RESOLUTION NO: 21 -2016

RESOLUTION OF THE COLUMBUS REDEVELOPMENT COMMISSION

TO CONTRACT SERVICES FOR
A GEOMORPHIC ASSESSMENT
OF A PORTION OF THE EAST FORK OF THE WHITE RIVER

Comes now the City of Columbus Department of Redevelopment, more commonly known as the City of Columbus Redevelopment Commission, and for this Resolution, says as follows:

WHEREAS, Indiana Code §36-7-14-1 *et seq*. provides that a community may establish a Department of Redevelopment to be controlled by a Redevelopment Commission; and

WHEREAS, the City of Columbus, through its Common Council, did on August 19, 2003 create the City of Columbus Department of Redevelopment and the City of Columbus Redevelopment Commission ("Redevelopment Commission") by way of Ordinance Number 25, 2003; and

WHEREAS, The Redevelopment Commission undertook a project to clean-up, modify, renovate and otherwise improve the general condition of the property between the 2nd Street and 3rd Street Bridges in downtown Columbus, and to that end, engaged the services of Core Planning, pursuant to Resolution 8-2016, to act as the Riverfront Project Manager; and

WHEREAS, Core Planning has brought together various state and federal agencies, all of whom will have some input or a say as to any changes of the river, the dam, river banks, and wild life; and

WHEREAS, Core Planning also engaged the "Silver Jackets", an *ad hoc* organization composed of members from all the various state and federal agencies who will have input, or from whom permits will be necessary in order to accomplish the goals of the Riverfront Improvement process; and

WHEREAS, the Silver Jackets offered a recommendation to study the present state of the East Fork of the White River where said study will be used to make further assessments as to the design, considerations and changes to the Riverfront, this study is a referred to as a Geomorphic Assessment; and

WHEREAS, the study will consist of various components, all set forth in Exhibit A attached hereto involving the work of Christopher Burke Engineering, Center for Earth and Environmental Science at IUPUI and the U.S. Geological Survey for a total project cost of $48,500.

NOW, THEREFORE, BE IT RESOLVED:

1. The City of Columbus Redevelopment Commission having heard a presentation for the need of the Geomorphic Assessment of a Portion of the East Fork of the White River and considering the recommendation by Core Planning now finds and concludes that said study is a necessary first step prior to any further design, development and improvements to the Riverfront.

2. The Redevelopment Commission does acknowledge that as between Burke Engineering, the U.S. Geological Service and the Center for Earth and Environmental Science at IUPUI the parties are considering the appropriate entity to act as lead consultant for the management, engineering and implementation of the Geomorphic Assessment and once those parties resolve that issue then a contract can be presented to the Commission for execution.

3. Nonetheless, all parties have recommended the commencement of this Geomorphic Assessment this year and the Commission, upon receipt of this information, is willing to make the necessary funding available all subject to a final contract being duly executed by the appropriate entity who will act as lead consultant.

4. The Redevelopment Commission does hereby approve the expenditure of a sum a NOT TO EXCEED $48,500, where said sum is earmarked for a Geomorphic Assessment for a portion of the East Fork of the White River pursuant to recommendations set forth in the attached Exhibit.

5. The President of the Commission is hereby authorized to execute a contract for an on behalf of the Redevelopment Commission without the need for further meeting once the public entities have identified the lead consultant and a contract has been reviewed and approved by the Redevelopment Commissions counsel.

Adopted this 15th day of August, 2016.

Sarah Cannon, President

John Dorenbusch, Vice-President

Donald Trapp, Secretary

DRAFT 7.1.2016

A Geomorphic Assessment of a Portion of the East Fork White River at Columbus, Indiana

Introduction and Background

The City of Columbus is currently investigating the possibility of removing an obsolete low head dam located on the East Fork White River approximately 3000-ft downstream from the confluence of the Flatrock River and the Driftwood River, and immediately downstream from the 3rd Street Bridge. The confluence of the Flatrock and the Driftwood Rivers forms the East Fork White River, which from its beginning, is a large river by Indiana standards. The East Fork White River has a long history of flooding and the upstream portion of the river is ranked the 4th most laterally active stream in the state. With its flood and channel migration history, the effects of any dam removal on river form and function needs to be thoroughly investigated. A background geomorphic assessment will also be a key component of exploring the river's recreational and aesthetic potential when the dam is removed.

