The Olympics as potential Catalysts for enhancing Urban Transport

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Michigan State University

TRB Webinar

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The Key Question

How can Olympic host cities make the best of the requirements the IOC imposes on the city?

Leverage the opportunities
Avoid most common mistakes
Build your own legacy

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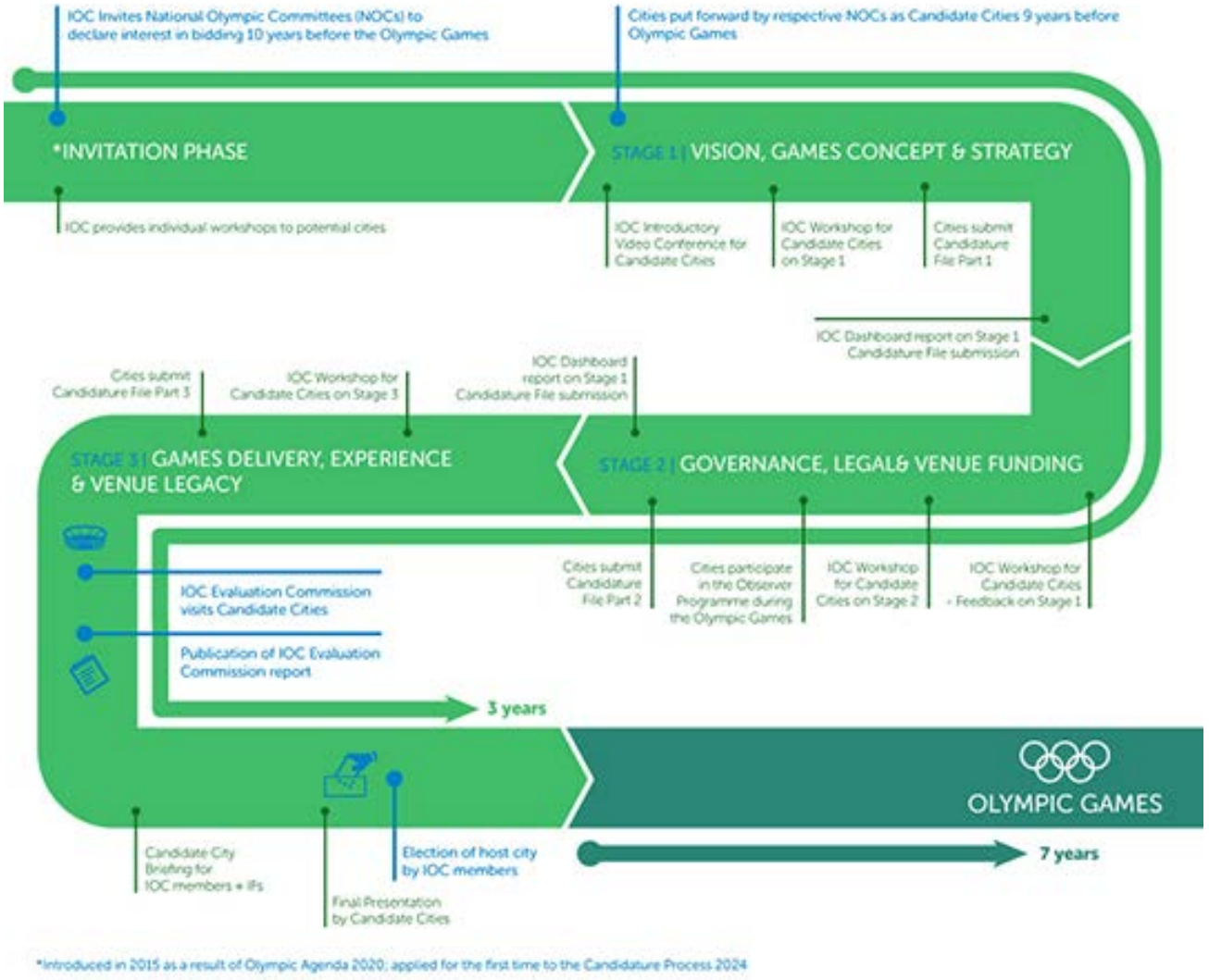
Phases of the Olympics



source: IOC 2015

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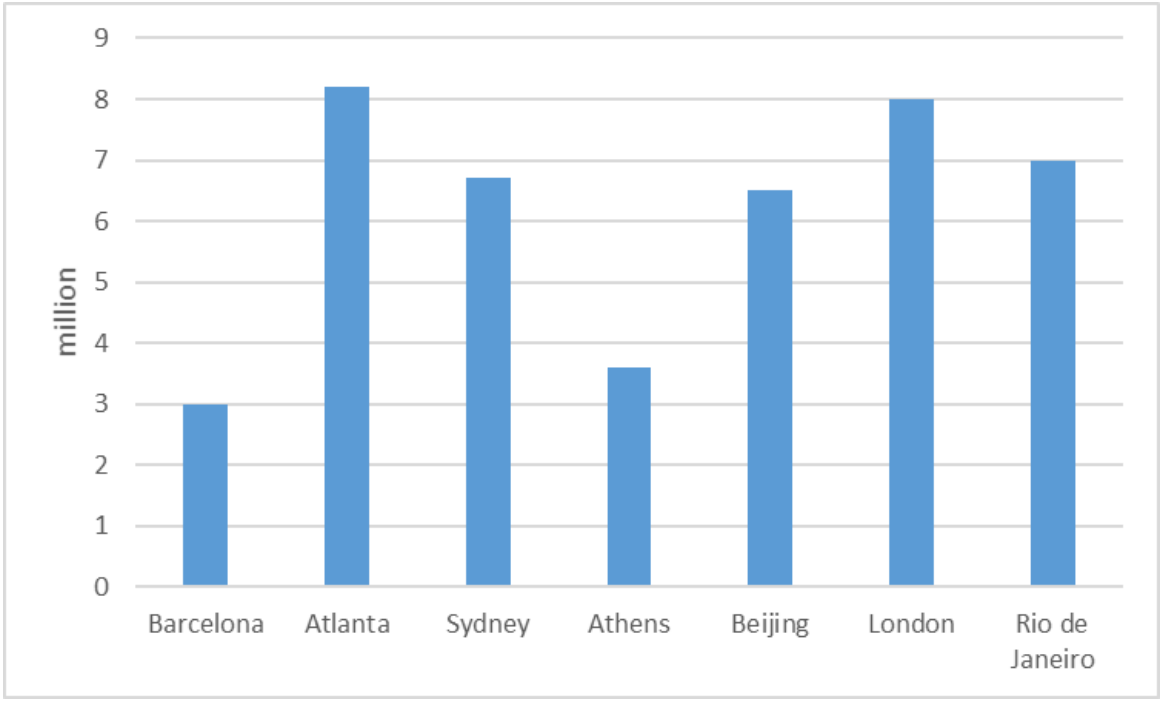
What to prepare for?



source: Olympic Games Evaluation Plans, 93-14

Visitors:
- Unfamiliar with area
- Language barrier

Olympic Family Members:
- ~80.000 members
- Group transport by teams
- Equipment
- Security

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Source: the author

Mobility Requirements

Serving different client groups:

- VIP's
- Media
- Volunteers
- Working staff
- Athletes
- Visitors
- Residents
- etc.

Theoretical service design:

- LOS
- Travel time
- Frequency
- Routes
- Vehicles
- Hours of Service
- Fare Structure
- Supporting services
- etc.

Impact on the transportation system

- during the event (Peak demand)
- and thereafter (Sustain)

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Mobility Requirements

	Athletes	Visitors
LOS	high	low
Travel time	<< 45min	?
Frequency	high	high
Routes	OV - Ven	Centre-Ven
Vehicles	low occ.	high occ.
Hours of Service	24h	24h
Fare Structure	none	(un)paid

Athletes ← Separation of traffic flows → Visitors

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Accessibility Requirements

Serving different hallmarks for client groups:

- Hotels
- Olympic Village
- Exhibition halls
- Stadiums
- Training facilities
- etc.

Theoretical accessibility design:

- Congestion levels
- Distance
- Capacity
- Proximity to public transport
- Proximity to exclusive transport
- Security
- etc.

Impact on the urban system

- during the event (Peak demand)
- and thereafter (Sustain)

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Research Methods

Comparative Case Study – the Olympic Games:

Policy analysis: Triangulation of qualitative data

Primary sources:

- Interviews with IOC, political leaders, planners, private contract companies, citizens
- Archival analysis in five languages
- Observation and ethnography

Secondary sources:

- Forecasts of traffic flow patterns in inner cities throughout Olympic period (mapping/GIS)
- Olympic Transportation plans
- Metropolitan policy and planning documents
- Surveys conducted by transport authorities (Statistics)

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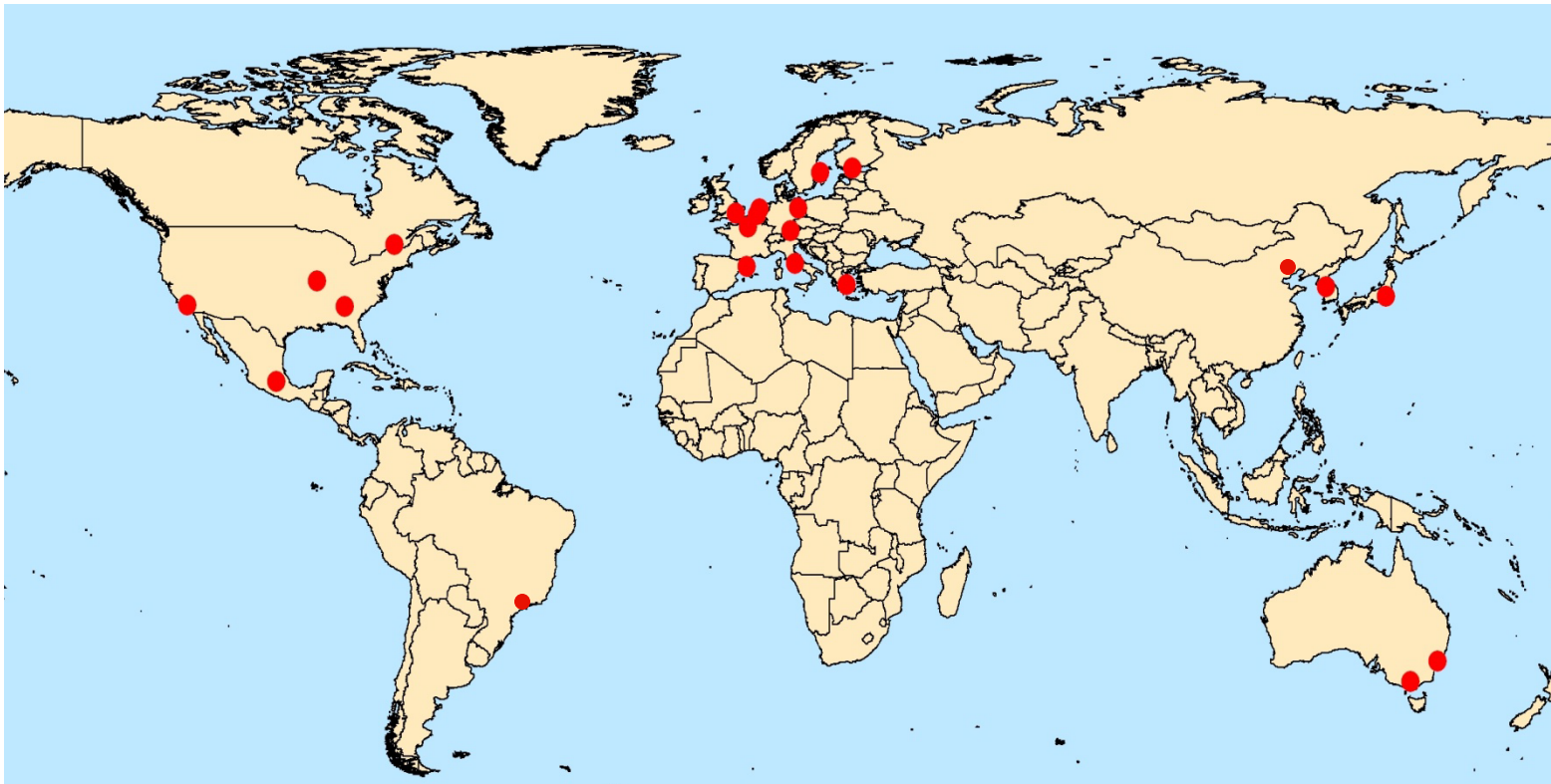
Case Studies

Six Summer Olympic Games and their Host Cities



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Transport Stimuli of the Olympics

Stimuli evoked by mega events can be grouped as being physical, behavioral or institutional in nature.

Analysis reveals five categories:

- Transport Infrastructure
- Transit Operations Management
- Traffic Operations Management
- Management of Transport Demand
- Institutional Policies

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Transport Infrastructure

Stimuli – new or upgraded btw. election and host year

Private: upgrade of key roads predicted to carry Olympic traffic, Streets and plazas in the central city, new roads that circle/bypass the city (BAR+ATH+RIO)

Public: minor improvements to public transport (except LON): funiculars, escalators (BAR), rail loop (SYD), extension of MARTA (ATL), 2 subway lines, tram (ATH), metro, LRT (RIO) vs. BRT is privately owned

Impacts

Private: Ring roads still relieve the burden of the inner cities traffic; improved interconnections among highways, They "will be very congested"

Interview Halkias (ATH)

Public:

Investments mainly driven by the Olympics failed to meet expectations in the long-term.

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Transit Operations Management

Stimuli – measures implemented during OG

- Olympic bus networks
- Park and ride facilities with access to public transport
- Shuttle busses
- Extended operating hours of public transit
- Free public transport

Impacts

- HOV lines
- Express busses
- Interregional bus lines
- Bus Rapid Transit

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Traffic Operations Management

Stimuli – ease and prioritize traffic flows

- Road closures
- Driving and parking restrictions
- Speed up traffic, e.g. prohibiting left turns
- Provisions for pedestrians and cyclists
- Upgrade traffic management systems
- Overhaul traffic management centers

Impacts

- State of the art traffic management centre
- Upgrade in incident management systems
- Citywide information system

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Management of Transport Demand

Stimuli – Reduction of base load demand

- Flexible working hours
- Telecommuting
- Relocation of workers
- Vacations during the three weeks
- Prohibition of certain vehicle types
- Freight deliveries during night time
- immediate ITS communication to travellers

Impacts

- Rarely any of these measures were sustained
- For individuals possibly different working conditions
- Businesses returned to their usual practices

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Institutional Policies

Stimuli – Coordination

- Centralized command, control and communication structure
- Coordination among all planning and transport agencies
- Combined ticketing

Impacts

- Short term nothing was sustained
- Long term, a few changes are observable: combined ticketing scheme
- Metropolitan Planning Agencies

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Results of six host cities

Infrastructure – remains in cities and is underused – if it was Olympically induced.

Political ones never change.

Behavioral ones adjust to the infrastructure.

Category	Requirements	Outcome
Infrastructure	Capacity enhancements	Road based preference
Transit	100% PT	New fleet, lengthening of platforms
Traffic	Free-flow for athl.	ITS
Demand Mgmt.	Reduction of base demand	none
Policies	Coordination	Integrated ticketing

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Policy implications

Key aspects to consider for rapid urban development and peak-demand transport

1. Holistic, integrated and comprehensive planning
2. Strongest influence lies in the early planning stages, but constant review is crucial.
3. Centralized planning, communication and coordination empowering *one* authority to act *across* jurisdictions (ministries, department, planning councils, etc.)
4. Importance of public support considering the country's historical context and culture
5. People are willing to change their behavior and accept rules across countries for a *greater good*!

