

Board Report

June 2018

Thank you Chairman Whitehead.

And good morning members of the Idaho Transportation Board.

The department will begin the bidding process for the first of four GARVEE projects on Interstate 84 next Tuesday, the 31st.

The project is in the Franklin Boulevard and Karcher Interchange corridor.

It will widen the shoulders of the highway, providing temporary traffic lanes that drivers will use when construction on the median begins next spring.

We held public meetings June 26th through the 28th, and received more than 150 comments.

Many of those were in support of improving the mobility and safety in this corridor

The Interstate 84 Project Teams estimate construction on the temporary lanes will begin in late August or early September, and be complete in early October.

The bidding process for the reconstruction of the Karcher Road overpass is scheduled for this fall.

Idaho's construction season coincides with wildfire season.

And roadside fires are a major concern for multiple federal and state agencies, including ITD.

At the request of the Governor's Office, ITD has formed a partnership with the Bureau of Land Management, also known as BLM, and the Idaho Fish and Game Department to protect important sage grouse habitat from fires.

District 4 Maintenance Foreman **Carl Horn** worked with the BLM to apply for a grant.

The application was successful, and ITD has been awarded \$155,000 to purchase mowers, lease tractors, and proceed with mowing strips of vegetation within the ITD right-of-way for a period of five years.

Please play the video.

District 2 Materials Engineer Chad Clawson is now several months into his year-long AASHTO fellowship in Washington D.C.

He is serving on several committees, including:

- Materials and Pavements
- Bridge
- Traffic
- Maintenance, and
- Innovation

His work has required him to travel to meetings in Denver, Phoenix, Nashville, and Vermont.

One of the important topics he is working on is autonomous vehicles.

He recently received a preview of how some states are preparing for the use of autonomous vehicles in their maintenance fleets.

Including a striping demonstration in which a driverless truck, controlled by LIDAR and other sensors, served as a pacing vehicle for a striping truck as it traveled around a course showing what the driverless truck was capable of.

Chad says that some striping operations in Colorado will soon begin testing this use of driverless vehicles.

He told us he is learning a lot and is trying to be a good representative for our state, and the Idaho Transportation Department.

Between his work and travels away from the capital, Chad has had time to visit several national monuments.

And even cheered on the Washington Capitals as they won the Stanley Cup.

Last year, a few of my Director's Reports addressed a major landslide in north Idaho on Highway 5.

After the crews repaired the road, they also had to replace the concrete barriers.

The sections are connected by steel loops held together by a large pin.

To move the barriers, our crews first have to remove the pins, which, as Transportation Technician Gareth Abell puts it, takes **“three guys and a prayer.”**

While attempting to pull the pins out with grapples, levers, and shovels, Gareth thought there had to be a better way to do it.

After replacing the barriers on Highway 5, he spent some time during the winter months researching more effective ways to unhook the pins.

He could not find a better method than the one we are already using, so he developed one himself.

Gareth made some tongs out of an old face plate from a plow.

Here is a short video showing how his new invention works.

Using the tongs is safer, reduces manpower needs, and shortens the time needed to replace concrete barriers by about two thirds.

Right now the Santa maintenance shed has the only pair of tongs in the state, but he has been warned by other crews, and I quote:

“Don’t be surprised if that pair goes missing.”

End quote

To keep the other crews from borrowing the tongs without asking first, maybe the Santa shed could make use of this next money-saving innovation from District 6.

Geologist Shawn Enright came up with a way to eliminate the frustrating calls received at all times of the day from contractors needing access through locked gates.

The only way they could get samples of our material sources for testing was to call for someone to come open the gates.

Unfortunately, the round-trip drive to some of the locations is more than six-hours.

Shawn knew there were not enough hours in the day to continue making these runs and still do the rest of his job.

So he came up with a simple solution.

He bought resettable combination locks and is placing them on the district materials source gates.

Each lock has its own code, which can be reset after contractors have completed their work.

And if a code is compromised, we can change it and not have to buy a new lock every time.

The locks allow ITD to provide rapid access in times of emergencies.

And they save money.

Using resettable combination locks will save an estimated \$5,000 per district by reducing the man hours required to drive to and from material sources to open gates for contractors.

That is a savings of \$30,000 state wide, and yet another significant improvement in customer service.

District 1 developed an innovation that worked so well they shared it with the other districts at the 2018 Foreman's Conference in Lewiston.

Their crew had a long list of signs to replace this year, and they invented a tool to accomplish their work safer and much faster.

Rather than leaning ladders up against signs while they change them, the crews from Peterson Hill and St. Maries developed a catwalk that extends from a maintenance pickup.

The catwalk can be easily stored in the bed of a truck between replacements.

This allows them be safer and a lot more efficient when replacing signs on highways that have no shoulders, or are in steep terrain.

It normally takes three hours to replace two or three signs.

The catwalk allows them to replace 25 signs in that same amount of time.

And they can do even more on flat roads that have shoulders.

Here is a video showing how it works.

A newer version of the catwalk has a jack to adjust the height of the catwalk for each sign.

And there are even more improvements in the works.

Because summer is the season for the national pastime, the Office of Highway Safety is teaming up with the Idaho Falls Chukars and the Boise Hawks to help baseball fans make it home safe from each game.

This year both teams will have highway-safety messages prominently displayed in their ballparks.

They will also play public-service announcements during their radio broadcasts.

On July 21, the Boise Hawks will have a **Saved by the Belt Night**.

The entire team will wear commemorative jerseys featuring a seatbelt.

Ken Corder, the Office of Highway Safety's Outreach Manager says, and I quote:

"This is a great example of the Hawks stepping up to the plate to help make our communities safer.

