

Drain: THISTLEWATE Drain #: 296
Improvement/Arm: 1996 RECONSTRUCTION
Operator: J. LIVINGSTON Date: 7-6-2004
Drain Classification: Urban/Rural Year Installed: 1996

GIS Drain Input Checklist

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

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**Gasb 34 Footages for Historical Cost
Drain Length Log**

Drain-Improvement: THISTLEWAITE - 1996 RECONSTRUCTION

Drain Type:	Size:	Length	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
PHASE I						
DREDGING		6880'				
CLEANING, SEEDING, TILE OUTLETS, ETC.		0'				
PHASE II						
OPEN DITCH	—	2250'	2250'			
TILE	15"	480'	480'			
* 500' GRASS WATERWAY	—	0'				
TILE OUTLETS, BREATHERS, ETC.		0'				

Sum: 2730' 2730' \$194,301.00

Final Report: _____

Comments:

* 500' PARALLEL DRAIN → GRASS WATERWAY



SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, Surveyor

773-6110 Ext. 19

Noblesville, Ind. 46060 January 12 1987

To: Hamilton County Drainage Board

Re: Thistlethwaite Drainage Area

Attached are plans, drain map, drainage shed map and schedule of assessment for the proposed reconstruction of the Thistlethwaite Drain. At this time the drain is number three on the classification list. The proposed drainage area is to include the Thistlethwaite Drains, South Sheridan Drain, Aaron Rawlings Drain and Stahl Dredge. The Thistlethwaite Drain was requested for classification on September 5, 1967 by Edward A. Jones. The Rawlings was requested on July 21, 1975 by George Coryell.

The Henry Thistlethwaite Drain was petitioned for and appraisers appointed in January 1878. Other than this, no other record exists. I believe that this drain was to follow the same route as the Shapely Drain described below.

The William Shapely Drain was constructed in 1881 beginning on 241st Street, following what is now the main ditch of the Thistlethwaite and ending in Section 11-19-2 in Boone County. The ditch was an open ditch except the first 800 feet which was tile.

The Charles Thistlethwaite Drain was constructed in 1881 and follows what is now Arm 2 and part of the main drain of the Thistlethwaite and was an open ditch.

The Ed Thistlethwaite Drain was constructed in 1889. This drain was what is now the Main Drain and Arm 2 to the Thistlethwaite ending at the county line.

The Thistlethwaite Drain constructed in 1908 is the drainage system now known as the Thistlethwaite Drain. It consisted of a Main drain, Arm 1, Arm 2, Arm 1 to Arm 2 and an Arm 2 to Arm 2. This drain ends in Section 11, T 19 N, R 2 E. The portion in Hamilton County consists of the following lengths:

Main-----	9150
Arm 1-----	1600
Arm 2-----	5630
Arm 1 to Arm 2-----	1300
Arm 2 to Arm 2-----	1174

The total Hamilton County length is 18,854 feet. The total ditch length including Boone County is 29,504 feet. This ditch consists of both tile and open.

The drain was assessed in 1943 by Hamilton County. The drain was reconstructed in 1957 as the Stahl Dredge. The project ran from S.R. 47 to the outlet of the Aaron Rawlings Drain.

The Aaron Rawlings Drain was constructed in 1889. In 1956 the drain was reconstructed by replacing 1560 feet of 3 rows of 10" tile with 1 row of 18" tile. In 1986 Mr. Floyd Pickard replaced a portion of this tile by re-routing approximately 300 feet of the tile around the pond on the Robert Coryell property. The existing tile was intercepted approximately 50 feet east of the outlet into the pond; run northwest across 226th Street, 92 feet east of the north quarter corner of 7-19-3; and intercepts the existing tile approximately 55 feet north of the

center line of 226th Street. I recommend the Board abandon the original tile beginning 50' east of the pond where the tile was intercepted west to the inlet on the south side of 226th Street. The tile between the inlets north and south of 226th Street north to the point where the new 10" tile intercepts the original tile shall remain as part of the regulated drain. The length of the drain is 6,972 feet.

The South Sheridan Drain was constructed by the Town of Sheridan in 1978-79. According to the plans by HNTB, the drain is approximately 4,803 feet in length and is constructed of CMP.

