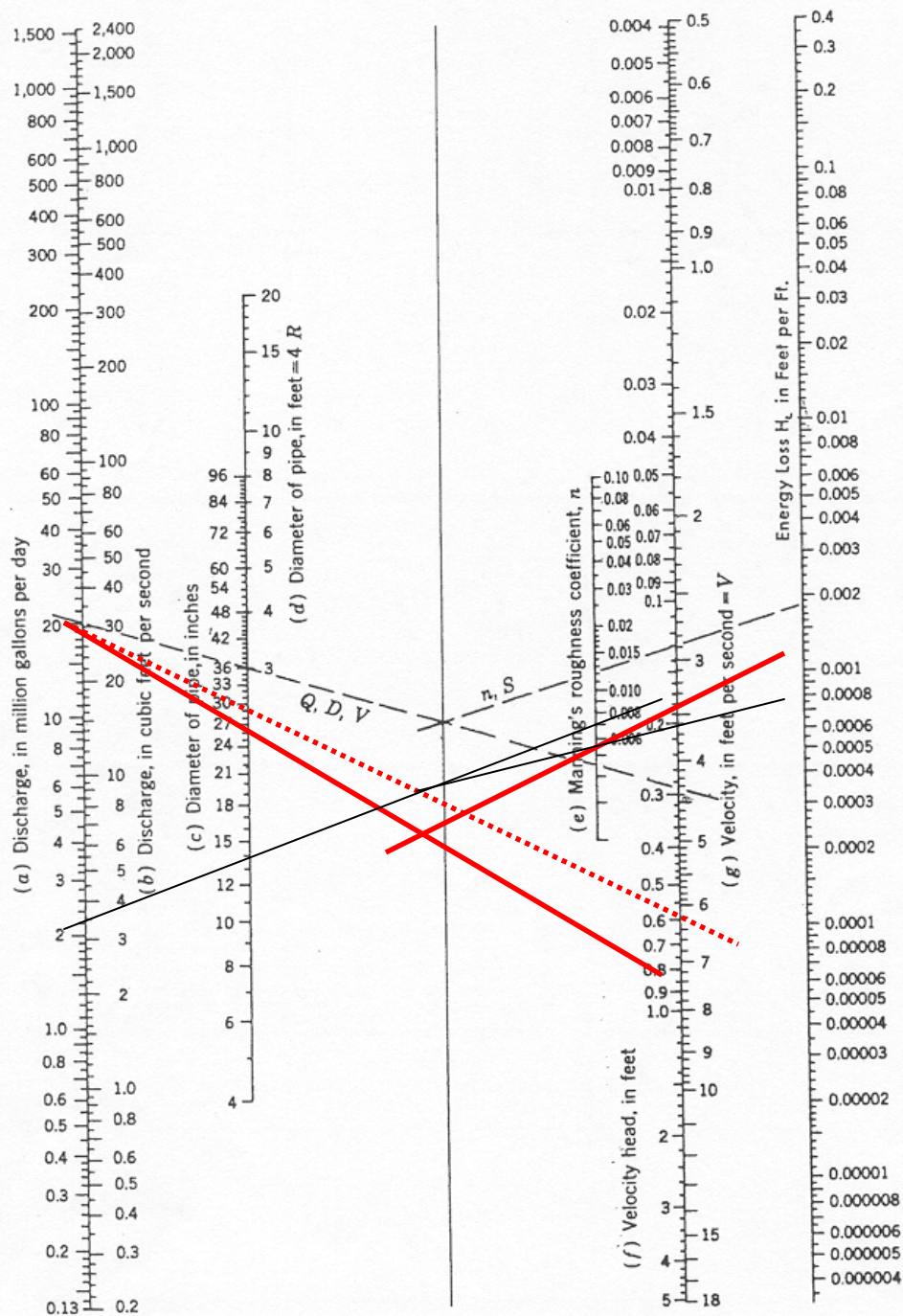




Alignment chart for energy loss in pipes, for Manning's formula.
 Note: Use chart for flow computations, $H_L = S$

Figure 3-29a Nomograph for solution of Manning's formula.

