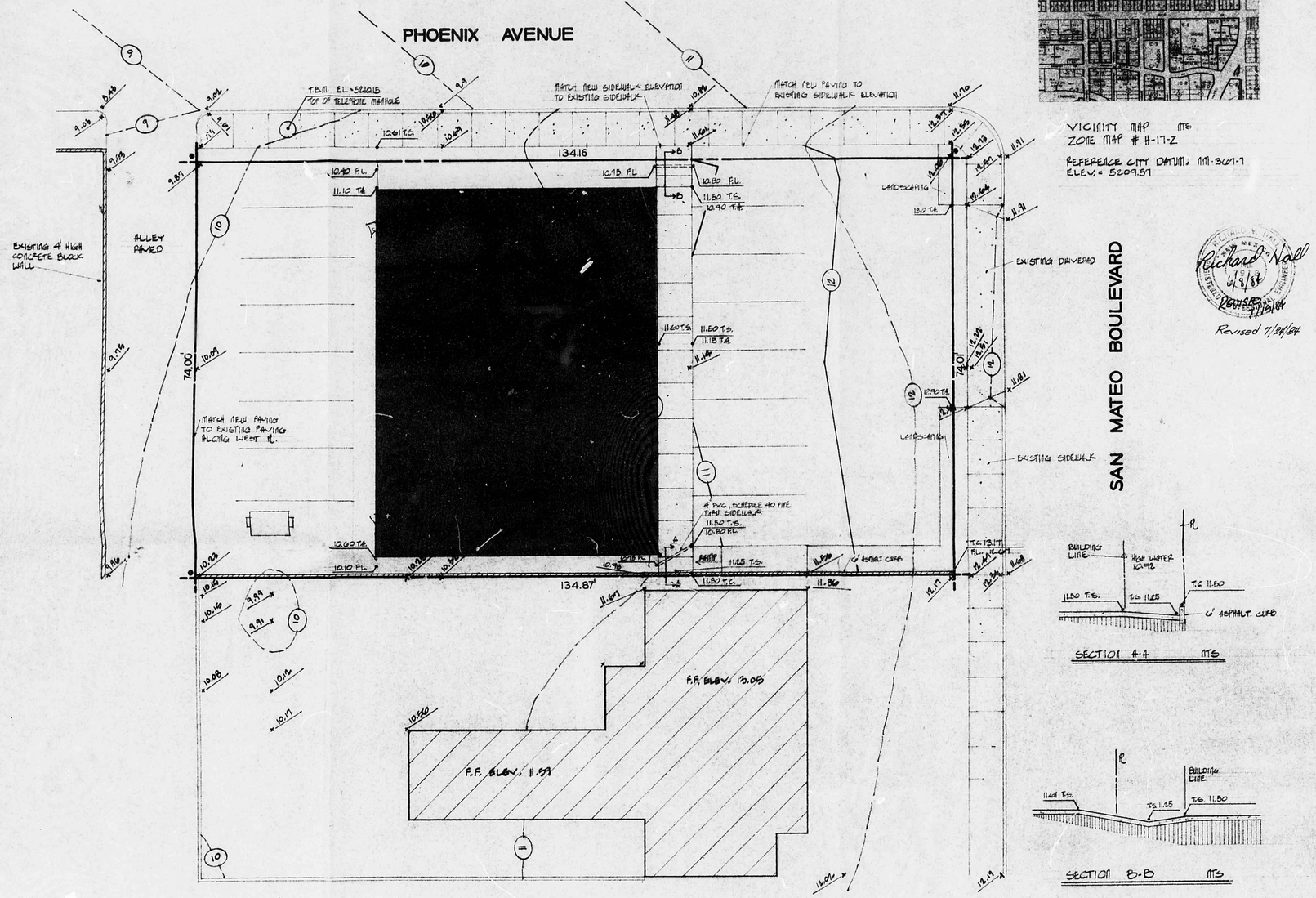
H 17/D 27

New Facility For Schwinn Cycle

1 Plan




# GRADING AND DRAINAGE PLAN

RECEIVED
JUL 24 1984
HYDROLOGY SECTION

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT

## LEGAL DESCRIPTION

Lot 1
Block 4
Bel-Air Subdivision
Zone Map # H-17-Z

## SYMBOL LEGEND

| | |
|---|---|
| T.=10.04 | Existing spot elevation |
| | Existing contour |
| 1060 T.S. | Proposed spot elevation |
| (12) | Proposed contour |
| | Swale |
| T.A. | Top of asphalt |
| T.S. | Top of sidewalk |
| F.L. | Flowline |
| T.B.M. | Temporary benchmark |

## DRAINAGE CALCULATIONS

I. Off-site flow - none.

II. On-site flow:

A. Time of Concentration, Tc. Use minimum of 10 minutes.

B. Intensity: From DPM Plate 22.2 D-1, 6-hour, 100-year rain is 2.25 inches at this location.

I = (2.25) 6.84 (10) -0.51 = 4.76 inches per hour.

C. Soil type: From Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, Soil is EtC, Embudo-Tijeras Complex, SCS Hydrologic Soil Group B.

D. "C" Factor (See Plate 22.2 C-1)
Undeveloped C = 0.34
Developed C = 0.95

E. Discharge, by Rational Equation. Q = CIA

Site area is approximately 80' x 120' = 9,600 sq.ft.
= 0.22 acres

Undeveloped (Refer to Drainage Plan)
Developed

F. Downstream Capacity. (See Conference Recap)

From "Albuquerque Master Drainage Study", Inventory of Existing Storm Sewer Facilities, System 341, Washington Street to Montclaire Drive, 27" diameter RCP. Existing capacity = 29 cfs. 100 year discharge =33 cfs., Therefore, the street will be required to carry 4 cfs.

Depth of flow in street, (see Plate 22.3 D-1)
For slope = 0.0114 and Q=4 cfs, D=0.32 ft, V=2.8 cfs.

Street capacity at s = 0.0114 = 44 cfs (depth = 0.67')

G. Conclusion:

The street (Phoenix Ave.) has adequate capacity. The street is required to carry only 9.1% of its capacity in accomodating the 100-year flood. Additional flow created by developing this site is 1.16 - 0.42 = 0.74 cfs. This increases the percentage of street capacity used to 10%.

NOTE TO CONTRACTOR:
The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.

Approved
7/30/84

GRADING AND DRAINAGE PLAN
NEW FACILITY FOR SCHWINN CYCLERY
2641 SAN MATEO BOULEVARD NE
ALBUQUERQUE, NEW MEXICO

2

H17/D27