



Urban and Arterial Highway Program

Jerome Casey, Program Manager
624-3344

Memorandum

To: Urban & Arterial Highway Program Designers
cc:
From: George Macdougall, Design Support Engineer
Date: July 15, 2002
Subject: Special Provisions and Supplemental Specifications -
Process and Guidelines

Attached are processes for both Special Provisions and Supplemental Specifications. Also included are guidelines for writing and formatting specifications with example specifications attached.

Some confusion exists as to the definitions of Special Provisions and Supplemental Specifications. Compounding the confusion is the existence of two types of Special Provisions, commonly used and project specific.

There are references to the following people in these processes:

Contract Coordinator - This is Steve Levesque for U&AHP.

Specifications Engineer - This is Scott Bickford for the Department and is part of the Contracts Section.

Design Support Engineer - This is George Macdougall for U&AHP.

The Standard Specifications define the following terms;

PLANS;

The approved plans, profile, typical cross sections, working drawings, and supplemental drawings or exact reproductions thereof, which show the location, character, dimensions, and details of the work to be done.

STANDARD SPECIFICATIONS:

A Specification that has been adopted by the department as a standard to do work by and appears in the printed book of Standard Specifications

SUPPLEMENTAL SPECIFICATIONS;

Additions and revisions to the Standard Specifications that are adopted subsequent to issuance of the printed book of Standard Specifications

SPECIAL PROVISIONS;

Additions and revisions to the Standard Specifications and Supplemental Specifications covering specific conditions on an individual project.

A commonly used Special Provision is a specification that will always be used such as SECTION 107, RELATIONS WITH AND RESPONSIBILITY TO PUBLIC (Soil Erosion and Water Pollution Control) or a specification used whenever a particular item is called for such as SECTION 606, GUARDRAIL (Bridge Transition). Special Provisions like these are very close to Supplemental Specifications. A few reasons why they are not Supplemental Specifications is that some or all of the Special Provision is prone to changes or the possibility exists that it may be discontinued in the future.

A project specific Special Provision is used given a certain requirement or condition on a particular project warrants such individual specifications. A typical example is a utility Special Provisions.

The importance of good specifications cannot be overstated. For example, Special Provisions govern over the Plans which govern over Supplemental Specifications, which govern over Standard Specifications.

Attachments

MAINE DEPARTMENT OF TRANSPORTATION

BUREAU OF PROJECT DEVELOPMENT

URBAN AND ARTERIAL HIGHWAY PROGRAM

GUIDE FOR PREPARING

SUPPLEMENTAL SPECIFICATIONS

&

SPECIAL PROVISIONS

FOR

CONSTRUCTION CONTRACTS

FOR USE WITH THE STANDARD SPECIFICATIONS

SUPPLEMENTAL SPECIFICATIONS PROCESS

1. Determine need for Supplemental Specifications.
2. Engage team members, designers and other resources as necessary.
3. Review existing Supplemental and Special Provisions. A workable specification may have been previously developed or one may be available that would serve as a good “go by”. The Specification Engineer maintains a database for commonly used Special Provisions and Supplemental Specifications.
4. Develop draft copy of Supplemental in its proper format and attach a brief synopsis.
5. Distribute for review and comment to appropriate resources and Design Support Engineer.
6. Adjust Supplemental if necessary.
7. Distribute Supplemental to the Contracts Coordinator. He will make the proper distribution for review and comment.
8. The Supplemental Specification will be adjusted by the Contracts Section, Specification Engineer and the author(s).
9. Distribute to appropriate personnel.
10. The Specification Engineer will distribute to FHWA to seek concurrence, after which the Supplemental will be input into the database.

SPECIAL PROVISIONS PROCESS

Determine need for Special Provision.

1. Determine need for Special Provision.
2. Determine if Special Provision is project specific or will be commonly used.
3. Engage appropriate team members, designers and other resources as necessary.
4. Review existing Special Provisions. A workable Special Provision may have been previously developed or one may be available that would serve as a good “go by”. The Specification Engineer maintains a library of project specific Special Provisions and a computer database for commonly used Special Provisions and Supplemental Specifications.
5. Develop draft copy of the Special Provision in its proper format and attach a brief synopsis.
6. Distribute for review and comment to appropriate resources and the Design Support Engineer.
7. Adjust Special Provision if necessary.
8. Distribute Special Provisions for review and comment to Contract Coordinator, appropriate Bureaus, Programs and/or Sections.
9. Adjust Special Provision if necessary.
10. Distribute to resources so they will have a copy for future reference.
11. Distribute to Contracts Section. If the Special Provision is project specific it should be submitted with the PS&E package. If it is a new or revised commonly used Special Provision it may be included in the PS&E package, if it is to be used on a project at that time, or it may be submitted independently if it is to be used on future projects. In either case, commonly used Special Provisions should be flagged so that the Specification Engineer can include them in the computer database and make distributions for their future use.

