

**ATTACHMENT 43 – EMAIL TO THE NATIONAL TRANSPORTATION SAFETY
BOARD FROM THE FEDERAL HIGHWAY ADMINISTRATION – MINNESOTA
DIVISION OFFICE DATED MARCH 7, 2008**

(3 pages)

FHWA DIVISION OFFICE RESPONSE TO NTSB FOLLOW-UP QUESTIONS
MARCH 7, 2008

- 1) Copy of entire FHWA Bridge Program Manual.

Will be mailed.

- 2) Follow-up with FHWA Headquarters Office in Washington, D.C. to track down (in records division or other applicable division) any comments that were made as part of the review of the IH-35W bridge plans in the early 1960's,

We have been in contact with both the Resource Center and the Washington Office concerning any records that may be available from the 1960's with any comments that may have been made about the design of this bridge and found that no such comments or documents exist at this point in time.

- 3) A couple of paragraphs that describe the differences between today and the early 1960's preliminary plan review process. Indicate the work force has changed and a general description of items that may have been looked at in greater detail. Include a small discussion that complex bridges (non-redundant, major, or unusual bridges) are generally reviewed by the Headquarters Office. Please include a list of items that are generally covered when reviewing complex bridges (i.e. connection details that are prone to fatigue)

In general, the administration of the Federal-aid program is less hands-on today than it was in the 1960's. In the 1960's FHWA engineers were more likely to be involved with the detailed engineering of projects during design and be active participants during construction. In addition, the workforce of the 1960's and 1970's included many engineers who grew up in the organization during the Interstate era when many State DOT's lacked technical expertise and were just starting to evolve. Thus, many of those employees would assume a professional responsibility in filling technical gaps in knowledge and experience and be more involved in project level activities. Today, our workforce is much different and we have a lesser number of employees who grew up in the organization having "touched" actual projects in detail. In addition, State DOT's are very mature. Thus, current employees focus on broader program delivery activities in carrying out their day-to-day responsibilities. This approach is consistent with current agency direction that has been shaped through the years by various transportation bills.

Having said the above, it appears that the FHWA review practices related to bridge plan review have really not changed much over the years. This is based on our inherent knowledge of such practices and discussions with retired FHWA bridge engineers who worked in the 1960's. We spoke with two individuals who were able to shed some light on this discussion: Jim McCutcheon, retired Minnesota Division Bridge Engineer, and Dave Briggs, retired Region One Bridge Engineer.

According to Mr. McCutcheon, the practice of today is the same as the practice from the 1960's. The practice being that all reviews do not generally get into any great detail unless some design feature appears to be out of place (under-signed or over-designed). Mr. Briggs provided similar feedback.

The following additional thoughts concerning the level of bridge plan review at the Division Office level are provided:

a. Review effort is dictated by the level of interest of the particular Engineer performing the review. Additionally, the review effort varies from bridge to bridge.

b. Compared to the 1960's there are little or no non-redundant structures being designed these days. Most structures designed these days are very redundant structures.

c. The review effort at both the Regional and Washington Office is probably not much different compared to the reviews that are performed by the Division Office, both now and historically. Major and unusual structures receive reviews by more than one Engineer (Regional and Washington Office) whereas other structures receive reviews by only one Engineer (the Division Bridge Engineer). Again the review effort is dictated by the level of interest of the particular Engineer performing the review. Additionally, there is no requirement for the Washington Office to be involved in the review of major and unusual structures beyond the preliminary plan stage. Note: Regional Offices no longer exist, so any supplementary reviews are being performed by the Washington Office.

1) The risk assessment list developed by the Division Office prior to the IH-35W bridge collapse and a revised risk assessment list developed after the IH-35W bridge collapse.

This information will be provided in separate email messages. The files are large.