

Kenton C. Ward, CFM
Surveyor of Hamilton County
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Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

December 5, 2017

TO: Hamilton County Drainage Board

RE: E.E. Cornthwaite- Jacob Kepner Drain Reconstruction

Attached are the petition, plans, schedule of assessments and drainage shed map, for the Cornthwaite-Kepner Drain Reconstruction Project. The reconstruction petition for the E.E. Cornthwaite Drain was filed on April 7, 2015. The petition which represented 33% of the landowners was referred to the Surveyor for report by the Drainage Board on April 13, 2015. (See Hamilton County Drainage Board Minutes Book 16, page 166-167.) I have reviewed the petition and found it to be in proper form.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable, will improve the public health, benefit a public highway and be of public utility; and that the costs, damages and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefited.

The attached plans dated June 30, 2016 were prepared by the Hamilton County Surveyor's Office. The plans are for the conversion of the section of the Cornthwaite Drain from tile drain to open ditch. The proposed project will improve the flow characteristics of both the EE Cornthwaite and the Jacob Kepner Drain outlets to better drain the soil of the agricultural fields served by these two drains.

History

EE Cornthwaite Drain

The EE Cornthwaite Drain is located in both Jackson and White River Townships; Section 5, 6 and 8 of Township 19 North Range 5 East.

A petition for the EE Cornthwaite Drain was presented to the Circuit Court on May 21, 1919. The drain consists of the following:

Tile Size	Length (feet)	Start Station	End Station
10"	1,500	0+00	15+00
12"	1,700	15+00	32+00
14"	2,780	32+00	59+80
15"	2,394	59+80	83+74
24"	226	83+74	86+00

There is a structure/catch basin at Station 83+74 and a headwall at Station 86+00.

The drain was placed on maintenance at the February 22, 1972 meeting of the Hamilton County Drainage Board (Hamilton County Drainage Board Minutes Book 1, page 80).

Work Order History

There have been fifteen (15) work orders completed on the drain since 2001. They are as follows:

Work Order Number	Type of Repair	Cost	Date Complete
WO-2001-00197	Wet spot in field	\$321.25	Dec. 1, 2001
WO-2003-00107	hole	\$770.70	June 24,2003
WO-2005-00113	2 holes	\$282.00	May 6,2005
WO-2005-00257	5 holes	\$519.80	Dec. 13, 2005
WO-2009-00290	several holes	\$1,980.40	Jan.12,2010
WO-2011-00148	small hole	\$163.00	June 28,2011
WO-2012-00142	several holes	\$489.00	April 20,2012
WO-2013-00083	remove trees and repair blow hole	\$4,219.58	May 24,2013
WO-2014-00115	hole	\$347.80	May 23,2014

WO-2015-00178	hole	\$998.00	Aug. 7, 2015
WO-2015-00179	jet tile check for blockage	\$300.00	June 5, 2015
WO-2016-00157	small hole	\$284.00	May 6, 2016
WO-2016-00193	small hole	\$142.00	May 10, 2016
WO-2016-00414	small hole	\$284.00	Dec. 20, 2016
WO-2017-00074	hole	Outstanding	Outstanding

Jacob Kepner Drain

The Jacob Kepner Drain is location in both Jackson and White River Townships; Sections 7 and 8 of Township 19 North Range 5 East.

A petition for the Levi Huber Drain was presented to the Drainage Board in 1883. A report was made to the Commissioners on May 7, 1883. The drain was reconstructed and lengthened as the Jacob Kepner Drain in 1902. There is a viewer's report dated June 20, 1902. The drain was lengthened by 104-feet in 1992 to its current length of 5,047-feet.

The drain consists of the following:

Tile Size	Length (feet)	Start Station	End Station
2, 7"	100	0+00	1+00
12"	787	1+00	8+87
15"	2,565	8+87	34+52
16"	816	34+52	42+68
18"	104	42+68	43+72
5" [Arm 1]	460		
10" [Arm 1]	215		

This drain terminates at Station 83+74 of the E. E. Cornthwaite Drain.

The drain was placed on maintenance at the meeting of the Drainage Board on September 8, 1970 (See Hamilton County Drainage Board Minutes Book 1, Page 58).

Work Oder History

Work Order Number	Type of Repair	Cost	Date Complete
WO-2002-00005	6 blow holes	\$860.00	Feb. 8, 2002
WO-2002-00208	4 blow holes	\$533.00	Nov. 8, 2002
WO-2003-00032	hole	\$327.40	March 3,2003
WO-2003-00273	5 holes	\$713.00	Jan. 13, 2004
WO-2004-00230	3 holes	\$683.50	Oct. 22, 2004
WO-2005-00092	1 large hole	\$369.00	April 22,2005
WO-2006-00183	replace beehive casting	\$230.51	Oct. 20, 2006
WO-2008-00115	large hole	\$374.00	June 6,2008
WO-2008-00259	several holes	\$1,197.50	Oct. 24, 2008
WO-2009-00136	3 small holes	\$322.50	Nov. 6, 2009
WO-2010-00058	Cover off of catch basin	\$176.13	April 23,2010
WO-2012-00120	4 holes	\$326.00	April 20,2012
WO-2015-00093	5 holes	\$937.90	April 24,2015
WO-2015-00157	hole	\$328.00	May 8,2015
WO-2015-00236	hole	\$718.20	June 19,2015
WO-2016-00041	tile not draining	\$909.60	June 28,2016

There are no outstanding work orders for this drain at this time.

Existing Condition

Currently, the Jacob Kepner Drain terminates in the EE Cornthwaite Drain at Station 83+74 of the EE Cornthwaite Drain. From this point, the drainage from these drains is conveyed in a 24" tile which discharges to the William Shyrock Creek. Portions of the existing 24" tile of the EE Cornthwaite Drain are exposed between Stations 83+74 and 86+00. There is accumulated sediment in the main channel of the Shyrock Creek which has reduced the capacity of the two drains. William Shyrock Creek is not presently regulated at that point.

