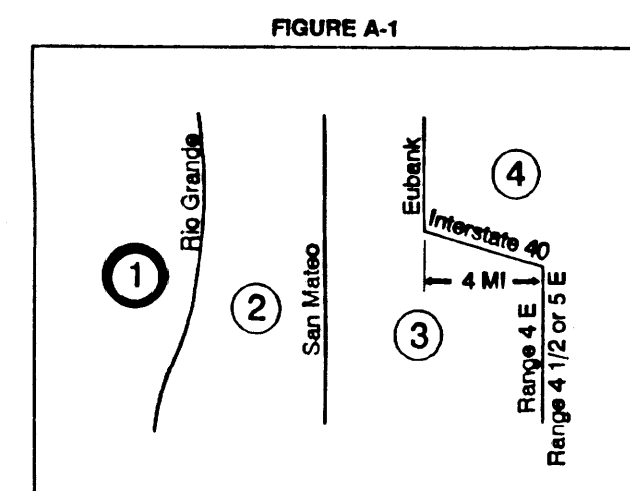


A.1 PRECIPITATION ZONES

Bernalillo County's four precipitation zones are indicated in TABLE A-1 and on FIGURE A-1.

TABLE A-1. PRECIPITATION ZONES	
Zone	Location
1	West of the Rio Grande
2	Between the Rio Grande and San Mateo
3	Between San Mateo and Eubank, North of Interstate 40; and between San Mateo and the East boundary of Range 4 East, South of Interstate 40
4	East of Eubank, North of Interstate 40; and East of the East boundary of Range 4 East, South of Interstate 40



Where a watershed extends across a zone boundary, use the zone which contains the largest portion of the watershed.

DPM SECTION 22.2 - HYDROLOGY January, 1993 Page A-4

TABLE A-4. LAND TREATMENTS	
Treatment	Land Condition
A	Soil uncompacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, groundcover and infiltration capacity. Croplands. Unfilled arroyos.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Minimal vegetation. Unpaved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs.

Most watersheds contain a mix of land treatments. To determine proportional treatments, measure respective subareas. In lieu of specific measurement for treatment D, the areal percentages in TABLE A-5 may be employed.

DRAINAGE COMMENTS AND CALCULATIONS:

AS SHOWN ON THE PLAN HEREON, THE SUBJECT SITE IS LOCATED EAST OF COORS ROAD N.W. AND WEST OF THE RIO GRANDE RIVER, BETWEEN THE CORRALES MAIN CANAL AND THE CORRALES RIVERSIDE DRAIN, IN THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, (ZONE ATLAS MAP "D-13-Z").

AS SHOWN ON PANEL 8 OF 50 OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY, (F.E.M.A.) FLOOD BOUNDARY AND FLOODWAY MAP, DATED OCTOBER 14, 1983, THE SUBJECT SITE IS LOCATED WITHIN A DESIGNATED 100-YEAR FLOOD HAZARD AREA, ZONE DESIGNATION "AH" (ELEVATION = 4981.0) ACCORDINGLY; PROPOSED FINISHED FLOOR ELEVATION HAS BEEN ESTABLISHED AS SHOWN ON THE PLAN HEREON.

THE SUBJECT SITE, 1.) IS TO HAVE A PROPOSED SINGLE-FAMILY RESIDENCE CONSTRUCTED ALONG WITH ASSOCIATED IMPROVEMENTS, 2.) DOES NOT CONTRIBUTE TO OFFSITE FLOWS OF ADJACENT PROPERTIES, 3.) DOES NOT ACCEPT OFFSITE FLOWS FROM ADJACENT PROPERTIES, 4.) DOES LIE ADJACENT TO BOTH MAN-MADE AND ARTIFICIAL WATER COURSES.

CALCULATIONS:

PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA FOR THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, DATED JANUARY, 1993.

SITE AREA = 5.16 ACRES

PRECIPITATION ZONE: ONE (1)

PEAK INTENSITY: IN./HR. AT T_c = TWELVE (12) MINUTES, 100-YR. = 4.70

EXISTING CONDITIONS:

TREATMENT	AREA/ACRES	FACTOR	CFS
A	5.06	X 1.29	= 6.53
D	0.10	X 4.37	= 0.44

"Q_P" = 6.97 CFS

PROPOSED CONDITIONS:

TREATMENT	AREA/ACRES	FACTOR	CFS
A	4.91	X 1.29	= 6.33
D	0.25	X 4.37	= 1.09

"Q_P" = 7.42 CFS

*** INCREASE = 0.45 CFS

GENERAL NOTES:

- 1.) NO PERIMETER BOUNDARY CORNERS HAVE BEEN FIELD ESTABLISHED PER THIS SURVEY OF THE SUBJECT PROPERTY.
- 2.) NO SEARCH HAS BEEN MADE FOR EASEMENTS OF RECORD WITHIN THE SUBJECT SITE OTHER THAN THOSE SHOWN ON THE PLAT OF RECORD.
- 3.) REFER TO "ARCHITECTURAL SITE PLAN" FOR FIELD LAYOUT OF THE PROPOSED IMPROVEMENTS.
- 4.) TOPOGRAPHY SURVEY OBTAINED BY "TRANSIT-STADIA" METHOD.

CONSTRUCTION NOTES:

- 1.) TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 465-1234 FOR LOCATION OF EXISTING UTILITIES.
- 2.) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS; SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
- 3.) ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 4.) ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

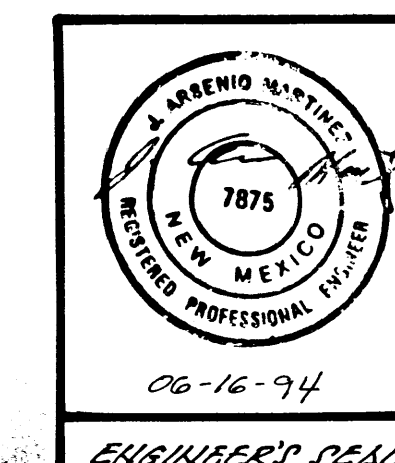
EROSION CONTROL MEASURES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT FOR STORM RUN-OFF DURING CONSTRUCTION; HE SHALL INSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

- 1.) ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SITE AND ENTERING ADJACENT PROPERTIES.
- 2.) ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREETS.
- 3.) THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT WITHIN PUBLIC STREETS THAT HAS BEEN ERODED FROM THE SITE AND DEPOSITED THERE.

