

State of Connecticut  
Department of Transportation  
Presentation to the General Assembly's  
Transportation Committee  
January 12, 2009

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**Discussion**

- CTDOT Structure & Responsibility
- Bureau Updates
- Organizational Assessment
- Recent Actions & Activity
- Vision
- Performance Measures & Reporting
- Major Project Update



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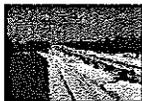
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**What we do . . . .**

- Transportation Policy, Planning & Development
- Public Transportation System - bus, rail & ridesharing
- Roads & Bridges
- Airports
- Ports



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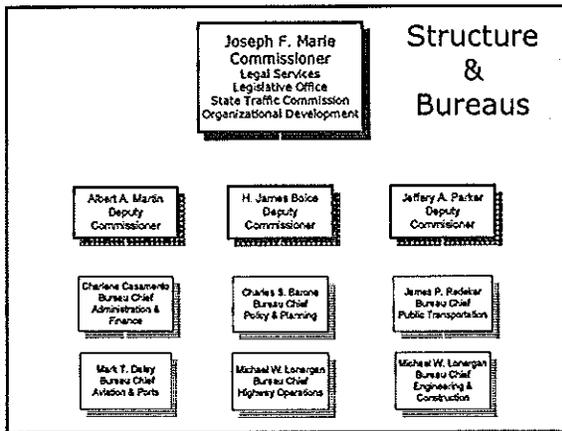
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### Highway Operations

- Largest of all bureaus
- Responsible for road & bridge maintenance
- Core metrics – good
- Bridge inspection program: 2-year cycle
- Preservation focus
- Preservation challenge – age of existing infrastructure




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### Finance & Administration

- Financial organization consolidation
- Contracting consolidation initiative
- Process improvement initiative
- Contract process improvement
- Municipal agreements
- Close out of federal projects
- Major emphasis on performance metrics
  - Measuring contract processing times, vendor payment times, etc.

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### Public Transportation

- Connecticut Transit:

- Ridership: Rising steadily at a rate of 3% to 5% since FY 2006



- Rail Ridership

- New Haven: Up 4.4%
- SLE: Up 17.1%

- On Time Performance

- New Haven: 97.1%
- SLE: 92%



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### Public Transportation

- Continued renewal of existing infrastructure (track & catenary)
- Completed New Haven Rail Yard Security Project
- Danbury CTC Design
- Coordination of M-8 design & testing
- Development of State Rail Plan
- New Haven Rail Yard Project Completion
- Bus Fleet Age
- Bus Fareboxes
- Evaluation of Bus Routes

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### Policy & Planning

- Master Transportation Plan – Jan. 2009
- Highway Safety Plan – Sept. 2009
- Statewide Long-Range Plan – Mar. 2009
- Statewide Transportation Improvement Plan – Sept. 2009
- Environmental Assessments and Impact Statements
- Travel Modeling for Traffic & Accident Data

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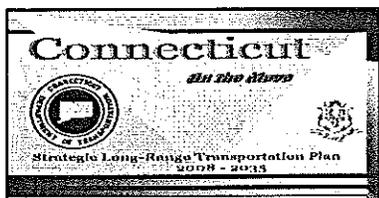
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### Policy and Planning

- Leadership role in development of Asset Management and Performance Monitoring Programs
- Focus on Life Cycle Cost (LCC) as basis for decision making



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### Aviation & Ports

**Bradley News:**

- International Air Service
- Embraer Maintenance Facility
- Hyatt & Embassy Suites Hotels
- Financial Performance Strong
- Terminal Renovations



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### Aviation & Ports

- Oxford Chosen for Major Corporate Aviation Facility
- Brainard Chosen for Connecticut Aero Tech School
- Heightened Awareness of Dredging Needs
- Rail Connectivity to Ports



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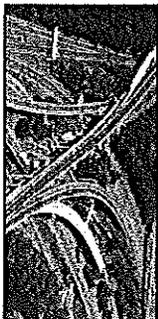
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## Engineering & Construction

- New Bureau focused on project design, construction and delivery for all modes
- Consolidation of resources
- Project Management Approach - Mega Projects
- QA focus
- Lessons Learned - Wisconsin DOT, etc.
- Project Updates



