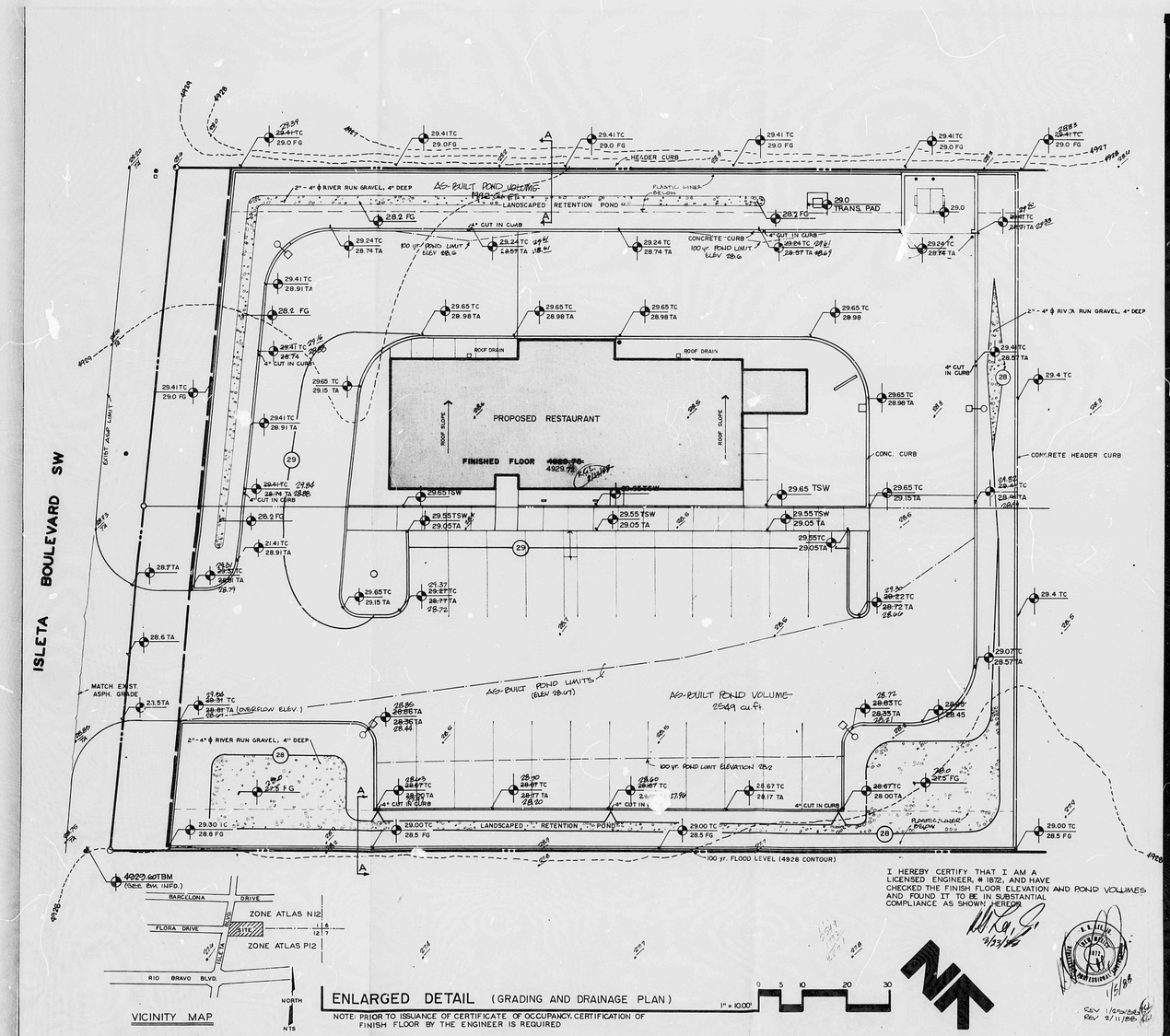



DRAINAGE CALCULATIONS

I. VOLUME: (developed portion only)

A. Rainfall, 100-year, 6-hour. P(6): (See Ref. A, Plate 22.2 D-1); P(6) = 2.25 inches.

B. Time of Concentration, Tc: Tc < 10 minutes; use 10 minutes (minimum value) for calculations.

C. Weighted "C" Factor for the developed portion. C = 0.78

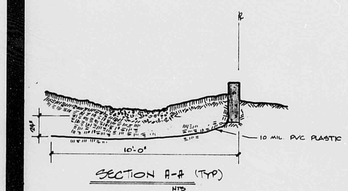
D. Area = 0.7353 Ac. or 32035 sq.ft.