The attached plans show the proposed reconstruction. The proposal is shown in two sections and affects only Hamilton County. The first section is the existing main open ditch (Stahl Dredge) and the second is the proposed open ditch for the Thistlethwaite Main Ditch south of S.R. 47. The proposed open ditch has been designed to coincide with existing fence rows. In doing so, the open ditch will add 1350 feet to the Thistlethwaite Drain. The tiles which will be cut off will be crushed 20 feet downstream from the crossing of the open ditch and will outlet into the open ditch at the point it intersects the ditch downstream. The tile between these locations will be repaired and remain as regulated drain. The total length of the drains within the Drainage Area will be 31,979 feet.

The estimated cost for the project is as follows:

SECTION I

Item	Quantity	Unit	Cost/Unit	Total Cost
1. Clearing	6.5	acre	\$1,700.00	\$11,050.00
2. Level existing spoil	6,100	feet	\$ 1.50	\$ 9,150.00

Item	Quantity	Unit	Cost/Unit	Total Cost
3. Excavate channel	6,800	feet	\$ 4.25	\$28,900.00
4. Clean culverts	3	each	\$ 250.00	\$ 750.00
5. Surface Water pipes	9	sites	\$ 400.00	\$ 3,600.00
12" tubing installed	250	feet	\$ 4.50	\$ 1,125.00
15" tubing installed	340	feet	\$ 6.50	\$ 2,210.00
6. Repair structures 4, 8, 10				\$ 3,000.00
7. Tile Repair				
6" tile	50	feet	\$ 2.00	\$ 100.00
8" tile	50	feet	\$ 2.50	\$ 125.00
12" tile	80	feet	\$ 4.25	\$ 340.00
Estimated repairs				\$ 600.00
8. Tile pipes, 20' sections w/animal guards installed				
6" CMP	5	each	\$ 150.00	\$ 750.00
8" CMP	5	each	\$ 180.00	\$ 900.00
10" CMP	2	each	\$ 220.00	\$ 440.00
15" CMP	1	each	\$ 275.00	\$ 275.00
Additional estimated costs				\$ 3,000.00
9. Armoring installed	125	tons	\$ 20.00	\$ 2,500.00
10. Seeding				
w fertilizer	7	acres	\$ 600.00	\$ 4,200.00
w/o fertilizer	3.5	acres	\$ 300.00	\$ 1,050.00
11. Install breather at West Road & Mule Barn Road				\$ 1,000.00
			Sub-Total	\$75,065.00
			10% for contingencies	7,506.50
			TOTAL	\$82,571.50

SECTION II

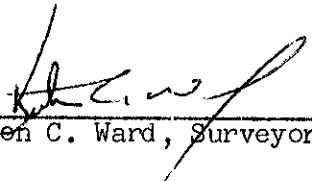
Item	Quantity	Unit	Cost/Unit	Total Cost
1. Clearing	1.5	acre	\$1,700.00	\$2,550.00
2. Channel excavation	2,700	feet	\$ 6.50	\$17,550.00
3. Repair 16" tile	100	feet	\$ 6.75	\$ 675.00
4. Clean culvert	1	each	\$ 250.00	\$ 250.00
5. Surface Water Pipes	3	sites	\$ 400.00	\$1,200.00
12" tubing	50	feet	\$ 4.50	\$ 225.00
15" tubing	100	feet	\$ 6.50	\$ 650.00
6. Tile pipes 20' section w/animal guard installed				
8" CMP	1	each	\$ 180.00	\$ 180.00
16" CMP	1	each	\$ 300.00	\$ 300.00
18" CMP	1	each	\$ 350.00	\$ 350.00
7. Armoring w/stone	75	tons	\$ 20.00	\$1,500.00

Item	Quantity	Unit	Cost/Unit	Total Cost
8. Wood overfall structure	1	each	\$3,000.00	\$ 3,000.00
9. Seeding				
w fertilizer	2.5	acre	\$ 600.00	\$ 1,500.00
w/o fertilizer	1.25	acre	\$ 300.00	\$ 450.00
			Sub-Total	\$30,380.00
			10% for contingencies	<u>3,038.00</u>
			TOTAL	<u>\$33,418.00</u>

Total for Sections I & II \$115,989.50

I recommend a reconstruction assessment of \$24.85 per acre with a \$150.00 minimum. I further recommend the maintenance assessment be set at \$2.00 per acre with a \$10.00 minimum. This will generate a total annual maintenance assessment of \$9,714.82.

