

## DRAINAGE INFORMATION SHEET

PROJECT TITLE: LUXURY INN ZONE ATLAS/DRNG. FILE #: K18 / D66  
ORB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: LOT 4A & LOT 22A BLK 3 FAIRGROUNDS ADDN  
CITY ADDRESS: \_\_\_\_\_  
ENGINEERING FIRM: Lovelady & Associates CONTACT: Frank D. Lovelady  
ADDRESS: 300 ALAMOSA NW PHONE: 345-2267  
OWNER: KALPESH PATEL CONTACT: \_\_\_\_\_  
ADDRESS: 6718 Central 87108 PHONE: 255-5900  
ARCHITECT: JERRY TORR CONTACT: JERRY TORR  
ADDRESS: 12836 LOMAS PHONE: 275-8223  
SURVEYOR: SOUTHWEST SURVEYING CONTACT: DAN GRANLEY  
ADDRESS: 333 LOMAS NW PHONE: 347-4444  
CONTRACTOR: T.H.J. CONSTRUCTION CONTACT: TVSHAR PATEL  
ADDRESS: 12836 LOMAS PHONE: 275-8223

## TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT  
☐ DRAINAGE PLAN  
☐ CONCEPTUAL GRADING & DRAINAGE PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☒ ENGINEER'S CERTIFICATION  
☐ OTHER

## PRE-DESIGN MEETING:

☐ YES  
☐ NO  
☐ COPY PROVIDED

## CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D. APPROVAL  
☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL  
☐ SECTOR PLAN APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ FOUNDATION PERMIT APPROVAL  
☐ BUILDING PERMIT APPROVAL  
☒ CERTIFICATE OF OCCUPANCY APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ S.A.D. DRAINAGE REPORT  
☐ DRAINAGE REQUIREMENTS  
☐ OTHER \_\_\_\_\_ (SPECIFY)

DATE SUBMITTED:

NOV 3 1995  
Frank D. Lovelady



# *City of Albuquerque*

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 14, 1995

Frank Lovelady  
Lovelady & Associates  
300 Alamosa NW  
Albuquerque, NM 87124

RE: RESUBMITTAL FOR ENGINEER CERTIFICATION FOR LUXURY INN  
(K18-D66) CERTIFICATION STATEMENT DATED 11/3/95.

Dear Mr. Lovelady:

Based on the information provided on your November 6, 1995  
resubmittal, Engineer Certification for the above referenced site  
is acceptable.

If I can be of further assistance, please feel free to contact me  
at 768-2667.

Sincerely,

Bernie J. Montoya, CE  
Engineering Associate

BJM/dl

c: Andrew Garcia  
File



## BENCH MARK:

Station 7-K19 Located at the intersection of Central Avenue and Louisiana Boulevard, on the east median of the intersection. Station is 65.5 feet east of centerline on Louisiana Blvd. and 25.7 ft. south of centerline on the west bound lanes of Central Avenue. Station is located on the nose of the median. Station is a standard ACS brass cap set in a concrete cylinder in the ground, stamped "7-K19, 1974 ACS" Elevation = 5323.308 Feet.

## ANALYSIS OF DOWNSTREAM CAPACITY:

Both of the adjacent streets, Central Avenue and Cochiti Road, are designated flood hazard zones. There are inlets on both of these streets at San Pedro Blvd. The flooding in Central and Cochiti appear to be the result of overflow from Louisiana Boulevard or flow that cannot be intercepted by the system in Alcazar. The site is approximately half way between the system in San Pedro and the system in Alcazar so the runoff from this site will have entered the San Pedro storm inlets before the peak runoff and resulting flooding occurs. The increase in runoff from this site is only 0.71 cfs which is not a very significant increase in flow.

NORTH

SCALE 1" = 20'

## LEGAL DESCRIPTION:

Lot Four-A (4-A) and Lot Twenty-Two-A (22-A), Block Three (3), of the plat of Lots 4-A and 22-A, Block Three, Fair-Grounds Addition, an addition to the City of Albuquerque, New Mexico, as the same are shown and designated on the replat of said addition, filed in the office of the County Clerk of Bernalillo County, New Mexico on May 25, 1994 in Map Book: 94-C, Folio 173.

