TECHNOLOGY FOR
Alaskan Transportation
DOT Statewide Research, Development, & Technology Transfer
Local Technical Assistance Program

"Improving Alaska's quality of transportation through technology application, training, and information exchange."

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Students Bridge Problem by Applying STEM Concepts

By Dave Waldo & Keith Whitaker, ASRA CE Co-instructors

Mission Impossible?

Design and build a full-scale, multi-use trail bridge able to accommodate the width and load of a utility task vehicle (UTV), commonly referred to as a side-by-side ATV. You are further limited by these design criteria and material specifications:

- 12' span on or above grade
- Transportable by ATV
- Quick on-site assembly: 30 minutes or less
- 2x4 wood: maximum length 5'
- Bolts, wood screws, lumber adhesive
- ¼" cable and associated hardware
- Total material cost not to exceed $800

This was the challenge faced by this year's participants in the Alaska Summer Research Academy (ASRA) Civil Engineering module, cosponsored by AKDOT&PF Research, Development & T2 and

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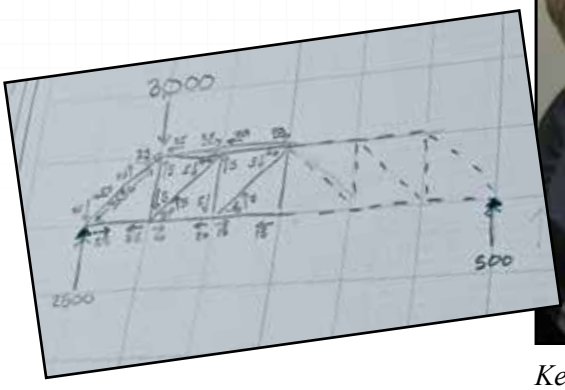

Keith Whitaker leads the group in a load testing exercise using a PASCO bridge set with load cells.

The Critical Role of Leadership in Successful Innovation and Technology Transfer

By Clint Adler, chief, Research, Development & T2

As the chief of the Research Development & Technology Transfer Section of the Alaska Department of Transportation & Public Facilities, I'm often asked by executives, researchers, and practitioners alike: "How do you ensure that the fruits of our research and innovation activities will get used in practice?" After all, state departments of transportation are interested mainly in deploying the products of applied research. They wish to see tangible, positive returns on the investments of their limited research & deployment dollars in the form of products or results that once put into practice will actually improve it.

After my 13 years in the public sector research and technology transfer business, I can say with confidence that no matter how talented or capable our research and technology transfer professionals are, by ourselves we are incapable of implementing any changes into the practices of a complex public sector organization. We must rely on those with the desire, authority, and resources to make the necessary changes and decisions. Without leaders who possess or can obtain all three of these ingredients, even the best ideas, highest quality research, and tailored solutions have not and will not become reality. Successful implementation only occurs once these factors come into alignment. Why? Because without this alignment, there is no longer an organization or a team, there is only a group of independent individuals. How much public sector innovation is aimed only at individuals for implementation? How far would a team of cats pull your sled?

What do we do to facilitate alignment within a state DOT? We've learned to insist on identifying and establishing the necessary leadership throughout the lifecycle of any innovation project or initiative. It is not enough to merely identify the problem and employ faculty or consultants to conduct the investigation as if it were a routine engineering or construction project with plans, schedules, and specifications. As a rule, innovation in organizations is a team sport. Therefore we must assemble a motivated advisory team that will collaborate to define the problem, frame the business case, and guide the conduct and communication of research and technology deployment so that the products facilitate rather than merely describe the necessary changes. The best research and innovation project advisory teams are motivated by a common vision, empowered to solve the problems, and understand the business processes and culture of the target organization(s). Most importantly, they must have the authority to make necessary decisions. But that is not all! They often must assume a facilitation and/or marketing function to educate project stakeholders.

You will certainly not hear these concepts from me alone. You will find these leadership messages throughout the literature on innovation and change management. At a leadership forum at a recent Transportation Research Board annual meeting, I heard multiple state DOT CEO endorsements of John P. Kotter's book *Leading Change*, which convincingly reframes much of what I've mentioned into eight key practices successful leaders practice when attempting innovation and/or change initiatives in organizations. Many of our executives and midlevel managers have shared with me how these practices, earnestly employed, have dramatically increased their effectiveness. Give it your review. I'd love to hear your perspective.

http://www.kotterinternational.com/our-principles/changesteps

Students Bridge Problem (continued from page 1)

the Alaska University Transportation Center. The group of seven Alaska high school students did nothing but amaze the authors during their two week UAF residential camp experience.

The Project

The module focused on civil and transportation issues and how engineering principles are applied to solve problems. Students learned basic engineering design principles of statics and structural analysis to focus on a final bridge project.

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Jacob takes readings during the load test exercise.

Greg, Mary, Jacob, and Solomon work with instructor Keith Whitaker on their truss design, calculating member tensile and compressive forces.

The ASRA CE students visit the Alaska University Transportation Center's materials testing lab.

At the materials lab, students were able to test the strength of a 2x4.

Students Bridge Problem (continued from page 3)

In order to raise intensity, the group was divided into two teams to compete for the best design: "The A-Team" and the "Alaska Thrill Seekers." Each group applied what they'd learned about the engineering process to help them with data gathering, developing schematic solutions, and completing a preliminary design.

"The teamwork involved in this was impressive," said James Harper, communication specialist for AUTC. "To see these bright young folks applying technical know-how while working together so fluidly was something special. If I didn't know better, I'd think it was an upper-level college class."

