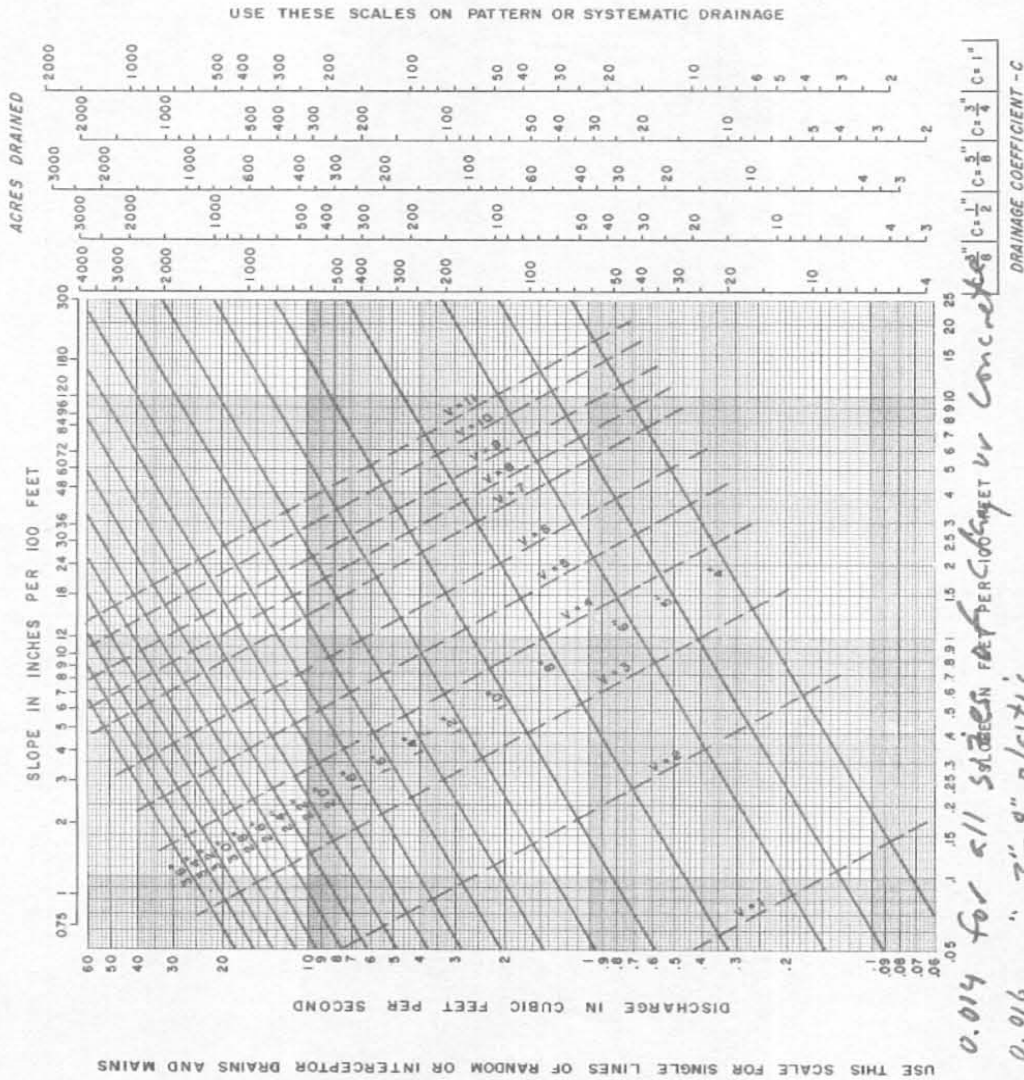


14-108.1

DRAIN CHART - CLAY, CONCRETE TILE AND BITUMINIZED FIBER PIPE



USE: $h = 0.012$ to 0.014 for all solutions except concrete
 $h = 0.015$ to 0.016 " 3"-8" plastic
 $h = 0.017$ to 0.018 " 10"-15" " Exhibit 14-11.1

