

*1. Administrative Details*

**Proposal Name: Upper Turkey Creek PED Funding Approval**

**by Agency: City of Merriam, Kansas**

**Locations: KS**

**Date Submitted: 08/18/2018**

**Confirmation Number: 9a2b773c-8ce1-4bed-ac82-440b86be743a**

*Supporting Documents*

| <b>File Name</b>     | <b>Date Uploaded</b> |
|----------------------|----------------------|
| UTC Council Res..pdf | 08/18/2018           |
| SMAC letter.pdf      | 08/18/2018           |
| MDD letter.pdf       | 08/18/2018           |

**2. Provide the name of the primary sponsor and all non-Federal interests that have contributed or are expected to contribute toward the non-Federal share of the proposed feasibility study or modification.**

| Sponsor                          | Letter of Support   |
|----------------------------------|---|
| City of Merriam. Kansas(Primary) | The City of Merriam, located in Johnson County, Kansas, fully supports the efforts of the United States Army Corps of Engineers, Kansas City District to proceed in partnership with the City on flood risk management efforts in the Turkey Creek Basin. The City is prepared to be a fully engaged partner in the project to bring more flood protection to our City and its residents.   |
| Johnson County                   | Since the mid 1190's the Johnson County Stormwater Management Program has been a dedicated, supportive, and involved partner with the City of Merriam in the pursuit of a flood damage reduction project along Upper Turkey Creek through Merriam. Our partnership with Merriam has included technical and financial support, and we plan to continue our support until such time that Upper Turkey Creek P project is constructed. |
| Merriam Drainage District        | The Merriam Drainage District has Consistently supported the Upper Turkey Creek Flood Mitigation Project. In the past the District has contributed funds for engineering studies for the project.   |

**3. State if this proposal is for a feasibility study, a modification to an authorized USACE feasibility study or a modification to an authorized USACE project. If it is a proposal for a modification, provide the authorized water resources development feasibility study or project name.**

[x] Modification to an Authorized USACE Project : Turkey Creek flood risk management project would construct the project as authorized and extend the level of protection of life and property downstream of the original project limit to encompass more protection. When design funding is provided, a short study can be conducted during design to address this modification.

***4. Clearly articulate the specific project purpose(s) of the proposed study or modification. Demonstrate that the proposal is related to USACE mission and authorities and specifically address why additional or new authorization is needed.***

This project is for flood risk management along Turkey Creek in the upper basin. Approximately 10,000 feet of low height levee and floodwall would be constructed to significantly reduce flood damage and risk to life. Serious water resource problems exist in the Upper Turkey Creek Basin due to the existing flood hazard and the associated flood damages. Urbanization and ongoing development in the watershed has resulted in increased flood risk and degradation of environmental resources associated with the creek. The creek has been impacting the channel as a result of high runoff volumes and flow rates associated with urbanization in the watershed. This is contributed to more flooding. The Turkey Creek Basin experienced major floods in 1951, 1958, 1961, 1968, 1977, 1983, 1986, 1993, 1995, 1996, and 1998. Headwaters concentrate all runoff to areas largely in the heart of the City of Merriam. Even a small amount of rain can cause sharp rises in water surface elevations in the reach of this project. The completion of the project would lead to a systems approach to address the problems and significantly reduce flood risk. The Feasibility Report with Integrated Environmental Assessment was submitted on March 12, 2015. Funding is needed for design and then construction of the project. No additional authorization for design or construction funding has been issued, and this proposal seeks to construct the project as authorized and extend the level of protection of life and property downstream of the original project limit to encompass more protection. When design funding is provided, a short study can be conducted during design to address this modification.

5. To the extent practicable, provide an estimate of the total cost, and the Federal and non-Federal share of those costs, of the proposed study and, separately, an estimate of the cost of construction or modification.

|              | Federal      | Non-Federal  | Total        |
|--------------|--------------|--------------|--------------|
| Study        | \$0          | \$0          | \$0          |
| Construction | \$26,000,000 | \$14,000,000 | \$40,000,000 |

Explanation (if necessary)

***6. To the extent practicable, describe the anticipated monetary and nonmonetary benefits of the proposal including benefits to the protection of human life and property; improvement to transportation; the national economy; the environment; or the national security interests of the United States.***

