

Original received  
by AMAFEA on  
2/11/94

PWD-93-192

6-23  
Lot 193

SHS 0.12

## GRANT OF EASEMENT FLOODWAY AND STORM DRAINAGE WORKS

ANDY AND MARIAN SIMON, a married couple, Grantor, being the owners of the property described herein, for good and valuable consideration, the receipt of which is hereby acknowledge, does grant, bargain, sell and convey unto the ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY, a political subdivision of the state of New Mexico, Grantee, and its successors and assigns, the permanent right and easement for drainage, flood control and conveyance of storm water and the construction, reconstruction, operation and maintenance of, and access to such facilities on, in, over and across the following described real estate.

THE LAND WHICH the forgoing rights and easements are granted is located within LOT 183, UNIT TWO(2), SANDIA HEIGHTS SOUTH, IN BERNALILLO, COUNTY, NEW MEXICO and more particularly described in Exhibit "A" attached hereto and incorporated herein by reference.

EXCEPT BY WRITTEN APPROVAL of Grantee, no fence, wall, building, or other obstruction may be placed or maintained in said easement and there shall be no alteration of the grades or contours in said easement. The granting of easement shall not obligate the grantee to maintain natural arroyos, drainage channel, or facilities that do not meet the standards of the Grantee for design and construction, nor shall this granting require the protection of property lying out side of the easement granted. Grantee shall only maintain property and/or improvement that it specifically agrees, by written agreement filed for public record, to maintain. Unless Grantee specifically agrees, by such written agreement, to maintain property and/or improvements such maintenance responsibility shall remain with the grantor, its successors or assigns. Maintenance or any landscaping, by the Grantor, within the easement hereby conveyed shall not alter the present flowline, capacity, or permeability of the present flood way area, except in an emergency. In the event of an emergency, Grantor shall notify the Grantee as soon as practical. Safe locations for structures built on lands adjacent to the rights and easements described herein may be substantially outside of the described area .

TO HAVE AND TO HOLD the said easement for the uses and purposes aforesaid , unto the Grantee, its successors and assigns forever, except that any portion of the easement granted herein shall revert to the grantor, it's successor or assigns , as and to the extent said portion is declared unnecessary for flooding control or drainage by the Board of Directors of the Albuquerque Metropolitan Arroyo Flood Control Authority. A reversion shall be conveyed by quitclaim deed.



THERE IS RESERVED to the Grantor, its successor and assigns, the right to use said lands for open space, landscaping and other purposed which will not interfere with the rights and easements hereby granted, provided that Grantor obtains Grantee's written approval for such use, not to be unreasonably withheld.

WITNESS our hands and seal this 11 day of February, 1994

Andy Simon  
Andy Simon

Marian Simon  
Marian Simon

**ACKNOWLEDGEMENT FOR NATURAL PERSONS**

STATE OF NEW MEXICO       )  
  ) SS  
COUNTY OF BERNALILLO    )

The forgoing instrument was acknowledge before me this 11 day of February, 1994 by Andy Simons and Marian Simons, a married couple.

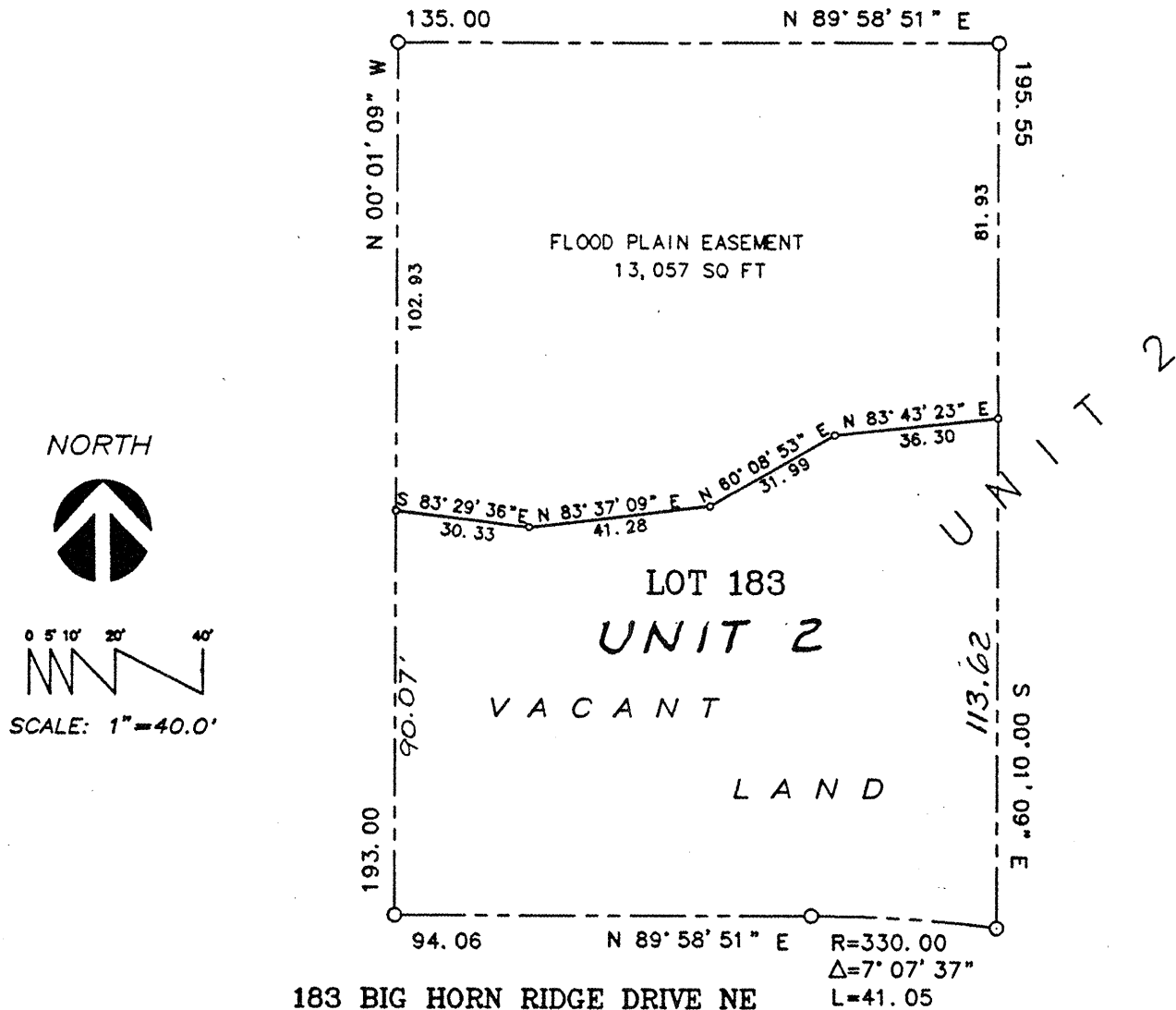
My commission expires:

4/3 1997

Joseph E. Harper  
Notary Public

[SEAL]

pet  
mss



## LEGAL DESCRIPTION:

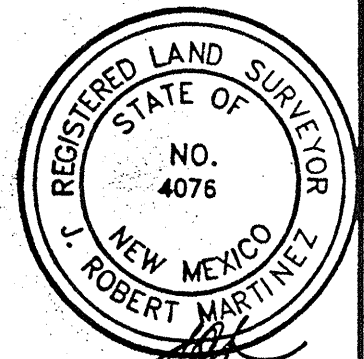
A certain tract of land to be designated as Flood Plain Easement being the drainage easement described on the northern portion of Lot One Hundred Eighty Three (183) of Unit two (2), Sandia Heights South, Albuquerque, New Mexico, as the same is shown and designed on the plat thereof, filed in the office of the County Clerk of Bernalillo County, New Mexico, on October 16, 1993; Book D, Page 132.

## SURVEYOR'S CERTIFICATION:

I, J. ROBERT MARTINEZ licensed under the laws of New Mexico, do hereby certify that this exhibit was prepared by me or under my direct supervision from actual field survey, and is true and correct to the best of my knowledge and belief.

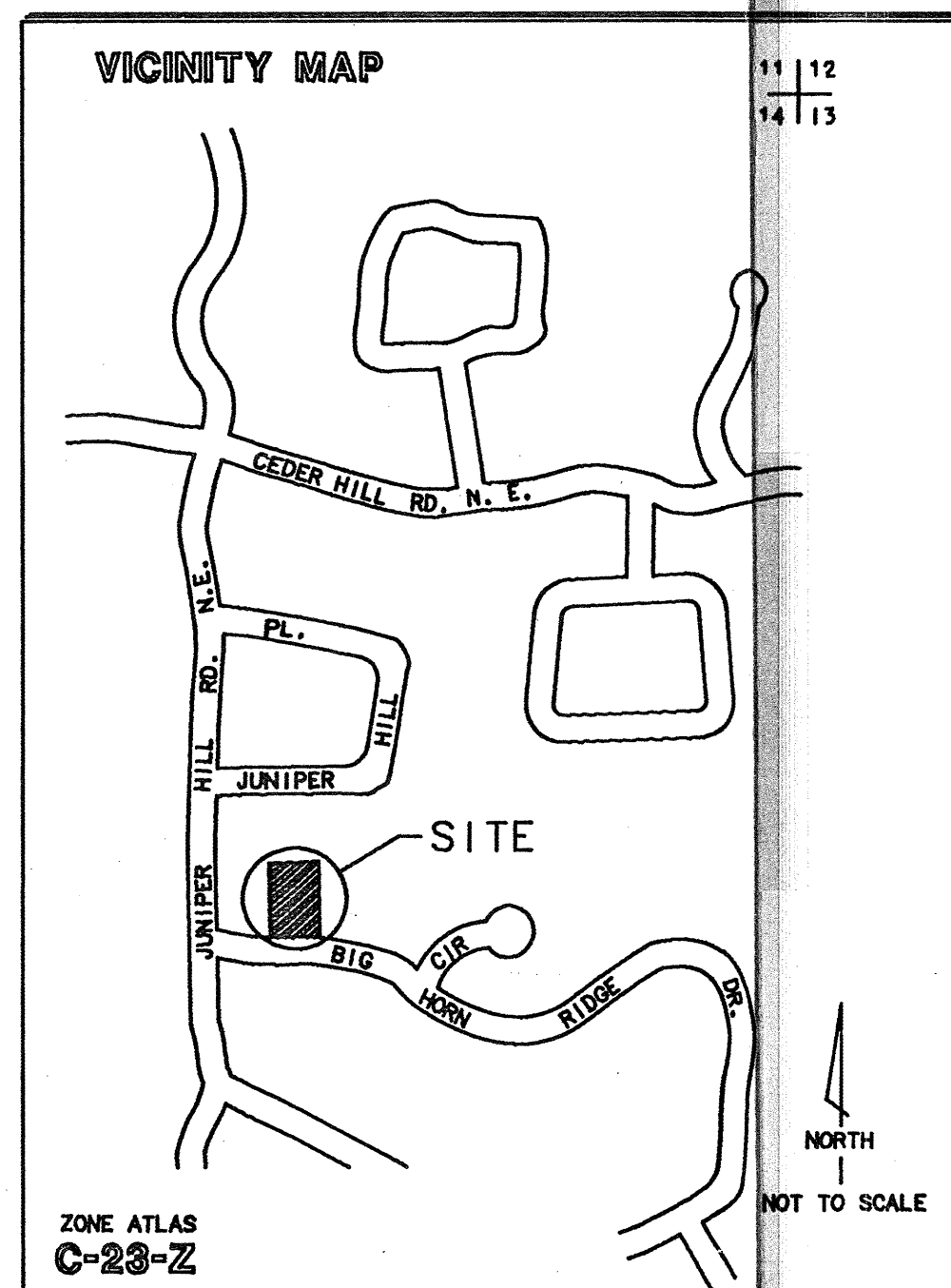
This certificate is executed at Albuquerque, New Mexico on this 14th day of October, 1993