Reconstruction Project

The improvement project will convert the portion of the EE Cornthwaite Drain between Stations 83+74 and 86+00 from a tile to an open ditch. The project will also re-establish the flowline of the William Shyrock Creek such that positive drainage is provided to the regulated drains.

Demolition

Clearing and demolition consists of the clearing of trees and woody vegetation within the easement area; demolition of 226-lf of 24-inch tile of the EE Cornthwaite Drain between Station 83+74 and 86+00; demolition of the existing concrete headwall at Station 86+00 of the EE Cornthwaite Drain; demolition of the existing concrete structure at Station 83+74 of the EE Cornthwaite Drain (also being Station 42+72 of the Jacob Kepner Drain); demolition of 128-lf of 15-inch tile on the Jacob Kepner Drain between Stations 41+44 and 42+72; demolition of 24-lf of 15-inch tile on the EE Cornthwaite Drain between Station 83+50 and 83+74.

EE Cornthwaite

The project will include the construction of 254-lf of new open ditch with 6-foot wide bottom and 2:1 side slopes with the excavated soil material placed within the easement on each side of the new ditch between Stations 83+74 and 86+28 of the EE Cornthwaite Drain and the installation of 20-lf of 18" CMP on the new outfall of the EE Cornthwaite Drain between Stations 83+50 and 83+70. The segment of the drain between Stations 83+70 and 83+74 is represented by the distance between the end of the tile and the centerline of the new open ditch. The project will also include the installation of rip-rap stabilization at drain outlets, seeding for a 20-foot filter strip on each side of the new ditch, and associated seeding and other stabilization of disturbed soil areas.

Jacob Kepner

The project will include the installation of 142-lf of 15" HDPE pipe on the Jacob Kepner drain between Stations 41+44 and 42+86 and the installation of 20-lf of 18" CMP on the new outfall of the Jacob Kepner tile between Stations 42+86 and 43+00 (the outlet also being Station 84+00 of the EE Cornthwaite Drain).

William Shyrock

The project will also include the re-grading of 106-lf of the channel of the existing William Shyrock Creek between Stations 0+00 and 1+06 of the new William Shyrock Drain.

EE Cornthwaite Arm

The project will also include work on a new arm of the EE Cornthwaite Drain. The work includes the installation of 17-lf of new open ditch between Stations 0+00 and 0+17, 59-lf of rock chute between Stations 0+17 and 0+76 and an 11-foot rip-rap apron between Stations 0+76 and 0+87.

The capacity of the new open ditch is as follows:

1. 266.3-CFS at a depth of 3.86-feet [10-year storm]
2. 366.58-CFS at a depth of 4.48-feet [25-year storm]
3. 567.7-CFS at a depth of 5.48-feet [100-year storm]

Cost Estimate

Item	Unit	Quantity	Unit Cost	Total Cost
Clearing [Headwall Removal, Junction Box Removal, 152-LF of 15" Pipe, 226-LF of 24" Pipe]	LS	1	\$ 8,000.00	\$ 8,000.00
Channel Excavation [Ditch Grading W/ Short Haul Spreading [1,550-CY + 241-CY Rip-Rap Undercut = 1,791-CY]	LF	436	\$ 15.00	\$ 6,540.00
18"x20' CMP Pipe with Animal Guard	EA	2	\$ 1,000.00	\$ 2,000.00
Filter Strip	SYS	2001	\$ 1.75	\$ 3,501.75
15" HDPE Pipe [8' deep]	LF	142	\$ 30.00	\$ 4,260.00
Seeding	SYS	1665	\$ 1.75	\$ 2,913.75
Rip-Rap Revetment	TON	190	\$ 75.00	\$ 14,250.00
Rip-Rap Class 1	TON	87	\$90.00	\$ 7,830.00
Rip-Rap Class 1 in Reno Mattress	TON	81	\$ 175.00	\$ 14,175.00
Subtotal				\$ 63,470.50
15% Contingency				\$ 9,520.58
Easement Cost				\$ 6,415.00
Appraisal Cost				\$ 500.00

Total	\$79,906.08
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Construction staking, inspection and as-built drawings will be performed by the Hamilton County Surveyors Office.

Permits

Per a letter dated April 5, 2017, a Construction in a Floodway Permit is not required from the Indiana Department of Natural Resources since the total length of the drain is less than 10-miles.

Per an email from the Army Corps of Engineers dated March 23, 2017, this project does not require a Department of Army (DA) individual permit.

The Indiana Department of Environmental Management approved the project as IDEM #2017-199-29-HAP-X.

A permit may be needed from the County Highway Department for construction equipment access from Cumberland Road.

Easements

The project will take place within existing regulated drain easements for the Cornthwaite and Kepner Drains.

In order to complete the work on the William Shyrock Creek portion of the project, a 0.76-acre permanent regulated drain easement was secured from Parcel 07-07-08-00-00-001.00 owned by Tamara C. Guilkey Living Trust over a portion of William Shyrock Creek. The easement is contiguous with the existing statutory easement over the EE Cornthwaite Drain. The easement was recorded as Instrument No.: 2017016609 on April 18, 2017. The cost of both the appraisal, \$500.00, and the easement, \$6,415.00, were taken from the General Drain Improvement Fund (GDIF) and have been included in the cost of the estimate above. This easement encompasses the extension of the EE Cornthwaite Drain to Station 86+28 and the William Shyrock Drain.

