

February 17, 1998

Dennis Lorenz  
Brasher & Lorenz Inc.  
2201 San Pedro NE Building 1 Suite 210  
Albuquerque, New Mexico 87110

RE: ENGINEER CERTIFICATION FOR LOT 12-B BLOCK 8 REBONITO SUBD. (J23-D24)  
CERTIFICATION STATEMENT DATED 1/22/98

Dear Mr. Lorenz:

Based on the information provided on your January 23, 1998 submittal, Engineer Certification for the above referenced site is acceptable.

Please be advised that a copy of the Certification is being forwarded to Mr. Baca for his file. Also, if for some unforeseen reason the adjacent property experiences any damage because of the retention pond at the rear of the property, it will be your clients responsibility to make corrective measures.

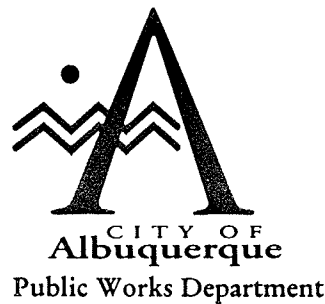
If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia  
Mr. Frank Baca 1620 Valdez Court NE  
Tuan Van Huyne 13319 Arch Ct. NE  
File

Sincerely

Bernie J. Montoya CE  
Associate Engineer





Martin J. Chávez, Mayor

Robert E. Gurulé, Director

April 29, 1997

Dennis Lorenz PE  
Brasher & Lorenz Engineering Inc.  
2201 San Pedro NE Bldg. 1 Suite 210  
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR LOT 12-B REBONITO SUBDIVISION (J23-D24)  
ENGINEER'S STAMP DATED 4/28/97

Dear Mr. Lorenz:

Based on the information provided on your April 29, 1997 submittal, the above referenced site is approved for Building Permit.

Please be advised that the proposed retaining walls will need to be constructed prior to continuation with the house pad. The retaining walls will need to be constructed and certified as to location by your firm. Please advise your client that a retaining wall permit is required prior to construction.

Also, prior to final acceptance by the City of Albuquerque, Engineer Certification per the DPM checklist will be required.

Please advise me as to your inspection and concurrence of the retaining walls so as to release the inspections with Code Administration.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia  
File

