MISSILE DEFENSE AGENCY (MDA)
SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) OUTREACH
Boosting Engineering Science and Technology (BEST) Robotics Grant:
National Teacher Professional Development (NTPD) 2018

I. Funding Opportunity Description

The purpose of this announcement is to offer support for local school systems and *their experienced Boosting Engineering, Science, and Technology (BEST) Robotics team teachers* for the opportunity to attend BEST national teacher professional development training. Teacher professional development ensures general Science, Technology, Engineering, and Mathematics (STEM) training for teachers and a successful experience during their local BEST Robotics season, advancing the awareness of and engagement in STEM with K-12 teachers and students.

The Missile Defense Agency (MDA) STEM Outreach Program's goal is to increase STEM awareness and proficiency among K-12 and college students to enhance the number of U.S. scientists and engineers capable of solving future missile defense challenges in the government, industry, and academia.

MDA STEM is further guided by the following objectives.

1. **Increase** the number of high school graduates capable of declaring a college major in a STEM field.
2. **Inspire** K-12 and college students about career paths and the activities of scientists and engineers.
3. **Investigate** real-life, practical uses for applied math and science in K-12 grade classrooms to further degree declarations; and career and life interest in STEM.
4. **Present** the importance of STEM career opportunities to school personnel, parents, and supporting institutions.

BEST Robotics, Inc. (www.bestinc.org) is a non-profit, volunteer-based organization whose mission is to inspire students to pursue careers in engineering, science, technology, and math through participation in a sports-like, science-and engineering-based robotics competition.

BEST's mission is to engage, inspire and excite students to pursue STEM majors and STEM careers through the vehicle of an after-school robotics program and competition. BEST values access and diversity and encourages participation of all students and schools by providing a free program supported through the fundraising and mentoring efforts of a large higher education and industry volunteer corps.

BEST Robotics Inc. point of contact: Rosemary Mendel, Executive Director, rosemary.mendel@bestinc.org, (469)630-2525.

II. Awards

The MDA will award no more than $75,000 through this grant opportunity in Fiscal Year (FY) 18. The number of awards is not predetermined. A school system may submit one proposal, for up to 5 team teachers. Proposals can also be submitted by the individual teacher through the school's Grant Office. Each school system's grant award will vary, but will not exceed $10,500. Estimates for individual teacher amounts are limited to $2,100 and must be compliant with the local travel, lodging, and meal per diem.

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18-MDA-9533 (6 Mar 18)

III. Eligibility Information

This MDA grant offers the opportunity for financial support for local school systems to provide professional development for up to five (5) veteran BEST Robotics team lead teachers, at the national BEST Robotics Inc. summer training sessions. All receipted and payment portions of the grant must be processed through their school system's grant office. Teachers identified by their district for training must: (1) be full-time employees, (2) have at least one year experience with BEST Robotics, as the team teacher for a competing team, and (3) this must be the teacher's first national conference experience.

School systems submitting proposals must have a Data Universal Numbering System (DUNS) number. Teachers submitting proposals must use their school system's grant office to apply. A DUNS number is a nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (866-705-5711) or website (http://fedgov.dnb.com/webform). For more detailed instructions for obtaining a DUNS number, refer to: https://www.grants.gov/web/grants/applicants/organization-registration/step-1-obtain-duns-number.html

School systems submitting proposals and awarded grants must also have current information in the System for Award Management (SAM). Teachers submitting proposals must use their school system's grant office to apply. If awarded a grant, SAM information must remain current until final payment is received, unless exempted from the requirement under 2 Code of Federal Regulations (CFR) 25.110. Additional information about registration procedures may be obtained by telephone (866-606-8220) or web site (https://www.sam.gov). For more detailed instructions for registering with SAM, refer to: https://www.grants.gov/web/grants/applicants/organization-registration/step-2-register-with-sam.html.

