



SHRP2 C19, *Expediting Project Delivery* Accelerated Bridge Program, Vermont Agency of Transportation

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Presentation Outline

- Origins of the ABP
- Overview of Structures Organization
 - Project Initiation and Innovation Team (PIIT)
 - Accelerated Bridge Program (ABP)
- C19 Timeline: Past, Present, and Future
- C19 Key Strategies and Outcomes
- Future Action Items
- Three Years of Proven Performance





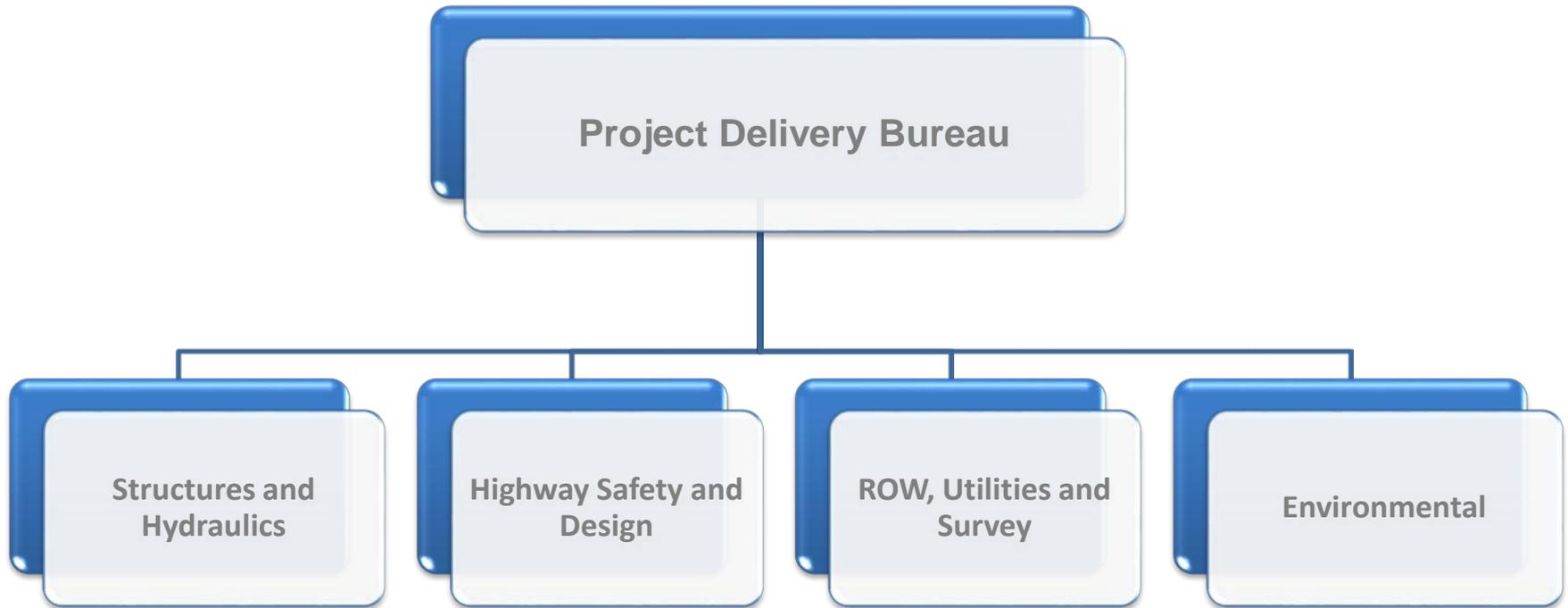
Origins of the Accelerated Bridge Program

Minimizing Impacts to Expedite Project Delivery



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PDB Organizational Chart



Setting the Stage for Expediting Project Delivery

- Significant increase in funding allocated to the Bridge program
 - 2009 American Recovery and Reinvestment Act
- Aging population necessitates replacement
- Tropical Storm Irene
- Legacy Projects





