

**Seattle City Council
Energy & Technology Committee Meeting**

**Seattle City Light
Street Lighting Program**

March 2, 2011

Presented By: Edward Smalley, SCL and Ahmed Darrat, SDOT
Street Lighting Program – New Technology 2011-03-02

AGENDA

Program Update

- LED Streetlight Conversion
- Next Steps

New Technology

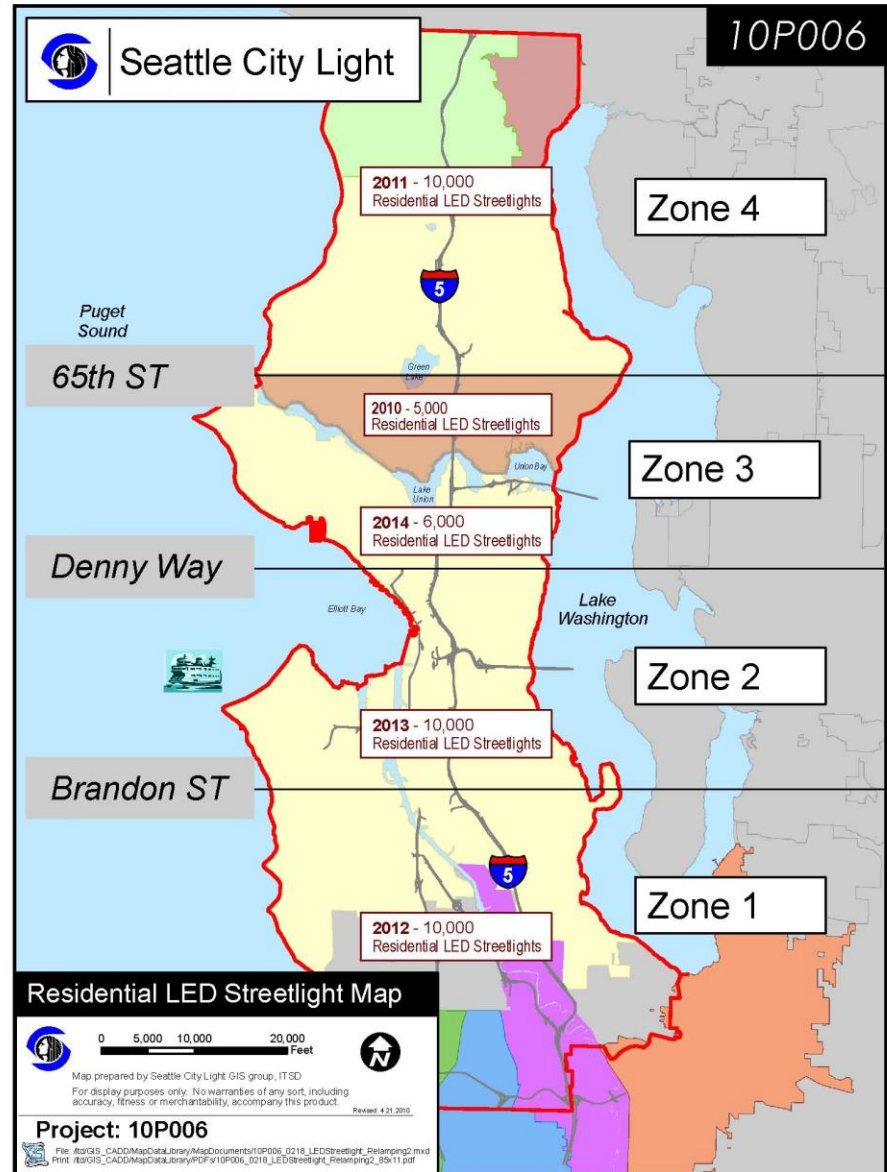
- Remote Monitoring and Outage Reporting
- Lumen Maintenance Control
- Adaptive Lighting Controls

