

Kenton C. Ward, Surveyor

Phone (317) 776-8495

Fax (317) 776-9628

Suite 188

One Hamilton County Square

Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

December 21, 2000

Re: Thistlewaite Drain Reconstruction

Attached are plans, specifications and calculations for the reconstruction of a portion of the Thistlewaite Drain. This reconstruction was petitioned for by the Sheridan Town Council on April 26, 1999. (See minutes book 5, page 127)

The portion of the drain to be reconstructed is that section known as Arm 2 and a portion of Arm 2 of Arm 2 (also known as the East Leg). The reconstruction will begin at Sta. 27 of Arm 2, which is on the south side of State Road 47. The work will proceed north to Sta. 6+20 of Arm 2. The portion of the drain which was reconstructed in 1998 for the West Forth Street Addition (see my report dated May 8, 1998) will not be reconstructed. The work will begin at the manhole on the north side of the subdivision at Sta. 4+70 and run to Sta. 0 of Arm 2, which is at Second Street or 241st Street.

The work on Arm 2 of Arm 2 shall begin at approximately Sta. 6+00 which is on the north line of Block A of the West Forth Street Addition. The new drain will run east within Block A 160 feet to a new manhole and thence run north 130 feet to an existing inlet located in Third Street which is approximately Sta. 2+80 of the original drain.

Along with this work additional arms are to be constructed in order to better serve various sections of Sheridan. These Arms are as follows:

1. Fifth Street Arm shall begin at the new Arm 2 and run east 780 feet to W. Elm Street where it will intersect with an existing tile from the northeast.
2. Sixth Street Arm will run from the new Arm 2 east 650 feet to Hamilton Avenue.
3. Seventh Street Arm will begin at the new Arm 2 and run east 1,980 feet to Main Street.
4. Hamilton Avenue Arm will begin at the Seventh Street Arm and run south 334 feet to Eighth Street.
5. Sheridan Avenue Arm will begin at the Seventh Street arm and run north 352 feet to Sixth Street and also run south of the Seventh Street Arm and run 672 feet to Ninth Street.
6. California Street Arm will begin at the Seventh Street Arm and run north 356 feet to Sixth Street. Also a south arm shall begin at the Seventh Street Arm and run south 668 feet south to Ninth Street.

7. Ohio Street Arm will begin at the Seventh Street Arm and run north 350 feet to Sixth Street. Also a south arm shall begin at the Seventh Street Arm and run south 668 feet to Ninth Street.

Each intersection which the above arms run through or to will have curb inlets installed at each corner of the intersection. Also, the Fifth, Sixth and Seventh Street Arms will have curb inlets on both sides of the street in the runs between Arm 2 and Hamilton Avenue.

The proposed project will replace 2,550 feet of the existing Arm 2 and 320 feet of the existing Arm 2 of Arm 2. The new drain shall consist of 12,175 feet of reinforced concrete pipe. The proposed reconstruction will add 9,305 feet of new regulated drain.

This reconstruction will not affect the Main Ditch nor Arm 1 north of State Road 47 (also known as the west leg). Currently both drains are not adequate to handle additional flow of water resulting from additional development in the drainage shed for these portions of the drain. Therefore, per IC 36-9-27-17(d) no further development shall take place in the drainage shed for the west leg until the drain is reconstructed.

Due to the size of storm sewer being proposed for this section certain restrictions must be placed on the undeveloped tracts within the drainage shed for both Arm 2 and Arm 2 of Arm 2. The tracts between the west leg and east leg, when developed in the future shall drain to the east leg at a predevelopment 2 year release rate. Tracts 02-01-32-00-00-002.000 owned by James and John Stafford and 02-01-32-00-00-002.001 owned by the Town of Sheridan when developed in the future should either change drainage sheds and go to the Benton Hinesley Drain or have a downstream analysis done on the available storm sewer capacity and have the allowable cfs per acre determined from that analysis.

The drainage area for Arm 2 north of Second Street (241st Street) shall be limited to an allowable cfs per acre of 0.01 for future development.