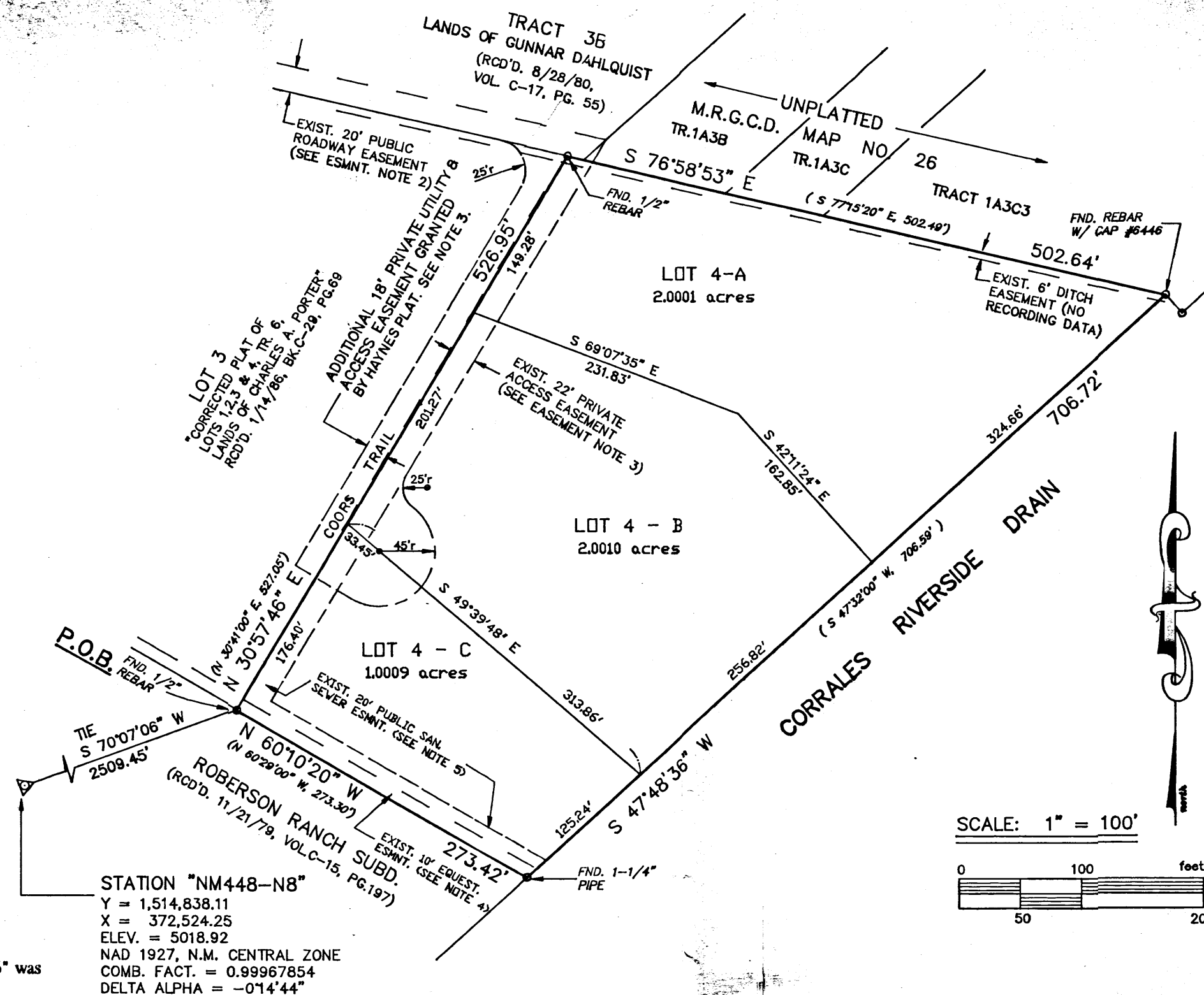
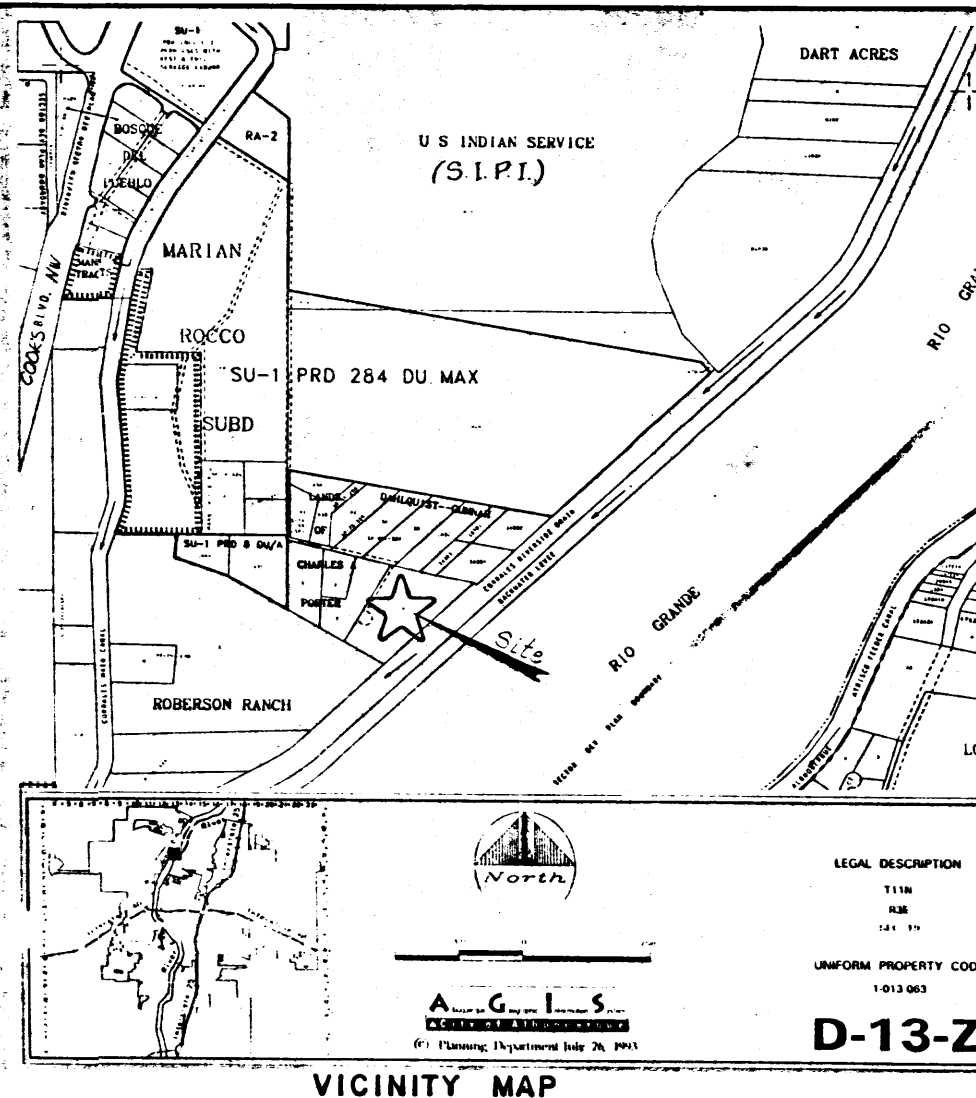
LEGAL DESCRIPTION: TRACT LETTERED "G", ROBERSON RANCH SUBDIVISION, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCH MARK REFERENCE: ACS CONTROL STATION, ALBUQUERQUE CITY SURVEY MONUMENT "NM 448-N8", M.S.L.D. ELEVATION OF 5018.92; PROJECT BENCH MARK AS SHOWN ON THE PLAN HEREON.



A DRAINAGE PLAN
FOR A PROPOSED RESIDENCE FOR
PIERRE AMESTOY, JR. FAMILY
(TRACT "G", ROBERSON RANCH SUBDIVISION)
BERNALILLO COUNTY, NEW MEXICO
JUNE, 1994

RECEIVED
JUN 20 1994



PLAT NOTES AND DATA:

- All exterior property corners were found in place as noted, and a washer impressed "PS #10466" was attached to all found corners. New lot corners are monumented with a rebar and cap "PS #10466".
- Bearings based on N.M. State Plane Coordinate Grid System, Central Zone. Distances are ground.
- No streets or alleys created.
- Date of field survey - January 18, 1994.
- Calls shown in parentheses are from "CORRECTED PLAT ...LANDS OF CHARLES A. PORTER", rcd'd. 1/14/86 in Bk. C29, Pg. 69. Calls without parentheses are as measured.

EASEMENTS:

- Talos Log # 94021615340433
- Record documents regarding roadway easement:
Plat, rcd'd. 8/28/80 in Bk. C17, Pg. 55; Plat, rcd'd. 7/23/75 in Bk. B-10, Pg. 113;
Plat, rcd'd. 8/26/84 in Bk. C17, Pg. 49; Plat, rcd'd. 6/10/74 in Bk. B-9, Pg. 139;
Grant of Esmnt., rcd'd. 4/11/56 in Bk. D-347, Pgs. 586 - 590;
Grant of Esmnt., rcd'd. 10/12/90 in Bk. 90-16, Pgs. 8598 - 8612
- Existing 22' Private Access Easement to serve Lots 3 & 4 was granted on the "CORRECTED PLAT OF LOTS 1,2,3 & 4, TRACT 6, LANDS OF CHARLES A. PORTER" rcd'd. 1/14/86 in Bk. C29, Pg. 69. Maintenance of the access facilities is the sole responsibility of the current or future owners of Lots 3 and 4 and subsequent divisions thereof.
- Existing "10 foot Hiking and Equestrian Easement Granted for the Exclusive Use of Owners, Tenants, and Visitors of Lots 1,2,3 & 4", as granted on the aforesaid "CORRECTED PLAT ... LANDS OF CHARLES A. PORTER", rcd'd. 1/14/86 in Bk. C29, Pg. 69.
- Existing 20 foot Public Sanitary Sewer Easement for C.O.A. Westside Interceptor III.
- This plat shows all easements of record made known to me by the owners.

