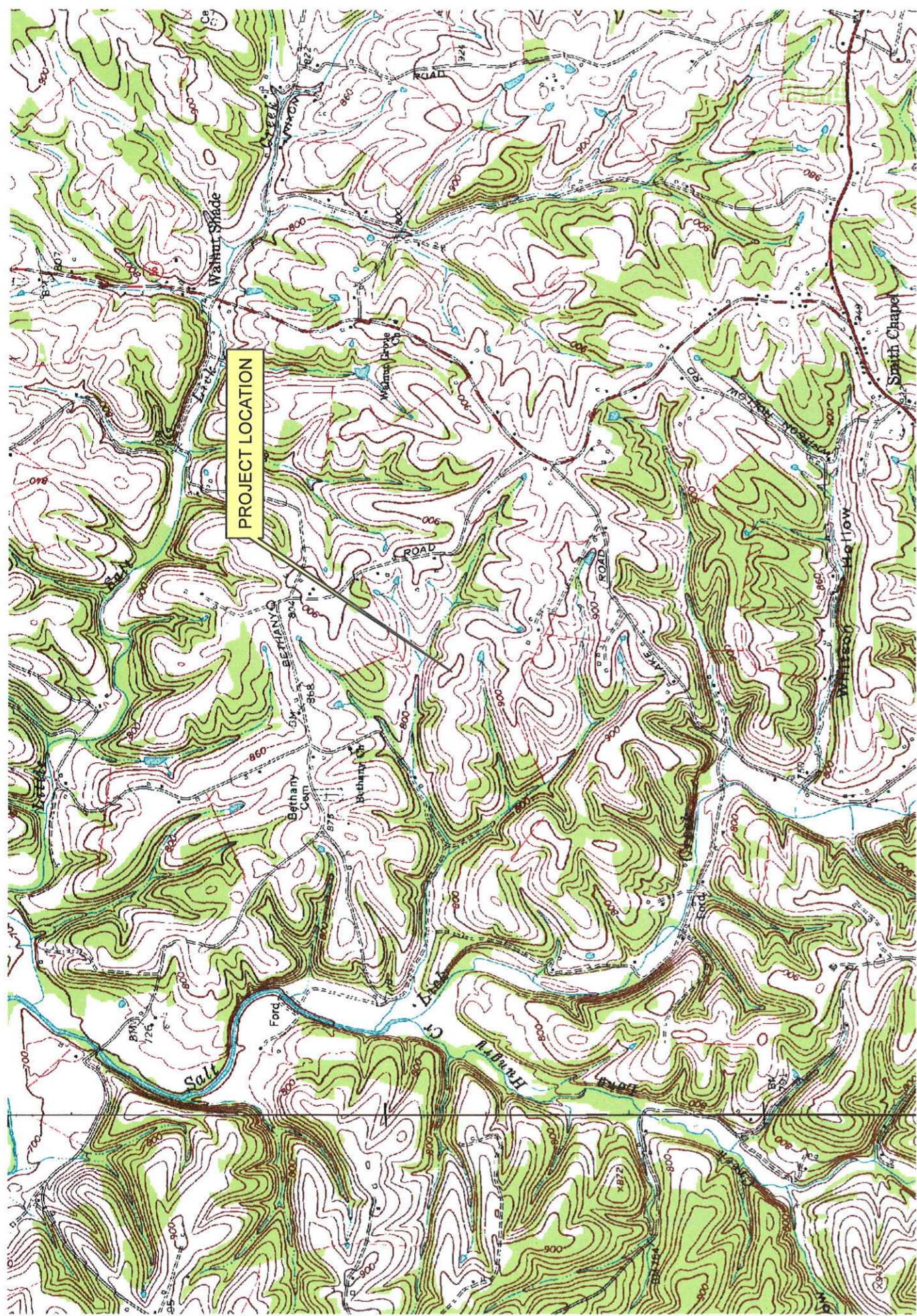


APPENDIX A

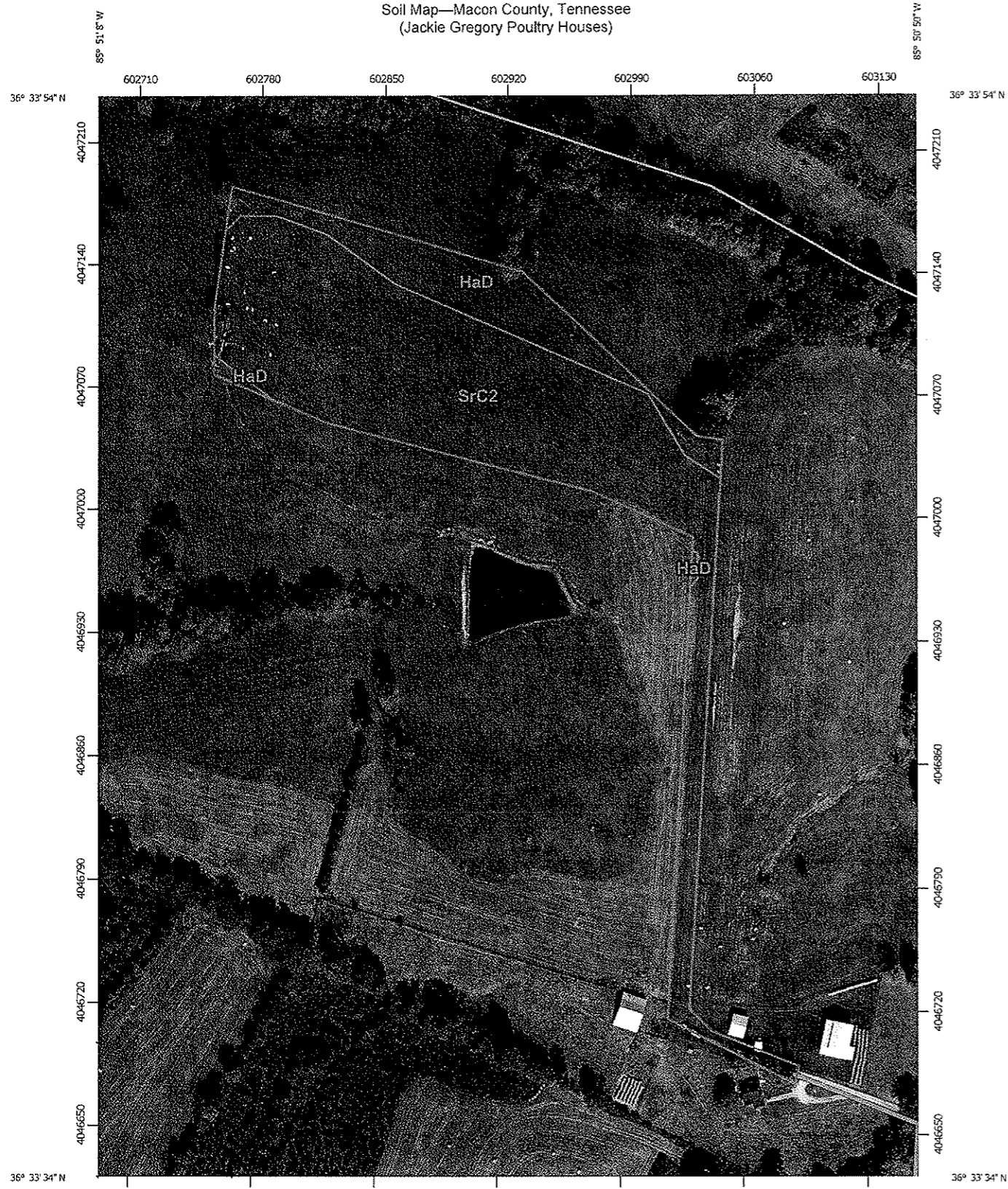
Location Map



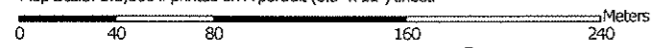
APPENDIX B

Soil Map with Descriptions

Soil Map—Macon County, Tennessee
(Jackie Gregory Poultry Houses)



Map Scale: 1:3,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

Soil Map—Macon County, Tennessee
(Jackie Gregory Poultry Houses)