Structures Reorganization

Dedicating Staff and Cultivating Proficiency



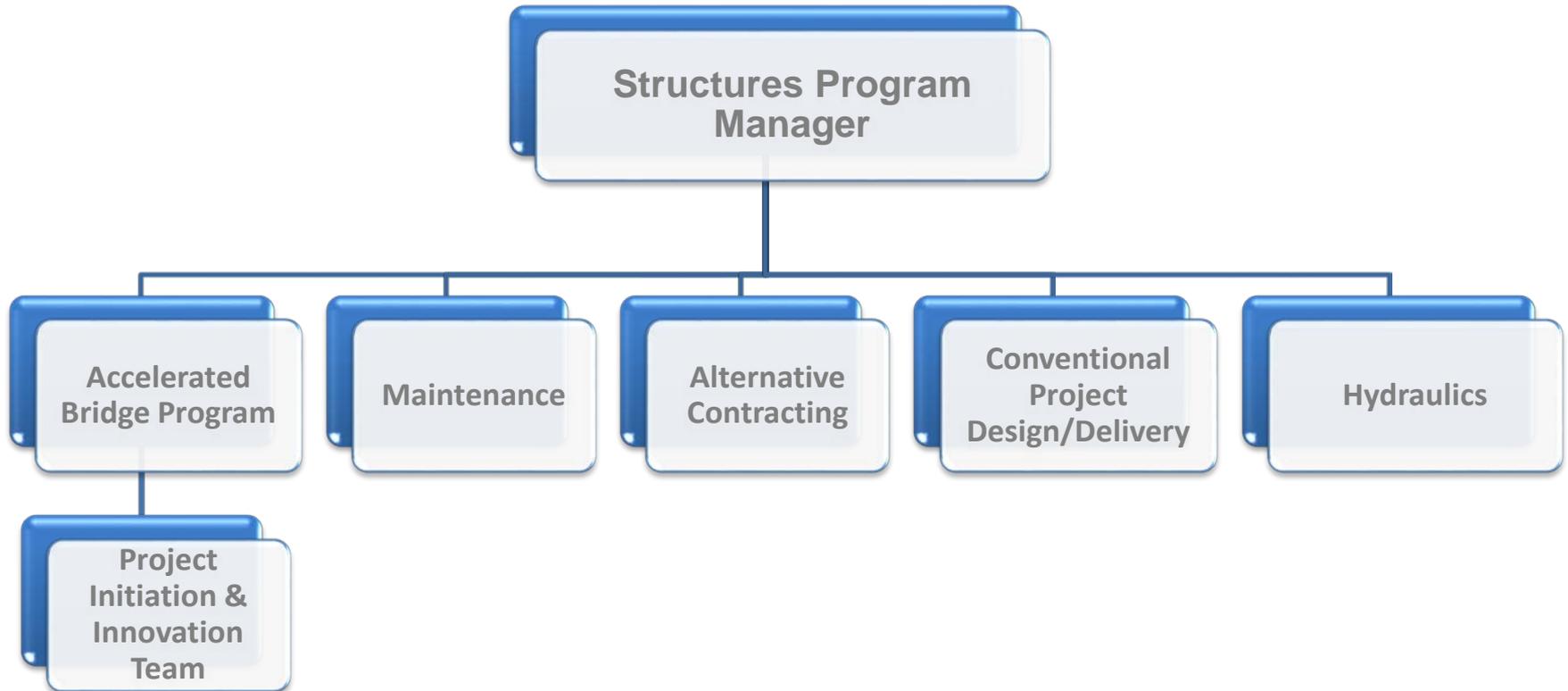
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Structures Reorganization

- The Structures Section reorganized in 2012 to streamline project delivery
 - Project Initiation and Innovation Team (PIIT)
 - Accelerated Bridge Program (ABP)



Structures Organizational Chart



Project Initiation & Innovation Team (Scoping)

- All bridge projects start here
 - Full Replacement
 - Rehabilitation
 - Major Maintenance
 - Painting
 - Membrane and Paving
 - Deck Patching
- Approximately 20-30 projects initiated and scoped per year
- Large investment in early public outreach and consensus building



Accelerated Bridge Program (ABP)

- Initiated and endorsed by Secretary Searles in January 2012
- Programmatic approach to accelerating projects
 - Minimize Project Impacts
 - Short Term Road Closures
 - Utilize Prefabricated Bridge Elements and Systems (PBES)
- Jump Started – Tropical Storm Irene – 14 Bridge Replacement projects delivered within 24 months
- 24 month performance goal from project defined to procurement (80% to meet 24 months)



Challenges and Opportunities

- Program not yet ingrained in the Agency's organization
- Struggling with resource allocation to meet the 24 month development schedule
- Managing Internal and External Stakeholder and Customer Expectations
- Need to document successful approaches to expediting project delivery





SHRP2 C19 Timeline: Past, Present and Future Leveraging Strategies to Remove Impediments and Deliver Projects



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SHRP2 C19 Background

- In 2012, SHRP2 published a report entitled, “Expedited Planning and Environmental Review of Highway Projects.”
- In October 2013, VTrans was selected as a recipient of the SHRP2 C19 grant.
- These funds were used to develop an action plan that identifies, describes, and evaluates the leading constraints to expediting project delivery and strategies to overcome these barriers.



