

**U.S. Department of Education - EDCAPS  
G5-Technical Review Form (New)**

Status: Submitted

Last Updated: 07/03/2017 08:55 AM

## Technical Review

**Applicant:** United Way of Massachusetts Bay Inc (U411C170195)

**Reader #1:** \*\*\*\*\*

	<b>Points Possible</b>	<b>Points Scored</b>
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	30	29
<b>Quality of the Project Design and Management Plan</b>		
1. Project Design/Management	50	50
<b>Sub Total</b>	80	79
<b>Total</b>	80	79

# Technical Review Form

Panel #8 - EIR - Early Phase - Content - 8: 84.411C

Reader #1: \*\*\*\*\*

Applicant: United Way of Massachusetts Bay Inc (U411C170195)

## Questions

### Selection Criteria - Significance

1. In determining the significance of the project, the Secretary considers the following factors:

(1) The national significance of the proposed project.

(2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

(3) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

#### Strengths:

The application makes a compelling case for its national significance. Beginning on p. 1, the application cites a number of relevant studies to prove the country's increasing need for and inadequate supply of STEM workers. Central to our economic growth, the stimulation of more highly-skilled STEM workers is clearly an area of importance to all regions of the country. The application also present research to show that first-generation, low-income, and minority students have tremendous challenges in accessing and succeeding in postsecondary education, but in STEM careers specifically (p. 2-3). The table and accompanying narrative on p. 3 is especially persuasive in showing a national need for greater diversity in the STEM workforce.

The application also proves that it has high-need students as its target population. On p. 4-5 the narrative uses demographic data to prove the high numbers of low socioeconomic, minority, and ELL students to be served in BoSTEM. More than just giving demographic data, however, the application uses performance gaps for academic risk factors on p. 5 to document that these particular students are in desperate need of a project that will help them be better prepared for postsecondary opportunities.

BoSTEM is strengthened by building its foundation on successful afterschool program strategies (p. 6). The narrative contains a very effective analysis of factors that contribute to minority students' decisions to enter STEM careers, and then incorporates those factors into their project. The narrative description of the project strategies was clear and well-developed. The quality of the strategies was given further credence by the inclusion of data on p. 7, providing evidence of the effectiveness of the organization's other out-of-school academic and enrichment activities in improving student interest, engagement, and persistence in STEM studies.

The project approach is well-explained, directly tied to the proposed priorities, and contains some exceptional elements. One of the most promising pieces of the approach is the implementation of culturally-responsive training to create more inclusive learning environments and to specially address barriers that can hinder at-risk students (p. 10). The use of a Community of Practice approach that will build upon an existing Boston STEM network is also of note. The collaborative approach will engage partners, build momentum, and provide a ready-made platform for disseminating results.

#### Weaknesses:

Although the idea of a personalized or customized approach for each school based upon their individual needs has merit, the narrative does not clearly explain how this type of approach is feasible for a project of this nature. The table on pp. 12-13 which shows the many different activities occurring in the different schools is confusing. Too many differences in

interventions and activity implementation will make it more difficult to show the impact of particular interventions, while also making replicability less concrete.

**Reader's Score: 29**

### **Selection Criteria - Quality of the Project Design and Management Plan**

**1. In determining the quality of the proposed project design, the Secretary considers the following factors:**

- (1) The extent to which the goals, objectives, and outcomes to be achieved by the project are clearly specified and measurable.**
- (2) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.**
- (3) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.**
- (4) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.**

#### **Strengths:**

The project has specific, measurable goals, objectives, and outcomes. They are tied directly to the project purpose and identified priorities. For example, Objective 2.1 on p. 15 has a numerical target for the percentage of participants who will express in interest in pursuing a STEM career. The target is ambitious, yet attainable and appropriately increases each year. The application also provides a specific measurement tool for the objective: the College and Career Ready Aspirations Student Survey. Objectives found in the table on pp. 15-16 are a mixture of process and outcome objectives. Thus, the project will measure both the quality level of activities, as well as their impact.

