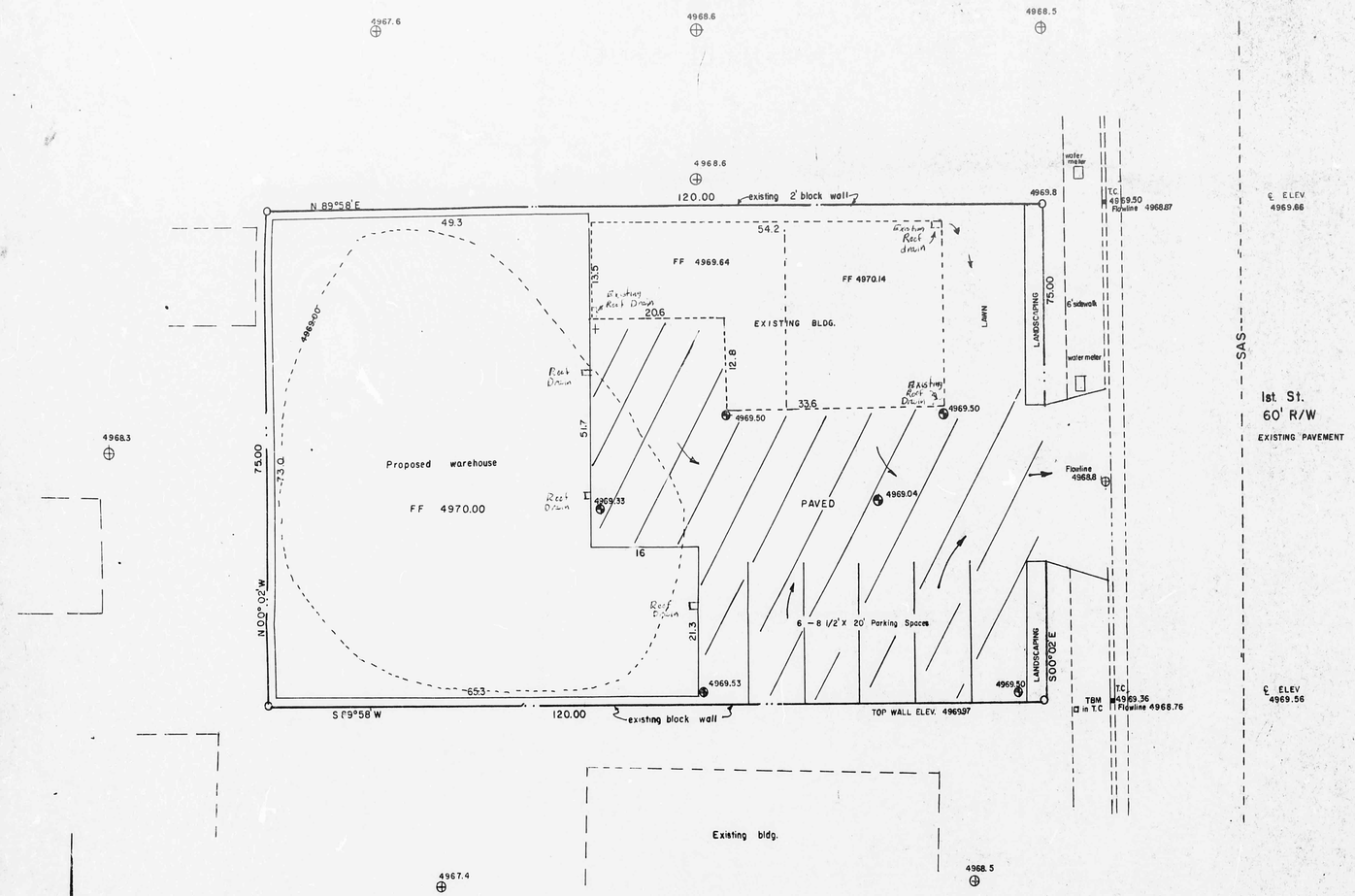
HYDROLOGY

H14/D29
1 PLAN

H14/D29

1 Plan

GRADING PLAN
East 120' of lots 36, 37 and 38, FRANCISCAN ADDITION
Albuquerque, New Mexico, 2-10-84



DRAINAGE CALCULATIONS ON EAST 120 FEET OF TRACTS 36, 37 and 38, BLOCK 14 FRANCISCAN ADDITION, ALBUQUERQUE, NEW MEXICO, A TRACT 75 x 120 FEET OR 0.21 AC.

1. All values and constants of rainfall intensities were taken from the City of Albuquerque's Development Process Manual.

2. All drainage is into 1st Street

3. OFFSITE RUNOFF
   There is no evidence of any offsite runoff.

4. PREDEVELOPMENT ONSITE RUNOFF
   Using the Rational Formula and a Time of concentration of 10 min.
   $Q_{100} = c i a$
   i = 1.4 from Development Process Manual
   a = 75 x 120 = 9000 sq. ft.
   c = weighted factors as follows

   $c = \frac{1200 \text{ (impervious)}}{9000 \text{ total area}} \times 0.90 + \frac{7000}{9000} \times .35$
   $= .12 + .30 = 0.42$

   $Q_{100} = (.42)(1.4)(.21) = 0.12$ cfs
   V = 700 cfs

   $Q_{10} = c i a$
   $= (.42)(1.4)(.21)$
   $= 0.12$ cfs
   $Q_{10} = 0.12$ cfs
   $V_{10} = 200$ cf

