PUBLIC WORKS/HYDROLOGY
L12/D6

0000 0000 1324

L12/D6

25×10 32×10

0000 0000 1325

DRAINAGE INFORMATION SHEET

PROJECT TITLE: South Valley Apostolic Church ZONE ATLAS/DRNG.FILE#: L-12 /106

LEGAL DESCRIPTION: Lot 2-B, Lands of Werner Dramberger
CITY ADDRESS: 242 Atrisco SW

ENGINEERING FIRM: D. Mark Goodwin & Assoc., PA CONTACT: Mark Goodwin
ADDRESS: P.O. Box 90606, Alb, 87199 PHONE: 828-2200

OWNER: South Valley Apostolic Church CONTACT: Chris Willadson
ADDRESS: 242 Atrisco SW Alb PHONE: 255-8668

ARCHITECT: Chris Willadson CONTACT: Chris Willadson
ADDRESS: 115 Amherst SE Alb PHONE: 255-8668

SURVEYOR: D. Mark Goodwin & Assoc., PA CONTACT: Richard Borgel
ADDRESS: P.O. Box 90606, Alb PHONE: 828-2200

CONTRACTOR: N/A CONTACT:
ADDRESS: PHONE:

RECEIVED OCT 30 HYDROLOGY

PRE-DESIGN MEETING

___ YES
X NO
___ 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 PLAN
___ ENGINEER'S CERTIFICATION

TYPE OF APPROVAL SOUGHT

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
X BUILDING PERMIT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ CERTIFICATION OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING / PAVING PERMIT APPROVAL
___ OTHER ___

DATE SUBMITTED: 10/30/92

BY: Mark Goodwin
Mark Goodwin, PE

25×10 32×10

0000 0000 1326

dmg D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT Church
SUBJECT Drainage
BY MB DATE 10/15/92
CHECKED _____ DATE _____
SHEET 1 OF 2

This site is so flat that we will have to provide a retention pond. We will also have to provide volume for 1.2 Ac. off-site area to north that drains into this site. We will follow Hydro Emergency Tech for retention.

On-site Area = 2.0 Ac.
off-site Area = 1.2 Ac.

On-site Area

Zone 1

$P_1 = 1.87$ $P_6 = 2.40$ $P_{24} = 2.66$ $P_{10} = 3.07$

Land Treatments: 0.003 Sq. Mi.

Treatment A = 0.13 Ac = 6%
Treatment B = 1.1 Ac = 55%
Treatment C = 0
Treatment D = 0.77 Ac = 39%

Per attached Hydro Run:

Q(100-6) = 1.9 cfs
Vol (100-6) = 0.19 Ac-ft

For 10 day Vol.

$V = 0.19 + \frac{0.77(3.07 - 2.40)}{12} = 0.28$ Ac-ft

25×10 32×10

0000 0000 1327

dmg D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT Church
SUBJECT Drainage
BY MG DATE 10/16/92
CHECKED _____ DATE _____
SHEET 2 OF 2

OFF-SITE:

Off-site area is 1.7 Ac. single family residence

Land treatments: 0.002 Sq. mi.

Treatment A = 0.06 Ac = 6%

Treatment B = 0.88 Ac = 88%

Treatment C = 0.02 Ac = 2%

Treatment D = 0.04 Ac = 4%

For Adjusted Hydro Run:

Q(100-D) = 3 cfs

Vol. (100-6) = 0.08 Ac-Ft.

Vol. (10 day) = 0.09 Ac-Ft.

Total Ponding required:

V_T = 1.37 Ac-Ft = 16,100 cu. Ft.

Emergency Spillway:

$Q = CLH^{3/2}$

$L = \frac{Q}{CH^{3/2}} = \frac{2.1}{2.9(.07)^{3/2}} = 5'$

25× 32×

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```
START                TIME=0.0
***** Hydrograph For Onsite Area - Proposed Conditions
***** Church Development - Atrisco
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                     RAIN DAY=2.66 IN DT=0.03333 HR
COMPUTE NM HYD       ID=1 HYD ND=101.1 AREA=0.00300 SQ MI
                     PER A=6.00 PER B=55.0 PER C=0.0 PER D=39.0
                     TP=0.1667 HR MASS RAINFALL=-1
PRINT HYD            ID=1 CODE=1
FINISH
```

25×10 32×10

```
AHYMO PROGRAM (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992
     RUN DATE (MON/DAY/YR) = 10/16/1992
     START TIME (HR:MIN:SEC) = 07:36:09      USER NO.= Z_GOODWN.S92
     INPUT FILE = ch1.dat