The narrative on p. 16 provides evidence that the applicant has the capability and expertise to conduct a project of this magnitude. Table 7 on p. 17 and Table 8 on p. 18 clearly delineates the project staff and other key stakeholders, specifying the roles and responsibilities of each. There is a detailed list of project activities on pp. 18-20, which details the activities, the timeline for this completion, and the person responsible. A high level of organization in the management plan certainly bodes well for strong and successful project implementation.

The project has a thorough plan for using performance feedback for continuous improvement. On p. 20, the narrative details how the Evaluation Group will bring relevant data to regular leadership team meetings to give ongoing, formative feedback on project functioning. Periodic feedback will be provided to each site and to the various teams who are stakeholders. Weekly leadership teams allow for regular participatory input from all groups, as well as review of performance data, to make project changes as needed.

The project dissemination plan is clear and thoughtful. The number of partners involved in the project will facilitate use of both existing and new mechanisms for dissemination. The plan involves disseminating the results on a local, regional, and national level (p. 22) and specifies key avenues, such as the Massachusetts STEM Summit, STEM Ecosystems Initiative, or the BoSTEM website. The findings will also be shared with the What Works Clearinghouse, assuring a broad reach to a wide audience.

#### **Weaknesses:**

No weakness were noted.

**Reader's Score:** 50

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**Status:** Submitted

**Last Updated:** 07/03/2017 08:55 AM

Status: Submitted

Last Updated: 06/30/2017 03:01 PM

## Technical Review

**Applicant:** United Way of Massachusetts Bay Inc (U411C170195)

**Reader #2:** \*\*\*\*\*

	<b>Points Possible</b>	<b>Points Scored</b>
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	30	28
<b>Quality of the Project Design and Management Plan</b>		
1. Project Design/Management	50	47
<b>Sub Total</b>	80	75
<b>Total</b>	80	75

# Technical Review Form

Panel #8 - EIR - Early Phase - Content - 8: 84.411C

Reader #2: \*\*\*\*\*

Applicant: United Way of Massachusetts Bay Inc (U411C170195)

## Questions

### Selection Criteria - Significance

1. In determining the significance of the project, the Secretary considers the following factors:

- (1) The national significance of the proposed project.
- (2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.
- (3) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

#### Strengths:

The applicant provides both national and local data in support of the significant need for additional supports for underserved students in the area of STEM (e24, e26). The proposed program strategy balances a range of high-quality programming choices (e33) with site-specific agency, with processes and supports determined at participating locations and based on student needs and alignment to school curricula; the applicant plans to differentiate supports based on localized decision-making while also creating networked learning communities to share promising practices (e31). The additional element of social-emotional learning, which the applicant proposes to embed into the content programming (e35), suggests this could be a holistic, comprehensive, and potentially exceptional approach to attending to both the student population and college and career readiness.

#### Weaknesses:

The applicant purports to offer "culturally responsive" programming (e32) but does not describe in detail how it will support its participating sites in designing programming that leverages the literacy practices of the cultures being served; the programming offerings listed on e33 mostly do not address cultural practices that can be integrated into STEM learning. The applicant's engagement with the local school district is underdeveloped.

Reader's Score: 28

### Selection Criteria - Quality of the Project Design and Management Plan

1. In determining the quality of the proposed project design, the Secretary considers the following factors:

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- (2) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.
- (3) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.
- (4) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.

**Strengths:**

The applicant's objectives include multiple measures of student growth, including perceptions about STEM content, motivation, and increased student achievement; these outcomes are clearly measurable. The applicant is proposing multiple layers of accountability, with input from multiple partners and stakeholders; the leadership team is meeting regularly to monitor implementation, and interim data collected is the focus of semi-regular engagements with stakeholders about outcomes. Given the range of sites and partners, the applicant is wisely proposing several additional staff roles beyond its current personnel. The management plan organizes activity by the project core goals and assigns lead staff to each. The applicant has a strong network of regional partners, ensuring learning from the effort will be shared; it also plans to share its findings with these partners in multiple mediums, including online and through programming (e43).

