

NCHRP 350 A STATE'S PERSPECTIVE ON DEVELOPING GUIDELINES

Don Jay Gripne

Washington State Department of Transportation

With the introduction of NCHRP 350, the states will be faced with questions that they did not face with NCHRP 230. NCHRP 230 had only one set of test criteria for each system. It had a specific set of vehicles and angles, but only one speed. NCHRP 350 changed this. It introduced six test levels. The first three are pretty straightforward. The last three will cause problems regarding when to use them. NCHRP 350 doesn't provide these criteria.

Who should take the lead in developing the guidelines for the use of each level? NCHRP 350 states,

It is the responsibility of the user agency(s) to determine which of the test levels is most appropriate for a feature's intended application. This will require over 50 user agencies to reinvent the wheel, and there will be many different versions. Consistency of application will be needed. A solution might be to have the committee that prepared NCHRP 350 develop the guidelines, then have the states review them for applicability.

The FHWA must be involved because they will provide the interpretation of the guidelines, and we will need to know what that interpretation will be.

NCHRP 350 opens the door to developing systems that more accurately reflect what is happening in the real

world. There could be the opportunity to develop criteria for bridge rails other than for Test Levels 4, 5, and 6. Why not have a test level for bridge rails using lower speeds or lighter vehicles or both?

Another question is, do we develop the warrants based on benefit costs? We have done this on embankment curves for the placement of guardrail. Is it practical to do this for all levels, or just for the top three? Doing it for all levels will increase the amount of engineering work, whereas the top three would be used only for unique situations.

When warrants are developed, what factors should go into them? Several factors are speed limit, operating speed, truck percentage, and volume (ADT). Another thing that comes to mind is a warrant for high speed and low volumes. Do we need warrants for urban areas? I believe we do.

What can these warrants do for the states? First, they will provide for consistency in design work, just as the AASHTO Green Book on Geometric Design has. Second, the warrants will reduce the states' tort liability.

NCHRP 350 offers the opportunity to refine the way we provide new systems. Somebody needs to take the lead to make this happen.