*J. Robert Martinez* 2/9/94  
J. ROBERT MARTINEZ NMLS 4076



Sheet 3 of 3



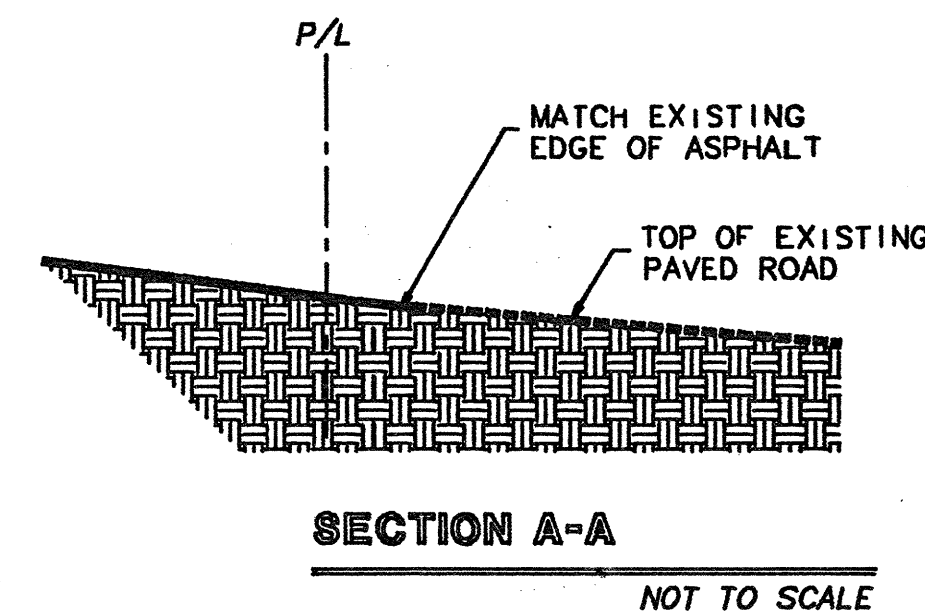


# GENERAL NOTES.

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 765-1234 FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- 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.
- ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- FINISH FLOOR ELEVATION SHOWN HEREON REFLECTS THE LIVING AREA OF THE BUILDING. SEE ARCHITECTURAL PLANS FOR DETAILS.

## Notes:

- Roof runoff in the directions shown. Flows will discharge through canals onto driveway or concrete splash blocks.
- All side slope shall have maximum 3:1 slopes.



## EROSION CONTROL MEASURES.

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

- ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY THE CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF TO LEAVE THE SITE AND ENTERING ADJACENT PROPERTY.
- 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 THE PUBLIC STREETS.
- THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY OR ALL SEDIMENT WITHIN THE PUBLIC STREETS THAT HAVE BEEN ERODED FROM THE SITE AND DEPOSITED THERE.

