PLANS/PLATS ON FILE

FILE DESC:

D-19/D014

PLANS/PLATS 1

DRAINAGE INFORMATION SHEET

PROJECT TITLE: CHURCH OF THE RISEN SAVIOR ZONE ATLAS/DRNG. FILE #: D/19/D-14

LEGAL DESCRIPTION: TR. "B", LANDS OF THE ARCHDIOCESE OF SANTA FE, & TR. "Q-1" SANTA BARBARA SUBD.

CITY ADDRESS: 7701 WYOMING BLVD. N.E.

ENGINEERING FIRM: J. ARSENIO MARTINEZ, P.E. c/o RODRIGUEZ & ASSOCIATES CONTACT: MR. MARTINEZ; MR. RODRIGUEZ

ADDRESS: 2500 GARFIELD S.E. #5, CITY, 87106 PHONE: 266-3830

OWNER: ARCHDIOCESE OF SANTA FE CONTACT: FATHER PAUL BACA

ADDRESS: c/o 7701 WYOMING BLVD. N.E. PHONE: 821-1571

ARCHITECT: LOU CASTILLO CONTACT: MR. CASTILLO

ADDRESS: c/o 2500 GARFIELD S.E. #5, 87106 PHONE: 867-4816

SURVEYOR: TORRES SURVEYING CO. CONTACT: MR. JIM TORRES

ADDRESS: c/o 2500 GARFIELD S.E. #5, 87106 PHONE: 266-3830

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

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 APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

RECEIVED SEP 25 1990 HYDROLOGY DIVISION

DATE SUBMITTED: SEP. 25, 1990

BY: RODRIGUEZ & ASSOCIATES

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 28, 1990

J. Arsenio Martinez
Rodriguez & Associates
2500 Carfield Street, SE Suite #5
Albuquerque, New Mexico 87106

RE: CONCEPTUAL DRAINAGE PLAN FOR IMPROVEMENTS @ THE CHURCH OF THE RISEN SAVIOR (D-19/D14) ENGINEER'S STAMP DATED 8/31/90

Dear Mr. Martinez:

Based on the information provided on your submittal of September 25, 1990, the referenced drainage plan is approved for site development and foundation.

Prior to building permit release, the following must be addressed:

1. Report discussing the proposed expansion. The report should contain existing and proposed flow rates and volumes. Volumes should be computed using the SCS method (more conservative).

2. Calculations showing the reconstruction of the ponding area to accommodate the increase in volume.

3. You will have flows from Tract Q-1 crossing onto Tract B. Replat or easement will be required prior to building permit release.

4. Cross section of proposed pond improvements.

5. Size of the rundowns to accommodate each basin. Please show the hydraulics within the report for each rundown.

6. Report should also make mention that the Archdiocese of Santa Fe still owns the property to the west, and provisions will be made for easements when the land changes hands.

7. Typical section for the proposed swales within the asphalt area.

8. Notation on plan and report that pond fencing is required because of the depth of over 18".

9. Report should also make mention of offsite flows if any.

10. Your flow rates and volumes will be computed for the 100 year 24 hour storm because of 100% retention.

11. You must also provide an overflow spillway which will spill over towards the northwest of the pond. Spillway designed to spill the Q_{10} storm.

12. Please include the 100 year water surface elevation on the plan drawing. Emergency spillway will serve to release the Q_{10} storm.

13. Provide the calculations for the size of weir that will be needed for the spillway. Spillway design for the Q_{10} must also be concrete.

14. Rundowns must be concrete.

15. What type of landscaping is proposed within the ponding area?

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

for Bernie J. Montoya
Fred J. Aguirre, P.E.
Hydrologist

xc: Lou Castillo
PO Box 723 87103

BJM:FJA/bsj
(WP+2183)

CITY OF ALBUQUERQUE
APPLICATION TO THE DEVELOPMENT REVIEW BOARD (DRB)

APPLICATION FOR: (CHECK APPLICABLE REQUEST; MORE THAN ONE CATEGORY CAN BE CHECKED)

Minor Subdivision
____Sketch Plat Review and Comment
____Preliminary Plat and Final Plat - (City Surveyor Approval Required)
____Lot Split(" " ")

Vacation (See No. 2)
____Public Right-of-Way
____Public Easement
____Private Easement

Major Subdivision (See No. 3)
____Sketch Plat Review and Comment
____Preliminary Plat Approval
____Final Plat Approval

Site Development Plan (See No. 4)
____Review and Comment
X Final Sign Off for EPC
____Approval (DRB only-attach checklist)
____Amended Plan

Subdivision Variance (See No. 5)
____Subdivision Design Standards
____Improvements Guarantee (Bulk Land)
____Sidewalk Variance
____Other (See No. 6)
____Amended Infrastructure List
____SIA Extension
____Sector Plan Review or ____Sign Off

DEC 12 1990 HYDROLOGY DIVISION

PRINT OR TYPE IN BLACK INK ONLY. Use additional sheets as necessary. The completed application must be submitted in person to the Planning Division by the applicant or agent. Fees are required at the time of application for Vacations, Site Development Plan Approvals (DRB only), and Preliminary Plat for Major Subdivisions. All attachments must be submitted with the application and, after folding, shall not exceed 8 1/2 x 14 inches. INACCURATE APPLICATIONS WILL DELAY HEARING OR DECISION DATE. For additional information, contact the Planning Division at (505) 768-3860.

APPLICANT INFORMATION

APPLICANT NAME: Church of the Risen Savior Telephone Number: 821 1571
Mailing Address: 7701 Wyoming Blvd. N.E.
City: Albuquerque, N.M. State: N.M. Zip Code: 87109
Applicant's Proprietary Interest in the Property: Church
Has a List of Owners Been Provided? X Yes ____ No (This is Required for Preliminary Plat Application)
AGENT (If Any): G.L.Castillo Telephone Number: 867 4816
Mailing Address: P.O.B. 723
City: Albuquerque, State: N.M. Zip Code: 87103
SIGNED (Applicant or Agent): (Print) G.L.Castillo

SITE INFORMATION

(a) Property is: X within the City Limits of Albuquerque or ____ Outside the City Limits of Albuquerque, but within five (5) miles (this is the extent of Development Review Board Jurisdiction)
(b) Present Zoning: SU-1 Proposed Zoning (Complete Only if Zone Change Request is Anticipated): SU-1
(c) Existing Buildings? X Yes ____ No - If yes, a Site Sketch is required (show buildings, setbacks, and parking on separate sheet); If yes, Address(s) (required): 7701 Wyoming Blvd. N.E.
(d) Number of Lots Existing: 1 Number Proposed: 1 Total Land Area Covered by Request: (Acres) 5 acres +/-
(e) Present Legal Description of the Property: Lot/Tract No.(s): Lands of Arch. of SE. Block/Map No.(s) ____
Subdivision/Addition: ____
(f) Location of Property by Streets - Located on (or near): Wyoming Blvd / Scotts Place
between Scotts Place and Paseo del Norte
(g) Uniform Property Code (18 Digit Number Issued by County Assessor): ____

VACATION ONLY: Give reason for request on separate sheet. Sketch/state exactly what is being vacated. Give reasons why vacation should be granted as per Subdivision Ordinance requirements. A copy of the document that created the areas to be vacated is required.

SUBDIVISION ONLY: An Infrastructure List and a completed checklist from the Development Process Manual (DPM) is required for Major Subdivision/Preliminary Plat application. Attach any variances or easements granted for this property which affects platting if applicable. Attach zoning action, Notifications of Decision, or Zone Change Request if applicable.

SITE DEVELOPMENT PLAN ONLY: For final sign off for EPC, Notification of Decision is required. For amended plan, list changes to previous plan.

SUBDIVISON VARIANCE REQUEST: Include letter of request for improvements guarantee (Bulk Land). Other information as required per the Development Process Manual (DPM) and Subdivision Ordinance. For Sidewalk Variance, sketch location and state reason for variance.

AMENDED INFRASTRUCTURE LIST. ETC: Describe and show changes to approved Infrastructure List. For Subdivision Improvement Agreement (SIA) Extension, attach previous DRB approvals (Infrastructure List, Notice of Decision, reduced plat or plan).

SUPPLEMENTAL INFORMATION

(a) List Cross References to Environmental Planning Commission cases (Z-) if Applicable: ____
(b) List Cross References to Development Review Board cases (DRB-) if Applicable: ____
(c) List Any Variance Granted (ZA-) if Applicable Case No.: ____ ____City ____County

****

PLANNING DIVISION INTERNAL USE ONLY

Application & Fees Accepted By: Allen R. Jaramillo Date: 12-11-90
Advertised Case? ____Yes ____No If Yes, Number of Signs Issued: ____ Fee(s): $____

Map Number: D-19
Hearing Date: Dec. 13, 1990
S-____
V-____

DRB - 90-447

D19/D14

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

RECEIVED
MAR 14 1991
HYDROLOGY DIVISION

DESIGN REVIEW COMMITTEE MEETING 3/12/91 1:30pm

PROJECT: Risen Savior Church Fire Hydrant PROJECT NO. 4251.90

CONSULTANT: Jeff Mortensen & Associates

ATTENDEES: Roger Green, D.R.C. Chairman
Ed Adams, Transportation
Greg Olson, Water/Wastewater
Jeff Mortensen, Consultant

Roger

COMMENTS:

1. No adverse comments from Hydrology Section or Ed Adams.

2. Marked up plan sets provided by Roger Green, Greg Olson, and Joe Luehring.

No further D.R.C. meeting is required. Bring mylars into Master Scheduler for signatures after comments are addressed. Return all marked up plan sets.

RAG/(WP+125155)

DRAINAGE INFORMATION SHEET

PROJECT TITLE: CHURCH OF THE RISEN SAVIOR ZONE ATLAS/DRNG. FILE #: D/19/D14

LEGAL DESCRIPTION: TR. "B", LANDS OF THE ARCHDIOCESE OF SANTA FE & TR. "D-1", SANTA BARBARA SUBD.

