

SOIL TYPE: B FROM SEDSWICK COUNTY SOIL SURVEY

FOR 1200' YARDS:
C₂ = .52
C₁₀₀ = .67

FOR BAKE YARDS:
C₂ = .25
C₁₀₀ = .41

I_e

Area A

76' OVERLAND LAWN FLOW @ .28 ft/s → 4.52 min
200' SHALLOW GUTTER FLOW @ .77 ft/s → 6.49 min
512' FULL GUTTER FLOW @ 1.5 ft/s → 3.72 min
14.48 min
USE 15 min

Area B

62' OVERLAND LAWN FLOW @ .28 ft/s → 3.69 min
300' SHALLOW GUTTER FLOW @ .77 ft/s → 6.49 min
1038' FULL GUTTER FLOW @ 1.5 ft/s → 11.53 min
21.72 min
USE 21 min

Area C

300' OVERLAND LAWN FLOW @ .28 ft/s = 17.86 min
107' GRASSSED WATERWAY @ 1.12 ft/s = 7.54 min
25.40 min
USE 25 min

Area D

300' OVERLAND LAWN FLOW @ .28 ft/s = 17.86 min
110' GRASSSED WATERWAY @ 1.12 ft/s = 1.64 min
300' SHALLOW GUTTER FLOW @ .77 ft/s = 6.49 min
152' FULL GUTTER FLOW @ 1.5 ft/s = 1.47 min
27.46 min
USE 27 min

Area E T_c = 15 by inspection

Area F

75' OVERLAND LAWN FLOW @ .28 ft/s = 4.46 min
300' SHALLOW GUTTER FLOW @ .77 ft/s = 6.49 min
245' FULL GUTTER FLOW @ 1.5 ft/s = 3.72 min
13.67 min
USE 15 min

Area G

300' OVERLAND LAWN FLOW @ .28 ft/s = 17.86 min
140' GRASSSED WATERWAY @ 1.12 ft/s = 2.08 min
19.94 min
USE 19 min

Area H

300' OVERLAND LAWN FLOW @ .28 ft/s = 17.86 min
128' GRASSSED WATERWAY @ 1.12 ft/s = 1.90 min
19.76 min
USE 19 min

Area I

62' OVERLAND LAWN FLOW @ .28 ft/s = 3.69 min
300' SHALLOW GUTTER FLOW @ .77 ft/s = 6.49 min
200' FULL GUTTER FLOW @ 1.5 ft/s = 3.72 min
12.4 min
USE 15 min

INLET ROUTING

Area A Q₂ = 3.43 cfs Q₁₀₀ = 3.50 cfs

INLET ① L = 10' INLET SUMP @ 20 cfs

Area B Q₂ = 15.38 cfs Q₁₀₀ = 33.90

INLETS ② ③ ④
2 L = 10' INLETS @ 5 cfs ea. = 10 cfs
Q₂ = 15.38 cfs Q₁₀₀ = 33.90

Area C Q₂ = 2.19 cfs Q₁₀₀ = 7.14 cfs

INLET ⑤ DROP INLET CAP = 13.49 cfs

Area D Q₂ = 8.00 cfs Q₁₀₀ = 20.60 cfs

INLET ⑥ L = 10' S = 35%
Q_A = 8.00 cfs Q₁₀₀ = 20.60 cfs
Q₁ = 2.00 cfs Q₁ = 3.6 cfs
Q₂ = 6.00 cfs Q₂ = 17.00 cfs

Area E Q₂ = 1.05 cfs Q₁₀₀ = 3.32 cfs

INLET ⑦ L = 10' S = 35%
Q_A = 7.05 cfs Q_A = 44.28 cfs
Q₁ = 1.82 cfs Q₁ = 5.02 cfs
Q₂ = 5.23 cfs Q₂ = 31.26 cfs