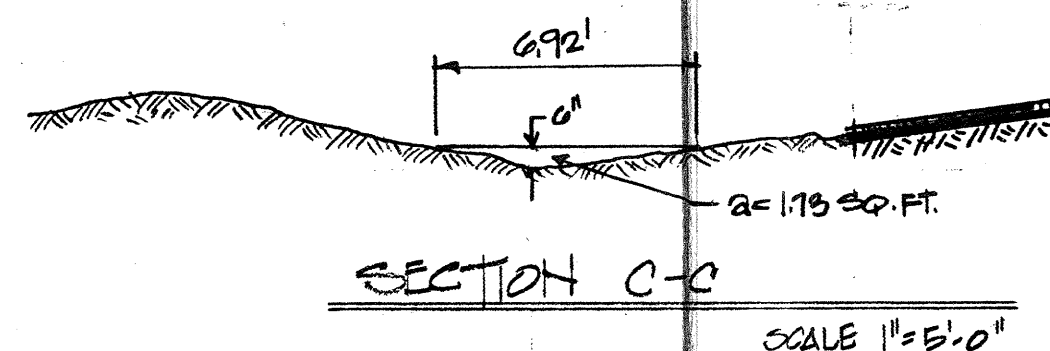
## FLOOD INFORMATION.

THIS SITE DOES LIE IN A DESIGNATED 100 YR FLOOD PLAIN. SEE FLOODWAY MAP PANEL 11 OF 50 ON SHEET 2 & 3 FOR DETAILS.

## EROSION LIMITS FOR THE 100 YEAR FLOOD PLAIN.

Exception to the Building Setback Requirement for 100 year flood plain is requested due to the following conditions.

- The requirement for six feet of setback for each 100 CFS of flow rate can not be met for the lot depth available. Flow rate is approximately 970 CFS, which would require a setback of 56 feet.
- Prudent line is essentially the drainage easement line because:
  - The proposed finished floor of the house is approximately eleven and half feet above the drainage easement line (approximately two feet above the drainage easement line at garage level) and is well above potential flood levels. This approximate elevation difference, between flood elevation and finished floor are consistent with adjacent properties.
  - The stability of the arroyo alignment is seen by comparing the Orthophoto Topographic Map C-23 (Photo dated 1983) and Sandia Crest Quadrangle (7.5 Series dated March 1981). As can be seen by comparing the photos, the arroyo has remained stable.
- A Hold Harmless Agreement will be submitted.



## SWALE CAPACITY

$$\begin{aligned} A &= 1.75 \text{ x } 1.75 = 3.06 \text{ sq. ft.} \\ P &= 1 \text{ ft.} \\ R &= 0.08 \\ Q &= A \times P \times R = 0.25 \text{ cu. ft.} \end{aligned}$$

# GRADING & DRAINAGE PLAN

183 BIG HORN RIDGE DRIVE N.E.

## DRAINAGE CALCULATIONS

### I. REFERENCES:

- SECTION 22.2. HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA FOR THE CITY OF ALBUQUERQUE, NEW MEXICO IN COOPERATION WITH BERNALILLO COUNTY, NEW MEXICO AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY.
- FLOODWAY, FLOOD BOUNDARY AND FLOODWAY MAP, CITY OF ALBUQUERQUE, NEW MEXICO, PANEL 11 OF 50.
- ZONE ATLAS PAGE C-23-Z.

### II. GENERAL INFORMATION:

- SITE LIES IN ZONE FOUR(4) (SEE REF. A, PAGE A-1)
- 100 YEAR, 6 HOUR RAINFALL CRITERIA
- TIME OF CONCENTRATION,  $T_c$ :  $T_c = 0.2 \text{ hr (12 MINUTES)}$ .

### III. IMPERVIOUSNESS:

TREATMENT	TYPES OF SURFACES	EXISTING SQ. FT.	ACRES	PROPOSED SQ. FT.	ACRES
A	UNDEVELOPED	26091	0.5990	20511	0.4709
B	LANDSCAPING	0	0.0000	508	0.0117
C	COMPACTED/VACANT	0	0.0000	824	0.0143
D	IMPERVIOUS	0	0.0000	4448	0.1021
	TOTAL AREA (TA)	26091	0.5990	26091	0.5990

### IV. PEAK DISCHARGE 100 YEAR (REF. A, TABLE A-9):

TREATMENT	TYPES OF SURFACES	EXISTING CFS/Ac	Qp(100)	PROPOSED CFS/Ac	Qp(100)
A	UNDEVELOPED	2.20	1.32	2.20	1.04
B	LANDSCAPING	2.92	0.00	2.92	0.03
C	COMPACTED/VACANT	3.73	0.00	3.73	0.06
D	IMPERVIOUS	5.25	0.00	5.25	0.54
	PEAK DISCHARGE FROM SITE		1.32 CFS		1.66 CFS

### V. PEAK DISCHARGE 10 YEAR (REF. A, TABLE A-9):

TREATMENT	TYPES OF SURFACES	EXISTING CFS/Ac	Qp(10)	PROPOSED CFS/Ac	Qp(10)
A	UNDEVELOPED	0.87	0.52	0.87	0.41
B	LANDSCAPING	1.45	0.00	1.45	0.02
C	COMPACTED/VACANT	2.28	0.00	2.28	0.03
D	IMPERVIOUS	3.57	0.00	3.57	0.36
	PEAK DISCHARGE FROM SITE		0.52 CFS		0.82 CFS