Intelligent Transportation System Interaction

LED SL Program Goals

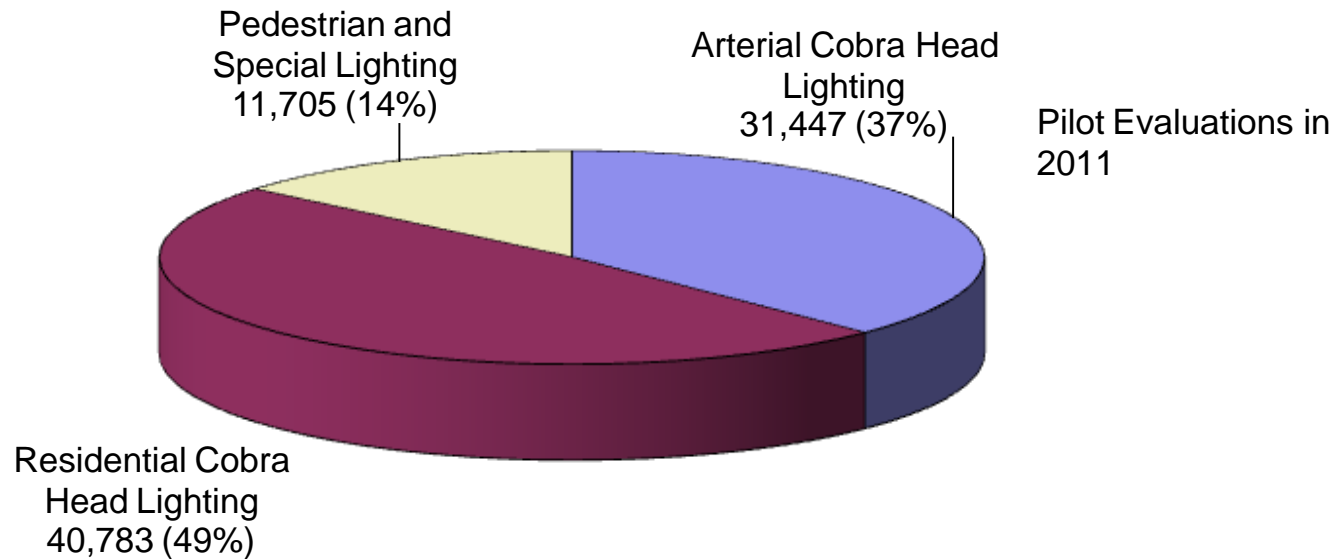
- Reduce energy use by 40% - Actual 48%+!
- Lower maintenance costs (only cleaning during fixture life)
- Improve Customer Service (no lamp change over fixture life - 12+ years)
- Improve operation on Bridges

41,000 Total Residential LED Streetlights to be Converted – 5000 Completed in 2010

