



ACEC-NH/NHDOT Highway Design Sub-Committee



NHDOT
7 Hazen Drive Concord NH
August 13, 2019
Room 112/113 8:00 am – 9:30 am

Meeting Minutes

Attendees:

Jim Marshall, NHDOT (Chair)
Ron Grandmaison, NHDOT
Tobey Reynolds, NHDOT
Leah Savage, NHDOT
Corey Spetelunas, NHDOT

Brian Colburn, MJ (Vice Chair)
Linda Greer, Fuss & O'Neill (scribe)
Ben Martin, VHB
Jen Mercer, GM2
Travis Wolfel, Kleinfelder

These meeting minutes are from the August 13, 2019 ACEC-NH/NHDOT Highway Design Sub-Committee Meeting. This is the first meeting revealing the results of the survey.

1. Introductory Remarks

Linda volunteered to be the scribe for the meeting.

2. Review and approve minutes – for June 11, 2019 meeting

The meeting minutes from the June 11, 2019 meeting were formally accepted as final and will be posted online. No meeting was held in July.

3. Review Survey Monkey results

The committee was informed that there were 63 responses to the survey. Of those, 25 were from the NHDOT and the other 38 were from the ACEC consultant community. The survey did the ranking of task items. The results are as follows:

1. Development of updated design tasks and submission checklists
2. Standardization of reports, including samples (i.e., engineers report, traffic analysis, estimates, etc.)
3. Develop design criteria standards (design speed, design vehicle, etc.)
4. Development of guidelines and process for electronic deliverables and submission review
5. Provide updated specifications and details in a timely manner in a central location for easy access.
6. Development of standards for 3D model deliverables
7. Guidance on department supported stormwater treatment options
8. Development of a project communication protocol (as a template that is customizable)

9. Development (by NHDOT) of barrier/guardrail design requirements
10. Implementation of new and innovative technology and methods in project development.

The responses were from a good mix of experience levels, but just over half have 20+ years. Also, good comments were received from a lot of firms.

4. Reviewed the ranking results.

One of the comments submitted, *“When does the front office need to be involved? Seems like it is happening much too often, slowing the process down. It also is not included at all in the scopes and fees that we develop and when it is necessary to involve the front office it takes a lot of time to develop the materials needed.”* was discussed and many agreed that the Front Office requirements have increased. Jim mentioned that this is because of the need for more documentation and sign-offs and that more and more DOT's are moving in this direction. In the past, the PM's have made all of the decisions, and have sign-offs were just needed prior to moving the project forward. With the need for more Front Office meetings, maybe the project Scope and Fee needs to include these types of meetings? It takes a lot of work to pull together presentation material.

Comment #51 is as follows: *“NHDOT already has many of these items completed or are in the works (electronic deliverables, guidelines, standardization of reports (see the HDM), guardrail/barrier design). Many of these items are items that we take care of without the Consultant (specification). Perhaps some of the issues here are more of a communication issue. I tried to order the topics above, but with points identified here, it is difficult to do.”* This is true, some have been started.

The common theme in the comments is that an updated Highway Design Manual is the highest priority. Currently, NHDOT is working on Chapter 8 and 9 for approval by FHWA. Chapter 9 might already be approved and will be posted as soon as it is. The updated chapter posting notifications will be done through the Consultant Notification email list. There was some discussion of whether or not there should be a split for Contract notifications and Design notifications, but the outcome was to have all notifications be sent to everyone on the list.

Some folks noted that recent notifications went out for the bridge manual and RFQ for Webster Bridge, one on August 6th and one on August 9th; however, some folks did not receive both notifications. Jim mentioned that solicitation notifications will most likely be on Fridays, about twice a month.

The Guardrail CRT detail has been updated. The update was a minor change and was a conversion to US survey feet which caused several scaled details to result in incorrect dimensions; however, the date was not updated to reflect that an update had taken place. It was noted that consultants typically check for update changes by looking at the date, and if the date does not reflect a change then the detail would not be replaced from a prior submission. NHDOT recognizes that if any type of change is made to a detail, then the date should change.

It was discussed that the first task in the priority ranking list, “Development of updated design tasks and submission checklists”, will be a big undertaking and most of that will fall on the Department's shoulders,

so we'll need to look at ways that the consultants can help. It was noted that the submission list will be somewhat easier for Final Design items than for Preliminary because the Preliminary checklists with NEPA items and a range of alternatives, makes things a little less structured. Also, lately with some projects, it is requested that the Slope and Drain level be progressed post-Hearing, so there is some bleeding of traditional Final Design items into Part A which is typically just preliminary design. This might be refined when Chapter 2 is updated.

Jim pulled up the Preliminary Checklist from the NHDOT's internal server, which has a date of 2007. Some people had seen this Checklist before while others had not. It was reiterated that revisions to the Final Design checklists will be an easier lift; however, there are still things missing such as ITS and the Wetland Plans requirements have changed due to new rules. *[Subsequent to the meeting, Tobey emailed everyone an invite to the Bluebeam session which contained the 2007 checklists for review and comment.]*

5. How do we proceed?

The update of the submission checklists were assigned to Maggie, Tobey, and Leah since their work group uses them the most. They will then distribute to the committee for comments. The original intent was for the Submission and Plan checklists to be placed in Volume 2 like the Typical and Standard Layouts, but they could alternatively be included as an appendix to Chapter 2 – Project Development.

