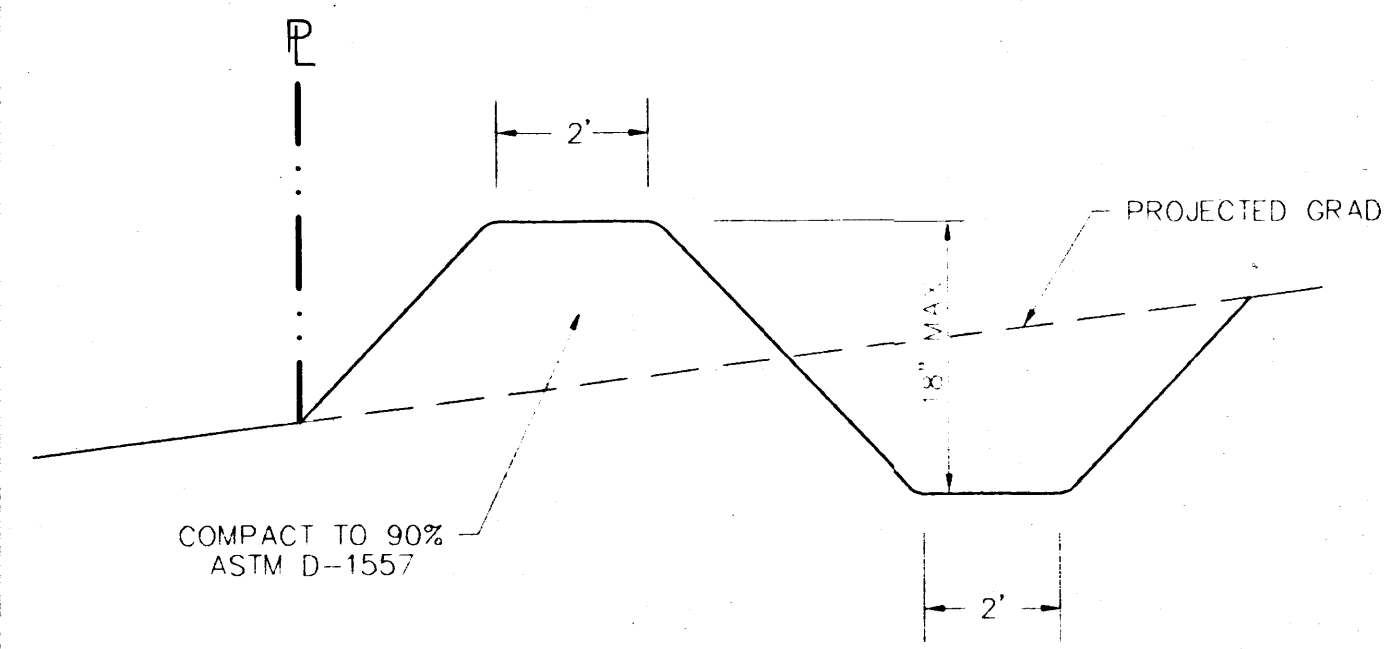
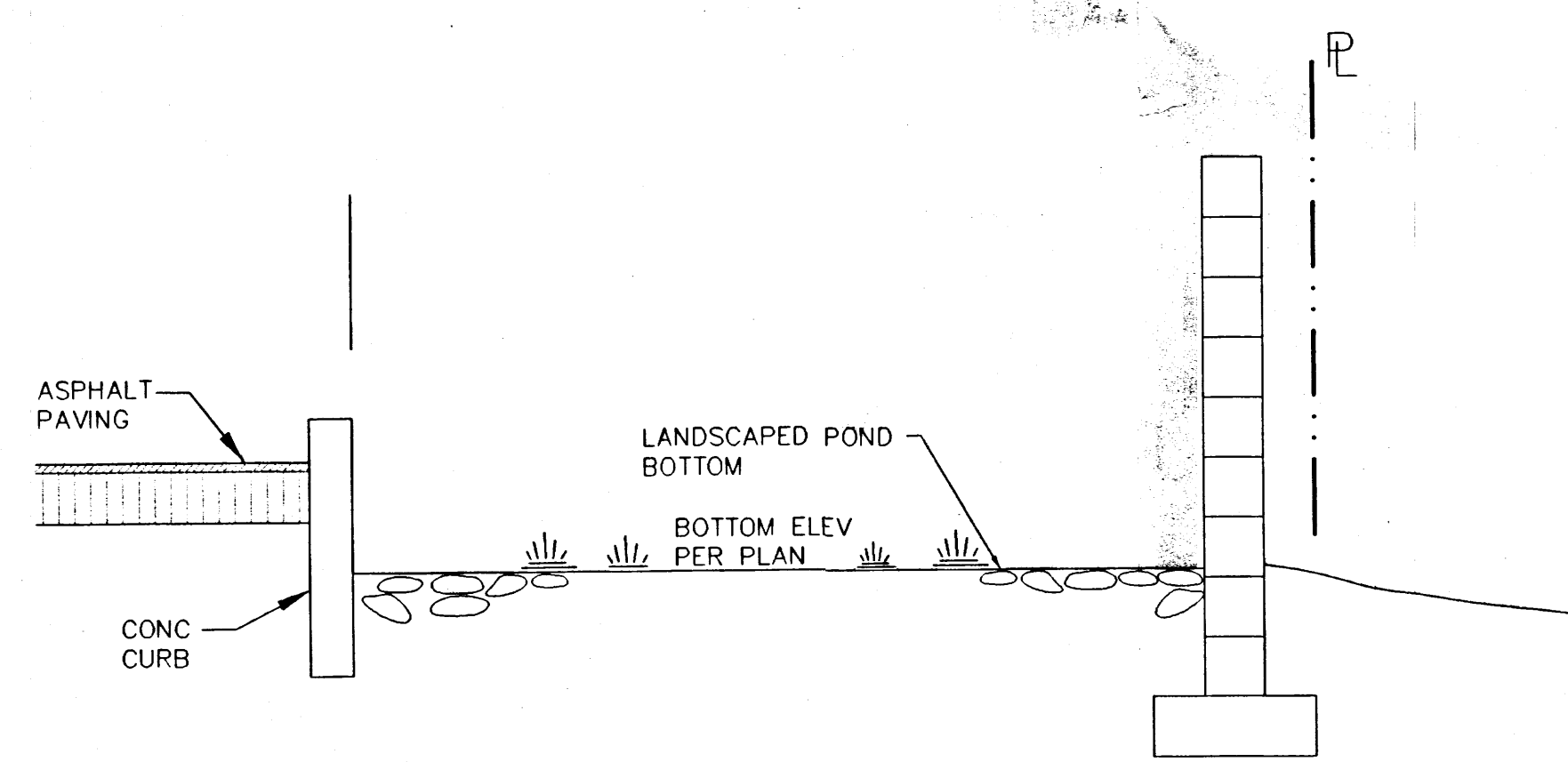


