

Context Sensitive and Sustainable Solutions (CS³): Implementation and Successes in Oregon

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Context Sensitive and Sustainable Solutions (CS³): Implementation and Successes in Oregon

- OTIA III State Bridge Delivery Program
 - Background and Progress
- CS3 Philosophy, Framework and Process
 - Program Goals
 - Program Application
 - Programmatic Permitting, Construction Waste Management, Statewide Mobility Management
 - Project Application and Tools
- Program Future and Successes
- Q&A

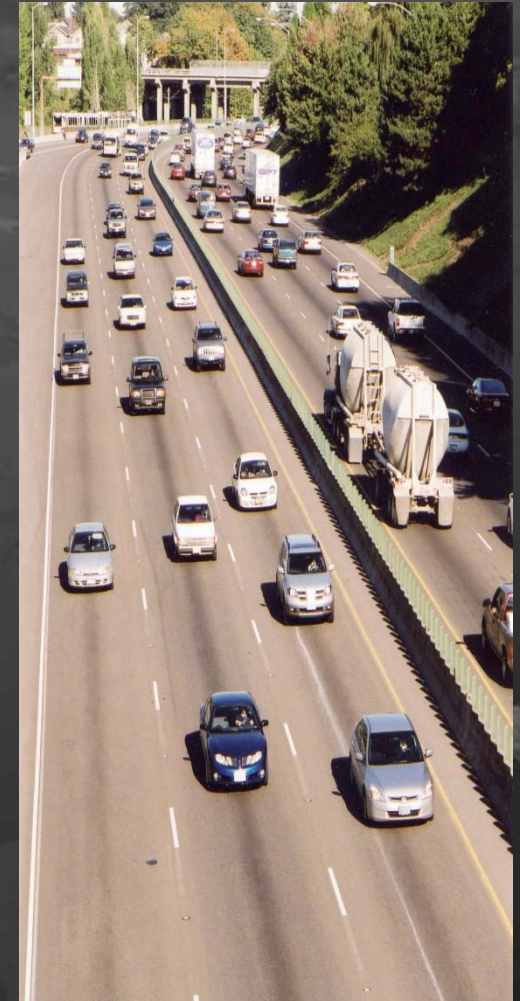
CS³ – A New Era in Transportation

- Sustainable programs mean sustainable jobs
- Sustainable infrastructure leads to a sustainable economy
- Sustainable project delivery leads to sustainable revenue streams



OTIA III: \$2.46 Billion Over 10 Years

- 2003 Legislature designated \$1.3 billion to address Oregon's aging state bridges
- \$300 million to repair or replace 141 local bridges
- \$361 million for maintenance and preservation of county roads and city streets
- \$500 million for modernization





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Who is Oregon Bridge Delivery Partners, JV?

Program Managers for ODOT

Program Management
Design Oversight
CEI Services

A joint-venture between:

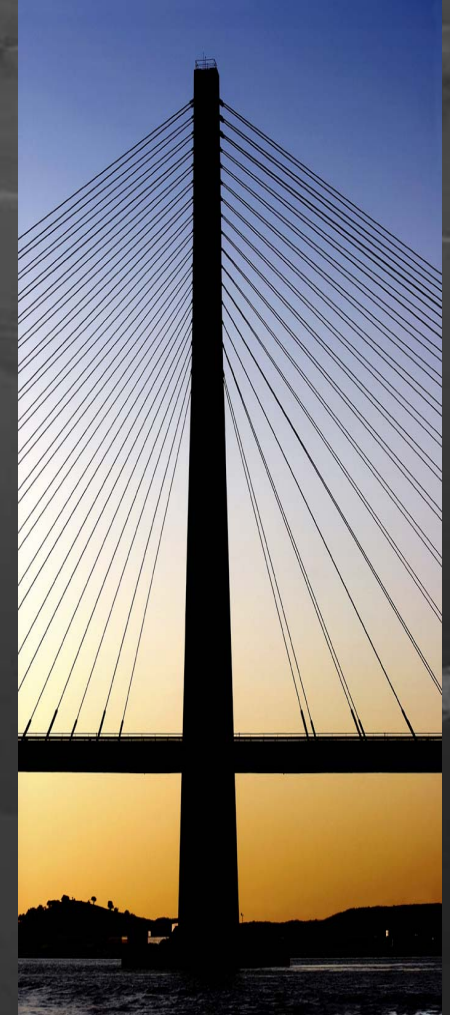
The HDR logo consists of the letters 'HDR' in a bold, serif font, colored in a dark red or maroon hue. It is centered within a white rectangular box.

The FLUOR logo features the word 'FLUOR' in a bold, blue, sans-serif font. A registered trademark symbol (®) is located to the right of the word. The logo is centered within a white rectangular box.

