PUBLIC WORKS/HYDROLOGY

2 OF 2

A14/D10

97C-135 (3)

97C-135 (3)

97044721

TRACTS G-1A-2A THRU G-1A-2E

SEVEN - BAR RANCH

(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)

CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOVEMBER, 1996

NOTE:
Flood hazard area as currently shown on the Federal Emergency Management Agency (FEMA) National Flood Insurance Program "Flood Insurance Rate Map" (Community Panel No. 350002 0002 C, effective date October 16, 1983). Existing improvements and the proposed drainage improvements to be constructed by the City of Albuquerque Special Assessment District No. 223 (SAD 223) are expected to eliminate the flood hazard on the subject property. The request for a letter of map revision (LOMR) from FEMA and the supporting drainage analysis will be submitted to FEMA in connection with the SAD 223 drainage report; however, the City does not guarantee FEMA approval of the request or issuance of a LOMR.

Reserved for County Clerk Seal

Additional street right of way dedicated to the City of Albuquerque in fee simple by this plat: 0.0338 Ac. (shaded area)

TRACT M-1
SEVEN-BAR RANCH
Filed- January 6, 1995 Volume 95C, folio 3

COTTONWOOD DRIVE N.W.

11.5'x17' PNM TRANSFORMER EASEMENT
Per plat filed- January 6, 1995
Volume 95C, Folio 3

11.5'x5' PNM TRANSFORMER EASEMENT
Granted by this Plat

8' SIDEWALK AND PUBLIC UTILITY EASEMENT
Granted by this Plat

RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT for the benifit of Tracts G-1A-2A and G-1A-2B to be jointly maintained by the owners of Tracts G-1A-2A and G-1A-2B. Granted by this plat. (shaded area)

TRACT G-1A-2A
1.3880 Ac.

10' WATERLINE EASEMENT
Granted by this Plat

10' PUBLIC UTILITY EASEMENT
Per plat filed- January 6, 1995
Volume 95C, Folio 3

TRACT G-1A-2B
1.3676 Ac

56' PRIVATE ROADWAY, DRAINAGE, AND PUBLIC UTILITY EASEMENT
Granted by this Plat

ELLISON DRIVE

10' PUBLIC UTILITY EASEMENT
Per plat filed- January 6, 1995
Volume 95C, Folio 3

50' PRIVATE ROADWAY, DRAINAGE, AND PUBLIC UTILITY EASEMENT
Granted by this Plat

TEMPORARY DRAINAGE EASEMENT
Per plat filed- October 8, 1992
(shaded area)
Vacated by V-98-17

SANITARY SEWER EASEMENT
Granted to New Mexico Utilities, Inc. by this Plat

RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT for the benifit of Tracts G-1A-1 and G-1A-2 to be jointly maintained by the owners of Tracts G-1A-1 and G-1A-2. Granted by plat filed _____ in Volume _____ Folio _____ (areas hatched area)

TRACT G-1A-1
SEVEN-BAR RANCH

RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT for the benifit of Tracts G-1A-1 and G-1A-2C to be jointly maintained by the owners of Tracts G-1A-1 and G-1A-2C. Granted by this plat. (shaded area)

TRACT G-1A-2C
1.2868 Ac.

TRACT G-1A-2D
1.4075 Ac

TRACT G-1A-2E
2.3141 Ac.

58' PRIVATE ROADWAY, DRAINAGE, AND PUBLIC UTILITY EASEMENT
Granted by this Plat

G-1A-2
SEVEN-BAR RANCH

Fd. 5/8" rebar and aluminum cap stamped "L.S. 5823" in conc.

15' PRIVATE DRAINAGE EASEMENT
Granted by this plat

LOT 1

LOT 1-A

RIVERWALK MARKETPLACE
Filed - November 17, 1989
Volume C40, Folio 45

G-2A-1
SEVEN-BAR RANCH
Filed - March 13, 1995 Volume 95C, folio 87

Fd. 5/8" rebar and aluminum cap stamped "L.S. 5823" in conc

New Mexico State Highway Commission Monument "NM-448-N12"
New Mexico State Plane Coordinates
Central Zone (NAD 27)
Y = 1,526,910.84
X = 381,108.04
Data Alpha = -0013'48"
Ground to Grid Factor = 0.99967505
Elevation = 5023.41 feet (SLD 1929)

TRACTS A THRU I
COTTONWOOD CORNERS
Filed- June 7, 1996 Volume 95C folio 250

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N22°39'35"W	281.35'
L2	N67°20'25"E	10.00'
L3	S22°39'35"E	281.35'
L4	S67°20'25"W	10.00'
L5	N67°20'25"E	10.00'
L6	S22°39'35"E	281.35'
L7	S67°20'25"W	10.00'
L8	N22°39'35"W	281.35'
L9	N67°20'25"E	10.00'
L10	S22°39'35"E	281.35'
L11	S67°20'25"W	10.00'
L12	N22°39'35"W	281.35'
L13	N67°20'25"E	10.00'
L14	S22°39'35"E	281.35'
L15	S67°20'25"W	10.00'
L16	N22°39'35"W	281.35'