NOTE REGARDING WATER AND SAN. SEWER SERVICE AVAILABILITY:

City of Albuquerque Water and Sanitary Sewer Service is currently not available to these properties.

NOTES REGARDING BERNALILLO COUNTY ENVIRONMENTAL HEALTH DEPT. REGULATIONS:

- An alternative on-site liquid waste disposal system designed by a sanitary and/or environmental engineer will be required if the most current on-site liquid waste disposal regulations can not be met at the time of installation.
- No private liquid waste disposal system shall be allowed where public sewer is available.
- Water supply system must meet the requirements outlined in the most current water supply regulations at the time of installation.
- New Lots 4-A, 4-B and 4-C shall be connected to City of Albuquerque Sanitary Sewer Service, if and when they become developed, by means of individual on-site pump systems. Request for connection must be verified and coordinated with the Public Works Dept., City of Albuquerque.

NOTE REGARDING DRAINAGE:

This property is within a 100-year flood plain as shown on the National Flood Insurance Program "Flood Insurance Rate Map". Any development of this property must conform to the Bernalillo County Flood Damage Prevention Ordinance. The property may be subject to the flood insurance requirements of the Federal Emergency Management Agency (FEMA). The Base Flood MSL elevation is 4981' per FEMA Map Panel No. 8 of 50. Development of these lots must have a finish floor elevation of 4981' or greater.

DISCLOSURE STATEMENT:

The purpose of this plat is to divide Lot 4 into three parcels.

LEGAL DESCRIPTION: That certain tract of land situate within Section 19, Township 11 North, Range 3 East of the New Mexico Principal Meridian, Albuquerque, Bernalillo County, New Mexico, comprising Lot Four (4) as such lot is shown and designated on the plat titled "CORRECTED PLAT OF LOTS 1,2,3, & 4, TRACT 6, LANDS OF CHARLES A. PORTER", filed for record in the Office of the Bernalillo County Clerk on January 14, 1986 in C-29, page 69, and being more particularly described as follows:

BEGINNING at the southwest corner of the parcel herein described, a found 1/2" rebar, whence, the survey monument "NM 448-N8" bears S 70°07'06" W, 2509.45 feet distant; and running thence, N 30°57'46" E, 526.95 feet to the northwest corner, a found 1/2" rebar; thence, S 76°58'53" E, 502.64 feet to the northeast corner, a found rebar and cap #6446, a point on the westerly right-of-way line of the Corrales Riverside Drain; thence, continuing along said westerly right-of-way line, S 47°48'36" W, 706.72 feet to the southeast corner, a found 1-1/4" pipe; thence, departing said right-of-way, N 60°10'20" W, 273.42 feet to southwest corner and POINT OF BEGINNING. Containing 5.0020 acres, more or less. (The above legal description employs New Mexico Coordinate System Grid bearings and ground distances.)

OWNERS FREE CONSENT STATEMENT: The undersigned owner states that he is the owner of the land shown and described hereon in fee simple, and does hereby consent to the land split in the manner shown hereon and states that it is in accordance with his wishes and desires. Said owners hereby create and grant the private access easement shown hereon for the exclusive use of the current and future owners Lots 3 and 4.

OWNER: THE GUNNAR DAHLQUIST AND ANNELIES DAHLQUIST TRUST.

Gunnar Dahlquist, Trustee
Annelies Dahlquist, Trustee

ACKNOWLEDGEMENT:

State of ~~California~~ CALIFORNIA
County of ~~San Diego~~ SANTA BARBARA

On this 8th day of APRIL, 1994, Gunnar Dahlquist and Annelies Dahlquist did appear before me and execute this instrument as their free act and deed as trustees of the Gunnar Dahlquist and Annelies Dahlquist Trust.

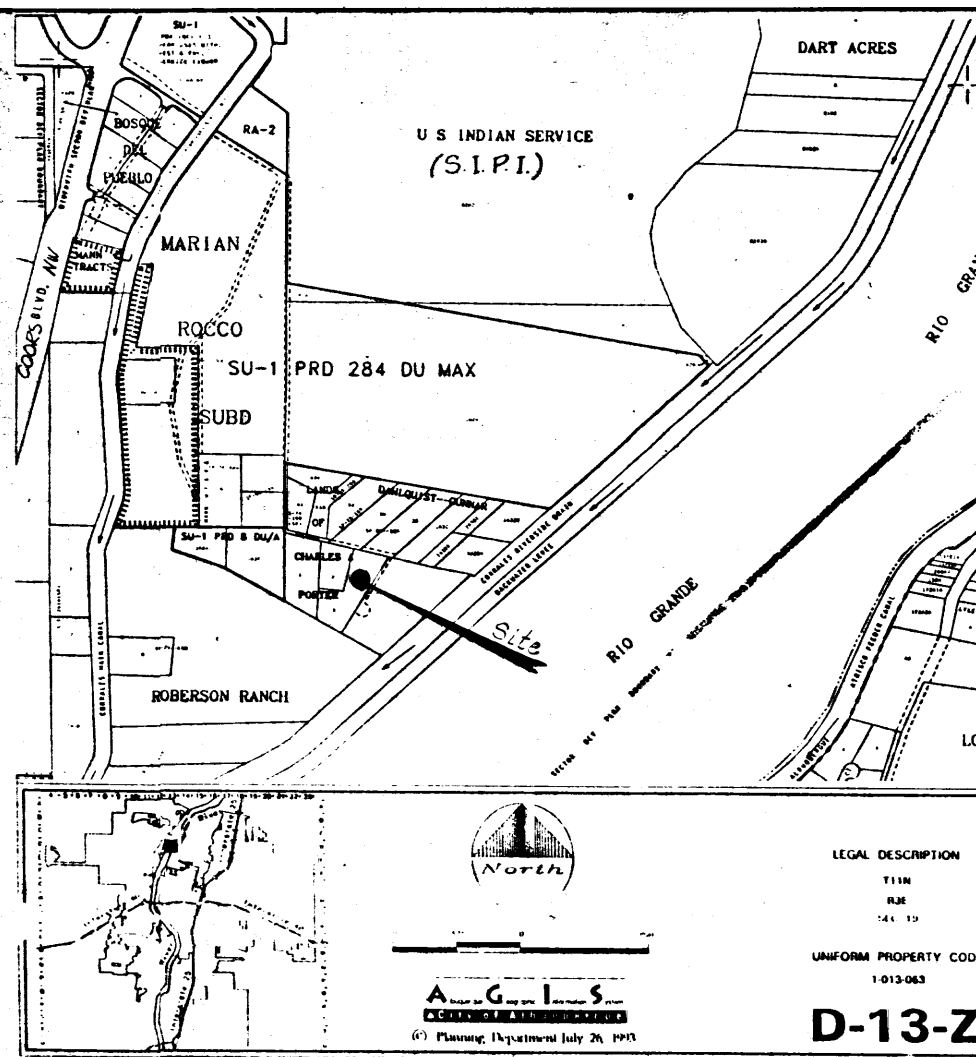
KAREN L. BILLONE
SANTA BARBARA, CA
APR. 2, 1996
EXPIRATION DATE

My Commission Expires: 1-2-96

Rex J. Vogler, NM PS #10466, 8-1-94 Date 3/31/94
P.O. BOX 7155 ABQ. NM 87109-0155 (505)242-5094



Rcd'd 7/28/94
Doc # 94094915
94C-247



VICINITY MAP

PLAT NOTES AND DATA:

- All property corners found in place as noted were attached with a washer impressed "PS #10466". Lot corners set as noted hereon are monumented with a rebar and cap "PS #10466"
- Bearings based on N.M. State Plane Coordinate Grid System, Central Zone. Distances are ground.
- No streets or alleys created.
- Date of field survey - January 18, 1994.
- Calls shown in parentheses are from "CORRECTED PLAT ...LANDS OF CHARLES A. PORTER", rcd'd. 1/14/86 in Bk.C29, Pg. 69. Calls without parentheses are as measured.