The HDR logo is displayed in white, serif font against a dark maroon background at the bottom left of the slide.

Adaptive Management

- Over 400 bridges identified in the engineering and environmental baseline effort performed by ODOT
- 365 bridges in current program
- 91 “no work” bridges
- OBDP has performed most of the bridge load ratings.

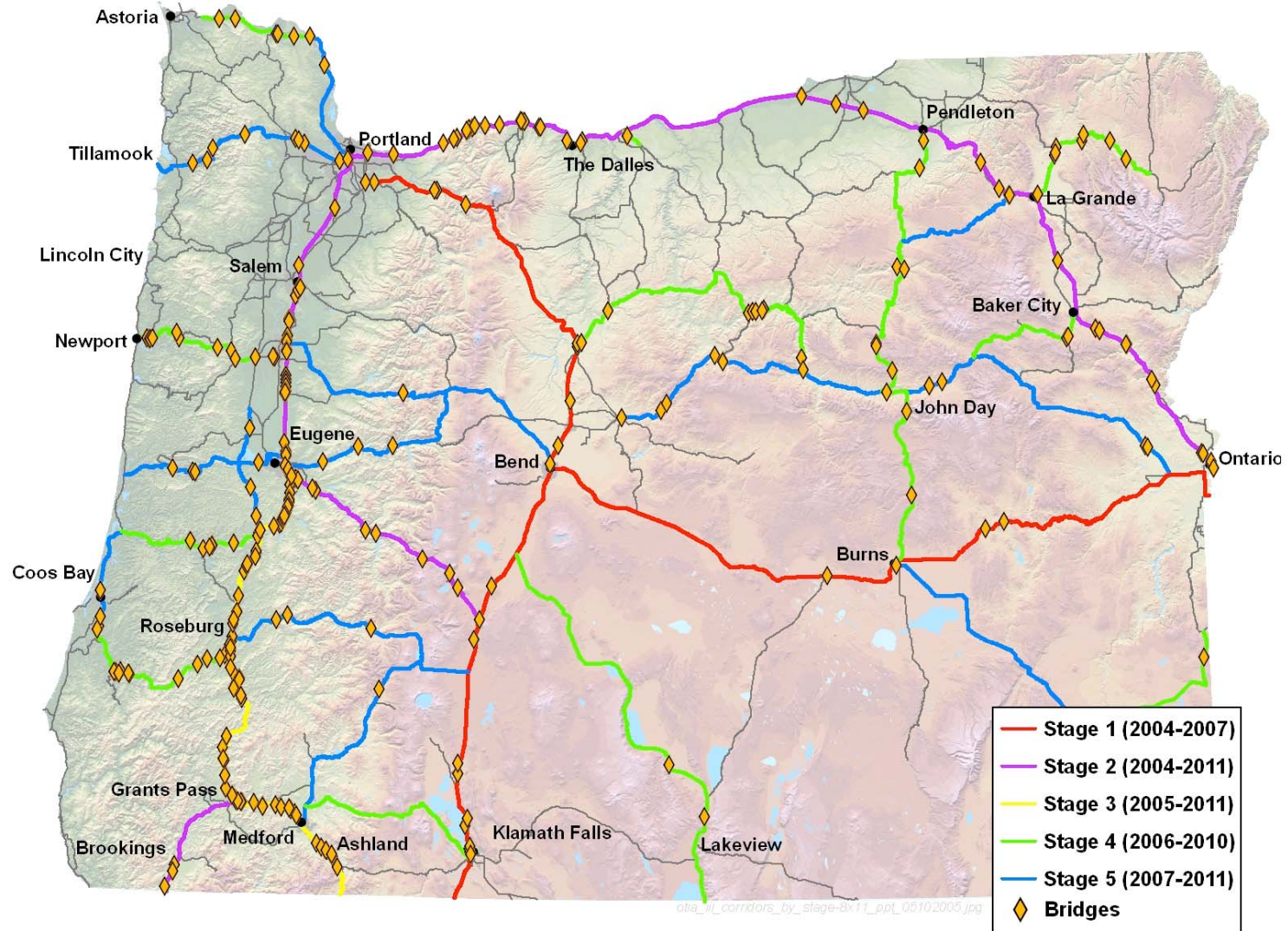


OTIA III State Bridge Delivery Program Goals

1. Stimulate the economy
2. Employ efficient and cost-effective delivery practices
3. Maintain freight mobility/keep traffic moving
4. Build projects sensitive to their communities and landscape
5. Capitalize on funding opportunities