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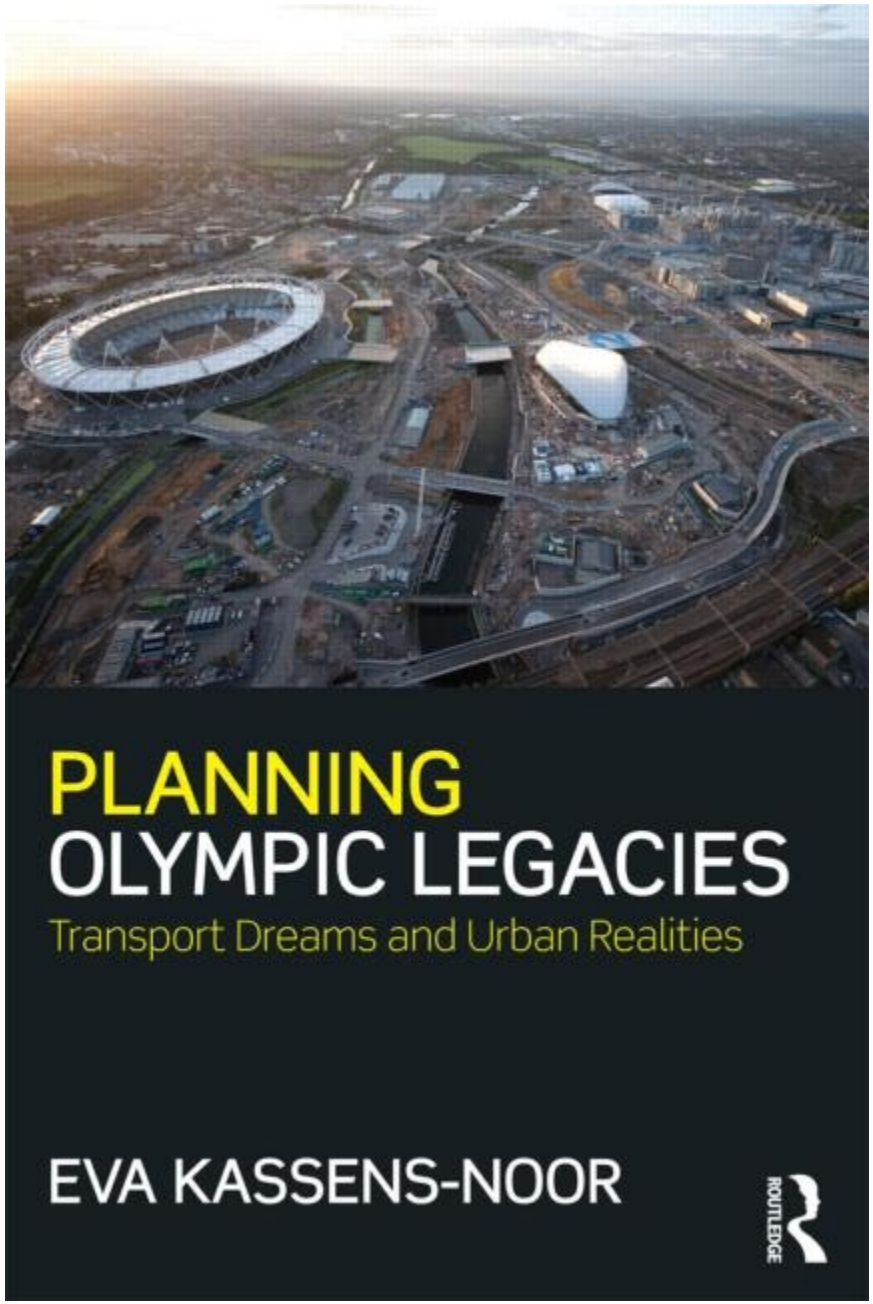

PLANNING
OLYMPIC LEGACIES
Transport Dreams and Urban Realities
EVA KASSENS-NOOR
ROUTLEDGE

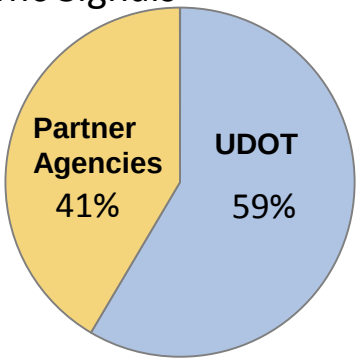
Thank you!

Managing Traffic for Special Events: The Role of Traffic Signals

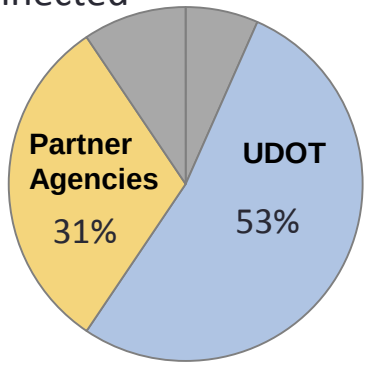
Jamie Mackey
UDOT Statewide Signal Engineer
jamiemackey@utah.gov

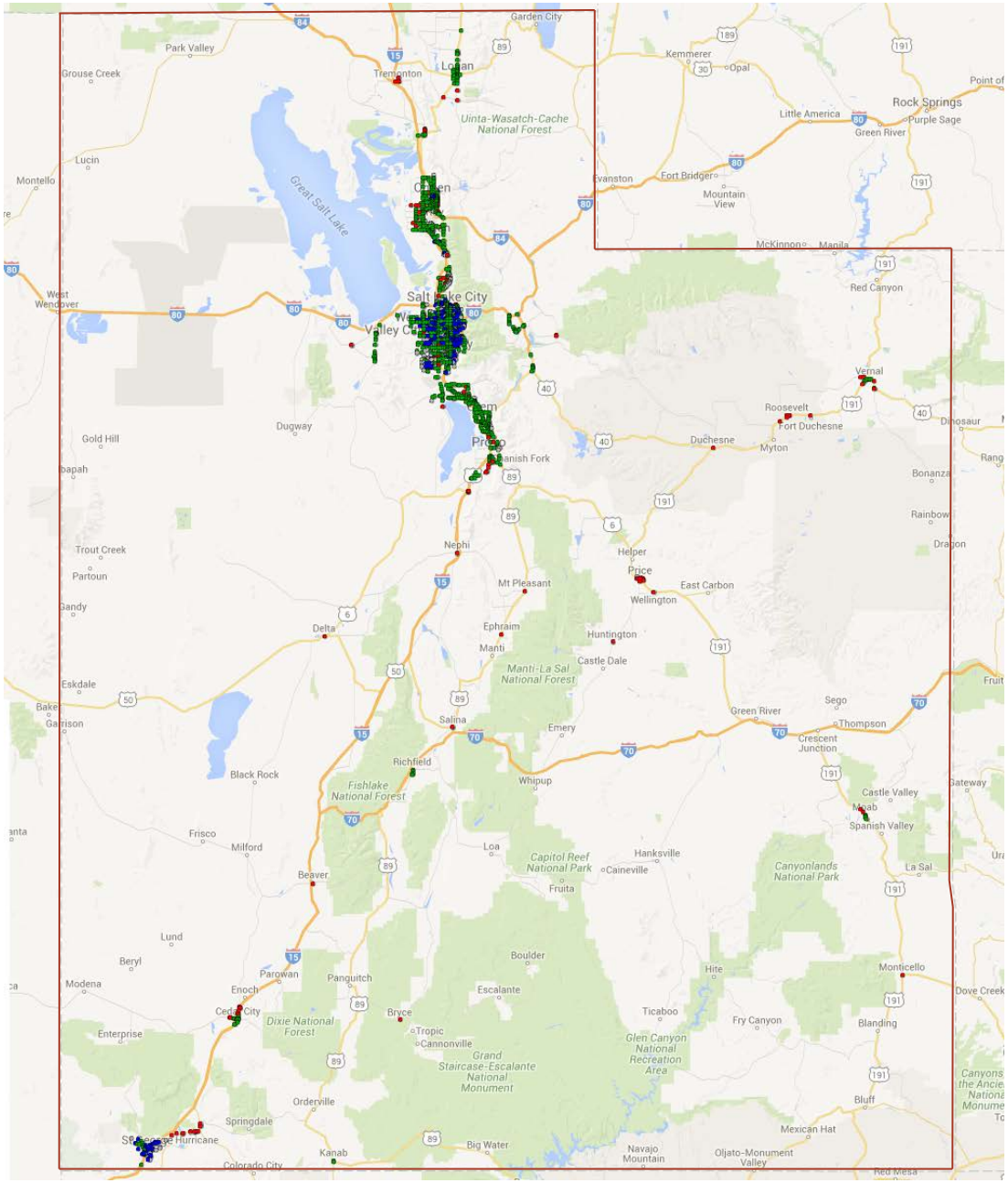
Traffic Signals in Utah

2100 Traffic Signals



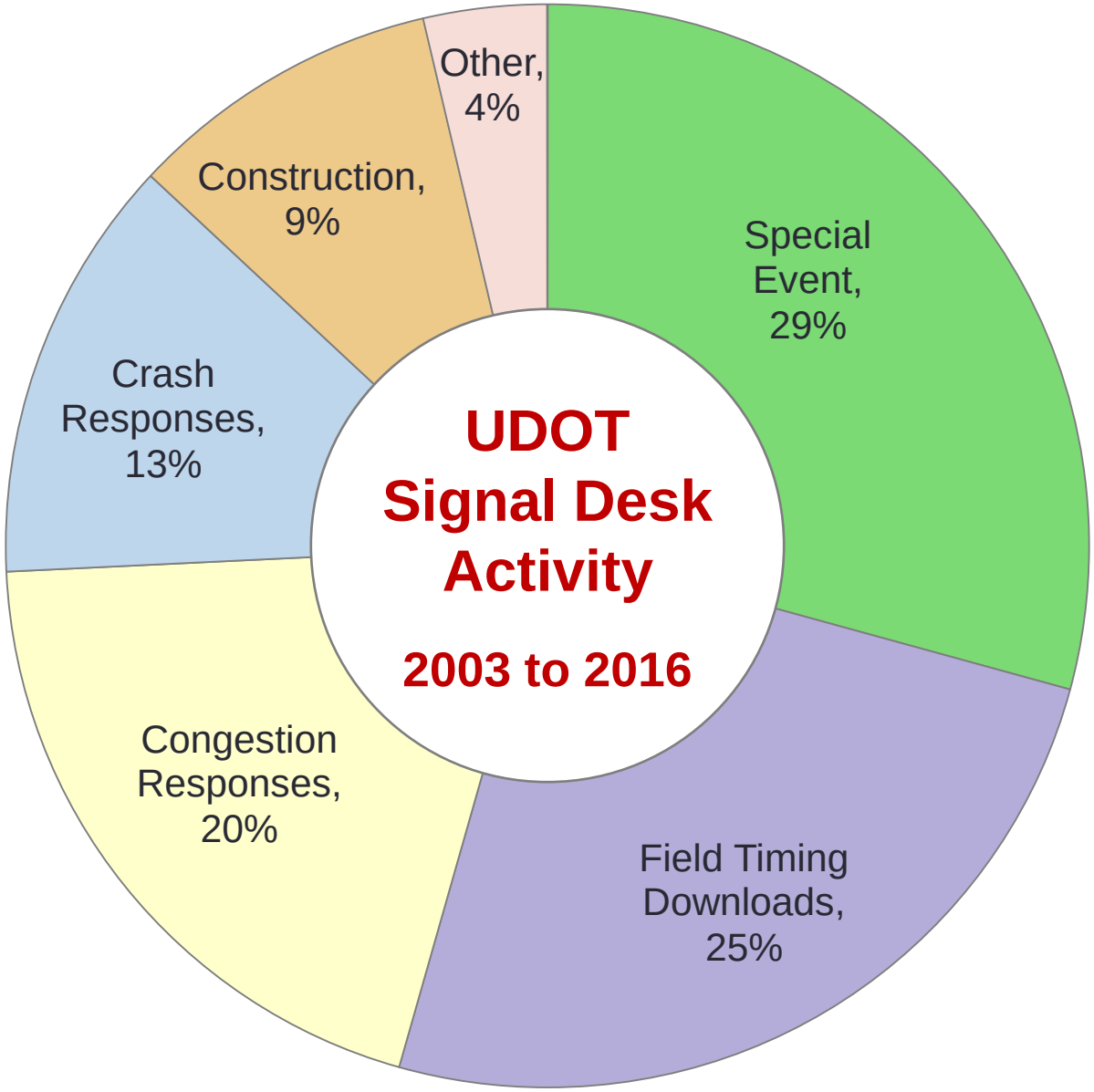
84% Connected



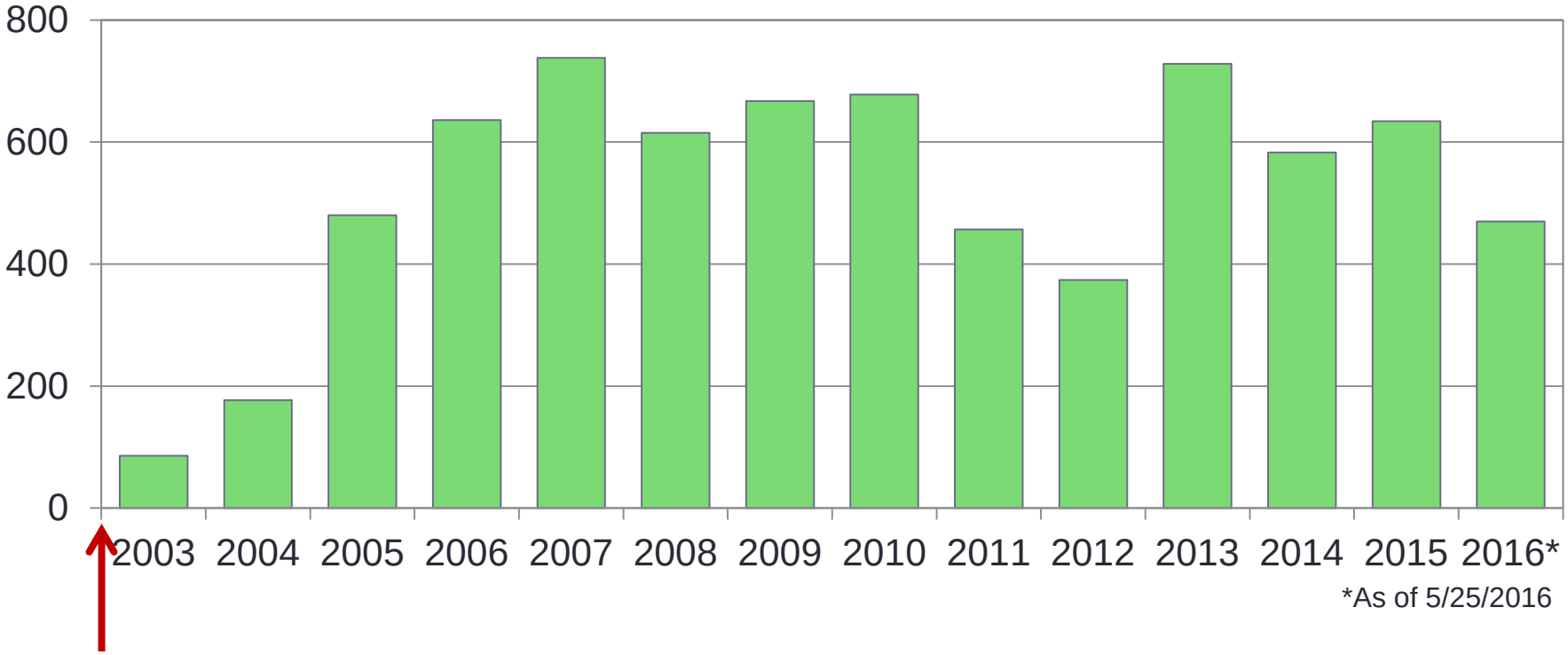


UDOT Traffic Operations Center

TOC Control Room


Other, 4%
Construction, 9%
Special Event, 29%
Crash Responses, 13%
UDOT Signal Desk Activity
2003 to 2016
Congestion Responses, 20%
Field Timing Downloads, 25%