97C-135(3)

97C-135(3)

97044721

TRACTS G-1A-2A THRU G-1A-2E

SEVEN - BAR RANCH

(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)

CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
NOVEMBER, 1996

NOTE:
Flood hazard area is currently shown on the Federal Emergency Management Agency (FEMA) National Flood Insurance Program "Flood Insurance Rate Map" (Community Panel No. 350002 0002 C, effective date October 14, 1983). Existing improvements and the proposed drainage improvements to be constructed by the City of Albuquerque Special Assessment District No. 223 (SAD 223) are expected to eliminate the flood hazard on the subject property. The request for a letter of map revision (LOMR) from FEMA and the supporting drainage analyses will be submitted to FEMA in connection with the SAD 233 drainage report, however, the City does not guarantee FEMA approval of the request or issuance of a LOMR.

Additional street right of way dedicated to the City of Albuquerque in fee simple by this plat 0.0338 Ac. (shaded area)

Reserved for County Clerk Seal

Monumentation found in place (typ.)

11.5'x17' PNM TRANSFORMER EASEMENT Per plat filed- January 6, 1995 Volume 95C, Folio 3

11.5'x5' PNM TRANSFORMER EASEMENT Granted by this Plat

8' SIDEWALK AND PUBLIC UTILITY EASEMENT Granted by this Plat

COTTONWOOD DRIVE N.W.

ELLISON DRIVE N.W.

COTTONWOOD PARK N.W.

TRACT M-1
SEVEN-BAR RANCH
Filed- January 6, 1995 Volume 95C, folio 3

TRACTS A THRU I
COTTONWOOD CORNERS
Filed- June 7, 1996 Volume 96C, Folio 250

RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT for the benifit of Tracts G-1A-2A and G-1A-2B to be jointly maintained by the owners of Tracts G-1A-2A and G-1A-2B Granted by this plat. (shaded area)

TRACT G-1A-2A
1.3880 Ac.

10' WATERLINE EASEMENT Granted by this Plat

10' PUBLIC UTILITY EASEMENT Per plat filed- January 6, 1995 Volume 95C, Folio 3

TRACT G-1A-2B
1.3676 Ac

36' PRIVATE ROADWAY, DRAINAGE, AND PUBLIC UTILITY EASEMENT Granted by this Plat

RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT for the benifit of Tracts G-1A-1 and G-1A-2 to be jointly maintained by the owners of Tracts G-1A-1 and G-1A-2 Granted by plat filed _____ in Volume _____ Folio _____ (cross hatched area)

RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT for the benifit of Tracts G-1A-1 and G-1A-2C to be jointly maintained by the owners of Tracts G-1A-1 and G-1A-2C Granted by this plat (shaded area)

TRACT G-1A-1
SEVEN-BAR RANCH

TRACT G-1A-2C
1.2868 Ac.

TRACT G-1A-2D
1.4075 Ac

TRACT G-1A-2E
2.3141 Ac.

50' PRIVATE ROADWAY, DRAINAGE, AND PUBLIC UTILITY EASEMENT Granted by this Plat

TEMPORARY DRAINAGE EASEMENT Per plat filed- January 6, 1995 Volume 95C, Folio 3 (shaded area) Vacated by V-96-17

10' PUBLIC UTILITY EASEMENT Per plat filed- January 6, 1995 Volume 95C, Folio 3

SANITARY SEWER EASEMENT Granted to New Mexico Utilities, Inc by this Plat

58' PRIVATE ROADWAY, DRAINAGE, AND PUBLIC UTILITY EASEMENT Granted by this Plat

G-1A-2
SEVEN-BAR RANCH

PRIVATE ROADWAY, DRAINAGE AND PUBLIC UTILITY EASEMENT Per plat filed- Pg. 96C-250 Per DOC. # 97-54

G-2A-1
SEVEN-BAR RANCH
Filed - March 13, 1995 Volume 95C, folio 8

15' PRIVATE DRAINAGE EASEMENT Granted by this plat

RIVERWALK MARKETPLACE
Filed - November 17, 1989
Volume C40, Folio 45

Fd. 5/8" rebar and aluminum cap stamped "L.S. 5823" in conc

New Mexico State Highway Commison Monument "NM-448-N12"
New Mexico State Plane Coordinates
Central Zone (NAD 27)
Y = 1,526,910.93
X = 381,108.54
Data Alpha = -00°13'46"
Ground to Grid Factor = 0.9996750
Elevation = 5023.41 feet (SLD 1929)

