2017-2022 TIP
Board Modification #8

Trans Com

June 15, 2017

Ben Wuthrich

Wasatch Front Regional Council

2017-2022 Transportation Improvement Program (TIP) (Amendment Eight)

Board Modification

Funding Exchange

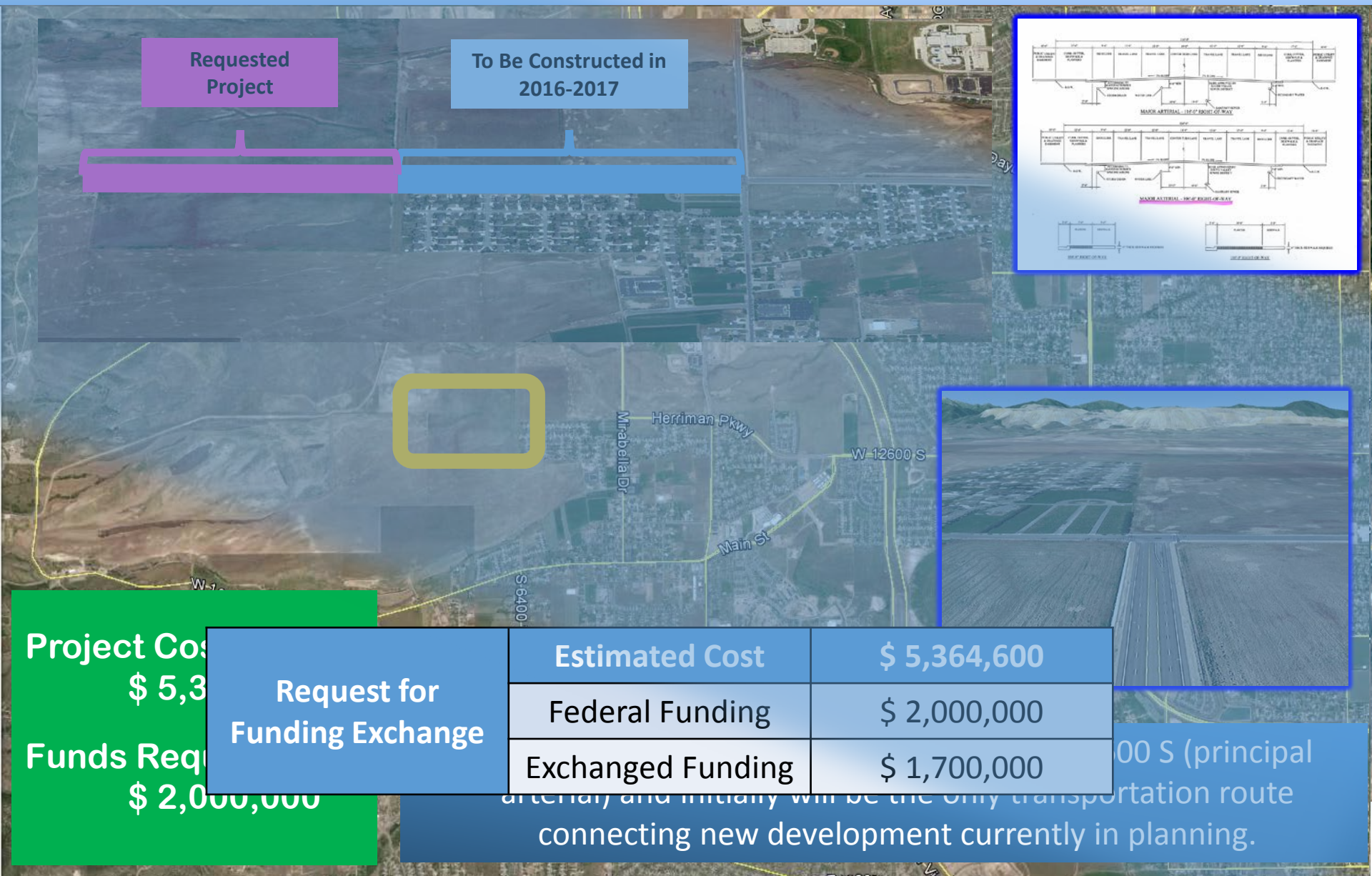
Salt Lake/ West Valley Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Salt Lake	Herriman	Herriman Parkway	14937	Herriman Parkway; 6400 West to 6800 West	New Construction - 5-lane facility with shoulders, curb, gutter, and sidewalks	STP_URB_SL (STP - Urban Area Salt Lake/ West Valley (WFRC))	$5,364,600	$2,000,000	***Exchanged Funding***	**$1,700,000**	2017
						ST_GF_TIF (General Fund - Transportation Investment Fund)		$0			

This project will construct the next section of the 5-lane facility with shoulders, curb, gutter, park strips, and sidewalks. By exchanging the $1,700,000 of State funds for the $2,000,000 of Urban Surface Transportation Program (STP) federal funds, Herriman will be able to advance the project and utilize other city and local resources without federalizing all participating funding and components of the new facility and surrounding infrastructure.

Herriman Parkway; 6400 West to 6800 West

New Construction – 5-Lane Facility



Project Cos
$ 5,3

Funds Req
$ 2,000,000

Request for Funding Exchange	Estimated Cost	$ 5,364,600
	Federal Funding	$ 2,000,000
	Exchanged Funding	$ 1,700,000

00 S (principal
arterial) and initially will be the only transportation route
connecting new development currently in planning.

TIP

Transportation Improvement Program is . . .

1. Six Year Program of Highway & Transit
   - Four Years Funded - Two Years Concept
2. In the Urban Areas
   - Salt Lake/ West Valley - Ogden/ Layton
3. Funded by
   - Federal, State, & Local Programs
4. For All Cities, Counties, UDOT & UTA

Transportation Improvement Program <u>will . . .</u>

1. Implement the Long Range Plans
    - Highwa jects for the Region
2. Help Meet t ge Needs
    - Of the \ t Area
3. Provide for the Maintenance
    - Of the Existing Transportation System

Transportation Improvement Program Contains . . . .

- Lists of Projects
- Including;
  - New Construction
  - Rehab & Maintenance
  - Safety/ ITS
  - Transit, O & M
  - Pedestrian & Bike

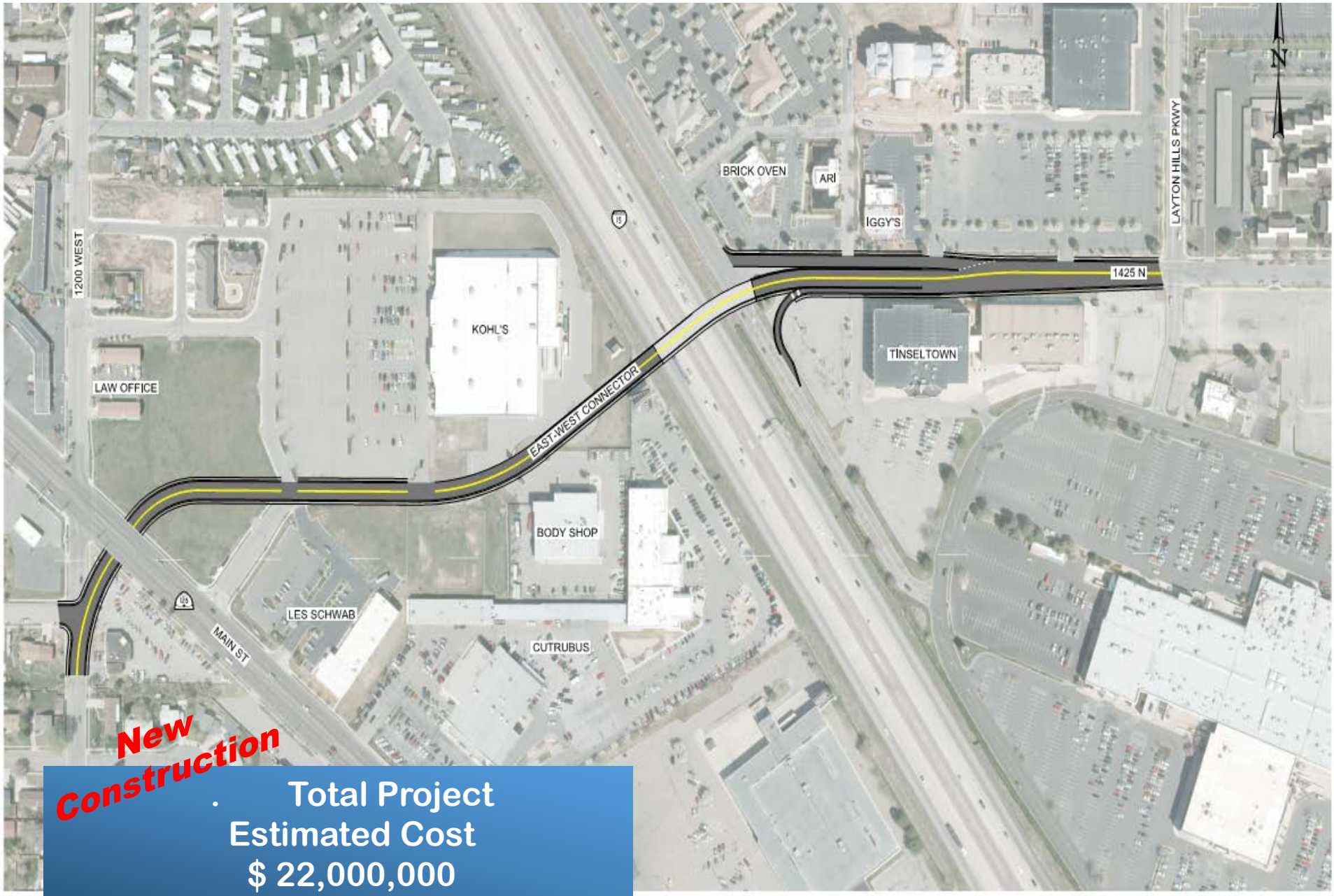
Projects in the TIP:

- Represent $ Millions
- Thousands of Jobs
- Economic Growth & Development
- Mobility/ Access
- Preservation of Life
- And Promote the Quality Of Life

Federal Law Requires:

- Financially Constrained
- Conform To Air Quality
- Reviewed By the Public
- Approved by Regional Council

Davis County – Layton I-15 Crossing; SR-126 (Main Street) & Hill Field Road
New Construction

