CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR THE REPLACEMENT OF:

HAMILTON COUNTY BRIDGE NO. 305
241ST STREET over SUGAR RUN CREEK
WHITE RIVER TOWNSHIP
HAMILTON COUNTY, INDIANA

PB-13-0009

Sherly George, PE

Prepared by: SJCA, P.C.
9102 North Meridian Street, Suite 200
Indianapolis, Indiana 46260

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NOTICE TO BIDDERS

Notice is hereby given that the Board of Commissioners of Hamilton County, Indiana; hereinafter referred to as the *OWNER*, will receive sealed bids for the following project:

Replacement Plans For
Small Structure No. 33008 (Bridge No. 305)
241st Street over Sugar Run
White River Township
Hamilton County, Indiana
PB-13-0009

Proposals may be forwarded individually by registered mail or delivered in person, addressed to the Hamilton County Auditor, 33 North 9th Street, Suite L21, Noblesville, Indiana, 46060, until **11:30 a.m., February 26**, **2018**. After 11:30 a.m. they can be delivered to the Auditor in the Hamilton County Commissioners Courtroom up to the time of the noticed bid opening. Only proposals from those *CONTRACTOR*S who are registered on the Indiana Department of Transportation's current listing of Prequalified Contractors for item D(A) "Bridges: Highway Over Water" will be considered. Any bids submitted by *CONTRACTORS* not approved for this item on the list will be returned to the bidder unopened.

All proposals will be considered by the *OWNER* at a public meeting held in the Hamilton County Government & Judicial Center in Noblesville, Indiana, Commissioners' Courtroom, and opened and read aloud at **1:00 p.m. local time, February 26, 2018**.

The work to be performed and the proposals to be submitted shall include a bid for all general construction, labor, material, tools, equipment, taxes, permits, licenses, insurance, service costs, etc. incidental to and required for this project.

All materials furnished and labor performed incidental to and required by the proper and satisfactory execution of the contracts to be made, shall be furnished and performed in accordance with requirements from the drawings and specifications included in these documents. Bidding documents may be examined at SJCA, P.C., 9102 N. Meridian Street, Suite 200, Indianapolis, Indiana, 46260, beginning at 9:00 am. on **February 1, 2018**. Electronic copies of the Proposal, Specifications, Contract Documents and Plans must be obtained from Reprographix (http://reprographix.com/) or contact Sherly George, P.E. at sgeorge@sjca-pc.com for further information. **Cost for obtaining the Contract Documents from SJCA P.C. will be $75.00 and made payable to SJCA (by check only). Cost for obtaining the Contract Documents from Reprograhix will be around $75.00 without tax.** Payments and costs of Contract Documents are non-refundable. Interested parties can view the Contract Documents online at www.hamiltoncounty.in.gov. Documents posted on the county website are for informational purposes only. It shall be the responsibility of the individual to periodically check for addendums posted online. Contract Documents and Plans must be obtained through Reprographix or SJCA P.C. to be eligible to bid on this contract.

Each proposal must be enclosed in a sealed envelope with the county supplied sealed bid notice, bearing the title of the project, bid opening date and the name and address of the bidder firmly affixed. **The bidder shall affix identifying tabs to the following sheets of each proposal:**

- **Form 96**
- **Non-Collusion Affidavit**
- **Bid Bond**
- **Financial Statement**
- **Itemized Proposal**
- **Receipt of Addendum (if applicable)**
- **Employment Eligibility Verification**
- **Drug Testing Program Compliance**

Each individual proposal shall be accompanied by a certified check or acceptable ***Bidder's Bond,*** made payable to the Hamilton County Auditor, in a sum of not less than ***ten percent*** of the total amount of the proposal, which check or bond will be held by the said Hamilton CountyAuditor as evidence that the bidder will, if awarded a contract, enter into the same with the *OWNER* upon notification from him to do so within ten days of said notification. Failure to execute the contract and to furnish performance bond to Hamilton County, Indiana, will be cause for forfeiture of the amount of money represented by the certified check, or bidder's bond, as and for liquidated damages. Form 96, as prescribed by the Indiana State Board of Accounts, shall be properly completed, and submitted with bid proposals. The Commissioners at their discretion reserve the right to waive any and all informalities in the bidding. All bids submitted shall be valid for 90 days from the opening of the bids.

Robin M. Mills
Hamilton County Auditor

Dated: January 26, 2018
Noblesville Times: **February 1st, 2018 and February 8th, 2018**

< NOTICE >

Sealed Bid Documents shall contain on the outside of the sealed envelope the following label:

SEALED BID DOCUMENTS

(To be completed by bidder before submission)

Equipment Type _____

Annual Bid Category #
Road Contract # / Bridge #
(Desc.) _____

(Circle One)

Name of Bidder: _____

Bid Opening Date: _____

Other Documents Enclosed:

Bid Bond	(Y)	(N)
Certified Check	(Y)	(N)
Form HC BID 06 / 03	(Y)	(N)
Form 96	(Y)	(N)
Other	_____	

For Hamilton County Use Only!
Received by the Auditor

File Stamp

Time Received: _____

All mailer packers will be opened upon receipt. Make sure the sealed envelope is contained within.

< NOTICE >

PROPOSAL

To the Board of County Commissioners of Hamilton County, of the State of Indiana; hereinafter referred to as OWNER:

Hamilton County Bridge No. 305
241st Street over Sugar Run Creek
White River Township
Hamilton County, Indiana

Pursuant to the legal notice that sealed proposals for the above project would be received by the Board of County Commissioners of Hamilton County, Indiana,

The undersigned hereby tenders this bid to construct the work in accordance with the plans, profiles, drawings, specifications, and all authorized revisions for this contract which are on file in the office of the Hamilton County Highway Department; and to furnish all necessary machinery, equipment, tools, labor and other means of construction and to furnish all material specified in the manner and at the time prescribed and under the supervision and direction of the OWNER or his duly authorized representative and pursuant to the terms of the **Performance Bond** and the **Payment Bond** in the amount of not less than **One Hundred Percent (100%)** of the amount of the Proposal, for the unit prices given on the attached Itemized Proposal dated _____.

Together with this PROPOSAL, the undersigned has:

A. Filed an Acknowledgment of Receipt of Addendum herewith for each Addendum issued;

B. Filed an Itemized Proposal with a unit price for each item listed, together with a total amount for all items, based upon the unique characteristics of this contract;

C. Executed the Form No. 96 filed herewith;

D. Filed a properly executed Bid Bond or certified check made payable to the Hamilton County Auditor herewith in an amount greater than or equal to ten percent (10%) of the total amount of this proposal;

E. Executed the Non-Collusion affidavit filed herewith;

F. Executed the Legal Status of Bidder Form filed herewith;

G. Filed a current Financial Statement herewith;

H. Filed an Employment Eligibility Verification Form herewith.

If awarded the contract, the undersigned promises to prosecute the work so as to complete the contract within the time specified in the Special Provisions.

Witness our hands this_____day of_____, 20 .

Firm Name _____

Address _____

By: _____
(Signature)

Name: _____
(Printed)

Title: _____
(Printed)

ITEMIZED PROPOSAL
Hamilton County Bridge #305
White River Township Hamilton County, Indiana

PAY ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION
1	CONSTRUCTION ENGINEERING	1.0	LSUM		
2	MOBILIZATION AND DEMOBILIZATION	1.0	LSUM		
3	CLEARING RIGHT OF WAY	1.0	LSUM		
4	PRESENT STRUCTURE, REMOVE	1.0	LSUM		
5	PIPE, REMOVE {30 IN. X 48 IN.}	31.0	LFT.		
6	SIDEWALK CONCRETE REMOVE	18.0	SYS		
7	FARMFIELD FENCE, REMOVE	387.0	LFT.		
*8	EXCAVATION, COMMON	1874.0	CYS.		
*9	EXCAVATION, UNCLASSIFIED	1245.0	CYS.		
*10	EXCAVATION, WATERWAY	188.0	CYS.		
11	SEDIMENT, REMOVE	141.0	CYS.		
12	TEMPORARY CHECK DAM, REVETMENT RIPRAP	48.0	TON		
13	TEMPORARY CHECK DAM, REVETMENT RIPRAP {MODIFIED}	50.0	TON		
14	TEMPORARY INLET PROTECTION	4.0	EACH		
15	TEMPORARY SILT FENCE	1829.0	LFT.		
16	NO. 2 STONE	100.0	TON		
17	TEMPORARY FILTER STONE	19.0	TON		
18	TEMPORARY GEOTEXTILE	252.0	SYS		
19	TEMPORARY SEED MIXTURE	350.0	LBS		
20	TEMPORARY CONCRETE WASHOUT BASIN	1	LSUM		
*21	SUBGRADE TREATMENT, TYPE II	6771.0	SYS		
*22	COURSE AGGREGATE NO. 8	1691.0	CYS.		
23	GEOGRID, TYPE IA	185.0	SYS.		
24	COMPACTED AGGREGATE NO. 53	1059.0	TON		
25	MILLING, TRANSITION	454.0	SYS		
26	HMA, SURFACE, TYPE A	481.0	TON		
27	HMA, INTERMEDIATE, TYPE A	765.0	TON		
28	HMA, BASE, TYPE A	1876.0	TON		
29	JOINT ADHESIVE, SURFACE	2206.0	LFT.		
30	JOINT ADHESIVE, INTERMEDIATE	2456.0	LFT.		
31	ASPHALT FOR TACK COAT	3.0	TON		
32	GUARDRAIL, TERMINAL SYSTEM, W-BEAM CURVED, 3	1.0	EACH		
33	GUARDRAIL, TRANSITION, TGS-1	4.0	EACH		
34	GUARDRAIL, END TREATMENT, OS	3.0	EACH		
35	GUARDRAIL, W-BEAM, 6 FT 3 IN. SPACING	93.75	LFT.		
36	CURB AND GUTTER, B, CONCRETE	483.0	LFT.		
37	CURB AND GUTTER, TURNOUT COMBINED MODIFIED	2.0	EACH		
38	HMA FOR APPROACHES, TYPE B	133.0	TON		
39	MAILBOX ASSEMBLY, SINGLE	4.0	EACH		
40	RIGHT-OF-WAY MARKER	29.0	EACH		
41	MONUMENT, B	2.0	EACH		
42	BENCH MARK POST	1.0	EACH		
43	GEOTEXTILES, TYPE 1A	1851.0	SYS		
*44	HIGH STRENGTH GEOTEXTILE, MIRAFI	4813.0	SYS		
45	RIPRAP, CLASS 1	358.0	TON		
46	RIPRAP, REVETMENT	619.0	TON		
47	RIPRAP, UNIFORM	138.0	TON		

* Paid per planned

48	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	2.0	EACH		
49	MULCHED SEEDING R	6572.0	SYS		
50	FERTILIZER	0.5	TON		
51	EROSION CONTROL BLANKET	6572.0	SYS		
52	CONCRETE, A, SUBSTRUCTURE	6.1	CYS.		
53	REINFORCING BARS, EPOXY COATED	2355.0	LBS		
54	CONCRETE, C, SUPERSTRUCTURE	18.2	CYS.		
55	RAILING, STEEL TS-1	46.0	LFT.		
56	STRUCTURAL MEMBER, CONCRETE, BOX BEAM, 12 IN. X 36 IN.	303.0	LFT.		
57	SURFACE SEAL (920 SFT.)	1.0	LSUM		
58	STRUCTURE, REINFORCED CONCRETE, BOX SECTIONS, 16 FT. X 4 FT.	62.0	LFT.		
59	PIPE, REINFORCED CONCRETE, 18 IN.	158.0	LFT.		
60	PIPE, CPP, 4 IN.	10.0	LFT.		
61	PIPE, TYPE 4, CIRCULAR, 6 IN.	300.0	LFT.		
62	PIPE, TYPE 4, CIRCULAR, 8 IN.	20.0	LFT.		
63	PIPE, TYPE 4, CIRCULAR, 10 IN.	20.0	LFT.		
64	PIPE, TYPE 4, CIRCULAR, 12 IN.	20.0	LFT.		
65	PIPE, TYPE 2, CIRCULAR, 12 IN.	348.0	LFT.		
66	PIPE, TYPE 4, CIRCULAR, 4 IN.	300.0	LFT.		
67	PIPE, TYPE 4, CIRCULAR, 15 IN.	20.0	LFT.		
68	PIPE, TYPE 3, CIRCULAR, 15 IN.	94.0	LFT.		
69	PIPE, TYPE 4, CIRCULAR, 18 IN.	20.0	LFT.		
70	PIPE END SECTION, DIAMETER 12 IN.	1.0	EACH		
71	PIPE END SECTION, DIAMETER 15 IN.	4.0	EACH		
72	MANHOLE (FOR 12 IN. – 24 IN. DIA. PIPES)	2.0	EACH		
73	INLET, B15	1.0	EACH		
74	INLET, C15	2.0	EACH		
75	CATTLE GUARD, CONCRETE	1.0	EACH		
76	LEVELING PAD, CONCRETE	188.0	LFT.		
77	MODULAR BLOCK WALL {SPLIT FACE}	2505.0	SFT.		
78	MODULAR BLOCK {SOLID, RED}	332.0	SFT.		
79	MODULAR BLOCK WALL ERECTION	2837.0	SFT.		
80	ROAD CLOSURE SIGN ASSEMBLY	8.0	EACH		
81	DETOUR ROUTE MARKER ASSEMBLY	22.0	EACH		
82	CONSTRUCTION SIGN, A	15.0	EACH		
83	MAINTAINING TRAFFIC	1.0	LSUM		
84	BARRICADE, III-A	96.0	LFT.		
85	BARRICADE, III-B	96.0	LFT.		
86	SIGN, SHEET, REMOVE	11.0	EACH		
87	TEMPORARY TRANSVERSE MARKINGS WHITE STOP LINE 24 IN	116.0	LFT.		
88	LINE, PAINT, BROKEN, YELLOW, 4 IN.	62.0	LFT.		
89	LINE, PAINT, SOLID, WHITE, 4 IN.	3792.0	LFT.		
90	LINE, PAINT, SOLID, YELLOW, 4 IN.	5800.0	LFT.		
				TOTAL	0.00

SUBMITTED BY: _____

ADDRESS:_____

TELEPHONE:_____

DATE:_____

BID BOND

KNOWN BY ALL PERSONS BY THESE PRESENTS THAT THE UNDERSIGNED:

BIDDER: _____

as principal, and

SURETY: [Name] _____

[Address] _____

_____

as Surety,

are firmly bound unto Hamilton County, Indiana in the full and just sum of an amount equal to TEN PERCENT of the amount of the Principal's bid, to the payment of which, well and truly to be made, we bind ourselves jointly and severally, and our joint and several heirs, executors, administrators and assigns, firmly by these presents.

THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE SUCH THAT, whereas, the Principal is herewith submitting a bid and proposal for construction and completion of this contract in accordance with plans and specifications, which are made part of this bond;

NOW, THEREFORE, if Hamilton County shall award the Principal the contract and the Principal shall promptly, enter into contract with Hamilton County, then this obligation shall be void; otherwise to remain in full force, virtue, and effect.

IT IS AGREED that no modifications, omissions, or additions in or to the terms of such contract or in or to the plans or specifications therefore shall affect the obligation of such sureties on this bond.

IN WITNESS WHEREOF, we hereto set our hands and seals:

< <BIDDER > >

(Bid Bond)

_____
(Signature)

_____
(Printed)

_____
(Title)

State of Indiana, County of_____, SS:
Before me, the undersigned Notary Public, personally appeared;

_____ As Principal and acknowledged the execution of the above bond on this_____Day of_____, 20 .

My commission Expires: _____

_____ _____
(County of Residence) (Notary Signature & Seal)

< <SURETY > >

(Bid Bond)

_____
(Signature)

_____
(Printed)

_____
(Title)

State of Indiana, County of_____, SS:
Before me, the undersigned Notary Public, personally appeared;

_____ As Principal and acknowledged the execution of the above

bond on this_____Day of_____, 20 .

My commission Expires: _____

_____ _____
(County of Residence) (Notary Signature & Seal)

PAYMENT BOND

KNOWN BY ALL PERSONS BY THESE PRESENTS THAT THE UNDERSIGNED:

BIDDER: _____
as principal, and

SURETY: [Name] _____

[Address] _____

_____

as Surety,

are firmly bound unto Hamilton County, Indiana in the penal sum of an amount equal to ONE HUNDRED PERCENT of the amount of the Principal's bid, to the payment of which, well and truly made, we bind ourselves jointly and severally, and our joint and several heirs, executors, administrators and assigns, firmly by these presents.

THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE SUCH THAT, whereas, the Principal is herewith submitting a bid and proposal for construction and completion of this contract in accordance with plans and specifications, which are made part of this bond;

NOW, THEREFORE, if Hamilton County shall award the Principal the contract for work and the Principal shall promptly enter into contract with Hamilton County, for the work and shall promptly make payments of all amounts due to all Claimants, then this obligation shall be void; otherwise to remain in full force, virtue, and effect. Claimant shall mean any subcontractor, material supplier or the person, firm, or corporation furnishing materials or equipment for or performing labor or services in the prosecution of the work provided in such an agreement, including lubricants, oil, gasoline, coal, and coke, repairs on machinery, and tools, whether consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work.

IT IS AGREED that no modifications, omissions, or additions in or to the terms of such contract or in or to the plans or specifications therefore shall affect the obligation of such sureties on this bond.

IN WITNESS WHEREOF, we hereto set our hands and seals:

< <BIDDER > >

(Payment Bond)

_____
(Signature)

_____
(Printed)

_____
(Title)

State of Indiana, County of_____, SS:

Before me, the undersigned Notary Public, personally appeared;

_____ As Principal and acknowledged the execution of the above

bond on this_____Day of_____, 20 .

My commission Expires: _____

_____ _____
(County of Residence) (Notary Signature & Seal)

< <SURETY > >

_____

(Payment Bond)

_____
(Signature)

_____
(Printed)

_____
(Title)

State of Indiana, County of_____, SS:

Before me, the undersigned Notary Public, personally appeared;

_____ As Principal and acknowledged the execution of the above

bond on this_____Day of_____, 20 .

My commission Expires: _____

_____ _____
(County of Residence) (Notary Signature & Seal)

PERFORMANCE BOND

KNOWN BY ALL PERSONS BY THESE PRESENTS THAT THE UNDERSIGNED:

BIDDER: _____

as principal, and _____

SURETY: [Name] _____

[Address] _____

_____

as Surety,

are firmly bound unto Hamilton County, Indiana in the penal sum of an amount equal to ONE HUNDRED PERCENT of the amount of the Principal's bid, to the payment of which, well and truly made, we bind ourselves jointly and severally, and our joint and several heirs, executors, administrators and assigns, firmly by these presents.

THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE SUCH THAT, whereas, the Principal is herewith submitting a bid and proposal for construction and completion of this contract in accordance with plans and specifications, which are made part of this bond;

NOW, THEREFORE, if Hamilton County shall award the Principal the contract for work and the Principal shall promptly enter into contract with Hamilton County, for the work and shall well and faithfully do and perform the same in all respects according to the plans and specifications and according to the time, terms, and conditions specified in this contract to be entered into, and in accordance with all requirements of law and shall promptly pay all debts incurred by the Principal or a subcontractor in the construction of the work, including labor, service, and materials furnished, and shall remain in effect at least until one year after the date when final payment becomes due, then this obligation shall be void; otherwise to remain in full force, virtue, and effect.