School systems submitting proposals must have a Wide Area Work Flow (WAWF) e-Business Suite (https://wawf.eb.mil/) account for, as a minimum, Invoice, Receipt, Acceptance, and Property Transfer (iRAPT) usage. Teachers submitting proposals must use their school system's grant office to apply. WAWF accounts must remain current until all grant agreement payments and reporting are complete. School system/district signing authority for the grant agreement, if awarded, must have working knowledge and access to WAWF. Additional information about WAWF accounts and instructions may be obtained by telephone (866-618-5988) or web site (www.dla.mil). When viewing www.dla.mil, select "Business Operations" on the top navigation bar and then select "Wide Area Workflow" from the list of options.

IV. Application Information

****Please refer to IX. Form Assistance for help in completing the grants.gov required forms.** **

Application forms and instructions are available at Grants.gov. To access these materials, go to http://www.grants.gov, select "Apply for Grants", and then follow the instructions. Read the instructions below about registering to apply for MDA STEM funds. Applicants should read the registration instructions carefully and prepare the information requested before beginning the registration process. Reviewing and assembling the required information before beginning the registration process will alleviate last-minute searches for required information.

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A school system may submit one proposal, for up to five (5) teachers. Proposals must identify teachers, their schools, and first year as a team teacher for a BEST Robotics team. No more than one proposal may be submitted by a school system. No more than five (5) teachers may be identified in a proposal.

Proposal submissions for this announcement may only request support for teacher professional development offered and provided by BEST Inc. National Headquarters. The national BEST Robotics Inc. summer training will provide teacher professional development in STEM areas, including computer programming, with up to five (5) continuing education credits.

Funding will include travel, lodging, and meals within General Services Administration's (GSA) Fiscal Year 2018 per diem rates. Funding will include exact reimbursement for costs: (1) up to and not exceeding the amounts below; (2) per teacher; and (3) for no more than five (5) days, including travel time.

FUNDING ITEM	MAXIMUM COST FOR UP TO 5 DAYS	ADDITIONAL RESTRICTIONS AND LIMITS
Professional Development Workshop Fee	$600	Flat, one-time fee. No daily amount
Lodging	TBD	Not to exceed local per diem rate for up to 4 nights
Meals	TBD	First and last day (combined), not to exceed 75% of the local per diem rate
Meals	TBD	Days 2 – 4 only, not to exceed the local per diem rate
Travel (Airplane)	$600.00	Special seating and upgrades will not be reimbursed
Travel (Mileage)	$226.80 (at $0.54 per mile for 420 miles)	Privately-owned vehicle 1. Mileage only 2. To training site, from lodging site only; leisure time is not included 3. Carpooling is required for all vehicle travel, for systems/districts with more than one teacher attending training. 4. To and from the airport in NOT included
Travel (Car)	$365.00 (at $73.00 per day)	Rental 1. Economy Class only 2. Includes gas allowance per day 3. Includes rental car fees per day 4. Vehicle rental must comply with ceilings set by GSA for the selected rental car company.

School systems are expected to pay all costs for each teacher for their lodging, travel, and workshop training fees, in lieu of individual teachers' payment responsibilities. These costs include those which may or may not be supplemented or included in the grant award. Grant-awarded school systems will be reimbursed by the grant for the identified teachers (only).

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****Please refer to IX. Form Assistance for help in completing the grants.gov required forms.** **
The registration process can take up to four weeks to complete. Therefore, registration should be done in sufficient time to ensure it does not impact your ability to meet required application submission deadlines.

The next step in the registration process is to create an account with Grants.gov. Applicants must know their organization's DUNS number to complete this process. Completing this process automatically triggers an email request for applicant roles to the organization's E-Business Point of Contact (EBiz POC) for review. The EBiz POC is a representative from your organization who is the contact listed for SAM. To apply for grants on behalf of your organization, you will need the Authorized Organizational Representative (AOR) role.

For more detailed instructions about creating a profile on Grants.gov, refer to:
https://www.grants.gov/web/grants/applicants/organization-registration/step-3-username-password.html

After creating an account on Grants.gov, the EBiz POC receives an email notifying them of your registration and request for roles. The EBiz POC will then log in to Grants.gov and authorize the appropriate roles, which may include the AOR role, thereby giving you permission to complete and submit applications on behalf of the organization. You will be able to submit your application online anytime after you have been approved as an AOR.