REFERENCE
 DISCHARGE BASED ON:
 $V = 138 R^{2/3} S^{1/2}$
 PIPE FLOWING FULL, MANNING $N = 0.011$

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14-108.2

DRAIN CHART - CORRUGATED PLASTIC DRAIN TUBING

$n = 0.015$

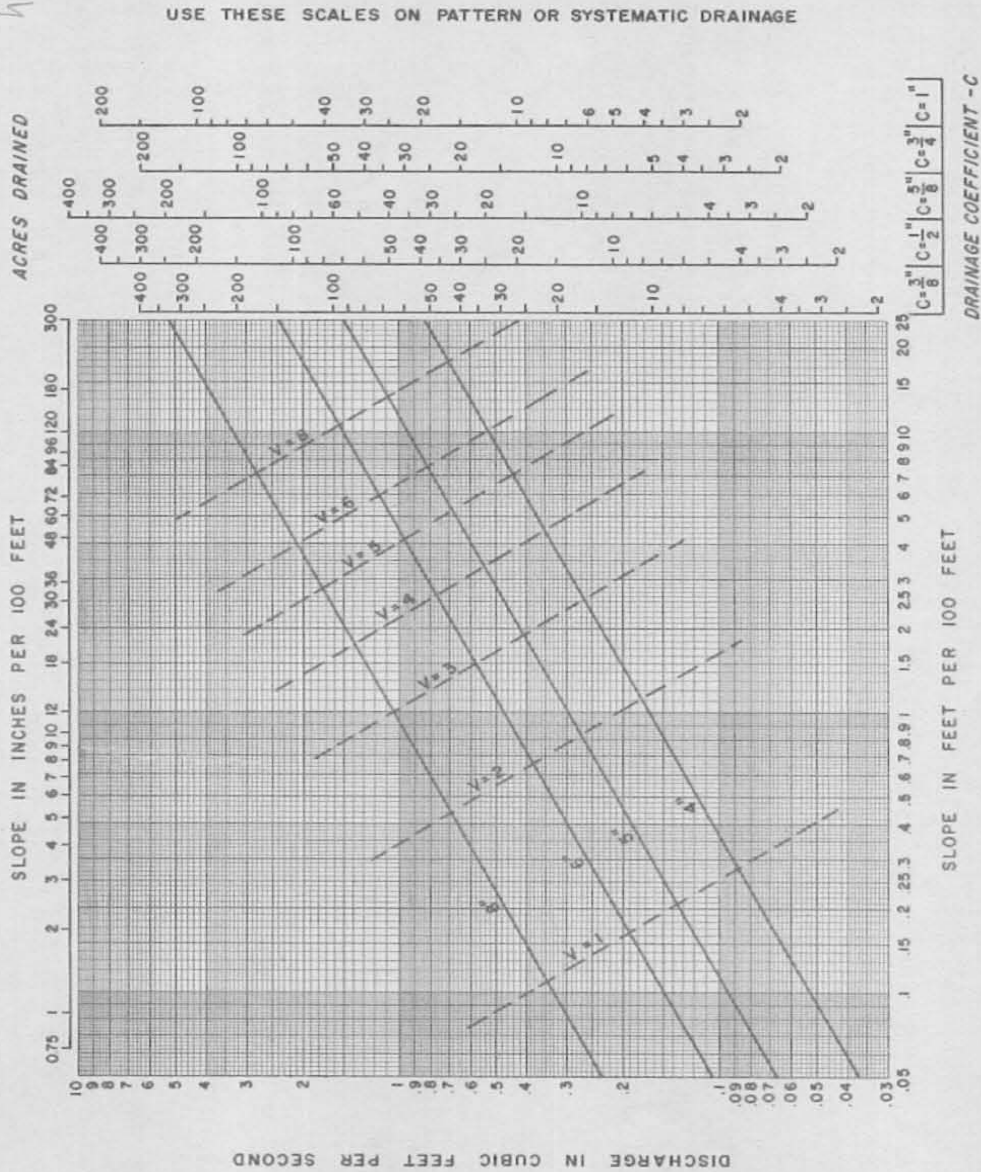


Exhibit 14-11.2

REFERENCE

DISCHARGE BASED ON:
 $V = 99 R^{2/3} S^{1/2}$
