


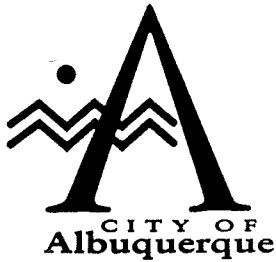
Eladio V. Ortiz 8/2/98
(date)

NTS
I, Elvidio V. Diniz (NMPE #7111), do hereby
certify that this site has been constructed in
substantial compliance with the approved Grading
and Drainage Plan dated 6/25/97.

1. Construct the west swale to provide a minimum of 2 feet between the top edge of existing slope and top of swale side slope.
2. ALL RIPRAP WILL BE SET IN PLACE WITH GROUT, AND BE SIZED $D_{50}=6"$. REFER TO COA Standard Specs. for Public Works Sections 106, 109, and 603.
3. All soils under rundowns, spillways, and grade control structures shall be 95% MD compaction per ASTM 1556.



1	6/20/97	SHEET NO. REFERENCE			LP EVD
NO.	DATE	REVISIONS			BY CHKD
<h1>DETAIL SHEET</h1> <h2>GRADING AND DRAINAGE PLAN</h2> <h2>FOR</h2> <h2>LOS ALTOS CHRISTIAN CHURCH</h2>					
 <p>Resource Technology, Inc. ENGINEERS & ENVIRONMENTAL SCIENTISTS 2129 COSMA NE - SUITE 200 ALBUQUERQUE, NEW MEXICO 87111 TELEPHONE - (505) 345 - 3115</p>					95-060
					C2 OF 23
DESIGNED BY: ED	DRAWN BY: ITS	CHECKED BY: ED	DATE: FFR 1997		



September 14, 1998

Elvidio Diniz
RTI
1720-B Randolph Rd. SE
Albuquerque, New Mexico 87106

RE: ENGINEER CERTIFICATION FOR LOS ALTOS CHRISTIAN CHURCH (J22-D63)
CERTIFICATION STATEMENT DATED 8/7/98

Dear Mr. Diniz:

Based on the information provided on your August 10, 1998 submittal, Engineer Certification for the above referenced site is acceptable.

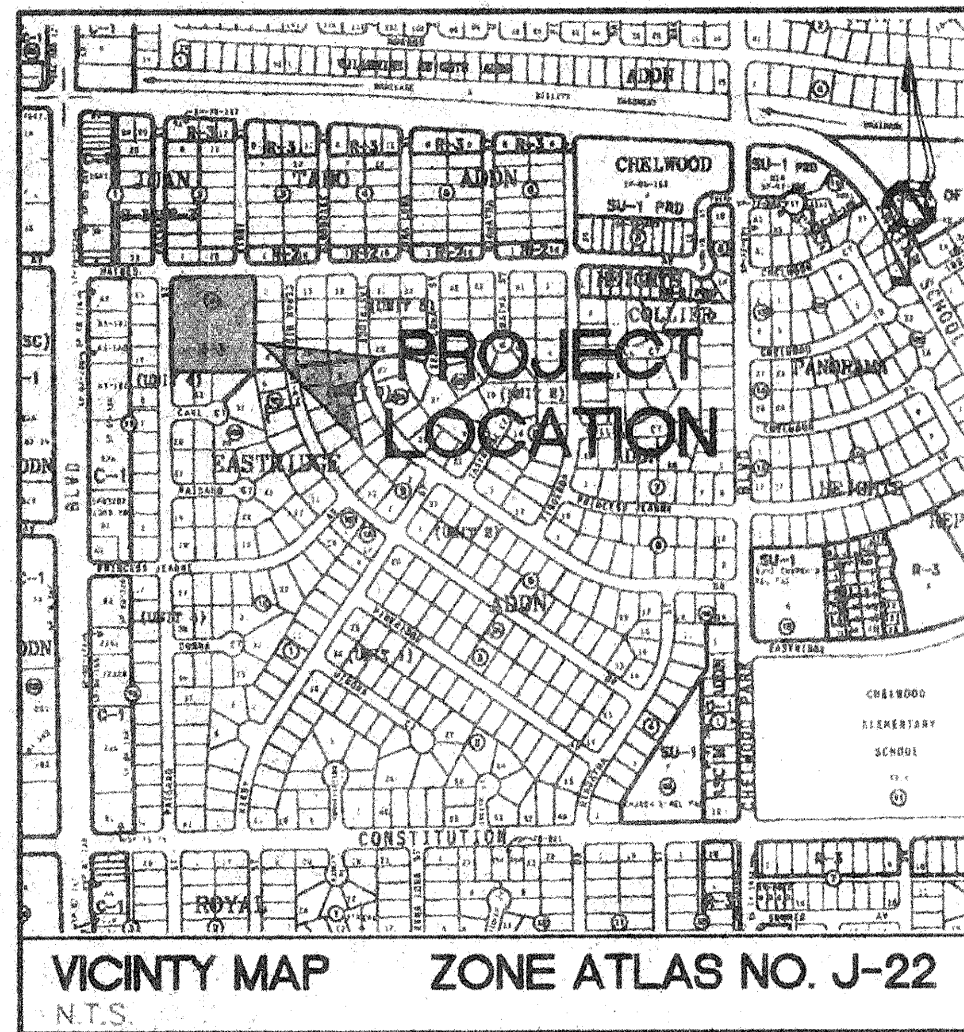
If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely