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N90°00'00"W	11.76'
L2	N90°00'00"W	21.16'
L3	N90°00'00"W	24.16'
L4	N90°00'00"W	18.00'
L5	N90°00'00"W	18.00'
L6	N90°00'00"W	18.00'
L7	N90°00'00"W	18.00'
L8	N90°00'00"W	18.00'
L9	N90°00'00"W	18.00'
L10	N90°00'00"W	18.00'
L11	N90°00'00"W	21.97'
L12	N90°00'00"W	18.00'
L13	N90°00'00"W	18.00'
L14	N90°00'00"W	18.00'
L15	N90°00'00"W	18.00'
L16	N90°00'00"W	18.00'
L17	N90°00'00"W	18.00'
L18	N90°00'00"W	18.00'
L19	N90°00'00"W	18.00'
L20	N90°00'00"W	18.00'
L21	N90°00'00"W	18.00'
L22	N90°00'00"W	18.00'
L23	N90°00'00"W	18.00'
L24	N90°00'00"W	18.00'
L25	N90°00'00"W	18.00'
L26	N90°00'00"W	18.00'
L27	N90°00'00"W	18.00'
L28	N90°00'00"W	18.00'
L29	N90°00'00"W	18.00'

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	1500.00'	11.76'	5.88'	11.76'	N89°59'59"W	0°26'56"
C2	1500.00'	21.16'	10.58'	21.16'	N89°59'59"W	0°48'29"
C3	1500.00'	24.16'	12.08'	24.16'	N89°59'59"W	0°55'21"
C4	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C5	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C6	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C7	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C8	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C9	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C10	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C11	1500.00'	21.97'	10.99'	21.97'	N89°59'59"W	0°50'21"
C12	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C13	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C14	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C15	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C16	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C17	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C18	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C19	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C20	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C21	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C22	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C23	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C24	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C25	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C26	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C27	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C28	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C29	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C30	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C31	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C32	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C33	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C34	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C35	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C36	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C37	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C38	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C39	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C40	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C41	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C42	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C43	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C44	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C45	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C46	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C47	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C48	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C49	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"
C50	1500.00'	18.00'	9.00'	18.00'	N89°59'59"W	0°41'14"

(IN FEET)
1 inch = 60 ft.

9602712P.3

SHEET 3 OF 3

SURVTEK, INC.
Consulting Surveyors
5643 Paradise Blvd N.W. Albuquerque New Mexico 87114
Phone 505-897-3366
Fax 505-897-3377

97C-135(3)

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

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

R# 23 DATE 3-13-02 OP EQP

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 (MS14.5-1977)

3/13/02
DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/02/02

C20 B16 A12

CITY OF ALBUQUERQUE

ENGINEER'S CERTIFICATION
OF GRADING & DRAINAGE IMPROVEMENTS
TRACTS G-1A-2A THRU G-IA-2D, SEVEN BAR RANCH

1" = 50'

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in accordance with the intent of the approved Grading and Drainage Plan.

The as-constructed information shown on this plan was provided by Surv-Tek, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P Bohannan Date 4/28/98

R. P Bohannan, P.E.
N.M.P.E. No. 9814

Flood Hazard Zone Line scaled from FIRM Map Number 350002 002 C ZONE AO

7-BAR RANCH
TRACT M-1

FUTURE RIGHT TURN / DECELERATION LANE IMPROVEMENTS BY OTHERS

EXISTING R/W

PROPOSED R/W

8' WIDE SIDEWALK AND UTILITY EASEMENT

ELLISON DRIVE

COTTONWOOD DRIVE

COTTONWOOD CORNERS
TRACT I

ZONE AO

ZONE C

DRIVE #1

DRIVE #2

DRIVE #3

DRIVE #4

DRIVE #5

TRACT G-1A-2A
1.3881 AC.
BASIN 2A1

TRACT G-1A-2B
1.3676 AC.
BASIN 2B1

BASIN 2B2

BASIN 2A2

TRACT G-1A-2E
2.3141 AC.
BASIN 2E

TRACT G-1A-1
1.3166 AC.

TRACT G-1A-2C
1.2868 AC.
BASIN 2C

TRACT G-1A-2D
1.4075 AC.
BASIN 2D

BASIN G-2A-1

7-BAR RANCH
TRACT M-1

RIVERWALK MARKETPLACE
LOT 1

RIVERWALK MARKETPLACE
LOT 1-A
WALMART

7-BAR RANCH
TRACT G-2A

10' WIDE WATERLINE EASEMENT

15' PRIVATE DRAINAGE EASEMENT

56' PRIVATE ROADWAY, SIDEWALK, WATER, SEWER AND DRAINAGE EASEMENT

PRIVATE ROADWAY, SIDEWALK, WATER, SEWER AND DRAINAGE EASEMENT

PROPOSED ACCESS, WATER AND SEWER EASEMENT

EXISTING TEMPORARY DRAINAGE EASEMENT TO BE VACATED

EXISTING 10' PUE

EXISTING 18" STORM DRAIN STUB OUT

EXISTING DRAINAGE

EXISTING ASPHALT ROAD

EXISTING PAVEMENT TO BE REMOVED WITH INITIAL SITE IMPROVEMENTS

INTERIM RETENTION POND, TYP. SEE TABLE FOR REQUIRED VOLUME

APPROXIMATE SLOPE LIMITS

TYPE "A" INLET

TYPE "D" INLET

ALAMEDA WEST SHOPPING CENTER ACCESS DRIVE

P.O.C. = 214+23.05

P.T. = 223+44.44

P.T. = 231+64.60

P.C. = 234+15.17

MIN. FFE = 5037.50

MIN. FFE = 5034.50

MIN. FFE = 5035.50

MIN. FFE = 5035.00

CENTERLINE CURVE DATA
Δ = 79°17'14"
R = 215.00'
L = 297.52'

