

FILE COPY



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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January 16, 1990

Louis Gross, P.E.  
Louis Gross & Associates, Inc.  
925 Sixth Street, NW Suite #3  
Albuquerque, New Mexico 87102

RE: REVISED DRAINAGE PLAN FOR GOLDEN EAGLE REMODEL  
(K-17/D64) REVISION DATED DECEMBER 26, 1989

Dear Mr. Gross:


Based on the information provided on your resubmittal of January 4, 1990, the referenced plan is approved for Building Permit and S.O. #19.

Please be advised that a separate permit is required for construction within City right-of-way. A copy of this approval letter will be needed when the contractor applies for the excavation permit.

If the building permit has already been released, you must provide the contractor with a copy of this revised, approved plan.

If you have any questions, please call me t 768-2650.

Cordially,

  
for Bernie J. Montoya, C.E.  
Engineering Assistant

xc: Darlene Saavedra

BJM/bsj  
(WP+1513)



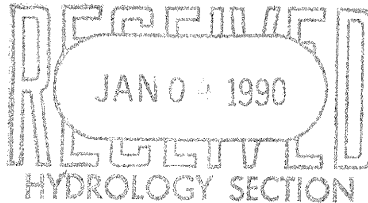
MAYOR

# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 14, 1989

Louis Gross, P.E.  
Louis Gross & Associates, Inc.  
925 Sixth Street, NW Suite #3  
Albuquerque, New Mexico 87102



RE: DRAINAGE PLAN FOR GOLDEN EAGLE REMODEL  
(K-17/D64) ENGINEER'S STAMP DATED NOVEMBER 6, 1989

Dear Mr. Gross:

Based on the information provided on your submittal of December 7, 1989, the referenced plan is approved for Building Permit, contingent on the proposed 6" pipe outfall is connected to the existing double "C" inlet. *done - see attached plans LWB*

Please be advised that a S.O. #19 permit is required for the 6" pipe connection to the inlet, (construction within City right-of-way). Please provide the contractor with a copy of this approval letter, as it will be required when applying for the excavation permit.

If you have any questions, please call me t 768-2650.

Cordially,

Gilbert Aldaz, P.E.  
City/County Floodplain Administrator

GA/bsj  
(WP+1513)

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.  
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

## HYDROLOGY

$$100 \text{ yr} - 6 \text{ hr} = 2.3 \text{ in} \quad I = 2.3 * 6.84 / 3.24 = 4.86 \text{ in/hr}$$

### D.A. No. 1 (Existing & Proposed)

$$\text{Area} = 3,702 \text{ sf} = 0.08 \text{ ac}$$

Roof	=	3,614	*	0.90	=	3,253
Natural Ground	=	88	*	0.40	=	35
		-----				-----
		3,702				3,288

$$C = 3,288 / 3,702 = 0.89$$

$$Q = 0.89 * 4.86 * 0.08 = 0.35 \text{ cfs}$$

$$CN = 95 \quad \text{Direct Run Off} = 1.8 \text{ in}$$

$$V = 1.8 / 12 * 3,702 = 555 \text{ cf}$$

Flow goes to Type "D" inlet as shown on the plan.

### D.A. No. 2 (Existing)

$$\text{Area} = 2,957 \text{ sf} = 0.07 \text{ ac}$$

$$C = 0.95 - \text{All pavement}$$

$$Q = 0.95 * 4.86 * 0.07 = 0.32 \text{ cfs}$$

$$CN = 95 \quad \text{Direct Run Off} = 1.8 \text{ in}$$

$$V = 1.8 / 12 * 2,957 = 444 \text{ cf}$$

### D.A. No. 2 (Proposed)

$$\text{Area} = 2,957 \text{ sf} = 0.07 \text{ ac}$$

Landscape	=	470	*	0.25	=	118
Pavement	=	2,487	*	0.95	=	2,363
		-----				-----
		2,957				2,481

$$C = 2,481 / 2,957 = 0.84$$

$$Q = 0.84 * 4.86 * 0.07 = 0.29 \text{ cf}$$

$$CN = 95 \quad \text{Direct Run Off} = 1.8 \text{ in}$$

$$V = 1.8 / 12 * 2,957 = 444 \text{ cf} - \text{Flow goes to Central Ave.}$$

D.A. No. 3 (Proposed & Existing)

Area = 1,961 sf = 0.05 ac

C = 0.95 - All pavement.

Q = 0.95 \* 4.86 \* 0.05 = 0.23 cfs

CN = 95 Direct Run Off = 1.8 in

V = 1.8 / 12 \* 1,961 = 294 cf - Flow goes to Central Ave.

