

Install 4' Wide
Curb Opening per
Grading Plan

Install 24" Wide
Sidewalk Culvert per
Grading Plan

1.38Ac/

					Desima	wa Cal	!	-				
				xrsung	Drama	ge care	ulation	S				
	This	stable is based	on the COA DP	M Chapte	r 6.2, Zone:	2		y				
BASIN	Area	Area	Land Treatment Percentages				Q(100)	Q(100)	WTE	V(100) ₃₈₀	V(100) ₁₄₄₀	V(100) _{10d}
	(SQ. FT)	(AC.)	A	В	С	D	(cfs/ac.)	(CFS)	(inches)	(CF)	(CF)	(CF)
Α	60160	1.38	0.0%	0.0%	78.0%	22.0%	3.48	4.81	1.35	6757	7198	8522
OS-1	10803	0.25	0.0%	0.0%	80.0%	10.0%	2.98	0.74	1.12	1005	1041	1149
TOTAL	70963	1.63						5.55		7762	8239	9670
			Propo	sed D	rainage	Calcul	ations					
			Ultimate Development Conditions Basin Data Tal									
		79 100 W 101 P.Y 1000		- TO	FA							

			Proposed Drainage Calculation				ations					
			Ultimate Development Conditions Basin Data Table									
	This table is based on the COA DPM Chapter 6.2, Zone: 2											
BASIN	Area	Area	Land Treatment Percentages			Q(100)	Q(100)	WTE	V(100) ₃₈₀	V(100) ₁₄₄₀	V(100) ₁	
	(SQ. FT)	(AC.)	Α	В	С	D	(cfs/ac.)	(CFS)	(inches)	(CF)	(CF)	(CF)
Α	60160	1.38	0.0%	0.0%	26.0%	74.0%	4.29	5.93	1.86	9338	10822	1527
OS-1	10803	0.25	0.0%	0.0%	80.0%	10.0%	2.98	0.74	1.12	1005	1041	1149
TOTAL	70963	1.63						6.67		10343	11862	1642

Proposed Addition

+/-3,738 SF FF = 4976.22

Existing CenturyLink building

Existing building +/-19,975 SF FF =4976.22

18" RCP

TOG 4971.5' FL 4968.4'

LOADING

0S-1 0.25Ac

Tract A-1

Not A Part

Griegos Ad. N.W.

IMPERVIOUS AREA CALCULATIONS

BASIN 'A' (EXISTING) TOTAL BASIN AREA: 60,160 SF PERVIOUS AREA: 46,692 SF (77.6%) IMPERVIOUS AREA: 13,468 SF (22.4%) BASIN 'A' (PROPOSED)

TOTAL BASIN AREA: 60,160 SF PERVIOUS AREA: 15,849 SF (26.3%) IMPERVIOUS AREA: 44,311 SF (73.7%)

WATER QUALITY POND CALCULATION

TOTAL NEW IMPERVIOUS AREA = 39,439 SF FIRST FLUSH = 39,439 * 0.42" / 12 = 1.380 CFTOTAL VOLUME PROVIDED = 7.961 CF

Water Quality Pond Volume Calculations

POND 'A'

Elevation	Area	Volume	Volume Sum	
(ft)	(sq.ft)	(cu-ft)	(cu-ft)	
4967.0	180	0.0	0.0	
4968.0	384	282.0	282.0	
4969.0	1186	785.0	1067.0	
4970.0	2274	1730.0	2797.0	
4971.0	3580	2927.0	5724.0	
4971.5	5370	2237.0	7961.0	

Existing Gas Station



WEIR EQUATION $Q = C*L*(H^1.5)$

C = 2.87 (Weir Coefficient) L = 2 feet (Width of Flow) H = 0.67 feet (Depth of Flow) Therefore:

 $Q = 2.87*2*(0.67^1.5)$ Q = 2.87*2*0.55Qcap = 3.15 cfs

4' WIDE CURB OPENING

WEIR EQUATION $Q = C*L*(H^1.5)$

C = 2.87 (Weir Coefficient) L = 4 feet (Width of Flow)

H = 0.50 feet (Depth of Flow) Therefore:

 $Q = 2.87*4*(0.50^1.5)$ Q = 2.87*4*0.35Qcap = 4.02 cfs

N.W.

64

Str

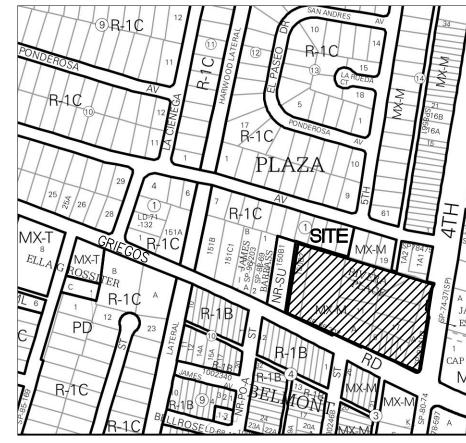
4th

18" RCP TOG 4972.7 -Inlet full of/

Debris.

