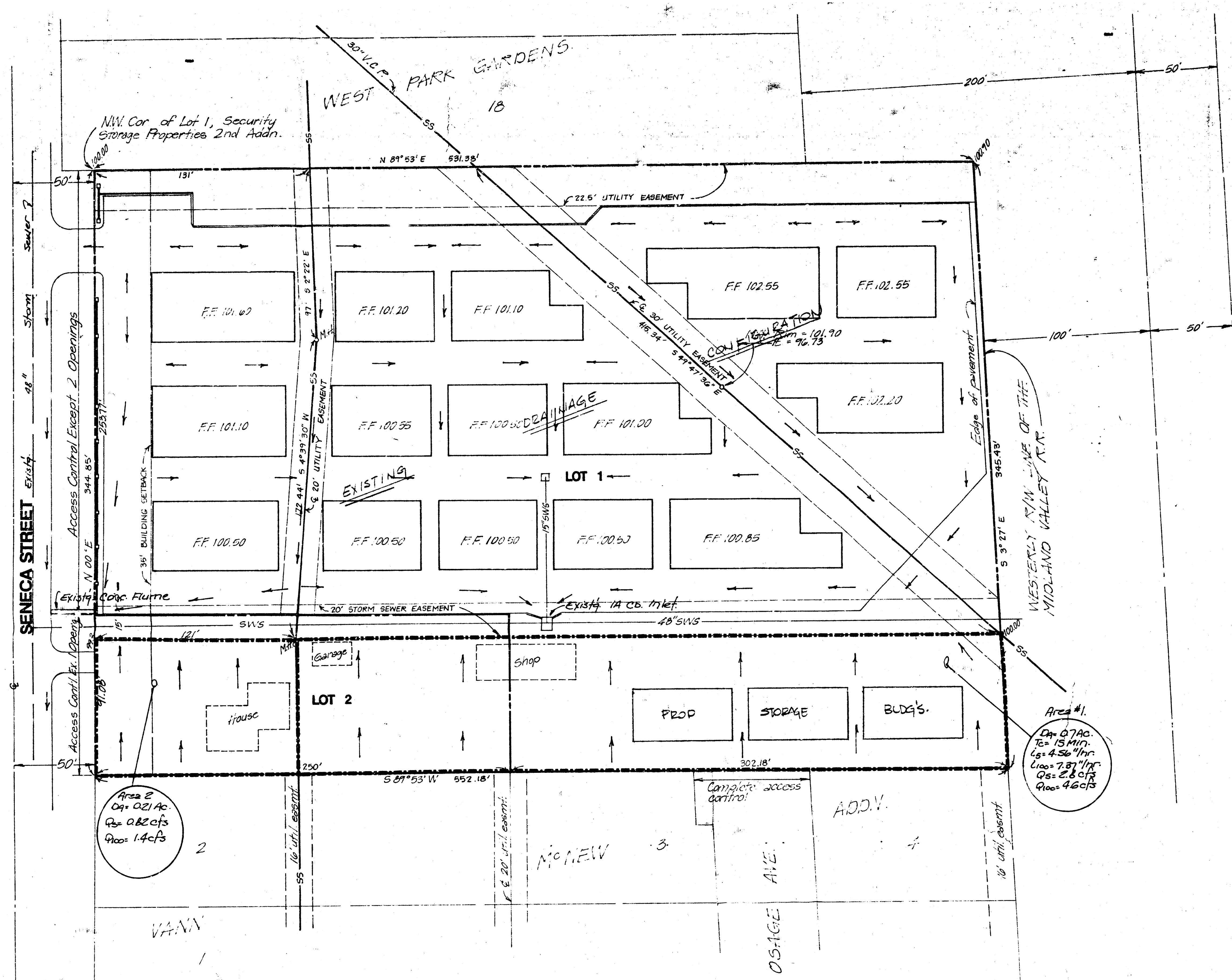


Approx Factor; From City of Wichita Drainage Manual.
 Parking lots $C_s = 0.87$ $C_{100} = 0.87$
 Roofs $C_s = 0.85$ $C_{100} = 0.12$
 For storage Park Area, Assume 30% roof Area
 $C_s = 0.7(0.87) + 0.3(0.85) = 0.86$
 $C_{100} = 0.7(0.87) + 0.3(0.12) = 0.70$
 Area 1; S.E. Corner of New Plat.
 Area = 0.7 Ac. Use $T_c = 15 \text{ min}$
 $C_s = 0.86$
 $C_{100} = 0.70$
 $Q_s = (0.7)(0.86)(4.56) = 2.8 \text{ cfs}$
 $Q_{100} = 7.37 \text{ m/h}$
 $Q_{100} = (0.7 \text{ Ac})(0.9)(7.37) = 4.6 \text{ cfs}$
 Drainage Handled 1/2 1-A Cu. Inlet. From Drainage Plan for Sec. Storage 2nd Addn, Cap = 7 cfs @ T.C. Elev.
 size for 5 yr storm.
 Existy Area from North to Inlet: 1.65 ft @ 18 Ac = 2.13 Ac. This Area was evaluated using the old Intensity Value of $I_s = 5.21 \text{ m/h}$ and $C_{100} = 6.98 \text{ m/h}$. Adjust for New Values.
 $Q_s \text{ total} = (\text{From North}) = (2.13 \text{ Ac})(0.86)(4.56) = 8.4 \text{ cfs}$
 Drop Inlet North of 1A Inlet has 5.0 cfs Cap @ 0.72 feet of Pond Depth (overflow Elev South).

