Illinois Department of Natural Resources
CONSERVATION PLAN
(Application for an Incidental Take Authorization)
Per 520 ILCS 10/5.5 and 17 Ill. Adm. Code 1080

150-day minimum required for public review, biological and legal analysis, and permitting

PROJECT APPLICANT: City of Kankakee

PROJECT NAME: Kankakee Riverfront Trail over Kankakee River

COUNTY: Kankakee County

AREA OF IMPACT: Kankakee River in the vicinity of the proposed bridge and causeway

The incidental taking of endangered and threatened species shall be authorized by the Illinois Department of Natural Resources (IDNR) only if an applicant submits a conservation plan to the IDNR Incidental Take Coordinator that meets the following criteria:

1. A **description of the impact likely to result** from the proposed taking of the species that would be covered by the authorization, including but not limited to -

A) identification of the **area to be affected** by the proposed action, include a legal description and a detailed description including street address, map(s), and GIS shapefile. Include an indication of ownership or control of affected property. Attach photos of the project area.

The project construction area is located in the City of Kankakee 0.25 miles northwest (downstream) of the IL 17 over Kankakee River bridge. The new bridge will be located on the old railroad alignment (bridge piers from the existing railroad structure are still present in the river) approximately 100′ northwest of the Norfolk Southern Railroad bridge. The bridge is located in the southeast quarter of Section 31, Township 31N, Range 12E, of the 3rd Principal Meridian.

B) **biological data** on the affected species including life history needs and habitat characteristics. Attach all biological survey reports.

State-listed Mussel Species: *A mussel survey was conducted in the Kankakee River in the vicinity of the proposed bridge on June 13, 2016. The survey results are included in Appendix B. Among the live species collected was one state-threatened species, the black sandshell (Ligumia recta). No live federally-listed species were collected. A fresh-dead shell of the purple wartyback (Cyclonaias tuberculate) was collected in the Kankakee River at this location in 2012. The state-listed mussel species are described below.*

State-listed Fish Species: *A fish survey was conducted in the Kankakee River in the vicinity of the proposed bridge on June 13, 2016. The survey results are included in Appendix B. Among the live species collected was one state-threatened species, the river redhorse (Moxostoma carinatum). No live federally-listed species were collected. The state-listed fish species are described below.*

This ITA presents best management practices, species surveys, and relocation of identified species in areas where construction is likely to affect listed species.

Black Sandshell Mussel

The black sandshell inhabits larger streams and rivers with hard bottoms such as firm, compacted sand, sandy gravel, or gravel/cobble in fast flowing water. Despite its name the black sandshell is rarely found in readily shifting sands and is never found in silty conditions (Parmalee and Bogan, 1998, Montana, 2012). The black sandshell is a thick shelled, elongated mussel that is dark brown or black in maturity, though juvenile and young adults can show a pattern of green rays on a lighter colored shell surface. The black sandshell shows sexual dimorphism and can reach a length of approximately eight inches. (Cummings & Mayer 1992, Klocek et al. 2006).

Native freshwater mussels require a fish host to distribute their larvae (glochidia). Black sandshells are bradytictic, or long term brooders. Females brood their glochidial larvae from August through the winter to the following July before they are released (Ortmann 1919). Host fish for the glochidia of the black sandshell include the bluegill (Lepomis macrochirus), largemouth bass, sauger and white crappie (Pomoxis annularis) (Watters 1994). Additionally, yellow perch, green sunfish (Lepomis cyanellus), rock bass, and white perch (Morone americana) were identified as suitable hosts for L. recta by Steg, (1998). Saugers are considered by some to be a primary host fish for black sandshell (Khym and Layzer. 2000).

Despite the relatively large number of host fish that carry larval black sandshell, the black sandshell appears to be declining throughout its midwestern range. Although exact causes of black sandshell decline are not reported in the literature, general declines or extirpations in mussel populations are attributed to habitat changes and water quality changes that can be linked to pollution from siltation, and urban runoff. (Downing et al. 2010). Recent findings that mussel glochidia are acutely sensitive to small ammonia spikes (USEPA, 2009) indicate that ammonia runoff from lawns, turf grass, farms and perhaps wastewater treatment plant overflows during heavy rain events may contribute to a lack of recruitment for larval mussels.

The Illinois Natural History database contains 279 records of black sandshell occurrences in Illinois, dating back to 1878. Recent populations of black sandshell were tallied from the INHS data, with records dated from the year 2000 through 2012 counted as recent populations. Recent reports of the black sandshell are from 20 discrete river/stream systems with approximately 37 populations known based on Illinois county distributions within the twenty river/stream systems.

Purple Wartyback Mussel

The purple wartyback is found in medium to large rivers with large to medium gravel or mixed sand and gravel substrates. Cobble and boulders may be present in the substrate. The purple wartyback's distinguishing features include a rounded shell with a fairly prominent wing, numerous bumps (or warts), and a purple nacre, though white nacre is present in some populations. Known fish hosts for the purple wartyback include: the black bullhead (Ameiurus melas), yellow bullhead (Ameiurus natalis), flathead catfish (Pylodictis olivaris) and the channel catfish (Ictalurus punctatus), all of which are common and widespread fish in Illinois (Cummings & Mayer 1992, Badra 2004, OSU, 2013).

The purple wartyback is commonly found throughout most of the Midwest and Eastern United States and is found as far west as Oklahoma. Within Illinois, Michigan, Wisconsin, Iowa, and Minnesota the specie's conservation status is listed as imperiled. The purple wartyback is state threatened in Illinois. (Nature Serve, 2013). The INHS database contains 259 records for purple

wartyback in 20 counties and from 25 discreet streams in Illinois. Of the 25 discreet stream records, only nine records are from 2000 or later with many records of last occurrence dating to 1897-1925. The purple wartyback is in decline throughout much of its Illinois range.