EASEMENTS:

- Talos Log # 94021615340433
- Record documents regarding roadway easement:
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Plat, rcd'd. 8/26/84 in Bk. C17, Pg. 49; Plat, rcd'd. 6/10/74 in Bk. B-9, Pg. 139;
Grant of Esmnt., rcd'd. 4/11/56 in Bk. D-347, Pgs. 586 - 590;
Grant of Esmnt., rcd'd. 10/12/90 in Bk. 90-16, Pgs. 8598 - 8612
- Existing 22' Private Access Easement to serve Lots 3 & 4 was granted on the "CORRECTED PLAT OF LOTS 1,2,3 & 4, TRACT 6, LANDS OF CHARLES A. PORTER" rcd'd. 1/14/86 in Bk. C29, Pg. 69. Maintenance of the access facilities is the sole responsibility of the current or future owners of Lots 3 and 4 and subsequent divisions thereof.
- Existing "10 foot Hiking and Equestrian Easement Granted for the Exclusive Use of Owners, Tenants, and Visitors of Lots 1,2,3 & 4", as granted on the aforesaid "CORRECTED PLAT ... LANDS OF CHARLES A. PORTER", rcd'd. 1/14/86 in Bk. C29, Pg. 69.
- Existing 20 foot Public Sanitary Sewer Easement for C.O.A. Westside Interceptor III.
- This plat shows all easements of record made known to me by the owners.

NOTE REGARDING WATER AND SAN. SEWER SERVICE AVAILABILITY:

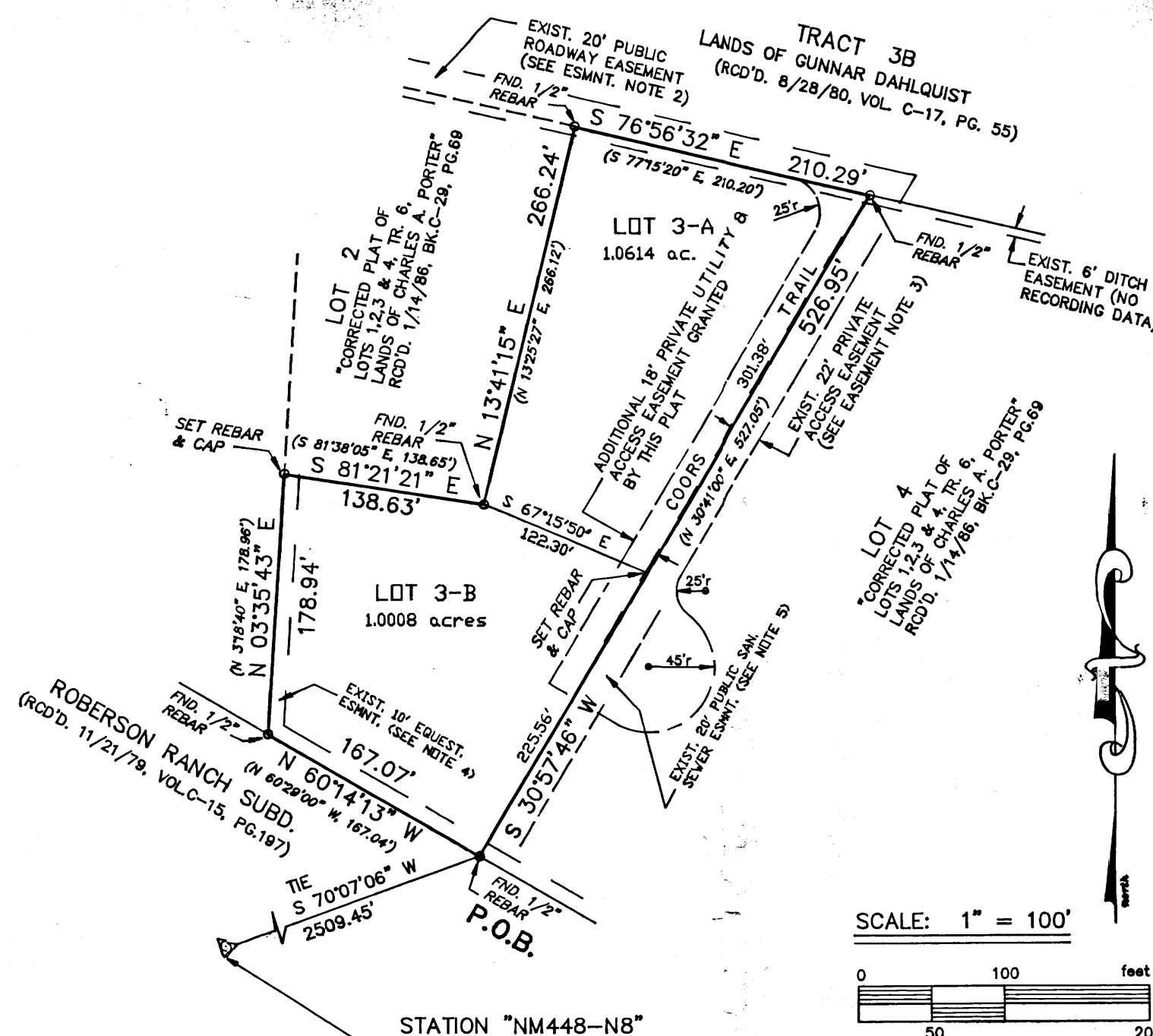
City of Albuquerque Water and Sanitary Sewer Service is currently not available to Lot 3-B. City water is not currently available to Lot 3-A, however City Sanitary Sewer Service may be available to Lot 3-A, and request for service must be verified and coordinated with the Public Works Dept., City of Abq..

NOTES REGARDING BERNALILLO COUNTY ENVIRONMENTAL HEALTH DEPT. REGULATIONS:

- An alternative on-site liquid waste disposal system designed by a sanitary and/or environmental engineer will be required if the most current on-site liquid waste disposal regulations can not be met at the time of installation.
- No private liquid waste disposal system shall be allowed where public sewer is available.
- Water supply system must meet the requirements outlined in the most current water supply regulations at the time of installation.
- New Lots 3-A and 3-B shall be connected to City of Albuquerque Sanitary Sewer Service, if and when they become developed, by means of individual on-site pump systems. Request for connection must be verified and coordinated with the Public Works Dept., City of Albuquerque.

NOTE REGARDING DRAINAGE:

This property is within a 100-year flood plain as shown on the National Flood Insurance Program "Flood Insurance Rate Map". Any development of this property must conform to the Bernalillo County Flood Damage Prevention Ordinance. The property may be subject to the flood insurance requirements of the Federal Emergency Management Agency (FEMA). The Base Flood MSL elevation is 4981' per FEMA Map Panel No. 8 of 50. Development of these lots must have a finish floor elevation of 4981' or greater.



DISCLOSURE STATEMENT: The purpose of this plat is to divide Lot 3 into two parcels, and to expand the private access easement within Lot 3.

LEGAL DESCRIPTION: That certain tract of land situate within Section 19, Township 11 North, Range 3 East of the New Mexico Principal Meridian, Albuquerque, Bernalillo County, New Mexico, comprising Lot Three (3) as such lot is shown and designated on the plat titled "CORRECTED PLAT OF LOTS 1,2,3, & 4, TRACT 6, LANDS OF CHARLES A. PORTER", filed for record in the Office of the Bernalillo County Clerk on January 14, 1986 in C-29, page 69, and being more particularly described as follows:

BEGINNING at the southeast corner of the parcel herein described, a found 1/2" rebar, whence, the survey monument "NM 448-N8" bears S 70°07'06" W, 2509.45 feet distant; and running thence,
N 60°14'13" W, 167.07 feet to the southwest corner, a found 1/2" rebar; thence,
N 03°35'43" E, 178.94 feet to an angle point, a set rebar and cap #10466; thence,
S 81°21'21" E, 138.63 feet to an angle point, a found 1/2" rebar; thence,
N 13°41'15" E, 266.24 feet to the northwest corner, a found 1/2" rebar; thence,
S 76°56'32" E, 210.29 feet to the northeast corner, a found 1/2" rebar; thence,
S 30°57'46" W, 526.95 feet to the southeast corner and POINT OF BEGINNING.