Area F Q₂ = 1.81 cfs Q₁₀₀ = 5.71

INLET ⑧ L = 5' INLET @ 13 cfs = 13 cfs

Area G Q₂ = 2.90 cfs Q₁₀₀ = 7.29 cfs

INLET ⑨ DROP INLET CAP = 13.5 cfs

Area H Q₂ = 2.86 cfs Q₁₀₀ = 7.21 cfs

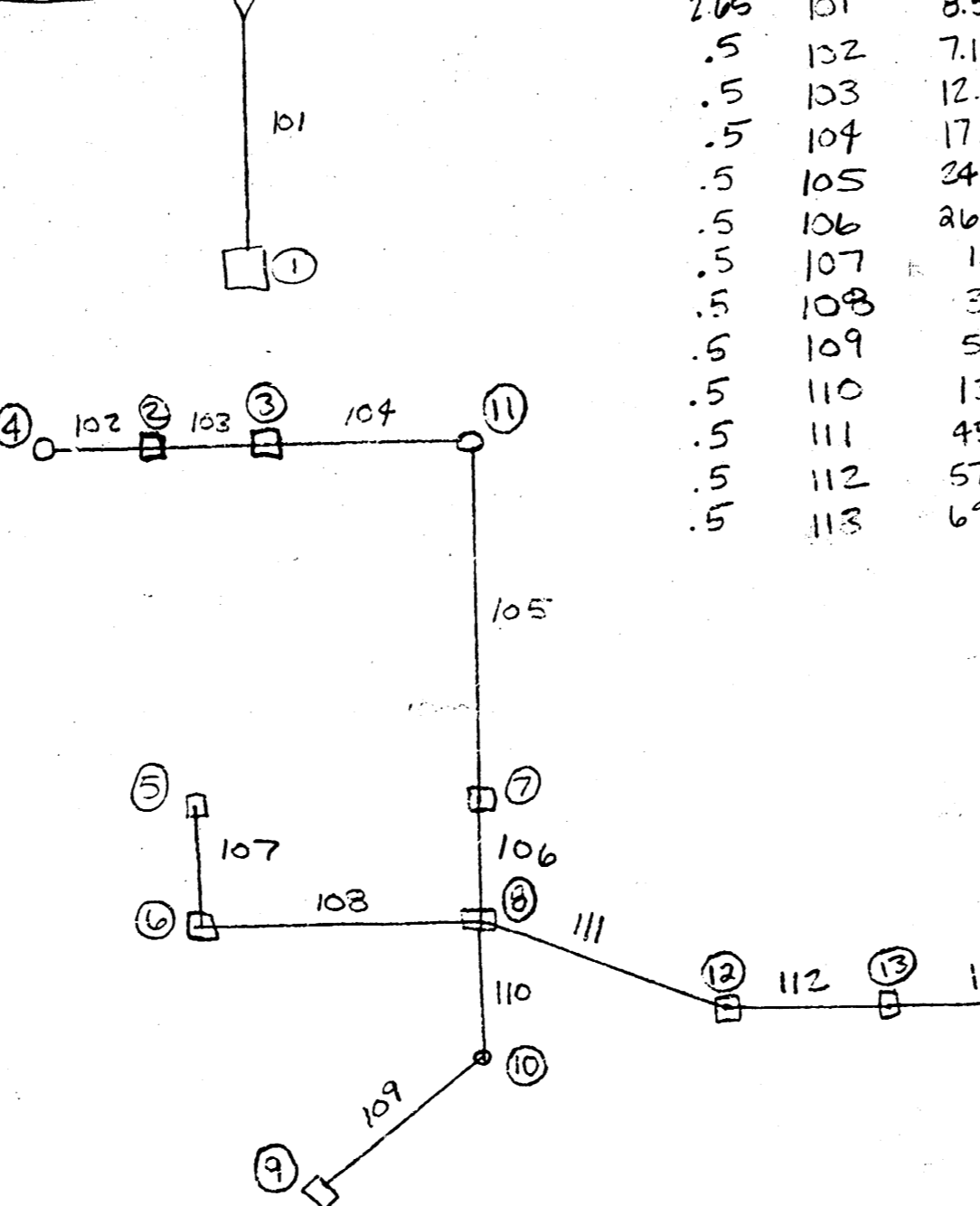
INLET ⑩ DROP INLET CAP = 13.5 cfs = 13.5 cfs

Area I Q₂ = 5.97 cfs Q₁₀₀ = 14.79 cfs

INLET ⑪ ⑫ ⑬ 2 L = 10' INLET @ 12 cfs = 24 cfs
Q₂ = 5.97 cfs Q₁ = 54.05 cfs
Q₁ = 11.20 cfs Q₂ = 24 cfs Q₁₀₀(EAST) = 30.05 cfs

PIPE SIZES

LENGTH	Q	SIZE
245	101	8.5 cfs 15"
.5	102	7.10 cfs 18"
.5	103	12.10 cfs 24"
.5	104	17.10 cfs 30"
.5	105	24.37 cfs 30"
.5	106	26.88 cfs 30"
.5	107	1.3 cfs 15"
.5	108	3.0 cfs 15"
.5	109	5.71 cfs 18"
.5	110	13.00 cfs 24"
.5	111	45.97 cfs 36"
.5	112	57.91 cfs 42"
.5	113	67.99 cfs 42"



Sheet

SHELLY'S ORCHARD 8/17/97

SOIL TYPE: B

2-year Design Storm

Area (ac)	T _c	I	c	Q
A	1.720421	15	3.83	3.43
B	7.918596	21	3.25	13.38
C	2.957866	25	2.96	2.19
D	5.419037	27	2.84	8.00
E	1.097773	15	3.83	1.05
F	1.889933	15	3.83	1.81
G	1.627943	19	3.42	2.86
H	1.610331	19	3.42	2.86
I	2.995718	15	3.83	5.97

100-year Design Storm

Area (ac)	T _c	I	c	Q
A	1.720421	15	7.37	8.50
B	7.918596	21	6.39	33.90
C	2.957866	25	5.90	7.18
D	5.419037	27	5.69	20.66
E	1.097773	15	7.37	3.32
F	1.889933	15	7.37	5.71
G	1.627943	19	6.68	7.29
H	1.610331	19	6.68	7.21
I	2.995718	15	7.37	14.79