HYDROLOGY K19/D67 1 PLAN

K19 | D67

1 Plan

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

VICINITY MAP K·19

SCALE: 1" = 800'

LEGEND

- PROPOSED SPOT ELEV.
- EXISTING SPOT ELEV.
- 56 — PROPOSED CONTOUR
- 5625 — EXISTING CONTOUR
- SWALE
- PROPERTY LINE
- CONCRETE
- PROPOSED ASPHALT
- TC 51.50 — TOP OF CURB ELEV.
- FL 51.00 — FLOW LINE
- ROOF DRAIN

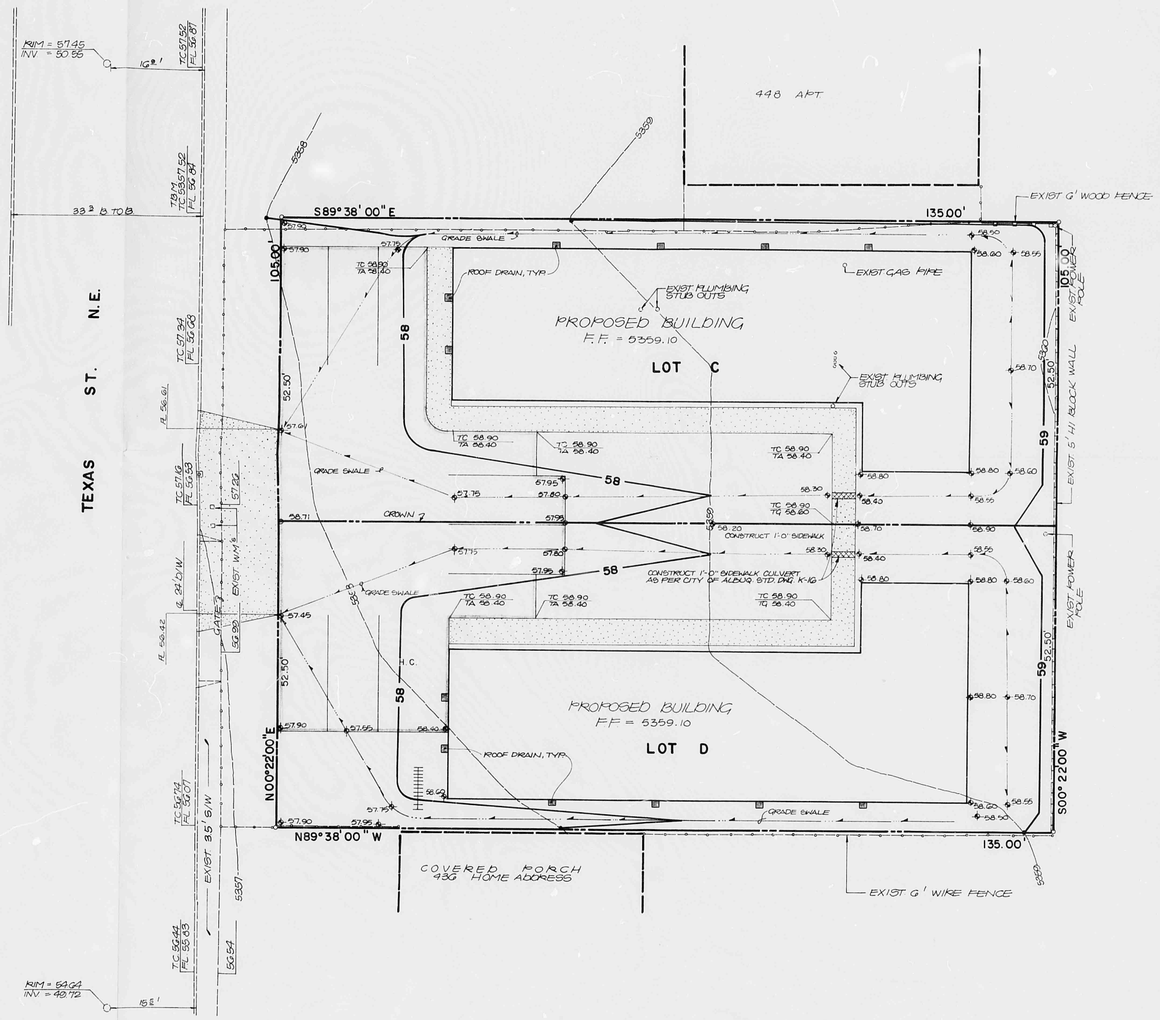
PROJECT BENCHMARK:

A SQUARE, ☐, CHISELED ON TOP OF CONCRETE CURB LOCATED @ THE INTERSECTION OF LOMAS BLVD. N.E. AND UTAH ST. N.E. IN THE N.W. QUADRANT OF THE INTERSECTION APPROXIMATELY 20' WEST OF THE W.N.W. CURB RETURN. (BM No. 2-J19)
ELEV = 5350.12 ft (MSLD)