EE Cornthwaite Drainage Shed

There are 292.28-acres and 8-lots assessed in the EE Cornthwaite Drain #64 generating \$1,236.02 per year. The current maintenance balance in the fund is \$2,886.47. The rates for the EE Cornthwaite Drain were increased by the Board per my report dated May 14, 2001 and approved by the Board at hearing on June 25, 2001 (see Hamilton County Drainage Board Minutes Book 6, Pages 70-72). The minimum rates for the EE Cornthwaite Drain were again increased by the Board per my report dated March 3, 2006 and approved by the Board at hearing on May 22nd 2006 (see Hamilton County Drainage Board Minutes Book 9, Page 237). The current maintenance assessment rates are as follows:

1. Agricultural tracts: \$2.00 per acre with a \$15.00 minimum.

2. Non-platted residential tracts: \$2.00 per acre with a \$15.00 minimum.
3. Commercial, institutional and multi-family residential tracts: \$10.00 per acre with a \$75.00 minimum.
4. Platted lots and Common Areas in subdivisions whose drainage systems will not be part of the regulated drain: \$5.00 per lot with a \$35.00 minimum.
5. Platted lots and Common Areas within subdivisions whose drainage system will be part of the regulated drain: \$10.00 per lot with a \$65.00 minimum.
6. Roads and streets: \$10.00 per acre.

The period of collections is four (4) years as per IC 36-9-27-43(a).

Jacob Kepner Drain Shed

There are 285.03-acres assessed in the Jacob Kepner Drain #28 generating \$1,290.12 per year. The current maintenance balance in the fund is \$5,394.63. The rates for the Jacob Kepner Drain were increased by the Board per my report dated March 3, 2006 and approved by the Board at hearing on May 22, 2006 (See Hamilton County Drainage Board Minutes Book 9, Page 239). The current maintenance assessment rates are as follows:

1. Agricultural tracts: \$4.00 per acre with a \$15.00 minimum.
2. Non-platted residential tracts: \$4.00 per acre with a \$15.00 minimum.
3. Commercial, institutional and multi-family residential tracts: \$10.00 per acre with a \$75.00 minimum.
4. Platted lots and Common Areas in subdivisions whose drainage systems will not be part of the regulated drain: \$5.00 per lot with a \$35.00 minimum.
5. Platted lots and Common Areas within subdivisions whose drainage system will be part of the regulated drain: \$10.00 per lot with a \$65.00 minimum.
6. Roads and streets: \$10.00 per acre.

The period of collections is four (4) years per IC 36-9-27-43(a).

Cornthwaite – Kepner Drain Shed

I recommend that the Board combine these drains into the Cornthwaite-Kepner Drain for maintenance purposes under IC 36-9-27-41.

The tracts now assessed for the E.E. Cornthwaite Drain and Jacob Kepner Drain should have their assessment increased as follows:

1. Maintenance assessment for agricultural tracts be set at \$5.00 per acre with a \$25.00 minimum.
2. Maintenance assessment for non-platted residential tracts be set at \$5.00 per acre with a \$25.00 minimum.
3. Maintenance assessment for commercial, institutional and multi-family residential tracts be set at \$20.00 per acre with an \$85.00 minimum.

4. Maintenance assessment for platted lots in subdivisions whose drainage systems will not be part of the regulated drain shall be set at \$10.00 per lot with a \$45 minimum. Common areas within non-regulated drain subdivisions shall be set at \$10.00 per acre with a \$45.00 minimum.
5. Maintenance assessment for platted lots within subdivisions whose drainage system will be part of the regulated drain shall be set at \$15.00 per lot with a \$75.00 minimum. Common areas within regulated drain subdivisions shall be set at \$5.00 per acre with a \$75.00 minimum.
6. Maintenance assessment for roads and streets be set at \$15.00 per acre.

The total annual assessment based on the above rates will be \$3,886.42.

I also recommend that the period of collections for this drain be extended from 4 years to 8 years as allowed under IC 36-9-27-43(b).

The combined acreage will be 578.83-acres and 8-lots. This is based on the current 292.28-acres and 8-lots of the EE Cornthwaite Drainage Shed, the addition of 1.52-acres to the EE Cornthwaite Drainage Shed per this report and the 285.03-acres of the Jacob Kepner Drainage Shed.

The current balances in the EE Cornthwaite and Jacob Kepner Drains shall remain in those funds until expended due to future maintenance on that drain. Once these funds are exhausted costs for future maintenance on the drain shall be paid from the combined Cornthwaite-Kepner Drainage Shed fund.

William Shyroch Drain Shed

The section of the William Shyroch Creek which is covered by the easement purchased from Guilkey shall be established as the William Shyroch Regulated Drain. However, until such time as the Shyroch Regulated Drain is extended to this point this section will be assessed for and covered by the maintenance of the Cornthwaite-Kepner Drainage Shed.

Changes to the EE Cornthwaite and Jacob Kepner Drains

This reconstruction will add 28 feet to the E. E. Cornthwaite Drain and 34-lf to the Jacob Kepner Drain.

William Shyroch Drain

As part of the reconstruction project, a portion of the existing William Shyroch Creek shall be established as the William Shyroch Regulated Drain. This section begins at the terminus of the new E. E. Cornthwaite Drain and runs east (downstream) 106-feet and north (upstream) 129 feet. The total length of the new open ditch will be 235-feet.

Arm to the EE Cornthwaite Drain

As part of the reconstruction a new arm of the EE Cornthwaite Drain shall be established. This section begins at Station 83+74 of the E. E. Cornthwaite Drain and runs southwest (upstream) a distance of 87-feet and consists of 17-lf of new open ditch, 59-lf of variable depth rock chute and 11-lf of rip-rap apron at the top of the rock chute. The total length of the new arm will be 87-feet.