D.A. No. 4

Existing

Area = 4,571 sf = 0.10 ac

C = 0.95 - All pavement.

Q = 0.95 \* 4.86 \* 0.10 = 0.46 cfs

CN = 95 Direct Run Off = 1.8 in

V = 1.8 / 12 \* 4,571 = 686 cf

Proposed

Roof = 375 \* 0.90 = 338

Pavement = 4,196 \* 0.95 = 3,086

-----  
4,571                      4,324

C = 4,324 / 4,571 = 0.95

Q = 0.95 \* 4.86 \* 0.10 = 0.46 cfs

CN = 95 Direct Run Off = 1.8 in

V = 1.8 / 12 \* 4,571 = 686 cf - Flow goes to Central Ave.

D.A. No. 5

Existing

Area = 8,994 sf = 0.21 ac

Hard packed Gravel 8,297 \* 0.80 = 6,638

Conc. Pad 449 \* 0.95 = 427

Roof 248 \* 0.90 = 223

-----  
8,994                      7,288

$$C = 7,288 / 8,994 = 0.81$$

$$Q = 0.81 * 4.86 * 0.21 = 0.83 \text{ cfs}$$

$$CN = 92 \quad \text{Direct Run Off} = 1.5 \text{ in}$$

$$V = 1.5 / 12 * 8,994 = 1124 \text{ cf}$$

This existing drainage goes over the sidewalk to Copper Ave.

#### Proposed

Landscape	=	1,668	*	0.25	=	417
Pavement	=	7,103	*	0.95	=	6,748
Roof	=	248	*	0.90	=	223
		-----				-----
		8,994				7,388

$$C = 7,388 / 8,994 = 0.82$$

$$Q = 0.82 * 4.86 * 0.21 = 0.83 \text{ cfs}$$

To inlet and 6" pipe.

6" pipe entrance capacity

$$Q = CA(2gH)^{0.5} = 0.61 * 0.20 * (2 * 32.2 * 2)^{0.5} = 1.4 \text{ cfs}$$

With a head of 2.0 feet on the pipe, it has sufficient capacity. We have 3.0 feet of head available in inlet box.

6" pipe barrel capacity

$$A = 0.20 \quad P = 1.57 \quad R = 0.13 \quad R^{0.67} = 0.25$$

$$S = 0.067 \quad S^{0.5} = 0.26$$

$$Q = 0.20 * 1.486 / 0.013 * 0.25 * 0.26 = 1.5 \text{ cfs}$$

This flow will go through the box inlet into the 6" steel pipe then to the gutter in Copper. There is an existing double "C" inlet approximately 23 feet West of and downstream of the end of the proposed pipe.

*Handwritten:*  
 $Q = CLH^{3/2} = 3.0 (0.5)^{3/2} = 2.17 \text{ cfs OK}$



TRACT A-1, BLOCK 1  
COLLEGE VIEW BUSINESS ADDITION  
ALBUQUERQUE, NEW MEXICO

COPPER AVENUE, N.E.




\*A property boundary survey was not performed in the preparation of this plan.

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work detailed on these plans to be performed, except as otherwise stated or provided herein, shall be constructed in accordance with the City of Albuquerque Standard Specifications for Public Works Construction 1986.
3. Two working days prior to any excavation, contractor must contact Line Locating Service 765-1234, for location of existing utilities.
4. Prior to construction, the contractor shall excavate to the depth of the mainline and vertical clearance of obstructions. Should a conflict exist, the contract shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to arterial street use.
6. Maintenance of these facilities will be the responsibility of the Owner of the property served.

APPROVALS	NAME	DATE
A.C.E./Design	<i>Edmund H. Hodge</i>	11/19/90
Inspector		
A.C.E./Field		

The contractor shall be responsible for compliance of the following:

1. No sediment bearing water shall be allowed to discharge from the site during construction.
2. During grading operations and until the project has been completed all adjacent property, rights of way and easements shall be protected from flooding.
3. Any and all sedimentation originating from the site which is deposited within public right of way shall be promptly removed by the contractor.
4. Control of sediment laden waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstate perimeters of the property.

	LOUIS GROSS & ASSOC., INC. Consulting Civil Engineers	File No 500 Date: Nov., '89
	925 6th Street N.W., Suite 3 Albuquerque, N. Mex. 87102 (505) 243-6353	Drawn C.L.L. Sheet 1 of 1

LOUIS GROSS & ASSOC., INC. Consulting Civil Engineers 925 6 <sup>th</sup> Street N.W., Suite 3 Albuquerque, N. Mex. 87102 (505) 243-6353	File No 500
	Date: Nov., '89
	Drawn C.L.L.
	Sheet 1 of 1