



Temporary Traffic Control Committee

Work Zone Safety – Toward Zero Deaths





SAFER ROADS SAVE LIVES

- How-To
- Training
- Partnering
- Outreach





Statewide Work Zone Safety Committee



TTC Committee



SWWZSC Industry Liaison Group

Goal, Purpose & Objectives

- **Relationships, Training & Communication**

- For Industry and Agencies to work together to ensure the safest Work Zones
- To improve working relationships and communication with Agencies
- Being willing to hear and gain understanding of Agency perspectives
- To offer solutions on ways to improve training, safety, specifications and enforcement
- To improve the consistency of how project specifications are interpreted and enforced
- Meet with different stakeholders to share Industry concerns so as to improve Work Zone Safety



Meet with MnDOT TEO TTC Committee

- **Introduce the NLATSSA TTC Committee**
- **Report on Safety Enhancements initiative**
 - Wider Sheeting on Drums
 - Wider Removable Wet-Reflective Pavement Markings
 - Wet-Reflective Temporary Pavement Markings
 - Higher Reflectivity on Barrier Delineators
 - Sequential Lighting in Tapers
- **Provide examples of opportunities for improvement**

Current Action Items

- Work with Prime Contractors regarding the communication of Traffic Control items, to ensure both specifications are being adhered and to achieve the utmost safety in Work Zones
- Look at projects earlier (pre-letting) so as to afford ample time for clarification, when warranted
- Provide examples of reoccurring “Specification Issues” so MnDOT can understand what we’re seeing and work towards improving
- **Meet with the Consultants to discuss, “What could improve Work Zone Safety from the Consultant’s perspective?”**
- Focus on positive aspects, outcomes and accomplishments



Meet with Consultants

TTC Committee

- Introduce the NLATSSA TTC Committee
- What factors create the “Ideal Scenario” to ensure the safest Work Zones?
- Discuss issues that compromise Work Zone Safety / Quality and discuss opportunities to improve / ensure the safest possible Work Zones.
- What are examples of sub-par Work Zones? (inadequate quantity of devices, poor quality of devices, not having the correct devices and “whatever is needed”)
- What could improve Work Zone Safety from the Consultant’s perspective?





TTC Committee

Meet with Consultants

Feedback:

1. Traffic Control is one of the last items to be planned for
2. Better communication between Agency Designers & Construction Personnel
3. Inconsistency between Districts and Engineers and from one Agency to another
4. Inconsistent use of Pay Items / Units of Measurement
5. Desire for Agencies to want fewer items to count or measure so making items incidental has become a default
6. “Less is More” or “More is More”
7. The competing interests of Flexibility & Unintended Consequenses
8. Quality & Safety vs. Cost – what’s the correlation?
9. Suggest having a “Every Project should have these X things addressed” check list
10. Suggest having a “What you need to know” document (Shalls, Shoulds, Best Practices)
11. Have an “Incidentals Tab” included in the Plan Set to clearly communicate what is incidental and the estimated quantity
13. More frequent training, more through / required annual training
14. Simply do a better job of conforming to the CFR & the Design Scene
15. Have an annual meeting (with MnDOT, Industry & Consultants) to discuss lessons learned, best practices, opportunities for improvement and ongoing training. (Case Studies)



Meet with Consultants

Subpart K—Temporary Traffic Control Devices

AUTHORITY: 23 U.S.C. 109(c) and 112; Sec. 1110 of Pub. L. 109-59; 23 CFR 1.32; and 49 CFR 1.48(b).

(f) *Payment for Traffic Control.* Consistent with the requirements of 23 CFR 630.1012, Project-level Procedures, project plans, specifications and estimates (PS&Es) shall include appropriate pay item provisions for implementing the project Transportation Management Plan (TMP), which includes a Temporary Traffic Control (TTC) plan, either through method or performance based specifications. Pay item provisions include, but are not limited to, the following:

(1) Payment for work zone traffic control features and operations shall not be incidental to the contract, or included in payment for other items of work not related to traffic control and safety;

(2) As a minimum, separate pay items shall be provided for major categories of traffic control devices, safety features, and work zone safety activities, including but not limited to positive protection devices, and uniformed law enforcement activities when funded through the project;

(3) For method based specifications, the specifications and other PS&E documents should provide sufficient details such that the quantity and types of devices and the overall effort required to implement and maintain the TMP can be determined;

(4) For method-based specifications, unit price pay items, lump sum pay items, or a combination thereof may be used;

Meet with Consultants

Subpart K—Temporary Traffic Control Devices

AUTHORITY: 23 U.S.C. 109(c) and 112; Sec. 1110 of Pub. L. 109-59; 23 CFR 1.32; and 49 CFR 1.48(b).

- (5) Lump sum payment should be limited to items for which an estimate of the actual quantity required is provided in the PS&E or for items where the actual quantity required is dependent upon the contractor's choice of work scheduling and methodology;
- (6) For Lump Sum items, a contingency provision should be included such that additional payment is provided if the quantity or nature of the required work changes, either an increase or decrease, due to circumstances beyond the control of the contractor;
- (7) Unit price payment should be provided for those items over which the contractor has little or no control over the quantity, and no firm estimate of quantities is provided in the PS&Es, but over which the highway agency has control of the actual quantity to be required during the project;
- (8) Specifications should clearly indicate how placement, movement/relocation, and maintenance of traffic control devices and safety features will be compensated; and
- (9) The specifications should include provisions to require and enforce contractor compliance with the contract provisions relative to implementation and maintenance of the project TMP and related traffic control items. Enforcement provisions may include remedies such as liquidated damages, work suspensions, or withholding payment for noncompliance.



