Program Development

PLANNING
PROGRAMMING
ASSET & PERFORMANCE MANAGEMENT
RESEARCH
GRANTS & IMPLEMENTATION
STIP Workshop in GIS

Who: UDOT, Commission, Legislature
What: State Transportation Improvement Plan
Where: Statewide
Why: To plan out projects in phases so that we can ensure we have the funding for the infrastructure needs we are facing, to ask for money if we need it
How: Region buy in and project entry
Corridor Planning Process
http://gis.bio-west.com/corridorplanning/

Who: UDOT planning & regions
What: Corridor plans and project creation
Where: Utah, as needed
Why: Understanding the vision of how we want to use a road will allow us to make strategic decisions about projects. Including cities will allow impacts to their system to be mitigated/planned for.
How: Data collection, defining context, goals, strategies, evaluation and communication
Central planning assists the regions through the first 5 steps.
I-80 Corridor story map
28 Projects were selected

- 3 Materials
- 5 Maintenance
- 7 Traffic Management & Safety
  - 3 Structures
  - 1 Preconstruction
  - 2 Planning
- 2 Data Analytics

141 PEOPLE ATTENDED!
Who: Planning Dept.
What: Freight information distribution
Why: UDOT has freight movement in mind during project planning and selection. Showing the community that we do think it is important.
Who: Planning Dept.
What: Freight information distribution
Why: UDOT has freight movement in mind during project planning and selection. Showing the community that we do think it is important.
Bike & Pedestrian Count Manuel

Who: Planning Dept.
What: Active Transportation guidance
Why: All modes of transportation need to be considered and planned for. Guidance on good design will ensure a system that gets used.
Reconstruct Pavement story book

Who: Pavement asset group
What: Project planning
Why: Good roads cost less
Trip and Mode Share
http://www.avenueconsultants.com/apps/district_trips/

Who: UDOT leadership
What: Mode and Destination
Where: Wasatch Front (urban)
Why: To better understand how people move and where they go. This allows for stake holders and leaders to understand real time needs and compare situations to understand prioritization.
How: 2012 house hold survey or 2040 travel demand model
Innovations & Efficiencies Report

New interactive format with categories and tags for ease of use.

Who: All UDOT employees
What: Innovative ideas
Why: Showcasing innovation will foster more innovation. Presenting ideas will help others implement innovations.
MAST ARM VIBRATION REDUCED WITH DAMPER

Wind loadings can be a significant concern for traffic signal mast arms, resulting in mast arm tips oscillating by as much as six feet. UDOT tested a self-contained vertical dampering device during the summer of 2016. The testing showed a reduction in signal mast arm vibration of 80%–90%. The benefits are less fatigue on mast arms, resulting in a longer life cycle and enhanced safety for the traveling public.

Links to media

Submission of new ideas!
IN THIS ISSUE

RESEARCH HIGHLIGHT:
"How can we improve assessment of liquefaction and lateral spread potential?" New Utah County maps available and more to come. [p. 4]
"Are there temperature benefits to dark concrete?" Results are in from an analysis of pavement sensor data to identify changing parameters. [p. 3]

UPDATE:
"UTRAC"Results of the annual UDOT Research Workshop (UTRAC) held March 20th. [p. 2]

INNOVATION:
"Improving Flow Wing Visibility" Immediate actions taken for increased safety. [p. 6]
"How many new innovations can UDOT implement?" Summary of TRB idea implementations for 2017. [p. 9]
"2016 Innovation and Efficiencies Report" What did UDOT do last year to innovate and improve? [p. 5]

NATIONAL INNOVATIONS

FUNDING OPPORTUNITIES

WEBINARS

ACCESS UDOT RESEARCH:
www.udot.utah.gov/qa/research

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A MESSAGE FROM THE RESEARCH DIRECTOR
By Cameron Kergaye, PhD, PMP, PE

The Research Division hosted a successful UTRAC workshop last month and selected 22 problem statements for research funding. There was record attendance this year and a new subject area (Data Analytics). Jonathan Johnson, Chairman of Overstock, gave a powerful keynote address about the principles of innovation and the need to invest in research. In this newsletter, we are announcing the new round of projects approved by our research council. Project teams will soon assemble and work towards contracting with principal investigators as early as July 1st.

Jonathan Johnson (Chairman of Overstock) as UTRAC keynote speaker.

