

WMATA Specification Preparation

STYLE AND USAGE GUIDE

1.01 GENERAL: For the WMATA facilities construction contracts, the specifications format adopted for use by WMATA follows a modified 1995 Construction Specifications Institute, Inc. (CSI) Format. Style and usage follow the rules of correct English grammar in addition to the guidelines established by this Style and Usage Guide. The rules and examples contained herein are provided to ensure uniformity and consistency among the WMATA Standard Specifications, Contract Specifications (contract-specific edits made to WMATA Standard Specifications), and Final Design Specifications prepared by WMATA staff, designers, and Design-Builders. A list of books on the subject of style and usage appears at the end of this Section.

1.02 FINAL DESIGN DOCUMENTS

- A. Division 0 – This division shall contain the Introductory Information, Proposing Requirements and Contracting Requirements.
- B. Division 1 – General Requirements: Division 1 Sections are generally applicable to the work of all construction contracts. However, because additional information and modifications are usually required, Division 1 must be specifically modified for each contract.
- C. Divisions 2 through 16 – Technical Specifications: The WMATA Standard Specifications issued under these 15 Divisions contain the specific requirements for the construction materials and methods that are unique to WMATA. They shall not be subject to change. The Design-Builder shall conform to these Sections. The Technical Specifications not issued shall be developed by the Design-Builder using MasterSpec®, published by ARCOM for The American Institute of Architects (AIA), as a guide.
 - 1. The WMATA Standard Specifications for Divisions 2 through 16 represent the specification requirements to be used unless jurisdictional codes and regulations are more stringent, in which case the codes and regulations shall govern. The WMATA Standard Specifications have been prepared to serve as standard requirements for products and execution requirements for all WMATA projects and are not specifically edited for the Project. The Design-Builder shall incorporate the WMATA Standard Specifications without edits into the Design Specifications, and shall clearly reflect the specified products on the Design Drawings to establish which WMATA Standard Specification products shall be used on the Project.

1.03 REFERENCE STANDARDS

- A. Specify material and equipment by the use of reference standards or by generic names, basic criteria requirements, or performance specifications. Specify quality of work by reference standards, the recommendations of the product manufacturer, or the required end-result.
- B. Wherever possible, use established industry standards and test methods prepared by organizations such as ASTM, AASHTO, ANSI, NEMA, and Federal and Military Specifications and Standards to establish type and quality of materials and installation. Where specification standards are referenced, indicate the specific requirements, such as size, type, rating, class, quality, grade, and finish that are provided by the standard as required to make the specified product, test method, or installation accurate and complete. In accordance with Section 01420, REFERENCES, the latest versions, amendments, etc. of the referenced standards shall apply at the date of the Award unless otherwise indicated.

- C. In the Final Design Specifications, do not repeat language from the reference standard. If, for example, a cited test method contains information necessary to perform the test, no further amplification is necessary. However, if additional requirements are necessary, or if the referenced standard permits options, specify them without repeating the text of the cited test method.

1.04 THIRD PARTY STANDARDS: The General Requirements describe requirements for compliance with both reference and Third Party standards. The WMATA Project Manager will identify to the Designer what areas of the project are governed by Third Party standards. The Designer or Design-Builder shall ensure that Final Design Specifications and Final Design Drawings clearly communicate components of work that shall comply with Third Party standards. To that end, the Designer or Design-Builder should pay particular attention to the Final Design Specification Sections that make reference to local jurisdictional authorities and their requirements and cite those requirements in the Contract Documents.

1.05 PERFORMANCE SPECIFICATIONS: When a performance specification is written, it should be complete in defining quality, function, durability, and other requirements, as well as listing options, if any, that are to be allowed. Describe each part of the product as clearly and briefly as possible. The use of a performance specification may require samples, tests, certifications, and other evidence to verify compliance. Avoid specifying requirements for both means of fabrication or installation and expected results.

1.06 REFERENCES: Minimize cross references, and be specific. In citing a reference standard, a reference to a particular Article will limit the requirement to the specific Article cited. Conversely, a general reference to a complete reference standard, will invoke every requirement contained in the reference. Refer to all lettered or numbered paragraphs and subparagraphs as Articles. Where reference is made to an Article, follow the examples listed below.