For more detailed instructions about creating a profile on Grants.gov, refer to:
https://www.grants.gov/web/grants/applicants/organization-registration/step-4-aor-authorization.html

To track your role request, refer to:
https://www.grants.gov/web/grants/applicants/organization-registration/step-5-track-aor-status.html

In addition to information requested in the grants.gov standard form instructions, your proposal must include the following as attachments.

1. Attachment Name: Teacher and Funding Information
   A document with the funding and team teacher/trainee information (up to 5) including:
   a. Team Teacher/Trainee's name
   b. School
   c. First year as BEST team teacher
   d. Full-time status
   e. Funding for Lodging
   f. Funding for Food
   g. Funding for Travel
   h. Total amount of funding for all Teachers
2. Attachment Name: Support Letter 1
   A signed support letter on official letterhead (internal) from a school system administrator.

****Please refer to IX. Form Assistance for help in completing the grants.gov required forms. ****

3. Attachment Name: Support Letter 2
   A signed support letter on official letterhead (external) from local BEST Robotics hub verifying all teachers identified in the grant have participated as team teacher during the previous year.
4. Attachment Name: Post-Award Agreement
   A signed letter of acknowledgement and agreement from the Hub Director on official college/university letterhead to provide MDA STEM with required post-award reporting. The letter should include MDA BEST Robotics Teacher Professional Development Survey, demographic information, information briefs, videos, and/or photographs.
5. Attachment Name: SAM Certification
   A certification that SAM information for the associated school system is current.
6. Attachment Name: WAWF Certification
   A certification that a WAWF account for the associate school system is current.

Grant award recipients must be able to independently accomplish all required hub tasks, without any involvement or additional funding from MDA.

Items 1 – 6 should total no more than six (6) attachments. Items 1 – 6 will be submitted on grants.gov on the Attachments Form. Please use the appropriate attachment names. The SF424 (R&R), REASEARCH & RELATED Senior/Key Person Profile, and Project/Performance Site Location(s) will remain and be submitted separate from items 1 – 6. Also included is the RESEARCH & RELATED Personal Data form; this is an optional form to be completed by the grant coordinator.

When applications are submitted through Grants.gov, the name of the organization's AOR that submitted the application is inserted into the signature line of the application, serving as the electronic signature. The EBiz POC **must** authorize individuals who are able to make legally binding commitments on behalf of the organization as an AOR; **this step is often missed and it is crucial for valid and timely submissions.**

Applications are due no later than **June 1, 2018**, at **5:00 p.m. CDT**, via Grants.gov.

V. Submission Information
Grants.gov applicants can apply online using Workspace. Workspace is a shared, online environment where members of a grant team may simultaneously access and edit different webforms within an application. For each Funding Opportunity Announcement (FOA), you can create individual instances of a workspace.

Below is an overview of applying on Grants.gov. For access to complete instructions on how to apply for opportunities, refer to: https://www.grants.gov/web/grants/applicants/apply-for-grants.html

1. *Create a Workspace*: Creating a workspace allows you to complete it online and route it through your organization for review before submitting.

**Please refer to IX. Form Assistance for help in completing the grants.gov required forms. **

2. *Complete a Workspace*: Add participants to the workspace, complete all the required forms, and check for errors before submission.
    a. *Adobe Reader*: If you decide not to apply by filling out webforms you can download individual PDF forms in Workspace so that they will appear similar to other Standard or MDA STEM forms. The individual PDF forms can be downloaded and saved to your local device storage, network drive(s), or external drives, then accessed through Adobe Reader.
3. NOTE: Visit the Adobe Software Compatibility page on Grants.gov to download the appropriate version of the software at: https://www.grants.gov/web/grants/applicants/adobe-software-compatibility.html
    a. *Mandatory Fields in Forms:* In the forms, you will note fields marked with an asterisk and a different background color. These fields are mandatory fields that must be completed to successfully submit your application.
    b. *Complete SF-424 Fields First*: The forms are designed to fill in common required fields across other forms, such as the applicant name, address, and DUNS number. To trigger this feature, an applicant must complete the SF-424 information first. Once it is completed, the information will transfer to the other forms.
4. *Submit a Workspace*: An application may be submitted through workspace by clicking the Sign and Submit button on the Manage Workspace page, under the Forms tab. Grants.gov recommends submitting your application package at least 24-48 hours prior to the close date to provide you with time to correct any potential technical issues that may disrupt the application submission.
5. *Track a Workspace*: After successfully submitting a workspace package, a Grants.gov Tracking Number (GRANTXXXXXXXX) is automatically assigned to the package. The number will be listed on the Confirmation page that is generated after submission.