CITY ADDRESS: 7701 WYOMING BLVD. N.E. CITY

ENGINEERING FIRM: W. REED EDGEL, P.E. CONTACT: MR. EDGEL

ADDRESS: 601 VASSAR DR. N.E. 87106 PHONE: 255-2675

OWNER: CHURCH OF THE RISEN SAVIOR CONTACT: FATHER PAULBACA

ADDRESS: 7701 WYOMING N.E. CITY PHONE: 821-1571

ARCHITECT: LOU CASTILLO CONTACT: MR. CASTILLO

ADDRESS: c/o 7701 WYOMING N.E. PHONE: 867-4816

SURVEYOR: TORRES SURVEYING CO. CONTACT: JIM TORRES

ADDRESS: PHONE:

CONTRACTOR: KLINGER CONST. CO. CONTACT: MR. DON KAWAL

ADDRESS: 8701 WASHINGTON N.E. CITY 87113 PHONE: 822-9990

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

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 APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

✓ GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

RECEIVED MAR 13 1991 HYDROLOGY DIVISION

DATE SUBMITTED: MARCH 11, 1991

BY: W. REED EDGEL, P.E.

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

March 15, 1991

W. Reed Edgel
Rodriguez & Associates
12800 San Juan NE
Albuquerque, New Mexico 87106

RE: DRAINAGE PLAN FOR THE CHURCH OF THE RISEN SAVIOR
(D-19/D14) ENGINEER'S STAMP DATED MARCH 13, 1991

Dear Mr. Edgel:

Based on the information provided on your submittal of March 13, 1991, the above referenced plan is approved for Grading/Paving and Building Permit.

Please be advised that prior to Certificate of Occupancy release, the following will be required:

1. Easement or replat for cross-lot-line drainage from Tract Q-1

2. Engineer's Certification per DPM requirements.

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

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya
for Fred J. Aguirre, P.E.
Hydrologist

xc: Alan Martinez
Larry Caudill

BJM:FJA/bsj
(WP+2183)

DRAINAGE INFORMATION SHEET

PROJECT TITLE: CHURCH OF THE RISEN SAVIOR ZONE ATLAS/DRNG. FILE #: D-19/D14

LEGAL DESCRIPTION: TR. "B", LANDS OF THE ARCHDIOSESE OF SANTA FE, & TR. "G-1," SANTA BARBARA SUBD.

CITY ADDRESS: 7701 WYOMING BLVD. S.E.

ENGINEERING FIRM: W. REED EDGEL, P.E. CONTACT: MR. REED EDGEL

ADDRESS: 601 VASSAR DR. N.E. ALBUQUERQUE, NEW MEXICO 87106 PHONE: 255-2675

OWNER: ARCHDIOSESE OF SANTA FE CONTACT: MR. JOHN HUGAMALA

ADDRESS: SANTA FE, N.M. PHONE: 831-8100 (OR FATHER BACK @ CHURCH)

ARCHITECT: LOU CASTILLO CONTACT: MR. CASTILLO

ADDRESS: BERNALILLO, N.M. PHONE: 867-4816

SURVEYOR: TORRES SURVEYING CONTACT: JIM TORRES

ADDRESS: 1570 BRIDGE S.W. ALBUQ., N.M. 87105 PHONE: 291-7085

CONTRACTOR: KLINGER CONST. CO. CONTACT: TOM

CITY ADDRESS: 8701 WASHINGTON N.E. PHONE: 822-9990

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

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 APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

RECEIVED MAY 14 1991 HYDROLOGY DIVISION

DATE SUBMITTED: 05-14-91

BY: W. REED EDGEL, P.E.

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

May 17, 1991

W. Reed Edgel
601 Vassar Drive, NE
Albuquerque, New Mexico 87106

RE: REVISED DRAINAGE PLAN FOR CHURCH OF THE RISEN SAVIOR
(D-19/D14) ENGINEER'S STAMP DATED MAY 14, 1991

Dear Mr. Edgel:

Based on the information provided on your resubmittal of may 14, 1991, the above referenced plan is approved for Building Permit.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

Also, please be advised that prior to Certificate of Occupancy release, Engineer's Certification per the DPM Checklist will be required for review.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez

BJM/bsj
(WP+2183)

D19/D14

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

RECEIVED
AUG 23 1991
HYDROLOGY DIVISION

August 21, 1991

CERTIFICATE OF COMPLETION AND ACCEPTANCE

Church of the Risen Savior
c/o Mr. Tom Novak
Klinger Constructors, Inc.
8701 Washington N.E.
Albuquerque, NM 87113

RE: PROJECT NO. 4251.90, CHURCH OF THE RISEN SAVIOR, (MAP NO. D-19)

Dear Mr. Novak:

This is to certify that the City of Albuquerque accepts Project No. 4251.90 as being completed according to approved plans and construction specifications. The City of Albuquerque will accept for continuous maintenance all public infrastructure improvements constructed as part of Project No. 4251.90.

The project is described as follows:

- Installed fire hydrant on Wyoming south of Paseo Del Norte for additional fire protection for The Church of the Risen Savior.

- The contractor's correction period begins the date of this letter and will be effective for a period of one (1) year.

Sincerely,

Brian L. Speicher, P.E.
Chief Construction Engineer
Design/Construction Division
Public Works Department

BLS:kt

xc: Jeff Mortensen & Associates
Klinger Constructors, Inc.
Fred Aguirre, Engineering Group, PWD
Terri Martin, Engineering Group, PWD
Martin Barker, Engineering Group, PWD
Steve Gonzales, Special Assessments
Sam Hall, Operations Group, PWD
A. N. Gaume, Operations Group, PWD
Jim Fink, Operations Group, PWD
Ray Chavez, Engineering Group, PWD
Greg Olson, Water/Wastewater Group, PWD
Dave Parks, Engineering Group, PWD
Tom Kennerly, Engineering Group, PWD
Josie Gutierrez, New Meter Sales, Finance Group, PWD
Claudia Gallegos, Standby Clerk, Finance Group, PWD
Lynda Michelle Devanti, Engineering Group, PWD
Richard Zamora, Engineering Group, PWD
Kelly Trujillo, Engineering Group, PWD
f/Project 4251.90
f/Warranty
f/Readers

(INP 140045)

DRAINAGE INFORMATION SHEET
RE-SUBMITTAL

PROJECT TITLE: CHURCH OF RISEN SAVIOR ZONE ATLAS/DRNG. FILE #: D-19/D-14

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TR. "B", LANDS OF ARCH. OF SANTA FE, & TR. "Q-1", SANTA BARBARA ADD.

CITY ADDRESS: 7701 WYOMING BLVD. N.E. (CITY)

ENGINEERING FIRM: W. REED EDGEL, P.E. CONTACT: REED EDGEL

ADDRESS: 601 VASSAR N.E. CITY 87106 PHONE: 255-2675

OWNER: CHURCH OF RISEN SAVIOR CONTACT: FATHER PAUL BACA

ADDRESS: 7701 WYOMING N.E. PHONE: 821-1571

ARCHITECT: LOU CASTILLO CONTACT: MR. CASTILLO

ADDRESS: _____ PHONE: 867-4816

SURVEYOR: TORRES SURVEYING CO. CONTACT: JIM TORRES

ADDRESS: 1570 BRIDGE S.W. (87105) PHONE: 291-7085

CONTRACTOR: KLINGER CONST. CO. CONTACT: TOM

ADDRESS: ALBUQ., N.M. PHONE: _____

TYPE OF SUBMITTAL:

- ___ DRAINAGE REPORT
- ___ DRAINAGE PLAN
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ GRADING PLAN
- ___ EROSION CONTROL PLAN
- ✓ ENGINEER'S CERTIFICATION
- ___ OTHER

PRE-DESIGN MEETING:

- ✓ YES
- ___ NO
- ___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SKETCH PLAT APPROVAL
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- ✓ CERTIFICATE OF OCCUPANCY APPROVAL
- ___ GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ S.A.D. DRAINAGE REPORT
- ___ DRAINAGE REQUIREMENTS
- ___ OTHER _____ (SPECIFY)

AUG 22 1991
HYDROLOGY DIVISION

DATE SUBMITTED: AUGUST 22, 1991

BY: W. REED EDGEL, P.E.

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

September 3, 1991

W. Reed Edgel
Rodriguez & Associates
12800 San Juan Road, NE
Albuquerque, New Mexico 87123

RE: ENGINEER'S CERTIFICATION FOR CHURCH OF THE RISEN SAVIOR
(D-19/D14) CERTIFICATION STATEMENT DATED AUGUST 22, 1991

Dear Mr. Edgel:

Based on the information provided on your submittal of August 22, 1991, Engineer's Certificaion for the referenced site is acceptable. Please advise your clients that the deletion of the 18" high curb on the northwest portion of the site will also disclaim any type of liability against the City of Albuquerque.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez
Father Paul Baca

BJM/bsj
(WP+2894)