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## Organizational Assessment

Transportation Committee  
January 12, 2009

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## Observations & Perceptions

- CTDOT Employees are Hard Working
- CTDOT Employees are Motivated
- Core Business Metrics: Good; Day-to-Day
- Fundamental Organizational Structure is Viable
- Challenges with Big Projects
- Challenges with Bad News
- Communications - Internal and External

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### Observations & Perceptions

- We don't ask "Why not?" and "How come?" enough
- We don't market and sell the good stuff that we do everyday
- The right people in the right places ?
- Empowerment & Ownership (Major Projects)
- Executive Staff Uncertainty, Vacancies, Acting Positions = Impact to decision making and speed

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### Observations & Perceptions - *Themes*

- Accountability
- Transparency
- Internal Controls
- Performance Measures
- Internal Communication (Projects, Employees)
- External Communication (Stakeholders - not all bad here!)
- Insularity and Bad News
- Trust & Confidence

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### Observations & Perceptions - *Moving Forward*

- Meaningful and long lasting change =
  - Evolutionary & Gradual
  - Can be inspired by leadership
  - Sustainable only if embraced by the Institution

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### Recent Actions & Activity

- Organizational Structure – Engineering & Construction
- Personnel Changes – Additions and Reassignments
- Lessons Learned “good and bad”
- Best Practices – Peer Reviews
- Performance Metrics
- Mission Statement

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### Recent Actions & Activity

- Reassignment of Deputy Commissioner’s responsibilities
- Filling of Bureau Chief Positions
- Field and site visits
- Meetings with key stakeholders (General Assembly, TSB, Bradley Board, Local Officials, MPOs, Union Representatives)
- Reassignment of key personnel to strengthen agency and align ourselves to core mission

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### Focus Teams & Areas

- Management Committee – Projects & Key Strategic Initiatives
- Internet Redesign Team
- Communications Strategy Team
- Contracting Process Review
- Quality Assurance Unit
- Asset Management
- DOL MOU for Succession Planning
- Performance Metrics Report
- Agency Mission Statement Development

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### Mission Statement

The mission of the Connecticut Department of Transportation is to provide a safe and efficient intermodal transportation network that improves the quality of life and promotes economic vitality for the state and the region.

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### Where are we going?

Transportation Committee  
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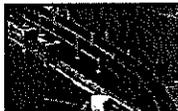
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### Vision

- Becoming a 21<sup>st</sup> Century organization
- Improving efficiency and effectiveness
- Improving transparency and accountability
- Confident: Not afraid to try new things – take chances
- Improve Mobility
- Modal Seamlessness
- Inter-Operationability



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### Vision

- Preserve and Protect Our Transportation Infrastructure
- High Credibility: CTDOT delivers . . . Does what it says it will do . . . Positive public perception
- Transportation & Economic Development
- Listening Organization
- Learning Organization
- A Place Where People Want to Work
- Results Driven - Focused on PERFORMANCE!

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### Communication & Trust

- Enhanced communication with all stakeholders (Partnering Sessions):
  - Citizens
  - Governor and General Assembly
  - Mayors and First Selectmen
  - RPO and MPO Meetings
  - CTDOT Employees
  - News Media
  - Business Community

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### Accountability & Transparency

- Web Site Redesign
  - Customer focused - GIS based
  - Active Projects Overview
  - Real Time Status of Traffic Congestion & Traffic incidents (Dynamic Data)
  - Direct Links to all of our services
  - Roll Out:
    - January - Active Projects, Traffic Cameras, Park & Ride Lots
    - February - Permanent Structures
    - March - Real Time Traffic Information
    - July - Performance Metrics

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### Performance Metrics

- Goals:

- Safety and Security
- Preservation
- Efficiency and Effectiveness
- Quality of Life
- Accountability and Transparency



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### Performance Metrics

- Safety and Security

- Objective: Ensure the safety and security of all customers who use Connecticut's multi-modal transportation system



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### Performance Metrics

- Safety and Security

- Objective - Reduce the number of injuries, fatalities and risks
  - Injury/fatality rates
  - Work zone safety
  - Seat belt use
  - Impaired driving
  - Hazard elimination



