

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

July 1, 2024

Mike Walla, P.E.
Walla Engineering
6501 Americas Pwky NE, Suite 301
Albuquerque, NM 87110

**RE: Christine Duncan Charter School
Conceptual Grading & Drainage Plan
Engineer's Stamp Date: 06/27/24
Hydrology File: H11D026A**

Dear Mr. Walla:

Based upon the information provided in your submittal received 05/17/2024, the Conceptual Grading & Drainage Plans are preliminary approved for action by the Development Facilitation Team (DFT) on Site Plan for Building Permit.

PRIOR TO BUILDING PERMIT:

1. Please submit a more detailed Grading & Drainage Plan to Hydrology for review and approval. This digital (.pdf) is emailed to PLNDRS@cabq.gov along with the Drainage Transportation Information Sheet.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (DTIS)

Project Title: _____ Hydrology File # _____

Legal Description: _____

City Address, UPC, OR Parcel: _____

Applicant/Agent: _____ Contact: _____

Address: _____ Phone: _____

Email: _____

Applicant/Owner: _____ Contact: _____

Address: _____ Phone: _____

Email: _____

TYPE OF DEVELOPMENT: Plat (# of lots) _____ Single Family Home
All other Developments

RE-SUBMITTAL: YES NO

DEPARTMENT: TRANSPORTATION HYDROLOGY/DRAINAGE

Check all that apply under Both the Type of Submittal and the Type of Approval Sought:

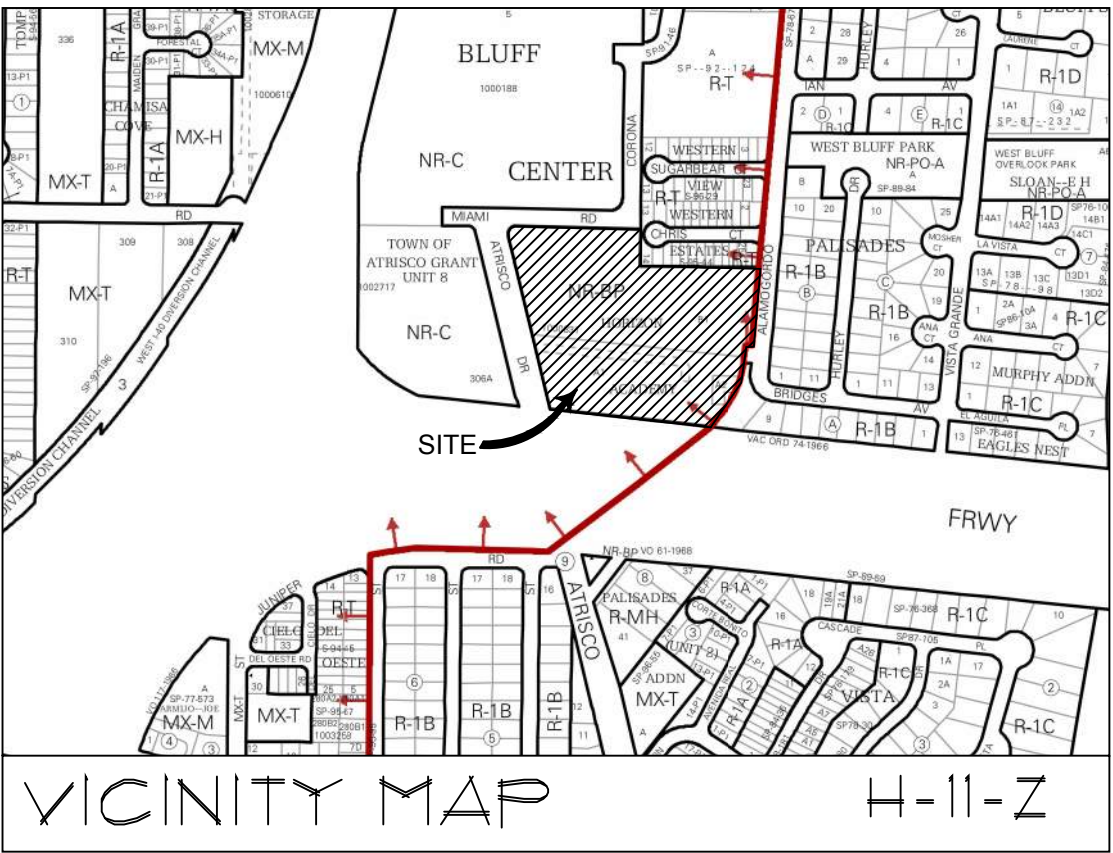
TYPE OF SUBMITTAL:

Engineering / Architect Certification
Conceptual Grading & Drainage Plan
Grading & Drainage Plan, and/or Drainage Report
Drainage Report (Work Order)
Drainage Master Plan
Conditional Letter of Map Revision (CLOMR)
Letter of Map Revision (LOMR)
Floodplain Development Permit
Traffic Circulation Layout (TCL) – Administrative
Traffic Circulation Layout (TCL) – DFT Approval
Traffic Impact Study (TIS)
Street Light Layout
OTHER (SPECIFY) _____

TYPE OF APPROVAL SOUGHT:

Pad Certification
Building Permit
Grading Permit
Paving Permit
SO-19 Permit
Foundation Permit
Certificate of Occupancy - Temp Perm
Preliminary / Final Plat
Site Plan for Building Permit - DFT
Work Order (DRC)
Release of Financial Guarantee (ROFG)
CLOMR / LOMR
Conceptual TCL - DFT
OTHER (SPECIFY) _____

DATE SUBMITTED: _____



LEGAL DESCRIPTION

TRACTS "A-1" , "A-2" & "B-1" HORIZON ACADEMY SUBDIVISION WITHIN TOWN OF ATRISCO GRANT PROJECTED SECTION 10, T. 10 N., R. 2 E., N.M.P.M. ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

BASIS OF ELEVATIONS

ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION NO. "16+141" HAVING AN ELEVATION OF 51022.50, NAVD 1988

SURVEY NOTE

TOPOGRAPHIC SURVEY IS AND AS-BUILT OF CURRENT IMPROVEMENTS PROVIDED BY HARRIS SURVEYING, INC. DATED FEBRUARY 2024

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED
DATE: 07/01/24
BY: *Rosalee C. Bruneau*
HydroTrans # H11D026A

THESE PLANS AND/OR REPORT ARE CONCEPTUAL ONLY. MORE INFORMATION MAY BE NEEDED IN THEM AND SUBMITTED TO HYDROLOGY FOR BUILDING PERMIT APPROVAL.

Grading & Drainage Design Narrative

Subject Property: Christine Duncan Charter School, 1900 Atrisco Drive NW, Albuquerque, NM

Area of Site: 2.283 Acre

Reference: City of Albuquerque Development Process Manual (DPM)

Project Description: The development includes the installation of 4 new portable classroom buildings, two storage Connex structures a children's play area and some asphalt paving on the previously unimproved east border of an existing school campus. The work also includes the excavation of a large portion of the area east of the campus to create a play field which will be depressed to create a storm runoff ponding area.

Predeveloped Conditions: The east end of the school property was previously unimproved with a slight prevailing surface slope directing runoff from east to west, toward the improved portion of the school campus. There were no structures on this east area of the school property. Surface conditions were estimated to be land treatment A since it was unimproved with minimal slope.

Developed Runoff: The new portable buildings and paved areas were constructed to direct runoff back to the east so that runoff would flow to the newly constructed pond but approximately 25% of the runoff from this developed building and paving area will flow west thru the rest of the campus. However, this volume is still considerably less than the original site runoff affecting the school campus in the predevelopment condition. The new ponding area created with this development is substantially larger and with more storage capacity than what is required for this development and will significantly reduce the runoff from the school property to downstream public facilities.

Offsite Impact: The nature of the new grading and the configuration of the new pond assures that no adjacent properties will be adversely affected regarding storm runoff from the subject site.