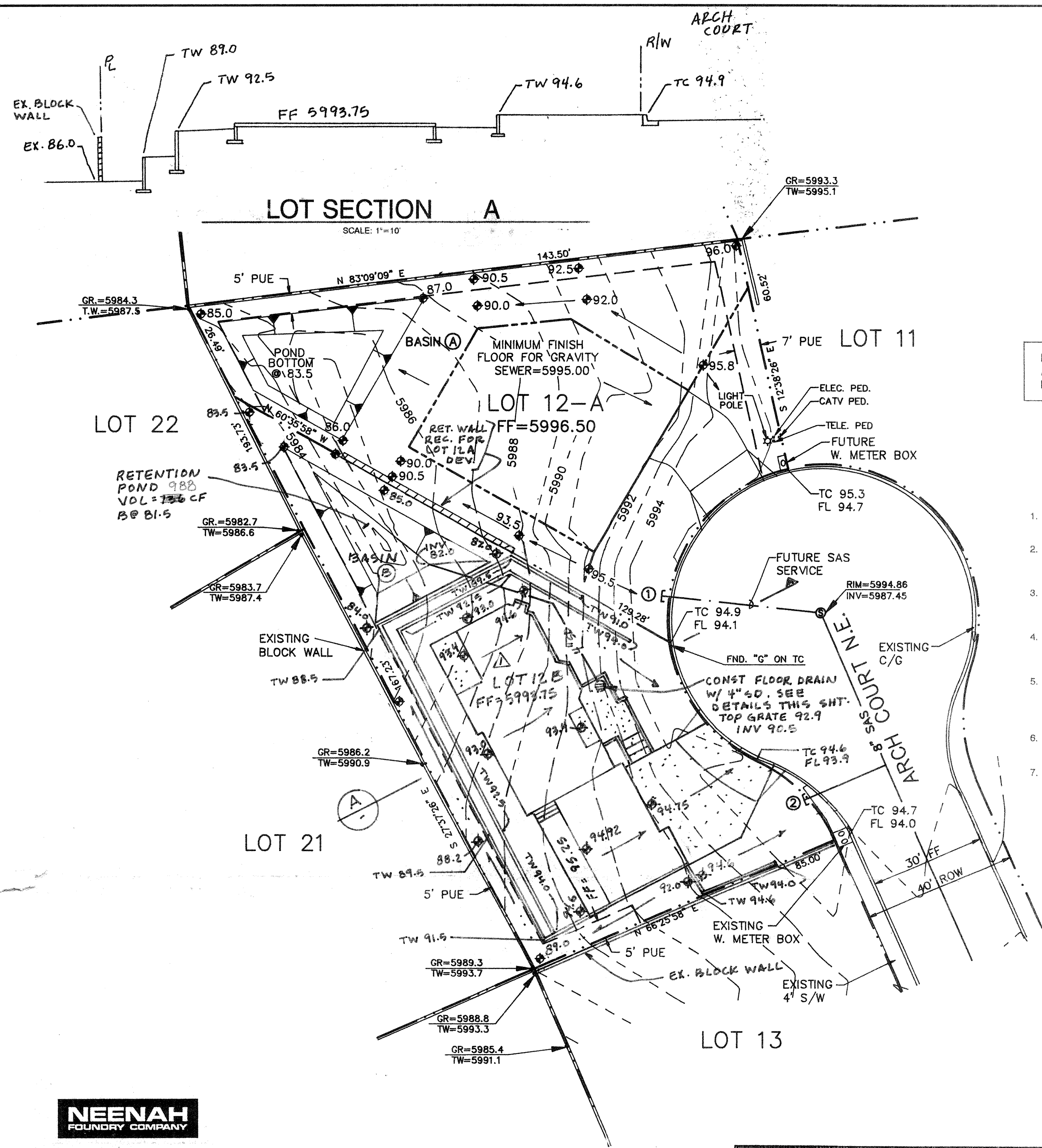
Sincerely

A handwritten signature in cursive script that reads 'Bernie J. Montoya'.  
Bernie J. Montoya CE  
Associate Engineer

Good for You, Albuquerque!