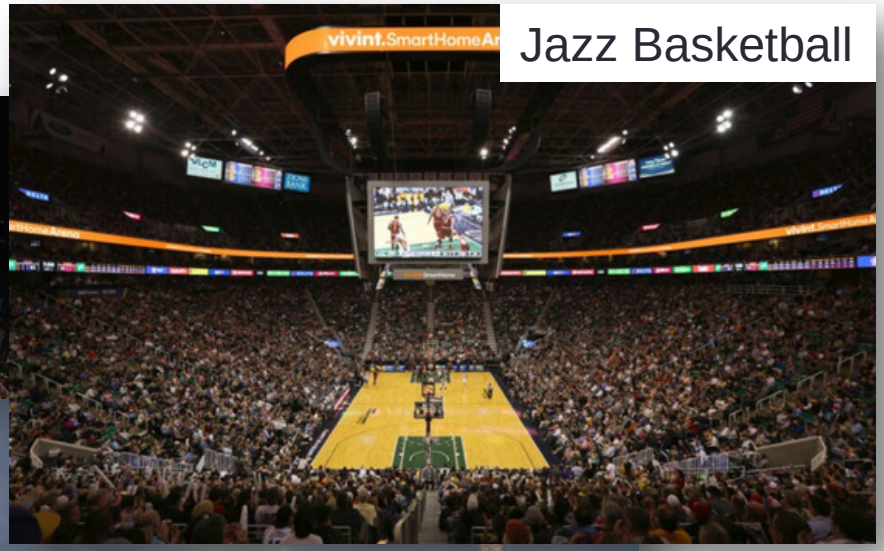
Special Event Plans Enabled



Event Types

U of U Football

Jazz Basketball



Real Soccer

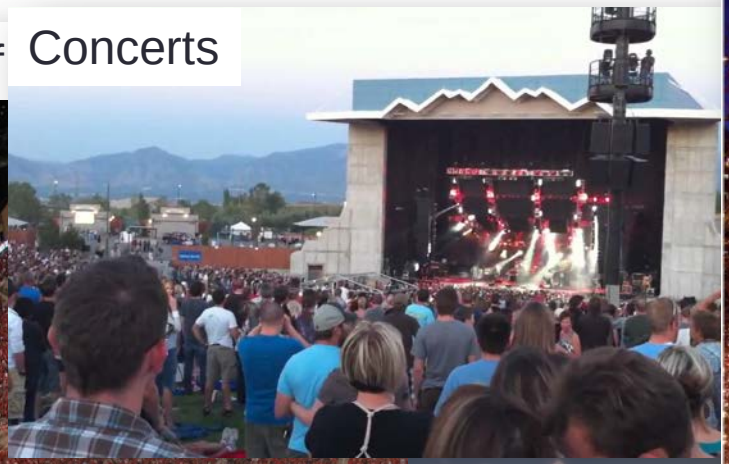
Bees Baseball

YU Football

Event Types

Holiday Celebrations

Concerts

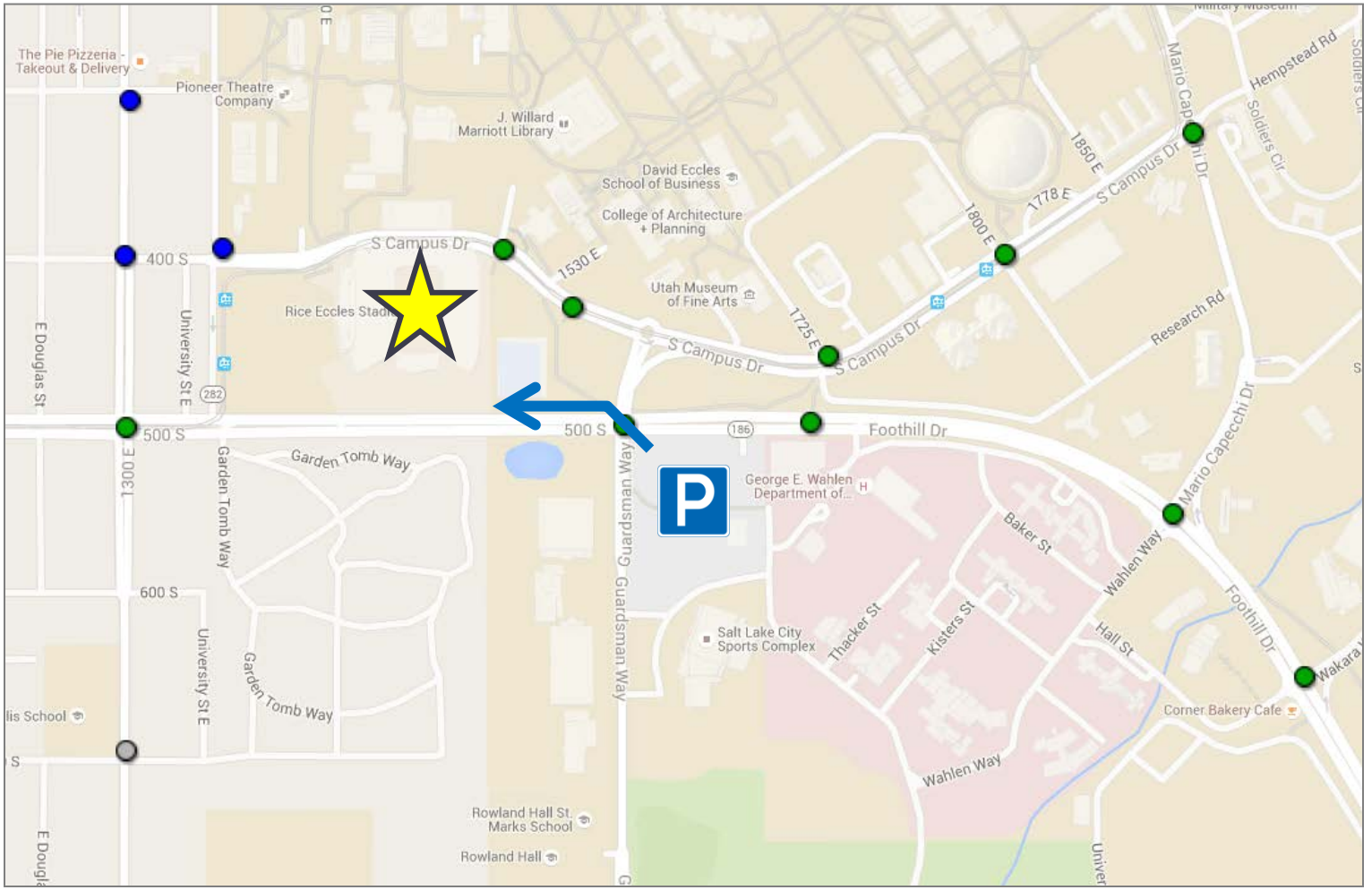


Conventions

Fireworks

Traffic Management by Law Enforcement

Example: Heavy Pedestrian Demand at U of U Football



Police Control of Signal Operation

Police Assistance with Exclusive Pedestrian Phase 1

Police Assistance with Exclusive Pedestrian Phase 2

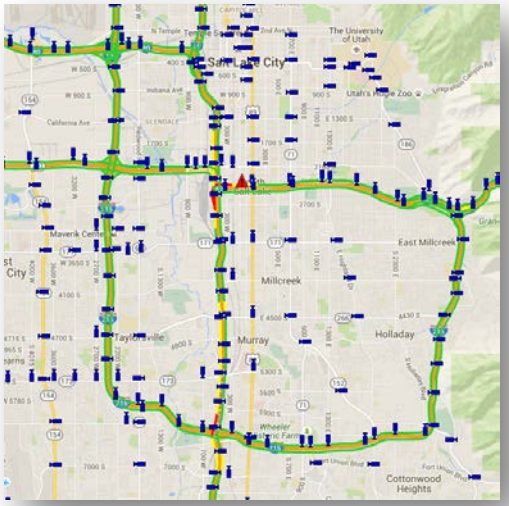
Police Assistance with Exclusive Pedestrian Phase 3

Police Assistance with Exclusive Pedestrian Phase

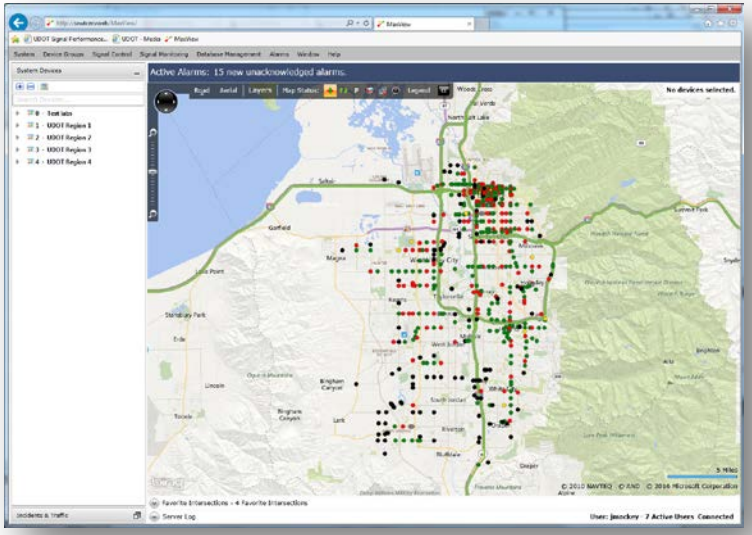
Event Signal Management Requirements

Communication

Cameras



Central System



Staff

- Coordinate
- Develop & Maintain
- Enable
- Monitor

Steps to Develop Special Event Plans

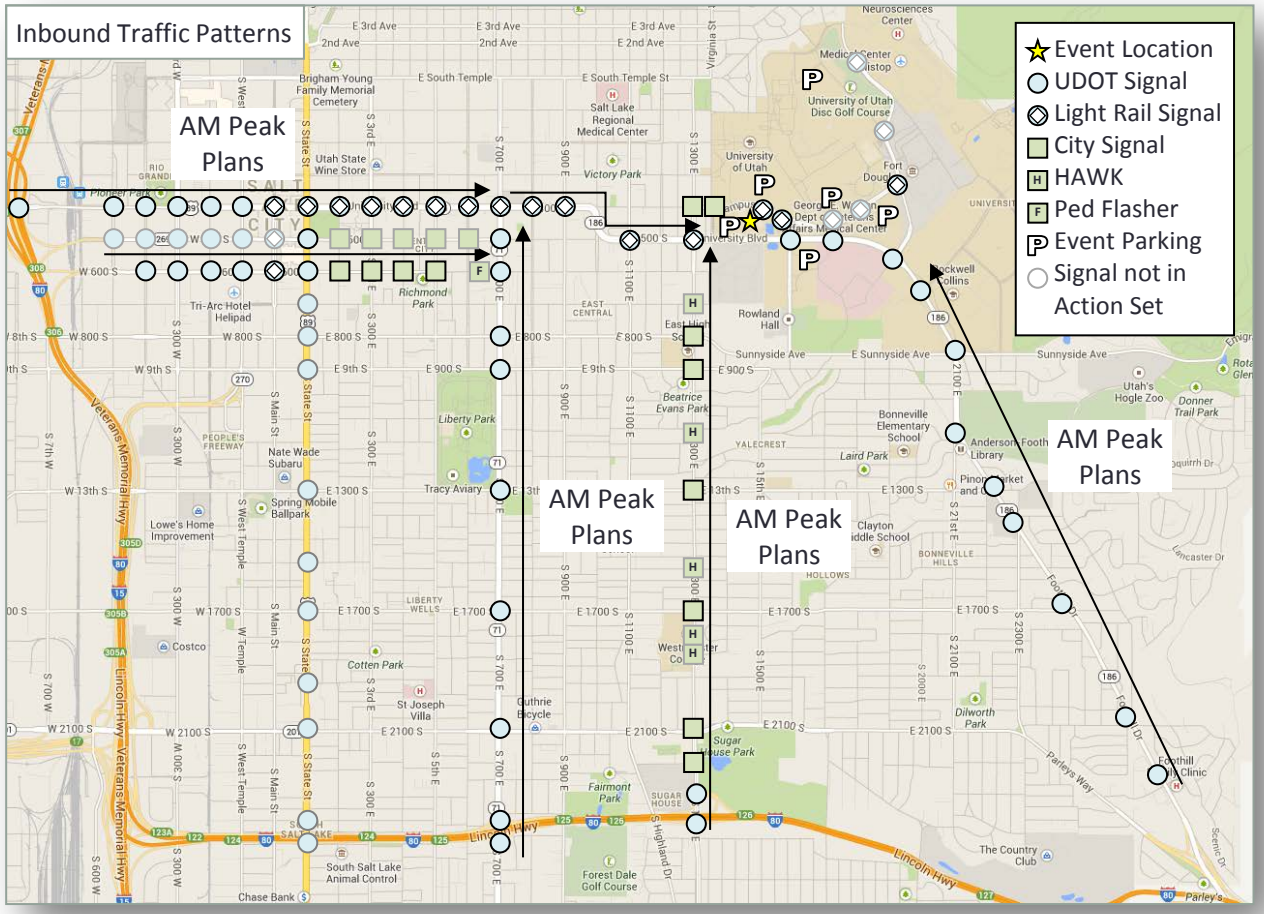
Prepare	• Meet with event staff, law enforcement, and/or public information officers - Consider Travel Demand Management to reduce background traffic • Estimate or monitor event ped & vehicle traffic • Use existing patterns or create new patterns - Consider a few alternate plans if it's a large event • Program controller • Set up action sets in central system • Do a test run
Manage Event	• Field & Control Room staff – Use radios, not cell phones • Fine tune plans
Review	• Host After-action Review Meeting
Maintain	• Develop event plan documents • Schedule future events • Review live event on schedule