### VI. WEIGHTED "E" 100 YEAR, 6 HR. (REF. A, TABLE A-8):

TREATMENT	TYPES OF SURFACES	EXISTING E	EXA/TA	PROPOSED E	EXA/TA
A	UNDEVELOPED	0.80	0.80	0.80	0.83
B	LANDSCAPING	1.08	0.00	1.08	0.02
C	COMPACTED/VACANT	1.48	0.00	1.48	0.03
D	IMPERVIOUS	2.64	0.00	2.64	0.45
	WEIGHTED "E" FACTOR		0.80 IN		1.13 IN

### VII. VOLUME 100 YEAR, V(360) (REF. A, TABLE A-8):

EXISTING	$0.80 \times 0.5990/12 = 0.0399 \text{ AC. FT.}$
PROPOSED	$1.13 \times 0.5990/12 = 0.0586 \text{ AC. FT.}$
	$1739 \text{ CU. FT.}$
	$2468 \text{ CU. FT.}$

## ENGINEER'S CERTIFICATION

I, R.G. LEE, JR., A REGISTERED PROFESSIONAL ENGINEER HEREBY CERTIFY THAT I INSPECTED THIS LOT ON SEPTEMBER 1, 1993 AND IT APPEARS NO GRADING, FILLING, OR EXCAVATION HAS OCCURRED THEREON SINCE THE EXISTING CONTOUR MAP WAS PREPARED.

R.G. LEE, JR., P.E.

Dec. 29, 1993  
DATE

## BENCH MARK INFORMATION

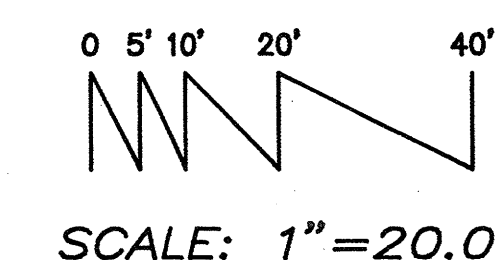
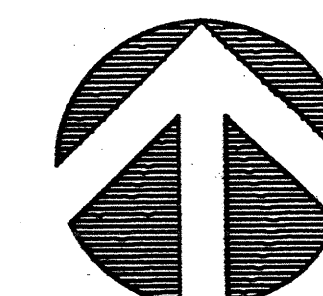
PROJECT BENCH-MARK BEING A "X" TBM SPRAY PAINTED ON ASPHALT AT THE SOUTHEAST CORNER BEARS ELEVATION 6281.33 REFERENCE ALUMINUM CAP NAA-14 LOCATED 280 FT. EAST OF ROCK POINT PLACE CUL-DE-SAC.

## SYMBOL LEGEND

EXISTING CONTOUR	5102
PROPERTY LINE	
PROPOSED GRADE	60
FLOW DIRECTION	
EXISTING SPOT ELEVATION	51.8

## LEGAL DESCRIPTION

LOT 183, UNIT 2  
SANDIA HEIGHTS SOUTH  
BERNALILLO COUNTY, NEW MEXICO



Revised  
SEPTEMBER 6, 1993

Date

Job Number

Checked by  
R.G. LEE, JR.

Drawn by  
H. HOOD

Sheet Title  
GRADING AND DRAINAGE

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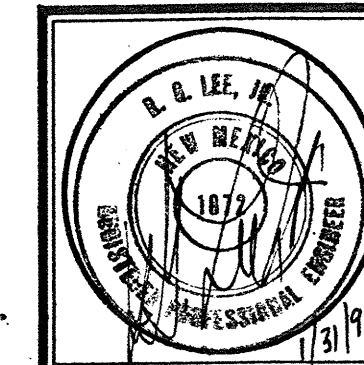
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Revised  
JANUARY 25, 1993  
Date

