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July 6, 2007

To: Hamilton County Drainage Board

RE: Cool Creek Regulated Drain Reconstruction (Revised)

Attached are plans, specifications, drain map, drainage-shed map, and schedule of assessments for the reconstruction of the Cool Creek Drain, also known as the Wheeler and Beals Drain, John Wheeler Arm. The Cool Creek Drain is currently 10th on the 2006 Drain Classification List under reconstruction. This project is being advanced at this time due to proposed development in the upstream portion of the drainage shed.

The Cool Creek Drain, formerly known as the Wheeler and Beals Drain, John Wheeler Arm, was petitioned by John Wheeler on the 18th day of October 1880 and filed with the Circuit Court, as case number 4620, on December 18, 1880. The Cool Creek Drain currently consists of both open drain and tiled drain. The length of drain currently being proposed for reconstruction, at this time, starts at the existing headwall at approximate Sta. 32+21, and runs to the east side of the U.S. 31 crossing, which is approximately Sta. 100+13, per the 1880 legal description. The tile portion of the drain is to be reconstructed from approximate Sta. 32+21 to approximately Sta. 31+01 of the original drain. The open drain currently proposed for reconstruction is approximately 6,792 feet and the tiled portion of the drain is approximately 120 feet, for a total length of 6,912 feet. The drainage area covers portion of Washington Township in Hamilton County and benefits properties in Township 19 North, Section 24, 25, 26, 35, and 36, Range 3 East with a total acreage of approximately 1113.47 acres, which includes the George Seybold Drain Watershed.

Reconstruction Project:

On March 27, 2006 the Hamilton County Drainage Board contracted with Banning Engineering to design the reconstruction of the upper section of the drain. This reconstruction of Cool Creek Drain will not include any relocation of the drain. Some clearing of trees will take place along the drain to facilitate the equipment needed for the dredging to occur. A side for future maintenance access will be cleared and will generally be the south and east banks of the ditch, as shown on the attached plans.

The fall for the ditch was designed at a constant slope of 0.2% for the entire length of the open drain. As for the width of the new ditch, several HEC-RAS profiles were run to determine what bottom width would work best for this project. From Sta. 0+00 to 26+27, per the Cool Creek construction plans by Banning Engineering, a 6 foot bottom width will be used. From Sta. 26+27 to 33+89, it was determined that a 5 foot bottom width is required. From Sta. 33+89 to Sta. 65+70, it was determined that a 4 foot bottom width is required. The 10-year storm profile for this model keeps the water in the ditch's banks. The hydraulic data was obtained from the FEMA Coordinated Discharge Rates and were pro-rated based on acreage to the upstream end of the open ditch. This information was used to determine the width of the ditch.

Watershed = 1075 acres
 Upstream Q₁₀ = 60 cfs
 Downstream Q₁₀ = 379 cfs

The allowable runoff rates for the drainage basin will 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 project shall include 1 pipe crossings and 2 wooden bridges, to replace existing crossings, for landowners who will have a portion of their property, not abutting a public road, landlocked by the reconstruction of the open ditch, as per IC 36-9-27-72(b). The following tracts shall have crossings installed as part of the project:

<u>Parcel</u>	<u>Current Owner</u>	<u>Structure Type</u>
08-05-25-02-01-001.000	James & Shirley Carrell	Shared Wooden Bridge
08-05-25-02-01-002.000	Jeffrey & Deborah Carrell	Shared Wooden Bridge
08-05-25-02-01-003.000	Gary & Cynthia Bordigon	Wooden Bridge
08-05-25-02-01-004.000	Rhonda Fennell Hammond	CMP Driveway Crossing

The future maintenance of the crossings shall be the responsibility of the landowners per IC 36-9-27-72(d).

The reconstruction of this drain will not require acquisition of new easement for the entire length of the drain. The drain is being reconstructed in place and the existing 75 foot easement from the top of bank, per IC 36-9-27-33, will be maintained. No additional easement acquisition will be required since the spoils of the project will be spread within the existing easement. If the owners of the residential property along the open drain do not want the spoils spread in the easement, then these spoils can be spread along other parts of the drain or possibly utilized in Sycamore on the Monon for landscaping mounds.

Upon a check of the U.S.G.S. Quadrangle Map, I found that from the tile outlet at station 32+21 to the confluence with White River, the length of drain is approximately 15.127 miles. Therefore, per IC 14-28-1-22, a permit from IDNR is required and has been approved as Permit FW-24180. Also, based on the length of the ditch, per IC 36-9-27-53.5, the SEA 368 process was completed. The permit from IDNR, as mentioned above, has been approved. The permit from IDEM is nearly complete, as it is near the end of the public comment stage, and should be approved by the end of April. A letter from USACE states that this project falls under Regional General Permit No. 1 and we may proceed with the project as long as we comply with the RGP General Conditions and received approval from IDEM under Section 401 Water Quality Certification.