P.O. Box 1293, Albuquerque, New Mexico 87103

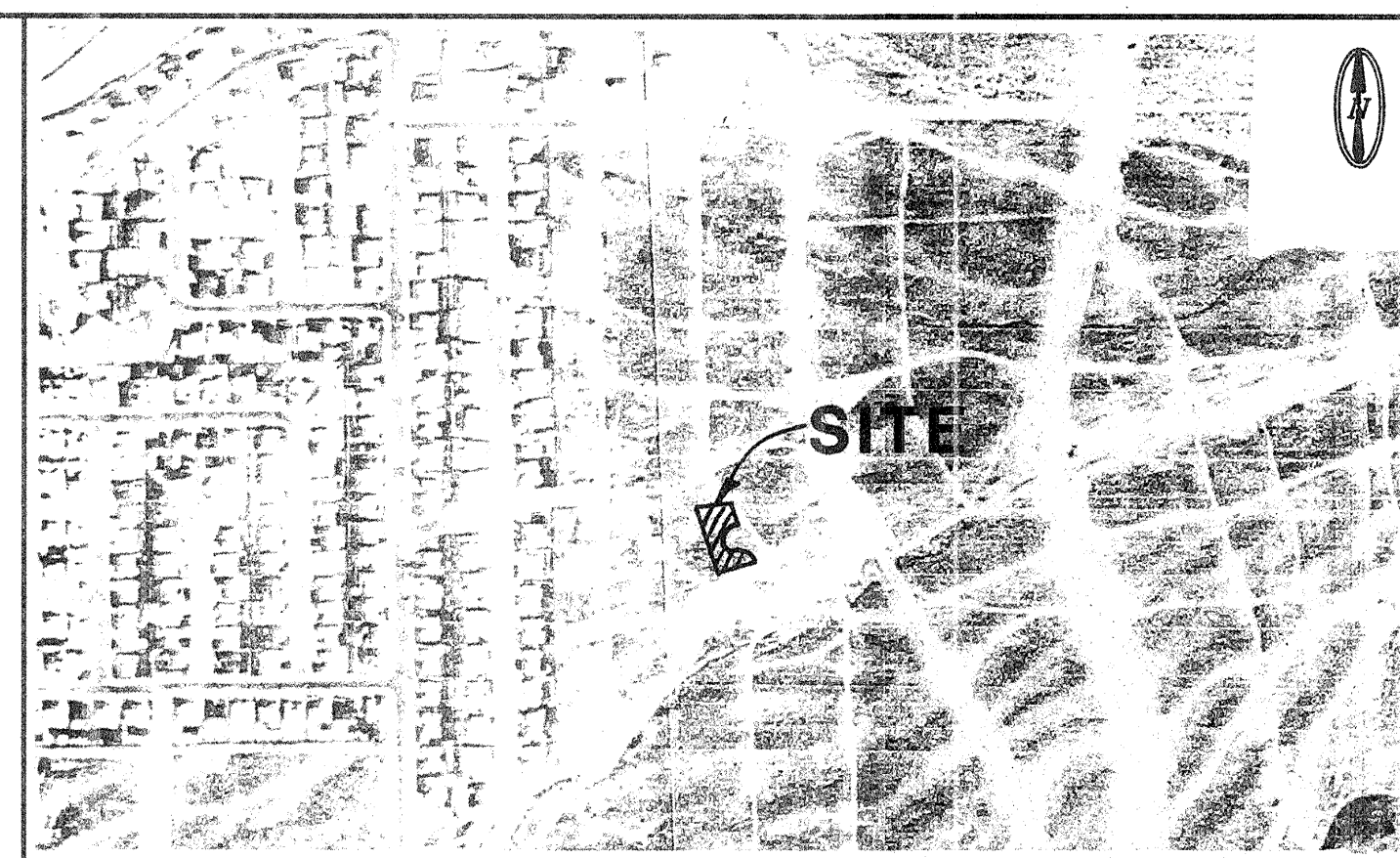
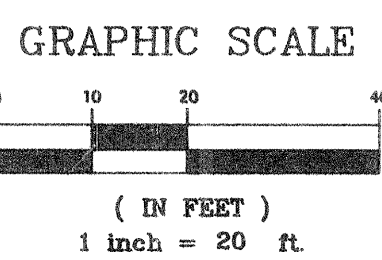




