Subapplicant information

Name of federal agency	**FEMA**
Type of submission	**Application**

TOWN OF HILLSBOROUGH

105 E CORBIN ST
HILLSBOROUGH, NC 27278 United States

State	DUNS #	EIN #
NC	091570440	566001246

Subapplicant type	**Local Government**
Is the subapplicant subject to review by Executive Order 12372 Process?	**No - Not selected**
Is the subapplicant delinquent on any federal debt?	**No**

Contact information

Subrecipient Authorized Representative (SAR)

Marie Strandwitz marie.strandwitz@hillsboroughnc.gc	**Primary phone** 9192969631 Work	**Mailing address**
Tiffany Long tiffany.long@hillsboroughnc.gov	**Primary phone**	**Mailing address**
Eric Peterson eric.peterson@hillsboroughnc.gov	**Primary phone**	**Mailing address**

Point(s) of contact

Marie Strandwitz Utilities Director	**Primary phone** 9192969631 Work **Fax**	**Additional phones** 9192969631 Work	**Mailing address** PO Box 429 105 E. Corbin St. Hillsborough NC 27278-0429

marie.strandwitz@hillsboroughnc.go

Community

Please provide the following information. If the Congressional district number for your community does not display correctly, please contact your State NFIP coordinator.

Add Communities

Please find the community(ies) that will benefit from this mitigation activity by clicking on the Find communities button. If needed, modify the Congressional District number for each community by entering the updated number under the U.S. Congressional District column for that community. When finished, click the Continue button. NOTE: You should also notify your State NFIP coordinator so that the updated U.S. Congressional District number can be updated in the Community Information System (CIS) database.

Community name	County code	CID number	CRS community	CRS rating	U.S. Congressional District
HILLSBOROUGH, TOWN OF	135	370343	N		2
ORANGE COUNTY *	135	370342	Y	6	1,2

Please provide any additional comments below (optional).

Portions of Orange County surrounding the Hillsborough area and within its water and sewer boundary will benefit from the project.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 1 - Project Location Map.pdf	11/23/2021	madeleine.lane@icf.com	Community Attachments	Map of proposed project location.	

Mitigation plan

Please provide your plan information below.

Is the entity that will benefit from the proposed activity covered by the current FEMA approved multi-hazard mitigation plan in compliance with 44 CFR Part 201?

Yes

Please provide plan detail

Plan name	Plan type	Plan approval date
Eno-Haw Regional Hazard Mitigation Plan	Local Multijurisdictional Multi-Hazard Mitigation Plan	06/08/2020

Proposed activity description

This proposed project will relocate the Town of Hillsborough's largest and oldest sewer pumping station out of the floodway for risk reduction and resiliency. Currently, this sewer pumping station is vulnerable to flooding and erosion that causes disruption to wastewater conveyance and treatment services. This project aligns with Action P-4 for Orange County as identified in Table 7.12 of the Eno-Haw Regional Hazard Mitigation Plan, continuing to collaborate and support municipal mitigation strategies, as well as Action PP-3, "identify potential flood hazards of critical infrastructure and mitigation measures to address."

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 2 - Eno-Haw Hazard Mitigation Plan.pdf	11/23/2021	madeleine.lane@icf.com	Mitigation Plan Attachments	Relevant excerpt from Eno-Haw Regional Hazard Mitigation Plan.	

Scope of work

The project Scope of Work (SOW) identifies the eligible activity, describes what will be accomplished and explains how the mitigation activity will be implemented. The mitigation activity must be described in sufficient detail to verify the cost estimate. All activities for which funding is requested must be identified in the SOW prior to the close of the application period. FEMA has different requirements for project, planning and management cost SOWs.

Subapplication title (include type of activity and location)	**Town of Hillsborough NC - River Pumping Station Relocation from Floodway**

Activities

Primary activity type	**Utility and infrastructure protection**
Primary sub-activity type	**Wastewater and/or sanitary sewer system**
Secondary activity type (Optional)	**Relocation**
Tertiary activity type (Optional)	
Geographic areas description	**The site of this mitigation activity is Hillsborough, North Carolina 27278 at 36.07461 latitude and -79.09227 longitude. The existing River Pump Station is located directly adjacent to the Eno River on its northern bank within the regulatory floodway (36.072414, -79.08922). Both sites are south of St. Mary's Road and directly south of River Park Elementary School. The existing pump station will be relocated outside of the floodway and Special Flood Hazard Area. Refer to the Project Location Map for more information.**

Community lifelines

Primary community lifeline	**Food, water, shelter**
Primary sub-community lifeline	**Water**
Secondary community lifeline (optional)	**Hazardous material**
Secondary sub-community lifeline	**HAZMAT, pollutants, contaminants**
Tertiary community lifeline (optional)	