QUANTITIES & COST ESTIMATE

The cost estimate for this work shall be as follows:

Design and Engineering Cost (minus staking and construction inspection)	\$ 25,800.00
Open ditch reconstruction – 6,370' @ \$10.00 per foot	\$ 63,700.00
Clearing 7.4 acres @ \$7,000.00 per acre	\$ 51,800.00
Chemical Treatment 1.6 acres @ \$180.00 per acre	\$ 288.00
Tile outlet pipes with animal guard installed:	
a. 2 - 6" x 20' CMP @ \$500.00 each	\$ 1,000.00
b. 2 - 8" x 20" CMP @ \$500.00 each	\$ 1,000.00
c. 1 - 12" x 20' CMP @ \$950.00 each	\$ 950.00
Install and Sediment Basins - 2 @ \$1,500.00	\$3,000.00
Install Surface Water Pipes 12" x 40 ft. 14 @ 40 ft @ \$ 22.00 per ft.	\$12,320.00
Rip Rap and Installation per plans – 1700 tons @ \$35.00 per ton	\$59,500.00
Erosion Control Blanket and Installation – 127 Sq. Yd. @ \$2.00 per Yd.	\$ 254.00
Seeding channel according to specifications 5.1 acres @ \$2,750.00 per acre	\$14,025.00
Seeding Ag area according to specifications 8.8 acres @ \$2,500.00 per acre	\$22,000.00
Seeding Residential area according to specifications 2.0 acres @ \$2,500.00 per acre	\$5,000.00
42 inch RCP – 120 feet @ \$80.00 per foot	\$ 9,600.00
42 inch RCP End Section – 1 required	\$ 910.00
72" Concrete Manhole – 1 required	\$ 2,570.00
Demo and Replace Wooden Bridges – 2 @ \$8,800 each	\$ 17,600.00
Debris and Beaver Dam Removal	\$ 12,285.00
Install 14.92' x 9.083' Multi-Plate CMP Pipe Arch across private driveway, including removing existing, utility relocation, foundation, granular fill, concrete collars, and driveway pavement patch	\$ 90,865.00
** Install 14.92' x 10.17' Multi-Plate CMP Pipe Arch across 191 st Street, including removing existing, utility relocation, foundation, granular fill,	

pavement patch, and guardrail replacement	\$ 110,940.00
** Excavation within existing structure on Tomlinson road, including rip rap	
Placement and patching of side walls	\$6,100.00
48 inch RCP under Monon Trail – 88 feet @ 90.00 per foot	
including installation, soil analysis, bedding, transitions with	
additional rip rap, and 2 RCP end sections	\$ 35,600.00
Patching of side walls on existing Monon Trail Structure	\$ 900.00
Sub Total	\$548,007.00
+ 15% contingencies	\$82,201.00
<hr/> Total	<hr/> \$630,208.00

** The cost of the new structure under 191st Street and dredging under Tomlinson Road shall be assessed to the Town of Westfield as per IC 36-9-27-71. This assessment for the structures to the Town of Westfield shall be \$134,596.00.

The cost of the reconstruction through the area being developed as Sycamore on the Monon should be assessed to the developers of the subdivision. The total assessment to the developers should be \$169,017.45. This should be proportioned based on the final acreage of the development owned by each developer. Upon completion of all the land transactions, Sycamore Village, LLC will develop 47.193 acres, making them responsible for \$57,417.52 of the project cost, and Equicor Real Estate Development and Investment will develop 91.727 acres, making them responsible for \$111,599.93 of the project cost. The developer will also be responsible for the prorated portion of the remaining cost of \$326,594.55 based on the percentage of acreage owned in the watershed as shown on the schedule of assessments. This is per the direction given at the Drainage Board Meeting on March 13, 2006 (Hamilton County Drainage Board Minutes Book 9, Pages 99 to 101).