Prepare

Meet with Stakeholders

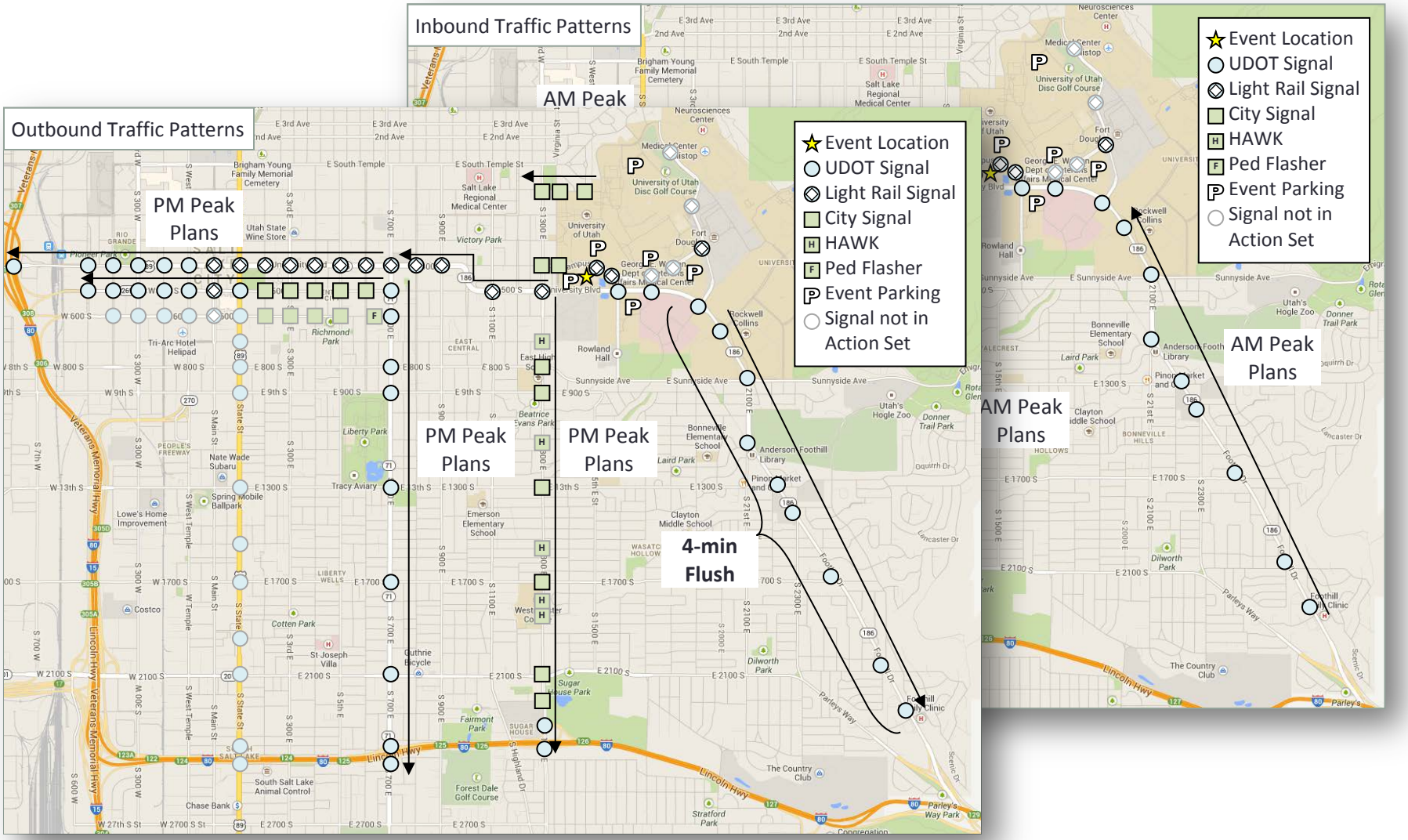
Prepare

Develop Event Plans



Prepare

Develop Event Plans

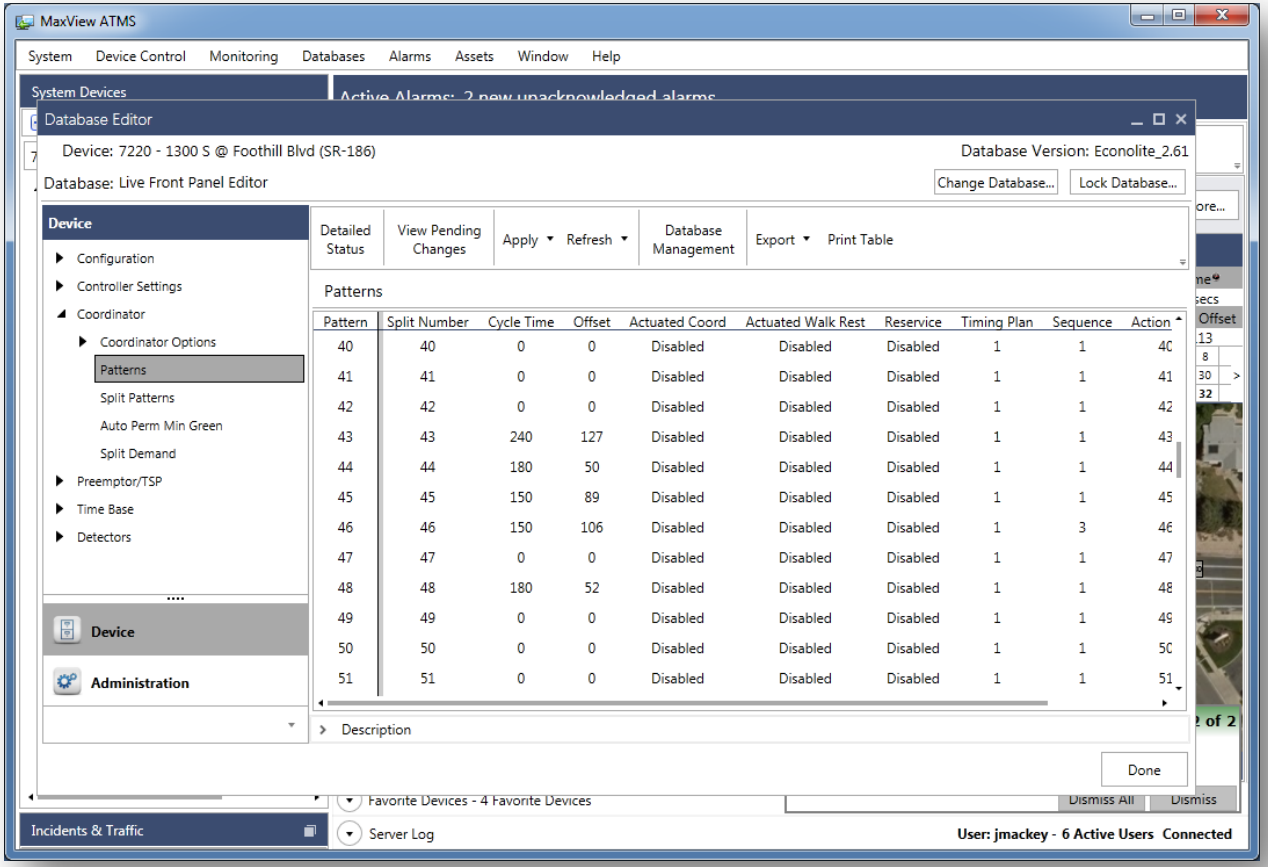


Prepare

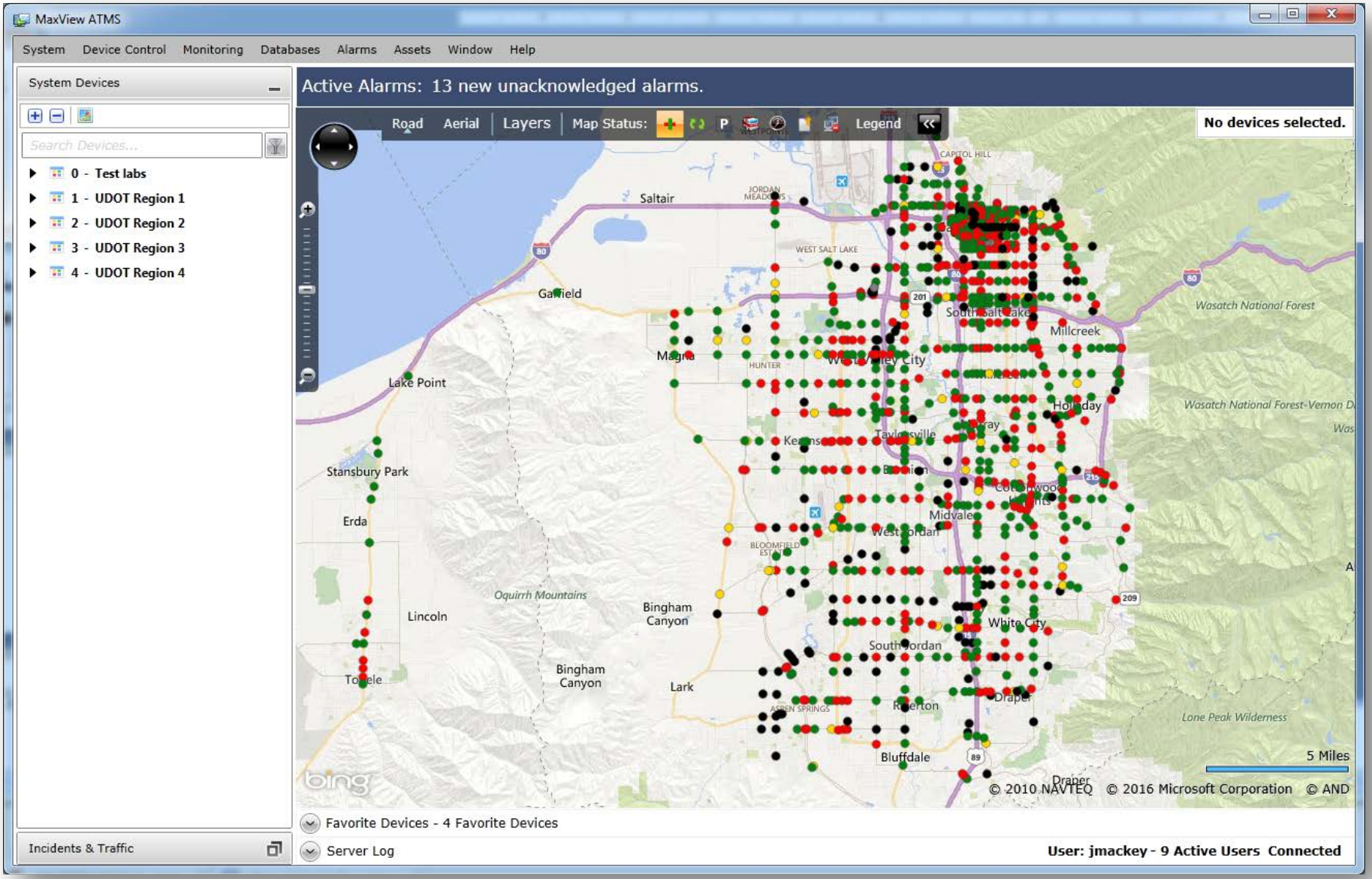
Program Controller

Through Front Panel:

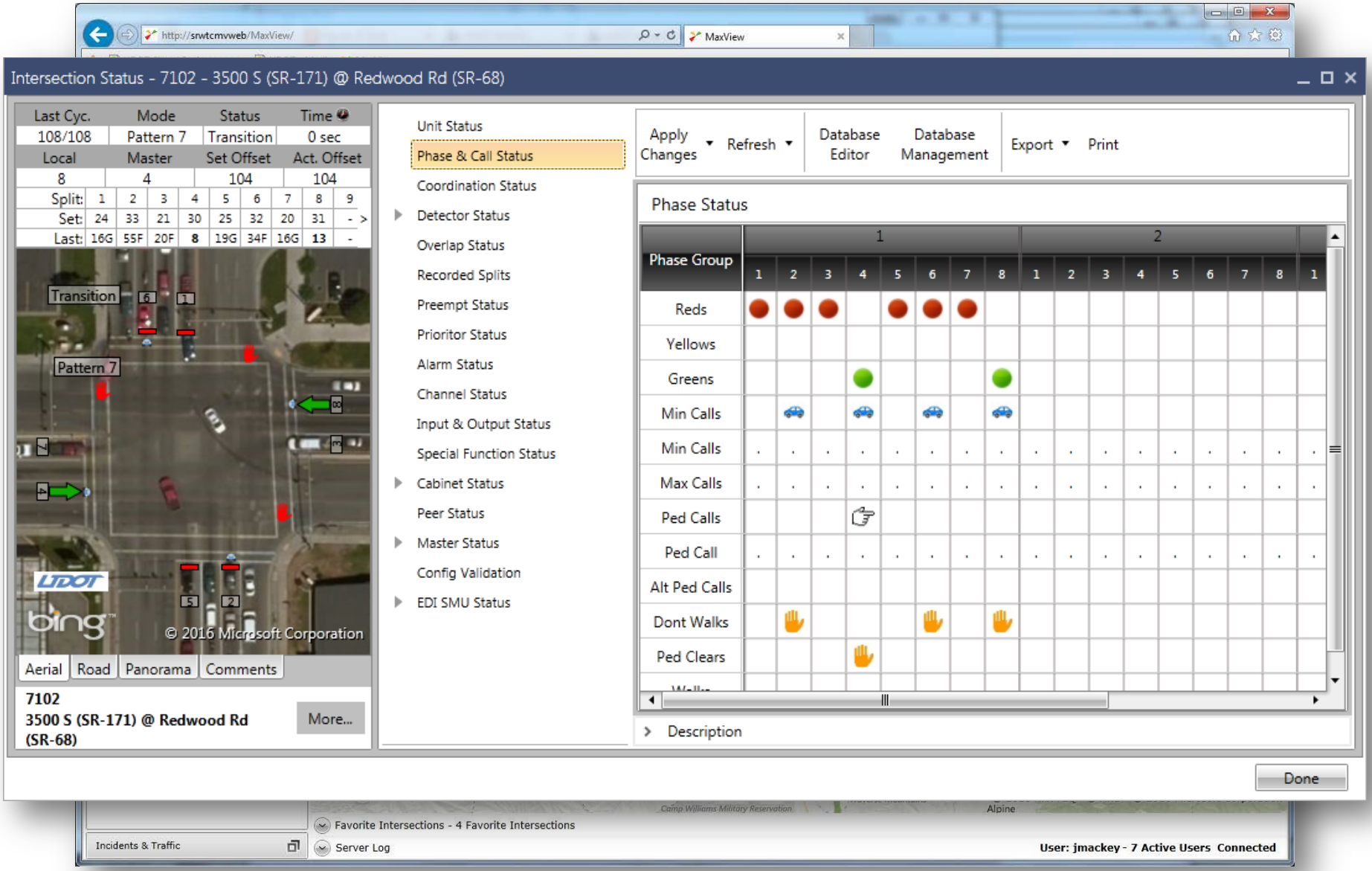
Using Central System:



Central Signal Management Software

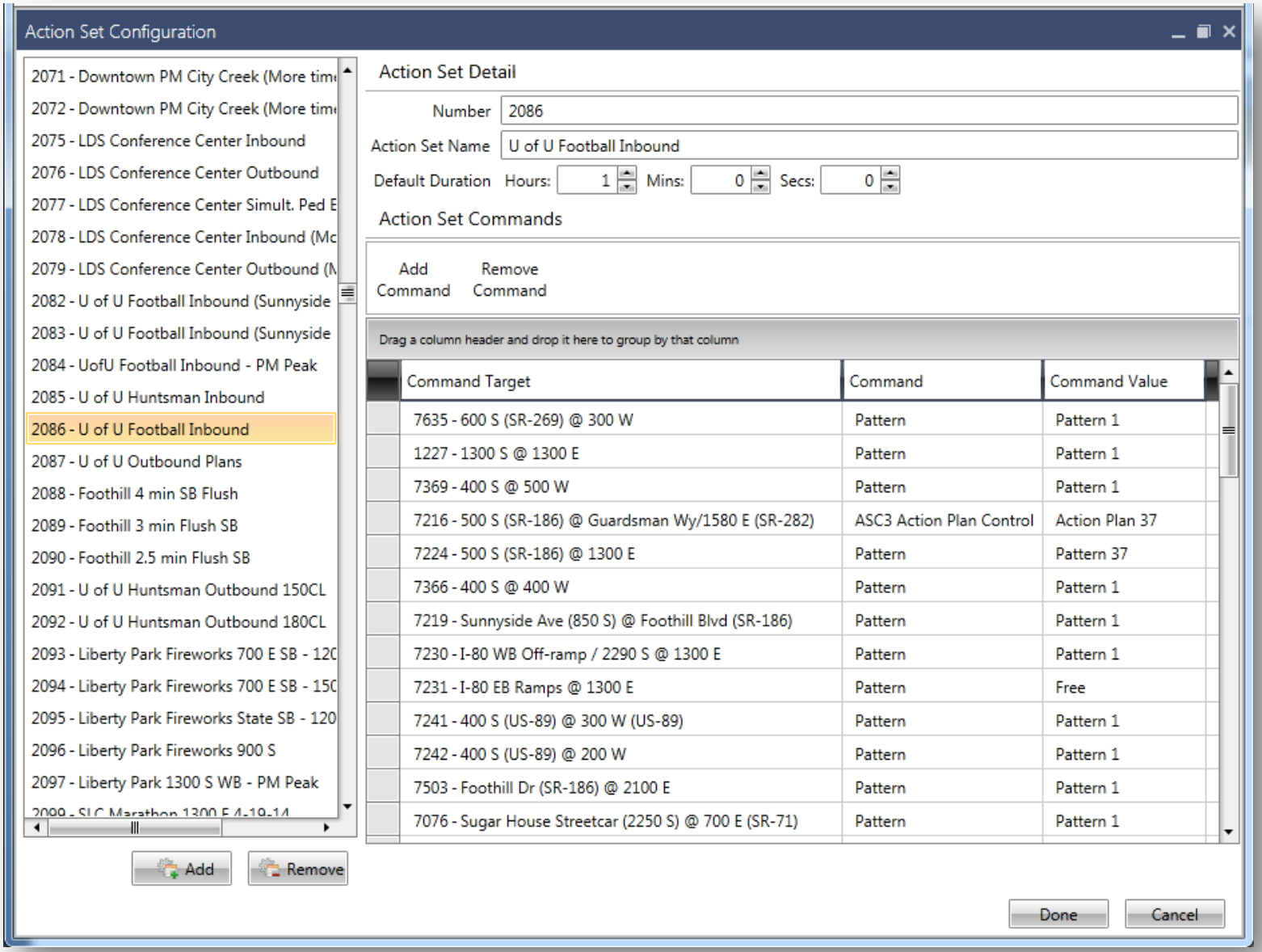


Central Signal Management Software

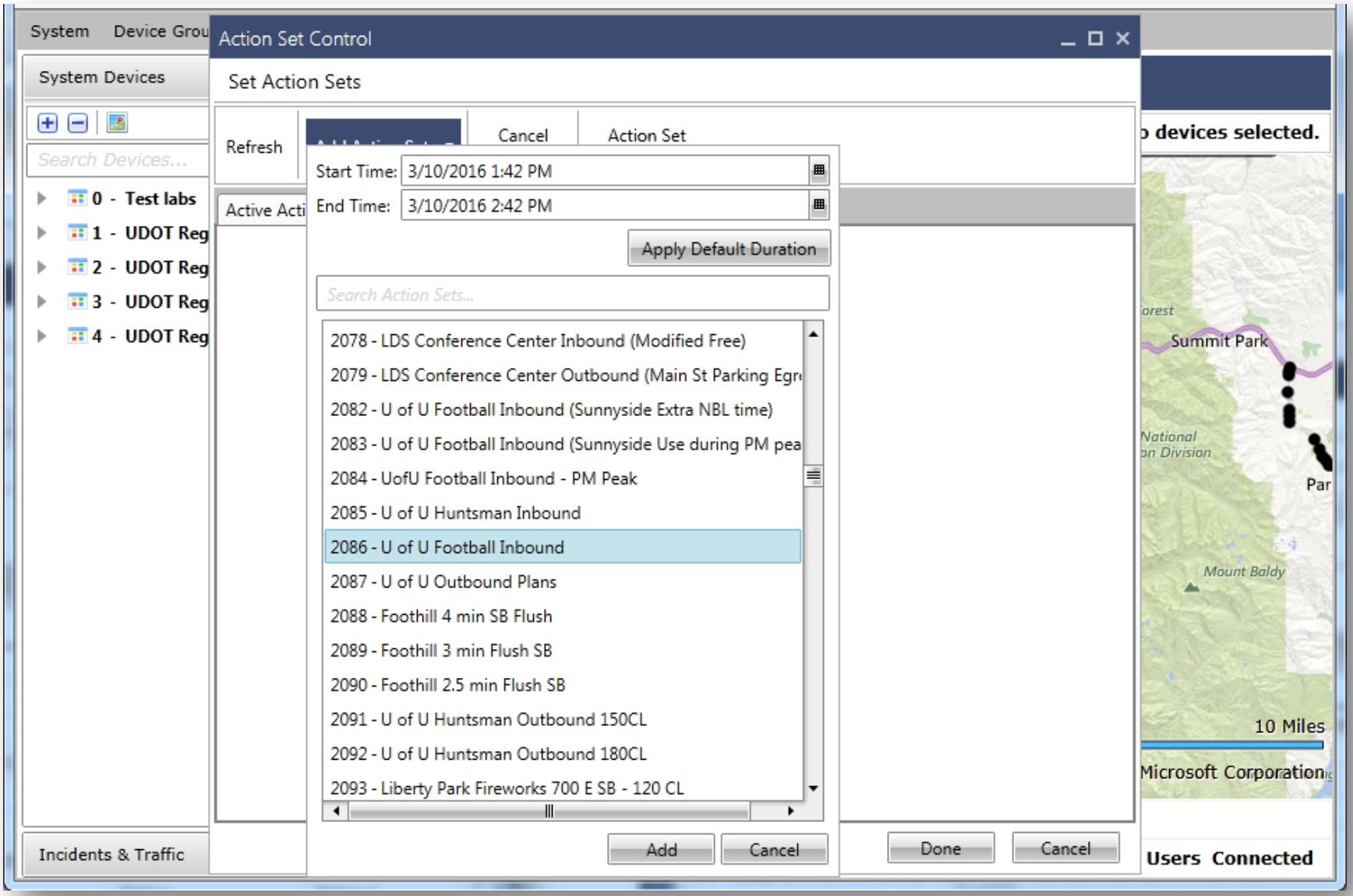


Prepare

Action Set Setup

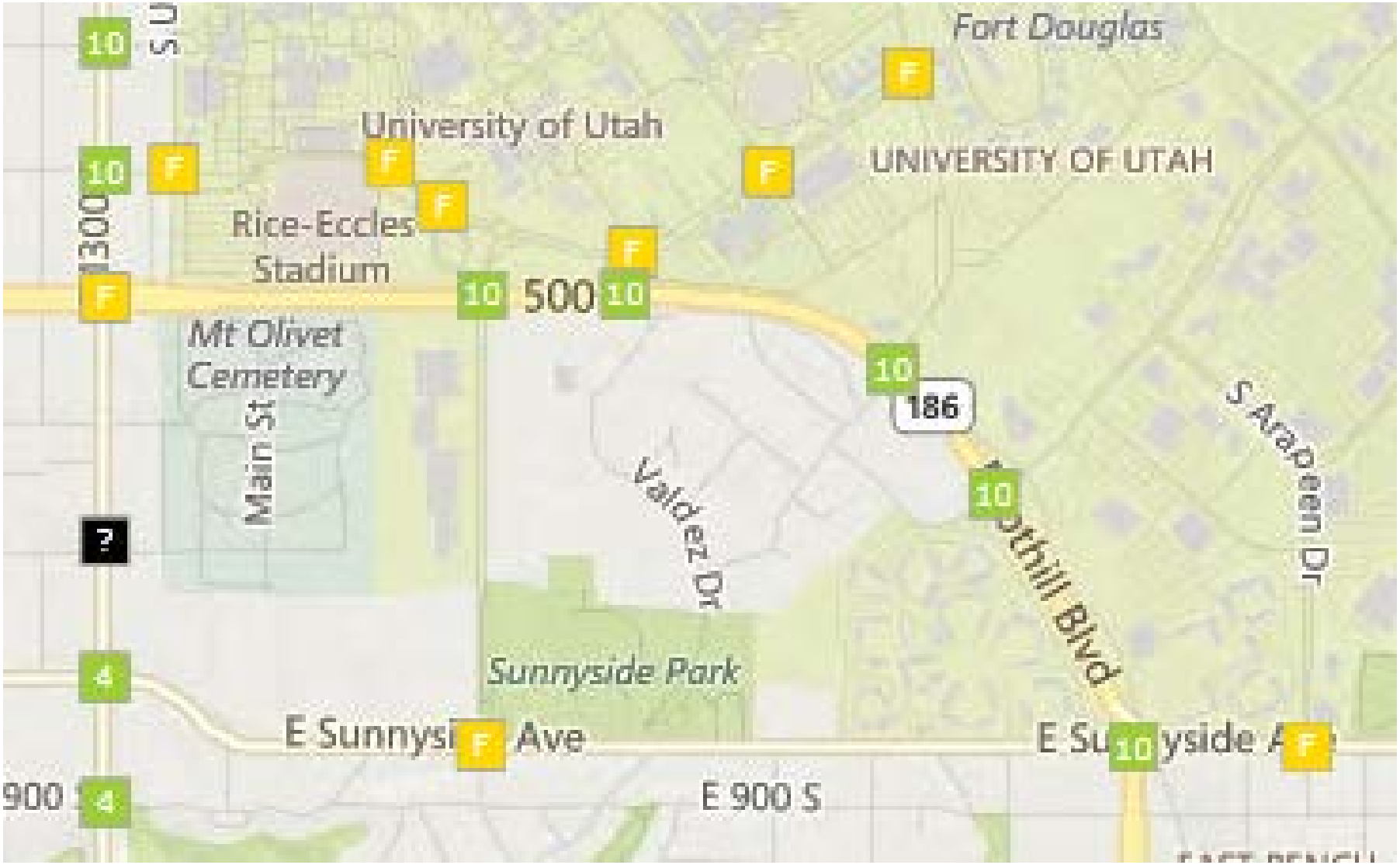


Manage Event Schedule Action Set



Manage Event

Monitor

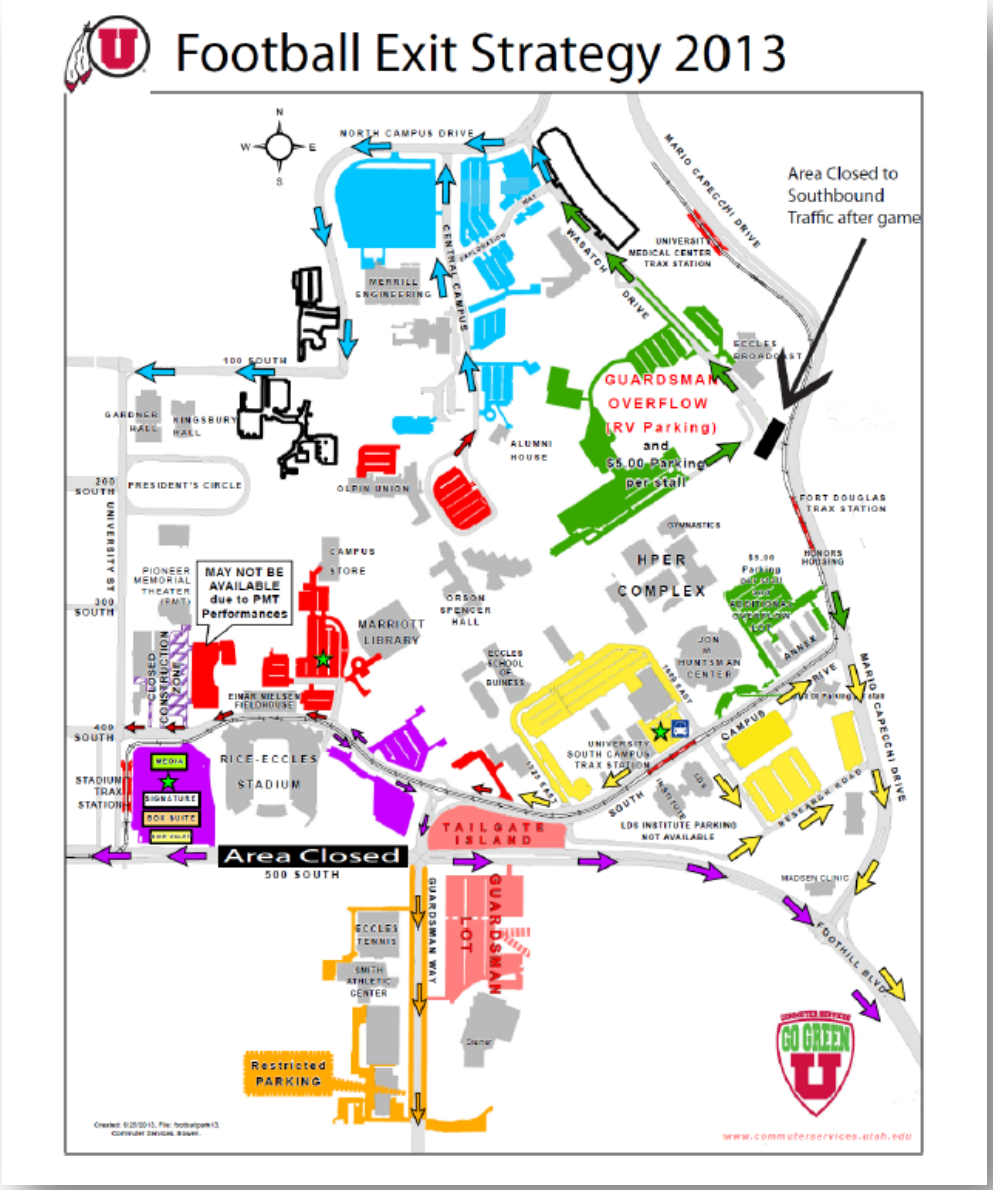


Manage Event

Monitor & Fine tune

Review

Assess Performance with Stakeholders



Review & Maintain Event Plan Documents

UTAH DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS CENTER

GUIDELINE AND PROCEDURE UPDATE

SUBJECT: **University of Utah Special Event Plans – Rice-Eccles Stadium**	*EFFECTIVE DATE*: November 2006 – mod 10-8-11, 09-19-12, 10-2-2013, 02-25-2016 (removed references to Huntsman Center which will now be treated separately)
NUMBER OF PAGES: 5	*APPROVAL*: Matt Luker

PURPOSE:

Special event signal timing plans have been developed to help traffic flow around football or large-scale events at the Rice-Eccles Stadium at the University of Utah. Generally, the Traffic Engineer at the Signal Timing Desk will schedule the timing for Football or large-scale *INBOUND* events. The Traffic Engineer will not schedule *OUTBOUND* events, due to the unpredictable nature of the sporting event. In the absence of the Traffic Engineer at the Signal Timing Desk, the TOC operators will need to run specific action sets when the sporting event is out for *OUTBOUND* traffic. Contact John Doe (johndoe@utah.edu or phone at 801-555-3987) to get the estimated attendance for the event.

OPERATIONAL GUIDELINE:

You may run the action sets for *INBOUND* or *OUTBOUND* by direction from the Traffic Engineer(s) in the field, or your observations on the CCTV cameras.

