



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 8, 2001

Dennis Lorenz, PE
Brasher & Lorenz, Inc.
2201 San Pedro NE, Bldg. 1
Albuquerque, NM 87110

**Re: Lands of Pablo Romero Subdivision Grading and Drainage Plan
Engineer's Stamp dated 10-4-01 (F14/D51)**

Dear Mr. Lorenz,

Based upon the information provided in your submittal dated 10-5-01, the above referenced site is approved for Preliminary Plat action by the DRB. Final Plat will be deferred until the SIA (with financial guarantees) is executed. Release of this SIA will require an Engineer's Certification of the above referenced grading plan

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, Hydrology

C: file

PROJECT HYDROLOGY								
Pablo Romero Subdivision								
ZONE:	2							
P ₆ HOUR	2.35							
P ₁₀ DAY	3.95							
UNDEVELOPED (ALLOWED):								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	<u>Q (cfs)</u>	<u>VOL (ac ft)</u>
SITE	1.22	1.22	0.00	0.00	0.00	0.53	1.90	0.054
DEVELOPED (PROPOSED):								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	<u>Q (cfs)</u>	<u>VOL (ac ft)</u>
A	0.31	0.00	0.00	0.17	0.14	1.58	1.19	0.041
B	0.30	0.00	0.00	0.16	0.14	1.59	1.16	0.040
C	0.32	0.00	0.00	0.18	0.14	1.56	1.22	0.042
D	0.29	0.00	0.00	0.16	0.13	1.57	1.11	0.038

Pond Volume: $V = (A_1 + A_2 + (A_1 * A_2)^{0.5}) / 3 * H$

		Req. Vol	A1 Elev(73)	A2 Elev(71)	H	Actual Vol (ft^3)
V10day(A)	0.059 (ac-ft)	2587.8 (ft^3)	2156	1102.00	2.00	3199.600
V10day(A)	0.058 (ac-ft)	2546.8 (ft^3)	2156	1102.00	2.00	3199.600
V10day(A)	0.060 (ac-ft)	2628.8 (ft^3)	2156	1102.00	2.00	3199.600
V10day(A)	0.055 (ac-ft)	2411.8 (ft^3)	2156	1102.00	2.00	3199.600

At an average elevation of 72.0, the area is 25'x67'

Volume=A*d (Req.)	d= 1.54	Water surface elevation	73.54	(Lot A)
Volume=A*d (Req.)	d= 1.52	Water surface elevation	73.52	(Lot B)
Volume=A*d (Req.)	d= 1.57	Water surface elevation	73.57	(Lot C)
Volume=A*d (Req.)	d= 1.44	Water surface elevation	73.44	(Lot D)

Minimum pad elev.	(Lot A)	74.54
(1' above W.S.E.)	(Lot B)	74.52
	(Lot C)	74.57
	(Lot D)	74.44

Diff. (in addition to the already 1' above W.S.E.)

Actual pad elev.	(Lot A)	75.5	0.96
	(Lot B)	75.5	0.98
	(Lot C)	75.5	0.93
	(Lot D)	75.5	1.06

TRACT 41A
M.R.G.C.D. MAP 32

TRACT 42A
(1.4323 AC)
(WARRANTY DEED FILED 7-11-94, DCC 96077219)

TRACT 42B
(1.1951 AC)
(WARRANTY DEED FILED 7-12-94, DCC 96077950)

TRACT 171A1A
LANDS OF JACK F. CULLY
(FILED 6-24-91, VOL. 930, P. 177)

LOT 1
LANDS OF JACK F. CULLY
(FILED 9-1-74, VOL. C-11, P. 95)

NOTES:

- ALL BEARINGS SHOWN HEREON ARE GRID BEARINGS BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, MEAN DELTA ALPHA = -00°14'01" ALL DISTANCES SHOWN ARE BASED ON THE SAME SYSTEM.

I, ROBERT C. MILLER, HEREBY AFFIRM THAT I AM A DULY QUALIFIED REGISTERED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO AND DO CERTIFY THAT THIS PLAT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION; SHOWS ACCURATE MEASUREMENTS OF LAND AREAS; SHOWS ALL EASEMENTS, ENCUMBRANCES, AND OTHER INTERESTS AFFECTING THE LANDS SURVEYED; AND THAT I AM A DULY QUALIFIED REGISTERED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO.

community
sciences

74 = 80.88 Ac.

Los Roblanos Ranch
Tr. 1A Map 31

Los Roblanos Ranch
44.90 Ac.

AMENDED PLAT OF COURT PARTITION
LOS ROBLANOS

354002

3.44 Ac.

Los Roblanos Ranch
7.64 Ac.

MONTAÑO

ICLEAR PHARMACY
(REPLAT OF TR. 8A14282A1)
TR. 8A
4.90(165) Ac.

REPL. of VILLA SANTENAY
TO
RANCHO CABALLERO

MUNICIPAL ADDITION NO. 8
COLUMBUS PARK
5.22 Ac.

Douglas Mac Arthur Subdn.

MAP 32

LAND OF COOMBS,
SMITH & MURPHY
200 AC.