The group quickly learned collegiate-level principles of geometry, vector forces, and statics. They then applied these to their team truss design using the method of joints to determine all the member tensile and compressive forces. Once the forces were determined, students used the properties of the available materials to determine adequate sizes of the truss components and fastening of joints.

Once each group completed their design project, they came back together to determine which design to select and to collaborate on the final project. After fierce negotiations, it was unanimous: the Alaska Thrill Seekers design was selected. They then consolidated into a new team, the Board of Trustees, to collaborate on the final project.

"Talk about hands-on collaborative learning," said Harper. "Boy, was it something to see Northern Region open their facilities to these kids—wide-eyed and excited to be doing real work at a real M&O outfit surrounded by all the equipment, safety gear, workers, and activity. They fit right in, too."

Two days were spent on assembling the overtruss bridge. All seven of the ASRA CE students worked hard to meet their assembly deadline.

The final week involved tweaking the final design, material acquisition, construction, and testing of the bridge project at the Alaska DOT&PF M&O warm storage shop. The students' commitment level was astounding. They dove into the project, knowing the deadline for completion loomed and that they would be asked to assemble their bridge in front of their peers in five days. Under the guidance of their instructors, who operated the more dangerous power tools, the construction was complete by the third day. Only one change order was issued as the group realized time and materials could be saved if they were allowed to use 6' 2x4s for the decking. This was approved as it had no real bearing on the truss or span criteria. Final project cost was $675.

The moment of truth had arrived. Would the bridge hold the Polaris Ranger selected as a test vehicle? They determined that one of their instructors was indeed the most expendable, so he would drive the UTV across the bridge in the DOT&PF M&O yard. Donning his daughter's pink safety helmet, the Ranger operator successfully traversed the bridge numerous times to cheers and sighs of relief.

During the final day of ASRA, the Board of Trustees assembled and dismantled their over truss, modular, UTV bridge in 15 minutes before 200 of their peers, parents, and other ASRA module instructors.

More info on ASRA and the CE module: http://www.uaf.edu/asra/

Tanner, Jacob, Reyvielyn, Solomon, Mary, Levi, and Greg proudly pose on their recently assembled overtruss UTV bridge.

Co-instructor Dave Waldo bravely tests the bridge with a Polaris Ranger UTV: total weight of vehicle and payload was about 1,400 lbs.

The Alaska Summer Research Academy promotes creativity and intellectual curiosity through hands-on, open-ended experiences in STEM (science, technology, engineering, and mathematics). ASRA students engage with mentors and peers to explore scientific concepts, investigate student-driven questions, and solve problems.

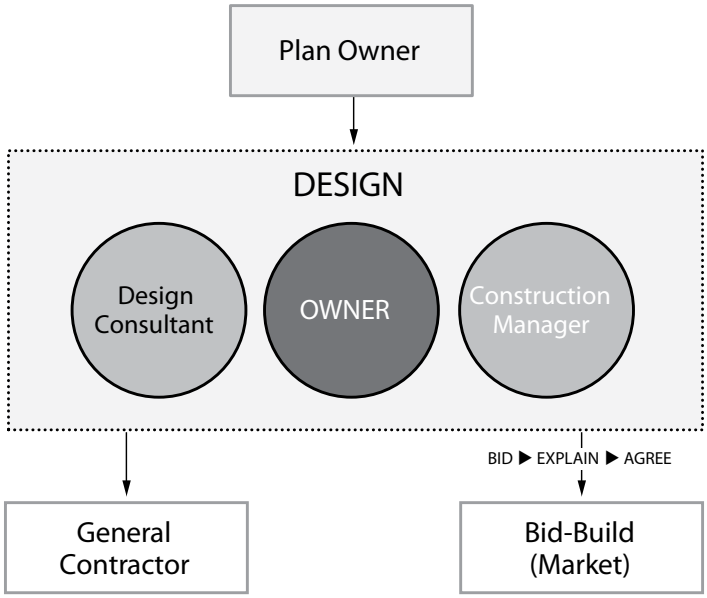
The ASRA Civil Engineering Module introduced students to solving real-world problems of the built environment through civil engineering planning and design concepts as well as construction methods and techniques. The use of various hands-on, engineering-related activities allowed students to explore and solve problems faced by civil engineers.

Shortening Project Delivery With the Construction Manager/General Contractor Method

From *Every Day Counts* (EDC), a state-based initiative of FHWA's Center for Accelerating Innovation

For transportation projects with sensitive schedules and potential constructability challenges that require special qualifications and extraordinary contractor cooperation, such as those in busy urban areas, the construction manager/general contractor (CM/GC) delivery method provides many benefits. Other projects that are a good fit for the CM/GC method are those that have public involvement or include right-of-way or utility issues that could affect the overall schedule.

By getting the contractor involved early in the planning and design processes, project owners have the opportunity to incorporate a contractor's perspective into planning and design decisions, introduce innovations, improve the design quality, and resolve potential third-party issues. This allows them to deliver projects that reduce costly change orders, decrease risk, optimize the construction schedule, and minimize impact to the traveling public.



Innovation Description

The CM/GC project delivery method consists of two phases—design and construction. When the owner considers the design to be complete, the construction manager then has an opportunity to bid on the project based on the completed design and schedule. If the owner, designer, and independent cost estimator agree that the contractor has submitted a fair price, the owner issues a construction contract and the construction manager then becomes the general contractor. The contractor acts as the consultant during the design process and can offer constructability and pricing feedback on design options and can identify risks based on the contractor's established means and methods. As noted earlier, this process also allows the owner to be an active participant during the design process and make informed decisions on design options based on the contractor's expertise.

