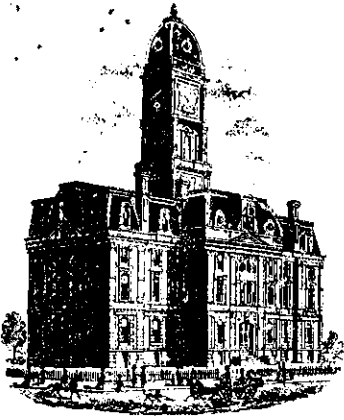


Drain: F M MUSSELMAN **Drain #:** 234
Improvement/Arm: WS BURNIAU
Operator: J. LIVINGSTON **Date:** 4-28-04
Drain Classification: Urban/Rural **Year Installed:** N/A

GIS Drain Input Checklist

- Pull Source Documents for Scanning JL
- Digitize & Attribute Tile Drains JL
- Digitize & Attribute Storm Drains _____
- Digitize & Attribute SSD _____
- Digitize & Attribute Open Ditch JL
- Stamp Plans _____
- Sum drain lengths & Validate JL
- Enter Improvements into Posse _____
- Enter Drain Age into Posse JL
- Sum drain length for Watershed in Posse JL
- Check Database entries for errors JL



SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square

Noblesville, Indiana 46060-2230

April 26, 1994

TO: Hamilton County Drainage Board

RE: F. M. Musselman Drainage Area

Attached are plans, specifications, drain map, drainage shed map and schedule of assessments for the reconstruction of the F.M. Musselman Drainage Area. The drainage area covers portions of Noblesville and Wayne Townships and consists of the F.M. Musselman Main Ditch, Arm 1 and Arm 2; W.S. Burnau, Main Drain and Arm 1, E.G. Barker Drain; and the Thomas Huggins

The F.M. Musselman Ditch was requested for Classification on March 12, 1975 by Gregg A. Bechtold and July 23, 1975 by Ralph Musselman and Roy Flanders. This drain was listed on the 1993 Classification List as number 7 and on the proposed 1994 Classification as number 2. A petition for this proposed reconstruction has not been submitted.

The E.G. Barker Drain, also known as the George Barker Drain, was constructed through the Hamilton County Commissioners Court between 1911 and 1913 at a cost of \$70.00. The drain consists of 2,237 feet of tile.

The Thomas Huggins Drain was constructed through the Hamilton County

Commissioners Court in 1904. The original drain consisted of 400 feet of tile and was constructed at a cost of \$109.00. The drain was reconstructed in 1982, due to the construction of an residence over the top of the drain. The relocation was done at the expense of the property owner. The drain now consists of approximately 425 feet of tile.

The original construction reports and other information for the W.S. Burnau Drain can not be found. Information concerning this drain has been drawn from other resources for its repair and maps, such as the 1932 drain map. The drain consists of a main ditch and an arm. The main ditch consists of approximately 5000 feet of tile and 350 feet of open ditch. The arm consists of approximately 2000 feet of tile. The approximate total length is 7350 feet. The drain was repaired as part of the S.H Scearce Drain 1915, 1916 and 1924. In 1922 and 1949 repairs to the Burnau at a cost of \$98.73 and 113.00 respectively.

The F.M. Musselman Ditch began in 1882 as the Issaac Miesse or the Miesse and Teeters or the Miesse Drainage Company, which was petitioned through the Circuit Court. This ditch followed the course of a stream known as Dry Branch and consisted of 19,600 feet of open ditch, constructed at a cost of \$1,834.89.

Sometime prior to 1898 the upper portion of the drain was tiled between STA 0 and STA 71. The drain was later repaired in 1898 and 1906 between STA 71 and STA 193.

In 1908 the drain was reconstructed through the Hamilton County Circuit Court under the name of F.M. Musselman Drain. The drain consisted of a main ditch ditch, being practically the same as the Miesse Drain, with

a length of 15,376 feet of tile and 4,024 feet of open ditch with a total length of 19,300 feet. Arm #1 consisted of 1,900 feet of tile and Arm #2 consisted of 955 feet of tile. The drain was 22,155 feet in length and cost \$6,566.45 to construct.

In 1915 the drain was repaired between STA 155+82 to 180+00 as the C.H. Searce Drain by tiling this portion of the F. M. Musselman open ditch.

In 1928-29 the F.M. Musselman was again repaired by removing tile between STA 31+50 to 180+00. The new and old open ditch was dredged to STA 193+30 at a cost of \$12,600.00.

In 1952-54 the drain was again reconstructed by dredging the open ditch between STA 31+24 and 180+00 at a cost of \$7,941.23.