It was discussed that Highway Design Manual updates require FHWA approval, and it is possible that the checklist would not require approval thus speeding the update process. FHWA needs to review NHDOT's standards per the Stewardship & Oversight Agreement, but not the DOT's process, which is why the checklists could go out under Chapter 2. Jim would like the checklists to go out as soon as possible as an appendix to Chapter 2, so he will check with Peter Stamnas.

If FHWA approval of the Manual is not required, then Chapter 8 can be posted. Chapter 8 is currently being used internally.

Brian noted that the Checklist updates should be similar to the CADD Manual in that the contract/scope is per the version that was in effect when the contract was signed.

For Special Details and Standards review, there is a NHDOT HD club that meets quarterly. NHDOT has the updated Typical and Standards to use internally, but can be provided to consultants to meet project's needs.

So far the entire work load is on NHDOT Committee Members. How can the Consultant Committee Members help?

- 1) Share internal DOT files with the group for review.
- 2) Discuss/review how construction estimates are being done as they are seeing huge increases in the costs when the bids come in.
 - a. In-house estimates are being developed differently.
 - b. Wendy Johnson is Chair of the NHDOT Estimating Task Force, so Jim will look into having her present their work to this Committee for review/comment.

- c. Develop a standard checklist of what items to estimate at each project stage.
- 3) There is a Bluebeam Club, working on how to use Bluebeam to improve deliverables and developing the standards tools like clouds, colors, etc. The Bluebeam Club reports to Tobey, so he will share information to this group. The Club has not met yet, but will before our next meeting.

The second task in the priority ranking list, “Standardization of Reports”, was discussed. Once the checklists are complete, the necessary reports would be identified, so there is no need taking the effort to develop a list of reports at this time.

The third task in the priority ranking list is “Develop Design Criteria Standards”. This is a tough one since the standards are in flux, especially in regards to guardrail and design speed. The use of posted speed, posted speed plus 5 mph, or plus 10 mph for design speed is used inconsistently. Guidance is being worked on but it could be that it is determined on a project-by-project basis. MaineDOT has their Highway Design Requirements Form (HDR), which can be found at this link <https://www.maine.gov/mdot/engineering/highway/> under the pull down “General/Forms”. The MaineDOT checklists are found under the pull down “General/Project Development Process”. It was discussed that completion of a Design Criteria Form be part of the checklist, and approval required before moving forward with the design elements. Some consultants mentioned having their own format for Design Criteria that is submitted and approved before moving forward. This information then goes into the Engineering Report.

6. Next Steps

- a. Tobey, Maggie, and Leah work on submission list *[Subsequent to the meeting, Tobey provided the 2007 lists to the group.]*
- b. Bluebeam Club meeting will take place so information can be provided at next meeting.
- c. Jim will look into consultant notification email issue (Bridge Design Manual & Webster Bridge solicitation).
- d. Everyone will look at MaineDOT Design Requirements that Linda is providing for task #3.
- e. Jim will find out about need for FHWA approval on Highway Design Manual.
- f. Jim will check with Wendy about presenting update on Estimating to this group.

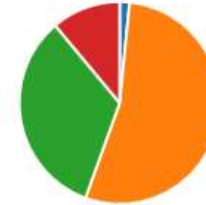
Next Meeting – September 10, 2019

Rank	Item
1	Development of updated design tasks and submission checklists
2	Standardization of reports, including samples (i.e. engineers report, traffic analysis, estimates etc.)
3	Develop design criteria standards (design speed, design vehicle, etc.)
4	Development of guidelines and process for electronic deliverables and submission review
5	Provide updated specifications and details in a timely manner in a central location for easy access.
6	Development of standards for 3D model deliverables
7	Guidance on department supported stormwater treatment options
8	Development of a project communication protocol (as a template that is customizable)
9	Development (by NHDOT) of barrier/guardrail design requirements
10	Implementation of new and innovative technology and methods in project development.

3. What is your current role?

[More Details](#)

CADD Technician / Drafter	1
Engineer	34
Project Manager	21
Other	7



4. Level of experience in the industry.

[More Details](#)

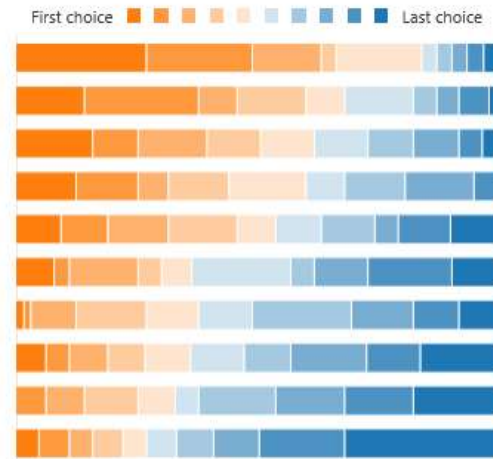
0-5 years	9
5-10 years	7
10-20 years	14
20+ years	33



5. Using drag and drop, or the up/down arrows, please rank the following items in order of importance, with 1st being the highest priority and 10th the lowest:

[More Details](#)

Rank	Options
1	Development of updated desi...
2	Standardization of reports, inc...
3	Develop design criteria standa...
4	Development of guidelines an...
5	Provide updated specification...
6	Development of standards for...
7	Guidance on department sup...
8	Development of a project com...
9	Development (by NHDOT) of...
10	Implementation of new and in...