E. Volume Generated:
V(100) = P(6)/12 x "C" x A (cu.ft.)
= 2.25 / 12 x 0.78 x 32035
= 4684 cu.ft.

NOTE: This volume reflects the developed area only. The remaining portion will be undisturbed. All runoff will be retain on site via retention ponds. Pond are sized to hold volume generated only.

SYMBOL LEGEND

- Existing contour
- 24.5 Existing spot elevation
- Proposed contour
- Proposed spot elevation
- TBM Temporary benchmark
- TC Top of curb
- TA Top of asphalt
- TSW Top of sidewalk
- FG Finish grade




SECTION A-A (TYP)
NTS

RECEIVED AUG 25 1983 HYDROLOGY SECTION

KENTUCKY FRIED CHICKEN
ISLETA BOULEVARD SW
ALBUQUERQUE, NEW MEXICO

C-2A


REF. 22 DATE 6-8-83 OP
CITY OF ALBUQUERQUE
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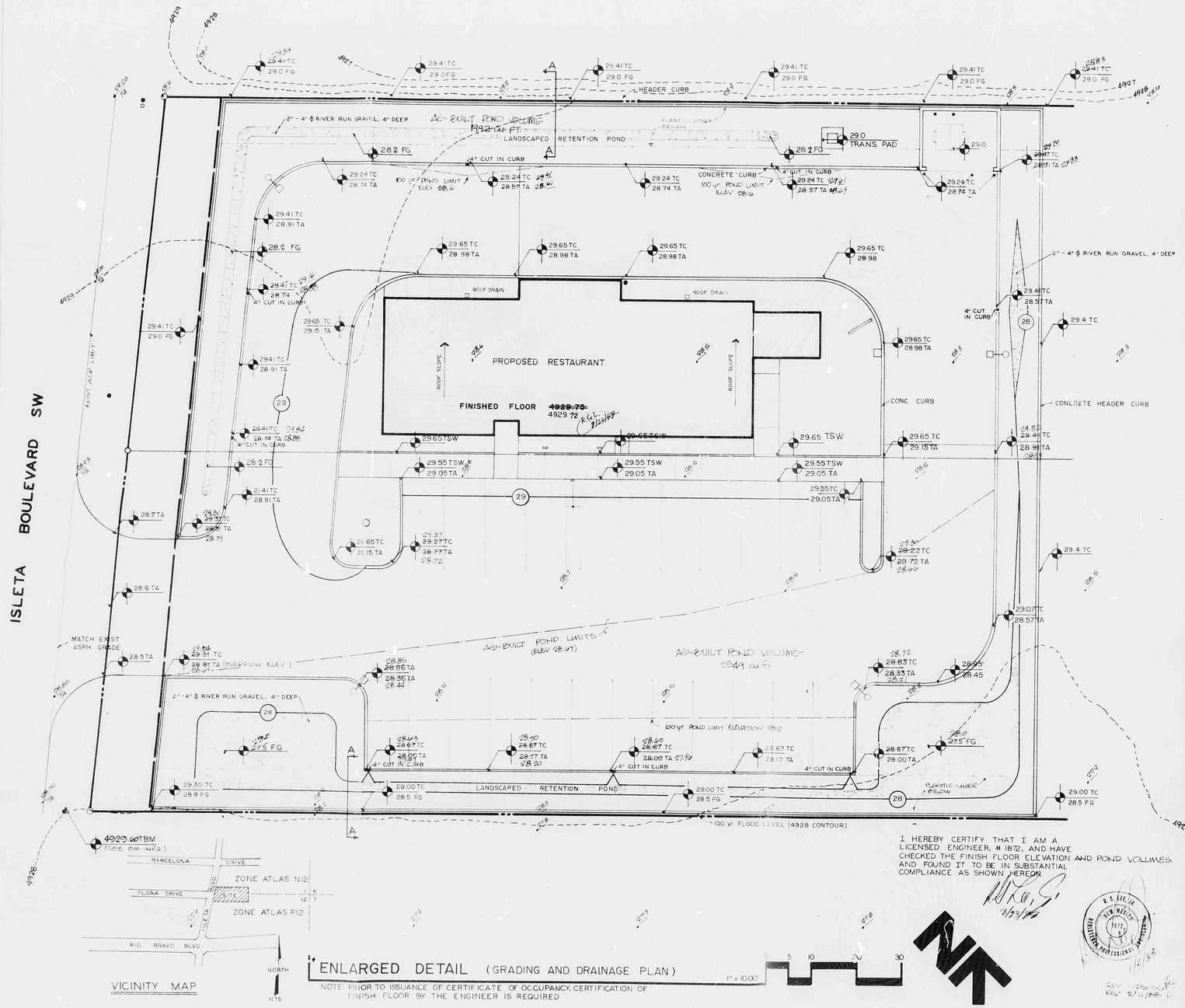
CITY CLERK RECORDER
OFFICIAL SEAL NORRETA SANCHEZ NOTARY PUBLIC STATE OF NEW MEXICO
My Commission Expires May 8, 1986
THIS PLAN SHOT TWICE ONCE ON LIGHT AND ONCE ON DARK.
CITY OF ALBUQUERQUE THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.
PLANS/PLATS ON FILE
FILE DESC: P-12/D004
# PLANS/PLATS 3


