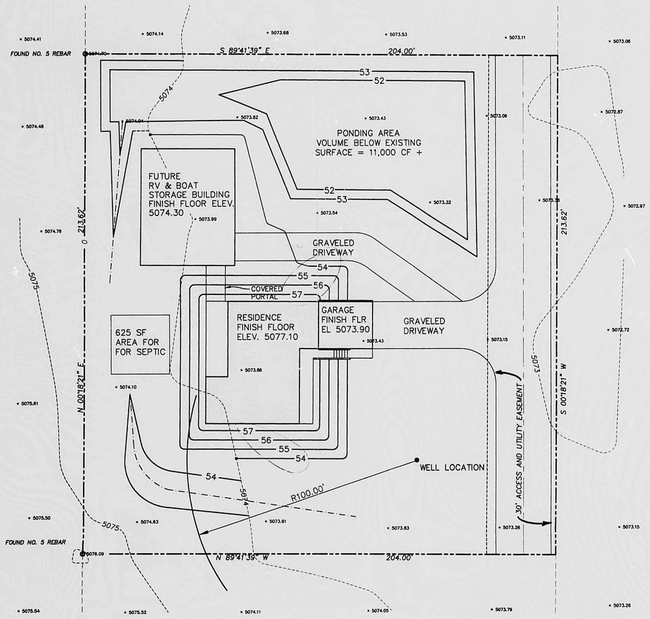
PUBLIC WORKS/HYDROLOGY

L10/D14



GRADING AND DRAINAGE PLAN

SCALE 1" = 20'

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

ROAD AGREEMENT:
THE UNDERSIGNED HEREBY CERTIFIES THAT HE (SHE) IS (ARE) THE OWNER(S) OF THE LAND DESCRIBED AS TRACT 417D, UNIT 3 TOWN OF ATRISCO GRANT AND HEARBY ACKNOWLEDGES THAT:

1) THERE IS NO EXISTING PUBLICLY MAINTAINED ROAD TO THIS LAND;
2) THAT BERNALILLO COUNTY WILL NOT MAINTAIN THE ROAD UNTIL IT IS CONSTRUCTED TO COUNTY STANDARDS AND FINALLY ACCEPTED BY THE COUNTY FOR MAINTENANCE;
3) THAT BERNALILLO COUNTY WILL NOT USE PUBLIC FUNDS FOR THE CONSTRUCTION OF THE ROAD; AND,
4) THAT ANY CONSTRUCTION OF THE ROAD CANNOT PROCEED UNTIL CONSTRUCTION PLANS (INCLUDING DRAINAGE PLANS) ARE APPROVED BY COUNTY PUBLIC WORKS AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA).

BY: _____
(SIGNATURE)

VERNON DORRIS
(PRINT NAME)

APRIL 13, 1996
DATE

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

ON THIS THIRTEENTH DAY OF APRIL, 1996, BEFORE ME PERSONALLY APPEARED VERNON DORRIS, WHOSE IDENTITY WAS PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS (ARE) SUBSCRIBED TO THIS INSTRUMENT, AND ACKNOWLEDGED THAT HE (SHE) (THEY) EXECUTED THE SAME.

NOTARY PUBLIC
MY COMMISSION EXPIRES ON
December 6, 1999

DISCUSSION

DEVELOPED HYDROLOGY:

THE PROPOSED DEVELOPMENT INCLUDES 5031 S.F. OF IMPERVIOUS AREA (HOUSE, GARAGE, PATIOS, SIDEWALKS) AND RV STORAGE BUILDING AND 1420 SF OF GRAVELED DRIVEWAYS, 5127 S.F. OF PRIVATE ACCESS, AND 625 S.F. FOR THE SEPTIC TANK AND LEACH FIELD. IT IS ASSUMED THAT 2000 S.F. OF LAWN AND GARDEN WILL BE DEVELOPED. IN THE SHORT TERM UNTIL REVEGETATION TAKES PLACE, 7500 S.F.OF DISTURBED SOIL WILL EXIST. THE ACTUAL RUNOFF WILL DECREASE AFTER NATIVE VEGETATION HAS RE-ESTABLISHED ITSELF.