The South Dakota DOT will visit UDOT in early May to learn about some of UDOT's advances and to discuss common challenges and innovative solutions. Approximately 35 transportation professionals will travel together by bus to meet their counterparts here at UDOT. Topics to be addressed include 3D design, web-based bidding, signal performance monitoring, variable speed limits, LiDAR applications and other innovative and technical areas. The Research Division has scheduled numerous peer-to-peer meetings on May 3rd. Additional UDOT employees may attend by contacting the Research Division.

The Research Division is also supporting the International Conference on Ecology and Transportation that takes place May 14-18 in downtown Salt Lake City. This biennial conference is co-hosted by UDOT and WYDOT and addresses a broad range of ecological issues related to transportation. While we have completed several important environmental projects recently, this is an opportunity to learn from other national leaders in the field.

Finally, a completed UDOT research project on Cold In-Place Recycling of Asphalt Pavements has been submitted for the AASHTO western region High-Value Research solicitation. Research selected for this recognition will be highlighted in national publications and displayed at the next TRB Annual Meeting.
UDOT Funding 101
Where does our money go?
Who: Research team

What: Quarterly newsletter

Where: Udot.utah.gov/ program development/ research/ newsletter

Why: The format of this newsletter was updated to engage the reader and provide information in an easy to quickly understand format.
Peer Exchange

**Who:** Research team

**What:** Peer Exchange

**Where:** Udot.utah.gov/program
development/research/reports

**Why:** Improve business practice and products
Socrata & UDOT measures

Who: UDOT division leaders
What: Creating UDOT measures
Where: Socrata Platform
Why: Goal setting, role evaluation, reporting, transparency.
Chairman notices

Who: Chairman
What: Notice letter of meeting
Where: Statewide
Why: To get better attendance and have fewer scheduling issues.
How: Chairman sent letters to people telling them to attend
**Who:** ePM

**What:** Pin tracking

**Where:** Statewide

**Why:** Tracking the cycle of pins as they are incorporated into other pins. Tracking where the money is going and coming from.
**Airport Capital Improvement**

**5 year plan**

**Utah Department of Transportation - Division of Aeronautics**

**DRAFT Statewide Airport Capital Improvement Program (ACIP 2018-2022)**

For review and comment at the May 2017 Transportation Commission Mtg.

**SORT BY YEAR** 5-year ACIP is for planning purposes only. Individual project funding is not assured until grants are issued.

<table>
<thead>
<tr>
<th>Year</th>
<th>Airport</th>
<th>Project Description</th>
<th>Funding Source</th>
<th>Discretionary</th>
<th>State Apportionment</th>
<th>Entitlements</th>
<th>State</th>
<th>Spa</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Blanding Municipal</td>
<td>Rehab Runway/EME/Connector TW Y</td>
<td>Federal AP</td>
<td>$1,200,000</td>
<td>$91,000</td>
<td>$31,015</td>
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<td>2017</td>
<td>Brigham City Municipal</td>
<td>TW YEH &amp; Possible Run Up Area (St, Ext)</td>
<td>Federal AP</td>
<td>$300,000</td>
<td>$31,015</td>
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<tr>
<td>2017</td>
<td>Cedar City-Regional</td>
<td>Prairie Dog Fence &amp; Apron &amp; TW Y C Design (AP-32)</td>
<td>Federal AP</td>
<td>$293,000</td>
<td>$31,015</td>
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<td></td>
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<tr>
<td>2017</td>
<td>Cedar City-Regional</td>
<td>Rehabilitate Apron &amp; TW Y C (AP-22)</td>
<td>Federal AP</td>
<td>$1,089,865</td>
<td>$31,015</td>
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<tr>
<td>2017</td>
<td>Delta Municipal</td>
<td>Editor Rwy Y-1738</td>
<td>Federal AP</td>
<td>$30,000</td>
<td>$4,005</td>
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<tr>
<td>2017</td>
<td>Duchesne Municipal</td>
<td>AV OSEI</td>
<td>Federal AP</td>
<td>$200,000</td>
<td>$1,000</td>
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<tr>
<td>2017</td>
<td>Ecliptic Municipal</td>
<td>Extend Control &amp; Fencing</td>
<td>Federal AP</td>
<td>$375,000</td>
<td>$19,127</td>
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<tr>
<td>2017</td>
<td>Eストラム Municipal</td>
<td>Extend Control &amp; Fencing</td>
<td>Federal AP</td>
<td>$300,000</td>
<td>$16,000</td>
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<tr>
<td>2017</td>
<td>Hakkalls</td>
<td>Replace Airport Drainage, Add PAV &amp; Wind Socks (Both Ends)</td>
<td>Federal AP</td>
<td>$300,000</td>
<td>$20,000</td>
<td></td>
<td></td>
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<tr>
<td>2017</td>
<td>Habor City Municipal</td>
<td>Apron Expansion Reimbursement (REO)</td>
<td>Federal AP</td>
<td>$300,000</td>
<td>$33,333</td>
<td></td>
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</tr>
<tr>
<td>2017</td>
<td>Hurricane</td>
<td>Rwy, Rwy Rehab &amp; TW Y (265, East)</td>
<td>Federal AP</td>
<td>$300,000</td>
<td>$16,000</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>Kanab Municipal</td>
<td>Rwy Y Mill and Overlay/Preservation (Design)</td>
<td>Federal AP</td>
<td>$190,000</td>
<td>$7,734</td>
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<tr>
<td>2017</td>
<td>Logan-Cache</td>
<td>NW Apron Rehab</td>
<td>Federal AP</td>
<td>$800,000</td>
<td>$41,355</td>
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<tr>
<td>2017</td>
<td>Logan-Cache</td>
<td>Taxiway G Throat &amp; Rehabi</td>
<td>Federal AP</td>
<td>$1,000,000</td>
<td>$150,000</td>
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<td></td>
<td>$150,000</td>
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</tr>
</tbody>
</table>

