



Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

October 3, 2018

To: Hamilton County Drainage Board

Re: Thistlethwaite Drain - California Street Arm Extension

Attached is a drain map and petition for the re-construction of a portion of the California Street Arm of the Thistlethwaite Regulated Drain in the Town of Sheridan. The portion of the regulated drain to be reconstructed is located in Adams Township, Section 31, Township 20 North, Range 3 East. For purposes of this Report, the California Street Arm of the Thistlethwaite Drain shall be referred to as the "Drain".

History

The history of the Thistlethwaite Drain is described in detail in two Surveyors Reports to the Drainage Board. The first report is dated January 12, 1987 and was presented to the Drainage Board at the meeting of March 9, 1987 (see Hamilton County Drainage Board Minutes Book 2, pages 198-199). The second report is dated August 1, 1996 and was presented to the Drainage Board at the meeting of August 12, 1996 (see Hamilton County Drainage Board Minutes Book 4, page 272).

The Drain is described in a Surveyors Report dated December 21, 2000 presented to the Drainage Board at the meeting of January 22, 2001. The construction of the Drain was part of the Thistlethwaite East Leg Construction project. The Surveyors Report states that the Drain starts at the proposed Seventh Street Arm and runs north 356-feet to 6th Street (see Hamilton County Drainage Board Minutes Book 5, pages 547-549). The Drain was approved for construction and classified as an Urban Drain at hearing on January 22, 2001 (see Hamilton County Drainage Board Minutes Book 5, pages 549-550). A final report dated December 9, 2002 was presented to the Drainage Board at the meeting of December 9, 2002 where the Drain was accepted (see Hamilton County Drainage Board Minutes Book 6, pages 504-516).

The Drain was placed on maintenance at hearing during the meeting of September 23, 1996 (see Hamilton County Drainage Board Minutes Book 4, page 297A-297G).

The Town of Sheridan petitioned the Drainage Board for an extension of the Drain at the meeting of July 25, 2016 (see Hamilton County Drainage Board Minutes Book 17, page 52).

The Surveyors Office prepared construction plans for the extension of the Drain and reviewed these plans with the Town of Sheridan on July 18, 2018.

Existing Conditions

The current non-regulated drainage facilities in the area consist of the following: (1) An existing manhole structure at the intersection of 5th Street and California Street that has four, 8-inch inlet pipes and a single, 8-inch outlet pipe draining the structure; (2) An existing manhole structure at the intersection of 6th Street and California Street that has a 12" inlet pipe and a 12" outlet pipe.

When the 8" outlet pipe of the existing manhole structure at 5th Street and California Street reaches capacity, stormwater fills the manhole structure and then surcharges out of the structure. This surcharge can result in flooding of the intersection of 5th Street and California Street. A drainage investigation on September 9, 2018 observed water surcharging from this manhole structure.

Upon completion of the project, these existing non-regulated drain facilities will outlet to the California Street Arm. The regulated drain outlet for these facilities is Structures 72. Downstream of Structure 72, the regulated drain consists of 327-feet of 21" RCP pipe.

Project Description

The project begins at existing Structure 72 and will extend the existing Drain along the west side of California Street between 6th Street and 5th Street. The project includes the installation of 376.42-feet of 18" RCP; 12-feet of 15" RCP; 39.72-feet of 12" RCP; 4, 48" diameter manholes with castings; 1, 72" diameter manhole with casting; 2, 2'x3' box inlet structures with top, casting, and concrete collar; and 3, 2'x2' box inlet structures with casting, and concrete collar. The project also includes incidental/ancillary construction including, but not limited to, pavement, curb, walk and drive demolition; removal of two trees; replacement pavement, curb walk and drive; and erosion and sediment control.

The intent of the design is to provide an additional drainage outlet for the stormwater entering the Town of Sheridan manhole structure at the intersection of 5th Street and California Street and reduce the frequency of stormwater surcharging out of this manhole structure. The slope and size of the proposed tile was governed by existing invert elevations, the size of the existing regulated drain tile downstream of Structure 72 and reasonable/minimal cover over the tile. The largest size tile considering these restraints was an 18-inch tile.

The project begins at manhole structure 72 of the existing Drain at the southwest corner of the intersection of 6th Street and California Street. The existing regulated drain manhole structure at this location will be removed and replaced by the proposed manhole Structure 601. Structure 601 is a 48" diameter manhole. All existing tiles will be reconnected to the new manhole structure.

The drain then continues as 12.98-feet of 18" RCP to Structure 602, a 48" diameter manhole. The existing Town of Sheridan manhole structure at this location will be removed and replaced by the proposed manhole Structure 602. All existing tiles will be reconnected to the new manhole structure.