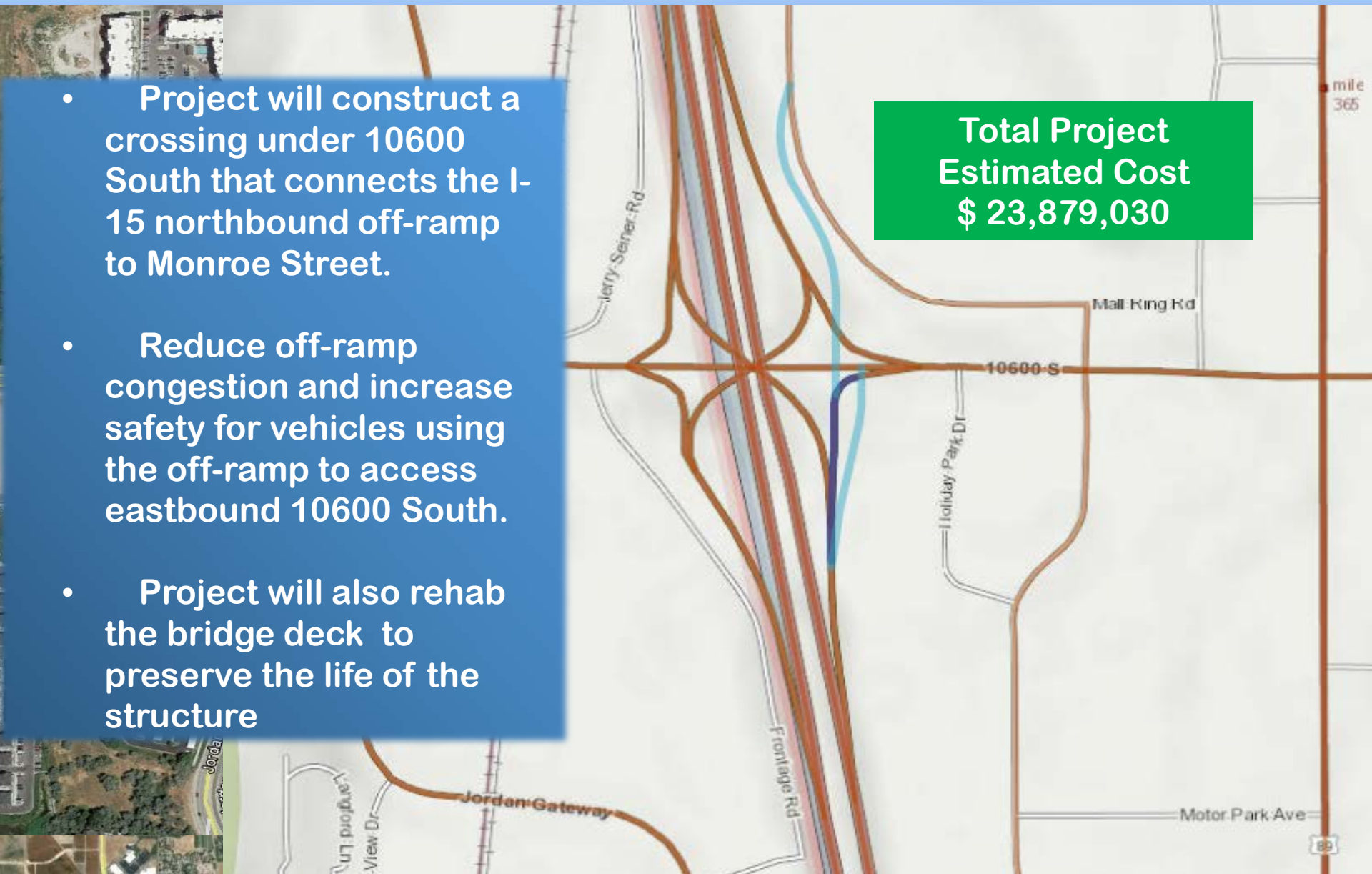


Total Project
Estimated Cost
$ 22,000,000

Salt Lake County – I-15; I-15 Northbound & 10600 South Interchange Improvements

- Project will construct a crossing under 10600 South that connects the I-15 northbound off-ramp to Monroe Street.
- Reduce off-ramp congestion and increase safety for vehicles using the off-ramp to access eastbound 10600 South.
- Project will also rehab the bridge deck to preserve the life of the structure

Total Project Estimated Cost
$ 23,879,030



TIF Bond Funding Recommendations (May 2017)

Pin	Transportation Investment Fund Projects	Current Amount	Est FY18	Est FY19	Est FY20	Est FY21	Est FY22	Est FY23	Est FY24	Est FY25	Const. Year	TIF Total
8314	SR-85, MVC; 5400 South to 4100 South	133.197	13.691	20.000							2016	133.197
10266	Provo/Orem Transportation Improvement Project	12.741									2016	12.741
10491	I-15, 2700 N (Farr West) to 1100 S (Brigham City)	25.748									2016	25.748
10603	Bangerter Highway Interchange at 600 W	46.087	6.655								2016	46.087
10689	SR-68; Centennial Blvd to Pioneer Crossing	3.918	3.854								2017	3.918
11203	SR-68; Bangerter Hwy to 12600 S	37.000	12.623								2017	37.000
11438	I-15; MP 37 to MP 42, Add NB Climbing Lane	15.000	2.000	8.000	5.000						2019	15.000
11454	SR-7; Warner Valley to Washington Dam Road	5.804									2017	5.804
11467	I-15; MP 22 to MP 28, Add NB Climbing Lane	25.000	12.47	11.760							2018	25.000
11477	SR-108; SR-127 to SR-107	50.000	11.35	2.437							2017	50.000
11481	SR-108; SR-37 to SR-79	2.000									2016	2.000
11827	I-15 Northbound, 10600 S. Interchange Improvement	9.600	5.500								2017	9.600
11979	US-191; Passing Lanes MP 82.1 to 96.2	6.000	4.840								2018	6.000
11982	SR-85; Mountain View Corridor, SR-73 to 2100 N	49.750	40.104								2017	49.750
12158	I-15; Lehi Main to SR-92, Technology Corridor	450.000	110.000	157.000	159.383						2018	450.000
12566	4 Interchanges on Bangerter Highway	201.068	97.646	33.650							2016	201.068
12587	I-15 SB; 12300 South to SR-201	169.200	42.423	80.000	42.729						2018	169.200
12780	I-15; Brigham Road to Dixie Drive	26.000	13.002								2018	26.000
13037	SR-37; 5100 West to SR-108	12.416	5.594								2018	12.416
13055	SR-30; Passing Lanes (Box Elder/Cache Counties)	3.495									2016	3.495
13149	SR-85, MVC; 4100 South to SR-201	495.000	15.000	21.000	178.086	206.414	57.590				2019	495.000
13385	US-40; Gusher EB Passing Lane & Center Turn Lane	9.300	0.011	1.131	7.936						2019	9.300
13391	US-40; Passing Lanes Between Bridgeland & Myton	8.800	3.351	4.652							2018	8.800
13394	US-40; WB Passing Lane W of Strawberry Res.	6.354	1.380	4.700							2019	6.354
13664	SR-10; 3200 South to 1150 South, Price	7.500		5.885							2018	7.500
13821	US-89; Farmington to I-84	275.000	3.960	35.710	150.450	67.800	15.588				2019	275.000
13822	I-15; SR-232 to I-84	158.000	6.877	59.123	92.000						2018	158.000
13823	Layton I-15 Crossing	22.000	6.979								2017	22.000
14412	SR-209 (9000 South); Redwood Rd. to I-15	37.000			1.000	10.000	26.000				2020	37.000
14413	SR-172; 5600 W. Railroad Crossing	26.000				1.000	25.000				2020	26.000

Transportation Investment Fund (TIF) – Existing Projects

- I-15; 12300 S. to SR-201 SB ***
  - Cost - $169 M
  - Funding Available – 2018-2020
- 9000 So (SR-209); Redwood Rd. to I-15
  - Cost - $37 M
  - Funding Available – 2020-2022
- SR-193; 2000 West to 3000 West
  - Cost - $9 M
  - Funding Available – 2017
- 5600 West Railroad Separation
  - Cost - $26 M
  - Funding Available – 2020
- I-15; SR-232 to I-84 ***
  - Cost - $158 M
  - Funding Available – 2018 & 2020

*** *Projects were Accelerated*

15669	I-15 NB; 9000 South to I-215	2019	130.000
15680	SR-108; 300 North to 1800 North	2023	60.000
15681	SR-30; SR-23 to SR-252	2021	45.000
11268	West Davis Highway	2020	610.000
15670	Porter Rockwell (Bridge)	2020	50.000
14415	Bangerter Highway @ 6200 South	2019	64.000
14416	Bangerter Highway @ 10400 South	2022	46.000
14417	Bangerter Highway @ 12600 South	2022	49.000
14421	Midvalley Highway	2019	74.400
15682	I-15; 1800 North Interchange	2024	90.000
15683	I-15; 24th Street Interchange	2023	96.000
15684	I-15; Shepard Lane Interchange	2023	47.000
11608	I-15; Exit 16 Interchange Improvements Phase 1	2019	25.400
15731	US-189; Wallsburg to Charleston	2023	53.000
15735	I-15; MP 135 to MP 142.5, Climbing Lanes	2022	37.000
15226	US-89; Various Passing Lanes	2023	6.000
11458	SR-7 (Southern Parkway); Sand Hollow to SR-9	2020	68.900
15706	Recreational Hot Spots		100.000
14552	I-80 / I-215 East Interchange Study		5.000
15685	I-15; SR-97 (5600 South) - Environmental Study		3.000
14557	I-15; Provo North Interchange Study		2.000
15228	SR-9; I-15 to Southern Parkway Environmental Study		2.000
15153	I-15; Springville/Spanish Fork Interchange Study - ROW		7.000

Riverton City – 4150 West – New Construction
Project Type – Capacity

12600 South to 13400 South

Project Cost – $ 17,712,800

Funds Request – $ 6,615,485

Construction of 4150 West from 12600 S to 13400 S, with a 4-lane concrete street, center running TRAX corridor, bike lanes, pedestrian trails or sidewalks, and traffic signals. This roadway will provide the north/south connection of 4150 West from 12600 South to 13400 South. Please see attached Traffic Study for the area..

Salt Lake County – Magna – Intersection Realignment
Project Type – Operations

2810 South at 8000 West

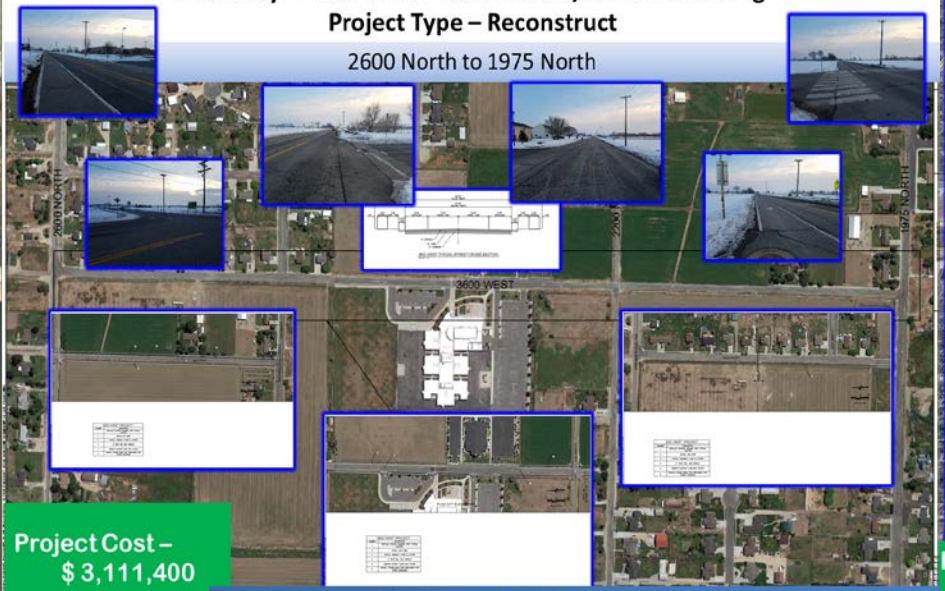
Project Cost – $ 2,000,900

Funds Request – $ 1,865,439

This project will realign an offset intersection to improve safety and connectivity between Magna and West Valley. The project will also relocate a midblock school crossing and bring it to the new realignment

Plain City – 3600 West – Reconstruct/ Minor Widening
Project Type – Reconstruct

2600 North to 1975 North



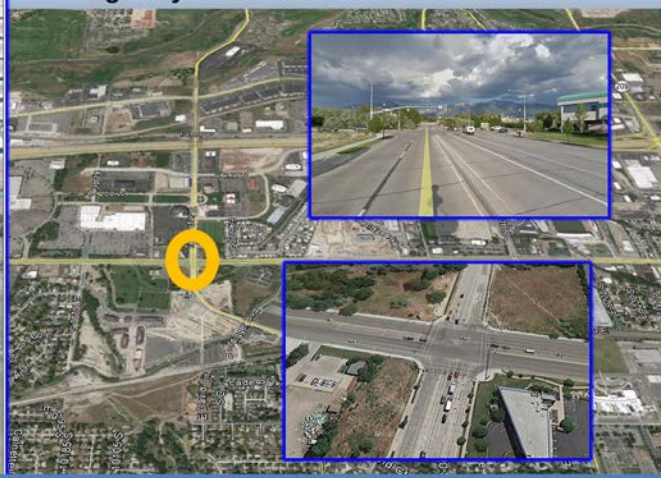
Project Cost – $ 3,111,400

Funds Request – $ 2,900,758

This project will widen 3600 West between 2600 North and 1975 North, add shoulders, and reconstruct the existing asphalt street section. This project includes safety improvements by improving access conditions and adding a center turn-lane at intersections for improved mobility.