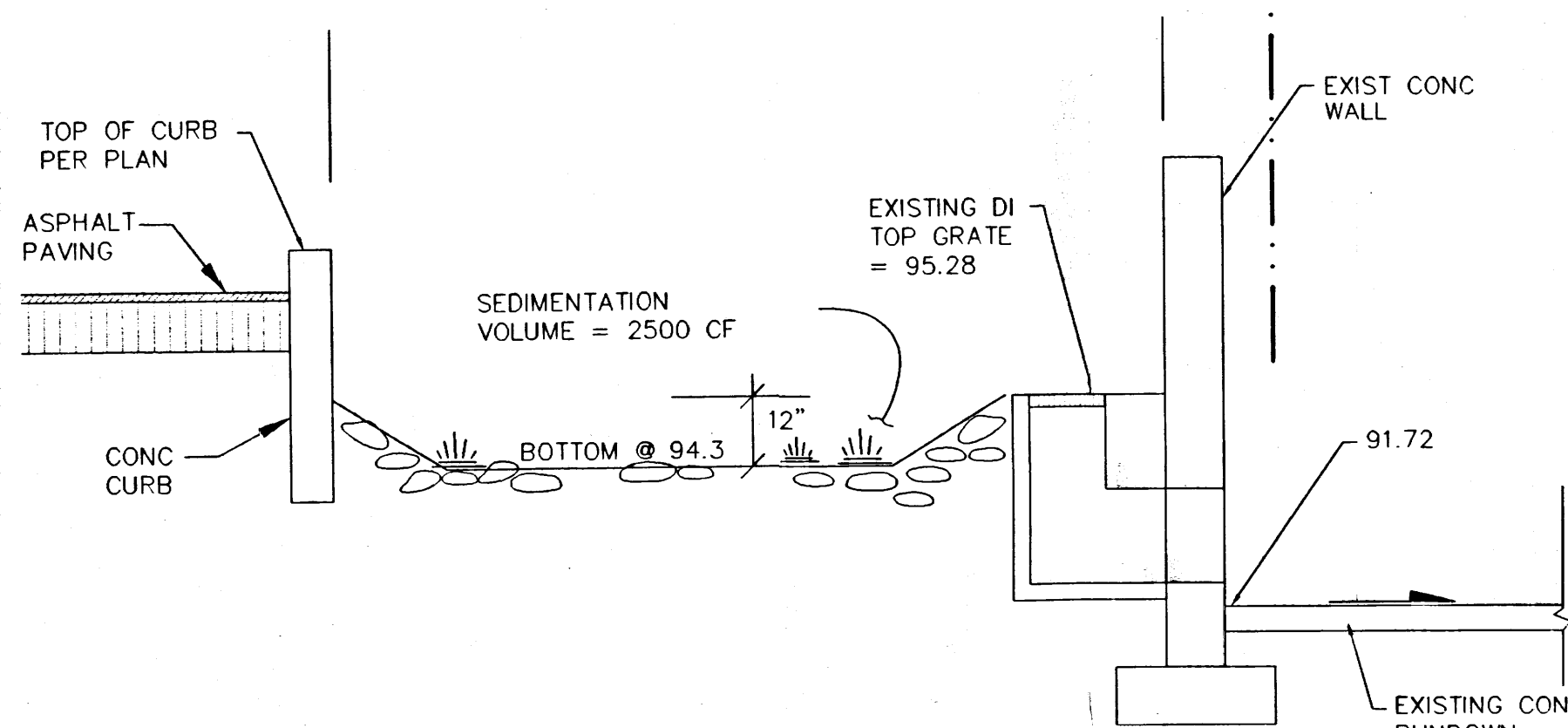
CONCRETE CHANNEL DETAIL A
1"=4" C-5



TEMPORARY EROSION CONTROL BERM DETAIL B
NTS C-5



POND SECTION A
NTS C-5



SEDIMENTATION BASIN SECTION B
NTS C-5

SEDIMENT POND CALCULATIONS

- I. PER "NORTH COORS DMP":
- A. VELOCITY OF SEDIMENT FALL = 0.002 FT/S AT 50% OF Q100
 - B. DETENTION TIME = POND DEPTH/ 0.002 FT/S
 - C. MAX HORIZONTAL VELOCITY = 0.5 FT/S AT 50% OF Q100
 - D. MIN SEDIMENT STORAGE = 0.0024 AF/AC
- II. CHECK DROP INLET CAPACITY
- USE WEIR EQN: $Q=CLH^{3/2}$
- L=9.5 FT C = 2.50 LET H=0.5 FT
Q=8.4 CFS @ Q100
- FIND H AT 50% Q100:
- L=9.5 FT C = 2.50 Q = 1.9 CFS
H = 0.19 FT
- MAX WSE = 95.28 (DI ELEV) + 0.19 = 95.47
- III. SEDIMENT CONTROL
- A. AVE HORIZONTAL VELOCITY
- AVE POND DEPTH = 0.4 FT
POND WIDTH = 10'
AVE AREA = 4.0 SF
AVE VELOCITY = Q/A = 0.48 F/S @ 50% Q100
- B. REQUIRED DETENTION TIME
- T (REQD) = POND DEPTH/ SEDIMENT FALL
= 0.4 FT/ 0.002 F/S = 200 SEC = 3.33 MIN
- C. PROVIDED RETENTION TIME
- T = POND LENGTH / AVE VELOCITY
= 110 FT / 0.48 F/S = 229 SEC = 3.8 MIN
- D. SEDIMENT VOLUME
- REQUIRED VOL = 0.93 AC (0.0024 AF/AC)
= 0.002232 AF
= 97 CF
(250 CF PROVIDED)

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 Bob's Burgers restaurant, with associated paving, landscaping, utility, grading, and drainage improvements. The scope of this plan is to establish grading and drainage criteria, and provide construction detail to facilitate building permit approval.

EXISTING CONDITIONS

The project site is approximately 0.93 acres in size and is located on Caminito Coors NW, just east of Coors Boulevard NW. The site is bounded by Caminito Coors on the west, the Corrales Main Canal on the east, developed commercial property on the north, and undeveloped land on the south. The site is described as Lot 2, Bosque Del Pueblo. Presently the site is undeveloped. Site topography slopes from west to east at approximately 3%. The site is sparsely covered with native vegetation. On-site all runoff flows east into the Corrales Main Canal.

As shown by the attached Floodway Panel, this site is mapped within a designated flood hazard zone. Upstream improvements have remove the site from the floodplain.

DEVELOPED CONDITIONS

As shown by the Plan, the project consists of the development of the property into a restaurant. The Plan shows the elevations required to properly grade and construct the recommended 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 by paved swales within the parking lot which will drain to the northeast corner of the site. At the northeast corner an existing concrete structure with a spillway serves as the drainage outlet to the Corrales Main Canal. The spillway discharges onto an existing concrete side inlet to the Canal.

The drainage management criteria for the site was established by the "North Coors Drainage Management Plan", which requires all flows to be routed through a sedimentation pond prior to discharge into the Corrales Main Canal (see attached letter from Cliff Anderson, AMAFCA, dated 6-7-89). This project provides a sedimentation basin in accordance with the established criteria.

Drainage easements exist on the property for the conveyance of off-site flow through the site. The 25' easement located along the north property line will be paved with the parking lot improvements. Minor off-site flows from Caminito Coors will enter the site and be conveyed to the discharge point via the paved swale. A 15' easement located along the south property line is reserved for the conveyance of flows from Lot 1, located to the south.

EROSION CONTROL

Temporary erosion control will be required during construction to the discharge of sediment into the public street and storm drainage network. The first phase of construction shall be the excavation of the ponding area, which will provide storage for excess runoff and sediment during construction. Temporary erosion control berms shall be placed along the north, east and south project boundaries to direct runoff and sediment to the ponding area.

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. Calculations are also provided to demonstrate sediment removal, per the approved DMP.