## LEGEND:

PROP. LINE  
EXIST. CONTOUR 5308  
EXIST. SPOT ELEV.  
NEW CONTOUR  
NEW SPOT ELEV.  
FLOW DIRECTION  
TOP OF CONC.  
TOP OF PAVEMENT  
ROOF DRAIN  
ROOF DRAIN THRU S.W.  
AS-BUILT SPOT ELEV.

Land Treatment	Southerly Drainage Basin Percent Area of Site	Sq.Ft.	Acres
A	0.0	0,000	0.0000
B	4.7	1,320	0.0303
C	8.1	2,294	0.0527
D	87.2	24,782	0.5689
Totals	100.0	28,396	0.6519

## EXISTING CONDITIONS:

The site is located between Central Avenue and Cochiti Road SE. There is a paved alley that separates the site into two portions, or drainage basins. The northerly basin (Basin "A") is presently totally paved with asphalt. The land directly to the east of Basin "A" is developed as the Adobe Rose Restaurant. There is not a curb blocking flow from the restaurant lot so this lot will have to be considered as off-site flow. The land directly to the west of the Basin "A" is presently undeveloped and is an unpaved vacant lot. The natural direction of flow is from northeast to southwest. The alley is presently paved. The southerly basin (Basin "B") is approximately twice as large as Basin "A" and also drains from northeast to southwest. The southerly basin is unpaved. Land directly to the east is used to park mobile homes. Land directly to the west is unpaved and vacant. The Firm Map shows Central Avenue to be a A-1 flood zone. The site is shown to be within the 500-year flood zone.

## DEVELOPED CONDITIONS:

It is proposed to construct a motel on the site as shown on the plan. It is proposed to drain Basin "A" to the alley. It is proposed to drain Basin "B" to the southwest corner of the parking lot to an inlet where 2 each 8" PVC pipes will convey the flow between the buildings. The flow will then be carried by concrete swale to a sidewalk culvert into Cochiti Road.

## DRAINAGE CRITERIA:

The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January 1993.

## PRECIPITATION ZONE:

The site is east of San Mateo Boulevard and west of Eubank Boulevard and is, therefore, in Precipitation Zone 3.

## LAND TREATMENTS:

The developed land treatment areas are shown in the following table:

Land Treatment	100-yr. q	10-yr. q	100-yr. E	10-yr. E	Percent Area of Site	Sq.Ft.	Acres
A	1.87	0.58	0.66	0.19	0.0	0,000	0.0000
B	2.60	1.19	0.92	0.36	18.5	2,568	0.0589
C	3.45	2.00	1.29	0.62	3.9	540	0.0124
D	5.02	3.39	2.36	1.50	77.6	10,792	0.2478
Totals					100.0	13,900	0.3191