- Reference to Article of Final Design Specifications Section Section 02300, Earthwork, Article 1.02B.2

or

Article 1.02B.2 in Section 02300, Earthwork
- Reference to Article within the same Final Design Specifications Section Article 1.02B.2 herein

1.07 STYLE

- A. Specifications shall be written in the indicative mood and imperative mood as appropriate. (The indicative and imperative grammatical moods of sentences are defined in CSI's Manual of Practice.) Imperative language is directed to the Contractor and is the recommended method for instruction covering installation of products and equipment. "Streamlining" may be employed where appropriate, primarily in Part 2, Products. (Streamlining is the use of the colon (:)) for the words: shall be, shall have, shall conform to, shall comply with, or shall meet the requirements of. Example: "A. Portland Cement: ASTM C150, Type II, low alkali."
- B. The specifications are written between WMATA (Authority or Contracting Officer Representative) and the Contractor or Design-Builder. When it is necessary to distinguish an action of the Contractor or Design-Builder from an Authority or Contracting Officer Representative action, use "Contractor shall," Design-Builder shall," "WMATA will," or "the Contracting Officer Representative will." "May" is permissive and should be used only for

acts, which the Design-Builder may or may not perform at its option, without concurrence of the Contracting Officer Representative. In every other case, use the imperative form to direct the Design-Builder. However, the Specifications must state "use x or y" where the selection from two or more specified materials or methods is optional.

- C. There are only two parties to the Contract: WMATA (Authority), as represented by Contracting Officer Representative, and the Contractor or Design-Builder. Generally, all references in the Final Design Specifications should be made only to Contracting Officer Representative, the Contractor or the Design-Builder. References to "others" are applicable when referring to work to be performed by contractors or agencies not a party to the Contract. Wherever possible, the "others" referred to should be identified.
- D. Materials that do not meet FTA's Buy America requirements (100% materials/manufacturing processes in the U.S.) must be brought to the attention of WMATA for approval prior to inclusion in the specifications.
- E. Limitations on the use of Brand Names. If Brand Names are used, three are preferred, two would be acceptable, a single source reference is NOT acceptable unless prior approval is obtained from the Authority. Add "or approved equal" after citing Brand Names (not "or equal").
- F. "As Approved by the Contracting Officer Representative", "subject to the Approval of the Contracting Officer Representative", and "as required by the Contracting Officer Representative", are vague statements and are generally used when the writer is uncertain how or to what level a portion of the work is to be performed. Use these statements only when necessary for clarity as all work on the project is subject to the acceptance of the Contracting Officer Representative. Standards, tests, or submittals applicable to the Contracting Officer Representative's decision regarding an alternative should be stated.
- G. Always use the plural, "these Specifications", instead of "this Specification". The phrase "in accordance with these Specifications" is generally not necessary; all work must be in accordance with the Specifications.
- H. Quality of work should be "in accordance with" and materials should "conform to" or "comply with" a referenced specification.
- I. Do not state "at no cost to the Authority", or "at the Contractor's or Design-Builder's expense", unless there is a definite possibility of misunderstanding, such as who pays for testing. The use of these phrases may imply that the other work specified is not at the Contractor or Design-Builder's expense.
- J. Use "option" when the intention is specifically to reserve a choice to the Contractor or Design-Builder. Use "alternative" where the Contracting Officer Representative or the Authority retains control of the decision. Do not use "alternate" for either of these cases; it has a completely different meaning.
- K. Do not use "and/or". It has no definite meaning and is subject to misinterpretation.
- L. "Includes" and "consists of" are not interchangeable. Use "consist" when a fixed quantity or list of requirements is needed (i.e., "The data submitted consist of. . ."). However, use "include" when a list of major items or minimum requirements, with a clear understanding that additional elements or requirements exist or may be provided (i.e., "the work includes. . ." or "the submittal includes at least the following. . ."). The proper use of these terms, either to restrict ("consist") or not restrict ("include"), will preclude the need to use the phrase "but not necessarily limited to".