The Upper Turkey Creek project area (the reach directly affected by the project) comprises much of the downtown area of the community of Merriam). The Upper Turkey Creek flood plain in this reach contains numerous commercial, residential and public structures. There is currently a 28.3% chance (1 in 3.5) of a damaging flood occurring in this area in any given year. Over 10 years, the probability exceeds 96%, and over 30 years, the probability exceeds 99%. Equivalent annual damages are approximately \$5.3 million. A 100-year flood would inundate structures in the reach to more than six feet and result in \$23.0 million in damage, while a 500-year flood would inundate the area with depths of up to 7.5 feet, resulting in damages of \$35 million. The project would reduce equivalent annual damages by 73%. The project has a benefit-cost ratio of 2.2 at the current federal interest rate of 2.75%, with benefits of \$3,476,000, annual costs of \$1,593,000, and net benefits of \$1,883,000. The project would reduce the chance of a damaging flood in a given year from 28.3% (1 in 3.5) to 0.5% (1 in 192), and the 10-year probability of a damaging flood, currently 1 in 1.04, would become 1 in 20. Flood risk to human life is also severe in Merriam. One fatality occurred in 1993 Turkey Creek flooding, and multiple fatalities were narrowly avoided in downtown Merriam in the record 1998 flood. The long-term flood-related consequences to be avoided include threat of life, increased frequency of structure and inventory damage, slowed economic growth, possible escalation of vacancies in the area, higher costs associated with repairing flood damage, and interrupted transportation access. This project will benefit the economy, infrastructure, and quality of life for City of Merriam residents. The completion of this project would protect considerable investment and also allow the City to redevelop and make use of the surrounding areas that are not at flood risk, greatly improving the economic an

**7. Does local support exist? If 'Yes', describe the local support for the proposal.**

Yes

### **Local Support Description**

After the floods of 1993 and 1998, it became apparent that there was a significant risk for enormous damages and loss of life through the Upper Turkey Creek channel, through a heavily populated area in the City of Merriam. As a commercially developing, vibrant community, the City is in full support of the findings of the Feasibility Report dated March 2015, which recommends the construction of a levee and floodwall system to provide protection for the community and its citizens. The Merriam City Council reaffirmed their support of this project with a Resolution dated 8\_13\_2018. The City recognizes the regional implications of the project, and has a strong partnership with Johnson County Public Works Stormwater Management Advisory Council (SMAC) to support the construction of the levee and floodwall system. City Council Resolution, Johnson County Public Works (SMAC) Letter and Merriam Drainage Board letter.

**8. Does the primary sponsor named in (2.) above have the financial ability to provide for the required cost share?**

Yes

# Primary Sponsor Letter of Support

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## UTC Council Res..pdf

RESOLUTION NO. 888

**A RESOLUTION SHOWING SUPPORT FOR THE PRELIMINARY DESIGN PHASE FOR THE UPPER TURKEY CREEK FLOOD RISK MANAGEMENT PROJECT**

WHEREAS, Turkey Creek is situated in the heavily urbanized and populated area within the City of Merriam; and

WHEREAS, residents of the city of Merriam and all residents of Johnson County enjoy recreational benefits of Turkey Creek through the utilization of trails, wooded areas, and parks; and

WHEREAS, development in the city of Merriam is growing and expanding; and

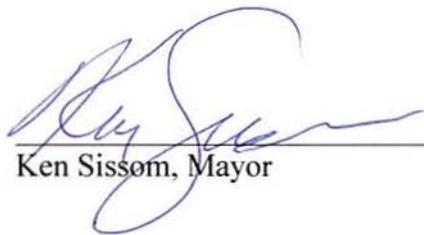
WHEREAS, damaging flash floods occurred in the Turkey Creek Basin in 1977, 1993 and 1998; and

WHEREAS, flash flooding continues to be a threat to life and property along Turkey Creek, with the potential of millions of dollars in damages to property and infrastructure.

NOW, THEREFORE, BE IT RESOLVED by the City Council of Merriam that the city supports the efforts of the United States Army Corps of Engineers, Kansas City District to proceed in partnership with the City on flood risk management efforts in the Turkey Creek Basin. Cost for PED phase is estimated at \$1.4M, and local share would be \$490,000. It would be accomplished over 2 years.

ADOPTED, by the Governing Body of the City of Merriam, Kansas, this 13 day of August, 2018,



  
Ken Sissom, Mayor

ATTEST:   
Juliana Pinnick, City Clerk

# Other Non-Federal Sponsors Letter(s) of Support

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**SMAC letter.pdf**

August 14, 2018

US Army Corps of Engineers  
Kansas City District  
Civil Works, Planning Branch  
635 Federal Building  
601 East 12th St. Kansas City MO 64106-2824

To whom it may concern:

Since the mid-1990's the Johnson County Stormwater Management Program has been a dedicated, supportive, and involved partner with the city of Merriam in the pursuit of a flood damage reduction project along Upper Turkey Creek through Merriam. Our partnership has Merriam included technical and financial support, and we plan to continue our support until such time that the Upper Turkey Creek Project is constructed.

Please contact me directly should you have questions or comments regarding our ongoing support.

Sincerely,



Kent Lage, P.E.

cc: Kevin Bruemmer, Public Works Director - Merriam

# Other Non-Federal Sponsors Letter(s) of Support

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MDD letter.pdf

# Merriam Drainage District

P.O. Box 2732  
Shawnee Mission, Kansas 66201

August 16, 2018

To Whom It May Concern

The Merriam Drainage District has consistently supported the Upper Turkey Creek Flood Mitigation Project. In the past the District has contributed funds for engineering studies for the project. The board members discussed with approval the news that funds for the project had been appropriated by Congress.

I am confident that the District will support the PED funding for FY 2019.

I will request a formal resolution of support at the District's next board meeting on September 10, 2018.

Sincerely,



Gerald Becker

Chair, Merriam Drainage District