LANDS OF SPENCER &
WESLEY
THE LAND OF
PAULA DELGADO CHAVEZ
4A 3A 2A 1A

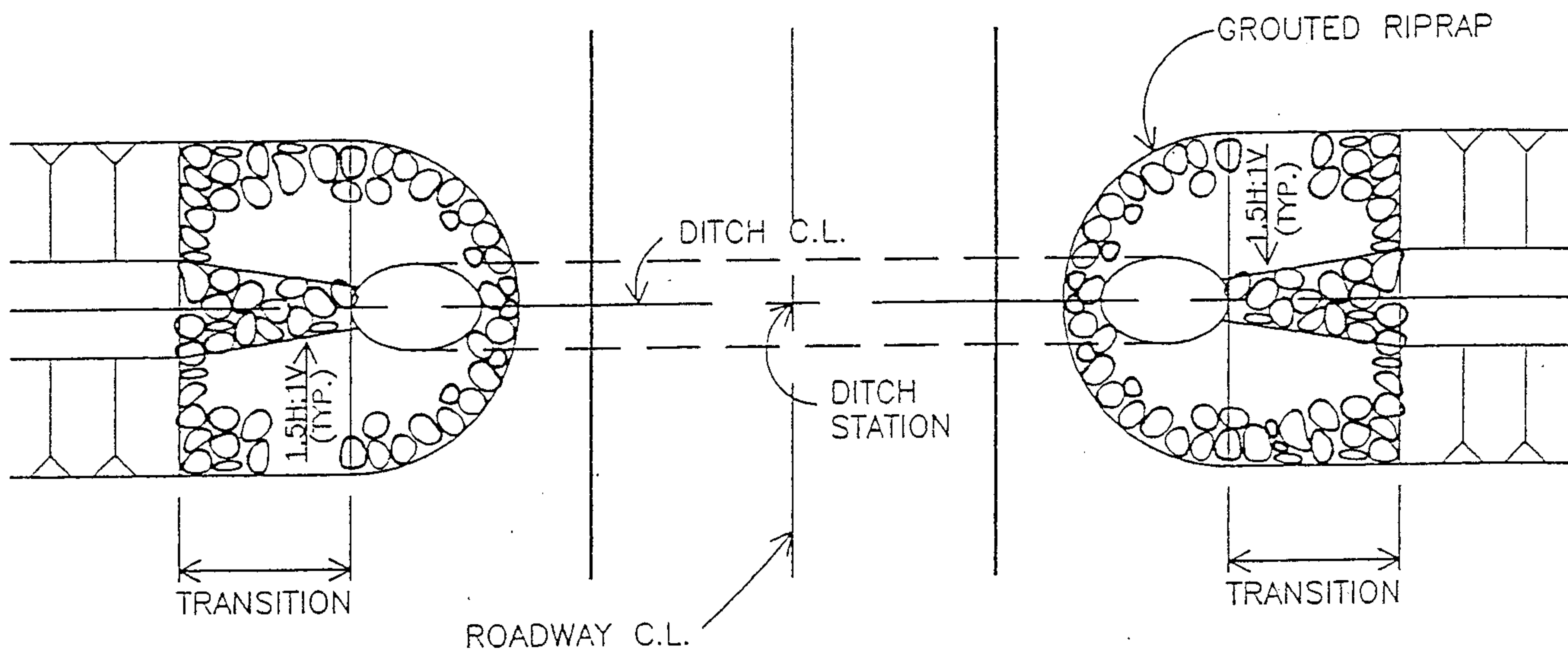
CHAVEZ
3
95 Ac.

Tr. 123 Map 32
3.60 Ac.

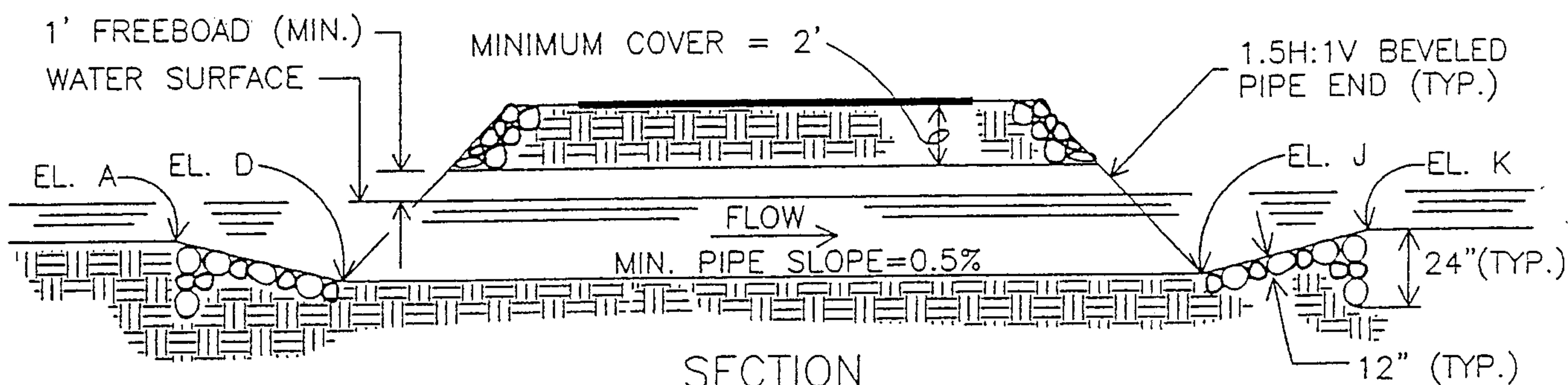
Tr. 124 Map 32

Tr. 125 Map 32

2.19



PLAN



SECTION

NOTES:

1. REINFORCED CONCRETE PIPE CULVERT SHALL CONFORM TO A.S.T.M. DESIGNATION 076-72, CLASS III, WALL B, USING "O" RING GASKETED JOINTS.
2. CORRUGATED METAL PIPE CULVERT SHALL CONFORM TO INTERIM FEDERAL SPECIFICATION WW-P-00405, CLASS I AND II, SHAPES 1, 2 AND 3.
3. CULVERT CROSSINGS SHALL BE SET AT AN ELEVATION PROVIDING A MAXIMUM BACK WATER EFFECT OF NOT MORE THAN 0.25' AS DETERMINED BY HYDRAULIC COMPUTATIONS.
4. TRANSITIONS SHALL BE PROVIDED AT BOTH INLET AND OUTLET OF THE PIPE AS SHOWN ON THE DRAWING ABOVE. TRANSITIONS MAY BE CONSTRUCTED OF CONCRETE OR GROUTED RIPRAP.
5. GROUTED RIPRAP PROTECTION SHALL BE USED ADJACENT TO STRUCTURES IN EARTH-SURFACED WATERWAYS WHERE EROSION MAY OCCUR. RIPRAP SHALL BE HARD, DENSE AND DURABLE.
6. ALL BACKFILL SHALL BE COMPACTED TO 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE A.S.T.M. PROCTOR TEST.
7. NO CULVERT INSTALLATIONS ARE PERMITTED DURING THE IRRIGATION SEASON (MARCH 1 TO NOVEMBER 1 INCLUSIVE).
8. THE LICENSEE SHALL CLEAN AND REMOVE ALL SILT AND DEBRIS WITHIN THE CULVERT CROSSING ON A ANNUAL BASIS PRIOR TO MARCH 1st AND THEREAFTER.
9. THE LICENSEE SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE CULVERT CROSSING AND ALL ACCESORIES ON THE CULVERT CROSSING.
10. THE LICENSEE SHALL BE RESOPNSIBLE FOR THE CONTROL OF VEGETATION ON AND AROUND THE CULVERT CROSSING.

PIPE CULVERT INFORMATION

EL @ A= 100.00
 EL @ D= 99.44
 EL @ J= 99.24
 EL @ K= 99.96
 WS @ A= 101.50
 WS @ K= 101.46
 PIPE LENGTH= 30'
 TRANSITION DIM.= 15'
 PIPE DIA.= 36" φ

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 MINIMUM CONSTRUCTION STANDARDS
 PIPE CULVERT CROSSING
 LATERALS AND ACEQUIAS