Project Funding

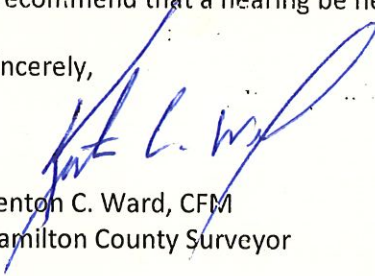
The benefitted drainage shed for this reconstruction project is 578.83 acres. I have reviewed the benefitted drainage shed and upon considering each parcel individually, I believe each parcel within the drainage shed will have equal benefits by land use as provided by the drain. Therefore, I recommend each tract be assessed as follows:

1. Agricultural/Residential Tracts - \$125.08 per acre with \$125.08 minimum.
2. Commercial Tracts - \$375.24 per acre with a \$375.24 minimum.
3. Roads - \$375.24 per acre with a \$375.24 minimum.

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

I recommend that a hearing be held for this matter on January 22, 2018.

Sincerely,



Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

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FILED

APR 07 2015

OFFICE OF HAMILTON COUNTY SURVEYOR



To: Hamilton County Drainage Board

Re: In the matter of the E.E. Cornthwaite Drain Petition

Comes now the undersigned individuals, who petition the Hamilton County Drainage Board, per IC 36-9-27, for the reconstruction of the above referenced regulated drain. The undersigned believe the following:

1. They are owners of ten percent (10%) in acreage or more of land area alleged by the petition to be affected by the drain.
2. That as property owners within the drainage shed, they are qualified petitioners.
3. That they now desire that a regulated drain be reconstructed in Jackson Township.
4. The names and address of each owner affected by the proposed public drainage are attached hereto, made a part hereof, and marked Exhibit "A", which area of land involved in the proposed drainage area is located in section 8, township 19 north, range 5 east, Hamilton County, Indiana.
5. That the proposed reconstruction consists of replace 250 feet of existing tile drain with an open ditch.

_____.
6. That in the opinion of the Petitioner, the costs, damages, and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land to be benefited thereby.
7. That in the opinion of the Petitioner, the proposed improvement will improve the public health; benefit a public highway; and be of public utility.
8. That Petitioners shall pay the cost of notice and all legal costs including engineering expense if the petition is dismissed.
9. Petitioners shall post a bond, if required, to pay the cost of notice and all legal costs in the case the improvement is not established.

Signature	Printed Name	Printed Address
	<u>Kevin Cavanaugh</u>	<u>8788 E 274th St Arcadia, IN</u>
	<u>Ken Newcom</u>	<u>9610E 226th Cicero, IN 46034</u>
_____	_____	_____
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To: Hamilton County Drainage Board

Re: In the matter of the Shyrook Drain Petition

Comes now the undersigned individuals, who petition the Hamilton County Drainage Board, per IC 36-9-27-54, for a new regulated drain. The undersigned believe the following:

1. They are owners of ten percent (10%) in acreage; or twenty five percent (25%) or more of the assessed valuation of the land that is outside the corporate boundaries of a municipality and is alleged by the petition to be affected by the proposed drain.
2. That as property owners within the drainage shed, they are qualified petitioners.
3. That they now desire that a regulated drain be established in Jackson Township, which involves the following public roads; 226th Street and various areas surrounding these roads in the drainage shed.
4. The names and address of each owner affected by the proposed public drainage are attached hereto, made a part hereof, and marked Exhibit "A", which area of land involved in the proposed drainage area is located in section 8, township 19 north, range 5 east, Hamilton County, Indiana.
5. No other public lands or owners are located in the area which would affect improvement.
6. That the general route of the proposed drain is shown in the attached plan which is marked Exhibit "B" and made a part hereof.
7. That in the opinion of the Petitioner, the costs, damages, and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land to be benefited thereby.
8. That in the opinion of the Petitioner, the proposed improvement will improve the public health; benefit a public highway; and be of public utility.
9. That the name of the attorney or spokesman representing petitioner in the drainage petition is N/A, who has an office at or whose address is N/A, phone N/A.
10. That Petitioners shall pay all the cost of notice and all legal costs if the petition is dismissed. These costs include but are not limited to engineering, appraisals, surveying and other costs associated with the proposed drain.
11. Petitioners shall post a bond, if required, to pay the cost of notice and all legal costs in the case the improvement is not established. These costs include but are not limited to engineering, appraisals, surveying and other costs associated with the proposed drain.

Signature	Printed Name	Printed Address
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE


Cornthwaite-Kepner Drain

On this 22nd day of January, 2018, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the *Cornthwaite-Kepner Drain*.

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

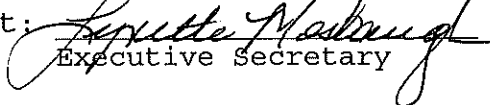
President



Member



Member

Attest: 
Executive Secretary

STATE OF INDIANA)
) ss:
COUNTY OF HAMILTON)

BEFORE THE HAMILTON COUNTY
DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN THE MATTER OF THE
RECONSTRUCTION OF THE
E. E. Cornthwaite-Jacob Kepner Drain Reconstruction

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the ***E. E. Cornthwaite-Jacob Kepner Drain Reconstruction*** came before the Hamilton County Drainage Board for hearing ***on January 22, 2018***, 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 ***E. E. Cornthwaite-Jacob Kepner Drain Reconstruction*** 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:


Executive Secretary

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF

Cornthwaite-Kepner Drain Reconstruction

NOTICE

To Whom It May Concern and: _____

Notice is hereby given of the hearing of the Hamilton County Drainage Board concerning the reconstruction of the **Cornthwaite-Kepner Drain Reconstruction** on **January 22, 2018 at 9:15 A.M.** in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana. Construction and maintenance reports of the Surveyor and the Schedule of Assessments proposed by the Drainage Board have been filed and are available for public inspection in the office of the Hamilton County Surveyor.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY

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

IN THE MATTER OF **Cornthwaite-Kepner Drain Reconstruction**

NOTICE

Notice is hereby given that the Hamilton County Drainage Board at its regular meeting **January 22, 2018** 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: Steven C. Dillinger
PRESIDENT

ATTEST: Lynette Mosbaugh
SECRETARY

KCW



SURVEYOR'S OFFICE Hamilton County

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

To: Hamilton County Drainage Board

January 31, 2019

RE: Cornthwaite Kepner Drain Reconstruction - Final Report

This is the inspector's final report on the Cornthwaite Kepner Drain Reconstruction located in Section 8 of Township 19 North Range 5 East in White River Township, Hamilton County, Indiana.