Program Stages – 365 Bridges



Delivery Strategy

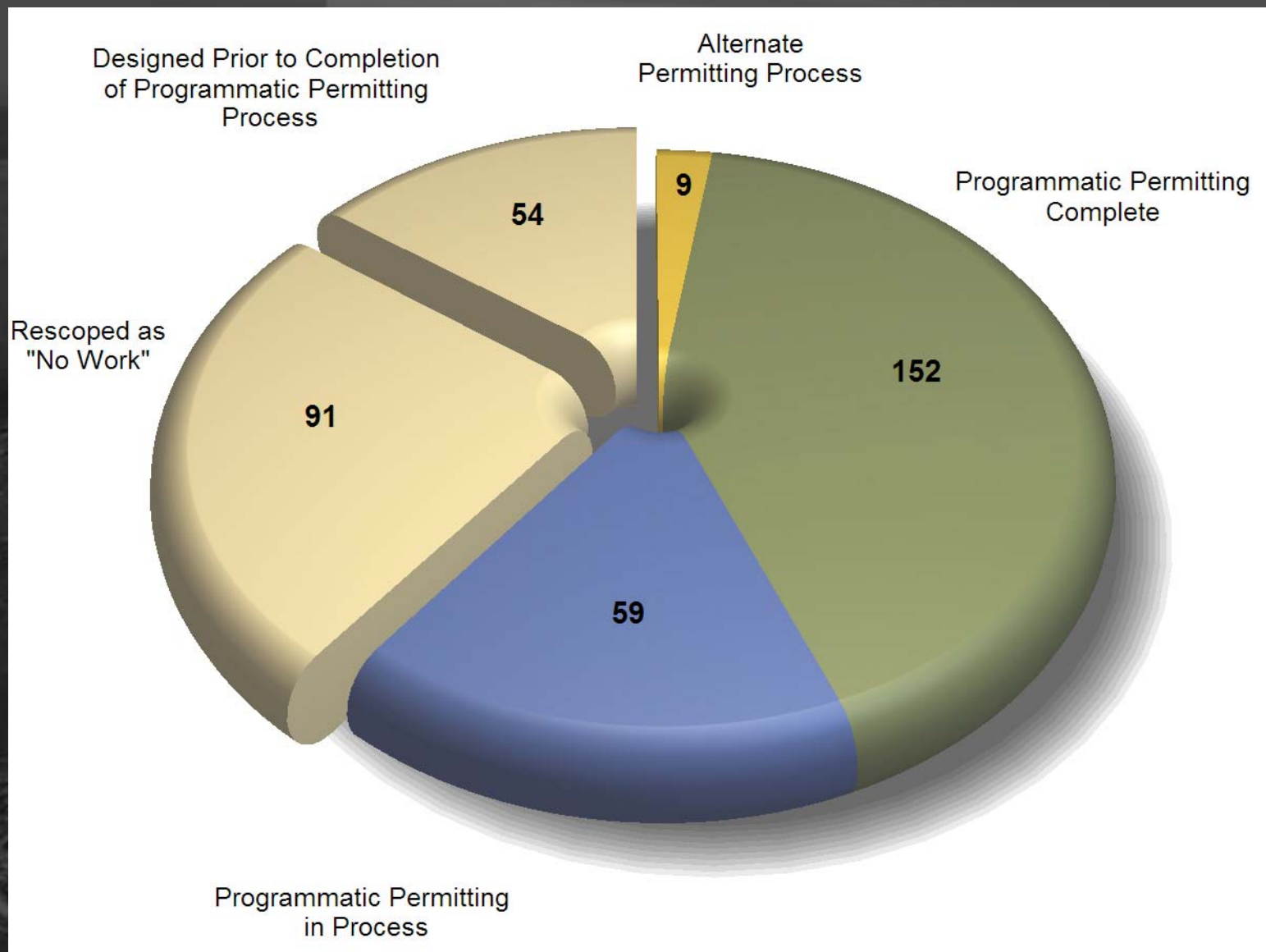
- Eighty-Four (84) project bundles throughout the Program
 - Location and context (geographic proximity enhances CS³ outcomes and minimizes mobilization costs)
 - Type of work (to provide cost-effective project bundles)
 - Packages sized to promote competitiveness of Oregon design and construction firms
 - Maintain mobility and minimize traffic impacts
 - Critical issues that can impact scope, schedule, or budget (risk management)
 - Delivery strategy to manage schedule and cash flow