START                TIME=0.0

***** Hydrograph For Onsite Area - Proposed Conditions

***** Church Development - Atrisco

RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN

                     RAIN ONE=1.87 IN RAIN SIX=2.20 IN

                     RAIN DAY=2.66 IN DT=0.03333 HR

                COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2
- PEAK AT 1.40 HR.
                DT =    .033330 HOURS        END TIME =     5.999400 HOURS
                   .0000   .0016   .0033   .0050   .0067   .0085   .0103
                   .0122   .0141   .0160   .0180   .0201   .0222   .0243
                   .0266   .0289   .0312   .0337   .0362   .0388   .0415
                   .0443   .0472   .0502   .0534   .0567   .0601   .0637
                   .0675   .0715   .0758   .0809   .0865   .0924   .1050
                   .1334   .1771   .2398   .3254   .4379   .5814   .7600
                   .9780  1.1804  1.2649  1.3363  1.3997  1.4575  1.5106
                  1.5600  1.6061  1.6493  1.6900  1.7284  1.7646  1.7989
                  1.8314  1.8623  1.8915  1.9193  1.9456  1.9518  1.9576
                  1.9630  1.9682  1.9732  1.9780  1.9825  1.9869  1.9912
                  1.9953  1.9993  2.0031  2.0068  2.0104  2.0140  2.0174
                  2.0207  2.0240  2.0272  2.0303  2.0333  2.0363  2.0392
                  2.0420  2.0448  2.0475  2.0502  2.0528  2.0554  2.0580
                  2.0605  2.0629  2.0653  2.0677  2.0700  2.0723  2.0746
                  2.0768  2.0790  2.0812  2.0833  2.0855  2.0875  2.0896
                  2.0916  2.0936  2.0956  2.0976  2.0995  2.1014  2.1033
                  2.1051  2.1070  2.1088  2.1106  2.1124  2.1141  2.1159
                  2.1176  2.1193  2.1210  2.1227  2.1244  2.1260  2.1276
                  2.1292  2.1308  2.1324  2.1340  2.1355  2.1371  2.1386
                  2.1401  2.1416  2.1431  2.1446  2.1460  2.1475  2.1489
                  2.1504  2.1518  2.1532  2.1546  2.1560  2.1573  2.1587
                  2.1600  2.1614  2.1627  2.1640  2.1654  2.1667  2.1680
                  2.1692  2.1705  2.1718  2.1731  2.1743  2.1756  2.1768
                  2.1780  2.1792  2.1804  2.1817  2.1829  2.1840  2.1852
                  2.1864  2.1876  2.1887  2.1899  2.1910  2.1922  2.1933
                  2.1944  2.1956  2.1967  2.1978  2.1989  2.2000

COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.00300 SQ MI

                     PER A=6.00 PER B=55.0 PER C=0.0 PER D=39.0

                     TP=0.1667 HR MASS RAINFALL=-1

        K =   .090852HR     TP =   .166700HR     K/TP RATIO =   .545000     SHAPE
CONSTANT, N =  7.106420
      UNIT PEAK =    3.6937     CFS    UNIT VOLUME =     .9972        B =    526.28
    P60 = 1.8700
      AREA =     .001170 SQ MI     IA =     .10000 INCHES     INF =     .04000 I
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```
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=    .033330

        K =    .167835HR     TP =    .166700HR     K/TP RATIO =  1.006808      SHAPE
CONSTANT, N =  3.506215
        UNIT PEAK =    3.5215     CFS    UNIT VOLUME =     .9962        B =   320.78
      P60 = 1.8700
        AREA =       .001830 SQ MI     IA =     .51475 INCHES     INF =    1.29131 I
NCHES PER HOUR
        RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=    .033330

     PRINT HYD            ID=1 CODE=1

                                        PARTIAL HYDROGRAPH    101.10

        RUNOFF VOLUME =      1.15762 INCHES      =         .1852 ACRE-FEET
        PEAK DISCHARGE RATE =        4.89 CFS  AT    1.533 HOURS    BASIN AREA =
 .0030 SQ. MI.