## VOLUME, 100-YEAR AND 10-YEAR, 6-HOUR:

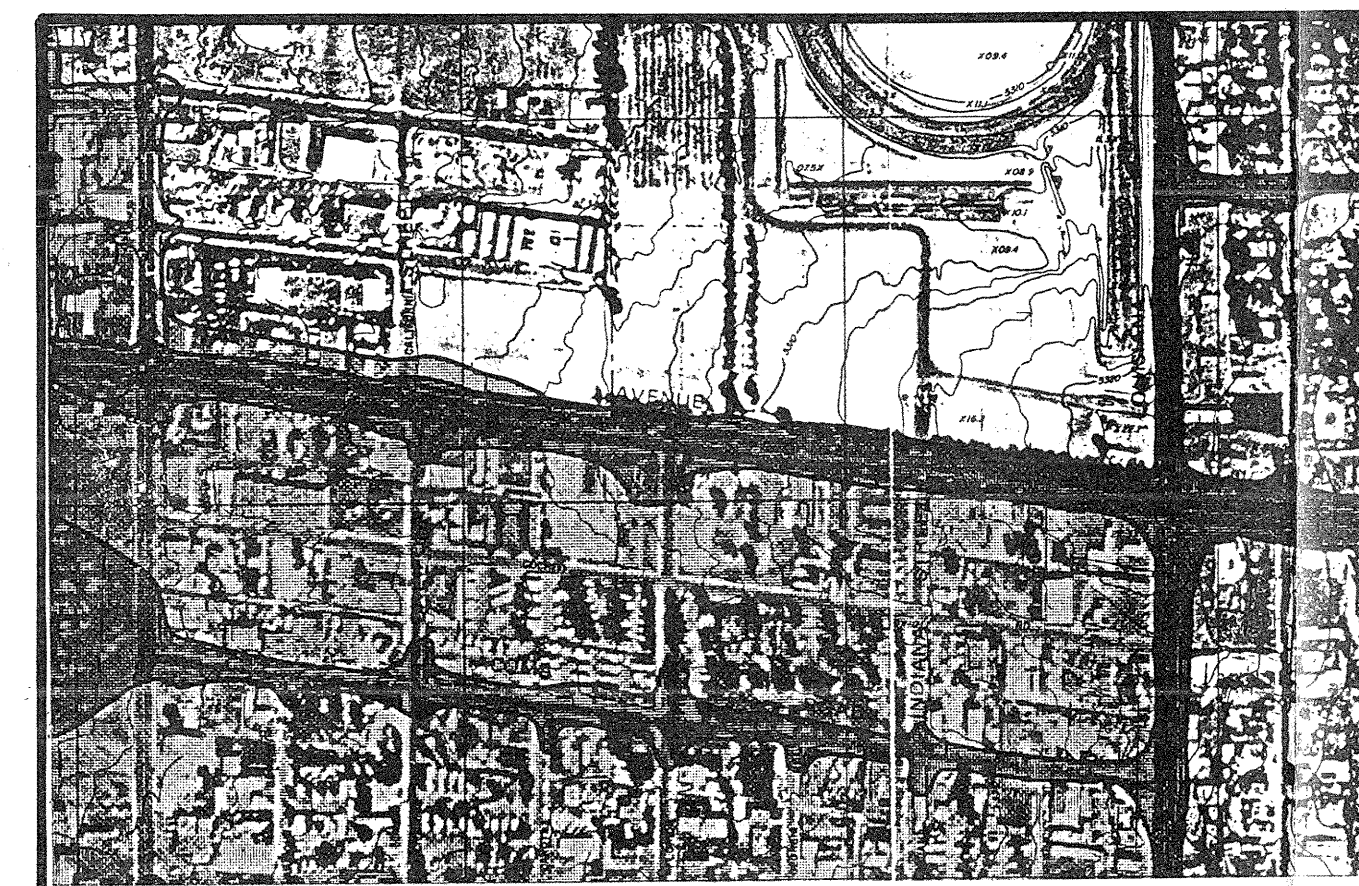
$V = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)$  Where E = Excess precipitation for the specified land treatment.  
A = Area in sq. ft. of the specified land treatment.

	SUMMARY OF VOLUMES V100(CFS)	V10(CFS)
Basin "A" - Existing Conditions	2,734	1,738
Basin "A" - Developed Conditions	2,377	1,454
Net Increase (Decrease)	(357)	(284)
Basin "B" - Existing Conditions	3,053	1,467
Basin "B" - Developed Conditions	5,221	3,256
Net Increase (Decrease)	2,168	1,789
Total Site - Existing Conditions	5,787	3,205
Total Site - Developed Conditions	7,598	4,710
Net Increase	1,811	1,505