Sandy City – Sego Lily Drive Intersection
Project Type – Intersections & Signals

Sego Lily Drive and State Street Intersection



Project Cost – $ 1,591,000

Funds Request – $ 1,389,127

State St. and 10000 S. is a choke point for bicycle traffic. This project will allow for bike lanes on 10000 South by widening the north side of the intersection. A right turn pocket will also be added for WB traffic. 10000 South is identified by UCATS, WFRC, Salt Lake County, and Sandy City as a priority bicycle route.

Ogden City – Weber State University Intermodal Center
Project Type - Transit

Weber State University Intermodal

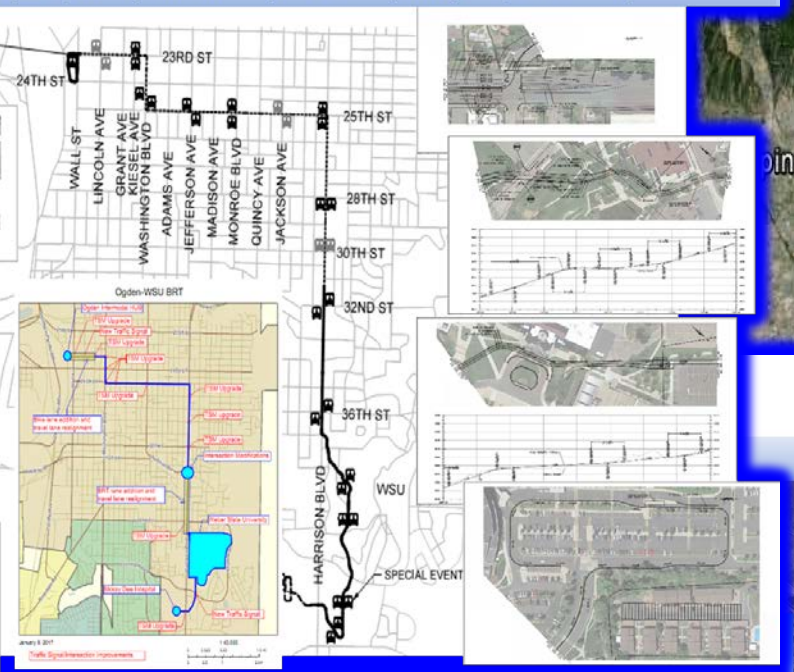
Project Cost – $ 3,116,900

Funds Request – $ 2,617,800

The Ogden/WSU Transit Study LPA is
alignment has been selected. WSU, UTA
know where the transit line will run thr
partners determined that a campus interm
easy transfers between local bus routes,
facilities, pedestrians, and cars.

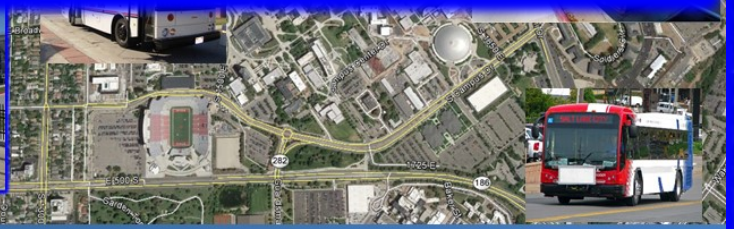
Ogden City – Ogden-WSU Bus Rapid Transit (Design)
Project Type - Transit

Ogden Intermodal HUB (23rd/Wall) and Mckay Dee Hospital (48th/Harrison)



The project proposes to connect the Ogden Intermodal HUB with WSU and Mckay Dee Hospital with a reliable, efficient and modern bus rapid transit system.

Sugarhouse Streetcar Double Track
New Construction



Project Cost – $ 4,073,900

Funds Request – $ 3,075,700

U of U campus is well served by UTA local bus routes, TRAX, and other alternative modes. Lacking though, is a place that welcomes transit users to the campus in a centralized location where transfers between TRAX, local buses, campus shuttles, bike facilities, and car share can easily occur. A Intermodal Center is needed.

Riverdale – Bicycle & Pedestrian Safety Enhancements
Project Type – Capital Improvement

Various Locations throughout the City

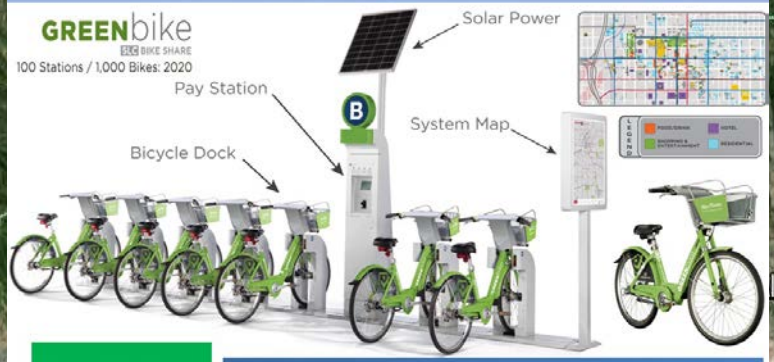
Project Cost – $ 69,200

Funds Request – $ 65,000

Installation of right of way striping and signage throughout Riverdale City as per the City's 2014 adopted Bicycle and Pedestrian Transportation Plan

Salt Lake City – Bike Share Program
Project Type – Capital Improvement

600 West to 700 East/North Temple to 900 South



Project Cost – $ 800,800

Funds Request – $ 746,586

The Bike share program provides high-quality bicycles for commuters to link local destinations with regional transit. A network of bike share stations within a dense urban area provides a fast, flexible, and affordable transit option for the last mile of regional transit trips.

Ogden City – Bike Share Program
Project Type - Transit

Various Areas in the Ogden Central Business District (CBD)

Project Cost – $ 484,686

Funds Request – $ 451,873

Ogden bikeshare would be an option to resolve the "first/last mile" transit quandary while bolstering economic activity in the CBD area of the City. A bikeshare program will also promote physical activity all while offering a zero emission transportation option to visitors and citizens.

Clinton City – D&RGW Trail Street Crossings
Project Type – Capital Improvement

1300 North to 2300 North

Project Cost – $ 111,100

Funds Request – $ 103,576

The D&RGW trail intersects 2300 North and 1300 North east of the intersections. Some trail users cross at unmarked midblock crossings to avoid going to the intersection. These improvement would stop the midblock crossing and require trail users to cross at the intersection crosswalks. .

2017

January						
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31						

WASATCH FRONT REGIONAL COUNCIL

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The Wasatch Front Regional Council builds consensus and enhances quality of life by developing and implementing visions and plans for a well-functioning multi-modal transportation system, livable communities, a strong economy, and a healthy environment.

CONSERVATION & OUTDOOR RECREATION COMMUNITY ASSISTANCE

SEARCH...

WASATCH CHOICE 2050 SCENARIOS | INTERACTIVE MAP GALLERY

MAJOR PLANS, PROGRAMS, PUBLICATIONS & NEWS

REGIONAL TRANSPORTATION PLAN

A PLAN THAT PROVIDES A CRITICAL BLUEPRINT FOR THE FUTURE OF TRANSPORTATION IN OUR

TRANSPORTATION IMPROVEMENT PROGRAM

THE REGION'S PLAN FOR FUNDING TRANSPORTATION IMPROVEMENTS OVER THE

TRANSPORTATION AND LAND USE CONNECTION

TRANSPORTATION AND LAND USE CONNECTION

IN PARTNERSHIP WITH SALT LAKE COUNTY AND OTHERS, ASSISTS LOCAL GOVERNMENTS TO

Active Transportation Plan Standards

Trans Com Meeting – June 15, 2017

WASATCH FRONT REGIONAL COUNCIL

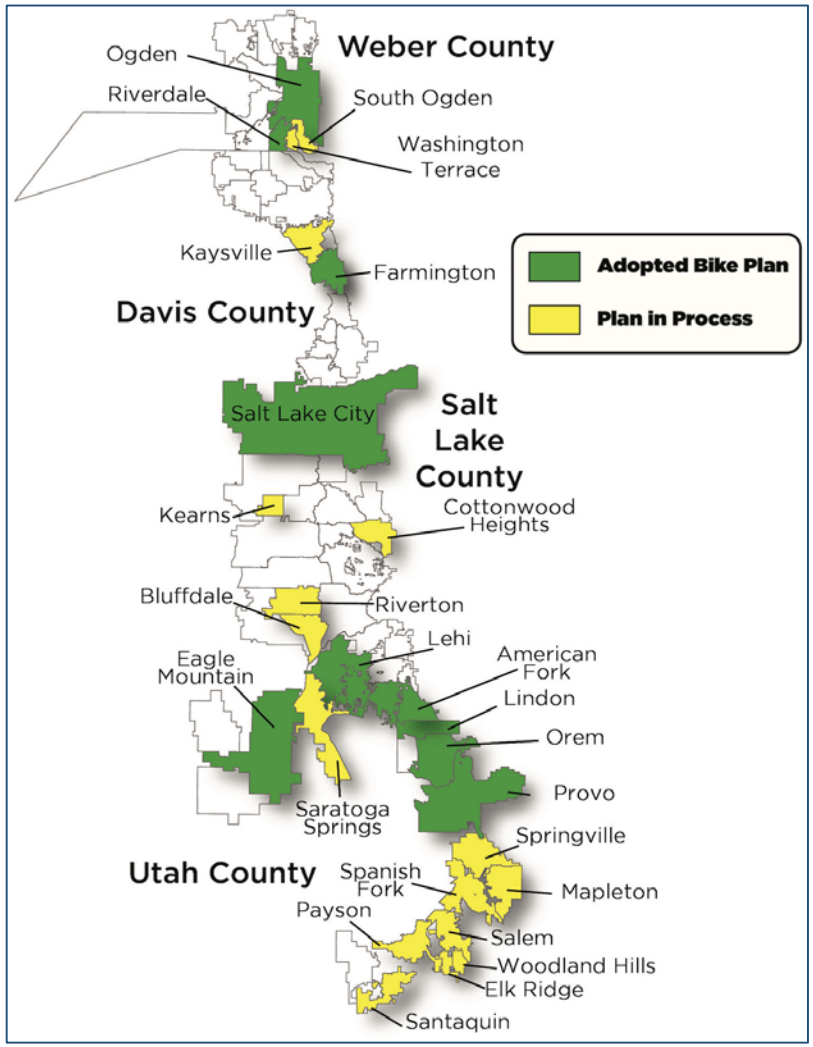
Active Transportation Goals - 2017

1. Update shared Regional Priority Bicycle Routes Plan/Map
2. Cities and counties adopt Local Active Transportation Plans [that align with Regional Priority Plan/Map]
3. Fund and construct priority projects
4. Build support for AT through effective engagement and outreach

How did this concept come about?