River Redhorse

The river redhorse usually is found in small to medium rivers with moderate flow over rock and cobble substrates (Page and Burr, 2011). Suitable habitat for the river redhorse was identified under and immediately upstream and downstream of the bridge (INHS, 2014). This species requires clear water and is intolerant of siltation and turbid conditions (Stagliano, 2001). River redhorse most likely spawn in Illinois from early April to late May (INHS, 2014). However, as river redhorse are relatively late spawners among suckers, spawning may occur in early June in the northern part of their range (Stagliano, 2001). River redhorse have been reported to spawn in 2-4 feet of water in moderate current over gravel and cobble substrate where redds (nests) are constructed that may be up to 4-8 feet wide (Stagliano, 2001). The species prefers clean gravel areas for spawning.

A recent report by Butler and Wahl (2012) identified 75 occurrences of the river redhorse in the Wilmington reach of the Kankakee River between 1975 and 2011. These occurrences were documented in various resources including the Illinois Department of Conservation Fisheries Metrics database.

C) **description of project activities** that will result in taking of an endangered or threatened species, including practices to be used, a timeline of proposed activities, and any permitting reviews, such as a USFWS biological opinion or USACE wetland review. Please consider all potential impacts such as noise, vibration, light, predator/prey alterations, habitat alterations, increased traffic, etc.

Two causeways will be constructed of RR 3 size stone and capped with a smaller granular material as shown in the attached plan. Cofferdams will be constructed using a 12′x32′x12′ steel trench box & steel plates at the center pier (crane will be required on the causeway to install the cofferdams), and sand bags (3′x3′x3′) at the two exterior piers (15′x30′ plan area). A crane will be required on the causeway to install the cofferdams. The cofferdams will be dewatered. The existing bridge piers are to be partially removed down to the top of the existing footing using heavy equipment on the causeways as required. The piers will be constructed using heavy equipment to set the reinforcement bar cages. They will be formed up and a concrete pump truck on the causeways will place the concrete. A total of three piers will be built. The truss superstructures will be placed with the use of cranes. The end span trusses will be placed in one piece. The two interior spans will require the trusses to be set in two pieces and connected at the center of the span. The cofferdams will be removed using a crane and heavy equipment. Riprap from the causeways will then be placed around the piers. The causeways will be completely removed from the river. It is anticipated that construction activities will start as soon as the ITA is approved and continue until April 2017, unless delayed late enough in the year due to weather, high water, etc. If delayed, construction may begin as late as July 2017 and continue until April 2018.

D) explanation of the anticipated **adverse effects on listed species**; how will the applicant′ s proposed actions impact each of the species′ life cycle stages.

If not relocated, mussels would likely be buried or otherwise crushed or killed by construction activities. The river redhorse could become entrapped in the temporary cofferdams during

construction. The potential adverse impacts would result from constructing the causeway & cofferdams, removal of the existing bridge piers and the construction of the new piers. There is also a possibility of sedimentation due to the reduced opening width of the causeway.

2) Measures the applicant will take to **minimize and mitigate** that impact and the **funding** that will be available to undertake those measures, including, but not limited to -

A) plans to **minimize the area affected** by the proposed action, the estimated **number of individuals** of each endangered or threatened species that will be taken, and the **amount of habitat** affected (please provide an estimate of area by habitat type for each species).

Due to difficulty accessing the site at the east end of the proposed bridge, the original causeway plan extended ~500' south along the bank to an area that provided better access to the river. 13,000 Sq. Ft. of proposed causeway has been removed (~48%) along the east bank (please note that the east side of the river is where all the black sandshell mussels were found in the most recent mussel survey) south of the proposed structure. This makes river access more difficult and costlier. The causeway hydraulic design allows for the entire flow of the river to be taken by the opening between the two causeways during low flow without the use of pipe culverts. 3-18" ϕ pipe culverts were added to prevent areas where siltation could occur which is harmful to the each of the listed species. The causeways will be built out of riprap that will also allow some flow through the causeway. It is estimated that 1-5 black sandshell mussels, 1-5 purple wartyback mussels, and 1-5 river redhorse will be taken. The total area of affected habitat 14,300 Sq. Ft. of instream work (causeways and cofferdams).

B) **plans for management of the area** affected by the proposed action that will **enable continued use** of the area by endangered or threatened species by maintaining/re-establishing suitable habitat (for example, native species planting, invasive species control, use of other best management practices, restored hydrology, etc.).

During construction, adjacent areas of land will contain erosion and sediment control features. The IDOT erosion and sediment control policy will be followed and will be in compliance with the USACOE Section 404 permit, the water quality certification policies of the the Illinois EPA, and the requirements of the NPDES construction permit. Other than the piers, all work in the stream is temporary (please note the proposed piers are smaller than the existing piers and located at the same location). It is expected, that after the instream work is completed, the area will be available for recolonization by all species of mussels.

C) description of **all measures to be implemented to avoid, minimize, and mitigate** the effects of the proposed action on endangered or threatened species.

- Avoidance measures include working outside the species' habitat.
- Minimization measures include timing work when species is less sensitive or reducing the project footprint.
- Mitigation is additional beneficial actions that will be taken for the species such as needed research, conservation easements, propagation, habitat work, or recovery planning.

- It is the **applicants responsibility to propose mitigation measures**. IDNR expects applicants to provide species conservation benefits 5.5 times larger than their adverse impact.

To minimize and mitigate the effects of the project on the black sandshell & purple wartyback mussels, it is planned to relocate all individuals of these species and all other species from the project area before construction begins. The relocation area will be an area with suitable stable substrates, similar unionid assemblages, and low to no zebra mussel infestations. The relocation area will be determined by IDOT before construction and approved by IDNR. The temporary holding of mussels will be in containers that allow the animals to remain moist and uncrowded. All mussel relocation protocols will be followed. The relocation will occur between September 1 and November 1 of 2016 and will be done as to avoid extreme temperatures. IDOT will perform the relocation.

To minimize and mitigate the effects of the project on the river redhorse, it is planned to capture and relocate any river redhorse (or any other fish or mussel) that becomes entrapped in the cofferdams. Stone riprap will be added around the piers to provide River Redhorse habitat (Becker 1983).