HYDROLOGY - HYMO									
Precipitation Zone 1					P360 = 2.20 inches				
BASIN	AREA	Aa	Ab	Ac	Ad	E	Q100	VOL100	
acres	acres	acres	acres	acres	acres	inches	cfs	af	
EXISTING CONDITION:									
SITE	0.93	0.81				0.12	0.64	1.56	0.0494
DEVELOPED CONDITION:									
SITE	0.93		0.07	0.07	0.79	1.79	3.79		0.1394
A	0.73		0.02	0.02	0.69	1.91	3.11		0.1160
B	0.39		0.05	0.05	0.29	1.68	1.51		0.0545

DRAINAGE PLAN NOTES

1. BLI recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
2. This Plan recommends positive drainage away from all structures to prohibit ponding of runoff which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
3. 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.
4. This Plan is prepared to establish on-site drainage and grading criteria only. BLI assumes no responsibility for subsurface analysis, foundation/structural design, or utility design.
5. Local codes may 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 BLI to prepare the Certification, we must be notified PRIOR to placement of the fill.
6. BLI recommends that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
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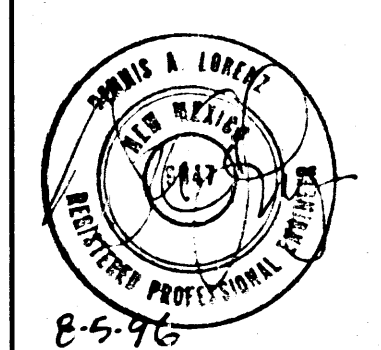
GRADING AND DRAINAGE PLAN



BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro NE Building 1 Suite 210
Albuquerque, New Mexico 87110
Ph: 505-888-6088 Fax: 505-888-6188

BOB'S BURGERS
COORS RD NW & EAGLE RANCH RD.
ALBUQUERQUE, NM
PROJECT # 1396

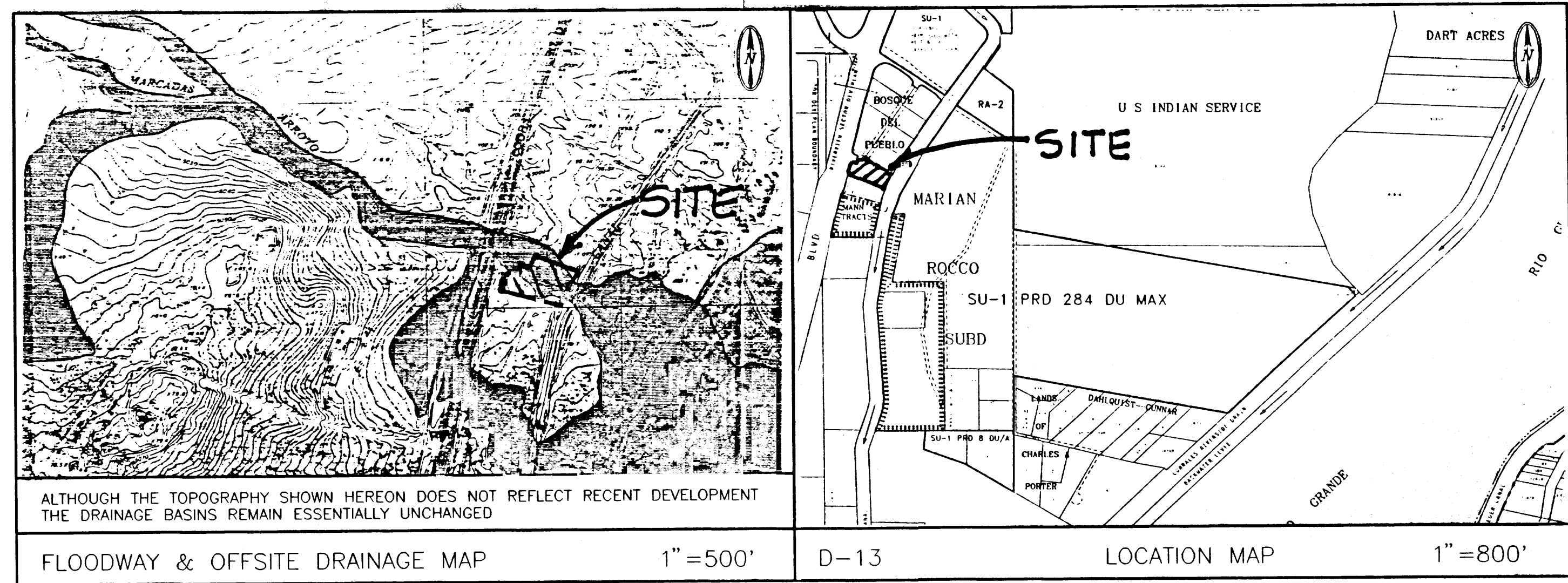
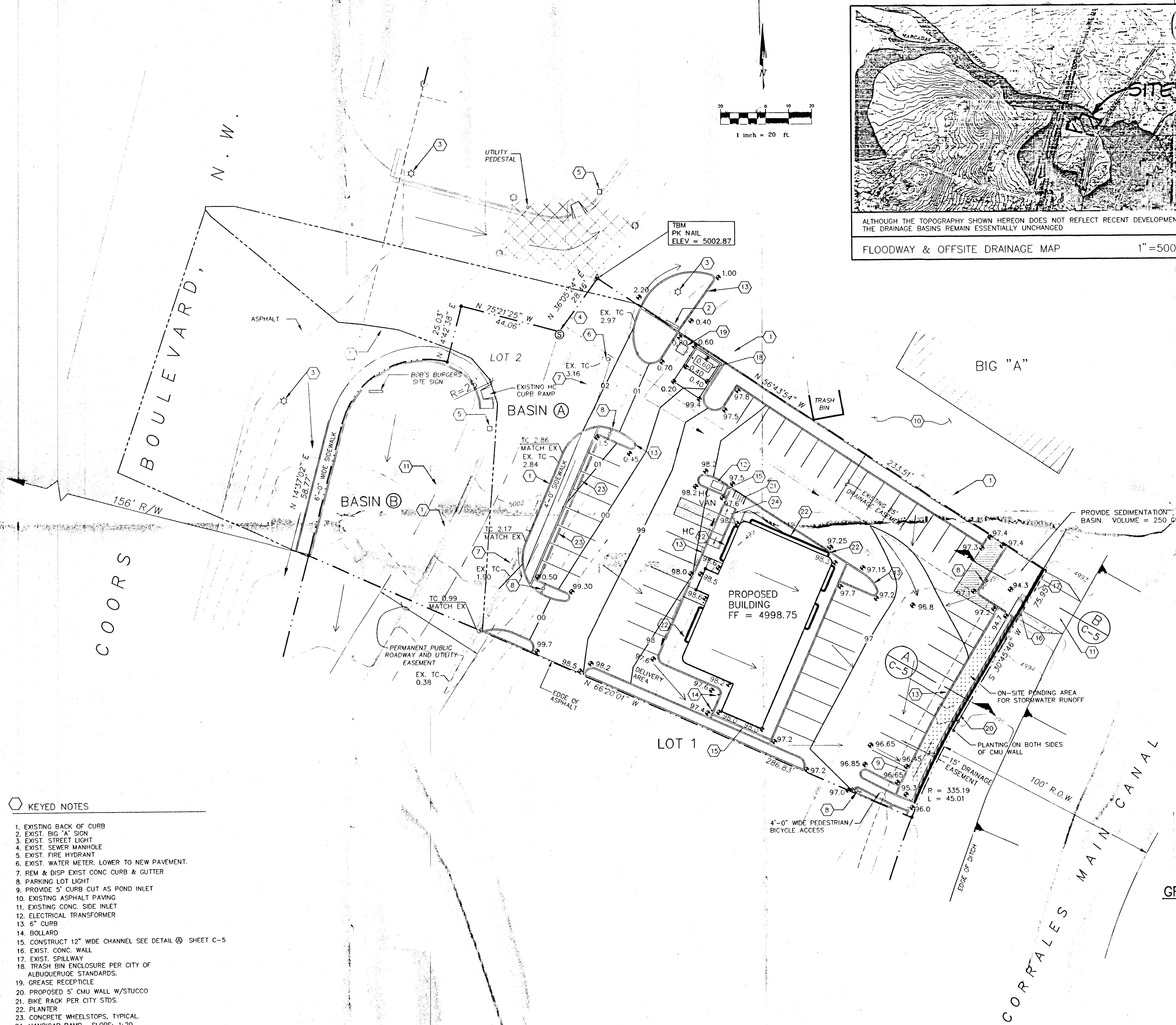
REVISION DATE



rick bennett
architect
AUG 1 1996
1118 Park Avenue SW
Albuquerque, New Mexico
87102 242-1839