I recommend the hearing for this proposal be set for March 9, 1987.



 Kenten C. Ward, Surveyor

KCW/jh



9/23/96
9:45 am

SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

Phone (317) 776-8495

Fax (317) 776-9628

Suite 146

One Hamilton County Square

Noblesville, Indiana 46060-2230

August 1, 1996

TO: Hamilton County Drainage Board

RE: Thistlewaite Drainage Area

Attached are plans, drain map, drainage shed map and Schedule of Assessment for the proposed reconstruction of the Thistlethwaite Drain. At this time the drain is Number Two (#2) on the Classification List. The proposed drainage area is to include the Thistlethwaite Drains, South Sheridan Drain, Aaron Rawlings Drain and Stahl Dredge. The Thistlewaite Drain was petitioned for reconstruction, January 12, 1995 by The Town of Sheridan.

The Henry Thistlethwaite Drain was petition for and appraisers appointed in January 1878. Other than this, no other record exists. I believe that this drain was to follow the same route as the Shapely Drain described below.

The William Shapely Drain was constructed in 1881 beginning on 241st Street, following what is now the main ditch of the Thistlethwaite and ending in Section 11, Township 19, Range 2 In Boone County. The ditch was an open ditch, except the first 800 feet, which was tile.

The Charles Thistlethwaite Drain was constructed in 1881 and follows in what is now Arm #2 and is part of the main drain of the Thistlethwaite and was an open ditch.

The Ed Thistlethwaite Drain was constructed in 1889. This drain was known as what is now the Main Drain and Arm #2 to the Thistlethwaite Drain ending at the county line.

The Thistlewaite Drain constructed in 1908 is the

drainage system now known as the Thistlewaite Drain. It consisted of a Main Drain, Arm #1, Arm #2, Arm #1 to Arm #2 and an Arm #2 to Arm #2. This drain ends in Section 11, Township 19 N, Range 2 East. The portion in Hamilton County consists of the following lengths:

Main-----	9,150 feet
Arm #1-----	1,600 feet
Arm #2-----	5,630 feet
Arm #1 to Arm #2-----	1,300 feet
Arm #2 to Arm #2-----	1,174 feet

The total Hamilton County length is 18,854 feet. The total ditch length including Boone County is 29,504 feet. This ditch consists of both tile and open ditch.

The drain was cleared and tile repaired by the CCC Camp in Lebanon in 1937. The drain was assessed in 1943 by Hamilton County. The drain was reconstructed in 1957 as the Stahl Dredge. The project ran from State Road 47 to the outlet of the Aaron Rawlings Drain. The drain was requested for Classification by Edward A. Jones on September 5, 1967.

The Aaron Rawlings Drain was constructed in 1889. In 1956 the drain was reconstructed by replacing 1,560 feet of three (3) rows of ten (10") inch tile with one (1) row of eighteen (18") inch tile. In 1986 Mr. Floyd Pickard replaced a portion of this tile by re-routing approximately 300 feet of the tile around the pond on the Robert Coryell property. the Existing tile was intercepted approximately fifty (50') feet East of the outlet into the pond; runs Northwest across 226th Street, ninety-two (92') feet East of the North quarter corner of Section 17, Township 19, Range 3 East; and intercepts the existing tile approximately fifty-five (55') feet North of the center line of 226th Street. I recommend the Board abandon the original tile, beginning fifty (50') feet East of the pond where the tile was intercepted West to the inlet on the South side of 226th Street. The tile between the inlets North and South of 226th Street North to the point where the new ten (10") inch tile intercepts the original tile shall remain as part of the regulated drain. In 1937, a new headwall, including tile repair and clearing was done by the Lebanon CCC Camp.

At some point in time the outlet of the drain was re-configured by running the tile East of the headwall and replacing it with a twenty-one (21") inch CMP. The drain was requested to be Classified on July 21, 1975, by George Coryell.

The length of the drain is 6,972 feet.