IT IS AGREED that no modifications, omissions, or additions in or to the terms of such contract or in or to the plans or specifications therefore shall affect the obligation of such sureties on this bond.

IN WITNESS WHEREOF, we hereto set our hands and seals:

< <BIDDER > >

_____
(Performance Bond)

_____
(Signature)

_____
(Printed)

_____
(Title)

State of Indiana, County of_____, SS:

Before me, the undersigned Notary Public, personally appeared;

_____ As Principal and acknowledged the execution of the above bond on this_____Day of_____, 20 .

My commission Expires: _____

_____ _____
(County of Residence) (Notary Signature & Seal)

< <SURETY > >

_____
(Performance Bond)

_____
(Signature)

_____
(Printed)

_____
(Title)

State of Indiana, County of_____, SS:

Before me, the undersigned Notary Public, personally appeared;

_____ As Principal and acknowledged the execution of the above

bond on this_____Day of_____, 20 .

My commission Expires: _____

_____ _____
(County of Residence) (Notary Signature & Seal)

NON-COLLUSION AFFIDAVIT

STATE OF_____)
) SS
COUNTY OF_____)

The undersigned contractor, being duly sworn, on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by it, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone, nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding in any way or manner whatever.

BY _____
(Signature)

_____
(Title)

FOR _____
(Firm or Corporation)

Before me, the undersigned Notary Public, personally appeared;

_____ this_____day of_____, 20 .

My commission expires: _____

_____ _____
(County of Residence) (Notary Signature)

LEGAL STATUS OF BIDDER

This Proposal is submitted in the name of:

Firm Name _____

The undersigned hereby designates below his business address to which all notices, directions or other communications may be served or mailed:

Street _____

City _____

State _____ Zip Code _____

The undersigned hereby declares that he has legal status checked below:

( ) INDIVIDUAL
( ) INDIVIDUAL DOING BUSINESS UNDER AN ASSUMED NAME
( ) CO-PARTNERSHIP (The Assumed name of the partnership is registered in the County of_____, Indiana.)
( ) CORPORATION INCORPORATED UNDER THE LAWS OF THE STATE OF_____. The Corporation is:
( ) LICENSED TO DO BUSINESS IN INDIANA
( ) NOT NOW LICENSED TO DO BUSINESS IN INDIANA

The name, titles and home address of all persons who are officers or Partners in the organization are as follows:

NAME AND TITLE	HOME ADDRESS
_____	_____
_____	_____
_____	_____

Signed and Sealed this_____day of_____, 20 .

By: _____
(Signature)

_____
(Printed)

_____
(Title)

Employment Eligibility Certification

This Certification is submitted by the undersigned,_____, as part of the contract with Hamilton County for the project known as_____entered into on the_____day of_____, 20 .

The undersigned affirms under the penalties of perjury that the Contractor does not knowingly employ an unauthorized alien.

The Contractor shall enroll in and verify the work eligibility status of all newly hired employees through the E-Verify program as defined in IC 22-5-1.7-3. The Contractor is not required to participate if the Contractor is self-employed and does not employ any employees.
The Contractor shall not knowingly employ or contract with an unauthorized alien. The Contractor shall not retain an employee or contract with a person that the Contractor subsequently learns is an unauthorized alien.

The Contractor shall require all subcontractors who perform work under its contract, to certify to the Contractor that:

1. The subcontractor does not knowingly employ or contract with an unauthorized alien;
2. The subcontractor has enrolled and is participating in the E-Verify program. The Contractor agrees to maintain this certification at least two years after the term of a contract with a subcontractor.

The County may terminate the contract if the Contractor fails to cure a breach of this provision no later than thirty (30) days after being notified by the County.

The terms of this Certification shall be incorporated within the contract between the Contractor and the County.

I,_____, verify under the penalties of perjury that the facts set out in the above Employment Eligibility Certification are true.

Witness this_____day of_____, 20___.

Contractor: _____

Address: _____

_____

_____,_____
Signature: Title

_____
Printed Name:

AFFIDAVIT AND WAIVER OF LIEN

□ Final □ Partial □ Payment to Follow

State of Indiana, County of_____SS

_____ Being duly sworn states that he is the_____of
(Name of Officer) (Title)
_____ having contracted with_____to furnish

certain materials and/or labor as follows_____
(Description)
for the project known as _____

located at_____and owned by_____Hamilton County_____
(Owner)
and does hereby further state on behalf of the aforementioned subcontractor/supplier:

(PARTIAL WAIVER) that there is due from the *CONTRACTOR* the sum of

_____ Dollars ($_____)

( ) receipt of which is hereby acknowledged; or
( ) the payment of which has been promised as the sole consideration of this affidavit and Partial Waiver of Lien which is given solely with respect to said amount and which waiver shall be effective only upon receipt of payment thereof by the undersigned:

(FINAL WAIVER) that the final balance due from the *CONTRACTOR* is the sum of

_____ Dollars ($_____)

( ) receipt of which is hereby acknowledged or
( ) the payment of which has been promised as the sole consideration for the Affidavit and Final Waiver of Lien which shall become effective upon receipt of such payment

THEREFORE, the undersigned waives and releases unto the OWNER of said premises, any and all lien or claim whatsoever on the above-described property and improvements thereon on account of LABOR or material or both, furnished by the undersigned thereto, subject to limitations or conditions expressed herein, if any; and further certifies that no other party has any claim or right to a lien on account of any work performed or material furnished to the undersigned for said project, and within the scope of this affidavit and waiver.

_____By_____Title_____
(Firm) (Authorized Representative)

WITNESS MY HAND AND NOTARIAL SEAL this_____day of_____ 20___

_____
(Notary Public)

_____
(Printed)

My Commission Expires _____

Residing in_____County

CERTIFICATION LETTER

TO BE COMPLETED BY ALL SUB-CONTRACTORS AND MATERIAL SUPPLIERS

Reference:

HAMILTON COUNTY BRIDGE NO. 305
241st STREET OVER SUGAR RUN CREEK
WHITE RIVER TOWNSHIP
HAMILTON COUNTY, INDIANA

We hereby certify that we have examined the Contract Plans and Specifications for this project and that all materials and workmanship will be in strict compliance therewith.

Company Name _____

Address _____

_____

By _____
(Signature)

_____
(Printed)

_____
(Title)

Date _____

Describe Item of work or material to be furnished:

_____

_____

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GENERAL PROVISIONS

GP1. **CONTRACT DOCUMENTS**

The Indiana Department of Transportation, Standard Specifications dated 2018 shall be used in conjunction with these Plans, Contract Forms, General Provision, Special Provisions, Modifications to the Specifications, Standard Sheets and any addenda which may be issued for this project.

It is the intent of these Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance therewith. Any work, materials or equipment that may reasonably be inferred will be supplied whether or not specifically called for.

Wherever reference is made to the Indiana Department of Transportation, Director, or Chief Highway Engineer, it shall be interpreted as the Board of County Commissioners of Hamilton County, Indiana.

GP2. **OWNER**

The Board of County Commissioners of Hamilton County, Indiana

GP3. **ENGINEER**

The Hamilton County Highway Engineer or his authorized representative.

GP4. **CONTRACTOR**

The Firm or Corporation with whom the *OWNER* has entered into the Construction Contract.

GP5. **BIDDING RESTRICTIONS FOR BRIDGE 305**

Only bids from those *CONTRACTORS* who are currently registered on the Indiana Department of Transportation's listing of Prequalified Contractors for item D(A) "Bridges: Highway Over Water" will be considered. *Any bids submitted by CONTRACTORS not on this list will be returned to the bidder unopened.*

GP6. **EXAMINATION OF THE PROJECT SITE**

Before the bid date, all bidders shall carefully and thoroughly examine the entire site of the proposed work and adjacent premises and the various means of approach and access thereto by means of a site inspection visit, and make all necessary investigations to inform themselves thoroughly as to the facilities necessary for delivering, placing, and operating the necessary construction equipment, and for delivering and handling materials at the site, and shall inform themselves thoroughly as to any and all actual or potential difficulties, hindrances, delays, and constraints involved in the commencement, prosecution and completion of the proposed work in accordance with the requirements of this contract. The *CONTRACTOR*, by the execution of the Contract, shall in no way be relieved of any obligation under it, due to his failure to receive or examine any form or legal instrument, or to visit the site and acquaint himself with the conditions there existing. The *OWNER* will be justified in rejecting any claim based on facts which he should have noticed as a result thereof.

GP7. **CONTRACT QUESTIONS**

Submit all questions in writing to SJCA P.C. prior to ***9:00 a.m. local time February 22, 2018.*** A written response will be faxed and mailed to the addresses on the "Record of Plans Purchased" that is required to be filled out by anyone purchasing plans. No questions will be answered by telephone.

GP8. **PUBLIC OPENING OF BIDS**

Bids will be opened publicly and read aloud at the time and place specified in the "Notice to Bidders". Bidders, or their authorized agents, are invited to be present. Any Bids received after the time specified in the "Notice to Bidders" will be returned to the bidder unopened.

GP9. **AWARD OF CONTRACT**

The *OWNER* reserves the right to reject any or all bids or to waive any informalities and to accept the bid which it deems favorable to the interest of the *OWNER* after all bids have been examined and scrutinized.

GP10. **NOTICE TO PROCEED**

Notice to Proceed will be issued after May 1st, 2018. The *CONTRACTOR* shall start to perform the work on the date designated in the written Notice to Proceed, but no work shall be done at the site prior to the date of the Notice to Proceed.

GP11. **PRECONSTRUCTION CONFERENCE**

Before the *CONTRACTOR* is issued Notice to Proceed, a conference attended by the *OWNER, ENGINEER, CONTRACTOR* and others as appropriate will be held. The purpose of this conference will be to discuss procedures for making submittals, processing applications for payment, and to establish other procedures and understandings bearing upon coordination and performance of the work.

GP12. **PROGRESS SCHEDULE**

Within ten days after the date of the Notice to Proceed, the *CONTRACTOR* shall submit to the *ENGINEER* for review a proposed schedule indicating the starting and completion dates of the various stages of the work to be performed under this contract. The *ENGINEER* shall review the proposed schedule to determine conformity with the contract and will make recommendations to the *OWNER* concerning approval thereof; however the review, approval or other action taken by the *ENGINEER* or *OWNER* in respect of such schedules shall not relieve the *CONTRACTOR* of its obligations to perform the work within the contract schedule(s).

GP13. **SUPERVISION**

The *CONTRACTOR* shall supervise and direct the work completely and efficiently devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents.

GP14. **RESIDENT SUPERINTENDENT**

The *CONTRACTOR* shall keep on the work site at all times during its progress, a competent resident superintendent, who shall not be replaced without written notice to the *ENGINEER* except under extraordinary circumstances. The superintendent will be the *CONTRACTOR's* representative at the site and shall have authority to act on behalf of the *CONTRACTOR.* All communications given to the superintendent shall be as binding as if given to the *CONTRACTOR*.

GP15. **PROJECT STAFFING**

The *CONTRACTOR* shall provide competent, suitably qualified personnel to survey and lay out the work and perform construction as required by the Contract Documents. The *CONTRACTOR* shall at all times maintain good discipline and order at the site.

GP16. **NOTIFICATION OF WORK SCHEDULE**

The *CONTRACTOR* shall provide a listing of the next work day's work activities by 12:00 p.m. of that day's work for the *ENGINEER'S* scheduling and inspection. All work scheduled for Monday shall be provided on Friday of the preceding week.

Failure to provide such notice within the specified time may result in the failure of the *ENGINEER* to pay for any material placed that day.

GP17. **PROJECT RESPONSIBILITY**

Unless otherwise specified in the Contract Documents, the *CONTRACTOR* shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, and sanitary facilities and all other facilities and incidentals necessary for the furnishing, performance, start-up, and completion of the work.

GP18. STANDARDS OF QUALITY

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for in the Contract Documents shall expressly run for the benefit of the *OWNER*. If requested by the *ENGINEER*, the *CONTRACTOR* shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

GP19. WARRANTY OF WORK

The *CONTRACTOR* warrants and guarantees to the *OWNER* that all work will be performed, supplied, furnished and installed, and that the work will perform in strict accordance with the Contract Documents and will not be defective. Notice of all work determined or suspected to be defective or not in conformity with the Contract Documents shall be given to the *CONTRACTOR* one year from final payment.

GP20. INSPECTION OF WORK

The *ENGINEER* and his representatives shall at all times have access to the work wherever it is in preparation or progress and the *CONTRACTOR* shall provide proper facilities for such access and for inspection.

If the specifications, the *ENGINEER's* instructions, laws, ordinances or any public authority require any work to be specially tested or approved, the *CONTRACTOR* shall give the *ENGINEER* timely notice of its readiness for inspection and, if the inspection is by an authority other than the *ENGINEER*, the date fixed for such inspection. If any work should be covered up without the approval or consent of the *ENGINEER*, it must, if required by the *ENGINEER*, be uncovered for examination at the *CONTRACTOR'S* expense.

Re-examination of questioned work may be ordered by the *ENGINEER* and if so ordered the work must be uncovered by the *CONTRACTOR*. If such work is found to be in accordance with the Contract Documents, the *OWNER* shall pay the cost of the re-examination and replacement. If such work is not found to be in accordance with the Contract Documents, the *CONTRACTOR* shall pay the cost, unless he shows that the defect in the work was caused by another *CONTRACTOR*, and in that event the *OWNER* shall pay the cost of the re-examination and replacement.

GP21. CHANGES IN THE WORK

The *OWNER*, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract Sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

In giving instructions, the *ENGINEER* shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the work, but otherwise, except in an emergency endangering life or property, not extra work or change shall be made unless in pursuance of a written order from the *OWNER* signed or countersigned by the *ENGINEER*, or a written order from the *ENGINEER* stating that the *OWNER* has authorized the extra work or change, and no claim for an addition to the contract sum shall be valid unless so ordered. The value of any such extra work or change shall be determined in one or more of the following ways:

(a) By estimate and acceptance in a lump sum
(b) By unit prices named in the contract or subsequently agreed upon
(c) By cost and percentage or by cost and a fixed fee

If none of the above methods is agreed upon, the *CONTRACTOR* provided he receives an order as above, shall proceed with the work. In such case and also under case (c), he shall keep and present in such form as the *ENGINEER* may direct, a correct account of the cost, together with vouchers. In any case, the *ENGINEER* shall certify to the amount including reasonable allowance for overhead and profit,

due to the *CONTRACTOR*. Pending final determination of value, payments on account of changes shall be made on the *ENGINEER's* certificate.

Should conditions encountered below the surface of the ground be at variance with the conditions indicated by the drawings and specifications, the contract sum shall be equitably adjusted upon claim by either party made within a reasonable time after the first observance of the conditions.

GP22. DELETION OF WORK

The *OWNER* has the right to delete any items that are a part of this contract.

GP23. DELAY AND EXTENSION OF TIME

If the *CONTRACTOR* should be delayed at any time in the progress of the work by and act or neglect of the *OWNER* or the *ENGINEER*, or of any employee of either, or by any separate *CONTRACTOR* employed by the *OWNER*, or by changes ordered in the work, or by strikes, lockouts, fire, unusual delay in transportation, unavoidable casualties or any causes beyond the *CONTRACTOR'S* control, or by delay authorized by the *ENGINEER* pending arbitration, or by any cause which the *ENGINEER* shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the *ENGINEER* may decide.

No such extension shall be made for delay occurring more than seven days before claim therefore is made in writing to the *ENGINEER*. In the case of continuing cause of delay, only one claim is necessary.

GP24. HOLIDAYS THAT WORK IS NOT PERMITTED

The *CONTRACTOR* may not perform work on this project on the following days without written permission from the *ENGINEER*:

1) Sundays
2) New Year's Day
3) Memorial Day
4) Independence Day
5) Labor Day
6) Thanksgiving Day and the day after Thanksgiving
7) Christmas Day

GP25. PERMITS

All permits and licenses which may be required due to construction methods such as, but not limited to, borrow or disposal pits, stream crossings, causeways, work bridges, cofferdams, etc., but which are not part of the contract documents shall be procured by the *CONTRACTOR* prior to beginning the work which requires the permit.

All charges, fees, and taxes shall be paid, and all notices necessary and incidental to the due and lawful prosecution of the work shall be given.

GP26. UTILITIES

The *CONTRACTOR* shall be responsible for contacting and coordinating with all utilities affected by this project. Contract working days will be charged unless the *CONTRACTOR* can show written evidence that he is making every possible effort on his part to get the utility work completed.

GP27. NON-DISCRIMINATION

In compliance with the Acts of Indiana General Assembly, 1933, Chapter 270, the *CONTRACTOR* hereby agrees:

That with respect to hire, tenure, terms, conditions, or privileges of employment of employees for the performance of work, under this Contract, or any Subcontract hereunder, no *CONTRACTOR*, Subcontractor, nor any person acting on behalf of such *CONTRACTOR* or subcontractor shall, by reason of race, color, religion, sex, national origin, or ancestry discriminate against any citizen qualified to do work to which the employment relates;

That no *CONTACTOR*, Subcontractor, nor any person on his behalf shall, in any manner, discriminates against or intimidate any employee hired for the performance or work under this Contract on account of race, color, religion, sex, national origin, or ancestry;

That this Contract may be canceled or terminated by the *OWNER*, and all money due or to become due hereunder may be forfeited for a violation of the terms or conditions of this section of the Contract.

GP28. <u>INSURANCE</u>

Contractor's Liability Insurance

The *CONTRACTOR* shall maintain such insurance as well as protect himself from claims under Workmen's Compensation Acts and other employee benefit acts; from claims for damages because of bodily injury, including death, to his employees and all others; and from claims for damages to property, any or all of which may arise out of or result from the *CONTRACTOR'S* operation under the Contract, whether such operations be by himself or by any subcontractor, or anyone directly or indirectly employed by either of them. This insurance shall be written for not less than any limits of liability specified herein.

Contractor's Insurance

The types and minimum amount of insurance to be provided for by the *CONTRACTOR* shall be as follows:

(A) Workmen's Compensation and Occupational Disease Insurance

The *CONTRACTOR* shall provide Workmen's compensation and Occupational Disease Insurance as required by law. Such policy shall specifically include coverage for the State of Indiana, and such adjoining states as required by the *COTNRACTOR'S* operations.

(B) Employer's Liability Insurance

The *CONTRACTOR* shall provide Employer's Liability with minimum limits as follows:

$100,000 bodily injury by accident, each accident;
$100,000 bodily injury by disease, each employee;
$500,000 bodily injury by disease, policy limit.

(C) Comprehensive General Liability Insurance

The *CONTRACTOR* shall maintain a Comprehensive General Liability form of Insurance with a combined single limit for bodily injury and property damage of not less than $1,000,000 each occurrence, $2,000,000 annual aggregate. The insurance policy shall include the following:

1. Premises Operations: The policy shall include coverage for the following special hazards when applicable to the project:
   (a) Property damage arising out of blasting or explosion
   (b) Property damage arising out of collapse of or structural injury to any building or structure due to grading of land, excavation, burrowing, filling, backfilling, tunneling, pile driving, cofferdam work or caisson work or to moving, shoring, under pining, raising, or demolition of any building or structure or rebuilding of any structural support thereof.