- Wasatch Bike Plan
- Network development
- Engaging the health community

<u>Partners:</u>
UDOT, WFRC, MAG, Bike Utah, Alta Planning + Design, and Fehr & Peers



WASATCH FRONT REGIONAL COUNCIL

Why do we need a set of standards?

- Template for interested communities
- Standard for funding of AT Plans (TAP, TLC, etc.)
- GIS consistency between plans at all levels
- Identifying communities in need of an active transportation nudge

Introduction & Process

This set of standards has been compiled to create a more comprehensive network of active transportation (bicycling and walking) facilities in Utah that can be implemented more easily and effectively. Additionally, these standards provide a sample scope for communities desiring to hire outside help. Whether the active transportation plan is being completed internally or by a consultant, it must include the following requirements and may include recommended elements (gray, dotted boxes). The *process*, however, is the most important element. By including a broad representation of the community and appropriate partners, the active transportation plan will:

- Addresses community needs
- Meets the needs of the partners
- Can be implemented successfully
- Is broadly supported

Standards

1. Partner Engagement

Involving internal and external partners in the planning process, as well as identifying and empowering community champions, creates an opportunity for comprehensive input and buy-in. Their unique perspectives will generate support for the plan as many of these partners will be critical to successful implementation.

- ☐ Include at least one of the following public officials: Mayor, City Manager, Planning Commissioner, City Council Member
- ☐ Include all of the following municipal departments: Planning, Engineering, Public Works/Streets, Parks
- ☐ Identify, engage, and empower "champions", those community members or staff who can and are willing to expend time, energy, and political will in order to implement the pieces of the plan
- ☐ UDOT region representative
- ☐ MPO, RPO, or AOG representative
- *Recommended: Transit agency; neighboring cities; health department; school district; Department of Public Safety/Utah Highway Patrol; police department; public lands agencies; major employers and work sites*

2. Public Engagement

At least two distinct methods of engagement and data collection must be utilized during all phases of the process in order to gather input from diverse community members:

Choose at least two

- Open houses or charrettes
- Online survey
- Opportunities to comment on plans or maps online or in-person
- Intercept surveys
- Pop-up meetings and attending existing events
- Walk and bicycle audit
- Stakeholder interviews or events at major work sites

3. Set the Vision, Goals, & Objectives

The vision, goals, and objectives of an active transportation plan create the framework and guide all policy, project, and program recommendations.

- [ ] Completed during the first stages of the planning process
- [ ] Vision expresses aspirations for bicycling and walking, whether it be related to network, culture, programs, or outcomes
- [ ] Goals are broader statements describing desired results; objectives are specific, measurable initiatives that bolster the goals
- [ ] *Recommended: Reflects the vision or purpose of the community's and/or region's existing plans*

4. Existing or Current Conditions

Creating a clear image of what the community is now enables a meaningful comparison with what the community wants to be in the future. The analysis should use words, photos, maps, and data to describe:

- ☐ Existing on and off-street bicycling and walking network and facility types
- ☐ Identification of network barriers and gaps
- ☐ Demographics
- ☐ Crash and safety data
- ☐ Integration with local and regional plans, including other active transportation plans
- ☐ Connections to transit and community destinations (e.g. parks, schools)
- ☐ *Recommended: Existing counts (if available)*
- ☐ *Recommended: Geological, hydraulic, or other physical characteristics and constraints*

5. Recommendations

This task involves recommending new infrastructure, supportive programs, and policies in order to promote better accommodation of people walking and bicycling.

A. Projects. These most crucial recommendations should encourage active transportation use, regardless of age or ability, by design. Each recommended facility must include (at least):

- ☐ Route and facility type identification
- ☐ GIS schema consistent with state and regional standards
- ☐ Recommended projects connected to regionally-significant existing or planned routes

B. Programs. Education, encouragement, evaluation, enforcement, and equity programs support the effectiveness of infrastructure (engineering) projects (5.A).

- ☐ Programming associated with existing and recommended facilities with an emphasis on the 5 Es
- ☐ Local context-specific Safe Routes to School programming
- ☐ Maintenance plan (i.e. snow removal, restriping, weed removal)
- ☐ *Recommended: Wayfinding plan compliant with national and local standards*

C. Policies. Policies, departmental procedures, design standards and guidelines that promote active transportation usage and safety should be recommended.

- ☐ Walking and bicycling friendly design standards and land use policies
- ☐ *Recommended: Complete Streets Policy or Ordinance*

6. Implementation Strategy

Creating an implementation strategy is a critical step in the active transportation planning process so that momentum and public support do not stall when the plan is finished. It should be detailed, yet easy to use. The plan should include:

- ☐ Prioritized and/or phased list of actions and recommendations
- ☐ Funding opportunities
- ☐ Capital and maintenance cost estimates and budget
- ☐ *Recommended: Annual work plan calendar*
- ☐ *Recommended: Agencies or persons responsible for realization of recommendations*

7. Performance Measures

Performance measures are effective ways to evaluate progress and the effectiveness of the implementation of recommendations. Measures should at least include:

- ☐ Walking and bicycling mode share (% of trips done by walking or bicycling)
- ☐ Regular bicycling and walking counts and reporting at several high profile locations
- ☐ Health indicators; crash and safety figures

Next Steps

- Review of local AT and General Plans to determine which communities need a plan or an updated plan
- Begin outreach to these communities
- Direct local communities toward funding mechanisms

Questions?

Scott Hess
Active Transportation Planner
shess@wfrc.org

801-643-3337

If you have questions about how to start or where to look for planning and funding assistance, please refer to the following contacts:

Communities in Salt Lake, Davis, Weber, Tooele, Morgan, and Box Elder Counties	Scott Hess, Wasatch Front Regional Council (WFRC) Active Transportation Planner (shess@wfrc.org)
Communities in Utah, Wasatch, and Summit Counties	Jim Price, Mountainland Association of Governments (MAG) Active Transportation Project Manager (jprice@mountainland.org)
All Other Utah Communities	Heidi Goedhart, UDOT Active Transportation Manager (hgoedhart@utah.gov) or Phil Sarnoff, Bike Utah Executive Director (phil@bikeutah.org)

WASATCH FRONT REGIONAL COUNCIL

UDOT AUTOMATED TRAFFIC SIGNAL PERFORMANCE MEASURES

Mark Taylor, P.E., PTOE
Utah Department of Transportation
Traffic Signal Operations Engineer
marktaylor@utah.gov

Opportunity from UDOT Executive Leaders (2011)

"What would it take for UDOT's traffic signals to be world class?"

"What's the trend – are signal operations improving, staying the same or getting worse?"

"What are our areas of most need?"

Quality
Improvement
Team

Automated Traffic Signal Performance Measures (ATSPM) Basic Concept

Automated Data Collection

- Signal controller
- Probe source

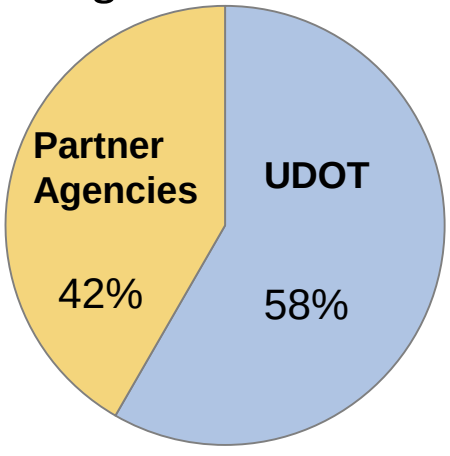
Useful Information about Performance

- Signal
- Corridor
- System

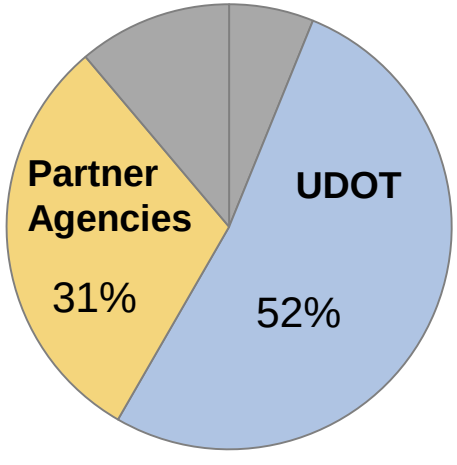
Why Model what you can Measure?