IN ACCORDANCE WITH DPM PROCEDURES, THE FOLLOWING TABLE GIVES THE MAXIMUM 100 YEAR DISCHARGE AND 100 YEAR VOLUME FOR THIS DEVELOPMENT IN ZONE 1 FOR A TIME OF CONCENTRATION OF 12 MIN.

TABLE 1

TREATMENT	AREA (AC)	MAX RUNOFF (CFS/AC)	MAX Q (CFS)
A	0.674	1.29	0.87
B	0.046	2.03	0.09
C	0.165	2.87	0.47
D	0.116	4.37	0.51

TOTAL AREA 1.000 AC. TOTAL 100 YR. Q = 1.94 CFS = 1.94 CFS/AC

OFFSITE FLOWS TABLE 2

TREATMENT	AREA (AC)	VOL RUNOFF (IN/AC)	MAX VOL (CF)
A	0.674	0.44	1077
B	0.046	0.67	112
C	0.165	0.99	593
D	0.116	1.97	830

TOTAL AREA 1.000 AC. TOTAL 100 YR. VOL = 2612 CF

HISTORICAL 100 YEAR VOL = 1.00 AC X 0.44 IN/AC = 1598 CF -

INCREASE VOLUME DUE TO DEVELOPMENT = 1014 CF

THE PROPOSED DEVELOPMENT DISPLACES PONDING VOLUME BELOW THE BASE FLOOD ELEVATION 5076 AS FOLLOWS:

HOUSE, WALKS, EMBANKMENT	= 7138 CF
BOAT & RV STORAGE BUILDING	= 1064 CF
GARAGE	= 220 CF
MAIN GRAVELED DRIVEWAY	= 269 CF
BOAT & RV STORAGE GRAVELED DRIVEWAY	= 282 CF
TOTAL DISPLACED VOLUME BELOW 5076 BFE	= 8973 CF

OFFSITE WATERSHED HYDROLOGY:

THIS AREA OF THE COUNTY IS CURRENTLY PLATTED AS 5 ACRE TRACTS, HOWEVER, THE TREND IS TO DIVIDE EACH TRACT INTO 1 ACRE (NET) TRACTS. THE TOTAL INCLUDING HALF OF THE ROADWAY IS 49,680 SF PER LOT. PER TABLE A-5, SECTION 22 OF THE CITY OF ALBUQ. DPM, A DENSITY OF 0.88 DU/ACRE GIVES AN IMPERVIOUS AREA (TYPE 'D') SOIL OF 15.9% OF THE TOTAL LAND AREA. THE ASSUMED PERCENTAGES OF SOIL TREATMENT IS: A = 41.9%, B = 20%, C = 20%. FOR HYDROLOGIC ZONE 1, THE RUNOFF PER WATERSHED ACRE IS (1.29)(0.419) + (2.03)(0.20) + (2.87)(0.20) + (4.37)(0.159) = 2.22 CFS/AC.

OFFSITE FLOWS:

DIRECT FLOWS TO THIS SITE ARE FROM A SMALL (0.81 AC) WATERSHED AT THE WEST PROPERTY LINE. CONTRIBUTING DIRECT FLOW FROM THIS WATERSHED IS 1.80 CFS THAT ENTERS THIS SITE AS SHALLOW FLOW ACROSS THE ENTIRE WEST PROPERTY LINE. THIS SITE IS NEAR THE LOW POINT IN A REGIONAL PONDING AREA AS SHOWN ON THE ATTACHED FLOODWAY MAP. THIS INDIRECT FLOW IS REPRESENTED ON THE FEMA MAP (PANEL 33) AS A 100 YEAR FLOOD PLAIN WITH A BASE FLOOD ELEVATION OF 5076. THEREFORE, THIS SITE HAS BEEN DESIGNED TO PROVIDE FINISHED FLOOR ELEVATIONS OF 5077.1 OR 1.1 FEET ABOVE THE BFE. SINCE THE SITE CONTRIBUTES TO THE FLOOD PLAIN, IT HAS BEEN DESIGNED TO RETAIN ALL INCREASES IN RUNOFF VOLUME PLUS THE VOLUME DISPLACED BY DEVELOPMENT ON-SITE.