- M. Do not use indefinite words such as "good workmanship", "adequate", "reasonable", "satisfactory", "generally", "workmanlike", "best commercial quality", and "standard practice" when a more exact word can be substituted or when a standard should be specified.
- N. In reference to the Work to be performed by the Contractor, the word "provide" or "provided" shall be understood to mean furnished and installed complete in place. The word "indicated" shall be construed to mean as shown on the Final Design Drawings, as described in the Final Design Specifications, or as required by the other Final Design Documents, including documents developed by the Design-Builder. Use these words in those contexts wherever possible.
- O. Use consistent nomenclature and terminology within the Final Design Specifications Sections and among the various Contract Documents.
- P. When using words or phrases listed in Article 00701, Definitions, of the General Conditions, it is intended that they be capitalized throughout the Contract Documents.

1.08 VOCABULARY

- A. Words should be carefully selected and used for precise meaning. Once a word is selected, use it consistently throughout the specifications whenever the same meaning is intended. The following are some examples of commonly misused or ambiguous terms along with guidelines for their recommended usage in specifications.
 1. *Amount and Quantity*: The word *amount* should be used when writing about money. The word *quantity* should be used when writing about number, linear measure, area, or volume.
 2. *Any*: The word *any* is imprecise in number, permitting discretion by the reader. "Repair any cracks" could mean some cracks selected by the contractor, while "repair cracks" means all cracks.
 3. *And, Or, And/Or*: The word *and* connects elements that are to be taken jointly. It may also mean plus or added to the preceding quantity. *Or* is used to introduce any of the possibilities in a series. The two words together (*and/or*) represent a hybrid term often used in legal and business documents as a grammatical shortcut. The term *and/or* is not recommended for specifications.
 4. *Balance and Remainder*: The word *balance* should be used when writing about money. The term *remainder* is preferred for "that which is left over."
 5. *Either and Both*: The word *either* implies a choice between two options, while the word *both* is all inclusive. Make clear whether the intent is to have "glass sidelights on either side of the door," or to have "glass sidelights on both sides of the door."
 6. *Flammable and Inflammable*: These words have exactly the same meaning, even though they sound opposite. The word *flammable* is preferred.
 7. *Furnish, Install, and Provide*: *Furnish* means to supply and deliver to project site, ready for installation. *Install* means to place in position for service or use. *Provide* is commonly accepted in specifications to mean furnish and install, complete and ready for intended use.
 8. *Insure, Assure, and Ensure*: To *insure* is to issue or procure an insurance policy. *Assure* is to give confidence to or convince a person of something. *Ensure* is to make certain in a way that eliminates the possibility of error.
 9. *Observe and Supervise*: *Observe* means to watch or view the execution or performance of work, while *supervise* means to oversee and to have control and direction of the work.
 10. *Party and Entity*: The work *party* refers to a signer of a contract, such as the owner and contractor in an owner-contractor agreement. When the intent is to include persons or firms, such as subcontractor, and others who are involved in the

construction process, but are not signers of the contract, the generic term *entity* should be used.

11. *Replace and Provide New*: The term *replace* can be construed as requiring reinstallation of removed materials rather than furnishing and installing *new* materials. Be specific as to what is required.
12. *Shall and Will*: Shall is used as an indicative in reference to the work required to be done by a Design-Builder or Contractor. Will is optional and is used in connection with acts and actions required of WMATA (the Authority) or the Contracting Officer Representative. The words “*must*” and “*is to*” are not recommended.

1.09 GRAMMAR

- A. Subject/Verb Agreement: The subject and the verb must always agree in number. Singular verbs should be used with singular subjects and plural verbs with plural subjects. An error in number is easy to make when a sentence is long and complicated. The singular subject of a sentence can be confused with a plural modifier.

1. *INCORRECT*: One of the elongated central fasteners are to be placed around the eye of the panel and bolted.
2. *CORRECT*: One of the elongated central fasteners shall be placed around the eye of the panel and bolted.
3. *PREFERRED*: Bolt one elongated central fastener to panel eye.

The incorrect example uses the singular subject “one” with the plural verb “are.” The grammatically correct example has number agreement between subject and verb, but is an involved, and relatively verbose sentence. The preferred language has number agreement, and is a simple, direct statement of instruction, i.e., clear, correct, complete, and concise.

- B. Parallel Construction: Good grammar also requires the use of identical style in both parts of a compound subject or predicate. The use of identical style in a series of nouns, adverbs, or prepositional phrases is also recommended.