PIPE FLOWING FULL, MANNING $N = 0.015$

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14-108.3

DRAIN CAPACITY CHART - CORRUGATED METAL PIPE

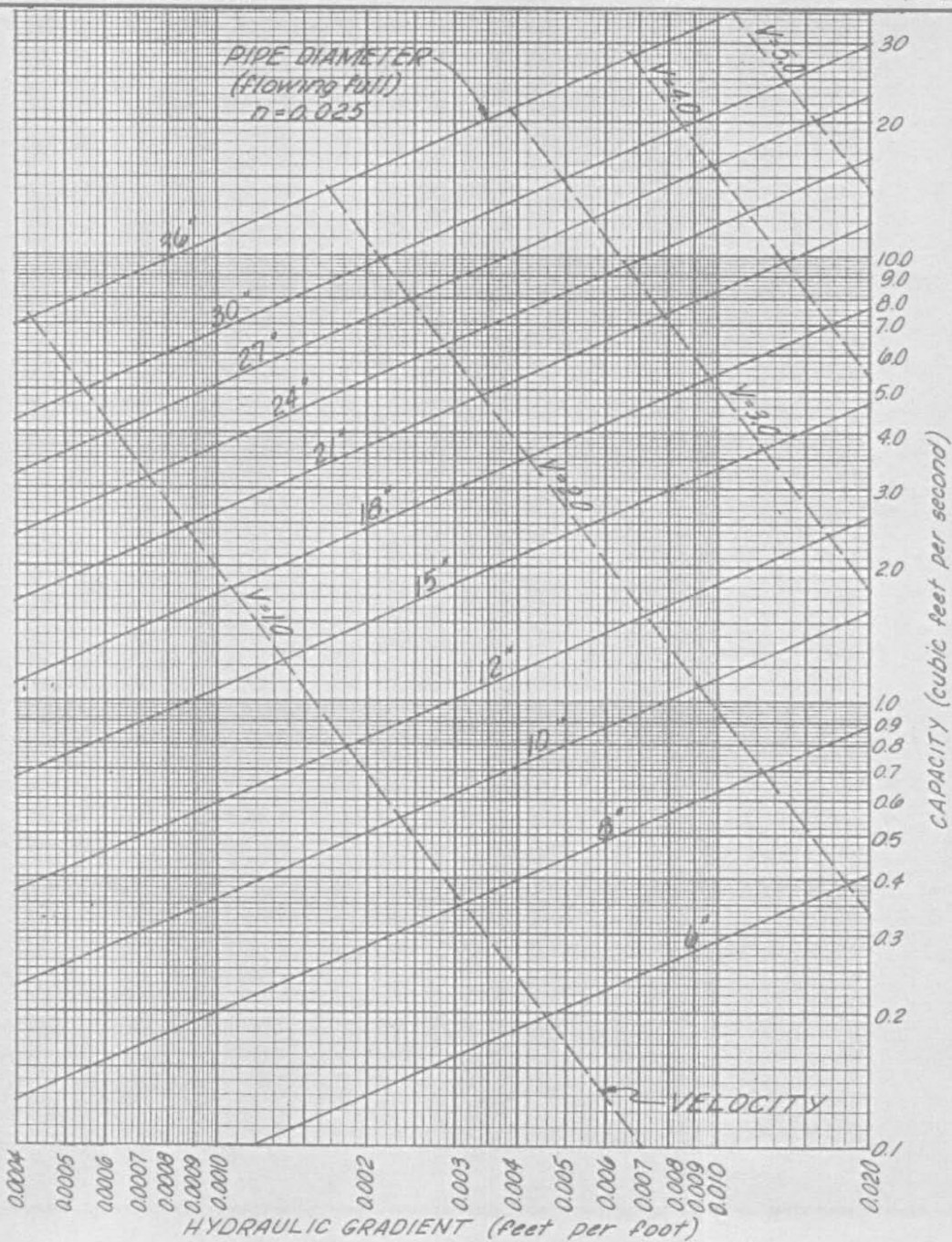


Exhibit 14-11.3

REFERENCE

DISCHARGE BASED ON
 $V = 59 R^{2/3} S^{1/2}$
PIPE FLOWING FULL, MANNING $N=0.025$

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