



Karl, Wade, Gregg, Darwin, Tim, Ben, Bryan and Casey.

Day and night

It's a 24-7 proposition keeping the state highway system operational. But it goes with the territory of the Maintenance Operations Division, led by Manager Ken Hahn.



Ken is a likeable guy and smart. Ask him to explain weight restrictions, salt use, etc., and technical knowledge will flow.

Ken oversees the seven maintenance areas (see area map on pp. 4-5). He also oversees sign, bridge, vegetation and shop programs.

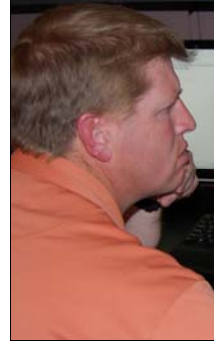
He supervises Dan Hawkins, Lyle Holden, Jeff Eagle, Scott Robinson, Ryan Wright and Kori Hansen. These men form a crackerjack team of foremen who manage field crews.

Ken also supervises Staff Engineer Tracy Bono, Engineer Assistants Randy Drake and Tony Black, and Shop Foreman Ron Miller, each of whom works with him in the District 6 office.

Tracy handles project development such as plans, environmental needs, equipment purchases and innovation. Randy manages sign, bridge, facility, hazardous material and vegetation program areas. Tony manages the District 6 fleet, rental program and vendor contracts, and works with Shop Foreman Ron Miller to ensure that equipment is ready.

District 6 eventually will hire another transportation staff engineer assistant (TSEA) to join Randy and Tony in managing program areas. This is in keeping with ITD's 2020 vision of a more streamlined organization.

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Senior Environmental Planner Tim Cramer and Transportation Staff Engineer Mike McKee.

T. Cramer, M. McKee named ITD professional, engineer of year

Tim Cramer and Mike McKee have been named [Professional of the Year](#) and [Engineer of the Year](#), respectively.

ITD made the announcement Aug. 5. Tim also won the award for excellence in environmental stewardship (see p. 7).

The selections were part of the 2015 Excellence in Transportation Awards competition, with this year's results marking District 6's best showing yet in the annual competition that showcases employee accomplishments.

Tim has worked as District 6's senior environmental planner for 18 years. His knowledge and background have facilitated district construction and

maintenance projects and furthered reliable environmental stewardship.

His strengths include a thorough understanding of federal and state environmental law, especially the National Environmental Policy Act (NEPA), Endangered Species Act, Migratory Bird Treaty Act, Section 106 of the National Historic Preservation Act, and Section 401-404 of the Clean Water Act.

Tim earned a bachelor's degree in biology and a master's degree in forestry, fisheries and wildlife from the University of Nebraska.

Meanwhile, Mike McKee has worked for District 6 approaching eight years, starting as an "engineer in training." He now works as a transportation staff engineer on Design-Construction Team B. Consistently a high-level performer, he has led in three-dimensional (3-D) and four-dimensional (4-D) modeling for improved design and construction, exemplifying innovation, technical expertise and drive.

Mike earned a bachelor's degree in civil engineering from the University of Idaho in Moscow. (See a related story on p. 8.) ■

New organization chart

See the insert inside for a look at the future. It's the new District 6 organization chart, complete with functions and reporting relationships. ITD Operations Chief Jim Carpenter has approved the new structure, which matches that of ITD's other five highway districts. In implementing the new arrangement, the district will ensure that no one loses his or her job or pay. ■

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Ken will assign program areas to the TSEAs, who will plan required work and schedule maintenance personnel to complete it, or will grant maintenance contracts if deemed necessary.

Maintenance Operations cares for 2,315 lane miles of highway, 352 bridges and 271 service vehicles, testing the dedication of each member of the 87-person division, which is District 6's largest.

Cool runnings

"Our first responsibility is plowing snow," Ken declares. "Maintenance sheds were organized, located and staffed to provide winter maintenance."

The division's second responsibility is helping design-construction teams inspect projects and test materials, he says.

Third responsibility – Patch and clean roads, repair and replace signs, spray and mow weeds, level and smooth shoulders, upgrade and service equipment – in other words, fix things.

Fourth duty – Emergency response. (Actually, emergencies trump all other obligations, when required.)

"We assist police and emergency medical technicians (EMTs) at crash scenes as requested," Ken explains. "If necessary, we push wreckage off travel lanes. We want to reopen roads as soon as possible."

"Safety, mobility, economic opportunity – that's our mission," he says.

Think of it this way: If the state doesn't plow the roads, you don't get to work, school, or wherever you're going.

Good times

"This is an exciting time to be in maintenance," Ken says.

He refers to the new horizontal career path for transportation technicians, which is called the Transportation Technician Operations (TTO) program.