Study Area

By convention most site specific geomorphic investigations focus on a reach that is approximately 20 times the bankfull width of the river at the specific area of interest. The predicted bankfull width of the East Fork White River just below the dam at Columbus, IN is 228- feet (39.1991, -85.926), indicating the need for a study reach of approximately 4,500-feet. River specific considerations for the East Fork White River suggest that the study reach should be from the confluence of the Driftwood and Flatrock Rivers to the confluence of Haw Creek, a distance of approximately 2-river miles. For this investigation the detailed geomorphic analysis will focus on the standard study area of 4.500-ft., while the hydraulic modeling will include the East Fork White River from the confluence of the Flatrock and the Driftwood to Haw Creek. To support future design considerations a preliminary geomorphic assessment will also be conducted from the confluence of the Driftwood and Flatrock Rivers upstream to the low head dam located on the Flatrock River near Newson Avenue, a distance of approximately 1 river mile.

Methods

Removing the East Fork White River Dam at Columbus is a significant step in the removal of obsolete dams in the State of Indiana. The Indiana Silver Jackets (ISJ), a multiagency hazard and mitigation response team, has made the removal of obsolescent low head dams in Indiana a priority because of their threat to public safety, exacerbation of flood and erosion risk, and overall negative impact on stream ecosystems. As interest in dam removal grows across the State the ISJ wants to ensure that when dams are removed some standard investigations are conducted to maximize the potential for a successful dam removal. The following tasks reflect what we believe should constitute an initial geomorphic assessment to be conducted before entering into dam removal and site design.

Task 1: Document Existing Conditions

1. Document reference cross sections above and below dam (CEES)
    a. Channel dimensions
    b. Pattern
    c. profile

2. Investigate sediments behind dam. (CEES/USGS)
    a. Bathymetric mapping (USGS)
    b. Core sediments behind dam (CEES)
        i. Sediment description
        ii. Sediment analysis
3. Downstream channel bed characteristics (bathymetric mapping, USGS)
4. Downstream depositional patterns (CEES)
5. Channel blockages (CEES)
6. Sediment competence and entrainment (CEES)
7. Assess bank stability above and below dam (CEES)
8. Current effect of dam on river hydraulics (CBBEL)

Task 2: Investigate Potential In-stream Response to Dam Removal

1. Effect of dam removal on river hydraulics (CBBEL)
    a. Review flood inundation model and incorporate it into a model with a longer reach, as needed
    b. Run model with dam out
2. Effect of dam removal on channel morphology (CEES)
    a. Change in flow patterns
    b. Change in pool and riffle structure
3. Effect of dam removal on sediment transport (CEES)

Task 3: Education and Outreach

1. Develop presentations at key project milestones for presentation to City officials and the public. (CEES)
2. Work with ISJ low head dam subcommittee to document project development (All)
3. Team presentations at IWRA and DIRT 17? (All)

Task 4: Coordination with Design Team (CBBEL)

1. Prepare final report for submittal (CBBEL lead/all)

Project Deliverables:

1. Report of findings for Design Team (ALL, CBBEL lead)
2. Presentation on findings for City officials and public (All, CBBEL lead)

Initial Cost Estimate

- Christopher B. Burke Engineering, LLC, (Tasks 1.8,2.1,3.1,3.2,3.3, 4.0,4.1 $12,000
- Center for Earth and Environmental Science at IUPUI, (Tasks 1.1,1.2b,1.4,1.5,1.6,1.7,2.2,2.3,3.1,3.2,3.3, 4.1) $24,500
- U.S. Geological Survey, (Tasks 1.2a,1.3,3.1,3.2,3.3, 4.1) $12,000

Total Budget: $48,500