The proposed causeway has also been reduced in size by ~48%. This reduction took place along the east bank, where all of the black sandshell mussel were found during the 2016 survey. Pipe culverts have been added to maintain flow throughout the width of the channel during low flow to avoid siltation in the areas on the river that will be blocked during low flow. These culverts were not required per the hydraulic calculations submitted to IDNR-OWR. Stone riprap will be added around the piers to provide fish habitat. Stone riprap is not required per the design plans due to the shallow depth of bedrock. The cost of the pipes and riprap is expected to be $5,000. An amount of $11,740 will be given to IDNR to be used for habitat restoration and species propagation for the river redhorse, black sandshell and purple wartyback.

D) plans for **monitoring** the effects of the proposed actions on endangered or threatened species, such as species and habitat monitoring before and after construction, include a plan for follow-up reporting to IDNR.

INHS will conduct mussel and fish surveys two and four years after construction is completed under the new bridge and at the relocation site. Their reports will be forwarded to IDNR & IDOT.

E) **adaptive management practices** that will be used to deal with changed or unforeseen circumstances that affect on endangered or threatened species. Consider environmental variables such as flooding, drought, and species dynamics as well as other catastrophes. Management practices should include contingencies and specific triggers. Note: Not foreseeing any changes does not quality as an adaptive management plan.

Mussel relocation is dependent on the flow and volume of water in the river at that time. If the flow is swift and/or the water levels are high the relocation will not take place and the projects

instream work will be delayed. Mussel relocation will occur only when water levels are low and current conditions are moderate or low.

Potential mussel relocation beds will be carefully screened to assure that the habitat is suitable for transplanted mussels and that risks of external threats to the relocation beds (siltation, chemical spills) are minimized.

F) verification that **adequate funding** exists to support and implement all mitigation activities described in the conservation plan. This may be in the form of bonds, certificates of insurance, escrow accounts or other financial instruments adequate to carry out all aspects of the conservation plan.

The City of Kankakee has entered into a federal aid agreement with the State of Illinois for the construction of this structure. The funding is contingent on the city following the approved conservation plan.

3) A description of **alternative actions** the applicant considered that would reduce take, and the reasons that each of those alternatives was not selected. A "no-action" alternative" shall be included in this description of alternatives. Please, describe the economic, social, and ecological tradeoffs of each action.

No Build Alternative

The only alternative that would not result in the take of listed species is the "no build" alternative which would mean that the riverfront trail would not have a river crossing. This structure is needed to ensure safety to the pedestrian and biking public. Not building the bridge and the multi-use path will result in lost economic opportunities for the City of Kankakee.

Four Span Structure Utilizing Existing Piers Alternative

This alternative would place the proposed pedestrian truss superstructure on the existing piers in the river. This alternative is not possible due to the poor condition and questionable load carrying capacity of the existing piers. The cost to repair the existing piers and bring them to the required load carrying capacity makes this option not economically feasible.

Four Span Structure Alternative

This alternative would utilize new piers in the same location as the existing piers. Reusing the existing pier locations helps to minimize the area of instream work. This option is the only option that can be economically built and minimizes the impacts to the river, mussels and fish. The multi-use path and bridge will result in additional economic opportunities for the City of Kankakee.

The four span structure alternative was chosen.

4) Data and information to indicate that the proposed taking **will not reduce the likelihood of the survival** of the endangered or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species existence in Illinois.

Suitable habitat exists both upstream and downstream of the bridge site. Due to the small area affected by construction of the new bridge, the relocation of the mussels from areas to be affected by construction activities and the relocation of any listed fish (and any other fish or mussels) that become entrapped in the cofferdams, it is expected that these three species will continue to exist in this reach of the Kankakee River.

It should be noted that there are multiple populations of each species located in Illinois that will not be affected by this project. Therefore, this project should not affect the survivability of the species in the wild in Illinois.

5) An **implementing agreement**, which shall include, but not be limited to (on a separate piece of paper containing signatures):

A) the names and signatures of all participants in the execution of the conservation plan;

B) the obligations and responsibilities of each of the identified participants with schedules and deadlines for completion of activities included in the conservation plan and a schedule for preparation of progress reports to be provided to the IDNR;

C) certification that each participant in the execution of the conservation plan has the legal authority to carry out their respective obligations and responsibilities under the conservation plan;

D) assurance of compliance with all other federal, State and local regulations pertinent to the proposed action and to execution of the conservation plan;

E) **copies of any final federal authorizations for a taking already issued to the applicant**, if any.

PLEASE SUBMIT TO: Incidental Take Authorization Coordinator, Illinois Department of Natural Resources, Division of Natural Heritage, One Natural Resources Way, Springfield, IL, 62702 OR DNR.ITAcoordinator@illinois.gov **October 2015**

Implementing Agreement

A) Names and Signatures of all participants: City of Kankakee is the owner of this project.
B) Obligations and Responsibilities of each participant with schedules and deadlines for completion and preparation of progress reports submitted to the department: City of Kankakee is responsible for activities related to the Kankakee River Bridge improvements. The City of Kankakee will oversee the activities of the contractor. Construction is scheduled to begin as soon as the ITA is approved and be complete by April 2017 unless delayed late enough in the year due to weather, high water, etc. If delayed, construction may begin as late as July 2017 and continue until April 2018. Once the project is completed, a summary report will be submitted to the IDNR summarizing all activities that occurred prior to the commencement of monitoring.
C) Certification that each participant has the legal authority to carry out their respective obligations and responsibilities: See Final Clause of this Plan.
D) Assurance of compliance with all other federal, state, and local regulations pertinent to the proposed action and to the execution of the conservation plan: Coordination has occurred with the following agencies:

- U.S. Army Corps of Engineers
- U.S. Fish & Wildlife Service
- U.S. Environmental Protection Agency
- Illinois Environmental Protection Agency
- Illinois Department of Natural Resources
- Illinois Historic Preservation Agency
- Illinois Department of Transportation

E) Copies of any federal authorizations of a taking already issued: U.S. Army Corps of Engineers Section 404 nationwide #14 permit had been issued and the IDNR-OWR permit is waiting on the approval of the ITA. A copy of the USACOE permit is attached.

