

### **GENERAL NOTES:**

- 1: CONTOUR INTERVAL IS ONE (1) FOOT.
- 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION No. "14-J-13", HAVING AN ELEVATION OF 4954.71.
- 3: UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND/ OR DEPTH PRIOR TO EXCAVATION OR DESIGN CON-SIDERATIONS.
- 5: THIS IS <u>NOT</u> A BOUNDARY SURVEY. BEARINGS AND DISTANCES SHOWN HEREON ARE FOR REFERENCE ONLY.

### LEGEND

EXISTING SPOT ELEVATIONS

CONCRETE

-X -X EXISTING FENCING

AS-BUILT EL PT. BOC 54.42 BACK OF CURB EL AS-BUILT GROUND EL. AS-BUILT

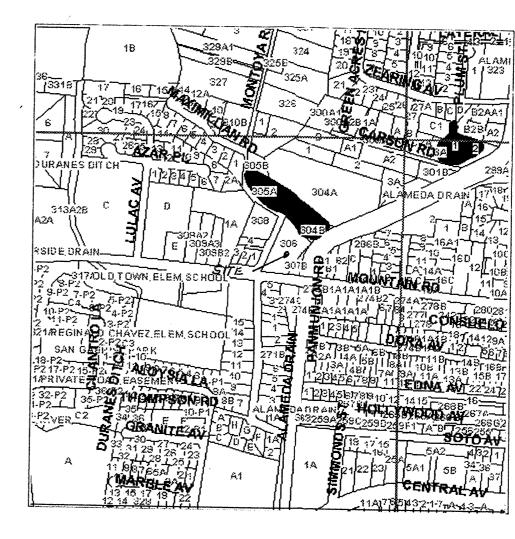
TOP HEADER CURB EL. PROPOSED

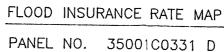
## DRAINAGE PLAN GRADING CERTIFICATION

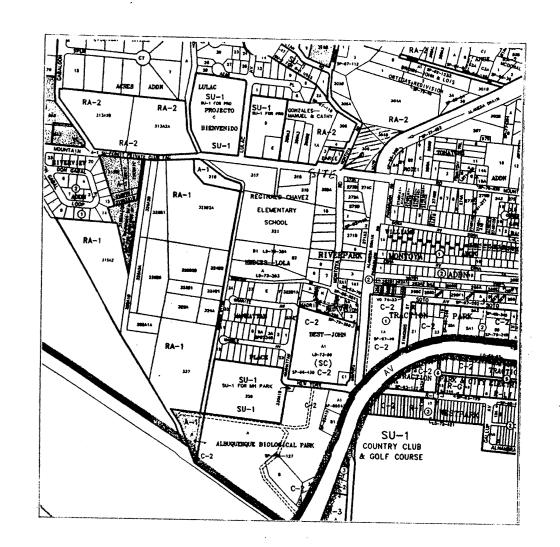
SHOWN ON THIS DRAWING ARE THE AS-BUILT LOCATION AND ELEVATIONS OF THE HEADER CURB REQUIRED FOR APPROVAL ON THE INFRASTRUCTURE LIST FOR DRB 1001011. Cacoon

C. A. COONCE N.M.P.E. #2934

OCTOBER 1, 2002







LOCATION MAP J-12-Z LEGAL DESCRIPTION: TRACT 306, M.R.G.C.D. NO. 38 BERNALILLO COUNTY, NEW MEXICO ADDRESS: N.E. CORNER MOUNTAIN RD. & MONTOYA RD., N.W.

### **GENERAL:**

### **EXISTING INFRASTRUCTURE:**

NOT HAVE STORM SEWERS. STORM WATERS ARE CONVEYED TO THE ALAMEDA DRAIN ONE LOT TO THE WEST OF THIS TRACT VIA MOUNTAIN ROAD. MONTOYA ROAD DRAINS SOUTHWARD TO MOUNTAIN ROAD AND THROUGH THE MOUNTAIN ROAD DRAINAGE SYSTEM TO THE ALAMEDA DRAIN.

### **EXISTING DRAINAGE:**

THE TRACT TO THE NORTH (MRGCD TR 304-A) IS A LARGE APPROXIMATELY SIX (6) ACRE TRACT WHICH CONTAINS THE KABO RADIO TRANSMISSION TOWER AND IS ZONED RA-2. IT IS UNDEVELOPED AND WELL VEGETATED FROM YEARS OF LYING FALLOW. IT CONTAINS A CLOSED SUMP AREA AT AN ELEVATION OF 4953' WITH A MIN. ELEVATION OF 4952.57'. TRACT 304-A DRAINS NEAR THE N.E. CORNER OF THIS TRACT INTO THE ALAMEDA DRAIN. THE N.E. PORTION OF THIS TRACT (TR 306) ALSO DRAINS INTO THE ALAMEDA DRAIN.

SOME OF THE EASTERN PORTION OF THIS TRACT (306) DRAINS ACROSS THE ADJACENT TR 307-B AND INTO THE ALAMEDA DRAIN ON MOUNTAIN ROAD. THE REMAINDER OF THIS TRACT (306), WESTERN AND SOUTHERN, DRAINS INTO MONTOYA ROAD AND MOUNTAIN ROAD AND THE DRAINAGE IS CONVEYED TO THE ALAMEDA DRAIN.