PROCEDURE FOR PREPARING
SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS

Since many individuals are contributing to the Specifications, the following will help obtain uniformity.

1. When typing the final copy, use the same arrangement and form as that of the Standard Specification; i.e. Description, Materials and Construction Requirements.
2. Use the correct designation, i.e., "Supplemental Specification" or "Special Provision". The order of precedence is important and is clearly defined in the Standard Specifications.
3. Leave at least 1-inch margin on each side of the page. This is important since the pages are bound and must be able to be read easily.
4. The heading at the top of the page of Supplemental Specifications should be arranged as follows:

October 1, 1981

SUPPLEMENTAL SPECIFICATION
SECTION 304
AGGREGATE BASE AND SUBBASE COURSE

5. The heading at the top of the page of Special Provisions should identify the project and should be arranged as follows:

Town
Project
October 1, 1981

SPECIAL PROVISION
SECTION 603
PIPE CULVERTS AND STORM DRAINS
(Bedding)

6. If the Supplemental Specification or Special Provision supersedes one previously written, the following information should be included in the upper right hand corner directly under the current date.

October 1, 1981
Supersedes 603
7/27/78

7. If diagrams and charts are used, they should be identified in the same manner as a written Supplemental Specification or Special Provision.
8. The initial of the author should be shown in the lower left hand corner of the last page.
9. Multiple page Specifications or Special Provisions should be numbered at the bottom center of each page. Such as "1 of 3".
10. A copy of all Supplemental Specifications and Special Provisions should be sent to the Specification Engineer.

IMPORTANT QUALITIES TO CONSIDER WHEN WRITING SPECIFICATIONS

Important qualities in a specification are:

1. Fairness
2. Clearness
3. Completeness
4. Correctness
5. Economy

1. Fairness: A specification should not be designed to “get something for nothing” by concealing its content. It is not fair to attempt to put all risks on the Contractor. Requirements must be realistic and represent what is practical to obtain for adequate quality.

Unfairness can also arise from the use of indefinite phrases, such as, “as the Engineer may direct”, “acceptable” and “as required”. Such language places the Contractor at the mercy of the Engineer. There may be occasions when they may be used, but this should be restricted to situations such as color or location determinations or other factors not involving costs to the Contractor.

2. Clearness: It is important that specifications be expressed in clear language. The language should be brief and to the point.
 - (a) Use simple words and terms of a single meaning.
 - (b) Use technical words in their exact meaning.
 - (c) Use terms in their common or local meaning.
 - (d) Use nouns; not pronouns. Repeat the word at the sacrifice of elegance.
 - (e) Use the same word throughout; never synonyms. Do not say “building” in one place and “house” in another when you refer to the same thing. Also do not use the same word with different meanings.
 - (f) Use short sentences. The language must be clear and unmistakable.
 - (g) Give directions, not suggestions. Do not say more than is necessary. Say exactly what you mean and only what you mean.
 - (h) Use commas sparingly. If changing the location of a comma changes the meaning, rewrite the sentence.
 - (i) Dimensions and sizes should not be included in the Specification if they can be shown on the plans. Do not repeat information which is given on the plans.

3. **Completeness:** Except for information set forth on the plans or standard drawings, the specifications must be complete and should describe its subject matter thoroughly. If the specification is silent as to a requirement, the Contractor cannot be expected to meet that requirement without additional payment. However, it must be also realized that it is not practical to cover all unimportant details or to provide for every possible contingency.

Completeness need not be carried to the point of exhaustiveness since a specification is not meant to be a complete treatise on the subject and is not the proper place for the writer to disclose all he knows about the subject.

Avoid whims and personal requirements. The reason for a requirement need not be included in specifications. This leads to disputes between the Engineer and the Contractor.

4. **Correctness:** It is the specification writer's responsibility to include the really essential characteristics of the subject matter along with realistic numerical limits, if such limits are required. The fact that a specification has been in force for a number of years does not necessarily assure technical adequacy.

All references and cross references should be checked for correctness, conflicts and omissions. Check AASHTO and ASTM Specification references for the correct numbers.

5. **Economy:** A practical specification is one that assures the highest dollar value of the resulting construction. Every requirement has some direct or indirect cost associated with it. Whenever specifications are written or revised, each requirement should be scrutinized with respect to its effect on cost.

Every specification item should be studied with a review to eliminating non-essential requirements and permitting the use of new materials, methods and equipment.

LIST OF PREFERRED USAGE

The following is a list of preferred word usage.