## PEAK DISCHARGE, 100-YEAR AND 10-YEAR:

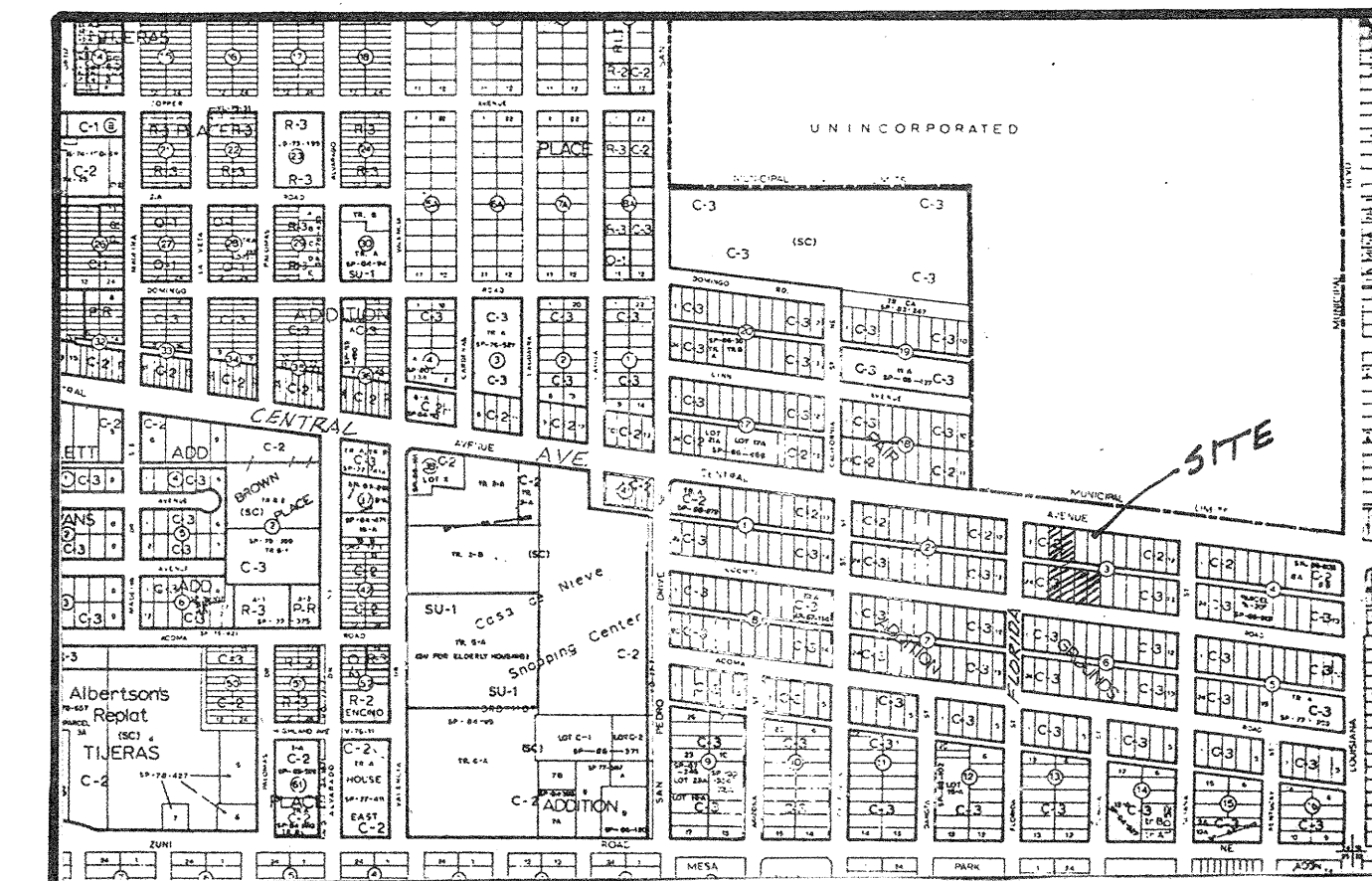
$Q = Q_{pAA} + Q_{pAB} + Q_{pAC} + Q_{pAD}$  WHERE,  $Q_p$  = Peak Discharge (CFS/ACRE)  
A = Area in acres of specified land treatment.

	SUMMARY OF PEAK DISCHARGE Q100(CFS)	Q10(CFS)
Basin "A" - Existing Conditions	1.60	1.08
Basin "A" - Developed Conditions	1.44	0.93
Net Increase (Decrease)	(0.16)	(0.15)
Basin "B" - Existing Conditions	2.25	1.30
Basin "B" - Developed Conditions	3.12	2.07
Net Increase (Decrease)	0.87	0.77
Total Site - Existing Conditions	3.85	2.38
Total Site - Developed Conditions	2.38	3.00
Net Increase	0.71	0.62



FLOODWAY MAP

PANEL 30 OF 50



VICINITY MAP

K-18

## OFF-SITE FLOW:

The area directly east of Basin "A" is approximately the same size as Basin "A" and is assumed to be entirely impervious. The peak off-site discharge from this area is, therefore, the same as the undeveloped peak discharge for Basin "A"  $Q_{100} = 1.60$  CFS  $Q_{10} = 1.08$  CFS

The area directly east of Basin "B" has an earth berm along its west boundary which prevents any off-site flow from reaching Basin "B".

## SELECT SIDEWALK CULVERT WIDTH:

Design  $Q = 3.12$  cfs, total developed discharge from Basin "B". Use Orifice Equation  $Q = CA(2GH)^{1/2}$   $C = 0.6$   $A = 2 \times 0.67 = 1.34$  sf  $H = 0.33$  ft.  
 $Q = 0.6 \times 1.34 (2 \times 3.2 \times 0.33)^{1/2} = 3.71$  cfs  $> 3.12$  cfs Adequate.