Containing 2.0622 acres, more or less, and now comprising Lots 3-A and 3-B,

(The above legal description employs New Mexico Coordinate System Grid bearings and ground distances.)

OWNER'S FREE CONSENT: The undersigned owners states that they are the owners of the land shown and described hereon in fee simple, and they hereby consent to the land split in the manner shown hereon and states that it is in accordance with their wishes and desires. Said owners hereby create and grant the private access easement shown hereon for the exclusive use of the current and future owners Lots 3 and 4.

OWNERS: THE MARTIN HAYNES AND CAROLE HAYNES TRUST

Martin J. Haynes, Co-trustee

Carole H. Haynes, Co-trustee

ACKNOWLEDGEMENT:

State of New Mexico)
County of Bernalillo) ss

On this 13th day of April, 1994, Martin J. Haynes and Carole H. Haynes did appear before me and execute this instrument as their free act and deed as co-trustees of the Martin Haynes and Carole Haynes Trust.

Notary Public

My Commission Expires: 6/12/95

PLAT OF LOTS 3-A & 3-B TRACT 6 OF LANDS OF CHARLES A. PORTER

(A LAND SPLIT OF LOT 3, TRACT 6,
OF LANDS OF CHARLES A. PORTER)

BERNALILLO COUNTY, NEW MEXICO
ZONE ATLAS D-13 MARCH 1994

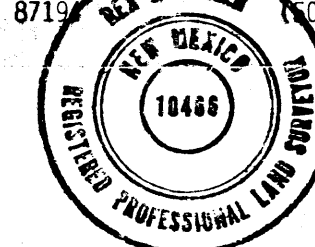
APPROVALS: SUBDIVISION NO.: _____

D.R.B. CASE NO.: 94-16

CITY PLANNING	DATE
CITY ENGINEER	7-25-94
TRAFFIC ENGINEER	7-19-94
PARKS & RECREATION SERVICES DEPT.	7-19-94
UTILITIES DIVISION	7-19-94
CITY SURVEYOR	08/14/94
ALBUQUERQUE, N.M.	7/28/94
BERN. COUNTY PUBLIC WORKS	7/11/94
US WEST	4-14-94
SAS CO. OF NM	4-18-94
COUNTY ENGINEER	4-18-94
COUNTY ENVIRONMENTAL HEALTH	6-17-94
COUNTY ENVIRONMENTAL HEALTH	6/20/94

SURVEYOR'S CERTIFICATION: I, Rex J. Vogler, New Mexico Professional Surveyor No. 10466, certifies that this plat and the field survey on which it is based was prepared by me or under my direct supervision; that it meets the Requirements for Land Surveying in New Mexico; that it meets the minimum requirements for monuments and surveys of the Albuquerque Subdivision Ordinance, and is true and correct to the best of my knowledge and belief.

Rex J. Vogler, NM PS #10466
P.O. BOX 7155 ABQ. NM 87119



PLAT DECLARATION

By approving this document, PNM does NOT waive or release any easement or easement rights which may have been granted by prior plat, map, or document.

Rcd'd. 7/28/94
Doc. # 94094916
94C-248

CALCULATIONS

THE FOLLOWING CALCULATIONS WERE DEVELOPED USING THE CITY OF ALBUQUERQUE DPM SECTION 22.2.

SITE CHARACTERISTICS:

SITE LOCATION: ZONE 1
PRECIPITATION: P(6hr) = 2.20 inches
PRECIPITATION: P(10day) = 3.67 inches

LAND TREATMENT:
UNCOMPACTED SOIL - TREATMENT A
LANDSCAPE - TREATMENT B
COMPACTED SOIL - TREATMENT C
BUILDINGS & PAVING - TREATMENT D

EXCESS PRECIPITATION:
TREATMENT A E = 0.39 inches
TREATMENT B E = 0.61 inches
TREATMENT C E = 0.94 inches
TREATMENT D E = 1.93 inches

PEAK DISCHARGE:
TREATMENT A = 1.15 cfs/acre
TREATMENT B = 1.91 cfs/acre
TREATMENT C = 2.73 cfs/acre
TREATMENT D = 4.37 cfs/acre

AREA: TOTAL AREA = 5.17 ACRE
(INCLUSIVE OF 0.17 ACRE OF FROM LOT 3A & 3B)

EXISTING	PROPOSED
TOTAL AREA = 5.17 AC.	
TREATMENT A = 5.17 AC. = 100.0%	4.64 AC. = 89.7%
TREATMENT B = 0.00 AC. = 0.0%	0.00 AC. = 0.0%
TREATMENT C = 0.00 AC. = 0.0%	0.32 AC. = 6.2%
TREATMENT D = 0.00 AC. = 0.0%	0.21 AC. = 4.1%

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF:
AREA OF ACCESS EASEMENT R/W = 20,640 SF = 0.47 AC.
AREA OF GRAVEL SURFACE = 13,840 SF = 0.32 AC.
(THESE FIGURES ARE INCLUSIVE OF THE PROPERTY OUTSIDE THE SUBJECT PARCEL.)

ACCESS EASEMENT RIGHT-OF-WAY AREA:

V100-6hr = $(0.39)(0.47)/12 = 0.015$ acre-ft = 665 cf
V100-10day = 665 cf (NO TREATMENT D AREA)

REMAINDER OF PARCEL:

V100-6hr = $(0.39)(4.7)/12 = 0.153$ acre-ft = 6,650 cf
V100-10day = 6,650 cf (NO TREATMENT D AREA)

DEVELOPED RUNOFF: THE CALCULATIONS SHOWN REFLECT BOTH THE DEVELOPED RUNOFF FOR THE FUTURE GRAVEL ROAD AND AN ESTIMATE OF THE IMPERVIOUS AREA ATTRIBUTABLE TO FUTURE HOMES.

ACCESS EASEMENT RIGHT-OF-WAY AREA:

WEIGHTED E = $[(0.39)(0.15) + (0.94)(0.32)]/0.47$
= 0.76 inches

V100-6hr = $(0.76)(0.47)/12 = 0.030$ acre-ft = 1,300 cf
V100-10day = 1,300 cf (NO TREATMENT D AREA)

REMAINDER OF PARCEL:

WEIGHTED E = $[(0.39)(4.49) + (1.93)(0.21)]/4.70$
= 0.46 inches

V100-6hr = $(0.46)(4.70)/12 = 0.18$ acre-ft = 7,840 cf
V100-10day = $V100-6hr + A^*D^*(P10day-P6hr)/12$

V100-10day = $7,840 + 9,000(3.67-2.20)/12 = 8,940$ cf

RESULTS:

DEVELOPED VOLUMETRIC RUNOFF:

ACCESS EASEMENT: 100% OF THE 100yr-10day RUNOFF VOLUME CREATED BY THE FUTURE ROADWAY WILL BE RETAINED WITHIN THE CONSTRUCTED BAR-DITCHES. VOLUME REQUIRED = 1,300 cf
REMAINDER OF PARCEL: RETENTION AREAS ARE TO BE CREATED TO ACCOMMODATE THE 100yr-10day RUNOFF VOLUME CREATED BY THE FUTURE HOMES. VOLUME REQUIRED:
 $8,940 - 6,650 = 2,290$ cf (764 cf PER LOT) INCREASE IN VOLUME

PEAK DISCHARGE: THIS PLAN PROVIDES FOR TOTAL RETENTION OF ALL RUNOFF VOLUME DEVELOPED FROM THE 100yr-10day EVENT WITHIN THE PROPOSED ROADWAY AND THE 100yr-10day RUNOFF VOLUME CREATED BY THE FUTURE HOMES. THEREFORE, THE PEAK DISCHARGE CALCULATIONS PROVIDED BELOW ARE FOR INFORMATION ONLY.