NOTE:  
ALL ROOFS SHALL  
DRAIN TO ARCH COURT

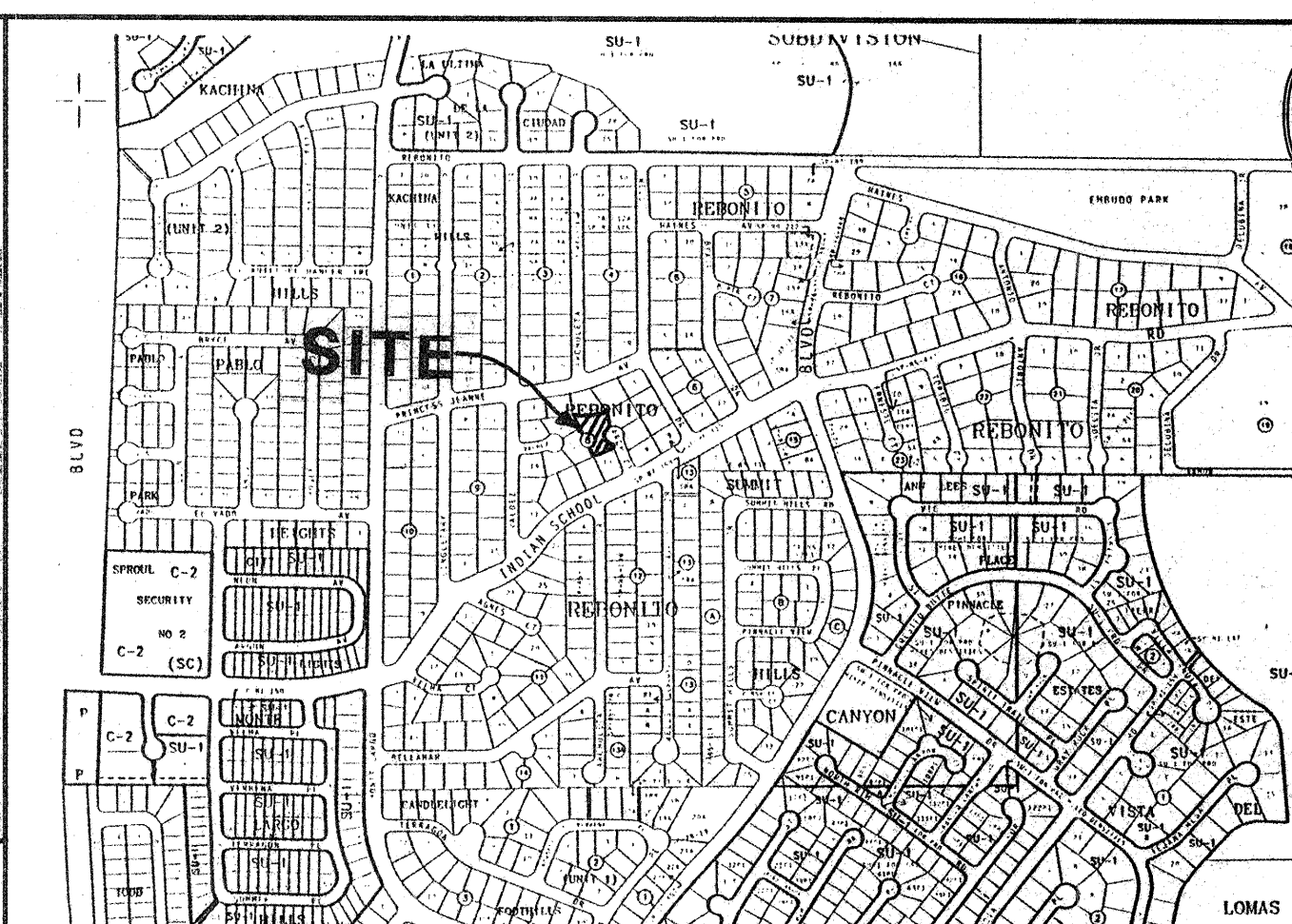
#### DRAINAGE PLAN NOTES

- BEI recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
- This Plan recommends positive drainage to prohibit ponding of runoff adjacent structures which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
- Irrigation within 10 feet of any proposed structure is not recommended. Introduction of irrigation water into subsurface soils adjacent to the structure could cause settlement.
- This Plan is prepared to establish on-site drainage and grading criteria only. BEI assumes no responsibility for subsurface analysis, foundation/structural design, or utility design.
- Local codes require all footings to be placed in natural undisturbed soil. If the Contractor plans to place footings on engineered fill, a certification by a registered Professional Engineer will be required. If the contractor wishes BEI to prepare the Certification, we must be notified PRIOR to placement of the fill.
- BEI recommends that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
- The property boundary shown on this Plan is given for information only to describe the project limits. Property boundary information shown hereon does not constitute a boundary survey. A boundary survey performed by a licensed New Mexico Registered Professional Surveyor is recommended prior to construction.