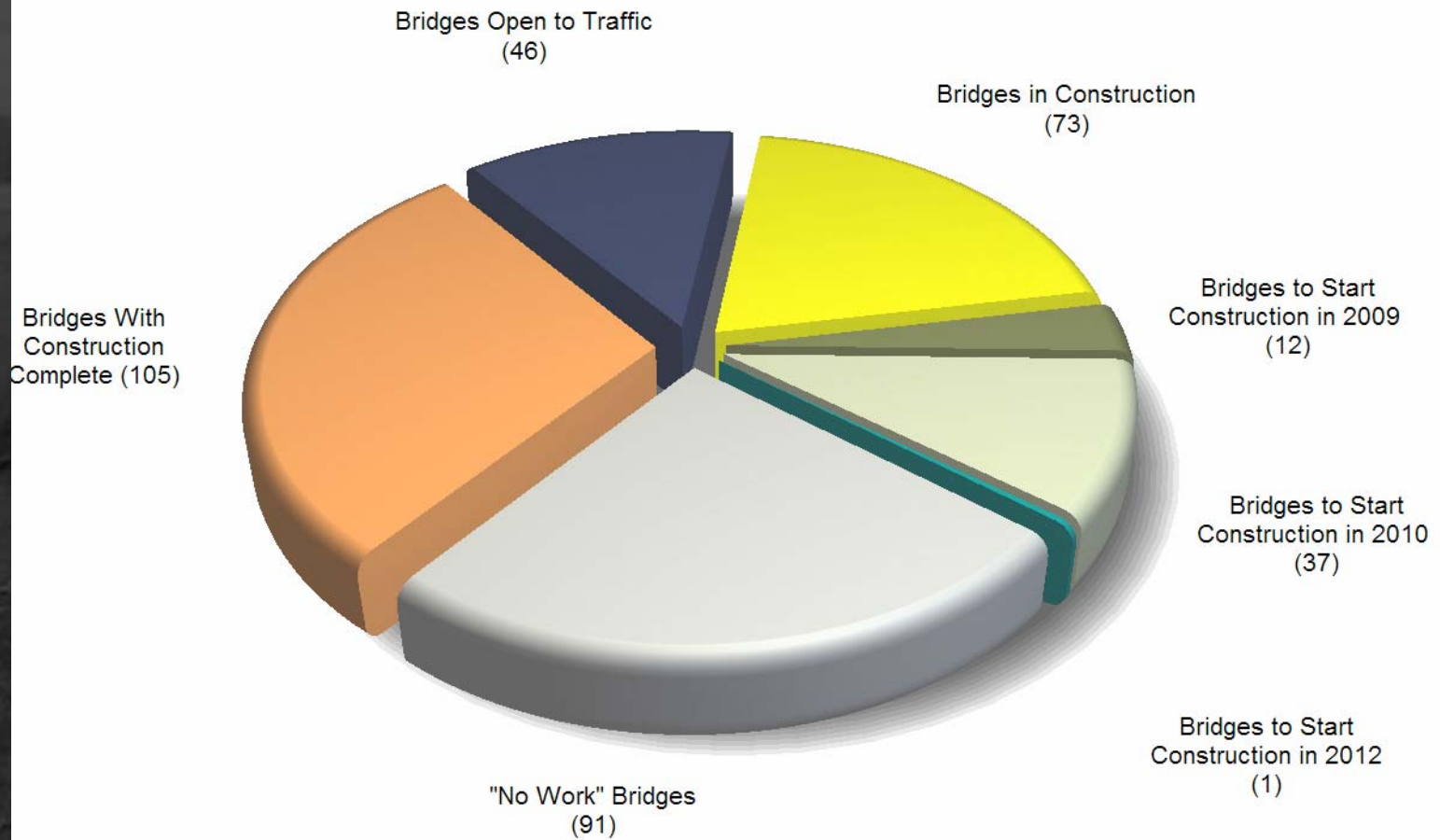
Environmental Programmatic Permitting Framework

- Environmental Performance Standards
- Programmatic:
 - Regional General Permit (Corps)
 - Biological Opinion (USFWS and NMFS)
 - Memorandum of Understanding (FHWA, USFS, BLM)
- **Allowed for the successful permitting of more than 400 bridges prior to design to conform to stringent environmental standards**
 - Merges multiple standards into one
 - Sets expectations before construction
 - Provides predictability for contractors

OTIA III Progress (data as of May 2009)

- **Design**
 - Approximately 275 bridges in various stages of design
- **Construction**
 - 105 bridges have completed construction with another 45 substantially complete and open to traffic
 - 82 bridges currently under construction
 - Approximately 1500 environmental construction monitoring/inspections visits with no permit violations
- **Utilized Programmatic Permits**
 - 225 bridges have utilized or are expected to utilize the programmatic permits





OTIA III State Bridge Delivery Program summary – Construction as of May 30, 2009

* Construction includes D-B and D-B-B



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Construction Waste Management

- What types of bridge construction and demolition waste are contractors required to report on? Answer is asphalt, concrete, wood, metal, green waste, clean fill.
- 15% reduction in particulate matter emissions results when using ultra low sulfur diesel compared to off-road diesel fuel.

