams Street, NE • Albuquerque, NM 87108 • (505) 242-7522

EXISTING CONVENT AREA SCALED DIMENSIONS

$29 \times 83 + 7 \times 14 + 29 \times 27 + 60 \times 25 = 4653$ ft²

CLASS ROOM AREA ADDED

$27 \times 62 = 1674$ SAY 1700 ft²

EXISTING ROOF DRAINAGE REROUTED

APPROX $13 \times 40 = 572$ SAY 570

CLASS ROOM AREA

EXISTING GRASS ON VERSCHUE NATIVE) Tg TB = GROUP B

$C = 0.34$ 100 yr 6 hr = 2.3 IN $I = 4.95$

$Q_{p\,100} = [1700\,(.34)_{GRASS} + (570 \times .95)_{ROOF}]\,(4.95/43560)$

$= 1119.5 \times 1.136 \times 10^{-4} = 0.127$

$V_{100} = 1119.5 \times 23/12 \approx 215$ cu ft

PROPOSED NEW ROOF ONLY

$C = 0.95$

$Q_{p\,100} = (1700 \times .95) \times (4.95/43560) = 1615 \times 1.136 \times 10^{-4}$

$= 0.184$ cu ft

$V_{100} \approx 310$ cu ft

CHANGE $\Delta = 0.184 - 0.127 = .057 \approx 0.06$ cu ft/sec $310 - 215 = 95$ cu ft

NOTE: FOR RUNOFF FROM CLASS ROOM AREA ONLY

$0.34 \times 1700 = 578$ $578 \times (4.95/43560) = 0.066$ $578 \times 23/12 \approx 111$

THEN $\Delta = 0.184 - 0.066 = 0.118$ cfs & $310 - 111 = 199$ cu ft

GRAPHIX INC. 196533

0879