The Revised Surveyor's Report for the Cornthwaite Kepner Drain Reconstruction dated April 10, 2018 was presented to the Drainage Board and approved on May 29, 2018 (Hamilton County Drainage Board Minutes Book (Book) 18, Pages 139-141). The revised reconstruction cost estimate of \$100,755.73 was presented to the Drainage Board on June 11, 2018 (Book 18 Page 177). The bid was awarded to Van Horn Construction for the amount of \$100,755.73 on June 11, 2018 (Book 18 Page 177).

The Cornthwaite Kepner Drain Reconstruction consisted of removing 226 feet of 24 inch tile, removing 152 feet of 15 inch tile, removal of a headwall, installation of 40 feet of 18 inch CMP pipe, installation of 204 feet of 15 inch HDPE, construction of 277 feet of open ditch with 6 foot wide bottom & 2:1 side slopes, dredging of 100 feet of existing open channel and the installation of a 47 foot rock chute. The project also included the construction of a new arm (Arm 1 to the EE Cornthwaite Drain) which consisted of the 47 foot rock chute, 24 feet of rip rap apron above and below the rip rap chute and 25 feet of open channel for a total of 96 feet.

There were 5 change orders on this project change order for additional work or field revisions on the project as allowed by IC 36-9-27-80.5. Those change orders are as follows:

Change Order #1 was for the installation of a temporary construction entrance on Cumberland Road. Total cost of Change Order #1 was \$4,331.75 approved on September 10, 2018 (Book 18, Page 243).

Change Order #1				
#2 Commercial Stone	21.24	TON	\$22.50	\$477.90
Geotextile	100.00	SYS	\$2.00	\$200.00
Labor	4.00	HR	\$28.00	\$112.00
Bobcat	2.00	HR	\$70.00	\$140.00
Machine Operator	2.00	HR	\$34.00	\$68.00

Cost by Van Horn for Change Order # 1

\$997.90

Change Order #2 was to add 60 feet of 15 inch HDPE pipe for realignment of the Cornthwaite outlet. Total cost of Change Order #2 was \$1,680.00 approved on October 8, 2018 (Book 18, Page 266).

Change Order #2

60' of 15" HDPE	60.00	LF	\$28.00	\$1,680.00
Cost by Van Horn for Change Order # 2				\$1,680.00

Change Order #3 was required due to provide an outlet for a private tile that was encountered. This private tile now discharges at the north bank of the open ditch in the rock chute. Total cost of Change Order #3 was \$357.47 approved on October 22, 2018 (Book 18, Page 274).

Change Order #3

20' of 6" CMP	20.00	LF	\$17.00	\$340.00
6" animal guard	1.00	EA	\$17.47	\$17.47
Cost by Van Horn for Change Order #3				\$357.47

Change Order #4 was for additional rip-rap required where the surface water enters the open channel. Total cost of Change Order #4 was \$967.20 approved on November 13, 2018 (Book 18, Pages 281-282).

Change Order #4

Graded Rip-Rap (7"-9")	20.15	Ton	\$48.00	\$967.20
Cost by Van Horn for Change Order #4				\$967.20

Change Order #5 was for removal of the temporary construction entrance on Cumberland Road. Total cost of Change Order #5 was \$661.00 approved on November 13, 2018 (Book 18, Page 282).

Change Order #5

Bobcat	3.00	HR	\$70.00	\$210.00
Labor	4.00	HR	\$28.00	\$112.00
Machine Operator	6.00	HR	\$34.00	\$204.00
Single Axle Dump Truck	3.00	HR	\$45.00	\$135.00
Cost by Van Horn for Change Order #5				\$661.00

Van Horn Excavating final costs for the reconstruction are as follows:

Contractor's Bid -----	\$ 87,613.68
Change Order #1 Total -----	\$997.90
Change Order #2 Total -----	\$1,680.00
Change Order #3 Total -----	\$357.47
Change Order #4 Total -----	\$967.20
Change Order #5 Total -----	\$661.00
Reconstruction Cost by Van Horn Excavating -----	\$92,277.25

Total Reconstruction Cost

Van Horn Excavating -----	\$92,277.25
Easement Purchase Cost -----	\$6,915.00

Total Reconstruction Cost -----	\$99,192.25
Amount Approved by the Board -----	\$107,670.73
Total Reconstruction Cost -----	\$99,192.25
Difference -----	\$8,478.48

At the May 29, 2018 revised hearing the reconstruction the rates of \$168.56 per acre and minimum for Residential/Ag properties and \$505.68 per acre and minimum for Commercial properties & roads were approved. This was based on a cost estimate of \$107,670.73. The final cost was \$99,192.25. I recommend the reconstruction assessments be reduced to \$155.28 per acre and minimum for Residential/Ag properties and \$465.84 per acre and minimum for Commercial properties & roads.

