CITY OF ALBUQUERQUE

March 27, 2015

Richard Dourte, PE
RHD Engineering, LLC
10101 Montgomery Blvd., NE
Albuquerque, NM 87120

RE: **First Christian Church, 10101 Montgomery Blvd.**
Grading and Drainage Plan
Engineer's Stamp Dated 3-09-15 (File: F21-D080)

Dear Mr. Dourte:

Based upon the information provided in your submittal received 3-9-15, the above referenced plan cannot be approved for Building Permit and for SO-19 until the following comments are addressed:

1) Show all new improvements that are contributing to the 0.13-acre increase in impervious area on the plan including the patio. Show elevation information for these new improvements.

2) For each of the proposed pipe runs, inlets, and sidewalk culverts, show capacity calculations. Label slope and flow that each pipe run is conveying.

3) The sidewalk culvert invert elevations and the neoplast area drain invert elevations appear to be 10 feet off. The culvert invert is also higher than the 12" HDPE pipe invert. Double-check these elevations, and revise as needed.

4) Label the existing curb and the existing sidewalk width. Call out COA Standard Dwg. 2236 for construction of the culverts. To prevent drop-off situation from sidewalk, extend sidewalk culvert 2 feet behind back of sidewalk. Show transition from 12" pipe to 2 sidewalk culverts.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

If you have any questions, you can contact me at 924-3924.

Sincerely,

Jeanne Wolfenbarger, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf Addressee via Email

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: First Christian Church Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Tract A-1 First Church Addition

City Address: 10101 Montgomery blvd NE, Alb. NM

Engineering Firm: RHD Engineering, LLC Contact: Richard Dourte

Address: 4305 Purple Sage Ave. NW, Albuquerque, NM, 87120

Phone#: 505-288-1621 Fax#: _____ E-mail: rhdengineering@outlook.com

Owner: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Architect: Simons Architecture PC Contact: Joe Simons

Address: PO box 67408, Alb., NM 87193

Phone#: 505-480-4796 Fax#: _____ E-mail: joe@simonsarchitecture.com

Surveyor: Construction Surveys Technologies, Inc Contact: John Gallegos

Address: _____

Phone#: 505-917-8921 Fax#: _____ E-mail: nmsurveyor@gmail.com

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ___ DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- ___ DRAINAGE PLAN RESUBMITTAL
- ___ CONCEPTUAL G & D PLAN
- ___ GRADING PLAN
- ___ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ___ ENGINEER'S CERT (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEER'S CERT (TCL)
- ___ ENGINEER'S CERT (DRB SITE PLAN)
- ___ ENGINEER'S CERT (ESC)
- ___ SO-19
- ___ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ___ SIA/FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D APPROVAL
- ___ S. DEV. POR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ CERTIFICATE OF OCCUPANCY (PERM)
- ___ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ___ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- ___ GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ GRADING CERTIFICATION
- X SO-19 APPROVAL
- ___ ESC PERMIT APPROVAL
- ___ ESC CERT. ACCEPTANCE
- ___ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED: X Yes ___ No ___ Copy Provided