For additional training resources, including video tutorials, refer to:
https://www.grants.gov/web/grants/applicants/applicant-training.html
Applicant Support: Grants.gov provides applicants 24/7 support via the toll-free number 1-800-518-4726 and email at support@grants.gov. For questions related to the specific grant opportunity, contact the number listed in the application package of the grant you are applying for.

**Please refer to IX. Form Assistance for help in completing the grants.gov required forms. **

VI. Grant Application Review Information

MDA will evaluate proposals based upon the following areas – **efficiency**, **involvement**, and **support**.

1. *Efficiency*
    a. Section IV. Application and Submission Information
        i. Is it evident by the amount, type, and description of expenses that the teacher(s) will effectively use the proposed funds?
    Proposal Data: **Section IV, Item 1**
    Proposal Evaluative Weight: 33.3%
2. *Involvement*
    a. Section IV. Application and Submission Information
        i. Is it evident by the information provided that the proposed teacher(s) have prior involvement in BEST Robotics?
    Proposal Data: **Section IV, Item 3**
    Proposal Evaluative Weight: 33.3%
3. *Support*
    a. Section IV. Application and Submission Information
        i. Is it evident by the information provided that the proposed teacher(s) and have support from the school system?
    Proposal Data: **Section IV, Item 2**
    Proposal Evaluative Weight: 33.3%

Evaluation of proposals may result in funding levels lower than the proposed amount(s).

VII. Award Administration Information

1. Award Notices

Successful proposers will receive a separate notice (award/acceptance letter or e-mail) stating that an application has been selected. The notification letter or e-mail must not be regarded as an authorization to commit or expend funds. The Government is not obligated to providing any funding for this award until a Government Grants Officer and the appropriate official from the selected entity sign the grant document.

2. Reporting

On or before November 9, 2018 grant award system/district must (collectively) submit the MDA BEST Robotics Teacher Professional Development Survey for each lead teacher participant supported by the grant.

Post-award reporting (completed surveys) should be submitted electronically to MDA STEM Program Director, at stemoutreach@mda.mil, with the e-mail subject as “MDA STEM Outreach BEST Robotics Grant NTPD 2018 – “ followed by the school system name and grant number.

On or before **November 9, 2018**, grant-awarded school systems must submit the documentation above to complete post-award grant reporting requirements.

3. *Invoicing*

The MDA BEST Robotics grant is limited to teacher professional development offered by BEST Robotics Inc. National Headquarters. School systems must have separate receipts, expense documents, and/or invoices for items reimbursable through the grant from those that will not. Receipts for and from food purchases are not needed. Also invoices must be separated by category - travel, lodging, meals, and workshop fee. Receipts are required for every/all invoiced items. Reimbursements will not be paid for any item without a receipt except for mileage and food. Mileage reimbursements require map direction documents specifying the distance from the lodging to the workshop site and/or the place of origin (school site/home) to the lodging site, as applicable.

In addition to the above, grant recipient school systems shall submit a request for payment in WAWF for an amount which:

a. Is not exceeding the amount identified in the grant agreement;
b. Is documented by the invoice(s);
c. Occurs after MDA STEM Program Director receives a copy of all receipts and invoices;
d. Occurs after deliverables, outlined in Section VI. Post-Award Reporting, are received by MDA STEM Program Director and Grants Officer Technical Representative; and
e. Occurs after hub receives an approval e-mail for deliverables from MDA STEM Program Director and Grants Officer Technical Representative.
f. Occurs between November 26, 2018 and December 28, 2018

Requests for payments shall be submitted directly in WAWF, as a cost voucher. A completed SF 270 form with the system/district invoice(s) for travel, lodging, and meals must be submitted as attachments to the cost voucher.