Inbound Plans

1. Usually, the Signal Desk will program the *INBOUND* action sets. You can verify that the *INBOUND* action sets are enabled on i2 by clicking on: CONTROL-MANUAL ASSIGNMENT. You will see the scheduled action sets scheduled to run in the right hand side of the Manual Assignment window. Please verify that the *INBOUND* action sets are running.
2. **SET:7 MaxView 2086 or SET:1 MaxView 2084** – Implement the INBOUND timing plans to start 90 minutes prior to the start of the event, unless a request is made to start it earlier, and end 15 minutes after the start of the event. This plan runs the AM peak plans on Foothill Blvd, 1300 E, 700 E, 400 S, and 600 S. Additional NBL time is provided at Sunnyside and Foothill. Do not run SET:7 **MaxView 2086** before 6 p.m. on weekdays, instead run SET:1 **MaxView 2084**, which runs AM plans on 1300 E and adjusts PM peak splits at Foothill and Sunnyside. .
3. **SIG#7219, APL:38 or APL:39** – At Foothill & Sunnyside for INBOUND, starting 3 hours before the event on Saturdays only and ending prior to the implementation of Action Set 7, run one of two coordination plans (dependent on the existing TOD cycle length along Foothill Blvd). Both provide more time for the NB to WB left turn. APL:38 (108s cycle length) should run on Saturdays only between 1600 and 2230. APL:39 (120s cycle length) should run on Saturdays only between 1000 and 1600. Make sure plan 38 or 39 is no longer running 90 minutes before game time because Action Set 7 will run a different plan for Sunnyside.
4. **SIG#7216, APL:41 or APL:42** – Pedestrian Scramble at 500 South & Guardsman is implemented for *INBOUND*, starting 60 minutes prior to the event and extending 15 minutes after the event begins. APL:41 should run for 25 minutes, starting 1 hour before the event. APL:42 starts 35 minutes before the event and runs for 35 minutes. Run APL:41 again starting at event time for 15-minutes.

   NOTE: The pedestrian scramble at 500 South and Guardsman separates the pedestrian timing from the vehicle timing. An exclusive pedestrian phase (phase 10) will come active immediately following the north/south red. During the pedestrian scramble, all the vehicle signal heads will be red, all the pedestrian signal heads will have the walk indication followed by a pedestrian clearance indication. Pedestrians are allowed to cross diagonally. There are usually police officers present to direct pedestrians.

Review & Maintain Event Plan Documents

Action Set Details

SET:2005														
Rio Tinto Ingress 120s CL														
Sig. ID	**Location**	**Action**	**CL**	**Off.**	**Seq.**	**Splits**								
						1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
7015	9000 S & 700 W (ASC2)	PAT:37	120	23	1	20	**70**	0	30	20	**70**	0	30	
7014	9000 S & 450 W (ASC2)	PAT:37	120	37	1	15	**49**	16	40	15	**49**	16	40	
7077	9000 S & I-15 (SPUI)	PAT:37	120	83	2	35	32	1	**53**	6	35	0	**53**	26
7621	9000 S & Monroe (Eagle)	PAT:37	120	116	0	17	**67**	18	18	20	**64**	18	18	
7173	State & 8720 S (ASC2)	PAT:37	60	19	1	0	**40**	0	20	0	**40**	0	20	
7174	State & 9000 S	APL:37	120	4	5	19	41	16	**44**	22	38	20	**40**	
			Act. Coord ON; AUX FCT 1 ON (dual EB right turn)											
7643	State & Rio Tinto	APL:37	120	49	1	0	**74**	0	46	0	**74**	0	0	
			PH4: Walk 2 (15s WALK, 26s FDW)											
7175	State & 9400 S	PAT:37	120	62	2	29	**37**	16	38	15	**51**	17	37	
7640	State & 9620 S	PAT:37	120	1	5	30	**42**	15	33	15	**57**	15	33	
7176	State & 10000 S	PAT:37	120	88	1	15	**50**	16	39	21	**44**	18	37	
7352	State & 10200 S	PAT:37	120	79	1	15	**58**	12	19	19	**34**	15	32	
7177	State & 10400 S	PAT:37	120	54	1	17	**50**	15	38	18	**49**	15	38	
7178	State & 10600 S	PAT:37	120	100	4	15	**39**	15	51	16	**38**	30	36	
7614	10400 S & 1055 W	PAT:37	120	69	1	20	**65**	0	35	20	**65**	0	35	
7613	10600 S & 700 W	PAT:37	120	114	5	18	**70**	0	32	19	**69**	0	32	
7612	10600 S & 400 W	PAT:37	120	18	1	20	**43**	20	37	20	**43**	20	37	
7079	10600 S & I-15 (SPUI)	PAT:37	120	76	1	25	58	0	**37**	5	42	0	**37**	36
4149	10600 S & 120 W	PAT:37	120	97	1	20	**52**	15	33	15	**57**	18	30	

Maintain Signal Desk Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
10 **10** BRC: Stake Conferer **11** STEC - SL Home Sh **2p** BRC: Stake Conferer **6p** BRC: YSA World Wic	11 **8** UVU First Week Inloac	12 **8** UVU First Week Inloac **7p** USU - men's b-ball	13 **8** UVU First Week Inloac **9** Signal Desk Staff Mee **7p** Maverik - Grizzlies	14 **8** UVU First Week Inloac **10:15** Weather Briefing **7p** Vivint Arena - Jazz **8p** UofU: Basketball	15 **7** Provo City Center Ten **8** UCCU - The Rumble **8** UVU First Week Inloac **11** STEC - Utah Auto Ex **7p** Maverik - Grizzlies	16 **7** Provo City Center Ten **10** STEC - Utah Auto Ex **7p** Maverik - Grizzlies **7p** Vivint Arena - Jazz
17 **10** STEC - Utah Auto Ex **10** BRC: Stake Conferer **2p** BRC: Stake Conferer **6:30p** UofU: Basketball	18 **7** Provo City Center Ten **10** STEC - Utah Auto Ex **1:30p** Maverik - Grizzlie **7p** Maverik - Grizzlies	19 **7** Provo City Center Ten **3:15p** Weather Briefing **9p** USU - Men's b-ball	20 **7** Provo City Center Ten	21 Sundance in Park City **7** Provo City Center Ten	22 **7** Provo City Center Ten **10:15** Weather Briefing **7:30p** Vivint Arena - Mor	23 **7** Provo City Center Ten **8** STEC - Rocky Mounta **2p** Vivint Arena - Monste **3p** UofU: Gymnastics **7:30p** Vivint Arena - Mor
24 Sundance in Park City **10** BRC: Stake Conferer **2p** BRC: Stake Conferer **6p** BRC: Bountiful Temp	25 **7** Provo City Center Ten **11** Maverik Ctr: Funeral **7p** Vivint Arena - Jazz	26 **7** Provo City Center Ten	27 **7** Provo City Center Ten **7p** Vivint Arena - Jazz **9p** UofU: Basketball	28 **7** Provo City Center Ten **3:15p** Weather Briefing **5p** Maverik - UHSAA Wr **9p** Marriott Center - BYU	29 **7** Provo City Center Ten **2p** STEC - Morris Murdo **2p** Weather Briefing (jan **3p** STEC - Bridal Show **7p** Maverik - Grizzlies **7p** Vivint Arena - Jazz	30 **7** Provo City Center Ten **9** STEC - Gun show **10** STEC - Morris Murdo **11** STEC - Bridal Show **3p** UofU: Basketball **7p** Maverik - Grizzlies +2 more
31 Sundance in Park City **9** STEC - Gun show **10** BRC: Stake Conferer **10** Weather Briefing (jan **2p** BRC: Stake Conferer	Feb 1 **7** Provo City Center Ten **7p** UofU - Gymnastics **7p** Vivint - Jazz	2 **7** Provo City Center Ten	3 **7** Provo City Center Ten **7p** Vivint - Jazz	4 **7** Provo City Center Ten **10** UCCU - Drill Team S **7p** Marriott Center - BYU **8:30p** Deer Valley: Worl	5 **7** Provo City Center Ten **10** UCCU - Drill Team S **11** STEC - Golf Expo **7p** Vivint - Jazz **8p** Maverik - PBR BlueD **9p** Deer Valley: World C	6 **7** Provo City Center Ten **8** UCCU - Drill Team Sta **9** STEC - Golf Expo **10** STEC - Winter Paloo **2p** Marriott Center - BYU **7p** Maverik - PBR BlueD **8:40p** Deer Valley: Worl

Maintain

Event Email

2016-6-4 Events @ STEC, Vivint, Maverik, USU, UofU and BRC

_Sigs/Events x _Sigs/Signal Desk x

SignalDesk Mar 4 (6 days ago)

to Peter, James, me, Kent, Mark, Matt, TC-ControlRoom, Erik, Bryan, Cabot, Kurt, Scott, Tom, Carı

Signal Timing Event Modifications

SUMMARY

Event Location	Time Period	Control Room Operator Action
South Towne Expo Center – AutoRama	3-4-16 15:00 - 22:00 3-5-16 10:00 - 22:00 3-6-16 10:00 - 18:00	Enable action sets as needed.
500 W Construction Support	3-4-16 22:00 – 3-5-16 07:00	**Region 1 Signal Engineer, Carrie Jacobsen will be contacting the TOC to enable MaxView Action Set 103 once lanes are taken.**
Vivint Arena – Disney On Ice	3-4-16 15:30, 19:00 3-5-16 11:30, 15:30, 19:00 3-6 11:30, 15:30	Monitor traffic and **modify** outbound action sets as necessary.
Maverik Center - Concert	3-5-16 16:00	Inbound scheduled.
USU – Men's Basketball	3-5-16 19:00	Outbound SET:1005 Scheduled.
Rice – Eccles Men's Basketball	3-5-16 19:30	**Outbound is enabled, please monitor game and verify that start time aligns with the end of the game.**
Bountiful Regional Center – Stake Conferences	3-6-16 9:00, 12:00, 15:00	None

Details contained in this event memo serve as a guide to action sets enabled **or** available as necessary for operators and Signal Staff. Detailed guidelines for venue locations should be referenced for start time and duration of action sets. They can be found in the following UDOT share drive location and: S:\TMD 8384 Traffic Signal Operations\Project Files\Special Events\Guidelines - Recurring Events

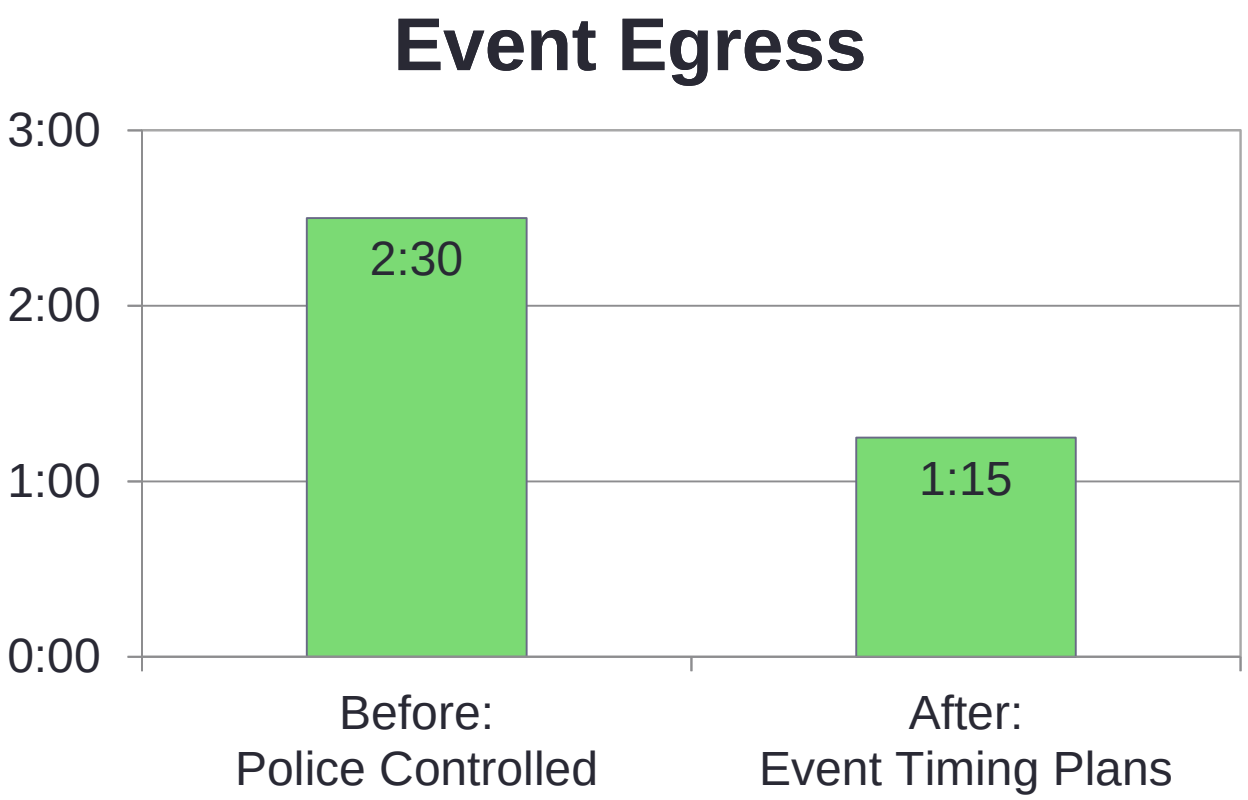
Bountiful Regional Center

WHAT:	WHEN:	Start:	End:
Layton Utah Valley View	3-6-16	9:00	11:00
Bountiful Utah South		12:00	14:00
Centerville Utah North		15:00	17:00

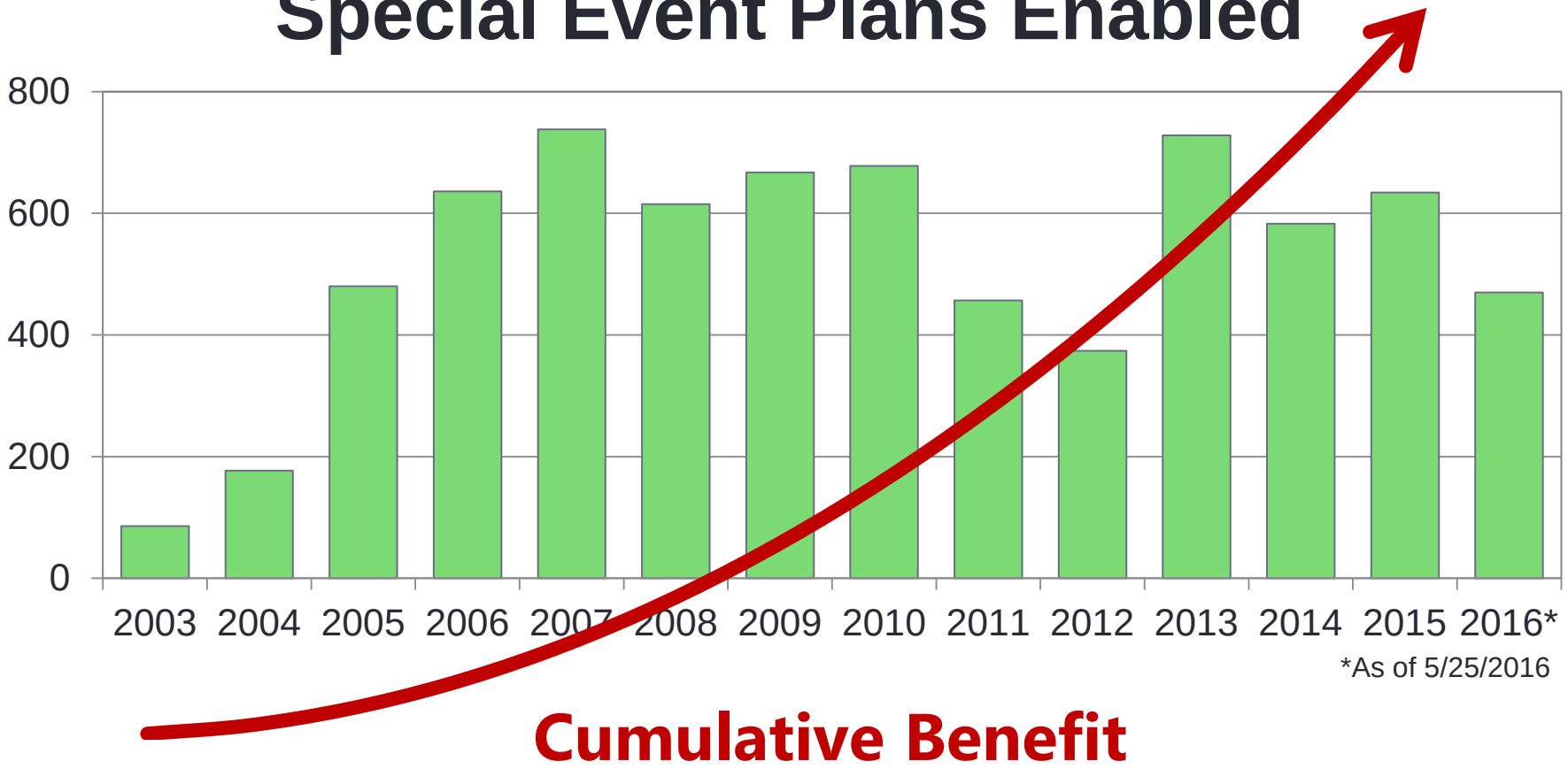
ACTION: The Bountiful Regional Center is located just off of I-15 near the 2600 S exit in Woods Cross. Traffic exiting the freeway for events at this location can be monitored using the CCTV camera at: I-15 SB @ 2600 S and Main St / US-89 @ 2600 S / SR-93