CENTERLINE CURVE DATA
Δ = 16°40'38"
R = 200.00'
L = 58.33'

CENTERLINE CURVE DATA
Δ = 37°38'06"
R = 200.00'
L = 131.37'

CENTERLINE CURVE DATA
Δ = 61°21'41"
R = 215.00'
L = 230.26'

CENTERLINE CURVE DATA
Δ = 19°04'04"
R = 200.00'
L = 66.56'

CENTERLINE CURVE DATA
Δ = 77°13'36"
R = 180.00'
L = 242.62'

FACE OF CURB CURVE DATA
Δ = 22°16'53"
R = 222.00'
L = 86.33'

FACE OF CURB CURVE DATA
Δ = 74°00'47"
R = 198.00'
L = 255.77'

FACE OF CURB TANGENT DATA
S24°35'55"E
70.68'

S 27°39'35" E 686.74'

N 27°39'35" W 244.94'

S35°28'50"E 26.19'

N 43°01'12" E 150.67'

S08°47'48"W 922.28'

N 08°47'48" E 239.62'

N 27°11'12" E 306.60'

N 62°48'12" W 216.45'

S 62°48'12" E 216.45'

GRADING & DRAINAGE PLAN
ALLOWABLE RELEASE RATES

BASIN	AREA (AC)	Q100 / RHR PEAK FLOW RATE (CFS)	ALLOWABLE RELEASE RATE (CFS)	APPROXIMATE RETENTION POND VOLUME REQUIRED FOR INTERIM CONDITION (CU FT)	APPROXIMATE DETENTION POND VOLUME REQUIRED FOR DEVELOPED CONDITION (CU FT)
2A1	1.1740	4.65	0.44	3,154	7243
2A2	0.3141	0.81	0.69	0	0
2B1	1.0633	4.81	0.41	2,937	6,745
2B2	0.2743	1.15	1.15	0	0
2C	1.2868	5.43	0.49	6,994	78464
2D	1.4075	5.84	0.53	3,781	8685
2E	2.3141	9.77	0.87	5,218	14275
G-2A-1	0.2279	0.86	0.86	0	0
TOTAL	7.9920	33.76	5.74		

* 11,000 CU.FT. IF TRACT G-1A-1 IS UNDEVELOPED

HYDROLOGY SUMMARY

BASIN	CONDITION	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	2 YEAR VOLUME (ac./ft.) 6 HR	24 HR	10 YEAR Q (cfs)	10 YEAR VOLUME (ac./ft.) 6 HR	24 HR	100 YEAR Q (cfs)	100 YEAR VOLUME (ac./ft.) 6 HR	24 HR	10 DAY
2A1	DEVELOPED	PROPOSED TRACT G-1A-2A SITE	1.1740	0.0%	0.0%	10.0%	90.0%	1.84	0.0648	0.0831	3.23	0.1135	0.1405	4.65	0.1631	0.2238	0.3128
2A2	DEVELOPED	PROPOSED TRACT G-1A-2A STREET	0.3141	0.0%	0.0%	14.0%	86.0%	0.53	0.0113	0.0144	0.88	0.0201	0.0248	0.89	0.0267	0.0368	0.0553
2B1	DEVELOPED	PROPOSED TRACT G-1A-2B SITE	1.0633	0.0%	0.0%	10.0%	90.0%	1.71	0.0601	0.0765	3.01	0.1067	0.1308	4.61	0.1706	0.2063	0.2911
2B2	DEVELOPED	PROPOSED TRACT G-1A-2B STREET	0.2743	0.0%	0.0%	13.0%	88.0%	0.42	0.0146	0.0186	0.75	0.0261	0.0333	1.15	0.0403	0.0516	0.0719
2C	DEVELOPED	PROPOSED TRACT G-1A-2C	1.2868	0.0%	0.0%	10.0%	90.0%	2.02	0.0708	0.0900	3.54	0.1244	0.1540	5.43	0.2007	0.2451	0.3429
2D	DEVELOPED	PROPOSED TRACT G-1A-2D	1.4075	0.0%	0.0%	10.0%	90.0%	2.21	0.0774	0.0985	3.87	0.1361	0.1684	5.94	0.2200	0.2681	0.3747
2E	DEVELOPED	PROPOSED TRACT G-1A-2E	2.3141	0.0%	0.0%	10.0%	90.0%	3.63	0.1273	0.1618	6.36	0.2237	0.2769	9.77	0.3610	0.4408	0.6161
G-2A-1	DEVELOPED	PORTION OF TRACT G-2A-1 STREET	0.2279	0.0%	0.0%	10.0%	90.0%	0.36	0.0125	0.0160	0.63	0.0220	0.0273	0.96	0.0356	0.0434	0.0607
TOTAL SITE	UNDEVELOPED	TOTAL BASINS 2A1-2E UNDEVELOPED	7.7961	90.0%	0.0%	0.0%	10.0%	1.31	0.0466	0.0595	3.92	0.1266	0.1467	12.41	0.3837	0.4134	0.4788
G-1A-1	UNDEVELOPED	OFFSITE INTERIM DRAINAGE-TRACT G-1A-1	1.3166	90.0%	0.0%	0.0%	10.0%	0.22	0.0079	0.0101	0.66	0.0215	0.0249	2.10	0.0651	0.0701	0.0812