### PROPOSED DRAINAGE PLAN:

THIS DRAINAGE PLAN IS NOT A BUILDING DRAINAGE AND GRADING PLAN FOR OBTAINING A BUILDING PERMIT. IT IS A SUBDIVISION DRAINAGE PLAN TO ASSESS THE ADEQUACY OF THE GRADING PLAN WHEN A SITE SPECIFIC STRUCTURE IS PROPOSED FOR A BUILDING PERMIT. THE DEVELOPER IS NOT A BUILDER, AND THE LOTS WILL BE SOLD TO INDIVIDUALS AND/OR BUILDERS.

THE BASIC SCHEME IS THAT THE LOTS FRONTING ON MONTOYA ROAD AND MOUNTAIN ROAD, LOTS A, C, E, AND F WILL DRAIN TO THE EXISTING DRAINAGE SYSTEM ON MONTOYA AND MOUNTAIN ROADS. THE INTERIOR LOT B AND D, WHICH ARE ACCESSED BY AN ACCESS AND UTILITY EASEMENT, WILL ADHERE TO THE FLAT GRADING SCHEME.

## **DRAINAGE CALCULATIONS:**

FOR PURPOSES OF ESTIMATING FLOWS AND VOLUMES, THE FOLLOWING

1. THE DWELLING UNIT WILL BE 2,000 S.F. AND THE DRIVEWAY 500 S.F., GIVING A TOTAL OF 2500 S.F. OF IMPERVIOUS AREA, AND 2. THE REMAINDER OF THE LOT WILL BE LAND TREATMENT B. THE FOUR LOTS A, C, E, AND F, DRAINING TO MONTOYA AND MOUNTAIN ROADS

X 2500 S.F.) CONTAIN 0.2295 AC. THE LOCATION IS IN PRECIPITATION ZONE : AND Q P100 = 2.28 CFS/ AC. TREATMENT B AND 4.70 CFS/ AC. TREATMENT D.

Q P100 = A B Q PB + A D Q PD

= (0.2295) (4.70) + (1.0954 - 0.2295) (2.28) = 3.0528 CFS FOR ALL FOUR LOTS.

THE EXISTING RUNOFF IS ESTIMATED BY Q P = 3.14 CFS/ AC.

Q P100 = (1.0954) (3.14) = 3.44 CFS FOR ALL FOUR LOTS.

### LOTS B AND D FLAT GRADING:

LOT B E 6 HR. 100 YR. TREAT. B = 0.78 IN. AND TREAT D = 2.12 IN.

V 6HR. 100 YR. = AB EB/12 + AD ED/12

= [ (43560) (0.3200) - 2500] 0.78/12 + (2500) (2.12/12)

= 743.55 + 441.67 = 1185.22 CF

= V360 + AD (P10 DAY - P360)

= 1185.22 + (2500) (3.95 - 2.20)/12

= 1185.22 + 364.58 = 1549.80 CF

AVERAGE DEPTH PERVIOUS AREA = V/A = (1549.80 / 11439.2)(12)

= 1.63 IN.

LOT D E 6 HR. 100 YR. TREAT. B = 0.78 IN. AND TREAT D = 2.12 IN.

V 6HR. 100 YR. = AB EB/12 + AD ED/12

= [ (43560) (0.2985 - 2500] 0.78/12 + (2500) (2.12/12)

= 682.64 + 441.7 = 1124.34 CF

V 10 DAY = V360 + AD (P10 DAY - P 360) /12 = 1124.34 + 364.58

= 1488.92 CF

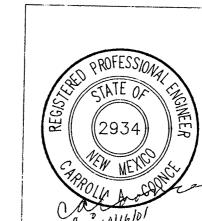
AVERAGE DEPTH PERVIOUS AREA = V/A = (1488.92/ 10502.66) (12)

= 1.70 IN

## FLOOD HAZARD:

FIRM MAP PANEL 331 OF 825 SHOWS A FLOOD PLAIN TOUCHING THE N P/L OF THIS TRACT WITH AN AH ZONE OF EL. 4955. SINCE THIS MUST BE HONORED OR CHANGED, NO FINISH FLOOR ELEVATIONS OF DWELLING UNITS ON THE SUBDIVISION IS ADHERED TO, A HEADER CURB OF EL. 4955 SHOULD BE CONSTRUCTED AT THE NORTH AND EAST PROPERTY LINE AS SHOWN. THIS WILL INSURE THAT THE DRAINAGE TO THE TWO SURROUNDING TRACTS WILL BE ELIMINATED, AND THE RUNOFF WILL BE TO THE INTENDED AREAS.