(c) Injury to or destruction of wires, conduits, pipes, mains, sewers, and other similar property of any apparatus in connection therewith below the surface of ground, if caused by use of mechanical equipment.

2. Contractual (Broad Form Indemnification): The *CONTRACTOR* agrees to indemnify and save harmless the *OWNER*, his agents and employees, from and against all loss or expense (including costs and attorneys' fees) by reason of liability imposed by law upon the *OWNER* for damages because of bodily injury, including death, at any time resulting therefrom sustained by any person or persons or on account of damage to property is due or claimed to be due to negligence of the *CONTRACTOR*, his Subcontractors, employees or agents.

3. Contractor's Protective: The *CONTRACTOR* shall maintain this type of Coverage on a "Blanket" basis to cover the operations of any Subcontractors.

(D) Automotive Liability Insurance

The *CONTRACTOR* shall maintain Comprehensive Automobile Liability Insurance policy with a combined single limit of not less than $500,000. This coverage may be provided either as a separate policy or as a part of the comprehensive liability policy described above. The automobile insurance must include coverage for all owned, non-owned, and hired vehicles.

(E) Furnish Indiana State Forms No. 19 (Workmen's Compensation) and No. 105 (Occupational Disease Act).

(F) Umbrella Insurance

The *CONTRACTOR* shall maintain an umbrella policy with limits of not less than $1,000,000 per occurrence, $1,000,000 aggregate in addition to their primary insurance.

GP29. <u>ADDITIONAL INSURED</u>

The *CONTRACTOR* shall submit a "Certificate of Insurance" indicating the above necessary coverage as well as naming the *OWNER*, its employees and representatives and *ENGINEER* as "Additional Insured" on all policies except Worker's Compensation.

GP30. <u>PROOF OF INSURANCE</u>

The *CONTRACTOR* shall not commence work until he has obtained all insurance specified herein, has filed with the *OWNER* one (1) copy of Certificate of Insurance, and such insurance has been approved by the *OWNER*.

Should any coverage approach expiration during the Contract period, it shall be renewed prior to its expiration, and certificate again filed with the *OWNER*. If any of such policies are canceled or are changed so as to reduce the coverage evidenced by the Certificate, at least ten (10) days prior written notice by registered mail of such cancellation or change shall be sent to the *OWNER*.

All insurance provided for under this Section shall be written by Insurance Companies licensed to do business in Indiana and countersigned by registered Indiana agent. The insurance company shall file with the *OWNER*, one (1) copy of Affirmation of Authority, on the form furnished by the *OWNER*, as verification of the resident agent.

All insurance shall be maintained in full force and effect until the Contract has been fully and completely performed.

GP31. **PARTIAL PAYMENTS**

Partial payments will be made once each month as the work progresses. Said payments will be based upon estimates prepared by the *CONTRACTOR* using the provided HCHD FORM 8049, and approved by the *ENGINEER* for the value of the work performed and materials complete in place in accordance with the contract, plans and specifications. No partial payment will be made when the amount due the *CONTRACTOR* since the last estimate amounts to less than Five Hundred Dollars. From the total of the amount determined to be payable on a partial payment, ten percent of such total amount will be deducted and retained by the *OWNER* until the final completion and acceptance of the work.

GP32. **FINAL PAYMENT**

When the contract work has been completed in an acceptable manner in accordance with the terms of the contract, the *CONTRACTOR* will prepare a final estimate for the work and will furnish the *ENGINEER* with a copy thereof. Before final payment of the contract, the *CONTRACTOR* shall furnish the provided Affidavit and Waiver of Lien from all subcontractors, material suppliers and equipment suppliers who provided goods and/or services valued at $500.00 or greater. Final payment will not be made until a final inspection has been performed, the work has been accepted by the County and has met the requirements of Section 109.08 of the Indiana Department of Transportation Standard Specifications. The *ENGINEER*, acting for the Board of County Commissioners, will then certify to the County Auditor the balance due the *CONTRACTOR*, and said certificate will be deemed an acceptance of the completed contract by the *OWNER*.

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SPECIAL PROVISIONS

SP1. **CONTRACT TIME**

The schedule for the completion of the work included in this contract including incidentals and clean up, shall be governed on a *Completion Date* basis. Notice to Proceed will be issued after May 1st, 2018.

Project duration for this Contract shall be 120 calendar days.

SP2. **ROAD CLOSURE**

The *CONTRACTOR* shall begin construction operations no earlier than June 4th, 2018.
241st Street shall not be closed more than 120 calendar days. The Fall Road intersection shall not be closed more than 30 calendar days.

The *CONTRACTOR* shall provide the *OWNER* at least three weeks' notice prior to closing the road. In no case shall the road be closed without prior consent from the *OWNER*.

SP3. **LIQUIDATED DAMAGES**

The *CONTRACTOR* shall pay one thousand dollars ($1,000.00) for each calendar day after the Completion Date for failure to complete the work in accordance with this contract. The *CONTRACTOR* shall also pay one thousand dollars ($1,000.00) for each calendar day that the road is closed to traffic after 120 calendar days from start of road closure date. If the *CONTRACTOR* exceeds both allotted time periods simultaneously, the assessed damages will be cumulative.

SP4. **EXISTING CONDITIONS**

The *CONTRACTOR* shall verify the elevation and measurements of all points where new construction is to match existing conditions prior to the commencement of any construction activities.

Where new work is to be fitted to old work, the *CONTRACTOR* shall check all dimensions and conditions in the field and report any errors or discrepancies to the *ENGINEER* or assume responsibility for their correctness and the fit of new parts to old. If such parts do not fit properly, the *CONTRACTOR* shall make such alterations to new parts as may be necessary to assure proper fits and connection, which meets the approval of the *ENGINEER*.

No direct payment shall be made for this work, but the cost thereof shall be included in the costs of other items of the contract.

SP5. **GEOTECHNICAL INVESTIGATION**

A Geotechnical investigation for this project site has been performed by Earth Exploration, INC., Indianapolis, Indiana. This report presents the soil evaluation, Geotechnical recommendations and construction considerations for this project.

A copy of this report in part is included in the Attachments. A complete report will be furnished upon request.

SP6. **CLEARING RIGHT-OF-WAY**

Clearing Right-of-Way shall be in accordance with the requirements of Section 201 except as follows: The initial payment for clearing right-of-way will be limited to 5 percent of the original total bid. If the contract lump sum price for clearing right-of-way is greater than 5 percent of the original total bid, the amount over 5 percent will not be paid until the contract has been completed and accepted.

Trees, brush, and other obstructions shall be cleared from the entire construction limits of the project. In addition, trees and brush shall be cleared from land between construction limits and project right-of-way wherever such clearing is necessary to build the project or relocate utilities, subject to any notes on the plans that identify specific trees or areas to remain undisturbed. The cost of tree removal will not be paid for, but shall be included in the lump sum price for "Clearing Right-of-Way."

This item includes the removal of all existing pipes, box culverts, and all other drainage structures in accordance with Section 202, to be removed during this project.

SP7. **SIDEWALK REMOVAL**

Existing concrete steps and sidewalk leading up to the front of residence of Edward E. and Rebeca A. Moore property shall be removed. A right of entry has been signed by the property owner for the removal of the sidewalk outside the right of way limits. The landscaping boulder shall be moved back to the new right of way line. All cost associated with the removal of the steps, sidewalk, hauling of the removed material and relocation of the landscaping boulder shall be included in the cost of the pay item Sidewalk Removal.

SP8. **FARM FIELD FENCE REMOVAL**

The Contractor shall coordinate with the property owner, ABC Runner prior to removal of the existing farm field fence from station 1095+16 to station 1098+35, right. The animals should be secured before removal of the fence and any work on this property. The phone number to contact Mr. Runner is (317) 601-2938.

SP9. **CATTLE GRATE REMOVAL**

Existing cattle grate located at the driveway, Station 1094+88 left shall be replaced or reset. The existing cattle grate can be reset if it is not damaged during construction of the driveway.

SP10. **DISPOSAL OF EXCESS MATERIAL**

All excess material not to be salvaged (waste) shall be removed from the project site. Whether a private or public waste site is utilized, such disposal shall comply with all Federal, State and local ordinances and permit requirements. A copy of all permits obtained or applied for shall be submitted to the *ENGINEER* prior to the material leaving the site.

The *CONTRACTOR* shall submit, in writing, the location of the proposed dump site, for review, prior to the commencement of construction.

No direct payment will be made for this work but the cost thereof shall be included in the costs of the other items of the contract.

SP11. **OPEN BURNING OF NATURAL GROWTH**

Open burning of natural growth will not be permitted on this contract.

SP12. **TREE AND LAWN PROTECTION**

When constructing private drives, the *CONTRACTOR* shall use reasonable care for the protection of trees, shrubbery, and lawn areas beyond the permanent right-of-way.

The cost of the protection or trimming and proper restoration of disturbed areas shall not be paid for directly, but shall be included in the cost of Clearing Right-of-Way.

SP13. **RESTORATION OF DISTURBED AREAS**

Cavities formed by the removal of shrubs, trees and/or stumps and located outside of proposed pavement areas shall be backfilled and compacted with "B" Borrow. Such compaction shall comply with Section 211.04. The top six (6) inches of the backfilled area shall be topsoil in accordance with Section 914.01.

Any roots remaining after all the removal of any designated item shall be removed to a depth of 6 inches below the surface of the surrounding ground area. The final preparation of these areas shall be in accordance with Section 621.

No direct payment shall be made for this work, but shall be included in the cost of other items.

SP14. PRIOR TO CLOSING ROADS TO TRAFFIC

The *CONTRACTOR* is to notify U.S. Post Office, rural fire departments, affected schools, local police agencies and Hamilton County Sheriff's Department, copy to *ENGINEER*. The XG20-5 Closure Signs are to be in place a minimum of ten days prior to the actual closure.

SP15. AFTER OPENING ROADS TO TRAFFIC

The *CONTRACTOR* is to notify the U.S. Post Office, rural fire departments, affected schools, local police agencies and Hamilton County Sheriff's Department, copy to *ENGINEER*.

SP16. DECREASED OR INCREASED QUANTITIES OF WORK

These Special Provisions shall not be considered as a waiver of, nor shall they invalidate the right of the *ENGINEER* to increase or decrease quantities of work.

SP17. TESTING OF MATERIALS

The *CONTRACTOR* shall be responsible for all testing and sampling of materials as hereinafter specified. The *CONTRACTOR* shall furnish certified tests for the following materials, which are to be made by an *independent* laboratory approved by the *ENGINEER*. Testing performed by an agent of a material producer or supplier will not be considered independent. The cost of providing samples and testing will not be paid for directly, but will be included in the cost of other items.

CONCRETE:

Advance Concrete Tests: Concrete tests shall be conducted in accordance with A.S.T.M. Serial Des. C-39, for compliance with the requirements of these specifications.

Slump: For each 25 cubic yards or fraction thereof taken from forms.

Compression: The CONTRACTOR shall have tests made at a testing laboratory that is approved by the Engineer. The CONTRACTOR shall furnish to the Engineer all equipment and facilities necessary to prepare concrete test specimens. Three test cylinders 6" in diameter and 12" high will be made for each 100 cubic yard of each class of concrete or fraction thereof, placed each day. The Contractor shall properly crate and transport the cylinder test specimens to the approved laboratory.

The minimum compressive strength at 28 days shall be:

Class "A" Concrete, 3500 P.S.I.
Class "B" Concrete, 3000 P.S.I.
Class "C" Concrete, 4000 P.S.I.

One of the three test specimens shall be tested at 7 days and the remaining two specimens shall be tested at 28 days.

Concrete test specifications shall be in accordance with AASHTO Des. T-23; cylinder specimens shall be tested in accordance with ASSHTO T-22, and test beams shall be treated in accordance with AASHTO Des. T-97.

If the CONTRACTOR desires to remove forms sooner than as specified in Article 702.13, he shall make 6x6x36 test beams to provide information for stripping forms. Equipment for testing these beams shall be furnished by the CONTRACTOR.

BITUMINOUS MATERIAL:
The CONTRACTOR shall provide proof that all bituminous material used shall be of State tested material and on immediate usage basis. Class D certification required.

REINFORCING STEEL:
The CONTRACTOR shall furnish the ENGINEER with two (2) copies of certified mill test reports. Reinforcing steel shall comply with the requirements set out in Article 910.01. Grade 60 steel shall be used.

FOUNDATION:
The CONTRACTOR shall verify soil bearing capacity meets or exceeds the design capacity at each GRS abutment. Engineer shall determine the location of each test.

SP18. COOPERATION WITH PUBLIC UTILITIES

The Contractor shall notify any utility which might have facilities in the way of the construction two weeks prior to beginning work.

The Contractor's attention is directed to Section 107.20 regarding his responsibility for Utility Properties and Service. No work is to commence until all utility owners have been contacted and the exact location and depth of existing lines has been established and the necessary arrangements for the protection thereof have been made. All work to be performed adjacent to existing lines shall be done in the presence of utility personnel, unless permission is otherwise granted from the particular owner involved.

SP19. UTILITY INFORMATION

All applicable sections for 105.06 and 107.20 shall apply except as amended elsewhere within the contract documents and as follows:

The utilities are beyond the control of the *OWNER*. Coordination with any applicable utility(s) is the sole responsibility of the *CONTRACTOR*.

The following is provided for information only. The *CONTRACTOR* shall contact the following personnel or companies to coordinate his work prior to the commencement of any construction activities:

Utility:

Name, Contact	*Phone*
Duke Energy, Anita Gindling & Brynn Streeter	317-776-5351
Frontier Communications, Steve Costlow	317-984-9010

SP20. PROTECTION OF FIELD TILE

All field tiles encountered and affected by the scope of work specified within the contract documents shall be given a positive outlet. Animal guards are required on the ends of all field tiles. The cost of all animal guards shall be included in the cost of the pipe.

Any tile outside the construction limits damaged by the *CONTRACTOR*'S operations shall be replaced by the *CONTRACTOR* at his own expense.

See Hamilton County Surveyor Drain Outlet Details #1 (Std. Plan O-1) and #2 (Std. Plan O-2) for drain tile outlet and animal guard details.

SP21. BENCHMARK

The *CONTRACTOR* shall install a Hamilton County Geodetic Control benchmark at Bridge #305. This work is to be done in accordance with Section 105.08 and Section 615 of the Standard Specifications. The *CONTRACTOR* shall coordinate with the Hamilton County Surveyor's Office (HCSO) for the location of the benchmark.

The HCSO will provide the *CONTRACTOR* with the new monument to be installed. In addition, the *CONTRACTOR* shall notify the HCSO 30 days prior to construction so that the necessary steps to offset an elevation may be taken.

The cost of all labor, materials and equipment necessary to complete this work shall be included in the cost of the pay item "Benchmark Post, Each."

SP22. FIELD TILE UNDISTRIBUTED

Field tiles encountered and affected by the scope of work specified within the contract documents shall be given positive outlet.

This work shall consist of the extension and repair of existing field tiles as necessary to keep tile in service. Field tile is expected to be uncovered under the pavement in the south west end of the project and it shall be relocated to outside construction limit with proposed right of way line.

Material and construction requirements shall be in accordance with 715 and 719 of the standard specifications.

Pipe will be measured per linear foot of new field tile in place as approved by the Engineer. The accepted quantities of pipe will be paid for at the contract unit price per foot for "Pipe, Type 4, Circular XX in., Undistributed" as listed in the Itemized Proposal. The costs of excavating, backfilling, disposal, planking removal of portions of existing tile, tees, elbows and necessary incidentals shall be included in the cost of work.

SP23. PERMITS

Copies of all permits obtained by the *OWNER* are included as a part of the contract documents. According to the requirements of the governing agencies, the authorizations must be conspicuously displayed at the project site and the *CONTRACTOR* shall perform his work in accordance with the conditions contained in all permits.

Rule 5 Permit NOI is attached. Complete Rule 5 Permit document will be provided upon request.
DNR permit will expire on September 30, 2018; permit renewal has been requested.

The *CONTRACTOR* shall procure all permits and licenses required due to construction methods in accordance with Section 107.02. A copy of each permit application and approval must be provided to the *ENGINEER* prior to issuance of notice to proceed with work which requires the permit.

SP24. IDEM NOTIFICATION FOR STRUCTURE REMOVAL

A bridge asbestos survey was performed by SJCA P.C. The Bridge Asbestos Survey Summary is included in the contract documents for use by the CONTRACTOR. The CONTRACTOR shall complete the Notification of Demolition form and submit it to the Indiana Department of Environmental Management.

The asbestos survey has determined that the existing structure contains no asbestos containing materials as indicated in the asbestos report.

SP25. GUARDRAIL DELINEATORS

This work shall consist of installing Mono and/or Bi-directional traffic Guardrail Delineators furnished by Hamilton County Highway Department and installed by the CONTRACTOR. The ENGINEER shall mark delineator location.

This material is manufactured by AKT Corporation, item No. 567 Triangular Guardrail Delineator. The delineators attach to the existing guardrail hex bolt; no additional material is required.

All labor, equipment, supervision and other related work required to complete this installation shall be included in the cost of other items.

Existing four object markers, located at each corner of the bridge shall be salvaged and handed over to the ENGINEER.

SP26. DEWATERING PLAN

The *CONTRACTOR* shall submit in writing a dewatering plan for the bridge and GRS abutment installation prior to the beginning of work. The plan shall include a sketch showing the proposed location of any temporary pipes, causeways, sumps, etc. as well as text describing the method of handling both low-flow and high-flow conditions. The dewatering plan shall meet all OSHA requirements for safety at all times. Damming of the waterway without a provision for continuous flow in the case of pump failure will not be allowed. The dewatering operations need to be completed in a manner that will not pollute the creek. A pump around detail has been included in the IDEM permit as the dewatering method.

There shall be a pre-construction meeting conducted to discuss dewatering requirements for GRS abutment construction before the project starts. Earth Exploration Inc., the geotech consultant for the project shall be invited to attend the meeting. The excavation area for GRS abutments shall be dewatered to the ground water elevation and the excavation area shall not be left for weekend to avoid collecting rain water.
If permits beyond those obtained in advance by the *OWNER* are required due to the method of dewatering, the *CONTRACTOR* shall obtain the necessary permits and provide copies of the permit applications and approvals to the *ENGINEER*. No work in the channel shall proceed until the *CONTRACTOR* has obtained the necessary permits, and has been directed to proceed by the *ENGINEER*.

All costs related to dewatering the excavation shall be included in the cost of other items.

SP27. PRESENT STRUCTURE REMOVE

The existing structure shall be removed in accordance with section 202.03 of the Standard Specifications. All materials shall become the property of the CONTRACTOR and be removed from the site and properly disposed, unless otherwise approved by the ENGINEER.

SP28. CONCRETE WASHOUT BASIN

A Concrete Washout Basin shall be constructed as shown on the plans, or as directed by the ENGINEER, prior to the placement of any concrete on site. The cost of all material, labor, and equipment necessary for the construction, maintenance, removal and repair of the Concrete Washout Basin will not be measured or paid for directly but will be included in the Lump Sum cost for "Temporary Concrete Washout Basin".