**Who:** Aeronautics  
**What:** 5 year project plan  
**Where:** Statewide  
**Why:** Planning projects for the airports in Utah.
Who: UDOT, Federal, State, Private
What: Grant information and tracking
Where: Statewide
Why: Finding available grants and tracking applications helps UDOT be successful in competitive grants.
Who: Planning Dept and trucking industry

What: Creating a plan for the cross roads of the west

Why: UDOT is a major pass for goods out of the coast. Having adequate facilities in good locations keeps people safer.
## FHWA Reporting Requirements

**Who:** UDOT Divisions

**What:** Measures to report on from the FAST ACT

**Where:** Statewide

**Why:** FHWA requires certain aspects of business to be monitored and maintained at a minimum standard

<table>
<thead>
<tr>
<th>Performance Measure Topic</th>
<th>FHWA Measures</th>
<th>UDOT SD Measures &amp; Targets</th>
<th>Measures reported other locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Number of fatal or reduce $\frac{2}{3}((5 \text{ or more})$</td>
<td>Number of Fatal or reduce $\frac{2}{3}((5 \text{ or more})$</td>
<td>Number of fatal or annual</td>
</tr>
<tr>
<td>Rate of Fatal or (per 100M YMT)</td>
<td>Number of fatal or reduce $\frac{2}{3}((5 \text{ or more})$</td>
<td>Rate of Fatal or (per 100M YMT)</td>
<td></td>
</tr>
<tr>
<td>Rate of non-fatal or (per 100M YMT)</td>
<td>Number of non-fatal or reduce $\frac{2}{3}((5 \text{ or more})$</td>
<td>Rate of non-fatal or (per 100M YMT)</td>
<td></td>
</tr>
<tr>
<td>Infrastructure Condition (Pavement &amp; Bridges)</td>
<td>Percentage of pavement (lane miles) in good &amp;</td>
<td>Percentage of pavement (lane miles) in good &amp;</td>
<td>Percentage of pavement (lane miles) in good &amp;</td>
</tr>
<tr>
<td>Traffic Congestion Delay per Capita</td>
<td>Percent of Non-SOF travel</td>
<td>Percent of Non-SOF travel</td>
<td>Percent of Non-SOF travel</td>
</tr>
<tr>
<td>System Reliability</td>
<td>Percent of Person Miles Travelled that are reliable</td>
<td>Percent of Person Miles Travelled that are reliable</td>
<td>Percent of Person Miles Travelled that are reliable</td>
</tr>
<tr>
<td>Freight Movement and Economic Vitality</td>
<td>Truck Travel Time Reliability (TTTR)</td>
<td>Truck Travel Time Reliability (TTTR)</td>
<td>Truck Travel Time Reliability (TTTR)</td>
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<tr>
<td>Environmental Sustainability</td>
<td>Percent change in taxi or truck DOE emissions on the NH</td>
<td>Percent change in taxi or truck DOE emissions on the NH</td>
<td>Percent change in taxi or truck DOE emissions on the NH</td>
</tr>
<tr>
<td>Reduced Project Delivery Delays</td>
<td>Who implemented an streamlined project delivery?</td>
<td>Who implemented an streamlined project delivery?</td>
<td>Who implemented an streamlined project delivery?</td>
</tr>
</tbody>
</table>