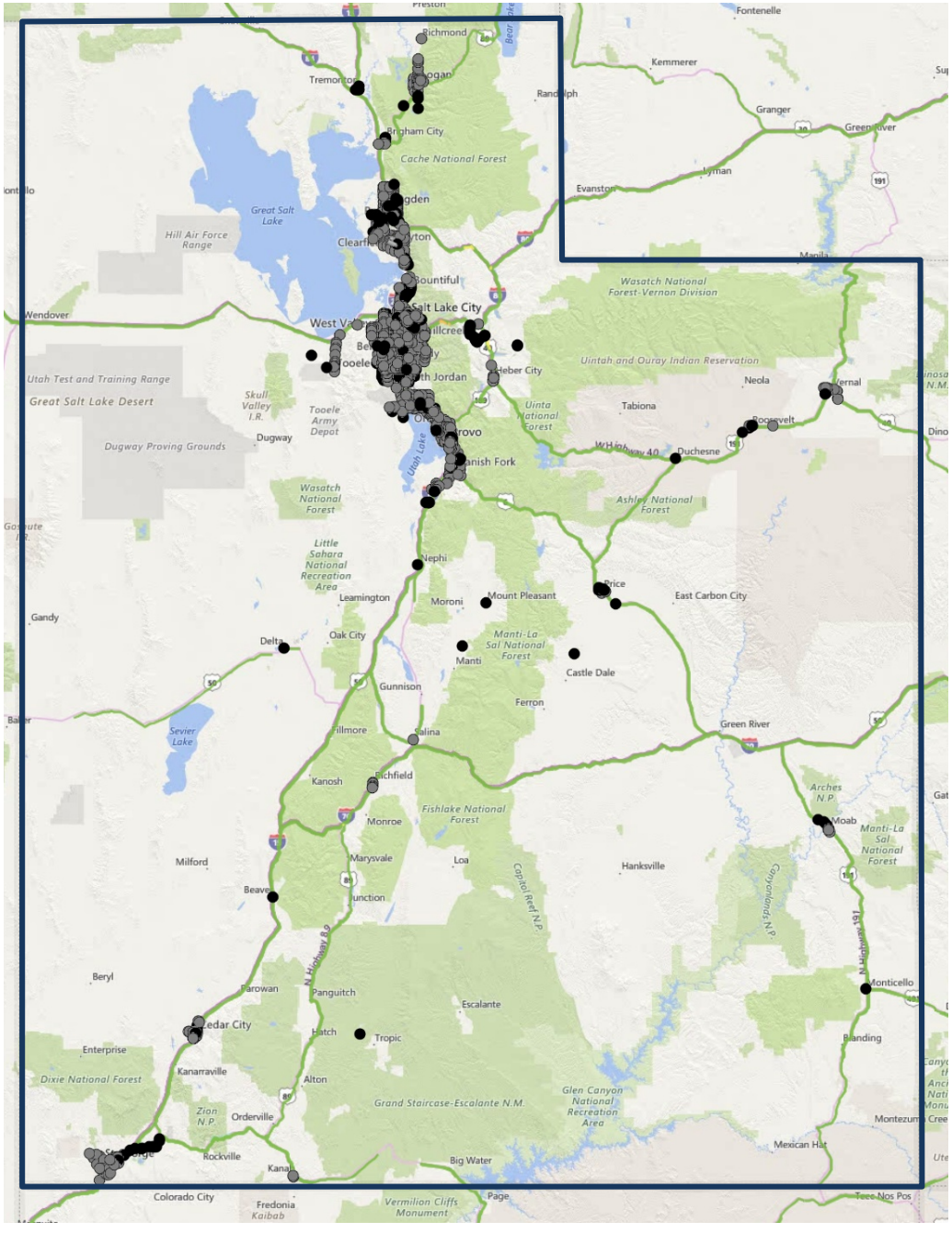
Traffic Signals in Utah

2218 Traffic Signals

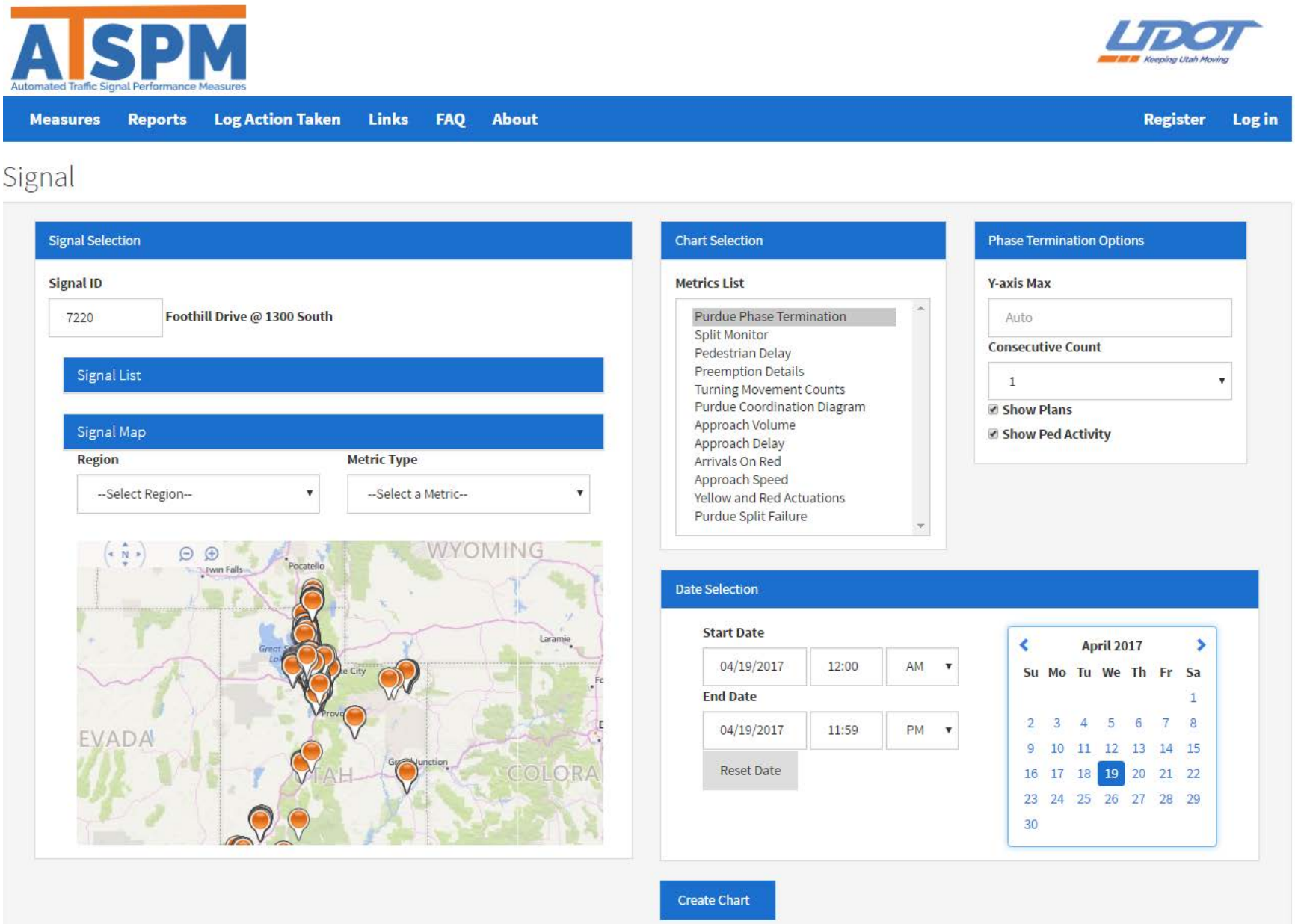


83% Connected





UDOT's ATSPM Website: http://udottraffic.utah.gov/ATSPM

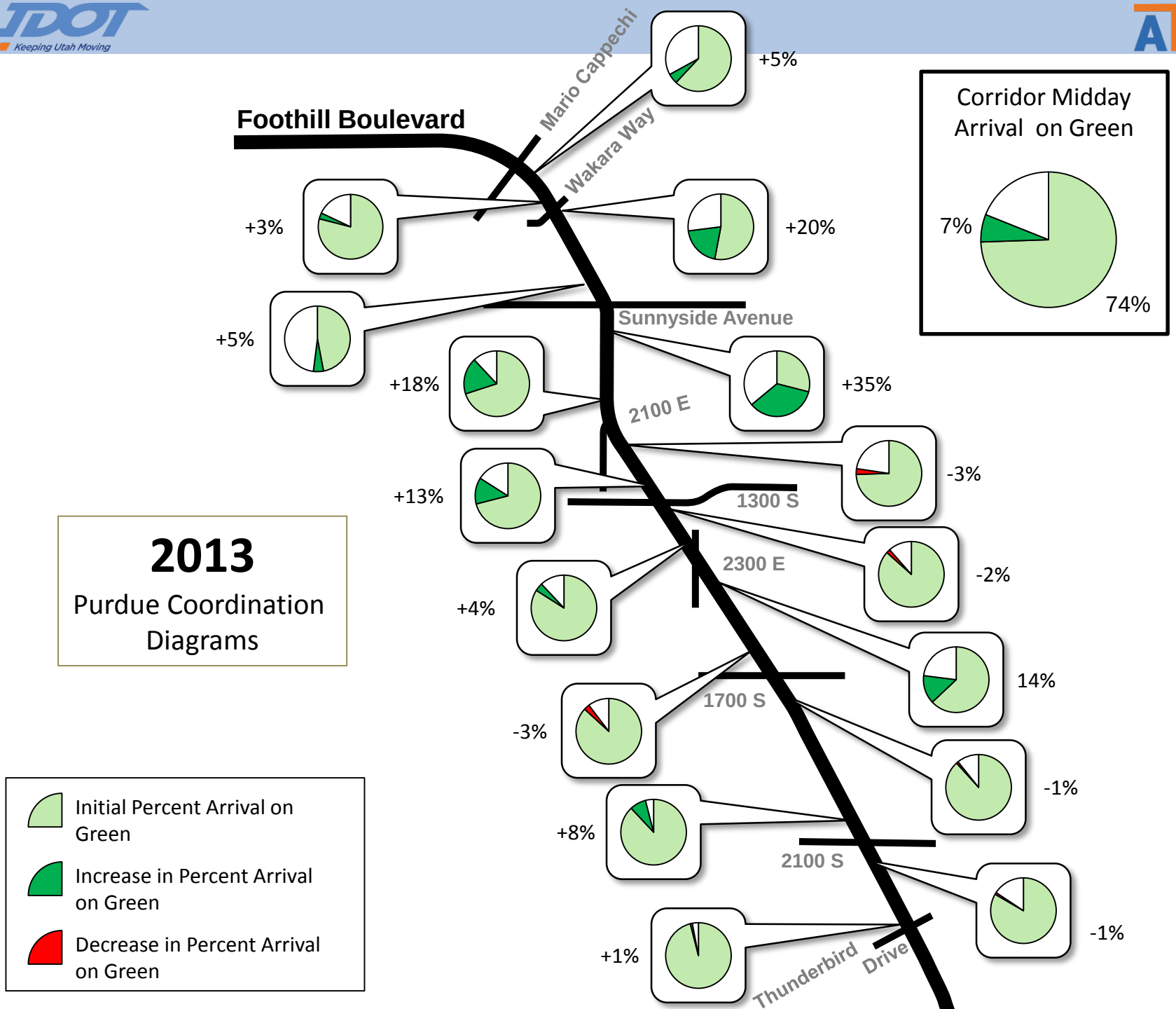


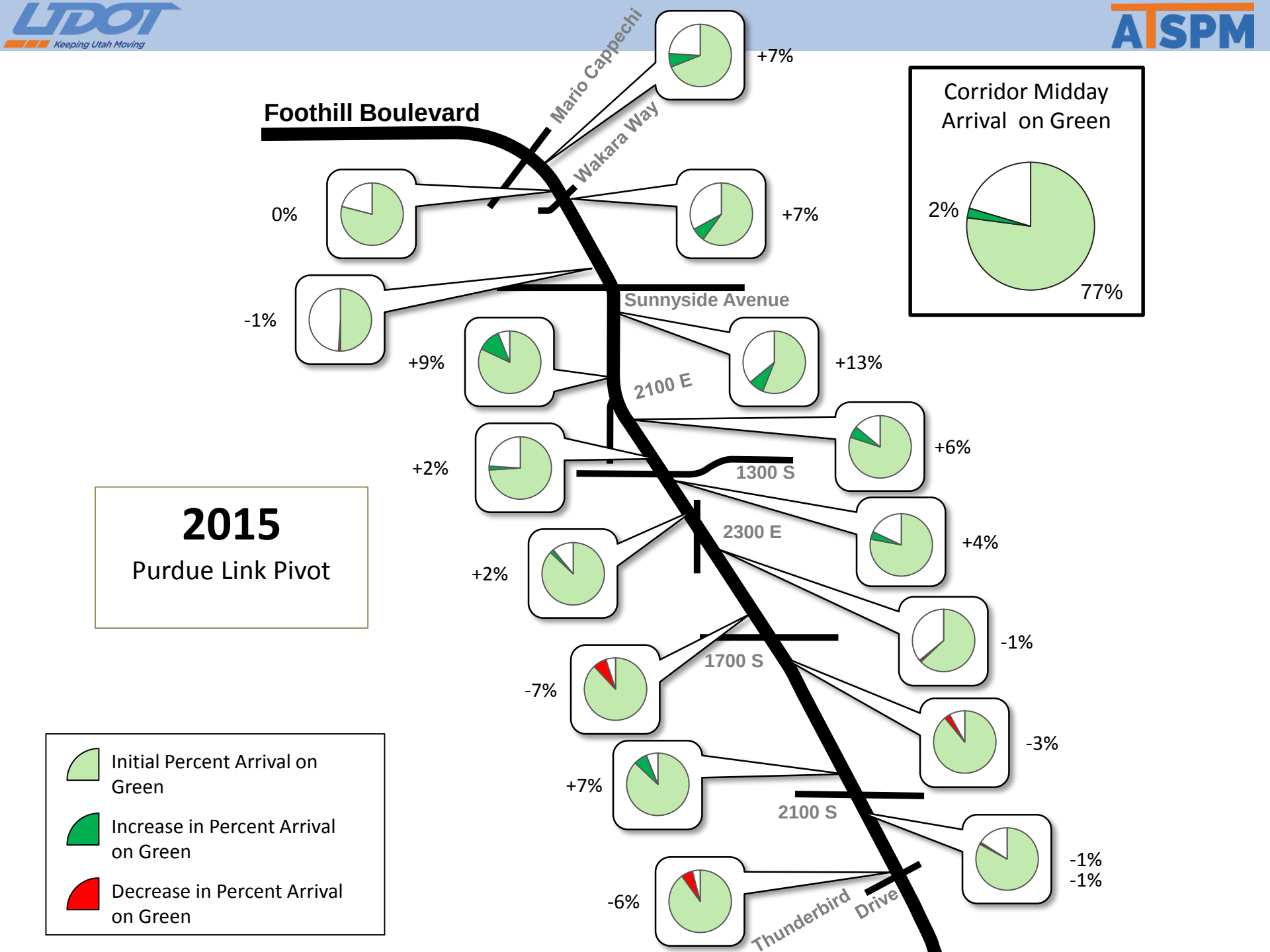
Various Performance Measures for Intersections