DATE
8-1-96

SHEET NUMBER
C-5



- LEGEND**
- 5001 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

PROPERTY ADDRESS
Caminito Coors NW

LEGAL DESCRIPTION
Lot 2, Bosque Del Pueblo

PROJECT BENCHMARK
TBM: NW property corner, PK nail
Elevation 5002.87 feet

SURVEY
Topographic and Field Measurement by
Presicion Surveys Inc.
Dated March, 1996

- KEYED NOTES**
- EXISTING BACK OF CURB
 - EXIST. BIG "A" SIGN
 - EXIST. STREET LIGHT
 - EXIST. SEWER MANHOLE
 - EXIST. FIRE HYDRANT
 - EXIST. WATER METER, LOWER TO NEW PAVEMENT.
 - REM & DISP EXIST CONC CURB & GUTTER
 - PARKING LOT LIGHT
 - PROVIDE 5' CURB CUT AS POND INLET
 - EXISTING ASPHALT PAVING
 - EXISTING CONC. SIDE INLET
 - ELECTRICAL TRANSFORMER
 - 6" CURB
 - BOLLARD
 - CONSTRUCT 12" WIDE CHANNEL SEE DETAIL @ SHEET C-5
 - EXIST. CONC. WALL
 - EXIST. SPILLWAY
 - TRASH BIN ENCLOSURE PER CITY OF ALBUQUERQUE STANDARDS.
 - GREASE RECEPTICLE
 - PROPOSED 5' CMU WALL W/STUCCO
 - BIKE RACK PER CITY STD.
 - PLANTER
 - CONCRETE WHEELSTOPS, TYPICAL
 - HANDICAP RAMP, SLOPE: 1:20.

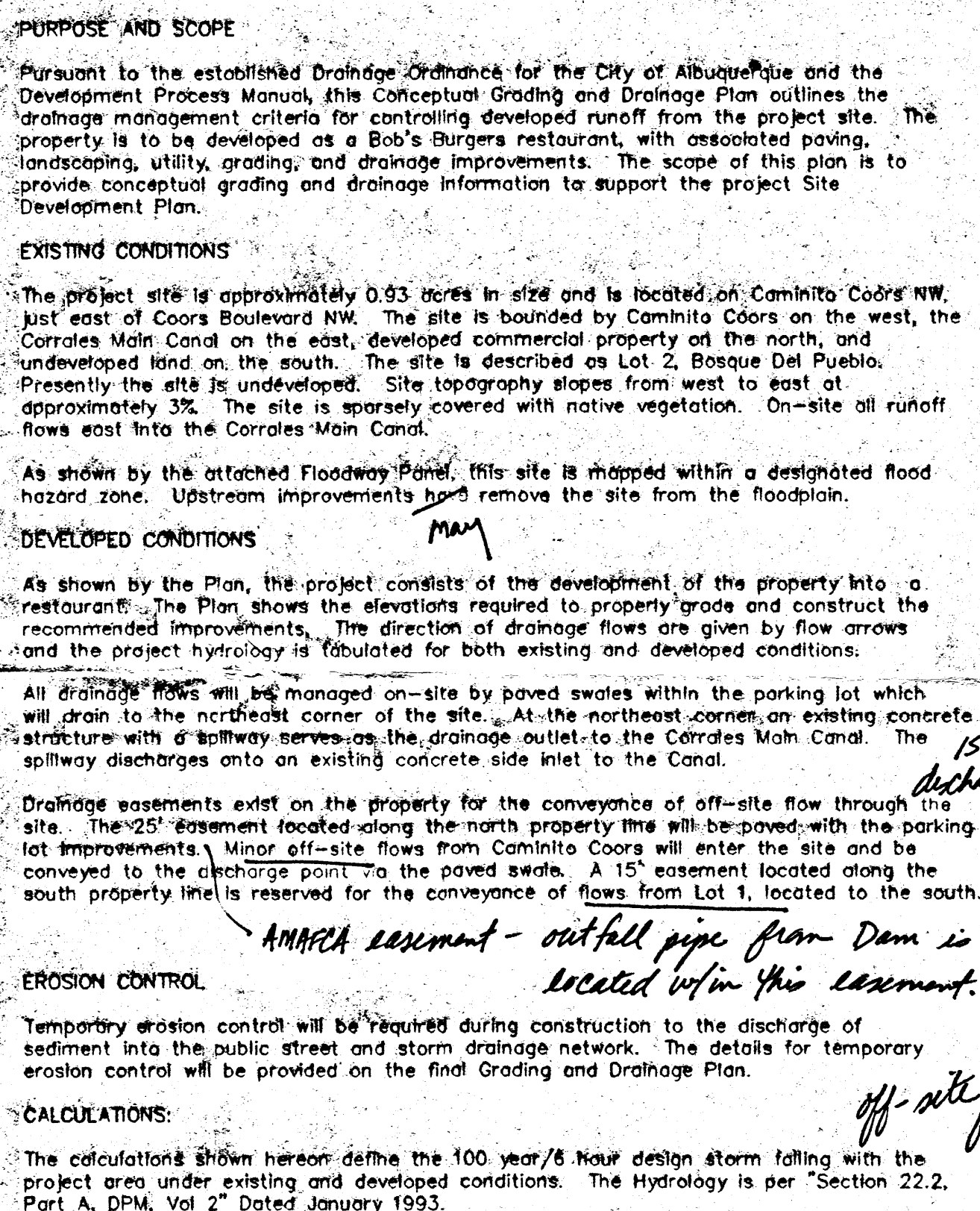
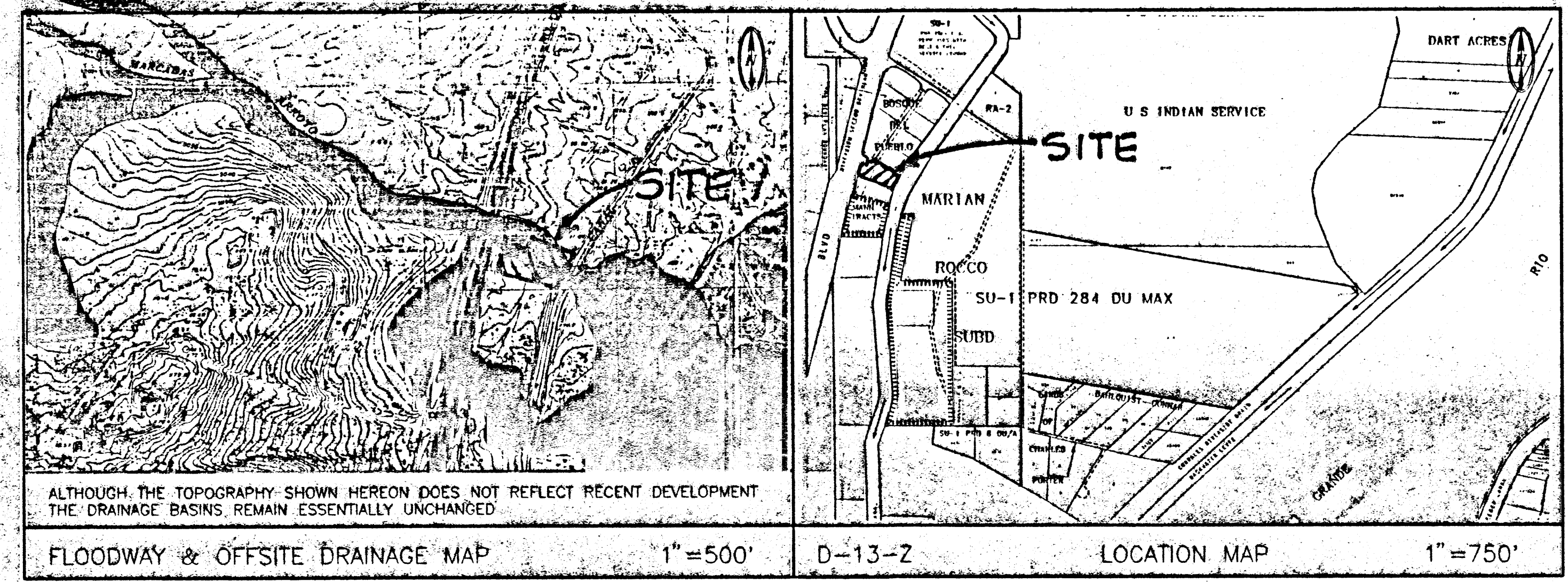
GRADING AND DRAINAGE PLAN

BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro NE Building 1 Suite 210
Albuquerque, New Mexico 87110
Ph: 505-888-6088 Fax: 505-888-6188

BOB'S BURGERS
COORS RD NW & EAGLE RANCH RD.
ALBUQUERQUE, NM
PROJECT # 1396

REVISION DATE
rick bennett architect
DATE 8-1-96
SHEET NUMBER C-1

AMAFCA
needs license
Coord w/ Marty



BOB'S BURGERS
CONCEPTUAL GRADING & DRAINAGE PLAN
COORS RD. NW & EAGLE RANCH RD.

- # KEYED NOTES
1. EXISTING BACK OF CURB
 2. EXIST. BIG 'A' SIGN
 3. EXIST. STREET LIGHT
 4. EXIST. SEWER MANHOLE
 5. EXIST. FIRE HYDRANT
 6. EXIST. WATER METER. LOWER TO NEW PAVEMENT.
 7. PROPOSED CUT OF EXIST CITY CURB & GUTTER.
 8. PARKING LOT LIGHT
 9. EXISTING TELEPHONE CABLE
 10. EXISTING CABLE TV
 11. EXISTING R.O.W.
 12. ELECTRICAL TRANSFORMER
 13. 6" CURB
 14. BOLLARD
 15. C.O.T.G.
 16. EXIST. CONC. WALL
 17. EXIST. DROP INLET
 18. TRASH BIN ENCLOSURE PER CITY OF ALBUQUERQUE STANDARDS.
 19. GREASE RECEPTICLE
 20. PROPOSED 5' CMU WALL, W/STUCCO
 21. BIKE RACK PER CITY STDs.
 22. PLANTER

- | | |
|----------|----------------------------|
| — 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 |

LEGAL DESCRIPTION
LOT NUMBER 2
IN BOSQUE DEL PUEBLO
ALBUQUERQUE, BERNALILLO CO., NEW MEXICO

PROPERTY ADDRESS
CAMINITO COORS NW

PROJECT SURVEY
ALTA AND SITE TOPOGRAPHY BY
PRECISION SURVEYS, INC., MARCH 1998

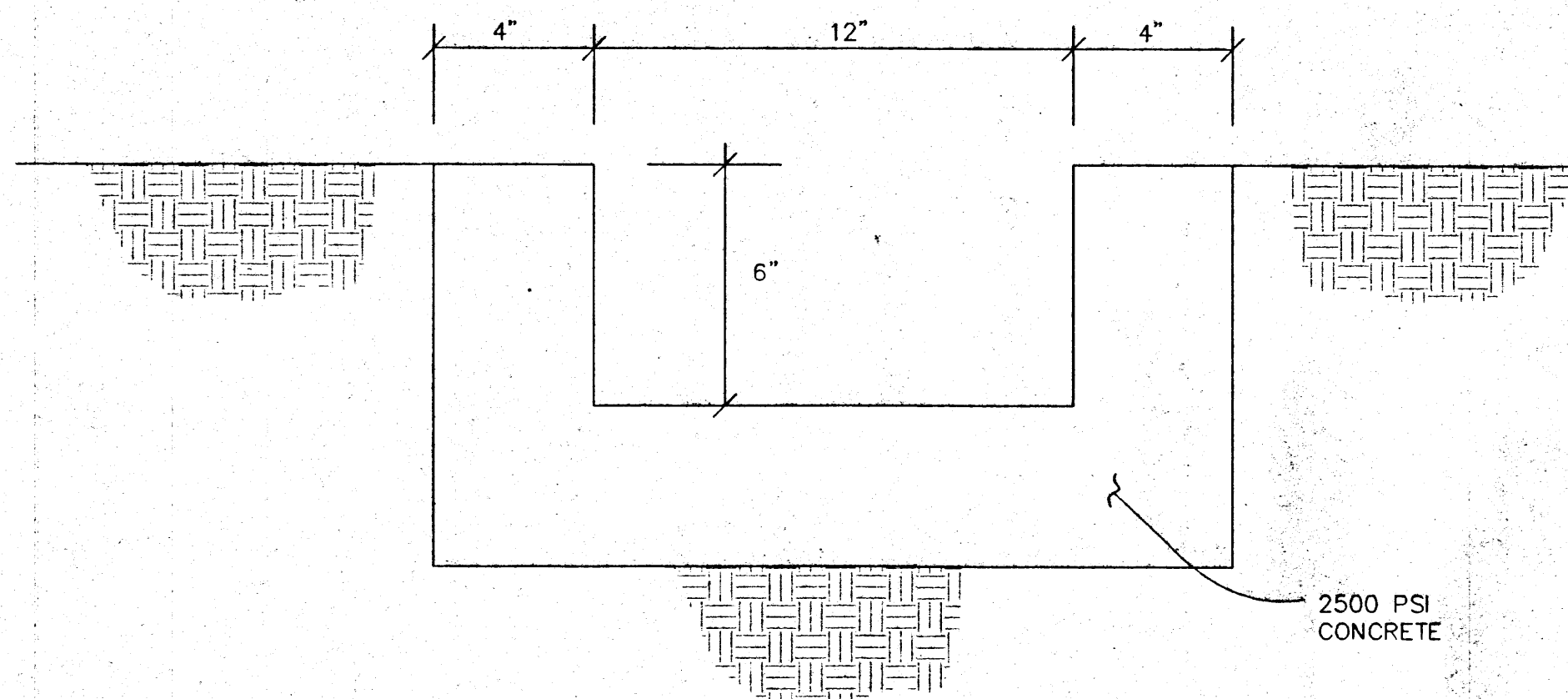
HYDROLOGY - HYMO							
Precipitation BASIN	Zone 1 AREA	Aa	Ab	Ac	P360 Ad	2.20 inches E	Q100 VOL100
	acres	acres	acres	acres	acres	Inches	cfs
EXISTING CONDITION:							
SITE	0.93	0.81			0.12	0.64	1.6
DEVELOPED CONDITION:							
SITE	0.93		0.07	0.07	0.79	1.79	3.8

[illegible]

