

DRAINAGE REPORT
FOR
RELIABLE NISSAN

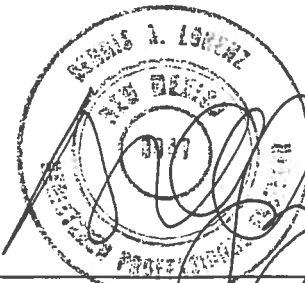
Albuquerque, New Mexico

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TABLE OF CONTENTS

TITLE	PAGE NO.
PURPOSE AND SCOPE	1
SITE DESCRIPTION	1
EXISTING CONDITIONS	1
SUMMARY OF EXISTING DRAINAGE PLANS	1
PROPOSED CONDITIONS	1
TEMPORARY EROSION CONTROL	2
MAPS	
LOCATION MAP - FIGURE 1	3
FLOOD INSURANCE RATE MAP - FIGURE 2	4
CALCULATIONS	
INFRASTRUCTURE CAPACITIES	
POND ROUTING	
AHYMO OUTPUT FILES	
APPROVAL LETTERS	
EXHIBITS	
GRADING AND DRAINAGE PLAN	POCKET

PURPOSE AND SCOPE

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Drainage Report outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of additions to the existing building and the expansion of the inventory lot for Reliable Motors. Paving, landscaping, utility, grading, and drainage improvements will be provided to support the project. The scope of this plan is to provide drainage criteria for the safe management of excess runoff. The report is presented to obtain Building Permit approval.

SITE DESCRIPTION

The project site is approximately 6.08 acres in size and is located on Coors Bypass NW, at Eagle Ranch Road NW (See Figure 1). The site consists of the partially developed Reliable Motors site. The developed portion of the site contains approximately 1.89 acres, which operates as an auto dealership. The undeveloped portion of the site contains 3.50 acres, and is used as overflow vehicle storage. Site terrain slopes west to east at approximately 2 percent. The site is presently described as Lot 7, Tract N-1A, Seven Bar Ranch. The site is bounded on the north by Coors Bypass, on the south by a private drive, and on the west by Eagle Ranch Road.

EXISTING CONDITIONS

The developed portion of the site drains easterly to an existing detention pond located at the intersection of Coors Bypass and the private drive. The pond detains 3221 cf, and drains to a 48 inch storm drain in Coors Bypass at a controlled discharge rate of 3.36 cfs. The undeveloped portion presently drains easterly to an existing depression located along Coors Bypass storm drain. No off-site flows impact the site. All off-site runoff is intercepted by the existing perimeter streets.

As shown by the attached FIRM Panel (Figure 2) this site does not lie within a designated flood hazard zone.

SUMMARY OF EXISTING DRAINAGE PLANS

Per the **Grading and Drainage Plan for Mitsubishi, Lot 7, Seven Bar Ranch (B-13/D3C)**, prepared by Easterling & Associates, Inc., 11-2-89, the allowable discharge rate for Lot 7 is 10.5 cfs. The Plan also allocates 3.36 cfs for the developed portion of Lot 7, which leaves the remainder (7.14 cfs) for undeveloped portion. The remaining portion is to be routed through a detention pond which discharges directly into the existing 48 inch storm drain located in Coors Bypass.

Per the **Conceptual Drainage Report for Reliable Nissan (B13/D3C)**, prepared by Brasher & Lorenz, Inc, December 7, 1998, the undeveloped portion of the site, which will be paved as a vehicle storage lot, will be routed through a detention pond to be constructed along the Coors Bypass right-of-way. The pond will drain through a 12 inch

private storm drain, with a maximum discharge of 7.14 cfs, which is to be connected to an existing drop inlet in Coors Bypass. The drop inlet drains to a 48 inch storm drain in Coors Bypass. The developed portion of the site, which will be further improved by construction of building additions, will continue to drain through an existing detention pond located at the southeast corner of the site. The pond drains by a 12 inch private storm drain to an existing drop inlet.

PROPOSED CONDITIONS

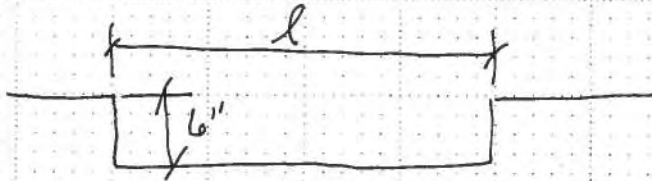
As shown by the Plan, the project consists of additions to the existing building and the expansion of the auto storage lot, with associated paving, utility, landscaping and drainage improvements. The Plan shows the elevations required to properly grade and construct the recommended improvements. The direction of drainage flows are given by flow arrows and on-site drainage basins are identified.