C19 Desired Outcomes

- Evaluate risks to timely project delivery
- Identify opportunities to expediting projects with special emphasis on the strategies described in the *Expediting Project Delivery* report
- Identify resource demands for the ABP and how this may differ from conventional project delivery
- Analyze the VTrans organizational structure for opportunities for increased efficiencies
- Identify potential process improvements
- Build relationships with internal and external partners



5 Key Strategies for Expediting Project Delivery

- Strategy 3: Context Sensitive Design/Solutions (Objective: Improve public involvement and support)
- Strategy 8: Expediting Internal Review and Decision-Making (Objective: Streamline decision-making)
- Strategy 10: Highly Responsive Public Engagement (Objective: Improve public involvement and support)
- Strategy 21: Strategic Oversight and Readiness Assessment (Objective: Improve internal communication and coordination)
- Strategy 22: Team Co-Location (Objective: Improve internal communication and coordination)

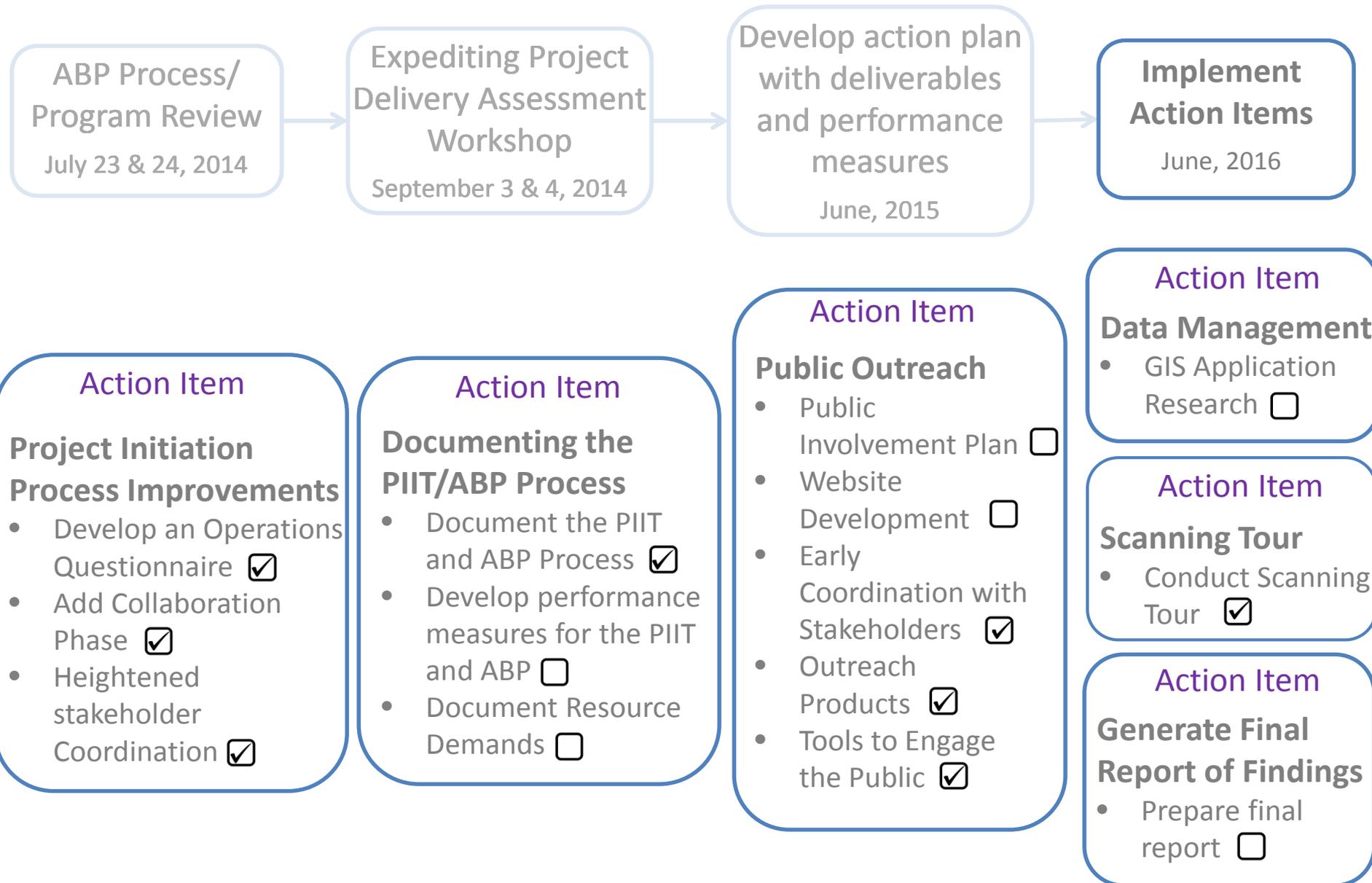


SHRP2 C19 Timeline

- October 2013, VTrans was selected as a recipient
- July 2014, Program/Process Review
- September 2014, C19 Workshop
- June 2015, Action Plan Approved
- Summer/Fall 2015, Peer to Peer Exchanges
- Fall 2015-Present, Implement Action Items
- January 2016, External and Internal Stakeholder Interviews



C19 Action Plan Drawing Upon Key Strategies





C19 Key Strategies and Outcomes

Focused Approach to Maximize Success



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Strategy 3: Context Sensitive Design Solutions

- Dedicated scoping team to ensure consistency
- Community and Operations Questionnaires
- Addition of “Collaboration Phase” during project definition
- Proper Selection of selected alternatives (avoidance, minimization, and mitigation)



Strategy 8: Expediting Internal Review and Decision Making

- Dedicated PIIT and ABP Teams
- Batching of scoping projects for resource ID
- Heightened Communication and Collaboration (**Emphasizing Partnerships**)
 - Collaboration Phase during Project Definition
 - Team Meetings
 - Construability Review Meetings
 - Pre-closure Contractor Meeting
- Concurrent Activities and Decision Tree



Strategy 10: Highly Responsive Public Engagement

- Providing Financial Incentives on TH Projects (ACT 153)
- Public Meetings throughout the life of the project
- Effective Public Engagement
 - Audience Response Systems
- Public Involvement Plans
- Project Outreach Coordinators
- Customer Satisfaction Surveys



Strategy 21: Strategic Oversight and Readiness Assessment

- Creating a Culture that Values Innovation
- Strong and Effective Project Management
