

2018 State Damage Prevention Program Grant Mid-Term Progress Report
CFDA Number: 20.720

Award Number: 693JK31840020PSDP

Grant Title: *New Jersey Board of Public Utilities State Damage Prevention Grant*

Project Title: *Project 1: Computer analysis tool to determine the impact on the community and total cost of excavation damages.*

Project 2: Personnel Expenses to Enforce NJ Damage Prevention Laws and Regulations

Report Period: *September 28, 2018 – March 31, 2019*

Date Submitted: *June 27, 2019*

Submitted by: *Michael Stonack*

Specific Objective(s) of the Agreement

Under this grant agreement, the NJBPU will enforce:

- *Laws and regulations of the damage prevention process*

Workscope

Under the terms of this grant agreement, the NJBPU will address the following elements listed in the approved application as stated in 49 U.S.C. §60134 (b).

- ***Element 7 (Enforcement):*** *Enforcement of State damage prevention laws and regulations for all aspects of the damage prevention process, including public education, and the use of civil penalties for violations assessable by the appropriate State authority.*

Accomplishments for this period (“A comparison of actual accomplishments to the objectives established.”)

Project 1

The proposed project is to develop a computer analysis tool to determine the impact on the community and total cost of excavation damages to factor into the use of civil penalties for violations of the New Jersey Underground Facility Protection Act. Excavation damage cases will be analyzed to determine the impact on the community (interruption of utility services, property damage, traffic impact, disruption of residents and businesses, etc.) and the total costs for repairs, restoration of services, use of police, fire, and other local responders, associated underground utility response costs, financial impact on businesses, etc. The project will provide a means to measure the total impact of excavation damage cases and to develop a range of civil penalties that reflect the severity of the excavation damage on the community. This project directly affects Element 7 (Enforcement) of the NJBPU Damage Prevention Program. In conjunction with the NJBPU, the project is being developed by Rutgers University Center for Advanced Infrastructure and Transportation (CAIT). The project consists of the following project tasks:

- Task 1 - Conduct a domestic and international literature scan to identify relevant studies and efforts in quantifying the true cost of utility damages, in particular for natural gas pipeline facilities.
- Task 2 - Create an influence diagram to identify all types of associated costs with utility damages and determine potential data sources to quantify these factors.
- Task 3 - Data collection to establish cost criteria and cost range.
- Task 4 - Establish a cost database based on historical data, cases, and collected data.
- Task 5 - Develop a computer analysis program for estimating the true cost of utility damages to natural gas line facilities.
- Task 6 - Demo and test the computer analysis program with BPU staff and related utility companies.
- Task 7 - Develop mid-term and final reports.

During this mid-term Grant period, significant progress was made on the project tasks as follows:

- Progress on Task 1 – The project team has completed reviewing related literature and use cases. A review report was compiled.
- Progress on Task 2 – The team has identified related factors for estimating costs pertaining to underground excavation damages.
- Progress on Task 3 – A list of subject matter experts was developed and they will be interviewed regarding cost factors related to utility damages.
- Progress on Task 4 – The project team has started developing the database structure.
- Progress on Task 5 – The project team has studied different platforms that can be used to develop the proposed analysis program.
- Progress on Task 6 – This task has not been started.
- Progress on Task 7 – A mid-term progress report was completed.

Project 2

Project 2 SDP Grant funds were to be used to offset salary and fringe benefit expenses for a damage prevention staff member to perform damage prevention compliance enforcement and related program activities. Although the NJBPU will continue to perform damage prevention compliance enforcement and complaint investigations, Project 2 will not be able to be funded based on the funding awarded for the 2018 SDP Grant. The funding awarded will only cover the cost for Project 1. The NJBPU will perform Project 2 activities outside of the realm of the 2018 SDP Grant.

Quantifiable Metrics/Measures of Effectiveness (“Where the output of the project can be quantified.”)

Project 1

- Progress on Task 1 – The project team has completed reviewing related literature and use cases. A review report was compiled.
 - Estimated Percent Completion: 100%
- Progress on Task 2 – The Rutgers team has identified related factors for estimating costs related underground excavation damages. The total cost of an excavation damage is comprised of direct costs, indirect costs, and social costs.
 - Estimated Percent Completion: 100%
- Progress on Task 3 – A list of subject matter experts was developed and they will be interviewed on related cost factors.
 - Estimated Percent Completion: 20%
- Progress on Activity 4 – The project team has started developing the database structure.
 - Estimated Percent Completion: 10%
- Progress on Activity 5 – This Rutgers team has studied different platforms that can be used to develop the proposed analysis program.
 - Estimated Percent Completion: 20%
- Progress on Task 6 – This task has not been started.
 - Estimated Percent Completion: 0%
- Progress on Task 7 – The mid-term report was developed.
 - Estimated Percent Completion: 50%

Issues, Problems or Challenges (“The reasons for slippage if established objectives were not met.”)

Project 1

- Planned objectives were accomplished after a contract was executed with Rutgers CAIT.

Project 2

- Project 2 will not be able to be funded based on the funding amount awarded for the 2018 SDP Grant. The funding amount awarded will only cover the cost for Project 1.

Financial Status Report (“A summary of project costs for the report period.”)**Mid-Term Financial Status Report**

The Mid-Term financial report has been sent as a separate attachment to the AA. See Form SF-425, Federal Financial Report, submitted by the PI on June 26, 2019.

*Mid-Term Project Costs**Project 1*

An advance of \$28,500 is being requested for Project 1. Costs for Project 1 will be initially invoiced by Rutgers CAIT for the period ending June 30, 2019.

Project 1

<i>Personnel</i>	<i>0.00</i>
<i>Fringe Benefits.....</i>	<i>0.00</i>
<i>Travel.....</i>	<i>0.00</i>
<i>Equipment.....</i>	<i>0.00</i>
<i>Supplies.....</i>	<i>0.00</i>
<i>Contractual.....</i>	<i>28,500.00</i>
<i>Other.....</i>	<i>0.00</i>
<i>Indirect.....</i>	<i>0.00</i>
<i>Total Mid-Term Project Costs.....</i>	<i>\$28,500.00</i>

Plans for Next Period (Remainder of Grant)

The NJBPU will continue to build on the mid-term progress relative to Project 1. Project 2 will not be able to be accomplished under the 2018 SDP Grant as a result of the funding amount awarded to the NJBPU.