

Via Electronic Mail

November 16, 2023



Julie Wilkins, Mayor  
City of LaBelle, FL  
481 West Hickpochee Ave.  
LaBelle, FL 33935

Re: Professional Engineering Services  
Vulnerability Assessment

Dear Mayor Wilkins:

Woodard & Curran, Inc. (W&C) appreciates the opportunity to provide this proposal for professional engineering services to develop a Vulnerability Assessment (VA) for the City of LaBelle (City) under their recently awarded Resilient Florida Program Planning Grant.

## **BACKGROUND**

The City intends to prepare a VA to address concerns relative to the impacts of climate change, including flooding, increases in rainfall intensity, groundwater levels and other applicable factors. The VA will identify critical assets located within the City and evaluate their vulnerability to the 100-year, 24-hour design storm. The VA Report will detail the findings, including illustrations via maps and tables, based on the statutory scenarios and standards outlined in the Technical Standards Guidance; a final list of critical and regionally significant assets that are impacted by flooding, prioritized by area or immediate need, specifying for each asset which flood scenario(s) by which it was impacted.

## **SCOPE OF SERVICES**

The tasks and deliverables described below have been developed in accordance with the Florida Department of Environmental Protection (FDEP) Grant Work Plan, Agreement No. 23PLN115 (LaBelle), Attachment 3. VAs are standardized to meet the requirements of Florida Statute, 380.093, and to maximize funding received from the FDEPs Resilient Florida Program Grant Award. Task descriptions, and deliverables are as follows:

### **Task 1: Kickoff Meeting**

W&C will develop an overall project management plan and address initial actions and then conduct a kick-off meeting for the project. Meeting attendees should discuss the project scope, project goals, schedule, key milestones, and deliverables in order to develop a consistent project approach.

Deliverables: W&C will provide the following: 1) meeting agenda to include location, date, and time of meeting; 2) meeting sign-in sheets or attendance records with attendee names and affiliation; 3) a copy of the presentation(s) and any materials created for distribution at the meeting, as applicable; 4) kick-off meeting minutes, which documents all decisions and agreed upon outcomes of the meeting.



## **Task 2: Acquire Background Data**

W&C will research and compile the data needed to perform the VA based on the requirements as defined in Section 380.093, F.S. Three main categories of data are required to perform a VA: 1) critical and regionally significant asset inventory, 2) topographic data, and 3) flood scenario-related data. GIS metadata should incorporate a layer for each of the four asset classes as defined in paragraphs 380.093(2)(a)1-4, F.S. GIS files and associated metadata must adhere to the Resilient Florida Program's GIS Data Standards (Exhibit I), and raw data sources shall be defined within the associated metadata. Sea level rise projection data shall include the 2017 National Oceanic and Atmospheric Administration (NOAA) intermediate-high and intermediate-low projections for 2040 and 2070, at a minimum. Other projections can be used at W&C's discretion. Storm surge data used must be equal to or exceed the 100-year return period (1% annual chance) flood event. In the process of researching background data, W&C shall identify data gaps, where missing data or low-quality information may limit the VA's extent or reduce the accuracy of the results. W&C shall rectify gaps in necessary data or identify future efforts needed to do so.

Deliverables: W&C will provide the following: 1) a technical report to outline the data compiled and findings of the gap analysis; 2) a summary report to include recommendations to address the identified data gaps and actions taken to rectify them, if applicable; and 3) GIS files with appropriate metadata of the data compiled, to include locations of critical assets owned or maintained by the Grantee as well as regionally significant assets that are classified and as defined in paragraphs 380.093(2)(a) 1-4, F.S.

## **Task 3: Exposure Analysis**

W&C will perform an exposure analysis to identify the depth of water caused by each sea level rise, storm surge, and/or flood scenario. The water surface depths (i.e. flood scenarios) used to evaluate assets shall include the following data: tidal flooding, current and future storm surge flooding, rainfall-induced flooding, and compound flooding, all as applicable, as well as the scenarios and standards used for the exposure analysis shall be pursuant to s. 380.093, F.S. GIS files and associated metadata must adhere to the Resilient Florida Program's GIS Data Standards (Exhibit I), and raw data sources shall be defined within the associated metadata.

