

VICINITY MAP - E-12

NTS

LEGEND

- EXISTING CONTOUR LINE
- NEW CONTOUR LINE
- FF = 4983.0 FINISH FLOOR ELEVATION
- 36.7 ◆ SPOT ELEVATION

DRAINAGE ANALYSIS

LEGAL: Tract A-1, Albuquerque Christian Children's Home, Bernalillo County, NM

AREA: 255,706 SF (5.87 acres) PROJECT LIMITS: 28,320 SF (0.65 acres)

BENCHMARK: City of Albuquerque Station '10_E12' being an aluminum disc
ELEV= 5009.741 (NAVD 1988)

SURVEYOR: Precision Surveys, Inc. dated July, 2014

PRECIPITATION ZONE: 1

FLOOD HAZARD: From FEMA Map 35001C0118G (dated 9/26/08) this site is identified as being within Zone 'X' which is located outside the 0.2% chance annual floodplain.

EXISTING CONDITIONS: The existing site is developed with 5 residences, several utility buildings, and a garage building. It slopes from the west down to the east at 1-2%. Existing access roads and parking spaces are gravel surfaced.

PROPOSED IMPROVEMENTS: The proposed improvements include two 5,006 SF 1-story residential buildings with associated gravel parking, concrete sidewalks, and landscaping.

FIRST FLUSH: $Q=(0.44-0.10)(12,265)/12= 348$ CF
This volume will be provided in the retention pond located at the SE corner of the site.

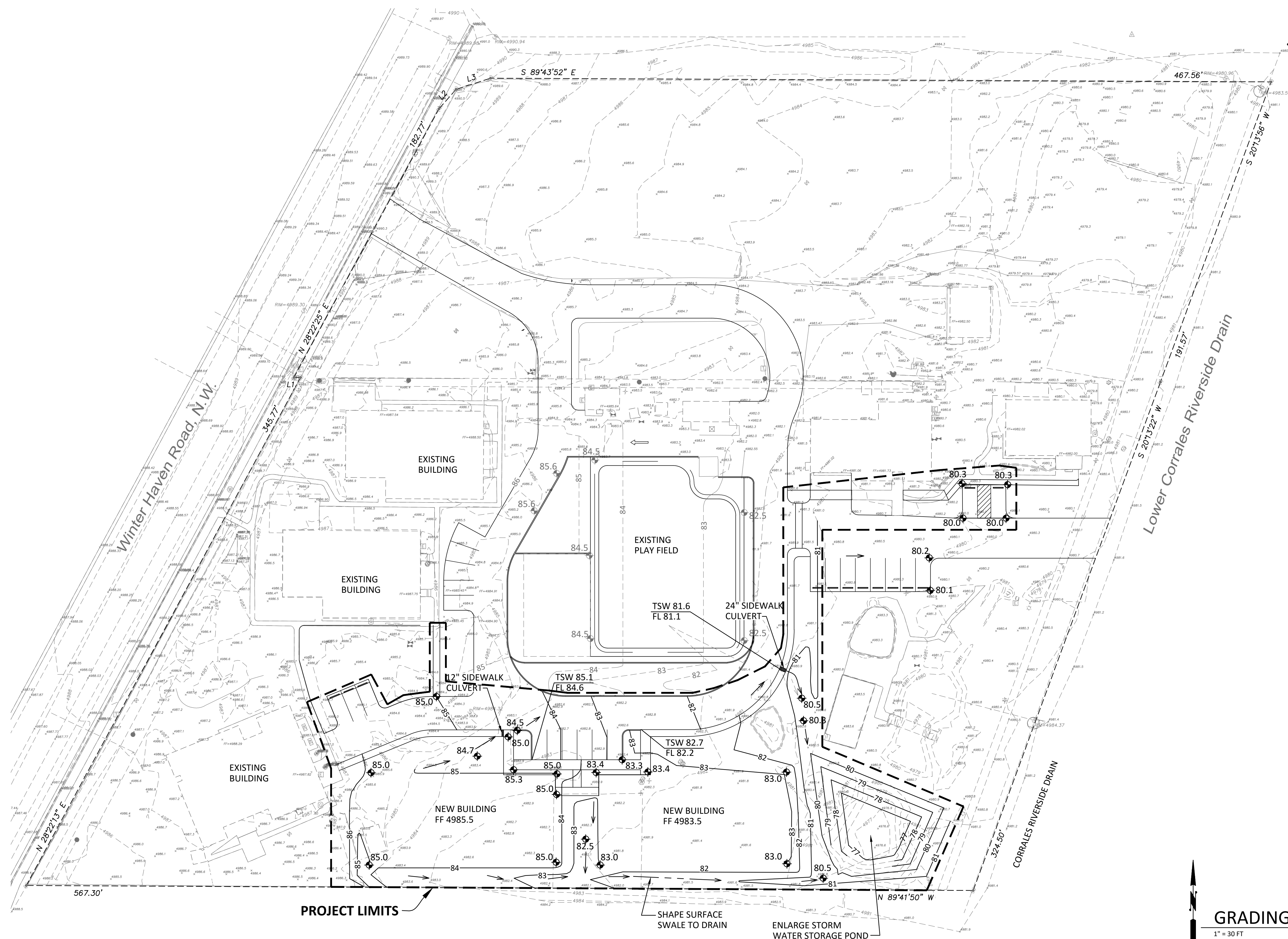
DRAINAGE APPROACH: The drainage plan will direct flows to the east side of the lot where a retention pond is proposed to be enlarged. Developed runoff will discharge to the east of the new buildings and be retained onsite in the enlarged pond as shown.

Area draining to the retention pond (land treatment A) is 1.53 acre
Existing land treatment: 4% A, 35% B, 48% C, & 13% D
 $Q=(0.06)(1.29)+(0.54)(2.03)+(0.73)(2.87)+(0.20)(4.37)=4.1$ CFS

Proposed land treatment: 6% A, 26% B, 36% C & 32% D
 $Q=(0.09)(1.29)+(0.40)(2.03)+(0.55)(2.87)+(0.49)(4.37)=4.6$ CFS
 $V=(4100)(.037)+(17370)(.056)+(24050)(.083)+(21280)(.164)=6,611$ CF
Required Pond $V=9,460$ CF (@ WSEL=4980.6)

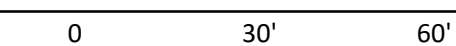
Required 100-YR 10-DAY $V=(6,611)+(21,280)(.1225)=9,218$ CF (<9,460 OK)

The proposed improvements increase site runoff, but with the increased onsite retention volume there won't be any impact to downstream drainage facilities.



GRADING & DRAINAGE PLAN

1" = 30 FT



CHERRY/SEE/REAMES ARCHITECTS, PC
220 gold avenue sw albuquerque, nm 87102
505 - 842 - 1278 fax 505 - 766 - 9269

SCOTT M. McGEHEE
NEW MEXICO
10519
PROFESSIONAL ENGINEER
6/16/16

Site Development Plan
Albuquerque Christian Children's Home
5700 Winterhaven Road NW
Albuquerque, NM 87120

MARK	DATE	DESCRIPTION

MANAGEMENT BLOCK

PROJECT NO:	
CAD DWG FILE:	MG1408_C101.DWG
DRAWN BY:	CB
CHECKED BY:	SMM
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TITLE OF SHEET
GRADING and DRAINAGE PLAN

SHEET NUMBER
C101
SHEET 3 OF