The drain then continues as 14.73-feet of 18" RCP to Structure 603, a 2'x3' box inlet structure.

The drain then continues as 174.24-feet of 18" RCP to Structure 604, a 48" diameter manhole.

The drain then continues as 135.56-feet of 18" RCP to Structure 606, a 2'x3' box inlet structure.

The drain then continues as 12.04-feet of 18" RCP to Structure 607, a 72" diameter manhole. The existing Town of Sheridan manhole structure at this location will be removed and replaced by the proposed manhole Structure 607. All existing tiles will be reconnected to the new manhole structure.

The drain then continues as 12.73-feet of 18" RCP to Structure 608, a 48" diameter manhole. This manhole structure will intercept an existing 8-inch tile that drains from the north in to the existing Town of Sheridan manhole structure being replaced by Structure 607.

The drain then continues as 8.14-feet of 18" RCP to Structure 609, a 2'x2' box inlet structure.

The drain will also include two lateral tiles. Structure 605 is located on the west side of California Street approximately halfway between 6th Street and 5th Street. Structure 605 is a 2'x2' box inlet structure that drains to Structure 604 through 8.29-feet of 12" RCP. Structure 610 is located on the east side of the intersection of 5th Street and California Street. Structure 610 is a 2'x2' box inlet structure that drains to Structure 607 through 25.43-feet of 12" RCP.

Also included in the drain is ancillary connections to the new manhole structures. These connections replace short sections of the existing tiles that are connected to existing Town of Sheridan manhole structures. These connections include 2, 6-foot section of 15" RCP at Structure 602; 6-feet of 18" RCP at Structure 608; and 6-feet of 12" RCP at Structure 610.

Easements

The new drain will be constructed in existing right-of-way. A regulated drain easement will be created for the extension and will be the same as the existing road right-of-way easement.

Permits

No permits from Federal or State Agencies are required for this project.

Project Cost

The estimated cost of the project is outlined below. Survey, Design and Construction Plan production was completed by staff from the Hamilton County Surveyor's Office. Inspection, construction staking and As-Built drawings will also be completed by staff from the Hamilton County Surveyor's Office. As such, there are not costs for these services in the itemized project cost below.

Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1	Demolish existing tile	40	LF	\$ 65.00	\$ 2,600.00
2	Disposal of Excess Soil Material	328	CY	\$ 25.00	\$ 8,200.00
3	Existing Manhole Removal	3	EA	\$ 1,000.00	\$ 3,000.00
4	Pavement Demolition [Pavement, curb, walk, drive]	1	LS	\$ 1,500.00	\$ 1,500.00
5	Tree Removal	2	EA	\$ 1,600.00	\$ 3,200.00
6	Coir Log	310	LF	\$ 10.00	\$ 3,100.00
7	Inlet Protection	3	EA	\$ 200.00	\$ 600.00
8	Seeding	354	SYS	\$ 2.00	\$ 708.00
9	Topsoil	60	CY	\$ 40.00	\$ 2,400.00
10	Maintenance of Traffic	1	LS	\$ 2,000.00	\$ 2,000.00
11	Sign removal	6	EA	\$ 100.00	\$ 600.00
12	Sign replacement	6	EA	\$ 250.00	\$ 1,500.00
13	Temporary Signage	6	EA	\$ 100.00	\$ 600.00
14	5-foot Sidewalk	178	SYS	\$ 50.00	\$ 8,900.00
15	ADA Tactile Warning	3.33	SYS	\$ 200.00	\$ 666.00
16	Concrete Curb, Straight	48	LF	\$ 30.00	\$ 1,440.00
17	Concrete Drive Repair	1	LS	\$ 1,250.00	\$ 1,250.00
18	HMA Road Repair	1	LS	\$ 3,750.00	\$ 3,750.00
19	Walk Bedding	33.33	TON	\$ 50.00	\$ 1,666.50
20	12" RCP with Granular Backfill (0-5' Deep)	39.72	LF	\$ 90.00	\$ 3,574.80
21	15" RCP with Granular Backfill (0-5' Deep)	12	LF	\$ 108.00	\$ 1,296.00
22	18" RCP with Granular Backfill (0-5' Deep)	376.42	LF	\$ 126.00	\$ 47,428.92
23	2'x2' Concrete Box with casting and concrete collar	3	EA	\$ 3,000.00	\$ 9,000.00