The South Sheridan Drain was constructed by the Town of Sheridan in 1978-1979. According to the plans by HNTB, the drain is approximately 4,803 feet in length and is constructed of CMP.

On March 9, 1987, the Drainage Board conducted a reconstruction hearing for the Thistlethwaite Drain. (see report dated January 12, 1987) The drain project was proposed in two sections, to be done at the same time. Section 1 was the dredging of the existing drain and section 2 was the proposed open ditch for the Thistlethwaite Main Ditch South of State Road 47. The cost for section 1 was \$81,571.50 and for section 2 the proposed cost was \$33,418.00 for a total project cost of \$115,989.50. The proposed reconstruction assessment was \$24.85 per acre with a minimum of \$150.00. The proposed maintenance cost was set at \$2.00 per acre with a minimum of \$10.00, which was to generate \$9,714.92 annually.

At the time of hearing, fifty-one (51) property owners out of 390 or 123 parcels out of 529, which amounted to thirty-two (32%) per cent of the total cost remonstrated. Also remonstrating was the Sheridan Town Board. Due to the remonstrance, the Board dismissed the proposal.

Since that time the Sheridan area has experienced flooding problems, relating to the Thistlethwaite Drain. Newspaper articles attest to these facts, such as the Noblesville Ledger of August 12, 1988 and July 19, 1993 with Indianapolis News, July 24, 1989 and July 14, 1993. Also requests from residents for assistance within the drainage shed have been made several times. Unfortunately, due to the dismissal of the projects by a previous Board, the funding, along with an adequate outlet was unavailable and assistance could not be provided. On May 22, 1991, a petition to reconstruction was filed by sixty-three (63) residents, amounting to two half (2.5%) per cent of the total to advance the project for reconstruction per IC 36-9-27-36. According to this section ten (10%) percent of the owners within the shed is required for advancement.

On January 12, 1994, the Sheridan Town Council petitioned the Board for reconstruction of the Thistlethwaite Drain. At that time the Board advanced the drain from number thirty-four (#34) on the 1993 Classification List for reconstruction to number four (#4) on the 1994 list.

The proposed 1996 reconstruction is shown on the attached plans. The proposal is shown as two phases matching the phases in the January 12, 1987 report with one exception. The project on Phase 1 now runs 100 feet into Boone County. The project will begin on the property owned by William J. and Barbara E. Davis and proceed upstream in the existing open ditch to State Road 47. Phase 2 remains as a proposed open ditch for the Thistlethwaite main ditch, South of State Road 47.

The proposed open ditch has been designed to coincide with existing fence rows. In doing so, the open ditch will add 1,350 feet to the Thistlethwaite Drain. The two regulated tiles which will be cut off will be crushed twenty (20') feet downstream from the crossing of the open ditch and will outlet into the open ditch at the point it intersects the ditch downstream. The tiles will have outlet pipes installed and breathers installed at its new beginning and remain as regulated drain. The total length of the drains within the drainage area will be 31,979 feet. This includes the Thistlethwaite, Aaron Rawlings and South Sheridan Drains.

During the interim period between the 1987 drain project and this project, State and Federal requirements have changed. Reviews and/or permits by the U.S. Army Corps of Engineers (COE) and the U S Fish and Wildlife Service (USF & W) on the Federal side, along with the Indiana Department of Environmental Management (IDEM) and the Indiana Department of Natural Resources (IDNR) were conducted and/or obtained.

On October 6, 1994, an application for permit was sent to the COE in Louisville, Kentucky. On October 31, 1994, the COE requested additional information which was sent January 27, 1995. On March 25, 1995, the COE authorized the work under Nationwide Permit No 26. The permit included special conditions which includes among other items, one sided clearing and using solid tile for the first 200 feet of the Main Ditch, Phase 2, South State Road 47. It also required application to IDEM for a Water Quality Certification (WQC).

Through on site meetings with USF&W, that agency made comments to the COE, dated March 16, 1995. Recommendations to COE included one sided clearing, filter strips and solid tile, as mentioned above.

On April 6, 1995, a request for WQC was made to IDEM. On April 21, 1995, the Section 401 WQC was granted subject to conditions, such as the solid tile as mentioned above and one sided clearing.