Hazard sources

Primary hazard source	**Flooding**
Secondary hazard source (optional)	**Infrastructure failure**
Tertiary hazard source (optional)	**Severe storm**
Is this a phased project?	**Yes**
Are you doing construction in this project?	**Yes**
Population affected	**75**
Detail/description of stated percentage	**75% of the Town of Hillsborough has their wastewater conveyed through the River Pumping Station (RPS). The River Pump Station services a portion of the population of the Town of Hillsborough and surrounding areas on a retail basis, providing treatment for customers and annual visitors to the Town. The service population for the River Pump Station is estimated to be 12,300 residents, based on the number of connections. While the Town of Hillsborough has approximately 5,000 sewer connections, 98 miles of pipe, and 26 sewage pumping stations, all sewage is pumped into one of two stations before reaching the wastewater plant – Elizabeth Brady Pumping Station and the RPS. Over 75% of the town's wastewater discharges into the RPS basin. This includes the oldest areas of town, low-income neighborhoods, and unincorporated areas in the county. If flooding renders the RPS inoperable, wastewater from 75% of the town's population will lose wastewater service.**
Provide a clear and detailed description of your proposed activity	**The Town of Hillsborough proposes to relocate the River Pumping Station out of the floodway and Special Flood Hazard Area to mitigate the risk of flooding at this critical facility. The Town Utilities Department provides wastewater service to customers located within the Town of Hillsborough and unincorporated areas, overseeing the Town's Wastewater Treatment Plant and Wastewater Collection Divisions. While the Town of Hillsborough has 26 sewage pumping stations, 75% of the Town's wastewater is pumped through the largest and oldest pump station, the River Pump Station (RPS, Attachments 3 and 4). The RPS, built in the 1970s with Clean Water Act funding on the banks of the Eno River, is currently sited within the regulatory floodway and is vulnerable to flood events. Storm events have caused flooding in the RPS, including Hurricane Fran in 1996, when water from the Eno River came up four to six feet up the station's drywell. The RPS flooded again in March of 1998 due to heavy precipitation in the Neuse River Basin (refer to Attachment 5 for pictures of each event). Despite the region being under drought conditions over the year, the RPS has been threatened by flood events eight times since being constructed, including events as recent as 2017 and 2019 (refer to Attachment 6: Peak Streamflow Eno River). Due to the impacts of climate change, the Town of Hillsborough is predicted to experience more frequent and severe weather events and an increased flooding risk, increasing risk of inundation at RPS. The Town could see a more than 60% annual increase in the number of days with precipitation of 3 inches or greater by midcentury from a 1996-2015 baseline average. North Carolina is also expected to experience more frequent and severe riverine flooding events. A recent study found that inland flooding is projected to increase in North Carolina by 40% by 2050 due to a higher volume of runoff from more intense storm systems. The current RPS, located within the floodway within Special Flood Hazard Area, is vulnerable to these changing pluvial and riverine flood conditions. To mitigate the risk of flooding at this critical facility, the Town of Hillsborough proposes to relocate the RPS out of the floodway and Special Flood Hazard Area. The Town has already invested in a conceptual plan and siting evaluation of the relocated RPS and also collection system hydraulic modeling for sizing (Attachment 7, 8, 9, 10). The proposed location will be outside of the floodway and Special Flood Hazard Area and will allow for the current**

	1.5-acre site to be returned to riparian space that will yield environmental benefits in terms of recreation/tourism, water filtration, and erosion control. The relocated RPS will process up to 6.8 million gallons per day of dry weather average flow (MGD), 1 MGD above the current RPS capacity of 5.8 MGD. The station will be designed to 10.5 MGD to accommodate occasional wet weather events. The relocated pump station will include a submersible pump design, a cost effective alternative that Town staff have experience maintaining. The relocated pump station will utilize a baffle wall wet well, consistent with the recommendations of the Hydraulic Institute (HI), the global authority on pumps and pumping systems. A four-pump arrangement will allow for a split wet well design, which will offer the ability to take one side down for maintenance during low flows. To allow the pump station to meet a wide range of flow conditions, a high flow/low flow pump setup will be utilized, with two 4.7 MGD pumps and two 2.9 MGD pumps. The site will be secured with fencing and lighting. A 250-kW permanent generator will be sited and installed along with an automatic transfer switch to ensure a consistent power supply to the station and uninterrupted wastewater pumping in the event of grid power loss. Additionally, an inline channel grinder to reduce wipes and stringy material and monitoring and alarm communications will be incorporated to protect the asset. In order to connect the new pump station to the existing infrastructure, 1,900 linear feet of force main and 700 linear feet of gravity sewer will be constructed.
How will the mitigation activity be implemented?	**The Town of Hillsborough will manage the proposed project and contract with a qualified design engineer and construction contractor through a competitive procurement process. The Town of Hillsborough Utilities Department proposes to implement the project in using a phased approach, in accordance with the FEMA Hazard Mitigation Assistance Guidance and FEMA BRIC program support material. Phase 1 of the project will include surveying, design, permitting, obtaining necessary easements, and refining the benefit-cost analysis (BCA). Permits will be obtained from all appropriate local, state, and federal agencies for construction activity, stormwater discharges, floodplain management, land disturbance, drainage review and approval, and environmental quality reviews. Upon completion of Phase 1 and approval from FEMA, Phase 2 will consist of project construction (including existing site demolition), acquisition of equipment and materials, and relocation of the pump station. Implementation of the project will require staging and construction management. Timing and initiation of this project will need to be closely coordinated and managed by the Town of Hillsborough. Site preparation will necessitate a staging area for material and equipment delivery, and this is reflected in the attached Ground Disturbance Map (Attachment 11).**
Describe how the project is technically feasible and will be effective in reducing the risk by reducing or eliminating damage to property and/or loss of life in the project area. Please include engineering design parameters and references to the following: preliminary schematic or engineering drawings/design; applicable building codes; engineering practices and/or best practices; level of protection (e.g., life safety, 100-yr flood protection with freeboard, 100-yr wind design, etc.):	**The project is technically feasible because the Town has already invested in conceptual design and modeling to determine the proposed Station needs. Evidence has shown that the Station in its current location is prone to flooding as a primary concern, and additional environmental, vandalism, and safety concerns. The proposed mitigation activities will reduce risk by not only mitigating direct damages and loss of function to the pump station but also by reducing the probability of cascading impacts, such as loss of function to critical facilities (such as UNC Hospitals) which depend on wastewater service. It will also prevent sewage backup within structures in the service area. Additionally, the project will have a positive impact on water quality in the service area due to prevention of sanitary sewer overflows. The relocation of the pump station to a higher elevation will reduce the possibility of sewer overflows into the Eno River, currently adjacent to the RPS. The RPS currently sits adjacent to the Eno River within the floodway and Special Flood Hazard Area and has a finished floor elevation of 495.21 Ft., NAVD88, which is four feet below grade elevation of 499.21, NAVD88. This elevation is 7.79 feet below the Base Flood Elevation as indicated on the Flood Insurance Study for the Eno River. After the project is**