ID	What is your current role?	Level of experience in the industry.	Please provide any additional comments (optional).
1	Project Manager	10-20 years	
2	Project Manager	10-20 years	
3	Project Manager	20+ years	Well done...drove pretty well I must say
4	Project Manager	20+ years	
5	Engineer	0-5 years	
6	Project Manager	20+ years	
7	Engineer	10-20 years	
8	Transportation Division Manager	20+ years	
9	Project Manager	20+ years	
10	Engineer	5-10 years	Would be interested in gaining further information on NHDOT Limited Reuse Soils (LRS) and the implications they pose for consultants working on NHDOT bridge/highway projects.
11	Project Manager	20+ years	
12	Engineer	10-20 years	
13	Project Manager	20+ years	Can standards not fully approved but used internally at NHDOT be shared externally as drafts or guidelines pending?
14	Principal / EVP	20+ years	Thanks for preparing this survey and soliciting our input.
15	Group Manager	20+ years	
16	PIC	20+ years	
17	Engineer	5-10 years	
18	CADD Technician / Drafter	20+ years	
19	Engineer	20+ years	
20	Engineer	5-10 years	
21	Engineer	10-20 years	
22	Engineer	10-20 years	
23	Engineer	0-5 years	
24	Engineer	5-10 years	
25	Project Manager	20+ years	
26	Project Manager	20+ years	
27	Engineer	0-5 years	
28	Project Manager	20+ years	When does the front office need to be involved? Seems like it is happening much too often, slowing the process down. It also is not included at all in the scopes and fees that we develop and when it is necessary to involve the front office it takes a lot of time to develop the materials needed.
29	Engineer	20+ years	
30	Engineer	20+ years	
31	Consultant Contract SME	20+ years	
32	Engineer	0-5 years	
33	Project Manager	10-20 years	
34	Engineer	0-5 years	
35	Engineer	5-10 years	Consistency between reviewers(NHDOT) needs to improve
36	Engineer	20+ years	
37	Engineer	0-5 years	I have little to no experience working with consultants.
38	Engineer	0-5 years	
39	Engineer	10-20 years	
40	Engineer	10-20 years	<p>Was difficult ranking the above, all are worthy causes, I could easily rank 4 or 5 of them as #2. The #1 priority though should be finalizing the update to the Highway Design Manual including volume 2. MaineDOT recently updated their manual to be all electronic, consultants now have the same information as their in-house staff.</p> <p>Numerous other DOTs have Engineering Directives or Instructions that are posted on their websites, having these in one location is very helpful.</p> <p>Adding additional details to the standard plans would also be welcomed. Including the same detail in project after project isn't the best use of everyone's time and money.</p> <p>This is a little specific, but adding items for precast headwalls for pipes would be welcomed. Instead of quantifying and tracking 2 items (concrete & roadway steel) for headwalls. Which are typically precast and constructed or installed as a single unit.</p> <p>I know there are always more things to tackle then time in the day, so add my name for any potential volunteer, committee, or feedback opportunities.</p>
41	Project Manager	20+ years	
42	Engineer	10-20 years	
43	Engineer	20+ years	
44	Engineer	10-20 years	
45	Engineer	5-10 years	
46	Project Manager	20+ years	
47	Engineer	10-20 years	
48	Engineer	5-10 years	

49	Engineer	0-5 years	
50	Engineer	0-5 years	
51	Project Manager	20+ years	NHDOT already has many of these items completed or are in the works (electronic deliverables guidelines, standardization of reports (see the HDM), guardrail/barrier design). Many of these items are items that we take care of without the Consultant (specifications). Many of these are project specific (design criteria, storm water treatment options). Perhaps some of the issues here are more of a communication issue. I tried to order the topics above, but with pointed identified here, it is difficult to do.
52	Engineer	20+ years	
53	Engineer	20+ years	
54	Engineer	10-20 years	I would think that an updated Highway Design Manual would be most helpful.
55	Regional Manager	20+ years	Very hard to pick from all these great topics! Thank you for sending out the survey.
56	Project Manager	20+ years	Publication of updated typical sections that are more legible and in English units would be the most critical need I see, along with an overall update of the Highway Design Manual that incorporates more of NHDOT's design practices and preferences, even if they aren't strict requirements.
57	Project Manager	20+ years	
58	Project Manager	20+ years	
59	Sr. Project Manager	20+ years	
60	Project Manager	20+ years	
61	Project Manager	20+ years	
62	Project Manager	20+ years	
63	Engineer	10-20 years	Provide updated typical sections in English units as they are currently in metric still. Also, an updated Highway Design Manual containing NHDOT's design preferences.