# C.A. COONCE & ASSOC., INC.

ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS 12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH (505) 296-1056 FAX (505) 296-0478

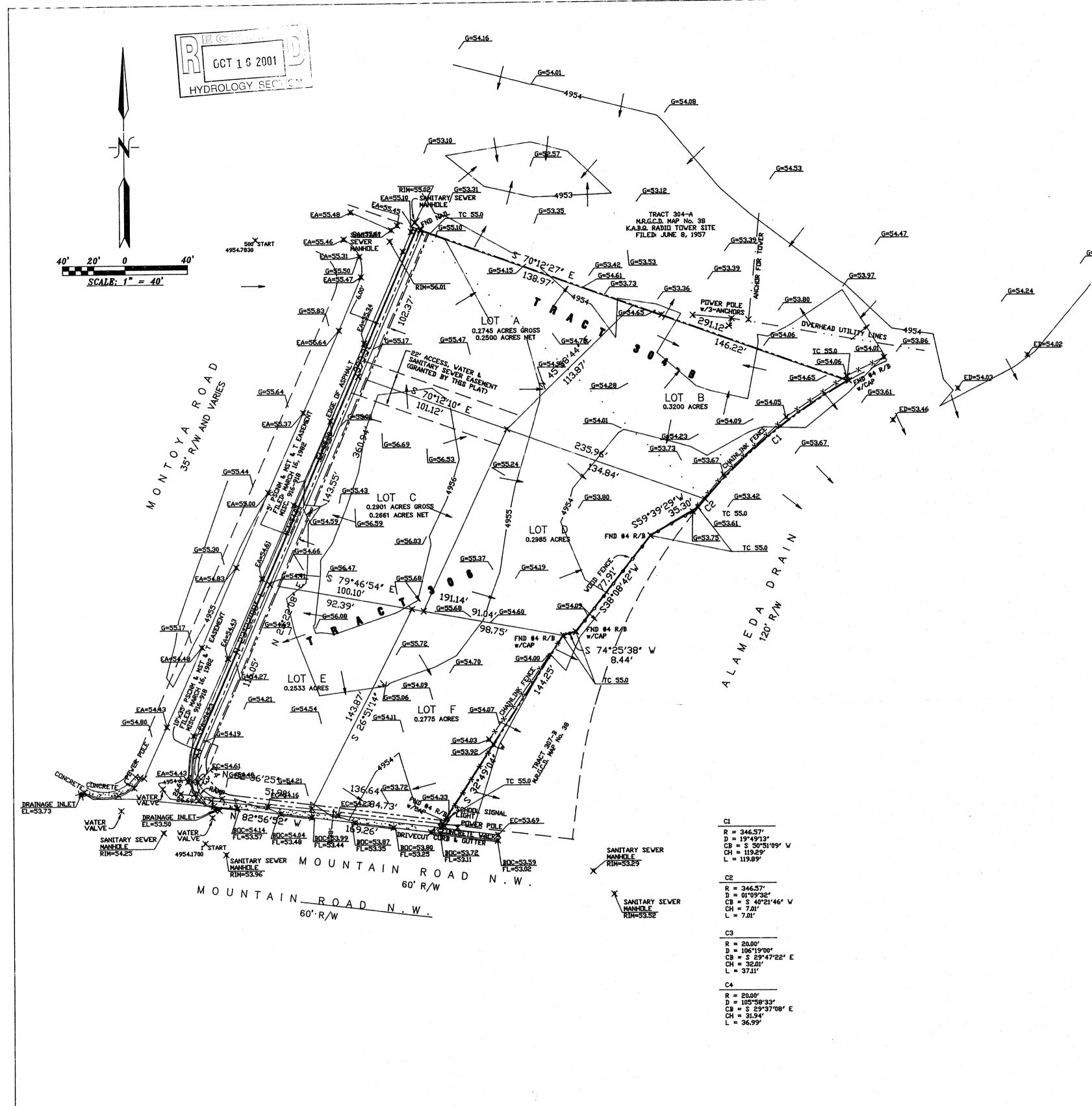
TITLE DRAINAGE PLAN

PROJECT TR. 306, MRGCD MAP NO. 38

684181

DRAWN LSC
CHECKED CAC

SHEET 1 OF 1



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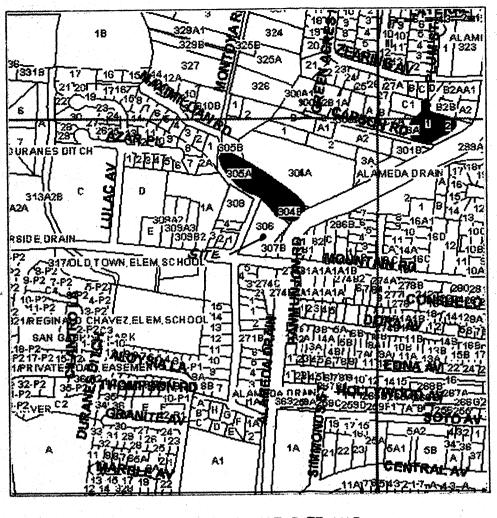
### LEGEND

54.00 EXISTING SPOT ELEVATIONS

- 5000 - EXISTING CONTOURS CONCRETE

ED EDGE OF ALAMEDA DRAIN

G GROUND \* \* \* EXISTING FENCING



FLOOD INSURANCE RATE MAP PANEL NO. 35001C0331 D



LOCATION MAP J-12-Z

LEGAL DESCRIPTION: TRACT 306, M.R.G.C.D. NO. 38 BERNALILLO COUNTY, NEW MEXICO ADDRESS: N.E. CORNER MOUNTAIN RD. & MONTOYA RD., N.W

