HYDROLOGY L21/D6 ULIBARRI CONSTRUCTION WAREHOUSE

L21/D6

ULIBARRI
CONSTRUCTION
WAREHOUSE

5 PLANS

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

September 23, 1985

Jake Bordenave
DMJM
5700 Harper Dr. NE, Suite 280
Albuquerque, NM 87111

REF: REVISED DRAINAGE PLAN FOR ULIBARRI CONSTRUCTION WAREHOUSE ADDITION (L21-D6) REVISION DATE 9/3/85

Dear Mr. Bordenave:

Based on the information provided on your September 6, 1985 resubmittal, the above referenced drainage plan is approved for building permit approval.

If I can be of further assistance, please feel free to contact me at 766-7644.

Sincerely,

Carlos A. Montoya

Carlos A. Montoya PE
City/County Flood Plain Admin.

CAM/BJM/cl

P.S. Please be advised that no sediment will be allowed onto the street from the site pond.

DRAINAGE INFORMATION SHEET

Resubm: Hol

PROJECT TITLE: ULIBARRI CONSTRUCTION WAREHOUSE ZONE ATLAS/DRNG. FILE #: L-21 D-6

LEGAL DESCRIPTION: Lot 25A, Formerly Lots 25 & 26, BLOCK 11 - EAST CENTRAL BUSINESS DISTRICT

CITY ADDRESS: 10,819 Acoma, S. E.

ENGINEERING FIRM: DMJM CONTACT: CHARLES BURM

ADDRESS: 5700 Harper Drive, N.E. PHONE: (505)822-7955

OWNER: ULIBARRI CONSTRUCTION CONTACT: RALPH ULIBARRI

ADDRESS: 10,819 Acoma, S. E. PHONE: 292-7212

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES DRB NO.

NO EPC NO.

COPY OF CONFERENCE RECAP SHEET PROVIDED PROJ. NO.

RECEIVED SEP 06 1985 HYDROLOGY SECTION

TYPE OF SUBMITTAL:

- DRAINAGE REPORT
- X DRAINAGE PLAN
- CONCEPTUAL GRADING & DRAINAGE PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION

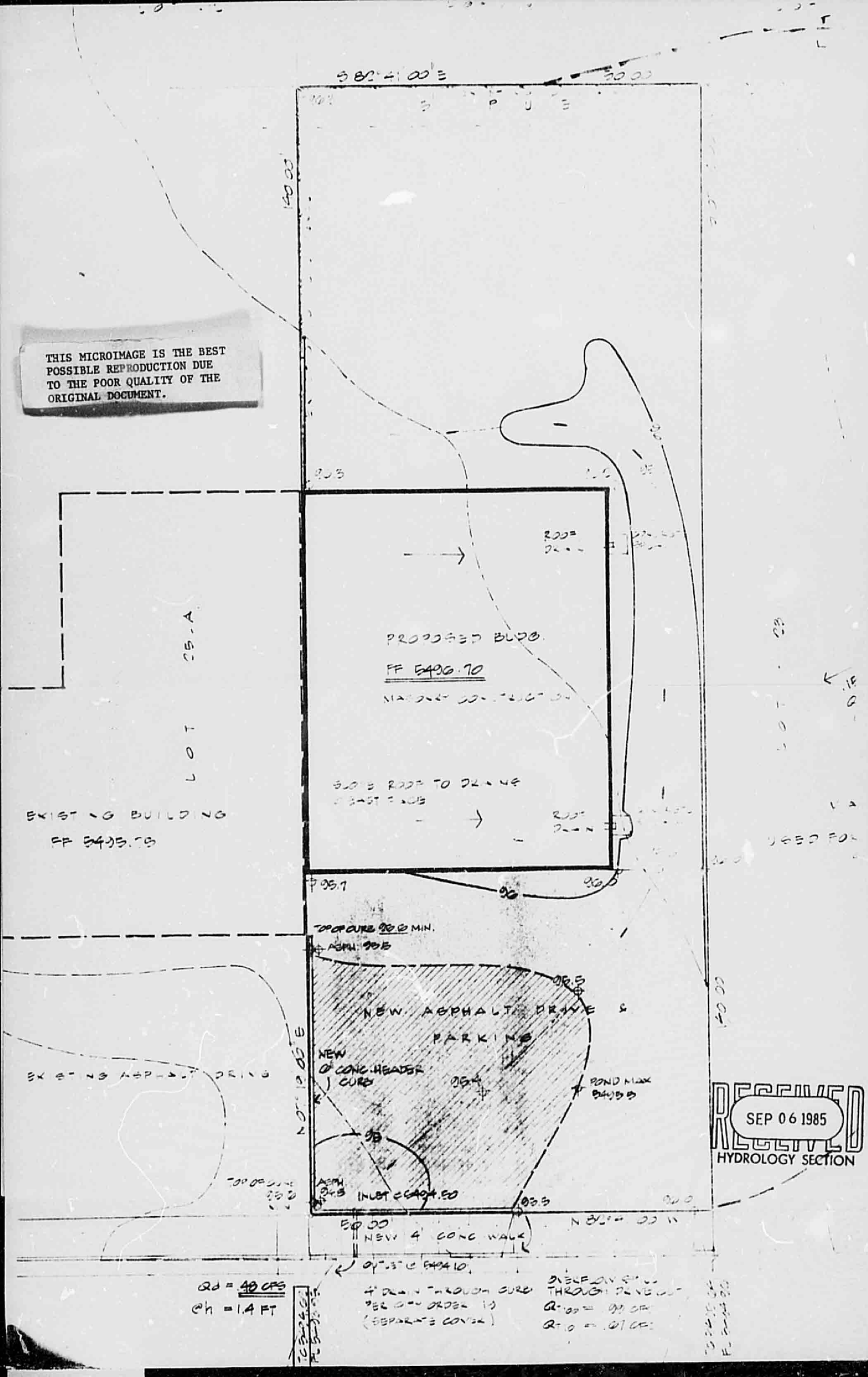
CHECK TYPE OF APPROVAL SOUGHT:

- SKETCH PLAT APPROVAL
- PRELIMINARY PLAT APPROVAL
- SITE DEVELOPMENT PLAN APPROVAL
- FINAL PLAT APPROVAL
- X BUILDING PERMIT APPROVAL
- FOUNDATION PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY APPROVAL
- ROUGH GRADING PERMIT APPROVAL
- GRADING/PAVING PERMIT APPROVAL
- OTHER (SPECIFY)

DATE SUBMITTED: 9-6-85

BY: Charles Burm

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.