Benefits

- **Foster innovation.** The collaborative process encourages both contractor and project owner to look at all options including using innovative techniques or approaches that reduce time and cost—for example, use of self-propelled modular bridge transporter (SPMT) bridge moves and slide-in bridge technologies.
- **Reduce risk.** Contractor feedback during the design phase can reduce project costs because the owner is able to understand and mitigate risks identified early in project development. Any risk mitigation savings identified during the design phase accrue to the owner in a CM/GC arrangement.
- **Improve design quality.** The contractor is able to review the designs and provide feedback, answer designer questions and provide changes. By including the contractor review, the designer can produce better designs that reduce issues in construction and prevent change orders that can lead to project overruns.
- **Improve cost control.** Value engineering is a natural part of CM/GC during the design process. This allows for the contractor's input during design so the owner can obtain reliable cost data for any design alternative being considered. This allows the owner to consider the budget and make more informed decisions about which alternatives offer the greatest cost benefit.
- **Optimize construction schedules.** The CM/GC process allows the contractor to begin

planning the construction schedule during the design phase. This way, the team can view how construction will impact traffic and adjust the schedule accordingly. CM/GC also enables the team to determine right-of-way and utilities issues on the critical path during design and give greater focus to those that affect the overall schedule.

Current State of the Practice

With the passage of MAP-21, SEP-14 approval is no longer required for State DOTs to use CM/GC so long as their state statutes allow for it. The FHWA does not presently have regulations concerning the CM/GC project delivery method.

Support and Available Tools

If you're interested in getting started with CM/GC in your state and need to better understand the technical issues and implementation process, here are some resources to help you get started:

- **FHWA CM/GC Project Delivery Program Guide,** http://www.fhwa.dot.gov/construction/cqit/cm.cfm
- **NCHRP Synthesis 402—Construction Manager-at-Risk Project Delivery for Highway Programs,** s.trb.org/onlinepubs/nchrp/nchrp_syn_402.pdf
- **Boston CM/GC Peer Exchange Presentation Materials,** May 2012, https://www.t2events.ce.ufl.edu/events/CMGC_Peer_Exchange_-_Boston%2C_MA.asp
- **2011 Utah DOT Annual Report CM/GC Report,** http://www.udot.utah.gov/main/uconowner.gf?n=8808304515548405
- **Sample Utah DOT CM/GC documents,** http://www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:1871
- **Sample Oregon DOT CM/GC documents,** http://www.oregon.gov/ODOT/HWY/MPB/WRB.shtml#CM_GC_Procurement_Documents
- **Sample CM/GC state legislation** (Arizona, Utah, Oregon, & Washington), http://www.fhwa.dot.gov/construction/contracts/cmgc_statutes.cfm

For additional information, please contact:
John Haynes, construction manager/general contractor lead EDC coordinator, Utah Division
john.haynes@dot.gov

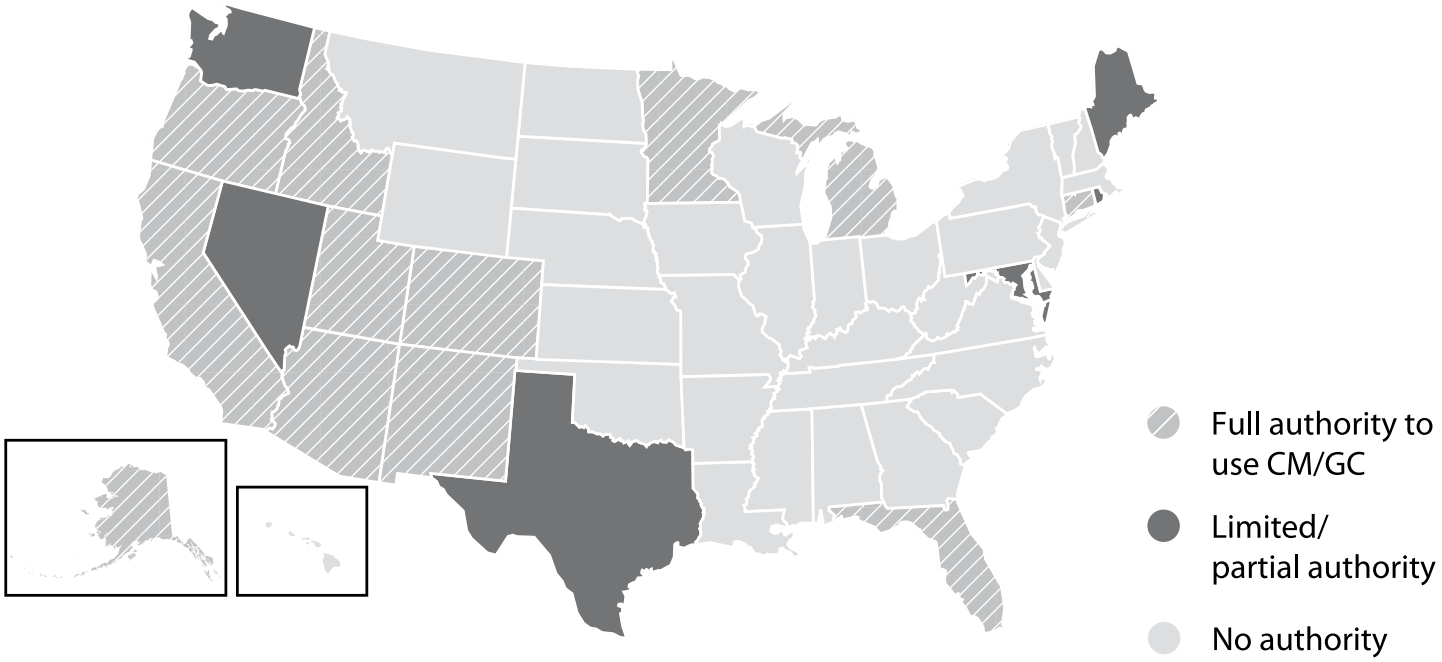


Figure 1: Construction manager/general contractor state authority. FHWA Division Office Survey 2012