Deliverables: W&C will provide the following: 1) a draft VA report that provides details on the modeling process, type of models utilized, and resulting tables and maps illustrating flood depths for each flood scenario; and 2) GIS files with results of the exposure analysis for each flood scenario as well as the appropriate metadata that identifies the methods used to create the flood layers.

## **Task 4: Sensitivity Analysis**

W&C will perform the sensitivity analysis to measure the impact of flooding on assets and to apply the data from the exposure analysis to the inventory of critical assets created in the Acquire Background Data Task. The sensitivity analysis should include an evaluation of the impact of flood severity on each asset class and at each flood scenario and assign a risk level based on percentages of land area inundated and number of critical assets affected.



Deliverables: W&C will provide the following: 1) an updated draft VA report that provides details on the findings of the exposure analysis and the sensitivity analysis and includes visual presentation of the data via maps and tables, based on the statutorily-required scenarios and standards; and 2) an initial list of critical and regionally significant assets that are impacted by flooding. The list of critical and regionally significant assets must be prioritized by area or immediate need and must identify which flood scenario(s) impacts each asset.

#### **Task 5: Identify Focus Areas**

W&C will identify focus areas, following the guidelines in Chapter 2 of the Florida Adaptation Planning Guidebook. Based on the exposure and sensitivity analyses, the Grantee may assign focus areas to locations or assets that are particularly vulnerable and require the development of adaptation strategies. GIS files and associated metadata must adhere to the Resilient Florida Program's GIS Data Standards (Exhibit I), and raw data sources shall be defined within the associated metadata.

Deliverables: W&C will provide the following: 1) a report summarizing the areas identified as focus areas, with justification for choosing each area; 2) tables listing each focus area with any critical assets that are contained inside the focus area; 3) maps illustrating the location of each focus area compared to the location of all critical assets within the geographic extent of the study; and 4) GIS files and associated metadata illustrating geographic boundaries of the identified focus areas.

#### **Task 6: Final Vulnerability Assessment Report, Maps, and Tables**

W&C will finalize the VA report pursuant to the requirements in s. 380.093, F.S. The final VA must include all results from the exposure and sensitivity analyses, as well as a summary of identified risks and assigned focus areas. It should contain a list of critical and regionally significant assets that are impacted by flooding and sea-level rise, specifying for each asset the flood scenario(s) impacting the asset. GIS files and associated metadata must adhere to the Resilient Florida Program's GIS Data Standards (Exhibit I), and raw data sources shall be defined within the associated metadata.

Deliverables: W&C will provide the following: 1) Final VA Report that provides details on the results and conclusions, including illustrations via maps and tables, based on the statutorily-required scenarios and standards in s. 380.093, F.S.; 2) a final list of critical and regionally significant assets that are impacted by flooding. The list of critical and regionally significant assets must be prioritized by area or immediate need and must identify which flood scenario(s) impacts each asset.; 3) all electronic mapping data used to illustrate flooding and sea level rise impacts identified in the VA, to include the geospatial data in an electronic file format and GIS metadata; and 4) a signed Vulnerability Assessment Compliance Checklist Certification.



### **Task 7: Public Presentations**

W&C will present the final VA results to local governing boards, technical committees, or other appropriate officers and elected officials. The purpose of the presentation is to share the findings from the final VA and provide recommendations of actions for adaptation strategies and future project funding. The presentation will also inform the public of the results and the future risk of sea level rise and increased flooding and encourage community participation when identifying mitigation strategies to address the flooding vulnerabilities. The Grantee will prepare all social media notifications, meeting invitations, meeting materials, presentations, and graphics utilized during the meeting, as applicable.

Deliverables: W&C will provide the following: 1) meeting agendas to include location, date, and time of meeting; 2) meeting sign-in sheets with attendee names and affiliation (i.e., local stakeholder, resident, steering committee member, local government staff); 3) a copy of the presentation(s) and any materials created in preparation of or for distribution at the meeting (i.e., social media posts, public announcements, graphics), as applicable; 4) a copy of the file or weblink of the video or audio recording from the meeting, if applicable; and 5) a summary report including attendee input and meeting outcomes.

### **Task 8: Local Mitigation Strategy**

The results of the VA can be used to inform a Local Mitigation Strategy (LMS) as required by the Florida Division of Emergency Management (FDEM). The LMS is usually developed at the county level and serves to reduce the risks associated with natural and man-made disasters, including sea level rise. W&C will support the City in working with the Local Mitigation Strategy Working Group (LMSWG) to ensure the VA Report is in alignment with the existing county LMS Plan and will be utilized during the planning process of future county LMS Plan updates.