F 30 D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D F



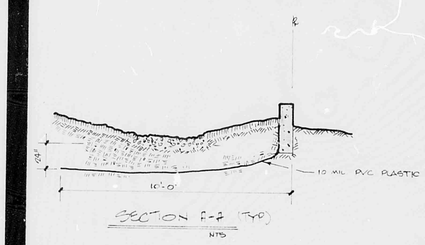

I HEREBY CERTIFY THAT I AM A LICENSED ENGINEER, # 1872, AND HAVE CHECKED THE FINISH FLOOR ELEVATION AND POND VOLUMES AND FOUND IT TO BE IN SUBSTANTIAL COMPLIANCE AS SHOWN HEREON

1/23/86

ENLARGED DETAIL (GRADING AND DRAINAGE PLAN)

1" = 10.00'

NOTE: PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY, CERTIFICATION OF FINISH FLOOR BY THE ENGINEER IS REQUIRED




KENTUCKY FRIED CHICKEN
ISLETA BOULEVARD SW
ALBUQUERQUE, NEW MEXICO

C-2A

THIS PLAN SHOT TWICE ONCE ON LIGHT AND ONCE ON DARK.

CITY OF ALBUQUERQUE
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RF 22 DATE 6-25-93 OP

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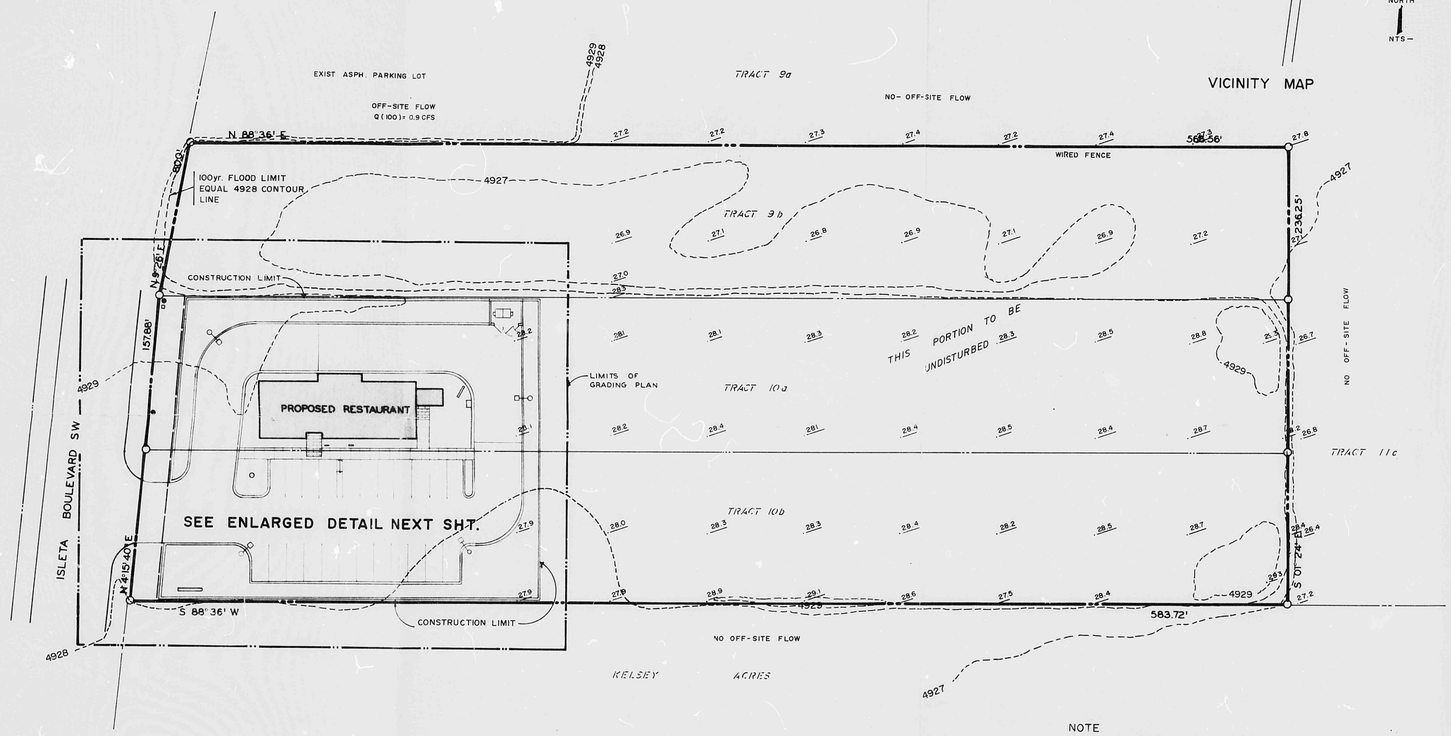
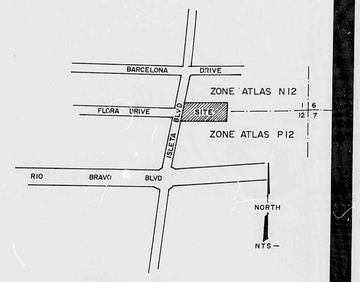
STATE OF NEW MEXICO
My Commission Expires MAY 8 1995

D 24 | C 20 | B 16 | A 12 | CITY OF ALBUQUERQUE | C | D




VICINITY MAP

NOTE
PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY, CERTIFICATION OF FINISHED FLOOR BY THE ENGINEER IS REQUIRED.

## GRADING AND DRAINAGE PLAN

LEGAL: TRACTS 9B, 10A, 10B, M.R.G.C.D. MAP # 46
