2013 ITS Alaska Annual Meeting

Session #1- Traffic Incident Mgmt and Emergency Coordination
LT. Hanson (Alaska BHP) & Dan Monteleone (DOT&PF-Safety Officer)

BIO: Administrative of Traffic Teams- 3-4 teams – 16 persons each, Click it or ticket program. In car system, radar systems.

STOC- challenge with dispatch centers:

- FBKS-Owned and operated by AST
- MATSU-Owned and operated by Wasilla PD. All city employees, AST contract dispatch with.
- Soldotna –Kenai Borough and AST (50/50 personnel)

STOC- DOT&PF doing feasibility study now. Work with Kittelson & Associates. They are conducting user needs interviews right now. Next steps are to create Concept of Operations, Feasibility Study, and alternative solutions (manned vs. virtual).

Like to have their own dispatch centers collocated with DOT&P operations/dispatch. Take the funding used to pay Soldotna and MATSU and create their own.

APD partnership is critical since they have the most important piece of the population. They have begun discussions with them. APD has gone from 14 traffic team to 7 team. Diminishing their dedicated traffic teams, that focuses on other duties besides just traffic.

How do you coordinate road closures? Coordinated effort to update the 511. Commissioner DOT&PF has authority to close road.

Fatality on roads- AST, LT. Hanson, train-the-trainer class in November (FHWA sponsored) to train traffic personnel to learn how to get the highway open, get traffic moving again. How do we make people safe? How do we get equipment off the road? Do we put up signs and how? For every minute traffic is stopped, it takes 11 minutes to get going again. Critical to everyone to get the roads up more quickly.

How do you coordinate in dead spots of the highway? They can use their radios if they have availability. The new ALMR system allows better coverage. Do satellite phones work in those areas? Yes. MS&CVE use in Tok area but very expensive. GPS attached to vehicles might be a solution, but still don't have solid strategic plan of how to role that in.

ALMR User Council- looking to put more repeaters out. They still need to conduct analysis of how many and where. Single repeater can cost $1.5 - $3 mil.

A couple Legislators pushed the Commissioners (DPS & DOT&PF) to get more information out the public, use of technologies. In response, DOT&PF put together a project list (short, medium and long term).

When it comes to it, we need to look at addressing some of the projects that have the most benefit; it's not just technology solutions, might be better lighting on the highway.

In Washington, they have large signs that say "Non-fender benders, get your vehicle to right" (to the shoulder) so that they are not blocking traffic. APD supports signs like this.

Administrative Code- gives DOT&PF authority to put up signs.

Session #2- Innovative ITS Technology Applications

Maintenance Decision Support System (MDSS) – Mike Coffey

Computerized tool to help make decisions. Able to determine when to send out winter maintenance equipment, when to apply treatment and how much, know when bridge decks freeze, reduce errors of putting too much or the wrong chemical on the road, etc.. One-stop shop to get all the weather data in one place! Look at forecast, pavement temperature. M&O staff use NWS reports, but need more to predict out to 72 hours and down the hour.

MDSS pooled fund-partnered with NCAR, to develop Alaska specific EMDSS (Enhanced MDSS). Bring in mobile weather. FBKS area vehicles are equipped with mobile weather equipment (ambient, dew point, pavement temp). There are 59 road weather stations statewide. It uses data from all these devices. Users have to track the data,

Looking to partner with transit, troopers, and others to collect mobile weather data.

Use deicing system at Knik River Bridge. Use a variety of chemicals. The chemical type depends on the temperatures and conditions.

First use of the system was on Steese Highway, putting down anti-icing solution. The MDSS told them the road is going to ice up.

Next steps: if successful will expand Kenai, Anchorage, Southeast and more. Expanded the contract, need an entire winter of test. Will make decision to expand spring 2014.

Surveillance and Broadcast Services- Jimmy Wright, FAA

Today's air transportation includes Navaids, radar, air/ground communications, airport traffic control towers.

FAA NextGen- Transitioning to satellite based navigation. Send routine message digitally. Allow pilots to see what the controllers see (air traffic). Improved location based weather reports. Operations in low-visibility.

ADS-B- Automatic Dependent Surveillance Broadcast – transmits location without pilot or operator input. Use GPS. More accurate than radar. Began with Capstone- 1995. Now all commercial providers

have ADS-B. Alaska Airlines does not have it yet. Final Rule – mandates ADS-B. Allows real-time location positions of airplanes to dispatch offices. It's available to private users. It's mandated if you are using certain airspaces (air carriers).

TIS-B- Traffic information Service Broadcast- service which provides ADS-B equipped aircraft with position reports from secondary surveillance radar.

Capstone- provides pilots using IFR with pre-defined routes, most commonly traveled routes and keeps them at a safe level and safe path.

Positive Train Control – Eileen Reilly, AKRR

Positive Train Control- goal is to eliminate human error. Have 54 locomotives, have not implemented them all yet.