- Percent of Vehicles Arriving on Green and Red
- Measuring the amount of green time used at the intersection
- Pedestrian delay (pushbutton pressed to start of “walk” interval)
- Number of pedestrian activations crossing the traffic signal
- Number of queues of vehicles not clearing during green

Various Performance Measures for Intersections

- Average and 85th Percentile Speeds of Vehicles
- Traffic Volumes (left, through, right) at intersections
- Yellow & Red Actuations into the Intersection
- Corridor & system wide trends (still developing)


Foothill Boulevard
Mario Cappechi
Wakara Way
Sunnyside Avenue
2100 E
1300 S
2300 E
1700 S
2100 S
Thunderbird Drive
+5%
+3%
+20%
+5%
+18%
+35%
-3%
+13%
-2%
+4%
14%
-3%
-1%
+8%
-1%
+1%
Corridor Midday Arrival on Green
7%
74%
2013
Purdue Coordination Diagrams
Initial Percent Arrival on Green
Increase in Percent Arrival on Green
Decrease in Percent Arrival on Green


Foothill Boulevard
Mario Cappechi
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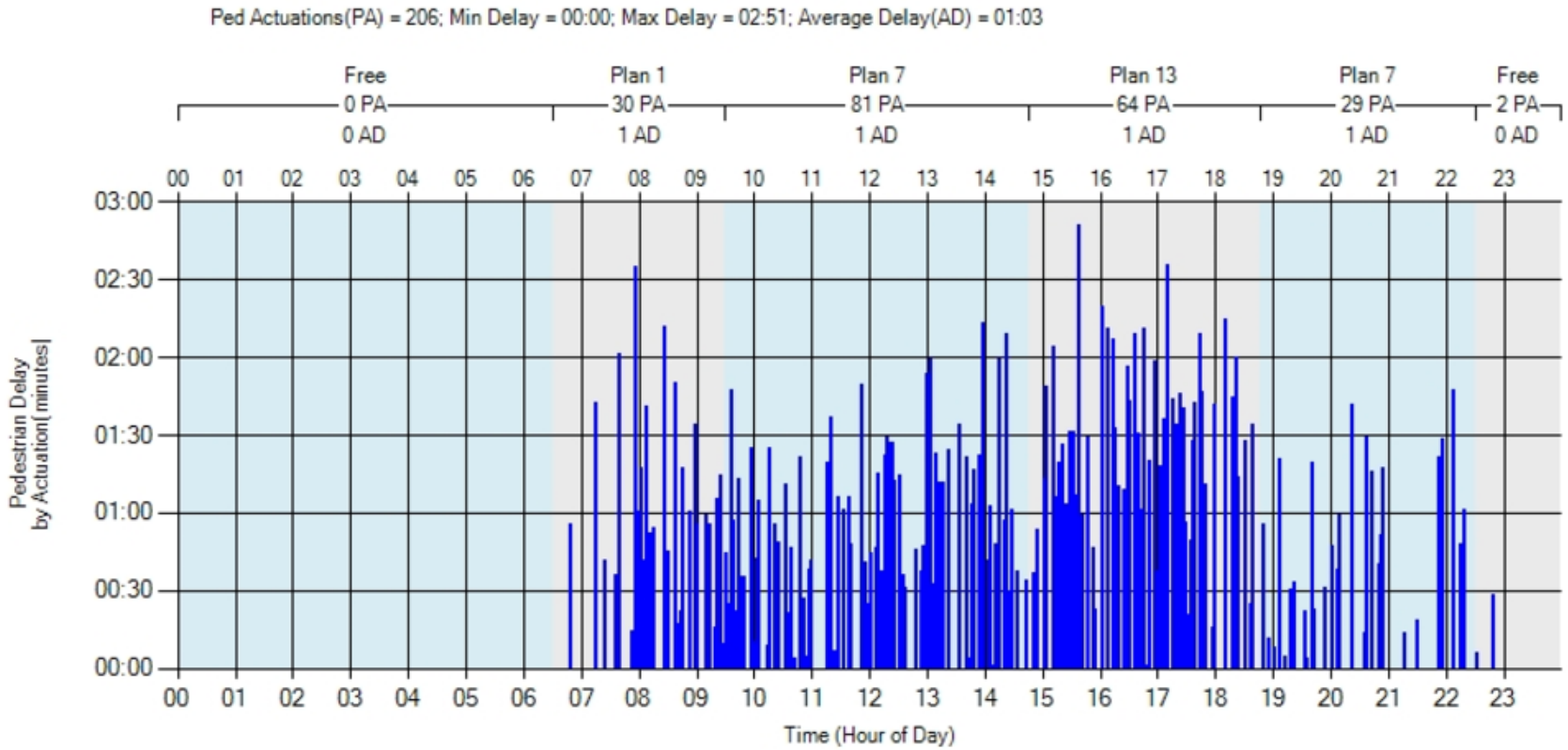
+13%
+6%
+2%
+4%
+2%
-1%
-7%
-3%
+7%
-1%
-1%
-6%
Corridor Midday Arrival on Green
2%
77%
2015
Purdue Link Pivot
Initial Percent Arrival on Green
Increase in Percent Arrival on Green
Decrease in Percent Arrival on Green