In 1990 Arm 2 of the Musselman Drain was reconstructed at a cost of \$14,847.00. The reconstruction replaced the original arm with 885 feet of tile.

The attached plans and specifications for the reconstruction were prepared by the Hamilton County Soil and Water Conservation District. The cost estimate for the work is as follows:

COST ESTIMATE

MAIN CHANNEL

1.	CLEARING-12.3 ACRES AT \$3,000.00/ACRE	\$ 36,900.00
2.	Junk Piles-dispose	3,000.00
3.	Channel dredging-12,100 feet at \$2.50/foot	30,250.00
4.	Tile Outlets (many under water)	

18" CMP 20 foot section with animal guard-1	350.00
8" CMP 20 foot section with animal guard-1	200.00
Estimated need for the project	5,000.00
5. Sediment traps 7 @ \$270.00/each	1,890.00
6. Remove existing pipe crossing at STA 44+50	500.00
7. Install pipe crossing at STA 90+70	
Remove existing crossing	1,000.00
Purchase 7'x38' Tank Car Pipe	3,500.00
Install two (2) pipes per plan	1,000.00
Install rip rap and gravel drive	500.00
8. Install farm crossing at STA 118+75	8,500.00
9. Clean out under the county bridges-2 @ \$300.00/each	600.00
10. Install surface pipes per detail and schedule	
5 at \$850.00/each	4,250.00
11. Install erosion control structures	
STR #1 Pipe w/canopy inlet	900.00
STR #2 Pipe w/canopy inlet	900.00
STR #3 Rock Chute	2,500.00
STR #4 Rock Chute	2,500.00
STR #5 Pipe w/Drop inlet	2,500.00
STR #6 Pipe w/Drop inlet	2,500.00
12. Seeding and fertilization 16.5 acres @\$1000/ac	16,500.00
	<hr/>
	\$125,740.00

Main Tile

1. Repair 24" tile hole	\$ 50.00
2. Repair junction box per plan	400.00
3. Install 12" concrete tile, 250 feet @ \$6.00/ft	1,500.00
4. Crush abandoned tile	300.00
5. Repair tile holes in 12" tile, 60ft @ \$6.00/ft	360.00
6. Install 6" plastic tile, 50' @ \$2.00/ft	100.00
7. Install 8" CMP tile outlet w/animal guard	250.00
8. Install animal guard on existing 15" CMP	40.00
	<hr/>
	\$ 3,000.00

BURNAU DRAIN

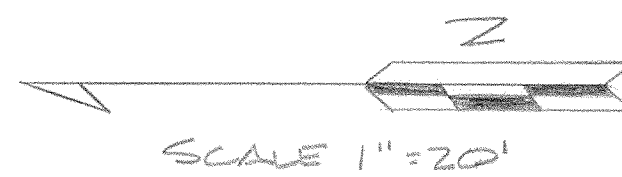
1. Uncover tile outlet and install 21" CMP w/ag	\$ 500.00
2. Repair small tile holes in the 15" or 16" tile	
20 ft @ \$8.00/ft	160.00
3. Repair large tile holes at the corner of the woods	
Repair 15" or 16" concrete tile 25' @ \$8.00/ft	200.00
Install 16"x10" tee	40.00
Install 10" tile, 10' @ \$4.00/ft	40.00
Fill in gully and tile hole and regrade swale	
100' @ \$3.00/ft	300.00
4. Clearing as specified, 1 acre @ \$3,000.00/ac	3,000.00
5. Repair 12" tile hole in the woods, 25' @ \$6.00/ft	150.00
6. Install tile breathers, 2 @ \$100.00/each	200.00
7. Seed and fertilize disturbed areas, 1.1 acres	
@ \$1000.00 acre	1,100.00
	<hr/>
	\$ 5,690.00