### GENERAL:

THIS TRACT OF LAND, TR 306 MRGCD MAP NO. 38, IS AN INFILL PROJECT WEST OF OLD TOWN ON THE N.E. CORNER OF MOUNTAIN RD. AND MONTOYA RD. THE LOT CONTAINS 1.7139 ACRES AFTER PLOTTING AND PROVIDING EXTRA R-O-W FOR MOUNTAIN ROAD AND MONTOYA ROAD. THE TRACT IS TO BE SUBDIVIDED INTO SIX (6) LOTS OF 0.25+ ACRES EACH. MOUNTAIN ROAD HAS A 60' R-O-W, BUT IS CONSTRUCTED ON THE NORTHERN PORTION OF THE R-O-W AND ALBUQUERQUE CITY TRAFFIC HAS REQUESTED NINE (9) FT. FROM THE FACE OF CURB TO THE PROPERTY LINE. THE MOST RECENT USE HAS BEEN AS A HORSE CORRAL, AND CONSEQUENTLY THE SOIL IS VERY PACKED AND VOID OF MOST VEGETATION. THERE IS ALSO EVIDENCE OF AUTOS BEING DRIVEN OVER IT IN PLACES.

### **EXISTING INFRASTRUCTURE:**

MOUNTAIN ROAD HAS CURB, GUTTER, SIDEWALK AND PAVING. IT ALSO HAS SANITARY SEWER, STORM SEWER AND INLETS, WATER, ELECTRICITY, GAS, TELEPHONE, AND CABLE LINES IN PLACE. MONTOYA ROAD IS PAVED AND DOES NOT HAVE STORM SEWERS. STORM WATERS ARE CONVEYED TO THE ALAMEDA DRAIN ONE LOT TO THE WEST OF THIS TRACT VIA MOUNTAIN ROAD. MONTOYA ROAD DRAINS SOUTHWARD TO MOUNTAIN ROAD AND THROUGH THE MOUNTAIN ROAD DRAINAGE SYSTEM TO THE ALAMEDA DRAIN.

### EXISTING DRAINAGE:

THE TRACT TO THE NORTH (MRGCD TR 304-A) IS A LARGE APPROXIMATELY SIX (6) ACRE TRACT WHICH CONTAINS THE KABQ RADIO TRANSMISSION TOWER AND IS ZONED RA-2. IT IS UNDEVELOPED AND WELL VEGETATED FROM YEARS OF LYING FALLOW. IT CONTAINS A CLOSED SUMP AREA AT AN ELEVATION OF 4953' WITH A MIN, ELEVATION OF 4952.57', TRACT 304-A DRAINS NEAR THE N.E. CORNER OF THIS TRACT INTO THE ALAMEDA DRAIN. THE N.E. PORTION OF THIS TRACT (TR 306) ALSO DRAINS INTO THE ALAMEDA DRAIN.

SOME OF THE EASTERN PORTION OF THIS TRACT (306) DRAINS ACROSS THE ADJACENT TR 307-B AND INTO THE ALAMEDA DRAIN ON MOUNTAIN ROAD. THE REMAINDER OF THIS TRACT (306), WESTERN AND SOUTHERN, DRAINS INTO MONTOYA ROAD AND MOUNTAIN ROAD AND THE DRAINAGE IS CONVEYED TO THE ALAMEDA DRAIN.

### PROPOSED DRAINAGE PLAN:

THIS DRAINAGE PLAN IS NOT A BUILDING DRAINAGE AND GRADING PLAN FOR OBTAINING A BUILDING PERMIT. IT IS A SUBDIVISION DRAINAGE PLAN TO ASSESS THE ADEQUACY OF THE GRADING PLAN WHEN A SITE SPECIFIC STRUCTURE IS PROPOSED FOR A BUILDING PERMIT. THE DEVELOPER IS NOT A BUILDER, AND THE LOTS WILL BE SOLD TO INDIVIDUALS AND/OR BUILDERS.

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### DRAINAGE CALCULATIONS:

FOR PURPOSES OF ESTIMATING FLOWS AND VOLUMES. THE FOLLOWING ASSUMPTIONS WERE MADE:

1. THE DWELLING UNIT WILL BE 2,000 S.F. AND THE DRIVEWAY 500 S.F., GIVING A TOTAL OF 2500 S.F. OF IMPERVIOUS AREA. AND

2. THE REMAINDER OF THE LOT WILL BE LAND TREATMENT B. THE FOUR LOTS A, C, E, AND F, DRAINING TO MONTOYA AND MOUNTAIN ROADS CONTAIN A TOTAL AREA OF 1.0954 AC. AND THE TOTAL IMPERVIOUS AREAS (4 X 2500 S.F.) CONTAIN 0.2295 AC. THE LOCATION IS IN PRECIPITATION ZONE 2 AND Q P100 = 2.28 CFS/ AC. TREATMENT B AND 4.70 CFS/ AC. TREATMENT D.