Program Application – Statewide Mobility Management

■ Mobility

- Narrative describing the approach to mobility issues as addressed in the following documents / activities:
 - Project-Level TMP (Transportation Management Plan)
 - Project scoping meetings
 - Project kick-off meeting
 - TCP (Traffic Control Plan)
 - Region Mobility Committees
- Example: The project requires complicated staging to maintain the existing number of lanes to preserve roadway capacity. The mobility narrative will briefly explain how this staging will be addressed in the Project-Level TMP and TCP.



Project Application and Tools: Design

- Design Guidance and Tools

- CS³ decision matrix - assist design alternative selection
- Templates:
 - Biological Assessment (with ODOT)
 - Wetland delineation report (with ODOT)
 - Environmental Baseline Technical Memo
 - PCA
- Design Team (A/E) Training:
 - Two-day trainings to design teams, including ODOT staff
 - ~ 400 participants in all trainings, > 90 design firms have attended
- A/E Design Guidebook:
 - A program procedures manual for the design team

Program Future and Successes



Goal 1: Stimulate the Economy – Program Update

■ Sustaining jobs

- Nearly 3,500 jobs (1,630 direct / 1,870 indirect) created or sustained during 2008.
- Goal of an annual average of 2,300 jobs over 10 years.
- Generated \$14.8M in total income and \$1.1M in tax revenue during March 2009.
- Oregon firms garnered more than \$13.3M in contracts which is approximately 93% on contracted work on bridge program.

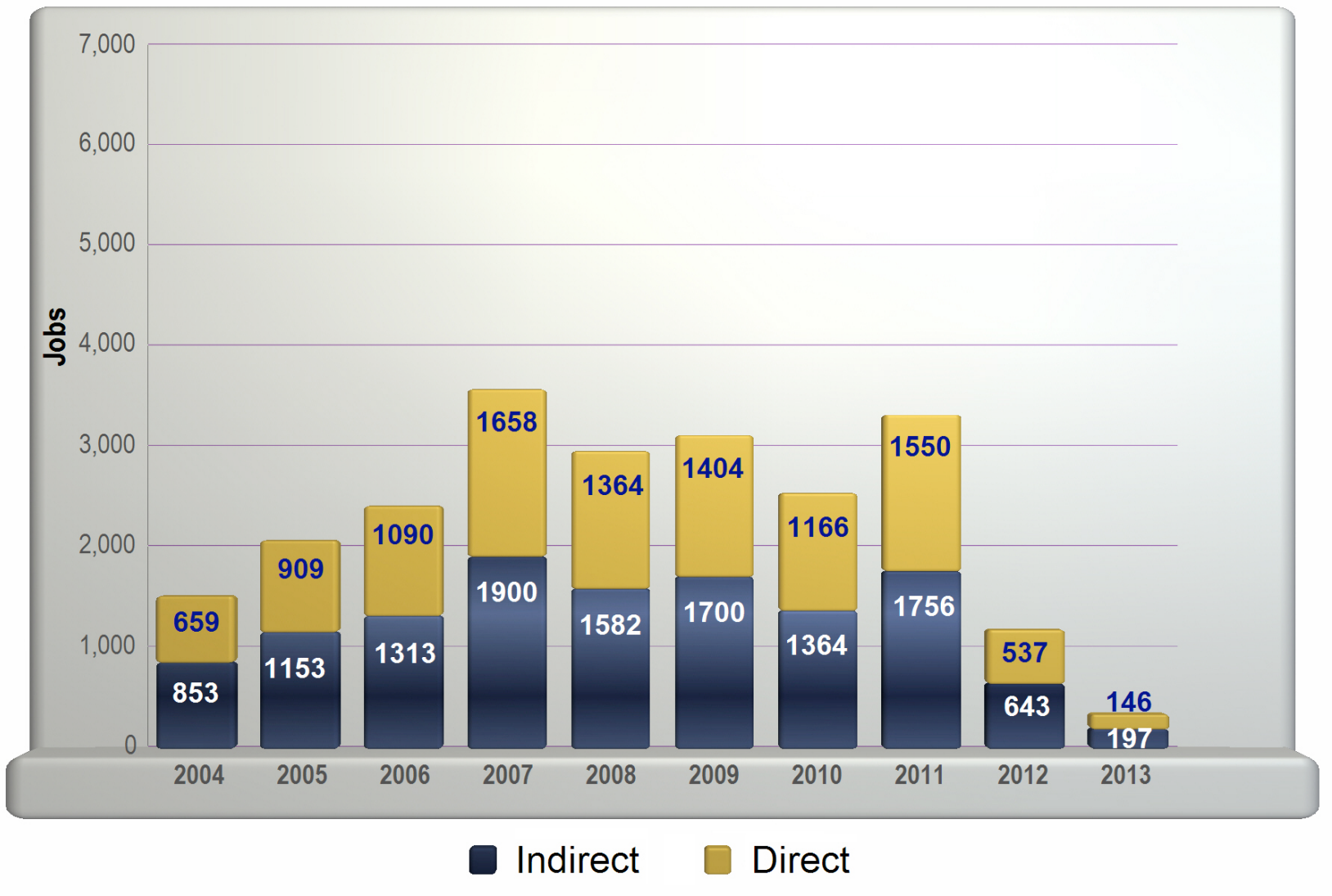
Job Creation in Oregon

OTIA III construction expenditures of \$1.04 billion will create or sustain an average of over 2,500 jobs per year in Oregon over the life of the program