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:
 $Q100 = (1.15)(5.17) = 5.95$ cfs

DEVELOPED DISCHARGE:

$Q100 = (1.15)(4.64) + (2.73)(0.32) + (4.37)(0.21) = 7.13$ cfs

BAR-DITCH RETENTION AREA:

SECTION AREA = $(2)(0.5)(1)(2) = 2.0$ SF
LENGTH OF DITCH = $943 - 80^* = 863$ LF
(* 4 DRIVEWAYS @ 20' ea. NO CULVERTS)

TOTAL VOLUME PROVIDED = $(863)(2) = 1,726$ cf

DEPTH OF WATER IN BAR-DITCH:

$1,300\text{cf}/863\text{LF} = 1.5$ SF OF SECTION AREA = $(d)(w)/2$
 $d = 0.25w$, $4d = w$, $1.5 = 4(d)(d)/2$, $d = 0.87\text{ft}$

LEGAL DESCRIPTION

LOTS 4-A, 4-B & 4-C, TRACT 6, OF LANDS OF CHARLES A. PORTER, BERNALILLO COUNTY, NEW MEXICO MARCH 1994

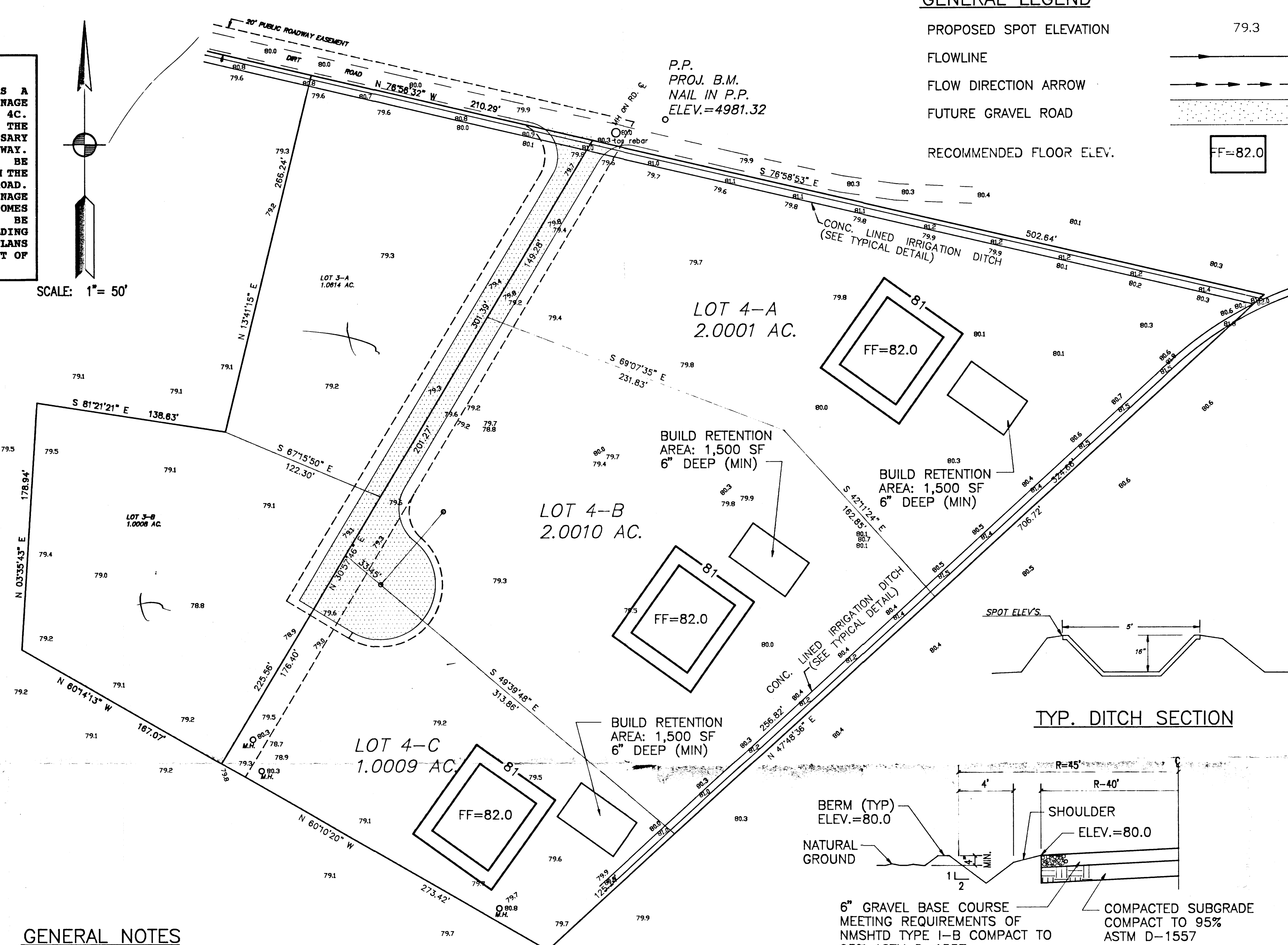
BENCH MARK

ACS CONTROL STATION ALBUQUERQUE CITY SURVEY MONUMENT "NM448-N8"
ELEVATION = 5018.92

NOTE:

THIS PLAN WILL SERVE AS A CONCEPTUAL GRADING AND DRAINAGE PLAN FOR LOTS 4A, 4B, AND 4C. THE PLAN PROVIDES FOR THE DRAINAGE IMPROVEMENTS NECESSARY FOR THE PROPOSED ROADWAY. THESE IMPROVEMENTS WILL BE COMPLETED CONCURRENTLY WITH THE CONSTRUCTION OF THE ROAD. INDIVIDUAL GRADING AND DRAINAGE PLANS FOR THE FUTURE HOMES AND/OR BUILDINGS WILL BE REQUIRED TO SECURE A BUILDING PERMIT. THESE INDIVIDUAL PLANS SHALL CONFORM TO THE INTENT OF THIS PLAN.

SCALE: 1" = 50'