B.O.R. APPROVAL _____
 M.R.G.C.D. APPROVAL _____
 DRAWN _____

DRAWING NO. 163-518-4944

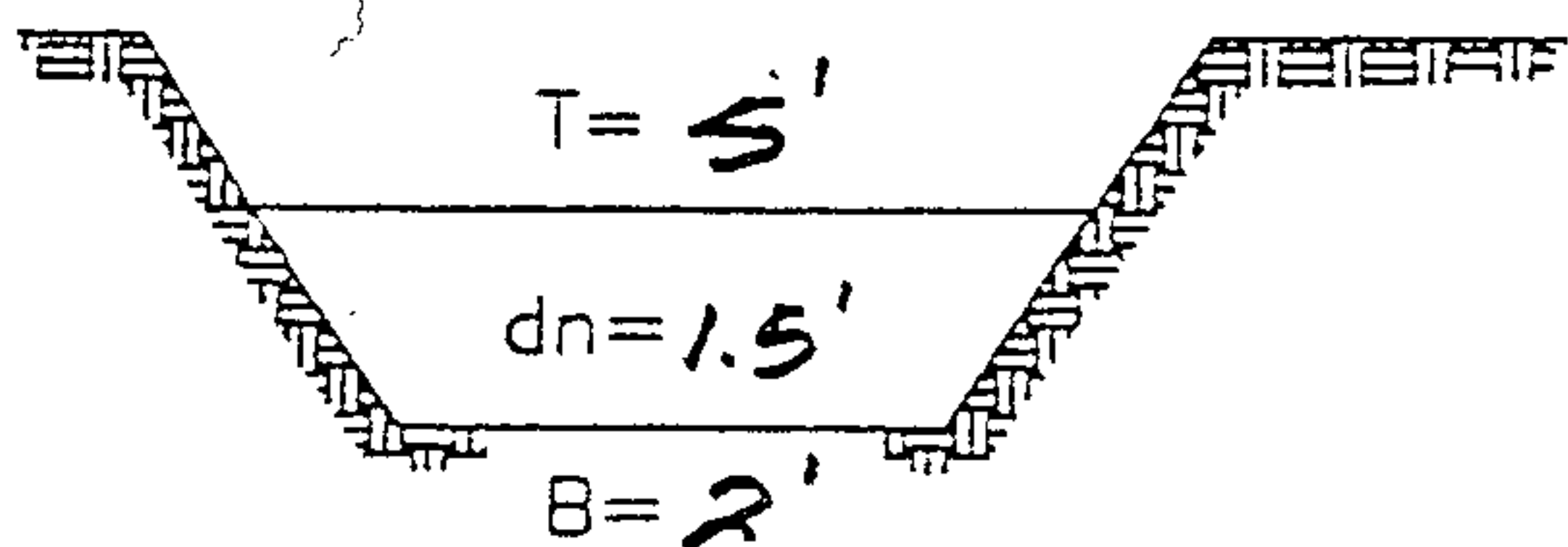
PROJECT PRIVATE ROAD CULVERT CROSSING

WATERWAY HACKMAN LATERAL

STATION 35+00 ± SHEET _____ OF _____

CALCULATED BY R. Gomez DATE _____

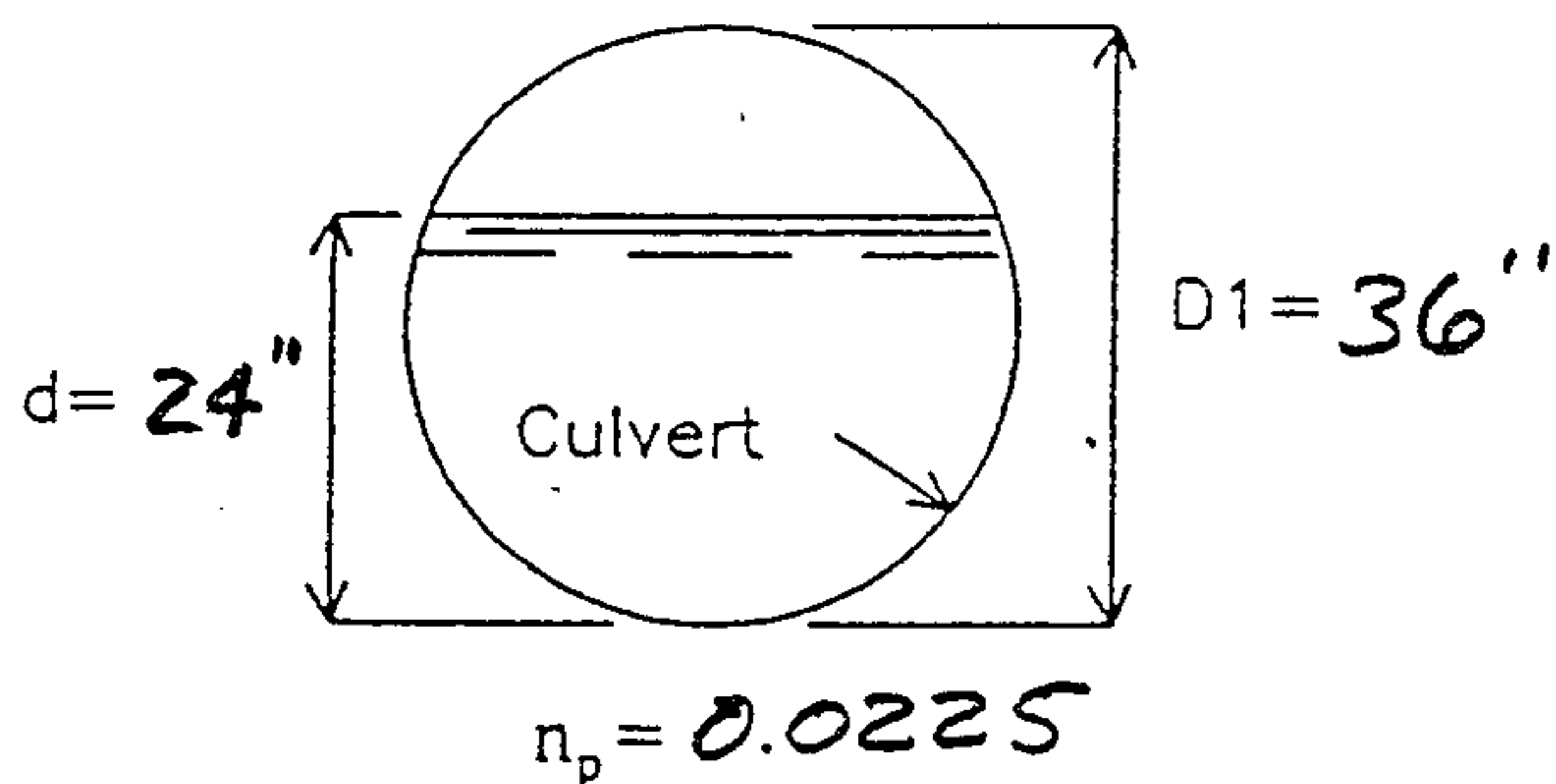
SURVEYED CHANNEL CROSS-SECTION



$$S_c = 0.0005 \text{ /FT}$$

$$n_c = 0.0225$$

PIPE HYDRAULICS



$$d/D_1 = 0.67$$

$$A_p = D_1^2 (\text{Table Value}) = 5.41 \text{ sf}$$

$$R_p = D_1 (\text{Table Value}) = 1.04'$$

$$V_p = Q_c / A_p = 1.68 \text{ fps}$$

$$h_{vp} = V_p^2 / 2g = 0.04'$$

NOTE:

Computations are based on applications of Mannings and Scobey's formuals.