CERTIFICATION:
City of Kankakee certifies that it has the authority to complete the project and to address the issues proposed in the Incidental Take Plan in the event state listed threatened or endangered species are encountered. The City of Kankakee is in charge of construction and will assure that all applicable state laws will be adhered to during the completion of the project.

Nina Epstein July 25, 2016
Name Date
City of Kankakee Representative

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ROCK ISLAND DISTRICT
PO BOX 2004 CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61204-2004

REPLY TO
ATTENTION OF

RECEIVED
MAY 07 2012
Tyson Engineering Inc.

May 2, 2012

Operations Division

SUBJECT: CEMVR-OD-P-2012-224

Mayor Nina Epstein
City of Kankakee
304 South Indiana Avenue
Kankakee, Illinois 60901

Dear Mayor Epstein:

Our office reviewed your application dated February 14, 2012 concerning the proposed construction of a bridge superstructure over the Kankakee River in Section 31, Township 31 North, Range 12 East, Kankakee County, Illinois.

Your project is covered under Item 14 of the enclosed Illinois Certification, provided you meet the permit conditions for the nationwide permits, which are also included in the Illinois Certification. The Corps has also made a determination of no effect on federally threatened and endangered species or critical habitat. The Illinois Environmental Protection Agency (IEPA) also issued Section 401 Water Quality Certification with conditions for this nationwide permit. Please note these additional conditions included in the Illinois Certification. The decision regarding this action is based on information found in the administrative record, which documents the District's decision-making process, the basis for the decision, and the final decision.

You are encouraged to conduct your construction activities during a period of low flow. You are required to remove all fill material used as a temporary crossing to an upland, non-wetland site, to seed all disturbed areas with native grasses and to implement appropriate measures to insure that sediments are not introduced into waters of the United States during construction of this project.

Bank and shoreline protection shall consist of suitable clean materials, free from debris, trash, and other deleterious materials. If broken concrete is used as riprap, all reinforcing rods must be cut flush with the surface of the concrete, and individual pieces of concrete shall not exceed 3 feet in any dimension. Asphalt and broken concrete containing asphalt are specifically excluded from this authorization.

Debris created by any bridge repair activities must be captured before it enters the river or stream. If debris inadvertently falls into the river or stream, it must be promptly remove and disposed to an upland non-wetland location.

This verification is valid for two years from the date of this letter unless the nationwide permit is modified, reissued or revoked. It is your responsibility to remain informed of changes to the nationwide permit program. We will issue a public notice announcing any changes if and when they occur. Furthermore, if you commence or are under contract to commence this activity before the date the nationwide permit is modified or revoked, you will have twelve months from this date to complete your activity under the present terms and conditions of this nationwide permit. If your project plans change, you should contact our office for another determination.

Our office has completed a Preliminary Jurisdictional Determination concerning your project area. A copy of our jurisdictional determination is enclosed. A Preliminary Jurisdictional Determination is not appealable, and it is applicable only to the permit program administered by the Corps of Engineers.

This authorization does not eliminate the requirement that you must still acquire other applicable Federal, state, and local permits. If you have not already coordinated your project with the Illinois Department of Natural Resources – Office of Water Resources, please contact them at 217/782-3863 to determine if a floodplain development permit is required for your project. You may contact the IEPA Facility Evaluation Unit at 217/782-3362 to determine whether additional authorizations are required from the IEPA. Please send any electronic correspondence to EPA.401.bow@illinois.gov.

This delineation/determination has been conducted to identify the limits of the Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This delineation/determination may not be valid for the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should coordinate with the local office of the Natural Resources Conservation Service prior to starting work.

The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the free navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

You are required to complete and return the enclosed "Completed Work Certification" upon completion of your project, in accordance with General Condition No. 30 of the nationwide permits.

The Rock Island District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the attached postcard and return it or go to our Customer Service Survey found on our web site at http://per2.nwp.usace.army.mil/survey.html. (Be sure to select "Rock Island District" under the area entitled: Which Corps office did you deal with?)

Should you have any questions, please contact our Regulatory Branch by letter, or telephone me at 309/794-5369.

Sincerely,

Jeff Sniadach

Jeffrey W. Sniadach
Project Manager
Enforcement Section

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ _____

Transferee Date

Enclosures

Copies Furnished: (w/o enclosures)

Mr. Mike Diedrichsen, P.E.
Office of Water Resources
IL Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62701-1271