Job Number

OFF-SITE FLOW STUDY

Sheet Title

LEE ENGINEERING  
8225 CORONADO N.E.  
ALBUQUERQUE, NEW MEXICO

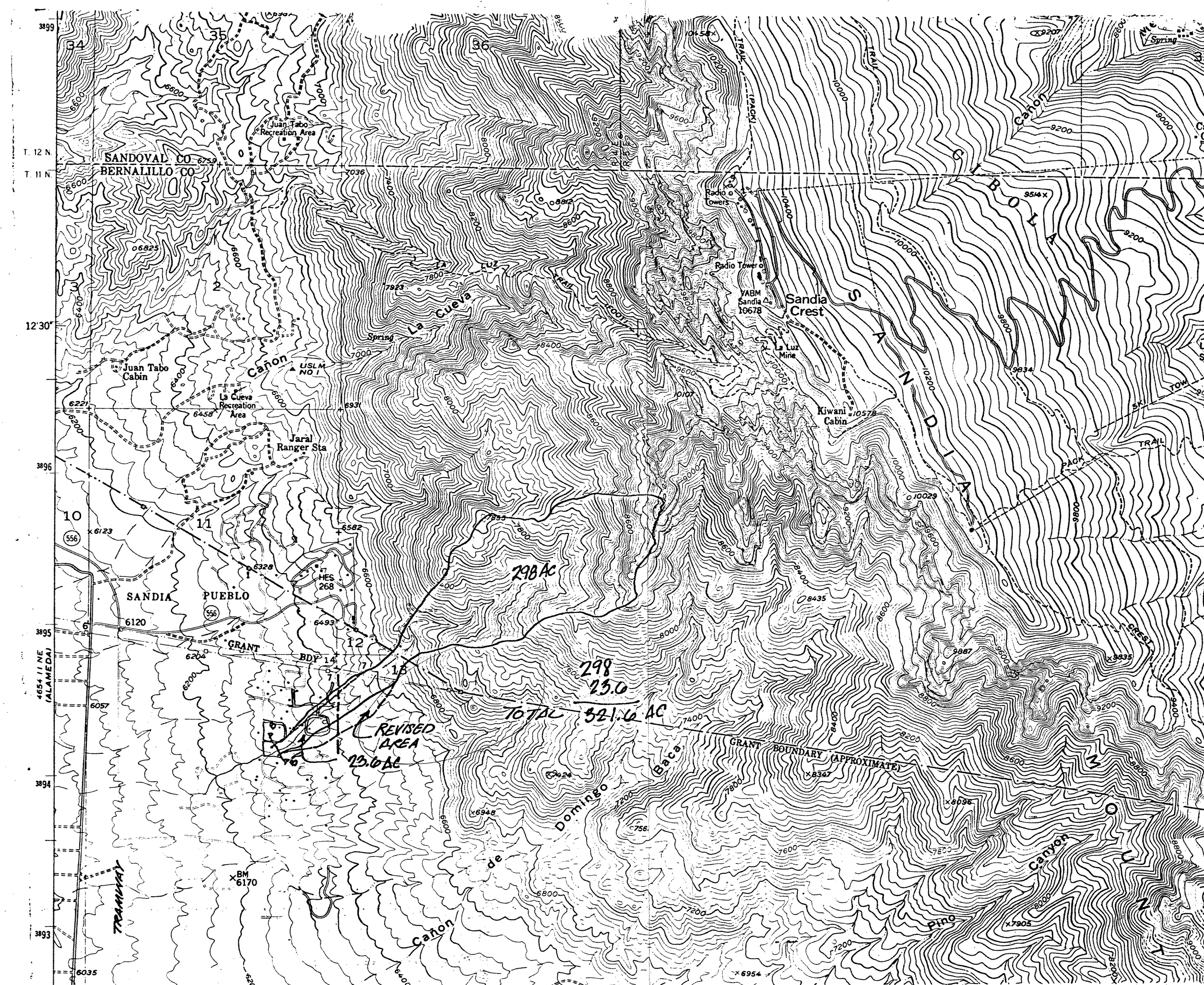
ANDY & MARIAN SIMON RESIDENCE  
183 BIG HORN RIDGE DRIVE N. E.

Job Title

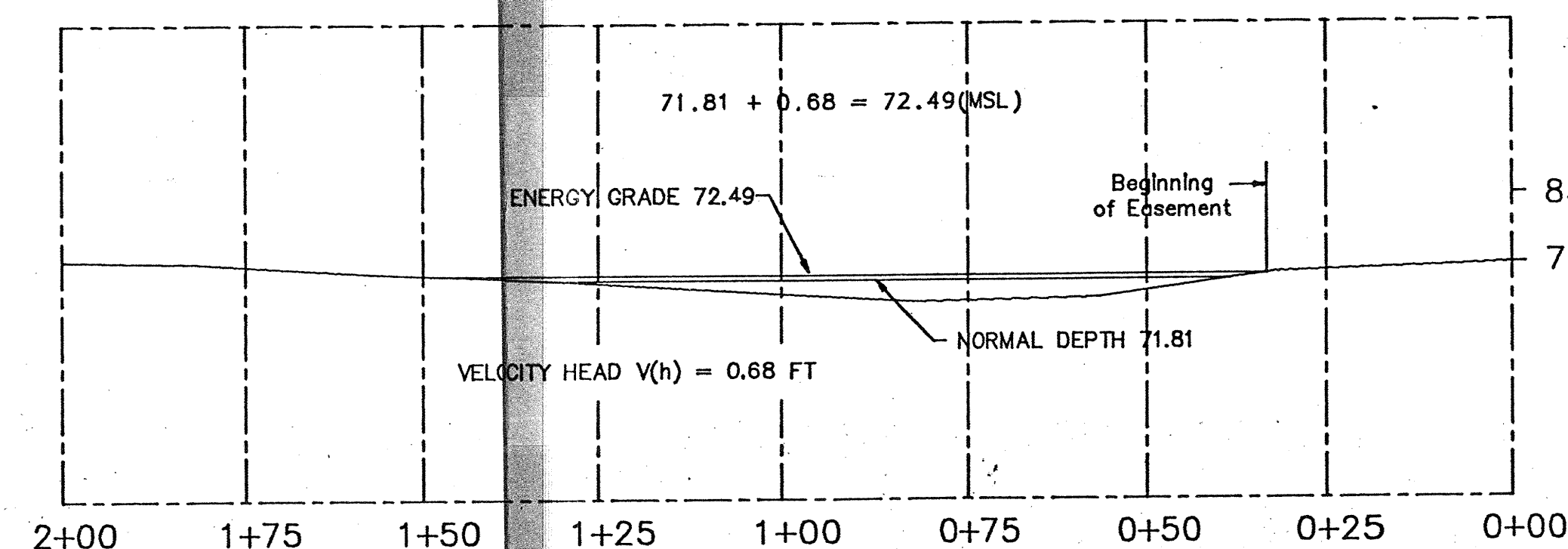
Sheet Number  
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## SANDIA CREST QUADRANGLE