T9N, R2E, SEC. 1 & 12, NMPM

0 15 30 60 90
1" = 30'

DRAINAGE CALCULATIONS

I. REFERENCES:

A. City of Albuquerque Development Process Manual (DPM) Vol. 2, Design Criteria, Chapter 22: Drainage, Flood Control, and Erosion Control.
B. Soil Survey of Bernalillo County and parts of Sandoval and Valencia Counties, New Mexico, United States Department of Agriculture, Soil Conservation Service.
C. Floodway, Flood Boundary and Floodway map, City of Albuquerque, New Mexico, Panel 40 of 50 .
D. County Zone Atlas page N-12 and P-12.

I. GENERAL INFORMATION:

A. Soil Type (Ref. B, Page 40) Soil type is Vinton (Va) and Gila (Gd) sandy loam, Both in Hydrologic Soil Group "B".
B. Imperviousness:

| Type of Surface | Existing Sq. Ft. | Area Acres | Proposed Sq. Ft. | Area Acres |
|---|---|---|---|---|
| Building Roof | -0- | -0- | 2687 | 0.0617 |
| Concrete Surfaces | -0- | -0- | 330 | 0.0076 |
| Asphalt Surfaces | -0- | -0- | 21610 | 0.4961 |
| Landscaping | -0- | -0- | 704 | 0.1699 |
| Undeveloped | 136356 | 3.1303 | 104328 | 2.3950 |
| Site Total | 136356 | 3.1303 | 136356 | 3.1303 |
| New Developed Portion Only | | | 32028 | 0.7353 |