On October 6, 1994, an application for a permit for construction in a floodway was sent to IDNR. This was placed in abeyance due to Notice Requirements October 31, 1994, which was satisfied November 16, 1994 and additional information was sent November 22, 1994, when requested. On January 6, 1995 a permit was granted with both general and specific conditions. The Board appealed three of the specific conditions on January 23, 1995. An on site meeting with IDNR representatives was held February 14, 1995. An agreed order was signed by both the County and State of Indiana on March 14, 1995 and March 20, 1995 respectively. A final order was issued by the Natural Resources Commission on March 21, 1995.

The estimated cost for this project is as follows:

PHASE I

Excavation	6880 ft @ \$5.00/ft	\$ 34,400.00
Clearing	14 ac @ \$4,000.00/ac	56,000.00
Silt Basins	4 @ 500.00	2,000.00
-Bury Junk Pile	1ac @ 1,500.00	1,500.00
Repair Structures	3 ea @ 1,000.00	3,000.00
Corner Protection	5 locations @ \$14.00 cu yd	
	1 location @ 34 cu yd @	3,570.00
Tile Pipes-20' CMP/Animal Guards		
6"	10 ea @ \$209.00	2,090.00
8"	6 ea @ 300.00	1,800.00
10"	4 ea @ 320.00	1,280.00
12"	2 ea @ 366.00	732.00
15"	2 ea @ 430.00	860.00
18"	1 ea @ 500.00	500.00
21"	1 ea @ 555.00	555.00
Surface Water Pipes		
12"	4 @ 29.0 ft @ \$21.00/ft	6,090.00
15"	5 @ 340 ft @ 26.00/ft	8,840.00
Seeding		
Slopes	8.5 @ \$1000.00/ac	8,500.00
Filter Strips	3.5ac @ 1000.00/ac	3,500.00
		<hr/>
		\$135,217.00

PHASE II

Channel Excavation	2250ft @ \$14.00/ft	\$31,500.00
Clearing	3 ac @ \$4000.00/ac	12,000.00
Clean out Culvert STA 27+50	1 ea @ 500.00	500.00
Solid Pipe-15"	480 ft @ 20.00/ft	9,600.00
Grass Waterway	500 ft @ 8.00/ft	4,000.00
Crush Tile	2 ea @ 500.00	1,000.00
Install Breathers	2 ea @ 475.00	950.00
Silt Basin	1 ea @ 500.00	500.00
Corner Protection-3 locations	17 cu yd(25T)/loca. @ 30.00/cu yd	1,530.00
Tile Pipes-20 feet sections with Animal Guards		
8" CMP	2 ea @ 300.00	600.00
18" CMP	2 ea @ 500.00	1,000.00
Surface Water Pipes-(50 foot average Length)		
12"	3 ea @ \$21.00/ft	3,150.00
15"	2 ea @ 26.00/ft	2,600.00
Aluminium Drop Structure #14	1 ea @ 4,600	4,600.00
Seeding-Hydro Seed Slopes	2 ac @ 1800.00/ac	3,600.00
Waterway	.6 ac @ 1000.00/ac	600.00
Filter Strips	2 ac @ 1000.00/ac	2,000.00
<u>PHASE II SUBTOTAL</u>		\$ 79,730.00
<u>PHASE I SUBTOTAL</u>		\$135,217.00
<u>PHASE II SUBTOTAL</u>		79,730.00
<u>PROJECT SUBTOTAL</u>		<u>\$214,947.00</u>
10% Contingency		21,495.00
IDNR Permit Fee		50.00
<u>TOTAL PROJECT COST</u>		<u>\$236,492.00</u>

The drainage shed for the project has been determined to be 1,633.56 acres. The Board should note that the acreage for platted lots has been figured and used instead of being listed as a lot. The area within Sheridan has been reviewed by The Town Council of Sheridan and approved the area designated as drainage shed in April 1994. (see letter from Town of Sheridan, dated April 15, 1994).

The proposed drainage shed does not include area within Boone County for assessment. Notice however must be sent to William J. and Barbara E. Davis although no assessment will be charge to their property. Boone County waived it's rights to a Joint Board on this project in special session on April 17, 1995.

Other than repair of outlets and two (2) breathers installed as mentioned above the tile drain portion of the drainage area will not be part of the reconstruction. Tile repair will be done under maintenance.