	completed, the relocated pump station will no longer be located in the floodway or SFHA, and its first-floor elevation will be higher than recorded flood events. After mitigation, the RPS will be relocated to a higher elevation and have all equipment and controls elevated to a design elevation 505.9 ft., NAVD88 in accordance with the Town's Flood Damage Prevention Ordinance requirement of Base Flood Elevation plus two feet of freeboard. This elevation is 1.2 inches higher than the 500-year flood elevation at the site and meets the regulatory requirements of the Federal Flood Risk Management Standard (FFRMS). The relocated pump station will be designed in compliance with all relevant engineering practices and federal, state, and local statutes, regulations, and laws. Additionally, since this proposed project is a phased project, the Town will be able to refine the mitigation approach in Phase 1 to ensure the greatest outcomes are selected for construction of the mitigation activity in Phase 2.
Who will manage and complete the mitigation activity?	**The Town of Hillsborough Utilities Department will manage the mitigation activity. The department has prior experience with projects of similar scope and scale, including construction of its Waterstone water tank, upgrading its Mayo Booster Pumping Station, several distribution system extensions and water plant upgrade projects from preliminary engineering to construction closeout. The Town of Hillsborough has received and administered numerous federal, state, and local grants and loans across town departments, including the Utilities, Police, Planning, Tourism, and Public Works Departments. The Town is well versed in following specific procurement and administration requirements including incorporating special conditions and form inserts into bid documents, meeting goals for minority and women owned participation, Davis-Bacon prevailing wage, quarterly and annual reporting of project expenditures, and requesting reimbursements through necessary procedures and systems. The town is capable of meeting the requirements to receive and comply with funding received under the FEMA BRIC program. The Utilities Department has directly received grants and loans through the State Revolving Fund, Clean Water Management Trust Fund, and the Department of Housing and Urban Development's Community Development Block Grant program for new projects as well as upgrades and extensions of its facilities and systems. See attachment 13.1 for an organizational chart of the grant management team.**
Will the project address the hazards identified and what risks will remain from all hazards after project implementation (residual risk)?	**The project will significantly mitigate the flood hazard to the Town's wastewater system by relocating the RPS out of the SFHA where only the most severe events, i.e., 500-year and greater, will pose a threat. In this way, the project will mitigate loss of wastewater function as well as emergency work and permanent repairs at RPS. In addition, by moving the RPS out of the floodplain and further from the banks of the Eno River, the Town of Hillsborough will mitigate the risk of wastewater contaminating the Eno River, a drinking water source. Residual risk of flooding and associated damages will be eliminated. There remains as with any mechanical or electrical equipment the risk of failure. However, these too will be mitigated by providing redundant pumps, backup power, and emergency alarm notifications.**
When will the mitigation activity take place?	**Assuming FEMA funding is awarded, the project will kick off in January 2023 and finish by the end of December 2025. Phase 1, including procurement, permitting, and design is expected to take 15 months. Phase 2 including bidding, award, and construction is expected to take 21 months. See Attachment 12 for detailed construction schedule.**
Explain why this project is the best alternative. What alternatives were considered to address the risk and why was the proposed activity considered the best alternative?	**Several alternatives were considered for this project, including the "No Action" alternative and a floodproofing alternative. The "No Action" alternative was determined to be not feasible because it would provide no protection to the pump station and would continue to allow flooding, damage to equipment, and loss of function in the future. The other alternative considered was hardening of the existing pump station through dry floodproofing. However, it was determined that hardening would be infeasible due to the age, layout and construction**

	of the existing pump station and its buried wet well and dry well configuration. The pump station would have required significant upgrades to harden the facility to the 500-year event and would result in the pump station to continuing to be located in the regulatory floodway. The proposed alternative will virtually eliminate flooding risk and will allow nature-based solutions to be incorporated into the project.
Please identify the entity that will perform any long-term maintenance and provide a maintenance, schedule and cost information. The subapplicant or owner of the area to be mitigated is responsible for maintenance (including costs of long-term care) after the project is completed?	**The Town of Hillsborough Utilities Department will be responsible for long-term maintenance of the project and include annual inspections and testing and general repairs and maintenance. Maintenance costs for the project are expected to be approximately $5,000 per year and will be built into the Town's annual budget. This includes site electricity, general fuel, maintenance of the generator, pumps and grinder channel, the communications annual fee and site housekeeping. For more detail, refer to Attachment 13, Maintenance Agreement Letter.**
Additional comments (optional)	

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 6 - Stream Gauge Data Eno River.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	USGS Daily Data for Eno River.	
Attachment 13.1 - Grant Management Team Organization Chart.pdf	01/07/2022	chris.mewes@icf.com	Scope of Work Attachments	*No description given.*	
Attachment 7 - RPS Preliminary Project Study and Plan.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Mechanical, structural, and electrical assessment of the pump station performed by Hazen.	
Attachment 11 - Ground Disturbance Map.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Map of ground and vegetation disturbance at proposed site.	
Attachment 10 - Hillsborough Collection Model Phase 2 Report.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Further describes Hillsborough's existing sewer system and identifies improvements.	
Attachment 13 - Maintenance Agreement Letter.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Maintenance agreement.	
Attachment 9 - Hillsborough Collection Model Phase 1 Report.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Describes Hillsborough's existing sewer system and identifies improvements.	
Attachment 12 - Detailed Schedule.pdf	11/24/2021	madeleine.lane@icf.com	Scope of Work Attachments	Estimated project schedule with durations for each phase and milestone.	
Attachment 4 - RPS Collection System Area.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Aerial view of sewer system including pump station, manholes, mains, and force mains.	
Attachment 6 - Stream Gauge Data Eno	11/23/2021	madeleine.lane@icf.com	Scope of Work	USGS Daily Data for Eno	

Filename	Date uploaded	Uploaded by	Label	Description	Action
River.pdf			Attachments	River.	
Attachment 8 - Proposed RPS Site Layout.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Proposed pump station layout.	
Attachment 6 - Stream Gauge Data Eno River.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	USGS Daily Data for Eno River.	
Attachment 3 - RPS Basins and Tributaries.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Map of pump stations basins and tributary basins.	
Attachment 5 - Photo Log.pdf	11/23/2021	madeleine.lane@icf.com	Scope of Work Attachments	Photos of current and proposed project sites.	

Schedule

Specify the work schedule for the mitigation activities.

Add tasks to the schedule

Please include all tasks necessary to implement this mitigation activity; include descriptions and estimated time frames.

Task Name
Phase 1: Design Contracting

Start Month
1

Task Duration (in Months)
1 months

Task Description
Design contract procurement and execution

Task Name
Phase 1: Assessment, Preliminary Design, and 50% Design Documents

Start Month
2

Task Duration (in Months)
5 months

Task Description
Design activities through the 50% drawings milestone what about land acquisition?

Task Name
Phase 1: Permitting

Start Month
7

Task Duration (in Months)
6 months

Task Description
Apply for and receive permits during the design phase. This includes from all appropriate local, state, and federal agencies for construction activity, stormwater discharges, floodplain management, land disturbance, drainage review and approval, and environmental quality reviews as applicable to the project.