D19-D14

```
********************** Agreement Log Entry - 1 of 2 **********************
)Type: B  SUBDIVISION IMPROVEMENTS AGREEMENT
)Status: 40 IN PROCESS                                  Acceptance Dates
 Title: CHURCH OF RISEN SAVIOR              Pub: mm dd yy Priv: mm dd y
 Contract Control No.: 9101077    Map No.:  D-19     SV No:
 DRB No 90-417 Hearing: 01 08 91 Infrastructure: FIRE HYDRANT
 Plat No   Plat File Date mm dd yy  Work Order Date Issued: mm/dd/yy
)Developer: ROMAN CATHOLIC CHURCH ,ARCHDIOCESE OF SF
 Street: 4000 ST. JOSEPH PL. N.W. City: ALBUQUERQUE State: NM ZIP: 87120
 Contact: JEFF MORTENSEN  Phone:( 505  ) 345-4250

 Legal Description:
)Subdivision: TRACT B, SANTA BARBARA SUBDIVISION
        Location:
  SIA Agreement Executed: mm dd yy   Extension Deadline Date: mm dd yy
  SIA Last Executed Agr.: mm dd yy   Requesting Final Plat Approval:   (Y/N)
  Agreement Deadline:     12 28 91   Site Development Plan:      (Y/N)
  Agreement Release Date: mm dd yy   Fin. Guarantee Release Date: mm dd yy
  City Engineer/AMAFCA Approval Date: 05 17 91
)Lookup   5:Nxt-Agr    9:ADD-new agreement
         16:END     17:COPY-to new agreement   28:Explain    RETURN: Nxt screen
 Company: PRD    Application: DDT 01     User: FAO     Friday     05/17/91 08:44

 Last Key:                                                Mode: CHG  Scan: Y


********************** Agreement Log Entry - 2 of 2 **********************
==========================================================================

)Financial Institution:  CASHIER'S CHECK # 608719
 Officer: FIRST INTERSTATE BANK     ID No.:
 Street:  City:  State:  ZIP:
 Guarantee Type:
        Amount: $ 6692.34  Expiration:  02 28 92 03 00

 Reduction 90% of Loan Reserve Available: N  (Y/N)
 SIDEWALK VARIANCE
          Executed Agreement: mm dd yy        Deadline: mm dd yy
     Last Executed Agreement: mm dd yy   Ext. Deadline: mm dd yy
     Financial Guarantee Type:
                  Guarantor:
                     Amount: $ 0.00   Expiration: mm dd yy hh mm
       Agreement Release Date: mm dd yy    Financial Release Date: mm dd yy

 Holding Account/Fin. Guarantee - Activity No.: 7000110 Account No.: 233100
                                Account Amount: $ 6692.34
)Lookup  4:Prv-Scr  5:Nxt-Agr  16:End  28:Explain   RETURN:Sve/Nxt
 Company: PRD    Application: DDT 01     User: FAO     Friday     05/17/91 09:45

 Last Key:                                                Mode: CHG  Scan: Y
```

PLAN/PLATS

ON

FILE

HYDROLOGY D19/D14

CHURCH OF THE
RISEN SAVIOR

D 19- D 14

1 PLAN

Rancho de Po
Villa Palomar
Drainage
Pla

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

April 12, 1983

D19-D13
or D13a

Ms. Margaret Chavez
114 D Sandia Rd. N.W.
Albuquerque, N.M. 87107

RE: DRB-83-69 VILLA PALOMAR

Dear Ms. Chavez:

Per our discussion at DRB this morning, this office is requiring that a revised Grading and Drainage Plan be prepared for the Phase 1 site. An assessment of your statement that "each phase can stand alone" will only be made after a review of the plan. Criteria and regulations outlined in the Drainage Ordinance and Development Process Manual should be followed for planning purposes.

I strongly suggest a meeting with me once you have selected an engineer to prepare the drainage plan. Please contact me if you have any questions.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl

cc: DRB Members

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT

INFORMATION SHEET

PROJECT TITLE CHURCH OF THE RISEN SAVIOR TYPE OF SUBMITTAL Grading Plan

ZONE ATLAS PAGE NO. D-19 CITY ADDRESS 7701 Wyoming Blvd., N.E.

LEGAL DESCRIPTION

ENGINEERING FIRM William Matotan & Assoc. CONTACT R.T. Williams

ADDRESS 230 Truman Street, N.E. PHONE 265-8467

OWNER Archdiocese of Santa Fe CONTACT

ADDRESS PHONE

ARCHITECT Miguel Trujillo & Associates CONTACT Miguel Trujillo

ADDRESS 230 Truman Street, N.E. PHONE 265-8329

SURVEYOR CONTACT

ADDRESS PHONE

CONTRACTOR CONTACT

ADDRESS PHONE

DATE SUBMITTED

BY

RECEIVED APR 22 1983 ENGINEERING

Use this Information Sheet when submitting the following:

Drainage report or plan, conceptual grading and drainage plan, engineer's certification plan, erosion plan and grading plan. Provide the information applicable to your submittal.

WILLIAM MATOTAN & ASSOCIATES • ENGINEERS

230 Truman Street, N.E. Albuquerque, New Mexico 87108 Phone (505) 265-8467

April 21, 1983

RECEIVED
APR 22 1983
ENGINEERING

Mr. Miguel Trujillo
Miguel Trujillo & Associates
230 Truman Street, N.E.
Albuquerque, N.M. 87108

Re: Grading Plan for Church of the Risen Savior, Albuquerque, New Mexico; Job No. 712

Dear Mr. Trujillo:

We are sending you, under separate cover, the grading plan and calculations for subject project. The plan was prepared to be compatible with the Drainage Report for Rancho de Palomas Mobile Home Development prepared by Bohannon-Huston, Inc., in 1981. Method of analysis was as specified in the City of Albuquerque Development Process Manual, Volume 2, Chapter 22.

The area contains approximately four acres. The soils on the site are classified as Embudo gravelly sandy loams. This soil type is classified by the Bernalillo County soils report as hydrologic soil group B. The six-hour, 100-year storm (2.4") was used to determine the rainfall intensity.

The runoff volume from the six-year, 100-year storm into pond "A" was calculated to be 3084 ft.^{3}; and that for pond "B" was calculated to be 16,528 ft.^{3}. The runoff will be retained in the respective ponds until improvements in the above cited drainage report have been made; at which time 5 cfs will be discharged from pond B into the streets of the Rancho de Palomas development.

Please contact me if you require further information.

Very truly yours,

WILLIAM MATOTAN & ASSOCIATES, INC.

RWilliams

Richard Williams, P.E.

Enclosure: Grading Plan and Calculations

RW:da

City of Albuquerque

May 5, 1983

Richard Williams, P.E.
William Matotan & Associates, Inc.
230 Truman Street NE
Albuquerque, NM 87108

REF: Church of the Risen Savior

Dear Mr. Williams:

The referenced drainage plan cannot be given a complete review without the benefit of the information circled in red on the attached checklist. Please provide this information with your resubmittal.

If you have any questions or would like to discuss these comments further, you can contact me at 766-7644.

NOTE: The checklist copied for you is from the Development Process Manual, Volume 2, Section 22.7.

Sincerely yours,

Fred J. Aguirre, P.E.
City Engineering/Hydrology

Enclosure

mrk

MUNICIPAL DEVELOPMENT DEPARTMENT

Richard S. Heller, P.E., City Engineer
LaMonte J. Urban, P.L.S., Chief City Surveyor

ENGINEERING DIVISION

123 Central Avenue N.W.
Albuquerque, New Mexico 87102
Telephone (505) 766-5040

WILLIAM MATOTAN & ASSOCIATES • ENGINEERS

230 Truman Street, N.E. Albuquerque, New Mexico 87108 Phone (505) 265-8467

May 9, 1983

Mr. Fred J. Aguirre, P. E.
City Engineering/Hydrology
City of Albuquerque
123 Central Avenue, N. W.
Albuquerque, New Mexico 87102

Subject: Church of the Risen Savior - Drainage Plan.

Dear Mr. Aguirre:

Thank you for the information you provided in your letter of May 5, 1983 regarding the subject drainage plan.

Specifically addressing the items circled on your enclosed drainage plan checklist:

1. We have enclosed a completed information sheet.

3. The submittal is stamped and signed by a registered professional engineer and land surveyor.

17.A.1. We have enclosed a revised copy of our calculations for the drainage plan. You will find existing and proposed pond volume calculations on the last page.

20.C. A legend has been provided in accordance with DPM Volume 2, tables 27.3a - 27.3d.

? 21.A. We have included a vicinity map.

21.B. The legal description is given on the information sheet and on sheet 1 of the plan set for subject project.

22.A. Vertical control is based on City of Albuquerque benchmark 10-D19, located on the top of curb on the west side of Wyoming Blvd., N. E., at its intersection with San Francisco Drive, N. E. The elevation is 5386.436. This benchmark is shown in the lower right corner of sheet C-1.

22.B. We have established a T.B.M. at elevation 5379.32 on the site. This T.B.M. is shown DESCRIPTION on sheet C-1.

23.H. Flow line elevations are shown for Wyoming Blvd., N. E., on sheet C-1. TOP C

24.D. Internal contributory drainage areas, including roof areas, have been outlined on sheet C-1.

24.G. 100-year depth of Pond A is 0.73 feet (3084 ft.^{3} ÷ (65 ft.)^2). 100-year elevation = 5374.23. 100-year depth of Pond B is 1.09 ft. (16,528 ft.^{3} ÷ (190 ft. x 80 ft.)). 100-year elevation = 5371.59. These have been outlined and indicated on sheet C-1.

24.H. Property lines and curbs on site have been differentiated. ANY CURBS ON WEST SIDE OF AREA 2

24.M. Cross-sections of the ponds are shown on sheet C-1. Details of rundowns into the ponds are also shown. Pond berm specifications are included. NOT TO SCALE

Please contact me if you require additional information.

Very truly yours,

WILLIAM MATOTAN & ASSOCIATES, INC.

RTWilliams

Richard T. Williams, P. E.

RTW:cmj

Enclosures: as noted herein.

cc w/o enc.: Mr. Miguel Trujillo
Miguel Trujillo & Associates

Resubmittal
D19 - D14
~~D-19~~

22.7

INFORMATION SHEET

PROJECT TITLE Church of the Ransomer TYPE OF SUBMITTAL Drainage Plan

ZONE ATLAS PAGE NO. D19-Z CITY ADDRESS 7101 Wyoming Blvd N.E.

LEGAL DESCRIPTION _____

ENGINEERING FIRM _____ CONTACT RT Williams, P.E.

ADDRESS _____ PHONE _____

RECEIVED

OWNER _____ CONTACT _____

ADDRESS _____ PHONE _____

AUG 26 1983

ARCHITECT Miguel Trujillo & Assoc CONTACT Miguel Trujillo

ENGINEERING

ADDRESS 230 Truman N.E. PHONE 265-8329

SURVEYOR _____ CONTACT _____

ADDRESS _____ PHONE _____

SAMPLE

CONTRACTOR _____ CONTACT _____

ADDRESS _____ PHONE _____

DATE SUBMITTED resubmitted Aug. 26, 1983

BY _____

Use this Information Sheet when submitting the following:

Drainage report or plan, conceptual grading and drainage plan, engineer's certification plan, erosion plan and grading plan. Provide the information applicable to your submittal.