The portion of Phase 2, which runs East to the existing open ditch, will require additional easement. Easement will be added from STA 0+00 to STA 13+50 on the new opened ditch. This will affect the following tracts:

Atkins, Florence Geraldine & Alberta Jean Cox T/C	01-05-06-00-00-007.000
Atkins, Florence Geraldine & Alberta Jean Cox T/C	01-05-06-00-00-008.000
Huffman, William A. & Joyce	01-05-06-00-00-009.000

These easements should be set at seventy-five (75') feet as measured from the Top of Bank per IC 36-9-27-33.

In addition to the above new easement, the addition of the South Sheridan Drain will also require additional easement. This portion of the drain should be considered Urban Drain and as such under IC 36-9-27-33e. The easement should be set at fifteen (15') feet per half as measured from the centerline of the tile. The tracts affected by this additional drain are as follows:

Freeman, Rex A. & Clara Z.	01-05-06-00-00-010.000
Freeman, Rex A. & Clara Z.	01-05-06-00-00-015.001
Burton, Elizabeth	01-05-06-00-00-015.004
Young, Kenneth G. & Sheila S.	01-05-06-00-00-015.003
Miller, Van E. & Mary K.	01-05-05-00-00-004.000
Miller, Van E. & Mary K.	02-05-05-00-00-004.001
Miller, Van E. & Mary K.	01-05-05-00-00-005.000
Miller, Van E. & Mary K.	01-05-05-00-00-003.000
Tudor, David F. & Sheryl W.	02-05-05-00-00-002.000

Atkins, Florence Geraldine & Alberta Jean Cox T/C	01-05-05-00-00-036.000
Atkins, Florence Geraldine & Alberta Jean Cox T/C	02-05-05-00-00-036.001
Faucett, Carl W.	01-05-05-01-01-012.000
Faucett, Carl W. & Patricia	01-05-05-01-02-011.000
Faucett, Carl W. & Patricia	01-05-05-01-02-011.001
Moore, Chad D. & Gwen J.	02-05-05-01-01-001.000
Crist, Dewey Jean	02-05-05-01-01-013.000
Habitat for Humanity Hamilton County, Inc.	02-05-05-01-01-012.000
Hope, Sharon S.	02-05-05-01-02-001.000

This list does not include streets and roads under the jurisdiction of the Hamilton County Highway nor the Town of Sheridan.

Not shown on the plans, but shall be considered as part of the reconstruction plans is the placement of twenty (20') foot filter strips along both side of the drain. These shall be installed by the Contractor as part of the leveling and seeding of the spoil. These shall be maintained annually as part of the maintenance program as per IC 6-1.1-6.7.

Upon review of the proposed project I do not believe any damages will result to land owners by this project. Therefore, damages for each tract shall be set at \$0.00.

As stated previously the drainage shed for this drain consists of 1,633.56 acres. I have reviewed the drainage shed for the proposed reconstruction and upon considering each parcel individually, I believe that each parcel will have equal benefits as provided by the drain. I recommend the Board assess each tract \$76.80 per acre with a minimum assessment of \$230.40 per tract.

I recommend the Board place the Thistlethwaite Drainage

Area on a maintenance program as set out in IC 36-9-27-38. This will include maintenance for the Thistlethwaite, South Sheridan and Aaron Rawlings Drains. These drains are not presently under a maintenance program.

The nature of maintenance work which may be required is as follows:

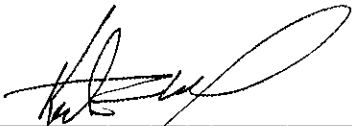
- A. Removal and/or prevention of brush within the drainage easement by hand, mechanical or spray methods.
- B. Re-excavating of open ditch to original grade line.
- C. Installation and/or repair of surface water structure as might be required.
- D. Bank erosion protection and/or seeding as might be required.
- E. Repair of private tile outlet ends as might be required.
- F. Repair of regulated tile outlet at drain end.
- G. Replacement of broken tile outlet ends as might be required.
- H. Cleaning and/or repair of existing catch basins as might be required.
- I. Installation of catch basins or inlets as may be required.
- J. Removal of debris and/or blockage from the existing tile drain including jetting or video work.
- K. Installation and/or repair of breather pipes.
- L. Removal of debris and/or blockage from the existing open drain.
- M. Maintain grass filter strips.
- N. Any other repairs necessary to restore the drain to it's original intended condition and use.