FLOOD PLAIN STATUS ? Zone AH ?

A SHOWN ON THE ADJACENT FLOODWAY MAP AND THE CORRESPONDING FEMA MAP PANEL ~~(33 C)~~ THIS SITE IS WITHIN A ~~FEMA~~ DESIGNATED 100 YEAR FLOOD PLAIN WITH A ~~BASE~~ FLOOD ELEVATION OF 5076. THERE ARE NO CONCENTRATED FLOW ARROYOS IN THE IMMEDIATE AREA OF THIS SITE.

LOT ACCESS:

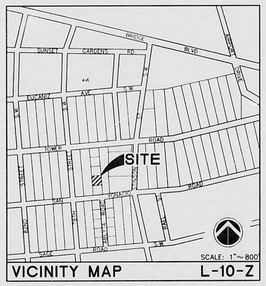
THIS TRACT OF LAND IS ACCESSED FROM TOWER ROAD, N.E. TOWER ROAD IS IMPROVED, AND IS MAINTAINED BY BERNALILLO COUNTY IN THIS SECTION. THE ROAD FROM TOWER TO THE SITE (WITHIN THE EASEMENT AT THE EAST PROPERTY LINE) IS NOT MAINTAINED BY BERNALILLO COUNTY. THE BERNALILLO COUNTY ROAD AGREEMENT IS INCLUDED ON THIS DOCUMENT.

FENCING

THIS LOT IS NOT CURRENTLY FENCED. THE OWNER AGREES THAT ANY FENCING INSTALLED IN THE FUTURE, WILL MEET THE REQUIREMENTS OF FENCE TYPES APPROVED BY THE COUNTY THAT DO NOT IMPEED FLOW.

EROSION

THE CONTRACTOR IS ADVISED THAT HE SHALL UTILIZE EARTHEN BERMS, HAY BALES, OR SILT FENCE AT THE RUNOFF DISCHARGE POINTS FROM THE SITE TO ASSURE ANY ERODED SOIL IS RETAINED ON THE SITE DURING CONSTRUCTION. ANY LOOSENED SOIL SHALL BE WATERED OR COVERED SO IT DOES NOT BECOME AIRBORNE.



VICINITY MAP L-10-Z

LEGAL DESCRIPTION: TRACT 417D, UNIT 3
TOWN OF ATRISCO GRANT
BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCH MARK

THE PROJECT BENCH MARK IS THE CITY OF ALBUQ. MONUMENT "8-L9".

AFFIDAVIT

ON APRIL 7, 1996 I INSPECTED THE PROJECT SITE. AT THAT TIME IT APPEARED THAT NO GRADING, FILLING, EXCAVATION, NOR CONSTRUCTION HAS OCCURRED SINCE THIS CONTOUR MAP WAS PREPARED.

LARRY G. READ, N.M.P.E. #10998 — 4/13/96 DATE

Zone A?
elev. 5076

FLOODWAY PANEL

FLOODWAY MAP AND BOUNDARIES
FEMA PANEL 350002 0033
EFFECTIVE DATE: OCTOBER 14, 1983

LEGEND

— — — —	CONSTRUCTED SWALE
----29----	EXISTING CONTOUR
——29——	PROPOSED CONTOUR
× 5073.32	EXISTING SPOT ELEVATION

APR 23 1996

SITE, GRADING AND DRAINAGE PLAN		REVISIONS	DATE
DORRIS FAMILY RESIDENCE 3932 TOWER ROAD SW ALBUQUERQUE, NEW MEXICO	LARRY READ & ASSOCIATES Civil Engineers P. O. Box 90233 Albuquerque, New Mexico 87199-0233 (505) 858-3165		4/11/96
4/13/96			SHEET NO.
			C1 OF 1

R# 27 DATE 3-27-02 OP E.P.

