



FDM 19-40 Exhibit 1.1 PS&E Pre-Submittal Review Guide

June 24, 2016

This guide is an outline of the actions taken during a project plan specification and estimate (PS&E) review. It helps ensure that a PS&E is complete, concise and consistent within itself at the time of submittal to the central office. Central Office plan examiners will complete a bidability review using this guide to ensure that the proposal package is ready for bidding when advertised.

Preliminary

A. Plan letter (refer to [FDM 19-10-15](#)). The plan letter should state:

1. Type of work (as defined for each project and/or contract).
2. Non-standard construction or bidding practices and explain reasons.
3. That the PS&E has been reviewed by the various central office units listed in [FDM 19-1 Attachment 1.4](#), that their comments have been received, and appropriate revisions have been made with a date supplied by the reviewer for the appropriate slot in the matrix at the end of the plan letter.
 - a. Bureau of Project Development (BPD), Project Services Section, Project Oversight Unit. The specific region's oversight liaison engineer needs to review STH, USH, & IH plans, specification and estimates for accurate roadway design, conformance to the design standards, and to ensure it conforms to the design study report (DSR). Designer must obtain an acceptance date for the plan letter matrix from this section.
 - b. Bureau of Structures (BOS). Submit final bridge plans, box culvert plans, retaining wall plans, and sign bridge plans to BOS for review a minimum of two months before the PS&E date.
 - c. Bureau of Traffic Operations (BTO), Traffic Engineering Section, Traffic Design Unit reviews all signing plans, bid items, and special provisions (Matt Rauch, 608-266-0150 HFSTB or 608-246-5305 Sign Shop). This unit creates the sign layout sheet PDF files or supplies the required hard copy sign plate drawings for each plan set that requires them. This section also reviews work zone traffic control and pavement marking plan sheets, bid items, and special provisions. Designer must obtain an acceptance date for the plan letter matrix from this section.

BTO, Traffic Engineering Section, Traffic Operations Unit reviews all traffic signals plans, bid items, and special provisions. Designer must obtain an acceptance date for the plan letter matrix from this section.

BTO, Systems Operations and Electrical Engineering Section, Electrical Engineering and Electronics Unit will review all roadway overhead lighting plans, bid items, and special provisions. Designer must obtain an acceptance date for the plan letter matrix from this section.

BTO, Systems Operations and Electrical Engineering Section, State Traffic Operations Unit reviews all intelligent transportation system (ITS) plans, bid items, and special provisions. Designer must obtain an acceptance date for the plan letter matrix from this section.
 - d. Bureau of Highway Maintenance, Highway Maintenance and Roadside Management Section reviews all landscape planting plan details, items, and special provisions. Designer must obtain an acceptance date for the plan letter matrix from this section.
 - e. Bureau of Technical Services (BTS), Environmental Services Section reviews all hazardous material, asbestos, erosion control, and storm water discharge related information, plan details, bid items, and special provisions. Designer must obtain an acceptance date for the plan letter matrix from this section.

BTS, Environmental Process, and Documentation Section reviews all wetland, endangered resources, archeological, historical, air, and noise related information, plan details, bid items, and special provisions. Designer must obtain an acceptance date for the plan letter matrix from this section.
4. Information to be included in the advertisement, such as: name and telephone number of contact person, if a pre-bid meeting is to be held, provide pre-bid meeting date/time/location and brief agenda, if region is requesting that prequalification be waived (this requires approval from Proposal Management Chief).

5. Project design number.
 6. Region design project manager's name, phone number and e-mail address.
 7. Name, phone number, and e-mail address of person to contact for project information after the project is advertised for bids. This person's name will appear in the advertisement.
 8. Consultant designer(s) name, phone number, and e-mail address.
 9. If project is federally funded and On-the-Job Training items are required use on-the-Job Training Apprentice at \$5.00/hr or On-the-Job Training Graduate at \$5.00/hr with the number of trainees and hours required per Project I.D. for both items. When required, ensure these items were added appropriately to the Trns•Port Estimate and that their \$5.00 item price has been properly pre-established for each item. See [FDM 19-5 Exhibit 10.6](#) for Trns•Port PES Pre-Established price item guidance.
- B. Special Provisions (refer to [FDM 19-15](#)). Review special provisions to ensure:
1. Formatting is up-to-date and correct (for questions contact Angie Clary, PE at 608-266-3611).
 2. Every ".S" item and every "SPV" item in the completed Trns•Port Estimate has a special provision article.
 3. That all ".S" item articles and every "SPV" item articles have a bid item in the Trns•Port Estimate.
 4. That all "SPV" bid items names match the bid item name used in Trns•Port Estimate.
- C. Check plan sheets for proper order (see [FDM 15-1-1](#) for guidance).
- D. Has all the railroad coordination been performed and approvals been received from the DTIM Bureau of Transit, Local Roads, Rails and Harbors (for at-grade crossings, call 608-266-2941. for structures, call 608-266-0233).
- E. Does the contract have Status 1 for all the ROW acquisition at PS&E? If not, contact the region project manager regarding viability of submittal of this PS&E.
- F. Are all the Utility interests clear at PS&E? If not, the viability of submittal of this PS&E should be discussed with the district or within the district.

