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Western States Rural Transportation Consortium (WSRTC)

Steering Committee Annual Meeting

October 5, 2021

Yreka, California

Meeting Minutes

This document is the official record of the WSRTC Steering Committee annual meeting held October 5, 2021, in Yreka, California, just prior to the 16th Annual Western States Rural Transportation Technology Implementers Forum.

WSRTC Steering Committee Meeting

October 5, 2021

Meeting/WebEx

**Western States Rural Transportation Technology Implementers Forum
Yreka, California**

Meeting Minutes

Prepared by

Leann Koon

Western Transportation Institute, Montana State University

Leann Koon and Sean Campbell welcomed everyone and called the meeting to order at 1:00 PM Pacific Time. Introductions were made by those at the meeting site in Yreka, California, and by those joining via WebEx. Leann reviewed the purpose of the meeting and the planned agenda.

The meeting agenda, presentation, and minutes are posted on the Consortium website at:

<http://www.westernstates.org/Documents/Default.html>.

Western States Forum

Leann Koon provided an overview of the upcoming 16th annual Western States Forum. Seven presentations (12 speakers) are on the agenda. Speakers will come from six different states with several new faces. Leann reviewed the agenda/schedule and expected participation. Those speakers and representatives who were in the meeting shared a quick synopsis of their presentation. Everyone agreed that they were looking forward to the in-person event.

WSRTC Pooled Fund Updates and Discussions

Sean Campbell gave a brief history of COATS and the evolution to the Western States Rural Transportation Consortium. In 1997, Caltrans helped start the Western Transportation Institute. Work in the bi-state (California, Oregon) region around Siskiyou Pass included several early winner projects along with the rural TMCs in Caltrans Districts 1 and 2. The COATS partnership is in its 8th phase with a focus on technology transfer. The WSRTC pooled fund process facilitates several research projects and will soon start a third phase. Sean referred the group to the Consortium website (www.westernstates.org) for a review of the various projects conducted since the start of the COATS partnership.

Sean Campbell reviewed the status of the Pooled Fund and the various Task Orders. He shared and reviewed balance sheets and the FHWA TPF transfer log. All payments have been made. Through the two phases of the WSRTC, 14 Task Orders have been executed with WTI, 2 Task Orders executed with Utah State University, and 1 Task Order executed with Montana Tech. Unused funds have been recycled and put towards additional Task Orders, so the group has made good use of the funds contributed to the

Pooled Fund. The time extension through March of 2023 will allow the dollars remaining in the Pooled Fund Phase II to be fully expended. Thank you to all who helped facilitate approval of the extension.

Currently, there are two active Task Orders. Task Order Montana Tech 1 will cover maintenance for the One-Stop-Shop, Automated Safety Warning System Controller, and WeatherShare Systems. WTI Task Order 14 provides funding to coordinate and run the Western States Forum, as well as providing travel support for Consortium members to participate in meetings such as the National Rural ITS Conference, the Northwest Transportation Conference, ITE, ITS America, etc. The 2022 Forum will be held in June. Other upcoming meetings are listed on the agenda. WSRTC support for participation in World Congress in Los Angeles next year will be dependent on available funds. State representatives noted travel restrictions still in place or recently lifted for states such as North Carolina. Tony Leingang will be speaking at the ITS America meeting in early December in Charlotte, NC.

WSRTC Pooled Fund Updates and Discussions – Phase III

Sean Campbell and WSDOT briefed the group on what is being done to establish Phase 3 of the WSRTC TPF. Commitments will be \$5,000 per year per member state for four years. Caltrans will contribute \$62,500 per year for four years for a total of \$250,000. Total funds available for Phase III will be \$330,000. Sean is working with WSDOT to prepare the Phase III solicitation documents. The solicitation is expected to be available in late 2021 or January 2022. Once he has them, Sean will send the TPF number and link to the group so the states can make their commitments to the TPF.