SP29. TEMPORARY EROSION CONTROL MEASURES

An amended Erosion Control Plan shall be submitted in accordance with 327 IAC 15-5 for those areas not included in the Department submittal as necessary for changes initiated by the Contractor. Items to include consist of sequencing of operations, stockpile sites, equipment storage sites, plant sites, and haul roads as well as any revision to the Department's submittal. All appropriate erosion control items shall be in place prior to disturbing the project site. A copy of the amended plan shall be provided to the Engineer.

Borrow and disposal sites shall be in accordance with 203.08.

The Contractor shall submit the planned sequencing of erosion and sediment control measures to be used on the project to:

Hamilton County Soil & Water
Conservation
1717 Pleasant Street
Noblesville, IN 46060

When required by 327 IAC 15-5, stockpile and storage sites shall be permitted by an IDEM Notice of Intent (NOI). The Contractor shall submit either a new IDEM NOI or revise the original NOI for the project. A copy of the new or revised NOI shall be submitted to the Engineer prior to any operations at a stockpile or storage site.

All information shall be submitted and approved prior to land disturbing activities. All appropriate erosion control items shall be in place prior to disturbing the project site. A copy of the amended plan shall be provided to the Engineer.

The Contractor shall designate one or more of its employees *as* an Erosion Control Supervisor. The Erosion Control Supervisor shall be responsible for the preparation, submittal, and ensuring receipt of the approval of the amended erosion control plan. Such individual(s) shall also be responsible for obtaining all other necessary permits including the wetland inspection and archaeological record check and field survey in accordance with 203.08, and for all environmental inspections. Such individual(s) shall also be responsible for obtaining all other necessary permits including the wetland inspection and archaeological record check and field survey in accordance with 203.08, and for all environmental inspections. Such individual(s) shall oversee the installation of all erosion control measures and shall conduct weekly and post-event inspections and perform all other tasks related to the installation, maintenance, and removal of erosion control measures. The Erosion Control Supervisor shall accompany personnel from IDEM or other governmental agencies, as required, during site visits by those agencies. The Erosion Control Supervisor shall be responsible for completion of all reports in accordance with 205.

A minimum of 14 days prior to commencing work, the Contractor shall prepare and submit to the Engineer, for approval, an erosion control plan that includes, at a minimum, the following items:

(a) Locations of all proposed soil stockpiles.

(b) Locations of all proposed equipment storage areas, fueling locations, construction trailers, batch plants, and designated concrete truck washout areas.

(c) Proposed construction sequence and phasing of erosion control measures.

(d) Location of all construction entrances where vehicles and equipment will enter and exit the site.

(e) Material handling and spill prevention plan, which shall include a list of expected materials that may

be present on the site during construction operations, as well as a written description of how these materials will be handled to minimize the potential that the materials may enter the storm water runoff from the site.

(f) Statements that the erosion control measures for the project shall, at a minimum, be inspected on a weekly basis and within 24 hours of every ½ in. (13 mm) rain event.

(g) Monitoring and maintenance plan for erosion control measures.

The erosion control plan shall be signed by the Erosion Control Supervisor. The Engineer will submit the erosion control plan to the Department's Office of Environmental Services Permit Coordinator.

The name of the Erosion Control Supervisor shall be furnished the Engineer at, or prior to, the preconstruction meeting. Should the designated individual(s) need to be replaced during the contract, replacements shall be designated within seven calendar days and notification shall be furnished the Engineer.

Permanent erosion control measures shall be incorporated into the work at the earliest practicable time as the construction progresses to stabilize the site.

In order to minimize pollution to bodies of water, the practices and controls set out below shall be followed.

(a) When work areas are located in or adjacent to bodies of water, such areas shall be separated by a dike or other barrier to keep contained. Sediment disturbance of these bodies of waters shall be minimized during the construction and removal of such barriers.

(b) All waterways shall be cleared as soon as practicable, of false-work, temporary piling, debris, or other obstructions placed during construction operations.

(c) Water from aggregate washing or other operations containing sediment shall be treated by filtration, a settling basin, or other means sufficient to reduce the sediment content.

(d) Pollutants such as fuels, lubricants, asphalt, sewage, wash water, or waste from concrete mixing operations, and other harmful materials shall not be discharged into existing bodies of water.

(e) All applicable regulations and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the contract.

The cost of preparation of the erosion control plan shall be included in the cost of the various erosion and sediment control items.

Temporary erosion control measures shall be placed as soon as possible. Silt fence and sediment traps shall be installed prior to beginning earth disturbing activities.

Temporary seeding shall be placed on disturbed areas that are expected to be undisturbed for over 7 days or as directed by the Engineer.

Check dams shall be installed as soon as possible in areas of construction. Once ditches are to grade, permanent erosion control measures shall be placed as soon as possible and no later than 5 workdays after ditch grading is completed. During construction, if ditch flow patterns change, erosion control measures may need to be moved or adjusted so that no areas are left unprotected. Pipe end sections and anchors shall be placed when the structure is installed. If the pipe end sections or anchors cannot be placed at the same

time, temporary riprap splashpads shall be placed at the outlets of the pipes until the pipe end sections or anchors can be placed.

Stable Construction Entrance
The Contractor shall provide a stable construction entrance at the points where construction traffic will enter onto an existing road. This entrance shall be a minimum of 12 ft. wide, 50 ft. long, and constructed of 12 in. of No. 2 stone. The radii shall be large enough to accommodate the vehicles utilizing the entrance. Additional stone may be required, as directed, to maintain the usefulness of the stable construction entrance. Where there is insufficient room for a stable construction entrance, other measures shall be taken to prevent the tracking of sediment onto the pavement.

Maintenance
Temporary erosion and sediment control measures shall be inspected by the Contractor's Erosion Control Supervisor once every seven days and after each rain activity. Inspections shall be documented and records shall be maintained by the Contractor, to be made available for review upon request. Records shall include, at a minimum, the date, the inspector's name, the maintenance and corrections needed based on this inspection, and the status of previously identified deficiencies. The temporary protection measures shall be returned to good working conditions within 48 hours after inspection or as directed. Sediment shall be removed as approved and disposed of in accordance with 201.03 and 203.08. Inspection records shall be kept until the entire contract is complete and has been permanently stabilized.

No. 2 stone for stable construction entrances will be measured by the ton (megagram) in accordance with 109.01(b).

The cost of constructing, maintaining, and removal of the stable construction entrance shall be included in the cost of No. 2 stone.

SP30. MODULAR CONCRETE BLOCK RETAINING WALL (GRS ABUTMENT SYSTEM)

DESCRIPTION: This work shall consist of design as required, furnishing materials, and placement of modular block wall units in accordance with 105.03.

GENERAL DESIGN REQUIREMENTS: Contractor shall provide a minimum of one week pre-notification prior to starting construction of the GRS wall abutment system. The top of the modular block wall shall be designed to prevent the removal of the top course of blocks. If the wall system provider needs additional information to complete the design, the Contractor shall be responsible for obtaining such information.

The modular block wall design shall follow the general dimensions of the wall envelope shown on the plans. The Contractor may elect to use square corners in lieu of the rounded corners shown on the plans.

The top of the modular block wall unit shall be at or above the top of the wall elevation shown on the plans.

Cast-in-place concrete will not be an acceptable replacement for modular block wall unit areas indicated by the wall envelope.

DESIGN CRITERIA: The maximum modular block wall unit face area shall be 1 sq ft. The minimum depth of modular block wall units shall be 9 in.

SUBMITTALS: The Contractor shall submit working drawings in accordance with 105.02. Wall construction operations shall not begin until the Contractor receives written notice that the working drawings are approved.

(a) The working drawings shall include all details, dimensions, quantities, cross sections, and general notes necessary to construct the wall and shall include, but shall not be limited to the following:

1. Plan and elevation sheets showing views which detail the placing position.
2. Plan sheets of the wall that indicate the offsets from the construction centerline to the face of the wall at all changes in horizontal alignment.

3. Elevation views of the wall which shall include the following:

   i. Elevations at the top of the wall at all horizontal and vertical break points at least every 50 ft along the face of the wall.

   ii. The designation as to the type of modular block wall unit.

   iii. An indication of the original and final ground lines and maximum bearing pressures.

(b) All modular block wall units shall show all dimensions necessary to construct the element and the location of soil reinforcing system devices embedded in the units.

(c) The details for construction of walls around drainage facilities and the outletting of internal drainage from the modular block wall volume.

(d) All details of the architectural treatment, if applicable.

MATERIALS: Materials shall be in accordance with the following:

Admixtures for Concrete*	912.03
Air Cooled Blast Furnace Slag	901.09
Coarse Aggregate, Class A or Higher, Size No. 91	904
Coarse Aggregate, Class D or Higher, Size No. 8	904
Concrete	702
Fine Aggregate, Size No. 23	904
Fly Ash	901.02
Portland Cement	901.01(b)
Water	913.01

* Admixtures in accordance with ASTM C 1372 may be used for the modular block if approved by the Engineer.

Concrete for the leveling pad shall be Class A.

Geotextile shall be Mirafi HP570 or approved equivalent. See Attachments for product data sheet.

(a) Concrete Modular Block Wall Units
Concrete modular block retaining wall units shall be in accordance with ASTM C 1372, except for the modifications below, and shall have a minimum compressive strength of 4,000 psi at 28 days. Modular block wall units utilizing type I or II cement will be considered acceptable for placement in the wall when 7-day strengths exceed 3,500 psi. The modular block wall unit's compressive strength shall be considered acceptable regardless of curing age when compressive test results indicate that the compressive strength is in accordance with the requirements stated above.

Retarding agents, accelerating agents, coloring pigments, or additives containing chloride shall not be used without approval.

If red color is specified, the color additive shall be mixed into the concrete per the manufacturer's recommendations to produce a modular block that is red in appearance, matching Federal Color 31120 or similar.

The Contractor shall submit a sample of the proposed color to the Owner for approval a minimum of two weeks prior to fabrication.

The foam plug shall be expanded polystyrene filler or equivalent, having a compressive strength greater than or equal to 10 pounds per square inch.

(b) Testing and Inspection

1. Table 1, "Strength and Absorption Requirements", shall be modified to require that the average compressive strength, when sampled and tested in accordance with ASTM C 140, of a three CMU compressive strength sample shall be 4,000 psi with no individual unit less than 3,500 psi. Maximum absorption shall be 6%. A Type C Certification in accordance with 916 for the compressive strength shall be submitted to the Engineer prior to use of the blocks.

2. Freeze-thaw durability testing shall be completed in accordance with Section 8.3 by a laboratory approved by the Department. Test results on all mix designs used in the manufacture of modular blocks shall have been completed in accordance with ASTM C 1372. If a change to the mix design, such as proportioning or material source, is desired, the modified mix design shall be retested for freeze-thaw. A Type A Certification in accordance with 916 for the freeze-thaw durability testing shall be submitted to the Engineer prior to use of the blocks.

3. Sampling and testing of the manufacturer's production lots will be conducted by the Engineer in accordance with ASTM C 140. If the compressive strength test result does not meet the requirements of this provision, the production lot units may not be used. The manufacturer may resample the same production lot in the presence of the Engineer for retesting. The Engineer will test the additional samples in accordance with ASTM C 140. If the retested samples meet the material requirements above, the production lot may be used. If the retested samples do not meet the material requirements, all the units from the production lot may not be used.

(c) Rejection

Units shall be subject to rejection due to failure to be in accordance with the requirements specified above. In addition, the following defects may be sufficient cause for rejection.

1. Defects which indicate imperfect molding.

2. Defects which indicate honeycombed or open texture concrete.

3. Defects in the physical characteristics of the concrete, such as broken or chipped concrete, or color variations, or dunnage marks on the front face due to excessive form oil or other reasons.

4. The height of each individual block shall be within 1/16 inches of its standard dimension.

5. The length and width of each individual block shall be within 1/8 inches of its standard dimension.

6. Units shall have a minimum face thickness of 1.25 inches and a web thickness of 3 inches.

The Engineer will determine whether spalled, honeycombed, chipped, or otherwise defective concrete shall be repaired or be cause for rejection. Repair of concrete, if permitted, shall be completed in a satisfactory manner. Repair to concrete surfaces, which are to be exposed to view after completion of construction shall be subject to approval.

(d) Marking
The date of manufacture, the production lot number, and the place mark shall be clearly scribbed on the rear face of each unit or on each shipping pallet.

(e) Handling, Storage, and Shipping
All modular block wall units shall be handled, stored, and shipped so as to eliminate the danger of chipping, cracks, fractures, and excessive bending stresses.

CONSTRUCTION REQUIREMENTS:

(a) General Requirements
The wall supplier representative shall provide technical instruction, guidance in preconstruction activities including the preconstruction conference, and on-site technical assistance to the Contractor during construction.

(b) Foundation Preparation
The leveling pad and course aggregate foundation for the modular block wall shall be graded level for the width shown on the plans. Foundation preparation shall otherwise be in accordance with 731.07. The leveling pad shall be cured in accordance with 702.22 for a minimum of 12 hours before placement of modular block layers.

(c) Retaining Wall Excavation
Excavation shall be in accordance with 731.08

(d) Wall Erection
Modular block wall units shall be stored to minimize contact with the ground or being covered by standing water. Modular block wall units having face discoloration shall not be used.

The Contractor shall perform the necessary work to verify that the foundation is at the correct elevation, that the wall is constructed to the correct alignment, and that the work is in accordance with the specified tolerances. Modular block wall units shall be placed in successive horizontal lifts in the sequence shown on the plans as backfill placement proceeds. As backfill material is placed behind the units, the units shall be maintained in vertical position. Horizontal alignment tolerances shall not exceed 3/4 in. when measured with a 10 ft straightedge. Vertical alignment tolerances shall not exceed ¼ in. over three layers of modular block units.

Alignment shall be checked at each layer of modular block wall units after the backfill behind the modular block wall units has been compacted, and the results shall be recorded. Checking of alignments and tolerances shall include verifying that the modular block wall units are plumb over the entire height of the wall.

The top of the bottom layer of modular block units shall have a maximum alignment tolerance of 1/8 in. when measured with a 10-foot straightedge along the length of the wall.

Each modular block layer and corresponding aggregate layer shall be completely constructed prior to installing the next layer of geotextile reinforcement and modular block unit. Each modular block layer shall be cleaned of any debris and fill material prior to installing the next layer of geotextile reinforcement and modular block unit.

A stretcher or running bond shall be maintained between courses of blocks to ensure that joints between blocks are offset with each row. Cut blocks, if required, shall be horizontally staggered between layers.

Geotextile reinforcement shall be placed normal to the face of the wall, unless otherwise shown on the plans and shall be constructed in accordance with 214.04.

Geotextile reinforcement shall extend between the layers of the modular block wall and cover 85 percent of the top surface of the modular block wall. Excess reinforcement showing through the face of the wall shall be removed in accordance with the manufacturer's recommendation.

Geotextile reinforcement shall be installed so that the strongest direction (i.e. cross machine direction) is perpendicular to abutment facing and shall cover 100 percent of the embedment area per layer unless otherwise shown in the drawings.

Adjacent sections of geotextile reinforcement do not need to be overlapped except when exposed in the wrap-around face system. The reinforcement in wrap-around face system shall be overlapped or mechanically connected per the manufacturer's recommendation.

Geotextile reinforcement shall be installed taut and free of wrinkles.

(e) Backfill Placement

Backfill placement shall follow erection of each course of modular block wall units. All sheeting and bracing shall be removed as the backfilling progresses. Backfill shall be placed so as to avoid damage or disturbance to the wall materials or misalignment of the modular block wall units. All material for backfill shall be subject to approval and shall be free from large or frozen lumps, wood, or other undesirable material. Wall materials that become damaged or disturbed during backfill placement shall be removed and replaced or corrected as directed. All misalignment or distortion of the modular block wall units due to placement of backfill outside the limits described herein shall be corrected as directed.

The work shall also include backfilling beyond the theoretical length of the geotextile in accordance with the details shown on the plans and the disposal of surplus of unsuitable excavated materials as permitted.

Six inches of backfill shall be installed over the geotextile reinforcement prior to operating a vehicle over it.

Backfill shall be installed in 8-inch compacted lifts or compacted lifts equal to the height of a unit or compacted lifts equal to the distance between geotextile reinforcement, whichever is less. Backfill placement and compaction shall otherwise be in accordance with 731.11. Each layer shall be compacted with a minimum of four passes per left and until there is no visible evidence of further compression of the aggregate layer.

Within three feet of the front of the wall faces, approved hand-operated compaction equipment, such as lightweight mechanical tampers, plates, or rollers shall be utilized. The aggregate fill behind the modular block units shall be compacted by rodding it every foot.

At the end of a day's operations, the last lift of backfill shall be sloped away from the wall face to direct surface runoff away from the wall. Surface runoff from adjacent areas shall not be allowed to enter the wall construction area. Any damage, including but not limited to aggregate washouts and soil fines filling the voids in the aggregate, caused by the Contractor's negligence to redirect surface water away from the construction area or to protect the area from flooding will be repaired at the Contractor's expense. Repair shall include, but not limited to, replacing the last laid layer of aggregate if the voids were infiltrated by fine soil, if directed by the Engineer.

(f) Method of Measurement

The measurement of concrete modular block wall and wall erection will be based on the square foot area contained within the neat line limits of the wall envelope shown on the plans and not that of the wall system supplier.

Foundation excavation will be measured by the cubic yard in accordance with 203.27(a) to the neat lines shown on the plans. Unsuitable foundation materials, if found, will be measured in accordance with 211.09. Coarse aggregate No. 8 will be measured by the cubic yard based on the theoretical volume to the neat lines as shown on the plans. Drainage of the backfill including piping and geotextile materials used in the drainage system will not be measured.

Concrete leveling pad will be measured by the linear foot.

(g) Stockpiled Modular Block Units

Partial payment may be made for block wall units stockpiled on the project site or at the Contractor's approved storage location. Partial payment will include the delivered cost of the units, as verified by invoices that include freight charges. The Contractor shall furnish the invoices. The partial payment will not exceed 75% of the contract unit price for modular block wall with. Prior to authorizing partial payment, the Engineer will verify that the units are in accordance with the Material specifications as detailed above.

(h) Basis of Payment

The accepted quantities of modular block wall units will be paid for at the contract unit price per square foot. Erection of modular block wall units will be paid for by the square foot. Foundation excavation will be paid for in accordance with 203.28. Unsuitable foundation materials will be paid for in accordance with 211.10. The accepted quantities of High Strength Geotextile will be paid for at the contract unit price per square yard, complete in place. Concrete leveling pad, complete and in place, will be paid for at the contract unit price per linear foot for leveling pad. The accepted quantities of Coarse Aggregate, No. 8 will be paid for at the contract unit price per cubic yard, complete in place.

Payment will be made under:

Course Aggregate, No. 8 .....CYS
Modular Block Wall Erection .....SFT
Modular Block Wall, Split Face .....SFT
Modular Block Wall, Solid, Red ..... SFT
High Strength Geotextile .....SYS
Leveling Pad, Concrete.....LFT
Geogrid, Type 1A…… SYS

The cost of the wall system, services including the testing laboratory, certified testing personnel, and the testing and inspection of modular block wall units shall be included in the cost of the pay items of this section.