This program rewards knowledge, skills and experience gained from training and work with increased



Technicians Reagan Hansen and Darryl Pinnock, of Rigby maintenance, grease mower.

decision-making and accountability. It provides for equitable advancement and improved compensation for technicians, serving transportation technician apprentices, transportation technicians, and transportation technician seniors as they work their way to transportation technician operator (TTO).

"About 92 percent of our technicians met the June 30 deadline for completing Step 1 of the TTO program," Ken says. "Statewide, 70 percent of ITD technicians achieved Step 1."

In connection with the program, ITD raised the statewide winter-mobility goal from 55 to 60 percent, meaning that road surfaces should be free of ice 60 percent of the time during a storm.

As part of the program, ITD is evaluating specific individual performance of technicians, such as arriving early for winter maintenance in inclement weather.

"Crew members need to read and respond to weather briefings," Ken says.

ITD is migrating from a "driver" to an "operator" model, he adds.

"Operators" are proficient not only at driving heavy equipment but also at analyzing and acting on environmental data from weather stations.

"In the TTO world, we expect you to create a maintenance schedule based

on NWS (National Weather Service) predictions," Ken says.

Leaders must recognize and celebrate member and team achievements, he mentions, which is one of the purposes of the TTO program.

Living the dream

What is the best part of leading the division?

"Seeing maintenance personnel succeed," Ken says.

"It's great when employees catch the vision of using technology to enhance their professionalism."

It's also great to see ongoing, competent upkeep, he says.

Maintenance Operations basically sees to the surface of the road – Is it dry? Is it smooth? Is it unobstructed?

That's really what motorists care about.

They want to know "what condition [their] condition [is] in." Remember the Kenny Rogers song?

Roads. Bridges. Equipment.

Patch, repair, refurbish.

Plow snow. Melt ice.

Repeat over and over.

It's maintenance – in all its glorious necessity. ■ (There's more to come.)



Transportation Technician Reagan Hansen mows the U.S. 20 roadside south of Rigby. Mowing reduces snowdrifts in the winter.



Shop Mechanic Darwin Palmer changes out the sander-chain motor on a plow truck.



Robert Holbert, I.F., removes pavement.



Above is the winning construction poster, which summarizes the U.S. 20 Dumpground Rd. to Sheep Falls Rd. reconstruction project.

Dumpground project wins construction award

Wade Allen, Bryan Young, Karen Hiatt, Rich Asbury, Gregg Bowman, Casey Messick, Karl Martin, Darwin Smout, Tim Cramer and Ben Burke won the prestigious construction award in the 2015 Excellence in Transportation Awards competition in Boise this year.

Below are excerpts from their [entry](#):

“Reconstruction of U.S. 20 between Dumpground Road and Sheep Falls Road was a major project along three miles of the Ashton Hill north of Ashton. Project scope was to address water runoff by installing new open graded base and a drainage system to collect and remove water from the roadway while mitigating erosion.”

“Crews installed drop inlets and 23,000 feet of drainage pipe throughout the \$6.5 million project. This was in addition to 16,000 feet of storm sewer and 41,000 cubic yards of drain rock.”

“ITD employed an open graded base and geotextile subgrade separation to mitigate the effect of soils and clay present and vulnerable to heaving.”

“To monitor traffic speed and the impact of construction on the traveling public, ITD used Bluetooth detection, which allowed engineers to track traffic delays. The system provided a comparison of traffic speeds through the work zone before construction, during active construction, and throughout nonworking hours of the project.”

“District 6 placed two detection trailers to detect when wildlife were near or on the road. Developed by District 6, the trailers detect wildlife up to 580 meters (1,900 feet) away in either direction. Detected animals trigger flashing signs, which signal drivers to slow down and stay alert. ITD worked with the U.S. Forest Service and Idaho Department of Fish

and Game to protect motorists and wildlife.”

“Real time data prompted the use of flaggers instead of a pilot car, resulting in a net time savings to the traveling public of 2.5 minutes per trip. Average times through the length of the work zone were reduced from 15 to 12.5 minutes.”

“ITD required the contractor to keep one lane of traffic open in both directions from Friday at midnight through Monday at 6 a.m. The agency worked with the Montana Department of Transportation to place message boards to reroute oversized traffic down Interstate 15 at Dillon, Montana.”

“Good communication among all parties characterized the project. The smooth, well-drained section of new roadway drew numerous positive comments from the traveling public.” ■



Here is the poster for the environmental stewardship category of the transportation competition in Boise, which features area wildlife.

Moose, elk research wins environmental award

Tim Cramer won the environmental stewardship trophy in the Excellence in Transportation Awards competition.