FIRM

1"=500'



J-23

LOCATION MAP

1"=800'

#### SANITARY SEWER SERVICE DATA

NO.	LOT	STATUS	INV @ PL	MINIMUM FF ELEV.
①	LOT 12-A	FUTURE	5989.30	5995.00
②	LOT 12-B	EXISTING	5990.58	5996.25

#### LEGEND

- 6001 — EXISTING CONTOUR ELEVATION
- 02.5 X — EXISTING SPOT ELEVATION
- 01 — PROPOSED CONTOUR ELEVATION
- — — — — PROPERTY LINE
- 01.5 — PROPOSED SPOT ELEVATION
- ← — DIRECTION OF FLOW
- — — — — DRAINAGE SWALE
- — — — — DRAINAGE BASIN DIVIDE
- ▨ — PROPOSED RETAINING WALL (LOT 12A)
- ▨ — PROPOSED RETAINING WALL (LOT 12B)

#### PROPERTY ADDRESS

Arch Court NE

#### LEGAL DESCRIPTION

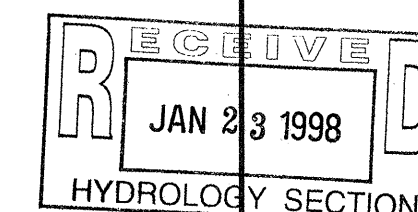
Lots 12A & 12B, Block 8, Rebonito Subdivision

#### PROJECT BENCHMARK

ACS Station 1-J23-A, a standard ACS aluminum tablet stamped "1-J23A,1982". Elevation 5840.58 feet

#### SURVEY

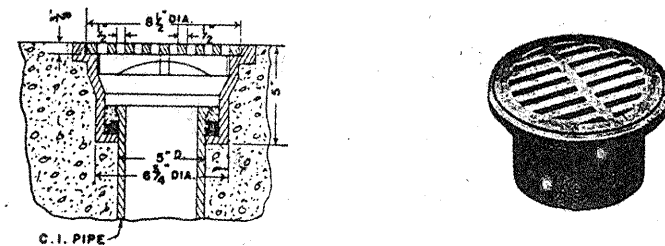
Topographic and Field Measurement by  
Professional Contracting Services  
Dated January, 1995



NEENAH  
FOUNDRY COMPANY

R-4937-B Cast Iron Floor  
Drain with Grate

Light Duty  
Outlet for 4-inch inside pipe coulk.



#### PORTAL FLOOR DRAIN DETAIL

#### PORTAL DRAIN CALCULATIONS

Provide 8 inch diameter floor drain with 4 inch drainline to retention pond.

Area draining to floor drain = 310 sf = 0.0071 acres

Ad = 0.0071 acres

Q100 = 0.04 cfs

4 inch drainline capacity:

FLOWRATE (CFS)	DIAMETER (IN)	FRICTION (FT*1/6)	SLOPE (%)	VELOCITY (FPS)
0.27	4.00	0.0130	2.00 (MIN.)	3.08

HYDROLOGY HYMO									
PRECIPITATION ZONE 4 P360 = 2.90" P1440 = 4.70"									
Basin	Area ac	Aa ac	Ab ac	Ac ac	Ad ac	E100 ln	Q100 cfs	V100 cf	
EXISTING CONDITION									
Lot 12A	0.21	0.21	—	—	—	0.80	0.05	610	
Lot 12B	0.19	0.19	—	—	—	0.80	0.04	552	
DEVELOPED CONDITION									
Lot 12A	0.21	—	0.11	0.04	0.06	1.60	0.8	1220	
Lot 12B	0.19	—	0.09	0.04	0.06	1.60	0.7	1104	
A	0.11	—	0.08	0.03	—	1.18	0.3	471	
Δ B	0.086	—	0.054	0.032	—	1.18	0.3	368	

#### LAND TREATMENT ASSUMPTIONS

This development proposes the following land treatments:

Aa = 0% Ab = 50% Ac = 20% Ad = 30%

#### POND VOLUMES

V1440 = V360 + Ad(P1440 - P360)/12 Ad = 0 ∴ V1440 = V360

Size ponds to hold twice the 100 yr/6 hour volume

LOT 12-A (Basin A) Vpond = 2(471 cf) = 942 cf

LOT 12-B (Basin B) Vpond = 2(368 cf) = 736 cf

#### GRADING AND DRAINAGE PLAN

##### PURPOSE AND SCOPE:

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Grading and Drainage Plan outlines the drainage management criteria for controlling developed runoff from the project site. The property is to be developed as a 2 lot residential subdivision, with associated paving, landscaping, utility, grading, and drainage improvements.

