The Maryland Quality Initiative (MdQI) Fourteen Years of MdQI Continuous Quality Improvement

Agenda

- Why Maryland Quality Initiative?
- History of MdQI
- Mission Statement
- Organization & Structure
- Achievements
- 2006 and Beyond
- Lessons Learned
Why Maryland Quality Initiative?

- Many organizations were meeting independently to address quality issues
- Needed forum for the exchange of ideas and cooperation within the highway industry
- Quality cannot be achieved without the commitment of all stakeholders
- Quality Strategies as a way of doing business

History of MdQI

- Late 1980's
  - Maryland Highway Contractor's Meetings

- 1990
  - Development of "Maryland With Pride" Awards Program

- 1992
  - Agreement made among Maryland's key highway organizations to hold a statewide conference
  - Initial charter signed & steering committee formed with the five sponsoring agencies
History of MdQI

Maryland’s first NQI “Road to Quality” Conference/Workshop

Some of the early initiatives
- Performance evaluation for contractors
- Performance evaluation for consultants
- Performance evaluation for SHA
- Reduced retainage
- Re-wrote Specification Book 1993-1994 with contractor input

1994

MdQI Mission Statement

“To provide the Maryland highway industry a forum that fosters coordinated and continuous quality improvement in order to ensure safe, efficient, and environmentally sensitive highways which meets the needs of all transportation stakeholders”
History of MdQI

- Six sub-committees were formed to consolidate the activities of the highway industry
  - Highway Operations
  - Project Development
  - Conference
  - Partnering
  - Training & Recruitment
  - Public Relations/Marketing
  - Safety (2005)
- MdQI Steering Committee meets monthly to address issues arising from our Annual Conference as well as new issues. Teams formed within Subcommittees.

History of MdQI

- Maintain relationship with National Partnership For Highway Quality (NPHQ) Throughout our History
- Participate in NPHQ National Awards
- NPHQ Lead State
- NPHQ State Quality Partnership Accreditation Tier I & II (2006)
Growth of Sponsoring Agencies

Signed 3 New Charters To Incorporate New Members

CurrentMdQI Structure

MdQI Steering Committee
Doug Rose (SHA) Co-Chairman
Dan Cheng (ACEC & JMT) Co-Chairman

Highway Operations Sub-Committee
Public Relations Sub-Committee
Conference Sub-Committee
Safety Sub-Committee
Project Development Sub-Committee
Partnering Sub-Committee
Training & Recruitment Sub-Committee
Subcommittees

- **Highway Operations**: Innovative contract, maintenance, materials, specifications and construction issues
- **Project Development**: Planning, design, project delivery & environmental stewardship
- **Partnering**: Improve/enhance partnering process
- **Training & Recruitment**: Promote careers in engineering and construction, student outreach
- **Public Relations**: Promotes awareness of MdQI through media, newsletters and website (www.mdqi.org)
- **Safety**: Promotes work zone safety
- **Conference**: Organizes annual conference & Awards Banquet

Annual Conference

- **Two Days in January**
  - **Day One**
    - Luncheon
    - Vendor and Technology Exhibits
    - Interactive Workshops
  - **Day Two**
    - CEO Breakfast with Key Officials
    - Vendor and Technology Exhibits
    - Opening Session and Keynote Speaker
    - Technical Presentations
    - Luncheon
    - Technical Presentations
    - Training Opportunities
    - Banquet with Key Officials
    - Recognition of 20+ Awards of Excellence
      - Concrete & Asphalt Plants
      - DBE/Sub-Contractors
      - Unique Projects – Roundabouts
  - **2006** - Largest conference to date with 550 participants and 750 attendees for the Awards Ceremony
Achievements: Key Initiatives of Recent Years

- Partnering in Design/Construction
- Construction & Engineering Career Day
- Industry/SHA Technical Team
- Superpave Implementation
- NPHQ Lead State
- Partnering-Training Boot Camp
- Pavement Selection Program

Achievements

- Implemented contractor/consultant evaluation forms
- Implemented reduced retainage process
- Implemented appeal process for consultant errors and omissions
- Developed formal partnering guidelines for construction
- Developed 2nd Manual for Partnering in Design and Construction
- Established teams to reduce change orders
- Promoted ITS technology in incident management and work zones
- Improved project closeout and materials clearance
- Implemented District special projects guidelines
Achievements

- Developed ADA Training Program
- Implemented “Thinking Beyond the Pavement” Concepts (1999) which is now called “Context Sensitive Solutions”
- Implemented QC/QA measures and specifications
- Improved SHA’s technology transfer program
- Executive leadership team
- Provided context sensitive design training
- MdQI newsletter and webpage: www.mdqi.org
- Implemented design build/best value/PPP
- Implemented safety team
- Introduction of construction mediation
- CPM specification rewrite
- Implementation of SHRP in Maryland
- Implemented Ride Smoothness Incentive