In accordance with the approved Masterplan and Conceptual Drainage Report, the proposed parking lot will drain to a detention pond to be located along Coors Bypass. The pond will rout all excess runoff through a 12 inch outlet pipe to Coors Bypass storm drain at a controlled rate not to exceed 7.14 cfs.

TEMPORARY EROSION CONTROL PLAN

1. Temporary Erosion Control is required to limit the discharge of sediment into the public street and/or storm drainage system and to protect adjacent properties from excess runoff during construction. After the initial site clearing, the temporary erosion control facilities should be constructed to direct excess runoff and sediment to the outfall locations. Earthen erosion control berms or silt fencing should then be placed along the downstream project boundaries to direct runoff to the project outfall.
2. The Contractor shall obtain a Top Soil Disturbance Permit from Environmental Health prior to performing any earthwork related operations.
3. It is the Contractor's responsibility to properly maintain all temporary erosion control facilities during the construction phase of the project.

① NEW POND INLET RUNDOWN

BASIN 101.1 $Q_{100} = 14.31$ CFS

$$Q = CLH^{3/2}$$

$$H = 0.5'$$

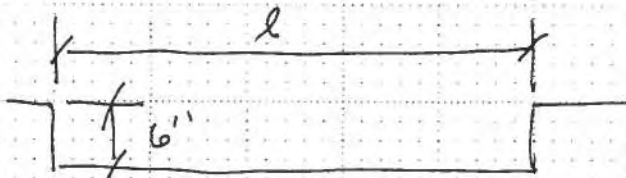
$$C = 2.50$$

$$l = Q / CH^{3/2} = 16.2 \text{ FT}$$

USE 18' (2 PARKING SP) ✓

② EMERGENCY SPILLWAY

USE ACCESS RAMP AS SPILLWAY

AS ABOVE ① $l = 16.2 \text{ FT}$ RAMP $l = 26.9 \text{ FT}$ ✓

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POND ROUTING

① PER BMP ALLOW FOR LOT 7 = 10.5 CFS

DEVELOPMENT PORTION USED 3.36 CFS

$$Q_{\text{ALLOW}} = 10.5 - 3.36 = 7.14 \text{ CFS}$$

DESIGN POND FOR P-LOT EXPANSION

DRAIN TO COORS BYPASS SD.

② SIZE OUTLET

$$Q_{\text{ALLOW}} = 7.14 \text{ CFS MAX}$$

③ SIZE DRAINLINE FOR GRAVITY FLOW

SEWER PIPES

Enter up to 10 pipes.

Enter <Return> only for flowrate and diameter to end.

FLOWRATE (CFS)	DIAMETER (IN)	FRICTION (FT ^{1/6})	SLOPE (%)	VELOCITY (FPS)
7.14	12.24	0.0130	3.62	8.74
6.78✓	12.00✓	0.0130	3.62	8.63

USE 12" PVC PIPE - CONNECT TO
EXISTING DROP INLET IN COORS
BYPASS.

(B) CHECK 12" PIPE FOR INLET CONTROL

ORIFICES

Enter up to 10 orifices.

Enter <Return> only for flowrate and area to end.

FLOWRATE (CFS)	AREA (SF)	COEFF (-)	E L E V A T I O N S		
			HEADWATER (FT)	CENTER (FT)	TAILWATER (FT)
7.14	0.73	0.600	52.80	48.63	48.63

$$A_{12"} = 0.79 \text{ SF}$$

(C) ROUT RES DATA

ORIFICES

Enter up to 10 orifices.

Enter <Return> only for flowrate and area to end.

FLOWRATE (CFS)	AREA (SF)	COEFF (-)	E L E V A T I O N S		
			HEADWATER (FT)	CENTER (FT)	TAILWATER (FT)
0.00	0.79	0.500	0.00	0.00	0.00
1.41	0.79	0.500	0.20	0.00	0.00
3.45	0.79	0.500	1.20	0.00	0.00
4.67	0.79	0.500	2.20	0.00	0.00
5.63	0.79	0.500	3.20	0.00	0.00
6.30	0.79	0.500	4.00	0.00	0.00

ELEV	AREA (SF)	VOL (AF)	H (FT)	QOUT (CFS)
48.8	0	0	0	0
49	1073.3	0.00004	0.2	1.41
50	2160.7	0.03716	1.2	3.45
51	3486.7	0.10198	2.2	4.67
52	4961.4	0.19896	3.2	5.63
52.8	10835.9	0.34402	4.0	6.30

⇒ PER AHYMO: QOUT = 5.43 CFS VOL = 0.1792 AF
WSE = 51.8 = 7806 CF