City of Albuquerque

May 11, 1983

William Matotan & Associates
230 Truman NE
Albuquerque, NM 87108

REF: Church of the Risen Savior - Dated 5/10/83

Dear Mr. Williams:

The referenced drainage plan satisfies the City's drainage requirements; therefore, this plan is approved. The building plans will be signed off with the inclusion of the following items in the building plan set:

1. An approved drainage plan dated 5/10/83.
2. Sheet SD-1 (rundown detail).
3. The Berm Specifications adequately referenced on the building plans.
4. A vicinity map identifying the project site.

Also, please advise the contractor that copies of the berm's compaction tests will be required at the time of the drainage inspection. These tests must be certified by a New Mexico Registered Engineer.

If you have any further questions, please feel free to contact this office.

Sincerely,

Fred Aguirre
Civil Engineer/Hydrology

mrk

cc: Miguel Trujillo, Architect

MUNICIPAL DEVELOPMENT DEPARTMENT

Richard S. Heller, P.E., City Engineer
LaMonte J. Urban, P.L.S., Chief City Surveyor

ENGINEERING DIVISION

123 Central Avenue N.W.
Albuquerque, New Mexico 87102
Telephone (505) 766-5040

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

September 13, 1983

William Matotan & Associates
230 Truman N.E.
Albuquerque, NM 87108

RE: CHURCH OF THE RISEN SAVIOR REVISED DRAINAGE PLAN DATED 8/22/83 (D19-D14)

Dear Mr. Williams:

The revised drainage plan is approved. Please see that the contractor is provided with the following information:

1. Drainage plan dated 8/22/83
2. Sheets SD1 - SD4
3. Berm specifications

Also, please advise the contractor that copies of the berm's compaction tests will be required at the time of the drainage inspection. These tests must be certified by a N.M. registered engineer.

If you have any questions regarding the above comments, please feel free to contact me.

Very truly yours,

Fred J. Aguirre
Civil Engineer/Hydrology

FJA/tsl

cc: Miguel Trujillo Architect

FOX

FOX & ASSOCIATES OF NEW MEXICO, INC.
CONSULTING ENGINEERS AND GEOLOGISTS
ALBUQUERQUE OFFICE 3412 BRYN MAWR DRIVE, NE
ALBUQUERQUE, NEW MEXICO 87107
(505) 884-0900

December 19, 1983

Wallin Construction Co., Inc.
P.O. Box 13596
Station E
Albuquerque, NM 87192

Job No. 429050

Subject: Density compaction test data for Church of Risen Savior

Gentlemen:

Transmitted herein is the detailed test data for the subject project.

FOX & ASSOCIATES OF NEW MEXICO, INC.

Greg Gower
Engineering Technician

MARTIN D. VINYARD
NEW MEXICO
8261
REGISTERED PROFESSIONAL ENGINEER

Reviewed by:

Martin D. Vinyard, P.E.
Project Geotechnical Engineer

Copies: Addressee (2)
Miguel Trujillo, Architect

Attached: Daily Report No. 14

ms

FOX

FOX & ASSOCIATES OF NEW MEXICO, INC.
CONSULTING ENGINEERS AND GEOLOGISTS
ALBUQUERQUE OFFICE 3412 BRYN MAWR DRIVE, NE
ALBUQUERQUE, NEW MEXICO 87107
(505) 884-0800

DENSITY-COMPACTION TEST RESULTS

PROJECT	Church of Risen Savior	PROJECT NO.	429050	DATE	12/16/83
LOCATION		REPORT NO.	14	TIME	
SOURCE		SAMPLE NO.		ENGINEERING TECHNICIAN	Greg Gower

TEST NO.	LOCATION	DEPTH OR ELEVATION	PROCTOR DENSITY PCF	OPTIMUM MOISTURE CONTENT %	DRY DENSITY PCF	MOISTURE CONTENT %	COMPACTION ACT. %	COMPACTION REQ. %	SOIL TYPE
39A	North ponding area, centerline of south embankment RETEST	FSG	130.0	7.5	125.0	4.4	96.2	90	SAND, silty, slighlty gravelly, brown (SM)
40A	South ponding area, centerline of west embankment RETEST	FSG	130.0	7.5	130.5	6.0	100.4	90	SAND, silty, slightly gravelly, brown (SM)
41A	South ponding area, centerline of west side	FSG	130.0	7.5	121.8	6.2	93.7	90	SAND, silty, slightly gravelly, brown (SM)

EQUIPMENT: 1-Blade, 1-Water Truck, 1-Compactor, 1-Grading Tractor

Embankments were being rolled while on job site. Prior to retests material was rewatered and rerolled. Results of tests were given to operators and foreman.

TYPE OF TEST: AG
TEMPERATURE: 30 to 55° F
WIND: 0 to 5 MPH
PRECIPITATION: None

WILLIAM MATOTAN & ASSOCIATES, INC. ENGINEERS 230 Truman Street, N.E. - Albuquerque, N.M. 87108 Telephone 265-8467	Project CHURCH of the RISEN SAVIOR Sheet 1 of Subject: DRAINAGE Job No. 712 Comp. by RTW Date APR 15, 83 Chk'd Date

PLANIMETER CONVERSION

1115
1107
1105

3327 ÷ 3 = 1109 P.U. = 10,000 ft²

1 P.U. = 9.02 ft²

DRAINAGE AREAS - EXISTING

AREA I - 165 x 260 = 42,900 SF = 0.985 AC

pervious - pond A

1882
1877
1889

5648 ÷ 3 = 1883 P.U. = 16,985 SF = 0.390 AC

impervious - pond A

86
92
102

280 ÷ 3 = 93.3 P.U. = 842 SF = 0.019 AC

pervious - pond B

213	75	17	17	300
219	80	20	14	300
220	80	12	13	299

652 + 235 + 49 + 44 + 899 = 1879 ÷ 3 = 626 P.U.

= 5650 SF = 0.130 AC

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ENGINEERS
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Telephone 265-8467

Project _____ Sheet 2 of _____
Subject: _____ Job No. _____
Comp. by _____ Date _____ Chk'd _____ Date _____

impervious - pond B

~~5206~~
2222
2219
2205

6646 - 235 - 49 - 44 = 6318 ÷ 3 = 2106 P.U. = 18,996 SF

= 0.436 AC

check: 0.390 + 0.019 + 0.130 + 0.436 = 0.975 AC OK

AREA II - 144 + 260 = 37,440 SF = 0.860 AC

pervious - pond A

~~160~~	143
197	141
189	135
176	
562 +	419

= 981 ÷ 3 = 327 P.U. = 2950 ft² = 0.068 AC

impervious - pond A

~~1862~~
878
864

2604 ÷ 3 = 868 P.U. = 7829 ft² = 0.180 AC

pervious - pond B

84	400	17	10	95
82	388	13	8	94
82	409	15	8	97

248 + 1197 + 45 + 26 + 286 = 1,802 ÷ 3 = 601 P.U

= 5,418 ft² = 0.124 AC

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Project _____ Sheet 3 of _____
Subject: _____ Job No. _____
Comp. by _____ Date _____ Chk'd _____ Date _____

impervious - pond B

2679
2660
2677

8016 - 45 - 1197 = 6774 ÷ 3 = 2258 P.U. = 20,367 SF = 0.468 AC

check: 0.068 + 0.180 + 0.124 + 0.468 = 0.840 AC ok

AREA III - 145 × 260 = 37,700 SF = 0.865 AC

pervious - pond A

65	3
45	12
45	10

155 + 25 = 180 ÷ 3 = 60 P.U. = 541 SF = 0.012 AC

impervious - pond A

182
188
195

565 ÷ 3 = 188 P.U. = 1699 SF = 0.039 AC

pervious - pond B

217	159	393	23	18	115
227	160	385	24	16	125
220	160	390	23	17	105

664 + 479 + 1168 + 70 + 51 + 345 = 2777 ÷ 3 = 926 P.U.

= 8350 SF = 0.192 AC

impervious - pond B

3156
: 3143
3155

3454 - 51 = 3403 ÷ 3 = 3134 P.U. = 28,272 SF = 0.649 AC

check: 0.012 + 0.039 + 0.192 + 0.649 = 0.892 AC ok

AREA IV

pervious - pond A - 0

impervious - pond A - 0

pervious - pond B - 206 × 135 = 27,810 SF = 0.638 AC

impervious - pond B - 0

AREA V

pervious - pond A - 0

impervious - pond A - 0

pervious - pond B - 134 × 206 = 27,604 SF = 0.634 AC

impervious - pond B - 0

check: 0.975 + 0.840 + 0.892 + 0.638 + 0.634 = 3.98 AC ok

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ENGINEERS
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Telephone 265-8467

Project _____ Sheet 5 of _____
Subject: _____ Job No. _____
Comp. by _____ Date _____ Chk'd _____ Date _____

POND A -

TOTAL AREA DRAINED = 0.350 + 0.019 + 0.068 + 0.180 + 0.012 + 0.039 = 0.708 AC

IMPERVIOUS AREA = 0.019 + 0.180 + 0.039 = 0.238

% IMPERVIOUS = $\frac{0.238}{0.708} \times 100 = 34\%$

POND B -

TOTAL AREA DRAINED = 0.130 + 0.436 + 0.124 + 0.468 + 0.192 + 0.649 + 0.638 + 0.634 = 3.271 AC

IMPERVIOUS AREA = 0.436 + 0.468 + 0.649 = 1.553

% IMPERVIOUS = $\frac{1.553}{3.271} \times 100 = 48\%$

SOIL ~~SERIES~~ - E+C (SOIL SURVEY of BERNALILLO COUNTY and PARTS of SANDOVAL and VALENCIA COUNTIES, NM), S.C.S., MAPS 11 and 21.