Benefits to Construction Program

- Partnering
  - Improves communication
  - Eliminates adversarial relationships
  - Streamlines project closeout (100 days on average)
  - Eliminates or minimizes delays
  - Reduced claims on construction projects
  - Reduces change orders
  - 91% or 118 out of 130 active construction projects were partnered as of June 2006. Represents 98% of all construction funds
  - Measurement of partnering
  - Value engineering
  - Expedited Material clearance
Benefits to Construction Program

1994-1999 Change Orders Averaged 11.4 %

FY 2000-2004 Change Order Totals:

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<tbody>
<tr>
<td>Number</td>
<td>510</td>
<td>424</td>
<td>416</td>
<td>486</td>
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<td>Change Order Cost</td>
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<td>$18,329,000</td>
<td>$22,579,395</td>
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<td>5.45%</td>
<td>5.07%</td>
<td>3.06%</td>
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<td>Expenditures</td>
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<td>$599,750,463</td>
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Settled vs. Claimed 1988 thru 1997

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<th>Year</th>
<th>Settled</th>
<th>Claimed</th>
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<td>88</td>
<td>$9,683,161</td>
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Count: 12 5 21 28 37 10 12 6 10 12 130

- **Settled**
  - $1,990,316.43
  - $4,294,000.00
  - $655,000.00
  - $17,000.00
  - $78,000.00
  - $3,323,772.77
  - $50,000.00
  - $27,433.37
  - $48,000.00
  - $10,483,522.57

- **Claimed**
  - $11,393,170.78
  - $15,920,828.73
  - $1,742,139.29
  - $1,205,107.66
  - $1,344,264.96
  - $12,501,625.15
  - $2,757,597.37
  - $3,281,782.55
  - $1,011,410.80
  - $51,157,927.29

- **Total**
  - $16,383,487.20

**Annual Construction Career Day**

- This year we held our 3rd Annual Highway Construction & Engineering Career Day
Annual Construction Career Day

- Over 500 high school students in search of a rewarding career
- College-bound and non college-bound students
- Teachers, counselors, and other education officials
- Community college students, Urban Youth League, Job Corps., etc.

Communication

Website: www.mdqi.org

Semi-Annual Newsletter with Industry Briefs
MdQI National Awards

- **I-270 Design and Interstate Reconstruction**
  - NQI Achievement Award - 1995
- **MD 450/ US Naval Academy Bridge**
  - NQI Achievement Award – National Finalist 1997
- **I-695 Baltimore Beltway Widening**
  - NQI Achievement Winner - Gold Level Award - 1999
- **Making a Difference State Quality Initiative**
  - Gold Level Award - 2000
- **US 113 Phase I**
  - NPHQ Recognition Award For Quality In A Small Project - 2001
- **Making a Difference Partnering - Silver Level Award - 2002**
- **Canal Parkway**
  - NPHQ Achievement Winner- Gold Level Award - 2003
- **Woodrow Wilson Bridge - Air Bubble Curtain System (“ABCS”)**
  - NPHQ - Gold Level Award - 2004
- **Woodrow Wilson Bridge - Making a Difference**
  - Risk Taking NPHQ - Silver Level Award - 2004
- **I-270 - Rockledge Drive & MD187 Interchange Project**
  - NPHQ - Partnering Gold Level Award - 2004

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2006 and Beyond

- Increase industry involvement and participation
- Increase membership - MSP, MDE, MOSH & Academia
- Partnering with utility companies
- Contract administration methods
  - G.E.C. construction management by consultants
- E&S specifications
- Technologies and innovations
  - Stakeless grading
  - Intelligent Compaction Program
  - Moveable Traffic Barriers
  - Concrete Maturity Meter Pilot
- Recycled Materials Specification
2006 and Beyond

- Mega projects
  - Woodrow Wilson Bridge
    - $2.5 billion est.
  - I-95/Section 100
    - $850 million est.
  - Intercounty Connector
    - $2.4 billion est.
- Managed lanes/express toll lanes
- Performance specifications
  - Warranties
  - Best value

Lessons Learned

- Commitment From the Top
- Evolutionary Process
- Monthly Steering Committee Meetings
  - Advance Agendas
  - Good Note Taking
  - Develop Action Items
  - Chief Engineer Rotation
- Contractors hard to get to table
- Assure Sponsoring Agencies, Contractors and Consultants are on each sub-committee. 2 Chairs for each sub-committee.