Partial Pay Requests for this project submitted and paid as allowed in IC 36-9-27-81 are as follows:

	Date Requested	Date Paid	Billed	Retained	Paid
Pay Request #1	8/17/18	09/11/18	\$20,729.85	\$3,109.48	\$17,620.37
Pay Request #2	9/7/18	09/25/18	\$13,872.66	\$2,080.90	\$11,791.76
Pay Request #3	9/21/18	10/09/18	\$23,053.04	\$3,457.96	\$19,595.08
Pay Request #4	10/5/18	10/23/18	\$11,206.18	\$1,680.93	\$9,525.25
Pay Request #5	10/19/18	11/14/18	\$16,269.27	\$2,440.39	\$13,828.88
Pay Request #6	11/2/18	11/27/18	\$5,364.75	\$804.71	\$4,560.04
Pay Request #7	11/2/18	11/27/18	\$1,781.50	\$267.22	\$1,514.28
Pay Request #8	12/12/18	12/20/18	\$(13,841.59)	\$0.00	\$13,841.59
Van Horn Excavating Totals:			\$92,277.25		\$92,277.25

Statement of All Incurred Expenses Paid signed by the contractor as required in IC 36-9-27-82(b) was received on October 30, 2018.

The engineering design, plans, construction staking and as-built (record) drawings were prepared by the Hamilton County Surveyor's Office. The as-built drawings are attached.

As of November 14, 2018, I hereby attest to and agree that the reconstruction was installed according to the specified plans and change orders and have approved such work under IC 36-9-27-82(a). All inspections have been completed. Final inspection was on November 8, 2018.

I recommend the Board approve the reconstruction as complete and acceptable.

Respectfully,



Andrew Conover
Inspector

"AS-BUILT" CERTIFICATION

"AS BUILT" INFORMATION COLLECTED BY HAMILTON COUNTY SURVEYOR'S OFFICE. I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF, A TRUE AND CORRECT REPRESENTATION OF THE LOCATIONS AND ELEVATIONS OF THE "AS-BUILT" REGULATED DRAIN IMPROVEMENTS. INFORMATION OBTAINED BY FIELD SURVEY BETWEEN 09/19/2018 - 11/08/2018 Field Book #10 Pages 120,121 & 134,135

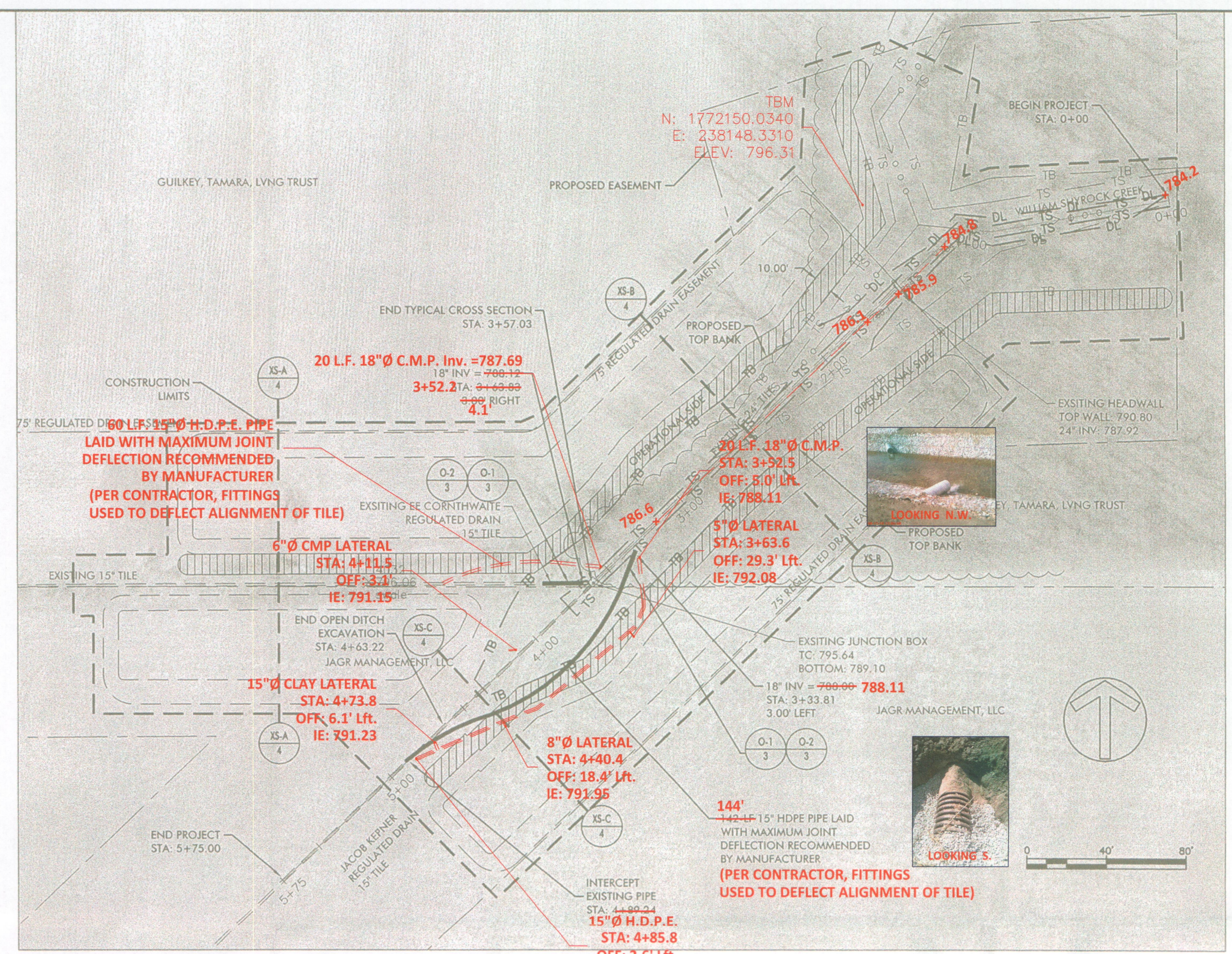
CERTIFIED BY: *B.K.R.*
 BRIAN K. RAYL, PS
 PROFESSIONAL SURVEYOR
 INDIANA LICENSE NO. 20100070
 DATE: JANUARY 31, 2019