The cost for this work is as follows:

DESCRIPTION	QUANTITY Street Dept	QUANTITY INDOT	QUANTITY Thistle waite	UNIT	UNIT COST	TOTAL COST
Clearing Easement			2	Acres	\$2,500.00	\$5,000.00
Bituminous Pavement (6")	1500		470	Tons	\$90.00	\$177,300.00
Bituminous Surface No#11		29		Tons	\$30.00	\$870.00
HMA for approaches		17		Tons	\$35.00	\$595.00
Bituminous Base SD		190		Tons	\$22.00	\$4,180.00
"B" Borrow for Structural Backfill	1242	555	4667	Cu Yds	\$24.00	\$155,136.00
Granular Backfill	2660		0	Cu Yds	\$24.00	\$63,840.00
Driveway Repair			40	Each	\$500.00	\$20,000.00
Mulch Seeding			25000	Sq. Yds	\$0.34	\$8,500.00
RipRap Outlet		1		Lump Sum	\$7,500.00	\$7,500.00
Pipe: Reinforced Concrete Pipe 72"		80	1000	Lineal Ft.	\$172.04	\$185,803.20

Pipe: Reinforced Concrete Pipe 60"			625	Lineal Ft.	\$117.00	\$73,125.00
Pipe: Reinforced Concrete Pipe 54"	20		680	Lineal Ft.	\$96.12	\$67,284.00
Pipe: Reinforced Concrete Pipe 48"	60		990	Lineal Ft.	\$73.70	\$77,385.00
Pipe: Reinforced Concrete Pipe 36"	20		360	Lineal Ft.	\$47.78	\$18,156.40
Pipe: Reinforced Concrete Pipe 30"	20		340	Lineal Ft.	\$34.40	\$12,384.00
Pipe: Reinforced Concrete Pipe 24"	55		2275	Lineal Ft.	\$22.00	\$51,260.00
Pipe: Reinforced Concrete Pipe 21"	100		1340	Lineal Ft.	\$19.80	\$28,512.00
Pipe: Reinforced Concrete Pipe 18"	80		1000	Lineal Ft.	\$14.30	\$15,444.00
Pipe: Reinforced Concrete Pipe 15"	3080	50	0	Lineal Ft.	\$11.20	\$35,056.00
Pipe: CMP Type III 15"		40	0	Lineal Ft.	\$21.00	\$840.00
Pipe: CMP 15" Type III End Sec.		2	0	Each	\$215.00	\$430.00
Manhole Type A			17	Each	\$1,670.00	\$28,390.00
Manhole Type D			2	Each	\$4,000.00	\$8,000.00
Manhole Type E			7	Each	\$6,000.00	\$42,000.00
Manhole Type F		1	3	Each	\$7,500.00	\$30,000.00
Catch Basin Type A			24	Each	\$1,200.00	\$28,800.00
Catch Basin Type E		2		Each	\$1,600.00	\$3,200.00
Inlets			35	Each	\$1,200.00	\$42,000.00
Maintaining Traffic		1		Lump Sum	\$6,800.00	\$6,800.00
Road Closure Sign Assembly		4			\$200.00	\$800.00
Barricade, III A		4			\$224.00	\$896.00
Barricade, III B		4			\$175.00	\$700.00
<b>DESCRIPTION</b>	<b>QUANTITY Street Dept</b>	<b>QUANTITY INDOT</b>	<b>QUANTITY Thistle waite</b>	<b>UNIT</b>	<b>UNIT COST</b>	<b>TOTAL COST</b>
Detour Route Marker Assembly		29			\$50.00	\$1,450.00
Construction Sign, A		11			\$100.00	\$1,100.00
Construction Sign, B		4			\$200.00	\$800.00
Concrete Anchor		1		Each	\$1,000.00	\$1,000.00
Type "O" Compacted Aggregate		74		Tons	\$30.00	\$2,220.00
Scarifying		84		Sq. Yds	\$3.00	\$252.00
Structure Removal		1		Lump Sum	\$15,000.00	\$15,000.00
<b>Sub Total</b>						<b>\$1,222,008.60</b>
15 %Contingencies						\$183,301.29
First year interest						\$31,678.59
<b>Total Estimate</b>	<b>12-20-00</b>					<b>\$1,436,988.48</b>

The Town Council of Sheridan has committed to funding the proposed reconstruction. This funding can be done in two methods. The preferred method is for the Town Council to bond the portion outside of the State Road 47 work area. This total will be \$1,308,967.20. The alternate method is for the Town to bond the portion of the project outside of the street crossings within the Town itself. The street crossings within the Town would be paid through the General Drain Improvement Fund (GDIF) and then be assessed for reconstruction and be paid over a 5 year period. Due to a shortfall in the GDIF, the County will fund the project with a bank loan under IC 36-9-27-97.5. The totals for this method would be \$992,181.36 for the bond and \$348,464.49 for the loan through GDIF for a total of \$1,340,645.85.