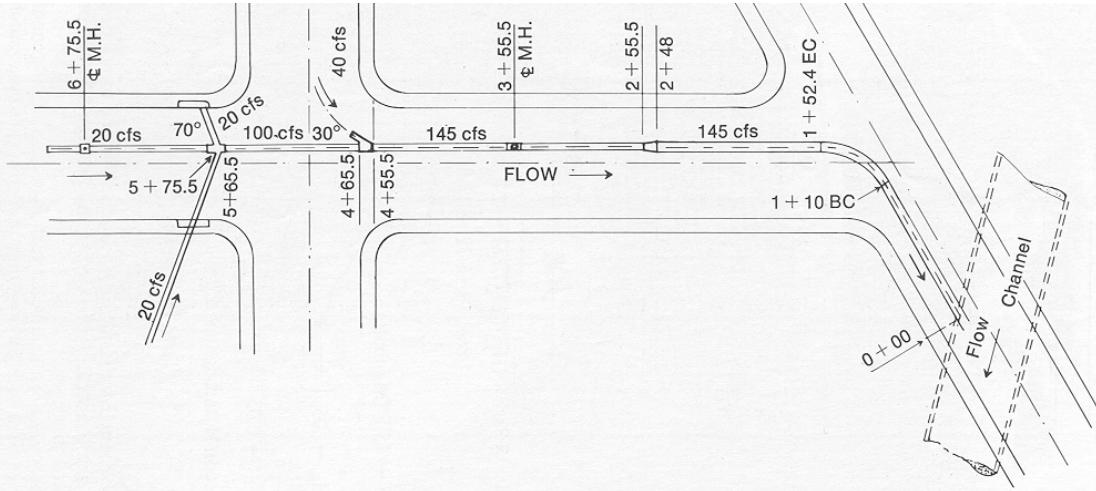
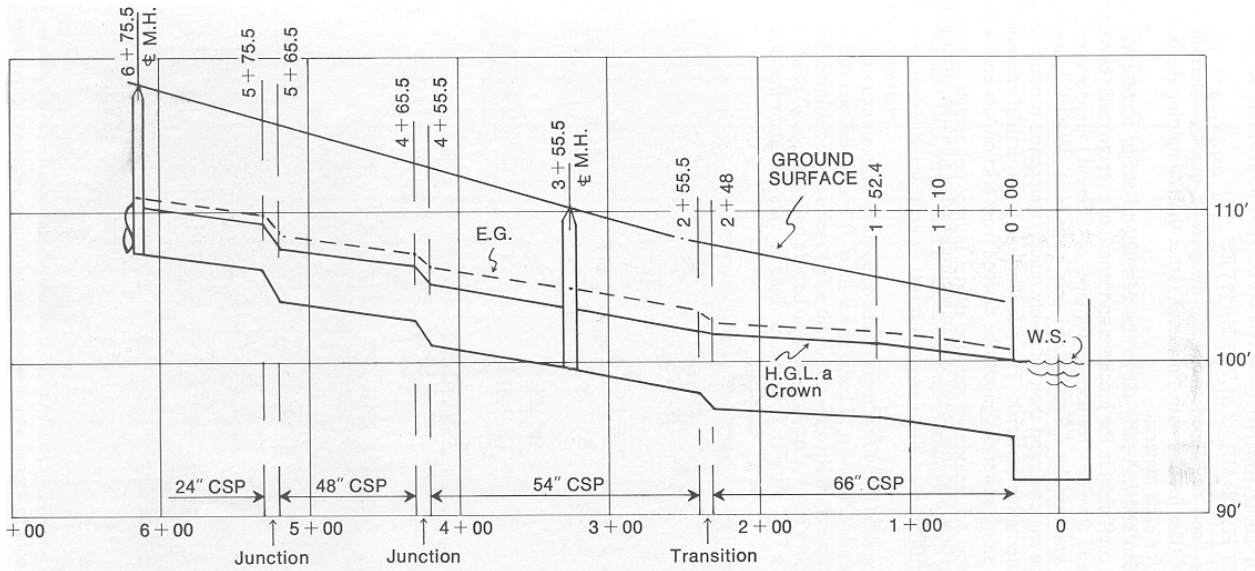