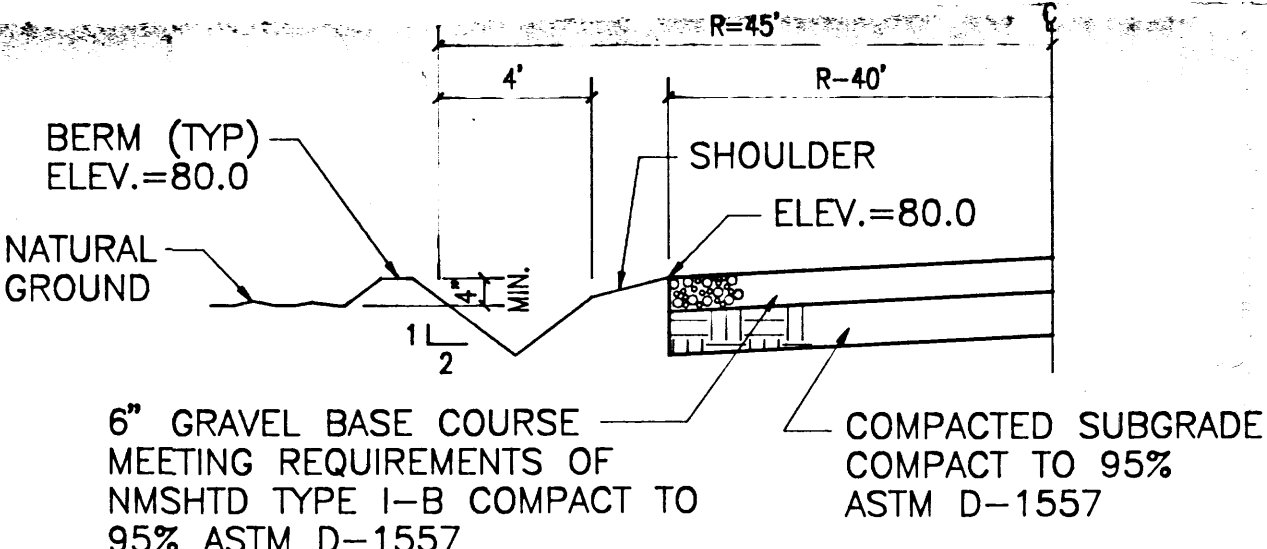
GENERAL LEGEND

PROPOSED SPOT ELEVATION 79.3
FLOWLINE
FLOW DIRECTION ARROW
FUTURE GRAVEL ROAD
RECOMMENDED FLOOR ELEV. FF=82.0

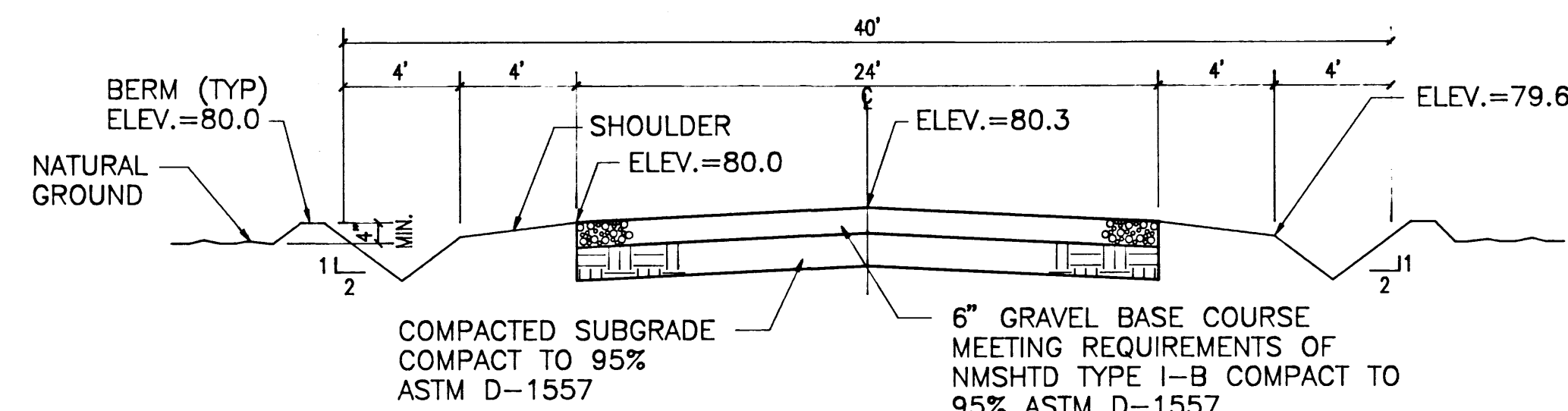
GENERAL NOTES

- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF AND DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT FROM BLOWING.
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY BERNALILLO COUNTY FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.

TYP. DITCH SECTION



FUTURE CUL-DE-SAC SECTION



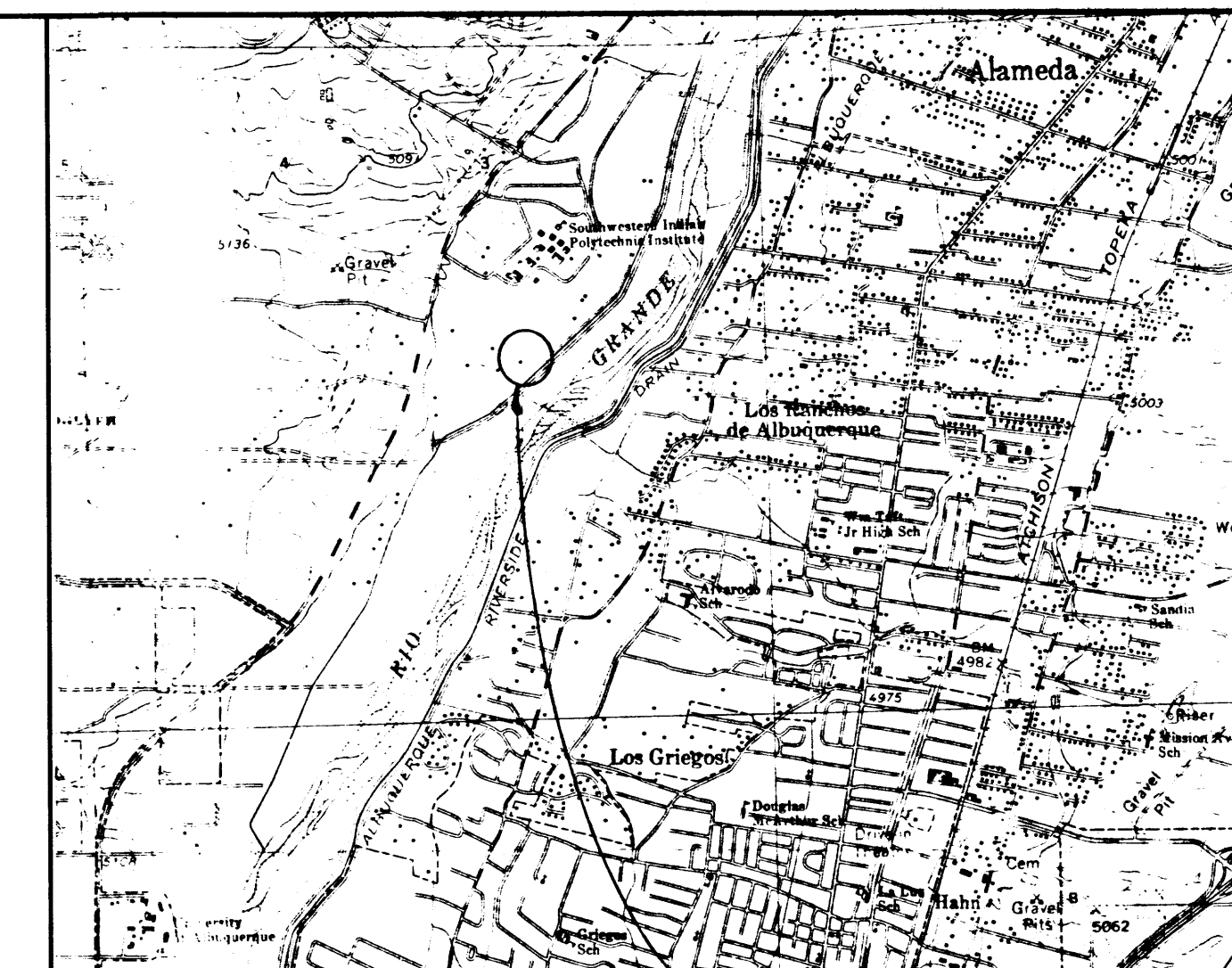
FUTURE ROAD SECTION

DRAINAGE PLAN

THE SUBJECT PARCEL IS LOCATED ON ALBUQUERQUE'S WEST SIDE AT 7100 COORS ROAD NW. AS SHOWN ON PANEL 8 OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP, DATED OCTOBER 14, 1983, THIS SITE IS WITHIN A DESIGNATED 100 YEAR FLOOD HAZARD AREA, ZONE DESIGNATION AH(EL 4981) ACCORDINGLY, RECOMMENDED MINIMUM FINISHED FLOOR ELEVATIONS HAVE BEEN PROVIDED.