Not shown on the plans, but described on sheet 16, is the placement of twenty foot (20') filter strips along both sides of the drain in the agricultural lands uses, unless the non-operational side has trees that are not being disturbed, in which case the filter strip is only on the operation side. This shall be considered as part of the reconstruction plans for this drain. The filter strip is a requirement of the IDEM approval for this project. The filter strip shall affect the following properties:

<u>Current Owner</u>	<u>Parcel</u>
Iia Grinstead	08-05-25-00-00-021.000
Norman Gray	08-05-25-00-00-022.003
C.F. Butler Investments	08-05-25-00-00-024.000
Cedar Knoll, LLC	08-05-25-00-00-027.000
Throgmartin Henke Development, LLC	08-05-25-00-00-055.000
Throgmartin Henke Development, LLC	08-05-25-00-00-056.000
Sycamore Village Development, Inc.	08-05-25-00-00-057.000
Sandee Enterprises, LLC	08-05-25-00-00-058.000

I have reviewed the drainage shed for the Cool Creek Drain and upon considering each parcel individually; I believe that each parcel within the drainage shed will have equal benefits, by land use, as provided by the drain. Therefore I recommend each tract be assessed on the same basis equally, by land use. Therefore for Highways and Roads, I recommend a reconstruction assessment of \$3,165.32 per acre based on its 76% impervious area and lack of detention. For commercial (including industrial, schools, and multi-family) tracts, developed, I recommend a reconstruction assessment of \$1,582.66 per acre

based on its 27% impervious area and some detention. For commercial (including industrial, schools, and multi-family) tracts, undeveloped, I recommend a reconstruction assessment of \$791.33 per acre. For Residential and Agricultural tracts, I recommend a reconstruction assessment of \$158.27 per acre.

I further recommend that the portion of the Drain being reconstructed be designated an urban drain. Because of said designation, any parcel over 5 acres which is used primarily for agricultural purposes shall be permitted to pay the above assessment over 20 years pursuant to Indiana Code 36-9-27-88(2), including interest at the rate of 10%.

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.

This portion of the Cool Creek Drain is not currently on maintenance.

I have reviewed the plans and drain map and believe as set out in IC 36-9-27-69, that all tracts within the drainage shed of this portion of the Cool Creek Drain currently being reconstructed will benefit. I recommend the maintenance assessment rates currently in place on parts of the Cool Creek Drain be adopted by the board for this watershed area:

1. Maintenance assessment for roads and streets to be set at \$10.00 per acre, with a \$25.00 minimum.
2. Maintenance assessment for agricultural tracts to be set at \$2.00 per acre, with a \$15.00 minimum.
3. Maintenance assessment for non-platted residential tracts to be set at \$2.00 per acre, with a \$15.00 minimum.
4. Maintenance assessment for commercial, institutional and multi-family residential tracts to be set at \$35.00 per acre, with a \$75.00 minimum.
5. Maintenance assessment for platted lots in subdivisions whose drainage systems will not be a part of the regulated drain (those systems maintained by the Town of Westfield) shall be set at \$10.00 per acre, with a \$25.00 minimum. Common areas within subdivisions whose drainage systems will not be part of the regulated drain (those systems maintained by the Town of Westfield) shall be set at \$10.00 per acre, with a \$25.00 minimum.
6. Maintenance assessment for platted lots within a subdivision whose drainage system will be a part of the regulated drain shall be set at \$15.00 per acre, with a \$65.00 minimum. Common Areas within regulated drain subdivisions shall be set at \$15.00 per acre, with a \$65.00 minimum.

Upon review of the drainage sheds I believe that the George Seybold Drain should be made an arm to the Cool Creek Drain. I recommend this action as the George Seybold Drain outlets into the Cool Creek Drain. This would also avoid a double assessment on the tracts currently assessed for the George Seybold Drain as the reconstruction is assessing a portion of the Cool Creek Drain for maintenance.

The George Seybold Drain in Washington Township was certified for maintenance assessment of October 13, 1970. The initial maintenance hearing was held by the Board on September 8, 1970 (Hamilton County Drainage Board Minutes Book 1, Page 58) and the assessment was approved on October 5, 1970 (Hamilton County Drainage Board Minutes Book 1, Page 59). At present the George

Seybold Drain maintenance assessments affects 195.91 acres. The current rate of assessment for the George Seybold Drain is \$3.50 per acre for un-platted residential lots and agriculture land, with a \$15.00 minimum, \$5.00 per acres for un-regulated subdivision, with a \$35.00 minimum, \$10.00 per acre for regulated subdivision, with a \$65.00 minimum, and \$10.00 per acre for commercial uses, with a \$75.00 minimum. The roadways are assessed at \$10.00 per acre. These rates collect \$837.30 annually and the current balance in the maintenance fund is \$(240.89). There are no outstanding work orders for this drain at this time. Therefore, with the 2007 collections, the negative balance would be paid off and a positive balance established.

The tracts now assessed for the George Seybold Drain should be assessed at the current land use and how it fits into the rates currently set for the Cool Creek Drain, listed above.