5. DEVELOPED RUNOFF
   Using the Rational Formula and a time of concentration of 10 min.

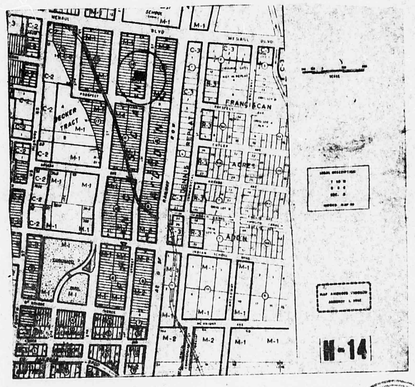
   $Q_{100} = cia$
   c = 0.9 since the lot is essentially impervious
   i = 1.4
   a = 0.21

   $Q_{100} = (.9)(1.4)(.21) = 0.4$ cfs

   Volume = 1050 cf

   $Q_{10} = (.9)(1.4)(.21)$
   $= .25$ cfs
   $V_{10} = 1050$ cf

BM. STA NM 47-13 Brass cap at intersection of Menaul & 4th. ELEV. 4968.392



Revised 4-2-84

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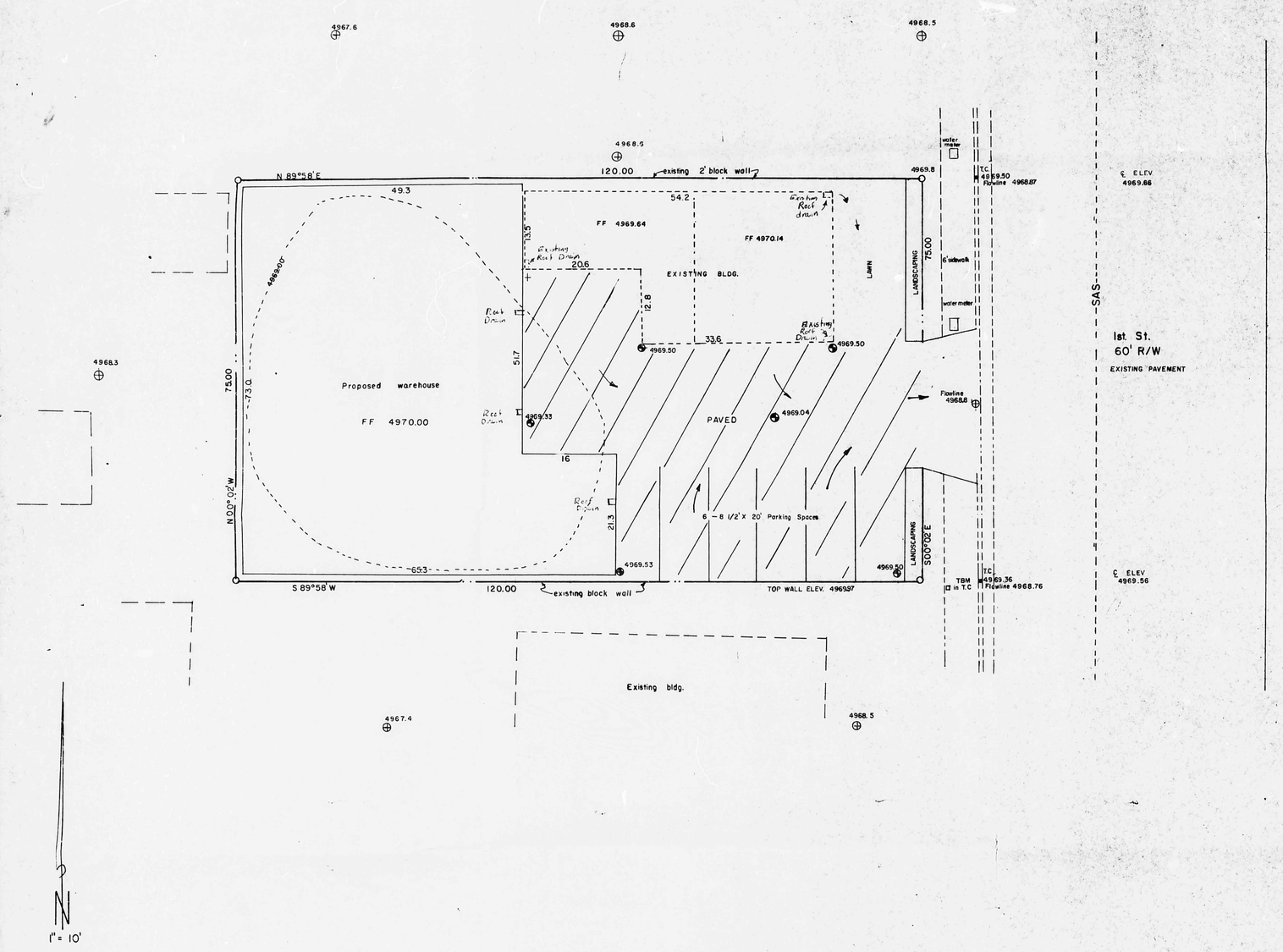

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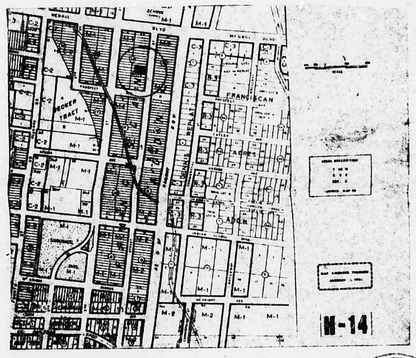

Revised 4-2-84