Comments on the Draft Vision and Strategic Plan for the MUTCD (JA comments are in blue)

Chapter 2

Items 1 a. and b.

"a. Infrastructure elements that restrict the road user's travel paths or vehicle speeds, such as curbs, speed humps, chicanes, channelization, and other raised roadway surfaces, are not traffic control devices.

b. Operational devices associated with the application of traffic control strategies and traffic control devices, such as in-vehicle electronics, fencing, roadway lighting, barriers, and attenuation devices are not traffic control devices."

Some of these are used extensively in work zones and are then considered traffic control devices (in our minds). Work zone TCDs are not mentioned in this document.

Items 32 a. (ii), 45. "The Uniform Vehicle Code (UVC) is no longer maintained as a national recommendation for traffic laws."

But the UVC is referenced in the MUTCD in several places: 1A.02, 07, 13, 2B.04, 3B.01, 02, 4D.04, 12, 27, 8A.03, 8C.01, 9A.05, 9B.06.

Item 33 – **strongly agree**:

"It is not feasible to expect a traffic control device document to provide detailed principles that will address all aspects of traffic control devices in all applications that can occur in practice. The range of differences between states and local jurisdictions, rural and urban areas, high and low speed roads, and the unique characteristics of a given site make it difficult, if not impossible, to provide inviolable standards that are applicable in all circumstances."

Item 43 – **also agree**:

"There is a need to provide sufficient flexibility in the national MUTCD to accommodate differences in traffic laws, engineering practice laws, and tort liability laws. This flexibility should also be provided and allowed so that engineers can consider local needs in a manner consistent with the concept of CSS."

Item 70 –

"The desire to avoid tort liability risks generates a demand for more specific MUTCD language/content, which can result in reduced flexibility to make engineering decisions."

disagree – making the MUTCD more specific would result in greater exposure to liability (in our experience). Our case studies show that if we exercise our engineering judgment, the courts are more likely to rule in our favor due to the immunities afforded us in our Tort Statutes.

Item 79 – **Agree**

"The MUTCD cannot be a simple and streamlined document and also be all things to all people. One of the key rules of effective written communication is to prepare the content for the targeted audience."

Chapter 3 – Recommended Vision:

Throughout this chapter, beginning with item 506, the author refers to Ministerial and Discretionary acts. In MN, these are considered legal terms and are interpreted by the courts. I am uncomfortable with using these terms when developing a vision and strategic plan for the MUTCD. 513, 514, 515, 518, 529, 531, 536, 542, 543.

Items 514 and 515:

514 "Traffic control device discretionary acts should be performed by professional engineers with appropriate traffic engineering expertise.

a. In states and other agencies/organizations (such as the federal government) that do not require a license or registration to practice engineering, an individual performing discretionary traffic control device acts shall have a level of traffic engineering expertise equivalent to that of a professional engineer.

- Basis for recommendation: Some MUTCD content is written to provide guidance in making decisions related to certain traffic control device activities. These decisions are engineering decisions that should be made by a professional engineer with the appropriate training, experience, and expertise."

515. "Traffic control device ministerial acts should be performed by individuals with proper authority and appropriate training, experience, and expertise.

- Basis for recommendation: Some MUTCD content is written as instructions that do not require an engineering decision. These instructions can be followed by individuals that have the appropriate training, experience, and expertise to follow the instructions."

In MN there are many instances, every day, where non-engineers have to use discretion in their day to day work that involves the MN MUTCD. For instance, field personnel installing signs and Maintenance workers setting up temporary traffic control need to use discretion if it is unreasonable (due to topography or other factors) to install TCDs at the required distances or lateral offsets. We do not have enough engineers to go to every field location to make these discretionary decisions. We provide training and they use their experience and judgment to make the appropriate decision. (see Item 518ii).