Task Name
Phase 1: Final Design Documents

Start Month
13

Task Duration (in Months)
3 months

Task Description
Design activities to finalize the design and create a bid package

Task Name

Start Month
14

Task Duration (in Months)

Phase 1: BCA		1 months
	Task Description Refine benefit-cost analysis	

Task Name Phase 1: Submittal	**Start Month** 15	**Task Duration (in Months)** 1 months
	Task Description Review and closeout phase one, submit deliverables to FEMA	

Task Name Phase 2: Construction Bidding and Award	**Start Month** 16	**Task Duration (in Months)** 3 months
	Task Description Advertising bid documents, receiving and evaluating bids, and awarding a construction contract	

Task Name Phase 2: Construction- Pump Station	**Start Month** 19	**Task Duration (in Months)** 18 months
	Task Description Construction activities related to pump station relocation	

Task Name Phase 2 - Closeout	**Start Month** 35	**Task Duration (in Months)** 2 months
	Task Description Project closeout.	

Estimate the total duration of your proposed activities (in months).	**36**

Proposed project start and end dates

Start Date	**2023-01-01**
End Date	**2025-12-31**

Budget

Budget cost estimate should directly link to your scope of work and work schedule. You must add at least one item(s) greater than 0 for your cost estimate. As necessary, please adjust your federal/non-federal cost shares, and add the non-federal funding source(s) you are planning to use this project. Once you have completed this section, please click the Continue button at the bottom of this page to navigate to the next section.

Add budget cost types and item(s)

First, click the Add cost type button below to add cost type cost estimate and then click the Add item(s) button to add the item(s) for the cost estimate.

Grand total: $8,293,637.65

Budget type: Construction

▸	**Cost type: Management cost**	**$241,847.35**

Program income (optional)

Cost share

Cost share or matching means the portion of project costs not paid by federal funds.

Proposed federal vs. non-federal funding shares
Hazard Mitigation Assistance (HMA) funds may be used to pay up to 75% federal share of the eligible activity costs. For Building Resilient Infrastructure and communities (BRIC), small impoverished communities may be eligible for up to 90% federal share. For Flood Mitigation Assistance (FMA), and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to 90% federal share. Flood Mitigation Assistance (FMA) and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to 90% federal share.

Is this a small impoverished community?		% Percentage	$ Dollar amount
This determines your federal/non-federal share ratio. No	**Proposed federal share**	**70.00**	**5805546.35**
	Proposed non-federal share	**30.00**	**2488091.30**
			Based on total budget cost: $8,293,637.65

Non-federal funding sources here
That portion of the total costs of the program provided by the non-federal entity in the form of in-kind donations or cash match received from third parties or contributed by the agency. In-kind contributions must be provided and cash expended during the project period along with federal funds to satisfy the matching requirements.

	Funding source	Funding amount	% Non-federal share by source
▸	**Funding source: Town of Hillsborough**	**$829,363.77**	**33.33%**
▸	**Funding source: Town of Hillsborough**	**$829,363.76**	**33.33%**
▸	**Funding source: Town of Hillsborough**	**$829,363.77**	**33.33%**

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 14 - Cost Commitment Letter.pdf	11/24/2021	madeleine.lane@icf.com	Budget Attachments	Cost commitment letter.	

Cost-effectiveness

How was cost-effectiveness determined for this project?

- [x] BCA completed in FEMA's BCA toolkit
  Subapplicant must attach supporting documentation.
- [ ] Pre-calculated benefits
- [ ] Substantial damage in special flood hazard area
- [ ] Other BCA methodology approved by FEMA in writing
- [ ] Not applicable

- [ ] Not applicable

What are the total project benefits? ($)	**8982319**
What are the total project cost? ($)	**8289270**
What is the benefit-cost ratio (BCR) for the entire project?	**1.08**
Was sea level rise incorporated into the flood elevations in the BCA?	**No**
Were environmental benefits added to the project benefits?	**Yes**
Were social benefits added to the project benefits?	**No**
Does the mitigation measure incorporate nature-based solutions?	**Yes**

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
River Pump Station BCA Export.zip	01/07/2022	chris.mewes@icf.com	Cost Effectiveness Attachments	Export from Benefit-Cost Calculator 6.0.	
River Pump Station BCA Report.pdf	01/07/2022	chris.mewes@icf.com	Cost Effectiveness Attachments	Report from Benefit-Cost Calculator 6.0.	
Attachment 16 - RPS BCA Methodology Technical Memorandum-2.pdf	11/23/2021	madeleine.lane@icf.com	Cost Effectiveness Attachments	Memo describing BCA methodology and inputs.	

Environmental/Historic Preservation (EHP) Review Information

Introduction

An environmental/historic preservation review is required for all activities for which FEMA funds are being requested. FEMA will complete this review with the assistance of both the state or tribal government and the local applicant. It is important that you provide accurate information. If you are having problems completing this section, please contact your application point of contact.

A. National Historic Preservation Act - Historic Buildings and Structures

1. Does your project affect or is it in close proximity to any buildings or structures 50 years or more in age?	**Yes**

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please attach the required documents below.)

- [x] The property address and original date of construction for each property affected (unless this information is already noted in the Properties section).

- [x] A minimum of two color photographs showing at least three sides of each structure (Please label the photos accordingly).
- [x] A diagram or USGS 1:24,000 scale quadrangle map displaying the relationship of the property (s) to the project area.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

- [x] Information gathered about potential historic properties in the project area, including any evidence indicating the age of the building or structure and presence of buildings or structures that are listed or eligible for listing on the National Register of Historic Places or within or near a National Register listed or eligible historic district. Sources for this information may include the State Historic Preservation Officer, and/or the Tribal Historic Preservation Officer (SHPO/THPO), your local planning office, historic preservation organization, or historical society.
- [ ] Consideration of how the project design will minimize adverse effects on known or potential historic buildings or structures, and any alternatives considered or implemented to avoid or minimize effects on historic buildings or structures. Please address and note associated costs in your project budget.
- [ ] For acquisition/demolition projects affecting historic buildings or structures, any data regarding the consideration and feasibility of elevation, relocation, or flood proofing as alternatives to demolition.
- [x] Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)	**The current RPS was built in 1978. The structure will be decommissioned once the new RPS is constructed.**