1. *INCORRECT*: Tests shall be performed to determine strength and establishing qualities.
2. *CORRECT*: Tests shall be performed to determine strength and to establish quality.
3. *PREFERRED*: Perform tests to determine strength and to establish quality.
4. *INCORRECT*: Heating, ventilation, and air conditioning.
5. *CORRECT AND PREFERRED*: Heating, ventilating, and air conditioning.

- C. Inappropriate Terms: Avoid using phrases that have missing “objects”:

1. As allowed
2. As appropriate
3. As approved
4. As directed
5. As indicated
6. As necessary
7. As required

- D. Avoid these Adverbs:

1. Hereinafter
2. Hereinbefore
3. Herewith
4. Wherein

E. Avoid these Articles:

1. Any or all
2. Such

F. Avoid these Words and Expressions:

1. Etc.
2. As per
3. In a workmanlike manner
4. To the satisfaction of the Contracting Officer Representative
5. Shall function as intended

G. Pronoun Preference: The use of pronouns in specifications should be minimized or avoided. Repeating the noun is better than risking possible misunderstanding.

1. *INCORRECT*: Apply coating with pneumatic equipment when it is above 40⁰F.
2. *CORRECT*: Maintain pneumatic equipment above 40 degrees F. **or** apply coating only when ambient temperature is above 40 degrees F.

Which and other relative pronouns should be used sparingly, if at all. Following is an example:

1. *POOR*: Contractor shall install bathroom accessories that are to be purchased under an allowance.
2. *CORRECT*: Contractor shall install bathroom accessories to be purchased under an allowance.
3. *PREFERRED*: Install bathroom accessories purchased under allowance specified in Section 01020.

The word *same* should not be used as a pronoun.

1. *POOR*: If materials are rejected, the Contractor shall replace same at no additional cost.
2. *CORRECT*: Contractor shall replace rejected materials.
3. *PREFERRED*: Replace rejected materials.

H. Unnecessary Words:

The: Definite article *the* and indefinite articles *a* and *an* need not be used in most instances.

1. *POOR*: Apply an oil paint with a brush to the wall.
2. *CORRECT*: Apply oil paint with brush to walls.

All: The use of the word *all* is usually unnecessary.

1. *POOR*: Store all millwork under shelter.
2. *CORRECT*: Store millwork under shelter.

Contractor: Avoid using *Contractor* as the subject of the sentence.

1. *POOR*: Contractor shall lay brick in common bond.
2. *CORRECT*: Brick shall be laid in common bond.
3. *PREFERRED*: Lay brick in common bond.

- I. Prepositional Phrases: Sentences may be shortened in specification language by using modifiers in place of prepositional phrases.
 1. CORRECT: Top of platform.
 2. PREFERRED: Platform top.
 3. CORRECT: Within the time recommended by manufacturer.
 4. PREFERRED: Within manufacturer's recommended time limit.

1.10 PUNCTUATION AND CAPITALIZATION: Use standard English punctuation to convey the specification requirements clearly and to ensure uniform interpretation by all persons reading the specifications. Omit punctuation if it does not clarify the text. Use standard capitalization for the first word of a sentence; proper nouns; entities and agencies; titles; names and trademarks; and names of days, months, and holidays. Commas should be used after each item in a series, including the item preceding a conjunction, and in other locations where the clarity of the statement will be improved.

- A. Capitalize the following words and phrases when used in the Contract Documents. In general, capitalize words and phrases defined in the General and Supplementary Conditions:

| | |
|--|------------------------------------|
| Article (of the Specifications) | Reference Utility Standards |
| Contract (referring to subject Contract) | Contracting Officer Representative |
| Contract Documents | Section (of the Specifications) |
| Contractor or Design-Builder (a party to the Contract) | Supplementary Conditions |
| Final Design Drawings | State (of Maryland for example) |
| Final Design Specifications | Substantial Completion |
| General Conditions | |
| Government (U.S.) | |
| Notice of Award | |
| Notice to Proceed (NTP) | |
| Part (of the Specifications) | |

- B. Capitalize abbreviations for agencies and entities as specified in the General Conditions.
- C. Capitalize names and titles of Sections, Articles, Exhibits, and Appendices within the Contract Documents.