General

- A. Is all information shown inside printing margins?
- B. Lettering size:
1. Minimum lettering height on required 11"x17" originals shall be 0.06 inches. (except right of way plat)
 2. Titles should be approximately 0.10 inch lettering height on required 11"x17" plan originals.
 3. If lettering sizes are too small, correction will be necessary to make plan notes readable in the required 11"x17" plans.
- C. Notes:
- Check that notes referring to standard detail drawings refer to the name of the drawing, not the number.
 - Check that construction notes are solid line notes; not screened line notes, etc
 - Check for notes with blank spaces (data fields) and either fill in the data field with appropriate information or remove the note completely.
- D. Plan details check that:
- Special details pertain to the contract and all required special details are in the plan (no more, no less)
 - Details are not crammed together - add lines for separation if appropriate
 - Details are correct, clear and easy to read.

Title Sheet (FDM 15-1-10)

- A. Project location map check for:
- North Arrow
 - Town and Range
 - Correct Project(s) location
 - Begin and End Project notes
 - Begin and End notes for construction work outside project limits
 - Equations
 - Highway designations shown

- Road or street names if referred to in special provisions
- County names, if more than one
- Graphic Scale
- Structure Numbers (on which work is being done)

B. Design Designation - is it filled in?

C. Net centerline length (listed to three decimal places to right of decimal point):

- Project breakdown (if more than one Project I.D. is part of a plan set, give a separate "Net Length of Centerline" for each Project I.D., even if the length is 0.000 for the Project I.D.)
- Total.

D. Titles check that:

- Correct format is used: (refer to [FDM 15-1-10](#), "Project Title".)
 - Each project title and sub-title should match FIIPS exactly (contact region for this FIIPS information), except all words should be spelled out on the title sheet and on all other PS&E documents.
- The title on the engineers estimate is consistent with the title sheet.

E. Signature Block:

- Ensure that all required signatures have been obtained. Signature lines for required signatures only - remove any not needed.
- Include a consultant block with professional engineer stamp, signature, and date when appropriate.
- Include names of Surveyor, Designer, Region Examiner, and Region Supervisor.

F. Conventional Symbols

- Commonly used symbols are preprinted on the title sheet. Additional symbols should be added below the preprinted symbols on the title sheet when appropriate.

G. State map:

- The county in which the project is located should be cross-hatched and the project location shown.

H. "Order of Sheets" block:

- Is it the latest standard format?

I. Check State Project numbers:

- In blocks near center of title sheet
- Upper right hand corner (one project number per line)

J. Margin information: (See [FDM 15-1-10.3](#) "Margin Information", [FDM 15-1 Attachment 5.1](#) example, and the appropriate [FDM 15-5 Attachment 5.1](#) "Title Sheet" plan sheet vehicle.)

- Project information should be in left binding margin, oriented to be read when facing the title sheet from the left edge (see procedures referenced above for orientation clarification).

Written Material, Typical Section and Detail Sheet

A. Preferred order of Section 2 sheets: ([FDM 15-1-1](#))

1. Written material.
2. Project Overview.
3. Typical sections.
4. Construction details.
5. Layout details:
 - a. Non-typical sections
 - b. Intersections
 - c. Interchanges
 - d. Contour Maps
 - e. Cross Section Match line
 - f. Erosion Control and Drainage
 - g. Storm Sewer and Utilities
 - h. Planting

- i. Signing
- j. Lighting
- k. Traffic Signals
- l. Pavement Marking
- m. Traffic Control and Construction Staging
- n. Fencing
- o. Alignment

B. First Section 2 Sheet: ([FDM 15-1-15](#))

1. The first Section 2 sheet should include:
 - a. Utility list and contact persons
 - b. DNR contact person (if plan has erosion control plan)
 - c. Plan-specific customized list of unusual or non-standard abbreviations
 - d. Surface boring log when salvaging Asphaltic Pavement or Pulverizing & Relaying Asphaltic and include lab tests when Salvaged Asphaltic Pavement is bid.
 - e. General notes. Notes should not duplicate standard specifications or special provisions.

C. Typical Sections: ([FDM 15-1-15](#))

1. All portions of the mainline
2. Major side roads
3. Minor side roads
4. Ramps and tapers
5. Existing sections when appropriate
6. Commercial and residential driveways
7. Temporary construction
8. Check that typical sections include widths, thicknesses, slopes, station to station, right or left, traffic lanes,
 - a. Show Tie Bars and Dowel Bars, where required. Bars placed in wet concrete are incidental. Bars to be drilled in are paid under item 416.0610 Drilled Tie Bars and 416.0620 Drilled Dowel Bars
 - b. Tined (when appropriate), include with the Concrete Pavement item label when "tining" is required (see [FDM 15-1-15](#)).
 - c. Curb and gutter, sidewalk, topsoil or salvaged topsoil, underdrains, geotextile fabrics, removals, islands, barriers, etc.
9. Check that typical section labels match current bid item titles.
10. The pavement structure of short sections of side roads, frontage roads, private drives and ramp tapers may be shown by note on plan or detail sheets.