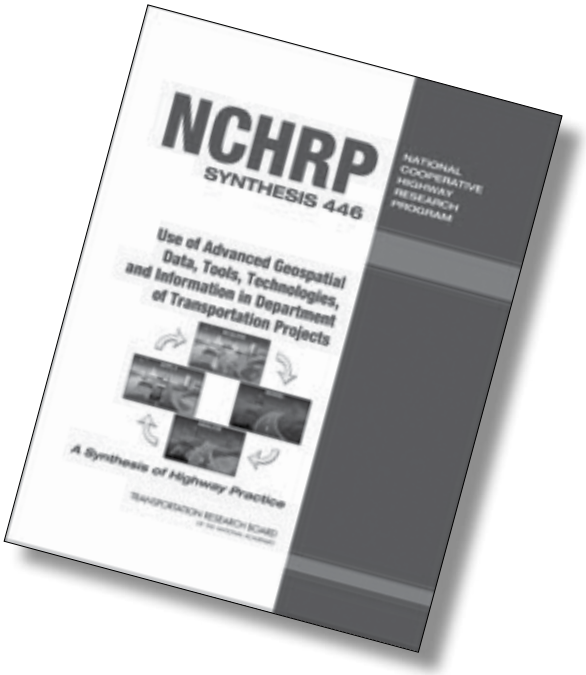
Use of Advance Geospatial Data, Tools, Technologies, and Information in Department of Transportation Projects

TRB's National Cooperative Highway Research Program (NCHRP) report *Synthesis 446: Use of Advance Geospatial Data, Tools, Technologies, and Information in Department of Transportation Projects* explores the development, documentation, and introduction of advanced geospatial technologies within departments of transportation.

The report also provides a discussion of strengths and weaknesses of leading technologies and how they are being used today.

Some of the key findings of this study include:

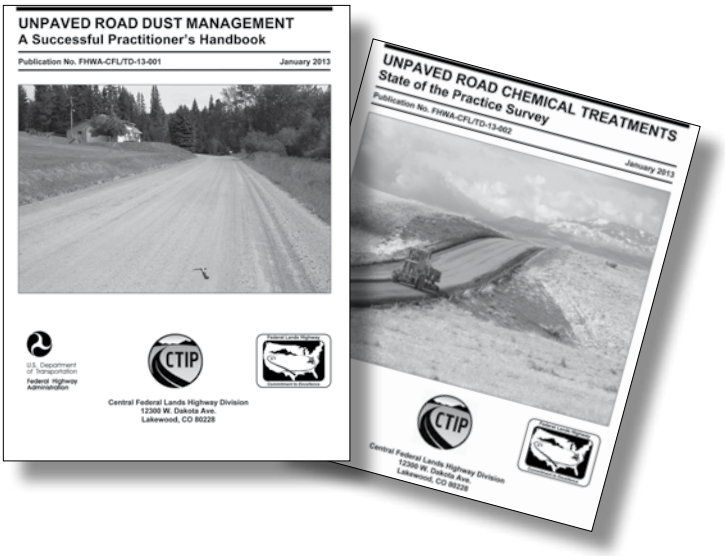
1. The most important change that is taking place is the transition from two-dimensional (2D) to 3D workflows. Transportation agencies that have transitioned or are transitioning to 3D workflows and software can reap the decision-making benefits of using geo-referenced spatial information contained in 3D design, asset management, and geographical information system environments.
2. DOTs indicated relatively high levels of experience with advanced geospatial technologies.
3. The top three barriers to technology adoption indicated by the DOTs are cost, inertia, and technical expertise.
4. The three key drivers of success when it comes to the introduction of new geospatial technologies are an early adopter mindset, an internal champion, and an interest in safety.
5. The top three geospatial technology research needs identified by the DOTs were data management, data integration, and transition from 2D to 3D workflow. Most research reports are published internally only. Reports for pilot projects are generally not made available on the web. Failures and decisions not to use a technology are rarely documented and even more rarely made publicly available.
6. DOTs were split between a desire for national and state standards. Service providers favored national standards, when possible. They also preferred performance-based specifications and guidelines.



7. Using advanced geospatial data technologies can have many benefits for transportation agencies. Change can sometimes be a slow, difficult process, but given the economic conditions that exist today, most cannot afford the luxury of waiting for a complete set of best practices and guidelines to be developed for new technologies. By sharing the experiences and lessons learned among transportation (and other) agencies, the learning curve will be shortened and cost efficiencies will be achieved.
8. Geospatial service providers are early adopters of geospatial technologies, particularly 3D workflows. They indicated that the three key drivers of success when it comes to the introduction of new geospatial technologies are an early adopter mindset, an internal champion, and an interest in safety. Similar to the DOTs, service providers believed that focused research projects, documentation, and centralized information dissemination would help overcome many barriers.