HYDROLOGIC SOIL GROUP - B (Op. cit., p.77)

POND A - C = 0.50 (DPM #2, ¶ 22.2 C-1)

POND B - C = 0.56 (DPM #2, ¶ 22.2 C-1)

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Project _____ Sheet 6 of ____
Subject: _____ Job No. _____
Comp. by _____ Date _____ Chk'd _____ Date _____

DRAINAGE AREAS - FUTURE

AREA I - NO CHANGE

AREA II

pervious - pond A

203	90
218	92
211	90

632 + 272 = 904 ÷ 3 = 301 P.U. = 2718 SF = 0.062 AC

impervious - pond A

902
911
915

2728 ÷ 3 = 909 PU = 8202 SF = 0.188 AC

pervious - pond B

24	21	105
22	21	107
20	20	99

66 + 62 + 311 = 439 ÷ 3 = 146 PU = 1320 SF

= 0.030 AC

impervious - pond B

2683
2689
2679

8051 ÷ 3 = 2684 P.U. = 24,207 SF = 0.556 AC

check: 0.062 + 0.188 + 0.030 + 0.556 = 0.836 AC ok

AREA III

pervious - pond A

43	7
~~66~~	8
53	7
39	

115 + 22 = 137 ÷ 3 = 46 P.U. = 412 SF = 0.009 AC

impervious - pond A

190	6
195	5
195	6

580 + 17 = 597 ÷ 3 = 199 P.U. = 1795 SF = 0.041 AC

pervious - pond B

81	410	138	27	135
82	405	139	26	142
80	390	130	27	144

243 + 1205 + 407 + 80 + 421 = 2356 ÷ 3 = 785 PU

= 7084 SF = 0.163 AC

impervious - pond B

3319
3310
3335

9964 - 80 - 421 = 9463 ÷ 3 = 3154 PU = 28,452 SF = 0.653 AC

check: 0.009 + 0.041 + 0.163 + 0.653 = 0.866 AC OK

AREA IV : NO CHANGE

AREA V : NO CHANGE

POND A -

IMPERVIOUS AREA = 0.019 + 0.188 + 0.041 = 0.248 AC

% IMPERVIOUS = $\frac{0.248}{0.708} \times 100 = 35\%$ USE C = 0.50

(DPM #2, pg 22.2 c-1)

POND B -

IMPERVIOUS AREA = 0.436 + 0.556 + 0.653 = 1.645 AC

% IMPERVIOUS = $\frac{1.645}{3.271} \times 100 = 50\%$ USE C = 0.58

(DPM #2, pg 22.2 c-1)

RAINFALL INTENSITY

$I = 6hr\text{-}100yr.vol \times 6.84 \times t_c^{-0.51}$

6hr - 100 yr vol = 2.4" (DPM #2, pg 22.2 D-1)

$t_c = 0.0078 \frac{L^{0.77}}{S^{0.385}}$

POND A

AREA 1 - L = 115', ΔH = 96 - 90.5 = 5.5'

$S = \frac{\Delta H}{L} = \frac{5.5}{115} = 0.048$

$t_c = 0.0078 \frac{115^{0.77}}{0.048^{0.385}} = 0.970$ min

$I_{A1} = 2.4 \times 6.84 \times 0.970^{-0.51} = 16.68$

WILLIAM MATOTAN & ASSOCIATES, INC.
ENGINEERS
230 Truman Street, N.E. - Albuquerque, N.M. 87108
Telephone 265-8467

Project _____ Sheet 3 of _____
Subject: _____ Job No. _____
Comp. by _____ Date _____ Chk'd _____ Date _____

AREA 2 - L = 245', ΔH = 100.25 - 90.5 = 9.75

$S = \frac{9.75}{245} = 0.040$

$t_c = 0.0078 \frac{245^{0.77}}{0.040^{0.385}} = 1.862$ min

$I_{A2} = 2.4 \times 6.84 \times 1.862^{-0.51} = 11.96$

AREA 3 - L = 385', ΔH = 103 - 90.5 = 12.50

$S = \frac{12.50}{385} = 0.032$

$t_c = 0.0078 \frac{385^{0.77}}{0.032^{0.385}} = 2.874$ min

$I_{A3} = 2.4 \times 6.84 \times 2.874^{-0.51} = 9.58$

POND B

AREA 1 - L = 245', ΔH = 122 - 88.5 = 33.5

$S = \frac{33.5}{245} = 0.137$

$t_c = 0.0078 \frac{245^{0.77}}{0.137^{0.385}} = 1.159$ min

$I_{B1} = 2.4 \times 6.84 \times 1.159^{-0.51} = 15.23$

AREA 2 - L = 335, ΔH = 122 - 88.5 = 33.5

$S = \frac{33.5}{335} = 0.100$

$t_c = 0.0078 \frac{335^{0.77}}{0.100^{0.385}} = 1.665$ min

$I_{B2} = 2.4 \times 6.84 \times 1.665^{0.51} = 12.66$

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AREA 3 - $L = 470$, $\Delta H = 103 - 88.5 = 14.5$

$S = \frac{14.5}{470} = 0.031$

$t_c = 0.0078 \frac{470^{0.77}}{0.031^{0.385}} = 3.392$ min

$I_{B3} = 2.4 \times 6.84 \times 3.392^{-0.51} = 8.81$

AREA 4 - $L = 83$, $\Delta H = 92.4 - 88.5 = 3.9$

$S = \frac{3.9}{83} = 0.047$

$t_c = 0.0078 \frac{83^{0.77}}{0.047^{0.385}} = 0.760$ min

$I_{B4} = 2.4 \times 6.84 \times 0.760^{-0.51} = 18.88$

AREA 5 - $L = 175'$, $\Delta H = 94 - 88.5 = 5.5$

$S = \frac{5.5}{175} = 0.031$

$t_c = 0.0078 \frac{175^{0.77}}{0.031^{0.385}} = 1.585$ min

$I_{B5} = 2.4 \times 6.84 \times 1.585^{-0.51} = 12.98$

EXISTING DISCHARGE CONDITIONS

POND A

$Q = CiA = 0.50(16.68)(0.985) + 0.50(11.96)(0.860)$
$+ 0.50(9.58)(0.865) = 17.50$ cfs

WILLIAM MATOTAN & ASSOCIATES, INC.
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Project: _____ Sheet 11 of _____
Subject: _____ Job No. _____
Comp. by _____ Date _____ Chk'd _____ Date _____

POND B -

$Q = ciA = 0.56(15.23)(0.985) + 0.56(12.66)(0.860)$
$+ 0.56(8.81)(0.865) + 0.56(18.88)(0.638) + 0.56(12.98)(0.634)$
$= 30.12$ cfs

FUTURE DISCHARGE CONDITIONS

POND A

$Q = ciA = 0.50(16.68)(0.985) + 0.50(11.96)(0.860)$
$+ 0.50(9.58)(0.865) = 17.50$ cfs

POND B

$Q = ciA = 0.58(15.23)(0.985) + 0.58(12.66)(0.860)$
$+ (0.58)(8.81)(0.865) + 0.58(18.88)(0.638)$
$+ 0.58(12.98)(0.634) = 31.20$ cfs

EXISTING RUNOFF VOLUME

POND A

$V = CRA = 0.50\left(\frac{2.4}{12}\right)(0.708)(43{,}560) = 3084\ ft^3$

POND B

$V = CRA = 0.56\left(\frac{2.4}{12}\right)(3.271)(43{,}560) = 15{,}958\ ft^3$

WILLIAM MATOTAN & ASSOCIATES, INC.
ENGINEERS
230 Truman Street, N.E. - Albuquerque, N.M. 87108
Telephone 265-8467

Project _____ Sheet 12 of _____
Subject: _____ Job No. _____
Comp. by _____ Date _____ Chk'd _____ Date _____

FUTURE RUNOFF VOLUME

POND A -

$V = CRA = 0.50\left(\frac{2.4}{12}\right)(0.708)(43{,}560) = 3084\ ft^3$

POND B

$V = CRA = 0.58\left(\frac{2.4}{12}\right)(3.271)(43{,}560) = 16{,}528\ ft^3$

TOTAL DURATION of RUNOFF

$T = \frac{2V}{qP} \div 60$

EXISTING - POND A

$T = \frac{(2)3084}{17.50} \div 60 = 5.87$ min

EXISTING - POND B

$T = \frac{2(15{,}958)}{30.12} \div 60 = 17.66$ min

FUTURE - POND A

$T = \frac{2(3084)}{17.50} \div 60 = 5.87$ min

FUTURE - POND B

$T = \frac{2(16{,}528)}{31.20} \div 60 = 17.66$ min

? (.25)

CAPACITY - POND A - 65(65)(0.5) = 2,112 ft^3 (existing)

CAPACITY - POND B - 80(200)(0.5) = 8,000 ft^3 (existing)

CAPACITY - POND A - 65(65)(1.25) = 5281 ft^3 > 3084 OK (proposed)

CAPACITY - POND B - 80(200)(1.5) = 24,000 ft^3 > 16,528 OK (proposed)

CHURCH of the RISEN SAVIOR - JOB # 83-1

REVISED DRAINAGE PLAN

RECEIVED
AUG 26 1983
ENGINEERING

1. ADDITIONAL RUNOFF INTO POND "A"

USE RATIONAL FORMULA - $Q = CIA$, $V =$

a. DETERMINE "C" FACTOR

SOIL SERIES - ETC (SOIL SURVEY of BERNALILLO COUNTY and PARTS of SANDOVAL and VALENCIA COUNTIES, N.M), SCS, MAPS 11 and 21

HYDROLOGIC SOIL GROUP - B (op. cit., p.77)

ASSUME 100% PAVED

$C = 1.0$ (DPM, Vol 2, pt 22.2 C-1)

b. DETERMINE "I"

$I = 6\,hr - 100\,yr.\,vol. \times 6.84 \times t_c^{-0.51}$

$6\,hr - 100\,yr.\,vol. = 2.4$ (DPM, Vol 2, pt 22.2 D-1)