Construction Details ([FDM 15-1-20](#))

A. Examples of items of construction requiring details.

1. Riprap, retaining walls, special inlets**, special covers*, pipe railing, steps, driveways, transitions, planting charts, etc.

* Is approximate weight listed on special covers?

** Minimum embedment required; ultimate soil bearing capacity required; engineering properties of retained and foundation soils required.

B. Check for:

1. Special details which conflict with standard practices.
2. Special details, which conflict with SDDs, called for in the plan.
3. Layouts and dimensions as appropriate.

C. Frequently used special details and CADD cell special details:

1. Are they correct for this plan?
2. Are dimensions filled in or corrected?
3. Unnecessary information or options included? If so, remove.

4. Are they updated to current spec book terminology (e.g., upper layer/lower layer for asphalt pavement and crushed aggregate base course now is base aggregate dense)?

D. Bid Items:

1. Are there bid items to cover the work shown?
2. Are the bid item titles correctly shown on the special detail (must match special provisions and estimate exactly)?

E. Check "Brand Name" labels (proprietary item titles) which are correct only if:

1. The list includes three names as approved equals.
2. The name is on the Product Selection List. ([FDM 19-1-5](#))
3. On a project-by-project basis, approval has been received from the specific region's CO Project Development Liaison engineer. This approval is acquired via an email letter justification for each proprietary item explained and approval requested. The approval is granted when the region's CO Project Development Liaison engineer replies to the email letter with an approval statement for which items per project have been approved.

F. If special provisions or standard specifications say "as shown" or "detailed on plans", check for the detail.

G. Check for appropriate use of:

1. Items marked "by others", "in place", or "existing"
2. The term "State furnished, contractor installed".
3. The term "required", when necessary to understand the detail

H. Include a customized (plan-set specific) "Order of Section 2 Sheets" list on the first Section 2 sheet for projects that have many construction details and could benefit from this list.

Layout Details ([FDM 15-1-20](#))

A. Non-typical sections, Intersections, and Interchanges:

1. Concrete pavement grades and curb and gutter grades shown for non-typical sections
2. Intersections and interchanges shall be shown on detail sheets
3. Islands; check for dimensions & type (asphalt, concrete, etc.)
4. Are radii, taper lengths, turning lanes and passing lanes clearly dimensioned for field layout?

B. Erosion Control and Drainage:

1. Shall be shown on detail sheets or included on plan and profile sheets.

C. Storm Sewer and Utilities:

1. Shall be shown on detail sheets.

D. Permanent Sign Details

1. Check that the BTO, Traffic Design Section has created the sign layout sheets PDF file or supplied to the BPD, Proposal Management Section the required hard copy sign plate drawings.

E. Pavement Marking Details:

1. Shall be shown on detail sheets.
2. Check for conflict with SDD's.
3. Check for correct bid item titles or correct marking "type" labels which match SDD terminology defined by detail (such as "Centerline," "No Passing," "Laneline," "Edgeline," etc.) on construction details.
4. Curb Ramp Detectable Warning Fields must be labeled on plan.

F. Traffic Control and Construction Staging:

1. Check and identify items typically bid separately from the item of Traffic Control, such as:
 - Temporary delineators and posts
 - Removing pavement marking
 - Temporary pavement marking, stop lines, removable tape

G. Alignment Diagrams:

1. Either separate detail sheets or alignment shown on plan sheets.

Miscellaneous Quantities Sheets (FDM 15-1-30)

A. General layout:

1. Lettering should be at least 0.06 inch height on required 11"x17" plans.
2. Check that MQ listings start with the lowest item number item at the top left of each sheet and that MQ sheets are organized numerically based on the item numbers included on each MQ sheet.
3. Check for use of line-work to separate tables or entries in tables.
4. Check that quantities shown on various tables on detail sheets are summarized on miscellaneous quantities sheet.
5. On plans with multiple projects or multiple categories, check that quantities are split accordingly and labeled. Quantity breakdowns by project and/or category are required, and each breakdown category must have a subtotal.
6. Ensure that multiple columns of lists for a single item have a SUB-TOTAL for each column and that each single item has a TOTAL clearly shown.
7. Check to ensure non-participating items and quantities are labeled. (This may be accomplished by designating the proper Trns•Port Estimate category under which the non-participating item is included.)
8. Check for proper unit of measure.
9. Follow through to the engineer estimate with any changes.
10. Quantity totals on miscellaneous quantity sheets must agree with project totals in engineers estimate.