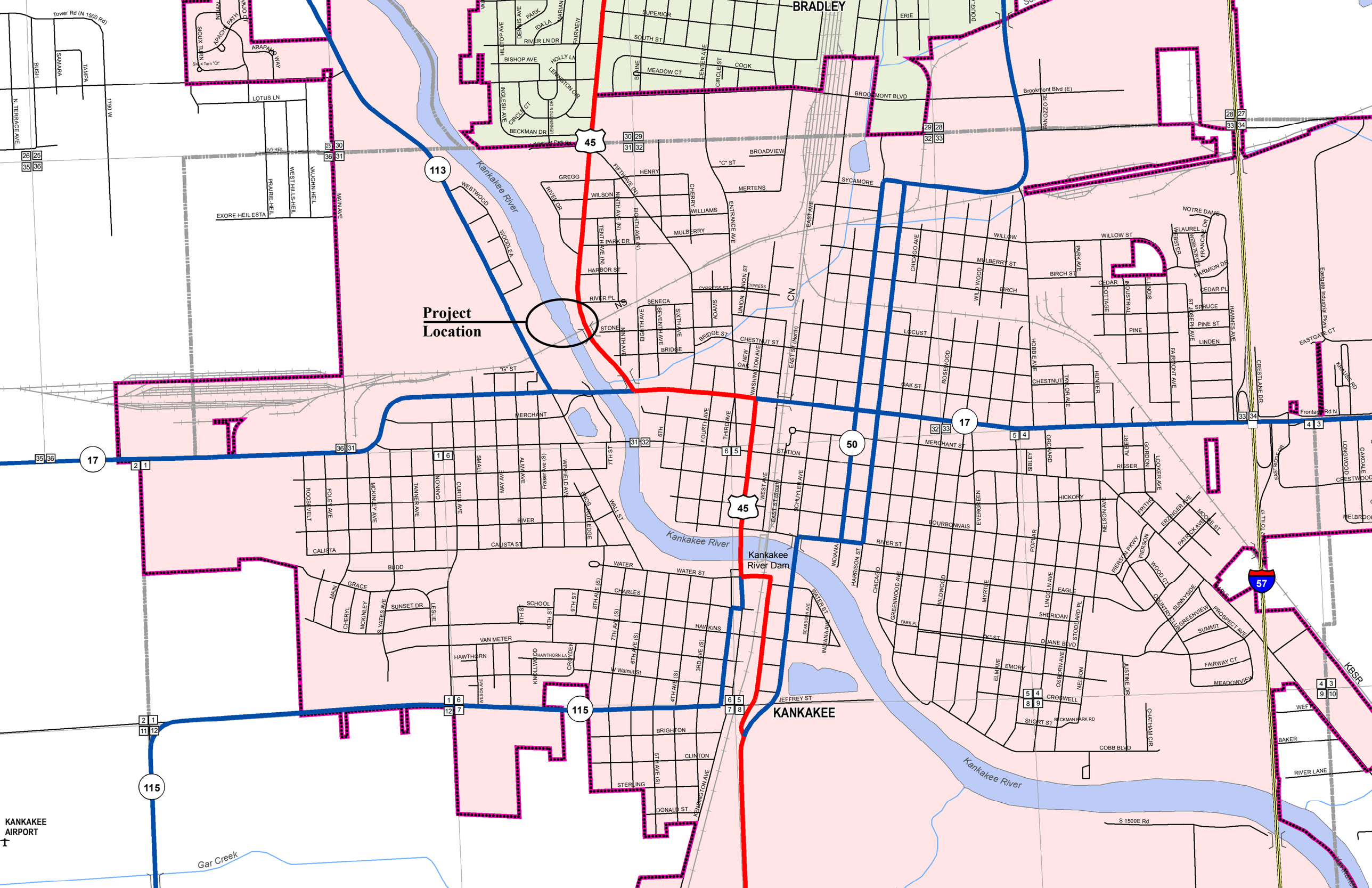
Mr. Dan Heacock
Illinois Environmental Protection Agency
Watershed Management Section, Permit Sec. 15
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
Epa.401.bow@illinois.gov (email copy)

U.S. Army Corps of Engineers
Illinois Waterway Project Office
257 Grant Street
Peoria, Illinois 61603

Mr. Peter J. Frantz/Ms. Kathy Ames
Bureau of Location and Environment
Illinois Department of Transportation
Division of Highways
2300 South Dirksen Parkway
Springfield, Illinois 62754

Mr. Steve McBurney
Tyson Engineering, Inc.
367 S. Schuyler Avenue
Kankakee, IL 60901