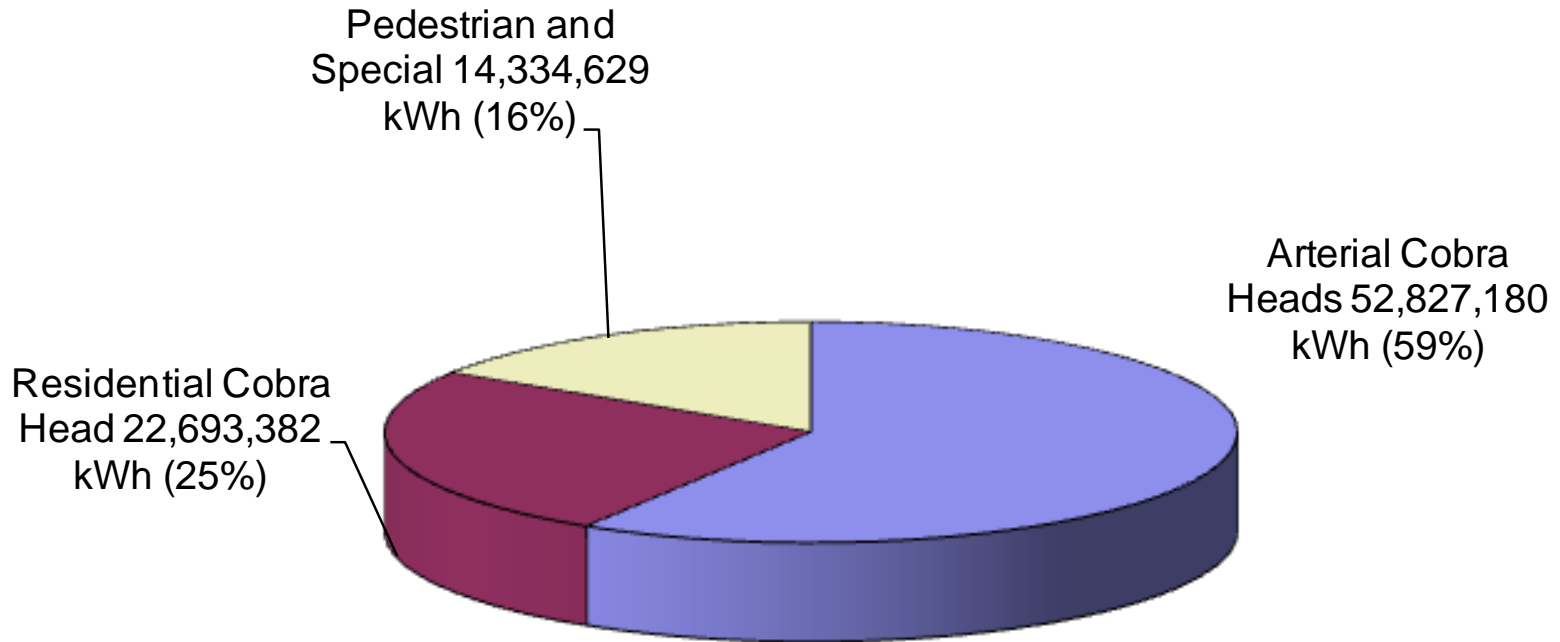


SCL Lighting Types by Use

84,000 Total Fixtures



Current SL System Energy Use by Category



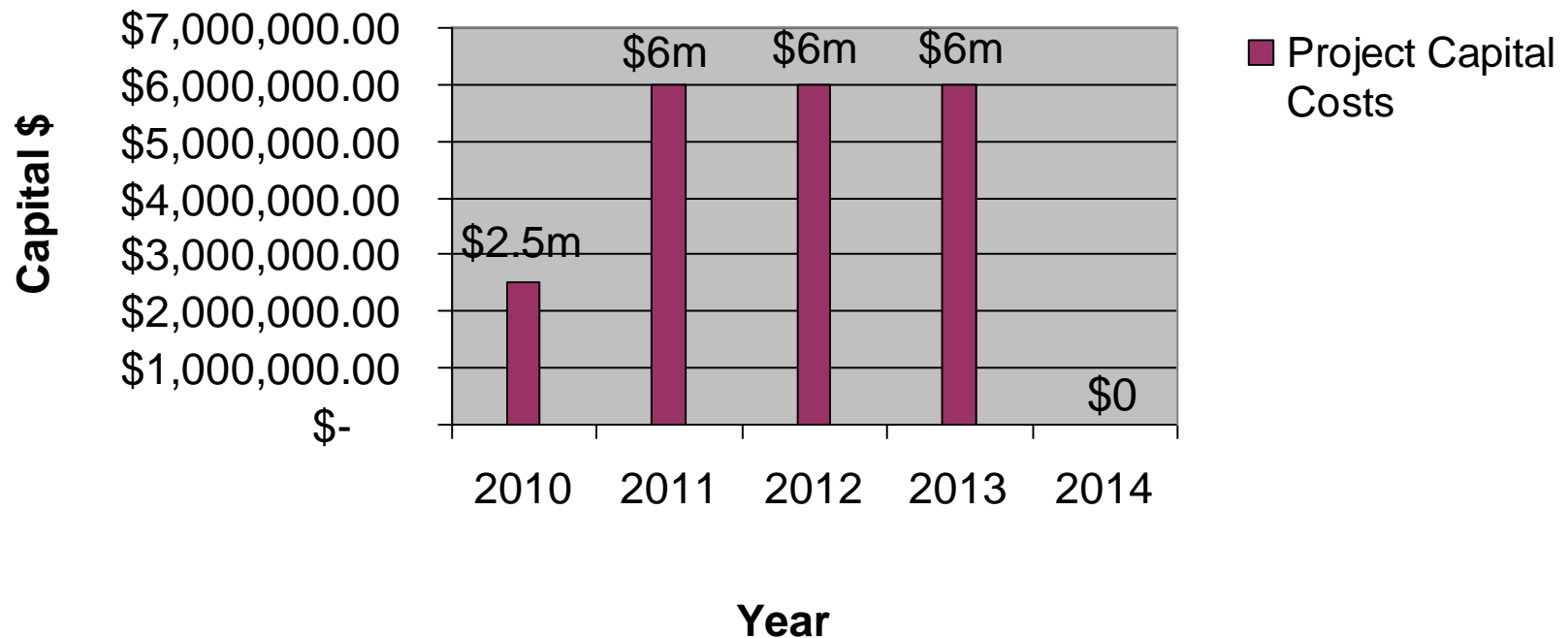
After 6000 LED Streetlights
installed Energy Usage
decreased 90,000 kWh

