



NHDOT / ACEC-NH Bridge Subcommittee Meeting Minutes

December 1, 2017

Invitees: (Check Mark Denotes Attendance)	
<ul style="list-style-type: none"> ✓ Bob Landry, NHDOT ✓ Angela Hubbard, NHDOT ✓ Joe Adams, NHDOT ✓ John Poisson, NHDOT ✓ David Scott, NHDOT ✓ Tony Weatherbee, NHDOT 	<ul style="list-style-type: none"> ✓ Tom Kendrick, MJ ✓ Bob Durfee, D&K ✓ Steve Hodgdon, VHB ✓ John Watters, GPI (Note Taker) ✓ Adam Stockin, WSP/PB ✓ Tom Levins, GM2

Location: NHDOT – Large Highway Design Conference Room Time: 10:00 AM – 11:30 AM

Notes By: J. Watters

Fourth Quarter Meeting 2017 (2nd meeting of this subcommittee)

Introductory Remarks

- All present introduced themselves.
- Meeting minutes were presented, reviewed, and accepted unanimously.

Department updates and staff changes (promotions, new-hires, retirements, etc.)

- Joe mentioned that the Bureau is fully staffed. Recently hired Jacqueline Hozza has transferred from construction to bridge.
- Nancy Mayville also retired and still working part time. No replacement for her position has been announced.

Summary of In-House Design Section staff meetings

- Angela noted that she would post the staff meeting notes to the NHDOT/ACEC website.
- Specific highlights include:
 - Recent storms have highlighted the need for continuous footings under 3 sided concrete frames for redundancy.
 - Clarification will be provided on the standard bridge contract superstructure notes that holes are not allowed in steel girders for construction purposes. Previous notes implied that holes may be acceptable on existing girders that would eventually become interior girders due to a widening project.

- The Google Earth link on the website has been updated to include inspection reports. The user needs to right click on “Inspection Report” and hit “open link” to review the report. The report does not include the inspection pictures.
- Not all the bridge plans have been scanned so not all of them are located on the Project Viewer site. Consultants should work through their PM to gain access to files that may not be available through the website.
- NHDOT has moved from PONTIS to BrM for inspection reports and element level reporting. It may take up to 2 inspection cycles before all bridges are updated to the new element reporting due to manpower and timing.
- Haunch details are being revised to be “straight up” on future projects.
- All new concrete bridge decks that cross over Tier 1 and Tier 2 roads shall use prestressed partial-depth or full-depth concrete deck panels between girders, unless approved otherwise by the Bridge Design Chief. The deck exterior overhangs and deck block-outs at end spans can be cast-in-place concrete. The “Contractor option for cast-in-place concrete” item shall not be used on these bridges. The contract plans shall show prestressed partial-depth or full-depth concrete deck panels with the corresponding item. See Bridge Design Memorandum for further information.
- Bridge mounted sign structures need a specific inventory number just like regular sign structures.
- Shallow girders that are supporting large signs can cause issues and will need greater level of analysis going forward, particularly with skewed bridges that may require long sign supports to connect to the girders.

NHDOT Bridge Design Manual Status

- Final efforts are being completed on Chapter 7. In particular bearings, rehabilitation, and preservation sections. Comments will be requested soon.

NHDOT Information for Consultants

- **Bridge Barrier/Railing – MASH Compliant**
- As of 12/31/2019 FHWA will require MASH tested barriers on all NHS roadways.
- NHDOT does not currently have a MASH compliant Bridge Rail.
- NCHRP 20-07 performed a study to compare existing DOT bridge rails to the MASH criteria. Railings were analyzed for stability, strength, and geometry. NHDOT steel 4-bar bridge railing on a sidewalk was analyzed and found acceptable for stability, marginal for geometrics, and not satisfactory for strength. Maine and Mass steel bridge railing was analyzed but also did not meet all the categories. The final report can be found at:
[http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP20-07\(395\)_FR.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP20-07(395)_FR.pdf)

- NHDOT is investigating a pooled fund study with Maine and Vermont similar to the NETC to get at least one railing approved.
- There are temporary concrete bridge barriers that are MASH tested and can be placed with 12 inches of deck behind the barrier.
- More details will be provided in Chapter 7 of the bridge manual.
- **Bridge Proximity to Airports – Permitting**
- Bridges within 5 miles of airports require coordinating through NH Aeronautics so that FAA is aware of the project and the proper permits are obtained in advance. Examples are limitations on the height of cranes in the work zone.
- **Limited Reuse Soils (LRS) Under Bridge**
- A policy was issued January 26, 2017 describing the definitions, limits, and management of LRS in projects.
- Coordinate with project managers if the item needs to be quantified and the means of quantifying it.

