Request for Proposal

for

Main Street Smart Corridor Plan Development

Buffalo, NY

Issued: March 1, 2018

Due: March 30, 2018

Project Identification Number: C-17-55
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Glossary of Terms:

BNMC: Buffalo Niagara Medical Campus

CBD: Central Business District

DPW: Department of Public Works

GBNRTC: Greater Buffalo Niagara Regional Transportation Council

IoT: Internet of Things

NFTA: Niagara Frontier Transportation Authority

NITTEC: Niagara International Transportation Technology Coalition

NYSDOT: New York Department of Transportation

NYSERDA: New York State Energy Research and Development Authority

SMART: Street Safety, Mobility and Automated Real-time Traffic Management

TMA: Transportation Management Association
1. INTRODUCTION

The Buffalo Niagara Medical Campus, Inc. (BNMC) is requesting proposals from qualified vendors with expertise in smart transportation infrastructure and Internet-of Things (IoT) technologies for the development of a Main Street Safety, Mobility and Automated Real-time Traffic Management (SMART) Corridor Plan. The project will take place in the City of Buffalo, New York.

The City of Buffalo has recently secured $13 million to redevelop street infrastructure for Main Street between Goodell Street and Humboldt Parkway. In tandem with the City’s redevelopment project, the BNMC and its project Steering Committee will work with the selected subcontractor to develop a Smart Corridor Plan to identify opportunities for the implementation of smart transportation infrastructure and technology in the project area.

The estimated budget available for developing the smart corridor plan is $75,000. This project is federally-funded. The project plan is expected to be completed by January 2019.

BNMC Contact for the RFP is:

William Smith
Director of Access and Safety
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716-218-7155

2. PROJECT OVERVIEW

BNMC was awarded $75,000 from the New York State Energy Research and Development Authority (NYSERDA) and New York State Department of Transportation (NYSDOT) to develop a Smart Corridor Plan for Main Street in the City of Buffalo. The Smart Corridor Plan will involve a collaborative and proactive approach to identifying opportunities for the implementation of smart transportation infrastructure and technology throughout the Main Street Corridor between Goodell Street and Humboldt Parkway (see Figure 1).

Main Street in the City of Buffalo is a densely populated, mixed-use, and multi-modal corridor which runs northeast through the heart of the city. In recent years, the City has witnessed a tremendous amount of new development along the Main Street Corridor, due in part to the continued growth of the BNMC and the city's Central Business District (CBD). In tandem with this growth, there is a strong push to repair and enhance the aging infrastructure of Main Street, including traffic calming measures, improving pedestrian and bicyclist accommodations, and improving access to Metro Rail – the city's subway system that runs along Main Street. Multiple planning efforts over the past years have all identified Main Street as a top priority for reconstruction, and the City of Buffalo has recently secured
$13 million to improve the street infrastructure of Middle Main Street (between Goodell Street and Humboldt Parkway). This section of Main Street is adjacent to the BNMC and includes four Metro Rail Stations. Figure 1 provides an outline of the project area.

Figure 1: Project Area Map

The City anticipates starting the design process for a large-scale streetscape improvements project in spring 2018. The BNMC and the City of Buffalo will work together with the selected subcontractor to develop the Main Street Smart Corridor Plan.

The primary objective of the Main Street Smart Corridor Plan will be to facilitate a greener, safer, more efficient and integrated transportation system for the Main Street Corridor. This will be achieved through an in-depth exploration of potential IoT applications as part of the City's Middle Main Street Improvements Project, a local capital project sponsored by NYSDOT.

The final deliverables of the Plan will include a blueprint for the utilization and management of IoT applications in the Main Street Corridor, as well as a thorough analysis of key considerations, such as: cost and feasibility, data management and ownership, and policy and privacy issues. An outline of the scope of work is included in Section 4.
3. ORGANIZATIONAL OVERVIEW

The Buffalo Niagara Medical Campus is a multi-anchor collaborative building an innovation hub in partnership with the community to change our city’s future. We do this by asking how we can better further the economic growth of our member institutions and partners, ignite urban revitalization, and build a strong thriving community.

The BNMC was created to leverage the economic impact of eight of the region’s leading health care, research, and education institutions co-located on 120-acres of an urban innovation district, and facilitate conversation and collaboration with the community. Today we have more than 15,000 people working on the BNMC and more than 125 private companies located here.

BNMC, Inc. formed a Transportation Management Association (TMA) in 2012 to help develop an efficient and sustainable transportation system for the Campus. The BNMC TMA is comprised of representatives from:

- BNMC, Inc.
- Campus Member Institutions, including Roswell Park Cancer Institute, Kaleida Health and University at Buffalo
- Niagara Frontier Transportation Authority (NFTA)
- Greater Buffalo Niagara Regional Transportation Council (GBNRTC)
- NYS Department of Transportation (NYSDOT)
- NYS Energy and Research Development Authority (NYSERDA)
- Niagara International Transportation Technology Coalition (NITTEC)
- City of Buffalo
- GObike Buffalo
- Shared Mobility, Inc./Reddy Bikeshare

3.1 Project Steering Committee

The selected subcontractor will work in tandem with City of Buffalo project manager and the City of Buffalo’s design contractor, DiDonato Associates. The project will be guided by the project Steering Committee, which includes TMA members, Project Team, and relevant stakeholders including National Fuel, National Grid, City of Buffalo Office of Strategic Planning, and Buffalo Sewer Authority. Figure 2 provides an overview of the Project Team organization.