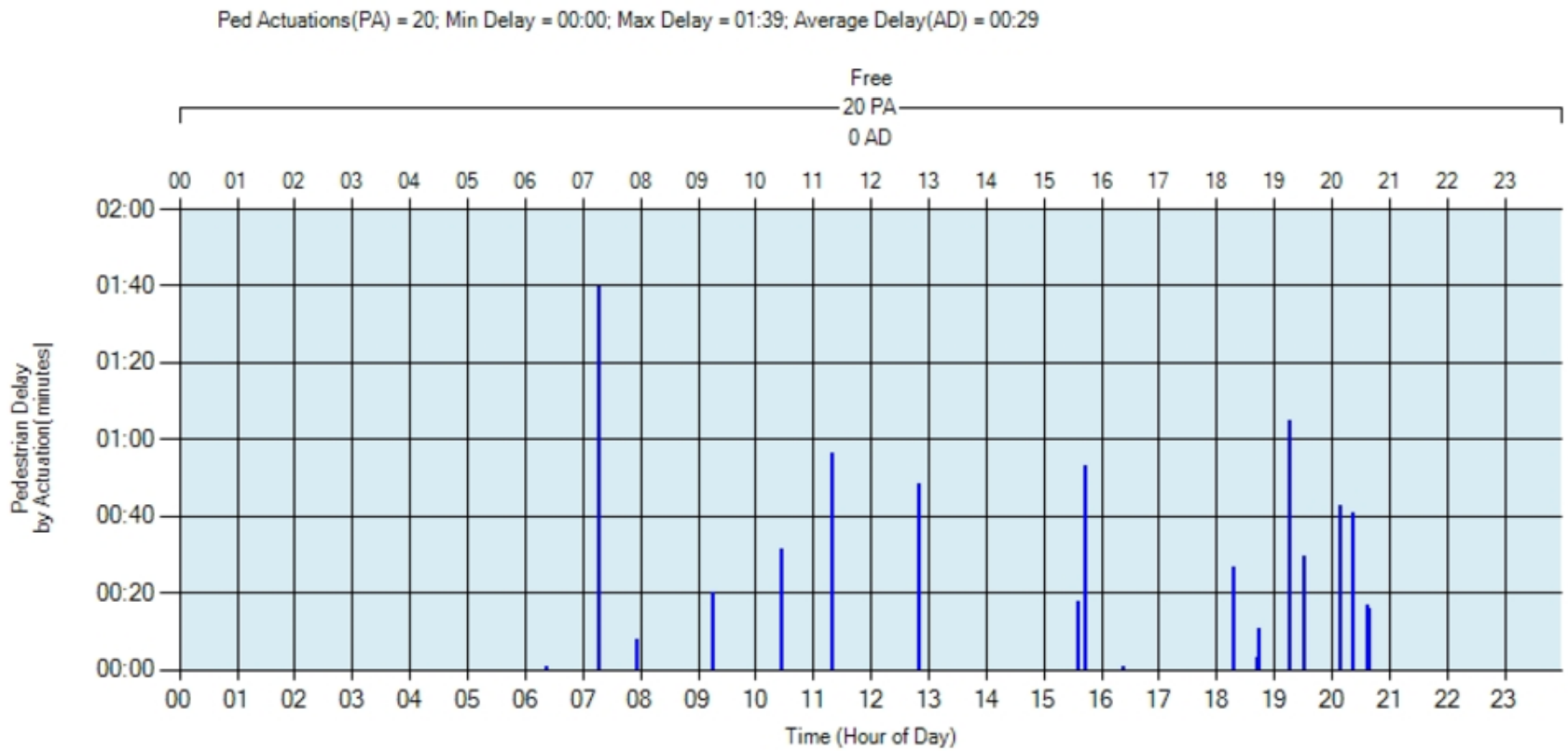
Pedestrian Delay

West Leg of Intersection: 500 South & Guardsman Way – Tuesday June 13, 2017

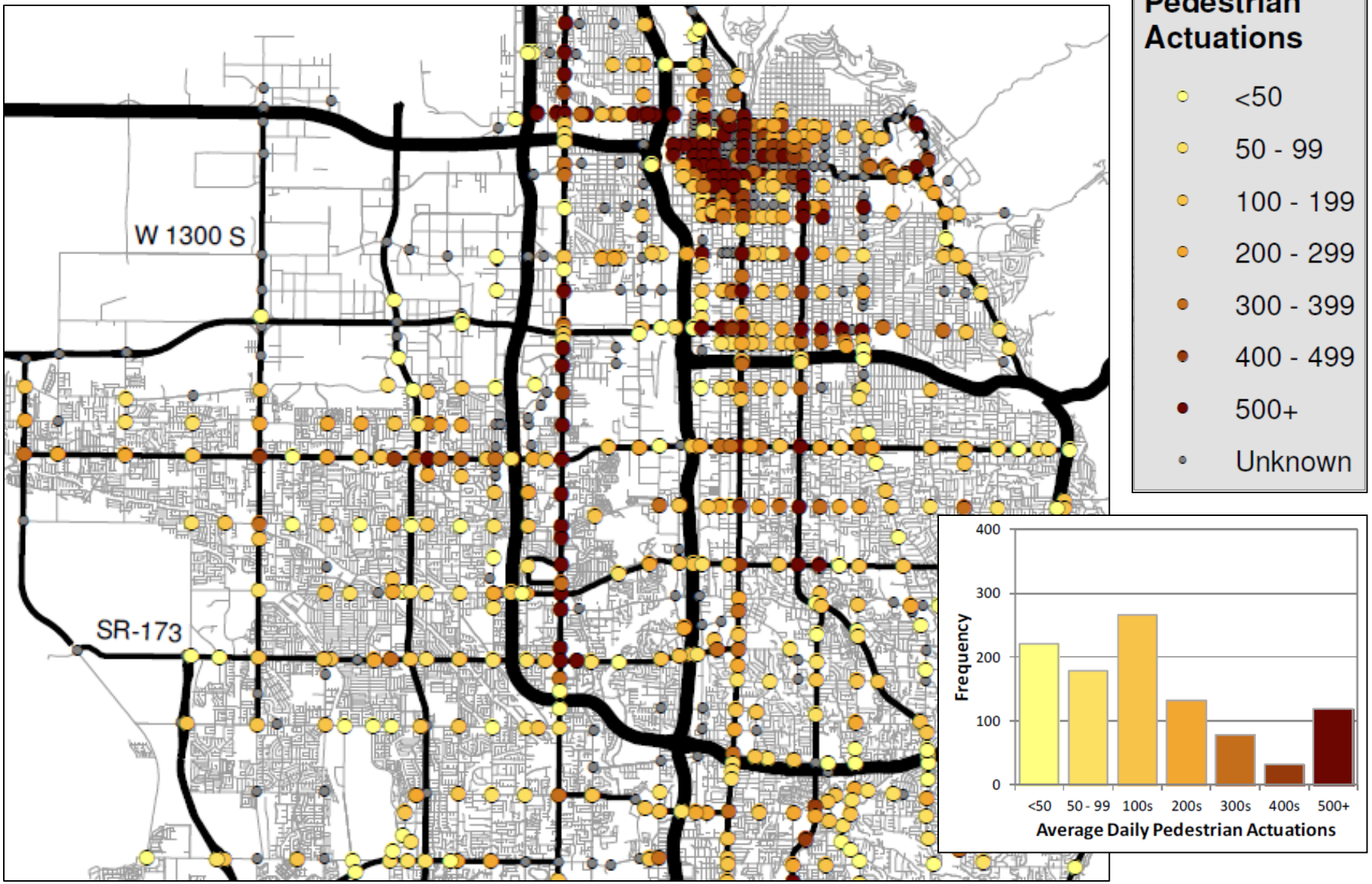


Pedestrian Delay

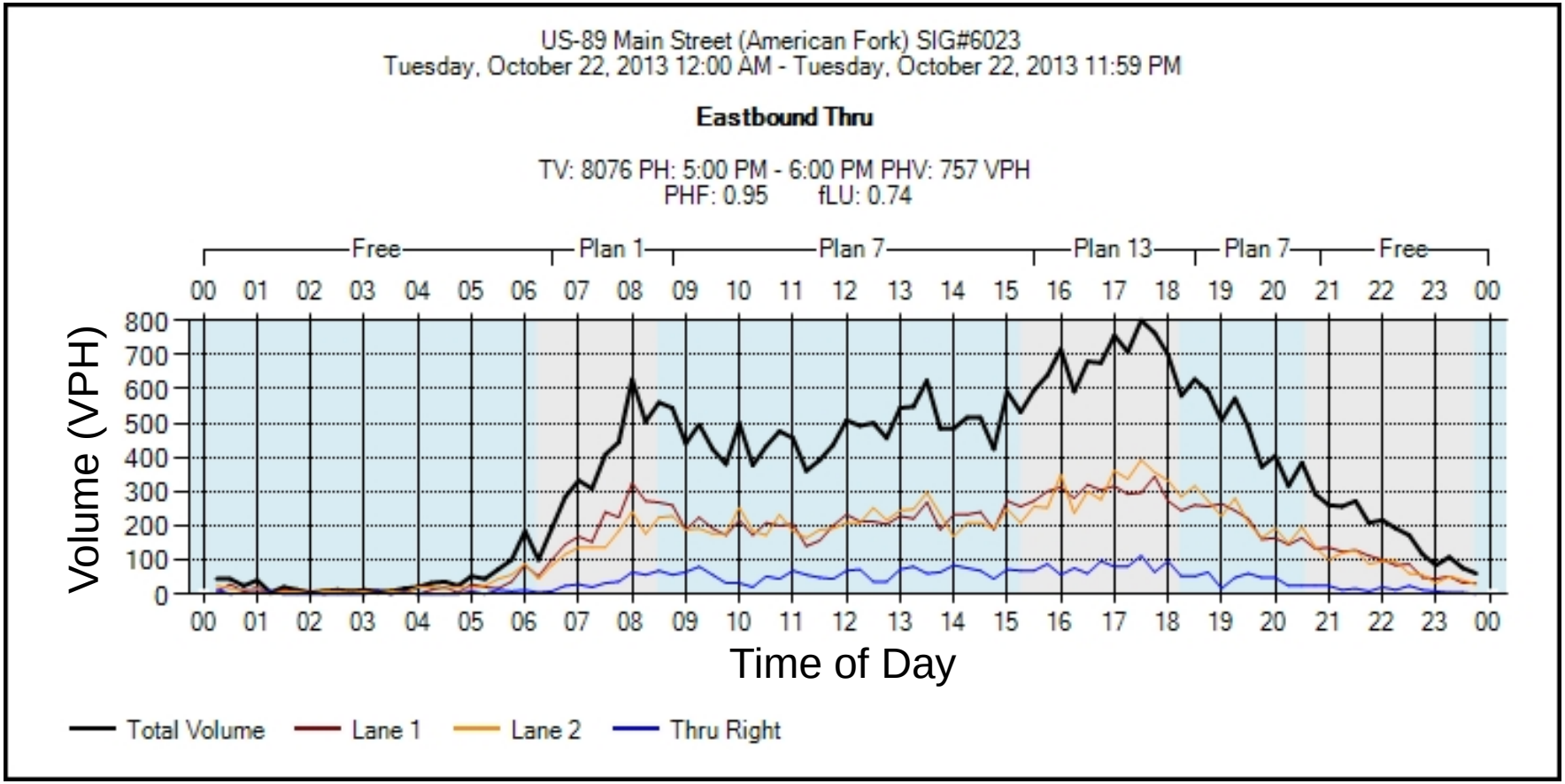
North Leg of Intersection: 8890 South (Newcastle) & Highland– Tuesday June 13, 2017



