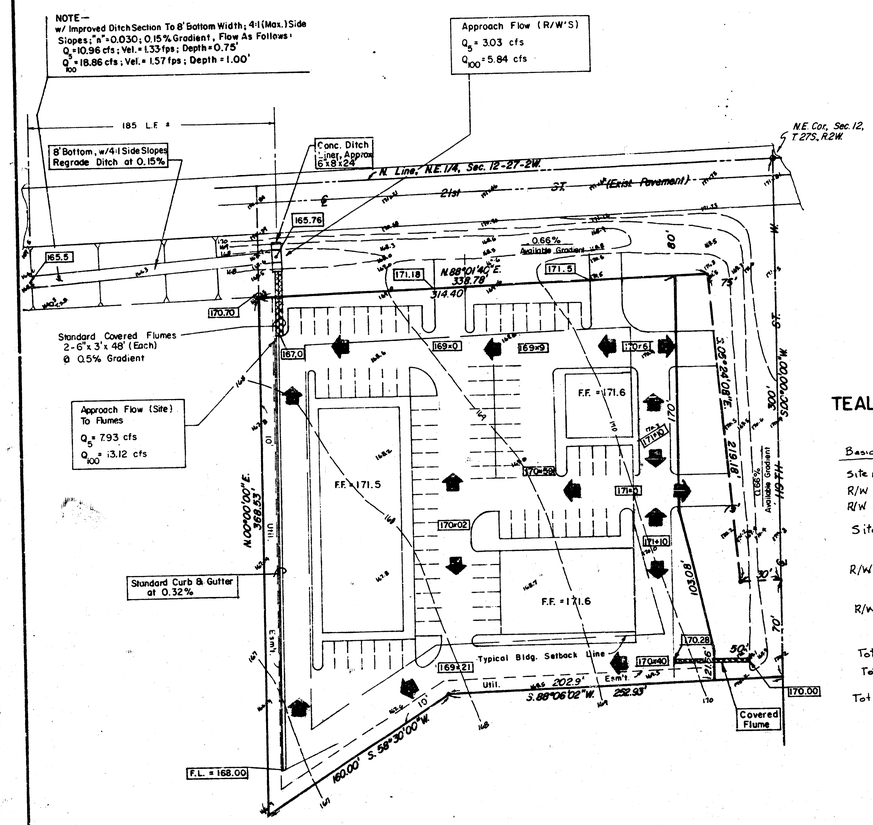
Teal Brook Commercial



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 = 2.0 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 × 4.56 × 2 = 7.93 cfs
Q_{100} = 0.89 × 7.37 × 2 = 13.12 cfs.

R/W (Imperv.) Q_5 = 0.87 × 4.56 × 0.61 = 2.42 cfs
Q_{100} = 0.89 × 7.37 × 0.61 = 4.00 cfs

R/W (Pervious) Q_5 = 0.22 × 4.56 × 0.61 = 0.61 cfs
Q_{100} = 0.41 × 7.37 × 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

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