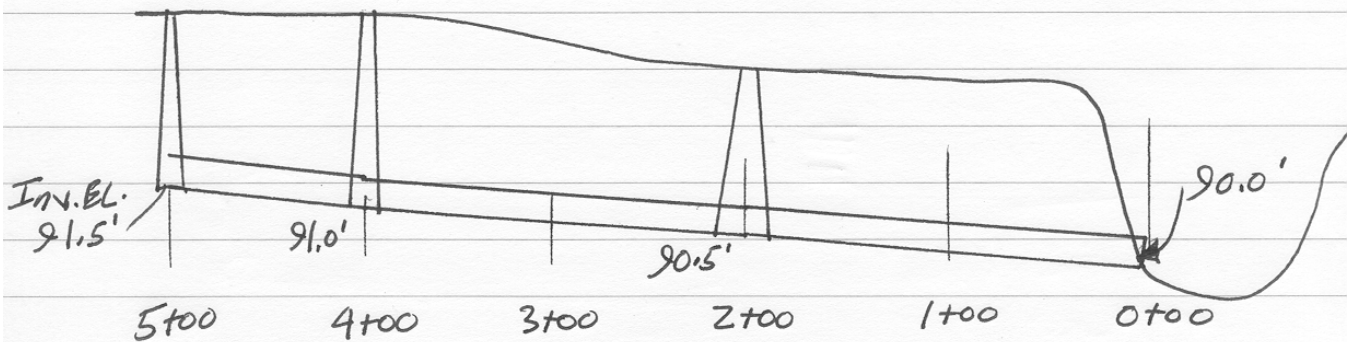
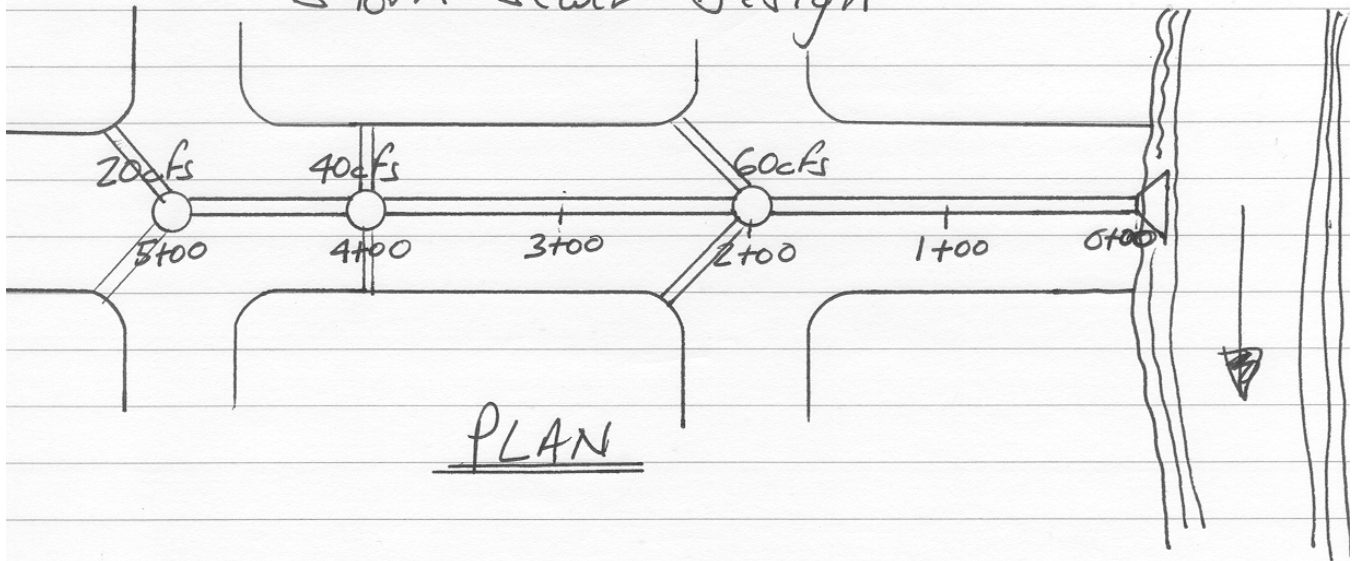
Figure 3-36a Plan and profile for storm sewer.



Wed Oct. 15, 2003

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PROFILE

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Station	Q (cfs)	Inv. El. (ft)	Δ Inv. El. (ft)	L (ft)	S $\left(\frac{ft}{ft}\right)$	n	Find Dia. (in.)	Check V (fps)
0+0	0	90.0	—	—	—			
2+0 1+0 2+0	60	90.5	0.5	200	0.0025	0.013	48"	4.7
4+0	40	91.0	0.5	200	0.0025	0.013	42"	4.2
5+0	20	91.5	0.5	100	0.005	0.013	27"	5.0

$$\text{Check } V = 2 \approx 6 \text{ fps}$$