C. "C" Factor for the developed portion only. (See Amendment to the DPM Jan.19,1986)

1. Proposed impervious surfaces

| | "C" | Area | C x A |
|---|---|---|---|
| Building (Roof area) | 0.90 | 0.0617 | 0.0555 |
| Concrete surface | 0.95 | 0.0076 | 0.0072 |
| Asphalt surface | 0.95 | 0.4961 | 0.4713 |
| Landscape surface | 0.25 | 0.1699 | 0.0425 |
| Undeveloped surface | 0.40 | -0- | -0- |
| TOTAL | | 0.7353 | 0.5765 |

Developed weighted "C" Factor 0.5765 / 0.7353 = 0.78

2. Existing impervious surfaces

| | "C" | Area | C x A |
|---|---|---|---|
| Undeveloped Area | 0.40 | 0.7353 | 0.2941 |

Existing weighted "C" Factor 0.2941 / 0.7353 = 0.40

D. Rainfall, 100-year, 6-hour, P(6): (See Ref. A, Plate 22.2 D-1) P(6) = 2.25 inches.
E. Time of Concentration, Tc; Tc < 10 minutes; use 10 minutes (minimum value) for calculations.
F. Rainfall Intensity, I: (See Ref. A, Plate 22.2 D-2
I = P(6) x 6.84 x Tc exp (-0.51)
= 2.45 x 6.84 x 10 exp (-0.51)
= 4.76 in/hr

III. PEAK DISCHARGE: (for developed portion only)

A. Existing Conditions. (Use Rational Equation)
Q(100) = 0.40 x 4.76 x 0.735 = 1.40 cfs
Q(10) = 0.657 x 1.40 = 0.92 cfs (Ref.A,Plate 22.2 D-1)
B. Developed Conditions.
Q(100) = 0.78 x 4.76 x 0.735 = 2.73 cfs
Q(10) = 0.657 x 2.73 = 1.79 cfs

IV. Volumes:

A. SEE NEXT SHEET FOR CALCULATIONS.

V. FLOOD INFORMATION:

A. Portion of the proposed site does lie within a designated flood zone. Ref. C, Panel 37 of 50. Flood elevation limits being the 4928 contour as shown on plan.
B. Flood Proofing; Finished floor set at 4929.75.

VI. CONCLUSIONS:

A. All run off generated due to this new development is directed and discharged into retention ponds and shall be retained on site as shown on plan.

VII CONSTRUCTION NOTES:

A. Two (2) working days prior to any excavation, contractor must contact line locating service at 765-1234 for location of existing utilities.
B. 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.
C. 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.
D. All construction within City Right-of-Way shall be performed in accordance with applicable City of Albuquerque standards and proceedures.

Benchmark Information:
Tempory benchmark as shown hereon is a 60 penny nail set on the north side of a power pole marked with orange spray paint, "TBM", bears elevation 4929.60 (MSL) reference to City Benchmark 10-N10 Elevation 4928.17 (MSL).

SYMBOL LEGEND

- - - - - - Existing contour
Existing spot elevation
TBM - temporary benchmark

KENTUCKY FRIED CHICKEN
ISLETA BOULEVARD SW
ALBUQUERQUE, NEW MEXICO

RECEIVED
FEB 11 1988
HYDROLOGY SECTION

C-2

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ONCE ON LIGHT AND
ONCE ON DARK.

