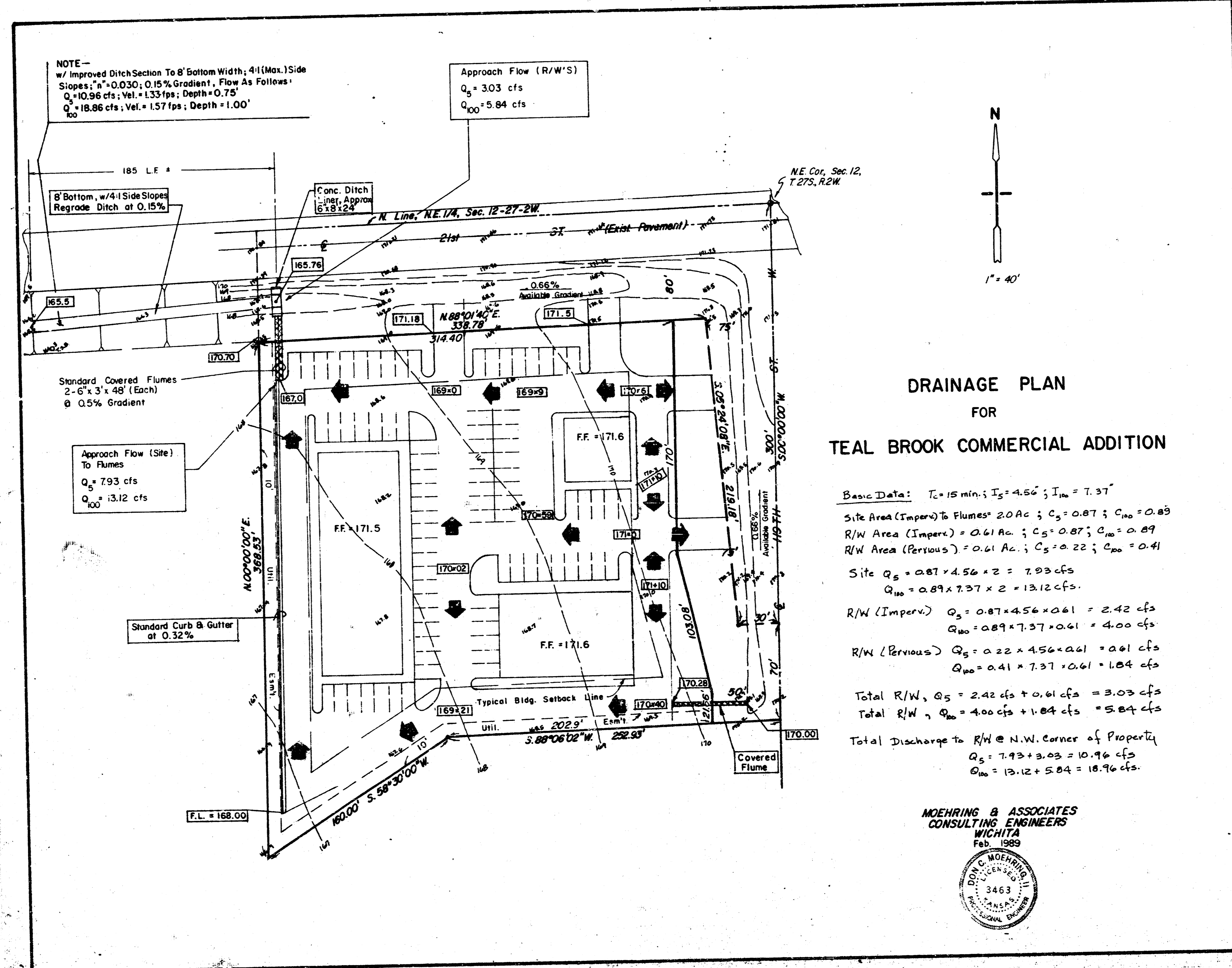


Teal Brook Commercial



NOTE—
w/ Improved Ditch Section To 8' Bottom Width, 4:1 (Max.) Side Slopes; $n = 0.030$; 0.15% Gradient. Flow As Follows:
 $Q_5 = 10.96$ cfs; Vel. = 1.33 fps; Depth = 0.75'
 $Q_{100} = 18.86$ cfs; Vel. = 1.57 fps; Depth = 1.00'

Approach Flow (R/W'S)
 $Q_5 = 3.03$ cfs
 $Q_{100} = 5.84$ cfs

8' Bottom, w/4:1 Side Slopes
Regrade Ditch at 0.15%

Conc. Ditch
- (See Appro.)
618x24"

Standard Covered Flumes
2-6' x 3' x 48' (Each)
@ 0.5% Gradient

Approach Flow (Site)
To Flumes
 $Q_5 = 7.93$ cfs
 $Q_{100} = 13.12$ cfs

Standard Curb & Gutter
at 0.32%

DRAINAGE PLAN
FOR
TEAL BROOK COMMERCIAL ADDITION

Basic Data: $T_c = 15$ min.; $I_5 = 4.56$; $I_{100} = 7.37$
Site Area (Imperv.) to Flumes = 20 Ac; $C_5 = 0.87$; $C_{100} = 0.89$
R/W Area (Imperv.) = 0.61 Ac; $C_5 = 0.87$; $C_{100} = 0.89$
R/W Area (Pervious) = 0.61 Ac; $C_5 = 0.22$; $C_{100} = 0.41$
Site $Q_5 = 0.87 \times 4.56 \times 2 = 7.93$ cfs
 $Q_{100} = 0.89 \times 7.37 \times 2 = 13.12$ cfs
R/W (Imperv.) $Q_5 = 0.87 \times 4.56 \times 0.61 = 2.42$ cfs
 $Q_{100} = 0.89 \times 7.37 \times 0.61 = 4.00$ cfs
R/W (Pervious) $Q_5 = 0.22 \times 4.56 \times 0.61 = 0.61$ cfs
 $Q_{100} = 0.41 \times 7.37 \times 0.61 = 1.84$ cfs
Total R/W, $Q_5 = 2.42$ cfs + 0.61 cfs = 3.03 cfs
Total R/W, $Q_{100} = 4.00$ cfs + 1.84 cfs = 5.84 cfs
Total Discharge to R/W @ N.W. corner of Property
 $Q_5 = 7.93 + 3.03 = 10.96$ cfs
 $Q_{100} = 13.12 + 5.84 = 18.96$ cfs.

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Feb. 1989