DATE SUBMITTED: 3-9-15 By: Richard Dourte

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

Drainage Report

For

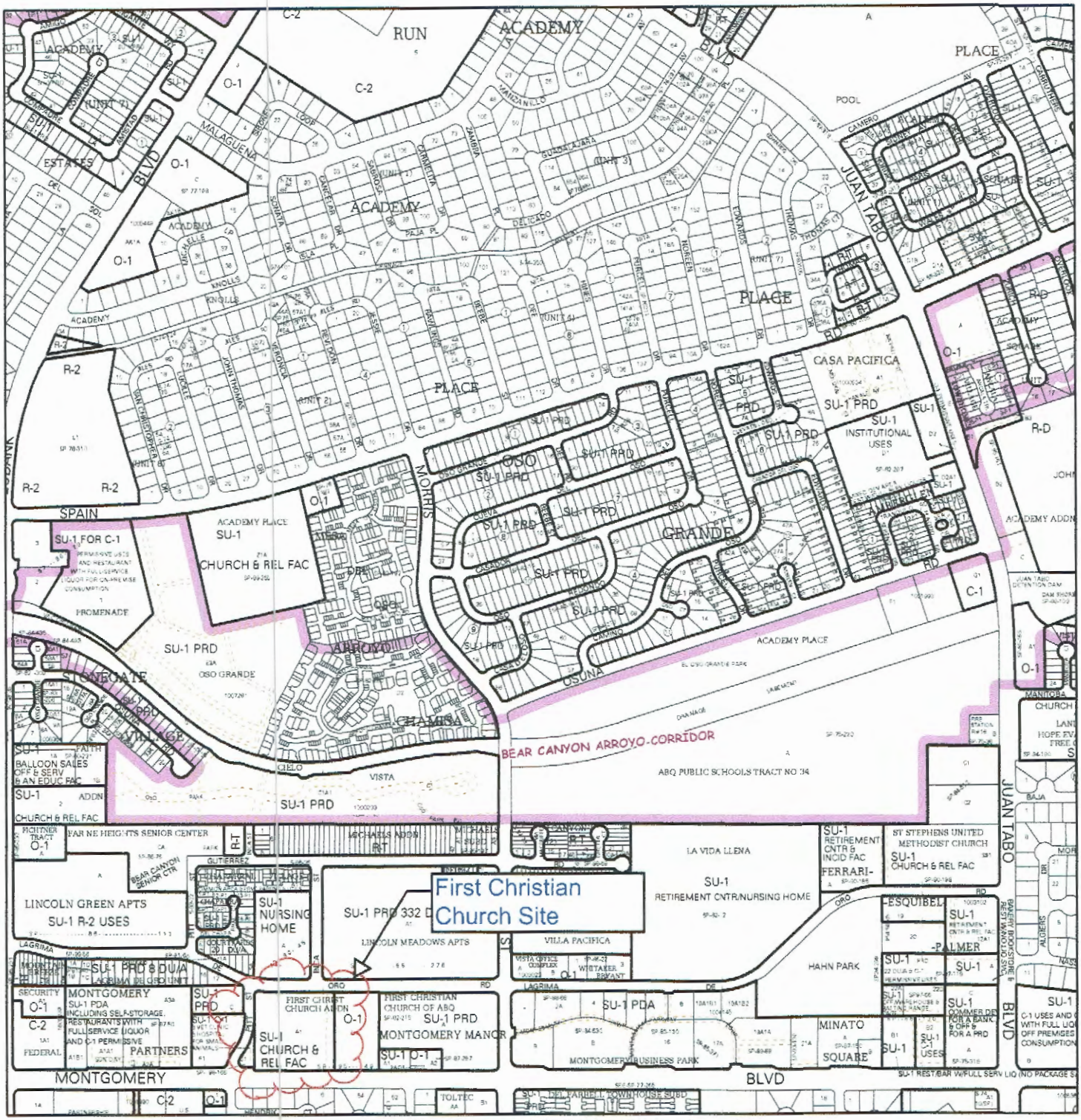
First Christian Church
10101 Montgomery Blvd NE
Albuquerque, New Mexico

Prepared by

RHD Engineering, LLC
Albuquerque, New Mexico

March 9, 2015

Table of Contents



For more current information and details visit: http://www.cabq.gov/gis

Albuquerque Geographic Information System

Map amended through: 9/2/2014

Zone Atlas Page:

F-21-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

Purpose:

The purpose of this drainage report is to provide a drainage management plan for the proposed changes to the First Christian Church. The site is approximately 4.2 acres in size. The proposed changes include increasing an existing outdoor patio enclosed by a wall along (new wall to be constructed) with a new playground that is also to be enclosed by a new wall. This drainage report and plan is prepared utilizing the City of Albuquerque Development Process Manual.

Introduction:

After consultation with and searching the records within the Hydrology Section of the Development Review Services Division of the Planning Department, no drainage file was found. The site, per the records in the Building Safety Division, was originally developed around 1972 and an addition was added in approximately 1979.

The proposed new improvements include a large screen wall and stage with exterior meeting area along with a new playground. The landscaping is also proposed to be improved.

FEMA Firm map 35001C0114G identifies that this site is located in zone x. Please refer to the drainage plan.

Existing Drainage Conditions:

The parking lot, the north sloping building roof for this site and a small landscaped area on the west side of the building (drainage basin A) drain to the southwest, then flows into Pitt street located west of this site.

The entrance to this site that directly accesses Montgomery (basin B) drains and free discharges directly into Montgomery Blvd. There are off-site flows from the east that enter this basin.

A portion of the building's roof and eastern section of landscaping (basin C) drain drains and free discharges into Montgomery Blvd. The remainder of this site (drainage basin D) drains to the south west and free discharges into Montgomery Blvd.

Proposed Conditions:

The proposed conditions are for the drainage from basins A, B and C remain as they are today. There is no proposed changes for these areas.