$t_c = 0.0078 \dfrac{L^{0.77}}{S^{0.385}}$

$\Delta H = 87.83 - 80.41 = 7.42'$

$L = \sqrt{246^2 + 40^2} = 249'$

$S = \dfrac{\Delta H}{L} = \dfrac{7.42}{249} = 0.0298$ USE 0.03

$t_c = 0.0078 \dfrac{249^{0.77}}{0.03^{0.385}} = 2.11\,min < 10$ USE $t_c = 10\,min$

$I = 2.4 \times 6.84 \times 10^{-0.51} = 5.07$

c. $A = 40 \times 246 = 9{,}840\,SF = 0.226\,AC$

$Q_{100} = 1.0\,(5.07)(0.226) = 1.15\,cfs$

$Q_{10} = Q_{100}(0.657) = 1.15\,(0.657) = 0.76\,cfs$

$V_{100} = 1.0\left(\frac{2.4}{12}\right)(9840) = 1{,}968\,CF$

RICHARD T. WILLIAMS
NEW MEXICO
7302
REGISTERED PROFESSIONAL ENGINEER

AREA - POND "A" $= (65)^2 = 4{,}225$ SF

ORIGINAL RUNOFF VOLUME = 3084 CF (ORIGINAL DRAINAGE PLAN, SHEET 12)

NEW RUNOFF VOLUME = 3,084 + 1,968 = 5,052 CF

CAPACITY - POND "A" = 4,225 (1.5) = 6337 CF / OK

DEPTH of PONDING = $\frac{5{,}052}{4{,}225} = 1.20'$

100-YR W.S. ELEV. = 5373.50 + 1.20 = 5374.70

2. ADDITIONAL RUNOFF INTO POND "B"

USE RATIONAL FORMULA AS ABOVE

a. DETERMINE "C" FACTOR (PAVED PORTION)

ASSUME 100% PAVED $\Rightarrow C = 1.0$

b. DETERMINE "I" (PAVED PORTION)

$\Delta H = 76 - 72 = 4'$

$L = \sqrt{178^2 + 107^2} = 208'$

$S = \frac{4}{208} = 0.019$ USE 0.02

$t_c = 0.0078 \frac{208^{0.77}}{0.02^{0.385}} = 2.14$ min < 10 USE $t_c = 10$ min

$I = 2.4 + 6.84 + 10^{-0.51} = 5.07$

$A = 178(107)(2) = 38{,}092$ SF $= 0.875$ AC

$Q_{100} = 1.0(5.07)(0.875) = 4.44$ cfs

$Q_{10} = 0.657(4.44) = 2.92$ cfs

$V_{100} = 1.0\left(\frac{2.4}{12}\right)(38{,}092) = 7{,}618$ CF

c. DETERMINE "C" FACTOR for POND "B"

ASSUME 0% PAVED

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C = 0.34 (DPM, Vol 2, pg 22.2 C-1)

d. DETERMINE "I" for POND "B"

ASSUME t_c = 10 min

$I = 2.4 + 6.84 \times 10^{-0.51} = 5.07$

A = 200 × 80 = 16,000 SF = 0.367 AC

$Q_{100} = 0.34(5.07)(0.367) = 0.63$ cfs

$Q_{10} = 0.657(0.63) = 0.41$ cfs

$V_{100} = 0.34\left(\frac{2.4}{12}\right)(16{,}000) = 1{,}088$ CF

TOTAL VOLUME = 7,618 + 1,088 = 8,706 CF

e. ORIGINAL RUNOFF VOLUME from AREAS IV & V

ASSUME 0% PAVED

C = 0.34 (DPM, Vol 2, pg 22.2 C-1)

ASSUME t_c = 10 min

$I = 2.4 + 6.84 \times 10^{-0.51} = 5.07$

A_{IV} = 27,810 SF = 0.638 AC (ORIGINAL DRAINAGE PLAN, SHEET 4)

A_{V} = 27,604 SF = 0.634 AC (ORIGINAL DRAINAGE PLAN, SHEET 5)

TOTAL AREA = 27,810 + 27,604 = 55,414 SF

$V = 0.34\left(\frac{2.4}{12}\right)(55{,}414) = 3{,}768$ CF

ADDITIONAL VOLUME = 8,706 − 3,768 = 4,938 CF

f. VOLUME REQ'D for POND B

ORIGINAL RUNOFF VOLUME INTO POND B = 16,528 CF (ORIGINAL DRAINAGE PLAN, SHEET 12)

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VOLUME REQ'D = 16,528 + 4,938 = 21,466 CF

A = 16,000 SF (from SHEET 3, THIS SUBMITTAL)

DEPTH REQ'D = $\frac{21,466}{16,000}$ = 1.34' < 1.5' OK

100 YR W.S. ELEV = 5370.5 + 1.34 = 5371.84

DESIGN of CONCRETE RUNDOWN E. SIDE of POND "B"

SEE "FUTURE DISCHARGE CONDITIONS - POND B", SHEET 11, ORIGINAL DRAINAGE PLAN

CIA - AREA II = 0.58 (12.66)(0.860) = 6.31 cfs

CIA - AREA III = 0.58 (8.81)(0.865) = 4.42 cfs

CIA - POND "B" = 0.34 (5.07)(0.367) = 0.63 cfs

CIA - PAVED PORTION = 1.0 (5.07)(0.875) = 4.44 cfs

Q_{100} = 15.80 cfs

$Q = \frac{1.486}{n} A r^{\frac{2}{3}} s^{\frac{1}{2}}$

USE n = 0.013 (POURED CONCRETE)

try $S = \frac{1}{3} = 0.33$

$A r^{\frac{2}{3}} = \frac{Qn}{1.486 s^{\frac{1}{2}}} = \frac{15.80(0.013)}{1.486(0.33)^{\frac{1}{2}}} = 0.241$

A = wh = 0.67 w (try h = 8")

$r = \frac{A}{WP}$

WP = W + 2(0.67) = W + 1.34

$r = \frac{0.67 w}{W + 1.34}$

$r^{\frac{2}{3}} = \left(\frac{0.67 w}{W + 1.34}\right)^{\frac{2}{3}}$

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$$A r^{\frac{2}{3}} = 0.67 w \left(\frac{0.67 w}{w + 1.34}\right)^{\frac{2}{3}} > 0.241$$

try $w = 6'$

$$0.67(6)\left[\frac{0.67(6)}{6 + 1.34}\right]^{\frac{2}{3}} = 2.68$$

try $w = 4'$

$$0.67(4)\left[\frac{0.67(4)}{4 + 1.34}\right]^{\frac{2}{3}} = 1.69$$

try $h = 4'' = 0.33'$

$A = 0.33 w$

$WP = w + 2(0.33) = w + 0.67$

$$r = \frac{0.33 w}{w + 0.67}$$

$$A r^{\frac{2}{3}} = 0.33 w \left[\frac{0.33 w}{w + 0.67}\right]^{\frac{2}{3}} > 0.241$$

try $w = 6'$

$$0.33(6)\left[\frac{0.33(6)}{6 + 0.67}\right]^{\frac{2}{3}} = 0.877$$

try $w = 4'$

$$0.33(4)\left[\frac{0.33(4)}{4 + 0.67}\right]^{\frac{2}{3}} = 0.566$$

→ TRY A DESIGN USING WIRE TIED RIP-RAP ($n = 0.040$)

$$A r^{\frac{2}{3}} = \frac{Qn}{1.486 S^{\frac{1}{2}}} = \frac{15.80(0.040)}{1.486(0.33)^{\frac{1}{2}}} = 0.740$$

try $h = 8'' = 0.67'$

$A = 0.67 w$

$WP = w + 1.34$

$$A r^{\frac{2}{3}} = 0.67 w \left(\frac{0.67 w}{w + 1.34}\right)^{\frac{2}{3}} > 0.740$$

→ try $h = 4'' = 0.33'$

$$A r^{\frac{2}{3}} = 0.33 w \left(\frac{0.33 w}{w + 0.67}\right)^{\frac{2}{3}} > 0.740$$

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→ TRY W = 6'

$Ar^{\frac{2}{3}} = 0.33(6)\left[\frac{0.33(6)}{6+0.67}\right]^{\frac{2}{3}} = 0.877 > 0.740$ OK

CHECK 10-YEAR VELOCITY

$Q_{10} = 0.657(15.80) = 10.38$ cfs

$Q = AV \Rightarrow V = \frac{Q}{A} = \frac{10.38}{0.33(6)} = 5.24 \frac{ft}{sec} > 3$ OK

DESIGN of RUNDOWN
N. SIDE of POND "B"

SEE "FUTURE DISCHARGE CONDITIONS - POND 'B'", SHEET 11, ORIGINAL DRAINAGE PLAN

CIA - AREA I = 0.50 (16.68)(0.985) = 8.21 cfs = Q_{100}

→ TRY A DESIGN USING WIRE TIED RIP-RAP (n = 0.040)

$Ar^{\frac{2}{3}} = \frac{Qn}{1.486 s^{\frac{1}{2}}} = \frac{8.21(0.040)}{1.486(0.33)^{\frac{1}{2}}} = 0.385$

→ TRY W = 4', h = 0.33'

$Ar^{\frac{2}{3}} = 0.33(4)\left[\frac{0.33(4)}{4+0.67}\right]^{\frac{2}{3}} = 0.566$ OK

CHECK 10-YEAR VELOCITY

$Q_{10} = 0.657(8.21) = 5.39$ cfs

$V = \frac{5.39}{4(0.33)} = 4.08 \frac{ft}{sec} > 3$ OK

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DESIGN of RUNDOWN
E. SIDE of POND "A"

SEE "FUTURE DISCHARGE CONDITIONS - POND A", SHEET 11, ORIGINAL DRAINAGE PLAN

$Q_{100} = 17.50$ cfs

TRY A DESIGN USING WIRE TIED RIP RAP ($n = 0.040$)

$$A r^{\frac{2}{3}} = \frac{Qn}{1.486\, s^{\frac{1}{2}}} = \frac{17.50(0.040)}{1.486(0.33)^{\frac{1}{2}}} = 0.820$$