Deliverables: W&C will support the City with the submittal of a letter to the Department and FDEM Mitigation Bureau Planning Unit, signed by the LMSWG Chair, or Designee, to include the following: 1) VA Report will be incorporated as a reference in updating the next iteration of the LMS Plan, i.e., utilized in the next five-year update; 2) VA Report will be included as an appendix to the next iteration of the LMS Plan; and 3) the entity/entities that composed the VA report will be involved with the LMSWG through any of the following: at a minimum, be added to the contact list, attend meetings, participate in the planning process of the next major update; participate in the adoption of the LMS plan; and submit projects to the LMSWG to be included on LMS Prioritized Project List.

### **Task 9: Adaptation Plan**

W&C will complete an Adaptation Plan (AP) that is consistent with the Florida Adaptation Planning Guidebook and includes the following: assessment of adaptive capacities, prioritization of adaptation needs, and identification of adaptation strategies. The Grantee may also include optional subtasks such as identifying adaptation action areas, stakeholder engagement, and integrating the proposed AP into existing APs. The AP will also include a list of prioritized projects for each asset class as defined in subsection 380.093(2), F.S., for consideration and implementation.

Deliverables: W&C will provide the final AP or Report.



## SCHEDULE

W&C anticipates completing the proposed scope of work within eight (8) months from authorization to proceed.

## BUDGET

W&C proposes to complete the scope of work for a lump sum fee of \$150,000.00 in accordance with the table below:

Description of Work	Budget
Task 1: Kickoff Meeting	\$5,000.00
Task 2: Acquire Background Data	\$30,000.00
Task 3: Exposure Analysis	\$30,000.00
Task 4: Sensitivity Analysis	\$30,000.00
Task 5: Identify Focus Areas	\$10,000.00
Task 6: Final Vulnerability Assessment Report, Maps, and Tables	\$20,000.00
Task 7: Public Presentations	\$5,000.00
Task 8: Local Mitigation Strategy	\$5,000.00
Task 9: Adaptation Plan	\$15,000.00
<b>Total Fee</b>	<b>\$150,000.00</b>

## TERMS AND CONDITIONS

The Scope of Services will be completed in accordance with the terms of the General Civil Engineering Services Master Agreement between Woodard & Curran, Inc., and City of LaBelle, dated October 13, 2022.

## ASSUMPTIONS AND UNDERSTANDINGS

The following assumptions and understandings apply to the scope of work, schedule, and budget described herein.

- The VA will be developed based on a desktop level evaluation supplemented with field observations and interviews with City staff, as noted above. The scope of work does not include field survey or conditions assessment of subsurface stormwater infrastructure facilities. Additional field investigation needs, necessary to implement



future capital improvement projects, will be identified in the VA for future funding considerations.

- Flood scenario-related data will be obtained from available studies prepared by FEMA, the County or local municipality.
- Detailed hydrologic and hydraulic capacity calculations and studies, necessary for the design, permitting and construction of improvements will not be performed as part of the VA.
- W&C assumes copies of all documents noted above will be provided by the City at no cost.
- Scope of Work does not include a detailed engineer's opinion of probable cost. We will provide an order-of-magnitude cost to each recommendation (i.e., higher/lower comparison).

## CLOSING

We greatly appreciate this opportunity to offer our professional engineering services. If you accept this proposal and wish to proceed with the Scope of Services, please sign in the space indicated below and return a copy for our files. Please feel free to call me at 863.354.4416 if you have any questions regarding this proposal or require any further information.

Sincerely,

WOODARD & CURRAN, INC.

A handwritten signature in blue ink, appearing to read "Justin deMello".

Justin deMello, PE  
Client Manager

JD/la

Enclosure(s)

PN: 023532.11





IN WITNESS WHEREOF, the parties hereto have executed this Agreement by their duly authorized agents as of the date indicated below.

**AUTHORIZATION BY:**

WOODARD & CURRAN, INC.

CITY OF LABELLE, FL

 11/16/2023  
Signature Date  
Justin deMello, PE  
Name (printed)  
Vice President  
Title

 2/8/24  
Signature Date  
Julie C. Wilkins  
Name (printed)  
Mayor  
Title