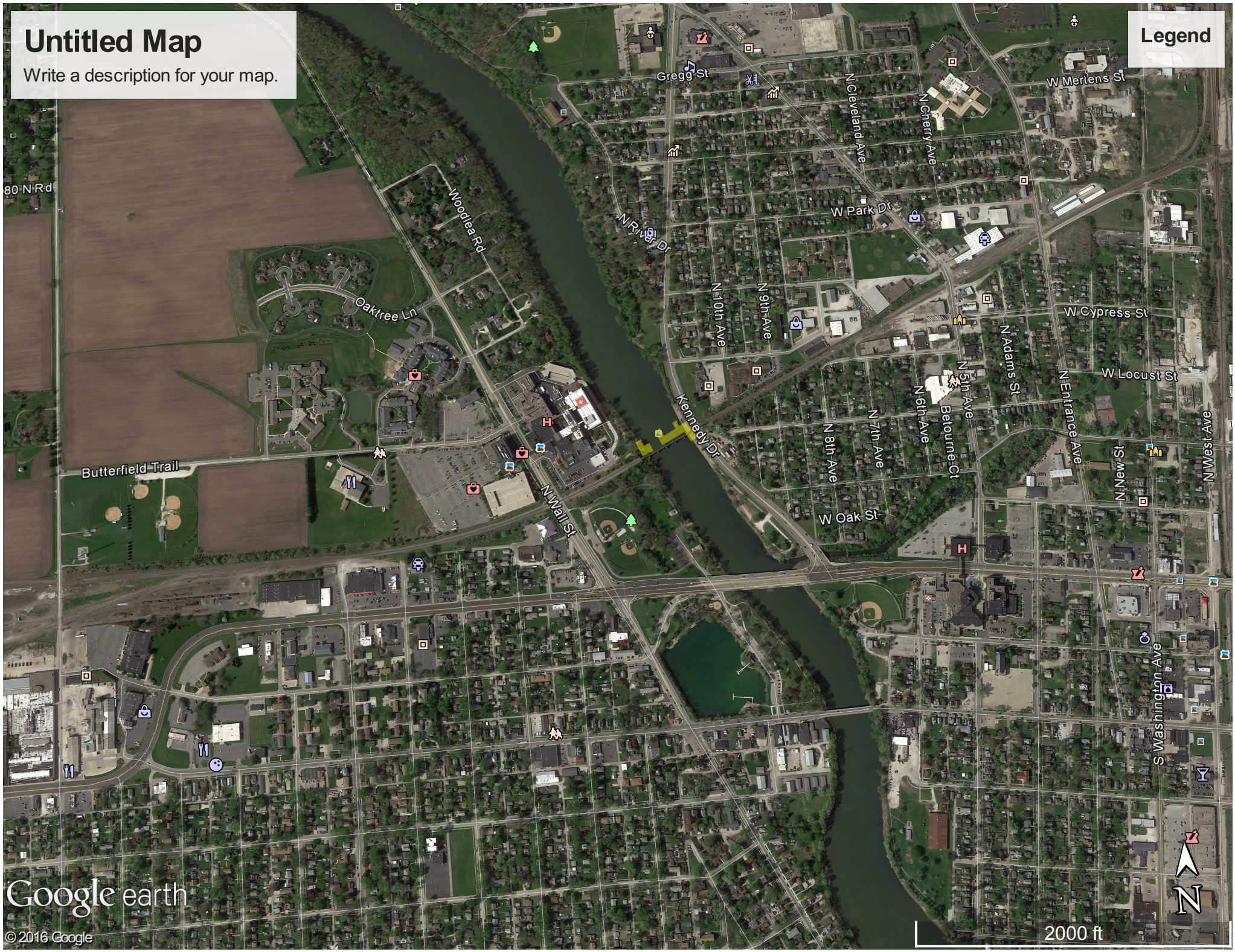
Appendix A – Location Maps


Project Location
Kankakee River
Kankakee River Dam
KANKAKEE
BRADLEY
KANKAKEE AIRPORT
Gar Creek
45
113
17
50
115
57
KBSR
CN
NS
Tower Rd (N 1500 Rd)
BUSH
SAMARA
TAMPA
1790 W
N TERRACE AVE
LOTUS LN
SIOUX TURN
APACHE PATH
ARAPAHO WAY
Sioux Turn "Ct"
WY'HEIL
PRAIRIE-HEIL
WEST HILLS-HEIL
VAUGHN-HEIL
EXORE-HEIL ESTA
MAIN AVE
WESTWOOD
WOODLEA
GREGG
WILSON
RIVER DR
NINTH AVE (N)
EIGHTH AVE (N)
TENTH AVE (N)
PARK DR
HARBOR ST
RIVER PL
STONE
SENECA
SIXTH AVE
SEVENTH AVE
BRIDGE
"G" ST
MERCHANT
CALISTA
CALISTA ST
BUDD
GRACE
SUNSET DR
LESLIE
S YATES AVE
MCKINLEY
CHERYL
MAIN
ROOSEVELT
FOLEY AVE
MCKINLEY AVE
TANNER AVE
QUINONI
CURTIS AVE
SMALL
MAY AVE
ALMA AVE
Fraser Ave (S)
WINFIELD AVE
RIVER
ROSS-COTTEDGE
WALL ST
7TH ST
6TH
FOURTH AVE
THIRD AVE
WATER
WATER ST.
CHARLES
SCHOOL
11TH ST
10TH ST
9TH ST
8TH AVE (S)
7TH AVE (S)
6TH AVE (S)
4TH AVE (S)
3RD AVE (S)
5TH AVE (S)
VAN METER
HAWTHORN
HAWTHORN LA
KNOLLWOOD
CROYDEN
WILSON AVE
W Walnut St
HAWKINS
JEFFREY ST
BRIGHTON
CLINTON
STERLING
DONALD ST
KENSINGTON AVE
BEECHWOOD
BISHOP AVE
HILLTOP AVE
DENNIS AVE
PARK
IDA LA
MARIAN
FAIRVIEW
RIVER LN DR
HOLLY LN
LENNISTON DR
INGLESH AVE
CIRCLE CT
BECKMAN DR
SUPERIOR
SOUTH ST
MEADOW CT
BEVINE
CENTER AVE
CIRCLE ST
COOK
ERIE
DOUGLAS
BROOKMONT BLVD
Brookmont Blvd (E)
BANOZZO RD
BROADVIEW
"C" ST
MERTENS
SYCAMORE
ENTRANCE AVE
CHERRY
WILLIAMS
MULBERRY
EAST AVE
UNION ST
CYPRESS ST
CYPRESS
ADAMS
BRIDGE ST
CHESTNUT ST
OAK
WASHINGTON AVE
EAST ST (North)
STATION
WEST AVE
EAST ST (South)
SCHUYLER AVE
INDIANA
HARRISON ST
WATER ST
DEARBORN AVE
INDIANA AVE
CHICAGO
GREENWOOD AVE
WILDWOOD
MYRTLE
EVERGREEN
POPLAR
LINCOLN AVE
NELSON AVE
PIERSON PKWY
PIERSON
FRITCH
ERZINGER AVE
PATRICK AVE
MOORE ST
WOOD CT
COUNTRY CLUB
SUNNYSIDE
GREENVIEW
PROSPECT AVE
SUMMIT
FAIRWAY CT
MEADOWVIEW
EAGLE
SHERIDAN
STODDARD PL
PARK PL
DUANE BLVD
EMORY
ELM AVE
OSBORN AVE
NELSON
CROSWELL
SHORT ST
BECKMAN PARK RD
COBB BLVD
CHATHAM CIR
JUSTINE DR
WILLOW
WILLOW ST
MULBERRY ST
BIRCH
WILDWOOD
CHICAGO AVE
PARK AVE
BIRCH ST
CEDAR
COTTAGE
INDUSTRIAL
ILLINOIS
CEDAR PL
SPRUCE
PINE ST
PINE
LINDEN
ST JOSEPH AVE
FAIRMONT AVE
HAMMES AVE
NOTRE DAME
WEBSTER
WEBSTER DR
FRANCINE DR
MARMION DR
LAUREL
Eastgate Industrial Pkwy
EASTGATE CT
CRESTLANE DR
KRAUSE RD
Frontage Rd N
LOCUST
ROSEWOOD
HOBBIE AVE
CHESTNUT
TAYLOR AVE
HUNTER
OAK ST
MERCHANT ST
ORCHARD
SIBLEY
ALBERT
GORDON
LOOKER AVE
RISSER
HICKORY
BOURBONNAIS
RIVER ST
EASTGATE DR
LONGWOOD
OAKDALE
CRESTWOOD
MELBROOK
ROUTE 17 TO IL 17
WEF
BAKER
RIVER LANE
S 1500E Rd

Untitled Map

Write a description for your map.