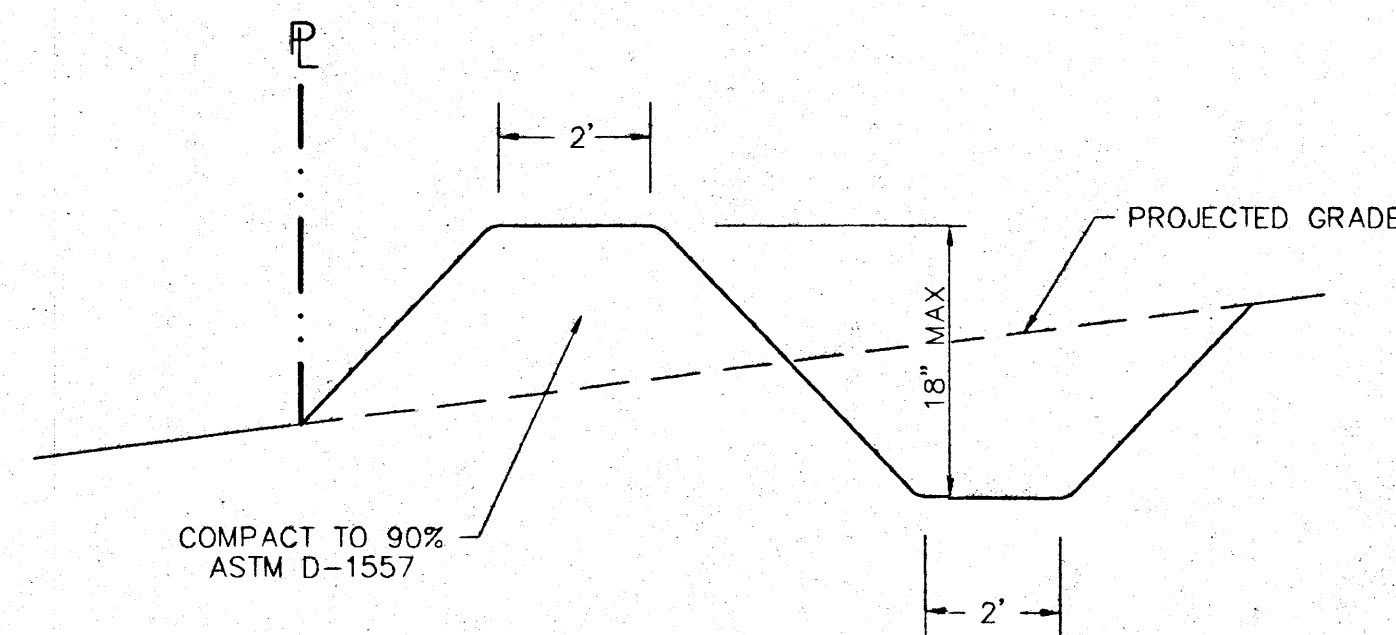
RECEIVED
JUL 12 1996
HYDROLOGY DIVISION

A circular postmark from Paul T. Brasher, dated 2009. The text "PAUL T. BRASHER" is at the top, "2009" is in the middle, and "7832" is handwritten in the center. The words "PAID" and "POSTAGE" are visible on the left and right sides respectively.

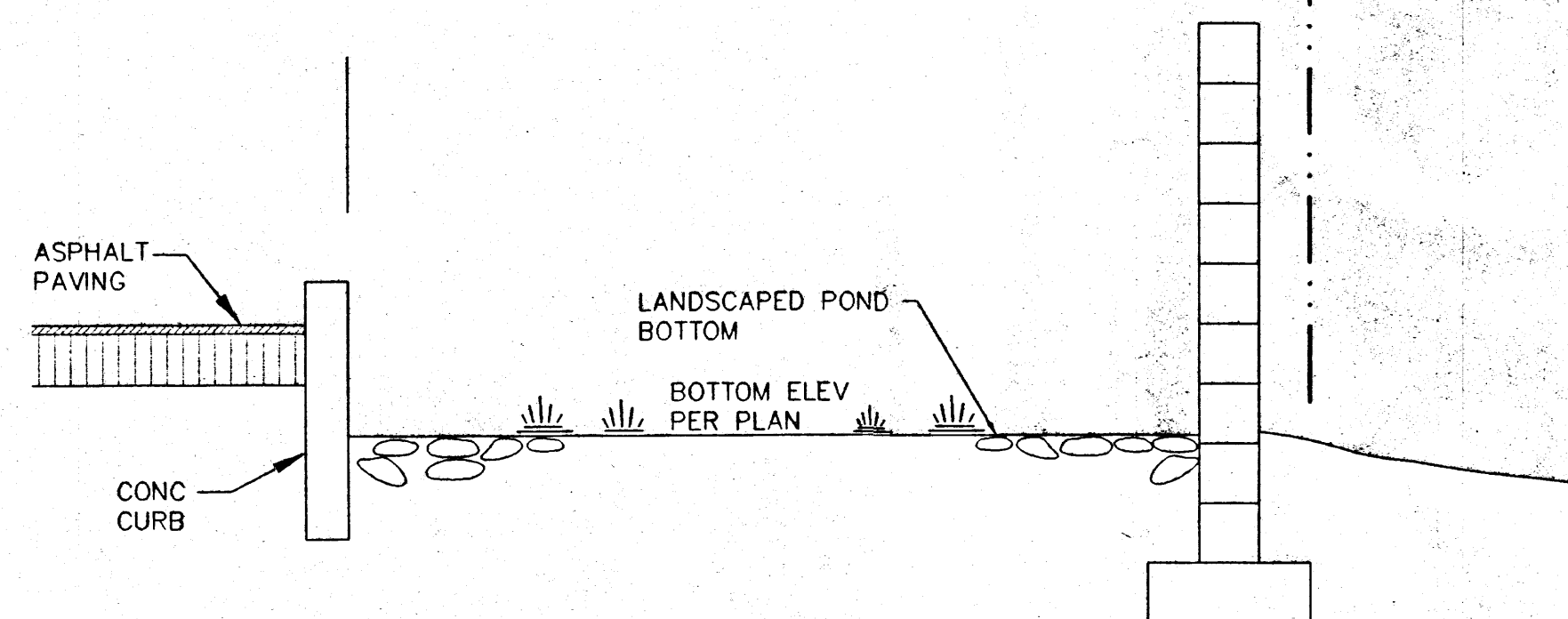
BLL BRASHER & LORENZ, INC.
Consulting Engineers
4425 Juan Tabo Blvd. NE Suite 202
Albuquerque, New Mexico 87111
Ph: 505-298-0422 Fax: 505-298-0466