FHWA Releases Rural Dust Handbook, Survey Results

By James Harper, AUTC Communication Specialist



This year FHWA released a much-anticipated pair of reports stemming from its nationwide surveys of road managers dealing with dust from unpaved roads. Together, they provide both a practical hands-on guide for road managers as well as a nationwide look at dust mitigation trends and strategies used at other state DOTs.

The survey component of these reports, titled *Unpaved Road Chemical Treatments: State of the Practice Survey*, outlines the results of a road manager survey on palliative treatments for unpaved roads. It explains the choices and obstacles made in efforts to reduce dust, and the report itself serves as a companion to *Unpaved Road Dust Management: A Successful Practitioner's Handbook* (Jones et al. 2013).

The survey was sent to 2,000 practitioners from county, federal, and state government, academic institutions, tribal organizations, and the private sector. The largest group of 287 respondents, 51%, were from county governments. The next largest respondent group, 12%, came from private industry. Survey questions covered a range of issues from user motivations for chemical treatments to the extent of palliative use within given segments of a statewide transportation system.

In sum, the survey aims to provide a comprehensive profile of the decision making by road managers and practitioners engaged in chemical treatments on unpaved roads. Among the highlights, it found that:

- 80% of respondents used chemical treatment for more than six years;
- 98% chose treatments as a dust mitigation strategy;
- reasons for dust mitigation included federal compliance, human and livestock health, public service, and reducing maintenance costs;
- spray treatments were the most commonly reported application method; and
- the top three reported treatments were magnesium chloride, calcium chloride, and lignin sulfonate.

The full report title: Kociolek, Angela, *Unpaved Road Chemical Treatments: State of the Practice Survey*. Lakewood, CO: U.S. Department of Transportation, Federal Highway Administration, Central Federal Lands Highway Division, Pub. No. FHWA-CFL/TD-13-002, January 2013. The report is also available digitally at the AASHTO Transportation System Preservation Technical Services Program website: http://www.tsp2.org/2013/06/04/unpaved-road-chemical-treatments-state-of-the-practice-survey/

The second report component, titled *Unpaved Road Dust Management: A Successful Practitioner's Handbook* is more of a best practices handbook, as the title suggests. It gives a comprehensive program-level view of unpaved road management formed through a national tour aimed at reviewing and assessing current state-of-practice trends. Its content provides hands-on directions for treatment selections relevant to a variety of specific scenarios.

The guide serves as a supplement for managers making treatment selections, allowing them to expand their understanding of unpaved road management from a program-level view, as opposed to a focus upon palliative solutions. For example, the national scan team focused on the following questions at each location they surveyed: Is the practice working? Is there a satisfactory balance between minimizing environmental impacts and maximizing road user and road agency benefits? Is the practice cost-effective?

Through the course of listening to practitioners' stories, driving and evaluating select road sections, and sharing team observations from the field, the

(continued on page 10)

handbook's authors have moved beyond a one-size-fits-all approach to articulate a more comprehensive and nuanced assessment of nationwide dust management practices. Among the handbook's highlights are:

- an eight-point best management process for unpaved road dust;
- a summarized reference list for 13 reports on unpaved road design, construction, and maintenance;
- a template for communicating cost comparisons for treated vs. untreated roads;
- recommendations for staff education;
- a planning guide for unpaved road improvement programs; and
- full chapters devoted to palliative treatment selection and application.

The full report title: Jones, David et al., *Unpaved Road Dust Management: A Successful Practitioner's Handbook*. Lakewood, CO: U.S. Department of Transportation, Federal Highway Administration, Central Federal Lands Highway Division, Pub. No. FHWA-CFL/TD-13-001, January 2013. The handbook is also available digitally at this link: *http://www.cflhd.gov/programs/techDevelopment/materials/Handbook/documents/UnpavedRoadDustManagementASuccessfulPractitionersHandbook.pdf*

As Alaska DOT&PF continues its successes researching and implementing new testing methods, treatment selection options, and management guidelines for dust control in Alaska, these supplemental reports and guides from FHWA should serve field practitioners and managers alike.

RD&T2: Implementing Research One Rural Road at a Time

By James Harper, AUTC Communication Specialist

Alaska DOT&PF RD&T2 has led collaborative research on fugitive dust that is yielding significant cost savings and improved maintenance for Alaska's rural roads and runways. Through this work, research on dust palliative use is helping both local and DOT road managers make more informed and cost-effective decisions about applying treatments to specific locations.

Fugitive dust (defined by the U.S. Environmental Protection Agency as PM 2.5 or PM 10) brings health risks, impairs quality of life, and imposes costly maintenance needs on limited local and state maintenance budgets. More than 50% of Alaska's state-owned roads are unpaved—as are nearly all other private and local roads. Traffic can remove as much as 750 tons of gravel per mile in a single year. At this rate, expenses for replacing the lost road surface can reach $15,000 per mile annually, based on a $20 per-ton unit cost of gravel. Dust-reducing palliatives like calcium chloride cost roughly $8,000 per mile, yielding a savings of $7,000 per mile over untreated roads. About 82% of Alaska's communities are outside the state road system and rely on local unpaved roads and 255 state-owned airports—many with unpaved runways—notable sources of fugitive dust.

Alaska DOT&PF and its research partners at the Alaska University Transportation Center have worked

to reduce dust on Alaska's roads, streets, and airports. To date, this partnership has

- tested and compared noncorrosive palliatives in 21 different regional sites;
- developed cost-effective options for Alaska DOT&PF and local governments;
- created and deployed a portable testing instrument and repeatable methodology;
- tested palliative solutions that reduce 90% of fugitive dust for one to two years;
- implemented results into new state dust-reduction requirements and FAA airport bidding specs; and
- developed new dust management guidelines.