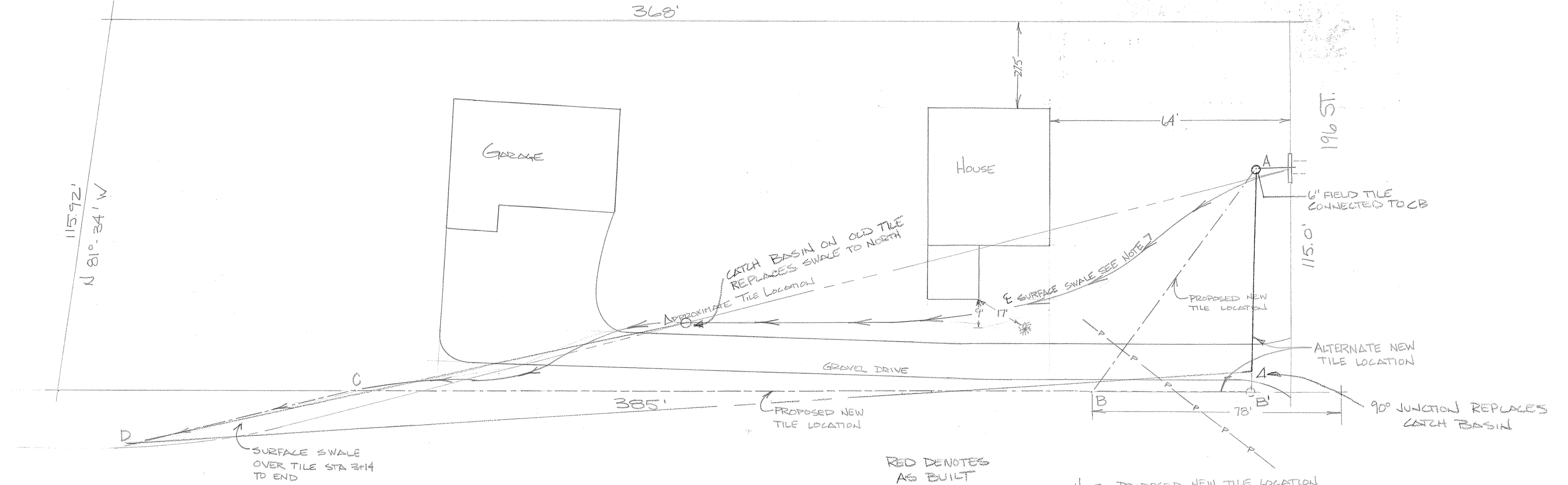
This information was gathered for input into the Hamilton County Geographical Information System. This document is considered an official record of the GIS.