Please provide an explanation and any information about this project that could assist FEMA in its review.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 5 - Photo Log.pdf	11/23/2021	madeleine.lane@icf.com	closeProximityTo50YearOldBuilding.attachmentIds	Preservation act photo log	
Attachment 19 - USGS Topographic Map.pdf	11/23/2021	madeleine.lane@icf.com	closeProximityTo50YearOldBuilding.attachmentIds	Topo map	
Attachment 18 - NPS Historic Building Site Map.pdf	11/23/2021	madeleine.lane@icf.com	closeProximityTo50YearOldBuilding.attachmentIds	Historic building site map	
Attachment 17 - SHPO Letter.pdf	11/23/2021	madeleine.lane@icf.com	closeProximityTo50YearOldBuilding.attachmentIds	Historical preservation letter	
Attachment 20 - RPS Outfall Design.pdf	11/23/2021	madeleine.lane@icf.com	closeProximityTo50YearOldBuilding.attachmentIds	Pumping station outfall design	
Attachment 21 - RPS Original Schematic.pdf	11/23/2021	madeleine.lane@icf.com	closeProximityTo50YearOldBuilding.attachmentIds	Pumping station original schematic	

B. National Historic Preservation Act - Archeological Resources

Does your project involve disturbance of ground?	**Yes**

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please attach the required documents below.)

- [x] A description of the ground disturbance by giving the dimensions (area, volume, depth, etc.) and location.
- [x] The past use of the area to be disturbed, noting the extent of previously disturbed ground.
- [x] A USGS 1:24,000 scale or other site map showing the location and extent of ground disturbance.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

- [x] Any information about potential historic properties, including archeological sites, in the project area. Sources of this information may include SHPO/THPO, and/or the Tribe's cultural resources contact if no THPO is designated. Include, if possible, a map showing the relation of any identified historic properties to the project area.

- [ ] Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

The proposed project site is located directly south of River Park (formerly Cameron Park) Elementary School, built in 1956. The proposed project site is near the town's Riverwalk, a paved, accessible, urban greenway that stretches about 1.8 miles along the Eno River between Gold Park in western Hillsborough and trails east of town.

Please provide an explanation and any information about this project that could assist FEMA in its review.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 11 - Ground Disturbance Map.pdf	11/23/2021	madeleine.lane@icf.com	involveDisturbanceOfGround.attachmentIds	Map of vegetation and ground disturbance at project site.	
Attachment 17 - SHPO Letter.pdf	11/23/2021	madeleine.lane@icf.com	involveDisturbanceOfGround.attachmentIds	Letter from Utilities Director to NC State Historic Preservation Officer.	

C. Endangered Species Act and Fish and Wildlife Coordination Act

1. Are federally listed threatened or endangered species or their critical habitat present in the area affected by the project?

Yes

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please provide the required documents either through attachment and/or comment box below.)

- [x] Information you obtained to identify species in or near the project area. Provide the source and date of the information cited.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

- [x] Any request for information and associated response from the USFWS, the National Marine Fisheries Service (NMFS) (for affected ocean-going fish), or your State Wildlife Agency, regarding potential listed species present and potential of the project to impact those species.

- [x] Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

Please refer to Attachment 22 - IPaC Report

Please provide an explanation and any information about this project that could assist FEMA in its review.

2. Does your project remove or affect vegetation?

Yes

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please provide the required documents either through attachment and/or comment box below.)

- [x] Description of the amount (area) and type of vegetation to be removed or affected.
- [x] A site map showing the project area and the extent of vegetation affected.
- [x] Photographs or digital images that show both the vegetation affected and the vegetation in context of its surroundings.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

- [ ] Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)	**The proposed RPS location has several small saplings as well as one large deciduous tree within 200 feet of the project site that will be removed.**

Please provide an explanation and any information about this project that could assist FEMA in its review.

3. Is your project in, near (within 200 feet), or likely to affect any type of waterway or body of water?	**Yes**

If Yes, and project is not within an existing building, you must confirm that you have provided the following: (If you have not provided these documents in any other section of the application, please attach the required documents below.)

- [x] A USGS 1:24,000 scale quadrangle map showing the project activities in relation to all nearby water bodies (within 200 feet).
- [x] Any information about the type of water body nearby including: its dimensions, the proximity of the project activity to the water body, and the expected and possible changes to the water body, if any. Identify all water bodies regardless whether you think there may be an effect.
- [x] A photograph or digital image of the site showing both the body of water and the project area.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

- [ ] Evidence of any discussions with the US Fish and Wildlife Service (USFWS), and/or your State Wildlife Agency concerning any potential impacts if there is the potential for the project to affect any water body.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)	**The proposed RPS location will be located outside of the current floodplain and more than 200 feet from a waterbody. However, the current RPS is located within the floodplain, approximately 40 feet adjacent to the west bank of the Eno River. The project is not expected to impact the water body; in fact, the project may help restore some riparian edge of the Eno River.**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 22 - IPaC Report.pdf	11/23/2021	madeleine.lane@icf.com	endangeredSpecies.attachmentIds	USFWS IPaC report.	
Attachment 19 - USGS Topographic Map.pdf	11/23/2021	madeleine.lane@icf.com	endangeredSpecies.attachmentIds	USGS map.	
Attachment 23 - Fish and Wildlife Letter.pdf	11/23/2021	madeleine.lane@icf.com	endangeredSpecies.attachmentIds	Letter from Utilities Director to US Fish and Wildlife, Raleigh Ecological Field Services Office.	
Attachment 5 - Photo Log.pdf	11/23/2021	madeleine.lane@icf.com	endangeredSpecies.attachmentIds	Photos of current and proposed site.	
Attachment 11 - Ground Disturbance Map.pdf	11/23/2021	madeleine.lane@icf.com	endangeredSpecies.attachmentIds	Map of vegetation and ground disturbance at project site.	