The improvements within the right-of-way for State Road 47 will be paid for by the State of Indiana through the Indiana Department of Transportation per IC 36-9-27-71. The estimated cost for this work is \$96,342.63.

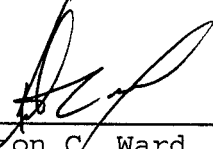
Upon review of the maintenance for the drain I believe that due to the additional system installation that maintenance needs will increase. This increase consists of additional pipe lengths to maintain by jetting; catch basins and manholes to maintain by vacuuming; additional inlets to maintain by keeping clean; and, initial problems from construction to maintain or repair such as settling, erosion at the open ditch and other construction related items which may occur.

Due to the need for increase maintenance I believe that the maintenance for roads and streets should be increased from \$2.00 per acre to \$10.00 per acre. I also recommend that the minimum assessment for maintenance for the drainage area north of State Road 47 and that portion of the Town of Sheridan south of State Road 47 be increased from \$15.00 to \$25.00 per tract. I further recommend that if in the future any existing undeveloped tract within the Thistlewaite Drainage Shed is developed as commercial or multifamily residential, that the assessment for that tract be set at \$10.00 per acre with a \$50.00 minimum.

The project will lie within existing easement or right-of-way except in places where the drain is being rerouted to avoid existing structures. In those cases the existing tile and easement will be vacated in order not to encumber the property with redundant easements. Therefore, I believe that no damages will result to landowners by the construction of this project.

I believe that this proposed drain north of State Road 47 and that portion of the existing drain south of State Road 47 that is within the Town limits of Sheridan meets the requirements for Urban Drain Classification as set out in IC 36-9-27-67 to 69. Therefore, this portion of drain shall be designated as an Urban Drain.

I recommend the Board set a hearing for this proposed reconstruction for January 22, 2001.

  
\_\_\_\_\_  
Kenton C. Ward  
Hamilton County Surveyor

KCW/kkw

OFFICE OF  
HAMILTON COUNTY DRAINAGE BOARD

Notice of hearing on Reconstruction Report and schedule of Assessments  
and Damages on the THISTLETHWAITE Drain.

TOWN OF SHERIDAN  
506 MAIN ST  
SHERIDAN IN 46069

The reconstruction report of the Surveyor and schedule of damages and  
benefits as determined by the Drainage Board for the proposed improvement  
known as THISTLETHWAITE have been filed and are  
available for inspection in the office of the County Surveyor. The  
schedule of assessments shows the following lands in your name are  
affected as follows:

Parcel Nbr & Description	Acres Benefited	Damage Asmt	Reconstn Asmt	% of Total	Maintenance Asmt
99-99-99-99-99-999.009 ROAD R/W WITHIN DRAINAGE SHED 83.16 AC	83.16	.00	1340,645.85	93.28	831.60

The maintenance assessment is the amount shown for annual assessment for  
periodically maintaining the drain. The hearing on the Surveyors  
reconstruction report and on the schedules of damages and assessments are  
set for hearing at 9:10 A.M. on January 22nd, 2001 in the Commissioners  
Court. The law provides that objections must be written and filed not less  
than five (5) days before the date of the hearing. Objections may be for  
causes as specified by law and which are available at the Surveyors office.  
Written evidence in support of objections may be filed. The failure to file  
objections constitutes a waiver of your right to thereafter object, either  
before the Board or in court on such causes, to any final action of the  
Board. On or before the day of the hearing before the Board, the Surveyor  
shall, and any owner of affected lands may cause written evidence to be  
filed in support of or in rebuttal to any filed objections.

HAMILTON COUNTY DRAINAGE BOARD