

Utah Department of Transportation



**Specification Writers' and
Drawing Developers' Guide**

2017 Edition



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**State of Utah
Department of Transportation**

Specification Writers' and Drawing Developers' Guide

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Introduction and Contacts

This Specification Writers' and Drawing Developers' Guide (Guide) was developed by the Utah Department of Transportation (UDOT), Project Development, Preconstruction, Standards Section.

Drawing requirements are new for the 2017 Edition. The title of the Guide was updated with the addition of these new requirements.

This Guide provides instructions for specification writers contributing to the UDOT *2017 Standard Specifications for Road and Bridge Construction*, Supplemental Specifications, and Special Provisions and drawing developers contributing to the UDOT *2017 Standard Drawings for Road and Bridge Construction* and Supplemental Drawings. This information includes the UDOT approved guidelines for writing style, word and number usage, and formatting for both documents.

This Guide uses both "Department" and "UDOT" when referring to the Utah Department of Transportation. "Department" is the term used in contract language and "UDOT" is the acronym used for most other reference to the Utah Department of Transportation.

Only the Standards Section can waive or modify the requirements set forth by this Guide.

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Changes from the 2012 to the 2017 Edition

Refer to separate Mark Up version.

Chapter 1 - Overview

Specification Update

UDOT revised its Standard Specifications for the new 2017 Edition. The main purpose of a revision is to consolidate Special Provisions and Supplemental Specifications that have been written or revised since publication of the last edition. All 2012 Supplemental Specifications have been rolled into the 2017 drafts for all Standard Specifications.

Drawing Update

UDOT revised its Standard Drawings for the new 2017 Edition. The first purpose of a revision is to consolidate Supplemental Drawings that have been written or revised since publication of the last edition. All 2012 Supplemental Drawings have been rolled into the 2017 drafts for all Standard Drawings.

Overall Update

The overall purpose is to continue to improve clarity. This is accomplished in part through the use of writing that promotes consistency, clarity, completeness, correctness, and identifies the roles and responsibilities of all the parties involved in a contract. Specific changes and new requirements are addressed throughout this guide.

Disclaimer

The examples and directions in this guide represent the goal of the Department. The 2017 Standard Specifications and Drawings, Supplemental Specifications and Drawings, Department Special Provisions, and Division Special Provisions comply with this Guide. All other Special Provisions including Project Special Provisions are required to meet guide requirements. Guidance described herein applies to all items listed in the second sentence of this paragraph unless specifically annotated for a specific type or when the listed information is not appropriate for a drawing type.

Consult *The Chicago Manual of Style* (requires a subscription for use), the *United States Government Printing Office Style Manual*, any specialized sources cited within, or a recent standard dictionary of American English for questions not addressed here. The Web links to these two manuals can be found from the Standards and Specifications Section's Reference Web page under Specification Writer's and Drawing Developers' Guide References at <http://www.udot.utah.gov/go/standardsreferences>.

All examples cited in this guide are models for style, usage, and formatting. Do not consider them to be or use them as actual standards or portions thereof.

Chapter 2 - Specification Organization

Organization Hierarchy

Use the following hierarchy when writing the elements of any Standard Specification, Supplemental Specification, or Special Provision. Use the least number of subparagraphs needed. The hierarchy of each specification is as follows:

SECTION NUMBER
TITLE
PART (1, 2, or 3)
ARTICLE (such as, 1.1, 1.2, 2.1, 2.2, 3.1, and 3.2)
Paragraph (such as A, B, C under an article)

Example:

PART 1 GENERAL
1.1 ARTICLE
 A. Paragraph
 1. Subparagraph
 a. Subparagraph
 1) Subparagraph
 a) Subparagraph

Do not use Roman Numerals for paragraph numbering.

Do not use auto paragraph numbering. Manually type all paragraph numbers followed by a tab.

Use bullets for Subparagraphs beyond that listed above only if absolutely necessary.

Basic Elements

Sections

PART 1 GENERAL
PART 2 PRODUCTS
PART 3 EXECUTION

Use the following example if a part is not used within a section.

PART 2 PRODUCTS Not used
PART 3 EXECUTION Not used

Part

Part 1 requires these five standard articles:

- 1.1 Section Includes
- 1.2 Related Sections
- 1.3 References
- 1.4 Definitions
- 1.5 Submittals

Refer to Appendix 1 for specification layout and examples of “not used” articles for a Section. Begin numbering any other articles required for a Section article 1.6.

Format

Standard Specification

Section number – Heading 1, Centered, Arial, font size 12, bold, upper case.

Title – Heading 2, Centered, Arial, font size 16, bold, upper case.

Part – Heading 3, Arial, font size 12, bold, upper case.

Article – Heading 4, Arial, font size 12, bold, upper case.

See [Appendix 1](#) for example

Supplemental Specification

Use when a new section is added, a current standard is completely replaced, or a current standard is deleted:

Type two lines (See Appendix 2) – Normal, no Heading, Centered, Arial, font size 12, bold, initial caps.

Section number – Heading 1, Centered, Arial, font size 12, bold, upper case.

Title – Heading 2, Centered, Arial, font size 16, bold, upper case.

Instructions – Normal, no Heading, Arial, font size 12, bold. These instructions indicate whether the section is being added, deleted and replaced, or deleted.

Part – Heading 3, Arial, font size 12, bold, upper case.

Article – Heading 4, Arial, font size 12, bold, upper case.

See [Appendix 2](#) for example.

Partial section added, modified, or deleted:

Type two lines (See Appendix 2) – Normal, no Heading, Centered, Arial, font size 12, bold, initial caps.

Section number followed by an “M” – Heading 1, Centered, Arial, font size 12, bold, upper case. No space between the section number and the “M.”

Example: 02056M

Title – Heading 2, Centered, Arial, font size 16, bold, upper case.

Instructions – Normal, no Heading, Arial, font size 12, bold. These instructions indicate which part of the section is being added, deleted, or modified.

The following are used, as needed depending on the extent of the modification. Do not use heading levels for the following areas within this type of specification. Several examples are given to illustrate the typical formatting. Formatting may vary depending on the extent of the modification.

Part – Normal, no Heading, Arial, font size 12, bold, upper case.