CHANNEL HYDRAULICS

$$A_c = \left[\frac{T+B}{2} \right] d_n = 5.25 \text{ sf}$$

$$WP_c = 2 \left[\left[\frac{T-B}{2} \right]^2 + d_n^2 \right]^{1/2} + B = 4.12'$$

$$R_c = A_c / WP_c = 1.27'$$

$$V_c = \frac{(1.486 \times S^{1/2} \times R_c^{2/3})}{n_c} = 1.73 \text{ fps}$$

$$Q_c = V_c \times A_c = 9.08 \text{ cfs}$$

$$h_{vc} = V_c^2 / 2g = 0.05'$$

AREA OF PIPE NEEDED

$$Q_c / V_m =$$

LOSSES THRU PIPE

$$h_i = k_i (h_{vp} - h_{vc}) = 0$$

$$h_o = k_o (h_{vp} - h_{vc}) = 0$$

$$h_f = L \frac{V_p^2 \times n_p^2}{2.2 \times R_p^{4/3}} = 0.02$$

30'

$$\text{TOTAL LOSSES (H)} = 0.02'$$

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
MINIMUM CONSTRUCTION STANDARDS
HYDRAULIC COMPUTATION
FORM

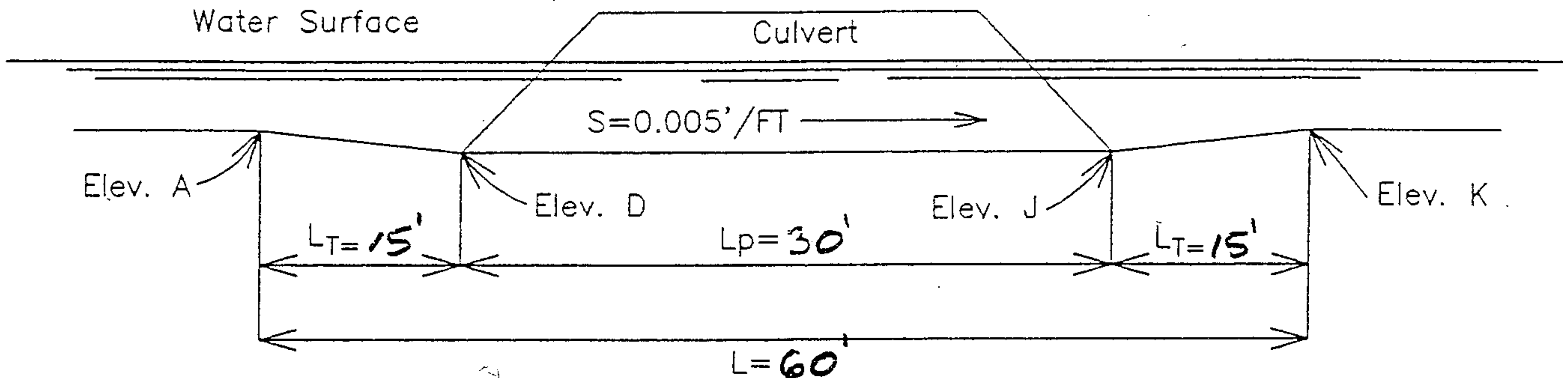
B.O.R. APPROVAL _____
M.R.G.C.D. APPROVAL _____
DRAWN _____

PROJECT PRIVATE ROAD CULVERT CROSSING

WATERWAY HACKMAN LATERAL

STATION 35+00 ± SHEET _____ OF _____

CALCULATED BY R. Gomez DATE _____



Elev. A = 100.00

W.S. Elev. @ Elev. A = Elev. A + d_n = 101.50

W.S. Elev. @ Elev. K = W.S. @ Elev. A - L (S) = 101.46

h_A = W.S. Elev @ Elev. A - W.S. Elev. K = 0.04

Elev. D = W.S. @ A - [$d + 1.5(h_p)$] = 99.44

Elev. J = Elev. D - [$0.005(L_p)$] = 99.24

Elev. K = Elev. A - h_A = 99.96

BACKED WATER AT ELEV. A = H - h_A = NO BACK WATER

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
MINIMUM CONSTRUCTION STANDARDS
HYDRAULIC COMPUTATION
FORM

B.O.R. APPROVAL _____

M.R.G.C.D. APPROVAL _____

DRAWN _____

IN WITNESS WHEREOF, the parties hereto have executed this agreement the day and year first above written.

APPROVED:

MIDDLE RIO GRANDE CONSERVANCY DISTRICT

[Signature] DATE: 6/26/2000
Chief Executive Officer

LICENSEE

Fabio Romero DATE: 6-18-00

ACKNOWLEDGMENT OF THE LICENSEE

State of _____)
County of _____)ss.

On the 19th day of June, 2000, the above noted Licensee personally appeared before me, known to me to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he / she signed the within and foregoing instrument as his / her free and voluntary act and did for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

