HYDROLOGY

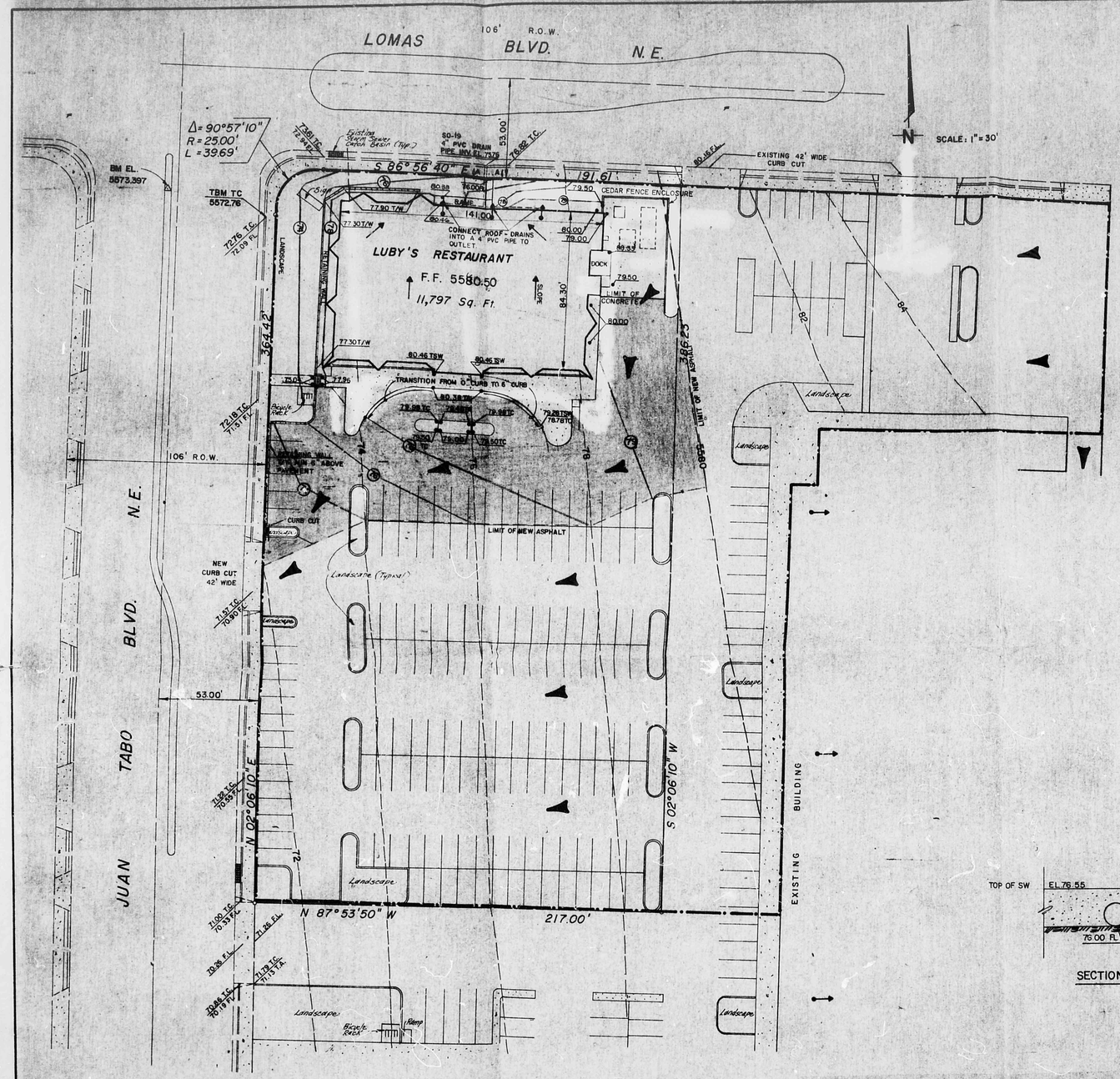
K22/D35B

ONE PLAN

1 PLAN FOR

LUBY'S CAFETERIA

K 22-D 35B



GRADING & DRAINAGE PLAN

FOR

LUBY'S RESTAURANT
MANZANO SHOPPING CENTER

TRACT "B-1", BLOCK 125

PRINCESS JEANNE PARK ADDITION

ALBUQUERQUE, NEW MEXICO

JULY, 1985

I. References

A. City of Albuquerque, Development Process Manual (DPM), Volume 2, Design Criteria
B. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, U.S. Soil Conservation Service, Sheet 32
C. Flood Insurance Rate Map, City of Albuquerque, New Mexico Panel 31

