

PROJECT TITLE: An Addition to the Second Presbyterian Church ZONE ATLAS/DRNG. FILE #: J-14 / D-84
 LEGAL DESCRIPTION: Lots 1, 2, 4, & 5, BLK 3, JESUS ROMERO ADD # 1; Lots 1-7, inclusive, TROTTER ADD # 2; Tracts 213, 214, 215 and a portion of 216, MRGCD Map # 37.
 CITY ADDRESS: 808 EDITH BLVD. NE

ENGINEERING FIRM: Marvin R Kortum CONTACT: Marvin R Kortum
 ADDRESS: 1605 Speakman Drive, SE
 Albuquerque, New Mexico 87123 PHONE: (505) 299-0774

OWNER: Second Presbyterian Church CONTACT: _____
 ADDRESS: _____ PHONE: _____

ARCHITECT: Jack E Fickel CONTACT: Jack Fickel
 ADDRESS: 3812 Edith Blvd. NE 87107
 Albuquerque, New Mexico PHONE: 344-9484
 Southwest Survey Co. Inc.

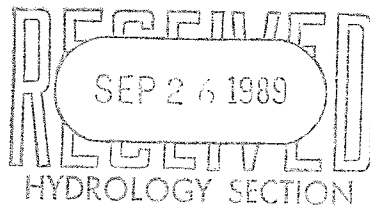
SURVEYOR: Dan Graney CONTACT: Dan Graney
 ADDRESS: 333 Lomas Blvd. NE 87102
 Albuquerque, New Mexico PHONE: 247-4444

CONTRACTOR: _____ CONTACT: _____
 ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☒ YES☐ NO

☐ COPY OF CONFERENCE RECAP
 SHEET PROVIDED



DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

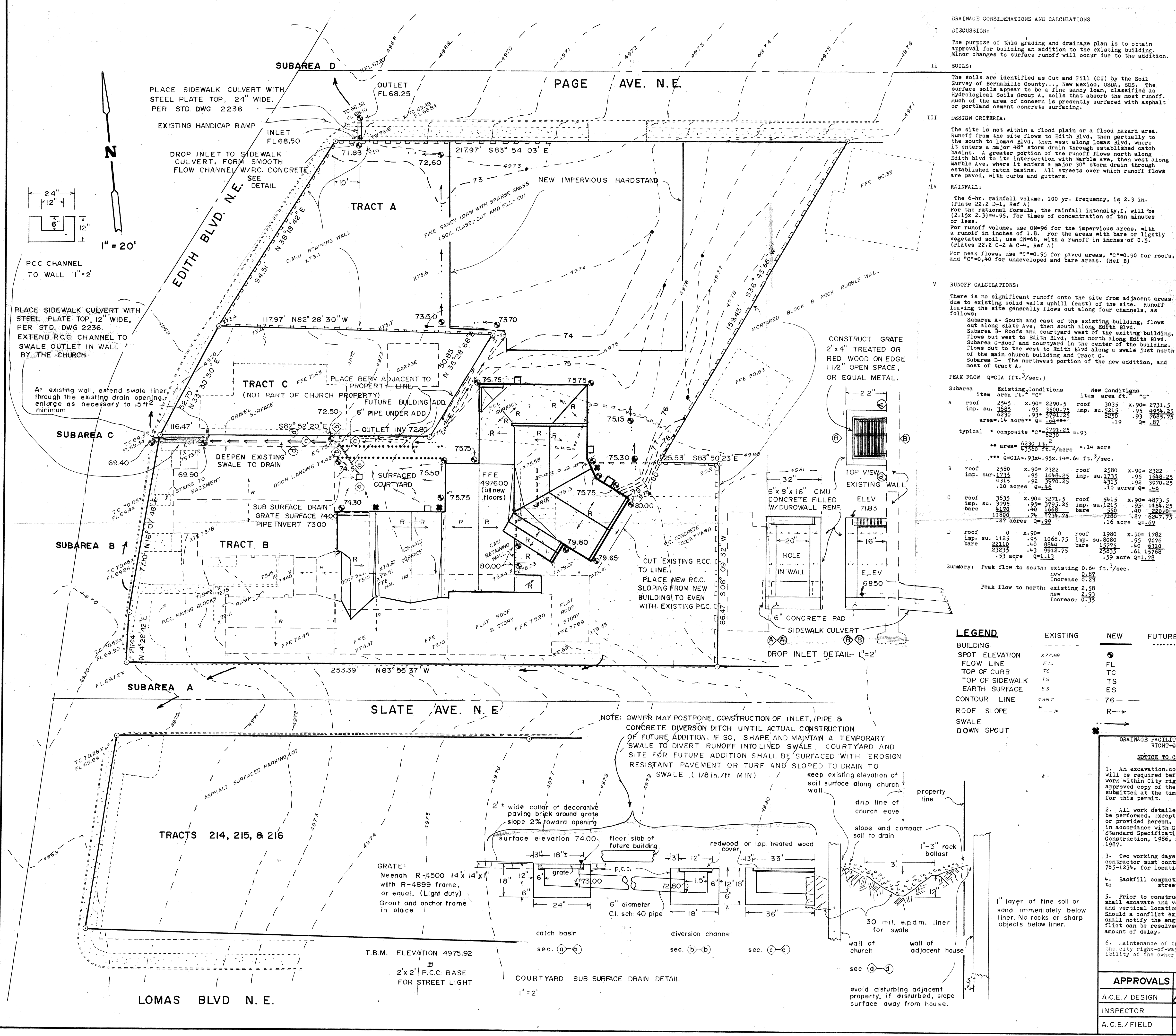
☐ DRAINAGE REPORT☒ DRAINAGE PLAN☐ CONCEPTUAL GRADING & DRAINAGE PLAN☒ GRADING PLAN☒ EROSION CONTROL PLAN☐ ENGINEER'S CERTIFICATION☒ RESUBMITTAL