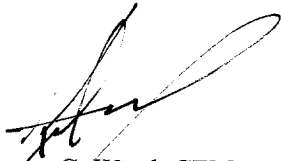
Any future balance of the George Seybold Drain shall be kept separate and these funds expend for needed maintenance on the drainage facilities that comprise the current George Seybold Drain. This shall be done until the funds are exhausted. At that time funding for repairs shall then be taken from the Cool Creek Drain Fund.

Future assessments for the drainage area of the George Seybold Drain will be made into the Cool Creek fund. No further maintenance collections for the George Seybold Drain fund shall be made.

The annual maintenance collection will be \$7,483.51.

The area in which the drainage shed for this drain is located is in the process of urban growth. The Town of Westfield is expanding northward and westward towards this area and will encompass portions of the drainage shed in the near future. Various tracts within the drainage sheet area already being converted to an urban use. Therefore, per IC 36-9-27-67, I recommend the Board designate the drain as an urban drain.

I recommend that the Board set a hearing for this reconstruction for May 29, 2007.



Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

STATE OF INDIANA)
) SS BEFORE THE HAMILTON
)
COUNTY OF HAMILTON) DRAINAGE BOARD

IN THE MATTER OF **Cool Creek Drain Regulated Drain**

NOTICE

Notice is hereby given that the Hamilton County Drainage Board at its regular meeting **July 9, 2007** adopted the reconstruction report of the Surveyor and the Amended Schedule of damages and assessments including annual assessment for periodic maintenance, finding that the costs, damages and expense of the proposed improvement would be less than the benefits which will result to the owner of lands benefited thereby.

The Board issued an order declaring the proposed improvement established. Such findings and order were marked filed and are available for inspection in the Office of the Hamilton County Surveyor.

If judicial review of the findings and order of the Board is not requested pursuant to Article VIII of the 1965 Indiana Drainage Code as amended within twenty (20) days from the date of publication of this notice, the findings and order shall become conclusive.

HAMILTON COUNTY DRAINAGE BOARD

BY: Christine Altman
PRESIDENT

ATTEST: Pamela L. Louks
ACTING SECRETARY

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE
Cool Creek Regulated Drain Reconstruction

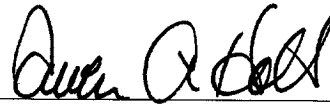
On this **29th day of May 2007**, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **Cool Creek Regulated Drain Reconstruction**

Evidence has been heard. Objections were presented and considered. The Board then adopted the original/amended Schedule of Assessments. The Board now finds that the annual maintenance assessment will be less than the benefits to the landowners and issues this order declaring that this Maintenance Fund be established.

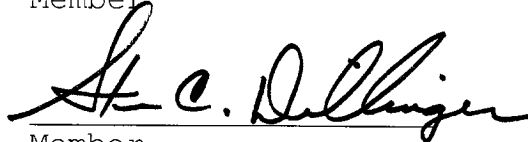
HAMILTON COUNTY DRAINAGE BOARD



President

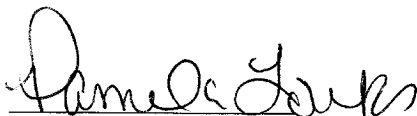


Member



Member

Attest:



STATE OF INDIANA)
) ss:
COUNTY OF HAMILTON)

BEFORE THE HAMILTON COUNTY
DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN THE MATTER OF THE
RECONSTRUCTION OF THE
Cool Creek Regulated Drain Reconstruction

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the **Cool Creek Regulated Drain** came before the Hamilton County Drainage Board for hearing on **May 29, 2007**, on the Reconstruction Report consisting of the report and the Schedule of Damages and Assessments. The Board also received and considered the written objection of an owner of certain lands affected by the proposed Reconstruction, said owner being:

Evidence was heard on the Reconstruction Report and on the aforementioned objections.

The Board, having considered the evidence and objections, and, upon motion duly made, seconded and unanimously carried, did find and determine that the costs, damages and expenses of the proposed Reconstruction will be less than the benefits accruing to the owners of all land benefited by the Reconstruction.

The Board having considered the evidence and objections, upon motion duly made, seconded and unanimously carried, did adopt the Schedule of Assessments as proposed, subject to amendment after inspection of the subject drain as it relates to the lands of any owners which may have been erroneously included or omitted from the Schedule of Assessments.

The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.

Wherefore, it is ORDERED, that the proposed Reconstruction of the **Cool Creek Regulated Drain** be and is hereby declared established.

Thereafter, the Board made inspection for the purpose of determining whether or not the lands of any owners had been erroneously included or excluded from the Schedule of Assessments. The Board finds on the basis of the reports and findings at this hearing as follows:

HAMILTON COUNTY DRAINAGE BOARD



PRESIDENT



Member



Member

ATTEST:


Acting Secretary