Article – Normal, no Heading, Arial, font size 12, bold, upper case.

See [Appendix 3](#) for example.

Special Provisions

Formatting similar to both types of Supplemental Specifications except as follows:

Type – Normal, no Heading, Centered, Arial, font size 12, bold, upper case.

Project # – Normal, no Heading, Centered, Arial, font size 12, bold, upper case.

PIN # – Normal, no Heading, Centered, Arial, font size 12, bold, upper case.

Use the # symbol in the Project Number and PIN Number lines and not the word “Number” spelled out. The # symbol here is needed for the Spec Download tool to work properly.

Section number (followed by an “M” or “S”) – Heading 1, Centered, Arial, font size 12, bold, upper case.

The remainder of formatting is similar to Supplemental Specifications. Pay close attention to the “Instructions” for formatting both types of Supplemental Specifications. The title of the Special Provision section must match exactly the title of the Standard when writing an “S” Special Provision that replaces a current Standard.

See [Appendix 4](#) for examples.

Date Standard, Supplemental, or Special Provision

Standard and Supplemental – In footer, line 3, right justified.

Special Provision – Type date on line above “SPECIAL PROVISION” right justified.

See [Appendix 1-4](#).

Headers and Footers

Headers – Not used in Standard Specifications, Supplemental Specifications, or Special Provisions.

Footer – Centered, Arial, font size 12, with page numbering set, use automatic code for the page number and a hard page number for the total number of pages. Do not use automatic coding for the total number of pages as this does not allow proper page numbering when combining more than one Section when creating a project document or a new edition of the Standard Specification Book. Do not add a blank line in front of any footer information. Do not use a graphics line in the footer. Use initial caps for the specification title in a footer.

See [Appendix 1-4](#).

Tab Sets

Set all tabs to half inch increments unless other increments are required for a specific reason.

Other Examples and Files

Refer to the Standards and Specifications Web site to the current specification year at <http://www.udot.utah.gov/go/standardsandspecifications> for master files that provide additional information for use in creating Standard Specifications, Supplemental Specifications, or Special Provisions.

Use current Supplemental Specifications or Special Provisions as an example for formatting requirements.

Cross References

Standard Drawing reference: Refer to XX Series Standard Drawings or according to XX Series Standard Drawings.

Do not refer to individual drawings or groups of drawings unless a sub-series can be called out.

Example:

Refer to FG 4 Series

Refer to this Guide, [Chapter X, Cross References](#) for more information.

Review Requirements

Refer to Appendix 7 when reviewing, updating, or creating a Specification.

Chapter 3 - Drawing Organization

Organization Hierarchy

Use the following hierarchy when developing or writing any Standard Drawing or Supplemental Drawing. The hierarchy of each drawing is as follows:

SERIES NUMBER
TITLE

Series:

AT	Advanced Traffic Management System
BA	Barriers
CB	Catch Basins and Cleanouts
CC	Crash Cushions
DB	Diversion Boxes
DD	Design Drawings
DG	Drainage
EN	Environmental Controls
FG	Fence and Gates
GF	Grates, Frames, and Trash Racks
GW	General Road Work
PA	Pedestrian Access (New for 2017)
PV	Paving
RR	Railroad (New for 2017)
SL	Signals
SN	Signs
ST	Striping
SW	Structures and Walls
TC	Traffic Control (TC)

Categorize drawings by series and number and if needed by alphanumeric designation.

Example:

AT 4	Typical Ramp Meter Signal Head Mounting
AT 11A	CCTV Pole Mounting Details
BA 1A1	Concrete Barrier General Notes and Standard Details 1 of 2
BA 1A2	Concrete Barrier General Notes and Standard Details 2 of 2

Do not use Roman Numerals for drawing numbering.

Basic Elements

Border

Refer to UDOT CADD Standards

Scale

30:1

Signatures

Recommended for Approval
Chairman Standards Committee

Approved
Deputy Director

Supplemental Drawing Designation

“SUPPLEMENTAL DRAWING” box placed bottom right of drawing and just left of drawing number or bottom of drawing if there isn’t sufficient room for bottom right placement. Place below any details or notes unless there is insufficient space, in which case place it as detailed in this paragraph.

Notes – General Requirements

Placed in bottom right area of drawing

Can extend full left to right for spacing.

Design Only Drawings and Design Only Notes

Some drawings, typically the DD Series Standard Drawings are for use only in design and do not apply to Contractors.

Design Only notes will use letters for note numbering.

Example:

- A. Note text goes here
- B. Note text goes here

Design Only notes will be shown on the drawing above or to the left of the regular notes depending on available space with a heading of “DESIGN-ONLY NOTES:”

“DESIGN-ONLY DRAWING” box placed bottom right of drawing and just left of drawing number or bottom of drawing if there isn’t sufficient room for bottom right placement. Place below any details or notes unless there is insufficient space, in which case place it as detailed in this paragraph

General Notes

Drawings that are not “Design Only” will have notes that apply just to Contractors or to both.

All notes not designated as “Design Only” will use numbers.

Example:

1. Note text goes here
2. Note text goes here

All regular notes will have a heading of “NOTES:”

Cross References

Standard Specification reference: REFER TO STANDARD SPECIFICATION XXXXX

Standard Drawing reference: STD DWG followed by the drawing number

Notes: SEE NOTE followed by the note number or numbers

Line Styles

Refer to UDOT CADD Standards

Font and Text Size

Refer to UDOT CADD Standards

Details

Place as required for the drawing.

Avoid over-crowding.

Separate multiple, unrelated details on a single sheet with a solid line at a line weight of 3.

Label details below each detail Graphic. Do not use a sheet title at the top of the sheet. Refer to UDOT CADD Standards for text sizes.

Tables in Detail Area

Text Settings

- Place as individual text in all blocks or cell area
- Do not multiple cell text in one element
- Text size
 - Medium text setting
 - Height and width: 0.07
 - Adjustment for large table; use as needed
 - Small text setting
 - Height and width: 0.06 (no smaller)

Revision Block

Text Settings

- Place as individual text in all blocks or cell area
- Do not enter all required text in one element
- Text size
 - Small text setting
 - Height and width: 0.06

Start of Edition year – Blank

New Drawing Added After Start of Edition Year

- 1 Date Initials of Sponsor NEW DRAWING.
- Add additional information if details from another drawing moved to this particular drawing or if some other clarification is needed about the drawing.