Q P100= A BQPB+ AD Q PD

= (0.2295) (4.70) + (1.0954 - 0.2295) (2.28)

= 3.0528 CFS FOR ALL FOUR LOTS.

THE EXISTING RUNOFF IS ESTIMATED BY Q P = 3.14 CFS/ AC. TREATMENT C, OR

 $Q_{P100} = (1.0954)(3.14) = 3.44 CFS FOR ALL FOUR LOTS.$ 

THEREFORE THE EXISTING AND PROPOSED DRAINAGE ARE APPROXIMATELY THE SAME.

### LOTS B AND D FLAT GRADING:

LOT B E 6 HR. 100 YR. TREAT. B = 0.78 IN. AND TREAT D = 2.12 IN. V 6HR. 100 YRF AB E B /12 + AD E D /12

**= [ (43560) (0.3200) - 2500] 0.78/12 + (2500) (2.12/12)** 

= 743.55 + 441.67 = 1185.22 CF

 $V_{10} DAY = V_{360} + AD (P_{10} DAY - P_{360})$ 

= 1185.22 + (2500) (3.95 - 2.20)/ 12

= 1185.22 + 364.58 = 1549.80 CF

AVERAGE DEPTH PERVIOUS AREA = V/ A

= (1549.80/ 11439.2) (12)

= 1.63 IN.

LOT D E 6 HR. 10 0 YR. TREAT. B = 0.78 IN. AND TREAT D = 2.12 IN. V6HR. 100 YR.= A B E B /12 + AD E D/12

= [ (43560) (0.2985 - 2500] 0.78/12 + (2500) (2.12/12)

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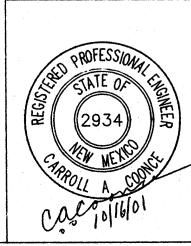
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### FLOOD HAZARD:

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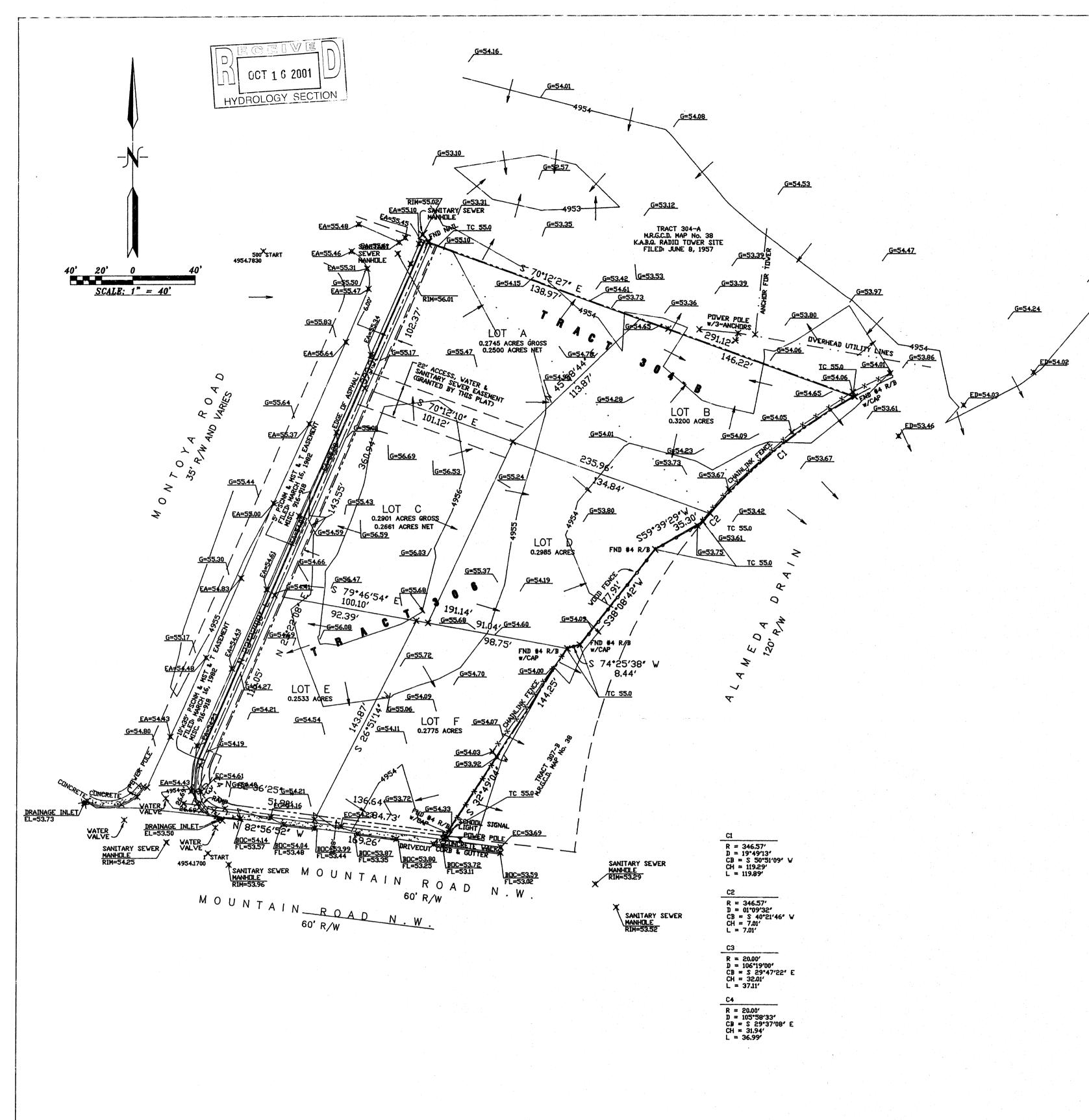
TITLE DRAINAGE PLAN