II. General Information

A. Site Location and Elevation Data
1. Legal Description: Tract "B-1" BLOCK 125 Princess Jeanne Park Addition
2. Total Site Area: 84,064 sf, 1.9298 ac
3. City Address:
4. City Bench Mark: JT-4A
5. County Zone Atlas: K-22

B. Soil Type (Reference) T B
Hydrologic Soils Group B
C. 6-hour, 100-year rain, P_6 = 2.4inches Reference , Plate 22.2 D-1

D. Runoff Coefficient ("C" Factor) Reference , Plate 22.2 C-1
Undeveloped "C" Factor, Curve is C = 0.90
Developed "C" Factor, assume the following values:
Buildings and concrete surfaces
Asphalt concrete paving
Landscaping, same as natural soil
Weighted "C" Factor:

Type of Surface	"C"	Area (SF)	C x A
Building	1.00	11,797	11,797
Asphalt	0.90	106,132	95,518
Landscape	0.15	11,823	1,493

Weighted "C" Factor = $\frac{\sum ("C" \times A)}{\sum A}$ = 111,808 / 129,752 = 0.8617

E. Time of Concentration - Developed Area
Watershed length L = 500
Watershed change in elevation h = 17
Watershed slope S = h/L = 0.0340
by Kirpich equation $T = 0.0078 (L^{0.77}/S^{0.385})$ < 10 minutes
T_c = 10 minutes minimum T_c = 3.43 min.

F. Intensity Reference , Plate 22.2 D-2
$I = P_6 \times 6.84 \times T_c^{-0.51}$
= 5.20in/hr

G. Peak Discharge - Rational Method: Q = CIA
Q = 0.8617 x 5.2 x 2.9787
= 13.94cfs

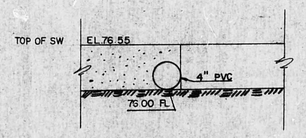
III. Existing Conditions (Undeveloped)

A. "C" Factor = 0.90 Plate 22.2 C-1

B. Time of Concentration
Watershed length L = 500
Watershed change in elevation H = 17
Watershed slope S = h/L = 0.0340
by Kirpich equation $T = 0.0078 (L^{0.77}/S^{0.385})$ < 10 minutes
T_c = 10 minutes minimum T_c = 3.43 min.

C. Intensity Reference , Plate
$I = (P_6 \times 6.84)/T_c^{0.51}$
= 5.20 in/hr

D. Peak Discharge - Rational Method: Q = CIA
Q = (0.90) (5.20) (2.9787)
Q = 13.94 cfs



SECTION A-A

LEGEND

EXISTING CONTOUR	5580
PROPOSED CONTOUR	76
FLOW DIRECTION	
DRAINAGE AREA BOUNDARY	
DIRECTION OF ROOF DRAIN	
EXIST. SPOT ELEVATION	71.00 TC 70.33 FL
PROPOSED SPOT ELEVATION	79.05 TSW 78.55 TA

BENCH MARK INFORMATION

BM JT-4A, A STANDARD BRASS DISK IN THE TOP OF A CONCRETE POST SET 0.2' ABOVE GROUND. LOCATED IN THE MEDIAN OF JUAN TABO BLVD. ON SOUTH SIDE OF LOMAS BLVD.
ELEVATION: 5573.397

EROSION CONTROL STATEMENT

1. THE BUILDING WILL BE PLACED ON TOP OF EXISTING PAVING, THEREFOR EROSION WILL BE MINIMAL.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. THE COTRACTOR IS RESPONSIBLE FOR CLEAN-UP OF ANY MATERIAL THAT IS DEPOSITED FROM WITHIN THE PROPOSED SITE INTO THE PUBLIC R/W.

RICHARD V. HALL NEW MEXICO No. 7918 REGISTERED PROFESSIONAL ENGINEER

AUGUST 26, 1985
Revised September 25, 1985
Revised Oct. 17, 1985

RECEIVED OCT 17 1985 HYDROLOGY SECTION

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K22/D35B

CITY OF ALBUQUERQUE
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