     FINISH

        NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 07:36:10
```

25×10 32×10

0000 0000 1331

```
START                TIME=0.0
***** Hydrograph For Offsite Area - Existing Conditions
***** Church Development - Atrisco
RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                     RAIN DAY=2.66 IN DT=0.03333 HR
COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.002 SQ MI
                     PER A=6.00 PER B=88.0 PER C=2.0 PER D=4.00
                     TP=0.1111 HR MASS RAINFALL=-1
PRINT HYD            ID=1 CODE=1
FINISH
```

25×10 32×10

0000 0000 1332

```
AHYMO PROGRAM (AHYMO392) - AMAFCA VERSION OF HYMO - MARCH, 1992
     RUN DATE (MON/DAY/YR) = 10/16/1992
     START TIME (HR:MIN:SEC) = 07:37:48      USER NO.= Z_GOODWN.892
     INPUT FILE = ch2.dat

START                TIME=0.0

***** Hydrograph For Offsite Area - Existing Conditions

***** Church Development - Atrisco

RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN

                     RAIN ONE=1.87 IN RAIN SIX=2.20 IN

                     RAIN DAY=2.66 IN DT=0.03333 HR

                COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2
- PEAK AT 1.40 HR.
                DT =     .033330 HOURS        END TIME =      5.999400 HOURS
                   .0000    .0016    .0033    .0050    .0067    .0085    .0103
                   .0122    .0141    .0160    .0180    .0201    .0222    .0243
                   .0266    .0289    .0312    .0337    .0362    .0388    .0415
                   .0443    .0472    .0502    .0534    .0567    .0601    .0637
                   .0675    .0715    .0758    .0809    .0865    .0924    .1050
                   .1334    .1771    .2398    .3254    .4379    .5814    .7600
                   .9780   1.1804   1.2649   1.3363   1.3997   1.4575   1.5106
                  1.5600   1.6061   1.6493   1.6900   1.7284   1.7646   1.7989
                  1.8314   1.8623   1.8915   1.9193   1.9456   1.9518   1.9576
                  1.9630   1.9682   1.9732   1.9780   1.9825   1.9869   1.9912
                  1.9953   1.9993   2.0031   2.0068   2.0104   2.0140   2.0174
                  2.0207   2.0240   2.0272   2.0303   2.0333   2.0363   2.0392
                  2.0420   2.0448   2.0475   2.0502   2.0528   2.0554   2.0580
                  2.0605   2.0629   2.0653   2.0677   2.0700   2.0723   2.0746
                  2.0768   2.0790   2.0812   2.0833   2.0855   2.0875   2.0896
                  2.0916   2.0936   2.0956   2.0976   2.0995   2.1014   2.1033
                  2.1051   2.1070   2.1088   2.1106   2.1124   2.1141   2.1159
                  2.1176   2.1193   2.1210   2.1227   2.1244   2.1260   2.1276
                  2.1292   2.1308   2.1324   2.1340   2.1355   2.1371   2.1386
                  2.1401   2.1416   2.1431   2.1446   2.1460   2.1475   2.1489
                  2.1504   2.1518   2.1532   2.1546   2.1560   2.1573   2.1587
                  2.1600   2.1614   2.1627   2.1640   2.1654   2.1667   2.1680
                  2.1692   2.1705   2.1718   2.1731   2.1743   2.1756   2.1768
                  2.1780   2.1792   2.1804   2.1817   2.1829   2.1840   2.1852
                  2.1864   2.1876   2.1887   2.1899   2.1910   2.1922   2.1933
                  2.1944   2.1956   2.1967   2.1978   2.1989   2.2000

COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.002 SQ MI

                     PER A=6.00 PER B=88.0 PER C=2.0 PER D=4.00

                     TP=0.1111 HR M   S RAINFALL=-1

     K =    .060550HR     TP =    .1  100HR     K/TP RATIO =    .545000      SHAPE
CONSTANT, N =   7.106420
     UNIT PEAK =    .37896     CFS    UNIT VOLUME =     .9726        B =    526.28
  P60 = 1.8700
  AREA          .002000 SQ MI    IA =     .10000 INCHES    INF =     .04000 I
```

25×10 32×10

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```
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=   .033330

      K =   .110443HR    TP =   .111100HR    K/TP RATIO =   .994086    SHAPE
CONSTANT, N =  3.551555
      UNIT PEAK =   5.6005    CFS   UNIT VOLUME =    .9979       B =   324.07
    P60 = 1.8700
      AREA =      .001920 SQ MI    IA =    .50625 INCHES    INF =   1.26750 I
NCHES PER HOUR
      RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=   .033330

   PRINT HYD            ID=1 CODE=1

                                     PARTIAL HYDROGRAPH   101.10

      RUNOFF VOLUME =      .70859 INCHES     =        .0756 ACRE-FEET
      PEAK DISCHARGE RATE =       3.07 CFS  AT   1.500 HOURS   BASIN AREA =
.0020 SQ. MI.


   FINISH

      NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 07:37:49
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25×10 32×10

0000 0000 1934

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

November 2, 1992

Mark Goodwin
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

RE: DRAINAGE PLAN FOR SOUTH VALLEY APOSTOLIC CHURCH (L12-D6) ENGINEER'S STAMP DATED 10/20/92.

Dear Mr. Goodwin:

Based on the information provided on your October 30, 1992 submittal, listed are some concerns that will need to be addressed prior to final approval:

1. No ponding is allowed within 15 feet from planned or existing structure or closer than 15 feet from the property line minus the required set back on adjacent property. For ponds 18 inches deep or less, water may be impounded adjacent to the street Right-Of-Way, but not closer than 10 feet from pavement.

2. Please include a cross-section of the ponding area. Include all details that the contractor will need to built the ponding area.

3. Retention ponds are only permitted on a temporary basis. Note on plan drawing indicating that once an SAD or planned outfall is iniciated, it will be the responsibility of the church to participate.

4. A maintenance agreement will be required for acceptance by the owner of maintenance responsibility and legal liability of the pond.

Gilbert or Fred

25×10 32×10

0000 0000 1335

Mark Goodwin
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

5. Proposed emergency spillway will need to be provided with some type of erosion protection on both west and east slopes.

6. City Zoning Department may require paved parking, please address if they do.

7. Invert elevations need to be shown on both sides of the proposed corrugated cover pipe.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Assistant

BJM/dl/WPHYD/3752

xc: File

25×10 32×10

0000 0000 1336

DRAINAGE INFORMATION SHEET

PROJECT TITLE: South Valley Apostolic Church ZONE ATLAS/DRNG.FILE#: L-12/D6

LEGAL DESCRIPTION: Lot 2-B, Lands of Werner Dramberger
CITY ADDRESS: 242 Atrisco SW

ENGINEERING FIRM: D. Mark Goodwin & Assoc., PA CONTACT: Mark Goodwin
ADDRESS: P.O. Box 90606, Alb, 87199 PHONE: 828-2200

OWNER: South Valley Apostolic Church CONTACT: Chris Willadson
ADDRESS: 242 Atrisco SW Alb PHONE: 255-8668

ARCHITECT: Chris Willadson CONTACT: Chris Willadson
ADDRESS: 115 Amherst SE Alb PHONE: 255-8668

SURVEYOR: D. Mark Goodwin & Assoc., PA CONTACT: Richard Borgel
ADDRESS: P.O. Box 90606, Alb PHONE: 828-2200

CONTRACTOR: N/A CONTACT: ____
ADDRESS: ____ PHONE: ____

PRE-DESIGN MEETING

___ YES
_X_ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ____
EPC NO. ____
PROJ NO. ____

RECEIVED NOV 10 1992 HYDROLOGY DIVISION

TYPE OF SUBMITTAL

___ DRAINAGE REPORT
_X_ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
_X_ GRADING PLAN
___ EROSION PLAN
___ ENGINEER'S CERTIFICATION

TYPE OF APPROVAL SOUGHT

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
_X_ BUILDING PERMIT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ CERTIFICATION OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING / PAVING PERMIT APPROVAL
___ OTHER ____

DATE SUBMITTED: 11/10/92

BY: Mark Goodwin
Mark Goodwin, PE

25×10 32×10

0000 0000 1337

Bernie

BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT
CASE FILE COMMENTS

Fueling Station
at Solid Waste

CASE NO: BP-92-894

ZONE MAP NO.: C-15

REFERENCE CASES:

BP-91-825
CSU-89-2
BP-90-548

STREET ADDRESS: 4600 EDITH NE

LEGAL DESCRIPTION: TRACT 107B1A2 MRGCD MAP 33

COMMENTS OF:

20-OCT-92 DRAN: This property is subject to the Bernalillo County Storm Drainage Ordinance, No. 90-6. A grading and drainage plan meeting the requirements of the Ordinance and the "Interim Drainage Design Criteria for Bernalillo County" is required prior to issuing a building permit.
Application for building permit DISAPPROVED.

We anticipate that the City Hydrology Department will take the lead in reviewing the required grading & drainage information to insure compliance with the master drainage plan prepared for this site and the proposed drainage improvement for the Special Assessment District.
Submit all grading and drainage information to the City Hydrology Department.

DRE: No Access Permit required.

INSP: Inspection required, applicant required to obtain permits from G. J. Foster at Bernalillo County Public Works Department. Phone (505) 843-6120.

Lobo Partners

RECEIVED
OCT 28 1992
HYDROLOGY DIV

25×10 32×10

0000 0000 1338

PLANS/PLATS ON FILE

FILE DESC: L12/D6

PLANS/PLATS 2

25×10 32×10

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