MAP LEGEND		MAP INFORMATION	
	Area of Interest (AOI)		Spoil Area
	Soils		Stony Spot
	Soil Map Unit Polygons		Very Stony Spot
	Soil Map Unit Lines		Wet Spot
	Soil Map Unit Points		Other
	Special Point Features		Special Line Features
	Blowout		Water Features
	Borrow Pit		Streams and Canals
	Clay Spot		Transportation
	Closed Depression		Rails
	Gravel Pit		Interstate Highways
	Gravelly Spot		US Routes
	Landfill		Major Roads
	Lava Flow		Local Roads
	Marsh or swamp		Background
	Mine or Quarry		Aerial Photography
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Macon County, Tennessee
 Survey Area Data: Version 7, Dec 21, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 8, 2011—Oct 22, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Macon County, Tennessee (TN111)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HaD	Hawthorne gravelly silt loam, 12 to 25 percent slopes	1.5	18.7%
SrC2	Sugargrove gravelly silt loam, 5 to 12 percent slopes, eroded	6.7	81.3%
Totals for Area of Interest		8.3	100.0%

APPENDIX C

Hydraulic Calculations

APPENDIX C

Culvert Calculator Report CP1

Solve For: Section Size

Culvert Summary			
Allowable HW Elevation	869.50 ft	Headwater Depth/ Height	0.61
Computed Headwater Elevation	867.41 ft	Discharge	0.80 cfs
Inlet Control HW Elev	867.34 ft	Tailwater Elevation	866.40 ft
Outlet Control HW Elev	867.41 ft	Control Type	Outlet Control
Grades			
Upstream Invert	866.80 ft	Downstream Invert	866.40 ft
Length	40.00 ft	Constructed Slope	0.010000 ft/ft
Hydraulic Profile			
Profile	M2	Depth, Downstream	0.37 ft
Slope Type	Mild	Normal Depth	0.45 ft
Flow Regime	Subcritical	Critical Depth	0.37 ft
Velocity Downstream	2.98 ft/s	Critical Slope	0.019376 ft/ft
Section			
Section Shape	Circular	Mannings Coefficient	0.024
Section Material	CMP	Span	1.00 ft
Section Size	12 inch	Rise	1.00 ft
Number Sections	1		
Outlet Control Properties			
Outlet Control HW Elev	867.41 ft	Upstream Velocity Head	0.09 ft
Ke	0.90	Entrance Loss	0.08 ft
Inlet Control Properties			
Inlet Control HW Elev	867.34 ft	Flow Control	Unsubmerged
Inlet Type	Projecting	Area Full	0.8 ft ²
K	0.03400	HDS 5 Chart	2
M	1.50000	HDS 5 Scale	3
C	0.05530	Equation Form	1
Y	0.54000		

Culvert Calculator Report CP2

Solve For: Section Size

Culvert Summary			
Allowable HW Elevation	869.50 ft	Headwater Depth/ Height	0.61
Computed Headwater Elevation	867.41 ft	Discharge	0.80 cfs
Inlet Control HW Elev	867.34 ft	Tailwater Elevation	866.40 ft
Outlet Control HW Elev	867.41 ft	Control Type	Outlet Control

Grades			
Upstream Invert	866.80 ft	Downstream Invert	866.40 ft
Length	40.00 ft	Constructed Slope	0.010000 ft/ft

Hydraulic Profile			
Profile	M2	Depth, Downstream	0.37 ft
Slope Type	Mild	Normal Depth	0.45 ft
Flow Regime	Subcritical	Critical Depth	0.37 ft
Velocity Downstream	2.98 ft/s	Critical Slope	0.019376 ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.024
Section Material	CMP	Span	1.00 ft
Section Size	12 inch	Rise	1.00 ft
Number Sections	1		

Outlet Control Properties			
Outlet Control HW Elev	867.41 ft	Upstream Velocity Head	0.09 ft
Ke	0.90	Entrance Loss	0.08 ft

Inlet Control Properties			
Inlet Control HW Elev	867.34 ft	Flow Control	Unsubmerged
Inlet Type	Projecting	Area Full	0.8 ft ²
K	0.03400	HDS 5 Chart	2
M	1.50000	HDS 5 Scale	3
C	0.05530	Equation Form	1
Y	0.54000		

Culvert Calculator Report CP3

Solve For: Section Size

Culvert Summary			
Allowable HW Elevation	861.00 ft	Headwater Depth/ Height	2.39
Computed Headwater Elevation	860.39 ft	Discharge	4.65 cfs
Inlet Control HW Elev	860.39 ft	Tailwater Elevation	851.00 ft
Outlet Control HW Elev	860.05 ft	Control Type	Inlet Control