**Weaknesses:**

Goals for program facilitation are process-oriented and largely focused on seat time (e.g., attendance at professional development); missing are measures to monitor implementation and improvement, which the applicant purports to value through its performance monitoring cycles. The applicant's dissemination plans focus almost entirely on local and regional outlets; it would be beneficial if they developed plans to share nationally what they've learned about culturally responsive supplemental STEM programming

**Reader's Score:**     **47**

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**Status:**             Submitted  
**Last Updated:**    06/30/2017 03:01 PM



Status: Submitted

Last Updated: 07/03/2017 02:37 PM

## Technical Review

**Applicant:** United Way of Massachusetts Bay Inc (U411C170195)

**Reader #3:** \*\*\*\*\*

	<b>Points Possible</b>	<b>Points Scored</b>
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	30	29
<b>Quality of the Project Design and Management Plan</b>		
1. Project Design/Management	50	50
<b>Sub Total</b>	80	79
<b>Total</b>	80	79

# Technical Review Form

Panel #8 - EIR - Early Phase - Content - 8: 84.411C

Reader #3: \*\*\*\*\*

Applicant: United Way of Massachusetts Bay Inc (U411C170195)

## Questions

### Selection Criteria - Significance

1. In determining the significance of the project, the Secretary considers the following factors:

- (1) The national significance of the proposed project.
- (2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.
- (3) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

#### Strengths:

Applicant cites U.S. Congress, JEC report that 1 million more STEM professionals needed than it can produce. Yet students' skills in math and science skills are falling. Low proficiency levels (per NAEP) in both subjects in 2016. Improvement in these subjects and pursuit of postsecondary education critical to national economic prosperity. Although minority enrollments increased significantly, remediation needs are high in college. In Boston Public Schools, there are significant performance gaps between MA state and BPS where there are high-risk indicators.

BoSTEM proposes to increase STEM learning opportunities, improve alignment across community of practitioners, and enhance documentation and dissemination of effective program practices. Will work on strong linkages between in-school and out-of-school curricula. Research confirms out-of-school programming has positive impact on academic and behavioral development and pre-college exposure to STEM impacts decisions to pursue STEM careers.

Theory of action is clear. Uniqueness is feedback cycle – site needs assessments, collaborative action plan, customized professional learning, community of practice.

#### Weaknesses:

References to culturally responsive programming are not as developed as they could be. As important as this component is to the project, it would be helpful to describe the content of that practice/curriculum.

Reader's Score: 29

### Selection Criteria - Quality of the Project Design and Management Plan

1. In determining the quality of the proposed project design, the Secretary considers the following factors:

- (1) The extent to which the goals, objectives, and outcomes to be achieved by the project are clearly specified and measurable.
- (2) The adequacy of the management plan to achieve the objectives of the proposed project on time and within

**budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.**

**(3) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.**

**(4) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.**

**Strengths:**

Goals clearly outlined, objectives itemized per goal with specific measures and timelines.

BoSTEM advisory council, leadership team, site teams and project staff consist of clearly defined individuals with appropriate responsibilities outlined in Table 7. Key stakeholders and their contributions are also clearly specified, including Boston Mayor's office who provides rep for advisory council. Program strategies have strong alignment with activities to be conducted by teams, per Table 9.

Using participatory approach to evaluation (eval group with leadership team). Logic model shows feedback loop to inform decision-making. Weekly meeting of leadership team will ensure timely assessments for continuous improvement management.

BoSTEM Network is a robust cross-sector collaboration designed to ensure resources to support the project and disseminate findings. Website will share updates and disseminate replication strategies.

**Weaknesses:**

None noted.

**Reader's Score: 50**

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**Status:** Submitted  
**Last Updated:** 07/03/2017 02:37 PM