## SELECT PARKING LOT DRAIN PIPE:

$Q = 3.12$  cfs This is conservative because some of the basin runoff flows to the rear of the buildings. Invert = 06.28 Water will pond to top of curb, elevation 07.90. Use Orifice Equation  $Q = CA(2GH)^{1/2}$   $C = 0.6$   
 $A = 0.3526$  (8" Dia. PVC pipe)  $H = (7.9 - 6.28) = 1.62$   
 $Q = 0.6 \times 0.3526 (2 \times 32.2 \times 1.62)^{1/2} = 1.92$  cfs Use 2 each 8" Dia. PVC pipes  $2 \times 1.92 = 3.84$  cfs  $> 3.12$  cfs

## SWALES BEHIND BUILDINGS:

Size swales for flow from the rear half of the two western-most buildings in Basin "B"  $(88 + 132) \times 16 = 3520$  SF = 0.0808 ac  
 $Q_{100} = 3.39$  X  $0.0808 = 0.27$  CFS

Flow to be contained between stem wall of building and 6" curb at property line with concrete paving between with a 2" deep "V" shaped cross section. Width 4.5'  $A = (0.17 \times 4.5) = 0.38$  sf  $P = 4.5'$   $R = A/P = 0.38 / 4.5 = 0.0844$   $N = 0.013$   $S = 0.0050$   
 $Q = 0.38(1.486/0.0133)(0.0844)^{2/3}(0.0050)^{1/2} = 0.59$  cfs  $> 0.25$  cfs Adequate for all behind-building swales.

## NOTE:

The S.O. 19 block has been removed from the plan so that sufficient space is available for the insertion of the following certification:

## ENGINEER'S CERTIFICATION:

I hereby certify that I have personally inspected the site and that finish floor elevations and certain spot elevations have been shot by others at my request, and that the site and all drainage facilities are in substantial compliance with the approved grading and drainage plan, engineer's stamp dated 9-28-94 (revised 2-17-95), with the following exceptions:

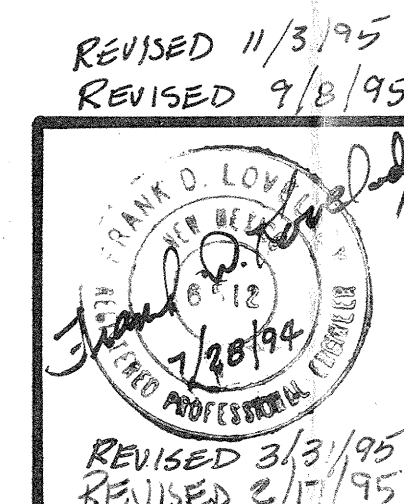
- The vacated alley, crossing through the middle of the motel parking lot from east to west, has not been paved because the vacation was to have been finalized in DRB on 3/28/95. This will be completed before the lapse of a 30-day temporary C.O. in conjunction with the other alley paving described in paragraph 2 below.
- The alley between the motel parking lot and Florida Street has not been constructed. The contractor is in the process of obtaining a work order and will have it complete before the lapse of a 30-day temporary C.O.
- The sidewalk culvert on Cochiti is under construction as of this date. The Contractor has obtained his permit and has removed the existing curb and gutter and sidewalk. The work will be completed with inspection green tags before the lapse of a 30-day temporary C.O.
- The drainage channel between the motel and Cochiti Drive and on the east side of the southerly motel complex has been rough graded but has not been paved. This is scheduled to be completed within the next few days and will be completed before the lapse of a 30-day temporary C.O.
- The concrete swale has been constructed along the west side of the buildings with a 2" invert but the concrete curb adjacent to it has been deleted. No downspouts have been provided and a drip edge is proposed to replace all gutters and downspouts. If this is unacceptable it can be resolved prior to the lapse of a 30-day temporary C.O.

Frank D. Lovelady 3/31/95  
Frank D. Lovelady, N.M.P.E. 6512 Date

## ENGINEER'S CERTIFICATION:

The above items 1 through 5 have all been satisfactorily completed and all on-site facilities are now in substantial compliance with the approved grading and drainage plan. The gutters have been installed along the rear side of all buildings. The number and location of downspouts on the south and east side are different than the approved plan but are shown as installed.

Frank D. Lovelady, N.M.P.E. 6512  
Date



GRADING & DRAINAGE PLAN  
LUXURY INN

ALBUQUERQUE, NEW MEXICO