D. Clean Water Act, Rivers and Harbors Act, and Executive Order 11990 (Protection of Wetlands)

1. Will the project involve dredging or disposal of dredged material, excavation, adding fill material or result in any modification to water bodies or wetlands designated as 'waters of the U.S' as identified by the US Army Corps of Engineers or on the National Wetland Inventory?	**No**

E. Executive Order 11988 (Floodplain Management)

1. Does a Flood Insurance Rate Map (FIRM), Flood Hazard Boundary Map (FHBM), hydrologic study, or some other source indicate that the project is located in or will affect a 100 year floodplain, a 500 year floodplain if a critical facility, an identified regulatory floodway, or an area prone to flooding?	**Yes**
Please explain in the text box below and/or provide any documentation to identify the means or the alternatives considered to eliminate or minimize impacts to floodplains (See the 8 step process found in 44 CFR Part 9.6.) to help FEMA evaluate the impact of the project:	**The project is to move an above ground sewage pumping station out of the floodway and special flood hazard area. Existing underground piping with manholes will remain.**

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

2. Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation?	**No**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 25 - Eight-Step Process.pdf	11/23/2021	madeleine.lane@icf.com	affectTo100Or500YearFloodplain.attachmentIds	FEMA 8-Step Process for Floodplains and Wetland	
Attachment 24 - Project Location FIRM.pdf	11/23/2021	madeleine.lane@icf.com	affectTo100Or500YearFloodplain.attachmentIds	FEMA FIRM.	
Attachment 25.1 - Floodplain Administrator Letter.pdf	11/23/2021	madeleine.lane@icf.com	affectTo100Or500YearFloodplain.attachmentIds	Letter from Utilities Director to Floodplain Administrator.	

F. Coastal Zone Management Act

1. Is the project located in the state's designated coastal zone?	**No**

G. Farmland Protection Policy Act

1. Will the project convert more than 5 acres of prime or unique farmland outside city limits to a non-agricultural use?	**No**

H. Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (Hazardous and Toxic Materials)

1. Is there a reason to suspect there are contaminants from a current or past use on the property associated with the proposed project?	**No**
2. Are there any studies, investigations, or enforcement actions related to the property associated with the proposed project?	**No**
3. Does any project construction or operation activities involve the use of hazardous or toxic materials?	**No**
4. Do you know if any of the current or past land-uses of the property affected by the proposed project or of the adjacent properties are associated with hazardous or toxic materials?	**No**

I. Executive Order 12898, Environmental Justice for Low Income and Minority Populations

1. Are there low income or minority populations in the project's area of effect or adjacent to the project area? **Yes**

If Yes, you must confirm that you have provided the following either in the text box below or by attachment: (If you have not provided these documents in any other section of the application, please attach the required documents or provide the description below.)

- [x] Description of any disproportionate and adverse effects to these populations.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

- [ ] Description of the population affected and the portion of the population that would be disproportionately and adversely affected. Please include specific efforts to address the adverse impacts in your proposal narrative and budget.
- [x] Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)	**Using the pump station's project location and service area and overlaying with HUD's low- and moderate-income summary data (LMISD), which is used to identify projects that provide benefit to low- and moderate-income persons on an area basis, this project will directly benefit low-income populations. The average LMI% of all census block groups in the River Pump Station's service area was 49.84%. See attached LMI report. No adverse impacts are perceived on these populations by the implementation of this project. In fact, this project is perceived to be of benefit to these populations as it will minimize the risk of critical lifeline services being disrupted during a flood event.**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
UPDATED Attachment 26 - LMI Map.pdf	01/07/2022	chris.mewes@icf.com	lowIncomeMinority.attachmentIds	Map of Hillsborough indicating percent Low and Moderate Income Residents.	

J. Other Environmental/Historic Preservation Laws or Issues

1. Are there other environmental/historic preservation requirements associated with this project that you are aware of?	**No**
2. Are there controversial issues associated with this project?	**No**
3. Have you conducted any public meeting or solicited public input or comments on your specific proposed mitigation project?	**Yes**
If Yes, please indicate in the text box below a description of the requirements, issues or public involvement effort.	**In addition to direct contact with stakeholders, a press release regarding the project was issued and articles were placed on the town's social media accounts and weekly digest. The reach is as follows: • News releases (includes digest): 1,313 • Facebook: 4,939 • Twitter: 2,696 • Nextdoor: 6,588 The Town of Hillsborough has also engaged with the local district from whom they hope to acquire an easement in order to build the pumping station. Attachment 29.1 is a fact sheet compiled by the Utilities Director in order to inform the school district of the project and its benefits and impacts.**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 27 - Public Outreach.pdf	11/23/2021	madeleine.lane@icf.com	otherEHPLawsIssues.attachmentIds	Town of Hillsborough website page, Weekly Digest, and Facebook page announcing BRIC subapplications.	
Attachment 29.1 - Fact Sheet for River Park Elementary.pdf	01/07/2022	chris.mewes@icf.com	otherEHPLawsIssues.attachmentIds	Fact sheet explaining project benefits and impacts to school where it would be sited.	

K. Summary and Cost of Potential Impacts

Having answered the questions in parts A. through J., have you identified any aspects of your proposed project that have the potential to impact environmental resources or historic properties?	**Yes**

If Yes, you must confirm that you have provided the following: (If you have not provided these documents in any other section of the application, please attach the required documents below.)

- [x] Evaluated these potential effects and provided the materials required in Parts A through J that identify the nature and extent of potential impacts to environmental resources and/or historic properties.
- [x] Consulted with appropriate parties to identify any measures needed to avoid or minimize these impacts.
- [x] Considered alternatives that could minimize both the impacts and the cost of the project.
- [x] Made certain that the costs of any measures to treat adverse effects are realistically reflected in the project budget estimate.

Please enter your comments below. (optional) : (Please indicate why in the text box below and any information about this project that could assist FEMA in its review).	**The proposed project site will have minimal impacts on historic sites, adjacent waterbodies, endangered species, and critical habitats. The proposed project will disturb a minor amount of ground and vegetation, which is demonstrated in the Ground and Vegetation Disturbance Map attached to this application (Attachment 11).**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 11 - Ground Disturbance Map.pdf	11/23/2021	madeleine.lane@icf.com	summaryCostOfImpacts.attachmentIds	Map of vegetation and ground disturbance at project site.	