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### Performance Metrics

Percent of Seat Belt Use in Connecticut and the Nation, 2002 to 2007

CT is the 4<sup>th</sup> Safest place to drive in the country with a low fatality rate per 100,000 population

The Department assists in preventing injuries and fatalities by supporting prevention and safety programs such as 'Click It or Ticket,' which promotes seat belt use

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### Performance Metrics

- Safety and Security
  - Objective - Ensure safety and security of all travelers
    - Airport and port security
      - Compliance with all federal laws, regulations and codes
    - Public transportation survey indicators

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### Performance Metrics

- Safety and Security

Rail Customer Satisfaction Survey Regarding Safety

New Haven Line (CT Residents Only)	2004	2005	2006	2007
% Satisfied with safety on the trains	94%	95%	94%	95%
% Satisfied with safety at the train station	92%	92%	91%	94%
% Satisfied with safety at train parking	90%	93%	90%	93%

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### Performance Metrics

- Preservation

– Objective – Utilize inspection and preventive maintenance strategies to:

- Preserve and maintain transportation infrastructure
- Maximize the useful life of existing facilities and equipment



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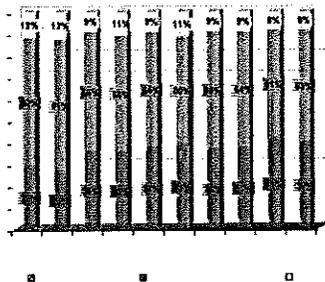
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### Performance Metrics

Ride Quality on Connecticut's National Highway System for the Past 10 Years - IRI



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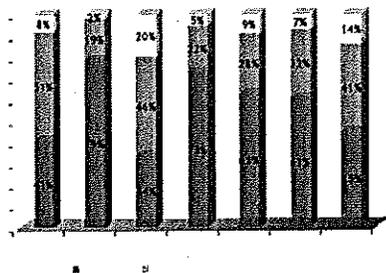
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### Performance Metrics

Ride Quality on the National Highway System in New England and New York, 2006 - International Roughness Index (IRI)



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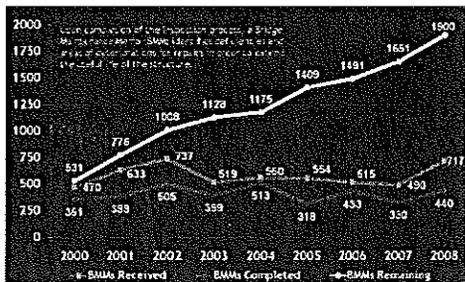
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### Performance Metrics

Number of CTDOT Bridge Maintenance Memo Requests from 2000 to 2008




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### Performance Metrics

- Preservation Challenges
  - Climate
  - Infrastructure Age: Average age of Connecticut's bridges is 50 years




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### Performance Metrics

- Efficiency and Effectiveness
  - Objective - Maximize the operational performance, capacity and reliability of existing systems
    - Airline enplanement, load factors, market share and debt per passenger
    - Rail on time service
    - Bus on time service
    - Mean distance between failures and outages

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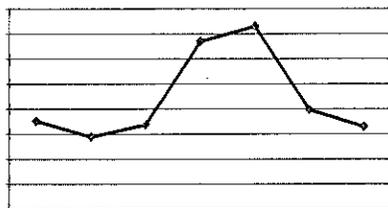
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### Performance Metrics

Bradley International Airport Enplaned Passengers



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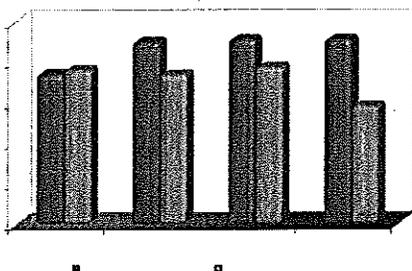
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### Performance Metrics

Rail On Time Performance (OTP)



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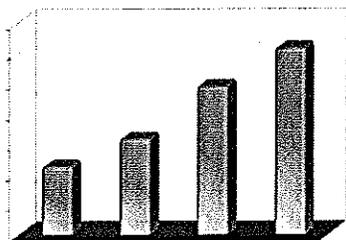
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### Performance Metrics