Item 518:

518. "MUTCD content should be prepared so that it is useable by the intended MUTCD user and the level of mandate for the content.

a. The user groups that represent practitioners responsible for conducting traffic control device activities are:

i. Engineering: Professional engineers with the appropriate training, experience, and expertise. Professional engineers can be involved in all traffic control device activities and can make discretionary decisions as well as perform ministerial acts.

 Some states and other organizations (such as the federal government) allow an individual to use the term "engineer" without being licensed. Within the context of this VSP, the term engineer is intended to mean an individual who is licensed as a professional engineer or has equivalent qualifications and that has the level of expertise appropriate to make traffic control device decisions.

ii. Technical: Professional staff with the appropriate training, experience, and expertise. Technical staff may make discretionary decisions if working under the supervision of a professional engineer or complying with recommended practices and may perform ministerial acts as well.

iii. Field: Individuals responsible for conducting the physical acts of placing, operating, maintaining, and/or removing traffic control devices. Field personnel perform ministerial acts and do not make discretionary decisions."

Item 518 ii may conflict with Item 514, but I agree with 518ii.

Item 522

522. The MUTCD should not serve as an educational document.

- Basis for recommendation: The purpose of the MUTCD is to establish principles, but it does not need to explain the reason for those principles.

We have had many discussions on what supporting information to include in the MUTCD. Should Standards and Guidance have references that give background to the reasons? Where do the principles come from? What is the relevant research? I believe there needs to be links to references for Standards and Guidance so there can be a basic understanding of the driving forces for any particular traffic control device.

Item 523

523. While tort liability is often a traffic control device concern, it should not be a motivating factor in making decisions related to any traffic control device activity.

- Basis for recommendation: Traffic control device decisions should be based on sound engineering principles and demonstrated effectiveness of the device.

Agree. MN has good statutory and case law that affords us immunities when making engineering decisions.

Item 525

525 MUTCD content should recognize that alternative traffic control device treatments or combinations of treatments may be as or more effective than the treatment specified in the MUTCD. MUTCD content should allow alternative treatments if there is adequate justification or evidence of equal or better performance as long as the alternative treatments do not compromise the uniform standards in the MUTCD.

- Basis for recommendation: Innovative uses of traffic control devices are appropriate as long as they are consistent with the guiding rules in the MUTCD.

Agree. MN has several signs and some signing and pavement marking practices that are in conflict with the 2009 MUTCD (Merge signs, signing freeway loops w/o chevrons, skip stripe intervals, TTC advance warning spacing). These practices have been around for decades and we have not had any problems with them.

Item 529

529. **Section 1A.XX Traffic Control Device Acts – Ministerial and Discretionary:** There are two types of actions associated with traffic control device activities: ministerial and discretionary.
a. Ministerial acts are those acts involving obedience to clearly defined orders to the extent that the individual is left no choice of his/her own. Within the content of the MUTCD, ministerial acts are those that are associated with conducting an activity specified by a shall, must, or should statement and which comply with any mandate associated with the shall, must, or should statement without deviation.

b. Discretionary acts are those involving the power to make choices among valid alternatives and to exercise independent judgment in choosing a course of action. Within the content of the MUTCD, discretionary acts are those that are associated with a decision to deviate from a must or should statement and with decisions associated with ought or may statements.
c. See item 533 for definitions associated with the levels of mandate.

- Basis for recommendation: Distinctions between the types of acts will provide the ability to establish the qualifications needed to perform selected traffic control device principles.

Same comments as beginning of Chapter 3: (Throughout this chapter, beginning with item 506, the author refers to Ministerial and Discretionary acts. In MN, these are considered legal terms and are interpreted by the courts. I am uncomfortable with using these terms when developing a vision and strategic plan for the MUTCD.)
and Items 514-515: [In MN there are many instances, every day, where non-engineers have to use discretion in their day to day work that involves the MN MUTCD. For instance, field personnel installing signs and Maintenance workers setting up temporary traffic control need to use discretion if it is unreasonable (due to topography or other factors) to install TCDs at the required distances or lateral offsets. We do not have enough engineers to go to every field location to make these discretionary decisions. We provide training and they use their experience and judgment to make the appropriate decision. (see Item 518ii)].