Modified Drawing – 1 Date Initials of Sponsor DETAILS OF CHANGE

Subsequently modified drawing to a previous Supplemental Drawing

- Increment the number.
- Do not number each line, just the first line of a specified change.
- Remaining information is the same as the above Modified Drawing.

Date

Signature Area: See example. The date is the Standards Committee meeting approval date.

Example: Aug. 27, 2015 (Current drawings have the date with no spaces and some with spaces. The correct method is now with a space after the period and one after the comma.)

Revision Block Area: See example. The date is the Standards Committee meeting approval date.

Example: 08/27/2015

Other Examples and Files

Use current Supplemental Drawings as an example for formatting requirements after the drawings have been brought up to CADD Standards.

Refer to the CADD Support to the CADD Downloads Web site at <http://www.udot.utah.gov/main/f?p=100:pg:0:::V,T:,1519>.

See [Appendix 5](#) and [6](#) for an example of a Standard Drawing and a Supplemental Drawing.

Supplemental Drawing Updates – Special Requirements

The Standards Committee Policy, 08A5-01 requires special markup related to recommended changes. Procedure 1, “Preparation and Approval of Documents by the Standards or Modified Committee,” Step 2b requires the use of clouding to annotate changes to a current Standard and that highlighting is not needed on new drawings.

The following is provided to expand on the policy with respect to the clouding.

Mark changes with colored clouding so the changes stand out from the starting details. The colored clouds surrounding the areas will highlight where changes have been made to details, call outs, dimensions, notes, and drawing titles and numbers.

Clouding Requirements

Change to a Current Standard Drawing or Addition of a New Drawing

White	To highlight each item or area being recommended for change. Not needed if the entire drawing is being changed or if it is a new drawing that is being added.
Red	Details or information being deleted and not replaced.
Green	New details or notes being added.
Blue	Special information included only for clarification during the coordination process where that information will be removed from the approved version.
Orange	Changes to the drawing after the drawing was sent out for the two-week review period required by Policy 08A5-01 to cover reviewer recommended and sponsor accepted changes. Used to assist the Standards Section in their follow up review.

The Drawing Owner will remove clouding as follows:

After approval by the Standards Committee and before submitting final drawing to the Standard Section.

When directed by the Standards Section.

Review Requirements

Refer to Appendix 7 when reviewing, updating, or creating a Drawing.

Chapter 4 - Abbreviations, Acronyms, and Symbols

Definitions

Abbreviations, acronyms, and symbols are shortened forms of longer words, names, or expressions. Each differs from the others in formation and usage.

Abbreviations in the strictest sense are shortened forms of a single word or phrase, usually followed by a period and often including lower case letters.

Example: Dr. and chap. Do not use abbreviations with the exception of a.m., p.m., and No. (for number).

Do not use “etc” to conclude a listing of possible outcomes. List all outcomes or use “such as” or “for example” instead.

Example: Department and other entities such as subcontractors, vendors and suppliers, utilities, local governments, and special service districts.

Acronyms are formed from the first letters of a string of words or an organizational name. The letters in acronyms can be read or pronounced separately or together as a single word. Do not use periods in acronyms.

Example: PVC, IEEE, FHWA, WYDOT, and OSHA.

Symbols are freestanding signs, letters, or characters with unique agreed-on meanings. Symbols are not abbreviations and are not punctuated. Use a space before and after a symbol. Symbols are not preceded by a hyphen or followed by a period unless at the end of a sentence.

Example: lb (pound), ft (foot or feet), yd³ (cubic yard).

Rules for Acronyms and Abbreviations

Be consistent. The shortened forms used most often in UDOT Standard Specifications are listed in Section 00570, Definitions and additional forms are listed in this guide. Consult *The Chicago Manual* chapter 15, “Abbreviations,” or the *United States Government Printing Office Style Manual* chapters 9 and 10, “Abbreviations and Letter Symbols” and “Signs and Symbols,” for the proper form of abbreviations not listed in Section 00570 or this guide. Do not invent or use forms that vary from these sources. Refer to <http://www.udot.utah.gov/go/standardsreferences>.

Write out the complete name or meaning at the first usage, followed immediately with the shortened form in parentheses. Maintain the lower-case letters in the full words and type the short form in capital letters.

Example: Use super glue when horizontal elliptical reinforced concrete pipe (HERCP) is specified. Install the HERCP so that all joints are flush.

Do not introduce an acronym that will not be reused in the Section or Drawing.

Contact the Standards Section to suggest adding any frequently used acronym or other shortened form not in Table 1 below. The Standards Section will provide guidance on how to proceed with any recommended change to Section 00570. Table 1 is a duplicate of Standard Specification Section 00570, Definitions, Article 1.6

Use the indefinite article “an” before acronyms and abbreviations that are pronounced as if they begin with a vowel. Precede it with an “a” if the acronym or abbreviation begins with or as if it were pronounced with a consonant.

Example: An AASHTO requirement, an SAE specification (because the letter s is pronounced es), a PSC document.

Form plural acronyms by adding the lowercase letter “s.” Do not use an apostrophe.

Example: Multiple disadvantaged business enterprises are written DBEs, not DBE’s, and multiple variable message signs are VMSs, not VMS’s.