B. Check for the following special information:

1. Ensure SAME DAY PAVEMENT MARKING POLICY is used on ALL rural type resurfacing contracts constructed under traffic. (See [FDM 11-50-1](#) and Note 2 on Standard Detail Drawing "PAVEMENT MARKING, MAINLINE")
2. Ensure that for the item "Removing Small Pipe Culverts," all pipes from 12" diameter, but smaller than a 60" diameter, are listed for payment. Also ensure a DESCRIPTION column is included giving the diameter, length, and type of pipe to be removed at each location. (See example in [FDM 15-1 Attachment 5.20](#))
3. Ensure all bridges to be removed with a span length of 20' or greater, all bridge-like structures to be removed with a span less than 20', all rectangular culvert structures to be removed of any size, and all non-rectangular culverts to be removed which are 60" diameter or larger, are paid for under "Removing Old Structure, (Station)"
4. Ensure that all removal items (other than those standard "204." items which have a removal title already designated) are not bid as "SPV." items, please use the appropriate standard "204.9xxx" items, based on the correct Unit of Measure intended.

C. Earthwork Summary:

1. An earthwork summary shall be included for all grading projects

D. Drainage Table:

1. For the culvert pipe items, metal thickness(es) and concrete pipe class(es) are required to be shown.
2. Are class IV or V culverts or storm sewer specified without any apparent reason? (See [FDM 13-1-25](#))

E. "Lump Sum" and "Each" bid items: ([FDM 19-5-1](#))

1. Are quantity breakdowns given so the contractor can bid the item?
2. Is the amount of work reasonably non-variable for the "Each" bid items?

F. Quantity Accuracy:

1. Check miscellaneous quantity breakdown of items for completeness of work within the various construction locations.
2. Spot check items for correct totals on miscellaneous quantity sheets and ensure that all item totals match the engineer estimate.

ROW Sheets (FDM 12-15-1)

- If new ROW is required, has a right-of-way plat been included in the plan set?
- Does ROW plat cover entire construction limits?
- Are slope intercept lines shown? Note - not applicable to transportation project plats.

Plan and Profile Sheets (FDM 15-1-35)

A. Do plan sheets cover all construction areas?

B. Begin and End Project notation is required.

C. All equations should be shown.

D. Are slope intercept lines shown?

E. Structure notes are required for:

1. Removing Old Structure, Station _____" items (include old bridge number, length and type).
2. New structures including retaining walls, noise walls and sign bridges.
3. Structure repairs (deck overlays and deck replacements).

F. ROW:

1. Are right of way, easement and permit limits shown?
2. Is all work, including private entrance, drainage, culverts and riprap, shown inside right-of-way or permit limits?
3. If plan sheets are also used as ROW plat, then requirements of [FDM 12-15-5](#) must be met.

G. Culvert notes are required.

H. Removal of miscellaneous items should be noted.

1. Culvert removal note should indicate type and size.

I. North arrows, curve notes, stations, road names, etc. should be shown.

J. Profiles are required for all grading areas, including long driveways and side roads.

K. Are types of intersection and curb ramp types shown? (Unless correctly covered by a general note.)

L.. New work distinguished from existing facility by legend, note or screening.

M. If rock excavation is bid, the top of rock lines should be shown and labeled on the profiles.

N. If marsh excavation is bid, a line showing the bottom of marsh should be shown and labeled on the profile.

Cross Sections (FDM 15-1-45)

A. Are cross sections included for grading areas?

B. Are earthwork tables required and if so, are they filled in?

C. Have special earthwork listings been supplied if required?

- Miscellaneous quantities station-to-station earthwork sheets or earthwork data sheets.
- Are computer earthwork data sheets supplied in proper format for use in plans?

D. Is all information within printing margins?

E. If rock or marsh lines are shown, are the Excavation Rock, Excavation Marsh, and Excavation Common items bid? (Note Unclassified Excavation is no longer a bid item.)

Trns•Port Estimate

General:

A. Have all the applicable EACH items been included. Refer to items:

- 213.0100, Finishing Roadway (Project)
- 618.0100, Maintenance and Repair of Haul Roads (Project) for all STH, USH, & IH projects but not used for local road projects or those STH, USH, IH projects within a city that has an on-going street maintenance program and where it would be impossible to determine damage from the state project's construction vehicles over others using the same roadways.
- 619.0100 Mobilization
- 642.5xxx, Field Office Type _
- 643.0100 Traffic Control (Project)

B. Have the Prepare Foundation LS items (211. xxxx) been considered for performing necessary foundation preparations that resulted from construction outside the contractor's control, especially for asphaltic resurfacing projects or for resurfacing sections of rehabilitation projects? (see [FDM 19-7-1](#) for guidance on when to use these items and how to address them appropriately in the plan and MQ listing.)

C. For a Structure & approaches type project, is a Temporary Structure necessary? If so, is the item 526.0100, Temporary Structure (station) included in the Trns•Port Estimate and has the STSP # 526-010 been included in the Special Provisions?