DMJM/Adam, Hamlyn, Anderson

September 6, 1985

RECEIVED
SEP 06 1985
HYDROLOGY SECTION

City of Albuquerque
Design Hydrology Section
P. O. Box 1293
Albuquerque, NM 87103

ATTN: Mr. Billy Goolsby

RE: Grading and Drainage Plan
Ulibarri Construction Warehouse Addition
City File No. L21-D6
DMJM No. 4697-01-01

Dear Mr. Goolsby:

In response to your comments of August 23, 1985:

1. Information sheet has been provided.
2. Plan has been revised and dated.
3. Offsite flows from the east have been redirected due to the grading and construction on the lot to the east. (See copy of Grading Plan for lot to the east).
4. Were included in the last submittal.
5. Bench Mark has been included.
6. Spot elevation have been included.
7. Ledger has been included.

If there are any question, please call.

Sincerely,

Charles Burm

Charles Burm

CB/dt

A Division of
Daniel, Mann, Johnson, & Mendenhall

Suite 280
5700 Harper Drive, N.E.
Albuquerque, New Mexico 87109
Telephone: 505/822-7955

Planning
Engineering
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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

August 23, 1985

Mr. Jake Bordenave
DMJM
5700 Harper Dr. NE, Suite 280
Albuquerque, NM 87111

REF: GRADING & DRAINAGE PLAN FOR ULIBARRI CONSTRUCTION WAREHOUSE ADDITION (L21-D6) RECEIVED 8/5/85

Dear Mr. Bordenave:

Based on the information provided on your August 5, 1985 submittal, items listed below will need to be addressed before final approval is granted:

✓ 1. New information sheet indicating resubmittal.

✓ 2. Engineer's stamp with signature and revision date.

✓ 3. Please address off-site flows which may enter at the Northeast corner indicated by your existing contours.

✓ 4. Undeveloped and developed flow-rates; calculations.

✓ 5. Identify the Albuquerque Control Survey Vertical datum used.

✓ 6. Include spot elevations on your grader ditch for construction purposes.

✓ 7. Please include a legend within your plan.

If you have any questions or comments, please feel free to call me at 766-7644.

Sincerely,

Billy J. Goolsby

Billy J. Goolsby PE
C.E./Design Hydrology

BJG/BJM/cl

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

August 23, 1985

Mr. Jake Bordenave
DMJM
5700 Harper Dr. NE, Suite 280
Albuquerque, NM 87111

REF: GRADING & DRAINAGE PLAN FOR ULIBARRI CONSTRUCTION WAREHOUSE ADDITION (L21-D6) RECEIVED 8/5/85

Dear Mr. Bordenave:

Based on the information provided on your August 5, 1985 submittal, items listed below will need to be addressed before final approval is granted:

1. New information sheet indicating resubmittal.
2. Engineer's stamp with signature and revision date.
3. Please address off-site flows which may enter at the Northeast corner indicated by your existing contours.
4. Undeveloped and developed flow-rates; calculations.
5. Identify the Albuquerque Control Survey Vertical datum used.
6. Include spot elevations on your grader ditch for construction purposes.
7. Please include a legend within your plan.

If you have any questions or comments, please feel free to call me at 766-7644.

Sincerely,

Billy J. Goolsby

Billy J. Goolsby PE
C.E./Design Hydrology

BJG/BJM/cl

DRAINAGE INFORMATION SHEET

PROJECT TITLE: ULIBARRI CONSTRUCTION WAREHOUSE ZONE ATLAS/DRNG. FILE #: L-21/D-6

LEGAL DESCRIPTION: Lot 25A, Formerly Lots 25 & 26, BLOCK 11 - EAST CENTRAL BUSINESS DISTRICT

CITY ADDRESS: 10,819 Acoma, S. E.

ENGINEERING FIRM: DMJM CONTACT: CHARLES BURM

ADDRESS: 5700 Harper Drive, N.E. PHONE: (505)822-7955

OWNER: ULIBARRI CONSTRUCTION CONTACT: RALPH ULIBARRI

ADDRESS: 10,819 Acoma, S. E. PHONE: 292-7212

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED AUG 05 1985 HYDROLOGY SECTION

DRB NO.

EPC NO.

PROJ. NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

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CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

DATE SUBMITTED: 8-5-85

BY: Chas Burm

DMJM/ Adam, Hamlyn, Anderson

Reply To: ☐ Phoenix, Arizona 85014 — 4751 North Fifteenth Street — 602-264-1397
☒ Albuquerque, NM 87109 — 5700 Harper Dr. N.E., Suite 280 — 505-822-7955

LETTER OF TRANSMITTAL

TO: City of Albuquerque
Design Hydrology

ATTN: Mr. Billy Gordsby

DATE:	PROJECT NO.
8-5-85	4697-01-01
PROJECT: Ulibarri Cast. Warehouse	

RECEIVED
AUG 05 1985
HYDROLOGY SECTION

WE TRANSMIT:
(X) herewith ( ) under separate cover via
( ) in accordance with your request

FOR YOUR:
(X) approval ( ) distribution to parties ( ) information
( ) review & comment ( ) record
( ) use ( )

THE FOLLOWING:
(X) prints (X) copy of letter ( ) change order
( ) originals ( ) specifications (X) calculations
( ) shop drawings ( )

Copies	Dwg. No.	DESCRIPTION	Action Code
1		Drainage Plan	
1	set	Arch. Plans	
1	set	Calculations	
1		Pre-design Recap & Information sheet	
1		Letter on Downstream Drainage	

Action Code
A. REVIEWED
B. REVIEWED AS NOTED
C. REVISE & RESUBMIT
D. REJECTED
E. See REMARKS below

REMARKS:

COPIES TO:

If enclosures are not as noted, please inform us immediately.

SIGNED: Charles Burns

DMJM/Adam, Hamlyn, Anderson

August 1, 1985

RECEIVED
AUG 05 1985
HYDROLOGY SECTION

City of Albuquerque
MDD/Engineering
Design Hydrology
P. O. Box 1293
Albuquerque, N. M. 87103

Attn: Mr. Billy Goolsby

Re: Revised Grading and Drainage Plan L-21 D-6
Ulibarri Construction Warehouse

Dear Mr. Goolsby:

We have made a site inspection of the flow patterns in the area of the subject project per your request during the pre-design meeting. Discharge from the site flows west on Acoma to the intersection of Acoma and Britt. Water flows across the half street paving on Britt and collects in an earth swale on the west side of Britt. The water is then carried south in the swale to the south side of the trailer park, then westerly.