When it comes to highway safety, it really is a team effort and we are so proud to have partners who go above and beyond to share our message."

External partnerships like the ones we have with the Boise Hawks and Idaho Falls Chukars are helping us reach our strategic safety goals.

But we also have partnerships that help other agencies.

One example of this is a 5S Project at Headquarters that ended up helping out the Boise School District's Technical Education Center.

5S stands for:

- Sort
- Set in Order
- Shine
- Standardize
- And Sustain

It is designed to organize work spaces to improve safety and efficiency.

James Poorbaugh is a Pavement Analysis Asset Management Engineer.

He arranged a 5S project to organize a shop area in the Headquarters Annex.

The project identified some welding equipment that we were no longer using.

James contacted the welding instructor at the Boise School District's **Technical Education Center** and arranged to donate the unused items to them.

The welding equipment is now helping their students improve their technical skills.

Easton Anderson, the student on the right side of the screen is preparing for a national welding competition.

The goal is to help students like him enter the Idaho workforce with valuable job skills on day one.

Not all partnerships work as smoothly as we would like.

For instance, it can take up to two years to execute an agreement with Union Pacific Railroad for the installation of safety features.

Like flashing lights or safety gates at a crossing.

Waiting that long for a needed safety upgrade wastes valuable time.

And can be extremely frustrating for ITD and the public.

In early 2014, Nestor Fernandez, who was then working as ITD's Resource Center Manager, began looking for ways to streamline the process.

He spent several years dealing with bureaucratic delays, but it was well worth his effort.

Because he successfully developed a statewide Master Agreement with the railroad.

Now ITD can create a supplemental agreement for each individual safety improvement project.

The agreements are signed at the local level, rather than the corporate level in Omaha, Nebraska.

This allows an agreement to be executed in three to six months, rather than the old process that took two years.

In Fiscal Year 19, we have five projects scheduled in the Rail Safety Crossing program.

Using the new Master Agreement approach for these five projects can create up to 7.5 years of time savings.

In the 11 months that the agreement has been in place we have already seen significant time savings.

Sometimes more than 18 months per project.

District 1 recently completed a \$4.7 million project east of Coeur d'Alene.

They replaced the Wolf Lodge Interchange on Highway 97 over Interstate 90.

The project improved safety and increased vertical clearance, allowing larger trucks to travel on the interstate.

The new interchange has Ultra High-Performance Concrete that provides a strong, durable, and maintenance-free connection for the deck girders.

After the project was completed, the District 1 office was asked to present information on Ultra High-Performance Concrete to a contracting group in Las Vegas.

The project also installed an adaptive lighting system.

When the sensors do not detect a car in the area, the lights are dim.

When they sense a car, it lights up.

This is a compromise between ITD's concerns for safety, and local residents' concerns about protecting the visibility of stars in the night sky.

The brightness of the new lighting changes based on time of day, traffic volumes, and weather conditions.

A project of this size would normally have taken 10 months to complete using conventional cast-in-place construction.

District 1 used the Accelerated Bridge Construction method to expedite construction.

They completed the two-stage project in four months.

This significantly reduced traffic delays for thousands of vehicles every day, approximately 20 percent of which are commercial trucks.

I have some exciting news to share with you about our GIS Team at headquarters.

GIS stands for Geographic Information Systems.

ITD's GIS Team just earned a major award from Esri, the global market leader in GIS software.

They presented ITD with the Special Achievement in GIS, or **SAG Award** on July 11 at the annual Esri User Conference.

This is the 40th award ITD has received so far this year, and it is a big one!

ITD was selected from over 300,000 eligible candidates to receive the award for innovative application of mapping, data analytics, and thought leadership in the field of transportation.

SAG Awards are presented to organizations using GIS to solve some of the world's toughest challenges.

And demonstrating the most groundbreaking and transformative possibilities of GIS software.

What our GIS Team is doing is very complicated.

The information they provide to the department is used to plan, design, build, maintain, and fund all of our infrastructure

To put why we earned the award in a nutshell, our old GIS was based on a system we had used since the 1970s.

It required a lot of double entry.

And was not responsive to realignments or other location changes made to the highway system.

Only GIS experts could enter data into the system.

Our new system allows business users from across the department to enter and edit their own data as changes are made.

For example, someone in the Planning Section can enter data about Federal Aid.

And someone in Roadway Data can enter information on traffic counts.

The new system provides quicker access to data.

Which can then be used by anyone at headquarters or in the districts to make data-driven decisions about planning, project funding, or asset management.

The new system synchronizes our road data.

And allows our GIS team to produce more precise data, analytics, and maps.

The new system provides an outstanding data-stewardship service to the entire department.

The goal is to develop a robust system that will allow someone to go to a marker anywhere on the system, and use a laptop or cell phone to access the most current data on pavement condition, bridge rating, or safety information, such as crash history.

Here is the interesting part about the 2018 SAG award.

ITD did not apply for it.

Esri looked at the work ITD is doing, then sent it to a group of peers for review.

And they nominated us for the award because of the high quality of ITD's road network data for each district.

I think some members of the GIS Team are here in the audience.

If you are, please stand up.

Please join me in applauding them for winning the 2018 SAG Award, and the work they did to earn it.

Last month we received an envelope containing a short letter, which is not unusual.

But it also contained some cash.

We are not sure if it was from someone with a guilty conscience, or was the result of a child getting caught by a parent.

When Blake Rindlisbacher saw it, he came up with a possible new slogan for the department:

Crime does not pay. But ITD does gladly accept cash.

Mr. Chairman and members of the board.

This concludes my July Director's Report.