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April 7, 2015

To: Hamilton County Drainage Board

**RE: Cool Creek Drain, William Knight Arm Reconstruction**

Attached are a petition, plans, specifications, drain map, drainage-shed map, and schedule of assessments for the reconstruction of the William Knight Arm of the Cool Creek Drain. The William Knight Arm is in need of reconstruction at this time due to its lack of adequate capacity and the drain conditions that have deteriorated beyond the practicality of normal routine maintenance.

The William Knight Drain, now an arm of the Cool Creek Drain, was petitioned by William Knight on the 25<sup>th</sup> day of July 1903 and filed with the Commissioners' Court on October 24, 1903. The William Knight Drain consisted of both open drain and tiled drain. The length of drain currently being proposed for reconstruction, at this time, starts at the existing terminus at Sta. 28+89, and follows the existing 10", 12", and 15" tile upstream to approximately Sta. 2+25, per the 1903 legal description. The original tile between Sta. 28+89 and the original terminus at Sta. 32+25 of the original legal description was removed and dug out as an open ditch (waterway) in 1981 with the drain reconstruction at that time, but not reflected in the drain records. The drainage area covers portion of Washington Township in Hamilton County and benefits properties in Township 18 North, Section 10 and 11, Range 3 East with a total drainage area of approximately 110.5 acres.

**Reconstruction Project:**

The reconstruction of the drain from Sta. 32+25 to Sta. 2+25 will closely follow the route of the original tile as shown in the Knight Legal Drain Reconstruction plans by Banning Engineering, having job number 07053. The new drain will run south of the original tile between Str. 105 to Str. 109, to avoid a 20" water main that runs right next to the original drain. The new reconstructed drain will start at Str. 100, running west to Str. 101, 102, 103, 104, 105, 106, 107, 108, and 109, where it intercepts the original tile at Str. 2+25. The arm between Str. 105 at Str. 112 follows the existing tile and picks up the tile drainage which may be entering the existing tile from the north.

The arm between Str. 109, 110, and 111 will serve the new development proposed by Cooperstown Partners, LLC. at the southeast corner of Springmill Road and 161<sup>st</sup> Street. The storm

sewer system within this development will continue the drain west to Springmill Road to provide a drainage outlet point for the area west of Springmill Road.

The storm sewer design is for the allowable runoff rates for the drainage basin to be based upon the post developed rates of 0.1 cfs per acre for the 0 to 10 year, 24-hour storm event and 0.3 cfs per acre for the 11 to 100 year, 24 hour storm event.

The reconstruction of this drain from Str. 100 to Str. 105 will not require acquisition of new easement for that entire length of the drain, since it is being reconstructed in place and the existing 75 foot easement from the center line of tile, per IC 36-9-27-33, will be maintained. The drain easement for the new pipe from Str. 105 to Str. 109 will remain the 75 foot easement from the centerline of the original 1903 legal description, with the new drain being offset to the south of that centerline varying distance from 17 to 32 feet. The easement for the new pipe from Str. 105 to 112 falls within the existing 75 foot easement from the original centerline of the drain. New easement for the new extension from Str. 109 to Str. 111 is being purchased by Cooperstown Partners, LLC. and will be granted to the Hamilton County as regulated drain easement on parcels:

<u>Parcel</u>	<u>Owner</u>
08-09-11-00-00-023.006	John & Carol Ruddock
08-09-11-00-00-023.007	Carmel Bible Methodist Church
08-09-11-00-00-023.008	Fred & Maureen Boyer

The new length of footage to be added to the William Knight Arm with this report is 596 feet, with 43 feet being from Str. 105 to 112 and 553 feet from Str. 109 to Str. 111.

**QUANTITIES & COST ESTIMATE – Str. 100 to Str. 109 and Str. 105 to Str. 112**

The cost estimate for this work shall be as follows:

30" HDPE Perforated Pipe w/ Backfill – 1037 feet @ \$79.00 per foot	\$ 81,923.00
24" HDPE Perforated Pipe w/ Backfill – 976 feet @ \$61.00 per foot	\$ 59,536.00
18" HDPE Perforated Pipe w/ Backfill – 289 feet @ \$55.00 per foot	\$ 15,895.00
24" RCP w/ Backfill under Driveway – 39 feet @ \$74.00 per foot	\$ 2,886.00
24" RCP w/ Backfill – 415 feet @ \$66.00 per foot	\$ 27,390.00
18" PVC SDR 21 w/ Backfill – 43 feet @ \$100.00 per foot	\$ 4,300.00
7 Manholes w Casting – 4'	\$ 28,000.00
2 Manholes w Casting – 5'	\$ 10,000.00
Existing Manhole Removal – 4 @ \$750.00 each	\$ 3,000.00
Flowable Fill at Waterline Crossing – 1 @\$500.00 each	\$ 500.00
Destroying & Removing of Old Tile – 2804 feet @ \$1.50 per foot	\$ 4,206.00