Hydrology Calculations

Christine Duncan Charter School – Site Area = 2.283 acres

Design Criteria: City of Albuquerque Development Process Manual – June 2020

Chapter 6 Drainage, Flood Control, and Erosion Control

Procedure for 40-Acre and Smaller Basins

Precipitation Zone 1 per Section 6-2(A)(1), Table 6.2.7 and Figure 6.2.3

Excess Precipitation, E, per Table 6.2.13

Peak Discharge for Small Watersheds: per Table 6.2.14

PRE-DEVELOPED CONDITIONS – Project Site - Assumed

Land Treatment	Area (ac)	Excess Precip. "E" (in)	Peak Q (cfs/ac)	Coefficient C
A	2.283	0.55	1.54	0.34
B	0.000	0.73	2.16	0.47
C	0.000	0.95	2.87	0.63
D	0.000	2.24	4.12	0.90

Weighted E: 0.55 in

$V_{360} = 0.55 \times 2.283 \times 43560 / 12 = 4558 \text{ CF}$

Total Qp = $(2.283 \times 1.54) = 3.516 \text{ CFS}$

POST-DEVELOPED CONDITIONS – Project Site – Current

Land Treatment	Area (ac)	Excess Precip. "E" (in)	Peak Q (cfs/ac)	Coefficient C
A	0.000	0.55	1.54	0.34
B	1.772	0.73	2.16	0.47
C	0.138	0.95	2.87	0.63
D	0.373	2.24	4.12	0.90

Weighted E: $[(1.772 \times 0.73) + (0.138 \times 0.95) + (0.373 \times 2.24)] / 2.283 = 0.99 \text{ in}$

$V_{360} = 0.99 \times 2.283 \times 43560 / 12 = 8204 \text{ CF}$

Total Qp = $(0.373 \times 4.12) + (0.138 \times 2.87) + (1.772 \times 2.16) = 5.76 \text{ CFS}$

Rational Method Check: 12-minute Peak Intensity, I = 4.58 in/hr

$Q = CIA = (0.47 \times 4.58 \times 1.772) + (0.63 \times 4.58 \times 0.138) + (0.90 \times 4.58 \times 0.373) = 5.75 \text{ CFS OK}$

Storm Water Quality Volume, (SWQV)

Impervious Area = 0.373 ac

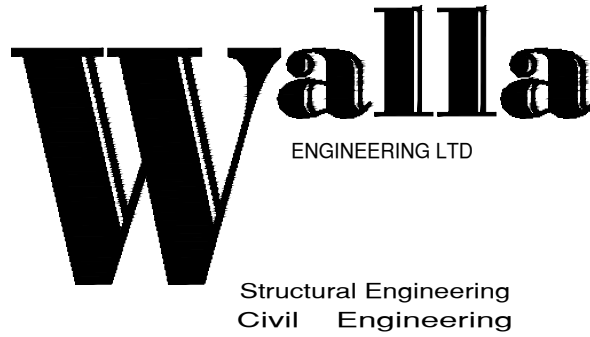
BMP Volume Required: $0.26' \times 0.373 \times 43560 / 12 = 352 \text{ CF}$

Storm Runoff Ponding Provided:

Contour	Area (SF)	Volume (CF)
5103	52750	
5102	45150	48950
5101	42000	43575
5100	38000	40000
5099	32040	35020
5098	29750	30895
5097	13200	21475
5096	5000	9100
Total Volume =		229,015 CF

LEGEND

- 5103 EXISTING CONTOUR
- FF FINISH FLOOR
- FL FLOW LINE
- TA TOP OF ASPHALT
- CB BACK OF CURB
- LIMIT OF NEW WORK
- FLOW DIRECTION ARROW
- SWALE
- /// ASPHALT PAVED SURFACE
- ▲ ROOF DRAIN/DOWNSPOUT



6501 Americas Parkway NE • Suite 301
Albuquerque • New Mexico • 87110
(505) 881-3008

CONTRACTOR



CHRISTINE DUNCAN
CHARTER SCHOOL

1900 ATRISCO DR. NW,
ALBUQUERQUE, NEW
MEXICO 87120

MARK DATE REVISION

PROJECT NO: D75-0224
CAD DWG FILE: C-101.DWG
DRAWN BY: LEK
CHECKED BY: MJW

SHEET TITLE

GRADING and
DRAINAGE PLAN

C-101