The Office of Naval Research (ONR) will serve as the administrative office (Grant Agreement, Block 6) for accredited domestic educational institutions of higher learning at the university level. The Defense Contract Management Agency (DCMA) will serve as the administrative office for all other accredited domestic educational institutions. DCMA or ONR will approve payment vouchers and supporting documents. Visit the ONR web site (http://www.onr.navy.mil/) or DCMA web site (http://www.dcma.mil/) for more information on electronic payments for grants.

After the ONR/DCMA approves the payment voucher and supporting documents, the ONR/DCMA will forward the information to the Defense Finance and Accounting Service (DFAS) for payment. DFAS is the payment office (Grant Agreement, Block 12).

Both ONR/DCMA and DFAS are completely separate entities from the MDA. Awarded school systems must:

a. Include the MDA in all e-mail communications with ONR/DCMA regarding payments;
b. Include the MDA in all communications with DFAS, if applicable; and
c. Forward to the MDA e-mail confirmations regarding invoice submissions (whether rejected or approved) from ONR/DCMA.
d. Provide to MDA a copy of all invoice documents and supporting receipts.

VIII. Agency Contacts

Questions about the grant application process should be directed to:

1. Willis Brice, Grants and Contracting Officer, (256) 450-4790, willis.brice@mda.mil; or
2. John Michael, Grants Specialist, (256) 450-1054, john.michael@mda.mil.

Questions about the grant implementation or post-award documentation should be directed to:

1. Patricia Gore, MDA STEM Program Director, (256) 450-4000, stemoutreach@mda.mil; or
2. Amber Horton, STEM, (256) 450-4000, stemoutreach@mda.mil.

IX. Form Assistance

All forms below are for sample purposes and are not for submission.

1. SF424 (R&R) – This is a required grants.gov form; no special directions are required.

2. Key Contacts Form – Please fill in the form with Hub Director's information. Once that has been completed, then fill in the form with the school system's grant office point of contact information.

RESEARCH & RELATED Senior/Key Person Profile

Hub Director's Information

PROFILE - Project Director/Principal Investigator

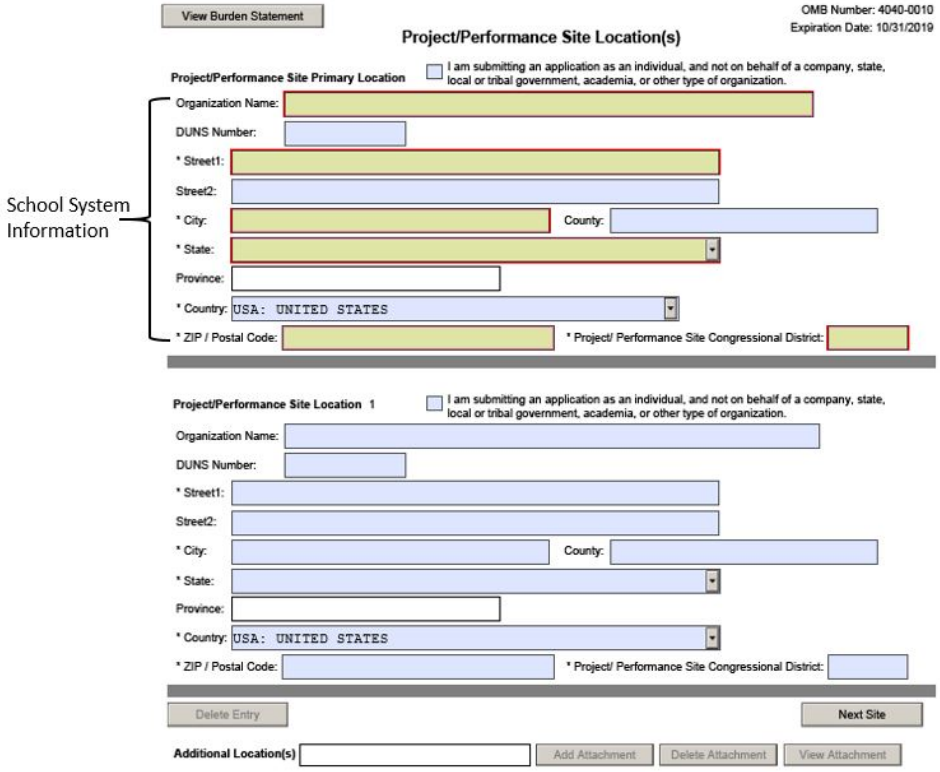
Prefix: * First Name: Middle Name:
* Last Name: Suffix:
Position/Title: Department:
Organization Name: Division:
* Street1:
Street2:
* City: County:
* State: Province:
* Country: USA: UNITED STATES * Zip / Postal Code:
* Phone Number: Fax Number:
* E-Mail:
Credential, e.g., agency login:
* Project Role: PD/PI Other Project Role Category:
* Attach Biographical Sketch Add Attachment Delete Attachment View Attachment
Attach Current & Pending Support Add Attachment Delete Attachment View Attachment