After near miss near Montana Creek in 1995, AKRR implemented PTC. (1997)

CAD – implemented in 1999. Can't have PTR without Computer Aided Dispatch.

GPS with DGPS is not accurate enough alone, can't tell if train is out of the way. PTC uses other types of navigational aids such as switches and algorithms to determine location.

They were required to equip the switches with monitoring devices.

Through PTC they can provide traveler information about where trains are, how long crossings will block areas of heavy congestion (C Street crossing in ANC). DOT&PF HSIP funds the signs at crossings.

They have a lot of "dark territory" that they need to keep track of. Limited by power - looking at solar panel wind generator with batteries to keep switch monitoring equipment. Have one at Potter Station, testing over the winter.

Next Steps- implementing new CAD system. Have PTC test corridor-Whittier to ANC. 7 new base station sites.

Deadline is Dec. 31, 2015- Challenges in technology, securing RF spectrum, cost of liability insurance and securing funds to complete implementation. Need to show FAA they are making a "good faith" effort.

Session #3-Transit Technology Deployments – Helping Transit Providers and Transit Riders

Routematch Software- Tom Coogan

Fairbanks North Star Borough-Metropolitan Commuter Access System (MACS)

2006- AVL-real-time vehicle tracking, ADA trans. Services

Routematch goes through a very tight planning phase where they work on the detail technical and functional specifications.

Avail Technologies- Derek Letvig

Consultant to ANC People Mover since 2003. Replaced Teleride Telerider IVR. Updated AVL for paratransit fleet and the deviated fixed route buses. In 2005 integrated fixed route technologies. Technologies include: mobile data terminals, CAD, AVL, automated passenger counters, digital signage, voice and data communications.

2011-integrated new fare collection system, point of sale and IVR –Anchor Rides Paratransit and People Mover Fixed Routes. ADA compliant next stop announcement.

Integrate Avail with Google Trip Planner.

Technologies for Greener Transportation- Gerard Kirchtag, Trapeze Group

Going green- Do more with what you have. Use technology you have in place and make it work more efficient. Automate the process to maximize resources. Vehicle optimization-alerts related to engine problems, analyze fuel consumption, and tire pressure. Driver behavior-detect how fast drivers are going, how long a bus is idling, harsh breaking, unauthorized vehicle use.

CARTS- Central Area Rural Transit System- implemented CAD/AVL and reduced the need to use contract out services-saved money.

Transit Technology Deployments- Jennifer Beckmann, CARTS

Demand responsive public transportation. Cover 423 miles.

Using Mobilitat- Easy Rides. Better at scheduling rides. Paperless. Less rides given to contract provider. More driver accountability-they know where they area. Use Text Ride reminder. Use to use phone reminder but too expensive. Optimize online ride reservation piece to be used on mobile devices.

Session #4 Technology Innovations for Transportation- A multi-Modal Roundtable discussion- Eileen Reilly, Mike Coffey, Jimmy Wright, Jeremy Arnold

ADOT&PF, MS/CVE- WIM, automated vehicle identification systems, transponders on the vehicles. CVIEW-aggregate safety data and make available to CVISN states, helps to enforce commercial vehicle. PRISM-performance registration info. system-when DMV registers a CV they can check the PRISM to see all the credential and safety information about a vehicle. Looking ahead-automatic vehicle identification-transponders on CV's, tracked at weigh station. Can make decisions about carriers-if they up to date with their credentials and not overweight they can just bypass the weigh station. Optical reader.

FAA- ADS-B (transition from radar), use of GPS based navigation, weathercam's (300+) – shared with other agencies. Shared with DOT&PF roadweather.alaska.gov. Looking ahead- continue to transition from radar to ADS-B.

DOT&PF, M&O-RWIS, Enhanced MDSS, DriveCam-140 cameras in the vehicles-can be used for fleet tracking, how much idle time, etc. In a 15 month trial. Pavement management- send vans collecting pavement data. Looking ahead- Transportation Asset Management (TAM)- trying to integrate systems, standards and policy & procedures, GIS common road network. Implementing an anti-idle policy- to reduce fuel: zero idle time in summer and 10 min max in winter.

AKRR- PTC, GPS train location, online reservation system, implement a lot of technology to improve. In a better place to share technologies. Use RFID-to track cars. Sign boards- rail/highway crossings. Do some with weather stations – WeatherTech. Alaska Land Mobile Radio is shared among the State agencies. Looking ahead - Fuel conservation- remote fuel rather than sitting idle waiting for gas. Golden Run simulators.

Lessons Learned

- Holding in Juneau- low attendance
- Be clearer about booths within the meeting space
- Room was too large and very cold, should have had tables set up front

What worked well?

- Multi-modal presentations-having a breadth of speakers & topics made for a very interesting meeting
- Had good presenters-those that could articulate their topic area
- Good food from Silver Bow Bakery & catered worked well to keep people at the meeting