Evaluation

Is the applicant participating in the Community Rating System (CRS)?	**Yes**
Select rating.	**6**
Is the applicant a Cooperating Technical Partner (CTP)?	**No**
Was this created from a previous FEMA HMA Advance assistance / Project scoping award?	**No**
Has the applicant adopted building codes consistent with the international codes?	**Yes**
Year of building code	**2018**
Please provide the building code.	**International Building Code**
Have the applicant's building codes been assessed on the Building Code Effectiveness Grading Schedule (BCEGS)?	**Yes**
Select rating.	**3**
Describe involvement of partners to enhance the mitigation activity outcome.	**There are several partners that will enhance the mitigation project outcome and ensure project success. The Orange County Board of Education and the Eno River Association will be engaged in aspects of project development and implementation. The Orange County Board of Education will be the grantor of the new River Pump Station location. The Board of Education will be involved in project development and design. In particular, the Board will ensure that the River Park Elementary School, which is in the vicinity of the proposed new River Pump Station location, is in discussion with the Town as the project is implemented. The Town has drafted a fact sheet to share with the River Park Elementary School community (Attachment 29.1) and the Board to explain the project, implementation plan, and security measures to ensure the community understands the need for the project and can engage with the Town on an iterative implementation process to minimize impact on River Park Elementary School students and families. Orange County has written a letter in support of the project, stating that the project will support environmental protection and preservation, as well as benefit town and county water ratepayers. The letter is provided as Attachment 28. The Eno River Association will also be an active stakeholder in the proposed project. The Eno River Association is a 501(c)(3) non-profit conservation organization whose mission is to conserve and protect**

	the natural, historical, and cultural resources of the Eno River basin. The Eno River Association has written a letter in support of the project (Attachment 29), stating that the Eno River Association believes the project will protect the Eno River from environmental impacts from the discharge of raw wastewater, as well as unsanitary conditions for impacted customers who cannot use water and who cannot discharge wastewater when the station shuts down.
Discuss how anticipated future conditions are addressed by this project.	**Climate change is bringing about unpredictable weather patterns in an already flood prone area of North Carolina. Due to the impacts of climate change, Hillsborough is predicted to experience more frequent and severe precipitation events and an increased flooding risk. Hillsborough could see a more than 60% annual increase in the number of days with precipitation of 3 inches or greater by midcentury from a 1996-2015 baseline average (see Attachment 30: North Carolina Climate Science Report). North Carolina is also expected to experience more frequent and severe riverine flooding events. A recent study found that inland flooding is projected to increase in North Carolina by 40% by 2050 due to a higher volume of runoff from more intense storm systems (Attachment 31: NC Sea Grant Flooding Mitigation Report). The current RPS, located within the Special Flood Hazard Area, is vulnerable to these changing pluvial and riverine flood conditions. By relocating the pump station out of the SFHA, this project address the anticipated increase in the frequency and severity of flood events that may otherwise cause damage and loss of function to sewer service. In addition, the provision of a permanent generator at the new RPS location will protect the station during power outages and ensure this critical lifeline remains operational. Since 2003, the number of power outages in the U.S. has doubled, in large part due to severe storms; between 2003 and 2012, North Carolina experienced more than 48 power outage incidents, the 7th most power outages in the nation. During the same period, Duke Energy and Dominion were the energy providers with the 2nd and 5th most customers impacted by power outages in the nation, respectively; over 15.3 million customers were impacted by outages. More recently, storms such as Hurricane Michael and Hurricane Florence have impacted over 1.5 million customers in North Carolina. There have been 37 incidents of power outages in North Carolina since 2015, 32 of which were caused by severe weather events. Severe storms present a growing threat to essential energy infrastructure, including infrastructure that serves Hillsborough's RPS. A permanent generator will protect the RPS during outages as will having the station connected to the utilities alarm monitoring system like its current and other sewage pumping stations. The generator is a standard requirement for all new pumping stations in the town system.**
Additional comments (optional)	**The Town of Hillsborough (Town) has an agreement with Orange County, NC (County) to perform building and fire inspections for all structures in its jurisdiction. Orange County received a commercial BCEGS score of 83.81/100 and residential BCEGS score of 78.64/100, which relates to a BCEGS Rating of 3 for both categories. The County's Building Inspections Division enforces the mandated North Carolina State Building Code (which conforms with the 2018 International Building Code) and conducts inspections to ensure code compliance during construction of buildings, electrical, mechanical, and plumbing systems. The Inspections Division issues zoning and building permits, issues occupancy permits upon compliance with state building codes and local regulations and takes proper corrective action when necessary. The Town must sign off on building permits and certificates of occupancy through their newly implemented EnerGov permit and inspections system that streamlines all building permit and inspections activities. While the County inspectors do most of the inspections, town staff also visit sites to provide further observations and to ask for corrective action if necessary. The County is responsible for enforcing corrective actions which may include fines or civil charges. The Town can encourage corrective actions by not approving the final occupancy. The County has developed a list of**

the most common causes of rejected permit applications and failed inspections for building, mechanical, electrical, and plumbing. See attachment See Attachment 34 regarding the county BCEGS score and inspections.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
02_Future Conditions Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	*No description given.*	
05_Outreach Activities Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	*No description given.*	
Attachment 33 - NC EIA Report.pdf	11/23/2021	madeleine.lane@icf.com	Evaluation Attachments	Electric Emergency and Disturbance Report - Calendar Year 2021	
Attachment 34 - BCEGS Score Email.pdf	11/24/2021	madeleine.lane@icf.com	Evaluation Attachments	Email correspondence re Hillsborough's BCEGS score.	
Attachment 28 - Letter of Support Eno River Water Association.pdf	11/23/2021	madeleine.lane@icf.com	Evaluation Attachments	Letter of support from Eno River Water Association.	
Attachment 32 - Climate Outage Report.pdf	11/23/2021	madeleine.lane@icf.com	Evaluation Attachments	Report from Climate Central.	
01_Risk Reduction Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	*No description given.*	
03_Implementation Measures Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	*No description given.*	
04_Impacted Population Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	*No description given.*	
06_Leveraging Partners Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	*No description given.*	
Attachment 29 - Letter of Support Orange County.pdf	11/23/2021	madeleine.lane@icf.com	Evaluation Attachments	Letter of support from Orange County.	
Attachment 31 - NC Sea Grant Flooding Mitigation Report.pdf	11/23/2021	madeleine.lane@icf.com	Evaluation Attachments	Report from Sea Grant North Carolina.	
Attachment 30 - NC Climate Research Report.pdf	11/23/2021	madeleine.lane@icf.com	Evaluation Attachments	Report from North Carolina Institute for Climate Studies.	