PROJECT TR. 306, MRGCD MAP NO. 38

CHECKED CAC

SHEET 10F1

HYDROLOGY SECT



1: CONTOUR INTERVAL IS ONE (1) FOOT. 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION No. "14-J-13",

**GENERAL NOTES:** 

- HAVING AN ELEVATION OF 4954.71. 3: UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT
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### LEGEND

54.00 EXISTING SPOT ELEVATIONS

- 5000 EXISTING CONTOURS

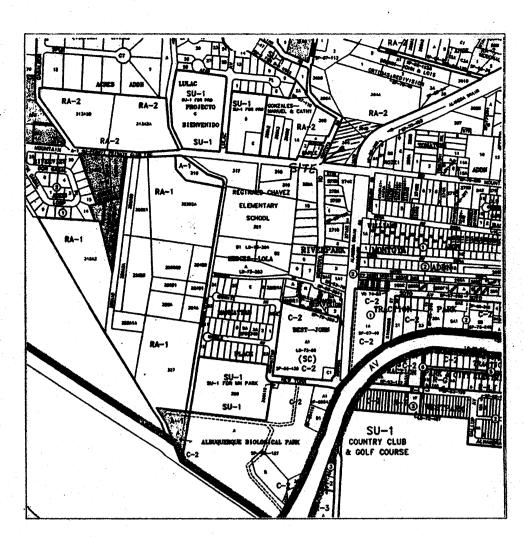
CONCRETE

ED EDGE OF ALAMEDA DRAIN G GROUND

\* \* \* EXISTING FENCING

FLOOD INSURANCE RATE MAP





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Q P100= A BQPB+ AD QPD **= (0.2295) (4.70) ÷ (1.0954 - 0.2295) (2.28)** = 3.0528 CFS FOR ALL FOUR LOTS. THE EXISTING RUNOFF IS ESTIMATED BY Q P = 3.14 CFS/ AC. TREATMENT C, OR

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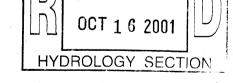
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## LOTS B AND D FLAT GRADING:

- LOT B E 6 HR. 100 YR. TREAT. B = 0.78 IN. AND TREAT D = 2.12 IN. V 8HR 100 YR AB E B /12 + AD E D /12
  - **= [ (43560) (0.3200) 2500] 0.78/12 + (2500) (2.12/12)**
  - = 743.55 + 441.67 = 1185.22 CF
- = V360 + AD (P10 DAY- P360)
  - = 1185.22 + (2500) (3.95 2.20)/ 12 = 1185.22 + 364.58 = 1549.80 CF
- AVERAGE DEPTH PERVIOUS AREA = V/A
  - = (1549.80/ 11439.2) (12)
  - = 1.63 IN.