Bernie J. Montoya CE
Associate Engineer





NOTICE TO CONTRACTOR

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1987.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

APPROVALS	NAME	DATE
A.C.E./DESIGN		
INSPECTOR		
A.C.E./FIELD		

I, Elvadio V. Dimic (NMPE #7111), do hereby certify that this site has been constructed in substantial compliance with the approved Grading and Drainage Plan dated 6/25/97.

Elvadio V. Dimic
(date)

LEGAL DESCRIPTION

A CERTAIN TRACT OF LAND, BEING AND COMPRISING LOT 1 IN BLOCK 4, VAN NUYS ADDITION TO THE CITY OF ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON JANUARY 13, 1956 IN VOLUME D2, FOLIO 6.

BASIS OF BEARINGS PER THE PLAT OF UNIT NO. 4, EASTRIDGE ADDITION, FILED JANUARY 11, 1968 IN VOL. D3, FOLIO 183.

BENCHMARK

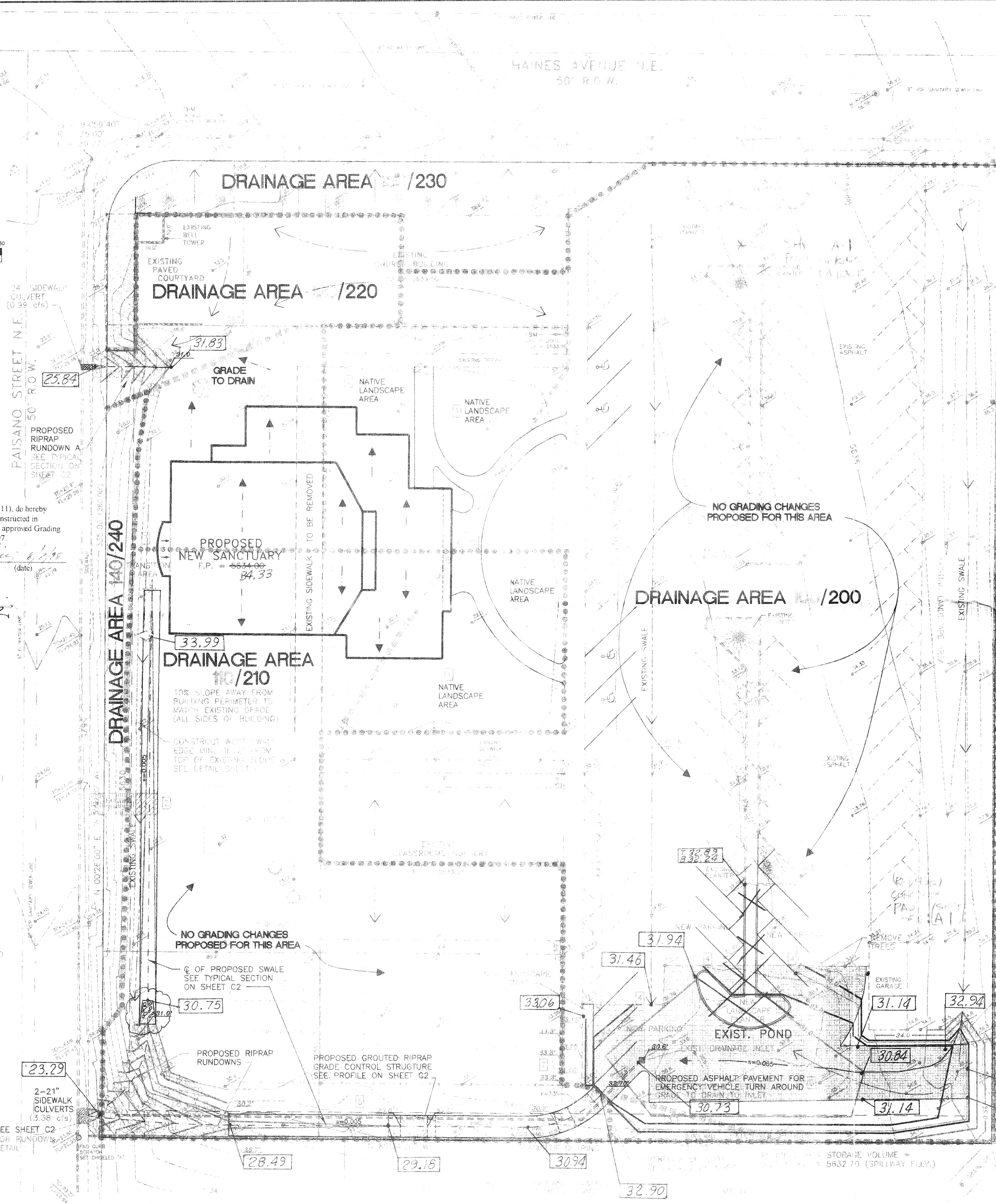
BASIS OF ELEVATIONS PER A.C.S. CONTROL STATION 15--H22, ELEVATION = 5612.966.