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.30	2.86	3.12	3.87

SEVEN BAR RANCH TRACT G-1A-2
GRADING AND DRAINAGE PLAN

GENERAL
TRACT G-1A-2, SEVEN BAR RANCH IS A 7.78 ACRE TRACT LOCATED AT THE SOUTHEAST CORNER OF ELLISON DRIVE AND COTTONWOOD DRIVE NW. THE SITE IS ZONED SU-1 FOR C2 USES (REFER TO EPC Z-95-92). TRACT G-1A-2 WAS CREATED BY SUBDIVISION OF TRACT G-1A INTO TWO PARCELS, G-1A-1 AND G-1A-2 (DRB 96-353). THE 9/27/96 CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A IS STILL APPLICABLE TO TRACT G-1A-1. THIS NEW GRADING & DRAINAGE PLAN ESTABLISHES REVISED DRAINAGE GUIDELINES FOR TRACT G-1A-2.

METHOD
THE HYDROLOGY FOR THIS GRADING AND DRAINAGE PLAN IS BASED ON THE METHODS PRESENTED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, SECTION 22.2 HYDROLOGY, JANUARY 1993, PROCEDURE FOR 40 ACRE AND SMALLER BASINS. THE HYDROLOGY FOR EXISTING (UNDEVELOPED) AND FOR PROPOSED (DEVELOPED) CONDITIONS IS INCLUDED IN THE HYDROLOGY SUMMARY TABLE.

EXISTING CONDITIONS
THE SITE IS CURRENTLY UNDEVELOPED. THE EXISTING SITE TERRAIN IS RELATIVELY MILD AND SLOPES GENERALLY FROM SOUTH TO NORTH AT ABOUT 1%. MOST OF THE SITE DRAINS TO THE TEMPORARY DETENTION POND AT THE NORTH END OF THE SITE CONSTRUCTED UNDER SAD 223. A SMALL PORTION OF THE SITE DRAINS EAST TO THE EXISTING WALMART STORE PARKING AREA. THE ONLY OFFSITE FLOWS ENTERING TRACT G-1A-2 ORIGINATE ON TRACT G-1A-1. THE FEMA FLOOD INSURANCE RATE MAP FOR THE CITY OF ALBUQUERQUE, NEW MEXICO AND INCORPORATED AREAS, PANEL 2 OF 50, (COMMUNITY PANEL NO. 350002 0002 C) INDICATES THAT A SMALL PORTION OF TRACT G-1A-2 IS WITHIN THE ZONE AO (DEPTH 1) FLOOD HAZARD AREA. THE FLOOD HAZARD AREA ENCROACHING ON THE SITE IS EXPECTED TO BE ELIMINATED BY A LETTER OF MAP REVISION TO BE PROCESSED IN CONNECTION WITH SAD 223.

PROPOSED CONDITIONS
IT IS PROPOSED THAT TRACT G-1A-2 BE SUBDIVIDED INTO FIVE TRACTS, G-1A-2A THROUGH G-1A-2E. IN ACCORDANCE WITH THE PREVIOUS CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A, THE TOTAL ALLOWABLE RELEASE RATE FROM THE TRACT G-1A-2 AREA IS 5.74 CFS. THE PORTION OF THE PROPOSED PRIVATE ROADWAY THAT ENCROACHES ONTO TRACT G-2A (BASIN G-2A-1) WILL ALSO BE DEVELOPED WITHIN THE 5.74 CFS ALLOWABLE RELEASE RATE. AN ONSITE PRIVATE STORM DRAIN WILL BE CONSTRUCTED TO ACCEPT DRAINAGE FROM THE PRIVATE ROADWAYS AND EACH TRACT. THE STORM DRAIN WILL DISCHARGE TO THE EXISTING 18" DIAMETER STORM DRAIN STUB IN ELLISON DRIVE. AS INDICATED IN THE ALLOWABLE RELEASE RATES TABLE, BASINS 2A2, 2B2 AND G-2A-1 WILL FREE-DISCHARGE TO THE PRIVATE STORM DRAIN. THE REMAINING BASINS WILL CONTROL DISCHARGE TO THE STORM DRAIN AT RATES NOT TO EXCEED THOSE SHOWN IN THE TABLE. A PRIVATE DRAINAGE EASEMENT WILL BE GRANTED OVER THE PRIVATE ROADWAYS AND THE PRIVATE STORM DRAIN CORRIDORS.