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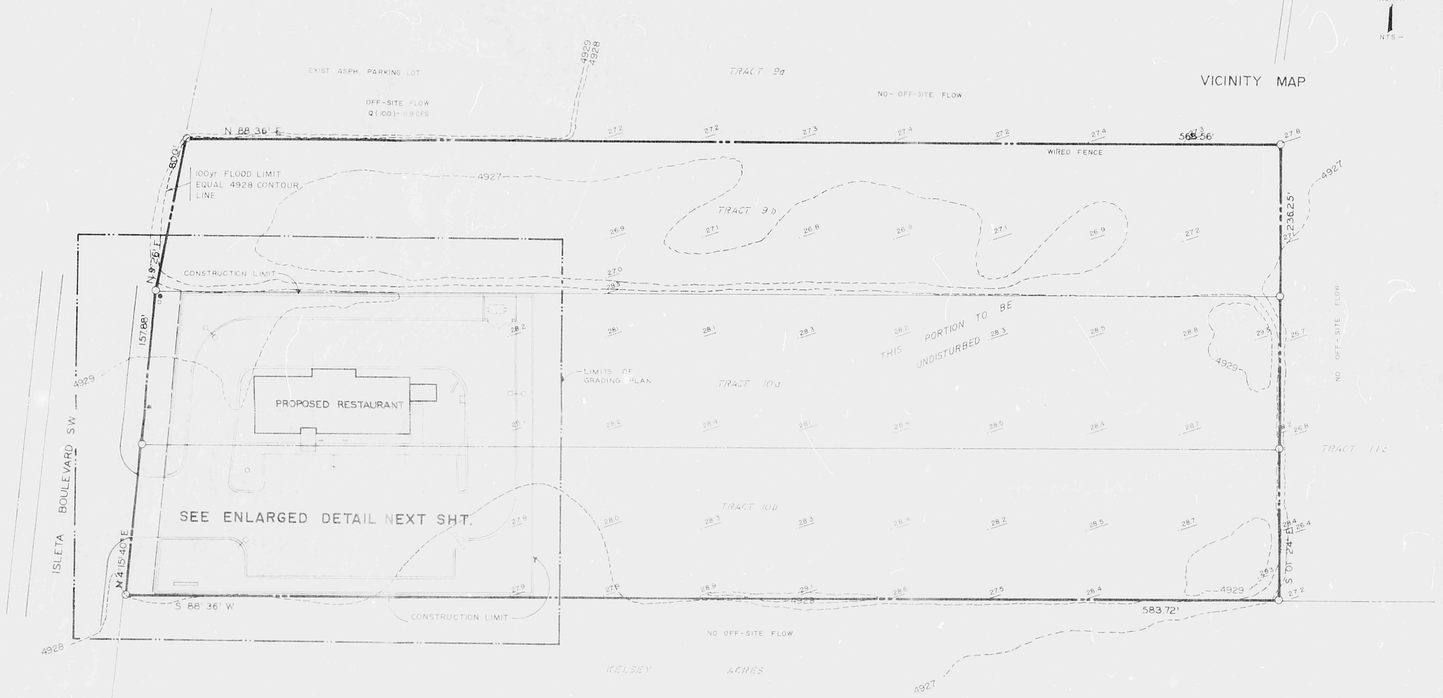
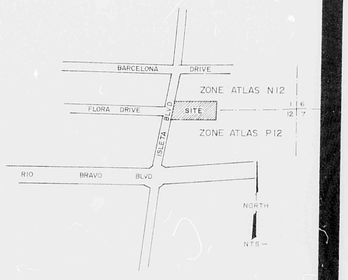
D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D




VICINITY MAP

NOTE
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GRADING AND DRAINAGE PLAN

LEGAL: TRACTS 9B, 10A, 10B, M.R.G.C.D. MAP # 46
T9N, R2E, SEC. 1 & 12, NMPM

1" = 40'

0 15 30 60 90

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ONCE ON DARK.