2010 LED Expenditures

DESCRIPTION	COSTS
Labor	\$665,000
Materials – City Funded	\$800,000
Materials – ARRA Funded	\$1,000,000
Total Project Cost	\$2,465,000

Investment and Savings on Residential System - Updated

Total Residential Capital Costs = \$20,500,000

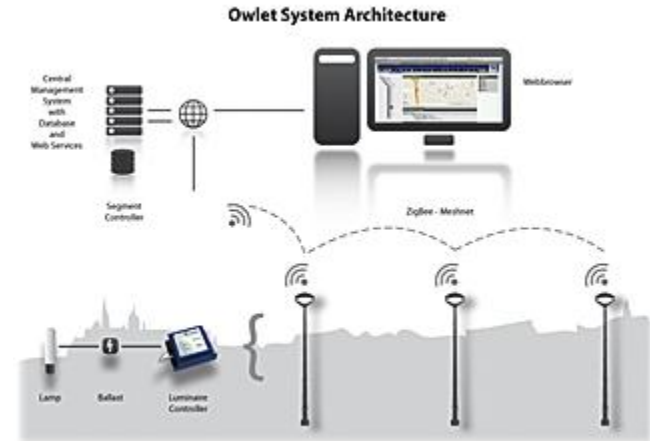


LED Next Steps

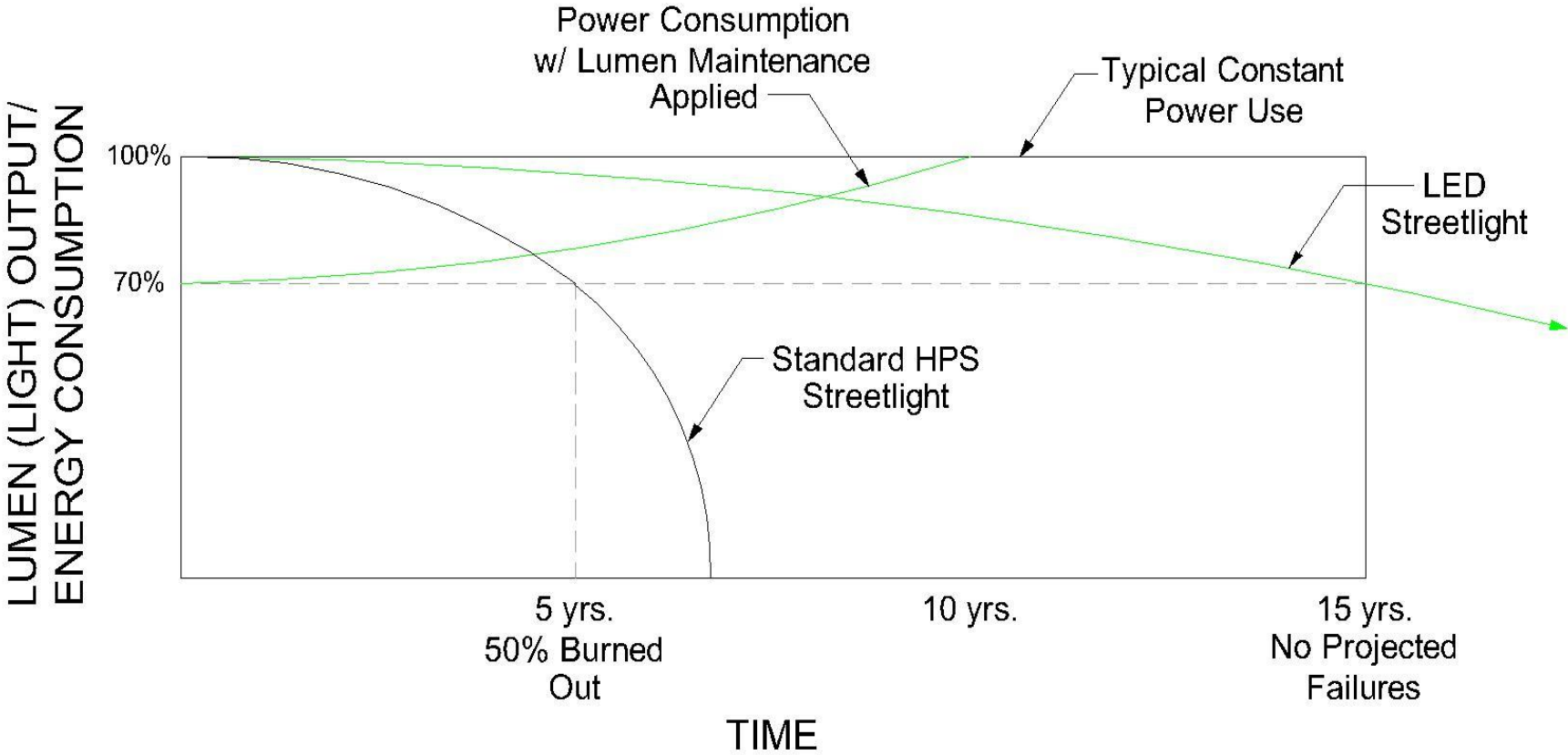
- In 2011 – Residential LED Conversion will take place north of N 65th to N 205th St
- Arterial Pilots
 - West Seattle Bridge – I-5 to 35th Ave SW (SCL|SDOT|US DOE Partnership)
 - S Henderson St – MLK Jr Way S to Seward Park Ave S
- Arterial Fixture Selection – Fall 2011
- Arterial Conversion Target year – 201X