Legend



Appendix B – Fish & Mussel Survey

Illinois Department of
Natural Resources
One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov
Bruce Rauner, Governor
Wayne A. Rosenthal, Director

Results of Fish and Mussel Survey
Riverfront Bike Trail Bridge
Kankakee River - Kankakee, IL

Prepared By: Nathan Grider – OREP, DEE
June 15, 2016

Introduction

On June 13, 2016, Department staff consisting of Nathan Grider, Rich Lewis, Sheldon Fairfield (OREP, DEE), Steve Pescitelli (ORC, Fisheries), and Vince Hamer (INHS/IDOT) conducted fish and mussel survey efforts at the proposed Riverfront Bike Trail Bridge over the Kankakee River in Kankakee, IL approximately 350 meters downstream of the State Route 17 bridge (See Figure 1). The proposed bridge construction project calls for causeways perpendicular from both banks in-between the existing railroad bridge to the south and the old railroad bridge piers to north. Cofferdams will be installed around the old railroad bridge piers so they can be demolished down to the foundation at riverbed level and rebuilt to support the new bridge.

Methods

Fish were collected for 30 minutes using boat-based electrofishing with two dippers. The survey boat moved around all existing piers in the project area and approximately 30 meters downstream. See Figure 1 for details.

The mussel survey consisted of 35 minutes of diving with one diver off of the west bank where the river was deeper. Efforts from the East bank consisted of four (4) persons 'pollywogging' for 20 minutes for a total of 1.3 man-hours. Common species were relocated upstream of the existing railroad bridge and any listed species were returned to the original vicinity of capture.

Results

Fish: A total of seven (7) species of fish were collected throughout the survey area as noted in Table 1 below. Three (3) individuals of state-threatened river redhorse (*Moxostoma carinatum*) were collected in the proposed construction area, mostly concentrated in the main channel and slightly downstream. The total number of fish collected was 24.

Table 1: Fish collected during 30 minutes of boat-based electrofishing (ST = State-threatened)

Common Name	**Scientific Name**	**Length Range**	**No. Individuals**
Channel catfish	*Ictalurus punctatus*	652 mm	1
Golden redhorse	*Moxostoma erythrurum*	405 – 469 mm	5
Quillback	*Carpiodes cyprinus*	388 mm	1
River redhorse ST	*Moxostoma carinatum*	637 – 728 mm	3
Silver redhorse	*Moxostoma anisurum*	525 – 593 mm	5
Smallmouth bass	Micropterus dolomieui	182 – 338 mm	8
Walleye	*Sander vitreus*	435 mm	1
			Total = 24

Mussels: The total number of species collected from the west bank during 35 minutes of diving effort was five (5) and total number of live individuals collected was 32. The 1.3 man-hours of pollywogging effort on the east bank produced three (3) species and 53 individuals, including three (3) of the state-threatened black sandshell (*Ligumia recta*). See Table 2 for more information.

Table 2: Live mussels collected during 35 minutes of diving from west bank and 1.3 hours of pollywogging from east bank. (ST = State-threatened)

Common Name	**Scientific Name**	**No. Individuals**
From west bank		
Deertoe	*Truncilla truncata*	1
Flutedshell	*Lasmigona costata*	2
Mucket	*Actinonaias ligamentina*	24
Paper pondshell	*Utterbackia imbecillis*	3
Plain pocketbook	*Lampsilis cardium*	2
		Total = 32
From east bank		
Black sandshell ST	*Ligumia recta*	3
Mucket	*Actinonaias ligamentina*	47
Plain pocketbook	*Lampsilis cardium*	3
		Total = 53
Species grand total = 6		**Grand total = 85**