USE $h = 0.33'$, $W = 6'$

$A r^{\frac{2}{3}} = 0.877$ (SEE CALCULATION, TOP of PAGE 6, THIS SUBMITTAL)

CHECK 10-YEAR VELOCITY

$Q_{10} = 0.657\,(17.50) = 11.50$ cfs

$$V = \frac{11.50}{0.33(6)} = 5.81 \frac{ft}{sec} > 3 \quad OK$$

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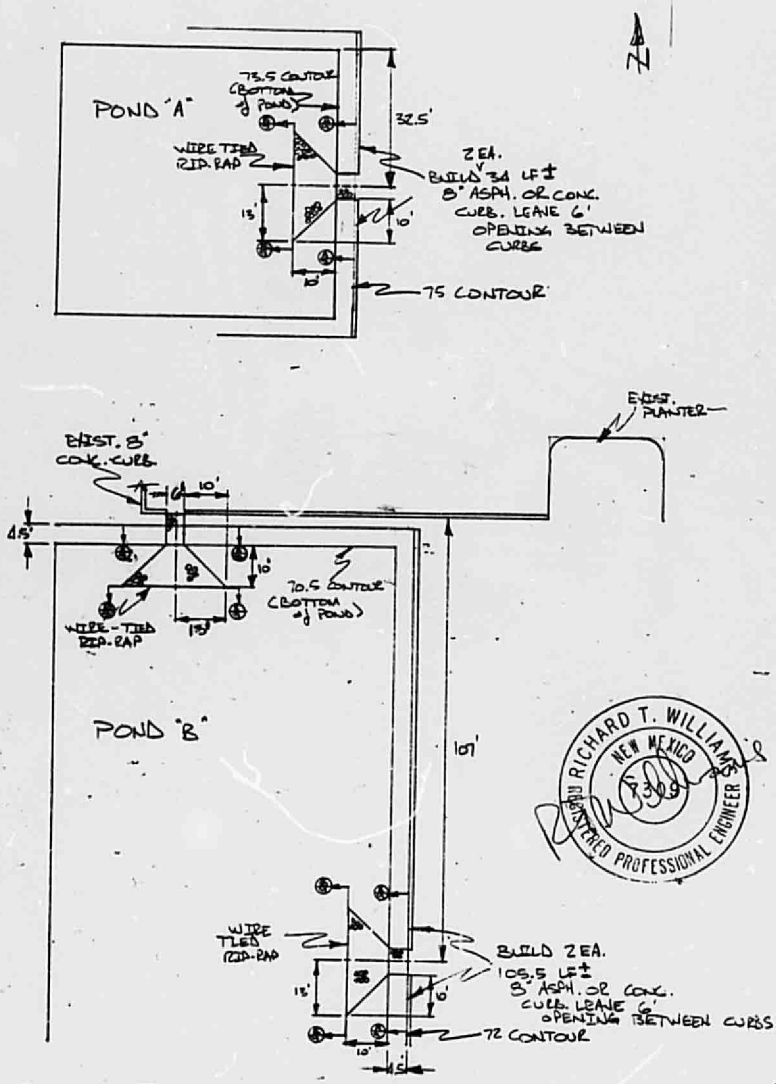
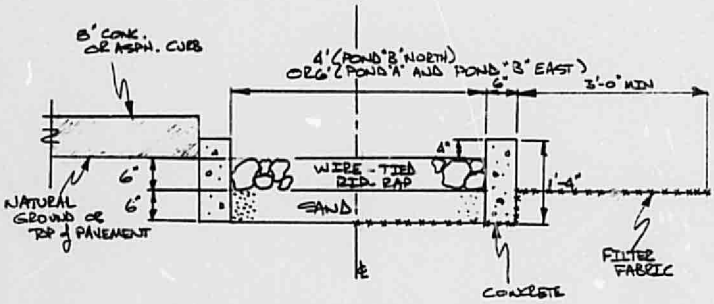
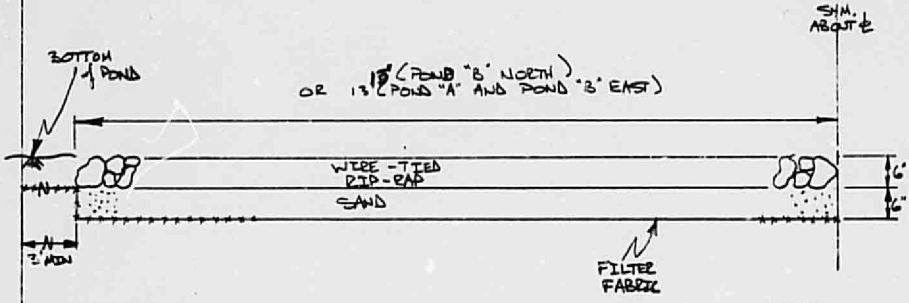


1 PLAN VIEW
C-1 | SD-1 SCALE 1" = 30'

SD-1



2 SECTION A-A
SD-1 | SD-2 SCALE: 1" = 2'



3 HALF-SECTION B-B
SD-1 | SD-2 SCALE: 1" = 2'

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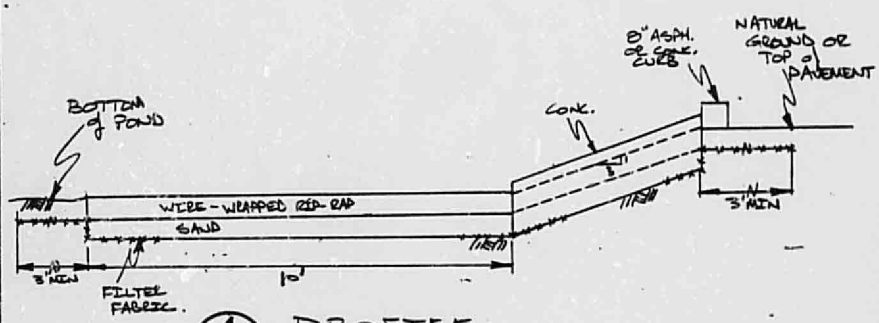
SD-2



4 PROFILE
C-1 | 10
SCALE: 1" = 30'

NOTES:

1. RIP-RAP TO BE 6" MAX. DIAMETER
2. SAND TO BE $-\frac{1}{4}$", NON-PLASTIC
3. NATURAL GROUND TO BE COMPACTED TO MIN. 90% MDD AS TESTED BY ASTM D-1557
4. CONCRETE - MIN 28-DAY COMPRESSIVE STRENGTH 3000 PSI
5. FILTER FABRIC TO BE HYPALON OR EQUIVALENT. MIN. 3' OVERLAP BETWEEN SHEETS.
6. ARCHITECT MAY SUBSTITUTE FLUSH-GROUTED RIP-RAP for WIRE WRAPPED RIP-RAP.

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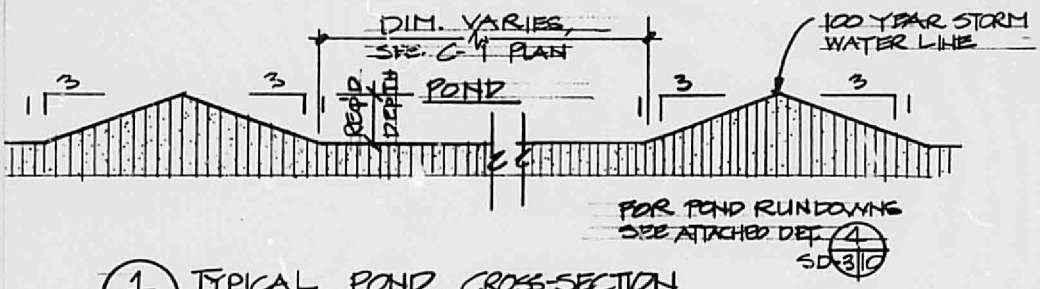
SD-3

LEGEND FOR SITE DRAINAGE

+ 82.5	NEW SPOT ELEVATIONS
82	PROPOSED CONTOUR LINES
12	PROPERTY LINE
	EXISTING CURB & GUTTER
	EXISTING CONC. SIDEWALK
80	EXISTING CONTOUR LINES
	NEW SWALE LINES
83.75±	EXISTING SPOT ELEVATIONS
	PROJECT CONST. BOUNDRY
	DIMENSION LINES

STATE OF NEW MEXICO
A. MIGUEL TRUJILLO
No. 1473
REGISTERED ARCHITECT



FOR POND RUNDOWNS
SEE ATTACHED DET. 4/SD-3/10

1 TYPICAL POND CROSS-SECTION
C-1/SD-4 SCALE: NONE

SUPPLEMENTARY DRAWING SD-4

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

DESCRIPTION OF WORK:

The extent of earthwork is shown on drawings.

Preparation of subgrade for building slabs, walks, and pavements is included as part of this work.

Select fill course for support of building slabs is included as part of this work.

Backfilling of trenches within building lines is included as part of this work.

QUALITY ASSURANCE:

Codes and Standards: Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.

Testing and Inspection Service: Employ, at Contractor's expense, testing laboratory to perform soil testing and inspection service for quality control testing during earthwork operations.

SUBMITTALS:

Test Reports-Excavating: Submit following reports directly to Architect from the testing services, with copy to Contractor.

Test reports on borrow material.

Verification of each footing subgrade.

Field density test reports.

One optimum moisture-maximum density curve for each type of soil encountered.

Report of actual unconfined compressive strength and/or results of bearing tests of each strata tested.

JOB CONDITIONS:

Site Information: Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that Owner will not be responsible for interpretations or conclusions drawn therefrom by Contractor. Data are made available for convenience of Contractor.

Additional test borings and other exploratory operations may be made by Contractor at no cost to Owner.

Existing Utilities: Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of protection during earthwork operations.

Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfacion of utility owner.