CITY OF ALBUQUERQUE
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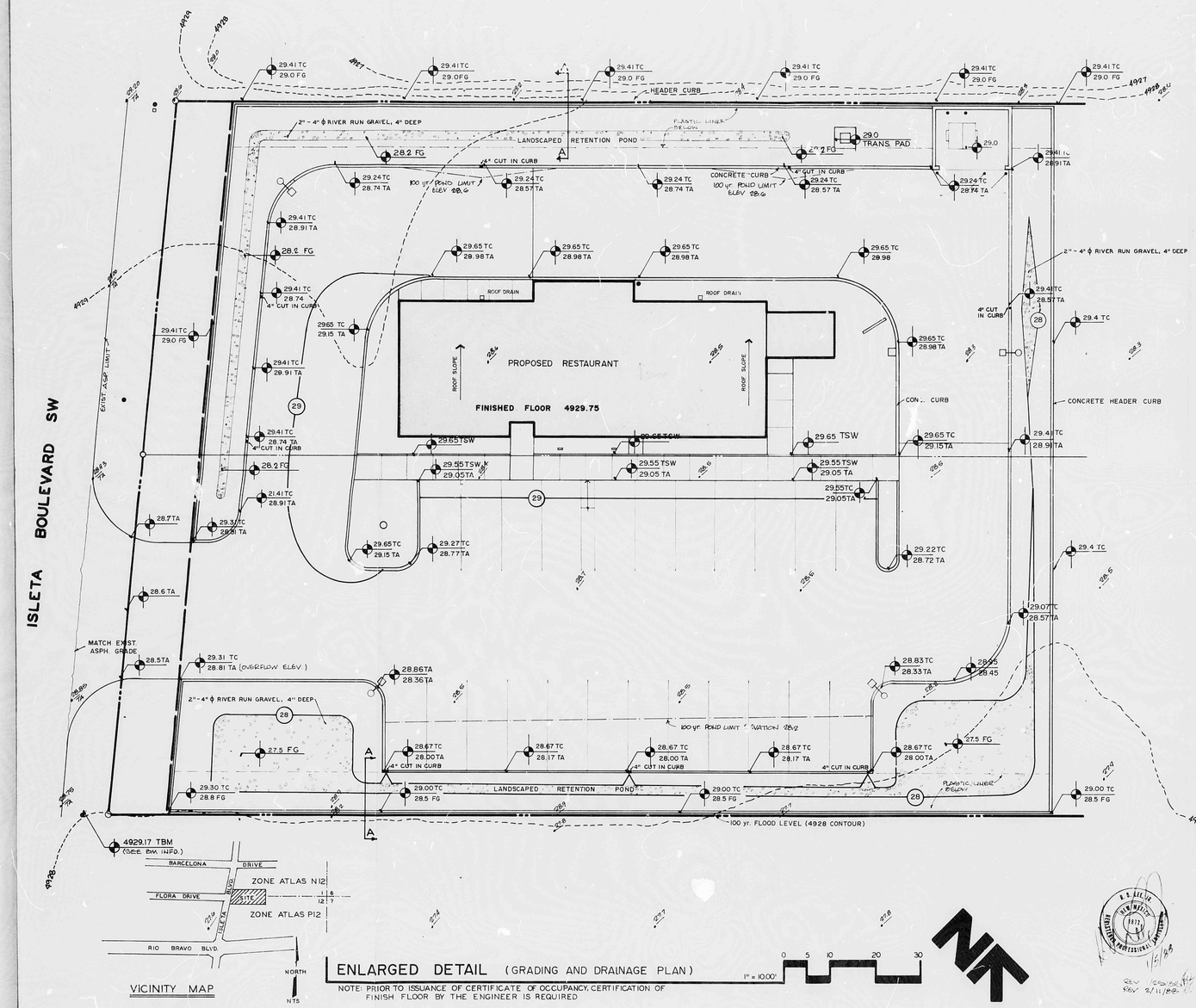
C-2

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE

C D




VICINITY MAP

ENLARGED DETAIL (GRADING AND DRAINAGE PLAN)

1" = 10.00'

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DRAINAGE CALCULATIONS

I. VOLUME: (developed portion only)

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C. Weighted "C" factor for the developed portion, C = 0.78

D. Area = 0.7353 Ac. or 32030 sq.ft.

E. Volume Generated:
V(ft³) = P(6)/12 x "C" x A (sq.ft.)
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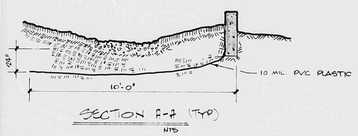
= 4084 cu.ft.

NOTE: This volume reflects the developed area only. The remaining portion will be undisturbed. All runoff will be retain on site via retention ponds. Pond are sized to hold volume generated only.

SYMBOL LEGEND

| | |
|---|---|
| | Existing contour |
| 123.5 | Existing spot elevation |
| | Proposed contour |
| | Proposed spot elevation |
| TBM | Temporary benchmark |
| TC | Top of curb |
| TA | Top of asphalt |
| TSW | Top of sidewalk |
| FG | Finish grade |




SECTION A-A (TYP)
NTS

RECEIVED
FEB 17 1988
HYDROLOGY SECTION

KENTUCKY FRIED CHICKEN
ISLETA BOULEVARD SW
ALBUQUERQUE, NEW MEXICO

C-2A

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REF. 22 DATE 6-25-88 OP. SSP.

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CITY OF ALBUQUERQUE

C D