Entry Date: 4-28-04

Entered by: *JWJ*



THOS. HUGGINS DRAIN
12" TILE

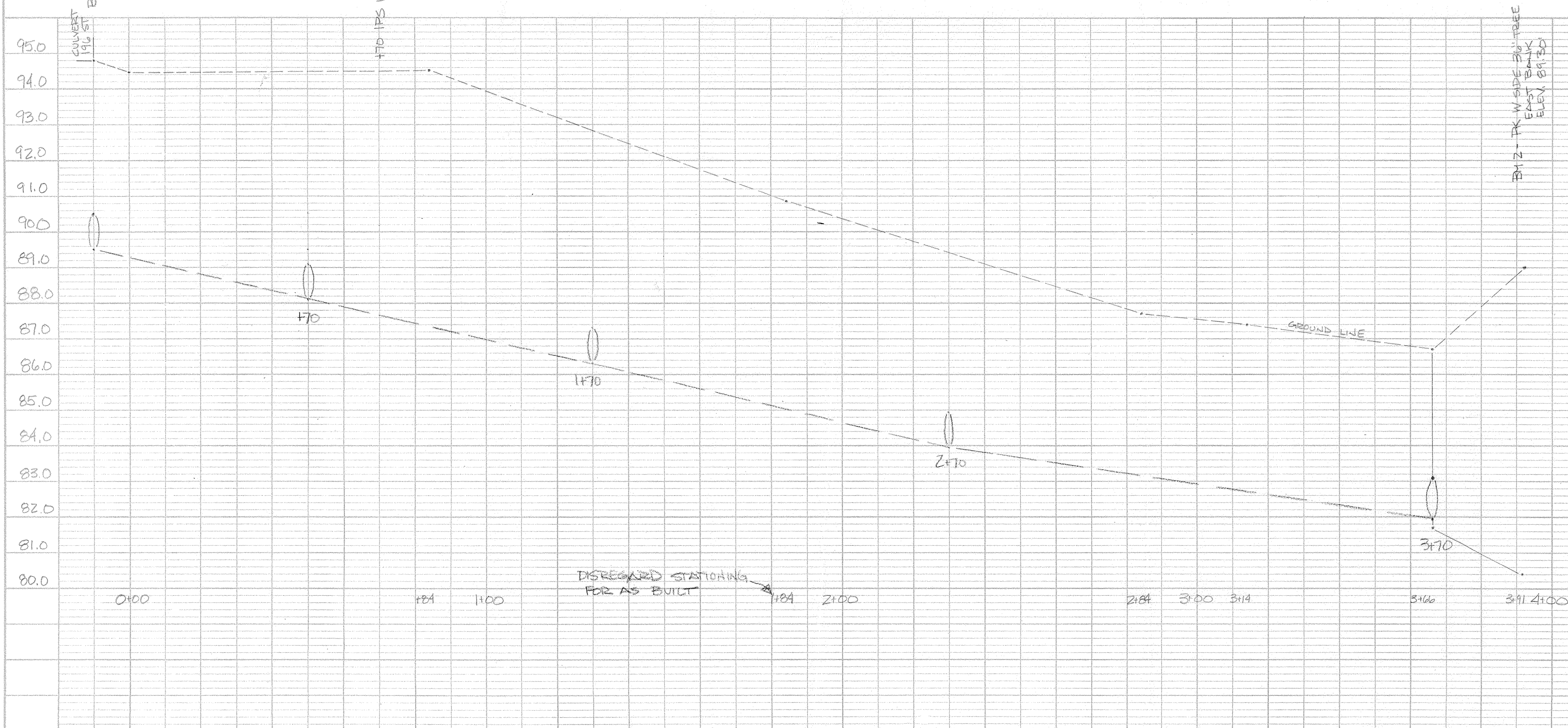


NOTE - PROPOSED NEW TILE LOCATION RUNS ABCD
- ALTERNATE NEW TILE LOCATION CAN RUN ABC'D ONLY IF CATCH BASINS ARE PLACED AT A & B'

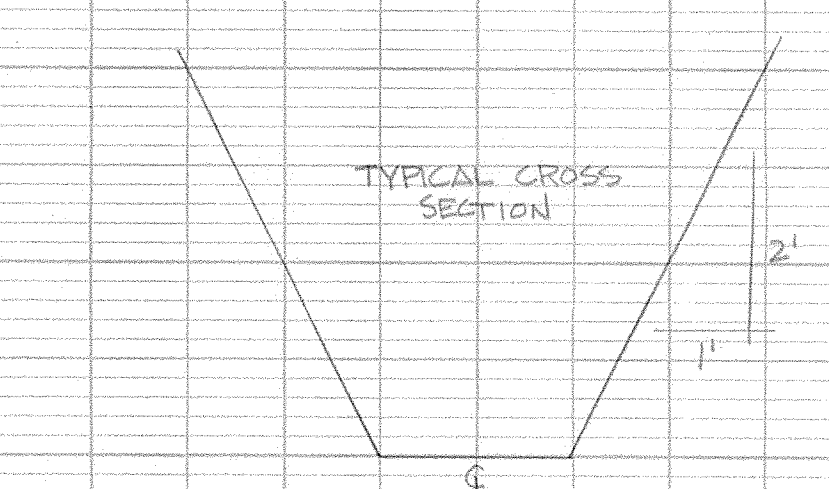
RED DENOTES AS BUILT

PLAN	DATE	BY
NO. 1	12/1/02	WADSEY
NO. 2	12/1/02	WADSEY
NO. 3	12/1/02	WADSEY
NO. 4	12/1/02	WADSEY
NO. 5	12/1/02	WADSEY
NO. 6	12/1/02	WADSEY
NO. 7	12/1/02	WADSEY
NO. 8	12/1/02	WADSEY
NO. 9	12/1/02	WADSEY
NO. 10	12/1/02	WADSEY

PROFILE	DATE	BY
NO. 1	12/1/02	WADSEY
NO. 2	12/1/02	WADSEY
NO. 3	12/1/02	WADSEY
NO. 4	12/1/02	WADSEY
NO. 5	12/1/02	WADSEY
NO. 6	12/1/02	WADSEY
NO. 7	12/1/02	WADSEY
NO. 8	12/1/02	WADSEY
NO. 9	12/1/02	WADSEY
NO. 10	12/1/02	WADSEY



BM 2 - IN W SIDE OF TREE EAST BANK ELEV. 87.80



1. STA 3+166 TO END TO BE OPEN DITCH WITH 4' BOTTOM AND 2:1 SIDE SLOPE.
2. END PIPE TO BE 20'-14" CMP WITH ANIMAL GUARD.
3. SEEDING TO BE DONE ON BANKS IMMEDIATELY AFTER FINAL GRADING. MIXTURE CONSISTS OF: 30#/AC KY 31 PESCUE 2 BU/AC WHEAT
4. TILE MUST BE LOCATED IN FIELD TO FIND ELEV. TO DETERMINE GRADE OF NEW TILE
5. NEW DRAIN TO CONSIST OF ONE ROW 12" TILE TO BE INSTALLED W/ TILE MACHINE
6. STA 3+166 TO HAVE RIP RAP (9" GRADED) PLACED AROUND OUTLET
7. SURFACE WATER SHALL BE A MINIMUM OF 1' DEEP WITH 4:1 BOTTOM & 3:1 SIDE SLOPES AND SHALL HAVE CULVERTS PROVIDED WHERE DRIVE CROSSES