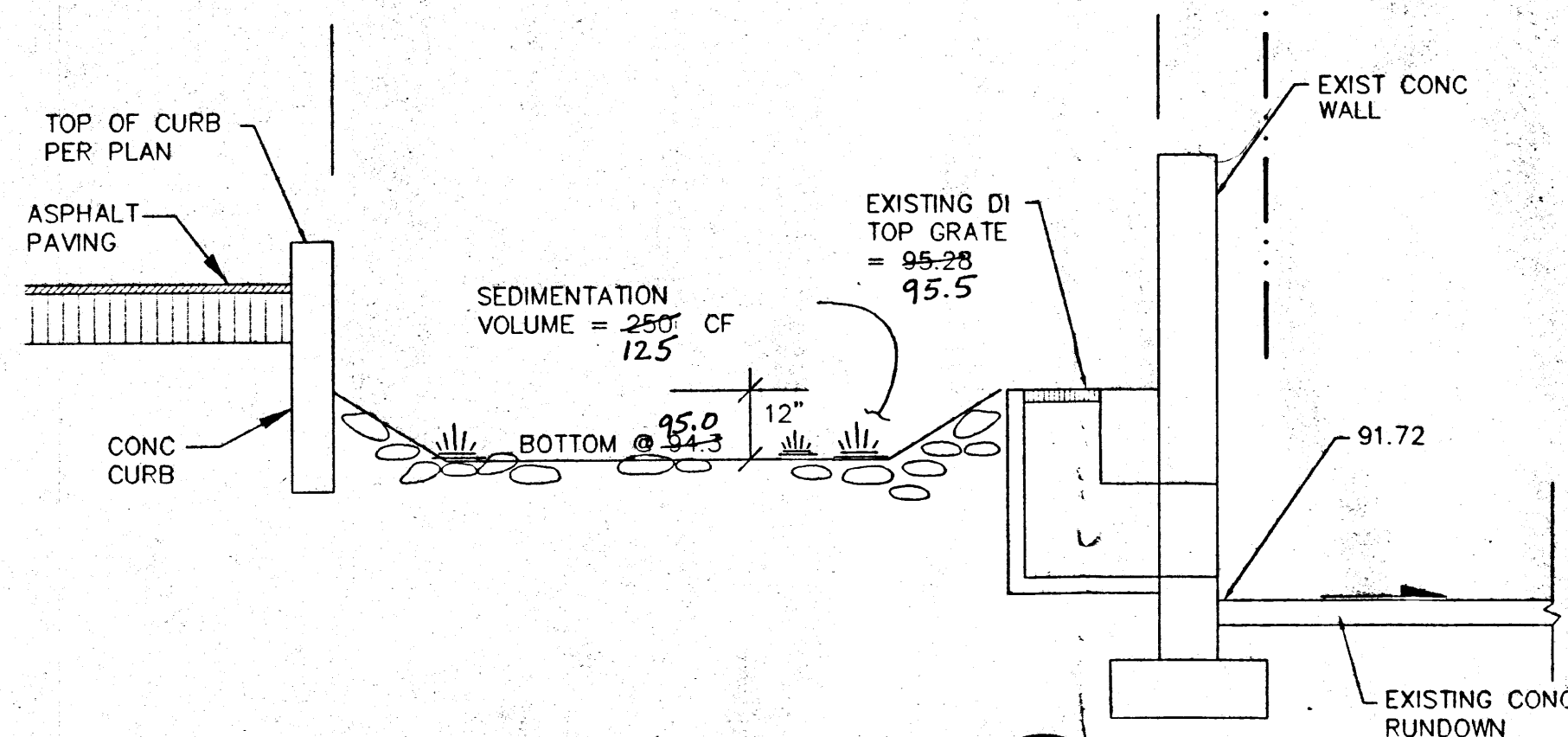
CONCRETE CHANNEL DETAIL A
1"=4" C-5



TEMPORARY EROSION CONTROL BERM DETAIL B
NTS C-5



POND SECTION A
NTS C-5



SEDIMENTATION BASIN SECTION B
NTS C-5

SEDIMENT POND CALCULATIONS

I. PER "NORTH COORS DMP":

- A. VELOCITY OF SEDIMENT FALL = 0.002 FT/S AT 50% OF Q100
- B. DETENTION TIME = POND DEPTH / 0.002 FT/S
- C. MAX HORIZONTAL VELOCITY = 0.5 FT/S AT 50% OF Q100
- D. MIN SEDIMENT STORAGE = 0.0024 AF/AC

II. CHECK DROP INLET CAPACITY

USE WEIR EON: $Q = CLH^{3/2}$

$$L = 9.5 \text{ FT} \quad C = 2.50 \quad \text{LET } H = 0.5 \text{ FT}$$

$$Q = 8.4 \text{ CFS} > Q100$$

FIND H AT 50% Q100:

$$L = 9.5 \text{ FT} \quad C = 2.50 \quad Q = 1.9 \text{ CFS}$$

$$H = 0.19 \text{ FT}$$

$$\text{MAX WSE} = 95.28 (\text{DI ELEV}) + 0.19 = 95.47$$

III. SEDIMENT CONTROL

A. AVE HORIZONTAL VELOCITY

$$\text{AVE POND DEPTH} = 0.4 \text{ FT}$$

$$\text{POND WIDTH} = 10'$$

$$\text{AVE AREA} = 4.0 \text{ SF}$$

$$\text{AVE VELOCITY} = Q/A = 0.48 \text{ F/S @ 50\% Q100}$$

B. REQUIRED DETENTION TIME

$$T (\text{REQD}) = \text{POND DEPTH} / \text{SEDIMENT FALL}$$

$$= 0.4 \text{ FT} / 0.002 \text{ F/S} = 200 \text{ SEC} = 3.33 \text{ MIN}$$

C. PROVIDED RETENTION TIME

$$T = \text{POND LENGTH} / \text{AVE VELOCITY}$$

$$= 110 \text{ FT} / 0.48 \text{ F/S} = 229 \text{ SEC} = 3.8 \text{ MIN}$$

D. SEDIMENT VOLUME

$$\text{REQUIRED VOL} = 0.93 \text{ AC} (0.0024 \text{ AF/AC})$$

$$= 0.002232 \text{ AF}$$

$$= 97 \text{ CF}$$

$$(250 \text{ CF PROVIDED})$$

$$12.5'$$

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 Bob's Burgers restaurant, with associated paving, landscaping, utility, grading, and drainage improvements. The scope of this plan is to establish grading and drainage criteria, and provide construction detail to facilitate building permit approval.

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As shown by the attached Floodway Panel, this site is mapped within a designated flood hazard zone. Upstream improvements have remove the site from the floodplain.

DEVELOPED CONDITIONS

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

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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. Calculations are also provided to demonstrate sediment removal, per the approved DMP.

HYDROLOGY -- HYMO									
Precipitation Zone 1					P360 = 2.20 inches				
BASIN	AREA	Aa	Ab	Ac	Ad	E	Q100	VOL100	
acres	acres	acres	acres	acres	acres	inches	cfs	af	
EXISTING CONDITION:									
SITE	0.93	0.81			0.12	0.64	1.56	0.0494	
DEVELOPED CONDITION:									
SITE	0.93		0.07	0.07	0.79	1.79	3.79	0.1394	
A	0.73		0.02	0.02	0.69	1.91	3.11	0.1160	
B	0.39		0.05	0.05	0.29	1.68	1.51	0.0545	

DRAINAGE PLAN NOTES

- BLI recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
- This Plan recommends positive drainage away from all structures to prohibit ponding of runoff which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
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GRADING AND DRAINAGE PLAN

ENGINEER'S CERTIFICATION

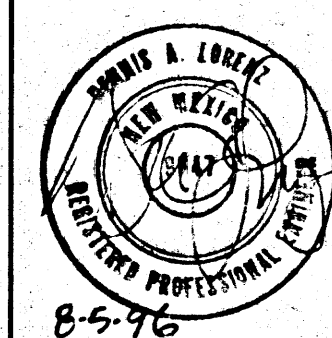
I, the undersigned, being a Professional Engineer in the State of New Mexico, do hereby certify that this drawing was prepared by me or under my supervision, and that the as-built information shown hereon is based on actual field measurements and inspections performed by Brasher & Lorenz, Inc. I further certify that the as-built condition of the site is in substantial compliance with the approved Grading and Drainage Plan prepared by Brasher & Lorenz, Inc., dated 8-5-96

Dennis A. Lorenz, NMPE 9647

Date

BOB'S BURGERS
COORS RD NW & EAGLE RANCH RD.
ALBUQUERQUE, NM
PROJECT # 1396

REVISION DATE



rick bennett
architect
1118 Park Avenue SW
Albuquerque, New Mexico
87102
(505) 242-1859