Rail Ridership on the Shore Line East Line, 2004 to 2007



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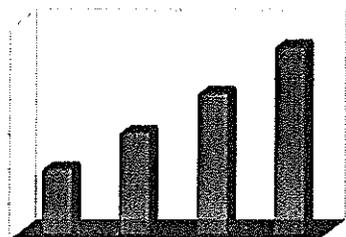
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### Performance Metrics

Rail Ridership on the New Haven Line, 2004 to 2007



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### Performance Metrics

- Efficiency and Effectiveness
  - Objective - Contain costs through:
    - Process Improvement
    - Technology advances
    - Human Resources data
    - Financial data



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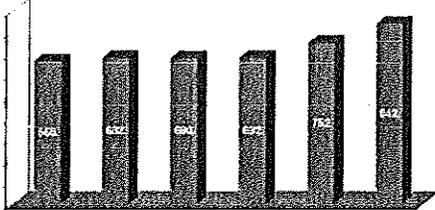
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### CTDOT Staffing

Filled Engineering Positions by Year



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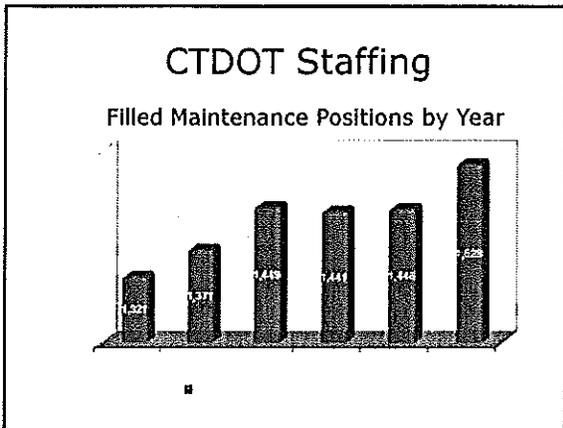
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### Performance Metrics

- Quality of Life
  - Objective - Improve the quality of life for Connecticut residents by increasing their mobility options
    - Incorporate smart growth and environmental approaches into all projects and activities
    - Relieve congestion
    - Increase modal choice options



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### Performance Metrics

- Quality of Life
  - Objective - Support smart growth principles and environmental programs which support sustainability
    - Noise mitigation
    - Reuse of materials
    - Use of advanced deicing technology



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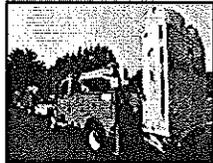
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### Performance Metrics

- Quality of Life
  - Objective - Relieve congestion
    - Clearing accidents
    - Tracking congestion rates



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### Performance Metrics

Congestion Capacity of Connecticut Roads



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### Performance Metrics

- Quality of Life
  - Objective - Increase mobility options
    - Bikeways, walkways and trails
    - Airport non-stop destinations and daily departures
    - Increase public transit usage



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### Performance Metrics

- **Accountability & Transparency**
  - Objectives - Assure that our business is conducted in an open and transparent way
    - Enhance communication and outreach
    - Quality Assurance Program
    - Contracting Process Improvement

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### Performance Metrics

- **Accountability and Transparency**
  - Objective - Enhance communication and outreach
    - Increase modes of communication
    - Advance outreach programs



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### Performance Metrics

- **Accountability & Transparency**
  - Objective - Optimize the allocation of resources with asset management
    - Inventory, track and evaluate the condition of all assets
    - Establish level of need
    - Utilize life cycle cost principles as a basis for Asset Management



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### Performance Metrics

- **Accountability & Transparency**
  - Objective - Develop and administer a comprehensive quality assurance and improvement program
    - Revamp Inspection processes
    - Expand throughout agency

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### Major Projects Update

Transportation Committee  
January 12, 2009

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### Major Projects Update

- M-8 Trains
- New Haven Rail Yard
- New Haven - Springfield Commuter Rail
- New Britain - Hartford Busway
- Q Bridge Project
- Shore Line East Expansion
- Stamford Garage
- Route 7 Brookfield Bypass
- I-84 Project
- I-95 Projects
- Danbury CTC