CITY OF ALBUQUERQUE

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The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

DIRECTOR

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

NOTARY PUBLIC

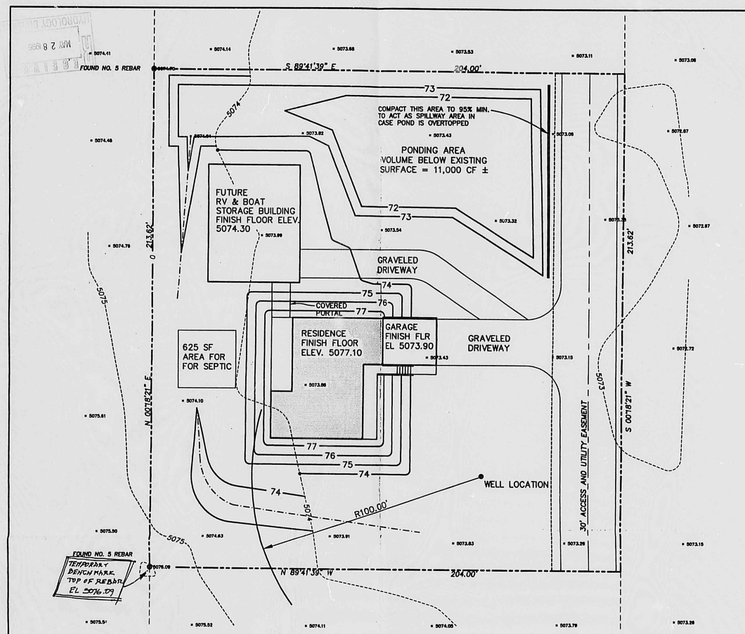
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 8/6/98

PLANS/PLATS ON FILE

FILE DESC: L10/D14

PLANS/PLATS 2

E 30 D 24 C 20 B 16 A 12 CITY OF ALBUQERQUE C D F



GRADING AND DRAINAGE PLAN

SCALE 1" = 20'

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

ROAD AGREEMENT:
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BY: (SIGNATURE)

VERNON DORRIS
(PRINT NAME)

APRIL 13, 1996
DATE

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

ON THIS THIRTEENTH DAY OF APRIL, 1996, BEFORE ME PERSONALLY APPEARED VERNON DORRIS, WHOSE IDENTITY WAS PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS (ARE) SUBSCRIBED TO THIS INSTRUMENT, AND ACKNOWLEDGED THAT HE (SHE) (THEY) EXECUTED THE SAME.

FRED D. TIDWELL
NOTARY PUBLIC
STATE OF NEW MEXICO

NOTARY PUBLIC
MY COMMISSION EXPIRES ON
December 6, 1999

DISCUSSION

DEVELOPED HYDROLOGY:

THE PROPOSED DEVELOPMENT INCLUDES 5031 S.F. OF IMPERVIOUS AREA (HOUSE, GARAGE, PATIOS, SIDEWALKS, AND RV STORAGE BUILDING AND 1420 SF OF GRAVELED DRIVEWAYS, 5127 S.F. OF PRIVATE ACCESS, AND 625 S.F. FOR THE SEPTIC TANK AND LEACH FIELD. IT IS ASSUMED THAT 2000 S.F. OF LAWN AND GARDEN WILL BE DEVELOPED. THE PONDING AND SWALE AREAS NORTH AND WEST OF THE PROPOSED STRUCTURES HAVE BEEN CONSIDERED AS TYPE "B" LAND TREATMENT. ALTHOUGH THEY WILL HAVE BEEN GRADED, THERE WILL BE NO FINE GRADING OR COMPACTION IN THESE AREAS.

IN ACCORDANCE WITH DPM PROCEDURES, THE FOLLOWING TABLE GIVES THE MAXIMUM 100 YEAR DISCHARGE AND 100 YEAR VOLUME FOR THIS DEVELOPMENT IN ZONE 1 FOR A TIME OF CONCENTRATION OF 12 MIN.