Meet with Consultants

MnDOT Design Scene – Chapter 2 (Quantities & Tabulations) Page 26 Revised 05-09-16

INCIDENTAL AND LUMP SUM ITEMS

An internal review of our existing process for the development of engineer's estimates for construction projects identified a number of risk areas and change needs. The following process changes will be made immediately. These adjustments to our process will result in reducing the risk of inadvertent disclosure of nonpublic data prior to project award per Minnesota Statute §13.72, subd. 1.

These new procedures will be applied to all projects that are included in the MnDOT letting process.

The **INCIDENTAL, FOR INFORMATION ONLY, and LUMP SUM** quantities will no longer be supplied in the plan or special provisions. The list of elements and application rates included in the incidental and lump sum items can be listed in the plan and special provisions but not the quantities.

FOR INFORMATION ONLY statement as associated with quantities will no longer be allowed in the plans.

This information will be supplied in the current tabulated or listed format via a stand alone document to the Cost Estimating Engineer and the Design Support Engineer only, at the time of project submittal. The Preliminary Estimate and Data Base file (*.mdb) will be located in the specific projects ProjectWise location (a right protected folder), with AD group name of "DxEstimates" and a Folder name of "Estimates_Restricted" which restricts access for anyone except newly established AD group (Ex. Design Engineer, Lead Designer & District Cost Estimating Engineer).

Meet with Consultants

MnDOT Design Scene – Chapter 2 (Quantities & Tabulations) Page 26 Revised 05-09-16

LUMP SUM ITEMS

The term, "lump sum," when used as a unit of measurement for payment, means complete payment for that item of work as described by the contract. A description of the work to be paid for as a "lump sum" is included in the plans so that contractors bidding on the project will know exactly what work and materials are included in the pay item. These "lump sum" items usually include work items that are used on many projects. Either a bill of materials has been developed for them (such as standardized traffic control or traffic control interconnection systems) or they are routine work items that do not vary significantly from project to project (such as maintenance or restoration of haul roads).

Clear definition in the plan of what is expected in each case contributes to harmony and better results at less cost during construction. More accurate estimates are promoted as well. There is no good substitute for careful research and determination of reasonably accurate quantities. Pursuing this a bit further - occasionally a plan provides for direct payment for certain items yet advises bidders that certain like items of unknown quantity required to be furnished by the contractor as included in one thing or another will not be measured for payment. This can only be disadvantageous to the state. The bidder must again include a sufficient sum somewhere in his proposal to cover the costs of the unknown quantity to protect themselves and then still demand direct payment of the engineer. How can direct payment be justified for the known quantity but not for the unknown? Better to provide that the unknown quantities will be paid for at the appropriate contract price. Gives estimators a break, too. The preceding cases are even more confusing when the extent of the unknown quantities is subject to "as direct (or ordered) by the engineer."

As an example, the Basic TMP should consist of the following:

- TTC – a selection of an appropriate combination of TTC plan layouts from the long-term TTC templates or plan sheets developed specifically for the project

Plans, Specifications, and Estimates (PS&Es)

The Plans, Specifications, and Estimates (PS&Es) shall include the appropriate provisions of the TMP (the TTC plan, TO and/or PI components) or provisions for contractors to develop a TMP at the most appropriate project phase as applicable to the chosen contracting methodology for the project. Generally the agency develops the TMP. A contractor developed TMP shall be subject to the approval of the Road Authority, and shall not be implemented before it is approved.

Pay Items

The PS&Es shall include appropriate pay item provisions for implementing the TMP. Designers are encouraged to use appropriate pay items to the fullest extent practical, either through end based or performance based specifications.

- (1) For end-based specifications individual pay items, lump sum payment, or a combination thereof may be used.
- (2) For performance based specifications, applicable performance criteria and standards may be used (e.g., safety performance criteria such as number of crashes within the work zone; mobility performance criteria such as travel time through the work zone, delay, queue length, traffic volume; incident response and clearance criteria; work duration criteria).



TTC Committee

Pending Questions / Discussion Items:

- Designing Traffic Control should be the top priority
- Why are items ever allowed or decided to be made incidental?
- Need to communicate the “unintended consequences”
- Case Studies
- Why is there so much inconsistency in the Design, Plan and Bid Item requirements? (Is it even possible to have statewide and Agency-wide consistency?)
- Industry’s part (Primes and Traffic Control subs)
- What about the “smaller companies” / Utility companies ?
- How the current training offerings may be contributing
- NLATSSA Industry, Consultant Representatives and MnDOT to meet and discuss the Feedback, share perspectives, prioritize and work toward improving.
- Thanks to MnDOT!
- Let’s work together so we’re doing everything we can, on every project, to make our Work Zones as safe as possible.

- **What's next?**

- **December 21, 2016 – State Work Zone Safety Committee Meeting**
- **January 2017 – MCEA Safety Committee Goal Setting**
- **January 2017 – NCITE Technical Committees**
- **March 21-22, 2017 – Northland ATSSA “How-To”**
- **Spring 2017 – ATSSA / MnDOT / AGC / Consultants / MCEA / CEAM / NCITE / FHWA ***

* Facilitated meeting, where representatives from each group determine specific goals and a clear outcome all to make the industry better and our Work Zones as safe as possible for the shared vision of Toward Zero Deaths.