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL☐ PRELIMINARY PLAT APPROVAL☐ SITE DEVELOPMENT PLAN APPROVAL☐ FINAL PLAT APPROVAL☒ BUILDING PERMIT APPROVAL☐ FOUNDATION PERMIT APPROVAL☐ CERTIFICATE OF OCCUPANCY☐ ROUGH GRADING PERMIT☐ GRADING/PAVING PERMIT☐ OTHER _____

DATE SUBMITTED: September 26, 1989

BY: Marvin R Kortum



DISCUSSION:
The purpose of this grading and drainage plan is to obtain approval for building an addition to the existing building. Minor changes to surface runoff will occur due to the addition.

SOILS:
The soils are identified as Cut and Fill (CU) by the Soil Survey of Bernalillo County, New Mexico, USDA, SCS. The surface soils appear to be a fine sandy loam, classified as Hydrological Soil Group A, soils that absorb the most runoff. Much of the area of concern is presently surfaced with asphalt or portland cement concrete surfacing.

DESIGN CRITERIA:
The site is not within a flood plain or a flood hazard area. Runoff from the site flows to Edith Blvd., then partially to the south to Lomas Blvd., then west along Lomas Blvd. where it enters a major 48" storm drain through established catch basins. A greater portion of the runoff flows north along Edith Blvd. to its intersection with Marble Ave., then west along Marble Ave., where it enters a major 30" storm drain through established catch basins. All streets over which runoff flows are paved, with curbs and gutters.