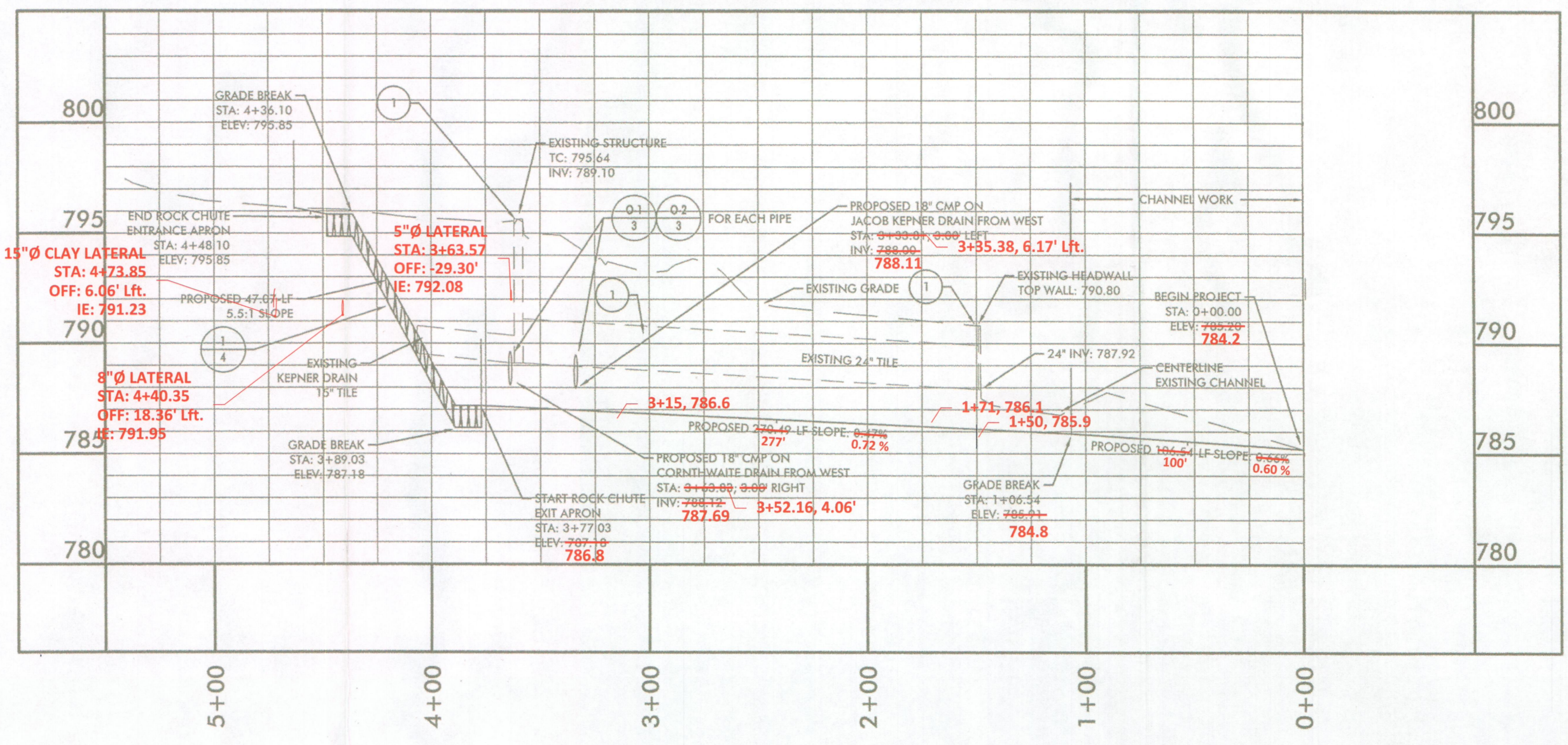
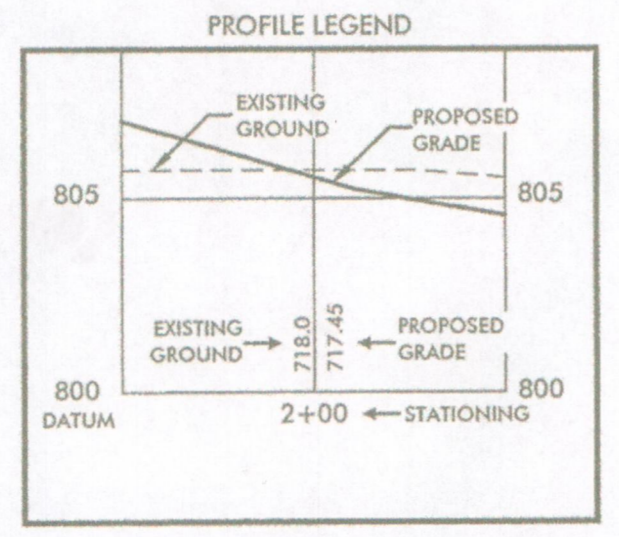
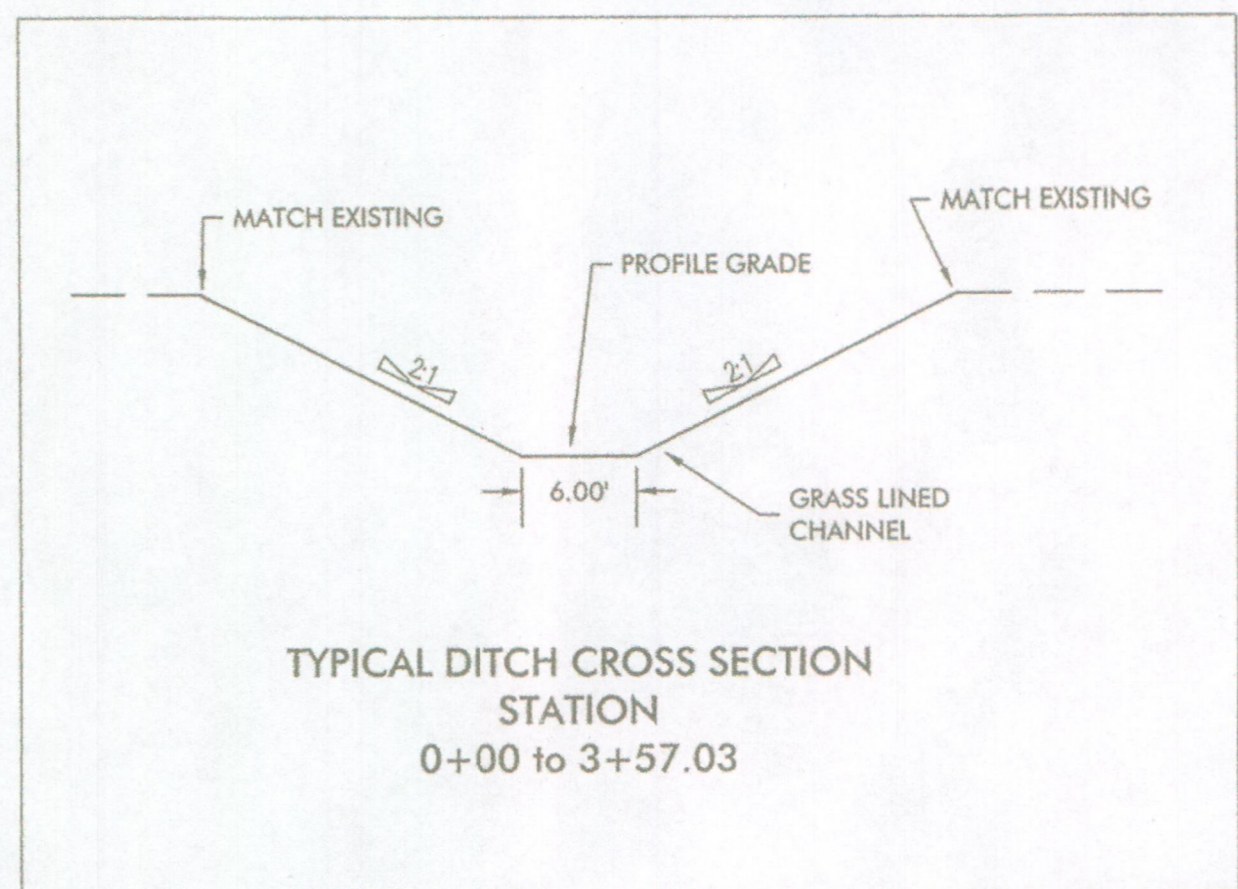
THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR SURVEYOR LOCATION REPORT