Total Q_s for Both Areas = 8.4 cfs + 2.8 cfs = 11.2 cfs
 1A Inlet: 11.2 cfs - 5.0 cfs (Drop Inlet) = 6.2 cfs for 1A Inlet.
 1A Inlet Cap @ T.C. = 7.0 cfs > 6.2 cfs Overflow from North O.K.
 Total 100 yr. Runoff = $(2.13 \text{ Ac})(0.9)(7.37) + 4.6 \text{ cfs}$
 $Q_{100} = 18.7 \text{ cfs}$
 From Old Drainage Plan, Total $Q_{100} = 17.2 \text{ cfs}$ Based on Old Values.
 Excess $Q = 18.7 - 17.2 = 1.5 \text{ cfs}$ Additional.
 100 yr. Inlet Cap = 16.5 cfs (From Sec. Stor. 2nd Dng. Plan)
 Excess Over Inlet Cap = 18.7 cfs - 16.5 cfs = 2.2 cfs
 This 2.2 cfs will Overflow East
 Previous Overflow East = 17.2 cfs - 16.5 cfs = 0.7 cfs
 Total Excess East Over Design Overflow = 2.2 cfs - 0.7 cfs = 1.5 cfs.
 This 1.5 cfs will flow East to E.R. Ditch then to River. O.K.
 Area 2 S.W. Corner of New Plat.
 $D_A = 0.21 \text{ Ac}$
 $Q_s = (0.21)(0.86)(4.56) = 0.82 \text{ cfs}$
 $Q_{100} = (0.21)(0.9)(7.37) = 1.4 \text{ cfs}$
 These will flow South and West to Existy Flume to Seneca Street.

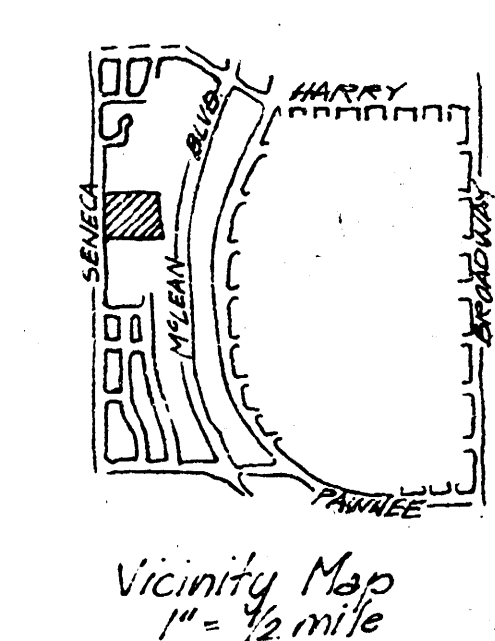
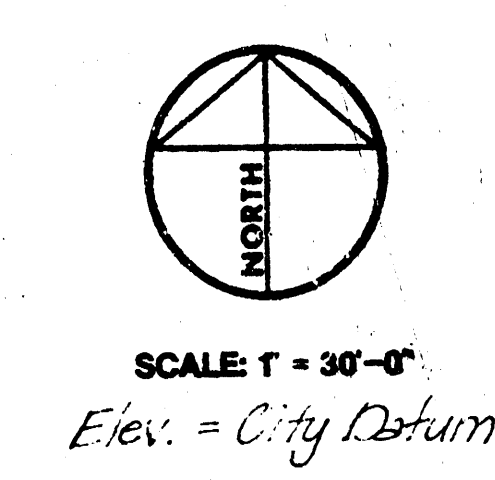
Existy Area to Flume = 0.37 Ac.
 Old $Q_s = (0.37)(0.86)(4.56) = 1.73 \text{ cfs}$
 Old $Q_{100} = (0.37)(0.9)(7.37) = 2.6 \text{ cfs}$
 Combined Areas for New Plat to Flume
 $Q_s = (0.37 \text{ Ac} + 0.21 \text{ Ac})(0.86)(4.56) = 2.3 \text{ cfs}$
 $Q_{100} = (0.37 \text{ Ac} + 0.21 \text{ Ac})(0.9)(7.37) = 3.9 \text{ cfs}$
 Excess Flow to Flume Based on Current Drainage Policy
 $Q_{s \text{ excess}} = 2.3 \text{ cfs} - 1.73 \text{ cfs} = 0.6 \text{ cfs}$
 $Q_{100 \text{ excess}} = 3.9 \text{ cfs} - 2.6 \text{ cfs} = 1.3 \text{ cfs}$
 The Addition of under 1.0 cfs of Runoff will not Affect the Flumes Capacity to Drain to Seneca Street.
 Summary: Since the Drainage for Security Storage 2nd Addition was at least equal to the Old Drainage Policy of $I_s = 5.21 \text{ m/h}$ and $C_{100} = 6.98 \text{ m/h}$, the Addition of the South Areas will not significantly Affect the Capacity of the existing Drainage Structure.

Note: 12" Water main in West side of Seneca



DRAINAGE PLAN 10/22/88 **SKETCH PLAT** **SECURITY STORAGE PROPERTIES 3RD ADDITION - Wichita, Kansas** BEING A REPLAT OF LOT 1, SECURITY STORAGE PROPERTIES 2ND ADDITION, WICHITA, KANSAS TOGETHER WITH A TRACT IN THE SW 1/4 OF SEC. 32, TWP 27-S, R-1-E.

NOTES: SEE SECURITY STORAGE 2ND PLAN AND ATTACHED REPORT FOR DRAINAGE CALCULATIONS TO THE NORTH.
 DRAINAGE FROM AREA 1 TO EXIST. 1A INLET.
 DRAINAGE FROM AREA 2 TO SENECA VIA EXIST. FLUME AS INDICATED.



POS
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 PLANNING DEVELOPMENT SERVICES, INC.

10-21-88
 DRAWN
 CHECKED
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 SHEET
 OF ONE