Review of survey response on potential technical and business-related topics

- The survey results are attached to these minutes and the committee had almost 100% response.
- The technical topics were discussed and the general concept was to focus on the top 5 issues and attempt to address one at each meeting.
- The top 2 topics were corrosion resistant reinforcing and accelerated bridge construction.
- Discussion of corrosion resistant reinforcing included stainless steel, epoxy coated, black bars, FRP, and general interface with membrane water proofing systems, low permeability concrete, and many other topics.
- Accelerated bridge construction was chosen as the first topic to focus on and NHDOT was interested in lessons learned from other projects in surrounding states. Vermont has completed many projects in the past few years, as has Massachusetts and Maine.
- Adam Stockin will act as a liaison to share information from Vermont
- Steve Hodgdon will act as a liaison for Maine
- John Watters will act as a liaison for Massachusetts
- Bob Landry will work with HDR contacts to set up an ABC forum to be held at Hazen Drive in the downstairs conference room. One particular topic of interest is UHPC (ultra high performance concrete)
- Tom Kendrick will send out an email with data that is intended to be collected before the next meeting in March. Possible topics are:
 - Details – particularly substructure
 - Lessons Learned
 - Performance of components

- Specification relationships and tolerances
- Material curing requirements – VTrans may have a good product to investigate
- The Bureau of Highway Design has been partnering with ACEC-NH on a consultant selection process and the draft flow chart is attached to these minutes.

Bridge Bureau workload and anticipated consultant support needs

- The bridge program is anticipated to be very busy in the next few years and Bob Landry is working on a list of project needs.
- NHDOT has metrics on consultant vs in-house advertisements and project completions since they need to report to the legislature. When the metrics are available they will be shared.
- A Bureau goal is to have 90% of projects on the shelf 14 months ahead of the advertisement date.
- Based on past years funding and other state forfeiture funding coming into NH, it is anticipated that the current on-shelf project list will be expended by 2019.

Potential NHDOT and Consultant bridge training opportunities

- The Department is still looking to get Part 2 of the Skewed/Curved Bridge course. Part 1 had been done earlier this year.
- Bridge inspection element level training may take place in January as coordinated through Nick Goulas.
- Bob Landry may initiate a consultant training course to manage the public process. This training may be a ½ day course.

Next Meeting - Friday March 9, 2018

Attachments:

- Agenda – December 1, 2017
- Survey Results (1 page)
- FHWA Memorandum (Jan-7-2016) related to MASH Requirements (2 pages)
- Consultant Selection Flowchart – Rev. 8/25/2017 (1 page)
- Consultant Selection Manual TOC – Rev. 11/30/2017 (2 pages)

I have attempted to summarize discussions held during this meeting as accurately as possible. If there are any items discussed herein that are misrepresented in any way, please contact me by December 22nd. In the absence of any corrections or clarifications, it will be understood that these minutes accurately summarize the discussions at the meeting.

Respectfully Submitted,
John Watters

Location:
NHDOT- Large Highway Design Conference Room

Time:
10:00 AM to 11:30 AM

Purpose of Meeting:
Fourth Quarter Meeting 2017

Invitees:

- | | |
|---|--|
| <input type="checkbox"/> Bob Landry, NHDOT | <input type="checkbox"/> Tom Kendrick, MJ (Co-Chair) |
| <input type="checkbox"/> Angela Hubbard, NHDOT (Co-Chair) | <input type="checkbox"/> Bob Durfee, D&K |
| <input type="checkbox"/> Joe Adams, NHDOT | <input type="checkbox"/> Steve Hodgdon, HTA |
| <input type="checkbox"/> John Poisson, NHDOT | <input type="checkbox"/> John Watters, GPI |
| <input type="checkbox"/> David Scott, NHDOT | <input type="checkbox"/> Adam Stockin, WSP/PB (Note Taker) |
| <input type="checkbox"/> Tony Weatherbee, NHDOT | <input type="checkbox"/> Tom Levins, GM2 |

AGENDA ITEMS:

1. Introductory remarks
2. Department staff changes (promotions, new-hires, retirements, etc.)
3. Summary of In-House Design Section staff meetings
4. NHDOT Bridge Design Manual update
5. NHDOT Information for Consultants
 - Bridge Barrier/Railing – MASH Compliant
 - Bridge Proximity to Airports – Permitting
 - Limited Reuse Soils (LRS) Under Bridges
6. Review of survey responses on potential technical and business-related topics
7. Bridge Bureau workload and anticipated consultant support needs
8. Potential NHDOT and Consultant bridge training opportunities
9. Subcommittee membership rotation

Tom Kendrick, Bob Durfee, Bob Landry, Angela Hubbard	Sept. 2017 to Sept. 2019
Steve Hodgdon, John Watters, Joe Adams, John Poisson	Sept. 2017 to Sept. 2020
Adam Stockin, Tom Levins, David Scott, Tony Weatherbee	Sept. 2017 to Sept. 2021

10. Next Meeting is Scheduled for Friday March 9th

Potential Technical Topics	Score
Corrosion resistant reinforcement (regional trends, costs, and preferences)	10.8
Accelerated Bridge Construction (preferences and trends)	10.6
Bridge preservation practices (materials, methods, lessons learned)	10.3
100-year service life for bridges	8.4
Ultra High Performance Concrete (UHPC)	8.0
Reuse of existing substructure elements	7.9
Use of FRP composites in bridge construction	7.8
Bridge Information Modeling (Brim) (software, plan development, data sharing)	7.8
Bridge constructability reviews (at what milestones, by whom?)	7.6
Bridge hydraulic analyses (1D, 2D, 3D)	7.4
Bridge asset management	6.9
Standardization of Expansion Joint Details	6.2
Cost estimating (construction and life cycle)	5.8
Cathodic protection systems	5.1
Additional Write-In Topics	Responses
Finite Element Software & Analyses	2
Bridge Railing	1
Low Permeability Concrete for Decks	1
Simplified/Accelerated Project Development Methods	1
GRS-IBS: Results in Practice	1
Inspection Reports	1
Performace of Waterproofing Membranes	1
Crash Tested Railing Evaluations	1