Here are excerpts from his [entry](#):

“In cooperation with the Idaho Department of Fish and Game (IDFG) and the Wildlife Conservation Society (WCS), the Idaho Transportation Department (ITD) conducted a 4-year study to identify primary animal-crossing locations along U.S. 20 and Idaho 87 in Island Park. Teams from IDFG and WCS captured 37 elk and 42 moose, fitting them with radio-transmitter collars to track animal and herd movement. Researchers found that the animals mostly accessed nine stretches along the highways.”

“Federal law does not regulate elk or moose, but state and federal wildlife and land management agencies are obliged to protect their movement corridors, given the importance of

these corridors in preserving ungulate habitat. Highways, roadsides and vehicular speed affect wildlife safety.”

“Vehicle-wildlife collisions on the two highways in Island Park account for 23 percent of all vehicle-wildlife accidents in Idaho. State highways cross known migration routes of the elk and moose as they negotiate the Greater Yellowstone Ecosystem.

“Migrating elk and moose typically cross the roads each spring and fall as they move between summer range in the Island Park Caldera and winter range on the Snake River Plain. Non-migratory moose cross the highways many times during regular movements.”

“Data analysis suggested that overpasses or underpasses that allow wildlife to safely move over or under roads, coupled with detection systems, warning signs, or roadside clearances to alert drivers, would help reduce

vehicle-wildlife collisions throughout eastern Idaho. For now, ITD has installed more wildlife crossing signs along the highways. Other ongoing research and development efforts being conducted in District 6 related to this study are focused on developing mobile infrared camera trailers to detect and warn drivers of large animals in the highway right of way.”

“Automakers recently announced animal-detection systems in upcoming vehicle models, which will warn drivers of large animals in their path. Meanwhile, accurate movement and location data will help future IDFG biologists assess habitat selection and migratory behavior of ungulates in the Island Park Caldera.”

“Results of the investigation enable ITD officials to make informed decisions on vehicle-wildlife collision mitigation, furthering safety and mobility for motorists and wildlife alike.” ■



Stephenie

Alecia

Comings & Goings

New employees are Stephenie Grover, human resource associate, Administration, and Alecia Johnson, transportation staff engineer assistant (TSEA), Residency C.

Departing employees:

Brian Lenz, transportation technician (TT), Ashton maintenance; Andrew Rogers, TT, Ashton maintenance; and Cole Wagoner, mechanic, Shop.

Promotions: Joe Kopplov to TSEA in Residency A, and John Cleveland to TSEA in Residency B.

Retirees: Rich Asbury, TSEA, Residency A, 32 years, and Steve Ball, staff engineer, Residency C, 17 years.

In Memoriam

Robert LeRoy Cleveland, 71, died July 9, 2015. He is the father of John Cleveland, TSEA in Residency B.

Leon L. Williams, 88, died Aug. 12, 2015. He is the father of Troy Williams, project/program lead in Engineering.

District 6 expresses condolences to family and friends. ■

Zero fatalities in these Idaho counties in 2014

<u>District</u>	<u>County</u>
3	Adams
3	Gem
4	Camas
5	Caribou
6	Clark
6	Madison
6	Teton

Way to go eastern Idaho!

Putting new technology to work

Although engineering technology has advanced, it is not always put to good use. A case in point is 3-D modeling, which has been around for years but has not been fully implemented.

“The ability to create 3-D models has been around a long time,” says Staff Engineer Mike McKee. “In fact, since 2006, we’ve had software applications specifically designed to build 3-D models. But little comparatively has been done to employ the applications.”

Mike and Product Manager Derricke Gray, of Bentley Civil Americas, teamed up for a presentation on the benefits of 3-D modeling at the Western Association of State Highway and Transportation Officials (WASHTO) conference in Boise last month. Titled, “The ROI [return on investment] of 3-D Modeling in Transportation,” the presentation discussed the benefits of 3-D technology in highway design and construction.

“What we have found is that even within organizations that are building 3-D models, we are still fitting the

model into traditional 2-D workflows,” McKee explained. “For example, we cut sections from the model and produce average end area earth works. And even though we have a model, our primary means of exchanging project data continues to be plan sets.

“In reality, the technologies have advanced dramatically while our civil processes and business practices have not.

“We have the technology, but generally as an industry we have not made the step to using these technologies efficiently throughout engineering and business workflows.”

“Whether it’s a feasibility study, looking at design alternatives, analyzing traffic movements or obtaining stakeholder buy-in, visualization can be an invaluable tool for many projects,” McKee explained.

“Visualization converts complex technical information into easily understood images or animations and communicates a single, common vision,” he said. “It can detect and eliminate design errors prior to construction.” ■



Citizens review plans for proposed improvements to U.S. 91 between Shelley and York Road. They participated in an open house at Shelley High School Sept. 3. Part of the project is in District 6, but District 5 is handling design, construction and public outreach.