The peak discharge from the site has been increased 0.02 cfs from 0.39 cfs to 0.41 cfs due to the addition of the carport. See attached basin routings for flow rates before and after the addition.

If there are any questions, please call.

Very truly yours,

Charles Burm

Charles Burm

CB:cs

A Division of
Daniel, Mann, Johnson, & Mendenhall

Suite 280
5700 Harper Drive, N.E.
Albuquerque, New Mexico 87109
Telephone: 505/822-7955

Planning
Engineering
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Economics

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

PRE-DESIGN CONFERENCE RECAP

HYDROLOGY SECTION PROJECT NO.: L-21 DATE: 6/14/85

PLANNING DIVISION NOS. EPC: _____ DRB: _____

SUBJECT: Warehouse Expansion For Illibarri Const.

LEGAL DESCRIP.: Lot 25 A Blk 11 East Central Business Dist.

APPROVAL REQUESTED

_____ PRELIMINARY PLAT _____ FINAL PLAT

_____ SITE DEVELOPMENT PLAN X BUILDING PERMIT

_____ ROUGH GRADING

	WHO:	REPRESENTING:
ATTENDANCE:	Jake Bordenave	DMJM
	Billy Goolsby	City

_____ Conceptual Drainage Plan/Report required for Preliminary Plat and/or Site Development Plan sign-off.

X Approved Drainage Plan/~~Report~~ required for ~~Final Plat and/or~~ Building Permit sign-off.

_____ Subdivision Improvements Agreement or Financial Security required.

FINDINGS: ① Update existing drainage plan to show Expansion. ② Field Inspection requested to determine approach for discharge.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED:	Billy J. Goolsby	SIGNED:	[illegible]
TITLE:	CE Design Hydrology	TITLE:	Branch Manager
DATE:	6/14/85	DATE:	6/14/85

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

DMJM / AHA ALBUQUERQUE	PROJECT 10818 ACOMA RD SE ULIBARRI CONSTRUCTION	PROJECT NO		PAGE
		BY: C. Birm	DATE: 7-31-85	

SUBJECT REVISED DRAINAGE CALCS

Present Conditions

PARKING + Buildings	6650 SF	x 0.95 =	6318
BARE GROUND	7350 SF	x 0.40 =	2940
		Effective Drainage Area	9300 SF

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HYDROLOGY SECTION

REVISED Site Conditions

PARKING + Buildings	9125 SF	x 0.95 =	8668
BARE GROUND	4875 SF	x 0.40 =	1950
		Effective Drainage AREA =	10,600 SF

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*****************************************
**              BASIN   ROUTING        **
*****************************************
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DMJM
5700 HARPER DR. NE SUITE 280
ALBUQUERQUE, NEW MEXICO 87109

PROJECT: ULIBARRI CONSTRUCTION
DATE: 31 JULY 19

EFFECTIVE AREA 9300 SQ.FT. Before Carport Addition
TOTAL RAINFALL 2.45 INCHES

STORAGE BASIN

ELEV	AREA SQ.FT.	VOLUME CU.FT.
92.30	2	0
92.50	444	44
93.00	763	346
93.50	1350	874
93.80	1500	1302

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HYDROLOGY SECTION

INFILTRATION 1ST HALF HOUR = 0.00 IN./HR.
INFILTRATION 2ND HALF HOUR = 0.00 IN./HR.
INFILTRATION AFTER 1 HOUR = 0.00 IN./HR.

OUTLET INFORMATION:

ROUND ORIFICE

DIAMETER INCHES	INVERT ELEV.
4.0	92.30

WEIR

LENGTH FEET	INVERT ELEV.
5.00	93.80

TIME MIN.	RAINFALL INCHES	ACCUM. INFLOW CUBIC FEET	POND ELEV.	AVG. POND ELEV.	ACCUM. OUTFLOW CUBIC FEET	STORAGE CUBIC FEET
0	0.000	0	92.300	92.300	0	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.047 CFS	14 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
5	0.139	108	92.604	92.452	14	94
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.191 CFS	57 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
10	0.313	243	92.743	92.673	71	171
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.275 CFS	82 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
15	0.695	539	93.049	92.896	154	385
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.355 CFS	106 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
20	1.163	901	93.311	93.180	260	641
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.388 CFS	116 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
25	1.340	1038	93.329	93.320	377	661
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.388 CFS	116 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
30	1.465	1135	93.312	93.320	493	641
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.380 CFS	228 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
40	1.685	1306	93.260	93.286	721	584
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.366 CFS	219 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
50	1.881	1458	93.194	93.227	941	516

		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.350 CFS	210 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
60	2.077	1610	93.132	93.163	1152	458	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.287 CFS	345 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
80	2.151	1667	92.739	92.936	1497	169	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.153 CFS	184 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
100	2.212	1714	92.470	92.605	1682	32	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.045 CFS	54 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
120	2.263	1754	92.427	92.448	1736	18	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.027 CFS	49 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
150	2.320	1798	92.401	92.414	1786	11	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.018 CFS	32 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
180	2.356	1826	92.381	92.391	1819	7	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.013 CFS	24 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
210	2.386	1849	92.374	92.378	1843	6	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.010 CFS	18 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
240	2.408	1866	92.363	92.368	1862	4	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.007 CFS	27 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
300	2.442	1893	92.354	92.358	1889	3	
		INFILTRATION		0 CU.FT.			
		ORIFICE FLOW	0.002 CFS	8 CU.FT.			
		WEIR FLOW	0.000 CFS	0 CU.FT.			
360	2.450	1898	92.310	92.332	1898	0	

. . .