Seeking a nonstationary dust monitoring system, the partnership also developed the DUSTM. Mounted to the back of an ATV, the portable dust monitoring system has an air intake, opacity measurement device, and data logging capabilities—all in a portable device offering the first repeatable methodology of its size for fugitive dust measurement. The DUSTM has been deployed on unpaved roads and runways in 23 communities across rural Alaska.

This work is not over yet. Ongoing field research continues to improve DOT's knowledge of palliative treatments currently being tested at rural airports across the state. For more about this, read the Summer 2012 No. 86 edition of *Technology for Alaskan Transportation*. http://www.dot.state.ak.us/stwddes/research/assets/pdf/12no87.pdf

The DUSTM, developed by AUTC researchers to allow Alaska DOT&PF a portable, repeatable methodology for testing and comparing fugitive dust treatments. (Photo courtesy AUTC.)

A typical dust cloud on a rural Alaska road. (Photo courtesy AUTC.)

Billy Connor Receives CAN-AM Amity Award

The CAN-AM Civil Engineering Amity Award recognizes a member of the American Society of Civil Engineers or the Canadian Society of Civil Engineers for either a specific instance that has had a continuing benefit in understanding and goodwill, or a career of exemplary professional activity that has contributed to the amity of the United States and Canada. In the case of its award to Mr. Billy Connor, director of the Alaska University Transportation Center, the Societies emphasize the latter: an entire career of professional contributions.

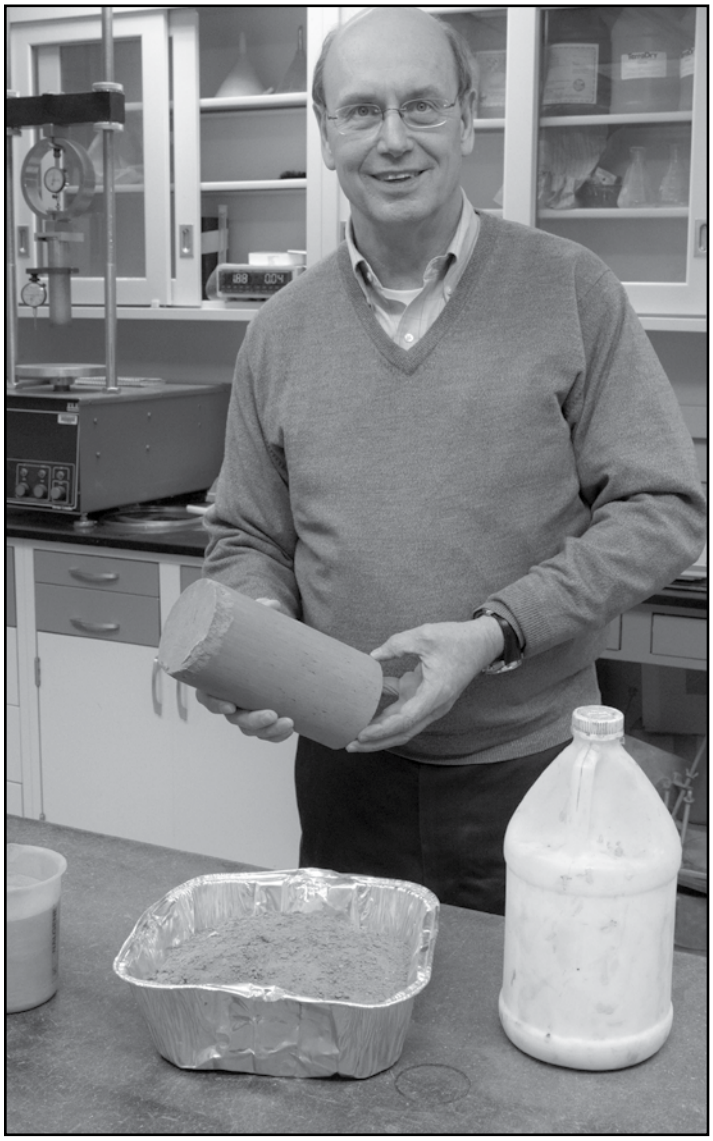
The objective of the CAN-AM Civil Engineering Amity Award is to give recognition to those civil engineers who have made outstanding and unusual contributions toward the advancement of professional relationships between the civil engineers of the United States of America and Canada.

In his 40-year career as an Alaska professional in civil engineering and engineering management, Mr. Connor has worked almost entirely on cold regions problems involving highways, airfields, and permafrost foundations. He has also been exemplary in the presentation, publication, and education of others based on the results of his work, educating the public and other professionals through technology transfer in state of the art considerations and solutions to the problems of building in the North.

From 1976 through 1991, Billy served as a research engineer for the AKDOT&PF. In 1998 he became the research manager for the department, serving in that role through 2004. He also served as the hydraulic engineer and as a construction engineering manager for the Department of Transportation, where he applied his research experience to improving pavement design methods and standards. He has continued to advance the science of building highways on permafrost by helping to develop design features and monitoring systems for experimental permafrost control roadway sections on the Al-Can highway in the Yukon Territory, in cooperation with Canadian engineers.

Mr. Connor has become an authority on northern design and construction. He has contributed numerous engineering publications as primary or co-author. Since 2004 he has served as program director of the University of Alaska's University Transportation Center in Fairbanks, managing a multimillion dollar program of innovative engineering research.

On behalf of Alaska DOT&PF's RD&T2, we congratulate Mr. Connor on this well-deserved award.