Trns•Port PES (FDM 19-5 Exhibit 10.1 thru 10.9)

A. "Projects" Ensure the appropriate data fields have complete.

1. Numbering Estimate Items is very important before a bidability review is performed and always after any Trns•Port Estimate item additions, item deletes, item number changes, or Supplemental Description changes have been made. If you suspect any Trns•Port Estimate changes have been made, ALWAYS re-number again, as a safeguard.
2. Under the "General" tab ([FDM 19-5 Exhibit 10.5](#)):
 - a. Page 1 - Check that the project "Description" data fields, both the title line (first line) and limit/sub-title line (second line), match the title sheet exactly
 - b. Page 1 - Ensure the "Road Name" shows the Title, Sub-Title, and Route (in that order; abbreviations are acceptable here since it's for the estimate cover sheet information only)
 - c. Page 1 - Ensure that the "Status" data field is set to "PSE" prior to PS&E submittal.
 - d. Page 1 - Ensure the "Item Version" is correct (NOTE - "03" is always used)
 - e. Page 1 - Ensure that "Const. Eng. Pct." has a number shown (should match the E&C shown in most of the estimate's categories)
 - f. Check that the correct "Region" designation is shown
 - g. Page 2 – Check that "Field Book" shows an "X."
3. Under the "Counties" tab (county information is mandatory):
 - a. Ensure the correct "County or Cong. Dist Code" CO__ number is shown with 100% in the "Percent of Project Length" field
 - b. Check that multiple county projects show each of the counties with a % breakdown for each county that when totaled = 100%.
4. Under the "Categories" tab:
 - a. Check that engineer estimates begin with category 0010 and that all categories are loaded as four digits; i.e. 0010, 0020, etc.
 - b. Check that there is a separate category for each project section that has different funding.
 - c. Page 1 - Check that each category has a "Category Description" added that makes sense for the category's items.
 - d. Page 1 - Ensure that all categories always and only have "0001" in the "Proposal Section Number" data field.
 - e. Page 1 - Check that the "Category Work Class" and the "Federal Work Category" data field Type Codes are correct for each category (Note – for nonparticipating categories under the "Federal Work Category" data field, use either "NSP", No State Participation, on state-funded projects or "NFP", No Federal Participation, on federal-funded projects)
 - f. Page 1 - Check that the "Federal Construction Class" is completed (usually "LET" is correct)
 - g. Page 1 - Check that each category has the correct "Construction Eng. Pct." (E&C) included; especially if any category requires a different E&C than at the Project Level.
 - h. Page 1 - If the project is to be given a length, ensure each category has the correct length included in the "Category Length" data field (note that the category lengths for each project are totaled on the Trns•Port PES "Detailed Estimate Cover Page" and that total should match what each project's title sheet shows as "Net Centerline Length" per project)
 - i. Page 1 – Ensure all non-participating categories' length is 0.000 miles.
 - j. Page 1 – For categories that only deal with a B- number bridge (mandatory) or C- number box culvert (if a separate category); in the "Bridge ID" data field, show the bridge number or box culvert number; in the "Bridge Length" data field, show the correct bridge length (typically end of deck to end of deck); in the "Bridge Width" data field, show the clear roadway width; in the "Number of Spans", show the number of bridge spans or number of box culvert cells; and in the "Bridge Type" field, choose the correct number.
 - k. Page 2 – If the project is to be given a length, show in the "Beginning Station" and the "Ending Station" data fields the correct information; typically shown as "Sta. xx+xx.xx" or depending on your project, you may have "Log Mile xx.xx", etc.
 - l. Page 2 – The "Unit Number" data field should always be left at the "000" default setting.
5. Under the "Funding" tab:

- a. Ensure each category is funded.
 - b. Ensure each "Priority" has "Participation Pct" that, when added together, totals 100% for each "Priority" (usually only for Priority 1; but when Priority 1 has a funding limit, then for Priority 1 and for Priority 2)
 - c. If there are funding issues that need to be addressed, correct the funding in the Trns•Port project categories, so each category's funding is in accordance with what the Region Planning Office shows in FIIPS for each category (ultimately FIIPS and the Trns•Port Estimate categories must match).
6. Under the "Worksheet" tab:
- a. Check that all items (in each category) that require a pre-established price have the correct price pre-established in Trns•Port PES; it's shown as a "Y" in the appropriate item number line under the "Pre-Established Price" column
 - b. Check that the non-standard items are renumbered into the correct order after renumbering
- B. "Proposal" icon on menu bar (Schedule of Items, Proposal Estimate, and for producing all Project Estimates associated with a Proposal at once) - check first that a Proposal has been created for your contract.
1. It is very important to generate Proposal Section and Line Numbers before a bidability review is performed and always after any Trns•Port Estimate item adds, item deletes, item number changes, or Supplemental Description changes have been made to any of the projects associated with your proposal. If you suspect any Trns•Port Estimate changes have been made, ALWAYS generate Section and Line Numbers for the proposal again, as a safeguard.
 2. Under the "General" tab, Page 1:
 - a. Check that the "Item Version" matches that of all the associated project IDs. (NOTE - "03" is always used)
 - b. Check that CNTL PCN is correct with showing the Lowest Project ID Number.
 - c. Check that the correct County or Counties are shown.
 - d. Check that the correct "Region" is shown.
 - e. Check the "Proposal Fund Type" to see if it makes sense with whether the project is state funded, federally funded, or state bond funded, etc.
 - f. Check that the correct "Contract Type" is completed (usually "LET" is correct).
 - g. Add the correct determined contractor classification into the "Proposal Type" and "Contract Work Type" data fields, after the plan review is complete.
 - h. Page 2, fill in the Construction Region Office.
 3. Under the "Sites" tab:
 - a. Ensure the "Site" number "00" is added. (If there are any interim liquidated damage sites required, they should be shown as sites "01", "02", etc.)
 - b. Check each "Site" for the correct contract "Type of Days," the correct "Number of Days" or "Specified Completion Date" (whichever is correct), the correct dollar value "Liquidated Damages per Day" (see [Standard Spec 108.11](#), for the current Liquidated Damages dollar values), and the correct "Description." The contract type and the days or date must match what the Proposal Cover Sheet says and that should also match the Contract Time Chart. Also note Contract Time Charts must be contract inclusive; not set up per project.
 4. Under the "Projects" tab:
 - a. Ensure all the correct projects that are part of the contract have been associated with the contract proposal.
 5. Under the "Sections" tab:
 - a. Ensure that "Section Number" 0001 is shown. This indicates that the "Generate Section and Line No's" process was run at least once since the Proposal was created)
 - b. Before printing the proposal documents for letting, change the "Section Description" to say CONTRACT ITEMS, unless what is already there is acceptable for the whole Proposal. Note, this description shows up on top of the first sheet of the "SOI" and the "Proposal Estimate."
 6. Under the "Items" tab (standard items):
 - a. Check that Units of Measure shown agree with those shown on the MQ sheets (examples: "Base Aggregate Dense" items can be either CY or Ton unit of measure, "Clearing" and

“Grubbing” items can be either Sta., ID, SY., or Acre unit of measure).

- b. Check that individual portions of a prorated item add up to 1.00 exactly.
- c. Ensure correct Supplemental Descriptions are added to all items, which require them.

7. Under the “Items” tab (non-standard items):

- a. Check that the correct unit of measure for Trns•Port non-standard items are used for the matching special provision items Unit of Measure and the MQ listings. For one example, it’s not correct to use item number SPV.0060, EACH, for a L.S. item SPV.0105, when the Special Provision article shows that L.S. is actually the required Unit of Measure.
- b. Each unique Unit of Measure non-standard item must have a Supplemental Description, which must begin with a two-digit number. Leaving gaps in the numbers is OK and it could be beneficial to do this when designers are starting a PS&E, to allow for adding items in the locations/order desired in the future. Check that all the non-standard item Supplemental Descriptions match the Special Provision article item numbers and titles and that the MQ listing item numbers and titles concur.

8. Under the “Items” tab (General):

- a. Check that item prices are NOT carried out to four or five places right of the decimal. (This is caused by different estimated item prices in different places in the proposal because Trns•Port PES is averaging these different prices. To correct this, highlight the incorrect price, key in the correct price, and click on the “Save Folder” icon to save the correct price to each location where that item appears throughout the proposal’s associated project estimates.)
- b. Check for items that are incorrectly repeated. This is caused by descriptions that are slightly different or the units are different. To correct this, use the menu selection “Projects/Categories/Items” and fix the descriptions or units appropriately.

C. Engineer Estimate Bid Items (General):

1. Check that all the contract work is either covered by a bid item, is specified to be included in pay for other items, or is to be done by others.
2. Review all item numbers, descriptions, supplemental descriptions, and units of measure for reasonableness. (Cursory Review)
3. Check that correct asphaltic item(s) is (are) bid.
4. Check that all Asphaltic Incentive items required by WisDOT Standard Specifications have been bid correctly: See item:
 - 460.2000, Incentive Density HMA Pavement (must be used in all projects with any quantity of HMA Pavement)
5. Check that all other desired Incentive items are bid appropriately. See items:
 - 715.0415, Incentive Strength Concrete Pavement
 - 440.4410, Incentive IRI Ride
 - 715.0502, Incentive Strength Concrete Structures.
6. Check that all desired Construction Staking items are bid appropriately. Note that in the same area where “Construction Staking Concrete Pavement” is bid, the items “Construction Staking Base” & “Construction Staking Curb Gutter and Curb and Gutter” are not to be bid separately. See [Standard Spec 650.4](#).
7. Has the plan modified the work under a standard bid item such that additional contract language is required to perform the work? If so, write a special provision modifying the standard bid item. Only define an “SPV” item if the cost is so different that it would be outside of the range of costs typical for that item.

D. “SPV.” (Non-standard) Trns•Port Items (General):

1. Is each item’s Supplemental Description title duplicated exactly from category to category as well as for multiple projects in the same contract? Check that each item appears only once. If not, then make appropriate item Supplemental Description corrections to the Project estimates and rerun the process and re-check to ensure they are now correct.
2. Is a description format similar to that of a similar standard bid item format being used where appropriate? If not, it should be. Is the unit of measure standard and appropriate?
3. Do the special provisions include an appropriate article for each non-standard “SPV.” item and each “.S” item in the contract? Does the unit of measure for each non-standard “SPV.” item in the Special

Provisions match that of the item in the Proposal Estimate?