7.5 MINUTE SERIES



X-Section	
Elev	Area Sq Ft
6275	536
6274	375
6273	260
6272	160
6271.81	146
6271	88
6270	35



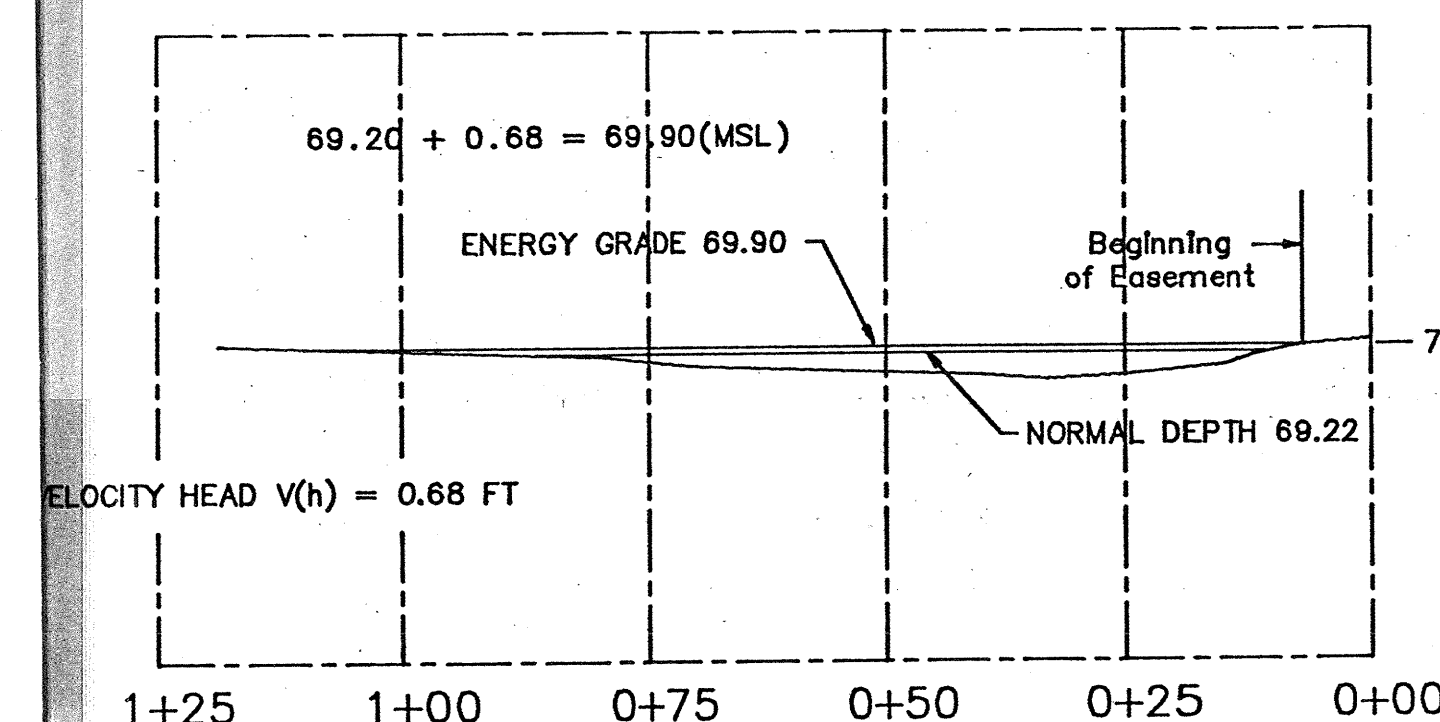
ARROYO X-SECTION (Section B-B, Sheet 1)

Scale 1"=20'

X-Sectional Area  
Area Under Contour  
6272 160 Sq Ft  
6271 88 Sq Ft  
6271.81 146 Sq Ft

Capacity at 6271.81  
A = 146 Sq Ft  
V = 6.64 Ft/Sec  
Q = 970 CFS  
Energy Grade  
71.81 + 0.68 = 72.49 (MSL)