MAXIMUM OUT FLOW IS AT POND ELEV. 93.329
ORIFICE OUTFLOW IS 0.390 CFS
WEIR OUTFLOW IS 0.000 CFS

****
** BASIN ROUTING **
****

DMJM
5700 HARPER DR. NE SUITE 280
ALBUQUERQUE, NEW MEXICO 87109

PROJECT: ULIBARRI CONSTRUCTION
DATE: JULY 31 19

EFFECTIVE AREA 10600 SQ.FT. After Carport Addition
TOTAL RAINFALL 2.45 INCHES

STORAGE BASIN

ELEV	AREA SQ.FT.	VOLUME CU.FT.
92.30	2	0
92.50	444	44
93.00	763	346
93.50	1350	874
93.80	1500	1302

RECEIVED
AUG 05 1985
HYDROLOGY SECTION

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INFILTRATION 2ND HALF HOUR = 0.00 IN./HR.
INFILTRATION AFTER 1 HOUR = 0.00 IN./HR.

OUTLET INFORMATION:

ROUND ORIFICE

DIAMETER INCHES	INVERT ELEV.
4.0	92.30

WEIR

LENGTH FEET	INVERT ELEV.
5.00	93.80

TIME MIN.	RAINFALL INCHES	ACCUM. INFLOW CUBIC FEET	POND ELEV.	AVG. POND ELEV.	ACCUM. OUTFLOW CUBIC FEET	STORAGE CUBIC FEET
0	0.000	0	92.300	92.300	0	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.054 CFS	16 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
5	0.139	123	92.628	92.464	16	107
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.206 CFS	61 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
10	0.313	277	92.788	92.708	78	198
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.293 CFS	88 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
15	0.695	614	93.122	92.955	166	448
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.374 CFS	112 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
20	1.163	1027	93.403	93.262	278	749
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.409 CFS	122 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
25	1.340	1183	93.429	93.416	401	782
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.411 CFS	123 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
30	1.465	1294	93.419	93.424	525	769
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.406 CFS	243 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
40	1.685	1488	93.379	93.399	768	720
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.395 CFS	237 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
50	1.881	1662	93.325	93.352	1005	656

	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.383 CFS		230 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
60	2.077	1835	93.274	93.299	1235	599	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.330 CFS		396 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
80	2.151	1900	92.893	93.083	1631	268	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.212 CFS		254 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
100	2.212	1954	92.549	92.721	1886	67	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.075 CFS		90 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
120	2.263	1999	92.443	92.496	1976	23	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.033 CFS		59 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
150	2.320	2049	92.407	92.425	2036	13	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.020 CFS		36 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
180	2.356	2081	92.387	92.397	2073	8	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.015 CFS		27 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
210	2.386	2107	92.380	92.383	2100	7	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.012 CFS		21 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
240	2.408	2127	92.367	92.373	2122	5	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.008 CFS		31 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
300	2.442	2157	92.358	92.362	2154	3	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.002 CFS		9 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
360	2.450	21[illegible]4	92.311	92.334	2163	0	

```
MAXIMUM OUT FLOW IS AT POND ELEV. 93.429
ORIFICE OUTFLOW IS   0.412 CFS
WEIR OUTFLOW IS      0.000 CFS
```

Pre-Design Investigation
(Additions)

DATE 2-19-85

ADDRESS 10819 Roma N.E. ZONE ATLAS # C21-06

LEGAL DESCRIPTION

OWNER Ben Ulibarri 292-7212

ARCHITECT/ENGINEER

LOT SIZE

ZONING

PROPOSED DEVELOPMENT Addition 3900 #

	YES	NO	NA	COMMENTS
FLOOD HAZARD AREA		✓		
PART OF AN APPROVED REPORT	✓			
CONSTRUCTION PLANS ON MICRO-FILM	✓			
FIELD INSPECTION	✓			

Notified Ben Ulibarri that we require a drainage plan by P.E.
Bernie Carlos
2-19-85

COMMENTS:

Proposed Addition was going to be constructed on pervious area Flows were presently directed to agricult property to west.

DRAINAGE REQUIREMENTS:

Review with Carlos Montoya Based of Report that indicents that Area "A" Drains to agricult property to West ~~Pond~~ Because that area was to be undeveloped, drainage plan will ~~be~~ need to be update to show Q's entering existing Pond and additional impervious Area
Updated drainage plan Required SKC 2-19-85

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

L21 - D6

July 7, 1982

Mr. Jake Bordenave
Adam, Hamlyn, Anderson
4055 Montgomery Blvd. N.E.
Albuquerque, N.M. 87109

RE: DRAINAGE REPORT FOR 10819 ACOMA RD. NE - LETTER DATED JUNE 30, 1982

Dear Jake:

The information contained in the referenced letter has been reviewed and approved by this office.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl

ADAM, HAMLYN, ANDERSON
consulting engineers inc.
4055 MONTGOMERY BOULEVARD, N.E.
ALBUQUERQUE, NEW MEXICO 87109
505-881-1808

RECEIVED
JUL 06 1982
CITY ENGINEER

L21-D6

June 30, 1982
Mr. Charles Easterling
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Attn: Mr. Brian Burnett

Re: Drainage Report for 10819 Acoma Rd. AHA JOB NO. AC81595

Dear Sir:

The drainage report for this project was reviewed and approved by you in March of this year. Construction of the original development is not yet complete. The owner had decided to add 750 square feet to the building area. The additional roof area is to drain south to the originally proposed roof and then to the pond. The following sheet of computations indicates the originally designed detention pond will be adequate to contain the additional runoff generated by the addition.

If there are any questions regarding the proposed construction or the computations, please notify me.

Jean J. Bordenave
J.J. BORDENAVE, N.M.P.E. & L.S. NO. 5110

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 5110 NEW MEXICO JEAN J. BORDENAVE

Approved 7/7/82 BGB

PRINCIPALS:
CARL H. ADAM, P.E.
RICHARD L. HAMLYN, P.E.
JAMES D. ANDERSON, P.E.
DOYLE L. WISTE, P.E.
JEAN J. BORDENAVE, P.E.

ASSOCIATE:
PHILLIP K. MATTHEWS, P.E.