Do not interrupt existing utilities serving facilities occupied and used by Owner or others, except when permitted in writing by Architect and then only after acceptable temporary utility services have been provided.

Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shut-off of services if lines are active.

Use of Explosives:

The use of explosives is not permitted.

Protection of Persons and Property: Barricade open excavations occuring as part of this work and post with warning lights.

Operate warning lights as recommended by authorities having jurisdiction.

Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

PART 2 - PRODUCTS

SOIL MATERIALS:

Definitions:

Satisfactory soil materials shall conform to the following:

Gradation: (Cumulative % Passing)

Screen Size	% Passing
1"	100
3/4"	90 to 100
1/4"	45 to 80
No. 200 mesh sieve	0 to 45

Plasticity Index: 12 maximum (general fill)
6 maximum (select fill under slabs and walks)

Unsatisfactory soil materials are those not previously defined as satisfactory.

Subbase Material: Naturally or artifically graded mixture of natural or crushed gravel, crushed stone, crushed slag, pit-run or crushed sand.

Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than 2" in any dimension, debris, waste, frozen materials, vegetable and other deleterious matter. See Drawings.

PART 3 - EXECUTION

EXCAVATION:

Excavation consists of removal and disposal of material encountered when establishing required finish grade elevations.

Earth excavation includes removal and disposal of pavements and other obstructions visible on ground surface, underground structures and utilities indicated to be demolished and removed, material of any classification indicated in data on subsurface conditions, and other materials encountered that are not classified as rock excavation or unauthorized excavation.

Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be at Contractor's expense.

Under footings, foundation bases, or retaining walls, fill unauthorized excavation by extending indicated bottom elevation of footing or base to excavation bottom, without altering required top elevation. Lean concrete fill may be used to bring elevations to proper position, when acceptable to Architect.

Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Architect.

Additional Excavation: When excavation has reached required subgrade elevations, notify Architect who will make an inspection of conditions.

If unsuitable bearing materials are encountered at required subgrade elevations, carry excavation deeper and replace excavated material as directed by Architect.

Removal of unsuitable material and its replacement as directed will be paid on basis of contract conditions relative to changes in work.

Stability of Excavations: Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated.

Maintain sides and slopes of excavations in safe condition until completion of backfilling.

Shoring and Bracing: Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross-braces, in good serviceable condition.

Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction.

Maintain shoring and bracing in excavations regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.

Dewatering: Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.

Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

Convey water removed from excavations and rain water to collecting or run-off areas. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.

Material Storage: Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage.

Locate and retain soil materials away from edge of excavations.

Dispose of excess soil material and waste materials as herein specified.

Excavation for Structures: Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10', and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction, and for inspection.

In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid based to receive other work.

Excavation for Pavements: Cut surface under pavements to comply with cross-sections, elevations and grades as shown.

Excavation for Trenches: Dig trenches to the uniform width required for particular item to be installed, sufficiently wide to provide ample working room.

Excavate trenches to depth indicated or required. Carry depth of trenches for piping to establish indicated flow lines and invert elevations. Beyond building perimeter, keep bottoms of trenches sufficiently below finish grade to avoid freeze-ups.

Where rock is encountered, carry excavation 6" below required elevation and backfill with a 6" layer of crushed stone or gravel prior to installation of pipe.

Grade bottoms of trenches as indicated, notching under pipe bells to provide solid bearing for entire body of pipe.

Backfill trenches with concrete where trench excavations pass within 18" of column or wall footings and which are carried below bottom of such footings, or which pass under wall footings. Place concrete to level of bottom of adjacent footing.

Concrete is specified in Division 3.

Do not backfill trenches until tests and inspections have been made and backfilling authorized by Architect. Use care in backfilling to avoid damage or displacement of pipe system.

Cold Weather Protection: Protect excavation bottoms against freezing when atmospheric temperature is less than 35° F. (1°C).

COMPACTION:

General: Control soil compaction during construction providing minimum percentage of density specified for each area classification.

Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum dry density for soils which exhibit a well-defined moisture density relationship determined in

accordance with ASTM D1557; and not less than the following percentages of relative density, determined in accordance with ASTM D2049, for soils which will not exhibit a well-defined moisture-density relationship.

Berms and Builtup Ponds on site: 90% Modified Proctor.

Building Slabs and Steps: 90% Modified Proctor.

Walkways: Compact top 6" of subgrade and each layer of backfill or fill material at 95% maximum dry density or 90% relatively dry density.

Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations.

Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.

Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing until moisture content is reduced to a satisfactory value.

BACKFILL AND FILL:

General: Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.

In excavations, use satisfactory soils.

Under walks, use same material, or satisfactory excavated or borrow material, or combination of both.

Under steps, use subbase material.

Under building slabs, see drawings.

Backfill excavations as promptly as work permits, but not until completion of the following:

Acceptance of construction below finish grade including, where applicable, dampproofing, waterproofing, and perimeter insulation.

Inspection, testing, approval, and recording locations of underground utilities.

Removal of concrete formwork.

Removal of trash and debris.

Permanent or temporary horizontal bracing is in place on horizontally supported walls.

Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip, or break-up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.

When existing ground surface has a density less than that specified under "Compaction" for particular area classification, break up ground surface, pulverize, moisture-condition to optimum moisture content, and compact to required depth and percentage of maximum density.

Placement and Compaction: Place backfill and fill materials in layers not more than 8" in loose depth for material compacted by heavy compaction equipment, and not more than 4" in loose depth for material compacted by hand operated tampers.

Before compaction, moisten or aerate each layer as necessary to provid- optimum moisture content. Compact each layer to 90 percent of maximum dry density or relative dry density or as per the drawings. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

Place backfill and fill materials evenly adjacent to structures, to required elevations. Take care to prevent wedging action of backfill against structures by carrying material uniformly around structure to approximately same elevation in each lift.

GRADING:

General: Uniformly grade areas within limits of grading under this Section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from structures and to prevent ponding.

Finish surfaces free from irregular surface changes, and as follows:

Lawn or Unpaved Areas: Finish area to receive topsoil to within not more than 0.10' above or below required subgrade elevations.

Walks: Shape surface of area under walks to line, grade and cross-section, with finish surface not more than 0.10' above or below required subgrade elevations.

Grading Surface of Fill Under Building Slabs: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/2" when tested with a 10' straightedge.

Compaction: See drawings.

BUILDING SLAB SELECT FILL:

General: Consists of placement of select fill material, in layers of indicated thickness, over subgrade surface to support concrete building slabs.

Placing: Place select fill material on prepared subgrade in layers of uniform thickness, conforming to indicated cross-section and thickness. Maintain optimum moisture content for compacting material during placement operations.

When a compacted select fill is shown to be 6" thick or less, place material in a single layer. When shown to be more than 6" thick, place material in equal layers, except no single layer more than 6" or less than 3" in thickness when compacted.

FIELD QUALITY CONTROL:

Quality Control Testing During Construction: Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed.

See drawings for rates of inspection and testing.

Foundation Wall Backfill: Take at least 2 field density tests, at locations and elevations as directed.

If in opinion of Architect, based on testing service reports and inspection, subgrade or fills which have been placed are below specified density, provide additional compaction and testing at no additional expense.

MAINTENANCE:

Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.

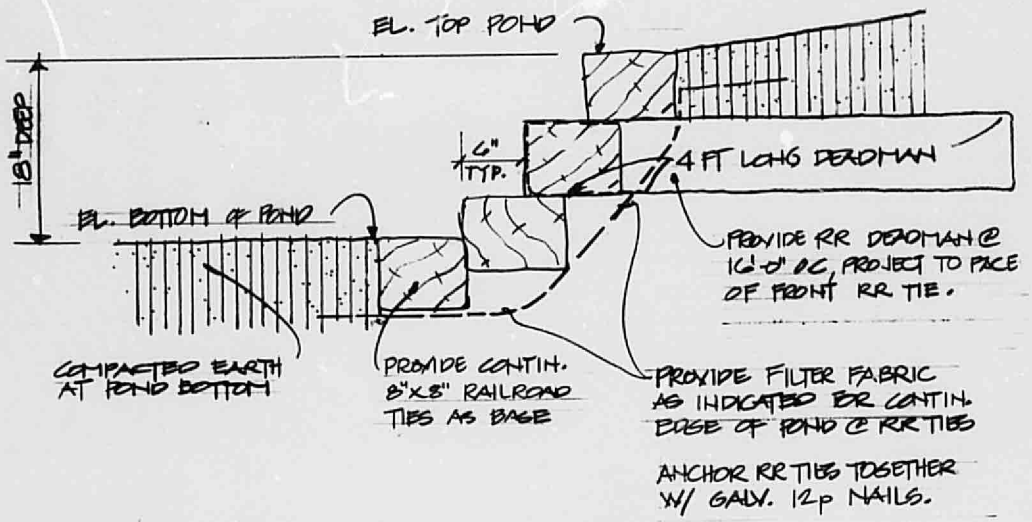
Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, re-shape, and compact to required density prior to further construction.

DISPOSAL OF EXCESS AND WASTE MATERIALS:

Removal to Designated Areas on Owner's Property: Transport acceptable excess excavated material to designated soil storage areas on Owner's property. Stockpile soil or spread as directed by Architect.

Removal from Owner's Property: Remove waste materials, including unacceptable excavated material, trash and debris, and dispose of it off Owner's property.

END OF SECTION 02200



1 DETAIL THRU POND RUNDOWN
C-1 SD-1 RAILROAD TIES SCALE: 1" = 1'-0"

MIGUEL TRUJILLO & ASSOCIATES ARCHITECTS · PLANNERS 230 TRUMAN NE ALBUQUERQUE NM 87108 PHONE (505) 265-8329	STATE OF NEW MEXICO A. MIGUEL TRUJILLO No. 1473 REGISTERED ARCHITECT	DATE MAY 1983 DRAWN M.T. CHECKED M.T.
PROJECT CHURCH OF THE RISEN SAVIOR OWNER ARCHDIOCESE OF SANTA FE TITLE POND RUNDOWN		SHEET SD-1 OF 1