TABLE 1

TREATMENT	AREA (AC)	MAX RUNOFF (CFS/AC)	MAX Q (CFS)
A	0.215	1.29	0.28
B	0.241	2.03	0.49
C	0.429	2.87	1.23
D	0.116	4.37	0.51

TOTAL AREA 1.000 AC. TOTAL 100 YR. Q = 2.51 CFS = 2.51 CFS/AC

ALTHOUGH THE TOTAL ON-SITE RUNOFF GENERATED AFTER DEVELOPMENT (2.51 CFS/AC) IS GREATER THAN THE ASSUMED AVERAGE RUNOFF (2.22 CFS/AC) SHOWN IN "OFFSITE WATERSHED HYDROLOGY" BELOW, THE TOTAL RUNOFF CONTRIBUTION FROM THE SITE IS ONLY FROM THE CENTER OF THE GARAGE ROOF TO THE SOUTH. THIS CONTRIBUTION TO OFFSITE IS BASED ON 18560 SF TOTAL AREA THAT IS 47.8% TYPE "A", 0% TYPE "B", 40.6% TYPE "C", AND 11.6% TYPE "D" LAND TREATMENTS. TOTAL RUNOFF TO OFF-SITE IS (1.29)(0.215) + (2.03)(0) + (2.87)(0.182) + (4.37)(0.052) = 1.03 CFS/AC WHICH IS LESS THAN THE ASSUMED 2.22 CFS/AC FOR OFFSITE. THE NORTH PORTION OF THE SITE WILL DRAIN TO THE PONDING AREA TO BE RETAINED ON-SITE.

TABLE 2

TREATMENT	AREA (AC)	VOL RUNOFF (IN/AC)	MAX VOL (CF)
A	0.215	0.44	343
B	0.241	0.67	586
C	0.429	0.99	1542
D	0.116	1.97	830

TOTAL AREA 1.000 AC. TOTAL 100 YR. VOL = 3301 CF

HISTORICAL 100 YEAR VOL = 1.00 AC X 0.44 IN/AC = 1598 CF

INCREASE VOLUME DUE TO DEVELOPMENT = 1703 CF

THE PROPOSED DEVELOPMENT DISPLACES PONDING VOLUME BELOW THE BASE FLOOD ELEVATION 5076 AS FOLLOWS:

HOUSE, WALKS, EMBANKMENT	= 7138 CF
BOAT & RV STORAGE BUILDING	= 1084 CF
GARAGE	= 220 CF
MAIN GRAVELED DRIVEWAY	= 269 CF
BOAT & RV STORAGE GRAVELED DRIVEWAY	= 282 CF

TOTAL DISPLACED VOLUME BELOW 5076 BFE = 8973 CF

TOTAL REQUIRED PONDING VOLUME (8973+1703) = 10676 CF

OFFSITE WATERSHED HYDROLOGY:

THIS AREA OF THE COUNTY IS CURRENTLY PLATTED AS 5 ACRE TRACTS, HOWEVER, THE TREND IS TO DIVIDE EACH TRACT INTO 1 ACRE (NET) TRACTS. THE TOTAL INCLUDING HALF OF THE ROADWAY IS 49,680 SF PER LOT. PER TABLE A-5, SECTION 22 OF THE CITY OF ALBUQ. DPM, A DENSITY OF 0.88 DU/ACRE GIVES AN IMPERVIOUS AREA (TYPE "D") SOIL OF 15.8% OF THE TOTAL LAND AREA. THE ASSUMED PERCENTAGES OF SOIL TREATMENT IS: A = 41.8%, B = 20%, C = 20%. FOR HYDROLOGIC ZONE 1, THE RUNOFF PER WATERSHED ACRE IS (1.29)(0.418) + (2.03)(0.20) + (2.87)(0.20) + (4.37)(0.159) = 2.22 CFS/AC.