1. “Linear” not “lineal”.
2. “Amount” refers to money, “quantity” refers to material.
3. “Said” - do not use as an adjective such as “said aggregate”, instead, use “this” or “these aggregates”.
4. “Same” - do not use as a pronoun such as “connected to same”, instead, if necessary, use “it”, “them”, or a similar pronoun.
5. “And/or” - do not use this term, instead, say “.... or Or both” or some other phrase.
6. “Etc.” - do not use in the specification.
7. “Must” and “shall” - do not use interchangeably. Generally, “shall” is used in the Maine specification.
8. “Shall” and “will” - “shall refers to what the Contractor is required to do. “Will” refers to what the “State” will do.
9. Do not omit articles. Do not say “Contractor shall scarify sub-grade”; say “The Contractor shall scarify the sub-grade”.
10. “Any”, “all” - do not say, “The Contractor shall correct any defects”; instead, say “The Contract” shall correct “all defects”.
11. “Either”, “both” - “either” implies a choice; “both” means one and the other.
12. Use the word “amended” when making an addition. Example: “This subsection is amended by the addition of the following:”.
13. Use the word “revised” when changing existing procedures or requirements. Example: “This subsection is revised to read as follows”:
14. Do not use such words as, “properly” or “adequate”. These words are too indefinite.
15. “Insure”, “ensure” and “assure” all mean “to make certain”; for uniformity, use “assure” in the Maine specification.
16. Do not use foreign words or phrases, such as “in lieu of”.
17. Do not use parentheses or underline phrases in the text. No requirement should be considered more important than others.

18. Numbers should be written numerically, except at the beginning of a sentence
19. Don't use trite phrases such as: "it shall be incumbent upon", use "shall", "by means of", use "by".
20. Cross references to Sections should include both the Section number and the Title. Refer to Subsections by number only. Such as "Section 310 Bituminous Stabilized Base" or "Subsection 310.04".
21. Symbols: In general do not use symbols except in tables - instead write out the whole word.

#	number
%	percent
"	inch
'	foot
°	degree when referring to angle
°	use °C, when referring to degrees temperature
+	plus
-	minus
"	minute
'	second
2 x 4"	2 by 4 inches

March 1, 1993

SPECIFICATION STANDARDS

1. A header will be used on all pages to assist with identification during handling and filing.
 - The header on page 1 will remain the same.

Supplemental &
Common Special Provisions:

January 28, 1992
Supersedes
December 10, 1991

Project Specific:

Sandy Bay
033-2(1)
February 22, 1993

- A header will be used on additional pages using the following format and is to be located in the upper right corner of the page.

Supplemental &
Common Special Provisions:

Section 503
January 28, 1992

Project Specific:

Sandy Bay
Section 652
February 22, 1993

2. If the specification is greater than one page, pages will be numbered "1 of 3", "2 of 3", "3 of 3", for example.
3. When changes are made to supplemental and common special provisions, the changes are to be made in bold type and vertical lines are to be drawn in both the left and right margins. This will help to quickly identify changes to designers, residents and contractors. Both margins should contain the vertical lines as most specifications are printed back to back which alternately binds each margin.
4. The authors and typists initials are to be placed at the end of the specification.
5. The document's computer name is to be placed under the initials to assist with locating the document in the future.

November 1, 1995

COMMONLY USED

SPECIAL PROVISION
SECTION 606
GUARDRAIL
(Bridge Transition)

Description. This work shall consist of furnishing and installing guardrail components and their attachment to a concrete or steel bridge rail system.

Material. All materials shall conform to the requirements of the Standard Specifications and shall be of the same type as the remainder of the guardrail system.

Construction Requirements. All components shall be installed in accordance with the Standard Specifications and Standard Details at locations shown on the plans or as directed. Additional bolt holes required in the guardrail beams shall be formed by a method approved by the Engineer. Holes shall not be burned.

Method of Measurement. Each installation will be measured for payment as one unit, complete in place and accepted.

Basis of Payment. Bridge Transitions will be paid for at the contract unit price for each installation. Such payment will include furnishing and installing the thrie beam or W-beam terminal connector, doubled beam section and transition section where called for, posts hardware and any other necessary materials and labor, including the attachment to the bridge rail system required to satisfactorily complete the work.

Payment will be made under:

Pay Item		Pay Unit
606.1721	Bridge Transition - Type "1"	Each
606.1722	Bridge Transition - Type "2"	Each

DMDbrdes
bcku- spec dist #2

All Contracts

COMMONLY USED

January 21, 1993

Supersedes

August 5, 1991

SPECIAL PROVISION
SECTION 107
RELATIONS WITH AND RESPONSIBILITY TO PUBLIC
(Soil Erosion and Water Pollution Control)

A resource or resources, which are governed by the requirements of the recently amended Maine Natural Resources Act (38 MSA 480-A et seq.) and the Federal Clean Water Act (Section 404), are affected by construction activities of this project. Additional requirements for erosion and pollution control to protect these resources are contained herein.