The frequency with which maintenance work should be performed is annually as required by the condition of the drain.

Work to be done under maintenance on the tile at this time includes inspection of all tiles North of State Road 47 and their repair. Also, the location of the tile and placement of breathers at the road crossings and STA 0 for the Aaron Rawlings Drain should be done at this time. Estimated cost for this improvement work is \$11,327.54.

I have reviewed the plans and drainage shed and believe that the drain will benefit each tract equally for the purpose of maintenance. Therefore, I recommend each tract within the drainage shed be assessed for maintenance equally at a rate of \$2.00 per acre with a minimum assessment set at \$15.00 per tract. The annual maintenance collection will be \$11,327.54.

I recommend the Board set a hearing for this proposed reconstruction and maintenance project for September 1996.



Kenton C. Ward
Hamilton County Surveyor
KCW/no



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

Phone (317) 776-8495

Fax (317) 776-9628

Suite 146

One Hamilton County Square

Noblesville, Indiana 46060-2230

TO: Kent Ward
Hamilton County Surveyor

July 22, 1997

RE: Thistelwaite Reconstruction Project

FINAL INSPECTION REPORT

Please regard this letter as the final inspector's report on the Thistelwaite Regulated Drain, Loacated in Section 6, Township 19 North , Range 3 East, in Adams Township of Hamilton County. As of the date of this letter I do hereby attest to and agree that the designed plans and additional change orders have been built by Tayolr Excavating. All grade checks and asbuilts have been completed by James V. Wyant and Frank Mills of the Surveyors Office. All other inspections have been performed by myself. There was 1 change order item or additional to this project during the course of the work. Notarized statement of all expenses incurred for labor and materials paid, recieved May 28,1997.

Change Order #1 dated--6-2-97	approved by board --6-9-97
Tile	
10' of 4"tile at \$4.00 per ft.-----	\$40.00
138' of 5" tile at \$4.00 per ft.-----	\$552.00
238' of 6" tile at \$4.50 per ft.-----	\$1071.00
8' of 8" tile at \$5.50 per ft.-----	\$44.00
184' of 10" tile at \$6.00 per ft.-----	\$1104.00
65' of 12" tile at \$8.00 per ft.-----	\$520.00
Outlets	
5--8" cmp w/animal guard at \$500.00 ea.-----	\$2,500.00
1--6" cmp w/animal guard at \$450.00 ea.-----	\$450.00
Total=	\$6,281.00
Bid cost-----	\$189,220.00
Change Order #1-----	\$ 6,281.00
Total=	\$195,501.00
Certified amount dated--1-30-97-----	\$229,241.36

Claim #1---submitted ---4-11-97-----\$ 76,012.00
 15% Retainage withheld-----\$ 11,401.80
 Check amount-----\$ 64,610.20 pd. 5-13-97

Claim #2---submitted ---5-5-97-----\$ 50,708.00
 15% Retainage withheld-----\$ 7,606.20
 Check amount-----\$ 43,101.80 pd. 5-28-97

Claim #3---submitted ---6-5-97-----\$ 61,300.00
 15% Retainage withheld-----\$ 9,195.00
 Check amount-----\$ 52,105.00 pd. 6-24-97

Claim #4---submitted ---6-2-97-----\$ 6,281.00
 15% Retainage withheld-----\$ 0.00
 Check amount-----\$ 6,281.00 pd. 7-15-97

Total Retainage withheld = \$ 28,203.00

Claim #5---submitted ---7-23-97-----\$ 28,203.00 to be paid 8-11-97

Amount paid to date = \$ 166,098.00
 Retainage \$ 28,203.00
 Final Total Cost = \$ 194,301.00

Contractor's Bid-----\$189,220.00
 Change Order-----\$ 6,281.00
 \$195,501.00
 Cost - \$194,301.00
 Diff = \$ 1,200.00