ADAM, HAMLYN, ANDERSON CONSULTING ENGINEERS, INC.	DRAINAGE REPORT SUPPLEMENT 10819 ACOMA RD SE	JOB NO. AC81595A DATE: 6/30/82 BY: JJB	SHT. NO. 1 OF

DEVELOPED CONDITION

100 YR, 6 HR STORM (See Sht 1 of 3 original report)

Area A =	6915 - 750 =	6,165 ft² @	C = 0.4	=	2,466
Area B =	1185 + 0 =	1185 ft² @	C = 0.7	=	830
Area C =	3500 + 0 =	3500 ft² @	C = 0.95	=	3325
Area D =	2400 + 750 =	3150 ft² @	C = 0.95	=	2993
					9614

6 hour Volume = (9614)(2.45/12) = 1,963 ft³

∴ POND VOLUME REQ'D = 1963 - 1143 = 820 ft³

POND VOLUME PROVIDED = 849 ft³ (from 2 of 3 original)

RUNOFF TO POND, 100 YR STORM

Runoff Volume = (9614 - 2466)(Rainfall/12) = 596 Rainfall

Assuming the peak volume to be @ 45 min. as in the original report and assuming the outflow to be equal to the original the total Vol. in storage under the new conditions would be:

Storage = (596)(1.96) - 345 = 823 ft³

which is less than the 849 ft³ provided; and the peak discharge would be:

Q peak = 0.15 cfs

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

L21 - D6

March 3, 1982

Mr. Jake Bordenave
Adam, Hamlyn, Anderson
4055-A Montgomery N.E.
Albuquerque, N.M. 87110

RE: 10818 ACOMA RD. DRAINAGE REPORT

Dear Jake:

The referenced drainage report is approved. Please see that the plans dated 1/22/82 are placed in the construction sets. Mr. Fred Aguirre will sign off for Hydrology when this is done.

Very truly yours,

BGB

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl

cc: Mr. Ken Hovey, Ken Hovey Design Group

ADAM, HAMLYN, ANDERSON
consulting engineers inc.
4055 MONTGOMERY BOULEVARD, N.E.
ALBUQUERQUE, NEW MEXICO 87109
505-881-1808

March 2, 1982
City of Albuquerque, Hydrology
P.O. Box 1293
Albuquerque, NM 87103

Attn: Mr. Brian Burnett

Re: The Drainage Report for 10819 Acoma Rd. AHA JOB NO. AC81595

Dear Sir:

In response to your questions regarding the Drainage Report for this project, we submit the following:

1. The property is zoned C-3 and set-back requirements for side yard are as stipulated for the O-1 zone. Front yard and corner lot side yards shall be a minimum of 5 feet. Interior lots have no side yard set-back.

2. It is difficult to tell the location of the development to the east of the project. However, it appears that the buildings are located in the first 3 or 4 lots on the east end of the block. This would leave an undeveloped area of approximately 3 to 4 lots between the existing and proposed development. In addition, it would appear that the first 5 or 6 lots at the west end of the block are developed. This again would leave a 3 to 4 lot undeveloped parcel between the existing and proposed development.

Sincerely,

Jean J. Bordenave, P.E.
Vice President

JJB/ccl

PRINCIPALS:
CARL H. ADAM, P.E.
RICHARD L. HAMLYN, P.E.
JAMES D. ANDERSON, P.E.
DOYLE L. WISTE, P.E.
JEAN J. BORDENAVE, P.E.

ASSOCIATE:
PHILLIP K. MATTHEWS, P.E.

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 24, 1982

Mr. Jake Bordenave
Adam, Hamlyn, Anderson
4055-A Montgomery Blvd. N.E.
Albuquerque, N.M. 87109

RE: 10818 ACOMA RD. NE DRAINAGE REPORT

Dear Jake:

A couple of questions?

1. Is the property to the East developed?

2. Is the zoning such that the building requires no setback?

Everything else appears in order. I will write an approval letter once these matters are cleared up.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl

cc: Mr. Ken Hovey

DRAINAGE REPORT

FOR

WAREHOUSE & OFFICES
ULIBARRI CONSTRUCTION COMPANY
10818 ACOMA ROAD SE
ALBUQUERQUE, NEW MEXICO

Prepared by:

Adam, Hamlyn, Anderson
Consulting Engineers, Inc.
4055 Montgomery Blvd. NE
Albuquerque, New Mexico 87109

Prepared for:

Ken Hovey Design Group
3700 Simms Avenue SE
Albuquerque, New Mexico

Jean J. Bordenave, N.M.P.E & L.S. #5110

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR
NO 5110
NEW MEXICO
JEAN J. BORDENAVE

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Removed

DRAINAGE REPORT
WAREHOUSE & OFFICES
ULIBARRI CONSTRUCTION COMPANY
10818 ACOMA ROAD SE
ALBUQUERQUE, NEW MEXICO

PURPOSE

The purpose of the report is to provide a method of construction which will comply with AMAFCA drainage requirements and the City of Albuquerque Policy, dated November, 1979.

LOCATION AND TERRAIN

The tract is located in the southeast quadrant of the City of Albuquerque and is situated on the north side of Acoma Road SE, west of Elizabeth St. See Plate I for exact location.

The site slopes to the west at approximately 2.5%. The site is in a natural state with very little vegetation.

UPLAND DRAINAGE

The site receives flows from the area immediately northeast of the property bounded by Cochiti on the north, Elizabeth on the east and Acoma on the south. See Plate II. Approximately 31,500 sq. ft. of area is involved. The flows will be allowed to follow historic directions across the site.

INTERNAL DRAINAGE

The site consists of four distinct areas. See Plate III. Area "A" will be left unchanged from that presently existing and any flows generated from this area will be permitted to flow unimpeded from east to west across the site. The runoff factor for this area of the site is taken to be 0.4 for both the developed and undeveloped conditions.

Areas "B", "C" and "D" are the portions of the site that will be modified by the proposed development.

Runoff from areas "B", "C" and "D" shall be directed to a detention pond located in the southwest corner of the property. The runoff factors for areas "B", "C" and "D" are conservatively takes to be 0.7, 1.0 and 1.0 respectively. The flows from the pond will be controlled by a 2.25 inch diameter orifice in a capped 4 inch diameter PVC drainage pipe.

CONCLUSION

Internally generated flows have been treated in such a manner that the 100 year peak flow from the developed site will be less than the 10 year undeveloped peak flow as required by the City of Albuquerque Policy, dated November 1979. Offsite flows are permitted to pass through the site.

The site is not in a flood hazard area. (See Plate IV.)

ADAM, HAMLYN, ANDERSON CONSULTING ENGINEERS, INC.	DRAINAGE REPORT 10818 ACOMA RD, SE	JOB NO. AC81595 DATE: 1/22/82 BY: DW	SHT. NO. 1 OF 3

EXISTING CONDITION

10-YR STORM.