Figure 2: Project Team Organizational Chart
4. SCOPE OF WORK

The selected subcontractor shall work in a professional and timely manner with the BNMC Project Team and Steering Committee to complete the following tasks:

Task 1: Review Existing Plans and Conditions (estimated 15% of total work)

In coordination with the Project Team, the subcontractor will perform the following:

1A. Review existing plans and studies of the Main Street corridor, including, but not limited to:
   - City of Buffalo Bicycle Master Plan
   - BNMC Master Plan Update
   - Downtown Public Realm Master Plan
   - GBNRTC BNMC CBD-North Transportation Study

1B. Review and understand existing conditions of the corridor that pertain to facilitating smart transportation systems, including, but not limited to:
   - Traffic volumes and collision data
   - Physical condition of complete streets infrastructure
   - Traffic and pedestrian signals
   - Street lighting and amenities
   - Fiber and wireless network connectivity
   - Condition and capacity of electric grid and other relevant utilities
   - Existing and planned transportation services offered along Main Street

Note: Much of the above information will be collected and provided by the City’s consultant, DiDonato Associates, as part of the Middle Main Street Improvements Project scope of work, a copy of which will be provided at a later time. Assistance with obtaining any additional data necessary to complete project tasks will be provided by Steering Committee members and their respective departments. Therefore, data collection should not be considered a significant portion of this project scope but rather to review and analyze the available data in order to create a set of sound infrastructure, operational and policy related recommendations (as described in Task 3).

1C. Analyze current data collection and sharing methods, tools, technologies and policies among transportation infrastructure planning and service departments, including but not limited to: City DPW, City Parking Department, NFTA, NITTEC, NYSDOT, and GBNRTC.

1D. Analyze existing technology that the City of Buffalo, utility companies, and local transportation service and planning providers are currently equipped with that can be leveraged to create a smart and more integrated transportation corridor.
1E. Review and refine project metrics based on input and feedback from the Project Team and Steering Committee. As part of this subtask, create a set of baseline measurements to help track the effectiveness of smart cities and IoT applications in achieving project goals.

**Primary Project Goal: To create a greener, safer, more efficient, and interconnected multi-modal transportation system for the future Main Street Corridor**

**Task 1 Deliverables:** A detailed report of findings from subtasks 1A through 1D listed above highlighting specific areas of both opportunity and concern as well as a set of well thought out performance measures with baseline metrics (subtask 1E). The overall report should provide a clear and descriptive narrative and include tables, charts, images, and illustrations where appropriate.

**Task 2: Research Best Practices, Opportunities and Challenges (estimated 35% of total work)**

In coordination with the Project Team, the subcontractor will perform the following:

2A. Identify other specific (recent or ongoing) urban streetscape projects, comparable to Buffalo’s Middle Main Street Corridor, where planning and design teams are working to accommodate future trends and innovations in transportation infrastructure and services.

2B. Identify ways in which smart cities and IoT applications are being used to create highly innovative, connected and autonomous urban environments, including areas such as:

- Complete streets infrastructure
- Public and private transportation services
- On-street and off-street parking management
- Mobility as a Service (Maas) tools and technologies
- Connected, autonomous and electric vehicles
- Utilities and energy infrastructure
- Public safety and emergency services
- Construction impact mitigation
- Public health and wellness
- Overall quality of life improvements

2C. Identify specific strategies and technological solutions being implemented to facilitate more integrated data exchange between various public and private transportation systems.

2D. Identify partnership/business models that have been adopted by other cities (preferably in the US and Canada) to fund and further the advancement of smart transportation systems. Include examples of value capture for public entities from data sharing and user fees, as well as any other innovative and collaborative strategies associated with funding the implementation of smart cities and IoT applications.
2E. Analyze legal and policy issues that may impact design and implementation decisions, including but not limited to state and local laws, insurance and liability issues, privacy issues, security and enforcement issues, and ownership of technology and data issues.

**Task 2 Deliverables:** A detailed report of key findings from subtasks 2A through 2E highlighting no fewer than five examples of urban transportation corridors where smart cities strategies and technologies have been (or are being) adopted within the past three years. The report should clearly demonstrate how these specific examples can be adapted for the redevelopment of the Main Street Corridor. The overall report should provide a clear and descriptive narrative and include tables, charts, images, and illustrations where appropriate.