Total Overflow Capacity = 7.17cfs

Qregd = 6.67cfs CHECK



VICINITY MAP - Zone Atlas Page F-14-Z

Telephone & Telegraph Company, and Tract "A" Furr's Properties, and Lots 1-5 & 11-17 Rivera Place, and a portion of Vacated Rivera Place Rd NW, Vacated per V-489.



Per FIRM Map 35001C0119G, dated September 26, 2008, the site is located in Zone X, 0.2% Annual Chance Flood Area.

DRAINAGE MANAGEMENT PLAN

The site will continue to pond and then overflow onto Griegos. Per the Proposed Drainage Calculations table this sheet, the runoff will increase by 1.12 cfs for a total of 6.67 cfs during the 100—Yr, 6—Hr storm. Ponding is being provided such that the difference between the 100-Yr, 10-Day storm (6,752 CF) is being captured. This ensures that the Pre-Developed runoff from the site will not be exceeded. The actual pond volume being provided is approximately 7,961 CF per calculations this sheet.

The pond will overflow and discharge through a 24" Sidewalk Culvert and a 4' wide curb opening in the driveway leading to Griegos Rd. Reference the weir calculations, this sheet.

Per the Calculations this sheet, we are providing two separate ponds which are connected via a 12" pipe, which more than captures the required First Flush volume per the DPM.

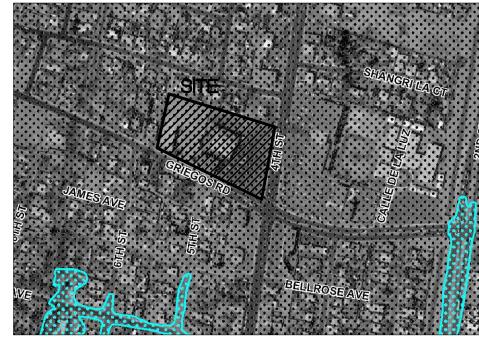
Per the percolation test provided by Western Technologies in the Geotechnical Report, the site soils will drain at a rate of 10 minutes per inch which is equivalent to 6 inches per hour or 12 feet per day. At this rate, the ponds should completely discharge in less than 24 hours via infiltration..

This drainage management plan provides for grading and drainage elements which are capable of safely passing the 100 year storm and meets city requirements. The proposed improvements for the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting approval of Building Permit.





Legal Description: Tract A-2, Plat of the Lands of Mountain States



FIRM MAP 35001C0119G

The purpose of this submittal is to provide a grading plan and drainage management plan for a new Truck Dock and Parking Expansion for the existing Lowes Grocery Store located at 4701 4th St NW in Albuquerque, NM. The property consists of approximately 3.37 acres. The City Drainage File Numbers are F14—D052 for the existing Lowes and F14/D021 for the CenturyLink (Qwest) property.

EXISTING HYDROLOGIC CONDITIONS

The site generally slopes to a couple of low points on site and ponds. Any overflow from the ponds would discharge onto Griegos Rd. There is an existing curb inlet located along Griegos directly adjacent to the site. The site area is mostly undeveloped except for some utility equipment located on the CenturyLink site. Per the Existing Drainage Calculations table this sheet, the site currently discharges 5.55 cfs onto Griegos during the 100—Yr, 6—Hr

PROPOSED HYDROLOGIC CONDITIONS

STORMWATER QUALITY PONDING



ARCHITECTS

A member of The American Institute of Architects

P.O. BOX 53910

Lubbock, Texas 79453 Phone: 806.744.4490 Fax: 806.744.4494



www.jdmaarchitects.com

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERNAL REVIEW UNDER THE AUTHORITY OF W. ALEX GROSS NEW MEXICO LICENSE

#003946. IT MAY NOT BE USED FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

CIVIL CONSULTANTS:

WOOTEN ENGINEERING 1005 21st St SE #13 Rio Rancho, New Mexico 87124 505 980 3560 PHONE

M.P.E. CONSULTANTS:

BSA CONSULTING ENGINEERS, PLLC 14302 Slide Road Lubbock, Texas 79424 806 780 7475 PHONE 806 780 0129 FAX

TRUCTURAL:

NIEMAN ENGINEERING, LLC 1500 Broadway **Suite 1210** Lubbock, TX 79401 806 589 3340 PHONE

LOWE'S MARKET #99 CK AND STORAGE ADDITIO 4701 4TH STREET NORTHWEST ALBUQUERQUE, NM 87107 DOC]

DRAWN BY: CHECKED BY: RG SHEET TITLE:

DATE: JANUARY 2021

PROJECT #: 2020052

Drainage Management Plan

C201 OF