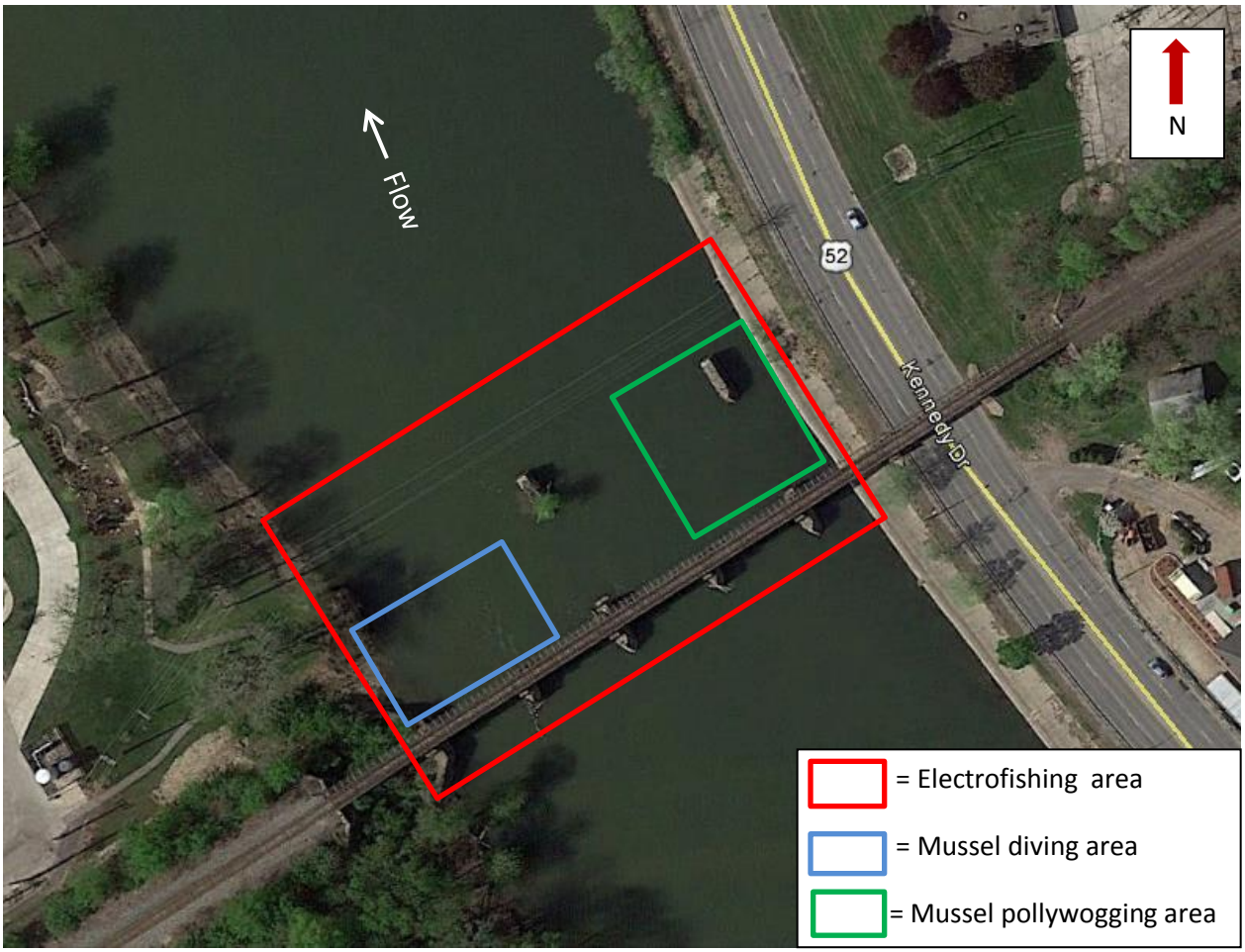


Figure 1. Map of fish and mussel survey area in Kankakee River – Kankakee, IL.

Appendix C – Site Photo

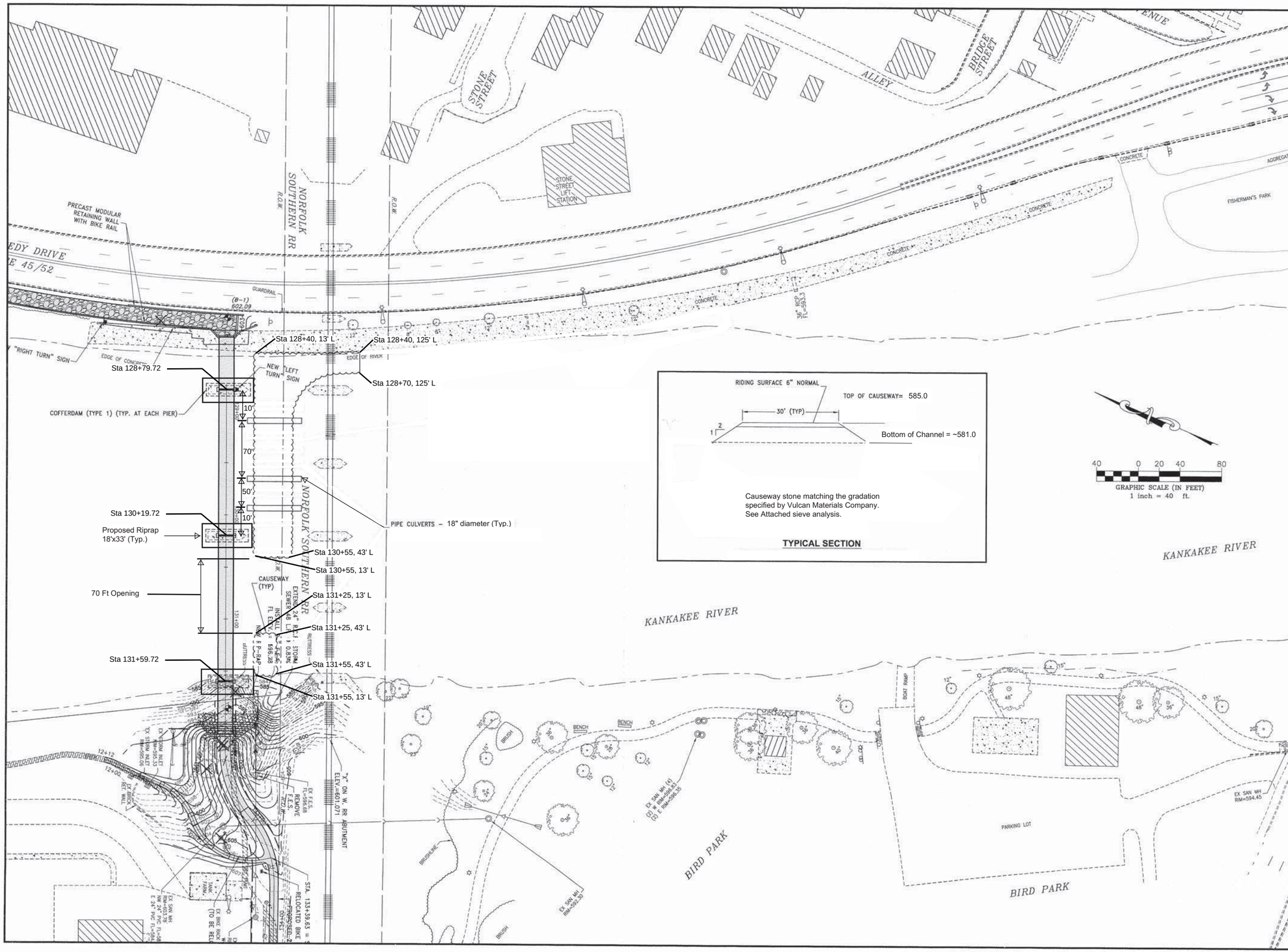
Site Photo Looking East (by Isaac Harms)

Appendix D – Plans

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N/A	*	KANKAKEE	25	12

CONTRACT NO. 87623

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
*10-00276-01-BT		



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Tyson ENGINEERING
367 South Schuyler Avenue
Kankakee, Illinois 60901
Phone (815) 932-7406

REVISIONS

NO.	DATE	BY	DESCRIPTION
2	10/20/15	NRD	PER CITY

CAUSEWAY

PROJECT:
PROPOSED IMPROVEMENTS FOR
RIVERFRONT TRAIL PHASE 2B
KANKAKEE, ILLINOIS

SECTION 10-00276-01-BT

DATE:	10/07/15	JOB NO.	E10054
SCALE:	1"=40'	FILE NO.	
DRAWN BY:	NRD	SHEET	12
CHECKED BY:	SRM	OF	25