For every \$1 million in construction expenditures:

- 7 Direct construction jobs are created
- 7 Indirect and Induced jobs are created in the regional economy





OTIA III State Bridge Delivery Program projected jobs



Goal 1: Workforce Diversity and DMWESBs

- ODOT launched the Workforce Development Plan
 - Increased hiring targets
 - Apprenticeship and training opportunities
- Recruitment of engineering interns
- Construction apprenticeships and On-the-Job Training (OJT) goals
- Aspirational targets set for disadvantaged, minority- and women-owned, and emerging small business firms
- To-date payments to DMWESB firms: \$21.4 million

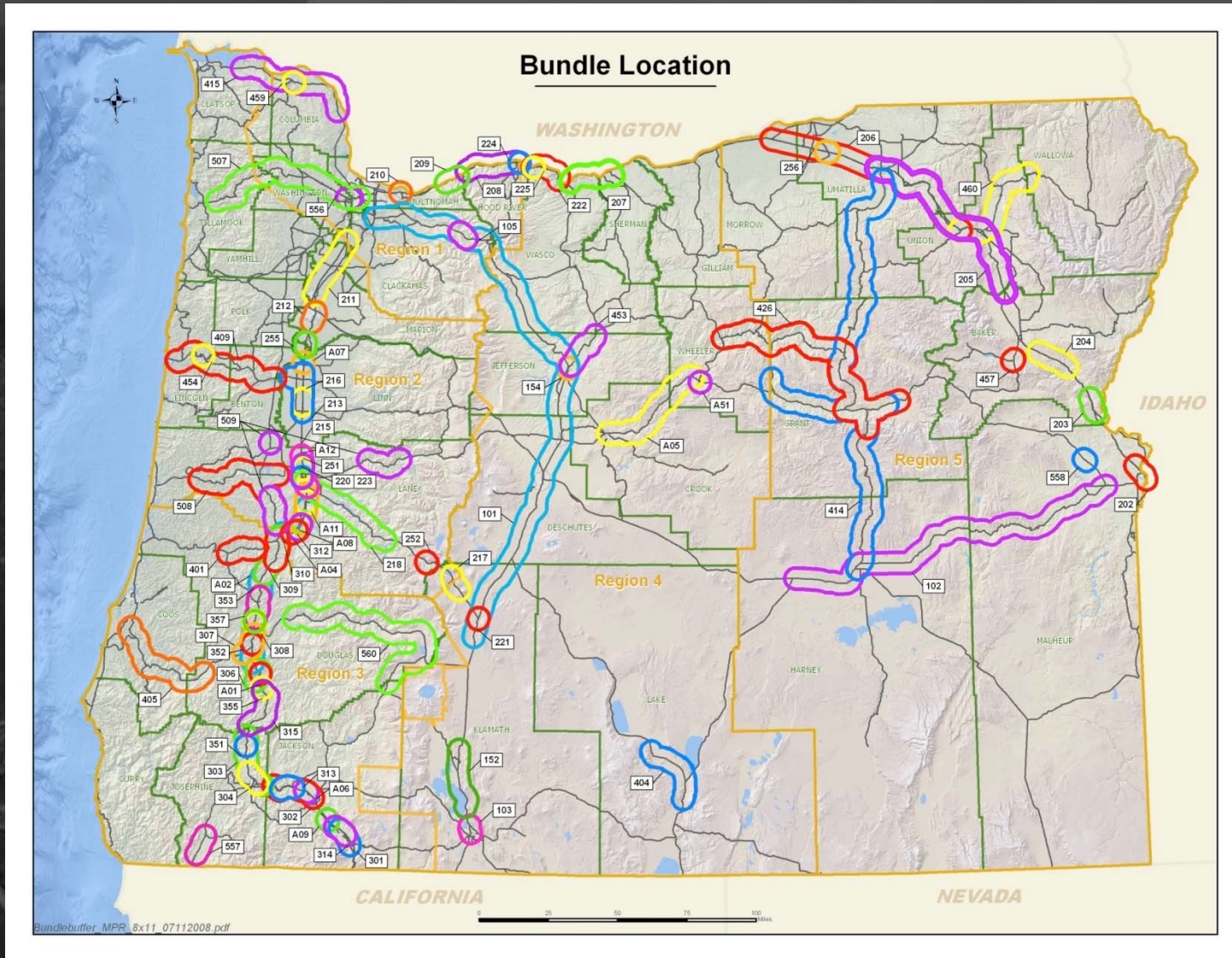


Goal 2: Employ Efficient and Cost- Effective Delivery Practices – Program Update

- **Managing project construction**
