The Cornell Asset Management Program (CAMP) summer intern project helps you implement a pavement management system for your highway network. A college student, mentored by a municipal employee, collects pavement inventory and condition data, and creates a five-year maintenance plan for your municipality using our Cornell Asset Management Program-Roads and Streets (CAMP-RS) software. The project provides your municipality with a way to overcome some of the time constraints that limit the implementation of a pavement management system. Students get practical experience that will help them after they graduate from college.

“The Program was a very valuable first engineering-related job for me. It helped me to gain confidence in practical engineering decision making, exposed me to the concept of town government and workplace politics, and stimulated my interest in the road management aspect of civil engineering.”

Benefits of Implementing Pavement Management

Pavement management is a planning and budgeting tool to help managers make more consistent, cost-effective, and defensible decisions about what work to do and when to do it. It helps you make decisions by providing information about inventory, condition, and cost of various repairs.

Benefits of the CAMP reported by previous participants include:

- Helping new Highway Superintendents learn about the condition of their roads
- Providing continuity between successive Superintendents
- Justifying increased funding for the highway department
- Using funds more efficiently
What are Pavement Management Systems?

The use of PMS will make “Maintenance... more systematic, rather than relying on the superintendent’s knowledge of his roads”

Pavement Management Systems (PMS) allows for the better use of resources, save time, and help agencies make better decisions about which repairs to use and when to use them. The basis of most PMS is illustrated in the figure below. Roads deteriorate slowly at first. Then when defects do begin, they occur quickly. The cost of repairs skyrocket as the pavement condition deteriorates. It is therefore cheaper to keep roads in good condition. A quality PMS will help decision makers select the proper repair treatment and apply it at the appropriate time.

RESPONSIBILITIES
Cornell Local Roads Program (CLRP)

CLRP coordinates the intern project by:

• Helping to recruit qualified students for participating municipalities (municipalities may hire their own student - local college engineering students are preferred)
• Training students and the municipal employees to use the software
• Providing support throughout the summer

“As far as technical support is concerned, [CAMP staff] were extremely helpful. Checking on us by telephone and with periodic visits occurred more often then I anticipated when I signed on to the program.”
The Municipality
The municipality is responsible for:

- Providing an employee familiar with the highway department’s roads and maintenance methods to help the student customize the software to the municipality and to update the system after the student leaves
- Sending an employee to 1½ days of training at Cornell for $60 plus travel expenses
- Providing a laptop for training
- Hiring the student at a wage of $12–$15 per hour, for a minimum of 10 weeks (It is recommended that the municipality pay the student during the training week)
- Providing a vehicle for the student
- Providing a computer to run the CAMP-RS Pavement Management software
- Completing a report for the Cornell Local Roads Program, evaluating their experience

Student Interns
Student interns are responsible for:

- Attending three days of training at Cornell University in May/June
- Collecting road inventory and condition surveys
- Determining repair alternatives and associated unit costs
- Generating a prioritized listing of road repairs using CAMP-RS
- Creating a five-year plan using prioritized listings
- Instructing a municipal employee on how to update the software
- Helping the highway department in other roles as time permits
- Completing an evaluation report to the Cornell Local Roads Program suggesting improvements and summarizing their experiences

Student Interns are hired by the municipality and are subject to any rules or procedures of the municipality. Hours of employment are the same as the hours of any other summer employee of the department whether the agency works a five-day or four-day work week. Interns must possess a valid drivers license and meet any other hiring requirements of the municipality.
After implementing the program, students can perform other work as needed to help the department. Some of the work done by students in previous years has included:

- Inputting data into a GIS mapping program
- Inventoring drainage facilities and sidewalks
- Flagging traffic
- Working as laborer on a highway crew
- Operating equipment on construction sites

**Equipment**
The municipality should have the following items available for the use by the student:

- Computer with Windows XP or newer operating system with a minimum of 1GB of RAM
- Vehicle for collecting field data
- Map of the municipality
- Measuring tape or walking wheel
- Personal protective equipment (PPEs) such as hard hat and safety vest
- A distance measuring device (an electronic distance-measuring instrument is recommended)
- Other items necessary to complete the report, such as a word processor, copier access, and camera

**TRAINING**
Training is over three days in late May and early June. On Wednesday and Thursday morning, municipal employees and students will work together to survey real roads, input the data into the software, and generate reports.

During the final half-day of training, students will do a case study on the Cornell campus.

**Training Schedule**
May 31–June 2, 2016. Cornell University, Ithaca

**Tuesday, May 31 (Interns):**
- Basics of a Good Road

**Wednesday, June 1 (Everybody):**
- Introduction to PMS
- The PMS Process, Inventory and Condition Rating
- Repair Alternatives
- Computer Use

**Thursday, June 2**
(Everybody a.m.; Interns, p.m.):
- Calculating Costs
- Computer Use
- Reports and Plans
- Practice (p.m.)
Field Visits
CLRP staff will make at least two field visits to each municipality while the interns are working. These visits are intended to help overcome any difficulties specific to the municipality, ensure that the surveys and reports provide useful information, and to help the Highway Superintendent understand that information.

The first visit typically occurs during the first two weeks of employment. The second visit occurs just over halfway through the summer. Additional visits can be scheduled as needed.

Phone Support
In addition to field visits, CLRP staff will be available for phone consultation. Contact with the student and municipal employee will occur at least once every two weeks.

Other Support
CLRP staff also provides all necessary computer support and project advice to enable the student interns and the municipal employees to complete the project successfully.

PARTICIPANTS SINCE 1993

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*Cities of 2015
HOW TO APPLY

Municipalities

Municipalities should send a letter on municipal letterhead to the Cornell Local Roads Program by February 29, 2016, stating their intent to participate in the program. By sending the letter, the municipality agrees it will meet all the responsibilities listed on page 3 and will have the necessary equipment before the training held in late May. The letter should state if the municipality will be recruiting the student.

Student Interns

Students not recruited directly by the municipality need to submit a resume to the Cornell Local Roads Program. Interviews will be held through the Cornell Engineering Career Services in March 2016 or directly by the CLRP. The Cornell Local Roads Program will match up students and municipalities as soon as possible after interviews.

Cornell Local Roads Program
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t. 607-255-8033
f. 607-255-4080
clrp@cornell.edu
www.clrp.cornell.edu

New York LTAP Center

The CAMP summer intern project is an extension activity of the Cornell Local Roads Program with the assistance and financial support of Cornell University, the New York State Department of Transportation, and the Federal Highway Administration.

More information can be found on our website at www.clrp.cornell.edu/trainingevents/interns.html