WSRTC Documents

Sean Campbell shared the DRAFT version of the revised WSRTC Charter. Suggested edits included making it more compact overall, only mentioning COATS as the Foundation for the WSRTC, and funding will be \$82,500 per year. Another suggestion was to meet more frequently to enhance engagement. The group agreed to meet quarterly starting in January 2022; meetings can be a simple check-in, roundtable discussion. Doug Spencer will check with Galen McGill regarding the Northwest Transportation Conference in March. The group also agreed to submit the amended Charter with original signatories. Any additional comments on the Charter are tentatively due January 31st. Sean will finalize the document and send for approval via DocuSign.

WSRTC Projects

Sean Campbell expressed his appreciation, noting that Doug Galarus, Leann Koon, and staff have been the research teams and institutions responsible for most of the projects and tasks conducted through the Pooled Fund. It has been a good team with 23 years of COATS and the WSRTC. Doug and Leann echoed Sean's sentiments.

Doug Galarus reviewed Montana Tech WSRTC Task Order 1, starting with positive comments about his student employees. The Automated Safety Warning System Controller (ASWSC) and the One-Stop-Shop system will be maintained through this project. He noted that this task order is expending remaining Phase II funds as these projects prepare for mainstream deployment. There are separate tasks for Controller and OSS within the Task Order. A second Task Order with Montana Tech is expected to start in January of 2022 to provide ongoing support for the WeatherShare system. Ultimately, the ASWSC and WeatherShare will be handed off to Caltrans for support. The One-Stop-Shop will stay with the Pooled Fund.

The Western States Forum Handbook is a practical, how-to guide for planning and executing the Western States Forum. It has been updated annually and will include information from this year's Forum.

Leann Koon, Sean Campbell, and Jeremiah Pearce discussed Phase 5 of the Professional Capacity Building for Communications project. Two in person, hands-on optical fiber courses will be delivered within the next month. Courses in IP Fundamentals and Advanced IP Networks/Protocols will be delivered online in the coming months, each with 24 students. Last fall, the project team surveyed managers to determine current training needs, and what training needs they anticipate in the future. Staff always need professional capacity building; communications are crucial to ITS – this project has addressed a critical need and has been a great opportunity for Caltrans.

The COATS project has had an impressive run. COATS 8 will be the last phase with funds for future COATS activities going through the TPF Phase III. "God speed COATS."

WSRTC Website, Forum Website

Leann Koon briefly updated the group on the efforts to ensure the Consortium and Forum websites are accessible, including the documents posted on the sites.

Upcoming Meetings

- ITS America, Charlotte, NC, Dec. 7-10, 2021
- NWTC, Corvallis, OR, March 2022 – *just changed to virtual event*
- WSRTC Annual Meeting, Yreka, CA, June 2022
- ITE, New Orleans, LA, July 31-August 3, 2022
- ITS World Congress, Los Angeles, CA, Sept. 18-22, 2022
- NRITS, North Carolina, fall 2022 – *has since been moved to join ITE in New Orleans, July 31 – August 3, 2022.*

Roundtable of Recent ITS Activities

Doug Spencer – Oregon DOT

- Broadband implementation within ODOT – yearlong effort to plan how ODOT will implement broadband services into our projects.
- ATCMTD grant (awarded in 2018) includes nine projects which were reviewed at the last annual meeting. Two innovative projects of note:
 - Cornelius Pass arterial corridor – with Washington County, includes adaptive pedestrian operations.
 - TriMet – transit signal priority with a central approach. Working with a vendor that has more of a black box (vs. a central application) with a goal of having the system centrally operated instead of having all this equipment on the roadside. ODOT IT is investigating feasibility and security.