ADOT&PF Improving Rural Airport Service and Developing Workforce

Rural airport contractors responsible for maintaining state airports recently received training on airport operations, safety, equipment operation and maintenance, lighting system maintenance, and education on how vital the contractors are to their community and the statewide aviation system.

Airport contractors from Koyukuk, Nulato, Golovin, Emmonak, Savoonga, White Mountain, Hooper Bay, Mekoryuk, Kipnuk, Akiachak, Port Heiden, Sand Point, and King Cove participated in weeklong classes held at the Fairbanks Pipeline Training Center.

"A trained and skilled workforce is a valuable community asset that will benefit the department, local communities, contractors, and the State of Alaska," said Mike Coffey, chief of Statewide Maintenance and Operations. "We hope to continue this training."

AKDOT&PF partnered with the Fairbanks Pipeline Training Center, the Construction Education Foundation of the Associated General Contractors of Alaska (AGC), and the Alaska Operating Engineers Employers Training Trust to provide the training, with major funding coming from a Denali Commission grant.

"These rural residents are responsible for maintaining a valuable state transportation asset and a critical component of rural Alaska: airports. Improving their skills has been a big boost to public safety in their communities," said John MacKinnon, executive director of the AGC.

Contact: Linda Bustamante, 907-269-8654, Linda.Bustamante@alaska.gov.

(L-R) Ron Trader, Emmonak; Davis Lincoln, White Mountain; Robert Kruger, Nulato; Ken Assyd, instructor; Bryan Rooko Jr., Savoonga; Curtis Oliver, Golovin; Jason Malemute, Koyukuk; and Saul Williams, instructor.

(L-R) Al Odom, operator instructor; Carl Kiunya, Kipnuk; Ed Kiokun, Mekoryuk; Paul Gundersen, Sand Point; Larry Hale, Hooper Bay; Warren Wilson, King Cove; John George, Akiachak; Kathleen Castle, executive director, Alaska Construction Academies; Derek Schraffenberger, Port Heiden.

Meetings and Training Around Alaska

Training Calendar

Every Day Counts: Intersection and Interchange Geometrics: Safer, Faster, Cheaper!

Dec. 4 in Juneau
Dec. 4 in Anchorage
Dec. 4 in Fairbanks

Fundamentals of Geometric Design

Jan. 13–17 in Juneau

Traffic Control Supervisor—Grant

Jan. 14 to Jan 15 in Anchorage

Traffic Control Technician—Grant

Jan 13 in Anchorage

The Work Zone Life Cycle

Feb. 12, Feb. 19, Mar. 5 and Mar. 12 in Fairbanks
Feb. 12, Feb. 19, Mar. 5 and Mar. 12 in Juneau

Traffic Control Technician/Supervisor

These are non-DOT sponsored events. Register through ATSSA and pay their tuition fee. See http://www.atssa.com/TrainingCertification/TrainingEventsStates.aspx?statecd=AK

1/13/2014	Traffic Control Technician—Grant
1/14/2014–1/15/2014	Traffic Control Supervisor—Grant
1/16/2014–1/17/2014	Flagger Instructor Training
1/28/2014	Traffic Control Technician
1/29/2014–1/30/2014	Traffic Control Supervisor
2/11/2014	Traffic Control Technician
2/12/2014–2/13/2014	Traffic Control Supervisor

Transportation Planners Conference

Apr. 29–May 1 in Juneau

Meeting Calendar

Society	Chapter	Meeting Days	Location	Contact
ASCE	Anchorage	Monthly, 3rd Tues., noon	Moose Lodge	
	Fairbanks	Monthly, 3rd Wed., noon except Sept. and Feb.	Westmark Hotel	
	Juneau	Monthly, 2nd Wed., noon except June–Aug	2nd Fl. Conf. Rm at AEL&P	
ASPE	Anchorage	Monthly, 2nd Thurs., noon except summer	Coast International Inn	
	Fairbanks	Monthly, 1st Mon., noon	Regency Hotel	Jennifer Gibson, 343-8130
	Juneau	Monthly, 2nd Wed., noon except June–Aug.	2nd Fl. Conf. Rm at AEL&P	
ASPLS	Anchorage	Monthly, 3rd Tues., noon	Sourdough Mining Co.	
	Fairbanks	Monthly, 4th Tues., noon	Westmark Hotel	George Strother, 745-9810
	Mat-Su Valley	Monthly, last Wed., noon	Windbreak Cafe	
AWRA	Northern Region	Monthly, 3rd Wed., noon	Rm 531 Duckering Bldg., UAF	Larry Hinzman, 474-7331
ICBO	Northern Chapter	Monthly, 1st Wed., noon except July and Aug.	Zach's Sophie Station	Tom Marsh, 451-9353
ITE	Anchorage	Monthly, 1st Tues., noon except July and Aug.	Ak. Aviation Heritage Museum	Karthik Murugesan, 272-1877
IRWA	Sourdough Ch. 49	Monthly, 3rd Thurs., noon except July & Dec.	West Coast International Inn	
	Arctic Trails Ch. 71	Monthly, 2nd Thurs., noon except July & Dec.	Zach's Sophie Station	
Asphalt Pavement Alliance	Alaska	3rd Wednesday of every other month	varies	John Lambert 267-5294
PE in Government	Anchorage	Monthly, last Fri., 7 a.m.	Elmer's Restaurant	
Soc. of Women Eng.	Anchorage	Monthly, 2nd Wednesday at 5:30pm.	DOWL HKM	Stephanie Mormilo at 562-2000 Virginia Groeschel at 562-2000

For information about T2-sponsored training, contact:

Dave Waldo at 907-451-5323, david.waldo@alaska.gov
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Simon Howell at 907-451-5482, simon.howell@alaska.gov
or
go to: www.dot.state.ak.us

Historic Plane "Flies" Again at Fairbanks Airport

One of the largest items in the history collections at the University of Alaska Museum of the North is once again soaring over travelers at the Fairbanks International Airport after a large-scale community effort to restore the plane.