24	2'x3' Concrete Box with casting and concrete collar	2	EA	\$ 4,500.00	\$ 9,000.00
25	48" Manholes with casting	4	EA	\$ 5,500.00	\$ 22,000.00
26	72" Manholes with casting	1	EA	\$ 10,000.00	\$ 10,000.00
27	Sanitary Lateral Restoration	2	EA	\$ 2,000.00	\$ 4,000.00
Subtotal				\$ 153,980.22	
15% Contingency				\$ 23,097.03	
Engineering				\$ -	
Survey				\$ -	
Construction Staking				\$ -	
As-Builts				\$ -	
Total Cost				\$ 177,077.25	

Project Funding

Presently, the maintenance fund balance for the Thistlethwaite Drain is \$185,325.60. Per IC 36-9-27-45.5 the Board may utilize 75% of this fund for the work which would be \$138,994.20. I recommend that the remaining balance of \$38,083.05 be taken out of the General Drain Improvement Fund and paid back from the increased drainage assessments as outlined below at a rate of \$19,041.53 per year over the next two years assessments beginning in 2019. This approach would negate the need for a reconstruction assessment on the residents within the Thistlethwaite Drain Shed for this project.

I believe no damages will result to the landowners. Damages are set at zero (0).

Changes to the Drain

The Drain currently consists of 391-LF of 15" and 21" RCP tiles. The project will install 376.42-feet of 18" RCP tile, 12-feet of 15" RCP tile and 39.72-feet of 12" RCP tile. The total length of the extension is 428.14-feet.

One manhole structure installed in 2001/2002 will be removed and replaced.

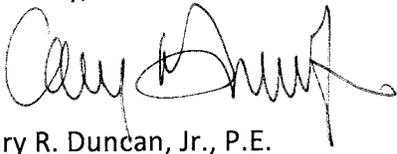
The new extension shall become part of the Drain.

Maintenance of Drain

The maintenance rates for the entire drainage shed were increased at hearing during the September 24, 2018 meeting of the Drainage Board. These new rates increased the annual assessment from \$26,660.02 to \$31,539.02.

I recommend that the Board set a hearing for this proposal for January 28, 2019.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary R. Duncan, Jr.", written in a cursive style.

Gary R. Duncan, Jr., P.E.
Hamilton County Surveyor's Office

Thistlethwaite Drain - California Street Arm Extension

Extending the East Leg Reconstruction - California St Arm for 428.14' from W 6th St to W 5th St on west side of S California St.

To be constructed in existing road right-of-way.

*No change in current maintenance assessment rates.

*Extension to be paid with Thistlethwaite maintenance funds. Hearing 01/28/19.

Construction Cost Estimate: \$177,077.25
 75% of maintenance fund as of 10/3/18 \$138,994.20
 Balance to be divided by 2 and paid with \$38,083.05
 maintenance collections from 2019 & 2020

Parcel	Owner	Desc1	Desc2	Benefit	MntAsmt	RecAsmt
02-01-32-03-15-020.000	Town of Sheridan	S32 T20 R3	Thistlethwaite Blk 3, 0.37 Ac	*	*	*
02-01-31-04-04-012.000	Pauley, Kent W & Stacy K	S31 T20 R3	Thistlethwaite Park Lot 5 & 6	*	*	*
02-01-31-04-04-013.000	Muller, Jessica L & Victor J II	S31 T20 R3	Thistlethwaite Park Lot 7	*	*	*
02-01-31-04-04-014.000	Sole. Peter T Jr & Cristina N	S31 T20 R3	Thistlethwaite Park Lot 8	*	*	*
02-01-31-04-04-015.000	Helms, George F	S31 T20 R3	Thistlethwaite Park Lot 9	*	*	*
02-01-31-04-04-016.000	Parsons, Randy L & Caryn D	S31 T20 R3	Thistlethwaite Park Lot 10	*	*	*
02-01-31-04-04-017.000	Barnes, Robert W & Sylvia M	S31 T20 R3	Thistlethwaite Park Lot 11	*	*	*
02-01-31-04-05-004.000	Barnes, Robert W & Sylvia M	S31 T20 R3	Thistlethwaite Park Lot 12	*	*	*
99-99-99-99-999.009	Town Of Sheridan	S31/32 T20 R3,	California St, W5th & W6th Road	*	*	*

Revised

Town of Sheridan

506 S. Main Street
Sheridan, Indiana 46069
(317) 758-5293
Fax: (317) 758-2505



July 13, 2016

Hamilton County Drainage Board
1 N 8th Street, #188
Noblesville, IN 46060

Hamilton County Drainage Board:

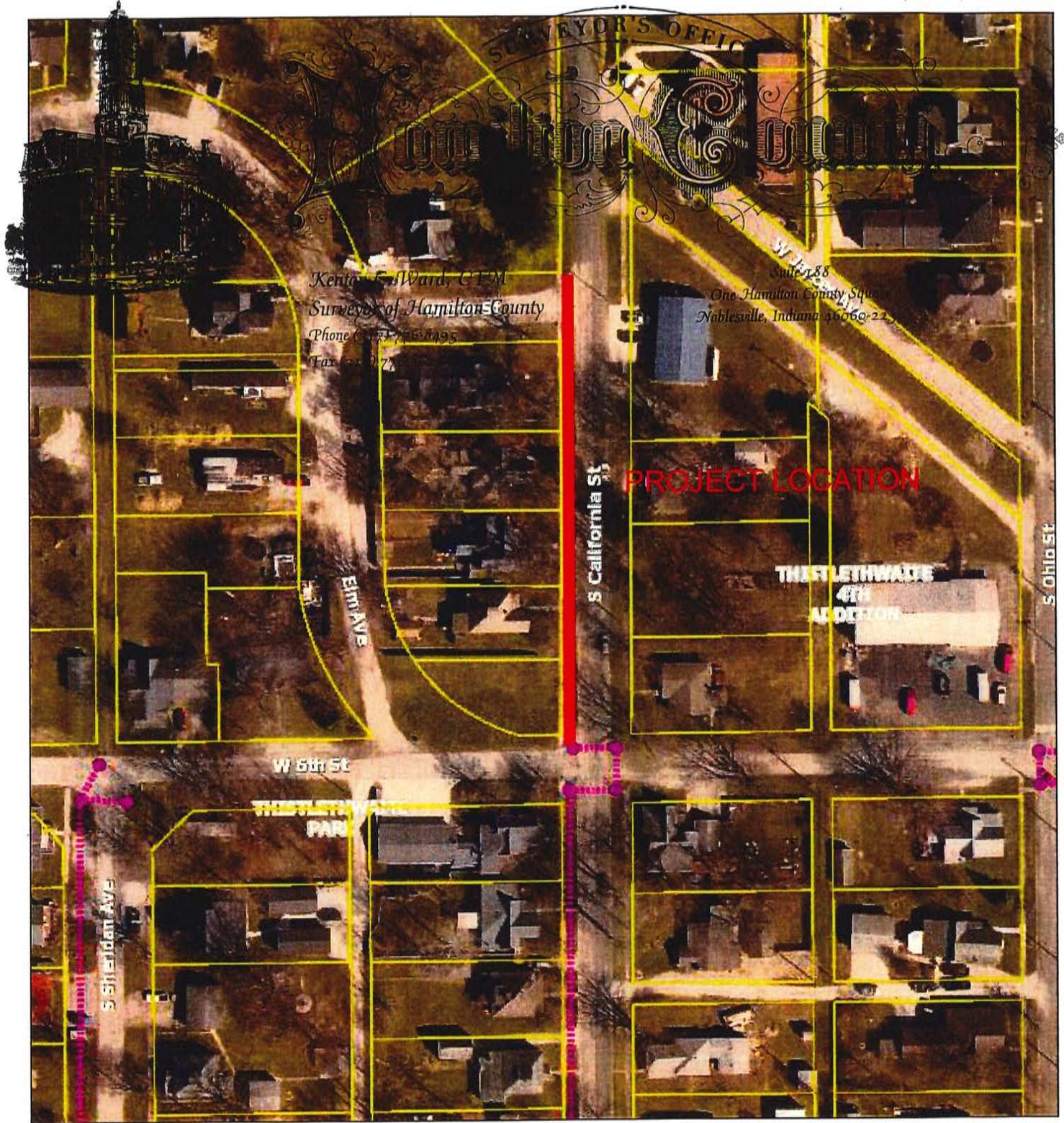
The Town of Sheridan would like to petition the Hamilton County Drainage Board to extend the Thistlewaite regulated drain (296). The petition proposes to extend the drain north approximately 326 LFT from Structure ID 74 located at the northwest corner of the intersection of 6th Street and California Street. The drain would facilitate drainage of a storm structure at the intersection of 5th Street and California Street that surcharges frequently and causes a safety issue for pedestrians and vehicular traffic due to prolonged flooding and a dislodged manhole due to surcharging. The work could be completed within Town Right of Way between the existing road and sidewalk along the west side of California Street. Furthermore, the town would like the board to consider utilizing a drainage maintenance fund transfer as outlined within IC-36-9-27-45.5 to fund the reconstruction. The potential construction cost for the project is currently estimated to be between \$30,000 and \$35,000. No detailed engineering plan or survey has been completed to date.

Sincerely,

David Kinkead
Sheridan Town Council, President

enclosure

Thistlewaite Drain - California St Ext (6th St to 5th St)



September 27, 2018