 - Established communication protocol with ODOT dispatch centers
 - Innovative IT solutions (wireless laptops, Web-based CEI Tool)
- **Project design**
 - OBDP and ODOT partnered to revise / update many of ODOT's standard engineering details to standardize repetitive design and construction



Bundling Efficiencies

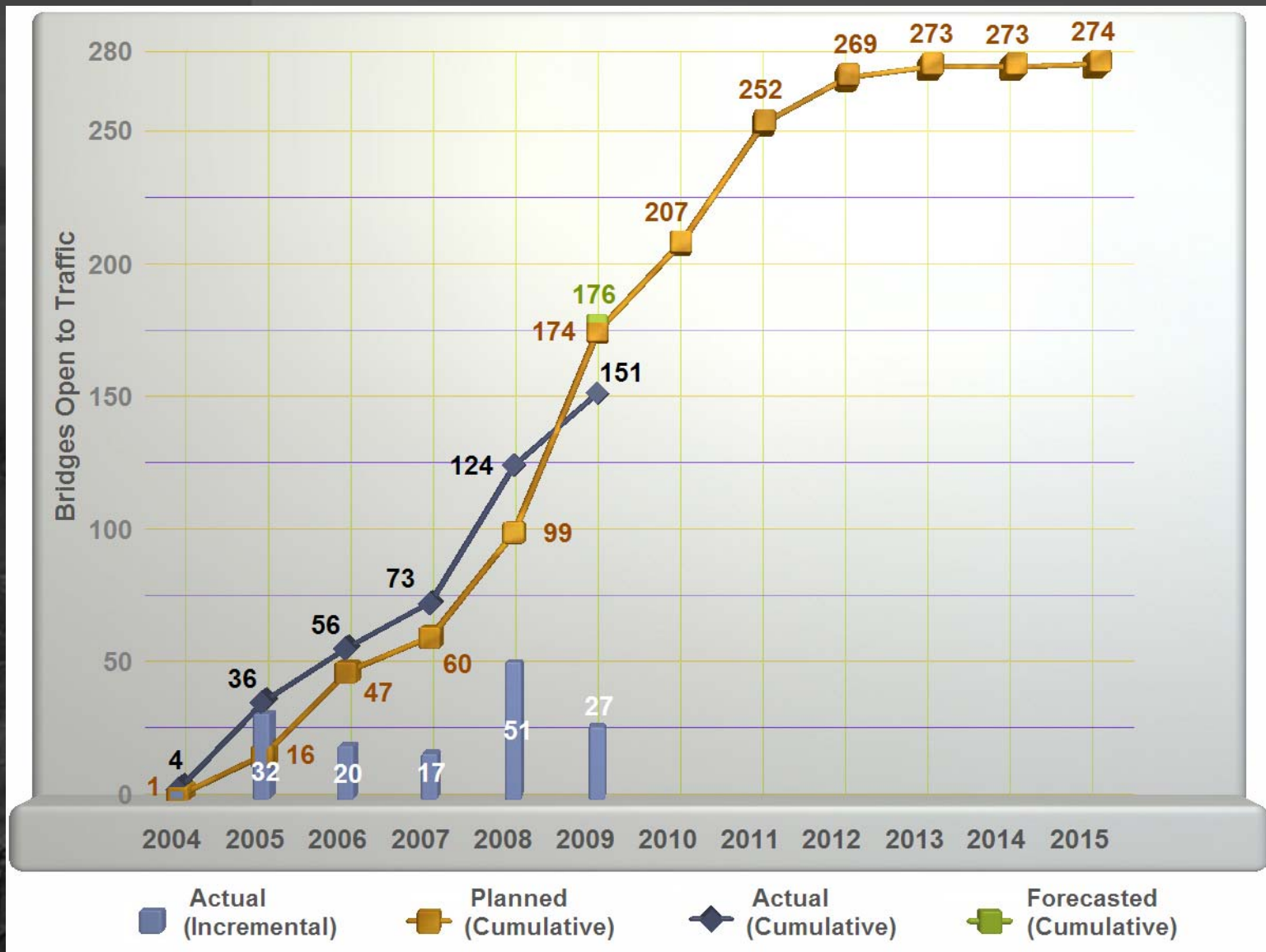


Goal 3: Maintain Freight Mobility / Keep Traffic Moving – Program Update

- ODOT coordination and communication
 - Coordinating mobility issues through Region Mobility Committee meetings
 - Attending Corridor Mobility Committee meetings to discuss coordination along major corridors (I-5, I-84, US 20/26/97, and OR 58)
- Unrestricted Mobility Measures
 - In 2008, there were 10 bridges with temporary restrictions
 - 1 has a height restriction
 - 3 have width restrictions
 - 6 have weight restrictions