**Task 3: Develop Smart Corridor Recommendations (estimated 50% of total work)**

In coordination with the Project Team, the subcontractor will perform the following:

3A. Develop a set of site-specific design and technology recommendations for the Middle Main Street Improvements Project that will facilitate the current and future development of a smart and highly integrated, multi-modal urban transportation corridor. These recommendations shall focus on, but not be limited to, the following areas:

- Network connectivity and wireless communications opportunities
- Integrated data exchange, management and sharing to improve access and mobility
- Sensory technologies (V2I and V2V) for data collection and real-time applications
- Connected and autonomous vehicle technologies and accommodations
- Dynamic traffic controls and signalization optimized for multi-modal transportation
- Smart parking meters and other parking management systems
- Transit technologies, including real-time data and systems coordination
- Electric vehicle charging infrastructure opportunities
- Renewable energy and energy efficiency applications
- Green infrastructure and innovative pavement materials
- Curb/lane flexibility and associated technologies
- Technologies for extreme weather conditions
- Construction related applications to ease impacts on neighborhoods/businesses, reroute vehicles during, and promote mode change.

3B. Conduct a thorough cost and benefit analysis for each of the recommendations in the above-listed areas, including estimated costs of implementation, effectiveness towards achieving project goals, and potential returns on investment.

3C. Develop an implementation plan that addresses the timing and phasing of recommendations based on the availability of new technologies, legal restrictions, cost and feasibility. This should include specific recommended for Middle Main Street design to accommodate the advent of future smart cities technologies.
3D. Define stakeholder roles and responsibilities, including recommendations for innovative governance structure.

3E. Identify innovative public and private partnerships and funding opportunities, including recommendations for new finance mechanisms.

Task 3 Deliverables: The subcontractor will provide a complete and thorough set of site-specific recommendations to be incorporated with the overall design of the Middle Main Street Improvements Project. The subcontractor will also provide a standalone, well-formatted Final Report combining all elements of Tasks 1 to 3.

Meetings: Subcontractor will attend a total of three steering committee meetings (with key personnel in attendance) coinciding with the completion of each of the above tasks, at which times they will present key findings, collect feedback, and facilitate discussion among member of the committee.

5. PROJECT BUDGET AND SCHEDULE
The estimated budget for the project is $75,000 and within the following time periods per task presented below. An overview of the proposed schedule is presented in Figure 3.

Task 1 (estimated 15% of work): To be completed within three months of contract execution.

Task 2 (estimated 35% of work): To be completed within two months from completion of Task 1.

Task 3 (estimated 50% of work): To be completed within four months from completion of Task 2.

6. RFP RESPONSE REQUIREMENTS
Please include the following in your proposal response:

Experience of Project Team: Please include a brief description of similar projects your proposed team have been a part of, and the specific role your organization played in these projects. Please also include an organizational chart, identifying the project manager and team members, with their titles and a brief
description of their experience and qualifications for taking on this project. Please also include any partnership and subconsultants being proposed for the project.

**Approach and Methodology:** Please include a description of your approach to and methodology for the scope of work outlined in section 4. Please also discuss how you plan to engage the steering committee, BNMC Project Team, and City of Buffalo/DiDonato Associates to reduce cost.

**Project Schedule:** Responses should include a proposed project schedule for the scope of work found in section 4. If project schedule differs from the estimated schedule found in section 5, please indicate the reasoning.

**Please do not include any cost estimates in your submission.**

**Submital Requirements**

A pre-proposal webinar will be hosted on March 9, 2018, to provide an overview of the project and address specific questions and concerns. Interested applicants are encouraged to attend. **Please respond with your intent to bid by March 8, 2018, via email to the proposal contact in order to receive an invitation to the pre-proposal webinar.**

Additionally, questions on the RFP may be submitted via email to the proposal contact until March 16, 2018. Response to questions will be posted on the BNMC website, BNMC.org, on March 19, 2018.

Proposals must be submitted in PDF format via email to the proposal contact by March 30, 2018.

**Proposal Contact:** William Smith, wsmith@bnmc.org

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<th>Table 1: Key Proposal Dates</th>
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<td><strong>Action</strong></td>
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<tr>
<td>Pre-Proposal Webinar</td>
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<td>Questions Due</td>
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<td>Response to Questions</td>
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<td>Proposals Due</td>
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<td>Notice of Intent to Award</td>
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<td>Contract Execution</td>
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BNMC, Inc. is an equal opportunity employer. BNMC is committed to helping stimulate the local economy, helping promote social and economic inclusion, and minimizing adverse environmental and health impacts of our purchasing and procurement decisions. We encourage local, veteran and MWBE businesses that can help us meet these commitments to respond to this RFP.
Cost will be negotiated prior to contract execution. Please do not include any cost estimates in your proposal. Payment will be made upon completion of task.

7. **SELECTION GRADING CRITERIA**

Proposals will be reviewed by a selection committee and will be scored and ranked according to the following criteria:

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<th>Experience of Project Team</th>
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<td>Experience of key personnel</td>
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<td>Logistics and familiarity with the project area</td>
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