KEYED NOTES

1. ALL NEW LANDSCAPE AREAS WILL BE SLIGHTLY DEPRESSED (APPROX. 6") TO PERMIT RUNOFF FOR NATIVE PLANTINGS. THESE AREAS ARE NOT CONSIDERED FOR OVERALL SITE DRAINAGE MANAGEMENT.
2. PAVE THIS AREA WITH 3/4" GRAVEL OR PAVING STONES TO FACILITATE PEDESTRIAN ACCESS WHEN SWALE AREA IS WET.
3. GRADE TO MATCH EXISTING TOP OF SLOPE OR EXISTING GRADE 3:1 MAX.
4. SAWOUT EXISTING ASPHALT AT CLEAN OR STABLE PAVING LINE PRIOR TO LAYDOWN OF NEW ASPHALT.
5. SEE SHEET A1 FOR DIMENSIONS AND GEOMETRY.
6. AS-BUILT LOCATION OF EXISTING 6" PIPE IS UNKNOWN. LOCATION ON PLAN IS BASED ON DRAINAGE AND PARKING LOT PAVING PLAN FOR LOS ALTOS CHRISTIAN CHURCH, NOV. 4, 1981.
7. ELEVATIONS OF 33.5 AT THE SOUTH END OF THE EXISTING SIDEWALK ARE REQUIRED FOR PROPER FUNCTIONING OF OVERFLOW SPILLWAY.

LEGEND

	= DROP INLET		= EXISTING DRAINAGE AREA
	= FIRE HYDRANT		= PROPOSED DRAINAGE AREA
	= LIGHT POLE		= EXISTING FL
	= POWER POLE		= PROPOSED FL
	= SEWER MANHOLE		= EXISTING ELEVATION
	= TELEPHONE RISER		= PROPOSED ELEVATION
	= WATER METER		= EXISTING CONTOUR
	= WATER VALVE		= PROPOSED CONTOUR
	= GROUTED RIPRAP		= ASPHALT PAVEMENT



GENERAL NOTES

SITE DESCRIPTION

Existing Conditions: The site is located on the south side of Haines Avenue NE, and on the east side of Paisano Street NE. At present, the site contains three buildings with connecting sidewalks, an asphalt parking lot, a ponding area with a 6" drain, and large areas of native vegetation. All of the surrounding area is developed, with concrete block walls (and no cross drainage) on the east and south perimeter of the site. As a result, this is an infill site.

Proposed Conditions: The proposed improvements to the site consist of the construction of a new sanctuary along with sidewalk and landscaping additions. At the south end of the parking lot, an emergency vehicle turn around will be added along with new parking stalls. Shallow swales, both grass and riprap, will be built to convey future condition runoff and control erosion. Three sidewalk culverts will be installed on Paisano Street to provide drainage from the new swales.

DRAINAGE

OFF-SITE FLOWS

Existing Conditions: Off-site flows are not a concern at this site. Off-site flows from the north are carried west by Haines Avenue NE. Paisano Street NE lies to the west and is topographically lower than the site. Properties to the east and south utilize an 8" drainage right of way that is located off the southeast property corner. Concrete block walls with no cross drainage are located along the east and south perimeter of the property.