*Grants & Implementation*
Project Selection Prioritization

**Who:** Performance Management & Asset

**What:** Project selection

**Why:** Select better projects at the right time
Website Improvements

Who: Program Development
What: Website
Why: So stuff is easier to find and relevant
**Meeting List**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Organization</th>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 MAT Tour Planning</td>
<td>Project</td>
<td>Various</td>
<td>Active Transportation</td>
<td>Monthly</td>
</tr>
<tr>
<td>Active Transportation Committee</td>
<td>Committee/Board</td>
<td>WRC</td>
<td>MPO/RPO Coordination</td>
<td>Six times a year</td>
</tr>
<tr>
<td>Active Transportation Design Video (UDOT UI)</td>
<td>Project</td>
<td>UDOT</td>
<td>Active Transportation</td>
<td>Bi-weekly</td>
</tr>
<tr>
<td>Active Transportation Research Updates</td>
<td>Other Meeting</td>
<td>UDOT</td>
<td>Active Transportation</td>
<td>Quarterly</td>
</tr>
<tr>
<td>ADA Ped Barn</td>
<td>Other Meeting</td>
<td>UDOT</td>
<td>Active Transportation</td>
<td>Monthly</td>
</tr>
<tr>
<td>ADA Ped Barn</td>
<td>Committee/Board</td>
<td>WRC</td>
<td>MPO/RPO Coordination</td>
<td>Monthly</td>
</tr>
<tr>
<td>Air Quality Committee</td>
<td>Committee/Board</td>
<td>UDOT</td>
<td>Air Quality</td>
<td>Variable</td>
</tr>
<tr>
<td>Alternative Fuels/Electric Vehicles</td>
<td>Project</td>
<td>UDOT</td>
<td>Active Transportation</td>
<td>Variable</td>
</tr>
<tr>
<td>AT Tactical Implications Meeting</td>
<td>Other Meeting</td>
<td>Various</td>
<td>Active Transportation</td>
<td>Quarterly</td>
</tr>
<tr>
<td>AT Update for Shame</td>
<td>Other Meeting</td>
<td>UDOT</td>
<td>Active Transportation</td>
<td>Quarterly</td>
</tr>
<tr>
<td>AT Website Updates</td>
<td>Project</td>
<td>UDOT</td>
<td>Active Transportation</td>
<td>Bi-weekly</td>
</tr>
<tr>
<td>Bear River Rural Planning Meetings (TAC and RPO Board)</td>
<td>Committee/Board</td>
<td>BRAG</td>
<td>MPO/RPO Coordination</td>
<td>Quarterly or as needed</td>
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<tr>
<td>Bike Utah - State of the State</td>
<td>Other Meeting</td>
<td>Various</td>
<td>Active Transportation</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Cache MPO TAC</td>
<td>Committee/Board</td>
<td>CNPO</td>
<td>MPO/RPO Coordination</td>
<td>Monthly</td>
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<tr>
<td>Dixie MPO TAC</td>
<td>Committee/Board</td>
<td>Dixie MPO</td>
<td>MPO/RPO Coordination</td>
<td>Monthly</td>
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<tr>
<td>Dixie MPO Transportation Executive Council</td>
<td>Committee/Board</td>
<td>Dixie MPO</td>
<td>MPO/RPO Coordination</td>
<td>Monthly</td>
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<tr>
<td>First/Last Mile UTA</td>
<td>Project</td>
<td>UTA</td>
<td>Travelwise</td>
<td>Bi-weekly</td>
</tr>
<tr>
<td>Foothill Boulevard Study</td>
<td>Project</td>
<td>UTA</td>
<td>Intermediate/Consultative Planning</td>
<td>Bi-weekly</td>
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<tr>
<td>GoodLife Board Meetings</td>
<td>Committee/Board</td>
<td>Private/Non-Profit</td>
<td>Intermediate/Consultative Planning</td>
<td>Monthly</td>
</tr>
<tr>
<td>Google sheet</td>
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</tr>
</tbody>
</table>

**Who:** Utah stakeholders  
**What:** Meeting frequency & times  
**Where:** Utah  
**Why:** To know when/ if there is a meeting with a group. To know who attends those meetings, to add issues and or request information from them.