INITIAL SITE DEVELOPMENT WILL INCLUDE CONSTRUCTION OF REQUIRED OFFSITE IMPROVEMENTS, ONSITE ROADWAYS AND DRAINAGE IMPROVEMENTS AND INTERIM RETENTION PONDS ON EACH TRACT. TRACT DEVELOPMENT WILL BE PHASED BASED ON DEMAND. INDIVIDUAL SITE-SPECIFIC GRADING AND DRAINAGE PLANS WILL BE PREPARED FOR EACH TRACT PRIOR TO TRACT DEVELOPMENT. ADDITIONAL INTERIM GRADING AND DRAINAGE IMPROVEMENTS MAY BE NEEDED DEPENDING ON REQUIREMENTS FOR INDIVIDUAL TRACT DEVELOPMENT.

UPON DEVELOPMENT OF TRACT G-1A-1, THE DRAINAGE FROM TRACT G-1A-1 WILL BE PONDED ONSITE AND CONTROL-DISCHARGED TO THE STORM INLETS IN COTTONWOOD DRIVE. IN THE INTERIM, THE EXISTING DRAINAGE WILL CONTINUE TO DRAIN TO TRACT G-1A-2C AND THE POND ON TRACT G-1A-2C SHALL HAVE SUFFICIENT ADDITIONAL VOLUME TO POND THE RUNOFF FROM BOTH TRACTS.

PROPOSED BUILDING FINISHED FLOOR ELEVATIONS SHALL BE AT LEAST ONE FOOT ABOVE THE FLOOD HAZARD ELEVATION.

EROSION CONTROL
ALL DISTURBED AREAS SHALL BE SURFACED, LANDSCAPED OR REVEGETATED UPON THE COMPLETION OF EACH PHASE OF SITE DEVELOPMENT. TEMPORARY SWALES, PONDS, EARTH BERMS, STRAW BALES AND SILT FENCING SHALL BE IMPLEMENTED AS NECESSARY DURING CONSTRUCTION TO PREVENT SEDIMENT EROSION FROM THE SITE.

FIRM MAP
No. 35001C0109D

VICINITY MAP
ZONE ATLAS PAGE A-14

LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5084	5084
SPOT ELEVATIONS	● 5085	● 5085
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES	M.R. BUTTERFLY	M.R. BUTTERFLY
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE		
GAS LINE		
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CT	CT
POWER/TELEPHONE POLE	O.P.P.	O.P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	TC 5089.18 EC 5087.68	TC 5089.18 EC 5087.68
HYDROLOGICAL ANALYSIS PT.		

LEGAL DISCRIPTION
TRACTS G-1A-2A THRU G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
1/31/97

APR 29 1998
HYDROLOGY SECTION

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E
SEVEN BAR RANCH
GRADING & DRAINAGE PLAN

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 1
RPB	DEC	RPB	OF 2
EAI JOB NO: 4350	DATE: 1-97		