Table 1

Acronyms and Abbreviations Used in Standard Specifications	
Acronym or Short Form	Full Name or Meaning
AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGC	Associated General Contractors
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMRL	AASHTO Materials Reference Laboratory
ANLA	American Nursery and Landscape Association
ANSI	American National Standards Institute
API	American Petroleum Institute
APL	Approved Products Listing
ARA	American Railway Association
AREA	American Railway Engineering Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ARTBA	American Road and Transportation Builders
ASCE	American Society of Civil Engineers

Acronyms and Abbreviations Used in Standard Specifications	
Acronym or Short Form	Full Name or Meaning
ASLA	American Society of Landscape Architects
ASTM	American Society for Testing and Materials
ATMS	Advanced Traffic Management System
AWPA	American Wood Preservers' Association
AWWA	American Water Works Association
AWG	American Wire Guide
AWS	American Welding Society
CCTV	Closed Circuit Television
CRF	Code of Federal Regulations
DMS	Dynamic Message Sign
EBS	UDOT's Electronic Bid System
ESS	Environmental Sensor Sign
EUSERC	Electric Utility Service Equipment Requirements Committee
FHWA	Federal Highway Administration
FSS	Federal Specifications and Standards
GRC	Galvanized Rigid Conduit
GSA	General Services Administration
HAR	Highway Advisory Radio
ID	Identification
IMSA	International Municipal Signal Association
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
ITS	Intelligent Transportation System
LRFD	Load and Resistance Factor Design
MIL	Military Specifications
MMF	Multi-Mode Fiber
MUTCD	Utah Manual on Uniform Traffic Control Devices (This applies to all references to the MUTCD in Department Standard Specifications and Drawings, Supplemental Specifications and Drawings, Special Provisions, and Plan Sheets.) Refer to http://www.udot.utah.gov/go/standardsreferences for a link to the Utah MUTCD.
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NIST	National Institute of Standards and Technology
NVLAP	National Verification Laboratory Acceptance Program, (Bureau of Standards)
OSHA	Occupational Safety and Health Administration
OTDR	Optical Time Domain Reflectometer
P + T	Price + Time
PCA	Portland Cement Association
PDPL	Performance Data Products Listing

Acronyms and Abbreviations Used in Standard Specifications	
Acronym or Short Form	Full Name or Meaning
PTI	Post-Tentioning Institute
RMS	Ramp Metering Station
RWIS	Roadway Weather Information System
SAE	Society of Automotive Engineers
SMF	Single-Mode Fiber
SSPC	Structural Steel Painting Council
SWPPP	Storm Water Pollution Prevention Plan
TMS	Traffic Monitoring Station
TOC	Traffic Operations Center
UDOT	Utah Department of Transportation
UL	Underwriter's Laboratory
UPDES	Utah Pollution Discharge Elimination System
USAS	United States of American Standard Institute
USC	United States Code
VIDS	Video Image Detection System
VMS	Variable Message Sign
WIM	Weigh in Motion
WWPA	Western Wood Products Association

Style for Measurements in Standard Specifications

Measurements involve descriptions of quantities and are composed of a numeric value and a unit of measure. Use numbers for the numeric value of a measurement. Use symbols to indicate the unit of measure. Do not use words or abbreviations for the number or units in a measurement. Exceptions are discussed in [Chapter 5](#) of this guide.

Measurement Symbols

Table 2

Measurement Symbols for Standard Specifications		
Inch-Pound Units (U.S. Customary System)		Kind of quantity or measurement
Symbol	Unit Name	
mil inch* ft yd mi	mil (0.001 inch) Inch foot, feet Yard Mile	Length
in ² ft ² yd ² mi ² acre	square inch square foot, square feet square yard square mile Acre	Area
fl oz pt qt gal in ³ ft ³ yd ³	fluid ounce Pint Quart Gallon cubic inch cubic foot, cubic feet cubic yard	Volume
oz lb ton	Ounce Pound ton, short (2000 lb)	Mass (Weight)
degrees F**	degree Fahrenheit	Temperature
s min h d	Second Minute Hour Day	Time
mph	miles per hour	Speed
psi	pounds per square inch	Pressure
w kw a v va Ω hz J lm fc hp	Watt Kilowatt Ampere Volt Voltampere Ohm Hertz Joule Lumen Footcandle Horsepower	Power, Energy, and Electrical
lbf kip	pound-force 1000 pounds-force	Force
Ku	Krebs unit	Viscosity, Dynamic
gpm	gallons per minute	Flow

* Spell out inch. Do not abbreviate as “in” except as noted above for area and volume

** Spell out degrees F and degrees of an angle. Do not use the degree symbol except in tables or as needed on Standard and Supplemental Drawings. (Refer to Table 3).

Symbols for units of U.S. Standard Units (Inch-Pound Units) appear in the *United States Government Printing Office Style Manual* in paragraph 9.62, “Standard Letter Symbols for Units of Measure.” Refer to <http://www.udot.utah.gov/go/standardsreferences> and then to the Specification Writers’ and Drawing Developers’ Guide for the link to this document.

Proper use of measurement symbols:

1. Do not follow with a period unless the symbol is at the end of a sentence. Measurement symbols are not abbreviations.
2. Do not add an “s” to form a plural except as noted in the following examples. The symbol remains the same whether the quantity is one or many.

Dimensions

Correct Example: 1 lb, 2 lb, 1 ft, 2 ft, 24 h, 4 inch

Incorrect Example: 2 lbs, 24 hrs, 4 inches

Statements

Correct Example: Drill the hole four inches from the curb.

3. Type a space between the quantity and the symbol.

Example: 2 lb, 2 ft, 25 degrees F.

4. Use only with numbers before the symbol, never words.

Correct Example: 2 ft

Incorrect Example: two ft

5. Do not use symbols without accompanying numbers.

Correct Example: Measurement is by the cubic yard

Incorrect Example: Measurement is by the yd³

6. Do not mix symbols and names in the same expression.

Correct Example: ft/s or feet per second

Incorrect Example: feet/second or feet/s

7. Print symbols and quantities in normal type regardless of surrounding text. Do not use italics.

Correct Example: 2 ft

Incorrect Example: *2 ft*

8. Do not use unit abbreviations, short forms, or symbolic representations not shown in Table 2.

Correct Example (specifications and drawings): 2 ft, 6 inch
Correct Example (drawings only): 2', 6"
Incorrect Example (specifications only): 2', 6"

Mathematical and Other Symbols

Table 3

Mathematical and Other Symbols			
Symbol	Meaning	Tables Only	Text and Tables
+	Plus		Y
-	Minus		Y
±	Plus or Minus		Y
=	Equal to		Y
<	Less than		Y
≤	Less than or equal to		Y
>	Greater than		Y
≥	Greater than or equal to		Y
x	Multiplied by or dimensional indicator		Y
/	Per		Y
%	Percent	Y	
°	Degree temperature or angular measurement	Y	
Ω	Ohm		Y
:	Ratio or proportionality		Y
\$	U.S. Dollar		Y
•	Bullet		Y

When using mathematical and other signs and symbols:

1. Type a space before and after.

Example: 2 x 2 x 1 inch

Exceptions: no space precedes the angular degree symbol (180°) or temperature degree (5° F) and no space follows the minus sign when used in a temperature that is below zero degrees (-5 degrees F or -5° F).