New Technology

- Remote Monitoring
 - Ability to get real time/ metered power usage for each light
 - Immediate notification of streetlight malfunctioning
 - Quicker response time for repair
- Lumen Maintenance - Light loss management
- Adaptive Controls
 - Ability to dim or brighten streetlights to meet vehicular and pedestrian demands
 - Set scenes for events and time of day
 - 20%+ Additional energy savings



New Technology – Lumen Maintenance

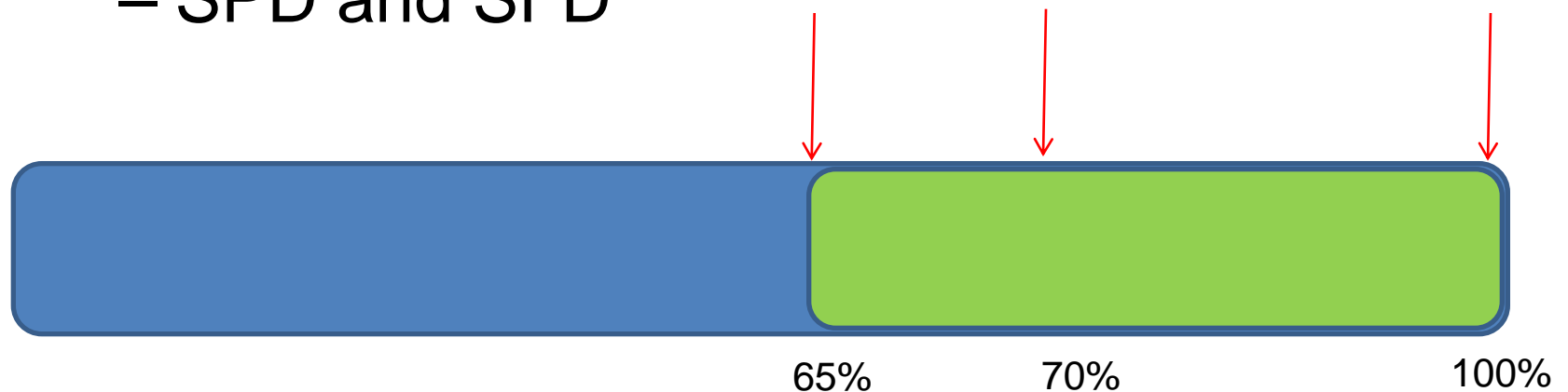


Adaptive Controls Next Steps

- 2011 - Consultant System Evaluation
- Pilots on Arterial and Residential Streets
- Economic Evaluation