Changing Traffic Staging

- **Problems with the Original Approach of Completing the Stages of Construction Sequentially**
 - Economic Stimulus would be in Limited Areas
 - Available Contractors and Resources
 - Linking of Region Projects with OTIA III Projects
 - Schedule of Addressing Environmental Impacts
- **Revised Approach Allowed Stages to Overlap**
 - Through the Development and Use of Project Travel Delay and Freight Mobility Requirements



When OTIA III State Bridge Delivery Program bridges will be open to unrestricted traffic as of May 30, 2009.

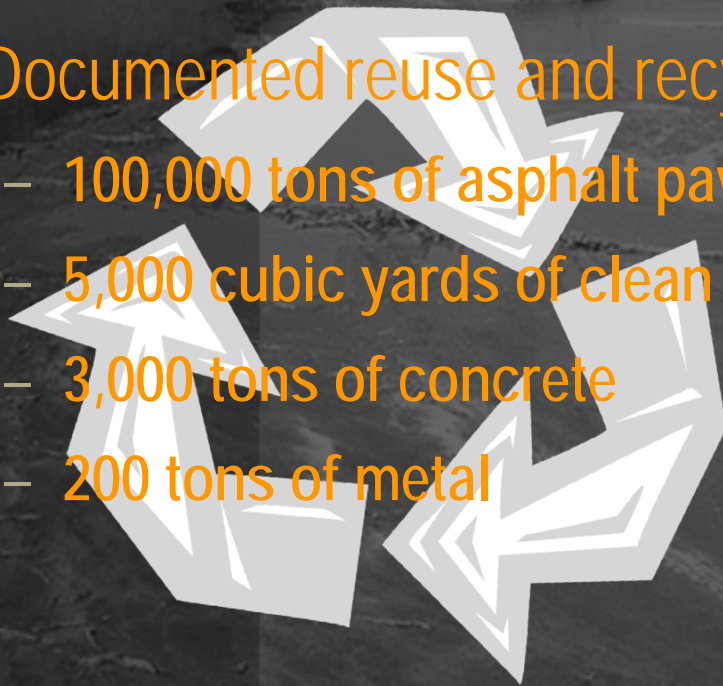
Note: Ninety-one bridges are classified as "No Work" and have been excluded from the Figure above.

Goal 4: Build Projects Sensitive to Their Communities and Landscape – Program Update: Avoidance and Minimization

- Take (less than 10% for any species)
 - UWR Chinook Salmon
 - Cutthroat Trout
 - Oregon Coastal Coho
 - Bull Trout
 - No listed fish have been captured or killed (observed)
- Metrics
 - Riparian (~2.6 acres impacted to date)
 - Streambank (~1,800 feet for entire program)
 - Waters and Wetlands (~2.2 acre total removal/fill in wetlands and ~>1 in water)
 - Fluvial Processes (~4,700 cubic yards removed to date)
 - Water Quality (~28 acres of treatment and 1.7 acre new)

Materials and Contamination

- Reporting received from construction sites indicated a documented savings to the Program in 2007
- Documented reuse and recycling data totaled more than
 - 100,000 tons of asphalt pavement
 - 5,000 cubic yards of clean fill
 - 3,000 tons of concrete
 - 200 tons of metal



Goal 4: Aesthetic Strategies for National Scenic Area

- Vision, strategy, and design guidelines for the Columbia River Gorge National Scenic Area
- Design dialogues shape the next generation of bridges in the Gorge
- Partnering with Gorge Commission, US Forest Service, Local Agencies (Counties and Cities), ODOT, various Regulatory Agencies

Goal 4: ODOT Wins National Environmental Excellence Award

- AASHTO's Center for Environmental Excellence Best Program Award in the Context Sensitive Solutions competition
- Recognized for CS³ implementation



Engaging Communities

- Vision, strategy, and design guidelines for the Columbia River Gorge National Scenic Area
- Design dialogues shape the next generation of bridges in the Gorge



Goal 5: Capitalize on Funding Opportunities – Program Update

- To date, \$3.4M in additional funding has been obtained through various grant sources including:
 - Highways for Life
 - FHWA Supportive Service Funds
 - EPA
 - FHWA Innovative Bridge Research and Construction