Comments & attachments

- **Community** — **1 comment, 1 attachments**
- **Mitigation plan** — **0 comment, 1 attachments**
- **Scope of work** — **0 comment, 14 attachments**
- **Budget** — **0 comment, 1 attachments**
- **Cost-effectiveness** — **0 comment, 3 attachments**
- **Evaluation** — **1 comment, 13 attachments**

Environmental/Historic Preservation (EHP)	**0 comment, 20 attachments**
Location	**0 comment, 6 attachments**

Introduction

Project location

Provide a detailed description of the proposed project's location.

The site of this mitigation activity is Hillsborough, North Carolina 27278 at 36.07461 latitude and -79.09227 longitude. The existing River Pump Station is located directly adjacent to the Eno River on its northern bank within the regulatory floodway (36.072414, -79.08922). Both sites are south of St. Mary's Road and directly south of River Park Elementary School. The existing pump station will be relocated outside of the floodway and Special Flood Hazard Area.

Latitude **36.074610**

Longitude **-079.092270**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 1 - Project Location Map.pdf	11/23/2021	madeleine.lane@icf.com	Project Location Attachments	Map depicting current and proposed sites as well as roads and floodways.	

Project benefiting area

Provide a detailed description of the proposed project's benefiting area.

Currently there are approximately 5,000 sewer connections in the system of 98 miles of pipe and 26 sewage pumping stations. All sewage is pumped into one of two stations – Elizabeth Brady Pumping Station and River Pumping Station (RPS). Over 75% of the town's wastewater discharges into the RPS basin. Over 75% of the town's wastewater discharges into the RPS basin. This includes the oldest areas of town, low-income neighborhoods, and unincorporated areas in the county. If flooding renders the RPS inoperable, approximately 75% of the town's population will lose wastewater service. Additionally, approximately 15,990 persons, including several low-income areas such as the Timbers, Oakdale, and Northside mobile home parks; the Fairview community; west Hillsborough; and business patrons, employees, county and town government officials, emergency responders and town visitors depend upon reliable wastewater conveyance. The customers pay a high price to maintain the system. If flooding or erosion damages the system, water use will be limited while the issue is resolved. Additionally, the average LMI percentage for census blocks in the River Pump Station's service area is 49.84%. There are two census blocks within the River Pump Station service area (371350110004 and 37135011101) that have a LMI percentage about 65% (77.1% and 65.3%, respectively). The River Pump Station serves a number of low-income Hillsborough residents. In accordance with the Justice40 initiative, the Town of Hillsborough has identified disadvantaged communities that will benefit from this project. The attached map depicts the Centers for Disease Control and Prevention's Social Vulnerability Index (SVI) for the census tracts within the WTP's service area. SVI ranks the tracts on 15 social factors, including unemployment, minority status, and disability and

further groups them into four related themes. The CDC SVI ranking variables for the four themes are for the Socioeconomic Status, Household Composition & Disability, Minority Status & Language , and Housing Type & Transportation. These indicators help support analysis on the relative vulnerability of a given census tract and helps identify communities that will need continued support to recover following an emergency or natural disaster. The attached map shows the overall ranking (RPL_Themes) which is a percentile ranking that represents the proportion of tracts that are equal to or lower than a tract of interest in terms of social vulnerability. For example, a CDC/ATSDR SVI ranking of 0.60 signifies that 60% of tracts in the state or nation are less vulnerable than the tract of interest and that 40% of tracts in the state or nation are more vulnerable. Looking at the map, at least two census tracts within the service area are above 0.60 SVI ranking, meaning this area is overall more vulnerable than others in the state / country. Utilizing SVI indicators, the census tracts 111.01 and 109.2 within the RPS service area appear especially vulnerable, with a SVI of 0.62 and 0.64 respectively; see attached SVI Map for further details.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 36 - Percent Poverty Service Area (1).pdf	01/07/2022	chris.mewes@icf.com	Location project benefiting area Attachments	Map depicting the percent of residents of the project area in poverty.	
UPDATED Attachment 35 - Overall SVI Percentile.pdf	01/07/2022	chris.mewes@icf.com	Location project benefiting area Attachments	Map depicting the CDC Social Vulnerability Index around the project area.	
Attachment 37 - Percent Minority Service Area (1).pdf	01/07/2022	chris.mewes@icf.com	Location project benefiting area Attachments	Map depicting the percent of residents in the project area who are minorities.	
Attachment 26 - LMI Map.pdf	11/23/2021	madeleine.lane@icf.com	Location project benefiting area Attachments	Map depicting the percent Low and Moderate Income Residents	

Project impact area

Provide a detailed description of the proposed project's impact area.

The design approach to mitigate flooding at the River Pump Station centers around the demolition, decommissioning, and full relocation of the existing pump station to a neighboring vacant lot approximately 1,500 feet northwest of its existing location. The Town of Hillsborough and the design team have strategically designed this new pump station location to ensure the entirety of the station is located outside of the 500-year floodplain. The elevation of the relocated pump station will be 2 feet higher than the base flood elevation of the pump station and higher than the 500-year flood elevation.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 11 - Ground Disturbance Map.pdf	11/23/2021	madeleine.lane@icf.com	Location project impact area Attachments	Map of vegetation and ground disturbance	

Filename	Date uploaded	Uploaded by	Label	Description	Action
				around project site.	

Project site inventory

Does this project subapplication propose to mitigate a property/structure(s)? **Yes**
(Examples: residential home, commercial building, bridge, fire station, levee, pumping station, wastewater treatment plant, telephone pole, electric line, etc.)

Please describe how the propert(ies) will be selected upon subgrant approval. (Example: Saferoom Lottery Project, Fix the Bricks Project)

Please download the excel template, and then fill out the template with building or infrastructure data.

Enter the location of the property/structure.

List of location(s) (1 location)

Status	Location ID	Address	Inventory type	Structure type	Mitigation action
✓	25649	River Pump Station , Hillsborough, NC, Orange, 27278	Infrastructure/Utility/other	Wastewater	Other retrofit, Relocation

Assurances and certifications

OMB number: 4040-0009, Expiration date: 02/28/2022 View burden statement

SF-424D: Assurances - Construction Programs

Content:

OMB Number: 4040-0009
Expiration Date: 02/28/2022

Certain of these assurances may not be applicable to your project or program. If you have any questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C.§§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C.§794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C.§§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C.§874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a--1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
20. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.