- Developing Key Planning Documents
 - Traffic Management Plans
 - Public Involvement Plans
 - Risk Registry
 - Credible Schedules and Spending Profiles
- Standardized Design Details and Special Provisions for ABC



Strategy 22: Team Co-Location

- Resource Groups Housed Together
- Dedicated Utility Relocation Specialists
- Project Development Team Meetings
- Constructability Review Meetings



Future Action Items

Setting the Stage for
Continuous Process Improvements



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Our C19 Journey Has Just Begun

- Numerous Takeaways from the Program/Process Review, Peer to Peer Exchanges, and Stakeholder Interviews
- Peer Exchanges with MassDOT, NYSDOT and MaineDOT
 - Diverse Group from VTrans in Attendance
 - Program Overviews
 - Accelerated Program Emphasis Areas
 - Shared New Initiatives, Innovations, and Lessons Learned
 - Takeaways



Our C19 Journey Has Just Begun

- Explore Enhancements in the PIIT process
 - Leverage expertise in VTrans to help refine recommended alternatives
 - Develop truncated scoping report for Preventative Maintenance and Emergency Projects
 - Explore effective methods to engage upper lever management on high risk and high cost projects
 - Develop prescreening GIS tool for resource ID



Our C19 Journey Has Just Begun

- Expand the Use of Alternative Contracting Methods
 - Best Value, Detail-Build, and Proposal Only
- Expediting ROW Acquisition
 - Modify project schedule to meet with property owners during preliminary plan development
 - Use “Block Out Approach” and begin “Plans and Titles” during preliminary plan development
- Explore Strategies for timely delivery of Utility Relocation
 - Consider integrating relocation order through the contract and make it the contractors responsibility



Our C19 Journey Has Just Begun

- Strengthen Partnerships with Construction
 - Develop construction expertise in ABC
 - Assign resident engineer during design
 - Seek approval from Construction on the design construction schedule prior to PS&E
 - Augment Construction Staff with Structures Design Staff
 - Embed Construction Staff in the Structures Program during winter months
 - Establish effective feedback loop of lessons learned
 - Consider the timing and sequencing of bridge closures



Our C19 Journey Has Just Begun

- Effective and Clear Traffic Management
 - Determine how to integrate portions of the TMP into the contract plans and special provisions
 - Establish protocol and approval process for closing roads
 - Create or utilize existing tools to determine if there are any conflicts with other ongoing construction projects
 - Develop FAQs for road closures on TH projects



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Our C19 Journey Has Just Begun