BYU Football Before/After Example

BYU Football Before/After Example



Special Event Plans Enabled



Lessons Learned

- Build **relationships**
  - Signal Partners
  - Event Coordinators
  - Law Enforcement
- Maintain reliable **communication** to traffic signals
- Locate **CCTV** at critical signals
- Retain dependable **staff** (e.g. TOC Operators, engineering consultants)
- Reevaluate on **schedule**
- **K**eep **I**t **S**imple, **S**weetheart

TRB Webinar: Impact of Mega Events on Urban Growth through Sustainable Transportation Solutions

FHWA's Planned Special Events (PSE) Program and TRB Strategic Highway Research Program 2 (SHRP2) Reliability Research

June 2, 2016

Laurel J. Radow
Federal Highway Administration, U.S. DOT

Annual Estimates of PSEs with more than 10,000 Attendees

* 24,000 large PSEs
* 600 million people in attendance
* $40 billion "in-event" revenue or spending
* $160 billion in economic impact
* $4 billion in local government revenue
* $1.7 to $3.5 billion in congestion cost
* 90-185 million hours and 65-130 million gallons of fuel wasted (sitting in traffic)

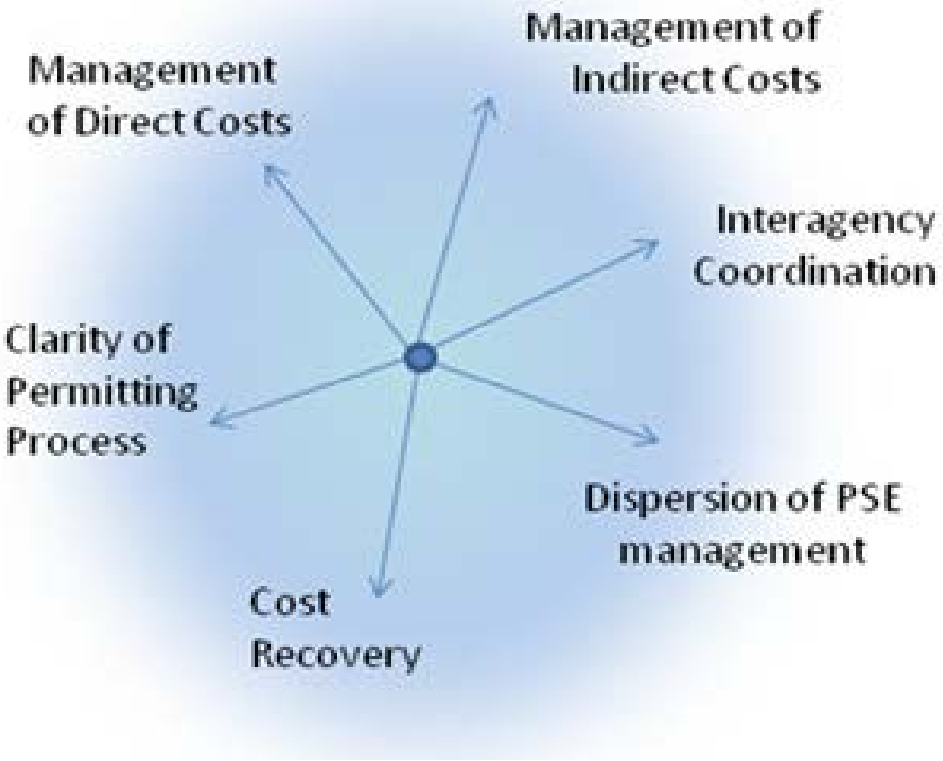
What is a Planned Special Event?

* Permanent multi-use venues
  * Sporting events
  * Concerts
  * Festivals
  * Conventions
* Other public events
  * Parades
  * Fireworks displays
  * Bicycle races
  * Sporting games
  * Motorcycle rallies
  * Seasonal festivals

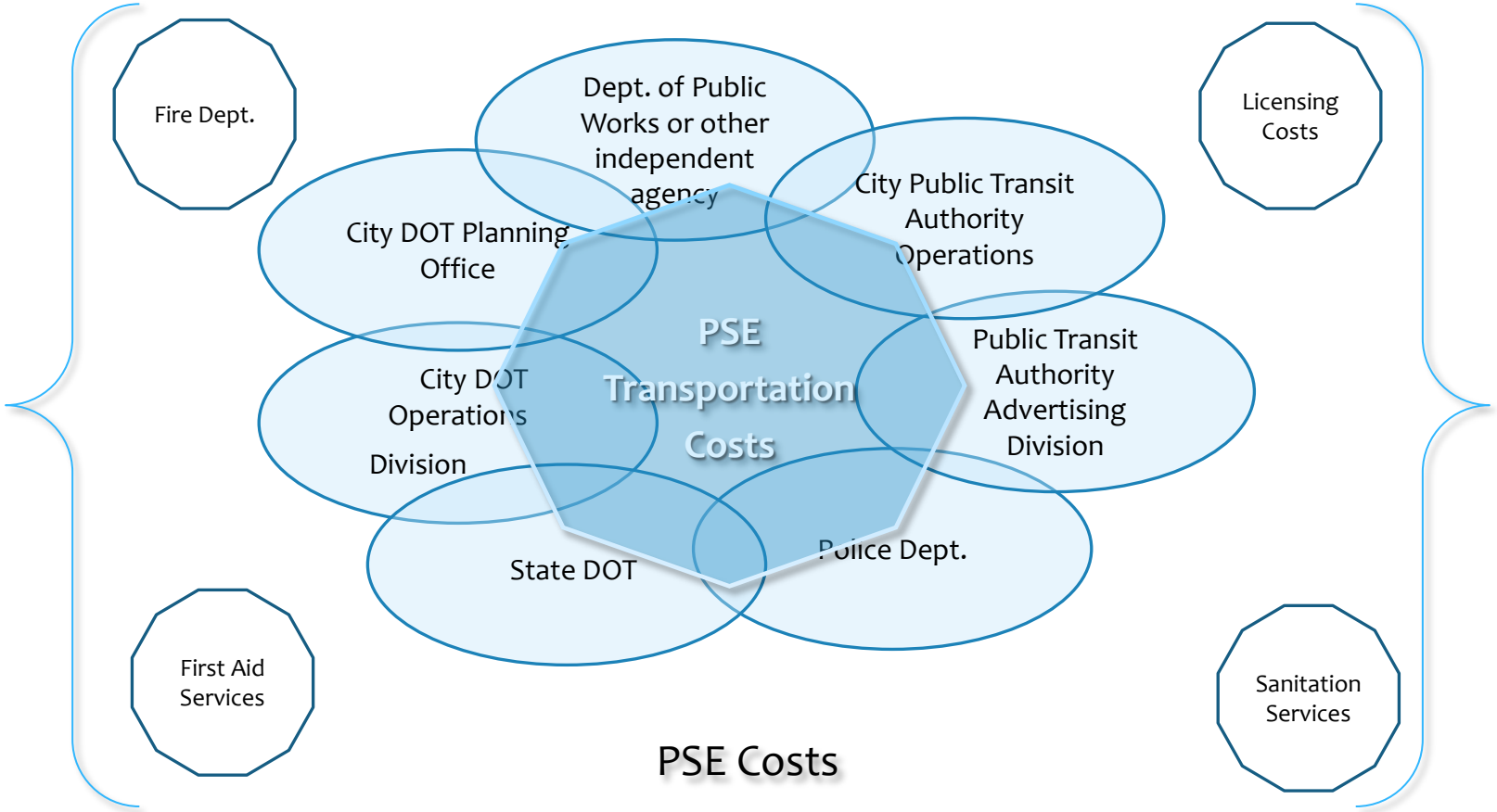
Transportation System Users Affected by Planned Special Events

* Event patrons or participants
* Non-attendee road users: local residents and businesses, commuters, truckers
* Emergency Responders
* Non-attendee transit users
* Public agency service providers

Management of Direct and Indirect Costs for Planned Special Events



Dispersion of Planned Special Events Costs



Benefits of Managing Planned Special Events

* Promote interagency coordination, resource use and sharing
* Incorporate new procedures, plans, and practices into day-to-day operation of agencies
* Form partnerships and build trust
* Reduce traffic congestion
* Improve mobility
* Improve travel safety

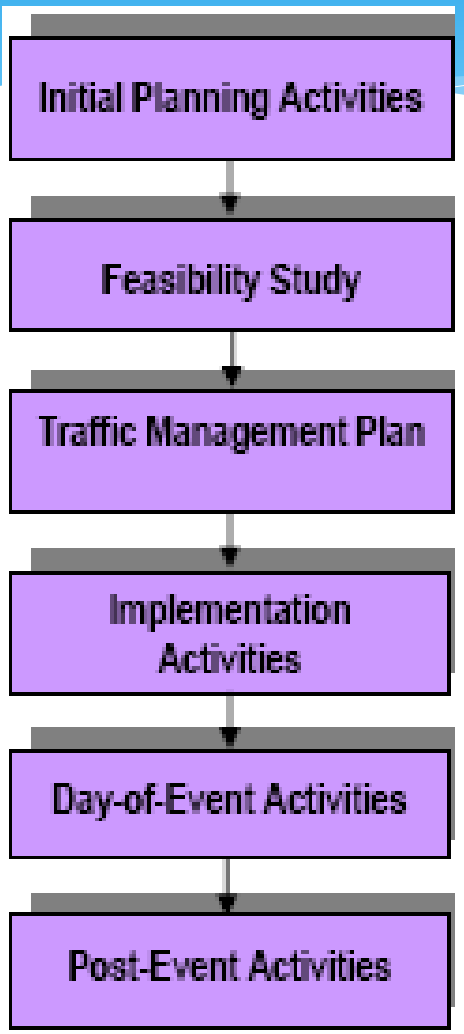
Meeting the Challenges

Multi-agency Traffic Management Team	Safety and Security Team
• Develops traffic management plan • Prepares procedures and protocol • Day-of-event traffic control and coordination	• Consists of stakeholder representatives involved in event-specific safety and security planning • Develops Safety & Security Plan and responses • Implements and, if necessary, modifies the safety and security plan on the day-of-event • Conducts post-event debrief

Resources and Tools

* Operational Strategies
  * Checklists
  * Tabletop Exercises
  * Incident Command System for Planned Special Events
  * PSE Capability Maturity Framework Workshops

Checklists



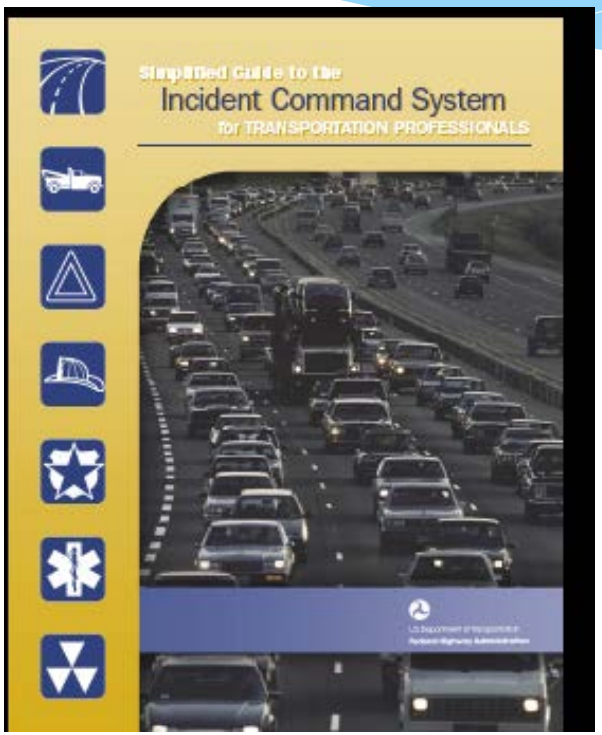
Includes common sequential steps:

- Useful for a range of planned special event practitioners: transportation, public safety, event operator and community interest stakeholders

Tabletop Exercises

* Effective test of transportation management plans developed for the venues
  * Tests the written assumptions in the plan
  * Notes what must be changed and how the plan can be improved
* Exercises for participants
  * Decision makers
  * Staff from the agencies with the venue managers/planners
  * Volunteers/Day-of-event field staff
* Helps to prepare for all contingencies

Incident Command System (ICS)



http://ops.fhwa.dot.gov/publications/ics_guide/ics_guide.pdf

ICS and Planned Special Events: What to Consider

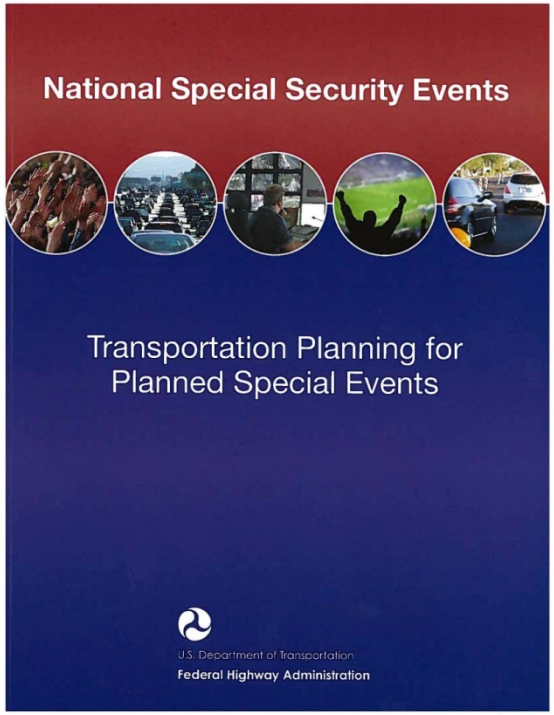
* Does the event involve a single agency or multiple agencies?
* Does the event involve a single jurisdiction or multiple jurisdictions?
* What command staff needs exist?
* What kind, type, and amounts of resources are required by the event?
* Are there any projected aviation operations?