EXISTING LEGEND	
---	EASEMENT LINE
W	WATER
---	PROPERTY LINE
TB	TOP OF BANK
TS	TOE OF SLOPE
OHE	OVERHEAD ELECTRIC
UGE	UNDERGROUND ELECTRIC
GAS	GAS
UGT	UNDERGROUND TELEPHONE
UGC	UNDERGROUND CATV
OHE	OVERHEAD ELECTRIC
SAN	SANITARY
FO	FIBER OPTIC
X	FENCE

PROPOSED LEGEND	
TB	TOP OF BANK
TS	TOE OF SLOPE
o o	FLOW LINE
DL	DAYLIGHT POINT
---	CONSTRUCTION LIMITS
(0-2/3)	DETAIL/SHEET REFERENCE
(1)	REMOVE EXISTING IMPROVEMENT



AS-BUILT RECORD DRAWING E.E. CORNTHWAITE



PLAN VIEW SCALE: 1"=40'
 PROFILE VIEW HORIZONTAL SCALE: 1"=40'
 VERTICAL SCALE: 1"=4'

HAMILTON COUNTY, INDIANA

HAMILTON COUNTY SURVEYOR'S OFFICE
 HAMILTON COUNTY GOVERNMENT/JUDICIAL CENTER
 ONE HAMILTON COUNTY SQUARE, SUITE 188
 NOBLESVILLE, IN 46060
 PHONE: (317) 776-8495
 FAX: (317) 776-9628
 SURVEYOR@HAMILTONCOUNTY.IN.GOV

PROJECT NO: 05-16
 WATERSHED NO: 64
 FIELD BY: SF
 DRAWN BY: GD
 CHECKED BY: JL
 DATE: 06/30/16

BY: _____
 DATE: _____
 REVISIONS: _____

GARY R. DUNCAN, JR., P.E.
 REGISTERED PROFESSIONAL ENGINEER
 CERTIFIED BY: *[Signature]*

PROJECT NAME: EE Cornthwaite Reconstruction
AS-BUILT RECORD DRAWING
 Plan & Profile
 SHEET NO. 1 OF 4
 PLOT DATE: Mar 20, 2018 - 11:58 am

S:\E-Surv\Projects\Regulated Drains\EE_Cornthwaite_Drain\Civil\BD\Production Drawings\EE_Cornthwaite_2016_Production_Sheets.dwg