AREA = 140 x 100 = 14000 ft²

RUNOFF COEFF = 0.40

LENGTH OF TRAVEL (OVERLAND) = 172'

SLOPE = 4/172 = 0.023%

∴ USE TIME OF CONCENTRATION = 10 MIN

i = 3.94 IN/HR

πr^2

Q10 = 0.4(3.94)(14000)/43560

= 0.51 CFS

100 YR, 6 HR. STORM

ACCUMULATED 6 HR VOL = 2.45(0.4)(14000)/12

= 1143 ft³

DEVELOPED CONDITION

100 YR, 6 HR STORM

AREA D = 30x80 = 2400 ft² ; C = 1.0

AREA C = 35x 100 = 3500 ft² ; C = 1.0

AREA B = 30 x 20 + 16x24 + (16²)π/4 = 1185 ; C = 0.70

AREA A = 75x100 - 16x24 - (16²)π/4 = 6915 ft² ; C = 0.40

ΣA = 2400+3500+1185+6915 = 14,000 ft²

6HR. VOL = $\frac{2.45}{12}$[2400x1.0+3500(1.0)+1185x0.70 + 6915x0.40]

= 1939 ft³

∴ POND VOL REQ'D = 1939 - 1143 = 796 ft³

ADAM, HAMLYN, ANDERSON CONSULTING ENGINEERS, INC.	DRAINAGE REPORT 10818 ACOMA RD, SE	JOB NO. AC81595 DATE: 1/22/82 BY: DW	SHT. NO. 2 OF 3

MAX FLOW FROM DETAINED AREA = Q_{10} (UND) - Q_{100} (AREA "A" DEV)

Q_{100} "A" DEV = (0.4)(5.70)(6915)/43,560 = .36 cfs

∴ MAX Q FROM POND = .51 - .36 = 0.15 cfs

POND VOL PROV.

ELEV.	AREA	VOLUME	Σ VOLUME
92.3	0	0	0
92.5	444	30	30
93.0	763	298	328
93.5	1350	521	849

DEPTH OF WATER @ V'OL = 680 ft³ = 1.2'

$Q = 0.6A\,[2gh]^{1/2}\,t = 0.15$ cfs

$= 0.6A\,[2(32.2)1.2]^{1/2}(1.0) = 0.15$

$A = .0284\ ft^2 = 4.10\ in^2$

$A = \frac{\pi D^2}{4} = 4.10$

∴ D = 2.28" → USE 2.25" DIA HOLE.

$A = 3.98\ in^2 = .0276\ ft^2$

$Q = 0.6(.0276)(64.4d)^{1/2}t$

$= .133\,d^{1/2}t$

$= 39.9d^{1/2}$ for $t = 5$ MIN

$= 79.8d^{1/2}$ for $t = 10$ MIN

RUN OFF TO POND = $\frac{1}{12}[3500 \times 1.0 + 2400 \times 1.0 + 1185(0.7)]$ RAINFALL

= 561 × RAINFALL

ADAM, HAMLYN, ANDERSON CONSULTING ENGINEERS, INC.	DRAINAGE REPORT 10818 ACOMA RD, SE	JOB NO A81595 DATE: 1/22/82 BY: DWL	SHT. NO. 3 OF 3

DEPTH EQUATIONS

@ ELEV = 92.5; $A = 444\ ft^2$ VOL = $30\ ft^3$; $d = 0.2\ ft$
@ ELEV = 93.0; $A = 763\ ft^2$ VOL = $328\ ft^3$; $d = 0.7\ ft$

@ $92.5 < ELEV < 93.0$; $A_{TOP} = 444 + [763 - 444]\, d/0.5$ $\quad d = d_1 + 0.2$
$= 444 + 638 d_1$

$$VOL = \frac{d_1}{3}\left(444 + [444\, A_{TOP}]^{1/2} + A_{TOP}\right) + 30$$

@ ELEV = 93.5; $A = 1350\ ft^2$ VOL = $849\ ft^3$ $\quad d = 1.2\ ft$

@ $93.0 < ELEV < 93.5$; $A_{TOP} = 763 + (1350 - 763)\, d_2/0.5 =$
$= 763 + 1174\, d_2$ $\quad d = d_2 + 0.7$

$$VOL = \frac{d_2}{3}\left(763 + (763\, A_{TOP})^{1/2} + A_{TOP}\right) + 328$$

TIME MIN	RAINFALL IN	RUNOFF VOL, FT³	STORAGE DEPTH, FT		Δ OUTFLOW FT³	EOUTFLOW FT³	STORAGE FT³
0	0.0	0	0				
				.345	23	23	319
5	0.61	342	.69				
				.78	35	58	475
10	0.95	533	.87				
				.92	38	96	577
15	1.20	673	.97				
				1.00	40	136	633
20	1.37	769	1.02				
				1.04	41	177	688
25	1.54	864	1.07				
				1.09	42	219	718
30	1.67	937	1.10				
				1.105	42	261	731
35	1.77	992	1.11				
				1.115	42	303	746
40	1.87	1049	1.12				
				1.125	42	345	754
45	1.96	1099	1.13				
				1.125	42*	387	746
50	2.02	1133	1.12				