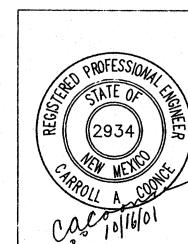
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- **= [ (43560) (0.2985 2500] 0.78/12 + (2500) (2.12/12)**
- = 682.64 + 441.7 = 1124.34 CF
- $V_{10 DAY} = V_{360} + AD (P_{10 DAY} P_{360}) / 12$ 
  - = 1124.34 + 364.58 = 1488.92 CF
- AVERAGE DEPTH PERVIOUS AREA = V/A
  - = (1488.92/ 10502.66) (12)
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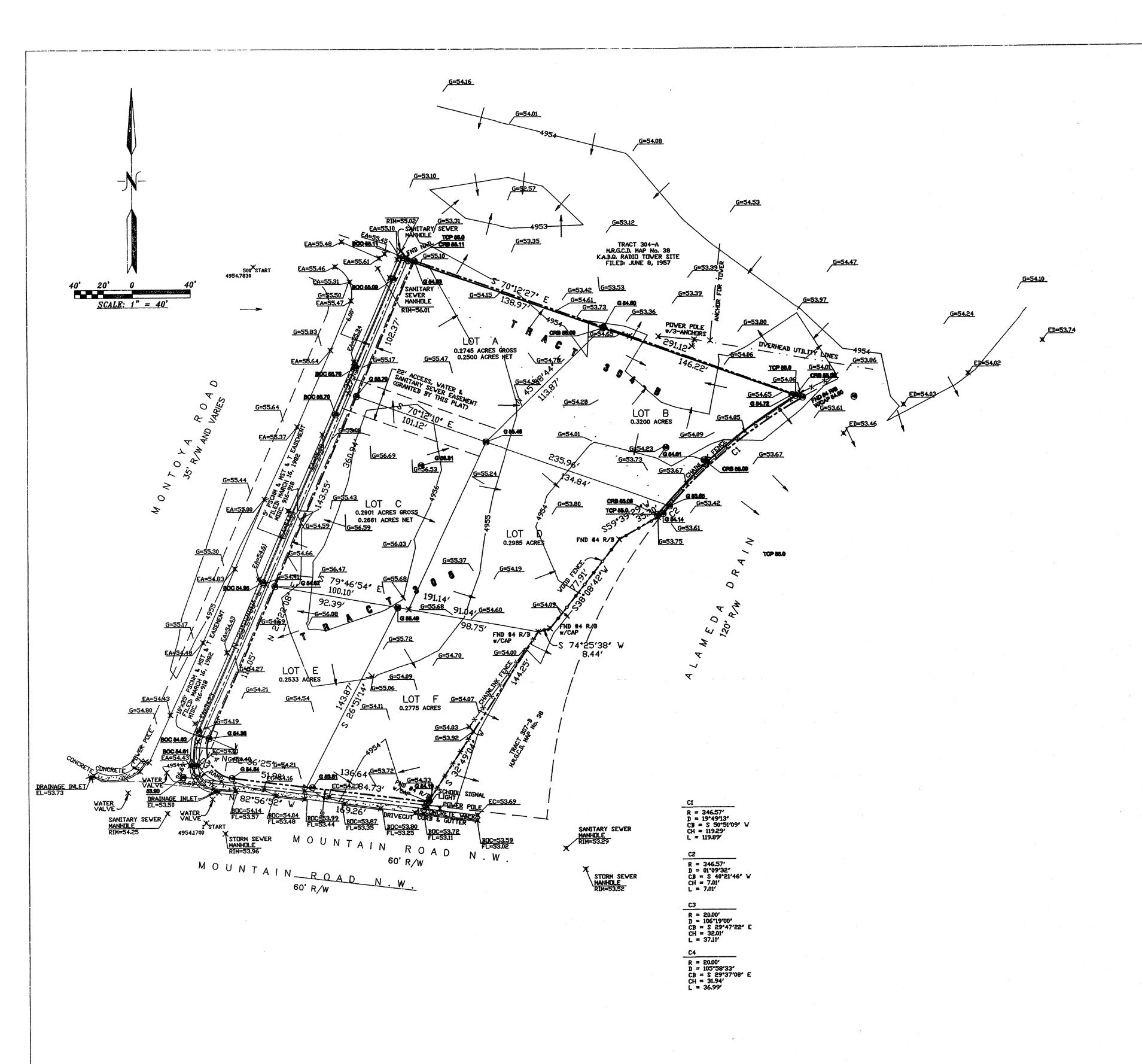
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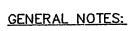
TITLE DRAINAGE PLAN

DRAWN LSC CHECKED CAC

PROJECT TR. 306, MRGCD MAP NO. 38

SHEET 10F1





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- 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE STATION No. "14-J-13", HAVING AN ELEVATION OF <u>4954.71</u>.
- 3: UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND / OR DEPTH PRIOR TO EXCAVATION OR DESIGN CON-
- 5: THIS IS NOT A BOUNDARY SURVEY. BEARINGS AND DISTANCES SHOWN HEREON ARE FOR REFERENCE ONLY.

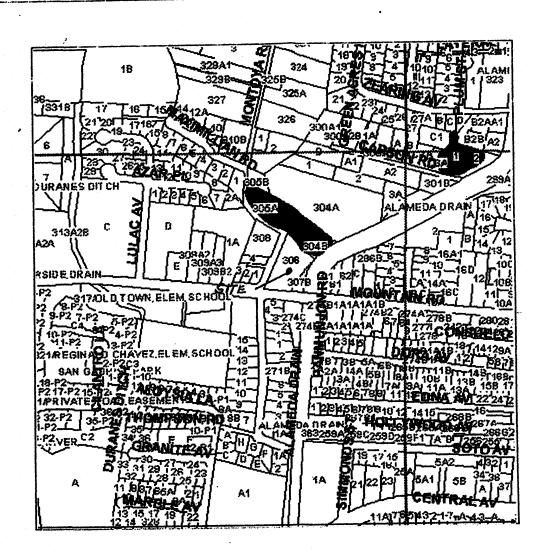
LEGEND \_\_\_ 5000\_\_\_ EXISTING CONTOURS AS-BUILT EL. PT.

### DRAINAGE PLAN GRADING CERTIFICATION

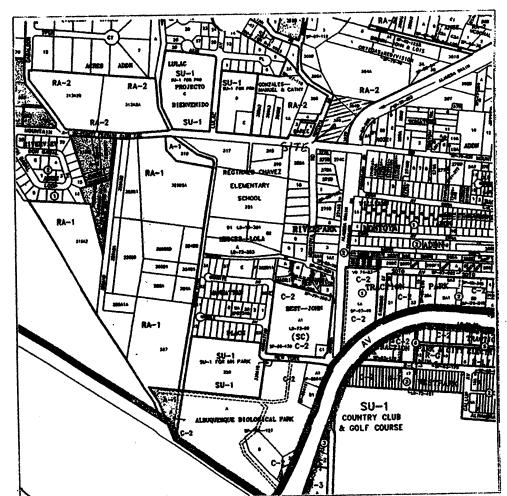
SHOWN ON THIS DRAWING ARE THE AS-BUILT LOCATION AND ELEVATIONS OF THE HEADER CURB REQUIRED FOR APPROVAL ON THE INFRASTRUCTURE LIST FOR DRB 1001011. THIS SUBDIVISION IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN.