T.B.M.:
TOP OF CONCRETE CURB, A EXTENSION OF THE N.W. PROPERTY CORNER AS SHOWN BELOW
ELEV = 5361.52 ft (MSLD)

LEGAL DESCRIPTION:
LOTS C & D, BLOCK 29, MESA VERDE ADDITION

SCALE: 1" = 10'



CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION 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.
3. 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.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. 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.
3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION

DRAINAGE PLAN

The following items concerning the Texas Triplexes' Drainage Plan are contained hereon:

1) Vicinity Map 2) Grading Plan 3) Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the East side of Texas St. N.E. between Marquette Ave N.E. and Copper Ave. N.E. At present, much of the surrounding area is developed residentially. The site is undeveloped making it an infill site.

As shown by plate K-19 of the Albuquerque Master Drainage Study, the site does not lie within a designated flood-zone. At present, runoff generated by this site flows west to Texas St. N.E., then south to Copper Ave. N.E. This is a minor area of flooding mapped by the A.M.D.S., however this flooding has been alleviated by the construction of the Fairgrounds Stormwater Relief System. The runoff continues west and outfalls to the Fairgrounds Relief System.

The Grading Plan shows 1) existing and proposed grades by spot elevations and contours at 1' 0" intravals, 2) continuity between existing and proposed grades, and 3) the limit and character of the proposed improvements. As shown by this plan the proposed improvements consist of the construction of two triplexes, landscaping and paving. Flows generated by area A flow westward over the common drivepad located on Texas St. N.E., to the Fairgrounds Stormwater Relief System as discussed above. The runoff generated from area B also flows westward over the common drivepad located on Texas St. N.E. From this point, the collective runoff flows to the Fairgrounds Stormwater Relief System. No off site flows enter from the East due to the existing block wall. No flow will cross the lot line between Lot 'C' and 'D'.

The calculations which appear hereon analyze both the existing and developed conditions for the 100 yr. 6 hr. rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will increase the peak discharge to Texas St. N.E. by only 0.4 cfs (approximately). Based upon this negligible increase in runoff combined with the fact that this is an infill site that contributes runoff to the existing Fairgrounds Stormwater Relief System, the free discharge of runoff from this site is appropriate.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 31:

Etc - Embudo - Tijeras complex

Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$

Where C varies
$i = P_6 (6.84) T_c^{-0.51} = 4.86$ in/hr
$P_6 = 2.3$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$

Where C varies
$P_6 = 2.3$ in (DPM Plate 22.2D-1)
A = area, sf

Existing Condition

1. Area A (Lot C)
$A_{total} = 7090$ sf $= 0.16$ Ac
$A_{imp} = 0$ sf; % impervious = 0
'C' = 0.34 (DPM Plate 22.2C-1)
$Q_{100} = CiA = (.34)(4.86)(.16) = 0.3$ cfs
$V_{100} = CP_6A = (.34)(2.3/12)(7090) = 460$ cf

2. Area B (Lot D)
$A_{total} = 7090$ sf $= 0.16$ Ac.
0 sf = 0%
'C' = 0.34
$Q_{100} = 0.34(4.86)(0.16) = 0.3$ cfs
$V_{100} = CP_6A = 0.34\ (2.3/12)(7090) = 460$cf

Developed Condition

1. Area A (Lot C)
$A_{total} = 7090$ sf $= 0.16$ Ac
$A_{imp} = 4600$ sf; % impervious = 65%
'C' = 0.34 (DPM Plate 22.2C-1)
$Q_{100} = CiA = (0.66)(4.86)(0.16) = 0.5$ cfs
$V_{100} = CP_6A = (0.66)(2.3/12)(7090) = 900$ cf

2. Area B (Lot D)
$A_{total} = 7090$ sf $= 0.16$ Ac
$A_{imp} = 4265$ % imp = 60%
'C' = 0.63
$Q_{100} = (0.63)(4.86)(0.16) = 0.5$ cfs
$V_{100} = (.63)(2.3/12)(7090) = 855$ cf

Comparison

$Q_{100} = (0.5 + 0.5) - (0.3 + 0.3) = 0.4$ cfs (0.2 cfs/lot)
$V_{100} = (900 + 855) - (460 + 460) = 835$ cf

RECEIVED OCT 23 1985 HYDROLOGY SECTION

JEFFREY C. MONTGOMERY NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER 10-22-85

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ENGINEERS

NO.	DATE	BY	REVISIONS

DESIGNED BY: J.G.M.
DRAWN BY: J.M.C.
APPROVED: J.G.M.

JOB NO. 51211
DATE 10·85

GRADING & DRAINAGE PLAN
TEXAS TRIPLEXES

FILE NO.
SHEET 1 OF 1

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE

C D