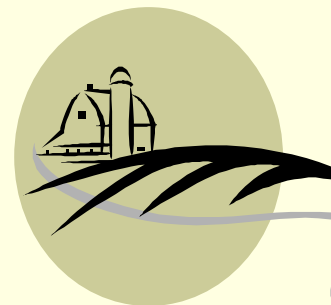


Design III



Small Group Drainage
Design Problem

Group Presentation

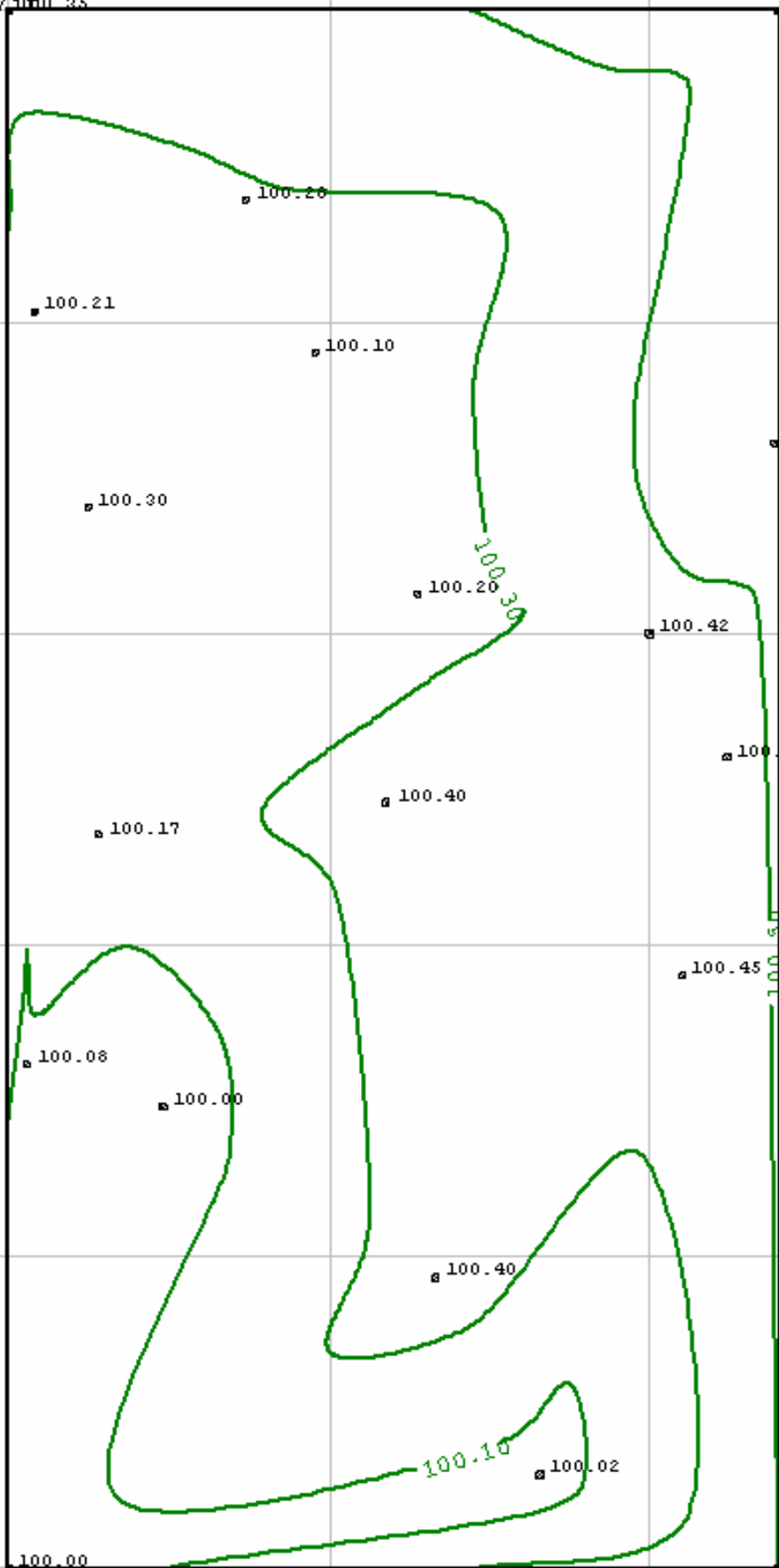


Design Process

- ▶ Work in small groups
- ▶ Select a drainage coefficient (DC) for the project
- ▶ Select a drain spacing & depth (target)
- ▶ Develop a drainage layout for the field
 - Locate mains and laterals
 - Don't have to draw every lateral
- ▶ Determine grade of main
 - Develop cut sheet for main
 - Check grade of at least one (most critical) lateral
- ▶ Determine size of main & laterals
- ▶ Estimate system cost
- ▶ Sketch system on overhead transparency
- ▶ Make 5 min presentation to group
 - Transparency showing system layout
 - Pipe summary table
 - Estimate of system cost