Grades			
Upstream Invert	858.00 ft	Downstream Invert	851.00 ft
Length	40.00 ft	Constructed Slope	0.175000 ft/ft

Hydraulic Profile			
Profile	S2	Depth, Downstream	0.54 ft
Slope Type	Steep	Normal Depth	0.54 ft
Flow Regime	Supercritical	Critical Depth	0.90 ft
Velocity Downstream	10.64 ft/s	Critical Slope	0.051279 ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.024
Section Material	CMP	Span	1.00 ft
Section Size	12 inch	Rise	1.00 ft
Number Sections	1		

Outlet Control Properties			
Outlet Control HW Elev	860.05 ft	Upstream Velocity Head	0.61 ft
Ke	0.90	Entrance Loss	0.55 ft

Inlet Control Properties			
Inlet Control HW Elev	860.39 ft	Flow Control	Submerged
Inlet Type	Projecting	Area Full	0.8 ft ²
K	0.03400	HDS 5 Chart	2
M	1.50000	HDS 5 Scale	3
C	0.05530	Equation Form	1
Y	0.54000		

TR 55 Worksheet 2: Runoff Curve Number and Runoff

Project: Jackie Gregory Poultry Houses Designed By: Evan White Date: 8/6/14

Location: Red Boiling Springs, TN Checked: Chris Ballou Date: 8/6/14

Check one: Present Developed

1. Runoff curve number (CN)

Soil name and hydrologic group (Appendix A)	Cover description (Cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
Sugargrove	Pasture, Fair Condition	69			6.2	428.5
Totals =					6.2	428.5

^{1/} Use only one CN source per line.

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{428.5}{6.2} = 69$$
 Use CN = 69

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency years	2	25	
Rainfall, P (24 hour) in.	3.6	6.0	
Runoff, Q in.	1.0	2.7	

(Use P and CN with Table 2-1, Figure 2-1, or equations 2-3 and 2-4.)

TR 55 Worksheet 2: Runoff Curve Number and Runoff

Project: Jackie Gregory Poultry Houses Designed By: Evan White Date: 8/6/14

Location: Red Boiling Springs, TN Checked: Chris Ballou Date: 8/6/14

Check one: Present Developed

1. Runoff curve number (CN)

Soil name and hydrologic group (Appendix A)	Cover description (Cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area <input type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
Sugargrove, B	Buildings	98			1.8	178.2
Sugargrove, B	Gravel	85			1.3	113.4
Sugargrove, B	Pasture, Fair Condition	69			3.1	210.6
Totals =					6.2	502.2

^{1/} Use only one CN source per line.

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{502.2}{6.2} = 81$$
 Use CN = 81

2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency years	2	25	
Rainfall, P (24 hour) in.	3.6	6.0	
Runoff, Q in.	1.8	3.9	

(Use P and CN with Table 2-1, Figure 2-1, or equations 2-3 and 2-4.)

Temporary Sediment Trap

Okay

2.15 Disturbed Area (Acres)
2.84 Peak Flow from 2-year Storm (cfs)

7740 Required Volume ft³
1237 Required Surface Area ft²
24.9 Suggested Width ft
49.7 Suggested Length ft

38 Trial Top Width at Spillway Invert ft
60 Trial Top Length at Spillway Invert ft
2 Trial Side Slope Ratio Z:1
6 Trial Depth ft (1.5 feet below grade + 2 to 3.5 feet above grade)

14 Bottom Width ft
36 Bottom Length ft
504 Bottom Area ft²
7776 Actual Volume ft³
2280 Actual Surface Area ft²

Okay

Okay

3 Trial Weir Length ft
0.5 Trial Depth of Flow ft
3.2 Spillway Capacity cfs

Okay

APPENDIX D
Construction Schedule

APPENDIX D

CONSTRUCTION SCHEDULE

1. Install stabilized construction entrance.
2. Install silt fence.
3. Install sediment traps or sediment basins
4. Begin clearing and grading.
5. Install proposed culverts.
6. Begin temporary seeding and mulching.
7. Final grading.
8. Final seeding and mulching.