Seeding & Mulching	\$ 6,264.00
Tree Removal	\$ 3,063.00
Stone Driveway Repair – 2 locations	\$ 4,000.00
Fence Repair	\$ 3,500.00
Sub Total	\$254,463.00
+ 15% contingencies	\$38,133.00
<b>Total</b>	<b>\$292,596.00</b>

At this time, all monies in the William Knight maintenance fund have been expended on the maintenance needs of the drain. In my opinion, the maintenance fund balance for the Cool Creek Drain (#345) is in excess of the amount reasonably needed in that fund for maintenance work in the foreseeable future; therefore, I recommend that a portion of this balance be transferred to this reconstruction. The maintenance fund transfer is as outlined in I.C. 36-9-27-45.5. The current maintenance fund balance for Cool Creek is \$873,995.89 and up to a maximum of \$292,596.00 will be transferred for this project to fund the construction from Str. 100 to Str. 109 and Str. 105 to Str. 112.

**QUANTITIES & COST ESTIMATE – Str. 109 to Str. 111**

The cost estimate for this work shall be as follows:

18" RCP w/ Backfill – 509 feet @ \$60.00 per foot	\$ 30,540.00
18" PVC SDR 21 w/ Backfill – 44 feet @ \$100.00 per foot	\$ 4,400.00
3 Manholes w Casting – 4'	\$ 12,000.00
Flowable Fill at Waterline Crossing – 1 @\$500.00 each	\$ 500.00
Seeding & Mulching	\$ 1,236.00
Tree Removal	\$ 437.00
Sub Total	\$49,113.00
+ 15% contingencies	\$7,367.00
<b>Total</b>	<b>\$56,480.00</b>

The cost of the drain extension from Str. 109 to Str. 111 to service the commercial development area being developed by Cooperstown Partners, LLC should be assessed to them. The total assessment for this extension assessed to the developers should be \$56,480.00. The developer has also paid for the engineering and design cost of this reconstruction. The parcels that make up the commercial development are:

<u>Parcel</u>	<u>Owner</u>
08-09-11-00-00-023.008	Fred & Maureen Boyer
08-09-11-00-00-023.004	Fred & Maureen Boyer
08-09-11-00-00-023.000	Fred & Maureen Boyer
08-09-11-00-00-023.003	Lisa & Jeffrey Foreman

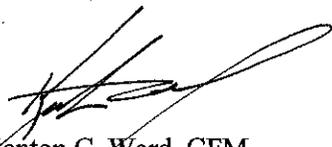
08-09-11-00-00-023.002  
08-09-11-00-00-023.001

Herbert & Deborah Feldmann  
Daniel & Lynne Coverdale

I further recommend that the portion of the Drain being reconstructed be designated an urban drain.

I believe that no damages will result to landowners by the reconstruction of this drain. Therefore, damages for all tracts shall be set at \$0.00.

I recommend that the Board set a hearing for this reconstruction for May 26, 2015.



Kenton C. Ward, CFM  
Hamilton County Surveyor

KCW/pll

**Cool Creek, William Knight Arm**

*Reconstruction from Sta. 32+25 to Sta. 2+25 to closeley follow original route.*

New drain to run south between Str. 105 to 109

Will add easement on 08-09-11-00-00-023.006, 023.007 & 023.008.

Will add 596' to the drains total footage.

\*No change in current maintenance assessment.

\*New drain from Str. 109 to 111 to be paid by Cooperstown Partners llc

\*Str 100-109 & 105-112 to be paid by Cool Creek maintenance fund.

Hearing: 05/26/15

**Cost Estimate**

\$56,480.00

\$292,596.00

Total: \$349,076.00

Parcel	Owner	Desc1	Desc2	Benefit	MntAsmt	RecAsmt
08-09-11-00-00-023.000	Boyer, Fred H & Maureen A	S11 T18 R3 0.89 AC	Development	*	*	*
08-09-11-00-00-023.004	Boyer, Fred H & Maureen A	S11 T18 R3 1.40 AC	Development	*	*	*
08-09-11-00-00-023.008	Boyer, Fred H & Maureen A	S11 T18 R3 2.41 AC	Easement & Development	*	*	*
08-09-11-00-00-023.007	Carmel Bible Methodist Chrurch	S11 T18 R3 4.07 AC	Easement	*	*	*
08-09-11-00-00-023.001	Coverdale, Daniel E. & Lynne A.	S11 T18 R3 1.10 AC	Development	*	*	*
08-09-11-00-00-023.002	Feldmann, Herbert B & Deborah C	S11 T18 R3 1.10 AC	Development	*	*	*
08-09-11-00-00-023.003	Foreman, Lisa K & Jeffrey W	S11 T18 R3 1.10 AC	Development	*	*	*
08-09-11-00-00-023.006	Ruddock, John M. & Carol S.	S11 T18 R3 3.10 AC	Easement	*	*	*