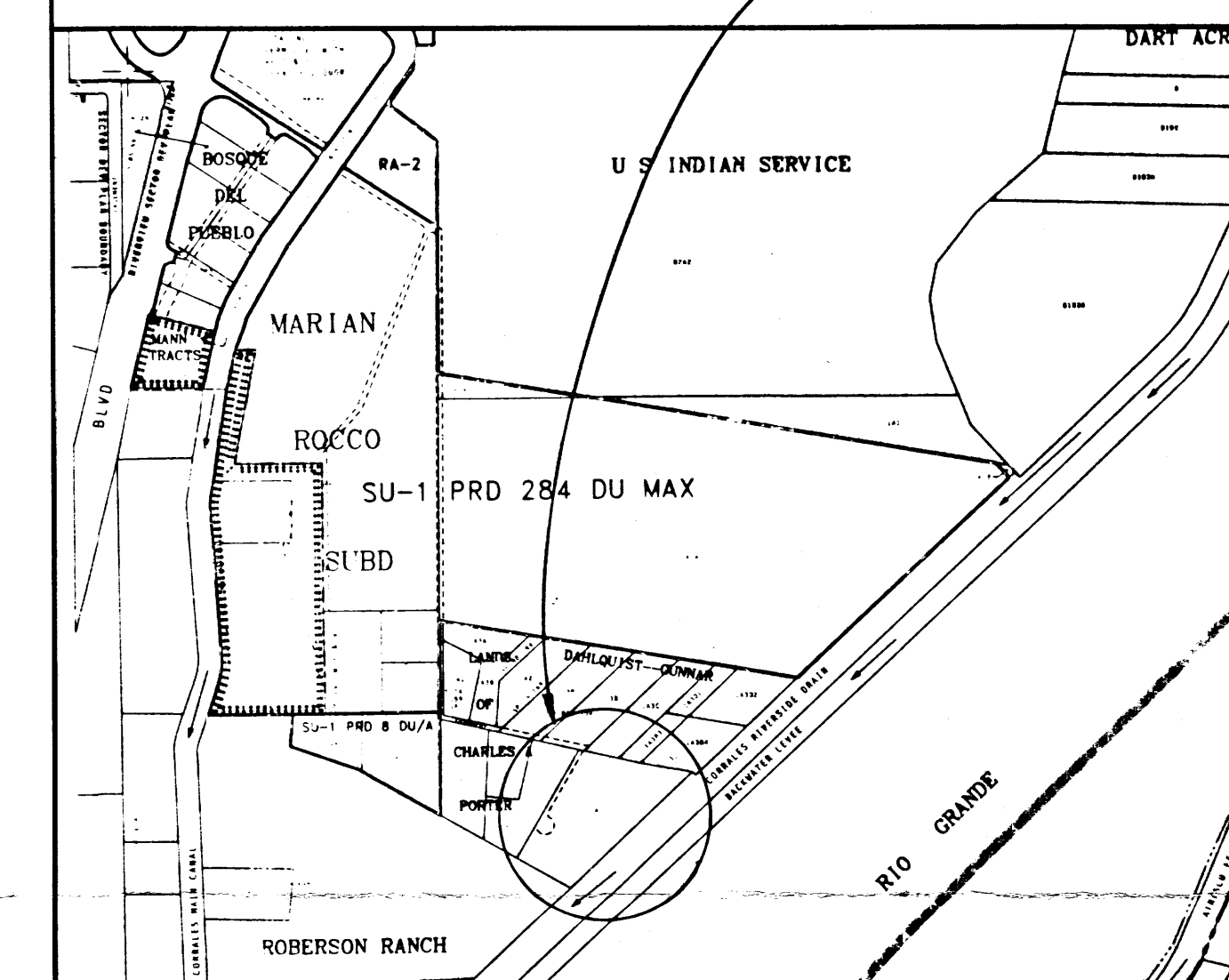
IT IS THE INTENTION OF THIS PLAN TO MAINTAIN CURRENT DRAINAGE CONDITIONS. THIS WILL BE ACCOMPLISHED BY CREATING RETENTION PONDING AREAS WITHIN THE ROADSIDE BAR-DITCH TO RETAIN THE RUNOFF GENERATED BY THE FUTURE ROADWAY EASEMENT AREA AND BY RETAINING RUNOFF CREATED BY FUTURE HOMES. THESE VOLUMES ACCOMMODATE THE 100yr-10day EVENT. THE CALCULATIONS PROVIDED ANALYZE BOTH EXISTING AND FUTURE CONDITIONS OF THIS EVENT. THE FUTURE HOMESITES REFLECT AN ESTIMATED IMPERVIOUS AREA OF 3,000 SF PER LOT. THE RECOMMENDED FINISHED FLOOR ELEVATIONS SHOWN ARE 12" ABOVE THE BASE FLOOD ELEVATIONS PROVIDED BY FEMA.

THE EXISTING SURVEY INFORMATION SHOWN WERE DEVELOPED FROM A SURVEY PERFORMED BY RIO GRANDE ENGINEERING AND SURVEY CO., INC. A SUBSEQUENT FIELD REVIEW OF THE SITE PERFORMED BY THIS OFFICE REVEALED THAT ALL THE INFORMATION IS CONSISTENT WITH THE ACTUAL CONDITIONS THAT EXISTING IN THE FIELD.



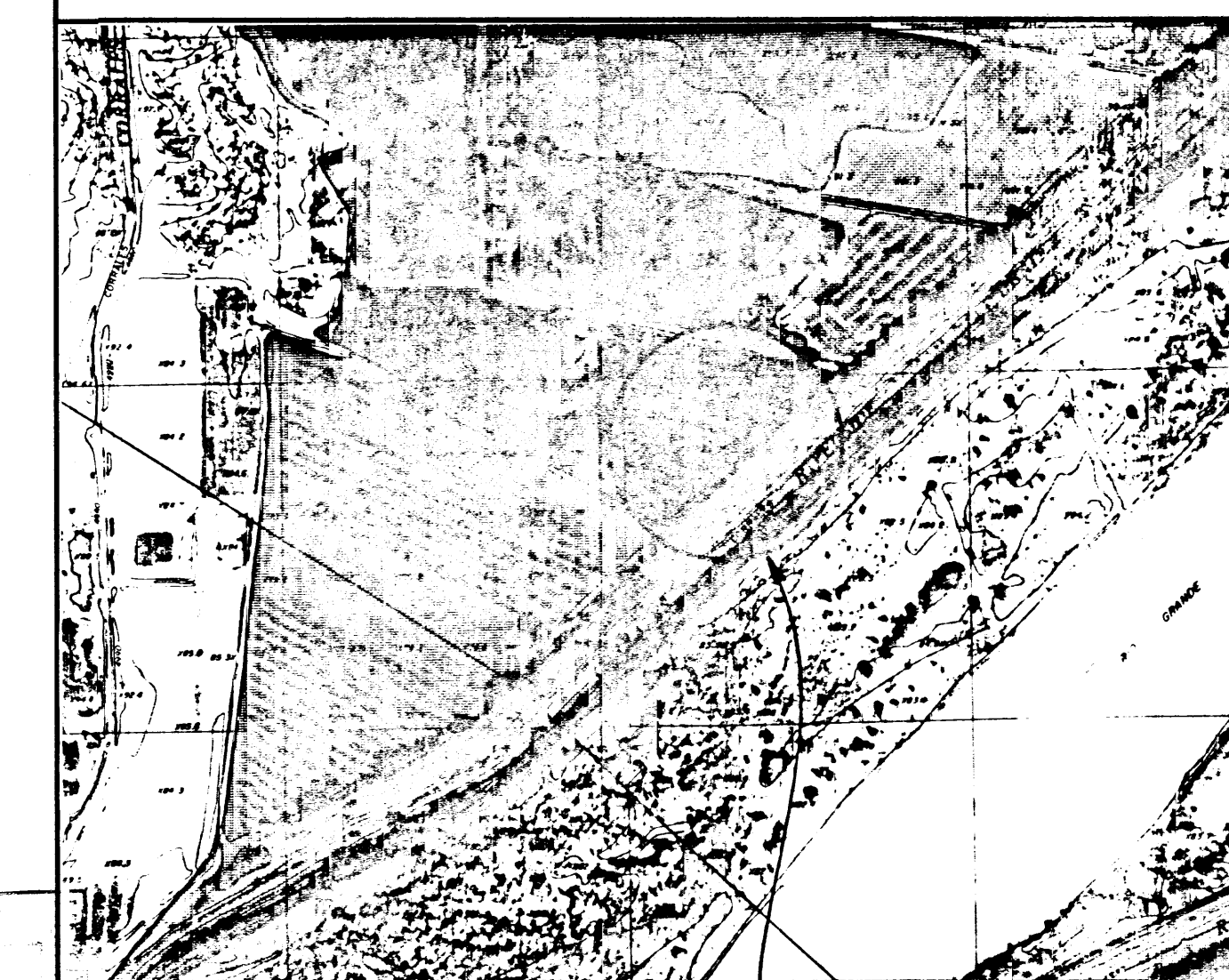
LOCATION MAP

PROJECT LOCATION



ZONE MAP

D-13



FLOOD BOUNDARY MAP

PROJECT LOCATION

LOTS 4-A, 4-B & 4-C, TRACT 6
LANDS OF CHARLES A. PORTER
GRADING AND DRAINAGE PLAN

KEMPER-VAUGHAN
CONSULTING ENGINEERS

3700 COORS RD. N.W. • ALBUQUERQUE, NEW MEXICO 87120 • (505) 831-4520

Designed KRK Drawn SE Checked KRK Sheet 1 of 1

File: HAYNES\VAL-SUB\DRAIN Date APRIL 1994