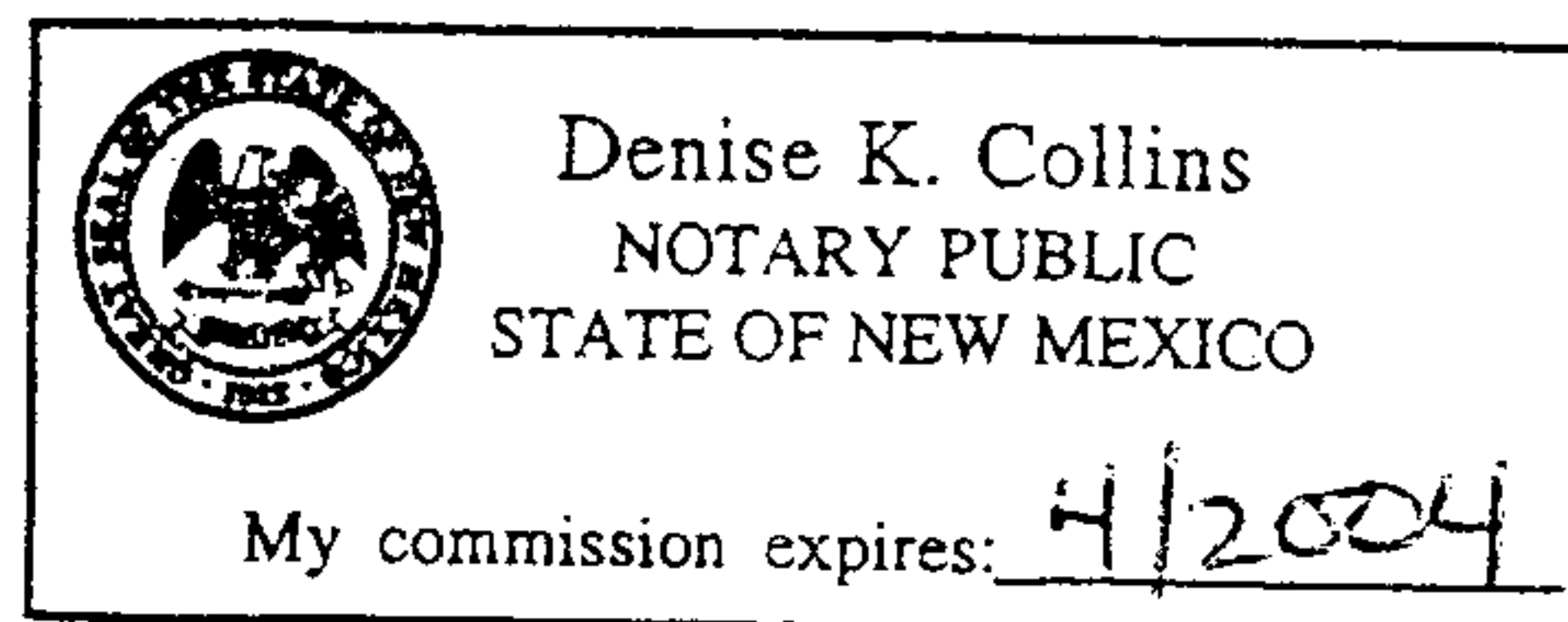
Denise K. Collins

Notary Public in and for the

State of

Residing at

My commission expires: 4/2004

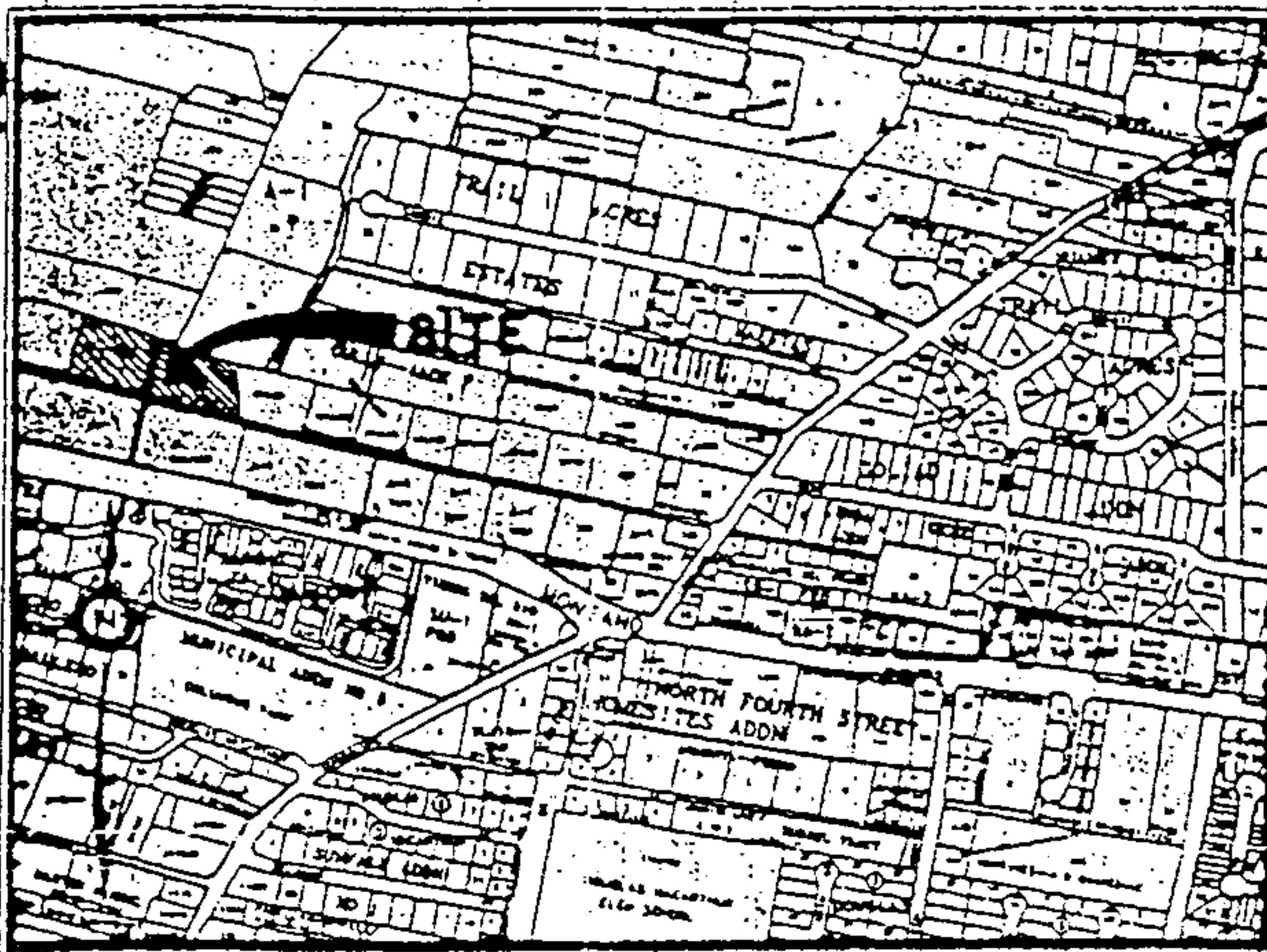


FINAL CONSTRUCTION INSPECTED:

MIDDLE RIO GRANDE CONSERVANCY DISTRICT

DATE: _____

FLA 7.000G



SCALE: 1"=750'± VICINITY MAP F-14-Z

LEGAL DESCRIPTION:

THAT CERTAIN PARCEL OF LAND SITUATE WITHIN THE TOWN OF ALAMEDA GRANT, "PROJECTED" SECTIONS 31 AND 32, TOWNSHIP 11 NORTH, RANGE 3 EAST, NEW MEXICO PRINCIPAL MERIDIAN, KNOWN AS TRACT 42A2 ON MAP 32, MIDDLE RIO GRANDE CONSERVANCY DISTRICT, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING FOR A TIE, AT THE ALBUQUERQUE CITY SURVEY (ACS) MONUMENT 75-F13 (ALUMINUM CAP HAVING NEW MEXICO STATE PLANE COORDINATES, CENTRAL ZONE (NAD 1927) OF X=376476.46 AND Y=1506857.51); THENCE N27°24'26"W, 320.15 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF ADOBE ROAD NW, SAID POINT ALSO BEING THE SOUTHWEST CORNER AND THE TRUE POINT OF BEGINNING OF THE PARCEL HEREIN DESCRIBED; THENCE DEPARTING THE NORTHERLY RIGHT-OF-WAY LINE OF ADOBE ROAD NW, N15°18'18"E, 198.06 FEET TO AN ANGLE POINT BEING THE NORTHWEST CORNER OF THE PARCEL HEREIN DESCRIBED; THENCE S74°19'04"E, 322.00 FEET TO AN ANGLE POINT BEING THE NORTHWEST CORNER OF TRACT 42B AS THE SAME IS DESCRIBED IN WARRANTY DEED FILED JULYB12, 1996, DOCUMENT #6077950, SAID POINT ALSO NORTHEAST CORNER OF THE PARCEL HEREIN DESCRIBED; THENCE S15°10'19"W, 109.37 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF ADOBE ROAD NW, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF THE PARCEL HEREIN DESCRIBED; THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE, N75°49'43"W, 322.00 FEET TO THE TRUE POINT OF BEGINNING OF THE PARCEL HEREIN DESCRIBED;