E. STSP “.S” items:

1. Check that correct item numbers have been used in the project estimates and that there is a special provision article for each of them.
2. Check that the unit of measure for each item in the Proposal Estimate is the correct unit of measure for that item in the Special Provisions.

F. Quantity Accuracy

1. Rough check quantities of major items.
2. Check that quantities appear reasonable for the Unit of Measure used and for the type and size of project.

Special Provisions Guidelines

The Special Provisions are an important document. It overrides the standard specifications and controls some of the project's work. Use these guidelines to prepare special provisions.

1. Ordering of Specials:

Article	Description
1.*	General
2.*	Scope of Work
3.*	Prosecution and Progress
4.	Traffic
5.	Holiday Work Restrictions
6.	Utilities
7.	Other Contracts
8.	Relations with Railroads
9.	Hauling Restrictions
10.	Environmental Protection & Erosion Control Items
11.	Public Convenience and Safety
12.	Modifications to Standard Specifications Arranged in numerical order in accordance with the Standard Specifications Traffic Control is found in section 643 Include .S items within this grouping.
13.	Non-Standard Bid Items, SPV Items Arranged in numerical order

*NOTE: These 3 articles are in EVERY set of Special Provisions. Articles 4 through 11 may or may not be included.

2. Consistency between Prosecution and Progress article and Project Completion Date provided on the Highway Work Proposal. Also, keep the project consistent with respect to working days vs. calendar days. Do not redefine working days or calendar days. Other guidelines for this article:

- Include information that may affect a contractor's schedule of operations, such as migratory birds' nests, fish spawning dates, any special arrangements with railroads or utilities that may affect when a contractor can do work, or areas where a contractor cannot do work.
- If the contract is a completion date contract, do not provide the completion date within this article. This contract information is provided on the Highway Work Proposal.
- Ensure that the time completion chart is consistent with the Highway Work Proposal. If it is a completion date contract, it should state so on the time completion chart.
- For further guidance on writing a Prosecution and Progress article, refer to [FDM 19-15-15](#).

Once the time frame for the work is determined, consider the following:

- If it is likely that there will be HMA placed outside of the timeframes in [FDM 19-7-1.2](#), include the HMA Cold Weather Paving bid item.
- If it is likely that there will be pavement marking placed late in the construction season, include the Pavement Marking Late Season STSP. Refer to [FDM 19-7-1.2](#).

3. Increased liquidated damages. Prior approval needed from the appropriate BPD Project Development

Liaison Engineer (see [FDM 19-1 Attachment 1.4](#)) for using increased liquidated damages or interim liquidated damages greater than the standard liquidated damages provided in the standard specifications. See [FDM 11-2](#) for guidance on determining the dollar amount of Interim Liquidated Damages. For additional information regarding interim liquidated damages in contracts, refer to [FDM 19-15-2.6](#).

4. Real Estate issues

- If a real estate issue affects a contractor's ability to do work at a particular time that needs to be addressed in Prosecution and Progress article.
- If the contractor needs to perform any R&R operations, the specials need to address how asbestos will be removed, and who will remove it.

5. Proprietary Items

Unless permission has been obtained to use proprietary items, three or more product choices must be listed within the specials. To obtain permission for proprietary items, submit a proprietary product justification to the Project Development Liaison Engineer assigned to your region.

6. Include all necessary items in the contract.

For example, if the plan letter states that plant surveillance will be required for two years, make sure that the item of Plant Surveillance is included in the proposal. Also, do not include articles for items not included in the contract.

7. Item titles in the estimate match the item titles in the special provisions.

The word "Special" is not needed after the description/title of an SPV item. The fact that it is an SPV item makes it a special item. In addition, the word "Special" is automatically placed at the beginning of the item description by Trns*port.

8. Avoid repetition.

Even if you believe emphasis is needed, avoid repetition in contract documents. Do not repeat language in the special provisions that is already stated elsewhere in the special provisions. Do not repeat language already included in the standard specifications. If the wording or punctuation is different between the references, and the intent is inadvertently changed, the contractor may be confused and interpret the contract differently from the designer's intent. If the contractor files a claim, courts will typically rule against the drafter of ambiguous or contradictory language, in this case against the department.

9. Check references used in specials against the Standard Specifications book.

10. Lane Rental Fee Assessment

Lane rental language shall be included as an article. Do not use a bid item for lane rental. Lane Rental will be assessed using the administrative item "Failing to Open Road to Traffic".

11. Check all articles for consistency. For example, one article may state that a minimum 48-hour notice is required for a particular action whereas another article may state that only a 24-hour notice is necessary. This often happens in articles addressing traffic control or erosion control items. Refer to #8 above.