School's Grant Office Information

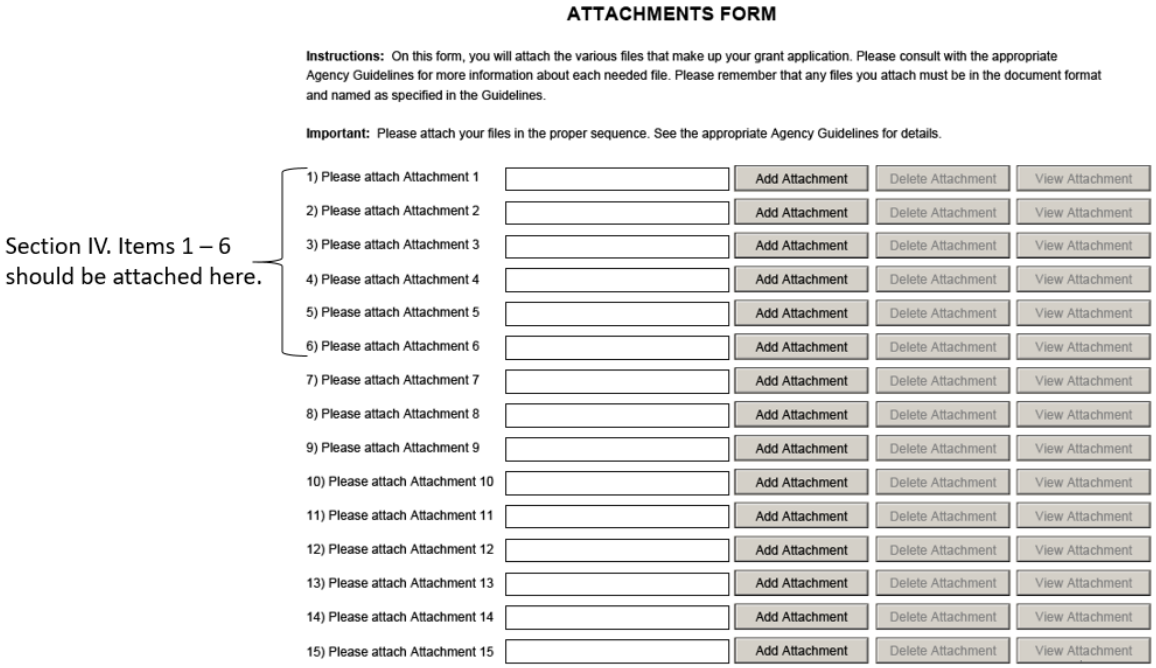
PROFILE - Senior/Key Person 1

Prefix: * First Name: Middle Name:
* Last Name: Suffix:
Position/Title: Department:
Organization Name: Division:
* Street1:
Street2:
* City: County:
* State: Province:
* Country: USA: UNITED STATES * Zip / Postal Code:
* Phone Number: Fax Number:
* E-Mail:
Credential, e.g., agency login:
* Project Role: Other Project Role Category:
* Attach Biographical Sketch Add Attachment Delete Attachment View Attachment
Attach Current & Pending Support Add Attachment Delete Attachment View Attachment
Next Person