The cost of materials, cutting or altering the geotextile and units at the site, concrete color additive, repair or replacement of units damaged or removed due to backfill placement, compressive- strength retesting if required, retesting or replacing failed block units, and incidentals shall be included in the cost of the pay items of this section.

The cost of all labor and materials required for preparing the wall foundation, coarse aggregate No. 8 placed outside the neat lines as shown on the plans, replacement materials damaged during backfill placement if required, and erecting the modular block units shall be included in the cost of wall erection.

The cost of all labor and materials required to install the foam plugs, and reinforcing bars and concrete in the top 3 layers of the modular blocks shall be included in the cost of other pay items.

SP31. <u>TOLERANCE OF PRESTRESSED BEAMS</u>

The fabricator's attention is called to the tolerances listed on Standards E 707-BPBF-01, E 707-BPBF-02 and E 707-BPBR-04. Any variation above the tolerance listed on these standards shall be cause for automatic rejection. If beams are placed by the Contractor with tolerances greater than those listed on the standard sheet, it shall be the Contractor's responsibility to remove those beams and replace them with beams meeting the standard requirements.

SP32. <u>REINFORCED CONCRETE BOX STRUCTURES</u>

INDIANA STANDARD SPECIFICATION SECTION 714, LINE 8, DELETE AND INSERT AS FOLLOWS:

The Contractor will *not* be allowed to substitute a three-sided structure in accordance with 723. ~~The three sided structure shall be of equivalent hydraulic capacity to that of the box structure shown on the plans. The structure shall be sumped as shown on the plans.~~

SECTION 714, BEGIN LINE 40, INSERT AS FOLLOWS:

Square HSS for grating shall be in accordance with ASTM A 500, Grade B. Steel plate material shall be in accordance with ASTM A 36. After fabrication, steel grates shall be galvanized in accordance with ASTM A 123. Hardware shall be galvanized in accordance with ASTM A 153. Steel grating materials shall be covered by a type C certification in accordance with 916.

SECTION 714, LINE 44, INSERT AS FOLLOWS:

Cast-in-place concrete for a reinforced concrete box structure, or splices between an existing culvert structure and a precast reinforced concrete box structure section extension shall be class A or higher in accordance with 707.04(c). It shall have a 28-day minimum concrete compressive strength of 5,000 psi (34,500 kPa). Cast-in-place concrete for headwalls or wingwalls *and grated box end sections* shall be class A or higher in accordance with 707.04(c). It shall have a 28-day minimum concrete compressive strength of 4,000 psi (27,600 kPa).

SECTION 714, BEGIN LINE 90, INSERT AS FOLLOWS:

Welding of steel grates shall be performed in accordance with AWS specifications by AWS qualified welder operators using E70 electrodes.

When riprap is specified, geotextile shall 1st be placed on the in-situ soil in accordance with 616.11. Riprap shall then be placed in accordance with 616.

SECTION 714, BEGIN LINE 94, INSERT AS FOLLOWS:

714.04 Design Requirements
The grated box end sections shall be constructed as detailed on the plans. No additional drawings or design calculations are required.

Where reinforcing bars are used, reinforcing bar splicing and spacing shall be in accordance with the AASHTO LRFD Bridge Design Specifications, except as modified herein.

SECTION 714, BEGIN LINE 145, INSERT AS FOLLOWS:
Working drawings shall be submitted in accordance with 105.02 for fabrication of a precast reinforced concrete box structure greater than 12 ft. (3.6m) span, a box structure of a size not described in ASTM C 1577, headwalls, wingwalls, and footings. Design calculations which show the effects of hydrostatic pressure on the structure shall also be submitted with the working drawings. *If the headwalls are constructed as detailed on the plans, no additional drawings or design calculations are required for the headwalls.* Working drawings shall include all details, dimensions, and quantities necessary to construct the structure, headwalls, wingwalls, or footings and shall include, but not be limited to, the following information.

SECTION 714, LINE 361, INSERT AS FOLLOWS:
Precast reinforced concrete box structures or structure extensions, precast coated reinforced concrete box structures or structure extensions, precast headwalls, precast wingwalls, cast-in- place reinforced concrete box structures or structure extensions, cast-in-place coated reinforced concrete box structures or structure extensions, cast-in-place headwalls, *cast-in-place grated box end sections,* and cast-in-place wingwalls will not be measured. The accepted quantities for payment will be the quantities shown on the plans.

SECTION 714, LINE 366, DELETE AND INSERT AS FOLLOWS:
measured in accordance with 213.08. Field drilled holes will *not* be measured ~~in accordance with 702.27~~.

SECTION 714, LINE 386, DELETE AS FOLLOWS:
in accordance with 213.09. ~~Field drilled holes will be paid for in accordance with 702.28.~~

SECTION 714, LINE 413, INSERT AS FOLLOWS:
The cost of excavation except as provided in 206.11(a), expansion joint material, perpetuation of existing drains shown on the plans, removal of portions of existing structures, cleaning out old channels or structures, *field drilled holes,* approved chemical anchor system, precast reinforced concrete structure joints, and necessary incidentals shall be included in the cost of the structure or structure extension.

SECTION 714, LINE 418, INSERT AS FOLLOWS:
The cost of precast concrete headwalls, precast concrete wingwalls, cast-in-place headwalls, *cast-in-place grated box end sections,* or cast-in-place wingwalls shall be included in the cost of the structure or structure extension.

SP33. <u>HMA PAVEMENT MATERIALS</u>
The Indiana Department of Transportation (INDOT) Standard Specifications, dated 2014, Section 402, shall apply with the modifications as noted herein. The current version of the INDOT Standard Specifications, Recurring Special Provisions, and Supplemental Specifications are applicable.

HMA.01 - Description
This work shall consist of one or more courses of Hot Mix Asphalt (HMA) base, intermediate, surface mixtures or other miscellaneous HMA application.

HMA.02 - Quality Control
HMA shall be supplied from a Certified HMA plant in accordance with Indiana Test method (ITM) 583 –Certified Volumetric Hot Mix Asphalt Producer Program. HMA shall be transported and placed according to a Quality Control Plan (QCP) prepared by the Contractor in accordance with ITM 803 – Contractor Quality Control Plan for HMA Pavement, and submitted to the Contracting Agency five (5) calendar days prior to commencing HMA paving operations.

HMA.03 - Materials
HMA materials shall meet the requirements of 904 except Table 1. HMA Coarse Aggregates for surface aggregates in Section 904.03(d) shall modified as follows when the design speed or posted speed limit is equal to or less than 45 mph.

Coarse Aggregate Type	**Traffic ESALs**		
	< 3,000,000	**< 10,000,000**	**≥ 10,000,000**
Air-Cooled Blast Furnace Slag	Yes	Yes	Yes
Steel Furnace Slag	Yes	Yes	Yes
Sandstone	Yes	Yes	Yes
Crushed Dolomite	Yes	Yes	Yes
Polish Resistant Aggregates	Yes	Yes	Yes
Crushed Stone	Yes	Yes	(Note 2)
Gravel	Yes	Yes	(Note 2)

Note 2. Crushed Stone or gravel may be used in accordance with Indiana Test Method (ITM) 221

HMA.04 - Design Mix Formula and Mixture Type
The design mix formula/job mix formula (DMF/JMF), shall be prepared by an INDOT approved Mix Design Laboratory in accordance with Sec. 402.05, and submitted to the Contracting Agency in an acceptable format one week prior to use. The DMF/JMF Type and Maximum Nominal Aggregate Size (NMAS) and shall be based on the following table:

HMA PAVEMENT MATERIALS Cont.

Mixture Type	*Type A **	*Type B**	*Type C**
Design ESAL	*200,000*	*2,000,000*	*9,000,000*
AADT (Average Annual Daily Traffic)	*<4000*	*4000- 15,000*	*15,000-30,000*
AADTT (Average Annual Daily Truck Traffic)	*< 50*	*50-1700*	*>1700*
Commercial & Residential Application	*Residential Driveways, passenger car parking ,<500 stalls, < 20 **heavy trucks day, service stations*	*Parking Lots with 20-300 **heavy trucks per day, Stops*	*Heavy Commercial parking with 150-300 **heavy trucks per day*
Surface-			
Max. Nominal Aggregate Sizes (NMAS)	*4.7mm, 9.5 mm 12.5 mm*	*4.75mm 9.5 mm 12.5 mm*	*4.75 mm 9.5mm 12.5 mm*
PG Binder	*64-22*	*64-22*	*70-22*
Intermediate-			
Max. Nominal Aggregate Sizes	*9.5mm 12.5mm 19.0mm 25.0 mm*	*9.5mm 12.5mm 19.0mm 25.0 mm*	*9.5mm 12.5mm 19.0mm 25.0 mm*
PG Binder	*64-22*	*64-22*	*64-22*
Base-			
Max. Nominal Aggregate Sizes	*19.0 mm 25.0 mm*	*19.0 mm 25.0 mm*	*19.0 mm 25.0 mm*
PG Binder	*64-22*	*64-22*	*64-22*

*A higher category mix may be used for a lower category application if the contractor so elects. The substitution will be at no additional cost to the agency.
** Heavy trucks are commercial vehicles with normally2 axle, six tire or larger.

HMA may be produced as warm-mix asphalt (WMA). The DMF/JMF shall list the minimum plant discharge temperature for HMA and WMA as applicable to the mixture. WMA mixtures may be produced by using a water injection foaming device or additives as specified herein and according to the manufactures recommendations.

HMA.05 - Volumetric Mix Design
Shall remain as Sec. 402.5 except the Material Adjustment Factor (MAF) will not apply.

HMA.06 - Job Mix Formula
A HMA DMF/JMF per 402 will be developed by a Certified HMA Producer. A DMF/JMF used in the current or previous calendar year that it was developed to Ndes will be allowed as long as it meets the requirements of current mix design procedures and mix design guides for aggregate bulk specific gravity (Gsb) effective October, 2013.

HMA.07 - Mix Criteria
Shall remain as Sec. 402.07

HMA.08 - Recycled Material
Shall remain as Sec. 402.08

HMA.09 - Acceptance of Mixtures
Acceptance will be on the basis of a Type D Certification in accordance with Sec. 916(d). The HMA Certification shall be the quality control test representing the material and shall include air voids and binder content for material supplied to the project. Type D certification shall be submitted to the Contracting Agency's representative each day in which material is received.

CONSTRUCTION REQUIREMENTS

HMA.10 - General
Shall remain the same as Sec. 402.10

HMA.11 - Preparation of Surfaces to be Overlaid
Shall remain the same as Sec. 402.11

HMA.12 - Weather Limitations
HMA courses less than 110 lb/syd are to be placed when the ambient and surface temperatures are 60o F or above. HMA courses equal to or greater than 110 lb/syd but less than 220 lb/syd are to be placed when the ambient and surface temperatures are 45o F or above. HMA courses equal to or greater than 220 lb/syd are to be placed when the ambient and surface temperatures are 32o F or above. Mixture shall not be placed on a frozen subgrade. However, HMA courses may be placed at lower temperatures provided the density of the HMA course is in accordance with HMA.16 or if approved by the Contracting Agency's representative.

HMA.13 - Spreading and Finishing
Shall remain the same as Sec. 402.13

HMA.14 - Joints
Shall remain the same as Sec. 402.14

HMA .15 - Compaction
The HMA mixture shall be compacted with equipment in accordance with 409.03(d) immediately after the mixture has been spread and finished. Rollers shall not cause undue displacement, cracking, or shoving.

Number of Roller Applications							
Rollers	Courses < 440 lb/syd (240 kg/m^2)					Courses > 440 lb/syd (240 kg/m^2)	
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2
Three Wheel	2		4			4	
Pneumatic Tire	2	4				4	
Tandem	2	2	2			4	
Vibratory Roller				6			8
Oscillatory					6		

HMA.16 - Low Temperature Compaction Requirements
Shall remain the same as Sec. 402.16. Density test reports shall be furnished to the Contracting Agency.

HMA.17 - Shoulder Corrugations
Shall remain the same as Sec. 402.17

HMA.18 - Pavement Smoothness
Shall remain the same as Sec. 402.18

HMA .19 - Method of Measurement
Shall remain the same as Sec. 402.19 except the MAF shall not apply

HMA.20 - Basis of Payment
Add the following pay items to Section 402.20

Pay Item*	Pay Unit
HMA Surface Type , mm	Ton
HMA Intermediate Type , mm	Ton
HMA Base Type , mm	Ton

*Mixture Type shall include the Type from Table in HMA.04 and the Nominal Maximum Aggregate Size (NMAS)

ATTACHMENTS

Asbestos Investigation

Geotechnical Report

Rule 5 Permit NOI

Waterway Permits
Indiana Department of Natural Resources (IDNR) Permit
IDEM Section 401 Water Quality Certification Permit
Department of Army, Regional General Permit
Crossing Permit

Mirafi HP 570 Data Sheet

REPORT OF BRIDGE ASBESTOS INSPECTION

Prepared by:

SJCA, P.C.

9102 North Meridian Street, Suite 200
Indianapolis, Indiana 46260
(317) 566-0629
sjca@sjcassoc.com

Hamilton County Small Structure No. 33008 at the Following Location:

241st Street over Sugar Run

In

Hamilton County

August 5, 2016

SMALL STRUCTURE ASBESTOS INVESTIGATION

Re:	**Results of Small Structure Asbestos Investigation**
Structure Description:	**Small Structure Removal/Bridge Replacement 241st Street over Sugar Run, 1.81 miles East of S.R. 19.**
Structure No.:	**Hamilton County Small Structure No. 33008**

INTRODUCTION

SJCA, P.C. has completed an asbestos investigation for Hamilton County Small Structure No. 33008 on August 5, 2016. The investigation was conducted by Gregory A. Huyck, Indiana Certification No. 19A003463, expiring November 4, 2016. The structure is a square, single span reinforced concrete small structure with a span length of 14.8 feet. This small structure is to be replaced with a 23.0' span reinforced concrete slab bridge. Certain suspect materials, if not directly accessible, were assumed to contain asbestos and therefore were not sampled. The quantities and locations of presumed asbestos containing material are noted and listed on the Asbestos Bulk Sampling Data Sheet and the Asbestos Inspection Summary. **The results of the inspection indicate the small structure contains no regulated ACM. No ACM's must be removed prior to removal or rehabilitation of this structure.** However, proper notification must be made to federal, state, and, if applicable, local regulatory agencies prior to beginning removal or demolition operations on this structure.

METHODOLOGY

SJCA conducted the asbestos inspection using an Indiana Department of Environmental Management (IDEM) Certified Asbestos Inspector. The inspection methodology included:

- Inspection of all exposed and accessible surfaces of the Small Structure for friable and non-friable suspect ACM's and PACM's. Aforementioned data obtained included identification of homogeneous areas and collection of bulk samples of suspect material according to the standards set forth by the Asbestos Hazard Emergency Response Act (AHERA).

- Documentation of the asbestos investigation including sample identification numbers, locations, material descriptions, friability of the sample, and sample condition with any additional comments associated with the suspect ACM bulk sample.

- If necessary, bulk sample collection was carefully done to minimize material damage that could result in ACM dust releases. Transport and transfer of the collected samples were documented utilizing a completed chain of custody process as these samples were submitted to the ACT Laboratory Services in Indianapolis.

- If necessary, bulk samples containing potential ACM were analyzed by ACT Laboratory Services in Indianapolis, an American Industrial Hygiene Association (AIHA) – Lab Accreditation No. 102853. Bulk sample analysis was conducted using the Polarized Light Microscopy (PLM) method (Performed by EPA 600/R-93/116 Method Modified).

SUMMARY AND CONCLUSIONS

Asbestos investigation results for Hamilton County Small Structure No. 33008 can be summarized as follows:

1. No presumed asbestos containing materials (ACM) were found at the site.

2. The scope of the work for this project consists of removing concrete and steel components of the entire small structure, and, as per AHERA requirements, concrete and steel are not considered to be suspect ACM. As a result, zero (0) homogeneous areas were identified for the subject small structure, therefore, no bulk sample ACM's were obtained from the small structure.

3. No bulk sample PLM analytical results were necessary as a result of the information described in Item 3.

4. No ACM's must be removed prior to removal or rehabilitation of this structure.

Summary of RACM/Presumed ACM

Presumed ACM present?	**None**
RACM identified by laboratory testing?	**None**

DEFINITIONS

Asbestos-Containing Material (ACM) – Any material that contains more than one percent (> 1%) asbestos.

Category I Non-Friable ACM – Packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent (> 1%) asbestos.

Category II Non-Friable ACM – Any material other than those designated as Category I Non-Friable ACM's that contain more than one percent (> 1%) asbestos and that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

Friable Asbestos Material – Any ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Non-Friable ACM can become friable after sustained damage.

Homogeneous Area (HA) – An area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture.

Miscellaneous Material – Any building material on structural components, structural members or fixtures, such as floor and ceiling tiles, excluding surfacing materials or thermal system insulations. Abbreviated "M".

Regulated Asbestos Containing Material –

1. Friable ACM
2. Category I Non-Friable ACM that has become friable.
3. Category I Non-Friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading.
4. Category II Non-Friable ACM that has a high probability of becoming, or has become, crumbled, pulverized, or reduced to powder by the forces expected to act on the ACM in the course of demolition or renovation operations.

Surfacing Material – Material that is sprayed—on, troweled on, or otherwise applied to surfaces such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes. Abbreviated "S".

Thermal System Insulation – Material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain, or water condensation, or for other purposes. Abbreviated "T".

Environmental Management Institute

5610 Crawfordsville Road, Suite 15, Indianapolis, Indiana 46224-3714

317/248-4848 • 800/488-8842 • FAX 317/248-4846
www.envtlmgmt.org

This confirms that

Gregory A. Huyck

Completed the Required Refresher Training for
Asbestos Accreditation Under TSCA Title II
and has
passed with a Score of 70 or Greater the Examination for

Asbestos Building Inspector

Course Date
August 27, 2015

Examination Date
August 27, 2015

Jack E. Leonard, President

Certificate: IN(R) 7891

Expires: August 27, 2016

Approved by:: Illinois Department of Public Health
Indiana Department of Environmental Management

SEAL OF THE STATE OF INDIANA 1816

Signature

WWW.IN.GOV

SF 49124

Indiana Dept. of Environmental Management

Gregory A. Huyck

Asbestos Inspector License #: 19A003463

Effective: **11/04/2015**	Expiration: **11/04/2016**
Birth Date: **12/06/1962**	Gender: **M**
Height: **5-09**	Eye Color: **Green**
Weight: **175**	Hair Color: **Brown**

GEOTECHNICAL EVALUATION

241st STREET OVER SUGAR RUN
HAMILTON COUNTY, INDIANA

Prepared for

SJCA P.C.
9102 NORTH MERIDIAN STREET, SUITE 200
INDIANAPOLIS, INDIANA 46260

By

EARTH EXPLORATION, INC.
7770 WEST NEW YORK STREET
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JUNE 21, 2016

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June 21, 2016

Ms. Sherly George, P.E.
SJCA P.C.
9102 North Meridian St., Suite 200
Indianapolis, IN 46260

Re: Geotechnical Evaluation
241st Street over Sugar Run
Hamilton County, Indiana
EEI Project No. 1-15-076

Dear Sherly:

We are pleased to submit our geotechnical evaluation for the above-referenced project. This report presents the results of our subsurface exploratory program and provides geotechnical recommendations for the structure replacement and roadway improvements. As you are aware, the work for this project was authorized via a subagreement dated February 16, 2015 and a supplemental agreement dated February 22, 2016. In addition to this hard copy, a copy of the report was sent via electronic mail. Unless you notify us otherwise, we will retain the soil samples from the exploratory program for 60 days and then discard them.