The proposed condition for the drainage from basin D is to route the flows through the pond. This pond with have a controlled discharge via the outlet for this pond.

The required first flush volume of stormwater generated by the new impervious areas (the stage and the new concrete patio) will be retained within the bottom 2 feet of the pond.

Summary:

This site will discharge the stormwater flows in the same manner as it is today.

For Basin D

The peak flows will increase from 3.71 cfs to 3.91 cfs or by 0.20 cfs for the 100 yr 6 hr. event.

The excess precipitation will increase from 5,707 cf to 6,276 cf or by 569 cf for the 100 yr 6 hr event. However the first flush pond will retain 3664 cf, thus the overall excess precipitation will be reduced to 2,612 cf.

The peak The City of Albuquerque's first flush requirements will be adhered to for the construction of the proposed improvements. The first flush for the proposed improvements is 164 cf and the first flush pond (bottom 2 feet of the total pond) is 3664 cf, thus the first flush pond has a much greater capacity than what is needed.

APPENDIX A

Drainage Calculations for Basin D

Zone 4 (100yr, 6hr)

Land Treatment	Peak discharge	Excess Precipitation
Type A -	2.20 cfs/ac	0.80 inches
Type B -	2.92 cfs/ac	1.08 inches
Type C -	3.73 cfs/ac	1.46 inches
Type D -	5.25 cfs/ac	2.64 inches

Existing Conditions for Basin D

Roof (type D)= 8962 sf = 0.21 ac

Area other than Roof (type C)= 30,700 sf = 0.70 ac

Peak Flow generated

0.21 ac x 5.25 cfs = 1.10 cfs
0.70 ac x 3.73 cfs = 2.61 cfs
Total = 3.71 cfs

Excess Precipitation

8962 sf x 2.64 in/12 = 1,972 cf
30,700 sf x 1.46 in/12 = 3,735 cf
Total = 5,707 cf

Proposed Conditions for Basin D

Roof (type D)= 8962 sf = 0.21 ac

New concrete patio and stage (type D)= 5,780 sf = 0.13 ac

Area other than roof, new concrete patio or stage –
land treatment (type C) = 24,920 sf = 0.57 ac

Peak Flow generated

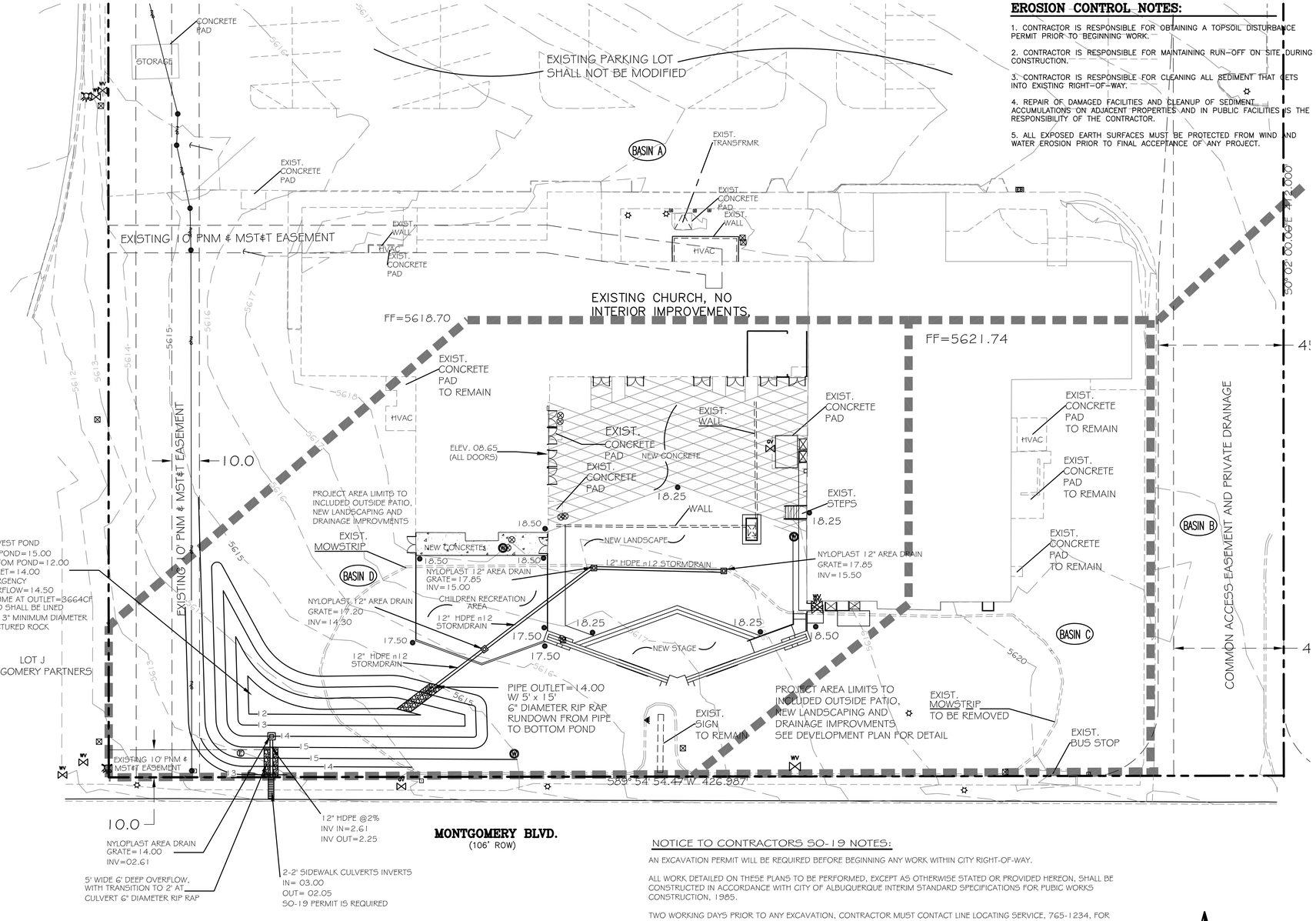
0.21 ac x 5.25 cfs = 1.10 cfs
0.13 ac x 5.25 cfs = 0.68 cfs
0.57 ac x 3.73 cfs = 2.13 cfs
Total = 3.91 cfs