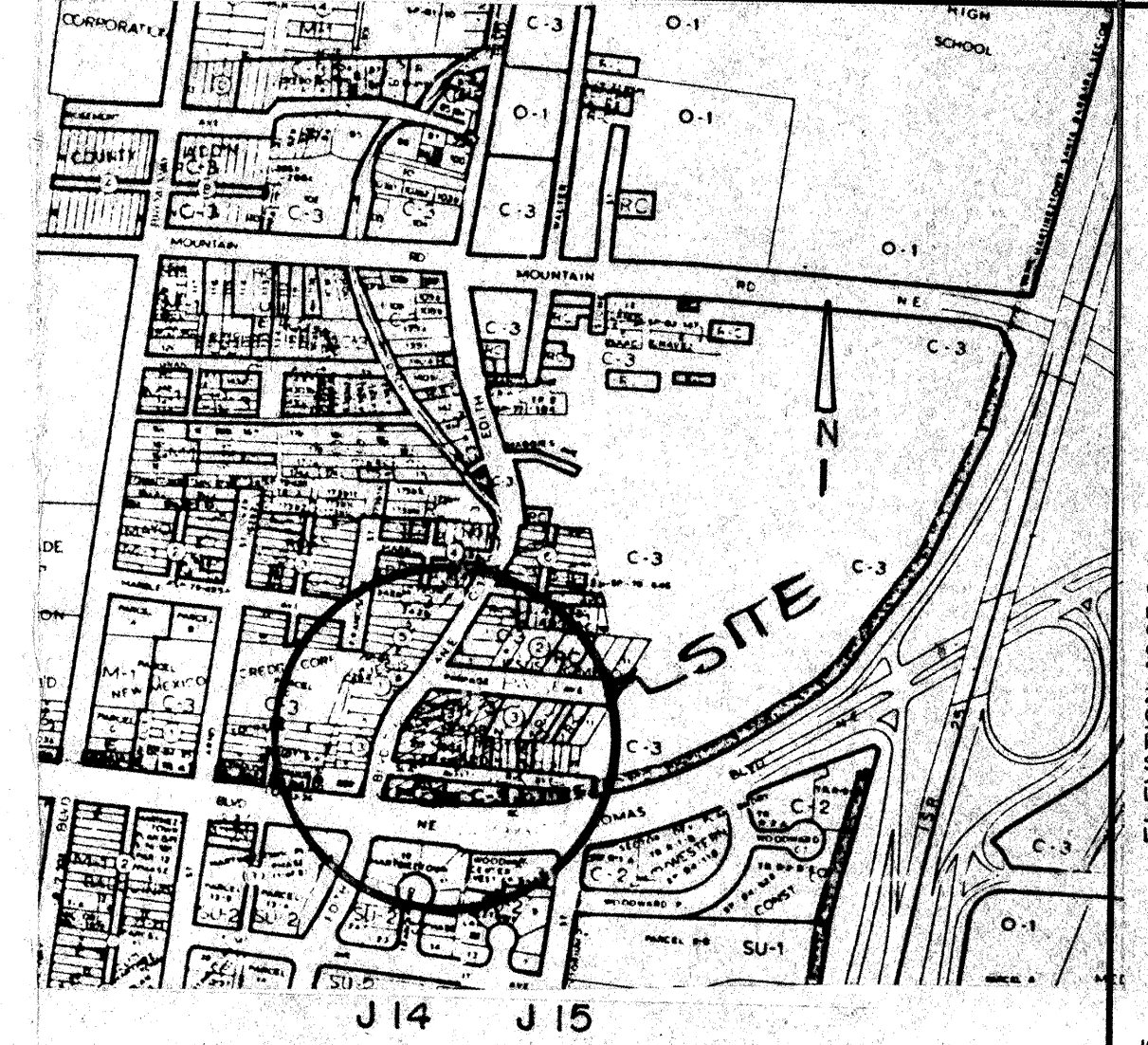
RAINFALL:
The 6-hr. rainfall volume, 100 yr. frequency, is 2.3 in. (Plate 22-2 D-1, Ref A).
For the rational formula, the rainfall intensity, I, will be (2.15 x 2.3) = .95, for times of concentration of ten minutes or less.
For runoff volume, use CN=96 for the impervious areas, with a runoff in inches of 1.8. For the areas with bare or lightly vegetated soil, use CN=68, with a runoff in inches of 0.5. (Plates 22-2 C-2 & C-4, Ref A).
For peak flows, use "C"=0.95 for paved areas, "C"=0.90 for roofs, and "C"=0.40 for undeveloped and bare areas. (Ref B).

RUNOFF CALCULATIONS:
There is no significant runoff onto the site from adjacent areas due to existing solid walls uphill (east) of the site. Runoff leaving the site generally flows out along four channels, as follows:
Subarea A - South and east of the existing building, flows out along Slate Ave., then south along Edith Blvd.
Subarea B - Roofs and courtyard west of the existing building, flows out west to Edith Blvd., then north along Edith Blvd.
Subarea C - Roof and courtyard in the center of the building, flows out to the west to Edith Blvd. along a swale just north of the main church building and Tract C.
Subarea D - The northwest portion of the new addition, and most of tract A.

PEAK FLOW Q=CIA (ft.³/sec.)

Subarea	Existing Conditions	New Conditions
A	roof 2545 x.90=2290.5 imp. su. 3685 .95 3500.75 area=14 acre** Q=.93	roof 3035 x.90=2731.5 imp. su. 5215 .95 4954.25 area=14 acre** Q=.93
B	roof 2580 x.90=2322 imp. su. 1215 .95 1153.25 bare 11800 .40 4720 area=10 acres Q=.46	roof 2580 x.90=2322 imp. su. 1215 .95 1153.25 bare 11800 .40 4720 area=10 acres Q=.46
C	roof 3635 x.90=3271.5 imp. su. 3995 .95 3795.25 bare 11800 .40 4720 area=10 acres Q=.46	roof 5015 x.90=4513.5 imp. su. 1215 .95 1153.25 bare 11800 .40 4720 area=10 acres Q=.46
D	roof 0 x.90=0 imp. su. 1125 .95 1068.75 bare 22110 .40 8844 area=53 acres Q=1.13	roof 1980 x.90=1782 imp. su. 8080 .95 7676 bare 6110 .40 2444 area=53 acres Q=1.78

Summary: Peak flow to south: existing 0.64 ft.³/sec. new 0.87 Increase 0.23
Peak flow to north: existing 2.23 ft.³/sec. new 2.33 Increase 0.10



LEGAL DESCRIPTION:
Lots 1, 2, 4, 45, Block 3, JESUS ROMERO ADDITION #1, Lots 1-7, inclusive, TROTTER ADDITION #2, Tracts 213, 214, 215 and a portion of 216, WRGCD Map # 37

NOTICE:
AT COMPLETION, OWNER MUST OBTAIN CERTIFICATE OF COMPLETION FROM A N.M. REGISTERED ENGINEER FOR REQUIRED DRAINAGE FACILITIES ON PRIVATE PROPERTY.