2. Use words in text for those quantitative relationships indicated in Table 3.

Example: Fasten reinforcing bars securely except where the spacing is less than 1 ft.

Chapter 5 - Numbers vs. Words

General

Use numbers for measurements, sizes, and critical or precise quantities.

Example:

Maintain a surface temperature of 70 degrees F for 72 hours

Gouges not more than $\frac{1}{4}$ inch deep

Mark the weight on members heavier than 3 ton

Use numbers when cross-referencing sections, subsections, and other parts of Standard Specifications or similar sources.

Example:

Use materials required by AASHTO section 5

Refer to this Section, Article 2.1, paragraph A2

Use numbers for numerical values greater than ten.

Example:

Fabricate from not more than two pieces of sheet steel.

Furnish six sets of drawings.

Allow two days to complete the testing.

Make payment within 30 days of completion.

Use words for numbers at the beginning of a sentence. Reorder the sentence if possible if a number appears at the beginning of a sentence.

Example:

Thirty minutes before installation, begin preparing the material.

Prepare the material 30 minutes before installation.

Use numbers for the size and words for the quantity when quantity and size are expressed together.

Example:

three ½ inch holes

two 50 pound weights

Be consistent. Treat similarly all numbers that refer to the same category of things within the same context.

Correct Example: Test from 5 to 15 seconds

Incorrect Example: Test from five to 15 seconds.

Thirty minutes before starting, and again sixty (not 60) minutes later check the temperature.

Do not use both words and numbers for the same call out.

Correct Example: Use three contractors for the team.

Incorrect Example: Use three (3) contractors for the team.

Incorrect Example: Use 3 contractors for the team.

Decimals

Express decimals in numbers, not words.

Correct Example: 0.1

Incorrect Example: one-tenth

Never leave a decimal point without numerals on both sides.

Example: 1.5, 6.125, 0.5, 0.125.

Don't follow a decimal point with a zero unless you need an exact unit or dimension with no tolerance.

Correct Example: 3 ft, 15 lb

Incorrect Example: 3.0 ft, 15.0 lb unless there can be no tolerance under any circumstance

Time and Date

Use numbers for clock times. Keep zeros when describing times “on the hour.” Use the standard 12-hour system, with all numbers accompanied by the appropriate a.m. or p.m. designation (using lower-case letters, followed by periods). Leave a space between the number and abbreviation but no spaces inside the abbreviation.

Example: 9:00 a.m. – 10:30 p.m.

Exception: Use the words “noon” and “midnight” to indicate twelve o'clock. Do not use the number 12 followed by a word or abbreviation.

Correct Example: Do not work from noon to midnight.

Incorrect Example: 12 noon or 12 p.m.
12 midnight or 12 a.m.

Use words (written in full) for the names of months and numbers for days of the month and years. Do not use ordinal designators such as th and rd in dates.

Correct Example: June 15, 2005
from May 1, to September 30
30th of the month

Incorrect Example: June 15th
15th of June
Jun 15

Money

Use numbers for monetary amounts. Do not include the decimal and zeros for the cents when amounts are in whole dollars. Do not leave a space between the dollar sign (\$) and numeric value.

Example: Bill at the rate of \$1,500 per mix.

Fractions

Determine whether it is technically correct to use fractions or decimals. Use fractions when expressing inch-pound measures and sizes, in most cases.

Example:

Leave the cut end at least $\frac{1}{2}$ inch above the base.

Drill to a depth of $\frac{1}{4}$ inch.

Construct from aluminum alloy sheet at least 0.0051 inch thick.

Use numbers for mixed fractions. Do not leave a space between the whole number and simple fraction.

Example:

Join the top to the bottom with an arc of not more than $87\frac{1}{2}$ degrees.

Leave a distance of no more than $1\frac{3}{4}$ times the diameter of the bolt.

Inserting a Symbol

Steps to insert a symbol may vary depending on the version of MS Word being used.

The fractions $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ are automatically formatted by the latest versions MS Word.

Fractions other than those that are already set in Word can be created by first entering the fraction, 1/16 for example. Continue by highlighting the numerator and then selecting superscript from the “Font” menu. Next highlight the denominator and then continue as in the numerator, except choose “Subscript” from the options. The fraction will then look like $\frac{1}{16}$. Copy and paste it to the correct location if the fraction in the proper format is available in the same or another document.

Percent

Use the word “percent” in text following a number.

Example:

Divide the samples into two, five-sample lots if the average density is less than 95 percent, but no one sample is less than 92 percent.

Changes greater than 5 percent will be invoiced separately.

A minimum of 4 percent moisture is allowed.

Correct Example: Provided the quantity does not exceed 0.1 percent of the total contract cost or \$2,500, whichever is greater.
Incorrect Example: one-tenth of one percent.

Use the % symbol in tables.

Commas vs. Spaces

Use commas in numbers of four digits or more.

Example: \$1,000
\$10,000
1,000 ft
10,000 psi
1,000 gal

Use a combination of letters and numbers for very large round numbers.

Example: Our budget exceeds \$16 million.

Chapter 6 - Punctuation

Serial Commas

Separate the elements in a series of three or more with a comma. Use a comma before the conjunction (“and” or “or”) joining the last two elements.

Example:

Provide a minimum of eight selectable outputs, each selectable by time-of-day, day-of-week, and week-of-year.

Do not use mortar blocks, bricks, wood, or aluminum framework in supporting deck slab reinforcement.

Protect trees, shrubs, and other landscape features designated by the Engineer for preservation from abuse, marring, or damage during construction.

Closing Quotation Marks

Place periods and commas required by a sentence inside closing quotation marks, regardless of whether the period or comma is part of the quote.

Example:

Correct – Lay the downstream end of each blanket on top, creating a “shingle effect.”

Incorrect – Lay the downstream end of each blanket on top, creating a “shingle effect”.

Correct – The contact pressure is “the average ground contact pressure,” expressed in pounds per square inch.