Active Transportation



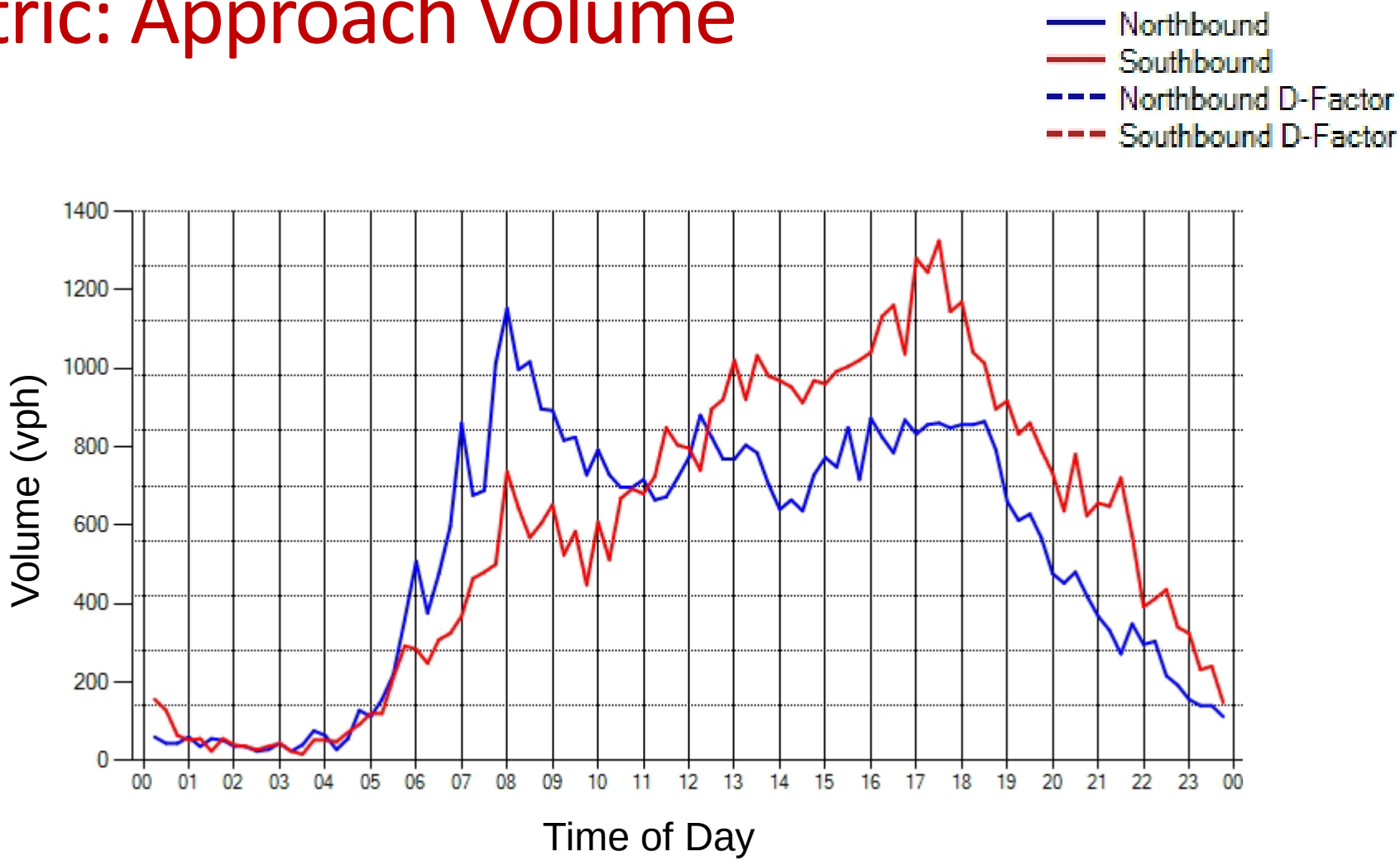
Turning Movement Counts



Metric: Turning Movement Counts

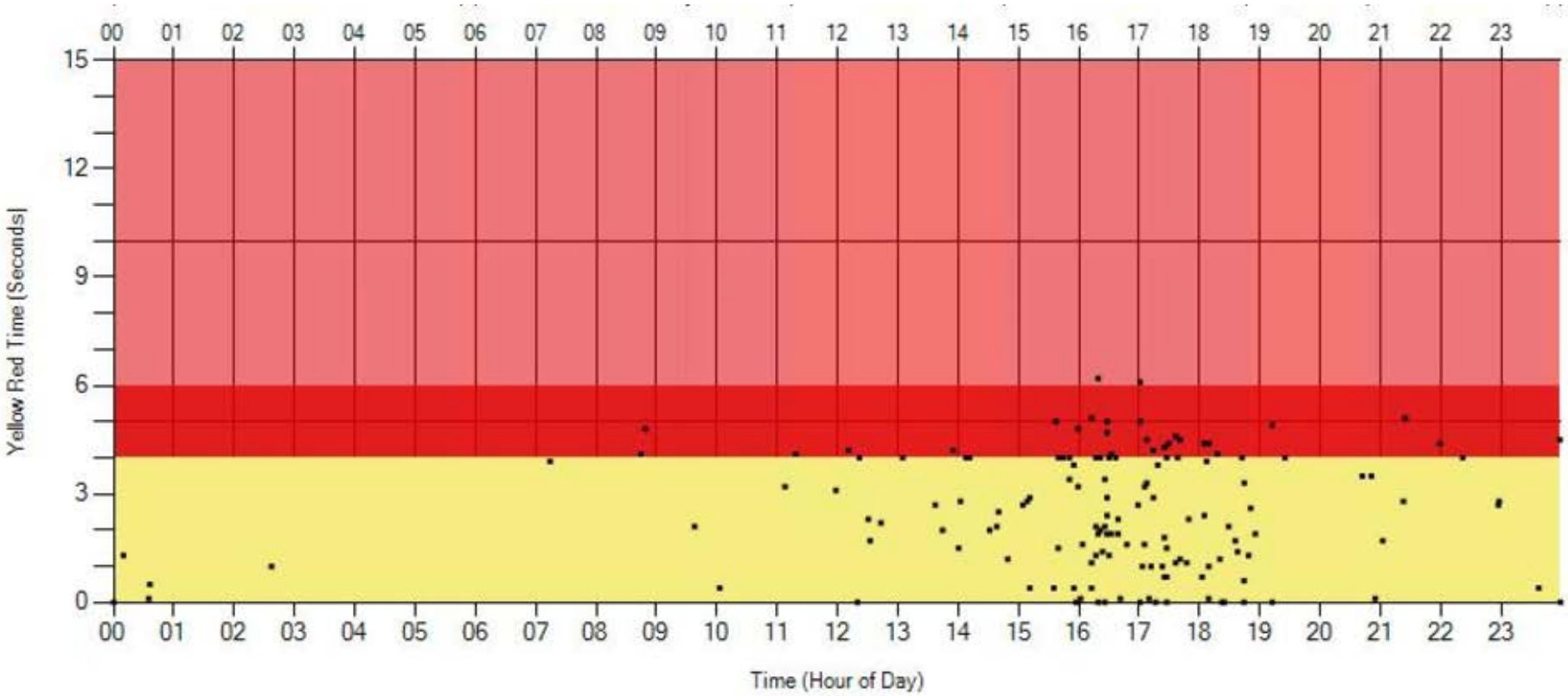
Detection Requirements: Stop Bar Counters

Metric: Approach Volume



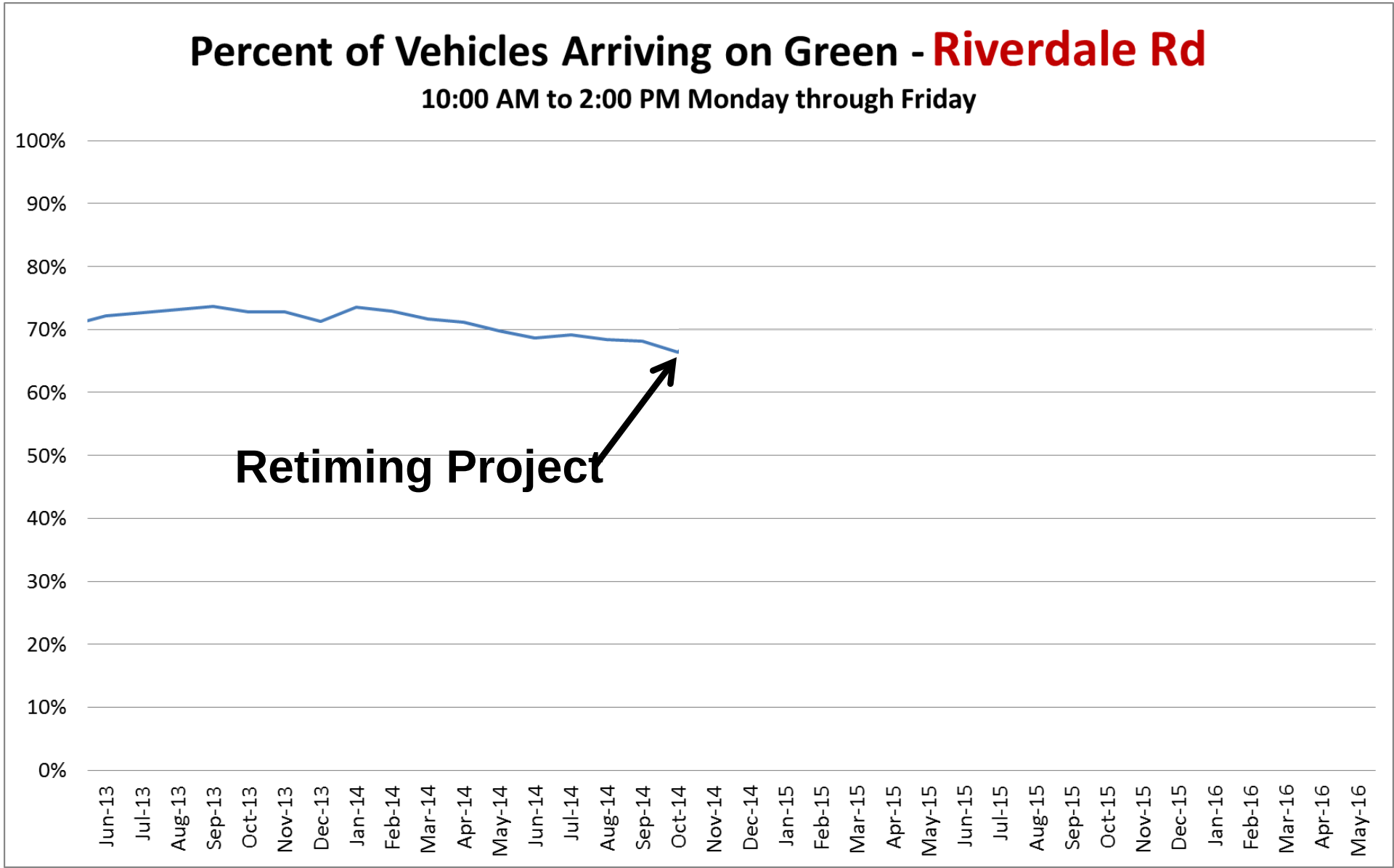
Yellow & Red Actuations

Wednesday, June 14, 2017 - 5600 West at 2700 South – Westbound Through



Monitoring Trends (In Development)

(Riverdale Rd – 11 intersections)

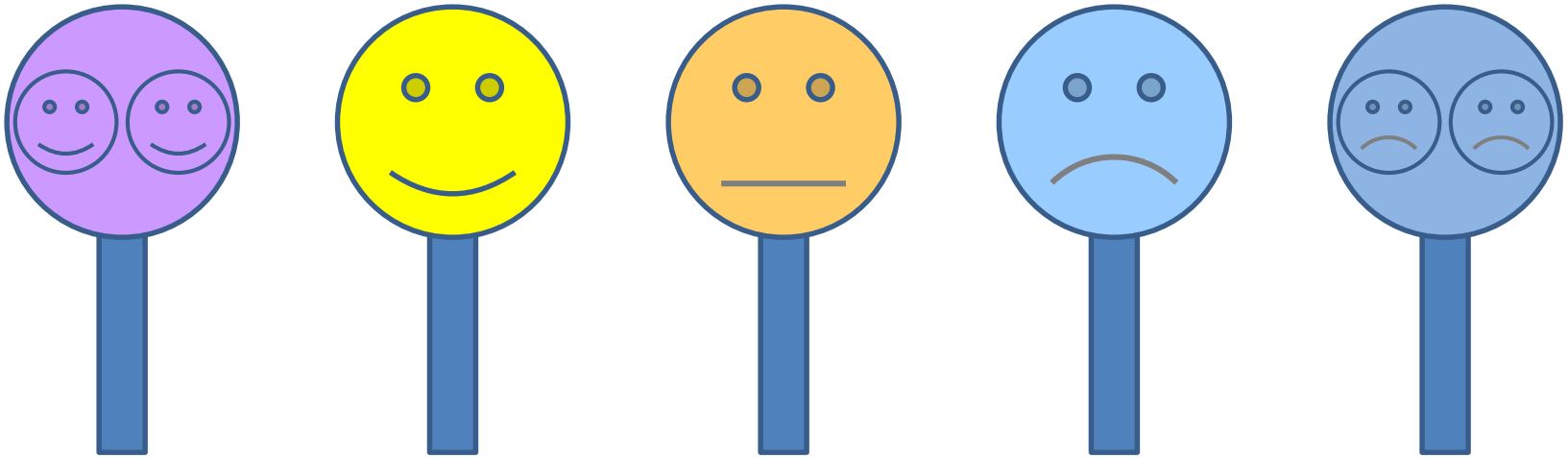


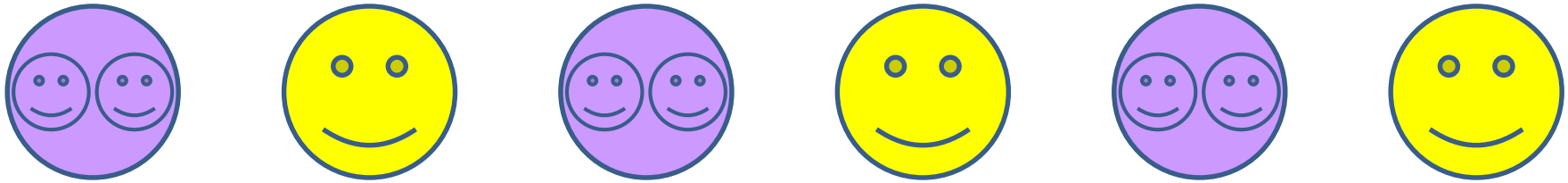
Real-Time Monitoring of Traffic Signals

- Benefits to Local Governments & UDOT
  - Improved Signal Operations
  - Improved Safety at Signals
  - Daily notifications with detection (vehicle & pedestrians) malfunctions
  - Measured Data for Better Planning (vehicles and pedestrians)
  - Better Reporting to Others
- Salt Lake County Traffic Signal Project (WFRC) – $2.5 M
  - 85 intersections getting vehicle detection and other upgrades for improved performance measure monitoring.

UDOT Signal Timing Focus Group (July 2014)

- *How do you feel about UDOT?*
- *How do traffic signals make you feel?*



Focus Group Key Findings (July 2014)

- UDOT is perceived positively, with innovation as the primary driver of positive impressions.
- Drivers believe traffic signal synchronization is improving.
- Drivers feel UDOT should be open about its accomplishments in a way that protects its credibility.