Excess Precipitation

8,962 sf x 2.64 in/12 = 1,972 cf
5.780 sf x 2.64in/12 = 1,272 cf
24,920 sf x 1.46 in/12 = 3,032 cf
Total = 6,276 cf

First flush requirements (for new impervious area)

5,780 sf x 0.34 inches/12 = 164 cf.



EROSION CONTROL NOTES:

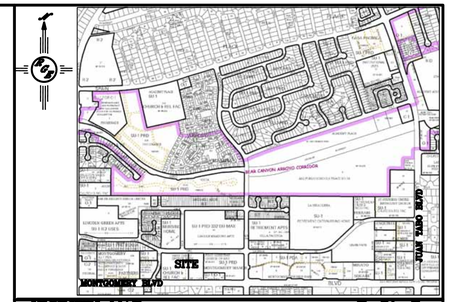
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.

3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.

4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



VICINITY MAP: F-21-Z

FIRM MAP: 35001C0144G

LEGAL DESCRIPTION:

TRACT A-1, FIRST CHURCH ADDITION
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.

LEGEND

XXXX ●	PROPOSED SPOT ELEVATION
5601	EXISTING CONTOUR
5600	EXISTING INDEX CONTOUR
5601	PROPOSED CONTOUR
5600	PROPOSED INDEX CONTOUR
	LOT LINE
	CENTERLINE
	RIGHT-OF-WAY
	EXTENDED STEM WALL SEE ARCH PLANS FOR DETAILS
	PROPOSED ROCK FACE WALL
	EXISTING CURB AND GUTTER
	PROPOSED EDGE OF CONCRETE
	PROPOSED FLOWLINE
	EXISITNG WALL
	PROPOSED BASIN BOUNDARY
BASIN A	PROPOSED BASIN ID

CAUTION:
EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.

NOTICE TO CONTRACTORS 50-19 NOTES:

AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.

ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBIC WORKS CONSTRUCTION, 1985.

TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.

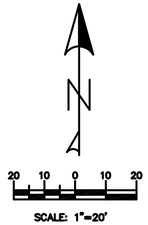
PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.

MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVAL	NAME:	DATE:
INSPECTOR		



SCALE: 1"=20'

ENGINEER'S SEAL
RICHARD H. DOURTE NEW MEXICO 10854 LICENSED PROFESSIONAL ENGINEER

RICHARD H. DOURTE P.E. # 10854

FIRST CHRISTAIN CHURCH

GRADING & DRAINAGE PLAN CITY OF ALBUQUERQUE

DRAWN BY: DEM
DATE: 3-2015
FIRST CHURCH_GNDLNDS
SHEET #: 4 of 6
JOB #: XXXXX