C. A. COONCE N.M.P.E. #2934

OCTOBER 8, 2002 DATE



FLOOD INSURANCE RATE MAP PANEL NO. 35001C0331 D



LOCATION MAP J-12-Z LEGAL DESCRIPTION: TRACT 306, M.R.G.C.D. NO. 38 BERNALILLO COUNTY, NEW MEXICO ADDRESS: N.E. CORNER MOUNTAIN RD. & MONTOYA RD., N.W.

### **GENERAL:**

### **EXISTING INFRASTRUCTURE:**

### **EXISTING DRAINAGE:**

THE TRACT TO THE NORTH (MRGCD TR 304-A) IS A LARGE APPROXIMATELY SIX CORNER OF THIS TRACT INTO THE ALAMEDA DRAIN. THE N.E. PORTION OF THIS

### PROPOSED DRAINAGE PLAN:

THIS DRAINAGE PLAN IS NOT A BUILDING DRAINAGE AND GRADING PLAN FOR BTAINING A BUILDING PERMIT. IT IS A SUBDIVISION DRAINAGE PLAN TO ASSESS THE ADEQUACY OF THE GRADING PLAN WHEN A SITE SPECIFIC STRUCTURE IS THE LOTS WILL BE SOLD TO INDIVIDUALS AND/OR BUILDERS.

SYSTEM ON MONTOYA AND MOUNTAIN ROADS. THE INTERIOR LOT B AND D. WHICH ARE ACCESSED BY AN ACCESS AND UTILITY EASEMENT, WILL ADHERE TO

### DRAINAGE CALCULATIONS:

FOR PURPOSES OF ESTIMATING FLOWS AND VOLUMES, THE FOLLOWING

2. THE REMAINDER OF THE LOT WILL BE LAND TREATMENT B. THE FOUR LOTS A, C, E, AND F, DRAINING TO MONTOYA AND MOUNTAIN ROADS

1. THE DWELLING UNIT WILL BE 2,000 S.F. AND THE DRIVEWAY 500 S.F.,

= (0.2295) (4.70) + (1.0954 - 0.2295) (2.28)= 3.0528 CFS FOR ALL FOUR LOTS.

THE EXISTING RUNOFF IS ESTIMATED BY Q P = 3.14 CFS/ AC.

Q P100 = (1.0954) (3.14) = 3.44 CFS FOR ALL FOUR LOTS.

### LOTS B AND D FLAT GRADING:

LOT B E 6 HR. 100 YR. TREAT. B = 0.78 IN. AND TREAT D = 2.12 IN.

V 6HR. 100 YR. = AB EB/12 + AD ED/12

= [ (43560) (0.3200) - 2500] 0.78/12 + (2500) (2.12/12)= 743.55 + 441.67 = 1185.22 CF

= V360 + AD (P10 DAY - P360)

= 1185.22 + (2500) (3.95 - 2.20)/12 = 1185.22 + 364.58 = 1549.80 CF

AVERAGE DEPTH PERVIOUS AREA = V/ A

= (1549.80/ 11439.2)(12) = 1.63 IN.

LOT D E 6 HR. 100 YR. TREAT. B = 0.78 IN. AND TREAT D = 2.12 IN.

V SHR. 100 YR. = AB E B / 12 + AD ED / 12

= [ (43560) (0.2985 - 2500] 0.78/12 + (2500) (2.12/12)

= 682.64 + 441.7 = 1124.34 CF

V 10 DAY = V360 + AD (P10 DAY - P 360) /12

= 1124.34 + 364.58 = 1488.92 CF

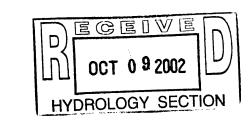
AVERAGE DEPTH PERVIOUS AREA = V/A

= 1.70 IN

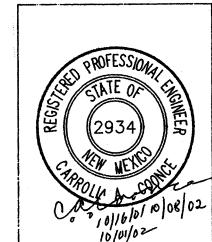
= (1488.92/ 10502.66) (12)

## FLOOD HAZARD:

FIRM MAP PANEL 331 OF 825 SHOWS A FLOOD PLAIN TOUCHING THE N P/L OF RUNOFF WILL BE TO THE INTENDED AREAS.



SHEET 10F1



# C.A. COONCE & ASSOC., INC.

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TITLE DRAINAGE PLAN

PROJECT TR. 306, MRGCD MAP NO. 38

684181

 DATE
 10/10/01
 REVISED

 DRAWN
 LSC
 10/01/02

 CHECKED
 CAC
 10/08/02