RUNOFF VOLUMES (ft.³)

Subarea	Existing Conditions	New Conditions
A	2545 x 1.8 = 4581 3685 x 1.8 = 6633 Total = 11214	3035 x 1.8 = 5463 5215 x 1.8 = 9387 Total = 14850
B	2580 x 1.8 = 4644 1215 x 1.8 = 2187 11800 x 0.5 = 5900 Total = 12731	2580 x 1.8 = 4644 1215 x 1.8 = 2187 11800 x 0.5 = 5900 Total = 12731
C	3635 x 1.8 = 6543 3995 x 1.8 = 7191 11800 x 0.5 = 5900 Total = 20634	5015 x 1.8 = 9027 1215 x 1.8 = 2187 11800 x 0.5 = 5900 Total = 17114
D	0 x 1.8 = 0 1125 x 1.8 = 2025 22110 x 0.5 = 11055 Total = 13080	1980 x 1.8 = 3564 8080 x 1.8 = 14544 6110 x 0.5 = 3055 Total = 21163

Summary: Total volume to the south: existing 935 ft.³ new 14850 Increase 13915
Total volume to the north: existing 3055 ft.³ new 17114 Increase 14059

CONCLUSIONS:
The increase in peak flow and total volume will not create a significant increase in flooding downstream.

REFERENCES:
A. Development Process Manual, Albuquerque, New Mexico.
B. Notice of Emergency Rule, signed by Mayor Schultz, Jan. 14, 1986, City of Albuquerque, New Mexico.
C. Soil Survey of Bernalillo County, New Mexico, USDA, SCS.

LEGEND

	EXISTING	NEW	FUTURE
BUILDING	XXXXXX	XXXXXX	XXXXXX
SPOT ELEVATION	XXXX.XX	XXXX.XX	XXXX.XX
FLOW LINE	FL	FL	FL
TOP OF CURB	TC	TC	TC
TOP OF SIDEWALK	TS	TS	TS
EARTH SURFACE	ES	ES	ES
CONTOUR LINE	4987	76	76
ROOF SLOPE	R	R	R
SWALE	SW	SW	SW
DOWN SPOUT	DS	DS	DS

DEPTH OF FLOW IN SIDEWALK CULVERTS

DEPTH FT	AREA FT ²	VELOCITY FT/SEC	QUANTITY FT ³ /SEC
12" wide channel	subarea C		
0.1	0.1	3.5	.35
0.2	0.2	5.0	1.00
24" "	"	"	"
0.1	0.2	3.8	.76
0.2	0.4	5.7	2.27

estimated flow 0.69
1.78

NOTICE TO CONTRACTOR

- 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.
- All work detailed on these plans to be performed, except as otherwise stated or provided herein, shall be constructed in accordance with City of Albuquerque Standard Specifications for Public Works Construction, 1986, as amended to Dec. 1, 1987.
- Two working days prior to any excavation, contractor must contact Line Locating Service 765-1234, for location of existing utilities.
- Backfill compaction shall be according to street use.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
- Maintenance of these facilities within the city right-of-way shall be the responsibility of the owner served.

APPROVALS

NAME	DATE
A.C.E. / DESIGN	10/14/89
INSPECTOR	
A.C.E. / FIELD	

MARVIN R. KORTUM, P.E.
Civil Engineering
1605 Speakman Drive, S.E.
Albuquerque, New Mexico 87123
(505) 299-0774

AN ADDITION TO THE SECOND PRESBYTERIAN CHURCH

GRADING AND DRAINAGE PLAN
ADDITION TO 2ND PRESBYTERIAN CHURCH
808 EDITH BLVD. N.E.

J-14, 15

BENCHMARK 6 J-15 ELEVATION 4965.911
LOCATED IN NE QUADRANT OF THE INTERSECTION OF EDITH BLVD & MARBLE AVE N.E.
A SPIKE IN A POWER LINE POLE.

SURVEYOR SOUTHWEST SURVEYING CO. NOV. 5, 1987

DATE SEP 25, 1989
JULY 10, 1989
MAY 31, 1989

BY M.R. KORTUM
M.R. KORTUM
M.R. KORTUM

APPROVALS PRELIMINARY REV 2
PRELIMINARY
PRELIMINARY

SHEET 1 OF 1
CIVIL