Quotation Marks When Referencing Signs and Labels

Use quotation marks when referring to specific words that appear elsewhere on items such as signs, labels, and drawings. Do not use all-capitals, bold typefaces, underline, or similar typographic features for added emphasis.

Example:

Mark each drawing “final.”

Mark submittals “approved,” “approved as corrected,” or “not approved.”

Mark the pull box covers “UDOT Traffic Signal” when the box contains traffic signal conductors.

Letters as Shapes

Do not use quotes around the letter. Link the letter and following word with a hyphen if warranted.

Example:

U-shaped staples	Y-connector	A-frame structure
U-bolts	I-connector	O-ring

To make letters used as shapes plural, add an “s” and no apostrophe.

Example: Vs not V’s

Parentheses

Use parentheses to insert and set off additional information relevant to the sentence.

Example: Nut rotation is relative to the bolt regardless of the element (nut or bolt) that is turned.

Parentheses are also used to insert and set off counterparts or equivalencies such as chemical formulas.

Example: Conform to the requirement for chrome oxide (Cr₂O₃) green.

Place commas, semicolons, periods, or other punctuation that the main sentence might need after the closing parenthesis mark.

Avoid the use of parentheses if possible, instead using commas as needed.

Chapter 7 - Capitalization

General

Be consistent within specifications and drawings. Consult *The Chicago Manual of Style* chapter 8, “Names and Terms,” or the *United States Government Printing Office Style Manual* chapter 3, “Capitalization Rules,” in for situations not addressed in this Guide. Refer to <http://www.udot.utah.gov/go/standardsreferences> and then to the Specification Writers’ and Drawing Developers’ Guide for the links to these documents.

Avoid over capitalization. Excessive capitalization slows reading and reduces the emphasis capitalization is meant to achieve.

Specific

Capitalize the following words or categories of specific names and things:

1. ACRONYMS
2. Document titles

Example: the Engineer’s Weekly Report

Certificate of Compliance

Laws and legislative acts

Example: the Utah Seed Law

the Federal Seed Act

Clean Air Act

Utah Statute 11-14-101

3. Official titles

Example: the State Bridge Engineer

the Engineer

the Contractor

UDOT Program

Construction Program

Highway Development Program

Materials Program

Traffic Program

4. Proper nouns

Titles of sections, subsections, tables, and figures in Standard Specifications.

Example: A bid guarantee that is not submitted according to this Section, Article 1.10, paragraph B1.

Sign and deliver the guaranty to the Engineer before contract acceptance according to Section 00570.

Refer to this Section, Article 1.6.

Do not capitalize:

bidder

commission (when referring to the Utah Transportation Commission)

fabricator

plans

subcontractor

work (even when referring to the defined term)

Chapter 8 - Lists

General

Lists may be used at any level within a specification or drawing.

Punctuation

UDOT does not use punctuation in lists of specifications, references, or general items.

Example 1:

1.2 RELATED SECTIONS

- A. Section 01455: Material Quality Requirements
- B. Section 01741: Final Cleanup
- C. Section 02455: Driven Piles
- D. Section 02912: Topsoil

Example 2:

1.3 REFERENCES

- A. AASHTO M 145: Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
- B. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates

Example 3:

- A. Use a rangeland type drill for non-turf areas or a Brillion type drill for turf areas equipped with the following:
 - 1. Depth band
 - 2. Seed box agitator
 - 3. Seed metering device
 - 4. Furrow opener
 - 5. Packer wheels or drag chains

Use a period at the end of a numbered list in which the list items are complete sentences.

Example:

- A. Prepare Turf Sod Surface:
 - 1. Review finish grade to confirm that topsoil is 1½ inch below the top of all walks, curbs, mow strips, and other hard surfaces.
 - 2. Apply fertilizer at the rate of 2 lb/100 yd² and mix thoroughly into upper 2 inches of topsoil.
 - 3. Level and roll seeded areas using a 21 gal water-filled hand roller containing 8 to 10 gal of water.
 - 4. Lightly rake and dampen with water the top ¼ to ⅝ inches of soil just before laying the sod.

Use a period at the end of a numbered list items when the list includes long items that contain a complete sentence. End all items in the list with a period when this applies to one item in the list.

Example:

- A. Concrete
 - 1. Refer to Section 03055.
 - 2. Furnish the Engineer with mix design, trial batch gradation, and 28-day compressive strength test results from the trial batches before placing concrete.
 - 3. Use the same materials and admixtures intended for production in the trial batches.
 - 4. Do not place pavement before obtaining written approval of the mix design.
 - 5. Meet the approved trial batch proportions. Changes in the mix proportions require new trial batches.

End the items in a numbered list with a period when the listed items contain a bolded introductory element.

Example:

- A. **Seasonal** – Do not pave from October 15 to April 15. Submit cold weather concrete plan to the Engineer for written approval to pave outside these limits.
- B. **Hot Weather and Cold Weather** – Refer to Section 03055.
- C. **Night Operations** – Provide proper lighting from one-half hour after sunset to one-half hour before sunrise following Section 00555.

Structure

Use parallel structure when creating lists by beginning each item in a list with the same part of speech—noun, verb, or adjective.

Example: Each numbered item begins with a verb:

- A. Place the mixed material with a self-propelled asphalt paver.
- B. Adjust emulsion content as pavement conditions change. Repair reclaimed materials when surface ruts or ravels before placement of final wearing surface.
- C. Use watering device to prevent materials from adhering to the tires for breakdown or intermediate rolling.
- D. Add water to milled material as necessary to facilitate uniform mixing.
- E. Continue breakdown rolling until no displacement is noted.
- F. Use steel wheel rollers in static or vibratory mode as required for final rolling.
- G. Wait 72 hours after a rain or confirm that moisture content is less than 1.5 percent before placing flush, tack, or final surfacing on cold recycled material.

AASHTO and ASTM References

All AASHTO and ASTM references are done by listing each numbered reference and not a single reference for each area.

Correct Example:

1.3 REFERENCES

- A. AASHTO M 145: Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
- B. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates
- C. ASTM D 2995: Estimating Application Rate of Bituminous Distributors
- D. ASTM D 3042: Insoluble Residue in Carbonate Aggregate

Incorrect Example:

1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO)
- B. American Society of Testing and Materials (ASTM)

Wording

Do not start a sentence with a prepositional phrase. Follow the above examples.