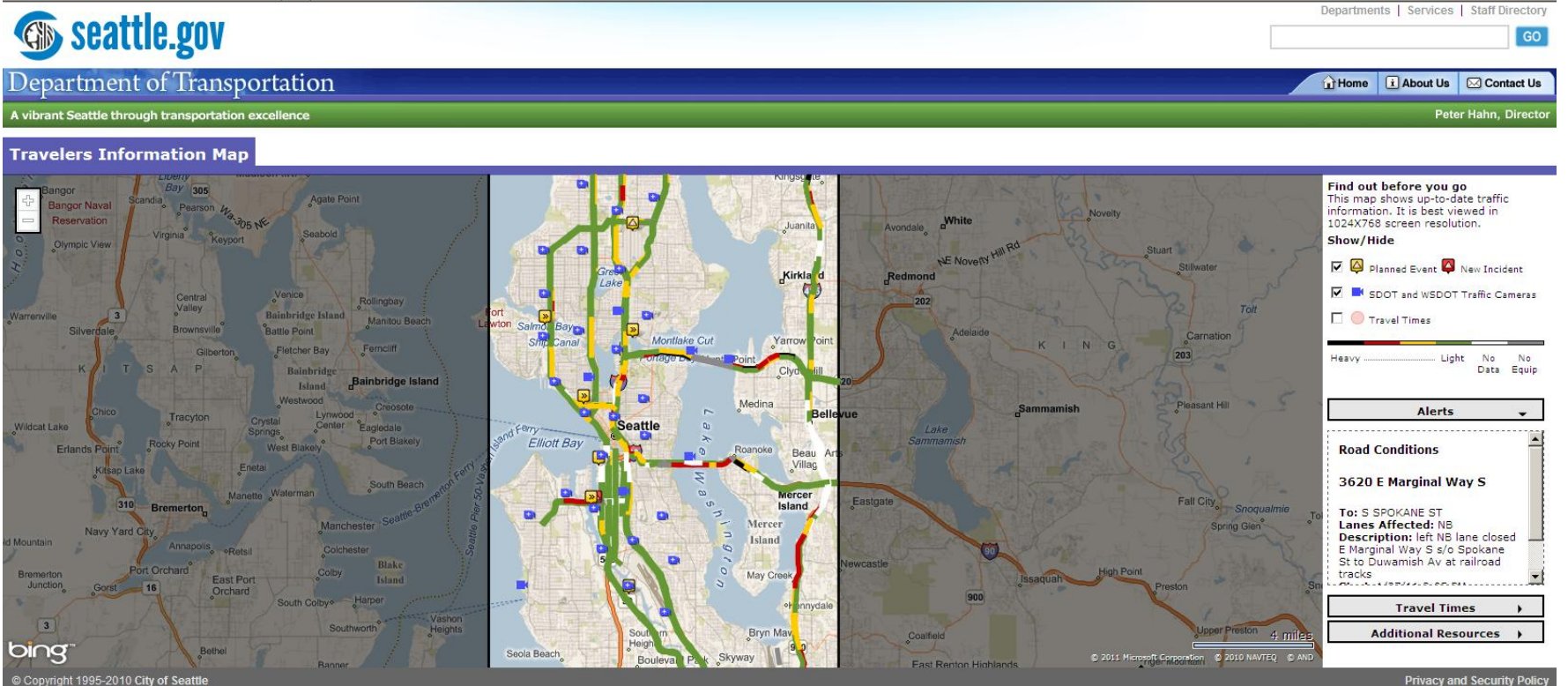
Variable Light Output Capabilities

- Unique Controls for different users
 - SDOT
 - SCL
 - SPD and SFD



ITS-Controls Integration

- SDOT's Intelligent Transportation System



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Peter Hahn, Director

Travelers Information Map

Find out before you go
This map shows up-to-date traffic information. It is best viewed in 1024x768 screen resolution.

Show/Hide

- Planned Event
- SDOT and WSDOT Traffic Cameras
- Travel Times
- New Incident

Alerts

Road Conditions

3620 E Marginal Way S

To: S SPOKANE ST
Lanes Affected: NB
Description: left NB lane closed E Marginal Way S s/o Spokane St to Duwamish Av at railroad tracks

Travel Times

Additional Resources

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Real-Time Data Output

- Collision Reports
- Outage Verifications

Challenges

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- Policies
- Security
- Hardware and Software

Seattle City Light Street Lighting Program New Technology

March 2, 2011

Questions?

Presented By:
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