DWG: T:\PROJECTS\4350\DWG\REVISED\GRADING.DWG
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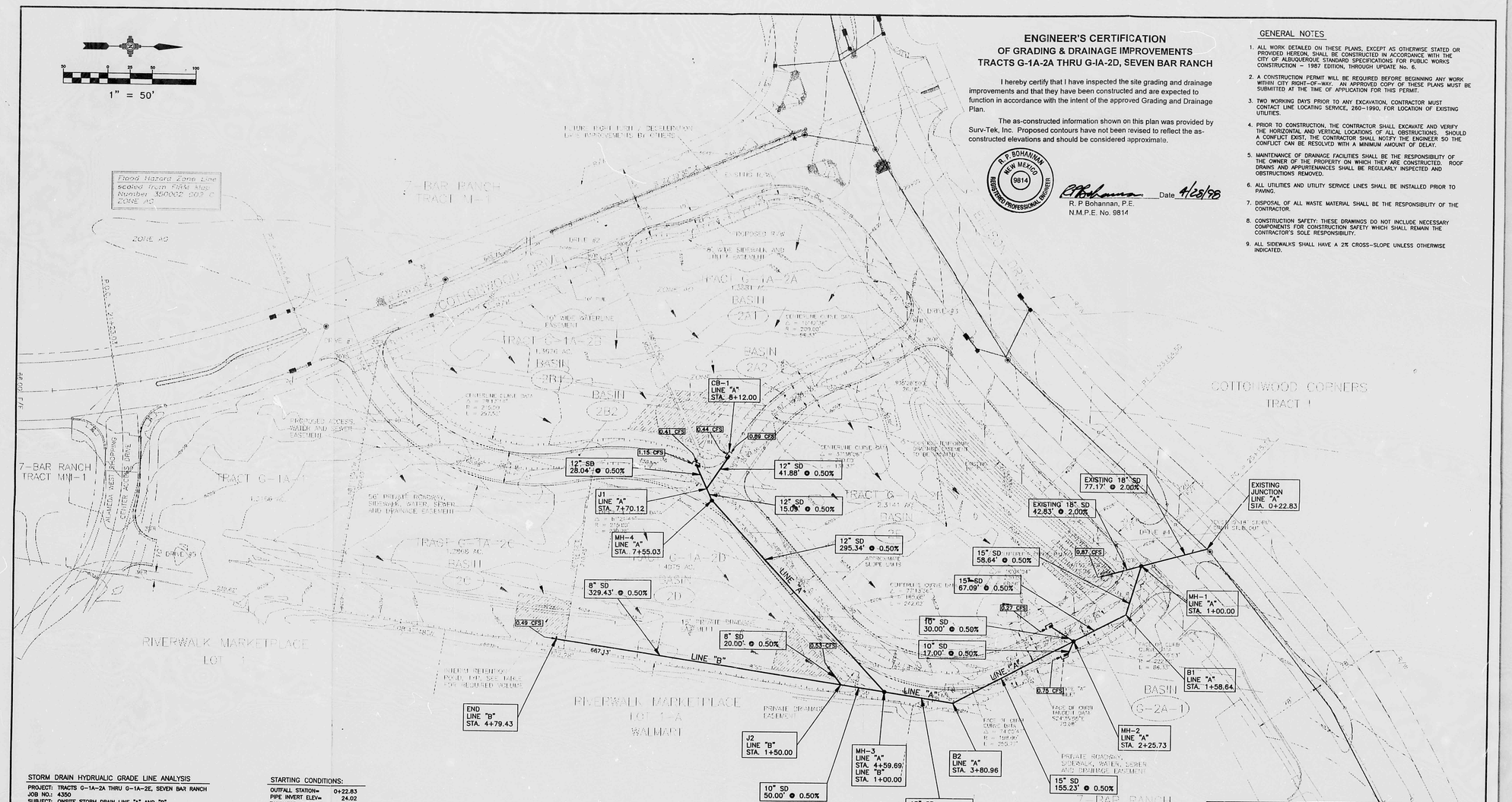

ENGINEER'S CERTIFICATION
OF GRADING & DRAINAGE IMPROVEMENTS
TRACTS G-1A-2A THRU G-1A-2D, SEVEN BAR RANCH

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in accordance with the intent of the approved Grading and Drainage Plan.

The as-constructed information shown on this plan was provided by Surv-Tek, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P Bohannan, P.E.
N.M.P.E. No. 9814

Date 4/28/98

GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – 1987 EDITION, THROUGH UPDATE No. 6.
2. A 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.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 260-1990, 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 THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. MAINTENANCE OF DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY ON WHICH THEY ARE CONSTRUCTED. ROOF DRAINS AND APPURTENANCES SHALL BE REGULARLY INSPECTED AND OBSTRUCTIONS REMOVED.
6. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
7. DISPOSAL OF ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONSTRUCTION SAFETY: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE CONTRACTOR'S SOLE RESPONSIBILITY.
9. ALL SIDEWALKS SHALL HAVE A 2% CROSS-SLOPE UNLESS OTHERWISE INDICATED.

STORM DRAIN HYDRAULIC GRADE LINE ANALYSIS

PROJECT: TRACTS G-1A-2A THRU G-1A-2E, SEVEN BAR RANCH
JOB NO.: 4350
SUBJECT: ONSITE STORM DRAIN LINE "A" AND "B"

STARTING CONDITIONS:

OUTFALL STATION=	0+22.83
PIPE INVERT ELEV=	24.02
TAILWATER ELEVATION =	27.12
STARTING HGL ELEV=	27.12
STARTING GROUND ELEV=	32.19