Chapter 9 - Tables, Figures, and Forms

General

Keep tables and figures as simple as possible, both in layout and content. Display information so it can be grasped quickly and without confusion. Refer to *The Chicago Manual of Style*, chapter 13, "Tables," for additional guidance on the format and design of tables and the *United States Government Printing Office Style Manual*, chapter 13, "Tabular Work." Refer to <http://www.udot.utah.gov/go/standardsreferences> and then to the Specification Writers' and Drawing Developers' Guide for the links to these documents.

Tables

Number all tables with "Table" and the number. Begin renumbering with each new section or drawing. Do not use the Section or drawing number in the table number.

Example: Table 1, Table 2, not Table 03055-1, Table 3-1, or Table AT 5-1.

Provide a title for every table. Capitalize the first letter only of all significant words. Do not place a period at the end of the title.

Information for Specifications

Center the table, table number, and title horizontally on the page. Place the table number above the start of the table and title in the first row of the table in 12 point Arial font. Bold the title. Do not bold the table number.

Use either 10 or 12 point Arial font for table text. Bold column headers.

Use grid lines on tables for all cells unless doing so would confuse the user. Use a normal single weight line for all lines.

Example:

Table 4

Price Reductions for Deficient Thickness over Existing Surfaces	
Deviations Below Profile (in feet)	Pay Factor
0.0 to 0.02	1.00
0.02 to 0.04	.90
0.04 to 0.06	.60

Table 5

Physical Properties of Joint Sealer (Structures) and Test Methods		
Modulus of Elasticity at 100 percent Elongation	132 psi	ASTM D 412
Hardness (Shore A)	40 ± 5	
Elongation (at break)	700 percent	ASTM D 412
Recovery	Greater than 90 percent	
Tensile Strength	190 psi	ASTM D 412
Adhesive in Peel	20 lbs/inch	TT-S00230 C Type II, Class A
Service Range	-40 degree F to 150 degree F	TT-S-00230 C
Initial Cure, Tack Free (Depending on Temperature and Humidity)	6 to 8 hours	
Final Cure	5 to 8 days	
Staining Characteristics	Nonstaining	
Color	Gray	

Refer to tables by number.

Example: See Table 1.

Refer to Table 2.

Information for Drawings

Place the drawing as needed.

Forms

Show the full form title when referring to a specific form. Place quotation marks around the title of the form followed by the word “form.” Include the appropriate form number in parentheses as applicable.

The word “Form” and the number may be used alone only upon additional reference within the same section as the initial full form title and form number.

Example:

Complete and submit the “Pile and Driving Equipment Data” form located at the end of this Section.

Complete the “Inspector’s Daily Report” form (C111) as required.

Complete Form C111 as required. (This example applies when used in the same section as the above example.)

Chapter 10 - Wording of Specifications

General

Use the simplest language that says clearly and accurately what needs to be said. Write as if you were speaking or giving directions aloud. Avoid jargon, contorted wording, and pseudo-legalisms. Use terms with legal meanings only when absolutely necessary.

Active Voice

Voice is a property of verbs that indicates whether the subject of the sentence acts (active voice) or is acted upon (passive voice). The subject is the doer of the act and the verb makes clear within the sentence who is doing what in the active voice. The active voice leaves no doubt who is responsible for the action described. Keep sentences as simple as possible by using one-word verbs.

Example: The Department specifies the dimensions.

The Department did the action and the verb “specifies” says in one word what the Department did. Occasionally the verb in the active voice requires a helping verb to complete the action or intention.

Example: The Engineer may test individual load consistency.

In this case, using the one-word verb “test” would not completely convey the intended meaning of the sentence. “May” indicates that it is at the Engineer’s discretion if the loads will be tested. This sentence is in the active voice because the doer of the action is conducting the action and appears in the sentence.

Sentences in the passive voice may not say anything about the doer of the action. Responsibility does not have to be assigned. Verbs in the passive voice always need help and even at their simplest, they always must be accompanied by a form of the verb “to be” that includes for example is, was, and will be.

Example: The concrete was placed.

The contractor may have placed the concrete but we do not know because the sentence does not say. The passive verb must be helped by was. The verb is packaged in a phrase with a form of “to be” and the doer of the action does not have to be identified. The identification comes after the verb in a phrase that begins with “by” if the doer is identified. For example: The concrete was placed by the contractor. The active and passive voice each have their uses. The active voice is best used when it is important to identify the party responsible for the action in a sentence.

Example:

Weigh masters will determine tonnage.

The passive voice is used when the receiver is more important than the doer. Passive sentences can be used when you do not know or do not want to mention the doer.

Example:

Tonnage will be determined.

The failure occurred because metal shavings were dropped into the gear housing.

Use the active voice rather than the passive as a general rule for writing Standard Specifications except as noted elsewhere in this Guide.

Mood

Mood is a property of verbs that conveys the writer's or speaker's belief about the truth or nature of the sentence—whether it is meant to be a command, a fact, or conjecture. There are three verb moods in English: imperative, indicative, and subjunctive.

Imperative

The imperative mood is used to give a command or instruction. A distinctive feature of statements in the imperative mood is that they leave out the subject of the sentence. The subject is understood but never stated.

Write UDOT specifications or drawings to the contractor, whether a standard specification or drawing, supplemental specification or drawing, special provision, or plan sheet. The specifications and drawings define the Contractor's responsibility in meeting each specification or drawing, spell out the Department's expectations, and explain what the Contractor is expected to provide. All actions are to be performed by the Contractor unless otherwise noted.

Example: Order the concrete.

This sentence is **written in the active voice and the imperative mood**. Because the Standard Specifications and Drawings already makes clear who the direction is addressed to, the party responsible for carrying out the directive—the Contractor—does not need to be stated. The complete sentence is understood to be:

[Contractor,] order the concrete.

Indicative

The second mood type is the indicative, used to indicate statements of fact and description. The indicative mood is used frequently in the Standard Specifications and Drawings. The statement is intended as a simple description of what is or is meant to be, and the verb will establish it in the indicative in the following example. Because most verbs have voice and mood at the same time, the sentence is in both the indicative mood and the active voice.