* PEAK FLOW = 42/5x60 = .140 CFS < .15 CFS OK

MAX RETAINED VOL = 754 FT^3

PRECIPITATION DATA

ALBUQUERQUE, SAN PEDRO BLVD EAST

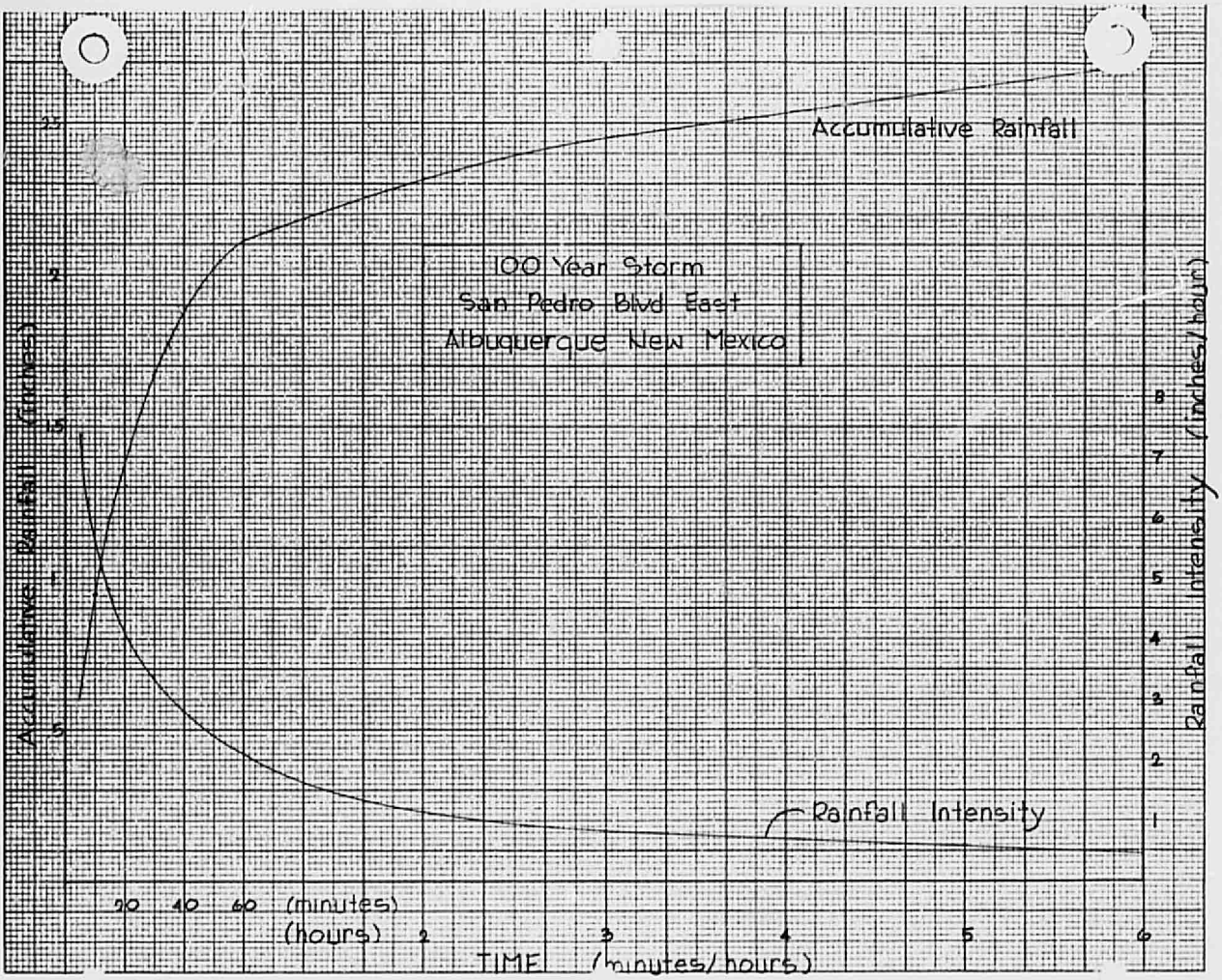
from NOAA Atlas 2, Volume IV, New Mexico

Recur Inter	Duration	min / hour	5	10	15	30	1	2	3	6	12	24
2 Year	Rainfall	inches	0.28	0.44	0.56	0.77	0.98	1.09	1.16	1.3	1.45	1.6
	Intensity	inches/hour	3.41	2.65	2.23	1.55	0.98	0.54	0.39	0.22	0.12	0.07
5 Year	Rainfall	inches	0.37	0.57	0.72	1.00	1.27	1.36	1.41	1.52	1.76	2.0
	Intensity	inches/hour	4.42	3.43	2.90	2.01	1.27	0.68	0.47	0.25	0.15	0.08
10 Year	Rainfall	inches	0.42	0.66	0.83	1.15	1.46	1.58	1.65	1.8	2.1	2.4
	Intensity	inches/hour	5.08	3.94	3.33	2.31	1.46	0.79	0.55	0.30	0.18	0.10
25 Year	Rainfall	inches	0.49	0.76	0.96	1.34	1.69	1.85	1.96	2.16	2.48	2.8
	Intensity	inches/hour	5.88	4.56	3.85	2.67	1.69	0.93	0.65	0.36	0.21	0.12
50 Year	Rainfall	inches	0.55	0.86	1.08	1.50	1.90	2.10	2.24	2.5	2.8	3.1
	Intensity	inches/hour	6.61	5.13	4.33	3.00	1.90	1.05	0.75	0.42	0.23	0.13
100 Year	Rainfall	inches	0.61	0.95	1.20	1.67	2.11	2.31	2.45	2.7	3.05	3.4
	Intensity	inches/hour	7.34	5.70	4.81	3.33	2.11	1.16	0.82	0.45	0.25	0.14

2 year 1 hour = $-0.011 + 0.942(1.3^2/1.6)$

100 year 1 hour = $0.494 + 0.755(2.7^2/3.4)$

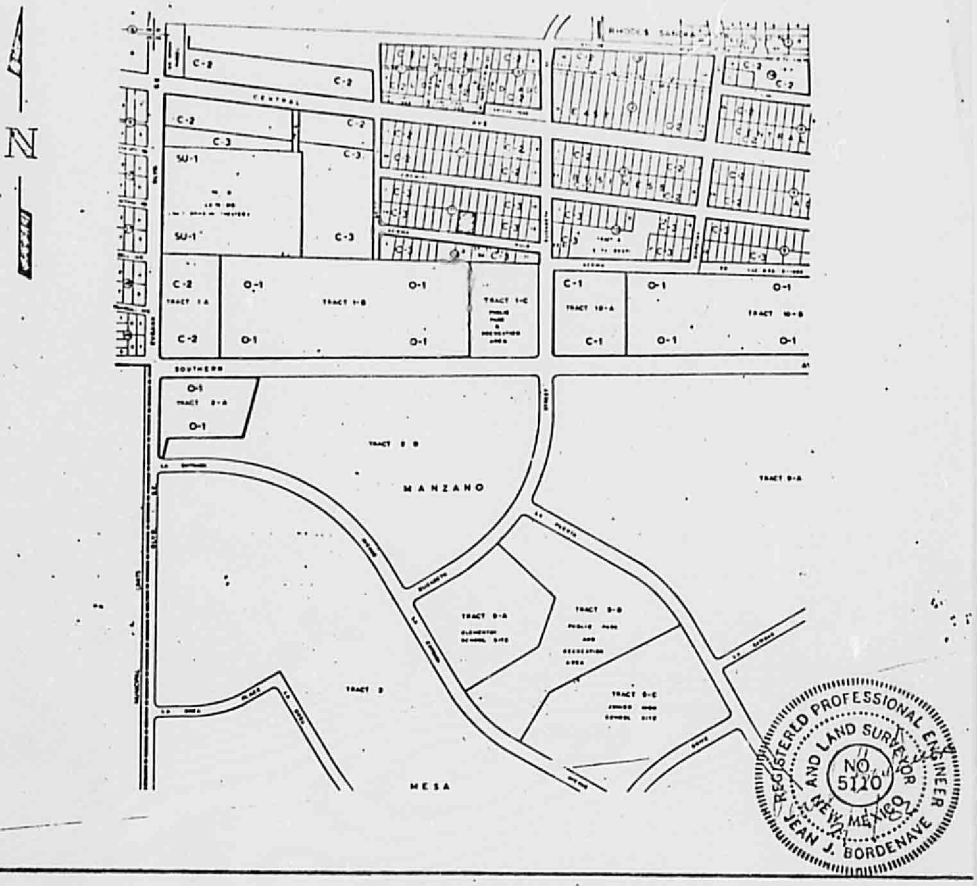
3 hour = 0.569 (6 hour) + 0.431 (1 hour)
2 hour = 0.341 (6 hour) + 0.659 (1 hour)
30 min = 0.79 (1 hour)
15 min = 0.57 (1 hour)
10 min = 0.45 (1 hour)
5 min = 0.29 (1 hour)