- Oregon side of Siskiyou Pass – installing variable message signs and variable speed limit signs to slow people down, warn of weather conditions, curve warnings, etc.
- Oregon 62 Bypass in Medford – project to improve incident response along the corridor. Adding variable message signs and calculating/posting travel times so that if there is an incident, people can reroute around the affected area.
- Rose Quarter, Portland – lids on tunnels so that parks, businesses, etc. can be built on top; include ventilation system, fire suppression system, lane management, other active traffic management features. ODOT does not do this work so it will be a challenge to leverage staff and resources to integrate the new systems into the software systems, etc. that ODOT currently has.
- Columbia River Bridge project – need to improve the fiber network and protect from vandalism to make the system robust enough to handle the tolling system that will be implemented and integrated with the current ITS equipment.
- I-84 snow zone project – just found out today that it was awarded the transportation award for small operations project.
- Migration of all traffic signals to the ATC platform –close to completion statewide.
- ITS Division inherited Commerce and Compliance Division (Motor Carrier) for engineering and maintenance of weigh stations and Point of Entries. ITS engineering team is working with an electrical contractor to get weigh stations / scales up to state and national electric code.
- Connected vehicle ecosystem – initiating efforts to hire a vendor to partner with the automobile industry to get ODOT data into vehicles.
- Smart Work Zone research project – joint project between ITS and Traffic Operations to utilize the national standards currently at play with smart work zones.

Seth Daniels – Nevada DOT

- Large expansion of Active Traffic Management System
 - Full color, full width DMS in Las Vegas area
 - Coordinated signals
 - 10 more gantries to support the rebuild of the Tropicana Interchange which services Allegiant Stadium and other event facilities.
 - Along Nevada 95 to the west of I-15; ATC / MTD grant; wrong way driver systems, elevated highway patrol stations, Waycare and enhanced freeway services.
- Wrong-way driver systems – Rick Tydeman will present what NDOT is working on at the Forum tomorrow.
- TSMO – working through plan. Reorganized traffic operations division. Seth works mostly with the technology and program side. Working on a large smart mobility plan with IT support vendor Gartner. Securing funding and developing framework for this. The work that Jim Whalen has presented on in the past including upgrading all switches and network topology will support the smart mobility plan.
 - Added a TSMO element to all job descriptions to integrate and develop the specialty ITS workforce.
 - Assisting districts with the state asset management system to better provide performance-based data, including real-time reports of systems status, maintenance, and accurate inventory of what is going onto the roads, etc.

Jim Whalen – Nevada DOT

- Will soon start a reorganization project to move the state microwave group from the state IT department to traffic operations.

- Asset inventory initiatives – expansion and improved management of fiber optics infrastructure statewide, including infrastructure sharing and joint construction projects. E.g., Company installing conduit along US 395 from the California border down into Reno. NDOT giving access to conduit and pull boxes along SR 439 and this company will let NDOT use new multi-duct conduit / pull boxes / splice boxes along US 395 to help support the broadband initiative in the state of Nevada. Also working with Southwest Gas on their trenching projects in support of fiber network expansion.
- Implementing a new GIS based inventory system for all their fiber optics which will involve going out, finding and relocating all the fiber that has been deployed. Will support asset inventory with performance grades, track uptime, lifecycle costs, performance-based budgeting, etc.
- Connecting the Big Switch Data Center in Las Vegas into the NDOT network.
- Establishing industry partnerships for fiber sharing; started slow but is really gaining steam now.
- Added that NDOT has also had problems with vandalism. Compare notes with ODOT / Doug Spencer.

Kevin Maxwell – Nevada DOT

- Related to fiber network, Eric McGill is working on a test pilot project that hooks into the Las Vegas hubs to send a fiber trace all along the network to track active congestion, etc. Looking forward to seeing what kind of data they can get.
- Related to fiber conduit, electronics teams are calling USA Dig before construction for marking but they don't locate any sort of NDOT infrastructure for electronic fiber, which can pose difficulties during construction. Jim's teams with the GIS based inventory project are working with contractors to survey and locate that fiber infrastructure.
- Adaptive lighting project (Eric McGill) for approaching vehicles.
- Wrong – way driver project (Rick Tydeman)
- Truck parking area – advanced queue and availability notifications for upcoming rest areas, etc.
- Small cell business plan development so prepared when 5G comes out.