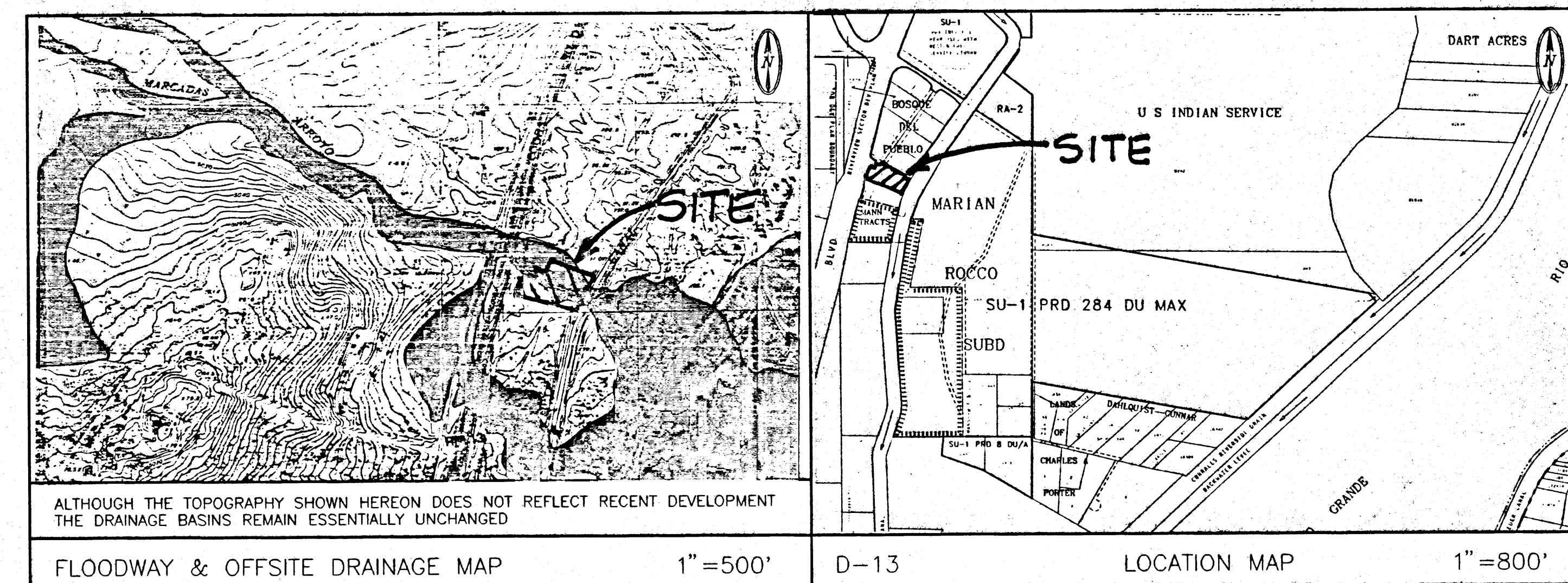
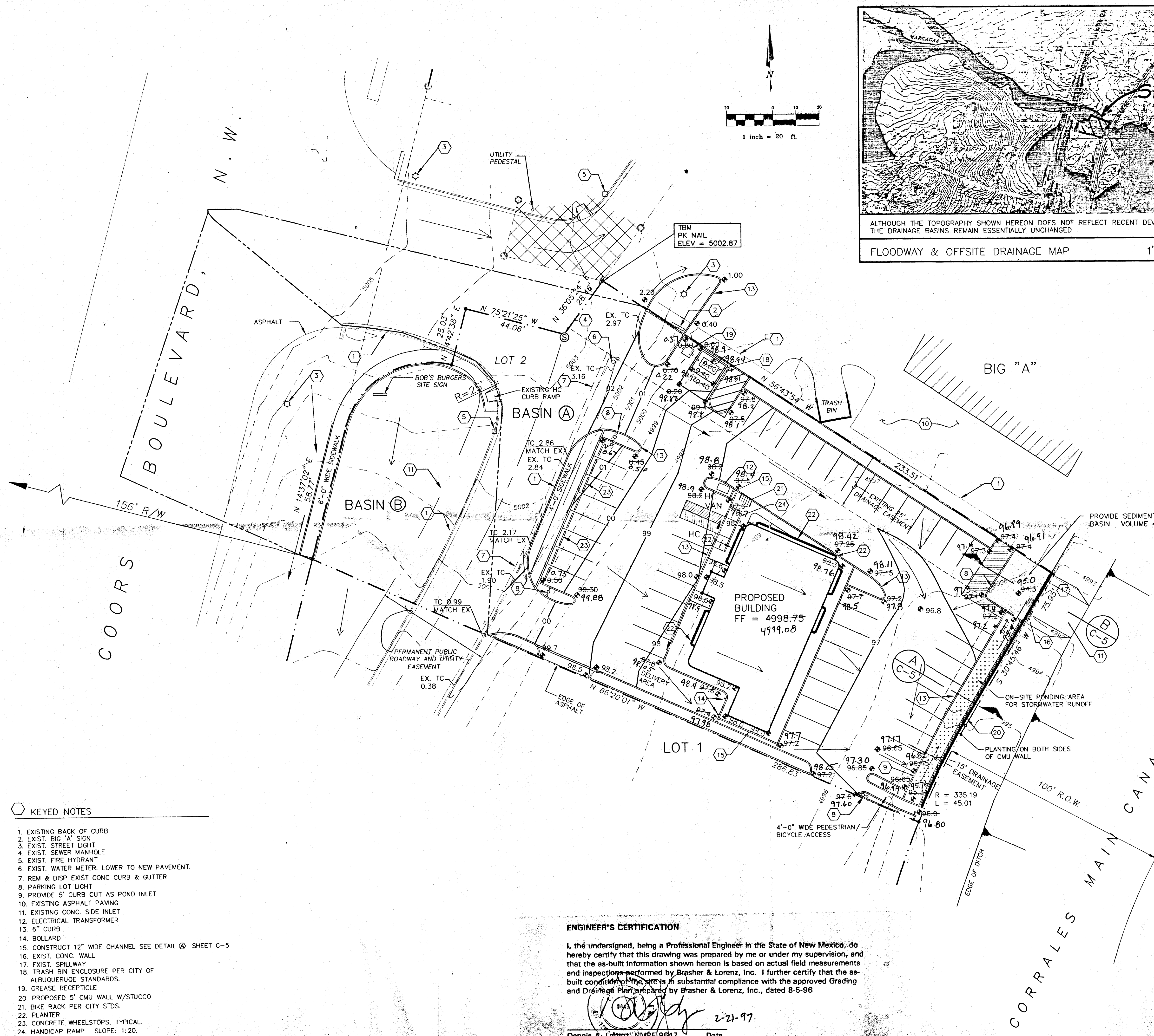
DATE

8-1-96

SHEET NUMBER

C-5

BLI BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro NE Building 1 Suite 210
Albuquerque, New Mexico 87110
Ph: 505-888-6088 Fax: 505-888-6188



LEGEND

- 5001 — 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
- 01.5 — AS-BUILT SPOT ELEVATION

PROPERTY ADDRESS

Caminito Coors NW

LEGAL DESCRIPTION

Lot 2, Bosque Del Pueblo

PROJECT BENCHMARK

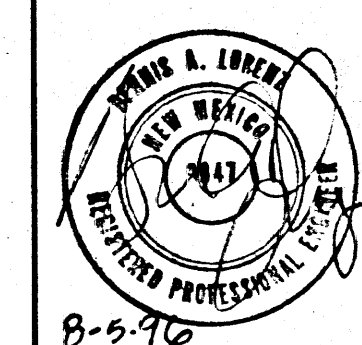
TBM: NW property corner, PK nail
Elevation 5002.87 feet

SURVEY

Topographic and Field Measurement by
Precision Surveys Inc.
Dated March, 1996

BOB'S BURGERS
COORS RD NW & EAGLE RANCH RD.
ALBUQUERQUE, NM
PROJECT # 1396

REVISION DATE



rick bennett
architect
1118 Park Avenue SW
Albuquerque, New Mexico
87102 242-1859

DATE

8-1-96

SHEET NUMBER

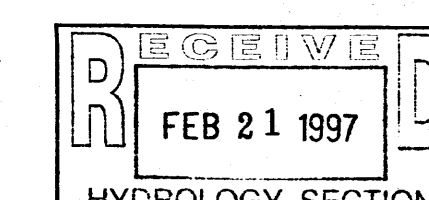
C-1

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Dennis A. Lorenz, NMPE 9647
Date 2-21-97

GRADING AND DRAINAGE PLAN



BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro NE Building 1 Suite 210
Albuquerque, New Mexico 87110
Ph: 505-888-6088 Fax: 505-888-6188