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### M-8 Trains

- 300 Car Order
- Contract Value: \$ 760 million (CT Share = \$494 million)
- Schedule: 1<sup>st</sup> Trainset will arrive in September, 2009
- Testing will commence immediately
- Production cars will arrive starting in January, 2010
- 80 option cars
- Aggressive delivery schedule



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### M-8 Trains



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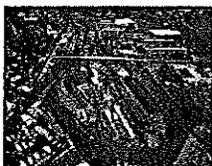
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### New Haven Rail Yard

- Project Scope: Expansion and reconstruction of the New Haven Rail Yard Complex
- Facilities will be completed in phases over 10+ years
- New facilities: main repair shop, parking, car wash
- New systems: track, signals
- Critical to maintenance of new rail fleet and for increased operational capacity of the commuter rail system



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### New Haven Rail Yard

- Hill International recently completed a "Review and Analysis of Proposed New Haven Rail Maintenance Facility Expansion Project"
- CTDOT & OPM currently working to develop Financial Plan associated with Tier 1 recommendations
- Ongoing construction efforts:
  - M-8 Acceptance Facility
  - EMU and CSR Shop Improvements

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### New Haven Rail Yard

- Comprehensive review of Tier 2 and Tier 3 project elements – Impacts to overall operating costs and maintenance efficiencies
- Component Change Out (CCO) Facility remains the critical path
- Implementation of other Hill findings & recommendations related to cost estimating and configuration management - ongoing

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### Commuter Rail Service New Haven – Hartford – Springfield

- Rail service between New Haven & Springfield, MA
- Stops in North Haven, Wallingford, Meriden, Berlin, Newington, Hartford, Windsor, Windsor Locks, Enfield and Springfield.
- Wilbur Smith Study identified 2 options



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### Issues

- Rail line ownership – AMTRAK
- Condition of existing infrastructure
- Infrastructure investment requirement (Travel time/ridership/quality)
- Operational cost and subsidy requirements (efficiency)
- Operation of the service (existing legislation)
- Environmental considerations
- 4 options are now being considered

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### Option A – Introductory Service

- Implemented as Categorical Exclusion (CE)
- No EA/EIE
- 4 trips per day
- Additional service negotiated with Amtrak utilizing CT DOT equipment
- Amtrak requires commitment for rebuilding of Hartford Viaduct and CT River Bridge

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### Option B – Introductory Service

- Could be implemented as a CE (No EA/EIE)
- Involves minimal dual tracking
- 7 trips per day
- Minimal parking expansion program
- Additional service negotiated with Amtrak utilizing CT DOT equipment
- Amtrak requires commitment for rebuilding of Hartford Viaduct and CT River Bridge

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### Option C – Start Up 30 Minute Peak Headways

- EA/EIE required due to wetlands and flood plan impacts
- Major construction and reconstruction effort: dual tracking (23 miles); parking lots; property acquisition; platforms; bridge replacement
- Purchase of additional trains

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### Option D – Full Build 15 Minute Peak Headways

- EA/EIE required
- Major construction & reconstruction effort
- Service levels would exceed New Haven Line levels
- Purchase of additional trains

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### New Britain – Hartford Busway

- Rapid bus service
- 11 stops
- 15,000+ daily riders
- Total Project Cost = \$569 million
- Funding:
  - 60% FTA New Starts
  - 20% Other FTA/FHWA
  - 20% State Bond Funds



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### New Britain – Hartford Busway

- Current Status
  - Progressing toward final design
  - Ongoing public meetings (service plan)
  - Engineering & ROW expenditures = \$35 million
  - Submitted New Starts Application in September, 2008
- Upcoming Milestones
  - Submission of FFGA, November, 2009
  - Construction start 2010
  - Revenue Operations – December, 2013

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### Q Bride – Multi-Modal Improvement Program

- Project Scope: Operational & Safety Improvements to 7.2 miles of I-95 between New Haven & Branford
  - New Pearl Harbor Memorial Bridge
  - Reconstruction of I-95 & I-91/Route 34 Interchange
  - 2 Lane Interstate to Interstate connection
  - Additional NB & SB 1/95 lanes