12. Any bid item that has an .S suffix or an SPV prefix must have an article in the special provisions. Some standard bid items also need an article in the special provisions, such as Expansion Device (Structure) and Locating No Passing Zones. If writing an article for a standard bid item include the bid item number in the title. For example, "Grouted Riprap Heavy, Item 606.0700".

13. Numbering .S items and SPV items.

Use numbers for sequential ordering instead of letters. For example, suppose the bid item 651.2000.S "Install Traffic Signal Controller & Cabinet (location)" is needed at three locations: Apple Street, Berry Street and Cherry Street. The items should appear on the estimate as:

- 651.2000.S Install Traffic Signal Controller & Cabinet
01. Apple Street
- 651.2000.S Install Traffic Signal Controller & Cabinet
02. Berry Street
- 651.2000.S Install Traffic Signal Controller & Cabinet
03. Cherry Street

The title of the article written for the specials should be - Install Traffic Signal Controller & Cabinet, Apple Street, Item 651.2000.S.01; Berry Street, Item 651.2000.S.02; Cherry Street, Item

651.2000.S.03. Number and title articles for SPV bid items in the same manner. For example, Inlet Screen Type M, Item SPV.0060.01; Type H, Item SPV.0060.02; Type W, Item SPV.0060.03.

14. SPV items. Refer to [FDM 19-15-80](#) for guidance on writing articles for SPV items.

15. STSP Changes.

- Do not change an STSP unless there is a legitimate reason to do so. Contractors are familiar with the STSP's and have expectations regarding their content.
- Explain changes made to STSP's in the plan letter.
- If an STSP is changed and that STSP has a corresponding bid item:
 - Change the title of the bid item and the title of the revised STSP – for example, add “Special” to the end of the item name.
 - Change the .S item number to an SPV item number.
 - Eliminate the date and parentheses found at the end of the STSP document.
- STSP's are “living” documents. Changes are frequently made to these documents, that is, one of the reasons why many STSP items are not standard bid items. For this reason, insert the latest STSP in the special provisions.
- When using STSP's, include all necessary information, such as flagging rates for the railroad. STSP's and daily damage amounts for Landscape Planting Surveillance and Care Cycles.
- For guidance on STSPs, refer to [FDM 19-15-85](#).

16. Abbreviations. Refer to [Standard Spec 101](#) and [FDM 19-1 Attachment 1.3](#) for some WisDOT abbreviations. When using other abbreviations within articles, use standard protocol in introducing the abbreviation.

17. Word-Processing Issues.

- Use people who have been trained in how to create special provisions to type the specials. They know how to properly use the template that has been prepared for developing special provisions.
- Do not use formatting such as bold or underlined text for emphasis; all contract language is equally important.

18. Geotechnical Issues

- Walls: Minimum embedment depths of 1'-6" or greater (dependent on wall type) required. Also, provide ultimate soil bearing capacity values on the plan. The engineering properties of the foundation and retained soils must also be shown, usually in a table. Refer to Chapter 14 of the department's Bridge Manual for more information.
- Geotextile/Geogrid:
 - If DF Fabric: Schedule A, B, or C? (For structure work, usually A.) These items will have separate item numbers.
 - Type ES, MS, and SR geotextiles and types MR and SSR geogrids are usually designed by a geotextile engineer and require special provisions. Required strength are usually provided in the project's geotextile report. Include STSP 645-024 for Geogrid Type MR and STSP 645-026 for Geogrid Type SSR.
- Pre-drilling piling into rock: Measure from the bottom of the hole to the bottom of footing, not just the distance into the rock.
- Pile Points: Generally not needed unless driving into soils with cobbles and boulders, or into weathered bedrock.
- Pile Lengths: Soil drillers should have taken the borings to at least the anticipated depth of the pile tips.

19. Highway Work Proposal. Use most recent version of form (includes the word SAMPLE in the “Firm Name” block. Fill in all required fields of form DT1502, including Type of Work (found at bottom of page). Also, enter Project Description field information exactly as it is shown on the plan's Title Sheet and in FIIPS. Refer to [FDM 19-10-25](#) for further guidance.

20. Time Completion Chart. The contract completion time provided on the time completion chart, i.e. the number of working days, the number of calendar days, or a completion date, must agree with what is stated on the Highway Work Proposal. For further guidance, refer to [FDM 19-10-30](#).

21. Inserts.

- After submittal of the PS&E all changes to the special provisions shall be made with an insert.

Please do not resubmit a revised set of special provisions without prior approval

- If changes are needed in say one paragraph of an article, just send in the paragraph as an insert in which there are changes. If minor changes are needed throughout the entire article, send in the entire article as an insert and highlight the changes needed.
 - If an insert includes adding an STSP, simply give direction to add the STPS. Do not past the entire STSP in the insert. If a portion of the STSP is being modified, indicate the modification only in the insert.
 - For further guidance on e-submitting inserts, refer to [FDM 19-10-1](#).
22. Questions? Contact the Special Provisions Engineer at 608.266.3811.

Also refer to [FDM 19-40 Exhibit 1.2](#) Standard Detail Drawings (Examiner's List).