

Iowa LTAP Work Zone Sign Package Program

tech transfer summary

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RESEARCH PROJECT TITLE

Iowa LTAP Work Zone Sign Package Program

SPONSOR

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The mission of the Institute for Transportation (InTrans) at Iowa State University is to develop and implement innovative methods, materials, and technologies for improving transportation efficiency, safety, reliability, and sustainability while improving the learning environment of students, faculty, and staff in transportation-related fields.

The Iowa Local Technical Assistance Program (LTAP) is dedicated to providing technical and management assistance to Iowa's local governments through a variety of programs and resources.

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This program, started in 2017, provides an avenue for Iowa cities with populations under 10,000 to obtain a basic package of work zone signs and personal protection vests. From a total of 19 applicants, 10 cities were awarded packages in 2018–2019.

Goal

The goal of the project was to provide an avenue for small cities to obtain a basic package of work zone signs and personal protection vests that could help them improve the safety of their work zone setups and increase the safety of their workers and the traveling public.

Problem Statement

The ability to acquire and set up work zone related devices that are in compliance with the 2012 revisions to the 2009 *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) can sometimes be difficult for smaller cities. The smaller budgets for these cities can result in a lack of inventory and/or the use of signs that are in poor condition.

Background

Although city budgets are limited, particularly for cities with populations under 10,000, those smaller cities' public works departmental staff members have demonstrated a commitment to work zone safety by attending related workshops and training events in Iowa.

The Iowa Local Technical Assistance Program (LTAP) led a pilot project in 2017 to assist those smaller cities, which had staff participate in work zone trainings, by providing acceptable work zone temporary traffic control devices or replacing their outdated equipment. This project is a continuation of the program.



Work zone sign package

Project Description

A technical advisory committee guided the design, creation, and implementation of the small city work zone sign package program. The project consisted of the following:

1. Developed the content of the work zone sign package. The package ultimately consisted of four ROAD WORK AHEAD signs, two ONE LANE ROAD AHEAD signs, two BE PREPARED TO STOP signs, two Type III barricades, sixteen 28-inch traffic cones, six Class 2 safety vests, eight sign stands, and ten 42-inch channelizer cones.
2. Defined the eligibility rules to apply and compete for the sign package. These rules included having a city population of 10,000 or less and at least one staff person who had completed work zone or other related training in the last three years.
3. Developed an application and distributed it to the 51 cities deemed eligible. This application consisted of 11 questions designed to determine the need that each eligible city had for the work zone sign package.
4. Defined and applied an evaluation and ranking process that assigned points to the answers for each question for each applicant.

Key Findings

- The work zone sign package appears to contain many or most of the devices needed by smaller cities within Iowa.
- The application eligibility rules restricted the competition to 51 cities in Iowa. Nineteen (37 percent) of these cities applied for the work zone sign package.
- The answers to the application questions appeared to measure the need for the work zone sign package relatively well.
- The answers to the open-ended questions showed that the majority of the cities that responded had a lack of work zone related inventory or had inventory that was out of compliance.

Recommendations

- Eligibility to apply for the work zone sign package should be adjusted to encourage more participation.
- Advertisement of the program should be extended to consultants and other outside agencies that work with smaller cities to encourage participation in the program.
- The point value assigned to the question concerning “quantity and quality” of current work zone devices should be reconsidered to better reflect the intent of the question. Currently, a respondent receives more points for signs in poor condition than for not having any signs.
- First-time applicants and non-winning previous applicants should be given priority over previous winners of the work zone sign packages.
- The importance of the narrative sections of the application should be emphasized to encourage more cities to elaborate on the importance of safety and their need for work zone safety devices.
- This program should be continued. There is an additional need to assist smaller cities with their acquisition and application of work zone related devices.

Implementation Readiness and Benefits

This year’s program provided basic work zone signs, equipment, and personal protection vests for 10 smaller cities that otherwise would not likely be able to afford to purchase new or replacement work zone equipment. This will better ensure the safety of their workers and the traveling public.