PIPE DATA								STRUCTURE(S) @ UPSTREAM END				PIPE SEGMENT		PIPE ELEVATION DATA				GROUND ELEV		PRESSURE FLOW HYDRAULICS						HEAD LOSS CALCULATIONS							EGL & HGL @ UPSTREAM END OF PIPE SEGMENT						HGL BELOW GROUND?	
PIPE SEGMENT		STA. OFFSET	MAIN FLOW (cfs)	PIPE DIA. (inches)	MANNING COEFF. ("n")	LAY LENGTH (feet)	PIPE SLOPE (f/f)	MANHOLE LOSS (1=yes)	BEND ANGLE (degees)	JUNCTION ANGLE (degees)	LATERAL DIAMETER (inches)	TRANSITION LOSS (1=yes)		PIPE INVERT DOWN STREAM (elev.)	PIPE INVERT UP STREAM (elev.)	PIPE SOFFIT DOWN STREAM (elev.)	PIPE SOFFIT UP STREAM (elev.)	DOWN STREAM (elev.)	UP STREAM (elev.)	FLOW AREA (sq.ft.)	FLOW VELOCITY (fps)	FLOW DEPTH (feet)	FRICTION SLOPE (f/f)	VELOCITY HEAD (feet)	FRICTION LOSS Hf	MANHOLE LOSS Hm	BEND LOSS Hb	JUNCTION LOSS Hj	TRANS LOSS EXPANSION Htx	TRANS LOSS CONTRACTION Hte	SUM OF LOSSES	STORM DRAIN STA.	EGL ELEV. BACK	EGL ELEV. AHEAD	HGL ELEV. BACK	HGL ELEV. AHEAD	DEFAULT HGL ELEV AHEAD	PIPE FULL?	FINISHED GROUND ELEV	CHECK
FROM DOWN STREAM	TO UP STREAM																																						
LINE "A"																																							
OUTFALL	MH1	STA. 1+00.00	5.74	18	0.013	77.17	0.020	1	55		18	1		24.02	25.56	25.52	27.06	32.2	32.4	1.767	3.25	1.50	0.003	0.164	0.230							0.287	0+77.17	27.51	27.57	27.35	27.41	27.41	FULL	32.40	OK
MH1	B1	STA 1+58.64	4.67	15	0.013	58.64	0.005		45					25.81	26.11	27.06	27.36	32.4	33.1	1.227	3.97	1.25	0.006	0.245	0.333	0.000	0.035	0.000	0.000	0.000	0.000	0.368	1+35.81	27.99	28.02	27.74	27.78	27.78	FULL	33.10	OK
B1	MH2	STA 2+25.73	4.67	15	0.013	67.09	0.005	1		60	10			26.11	26.44	27.36	27.69	33.1	32.6	1.227	3.97	1.25	0.006	0.245	0.381	0.012	0.000	0.152	0.000	0.000	0.000	0.546	2+02.9	28.40	28.57	28.16	28.32	28.32	FULL	32.60	OK
MH2	B2	STA 3+80.96	3.91	15	0.013	155.23	0.005		37					26.44	27.22	27.69	28.47	32.6	33.5	1.227	3.19	1.25	0.004	0.158	0.569	0.000	0.020	0.000	0.000	0.000	0.000	0.589	3+58.13	29.05	29.07	28.89	28.91	28.91	FULL	33.50	OK
B2	MH3	STA 4+59.69	3.91	15	0.013	78.73	0.005	1	40	1	10	1		27.22	27.61	28.47	28.86	33.5	31.5	1.227	3.19	1.25	0.004	0.158	0.288	0.008	0.021	0.003	0.000	0.000	0.000	0.320	4+36.86	29.36	29.39	29.20	29.23	29.23	FULL	31.50	OK
MH3	MH4	STA 7+55.03	2.89	12	0.013	295.34	0.005	1	18					27.86	29.34	28.86	30.34	31.5	35.8	0.785	3.68	1.00	0.007	0.210	1.943	0.011	0.019	0.000	0.000	0.000	0.000	1.973	7+32.2	31.38	31.41	31.17	31.20	31.20	FULL	35.80	OK
MH4	J1	STA 7+70.12	2.89	12	0.013	15.09	0.005		60	1	12			29.34	29.41	30.34	30.41	35.8	35.9	0.785	3.68	1.00	0.007	0.210	0.099	0.000	0.034	0.209	0.000	0.000	0.000	0.343	7+47.29	31.51	31.76	31.30	31.55	31.55	FULL	35.90	OK
J1	CB1	STA 8+12.00	1.33	12	0.013	41.88	0.005							29.41	29.62	30.41	30.62	35.9	35.9	0.785	1.69	1.00	0.001	0.045	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.058	7+89.17	31.65	31.65	31.60	31.60	31.60	FULL	35.90	OK
CB1	DUMMY																																						
LINE "B"																																							
MH3	J2	STA 1+50.00	1.02	10	0.013	50.00	0.005				45	8	1	28.03	28.28	28.86	29.11	31.5	32.5	0.545	1.87	0.83	0.002	0.054	0.108	0.000	0.000	0.045	0.000	0.000	0.000	0.154	0+50.00	29.39	29.44	29.34	29.38	29.38	FULL	32.50	OK
J2	END	STA 4+79.43	0.49	8	0.013	329.43	0.005							28.45	30.09	29.11	30.76	32.5	32.7	0.349	1.40	0.67	0.002	0.031	0.542	0.000	0.000	0.000	0.000	0.000	0.000	0.542	3+79.43	29.96	29.96	29.93	29.93	30.76	(PARTIAL)	32.70	OK
END	DUMMY																																						

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E
SEVEN BAR RANCH
GRADING & DRAINAGE PLAN
STORM DRAIN HYDRAULIC GRADE LINE ANALYSIS

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
1/31/97

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 2
RPB	DEC	RPB	OF 2
EA JOB NO: 4350	DATE: 1-97		

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