The opinions and recommendations submitted in this report are based, in part, on our interpretation of the subsurface information revealed at the exploratory locations as indicated on an attached plan. Understandably, this report does not reflect variations in subsurface conditions between or beyond these locations. Therefore, variations in these conditions can be expected, and fluctuation of the groundwater levels will occur with time. Other important limitations of this report are discussed in Appendix A.

PROJECT DESCRIPTION

We understand that the commissioners of Hamilton County are planning to replace an existing small structure (i.e., Hamilton SS 33008) carrying 241st Street over Sugar Run using local funds. Based on preliminary plans provided by SJCA P.C. (SJCA), the new structure is anticipated to consist of a single-span bridge with a total length of about 25 ft. Based on discussion with SJCA, we understand that the county prefers to use geosynthetic-reinforced soil (GRS) abutments for support of the bridge, if possible. In addition, roadway improvements consisting of widening and reconstruction are planned for a distance of about 500 ft west and 1,000 ft east of the bridge and will include improvements to the intersection of East 108th Street (also known as Fall Road). Improvements to East 108th Street are planned to consist of reconstruction for a distance of about 120 ft to 240 ft north and south of 241st Street, respectively. Based on information shown on preliminary plans, up to 6 to 7 ft of earth fill will be required to establish grades along the main line for the bridge approaches, and sideslopes are planned to be established at 4 Horizontal (H) : 1 Vertical (V) (4H:1V). The profile grade at the bridge

is planned to be near Elevation 820 and the bottom of the leveling pad for the GRS abutments is planned to be near Elevation 801 to 802. Additionally, drainage improvements are planned to consist of modifications to the existing roadside ditches, and a new 16-ft x 4-ft box culvert is planned to re-route a tributary to Sugar Run near Station 1090+00. The bottom of the planned culvert is near Elevation 810. At this time, other information such as abutment loads and construction schedule is not known. In the event that the nature, design or location of the proposed construction changes, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed, and the conclusions are modified or confirmed in writing.

FIELD EXPLORATION AND LABORATORY TESTING

Subsurface conditions for the proposed improvements were explored by performing two structure borings (designated TB-1 and TB-2) to depths of about 45 and 69 ft below the existing ground surface, two culvert borings (designated CB-1 and CB-2) to a depth of 20 ft, and four road borings (designated RB-1 through RB-4) to depths of 7½ to 10 ft. The number, depth, and location of the borings were determined by EEI. The exploratory locations were identified in the field by EEI personnel referencing identifiable features shown on the plans. Additionally, ground surface elevations at the exploratory locations were interpolated to the nearest 1-ft based on topographic information on the plans. The locations and elevations should be considered accurate only to the degree implied by the methods used.

Exploratory field activities were performed by EEI on April 25 and 26, 2016 using truck-mounted equipment. In general, exploratory activities were performed using hollow-stem augers to advance the boreholes. Representative samples of the soil conditions were obtained at predetermined intervals using Standard Penetration Test (SPT) procedures (AASHTO T 206). After obtaining final groundwater observations, each borehole was backfilled with auger cuttings and a bentonite chip plug. In addition, the surface was restored with a concrete patch. Additional details of the drilling and sampling procedures are provided in Appendix B.

Following the exploratory activities, the soil samples were visually classified by an EEI engineering technician and later reviewed by an EEI geotechnical engineer. After visually classifying the soils, representative samples were selected and submitted for laboratory testing. These tests included: natural moisture content (AASHTO T 265); Atterberg limits (AASHTO T 89 and T 90); hand penetrometer readings (q_p); and unconfined compressive strength tests (AASHTO T 208). The results of the tests are provided on the boring logs or laboratory sheets in Appendix C. For your information, soil descriptions on the boring logs are in general accordance with the AASHTO system and the INDOT Standard Specifications (ISS[1]) (textural classification, e.g., loam). The boring logs represent our interpretation of the individual samples and field logs and results of the laboratory tests. The stratification lines on the boring logs represent the approximate boundary between soil types; although, the transition may actually be gradual.

[1]References the Indiana Department of Transportation (INDOT) Standard Specifications.

SITE CONDITIONS

Surface Conditions

The test borings were performed in the roadway on 241st Street and East 108th Street. In general, the ground surface conditions consisted of about 4 to 8 in. of asphaltic concrete. Topographic information shown on the plans indicates that the existing ground surface along 241st Street ranges from about Elevation 814 near Sugar Run to about Elevation 823 near the intersection with East 108th Street. Drainage is conveyed via shallow roadside ditches, and light vegetation (i.e., grass and weeds) is present off the shoulder. Thicker vegetation (i.e., brush and trees) is present along Sugar Run and near residential properties. Properties within the project limits are used primarily for agricultural purposes.

Hand auger soundings were performed in existing ditches in the vicinity of the proposed box culvert. Surface conditions at these locations consisted of about 3 in. of topsoil underlain by cohesive-type soils. These conditions were described as soft to a depth of about 6 to 8 in. based on the ease with which to push a ½-in. diameter probe rod.

Subsurface Conditions

The subsurface conditions at the boring locations were relatively similar and consisted primarily of cohesive soil (i.e., clay, clay loam, silty clay loam, silty loam, and loam) within about 12 to 16 ft (Elevation 798 to 802) of the existing ground surface. In profile, the loam was typically observed below the other soil types. Below a depth of about 12 to 16 ft, both cohesive-type soils (loam and silty loam) and granular-type soils (sand, gravelly sand, and sand and gravel) were observed and extended to the maximum depths explored.

The near-surface clay loam and clay was of high plasticity based on Atterberg limit determinations based on plasticity indices (PI) of 27 and 32, respectively. The loam was of much lower plasticity based on a PI of 5. The consistency of the cohesive soils observed at the location of Borings RB-1, RB-2, CB-1, and CB-2 was generally described as stiff to hard based on hand penetrometer readings ranging from 1 to more than 4½ tons/sq ft (tsf), and moisture contents varied with depth and soil type (e.g., clay vs. loam). Moisture contents within about 6 to 8 ft of the existing ground surface typically ranged from about 18 to 30 percent, with the exception of Boring RB-1 near a depth of 2 ft where the moisture content of the clay was observed to be about 41 percent.

The consistency of the cohesive soils at the location of Borings TB-1 and TB-2 was described as soft to medium stiff within about 6 to 8 ft (above about Elevation 805) of the existing ground surface based on hand penetrometer readings ranging from ½ to 1 tsf. The consistency of the underlying loam was stiff to hard based on hand penetrometer readings ranging from 2 to more than 4½ tsf, and moisture contents ranged from about 9 to 16 percent. Results of unconfined compressive strength tests performed on several split-spoon samples of loam indicated undrained shear strengths (using the Φ

= 0 concept) in the range of 1.31 to 9.25 kips/sq ft (ksf). Comparison of the Atterberg limits and the observed moisture contents indicate that the loam is over-consolidated.

The relative density of the granular soils was generally described as medium dense to very dense based on SPT N-values typically ranging from 23 to more than 50 blows/ft (bpf). Lower N-values were observed at the location of Borings TB-1 and TB-2 near a depth of about 16 to 17 ft (Elevation 798) and, in our opinion, these N-values are fictitiously low due to sampling disturbance in the presence of groundwater.

Groundwater Conditions

Groundwater was typically observed at depths ranging from about 4 to 7 ft below the existing ground surface during and upon completion of the field activities and as noted at the bottom of the boring logs. Given the presence of granular soils below a depth of about 12 to 16 ft (Elevation 798 to 802), these observations could be indicative of a piezometric condition. It should be noted that groundwater levels either perched or piezometric can vary due to changes in precipitation, infiltration, run-off, pumping rates of nearby wells (if any), level of Sugar Run, and other hydrogeological factors.

DISCUSSION AND RECOMMENDATIONS

General

Based on our observations at the exploratory locations, it is our opinion that the subsurface conditions should be suitable for support of the proposed improvements provided the subgrades are prepared in accordance with the recommendations provided herein. From a geotechnical perspective, construction-related issues are anticipated to include subgrade preparation for the high plasticity cohesive-type soils below the proposed pavement and groundwater management and subsequent subgrade preparation for the GRS abutment excavations.

GRS abutments consist of alternating layers of compacted structure fill and geosynthetic-reinforcement to provide support for the bridge via a spread foundation. Based on preliminary information provided by SJCA, the bottom of the leveling pad is anticipated to be established near Elevation 801.5, and the flow line is reportedly near Elevation 807. Given the anticipated foundation subgrade and the proposed grading plan, maximum GRS abutment heights are anticipated to be about 19 ft. Based on our observations at the test boring locations, relatively stiff cohesive soils are anticipated at the subgrade. However, wet granular soils were observed within 3 ft of the subgrade. Provided the subgrade is prepared in accordance with the recommendations provided hereafter, these conditions are anticipated to provide suitable support of the GRS abutments with regard to bearing and global stability. Due to the presence of wet granular soil layers within 3 ft of the leveling pad, we recommend that the foundation design be optimized and established as high as possible, while still addressing scour concerns, to reduce the risk of subgrade distress during construction.

It should be noted that GRS abutments are not utilized by INDOT, and specific design and construction practices are not identified in the INDOT Design Manual or Standard Specifications (ISS). However, these elements are similar to mechanically stabilized earth (MSE) abutments, and the construction procedures outlined in ISS Section 731.07 with regard to foundation preparation are considered to be applicable. Additionally, we understand that SJCA plans to utilize specifications developed in Ohio for several similar projects and build on recent experience on other projects in Hamilton County. Furthermore, design and construction guidelines are available in publication FHWA-HRT-11-026. The following paragraphs provide site-specific discussion and recommendations regarding design and construction.

Subgrade Considerations

Based on information shown on the plans, less than 2 to 3 ft of fill is generally planned to establish grades along the centerline, except from about Station 1093+00 to 1098+00 where up to 7 ft of fill is planned. In all areas to receive pavement components or embankment fill, we recommend that all topsoil, wet or soft near-surface soils, and existing pavement components be removed from within the construction limits. In addition, we recommend that existing underground utilities be appropriately relocated where required. Where utilities are relocated or removed, we recommend that the resulting excavations be backfilled with "B" borrow.

After removal and where feasible, we recommend that exposed cohesive soils in pavement areas and areas to receive fill be proof-rolled in accordance with the ISS, Section 203.26. Although the near-surface cohesive soils were observed to be relatively stiff at the boring locations, they are moisture-sensitive and will likely yield during a proof-roll evaluation, particularly the high plasticity clay observed near the surface at the location of Borings RB-1 and RB-2. Additionally, softer conditions should be anticipated in existing roadside ditches where widening is planned. Where yielding areas are exposed during the proof-rolling operations, we recommend that they be aerated (if feasible) to reduce the moisture content and be recompacted. Given the high plasticity of the near-surface clay and the high moisture content of the other near-surface cohesive soils, this may be difficult. If wet weather conditions exist or if the underlying subgrade begins to "pump" and aeration is not feasible, other means of stabilization such as chemical modification (in accordance with ISS 217) or undercutting and replacement with granular fill (e.g., "B" borrow), possibly in conjunction with geogrid will be required. In areas where the proposed grade is within a few feet of the existing grade, i.e., from about Station 1088+00 to 1092+00 and Station 1098+00 to 1102+50, we anticipate that subgrade improvement can be accomplished within the range of subgrade treatment. However, in the planned widening areas and in areas to receive fill, chemical modification may be the most economical improvement alternative. We recommend that quantities for chemical modification be included in the contract for subgrade improvement in accordance with ISS 217, to be used if needed. The final decision regarding stabilization should be made at the time of construction based on the observed conditions. Furthermore, we recommend that the subgrade be graded at the end of each day to facilitate positive drainage and reduce the risk of ponding water.

Based on discussion with SJCA, we understand that a standard pavement section utilized by the county will be used for the roadway improvements. In our opinion, the high plasticity cohesive soils observed at the subgrade present a relatively poor subgrade. If necessary for design, a CBR of 2 or resilient modulus of 3,000 lbs/sq in. (psi) could be considered for the natural subgrade. We recommend that a Type IB subgrade treatment be utilized in accordance with INDOT specifications.

The bottom of the GRS fill is anticipated to be established near Elevation 801 to 802. Based on our observations at the test boring locations, stiff cohesive soils are anticipated at this depth, and wet granular soils were within about 3 ft of the planned subgrade elevation. Due to these conditions and potential for perched groundwater to be present within the excavation limits, dewatering should be anticipated. Considering the groundwater level observations upon completion of drilling (i.e., near Elevation 810 to 811, there is a risk regarding bottom heave during excavations for the abutments. To reduce that risk, we recommend that the groundwater level be lowered to at least Elevation 803 prior to beginning any excavation activities. The performance of the subgrade is anticipated to be a function of the contractor's care and workmanship particularly with regard to dewatering. Additional dewatering recommendations are provided in a subsequent section.

As previously mentioned, we recommend that the foundation subgrade be prepared in accordance with ISS 731.07 and the subgrade be observed by a qualified individual. Additionally, we recommend that steel rod probes and dynamic cone penetrometers also be used to evaluate the subgrade and any soft conditions. Although the cohesive soils were observed to be stiff, some isolated soft/yielding areas may be encountered particularly if the subgrade is exposed to water. It should be noted that a relatively stiff cohesive subgrade can quickly soften due to moisture exposure and/or repeated construction traffic. The ability to undercut and replace and soft soils encountered at the subgrade will be a function of the dewatering plan and the contractor's ability to lower the head level. Additionally, we recommend that construction traffic be limited on the prepared subgrade and that backfilling operations occur as quickly as is feasible. If the excavation is planned to be left open or in the event of inclement weather, consideration could also be given to pouring a mud mat consisting of lean concrete on the subgrade to reduce the risk of softening and provide a working platform for backfill placement.

Earth Cut and Fill Considerations

In general, standard embankment construction practices outlined in the ISS and as discussed above should provide adequate support for embankment construction. We recommend that embankment fill used to raise grades or backfill of undercut areas be placed in loose lift thicknesses not exceeding 8 in. and be compacted to 95 percent of the maximum density obtained in accordance with AASHTO T 99 as specified in the ISS. In our opinion, the soils as observed at the test boring locations are suitable for reuse as engineered fill. However, the natural moisture content of the shallow cohesive soils exceeds the optimum. Therefore, drying (i.e., via continuous discing) of the fill will be required before compaction in order to satisfy the ISS. Under some climatic conditions, such as cold or rainy weather, or in confined areas, adequate moisture conditioning may be difficult to achieve, and in this case, granular fill could be required to expedite construction activities. Based on the proposed

grading plan, we anticipate that imported fill will be required and will need to be evaluated by inspection in the field at the time of construction.

GRS Abutment Design Considerations

As previously mentioned, stiff cohesive soils are anticipated at the foundation subgrade underlain by medium dense to dense granular soils. These conditions are anticipated to provide adequate support of the GRS fill provided the subgrade is prepared in accordance with the previous sections. In accordance with information published by FHWA, a resistance factor of 0.65 can be considered in determining the factored bearing resistance for an LRFD approach. In our opinion, the abutments can be designed considering a factored bearing resistance of 7,000 lbs/sq ft. We recommend that consideration be given to constructing a conventional concrete leveling pad (similar to that of an MSE wall leveling pad) and backfilled with INDOT No. 8 crushed stone underlain by Type I geogrid to support the GRS abutment. As previously mentioned, the loam observed below the planned subgrade is overconsolidated, and settlement is anticipated to be nominal provided the subgrade is prepared as discussed above.

Similar to an MSE wall, the external stability (i.e., sliding, bearing, and global) and internal stability (reinforcement strength, length, and vertical spacing) of the GRS should be evaluated, and we recommend the design be in compliance with information published by the FHWA. We understand that these modes of instability will be evaluated once additional design information becomes available. Furthermore, we understand that the facing elements, scour information, and countermeasures will be determined by the designer and the county. As previously mentioned, we recommend that the foundation design be optimized to be established as high as possible, while still addressing scour concerns, to reduce the risk of subgrade distress during construction.

Box Culvert Considerations

Based on information shown on the preliminary plans, the bottom of the new box culvert at Station 1090+00 is planned to be near Elevation 810. Based on our observations at the location of Borings CB-1 and CB-2, stiff cohesive soils are anticipated at the subgrade which are suitable for support of the culvert provided the subgrade is prepared as discussed herein. As mentioned in a previous section, these soils are moisture-sensitive and care should be taken to protect the subgrade from groundwater or runoff. If soft conditions are encountered at the subgrade, we recommend that they be undercut and replaced with coarse aggregate (e.g., No. 2 or No. 5 crushed stone) up to the bedding elevation and capped with No. 53 stone. If No. 2 stone is used as backfill, we recommend that a geotextile be placed below the bedding material. We recommend that the excavation not be left open for an extended period of time and the culvert placement and backfill activities begin as soon as is feasible. Dewatering is discussed in a subsequent section. Any groundwater or runoff entering the excavation will need to be diverted from the subgrade and removed in order to protect the subsurface conditions. Subgrade preparation activities will be a direct function of the contractor's workmanship particularly with regard to dewatering. The decision regarding the need for any undercutting should be made in the field at the time of construction by a qualified individual.

The area around and above the culvert should be backfilled in accordance with ISS Section 714. Hand- or remote-guided vibratory compactors are recommended for compacting the bedding material and material on either side of the pipe. Furthermore, we recommend the first several lifts of backfill over the culvert be compacted with small vibratory compactors to assure proper compaction is achieved and to prevent damage to the box from heavier, high-energy compactors. Based on our understanding, no wing walls are planned at the structure.

Excavations and Dewatering

Excavations are anticipated to encounter primarily cohesive soils likely with some granular soil seams. All excavations should conform with Occupational Safety and Health Administration (OSHA) requirements (i.e., 29 CFR Part 1926). Additionally, soil should not be stockpiled immediately adjacent to the top of the excavations. The Contractor is solely responsible for constructing and maintaining stable excavations.

Dewatering efforts will be dependent on the planned excavation depths and the water level in the creek at the time of construction. Excavations for the GRS abutments are anticipated to be about 4 to 6 ft below the flow line of the creek. As previously mentioned, we recommend that the groundwater level be lowered to at least Elevation 803 prior to beginning foundation excavations to reduce the risk of bottom heave. Large volume pumps in slotted casing and/or well points are anticipated to be required to facilitate these activities. Once excavated, we recommend that the foundation subgrade be graded to drain and that sump pumps and pits be located in the two lower corners of the excavation. Considering the shallower excavation depths for the box culvert, conventional sump pumps and pits are anticipated to be adequate. Performance of the subgrade is a function of the contractor's workmanship with regard to dewatering efforts.