Tony Leingang – Washington State DOT

- Adopted TSMO plan; some early winner projects and initiatives, including establishing TSMO sub-committee on Smart Work Zones.
- A working group of 20-30 people is meeting monthly to push out an updated traveler information page with many new features for the public facing site.
- Working on a pre-plan detour system in the GIS environment to help improve incident response and management.
- Virtual Coordination Center with CAD, cameras, information sharing, etc.; “situational awareness on steroids”.
- Working with the Northwest Passage group for a truck platooning project along I-90.
- One of 13 federal demonstration grantees for the work zone data exchange; developing a translator. Applied as lead state for the North/West Passage Transportation Pooled Fund.
- Every Day Counts 6 Initiative
- Weigh station parking project

Tyler Laing – Utah DOT

- Making good headway upgrading the state CCTV network from analog to digital; developed a universal decoder that can handle both analog and digital video inputs and have been deploying that throughout the state.

- An RFQ will be released soon to replace the 20-year-old ATMS for the Traffic Operations Center.
- Working through process and identifying funding to replace DSRC units with cellular versions of roadside units.
- The Variable Speed Limit system between Salt Lake City and Park City is being upgraded, automated, and expanded. The new system will facilitate recommendations and decisions based on weather and not just speeds.
- Deployed a new Variable Speed Limit system in southern Utah along I-15 as well. Looking for other areas for VSL system expansion.
- Recently kicked off a contract with Kimley Horn to develop an asset management system for UDOT. Will help answer questions with data, better tell the benefits story, improve life cycle management, etc.
- Have received federal funding for rural fiber projects. Installing 100 miles of fiber along I-70 in southern Utah towards the Colorado border; deploying ITS elements along a rural stretch of I-84 between Utah and Idaho to improve coverage.
- Funding from the American Recovery Act for broadband especially in rural areas since urban areas are well-covered.
- Started a fiber sensing pilot project to sense traffic, etc. Currently identifying locations, best places for installation, issues, etc.
 - Doug Spencer mentioned that they did a similar project about 20 years ago and did not have success. Tyler would be interested in exchanging notes.
 - Seth Daniels mentioned a similar project by a company called OptaSense.
 - Sean Campbell noted that California is using fiber to detect earthquakes.
 - Michael Villnave indicated that North Dakota was working on fiber sensing. He will share a presentation about the project with the group.
- Kicking off a research project to evaluate and quantify the effectiveness of ITS on Utah roads.
- Tyler is on a NCHRP panel to develop crash modification factors for ITS applications ([NCHRP 17-95](#)).
- Utah DOT Director's goal is to have full situational awareness of everything on the road. Have established an ITS Master Plan with GIS, data, and analytics components and focus areas.
 - Karthik Murthy asked if Kimley Horn was also doing the ITS Master Plan. UDOT is doing their master plan in house. WSDOT also shared theirs with UDOT.

Jeremiah Pearce – Caltrans, District 2

- Installation of the Controller system was delayed due to the Dixie Fire this summer. Will report next year.
- Finishing construction work on the North Canyon TMS project which expands the microwave backbone from Sugarloaf Mountain to Mount Shasta and eventually all the way to Yreka. Hope to have the site turned up before winter.
- The Rural Research Program is kicking off an exercise to develop a road map to define the program for the next 5 years. Considering ideas such as a new family of projects for connected and automated vehicles or studying the realities of implementing ITS in some of the very remote areas of California with no connectivity or cellular coverage.
- Work has started on upgrading the Field Element Network core.
- Upgrading all CCTVs to digital. Research project conducted in parallel with what the District is doing since the pool of analog cameras is getting thin.