Scale: 250.0ft/100.35

100.60



100.20

100.21

100.10

100.30

100.20

100.30

100.42

100.68

100.30

100.40

100.17

100.45

100.50

100.08

100.00

100.40

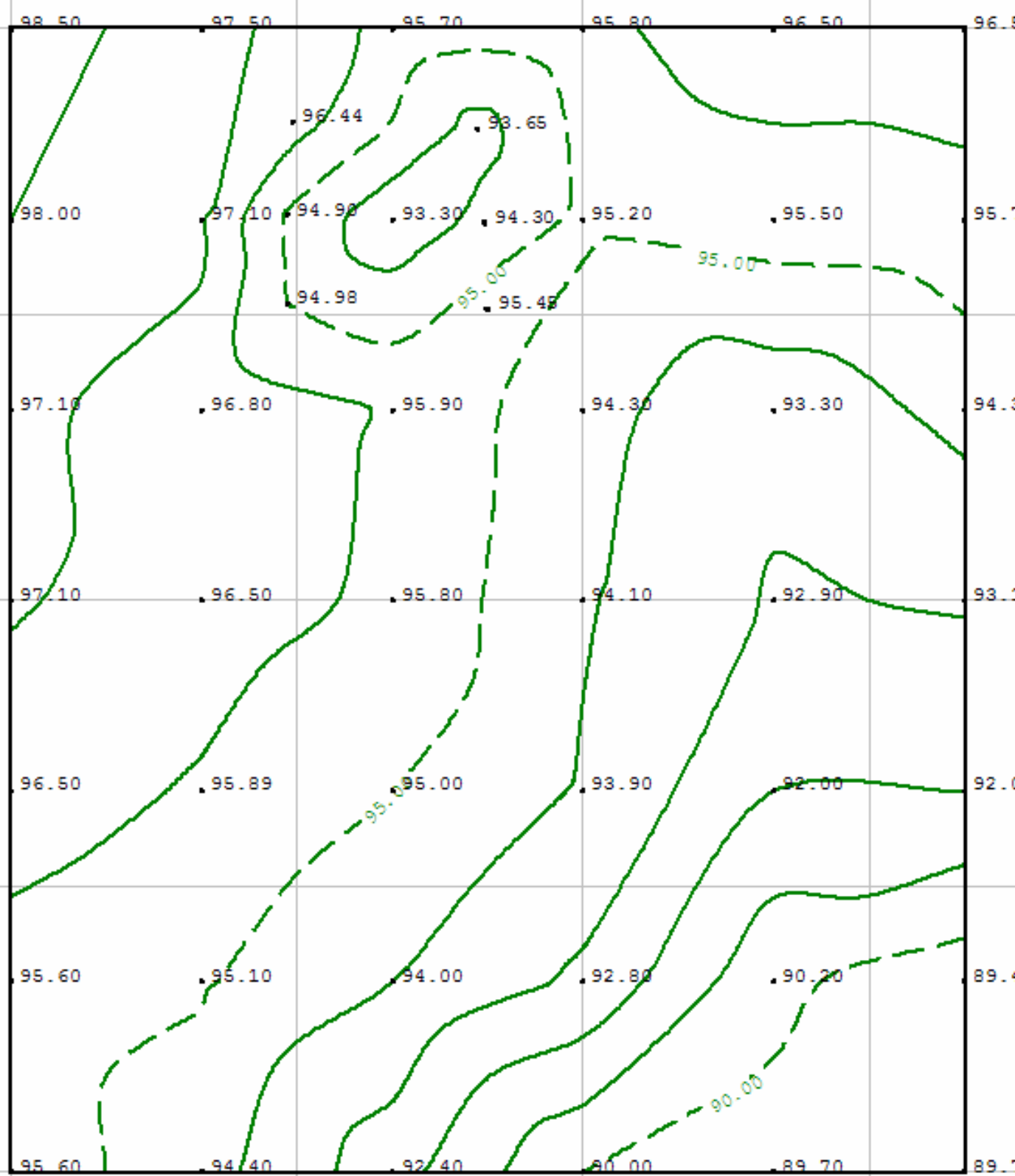
100.10

100.02

100.00

100.50

Scale: 150.0ft/in



Installed Cost

Description	\$/ft installed	Installed Feet	Cost, \$
4"	\$0.95		
6"	\$1.55		
8"	\$1.95		
10"	\$2.75		
12"	\$3.75		
15"	\$4.90		
Fittings	\$5 ea		
Hookups	\$500 ea		
Subtotal			
Misc @ 10% of Total			
TOTAL			

Project Summary

Drainage
Coefficient

in/day

Crop(s)

Drain Spacing

ft

Drain Depth

ft

Lateral Costs
(include fittings)

\$

Main Costs
(include junctions)

\$

Outlet Size

in

Comments:

Project: pattern drainage, 46 acres

Location: Polk County

Soil: Bearden

Elevation of Ditch Bottom: 95.0 ft

Scale: 200 ft/in