Gates 2 at \$600.00 ea. (deleted from contract)-----\$1,200.00

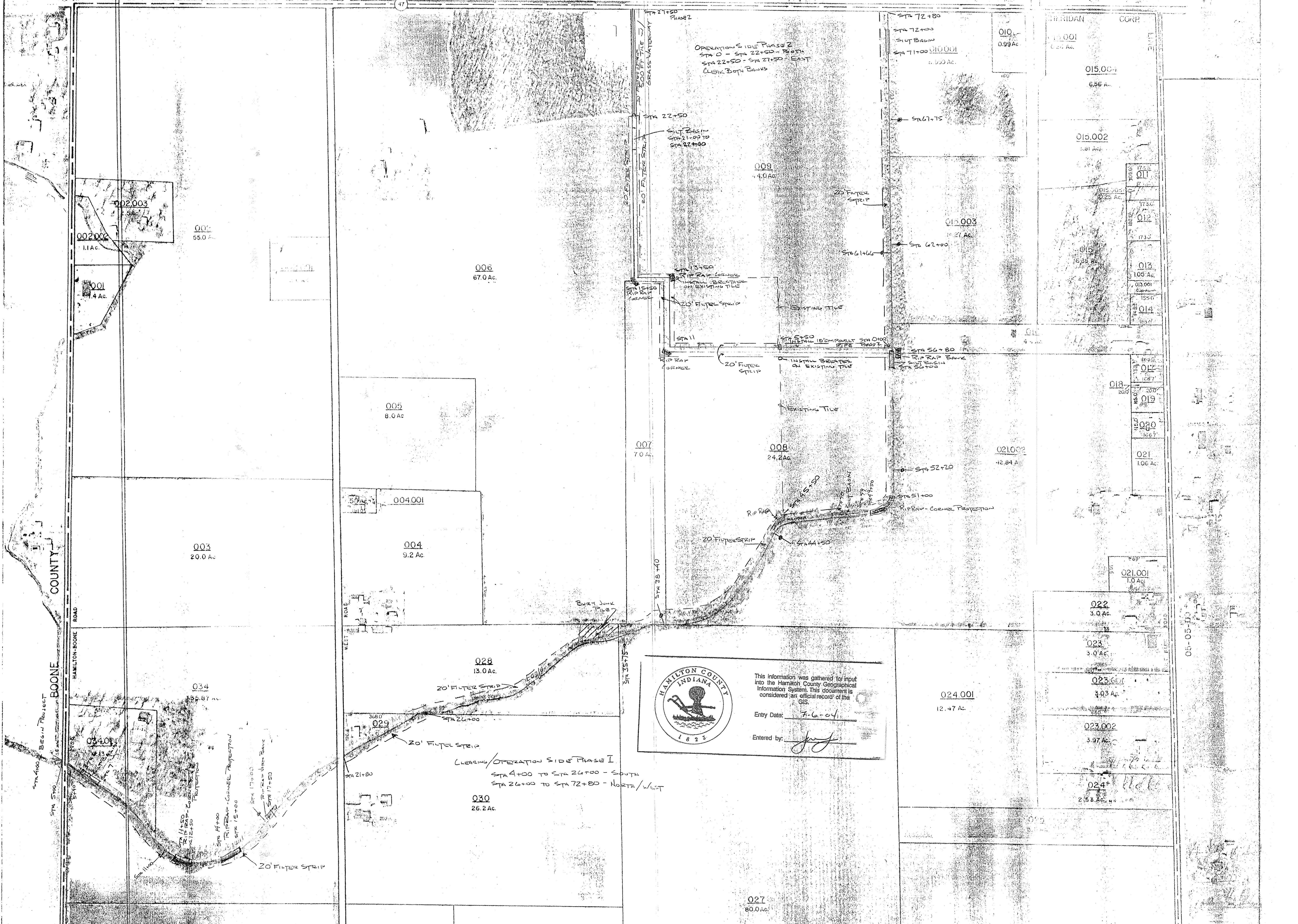
Certified amount-----\$229,241.00
 Cost-----\$194,301.00
 IDNR Permit Fee-----\$ 50.00

Balance = \$ **34,890.00**

My recommendation is to place balance in the maintenance fund. This will help pay for items not covered by the reconstruction. These items may include but are not limited to, jetting, video tape of tile system, and investigative work to be done.

Sincerely,

 Stephen Baitz



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: 7-6-04

Entered by: *[Signature]*