- A project to add a 6th lane through Redding is in the environmental phase and will move to design soon. Part of that project will address queuing challenges when I-5 closes at Fawndale. Some ideas that have been put forth include signed bridges (move trucks off road or leave them queued in #1 lane), travel time / chain delay system (potential WSRTC incubator project), and variable speed limit signs through queuing areas.
 - Jeremiah asked Doug Spencer about the VSL signs on Siskiyou Pass. Doug can share the plans and what they look like from an operations standpoint.
 - Tyler asked whether ODOT was using black on white or another color combination for regulatory signs.
 - Doug indicated that they have two systems. In the Portland area, they use yellow on black for advisory speeds. Other locations, such as US 97 south of Bend and the Siskiyou Pass signs are full matrix, full color, and operators can program in about 100 different messages. In addition to variable speed limits, the system can be used for different things such as lane management during incidents. Regulatory speeds look just like regulatory speeds but it is a VMS sign.
 - Tyler followed up indicating that UDOT's first round of VSL signs were cutouts with white LEDs for the digits. Given usage was generally in the winter in snowy conditions, they changed the lights to an amber LED. However, there were questions about meeting MUTCD guidelines; Wyoming did the same. Tyler asked for discussion on what other states were doing. ODOT used a larger display that looks and feels just like a VMS sign; more expensive but they can also be used for a variety of ATM operations. Nevada DOT also used full color, full matrix, MUTCD compliant signs.
 - Doug Spencer and Galen McGill will be presenting on the ATM software at an upcoming CTSO ITS meeting. Doug also mentioned that Blaine VanDyke and Michael Burkhart presented the ATM software with the sign specifications at the 2018 Forum (http://www.westernstatesforum.org/Documents/2018/Presentations/ODOT_VanDyke_Burkart_FINALb_ActiveTrafficManagement.pdf).

Sean Campbell – Caltrans Division of Research, Innovation, and System Information

- DRISI is shifting focus and mission to align with the Department, focusing more on safety, equity, and connected vehicles, and moving away from ITS. Last year, there were approximately 125 research proposals for \$3 million to \$4 million so the competition for funding is fierce.
- After devastating California wildfires, power utility company has implemented public safety power shutdowns when red flag conditions occur. Caltrans has been trying to mitigate the effects of the shutdowns by placing gensets, etc., which is becoming a significant maintenance challenge. Alternative systems are being investigated, including fuel cells. Sean and his team are starting a fuel cell research project with a Folsom, California company – 4 sites, 2 signalized intersections, ITS node, and CMS; 1 -5 Kw systems; 70-80 hours of run time per fill; \$30,000 - \$40,000 per system; cabinet footprint like a 334 cabinet. Kevin Maxwell is interested in the results of this project.
- Headquarters is developing another round of ATMS specifications, combining multiple stand-alone systems.
- Major changes in Headquarters Electrical office with the retirement of every senior. Some of the positions are being downgraded to regular electrical engineer positions.

Announcements

Sean Campbell thanked everyone for their support of the rural research program and the Western States Rural Transportation Consortium. He added that there is a good program for the Forum over the next couple of days.

Forum presentations will be posted after the event. As of now, plans are proceeding for the 17th Annual Western States Forum in June of 2022.

With thank you's, the meeting was adjourned.

Action Items

<u>Item</u>	<u>Deadline</u>
1. Information regarding attendance at the ITS America meeting in North Carolina will be sent to the group.	Early November 2021
2. Doug Spencer will check on plans for the Northwest Transportation Conference in March of 2022.	After this meeting
3. The Charter document will be updated, and then sent for final approval and signatures.	January 31, 2022
4. Sean Campbell and Tony Leingang will complete and submit the solicitation documents for Phase 3 of the WSRTC Transportation Pooled Fund to the FHWA. Sean will notify the group when the solicitation is active and share the TPF number and link so the states can make their commitments to the TPF	Late December 2021 or January 2022
5. Schedule next meeting.	January 7, 2022
6. Michael Villnave will share documentation on North Dakota's fiber sensing project.	After this meeting
7. Doug Spencer will share the plans and what the VSL signs on Siskiyou Pass look like from an operations standpoint.	After this meeting

Meeting Participants

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