EMS 1st Addition Drainage Plan

10-2-95
CMB

From soil survey of Sedgwick County, KS.

Soil Type = F_6 = Hydrological Soil Group B

Site (existing) grades from Hillside Ave. to the east to existing channel formed by K-96 to the North & R.R. RCBC to the South. Channel flow is from the north (new box) to the south (RR Box).

Plat Area = 3.0 Acres.

From FEMA Firm MAP # 200328 0010 B
BFE = 1339.5 (Interpolated)
This elevation line is shown on drainage plan.

New building and parking areas = 0.30Ac.

For proposed site; calculate C factor

Grossed area = 3Ac − 0.3Ac = 2.7 Acres
Imperv. area = 0.3Ac

$C_5 = \frac{2.7Ac(0.26) + 0.3Ac(0.95)}{3} = \frac{0.987}{3} = 0.33 = C_5$ "B" Type soil-lawn, 5% Bldgs

$C_{100} = \frac{2.7Ac(0.45) + 0.3Ac(0.95)}{3} = \frac{1.50}{3} = 0.50 = C_{100}$

∴ @ T_c = 15min
i_5 = 4.56"/hr
i_{100} = 7.37"/hr

$Q_5 = (3.0Ac)(0.33)(4.56) = 4.5cfs$

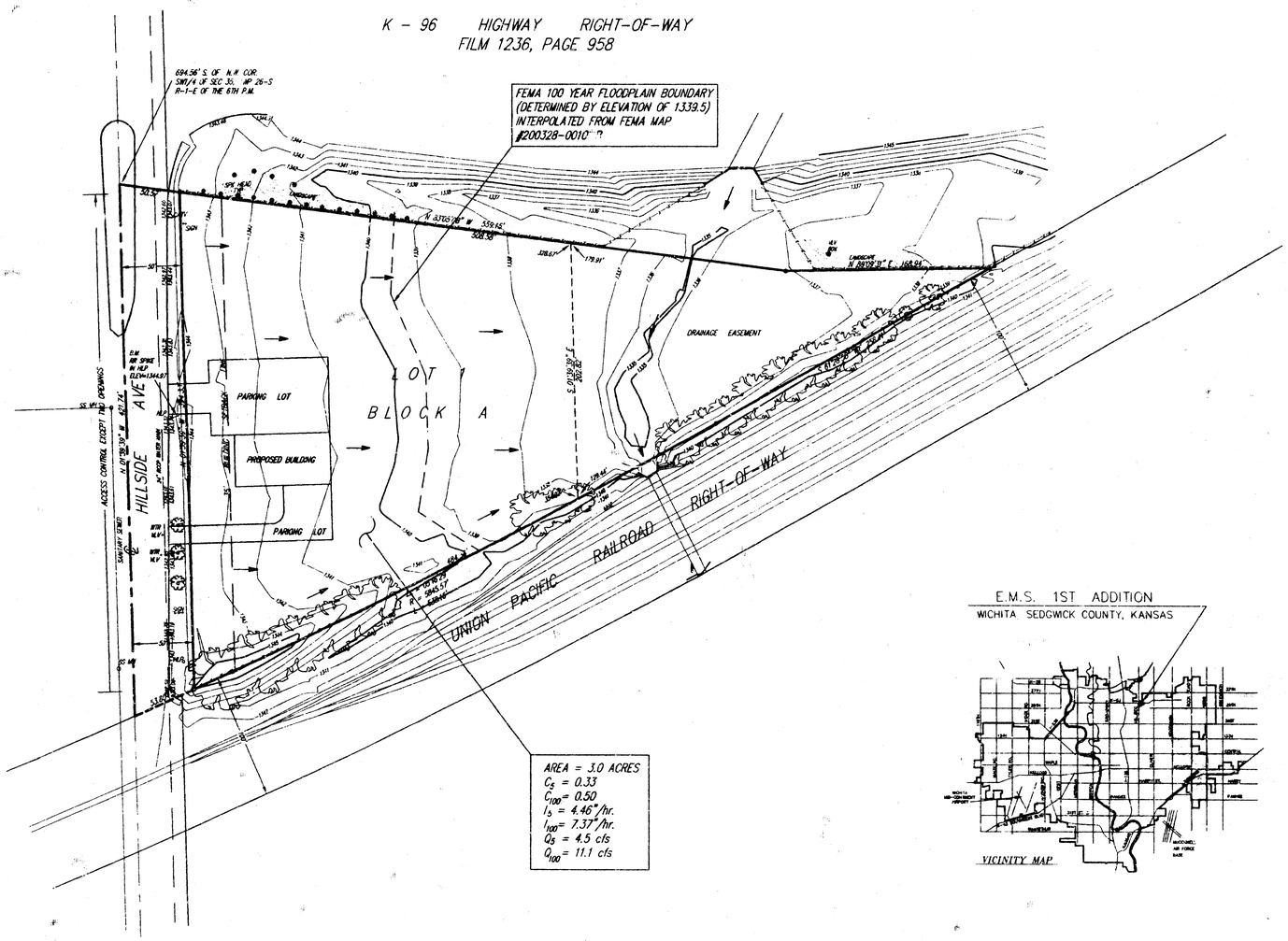
$Q_{100} = (3.0Ac)(0.50)(7.37) = 11.1cfs$

Paved areas must be collected and drained via inlet to SWS pipe.

DRAINAGE PLAN
E.M.S. 1ST ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS

A tract of land in the SW1/4 of Sec. 35, Twp. 26-S, R-1-E of the 6th P.M., Sedgwick County, Kansas, lying south of K-96 Highway right-of-way and north of the Union Pacific Railroad right-of-way.



E.M.S. 1ST ADDITION
WICHITA SEDGWICK COUNTY, KANSAS

VICINITY MAP



1" = 50'
CLEV = MSL

BENCH MARK
RAILROAD SPIKE IN HUP 880'± S & 43'± E OF N-W COR. SW1/4 SEC. 35-26S-1E EAST SIDE OF HILLSIDE CLEV = 1344.97 MSL

Min Pad = 1340.5

DRAINAGE PLAN -- E.M.S. 1ST ADDITION

SRB 924 NORTH MAIN WICHITA, KANSAS 67203 316-264-6008 FAX 264-4621
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

PROJECT NUMBER

DRAWN	DESIGN	REVIEW	DATE	UTILITY	SRB JOB
CMB	CMB		10-4-95		

REVISED

ENG\1274P