##### EXISTING CONDITIONS:

The project site is approximately 0.40 acres in size and is located on Arch Court NE, just north of Indian School Road NE. The site is bounded by Arch Court on the east, and developed residential property on the east, west and north. Presently the site is undeveloped. Site topography slopes from east to west at approximately 10%. The site is sparsely covered with native vegetation. No off-site flows impact the site.

On-site, all flow drains as sheet flow to the west and into depressions located along the west side of an existing block wall. Arch Court is an improved public street, with curb and gutter and permanent pavement. No sidewalks exist adjacent to the cul-de-sac.

As shown by the attached FIRM Panel, this site does not lie within a designated flood hazard zone.

##### DEVELOPED CONDITIONS:

As shown by the Plan, the project consists of the development of the property into a 2 lot residential subdivision. The Plan shows the contours and elevations required to properly grade and construct the required improvements. The direction of drainage flows are given by flow arrows and the project hydrology is tabulated for both existing and developed conditions.

All drainage flows will be managed on-site and discharge to the existing perimeter public street. Due to the extreme grades on-site, the rear yard areas of both lots will not drain to Arch Court. Ponding areas are designated to retain the estimated volume of two 100 year, 6 hour storms. In order to reduce the rear yard ponding volumes, this plan requires the buildings to drain to the street. It may be necessary to gutter the roofs to direct all roof flow to Arch Court.

The rear yard ponding concept was chosen to eliminate the construction of retaining walls along the north, west, and south property line interfaces. In order to surface drain the rear yards to Arch Court, retaining walls up to 13 feet high would be required, which would severely impact adjacent properties. The plan recommends building construction that would incorporate stem walls and/or the construction of basements to make the grade transition from Arch Court to the west property line elevation.

As shown by the plan, minimum finish floor elevations have been established which will allow gravity flow to the public sanitary sewer line located in Arch Court. Construction of finish floors below the specified elevations will require a grinder pump system to access the sewer main. As mentioned above, basements will assist in making the grade transition from the street to the west property line, however, gravity sewer flow will not be attained.

##### EROSION CONTROL

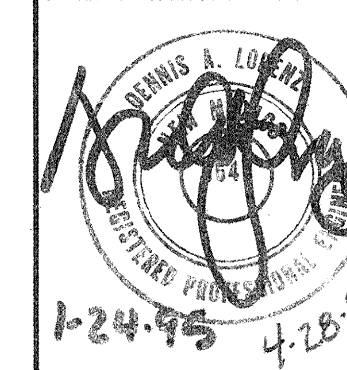
Temporary erosion control should not be required since the lots will naturally drain to the depressions located along the west property line during construction.

##### CALCULATIONS:

The calculations shown hereon define the 100 year/6 hour design storm falling with the project area under existing and developed conditions. The Hydrology is per "Section 22.2, Part A, DPM, Vol 2" Dated January 1993.

REVISED LOT 12-B GRADING 4-28-97 DAL.

#### LOTS 12A & 12B BLOCK 8, REBONITO SUBDIVISION GRADING & DRAINAGE PLAN



BRASHER ENGINEERING, INC.

4425 JUAN TABO BLVD. NE., SUITE 202  
ALBUQUERQUE, NM 87111  
PH (505)296-0422 FAX (505)296-0466

DRAWN BY: STAFF	DATE: JANUARY, 1995
CHECKED BY: D.A.L.	
FILE: 90804	SHEET 1 OF 1