In 1923, pilot Carl Ben Eielson persuaded a group of Fairbanks businessmen to purchase the Curtiss JN-4D "Jenny" Aircraft. The war-surplus airplane cost $2,400. Eielson turned a profit within the week by giving demonstration flights over Fairbanks. Eielson and his backers started the Farthest North Airplane Co., which flew goods, people, and eventually the first airmail routes to communities around Fairbanks.

Senior Ethnology and History Collections Manager Angela Linn says the artifact connects us to many portions of Fairbanks' roots, so the museum has a long history of wanting to display it for the public:

> With an object of this size, our options have been limited. We're fortunate that the Department of Transportation and the staff at the Fairbanks International Airport have been so supportive of the project. Not just once, but twice, they've gone out of their way to accommodate this 1,450 pound plane, suspending it from the ceiling so that it can fly above passengers as they arrive and depart Fairbanks. It's a reminder of the aviation history of this community.

When the plane was first installed at the airport in 1981, it was thanks to the efforts of a host of Air Force mechanics who moved the plane to a storage facility at Eielson Air Force Base while a cosmetic overhaul of the plane was completed. They attached wings from another type of biplane known as a "Swallow." For that and other reasons, local aviation buffs have long dreamed of restoring Eielson's plane to its original aesthetic.

Pete Haggland, the director of the Pioneer Aviation Museum in Fairbanks, was the president of the local chapter of the Experimental Aviation Association (EAA) in 2007 when the plane was removed for restoration. He raised $25,000 for the project. "I raised the money, but I didn't do the work," Haggland says.

Roger Weggel, an instructor in UAF's aviation department, directed the Jenny project for the EAA. He says more than 30 people have had a hand in the restoration, putting in thousands of hours of work.

"We started keeping track," Weggel says. "I have 100 pages of hours, but we got tired of writing it down. We decided to just keep working instead."

In return for the work completed by the EAA, the museum agreed to trade the Swallow wings. "Not only were the wings wrong, the rest of the aircraft needed work to bring it up to its original standards," Haggland says.

Haggland says it's amazing how many people have asked about the aircraft while it's been away. The Department of Transportation, along with officials from the Fairbanks International Airport, EAA volunteers, and Davis Construction, the original contractor for the recent expansion at FIA, worked together to complete the installation on Monday, October 28.

Contact Angela Linn, senior collections manager of ethnology & history, at 907-474-1828 or via email at ajlinn@alaska.edu or Angie Spear at Fairbanks International Airport, 907-474-2529.

http://www.dot.state.ak.us/comm/pressbox/arch_2013/PR13-2550.shtml

(more on back page)

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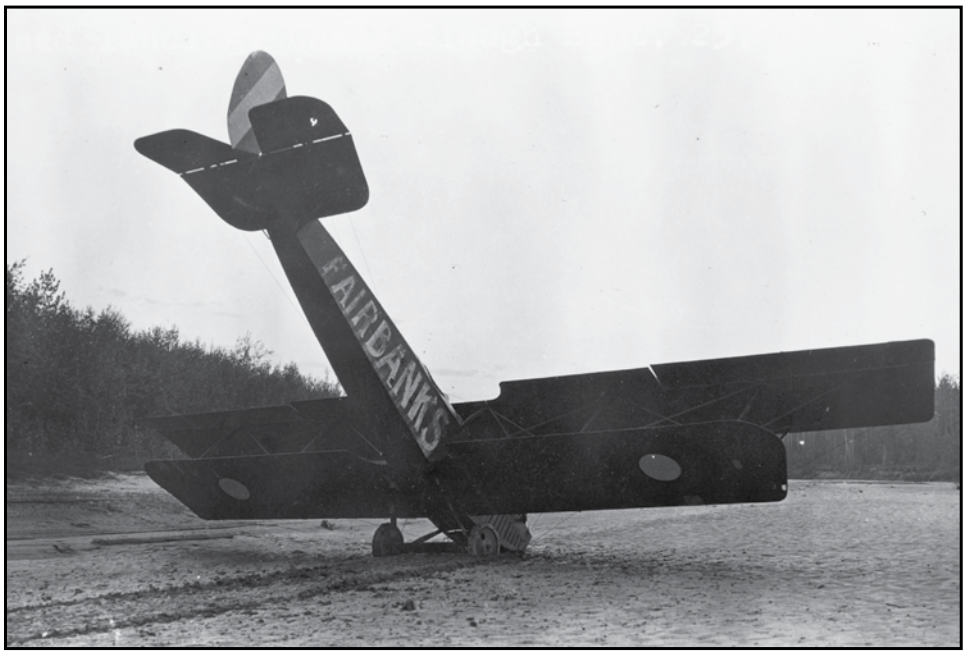

Photograph of Ben Eielson's plane, a Curtis J-N4 "Jenny," after a wreck. Faded text typed across the top reads: "[...]sed landing Chena Slough Sept. 23."
See page 8 for Historic Plane "Flies" Again at Fairbanks Airport.
Charles E. Bunnell Collection, Vertical File Photograph Collections-People, UAF-1958-1026-745.

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