X-Section	
Elev	Area Sq Ft
6270	185
6269	136
6268.22	147
6268	52



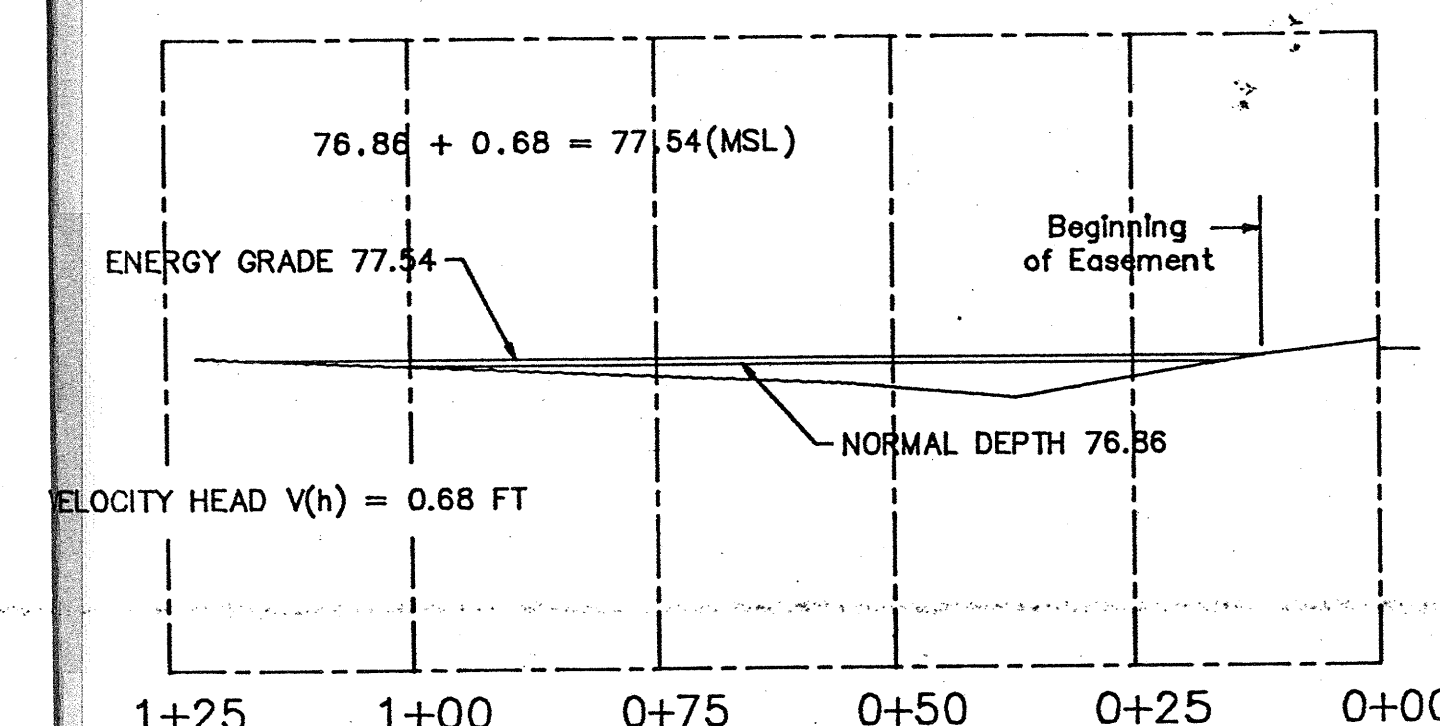
ARROYO X-SECTION (Section D-D, Sheet 1)

Scale 1"=20'

X-Sectional Area  
Area Under Contour  
6270 185 Sq Ft  
6269 136 Sq Ft  
6268.22 147 Sq Ft

Capacity at 6271.81  
A = 147 Sq Ft  
V = 6.64 Ft/Sec  
Q = 1005 CFS  
1005 > 970 CFS  
Energy Grade  
69.22 + 0.68 = 69.90

X-Section	
Elev	Area Sq Ft
6277	158
6276.86	147
6276	82



ARROYO X-SECTION (Section E-E, Sheet 1)

Scale 1"=20'

X-Sectional Area  
Area Under Contour  
6277 158 Sq Ft  
6276 82 Sq Ft  
6276.86 147 Sq Ft

Capacity at 6271.81  
A = 147 Sq Ft  
V = 6.64 Ft/Sec  
Q = 1005 CFS  
1005 > 970 CFS  
Energy Grade  
76.86 + 0.68 = 77.54

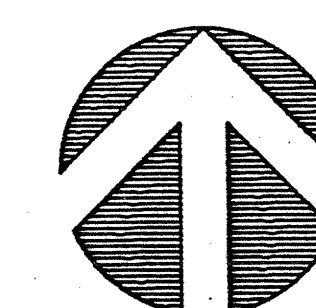
### Off-Site Calculations

Time of Concentration K = 3 L = 10,100 L(cu) = 7,000 g = 0.253 K(n) = 0.033 Tc = 0.4227 Hrs Intensity Tc = 0.4227 P(60) = 2.23 I = 3.90 In	Peak Discharge (Rational Method) C(a) = 0.68 (Treatment C) I = 3.90 In A = 322 Ac Qp = 829 CFS Sediment Factor 17% 829 x 1.17 = 970 CFS Qp = 970 CFS Velocity (L/Tc) L = 10,100 Tc = 0.4227 V = 6.64 Ft/sec Velocity Head V(h) V = 6.64 g = 32.2 V(h) = 0.68 Ft
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### LEGAL DESCRIPTION

LOT 183, UNIT 2  
SANDIA HEIGHTS SOUTH  
BERNALILLO COUNTY, NEW MEXICO

OFF-SITE FLOW STUDY



RECEIVED  
JAN 1 1994