TRB AFF10 (1) Traffic Structures Subcommittee Activities

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TRB AFF10 (1) “Traffic Structures”

• Under AFF10 “General Structures” Committee
• To Advance State-of-Art Technologies & Materials
• ~ 35 Members/Friends
• Partners/Liaisons:
  - AASHTO T-12
  - AASHTO-ARTBA-AGC TF 13
  - Mid-Atlantic States SCEF
  - TRB AFH70 Committee (Metal Fabrication)
  - Other TRB Committees Relating to Traffic

• Activities:
  - Identify Research Needs
  - Develop Problem Statements (AASHTO T-12)
  - Facilitate Funding
  - Sponsor Paper/Conference Sessions & Workshops
  - Publish Research Papers/Reports
# Current Research Programs / Projects

(Close Partnership with AASHTO T-12)

- TRB-NCHRP Program
- TRB-NCHRP 20-30 IDEA Program
- TRB-NCHRP 20-07 Program  
  (Research for AASHTO Standing Committee on Highways)
- Transportation Pool-Funded Program
NCHRP Projects

• 10-70  “Cost-Effective Connection Details for Highway Signs, Luminaires, and Traffic Signal Structures”

• 10-74  “Development of Fatigue Loading and Design Methodology for High-Mast Lighting Poles”

• 10-80  “New Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals” -> LRFD
NCHRP IDEA Project

- IDEA 141 “Reducing Fatigue in Wind-Excited Support Structures Using Smart Damping Technologies”
Research Needs

• in 2011
  1) Flatness Control of Transverse/End Connection Plates
  2) In-Depth Investigation of Anchor Bolt Tightening/Tensioning Methods and Procedure
  3) Evaluation of Damaged Light Poles, Traffic Signal Devices and Signs with Damage (to Determine Thresholds for Removal)
  4) Wind and Fatigue Loads for “in-Transit”/Mobile Signal Poles

• Prior to 2011
  Review & Update Gust Factor; Drag factor; Damping; UIT; Maintenance Database; FRP; Galvanizing Effect; Wind Power Maps; Tubular Connection, etc.
Implementation of Research

• Mid-Atlantic States SCEF
  * Steel Committee on Economic Fabrication: Ancillary Structures Subcomm.
  * DC; DE; NJ; MD; PA; VA; WV; FHWA
  * Current Activities:  - Ballot on Mast-Arm-to-Pole Connection Details
    - Standardization of Bolt Circle and Number of Anchor Bolts
    - Info Exchange

• AASHTO-ARTBA-AGC Task Force 13
  * Test of Breakaway Device (aluminum transformer base) (new TL-loads)
  * DTIs
SCEF Connections

Detail 1:
AASHTO Example 8
(most states)

Detail 2:
Clamp-up Connection
(NJDOT etc.)
Present and Future Work

• 2011 TRB Annual Meeting
  * Paper Review/ Presentations:  1) Smart Damping;  2) Anchor Rod Tightening
  * NCHRP Project Updates:  10-70;  10-74;  10-80
  * SCEF Activities
  * Research Needs

• 2011 - 2012
  * Research Needs  (T-12)
  * Problem Statements  (T-12)
  * Solicit Papers
  * Sponsor Presentation Session(s) for 2012 TRB Annual Meeting

• AASHTO T-12 Input
Questions and Comments?

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AASHTO / FHWA / TRB

Owner

Practitioner

Researcher