KEUFFEL & ESSER CO. N.Y.

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



NOTICE TO CONTRACTOR

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 hereon, shall be constructed in accordance with "Contract Documents for City-Wide Utilities and Cash Paving No. 30 "

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 and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.

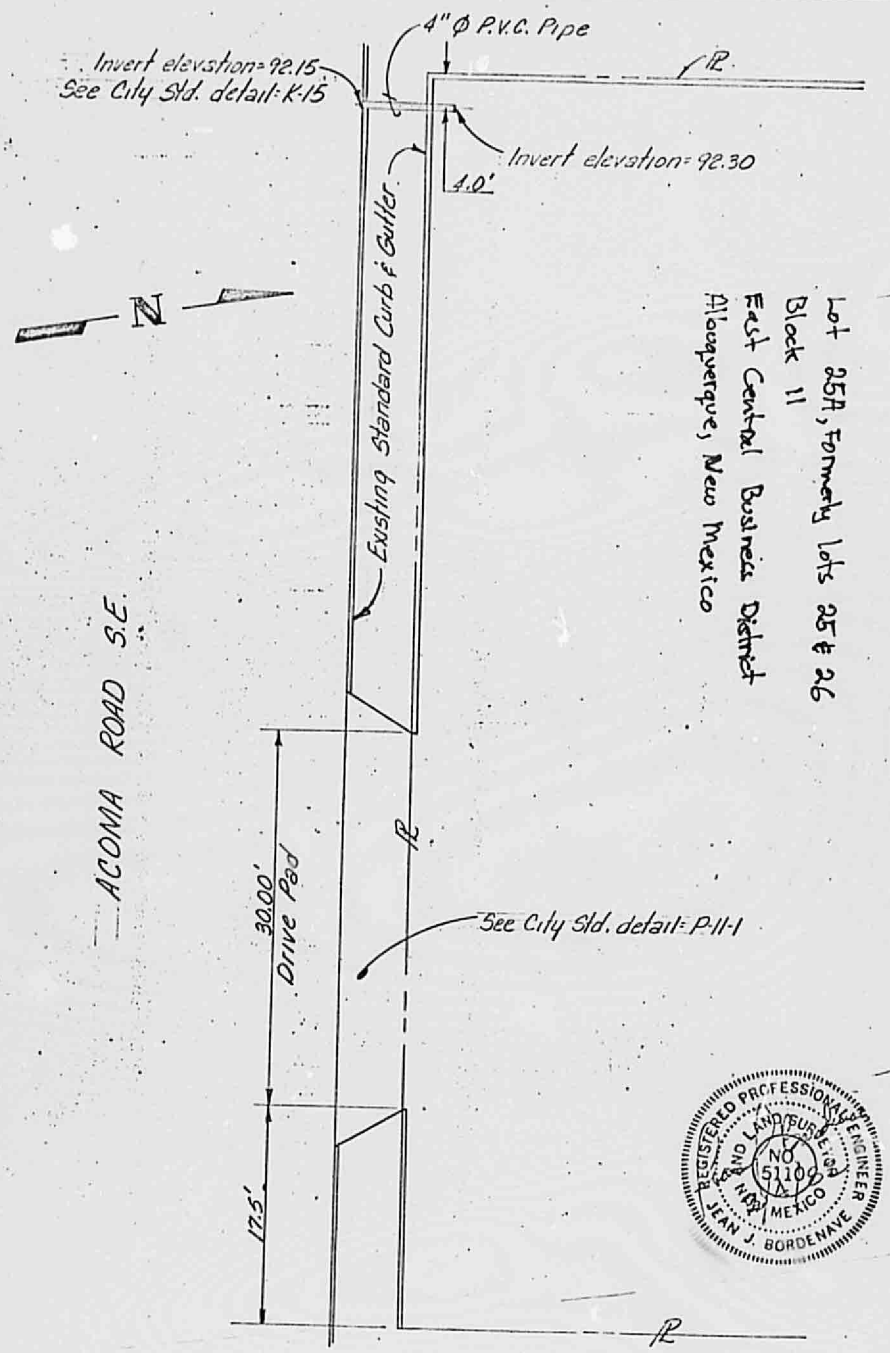
5. Backfill compaction shall be according to residential ~~N/A~~ street use.

Cente- Triangle Paving R-06870 B-15

APPROVALS	NAME	DATE	TITLE: DRIVE PAD & CURB DRAIN LINE 10819 ACOMA RD. S.E.
A.C.E./DESIGN	[illegible]	5 Apr 83	
INSPECTOR	[illegible]	10/5/83	PERMIT NO.
A.C.E./FIELD	[illegible]	10-14-83	SHEET 1 OF 2 — MAP NO. L-21

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



APPROVALS	NAME	DATE	TITLE: DRIVE PAD & CURB DRAIN LINE 10819 ACOMA RD. S.E.
A.C.E./DESIGN	[illegible]	5/11/83	
INSPECTOR	[illegible]	10/5/83	PERMIT NO.
A.C.E./FIELD	Ernest R. Harper	11-14-83	SHEET 2 OF 2 — MAP NO. 1-21