CONCLUDING REMARKS

In closing, we recommend that EEI be provided the opportunity to review the final design and project specifications to confirm that earthwork and foundation requirements have been properly interpreted and implemented in the design and specifications. We also recommend that EEI be retained to provide construction observation services during the earthwork and foundation construction phases of the projects. This will allow us to verify that the construction proceeds in compliance with the design concepts, specifications and recommendations. It will also allow design changes to be made in the event that subsurface conditions differ from those anticipated.

We appreciate the opportunity to provide our services to you on this project. Please contact our office if you have any questions or need further assistance with the project.

Sincerely,

EARTH EXPLORATION, INC.

Scott T. Roosa, P.E.
Senior Geotechnical Engineer

Michael S. Wigger, P.E.
Principal Engineer

Attachments –

APPENDIX A	-	Important Information about Your Geotechnical Report
APPENDIX B	-	Field Methods for Exploring and Sampling Soils and Rock
APPENDIX C	-	General Site Plan (Drawing No. 1-15-076.A1)
		Exploratory Location Plan (Drawing No. 1-15-076.B2)
		Log of Test Boring – General Notes
		Log of Test Boring (8)
		Summary of Hand Auger Soundings
		Summary of Classification Test Results
		Unconfined Compression Test (5)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb Bruno Pigott

January 19, 2017

65-42 WQS/RJB
Faraz Khan
Hamilton County Highway Department
1700 South 10th Street
Noblesville, IN 46060

Dear Mr Khan:

Re: **Notice of Sufficiency**
INR10N201
East 241st St. (Bridge #305) over Sugar Run
Hamilton County

The Notice of Intent (NOI) letter submitted for the project referenced above has been reviewed by the Indiana Department of Environmental Management (IDEM) to determine compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit for storm water discharge associated with construction activity (327 IAC 15-5). The items contained in the NOI are sufficient. This letter is being issued for 327 IAC 15-5 and does not constitute approval to conduct activities that are related to other local, state, or federal permits.

An NPDES general permit identification number has been assigned to this project. This number and the above referenced project name should be included on any correspondence or amended NOI information submitted to IDEM pertaining to this project. The general permit number assigned to this project is: **INR10N201**.

It is important that all activities associated with your site are in compliance with the requirements of 327 IAC 15-5 (Rule 5) and any local storm water permits. In accordance with 327 IAC 15-5-10, you are required to implement your construction plan, implement and maintain all storm water quality measures, and monitor the effectiveness of the storm water quality measures until the project is complete.

All Notices of Intent submitted for Rule 5 NPDES general permit coverage are automatically limited to a maximum term length of 5 years (327 IAC 15-5-12). The General Permit issued for the project referenced above will expire on **1/6/2022**. If this project requires coverage beyond this date the applicant must reapply for a new permit 90 days prior to the expiration date.

Upon completion of the project, you are required to terminate the permit. Information for termination can be found in 327 IAC 15-5-8. To expedite this process, it

is recommended that you first receive verification from the plan review entity prior to submittal of the Notice of Termination.

Any questions regarding this letter or the enclosed materials should be directed to the Storm Water Permits Coordinator at 317-233-1864 or 800-451-6027, ext. 3-1864.

Questions regarding the development or implementation of the Construction Plan/Storm Water Pollution Prevention Plan should be directed to the local plan review authority (Soil and Water Conservation District (SWCD) or the local Municipal Separate Storm Sewer entity). If you are unable to reach the SWCD or have other questions please direct those inquiries to the IDEM Storm Water Permits Coordinator at 317-233-1864 or 800-451-6027 ext.3-1864. For more information on the storm water program and forms please visit: www.idem.IN.gov/4896.htm.

Sincerely,

Randy J Braun

RECEIVED
JAN 23 2017
HAMILTON CO. HIGHWAY DEPT.

Randy J. Braun, CPESC, CMS4S
Section Chief
Storm Water and Wetlands Section
Office of Water Quality

RULE 5 - NOTICE OF INTENT (NOI)

State Form 47487 (R6 / 2-15)
Indiana Department of Environmental Management
Office of Water Quality
Approved by State Board of Accounts, 2005

Type of Submittal *(Check Appropriate Box)*:
☑ Initial ☐ Amendment ☐ Renewal

Permit Number:

(Note: The initial submittal does not require a permit number; the Department will assign a number. A permit number is required when filing an amendment, applying for renewal, or correspondence related to this permit).

Note: Submission of this Notice of Intent letter constitutes notice that the project site owner is applying for coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit Rule for Storm Water Discharges Associated with Construction Activity. Permitted project site owners are required to comply with all terms and conditions of the General Permit Rule 327 IAC 15-5 (Rule 5).

NAME AND LOCATION OF PROJECT

Name of Project: East 241st St. (Bridge #305) over Sugar Run

County: Hamilton

Brief Description of Project Location:

Bridge replacement project on East 241st Street over Sugar Run approximately 1.81 miles east of S.R. 19 in Cicero. Existing structure will be replaced with a one span prestressed concrete box beam bridge with a span of 85'-0". The clear roadway width will be 32'-6".

Project Location: *Describe location in Latitude and Longitude (Degrees, Minutes, and Seconds or Decimal representation) and by legal description (Section, Township, and Range, Civil Township)*

Latitude: 40 Degrees 08 Minutes 23 Seconds North

Longitude: 85 Degrees 58 Minutes 46 Seconds West

Quarter: Section: 32 and 33 Township: 20 North Range: 5 East Civil Township: White River

Does ☑ all or ☐ part of this project lie within the jurisdictional boundaries of a Municipal Separate Storm Sewer System (MS4) as defined in 327 IAC 15-13?
☑ Yes ☐ No If yes, name the MS4(s): Hamilton County

SITE OWNER OF PROJECT AND CONTACT INFORMATION OF PROJECT

Name of Company *(If Applicable)*: Hamilton County Highway Department

Name of Project Site Owner: *(An Individual)* Faraz Khan

Title/Position: Project Engineer

Address: 1700 South 10th Street

City: Noblesville

State: Indiana

ZIP Code: 46060

Phone: 317-773-7770

FAX: 317-776-9814

E-Mail Address: *(If Available)* Faraz.Khan@hamiltoncounty.in.gov

Ownership Status *(check one)*:

Governmental Agency: ☐ Federal ☐ State ☑ Local Non-Governmental: ☐ Public ☐ Private ☐ Other: *(Explain)*

Contact Person: Gregory Huyck

Name of Company: *(If Applicable)* SJCA P.C.

Affiliation to Project Site Owner: Consultant

Address: *(if different from above)* 9102 North Meridian Street, Suite 200

City: Indianapolis

State: IN

ZIP Code: 46260

Phone: 317-566-0629

FAX: 317-566-0633

E-Mail Address: *(If Available)* ghuyck@sjcassoc.com

PROJECT INFORMATION

Project Description:

☐ Residential-Single Family ☐ Residential-Multi-Family ☐ Commercial ☐ Industrial ☑ Other: *(Explain)* Bridge Removal/Replacement

Name of Receiving Water: Sugar Run

(Note: If applicable, name of municipal operator of storm sewer and the ultimate receiving water. If a retention pond is present on the property, the name of the nearest possible receiving water receiving discharge must be provided).

Project Acreage

Total Acreage: 4.20 Proposed Land Disturbance: *(in acres)* 3.18

Total Impervious Surface Area: *(in square feet, estimated for completed project)* 54,151 Sft

Project Duration

Estimated Start Date: 04/01/2017 Estimated End Date for all Land Disturbing Activity: 08/31/2017

(Continued on Reverse Side)

CONSTRUCTION PLAN CERTIFICATION

By signing this Notice of Intent letter, I certify the following:

A. The storm water quality measures included in the Construction Plan comply with the requirements of 327 IAC 15-5-6.5, 327 IAC 15-5-7, and 327 IAC 15-5-7.5;
B. the storm water pollution prevention plan complies with all applicable federal, state, and local storm water requirements;
C. the measures required under 327 IAC 15-5-7 and 327 IAC 15-5-7.5 will be implemented in accordance with the storm water pollution prevention plan;
D. if the projected land disturbance is One (1) acre or more, the applicable Soil and Water Conservation District or other entity designated by the Department, has been sent a copy of the Construction Plan for review;
E. storm water quality measures beyond those specified in the storm water pollution prevention plan will be implemented during the life of the permit if necessary to comply with 327 IAC 15-5-7; and
F. implementation of storm water quality measures will be inspected by trained individuals.

In addition to this form, I have enclosed the following required information:

☑ Verification by the reviewing agency of acceptance of the Construction Plan.

☑ Proof of publication in a newspaper of general circulation in the affected area that notified the public that a construction activity is to commence, including all required elements contained in 327 IAC 15-5-5 (9). The Proof of Publication **Must** include company name and address, project name, address/location of the project, and the receiving stream to which storm water will be discharged. Following is a sample Proof of Publication:

"XERT Development Inc. (10 Willow Lane, Indianapolis, Indiana 46206) is submitting a Notice of Intent to the Indiana Department of Environmental Management of our intent to comply with the requirements of 327 IAC 15-5 to discharge storm water from construction activities associated with Water Garden Estates located at 24 Washout Lane, Indianapolis, Indiana 46206. Runoff from the project site will discharge to the White River. Questions or comments regarding this project should be directed to Walter Water of XERT Development Inc."

☑ $100 check or money order payable to the Indiana Department of Environmental Management. A permit fee is required for all NOI submittals (initial and renewal). A fee is not required for amendments.

SITE OWNER OF PROJECT RESPONSIBILITY STATEMENT

By signing this Notice of Intent letter, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information or violating the provisions of 327 IAC 15-5, including the possibility of fine and imprisonment for knowing violations.

Printed Name of Project Owner: Faraz Khan,

Signature of Project Owner: _____ Date *(month, day, year)*: 12/16/2016

This Notice of Intent must be signed by an individual meeting the signatory requirements in 327 IAC 15-4-3(g).
All NOI submittals must include an original signature (FAX and photo copies are not acceptable).

Note: Within 48 hours of the initiation of construction activity, the project site owner must notify the appropriate plan review agency and IDEM, Office of Water Quality of the actual project start date if it varies from the date provided above.

Note: A permit issued under 327 IAC 15-5 is granted by the commissioner for a period of five (5) years from the date coverage commences. Once the five (5) year permit term duration is reached, a general permit issued under this rule will be considered expired, and as necessary for construction activity continuation, a new Notice of Intent letter (Renewal) is required to be submitted ninety (90) days prior to the termination of coverage. The submittal must include the NOI Letter, Proof of Publication, Fee, and verification that the plan for the project was approved (original verification of plan approval is acceptable provided the scope of the project has not changed from the original submittal).

Mail this form to: Indiana Department of Environmental Management
Storm Water Program, IGCN, Room 1255
100 North Senate Avenue
Indianapolis., IN 46204-2251

327 IAC 15-5-6 (a) also requires a copy of the completed Notice of Intent letter be submitted to the local Soil and Water Conservation District or other entity designated by the Department, where the land disturbing activity is to occur.

Questions regarding the development or implementation of the Construction Plan/Storm Water Pollution Prevention Plan should be directed to the local county Soil and Water Conservation District (SWCD). If you are unable to reach the SWCD or have other questions please direct those inquiries to the IDEM Storm Water Permit Coordinator at 317/233-1864 or 800/451-6027 ext.3-1864.
For information and forms visit http://www.in.gov/idem/4896.htm .

PUBLISHER'S AFFIDAVIT

State of Indiana)
) ss:
Hamilton County)

Personally appeared before me, a notary public in and for said county and state, the undersigned Tim Timmons who, being duly sworn, says that he is Publisher of The Times newspaper of general circulation printed and published in the English language in the city of Noblesville in state and county afore-said, and that the printed matter attached hereto is a true copy, which was duly published in said paper for 1 time(s), the date(s) of publication being as follows:

11/17/2016

Subscribed and sworn to before me this Thursday, November 17, 2016.

Notary Public

My commission expires: **05/28/2020**
Jennifer Louise May
Resident of Marion County

Publisher's Fee: $26.00

Y I

TL 11216

PUBLIC NOTICE OF CONSTRUCTION ACTIVITY

Hamilton County Highway Department (1700 South 10th Street, Noblesville, IN 46060) is submitting a Notice of Intent to the Indiana Department of Environmental Management of our intent to comply with the requirements of 327 IAC 15-5 to discharge storm water from construction activities associated with the following project: Hamilton County Small Structure 33008 (Bridge No. 305, 241st Street structure replacement over Sugar Run at 10700 East 241st Street, Cicero, Indiana 46034. Runoff from the project site will discharge to Sugar Run. Questions or comments regarding this project should be directed to the Hamilton County Highway Department.

TL11216 11/16 1t hspaxlp

Construction/Stormwater Pollution Prevention Plan
Technical Review and Comment *(Form 1)*

Project Information

Project Name: Hamilton Bridge No. 305 - 241st Street Over Sugar Run **County:** Hamilton
Plan Submittal Date: 11/10/16 **Hydrologic Unit Code:** 5120201070020
Project Location Description: 241st St. over Sugar Run 523' west of the new bridge, to 901' east of the new bridge
Latitude and Longitude: 40 08' 23" N and 85 58' 46" W
Civil Township: **Quarter:** **Section:** 2 and 3 **Township:** 20N **Range:** 5E

Project Owner Name: Hamilton County Highway Department
Contact: Faraz ~~Kahn~~ Khan
Address: 1700 S. 10th Street
City: Noblesville **State:** IN **Zip:** 46060
Phone: 317-773-7770 **FAX:** 317-776-9814 **E-Mail:** faraz.kahn@hamiltoncounty.in.gov

Plan Preparer Name: Gregory A. Huyck
Affiliation: SJCA Engineers and Surveyors
Address: 9102 North Meridian Street Suite 200
City: Indianapolis **State:** IN **Zip:** 46260
Phone: 317-566-0629 **FAX:** 317-566-0633 **E-Mail:** ghuyck@sjcassoc.com

Plan Review

Review Date: 12/09/16
Principal Plan Reviewer: Ginger C. Davis
Agency: Hamilton County Soil and Water Conservation District
Address: 1717 Pleasant Street, Suite 100
City: Noblesville **State:** IN **Zip:** 46060
Phone: 317-773-2181 **FAX:** **E-Mail:** ginger.davis@hamiltoncounty.in.gov
Assisted By:

☑ **PLAN IS ADEQUATE: A comprehensive plan review has been completed and it has been determined that the plan satisfies the minimum requirements and intent of 327 IAC 15-5.**

☐ **Please refer to additional information included on the following page(s).**

☑ **Submit Notice of Intent (NOI):** *Attach a copy of this cover page when submitting the NOI to the Indiana Department of Environmental Management. Construction activities may begin 48 hours following the submittal of the NOI. A copy of the NOI must also be sent to the Reviewing Authority (e.g. SWCD, DNR).*

☐ **A preliminary plan review has been completed; a comprehensive review will not be completed within the 28-day review period. The reviewing authority reserves the right to perform a comprehensive review at a later date and revisions to the plan may be required at that time to address deficiencies.**

☐ **Please refer to additional information included on the following page(s).**

☐ **Submit Notice of Intent (NOI):** *Attach a copy of this cover page when submitting the NOI to the Indiana Department of Environmental Management. Construction activities may begin 48 hours following the submittal of the NOI. A copy of the NOI must also be sent to the Reviewing Authority (e.g. SWCD, DNR).*

☐ **PLAN IS DEFICIENT: Significant deficiencies were identified during the plan review.**

☐ **Please refer to additional information included on the following page(s).**

☐ **DO NOT file a Notice of Intent for this project.**

☐ **DO NOT commence land disturbing activities until all deficiencies are adequately addressed, the plan re-submitted, and notification has been received that the minimum requirements have been satisfied.**

☐ **Plan Revisions** ☐ **Deficient Items should be mailed or delivered to the Principal Plan Reviewer identified in the Plan Review Section above.**

Construction/Stormwater Pollution Prevention Plan - Technical Review and Comment *(Form 1)*

Project Name: Hamilton Bridge No. 305 - 241st Street Over Sugar Run
Date Reviewed: 12/09/16

The technical review and comments are intended to evaluate the completeness of the Construction/Stormwater Pollution Prevention Plan for the project. The Plan submitted was not reviewed for the adequacy of the engineering design. All measures included in the plan, as well as those recommended in the comments should be evaluated as to their feasibility by a qualified individual with structural measures designed by a qualified engineer. The Plan has not been reviewed for other local, state, or federal permits that may be required to proceed with this project. Additional information, including design calculations may be requested to further evaluate the Plan.

All proposed stormwater pollution prevention measures and those referenced in this review must meet the design criteria and standards set forth in the "Indiana Stormwater Quality Manual" from the Indiana Department of Natural Resources, Division of Soil Conservation or similar Guidance Documents.

Please direct questions and/or comments regarding this plan review to:
Ginger C. Davis
Please refer to the address and contact information identified in the Plan Review Section on page 1.

Assessment of Construction Plan Elements *(Section A)*

The Construction Plan Elements are adequately represented to complete a plan review:
☑ **Yes** ☐ **No**

The items checked below are deficient and require submittal to meet the requirements of the rule.

A			A		
☐	1	Index showing locations of required Plan Elements	☐	2	11 by 17 inch plat showing building lot numbers/boundaries and road layout/names
☐	3	Narrative describing the nature and purpose of the project	☐	4	Vicinity map showing project location
☐	5	Legal Description of the Project Site (Include Latitude and Longitude - NOI Requirement)	☐	6	Location of all lots and proposed site improvements (roads, utilities, structures, etc.)
☐	7	Hydrologic unit code (14 Digit)	☐	8	Notation of any State or Federal water quality permits
☐	9	Specific points where stormwater discharge will leave the site	☐	10	Location and name of all wetlands, lakes and water courses on and adjacent to the site
☐	11	Identification of all receiving waters	☐	12	Identification of potential discharges to ground water (abandoned wells, sinkholes, etc.)
☐	13	100 year floodplains, floodways, and floodway fringes	☐	14	Pre-construction and post construction estimate of Peak Discharge (10 Year storm event)
☐	15	Adjacent landuse, including upstream watershed	☐	16	Locations and approximate boundaries of all disturbed areas (Construction Limits)
☐	17	Identification of existing vegetative cover	☐	18	Soils map including soil descriptions and limitations
☐	19	Locations, size and dimensions of proposed stormwater systems (e.g. pipes, swales and channels)	☐	20	Plans for any off-site construction activities associated with this project (sewer/water tie-ins)
☐	21	Locations of proposed soil stockpiles and/or borrow/disposal areas	☐	22	Existing site topography at an interval appropriate to indicate drainage patterns
☐	23	Proposed final topography at an interval appropriate to indicate drainage patterns			

Construction/Stormwater Pollution Prevention Plan - Technical Review and Comment *(Form 1)*

Project Name: Hamilton Bridge No. 305 - 241st Street Over Sugar Run
Date Reviewed: 12/09/16

Assessment of Stormwater Pollution Prevention Plan *(Sections B & C)*

Stormwater Pollution Prevention Plan - Construction Component *(Section B)*

The construction component of the Stormwater Pollution Prevention Plan includes stormwater quality measures to address erosion, sedimentation, and other pollutants associated with land disturbance and construction activities. Proper implementation of the plan and inspections of the construction site are necessary to minimize the discharge of pollutants. The Project Site Owner should be aware that unforeseen construction activities and weather conditions may affect the performance of a practice or the effectiveness of the plan. The plan must be a flexible document, with provisions to modify or substitute practices as necessary.