Items 4a&b and 530a&b:

Traffic Control Device ~~Activities~~ Characteristics: The ~~activities~~ characteristics associated with traffic control devices are:
a. Meaning: The ~~process of defining the meaning~~ message of a specific device and the expected road user response to the device.
b. Appearance: The ~~process of establishing the~~ general physical characteristics of a specific device as it appears to the road user. These characteristics include color, shape, legend, and the relative position and layout of individual elements.

I don't agree that these are "activities" but are characteristics of a TCD. Re-word these statements similar to changes above and also reword items 67 & 72a to reflect this.

Item 531

531. **Section 1A.XX MUTCD User:** Traffic control device principles in the MUTCD shall be developed for and used by individuals who are duly authorized and qualified to conduct traffic control device activities. Ministerial activities shall be performed by individuals that are properly trained to conduct the specific activity. Discretionary activities shall be performed by a professional engineer with the appropriate level of traffic engineering expertise.
a. In states and other agencies/organizations (such as the federal government) that do not require a license or registration to practice engineering, an individual making discretionary traffic control device decisions shall have a level of traffic engineering expertise equivalent to that of a professional engineer.

- Basis for recommendation: Establishes minimum qualifications for those responsible for performing traffic control devices activities. Reduces the potential for individuals that are not qualified to perform traffic control device activities.

Same comments as beginning of Chapter 3 and Items 514-515, 529

Item 533

533. **Section 1A.XX Definitions:**
Uniform Standard - SHALL
Consistent Standard - MUST
Guidance - SHOULD
Option - MAY
Preference - OUGHT
Support – information only

Do not use "must" and "ought". There is already enough confusion between "shall" and "should" outside the traffic engineering community (and sometimes inside the traffic engineering community!). Introducing "must" and "ought" will only add to the confusion. While we understand the intent of having uniform and consistent standards, it becomes a grayer line between consistent standards, guidance, and preference. It seems that guidance statements were strengthened through the added definition of Substantial Conformance, making them almost as strong as Standards unless you use engineering judgment or conduct an engineering study.

Item 536

Same comments as above.
Critical vs. crucial vs. important. Seems like subtle differences.
There is more mention of discretionary vs. ministerial acts, which we believe are legal terms.
It would be helpful to take an existing section of the MUTCD with Standards, Options, Guidance, and Support and use it as an example for the proposed structure and mandates.

Item 540

Agree with the concept of one document broken into three "divisions". There would need to be "smart" links linking all the pertinent information about each TCD, which could get tricky to navigate.

Items 541-543

Again some of the same comments regarding ministerial vs. discretionary acts.
542.c states "The content in this volume could be used by technicians and field personnel when conducting a ministerial act (traffic control device principles provide a specific instruction such that there is no decision to be made)." This is rarely the case (when there are no decisions to be made).
543.b discussed "typical" applications and drawings. "Departure from the use or placement illustrated in the typical application would require an engineering decision." Then 543.c goes on to say "Written so that field personnel can use without making engineering decisions."
Most field applications are not "typical" and it would be impossible to illustrate all the variations that may be encountered in the field.

Chapter 4 Recommended Strategic Plan

Items 801, 802, 803

801. There should be a comprehensive evaluation of the differences in state traffic laws (rules of the road) that are related to traffic control devices or otherwise impact the use of traffic control devices.
802. There should be a comprehensive evaluation of the differences in state tort liability laws that are related to traffic control devices or otherwise impact the use of traffic control devices.
803. There should be a comprehensive evaluation of the differences in state engineering practice/registration laws that are related to traffic control devices or otherwise impact the use of traffic control devices.

While all these would be nice to have, they should not hold up the next publication of the MUTCD.