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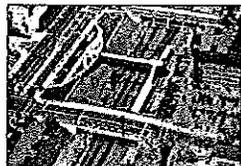
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### Q Bride – Multi-Modal Improvement Program

- Expanded transit services & transit management measures
  - New State Street Station
  - Shore Line East Station upgrades:
    - Branford
    - Clinton
    - Gullford
    - Madison
    - Westbrook




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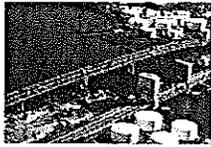
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### Q Bride – Multi-Modal Improvement Program

- Program Cost: \$2 billion
- Program Status:
  - 17% Complete
  - 8 Projects Complete
  - 4 Ongoing Projects
  - Program Completion: 2016 – Department examining opportunities for expedited project delivery



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### Q Bride – Multi-Modal Improvement Program

- Ongoing Projects
- Contract B1:
  - \$164 million
  - Q Bridge main span bridge foundations
  - Completion: Sept. 2011
- Contract E2:
  - \$114 million
  - I-95 NB to Route 34 Flyover Bridge
  - Completion: Nov. 2011



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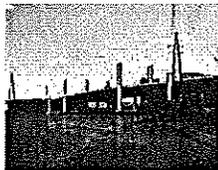
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### Q Bride – Multi-Modal Improvement Program

- Future Projects
- Contract B:
  - 100% Design
  - New Q Bridge
  - Advertising: Feb. 2009
- Contract E:
  - I-95/I-91/Route 34 Interchange
  - 80% Design
  - Advertising: Feb. 2010



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### Shore Line East Expansion

- Phase 1 Service Expansion fully implemented in July, 2008
- Holiday Service (weekend schedule)
- Weekend midday and evening service
- Cross honoring of multi-ride tickets between New Haven and New London (April, 2008)
- Madison Station Parking completed (July, 2008)



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### Shore Line East Expansion

- Phase 2 Service will extend all trains to New London
- Ongoing discussions with Amtrak
- Stakeholder meetings: Coast Guard, DEP and CT Marine Trade Associations
- Monthly updates



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### Stamford Garage

- Existing condition
- Must be replaced
- Goal: Commence construction in 2010
- TOD Program
- Stakeholder/Partnering meetings with city and business community
- Request for Expressions of Interest (RFEI)



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### I-84 Waterbury/Cheshire

- Project Scope: 3.5 mile road widening, drainage, ramp construction
- Ongoing civil action
- Work is fundamentally complete
- Lessons Learned
- Organizational & procedural changes – QA & project management



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### Route 7 Brookfield Bypass

- Project Scope: Construction of 4 lane 2.5 mile expressway
- Scheduled Completion Date: Nov. 2009
- Redesign completed Jan. 5, 2009
- Technical & Environmental Challenges



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### I-95 Operational Lanes

- Project Description: Addition of continuous auxiliary lanes
- Darien (Exits 11, 12 & 13):
  - Construction ongoing
  - Completion in 2010
  - On Budget: \$15 million
- Norwalk (Exits 14 & 15)
  - Design Completion: Fall, 2009

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### Danbury CTC

- Project Scope: Design and construct systems (track, signals, etc.) to improve capacity, safety and reliability of the Danbury Line
- Department is evaluating a number of ways to develop this project in phases in order to minimize operational impacts during construction and match the level effort to funding availability
- Design is ongoing

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### Stimulus Package

- CTDOT Stimulus Package Working Group
- Active since October, 2008
- Identifying and tracking eligible projects
- Evaluating and managing internal and external constraints
- Actual legislation will determine project eligibility

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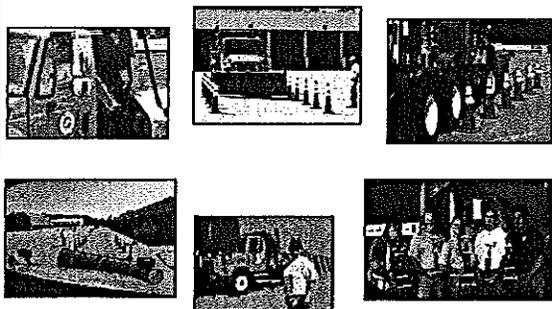
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### Pride, Ownership & Performance



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