1.11 SPELLING

- A. Spelling should be correct and consistent, based on a particular dictionary designated as the office standard for spelling. A supplemental list of technical terms may also be needed for words not contained in the dictionary selected as the standard.
- B. In those cases where two spellings are considered equally correct, the shorter of the two spellings is preferred for use in contract documents (e.g. *calk* not *caulk*, *facia* not *fascia*, *gage* not *gauge*, *molding* not *moulding*, and *catalog* not *catalogue*). However, unacceptable spellings produced by attempts at brevity or simplification should be avoided (e.g. *thru* instead of *through*).

1.12 ABBREVIATIONS

- A. Identify abbreviations used only in one Section either at the beginning of that Section or at the first place they are used in that Section. Do not abbreviate words used only once or twice, or at widely spaced intervals. Avoid the use of abbreviations, which may have two or

more meanings, such as "pf", for "power factor", "point of frog", "perfect", "preferred", and "picofarad". Do not include abbreviations that are used only on the Drawings.

- B. Do not use "et cetera" or "etc.". This term conveys no meaning and has no precise definition in specifications. Where an indefinite listing is required, state "...including such items as nuts, bolts, and lockwashers" rather than "...nuts, bolts, etc."
- C. Avoid the use of abbreviations that provide little saving in typing, such as "in." in lieu of "inch" or "inches", and "ft." in lieu of "foot" or "feet".

1.13 NUMBERS: Spell out numbers one through nine. Express number 10 and above in figures. Use only figures when numbers represent dimensions (i.e. length, mass, and time.). When numbers are in sequence, use one form for all such as "eight, nine, and ten", or "9, 11, 13, and 14" except as noted in paragraph 4.15D below.

- A. When numbers are used to define both size and quantity, the written word should be used for the quantity (e.g., three 1/2-inch holes; five 2 by 4s).
- B. Always use figures for dimensions, degrees for temperature, percent, and dollars and cents [e.g. 3 inches by 5 inches, 50 degrees F., 20 percent, \$5.50]. Clock times and dates should be expressed in figures [e.g., 2:10 p.m. on June 15 (omit the "th"), 2010. Exceptions to this are the use of the words "noon" and "midnight." Noon is not 12 noon, 12:00 noon, or 12:00 p.m.].
- C. It is unnecessary to use both numbers and figures, such as "two hundred (200)."
- D. Do not use typewriter characters for fractions. The character ¼, for example, is illegible on a bad copy and there is no way to make it consistent with fractions not on special keys, such as 3/8. Write out all fractions with full numbers and a virgule (/). "Three and one-half inches" should be written "3-1/2 inches". "Three one-half inch" holes should be written "three 1/2-inch".
- E. A zero should be used in front of the decimal for figures less than one; for example "0.13."
- F. Omit unneeded zeroes in time and money references (e.g., \$200 not \$200.00 and 9 pm not 9:00 p.m.).

1.14 SYMBOLS: Do not use symbols such as ", ', %, &, ° and # in specifications. Their use causes errors that may not be caught in proofreading. Write out "feet", "inches", "percent", "degrees", "and", and "pounds". The word "number" may be abbreviated "No." but not "#". An ampersand may be used where it appears in the name or corporate identification of a firm or agency, such as "American Telephone and Telegraph (AT&T)". Do not use a hyphen for "minus", "to", or "through" in data where it is also used as a spacing or separating device or where any question as to the exact meaning may arise.

1.15 EMPHASIS: Except for Section or Article headings and titles, do not use capital letters, quotation marks, and underlining in the body of the Contract Specifications to express emphasis. For sign or tag names (ON, OFF, AIR, for example), use all capital letters.

1.16 REPRESENTATIVE BOOKS ON STYLE AND USAGE:

- A. CSI Manual of Practice; Contract Specifications Institute, Inc., Washington, D.C.
- B. Style Manual; U.S. Government Printing Office, Washington, D.C.

- C. Webster's New Collegiate Dictionary: G. & C. Merriam Company, Springfield, Massachusetts.
- D. Writers Guide and Index to English; Porter G. Perrin, Scott Foresman & Company.