OFFSITE FLOWS:

DIRECT FLOWS TO THIS SITE ARE FROM A SMALL (0.81 AC) WATERSHED AT THE WEST PROPERTY LINE. CONTRIBUTING DIRECT FLOW FROM THIS WATERSHED IS 1.50 CFS THAT ENTERS THIS SITE AS SHALLOW FLOW ACROSS THE ENTIRE WEST PROPERTY LINE. THIS SITE IS NEAR THE LOW POINT IN A REGIONAL PONDING AREA AS SHOWN ON THE ATTACHED FLOODWAY MAP. THIS INDIRECT FLOW IS REPRESENTED ON THE FEMA MAP (PANEL 33) AS A 100 YEAR FLOOD PLAIN WITH A BASE FLOOD ELEVATION OF 5076. THEREFORE, THIS SITE HAS BEEN DESIGNED TO PROVIDE FINISHED FLOOR ELEVATIONS OF 5077.1 OR 1.1 FEET ABOVE THE BFE. SINCE THE SITE CONTRIBUTES TO THE FLOOD PLAIN, IT HAS BEEN DESIGNED TO RETAIN ALL INCREASES IN RUNOFF VOLUME PLUS THE VOLUME DISPLACED BY DEVELOPMENT ON-SITE.

FLOOD PLAIN STATUS

AS SHOWN ON THE ADJACENT FLOODWAY MAP AND THE CORRESPONDING FEMA MAP PANEL 350002-0033, THIS SITE IS WITHIN A FEMA 100 YEAR FLOOD PLAIN. HOWEVER, THERE ARE NO CONCENTRATED FLOW ARROYOS IN THE IMMEDIATE AREA OF THIS SITE.

LOT ACCESS:

THIS TRACT OF LAND IS ACCESSED FROM TOWER ROAD, N.E. TOWER ROAD IS IMPROVED, AND IS MAINTAINED BY BERNALILLO COUNTY IN THIS SECTION. THE ROAD FROM TOWER TO THE SITE WITHIN THE EASEMENT AT THE EAST PROPERTY LINE) IS NOT MAINTAINED BY BERNALILLO COUNTY. THE BERNALILLO COUNTY ROAD AGREEMENT IS INCLUDED ON THIS DOCUMENT.

FENCING

THIS LOT IS NOT CURRENTLY FENCED. THE OWNER AGREES THAT ANY FENCING INSTALLED IN THE FUTURE WILL MEET THE REQUIREMENTS OF FENCE TYPES APPROVED BY THE COUNTY THAT DO NOT IMPEDE FLOW.

EROSION

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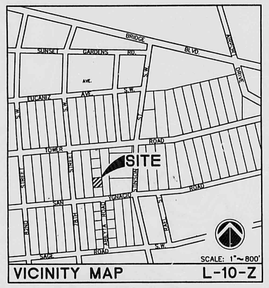

VICINITY MAP L-10-Z

LEGAL DESCRIPTION: TRACT 417D, UNIT 3
TOWN OF ATRISCO GRANT
BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCH MARK

THE PROJECT BENCH MARK IS THE CITY OF ALBUQ. MONUMENT "8-L9".

AFFIDAVIT

ON APRIL 7, 1996 I INSPECTED THE PROJECT SITE. AT THAT TIME IT APPEARED THAT NO GRADING, FILLING, EXCAVATION, NOR CONSTRUCTION HAS OCCURRED SINCE THIS CONTOUR MAP WAS PREPARED.

LARRY D. READ, N.M.P.E. #10998 — DATE 4/13/96

FLOODWAY PANEL

FLOODWAY MAP AND BOUNDARIES
FEMA PANEL 350002 0033
EFFECTIVE DATE: OCTOBER 14, 1983

LEGEND

—·—·—·—	CONSTRUCTED SWALE
----29----	EXISTING CONTOUR
——29——	PROPOSED CONTOUR
• 5073.32	EXISTING SPOT ELEVATION

LARRY D. READ N.M. 10998 PROFESSIONAL ENGINEER
APR 11 1996

SITE, GRADING AND DRAINAGE PLAN		REVISIONS	DATE
DORRIS FAMILY RESIDENCE 3932 TOWER ROAD SW ALBUQUERQUE, NEW MEXICO	LARRY READ & ASSOCIATES Civil Engineers P. O. Box 90233 Albuquerque, New Mexico 87199-0233 (505) 858-3165	COMMENTS 5/12/96	4/11/96
			SHEET NO. C1 OF 1

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

R# 217 DATE 5-27-96 OP EP

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

DIRECTOR 11-5-96

NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 8/20/98

E 30 D 24 C 20 B 16 A 12 CITY OF ALBUQERQUE C D F