Adequate	Deficient	Not Applicable	B	
☑	☐		1	**Description of potential pollutant sources associated with construction activities**
☑	☐		2	**Sequence describing stormwater quality measure implementation relative to land disturbing activities**
☑	☐		3	**Stable construction entrance locations and specifications (at all points of ingress and egress)**
☑	☐	☐	4	**Sediment control measures for sheet flow areas**
☑	☐	☐	5	**Sediment control measures for concentrated flow areas**
☑	☐	☐	6	**Storm sewer inlet protection measure locations and specifications**
☑	☐	☐	7	**Runoff control measures** (*e.g. diversions, rock check dams, slope drains, etc .*)
☑	☐	☐	8	**Storm water outlet protection specifications**
☐	☐	☑	9	**Grade stabilization structure locations and specifications**
☑	☐		10	**Location, dimensions, specifications, and construction details of each stormwater quality measure**
☑	☐		11	**Temporary surface stabilization methods appropriate for each season** (*include sequencing*)
☑	☐		12	**Permanent surface stabilization specifications** (*include sequencing*)
☑	☐		13	**Material handling and spill prevention plan**
☑	☐		14	**Monitoring and maintenance guidelines for each proposed stormwater quality measure**
☑	☐	☐	15	**Erosion & sediment control specifications for individual building lots**

Stormwater Pollution Prevention Plan - Post Construction Component *(Section C)*

The post construction component of the Stormwater Pollution Prevention Plan includes the implementation of stormwater quality measures to address pollutants that will be associated with the final landuse. Post construction stormwater quality measures should be functional upon completion of the project. Long term functionality of the measures are critical to their performance and should be monitored and maintained.

Adequate	Deficient	Not Applicable	C	
☑	☐		1	**Description of pollutants and their sources associated with the proposed land use**
☑	☐		2	**Sequence describing stormwater quality measure implementation**
☑	☐		3	**Description of proposed post construction stormwater quality measures** *(Include a written description of how these measures will reduce discharge of expected pollutants)*
☑	☐		4	**Location, dimensions, specifications, and construction details of each stormwater quality measure**
☑	☐		5	**Description of maintenance guidelines for post construction stormwater quality measures**

Project Name:	Hamilton Bridge No. 305 - 241st Street Over Sugar Run
Date Reviewed:	12/09/16

cc: File

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

CERTIFICATE OF APPROVAL
CONSTRUCTION IN A FLOODWAY

APPLICATION # : FW-28390

MAILED: September 30, 2016

STREAM : Sugar Run

APPLICANT : Hamilton County Board of Commissioners
Faraz J Khan
1700 South 10th Street
Noblesville, IN 46060-3835

RECEIVED
OCT 04 2016
HAMILTON CO. HIGHWAY DEPT.

AGENT : SJCA P.C.
Ben Deichmann, PE
9102 North Meridian Street, Suite 200
Indianapolis, IN 46260

AUTHORITY : IC 14-28-1 with 312 IAC 10

DESCRIPTION : The existing 15'-0" span x 5'-1" concrete slab top culvert carrying East 241st Street over Sugar Run will be replaced with a new culvert system. The new crossing will consist of a 17'-0" clear span x 12'-3.5" rise and 44'-0" long reinforced concrete slab top culvert set in geosynthetic reinforced soil-integrated abutments and wing walls. The new culvert will have an upstream and downstream invert elevation of 807.03', NAVD. The culvert will be skewed 0 degrees to align with streamflow. Minor channel shaping will occur both downstream and upstream of the new culvert to improve the flow transition at the crossing. The shaping will be confined to the construction right-of-way. The reshaped areas will be stabilized with an 24" thick layer of riprap. The roadway will be elevated approximately 5'-9" above the existing road elevations. The crown of the roadway over the new culvert will be at 820.07, NAVD. Steel W-beam guardrails will be placed along each side of the roadway over the channel. Details of the project are contained in information received electronically at the Division of Water on April 27, 2016 and in plans and information received at the Division of Water on May 17, 2016, July 14, 2016, August 31, 2016 and September 13, 2016.

LOCATION : At the East 241st Street crossing near Cicero, White River Township, Hamilton County
Section 32, T 20N, R 5E, Omega Quadrangle
UTM Coordinates: Downstream 4443765 North, 586945 East

APPROVED BY : Bryan Denman

Bryan Denman, Environmental Manager
Division of Water

APPROVED ON : September 30, 2016

Included: Notice Of Right To Administrative Review - General Conditions - Special Conditions - Service List

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

NOTICE OF RIGHT TO ADMINISTRATIVE REVIEW

APPLICATION #: FW- 28390

This signed document constitutes the issuance of a permit by the Department of Natural Resources, subject to the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

The permit or any of the conditions or limitations which it contains may be appealed by applying for administrative review. Such review is governed by the Administrative Orders and Procedures Act, IC 4-21.5, and the Department's rules pertaining to adjudicative proceedings, 312 IAC 3-1.

In order to obtain a review, a written petition must be filed with the Division of Hearings within 18 days of the mailing date of this notice. The petition should be addressed to:

Director
Division of Hearings
Indiana Government Center North, Room N501A
100 North Senate Avenue
Indianapolis, Indiana 46204

The petition must contain specific reasons for the appeal and indicate the portion or portions of the permit to which the appeal pertains.

If an appeal is filed, the final agency determination will be made by the Natural Resources Commission following a legal proceeding conducted before an Administrative Law Judge. The Department of Natural Resources will be represented by legal counsel.

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

GENERAL CONDITIONS

APPLICATION #: FW- 28390

(1) If any archaeological artifacts or human remains are uncovered during construction, federal law and regulations (16 USC 470, et seq.; 36 CFR 800.11, et al) and State Law (IC 14-21-1) require that work must stop and that the discovery must be reported to the Division of Historic Preservation and Archaeology within 2 business days.

Division of Historic Preservation and Archaeology
Room W274
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-1646, FAX: (317) 232-8036

(2) This permit must be posted and maintained at the project site until the project is completed.

(3) This permit does not relieve the permittee of the responsibility for obtaining additional permits, approvals, easements, etc. as required by other federal, state, or local regulatory agencies. These agencies include, but are not limited to:

Agency	Telephone Number
Hamilton County Drainage Board	(317) 776-8495
US Army Corps of Engineers	(502) 315-6686
Indiana Department of Environmental Management	(317) 233-8488 or (800) 451-6027
Local city or county planning or zoning commission	

(4) This permit must not be construed as a waiver of any local ordinance or other state or federal law.

(5) This permit does not relieve the permittee of any liability for the effects which the project may have upon the safety of the life or property of others.

(6) This permit may be revoked by the Department of Natural Resources for violation of any condition, limitation or applicable statute or rule.

(7) This permit shall not be assignable or transferable without the prior written approval of the Department of Natural Resources. To initiate a transfer contact:

Mr. Michael W. Neyer, PE, Director
Division of Water
Room W264
402 West Washington Street
Indianapolis, IN 46204

Telephone: (317) 232-4160, Toll Free: (877) 928-3755
FAX: (317) 233-4579

(8) The Department of Natural Resources shall have the right to enter upon the site of the permitted activity for the purpose of inspecting the authorized work.

(9) The receipt and acceptance of this permit by the applicant or authorized agent shall be considered as acceptance of the conditions and limitations stated on the pages entitled "General Conditions" and "Special Conditions".

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

SPECIAL CONDITIONS

APPLICATION #: FW- 28390

PERMIT VALIDITY : This permit is valid for 24 months from the "Approved On" date shown on the first page. If construction work in the floodway has not been completed by September 30, 2018 the permit will become void. This permit may be renewed one (1) time if a written request is received by DNR, Division of Water prior to September 30, 2018. Thereafter the permit will become void and a new permit will be required in order to continue work on the project.

This permit becomes effective 18 days after the "MAILED" date shown on the first page. If both a petition for review and a petition for a stay of effectiveness are filed before this permit becomes effective, any part of the permit that is within the scope of the petition for stay is stayed for an additional 15 days.

CONFORMANCE : Other than those measures necessary to satisfy the "General Conditions" and "Special Conditions", the project must conform to the information received by the Department of Natural Resources on: April 27, 2016, May 17, 2016, July 14, 2016, August 31, 2016 and September 13, 2016. Any deviation from the information must receive the prior written approval of the Department.

Number	Special Condition
(1)	revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion
(2)	minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush
(3)	do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife
(4)	do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30
(5)	operate equipment used to replace the structure from the existing roadway
(6)	use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids
(7)	plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction
(8)	do not use broken concrete as riprap
(9)	underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap
(10)	minimize the movement of resuspended bottom sediment from the immediate project area
(11)	do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

SPECIAL CONDITIONS

APPLICATION #: FW- 28390

(12) appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized

(13) seed and protect disturbed stream banks that are 3:1 or steeper with heavy-duty net-free biodegradable erosion control blankets to minimize the entrapment and snaring of small wildlife such as snakes and turtles (follow manufacturer's recommendation for installation); seed and apply mulch on all other disturbed areas

(14) conduct a post-construction inspection to verify that riprap placed in the active thalweg channel or placed in the streambed conforms to the streambed elevation and channel grade, and does not impair upstream fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation); any riprap placed in the streambed that extends above the streambed level may result in a fish passage obstruction and will need to be removed

(15) do not dewater directly into the stream; dewater into a sediment bag, into a roll off box, and onto a riprap apron, or similar system

(16) dewatering pumps must incorporate filters or bypasses to avoid injuring or killing fish and other aquatic organisms

(17) except for the material used as backfill as shown on the above referenced project plans on file at the Division of Water, place all excavated material landward of the floodway *

(18) do not leave felled trees, brush, or other debris in the floodway *

(19) upon completion of the project, remove all construction debris from the floodway *

(20) issuance of this Certificate does not constitute approval of any temporary causeways, coffer dams, runarounds, access bridges or borrow areas associated with the proposed bridge construction; separate written approval must be obtained from the Department for these types of projects prior to beginning any work within the floodway *

(21) keep the bridge waterway opening free of debris and sediment at all times

(22) * NOTE: for regulatory purposes, the floodway is defined as the area inundated by the base flood as shown on Panel 65 of the Hamilton County Flood Insurance Rate Map dated November 19, 2014.

STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES

SERVICE LIST

APPLICATION #: FW- 28390

Hamilton County Board of Commissioners
Faraz J Khan
1700 South 10th Street
Noblesville, IN 46060-3835

SJCA P.C.
Ben Deichmann, PE
9102 North Meridian Street, Suite 200
Indianapolis, IN 46260

Jared A Bailey
1260 Dahlgren Lane
Cicero, IN 46034

Hamilton County Drainage Board
1 Hamilton County Square, Suite 188
Noblesville, IN 46060-2653

Hamilton County SWCD
Mark McCauley
1717 Pleasant Street, Suite 100
Noblesville, IN 46060

Indiana Department of Natural Resources
Division of Law Enforcement
District 4 Headquarters
3734 Mounds Road
Anderson, IN 46017

Gerald and Nancy Kakasuleff
9711 East 246th Street
Cicero, IN 46034

Chuck Kiphart
One Hamilton County Square, Suite 306
Noblesville, IN 46060

Warren and Landi Lockwood
10680 East 241st Street
Cicero, IN 46034

Edward and Rebecca Moore
10680 East 241st Street
Cicero, IN 46034

US Army Corps of Engineers
Louisville District
PO Box 59
Louisville, KY 40201-0059

Staff Assignment:

Administrative	: Bryan Denman
Technical	: Bryan Denman
Environmental	: J. Matthew Buffington
Fish and Wildlife	: Erin Basiger
Engineering	: Jim Wertz

Sherly George

From: Turner, James <JTurner2@idem.IN.gov>
Sent: Monday, July 31, 2017 5:36 PM
To: Sherly George
Subject: RE: IDEM Permit for Hamilton 33008

It was approved as:

2016-490-29-HAP-X

You won't receive a formal approval letter.

Jay

J. Turner | Wetlands, Lakes, and Streams Project Manager
IDEM, Office of Water Quality, 100 North Senate Avenue MC 65-42, IGCN Room 1255, Indianapolis, Indiana 46204
Office: 317-234-6352 | Mobile: 317-450-7054 | JTurner2@IDEM.IN.Gov | **wetlands.IN.gov**

From: Sherly George [mailto:sgeorge@sjca-pc.com]
Sent: Monday, July 31, 2017 4:12 PM
To: Turner, James <JTurner2@idem.IN.gov>
Subject: IDEM Permit for Hamilton 33008

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Hi Mr. Turner,
I am reaching out to you to check on the permit for the above mentioned project. We submitted the permit application on 08/08/2016 and the transmittal is attached. We received the RGP permit from ACOE and is attached. Please let me know if there is a permit that has been issued or the project automatically qualifies and we won't be issued a permit.
Let me know if you need any additional information.
Thanks for your help.

Sherly George P.E.
SJCA P.C.
9102 North Meridian St., Suite 200
Indianapolis, IN 46260
Office: 317 566 0629
Fax: 317 566 0633
sgeorge@sjca-pc.com

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE KY 40201-0059
FAX: (502) 315-6677

November 4, 2016

Operations Division
Regulatory Branch (North)
ID No. LRL-2016-841-jlt

Mr. Faraz Khan
Hamilton County Highway Department
1700 South 10th Street
Noblesville, Indiana 46060

Dear Mr. Khan:

This is in response to your application received August 11, 2016, and additional information received October 3, 2016, for a Department of the Army Permit to replace a 16-foot 5-inch by 18-foot 3-inch bridge with a 25-foot by 33-foot single span bridge. The project is identified as the Hamilton County 305 Bridge Replacement over Sugar Run. The project is located on 241 Street over Sugar Run, Cicero, Hamilton County, Indiana (Latitude: 40.139696°; Longitude:-85.979388°).

Under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (CWA), the Louisville, Detroit, and Chicago Districts issued Regional General Permit (RGP) No. 1 on December 15, 2014, for certain activities having minimal impact in Indiana. We have verified that your proposed work described below is authorized under the RGP. Therefore, you may proceed with the work subject to the enclosed general conditions, the Indiana Department of Environmental Management (IDEM) Section 401 Water Quality Certification (WQC) dated December 15, 2014 and the noted Special Condition. Please note that IDEM must be notified as a condition of the WQC.

The following work is authorized:

To replace a bridge over Sugar Run. Impacts below the Ordinary High Water Mark include the discharge of 146 cubic yards of concrete and riprap over an area of 0.041 acre along 94 linear feet of creek bank.

Special Condition:

There shall be no tree clearing between April 1 and September 30 to trees greater than 3 inches in diameter at breast height (dbh) with loose hanging bark to avoid impacts to the Federally endangered Indiana bat (*Myotis sodalis*) and the Northern long-eared bat (*Myotis septentrionalis*).

Any new construction activity other than that described above may not qualify for the RGP. If your plans change or if additional activities are proposed, please submit revised plans to this office for review prior to construction.

Enclosed is a "Notice of Authorization" to be displayed at the construction site in a conspicuous place. Upon completion of the work authorized by this RGP, the enclosed Completion Report form must be completed and returned to this office. This authorization is valid until December 15, 2019.

A copy of this letter will be sent to the Indiana Department of Environmental Management and your agent (see enclosure for addresses).

If you have any questions concerning this matter, please contact this office at the above address, ATTN: CELRL-OPF-N or call me at (502) 315-6710. Any correspondence on this matter should refer to our ID Number LRL-2016-841-jlt.

Sincerely,

Original Signed

Jim Thomas
Project Manager, North Section
Regulatory Branch

Enclosures

ADDRESS FOR COORDINATING AGENCY

Ms. Heather Parsons
Indiana Department of Environmental Management
Office of Water Quality
Wetlands and Storm Water Section
MC-65-42, Room 1255
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

ADDRESS FOR COORDINATING AGENT

Ms. Sherly George
SJCA P.C.
9102 North Meridian Street, Suite 200
Indianapolis, Indiana 47404

Hamilton County Surveyor's Office
One Hamilton County Square, Suite 188
Noblesville, Indiana 46060
Office: (317) 776-8495 Fax: (317) 776-9628

Crossing Permit

Permit Number: **C-2017-00031** ***Issue Date:*** **August 02, 2017** ***Temporary:*** **Y**

Drain Name: **GINTERT,CLARA** ***Project Name:*** Structure #33008

Project Location: 241st Street approximately 1,050' west of Rulon Rd

Crossing Type: Other ***# of Crossings.*** 1 ***Engineering Firm:*** SJCA Engineering

Purpose: Road construction as part of bridge project. ***Plan Project Id:*** Bridge 305

Applicant:

HAMILTON COUNTY HIGHWAY
1700 S. 10th STREET
NOBLESVILLE,IN 46060
(317) 773-7770 (Business)

Contact: Sherly George, Hamilton County High
317-773-7770
- -

Conditions for Approval:

Existing field tile to be replaced within road right-of-way. Reinforced concrete pipe to be utilized, box structure to be set at both junctions with existing pipe. Next size larger pipe to be used if existing size is not available.

Parcels:

Parcel No: 07-03-32-00-00-013.000 White River

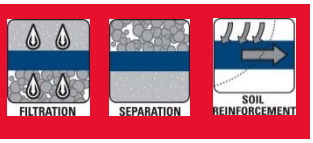
Surveyor:

8/2/2017
Date:

APPROVED

TENCATE GEOSYNTHETICS
Americas

Mirafi® HP570



Mirafi® HP570 geotextile is composed of high-tenacity polypropylene yarns, which are woven into a network such that the yarns retain their relative position. Mirafi® HP570 geotextile is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

TenCate Geosynthetics Americas is accredited by a2La (The American Association for Laboratory Accreditation) and Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP). NTPEP Listed

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Tensile Strength (at ultimate)	ASTM D4595	lbs/ft (kN/m)	4800 (70.0)	4800 (70.0)
Tensile Strength (at 2% strain)	ASTM D4595	lbs/ft (kN/m)	960 (14.0)	1320 (19.3)
Tensile Strength (at 5% strain)	ASTM D4595	lbs/ft (kN/m)	2400 (35.0)	2700 (39.4)
Tensile Strength (at 10% strain)	ASTM D4595	lbs/ft (kN/m)	4800 (70.0)	---
			Minimum Roll Value	
Flow Rate	ASTM D4491	gal/min/ft^2 (l/min/m^2)	30 (1222)	
Permittivity	ASTM D4491	sec^{-1}	0.40	
			Maximum Opening Size	
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve (mm)	30 (0.60)	
			Typical Test Value	
Pore Size 0_{95}[1]	ASTM D6767	microns	465	
Pore Size 0_{50}[1]	ASTM D6767	microns	632	
			Minimum Test Value	
Factory Sewn Seam	ASTM D4884	lbs/ft (kN/m)	3000 (43.8)	
UV Resistance (at 500 hours)	ASTM D4355	% strength retained	80	

[1] Based on Third Party Testing

Physical Properties	Unit	Roll Size
Roll Dimensions (length x width)	ft (m)	15 x 300 (4.5 x 91)
Roll Area	yd^2 (m^2)	500 (418)

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