Potential Business Topics	Score
Contract approval process in NH (duration, staff time commitments)	6.1
Online Shared Review for Plan Submittals	5.9
Bridge geotechnical recommendations (process and schedule)	5.7
Statewide contracts versus stand-alone solicitations (trends, preferences)	5.3
Use/Development of Design Schedule Templates	5.0
Consultant invoicing (issues, quality, trends)	3.8
Consultant access to contract documents (bid portal or other)	3.3
Consultant access to construction closeout summary and grading documents	3.0
Additional Write-In Topics	Responses
Electronic Review of Submittals	1
Project Scoping Issues - is the current process good or bad	1
Paper and electronic copies of calculations	1



Memorandum

Subject: **INFORMATION:** AASHTO/FHWA
Joint Implementation Agreement for
Manual for Assessing Safety Hardware
(MASH)

Date: JAN - 7 2016

From: *Thomas D. Everett*
Thomas Everett
Director, Office of Program
Administration

In Reply Refer To:
HSST

Michael S. Griffith *Michael S. Griffith*
Director, Office of Safety Technologies

To: Division Administrators
Directors of Field Services
Federal Lands Highway Division Directors

Purpose

The purpose of this memorandum is to share information regarding the American Association of State Highway and Transportation Officials (AASHTO)/FHWA Joint Implementation Agreement for the AASHTO Manual for Assessing Safety Hardware (MASH). Recently, the agreement was successfully balloted by AASHTO's Standing Committee on Highways and approved by FHWA.

Information

On November 12th, 2015, FHWA issued a memorandum (http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/policy_memo/memo111215/) indicating that all modifications to NCHRP 350-tested devices will require testing under MASH in order to receive a Federal-aid eligibility letter from FHWA. In addition, a Federal Register Notice (<https://www.federalregister.gov/articles/2015/11/13/2015-28753/manual-for-assessing-safety-hardware-mash-transition>) was also issued regarding this action. This action provided a significant step forward to the implementation of MASH.

Through the AASHTO/FHWA partnership, the agreement was executed to define actions needed for full implementation of MASH over the course of several years. Per the agreement, the implementation of the forthcoming edition (anticipated Spring 2016) of the AASHTO Manual for Assessing Safety Hardware (MASH) will be as follows:

- The AASHTO Technical Committee on Roadside Safety will continue to be responsible for developing and maintaining the evaluation criteria as adopted by

AASHTO. FHWA will continue its role in issuing letters of eligibility of roadside safety hardware for federal-aid reimbursement.

- Agencies are urged to establish a process to replace existing highway safety hardware that has not been successfully tested to NCHRP Report 350 or later criteria.
- Agencies are encouraged to upgrade existing highway safety hardware to comply with the 2016 edition of MASH either when it becomes damaged beyond repair, or when an individual agency's policies require an upgrade to the safety hardware.
- For contracts on the National Highway System with a letting date after the dates below, only safety hardware evaluated using the 2016 edition of MASH criteria will be allowed for new permanent installations and full replacements:
 - December 31, 2017: w-beam barriers and cast-in-place concrete barriers
 - June 30, 2018: w-beam terminals
 - December 31, 2018: cable barriers, cable barrier terminals, and crash cushions
 - December 31, 2019: bridge rails, transitions, all other longitudinal barriers (including portable barriers installed permanently), all other terminals, sign supports, and all other breakaway hardware
- Temporary work zone devices, including portable barriers, manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of MASH. Such devices manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.
- Regarding the federal-aid eligibility of highway safety hardware, after December 31, 2016:
 - FHWA will no longer issue eligibility letters for highway safety hardware that has not been successfully crash tested to the 2016 edition of MASH.
 - Modifications of eligible highway safety hardware must utilize criteria in the 2016 edition of MASH for re-evaluation and/or retesting.
 - Non-significant modifications of eligible hardware that have a positive or inconsequential effect on safety performance may continue to be evaluated using finite element analysis.

Division Offices should discuss the MASH implementation agreement with state transportation agency partners and monitor the actions taken and progress towards the dates established in the agreement.

If you have any questions or comments, please contact Brian Fouch in the Office of Safety at (202) 366-0744.

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Consultant Selection Manual

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Appendix M – Construction Change Order Flowchart

Appendix N – Statewide Task Order Approval Process

4.0 Retaining Contract Record

4.1a Appendix - 2 CFR 200.333

4.1b Appendix - RSA 228.43

4.1c Appendix - RSA 5.38

5.0 Pertinent State and Federal Laws

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Qualifications Based Selection Process