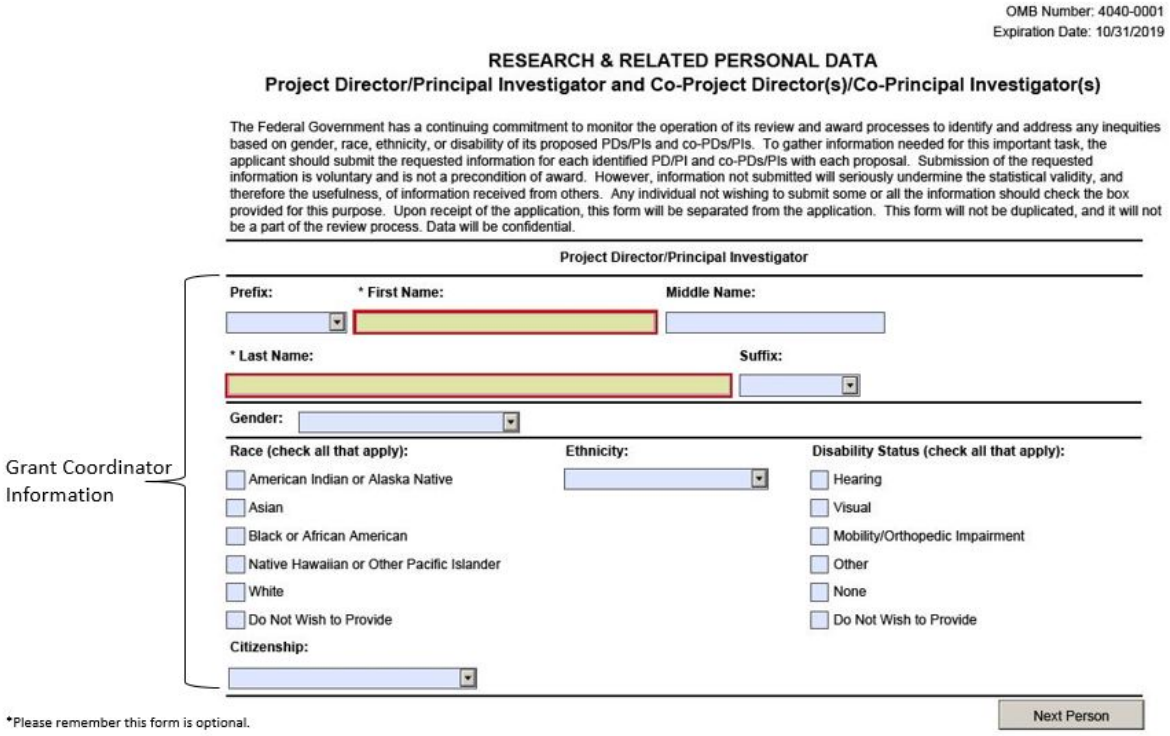
3. Project/Performance Site Location(s)



4. Attachments Form



5. RESEARCH & RELATED Personal Data



OMB Number: 4040-0001
Expiration Date: 10/31/2019

RESEARCH & RELATED PERSONAL DATA
Project Director/Principal Investigator and Co-Project Director(s)/Co-Principal Investigator(s)

The Federal Government has a continuing commitment to monitor the operation of its review and award processes to identify and address any inequities based on gender, race, ethnicity, or disability of its proposed PDs/PIs and co-PDs/PIs. To gather information needed for this important task, the applicant should submit the requested information for each identified PD/PI and co-PDs/PIs with each proposal. Submission of the requested information is voluntary and is not a precondition of award. However, information not submitted will seriously undermine the statistical validity, and therefore the usefulness, of information received from others. Any individual not wishing to submit some or all the information should check the box provided for this purpose. Upon receipt of the application, this form will not be duplicated, and it will not be a part of the review process. Data will be confidential.

Project Director/Principal Investigator

Prefix: *** First Name:** **Middle Name:**

*** Last Name:** **Suffix:**

Gender:

Race (check all that apply):
- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Do Not Wish to Provide

Ethnicity:

Disability Status (check all that apply):
- Hearing
- Visual
- Mobility/Orthopedic Impairment
- Other
- None
- Do Not Wish to Provide

Citizenship:

Next Person

*Please remember this form is optional.

Grant Coordinator Information