Within these affected areas, requirements of this Special Provision shall govern over requirements of the Standard Specifications.

In the event of conflict between this Special Provision and other erosion and pollution control laws, rules or regulations of other Federal, State and local agencies, the more restrictive laws, rules or regulations shall apply.

The entire project is governed by the requirements of this Provision except when specific resource areas are identified on the plans or elsewhere in these Special Provisions. The requirements of this Provision shall apply to only specific resource areas, when identified, and not the entire project.

ENVIRONMENTAL STANDARDS

The standards described below shall be met within the resource areas on the project.

The standards are designed to insure that the construction will not unreasonably:

- a. interfere with any existing recreational or navigational uses;
- b. cause erosion of the soil or siltation of the water;
- c. interfere with the natural flow of water;
- d. harm any wildlife or fish habitat; and
- e. degrade water quality

Belgrade
F-BR-032P(27)
April 18, 1995

PROJECT SPECIFIC

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Existing Structure Modifications)

Description. This work shall consist of the reconstruction of the concrete and granite retaining walls of the existing dam over Great Pond Outlet.

Construction Requirements. All work shall be in conformity with applicable requirements of Section 502 of the Standard Specifications, Supplemental Specifications, and Special Provisions. New construction shall match into the existing walls as shown on the contract Plans, with existing wall removal and reconstruction kept to a minimum as directed by the Engineer. The respective concrete or granite walls shall be rebuilt in kind using existing reinforcing steel or granite blocks, as appropriate.

Method of Measurement. Existing Structure Modifications will be measured for payment by the lump sum, consisting of all work required to reconstruct the existing retaining walls.

Basis of Pavement. Existing Structure Modifications will be paid for at the contract lump sum price, which price shall be full compensation for furnishing all labor, materials, equipment, and incidentals required to complete the work. Removal of the existing concrete or granite will be paid for under Item 202.19, Removing Existing Bridge.

Pavement will be made under:

Pay Item		Pay Unit
502.36	Structural Concrete Existing Structure Modifications	Lump Sum

PLHbrdes
Harddrive

May 5, 1995

SUPPLEMENTAL SPECIFICATION
SECTION 627
PAVEMENT MARKING

Section 627 - Pavement Markings is amended as follows:

627.09 Method of Measurement. Replace the first paragraph with the following:

Longitudinal lines parallel to the centerline of the roadway will be measured by the meter (linear foot) along the centerline stationing of the roadway. Other lines will be field-measured or computed. Double-yellow centerline, broken or solid, shall be considered to be one line for measurement purposes. The measurement of broken lines will include the gaps when painted and will not include the gaps when plastic. All other pavement markings will be measured by the square meter (square foot).

627.10 Basis of Payment. Replace the final paragraph, which consists of Pay Items, with the following:

Pay Item	Metric United	Pay Unit
627-61	100 mm White Pavement Marking Line	meter
627.62	150 mm White Pavement Marking Line	meter
627.63	100 mm Yellow Pavement Marking Line	meter
627.64	150 mm Yellow Pavement Marking Line	meter
627.65	White or Yellow Pavement and Curb Marking	square meter
627.67	Removing Pavement Markings	square meter
627.68	Temporary 100 mm Painted Pavement Marking Line, White or Yellow	meter
627.681	Temporary 150 mm Painted Pavement Marking Line, Yellow or White	meter
627.69	Temporary 100 mm Plastic Pavement Marking Line, Yellow or White	meter
627-691	Temporary 150 mm Plastic Pavement Marking Line, Yellow or White	meter

Pay Item	Metric Units	Pay Unit
627-61	4-inch White Pavement Marking Line	Linear Foot
627.62	6-inch White Pavement Marking Line	Linear Foot
627.63	4-inch Yellow Pavement Marking Line	Linear Foot
627.64	6-inch Yellow Pavement Marking Line	Linear Foot
627.65	White or Yellow Pavement and Curb Marking	Square Foot
627.67	Removing Pavement Markings	Square Foot
627.68	Temporary 4 inch Painted Pavement Marking Line, White or Yellow	Linear Foot
627.681	Temporary 6 inch Painted Pavement Marking Line, Yellow or White	Linear Foot
627.69	Temporary 4 inch Plastic Pavement Marking Line, Yellow or White	Linear Foot
627-691	Temporary 6 inch Plastic Pavement Marking Line, Yellow or White	Linear Foot