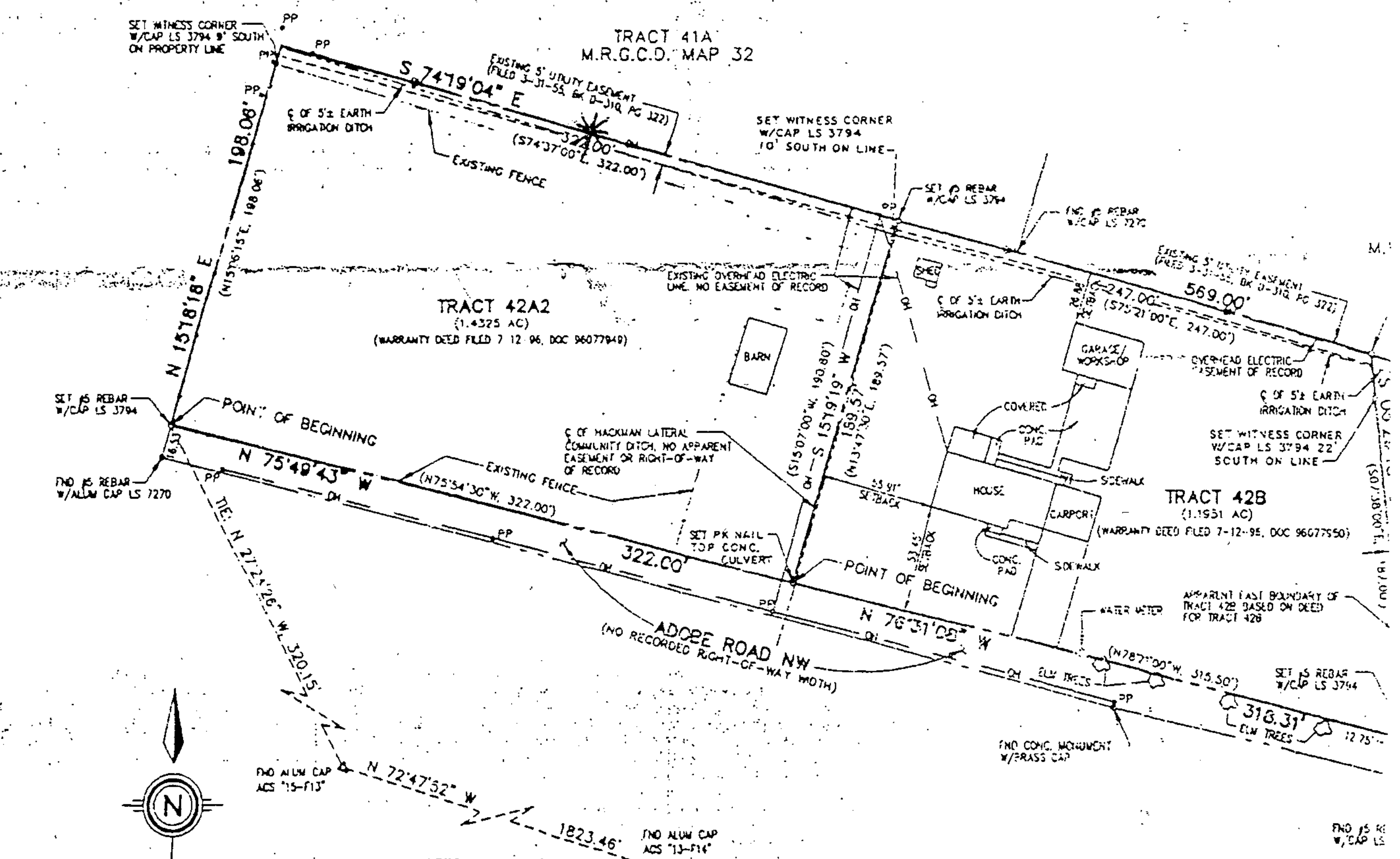
THE ABOVE DESCRIBED PARCEL CONTAINS 1.4325 ACRES MORE OR LESS.

LEGAL DESCRIPTION:

THAT CERTAIN PARCEL OF LA
GRANT, "PROJECTED" SECTION
EAST, NEW MEXICO PRINCIPAL
MAP 32, MIDDLE RIO GRANDE
MORE PARTICULARLY DESCRIBE

BEGINNING FOR A TIE, AT THE MONUMENT "15-F13" (ALUMINUM PLANE COORDINATES, CENTRAL Y=1506857.51); THENCE N27°24'E CORNER OF TRACT 42A AS THE DEED, FILED JULY 12, 1996, BEING ON THE NORTHERLY RIGHT-THENCE ALONG SAID NORTHERLY FEET TO THE TRUE POINT OF DESCRIBED; THENCE DEPARTING OF ADOBE ROAD NW, N15°19'11"E BEING THE NORTHWEST CORNER THENCE S74°19'04"E, 247.00 FEET NORTHEAST CORNER OF THE S06°29'18"E, 191.50 FEET TO A 1/2 WAY LINE OF ADOBE ROAD SOUTHEAST CORNER OF THE 1/2 ALONG SAID NORTHERLY RIGHT-TO THE SOUTHWEST CORNER OF PARCEL HEREIN DESCRIBED.

THE ABOVE DESCRIBED PARCE
LESS.



NOTES:

1. ALL BEARINGS SHOWN HEREON ARE GRID BEARINGS BASED ON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, MEAN DELTA ALPHA = $-00^{\circ}14'01''$. ALL DISTANCES ARE GROUND DISTANCES.
2. BEARINGS AND DISTANCES SHOWN IN PARENTHESIS ARE RECORD DATA FROM PLATS AND DEEDS.
3. THE LOCATION OF THE GAS EASEMENT FOR THE PURPOSE OF LAYING AND MAINTAINING A GAS LINE GRANTED TO ALBERT SIMMS, RECORDED MARCH 13, 1957 IN BOOK D-379, PAGE 561, IN BERNALILLO COUNTY, NEW MEXICO, CANNOT BE DETERMINED FROM INFORMATION PROVIDED.

I, ROBERT C. MILLER, HEREBY AFFIRM THAT I AM A SURVEYOR UNDER THE LAWS OF THE STATE OF CALIFORNIA. THIS PLAT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION. THIS PLAT SHOWS ALL EASEMENTS AND RESERVATIONS MADE KNOWN TO ME BY THE OWNERS AND/OR THEIR ATTORNEYS, TITLE COMPANIES, UTILITY COMPANIES OR OTHERS. I CERTIFY THAT THIS PLAT MEETS THE "MINIMUM REQUIREMENTS" OF THE STATE OF NEW MEXICO AND IS TRUE AND CORRECT TO THE BEST OF MY BELIEF.

IN WITNESS WHEREOF, this certificate is executed
day of December, 1995.

* 30 foot drive pad, centered
mid way on North property
line. $\approx$ 161.5' from property corner

CURB CUT(S) APPROVED
TRAFFIC ENGINEER/TRANSP. DEV. DIV.
BY Joseph D Montano
DATE 5-17-2000