ON-SITE FLOWS

At present, the site has five drainage areas, designated as Area 100, 110, 120, 130, and 140, as shown on the plan. Drainage Areas 130 and 140 will not be changed by future conditions. Drainage Area 100 drains from the northeast corner of the site to the south. Drainage Area 110 drains from the south edge of the existing church building to the southwest corner of the site. Drainage Area 120 drains from the courtyard onto Paisano Street. Drainage Area 130 drains the landscape north of the church building, the landscape rock area, and a small portion of the church building to the northwest and onto Haines Avenue. Drainage Area 140 drains the existing slope along the west side of the site with overland runoff onto Paisano Street. Paisano Street drains south to Princess Jeanne Avenue, and west to Juan Tabo Blvd. Haines Avenue drains west to Juan Tabo Blvd, and then south. Both flows are intercepted by a 48" public storm drain in Juan Tabo Blvd. Review of the City of Albuquerque Drainage Facilities Map indicates that this public storm drain facility drains in a southerly direction, increasing in size as the system progresses downstream, until discharging into the Interstate 40 channel. Due to the proximity of this site to existing public storm drain facilities, and the fact that this is an infill site, the free discharge of runoff from the site is suitable.

Proposed Conditions: Five drainage areas will remain at the site, designated as 200, 210, 220, 230, 240. Area 230 (formerly 130) and 240 (formerly 140) will remain unchanged. Drainage Area 200 will drain from the north to the south, taking partial flows from the new sanctuary and landscape areas. The southern ponding area will be expanded to accommodate additional runoff volume. The existing drain will be enlarged and will continue to discharge runoff to Paisano Street. Drainage Area 210 will drain from the north to the south in a new 6' wide and 1' deep swale, and from east to west in a similar swale within the landscape buffer at the south end of the site. These flows will join at the southwest corner of the property and be directed to two sidewalk culverts. Both flows will be contained in grouted riprap swales on the steep slopes to control erosion. Drainage Area 220 will drain to the west and discharge into a grouted riprap swale that will direct runoff to a sidewalk culvert at Paisano Street.

HYDROLOGY

All hydrologic calculations were completed in accordance with the City of Albuquerque Development Process Manual, Section 22.2, Hydrology. The 100-year, 6-hour storm event was used for peak runoff calculations, and the 100-year, 10-day storm was used for volume calculations in ponding areas.

FLOODPLAIN HAZARD

As shown by Map 357 of the National Flood Insurance Program Flood Insurance Rate Map for Bernalillo County and Incorporated Areas, 1996, the site is in flood hazard zone X (FHZ-X) outside of the 500-year floodplain.

SOIL TYPE (Soil Survey of Bernalillo County, New Mexico, Soil Conservation Service, 1977)

TgB - Tijeras gravelly fine sandy loam

PRECIPITATION

Zone 4

100-year, 6-hour storm = 2.90 inches (from NOAA Atlas 2, Vol IV)

EXCESS PRECIPITATION (DPM Table A-8)

100-year, 6-hour storm (inches)

Land Treatment A 0.80
Land Treatment B 1.08
Land Treatment C 1.46
Land Treatment D 2.64

PEAK DISCHARGE (DPM Table A-9)

100-year

2.20 cfs/acre
2.92 cfs/acre
3.73 cfs/acre
5.25 cfs/acre

HYDROLOGIC RESULTS (DPM Tables A-2, A-8, A-9)

Drainage Area	Area (acre)	Land Treatment	Peak Runoff (cfs)	Runoff Volume (acre/ft)
EXISTING		%A %B %C %D	100-year, 6 hour	100-year, 6 hour
100	1.55	32 0 9 59	6.42	0.25
110	0.89	62 5 19 14	2.62	0.09
120	0.115	22 0 0 78	0.53	0.02
130	0.12	0 0 73 27	0.50	0.02
140	0.046	100 0 0 0	0.10	0.003
PROPOSED				
200	1.595	27 0 0 73	7.04	0.28
210	0.73	63 7 7 23	2.21	0.08
220	0.23	31 0 0 69	0.99	0.04
230	0.12	0 0 73 27	0.50	0.02
240	0.046	100 0 0 0	0.10	0.003

Rev 8/10/98

NO.	DATE	REVISIONS	BY	CHKD
2	6/25/97	SIGN-OFF BLOCK & CONTRACTOR NOTES	LP	EVD
1	6/20/97	SHEET NO. REFERENCE	LP	EVD

GRADING AND DRAINAGE PLAN FOR LOS ALTOS CHRISTIAN CHURCH

Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
2129 OSUNA NE - SUITE 200, ALBUQUERQUE, NEW MEXICO 87113
TELEPHONE: (505) 345-3115

JOB NO.
95-060

SHEET NO.
C1

DESIGNED BY: ED DRAWN BY: JTB CHECKED BY: ED DATE: FEB 1997