ICS and Planned Special Events: What to Consider (cont'd)

* Are there any staging areas and other required facilities?
* What kind and type of logistical support needs are required by the event?
* Are there any known limitations or restrictions of local resources?
* What kind and type communications resources are available?
* ICS can be expanded as the event demands increase in volume or complexity.

National Special Security Events

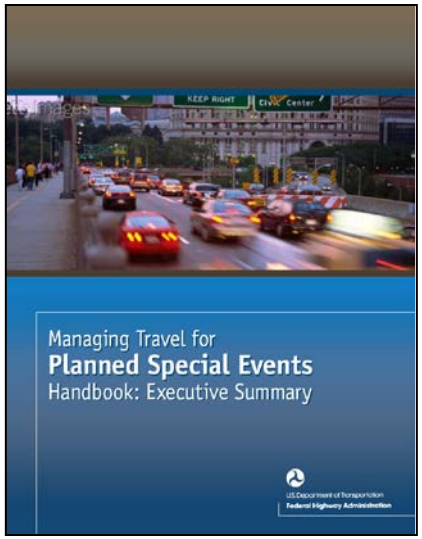
* These events include:
  * Presidential inaugurations
  * Presidential nominating conventions
  * Major sports events
  * Major international summits including G-20, APEC, 2016 Nuclear Security Summit

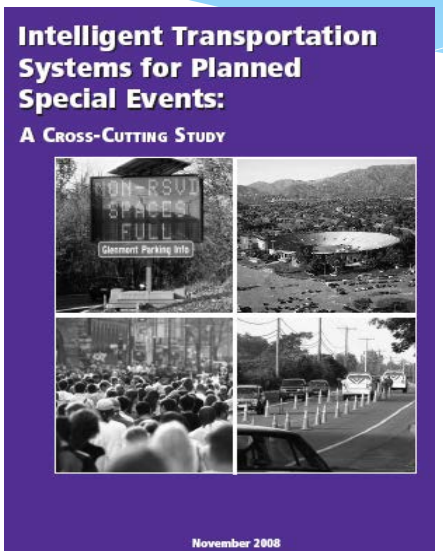


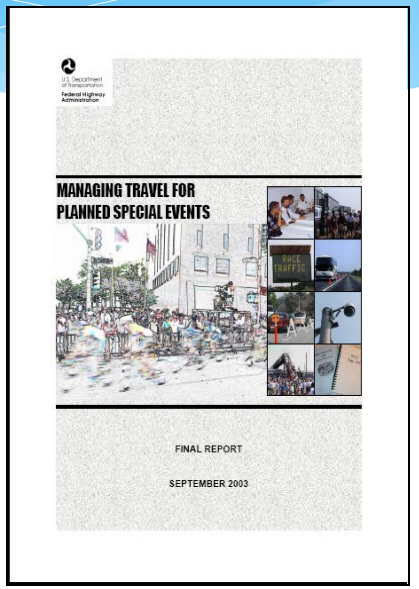
NSSE Factors and Considerations

* Size of the event
* Significance of the event
* Duration of the event
* Anticipated attendance by dignitaries
* Availability of state and local resources
* Multiplicity of jurisdictions
* Threat assessments

Planned Special Events Publications



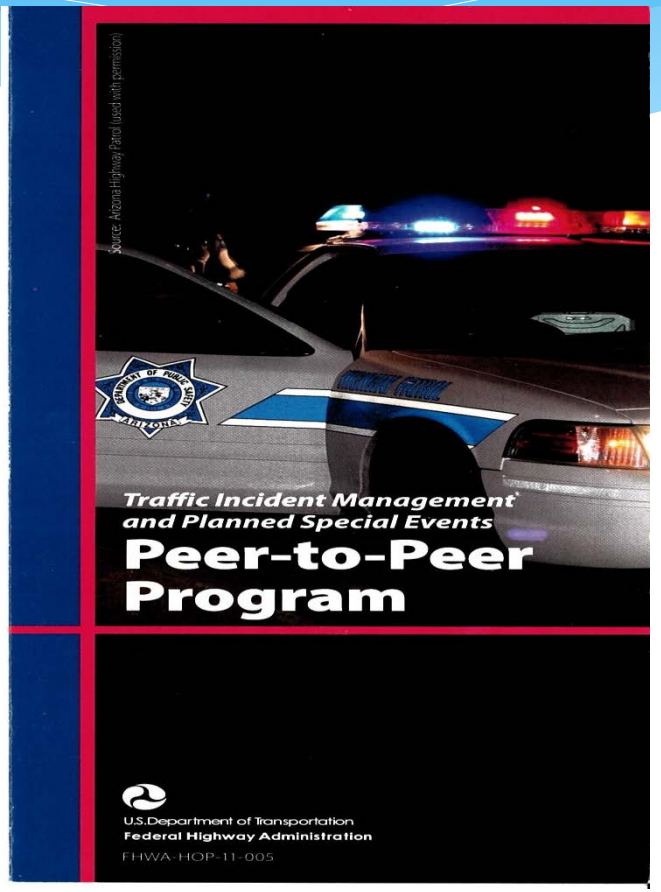




http://ops.fhwa.dot.gov/publications/publications.hm#pse

Peer-to-Peer Program

- Traffic Incident Management/Planned Special Events Peer-to-Peer Program:
  - APEC, November 2011
  - RNC, August 2012
  - Super Bowl 2013
  - RNC 2016
- Please contact me for a peer-to-peer session



PSE Resources and Tools

* National Highway Institute course, "**Managing Travel for Planned Special Events (2-Day)"** FHWA-NHI-133099 http://www.nhi.fhwa.dot.gov/training/course_search.aspx?tab=0&key=planned+special+events&sf=0&course_no=133099

Capability Maturity Framework (CMF) Objectives and Background

* Develop, test and validate Capability Maturity Frameworks for five areas
  * Traffic Incident Management, **Planned Special Events**, Road Weather Management, Work Zone Management, and Traffic Signal Control
* Builds on earlier work done as part of SHRP2
  * L01– Integrating Business Processes to Improve Reliability
  * L06 – Institutional Architectures to Advance Operational Strategies
* Both projects focused on the role of institutions, process needed to achieve operational objectives

Capability Maturity Frameworks

Process Matters
Projects fail or do not achieve desired functionality for a variety of reasons unrelated to the technology

Prioritizing the right actions
Is your agency ready?
How would you know?
What should you do next?

Focus on the weakest link
What is holding the agency back in becoming a leader in this area?

Capability Maturity Frameworks for Transportation Operations

Process

- Adapted from software development world
- A consensus-driven consistent structured evaluation or assessment of a process
- Guides an agency towards a higher level of implementation, standardization, and return on investment

Outcomes

- Clear identification of weak links in the process
- Prioritization of areas of improvement
- List of process-oriented actions that an agency can implement

Capability Maturity Framework

Process Improvement Areas		Capability Levels			
Dimensions or Process Area	What is it	**Level 1 Ad-Hoc. Low Level of Capability**	**Level 2**	**Level 3**	**Level 4 Optimized. High**
Business Process	Plans, Programs, Budgets	Statement of capability	..	..	
Systems & Tech	Approach to building systems	..	..	..	
Perf. Measurement	Use of performance measures	..		..	
Workforce	Improving capability of workforce	..	..	..	..
Culture	Changing culture and building champions	..	..	..	..
Collaboration	Improving working relationships	..			..

Step 1. Self-Assessment
Work with your stakeholders to assess where you are in terms of the capabilities in each area

Step 2. Identify areas of improvement and the desired levels of capability to improve program effectiveness

Identify actions that you need to take to move to the desired levels of capability

Program Area Frameworks

* FHWA continues the development of these capability frameworks to support improvements at program-level
  * Traffic Incident Management
  * **Planned Special Events**
  * Work Zone Management
  * Road Weather Management
  * Traffic Signal Management
  * Traffic Management

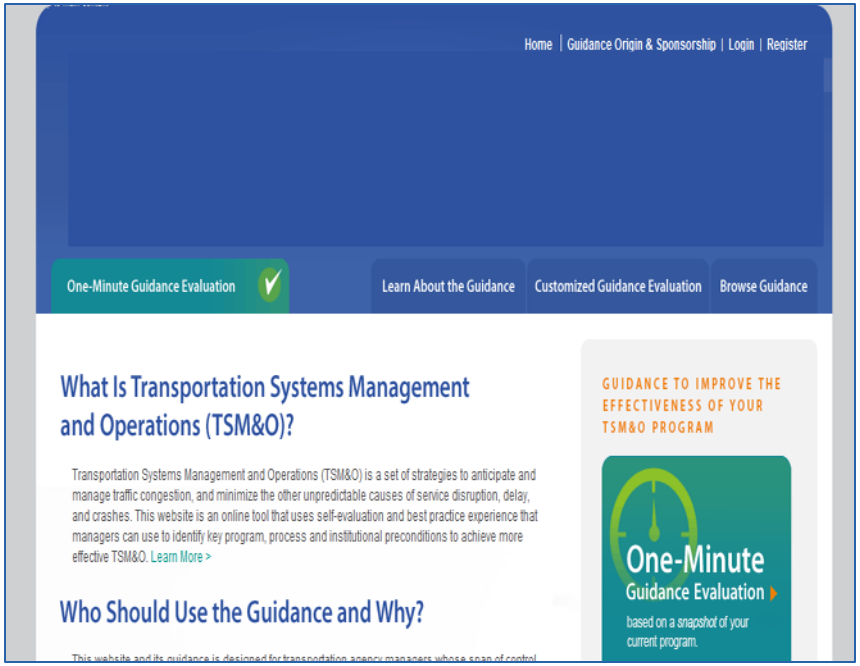
- **More focused actions**
- **Bottom-up improvement in capability**
- **Engagement of program-specific stakeholders**

SHRP2 and AASHTO TSM&O Guidance

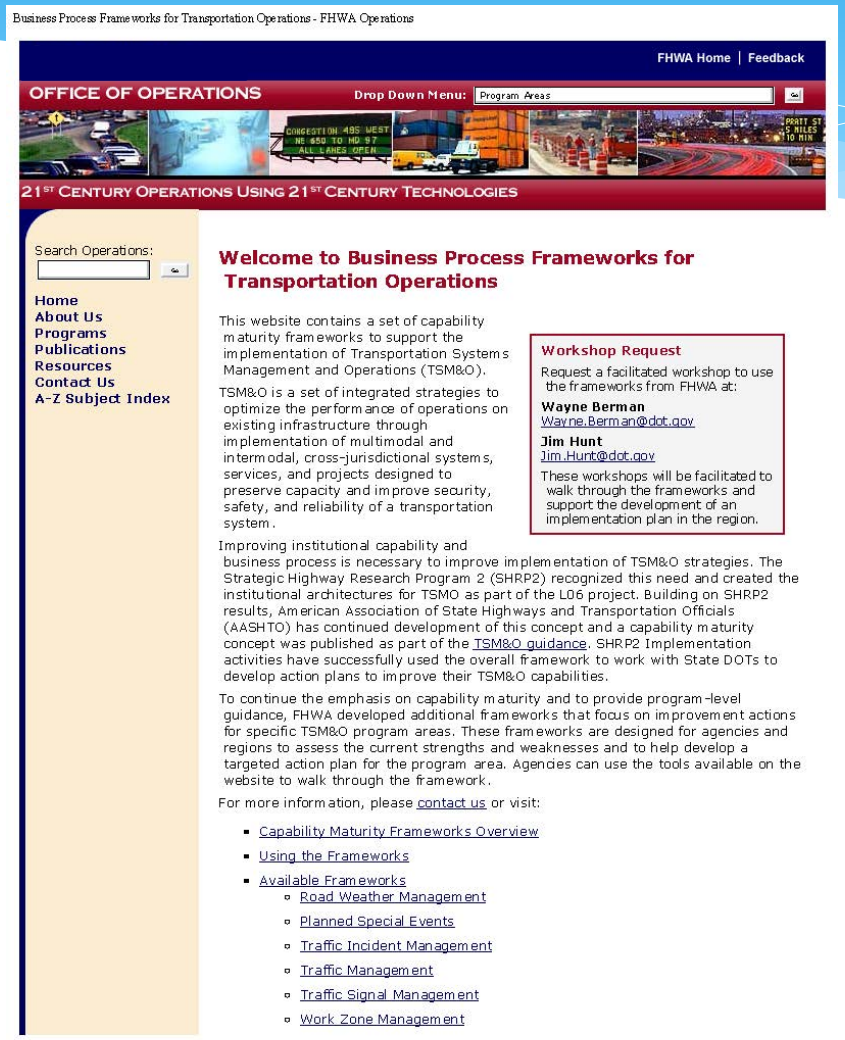
* SHRP2 L06
  * Undertook a comprehensive and systematic examination of the way agencies should be organized to successfully execute operations programs that improve travel time reliability
  * Developed a version of Capability Maturity Model for highway operations and in turn travel time reliability
* AASHTO
  * Support the conversion of the SHRP 2 Reliability Project L06 research into a web-based tool that would be user friendly, easy to access, and updatable. (NCHRP Project 03-94, Transportation Systems Operations and Management Guide)

AASHTO Transportation Systems Management and Operations (TSM&O)Guidance

* AASHTO SOM Guidance -
* http://www.aashtotsmoguidance.org/
* Capability Maturity Framework (CMF) is being used widely as part of SHRP2 implementation efforts
* Focuses on capability for all operations



CMF On-Line Tool



Business Process Frameworks for Transportation Operations - FHWA Operations

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Welcome to Business Process Frameworks for Transportation Operations

This website contains a set of capability maturity frameworks to support the implementation of Transportation Systems Management and Operations (TSM&O).

TSM&O is a set of integrated strategies to optimize the performance of operations on existing infrastructure through implementation of multimodal and intermodal, cross-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of a transportation system.

Workshop Request

Request a facilitated workshop to use the frameworks from FHWA at:

Wayne Berman
Wayne.Berman@dot.gov

Jim Hunt
Jim.Hunt@dot.gov

These workshops will be facilitated to walk through the frameworks and support the development of an implementation plan in the region.

Improving institutional capability and business process is necessary to improve implementation of TSM&O strategies. The Strategic Highway Research Program 2 (SHRP2) recognized this need and created the institutional architectures for TSMO as part of the L06 project. Building on SHRP2 results, American Association of State Highways and Transportation Officials (AASHTO) has continued development of this concept and a capability maturity concept was published as part of the TSM&O guidance. SHRP2 Implementation activities have successfully used the overall framework to work with State DOTs to develop action plans to improve their TSM&O capabilities.

To continue the emphasis on capability maturity and to provide program-level guidance, FHWA developed additional frameworks that focus on improvement actions for specific TSM&O program areas. These frameworks are designed for agencies and regions to assess the current strengths and weaknesses and to help develop a targeted action plan for the program area. Agencies can use the tools available on the website to walk through the framework.

For more information, please contact us or visit:

- Capability Maturity Frameworks Overview
- Using the Frameworks
- Available Frameworks
  - Road Weather Management
  - Planned Special Events
  - Traffic Incident Management
  - Traffic Management
  - Traffic Signal Management
  - Work Zone Management

http://www.ops.fhwa.dot.gov/tsmoframeworktool/index.htm[4/25/2016 5:34:56 PM]

Thank you.

Questions?

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