- Enhanced Quality and Customer Service
 - Develop Plan Quality Certification
 - Consider pairing new consultant with seasoned designer
 - Develop and disseminate quality surveys for bidders following project award
 - Consider Local Advisory Committees for projects with significant public interest
 - Consider holding Regional Concerns Meetings for Interstate projects during TAC meetings





Accelerated Bridge Program

Three Years of Proven Performance



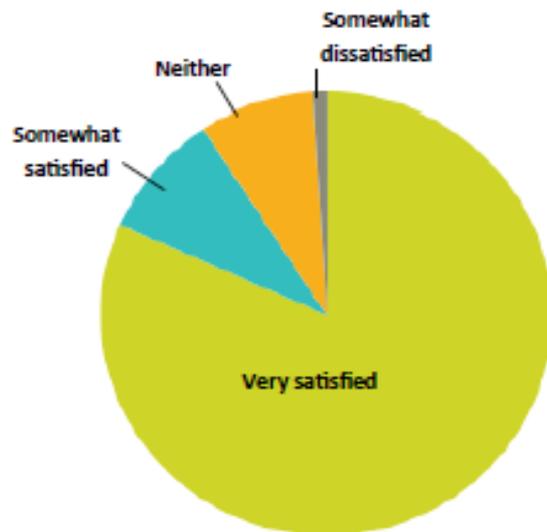
ABP by the Numbers

- 22 projects have been delivered through 2014
- 6 are under construction this summer
- The 28 projects represent \$55 million in construction costs
- Another 10 ABP projects will be delivered in 2017



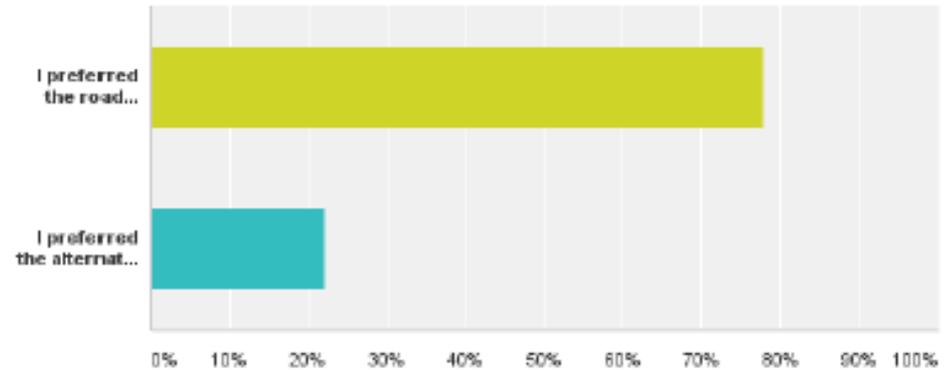
Q8 The Stowe VT 108 Bridge Project used an innovative construction method called Accelerated Bridge Construction, which uses prefabricated bridge elements and road closures to reduce onsite construction time. Conventional construction typically uses temporary bridges and takes one to two years to complete. How satisfied were you with the Accelerated Bridge Construction?

Answered: 109 Skipped: 6



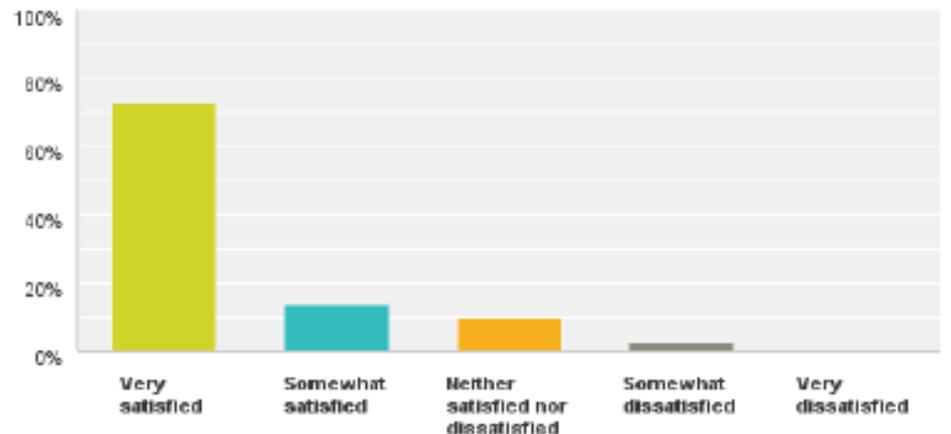
Q9 How would you rate your level of satisfaction with the road closure compared to alternating one-way traffic following the bridge closure period?

Answered: 108 Skipped: 7



Q12 Overall, how satisfied were you with how VTrans delivered this project?

Answered: 108 Skipped: 7





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