Example: The Engineer will establish right-of-way and construction lines.

Subjunctive

The third mood type is the subjunctive mood. The subjunctive mood is not used in the Standard Specifications or Drawings because it is used to convey doubt or conjecture or to pose a “what if” situation.

Do not start a sentence with a prepositional phrase.

Example:

Incorrect – If slotted or oversized holes are specified, the Contractor will use hardened flat washers.

Correct – Use hardened flat washers if slotted or oversized holes are specified.

Benefits of the Active Voice and Imperative Mood

An increased use of both the active voice and the imperative mood are two of the writing tools best suited to bring enhanced clarity to Standard Specifications.

Active voice forces a writer to identify within a sentence who is responsible for what.

Example of Passive Voice:

If invoices for transportation charges are not furnished, payment will be delayed until the invoices are submitted.

Example of Active Voice:

The Department will withhold payment for transportation charges until the contractor submits the invoices.

Not only does the second sentence have 18 percent fewer words than the first but it also adds two pieces of information: who is responsible for the delay in payment (the Department) and who is responsible for submitting the invoices (the contractor). Used well, the active voice adds clarity, fixes responsibility, and improves readability by simplifying sentence structures and eliminating words.

The imperative mood offers similar benefits. It is the most efficient way to give a command, direction, or instruction. The imperative allows brevity because the person to whom the instruction is addressed is understood grammatically to be included in the sentence but is left out of the wording.

Statements in Standard Specifications and Standard Drawings are directed to the bidder or the contractor unless otherwise indicated. Increased use of the imperative gives specification writers and drawing developers a tool to make this direction more efficient.

Chapter 11 - Other Wording and Usage

General

Choose the wording that says most clearly and efficiently what needs to be said. Say no more than that, but say exactly that.

Needless Words and Jargon

Many words serve only as filler. Their use adds clutter and can hinder a reader's ability to grasp what is important. Omit words that do not add meaning. Favor a single word over a phrase. Avoid jargon.

Table 6

Alternatives to Common Wordy Phrases	
Instead of ...	Use or Consider ...
a minimum of	at least
absolutely essential	essential
ambient, atmospheric	air
as may be necessary	as necessary
at a later date	later
commence	begin or start
cost thereof	cost of
dispose of at a contractor-furnished site	becomes the Contractor's property
enclosed herewith	enclosed
fails to	does not
give due and sufficient written notice	give written notice
Impracticable	Impractical
in order to	to
in lieu of	instead of
in the event of	if
in advance of	before
In accordance with	according to
job site	project
per	according to
Pertinent	appropriate
Practicable	practical
prior to	before
shall	will or must for example
through the use of	by
until such time as	until
utilize	use
worksite	project

Usage of Specific Words or Phrases

According to – Use instead of “as described in,” “as designated in,” “as indicated in,” “pursuant to,” “conformance to,” or similar phrases that reference provisions of a specification.

And/Or – This construction is awkward and confusing. Do not use this word combination.

Example: red, blue, or both. Not red and/or blue

Fabrication includes other inserts, sleeves, or both. Not “Fabrication includes other inserts and/or sleeves.”

Ensure vs. Insure vs. Assure – These are three different verbs with three different meanings. Use “insure” only when speaking of the sort of financial protection offered by insurance companies. “Assure” is only used when giving reassurance to another person, as in “Let me assure you that . . .” UDOT does not use “ensure” or “assure” in specification or drawing writing.

In the contract – Use instead of “in the specifications” or “on the plans.”

Incidental – Use instead of “subsidiary.”

Example:

Finishing local material source sites, including seeding and mulching, is not measured or paid for separately and is considered incidental to other items of work.

Its vs. It’s. Its, without an apostrophe, is the possessive of the pronoun it. It’s, with an apostrophe, is a contraction of it is or it has. Try replacing it with it is or it has if you’re not sure which spelling to use. Its is the word you’re looking for if neither of those phrases works in its place.

Example:

The Contractor may supply information in support of its position.

Certify that the baseline schedule represents how the work was bid or explain how it’s different.

May – Use as appropriate instead of “exercise its option to,” “reserve the right to,” or similar phrases that describe a party’s prerogatives.

Shall – Do not use Shall. The use of the imperative mood eliminates the need for “shall.” Use “will” to indicate something the Department will execute.

Slash (/) Symbol. The symbol is only used in dimension and unit call outs. Do not use the symbol in word combinations such as “nut/washer/bolt.” The correct usage is “nut, washer, and bolt.”

Quantity vs. Amount – Use “quantity” for materials. Use “amount” for money.

That vs. Which. “That” and “which” are often used as if they are interchangeable. “That” is properly used to introduce information or a phrase that is essential to the meaning of a sentence. “Which” introduces information that is not essential to the meaning of a sentence.

There vs. Their vs. They’re. The English language is full of problems like the one presented by there, their and they’re. Most native English speakers pronounce these the same way (the words are known as homophones); therefore, it is difficult for some to determine which spelling to use. Each spelling means a very different thing, and it is important to communicate clearly and correctly in written correspondence and in business or academic writing.

Use there when referring to a place.

Also use there with "to be" verbs. There plus a "to be" verb (be, is, am, are, was, were) indicates the existence of something, or mentions something for the first time.

Example:

There is evidence of collusion among bidders.

Include all costs in Traffic Control or other items of work when there is no bid item included in the proposal.

Use their to indicate possession.

Remember that they're is a contraction of the words they and are. It can never be used as a modifier, only as a subject (who or what does the action) and verb (the action itself).

Your vs. You’re. Your is a possessive adjective. It shows possession, that something belongs to the person you are talking to. You're = You are. It is a contraction (or short way of writing).

Hyphenation, Word Separation, and Standard Phrasing

English changes over time and words that are commonly used together tend to migrate, first staying paired but separate, then finding frequent use with a linking hyphen, then joining eventually into a single word.

It can be hard to know where in this progression a word pair or phrase may be. Some common combinations are shown below in the form used in Standard Specifications. Refer to *The Chicago Manual of Style*, chapter 7, “Spelling, Distinctive Treatment of Words, and Compounds,” and the *United States Government Printing Office Style Manual*, chapters 6 and 7, “Compounding Rules” and “Compounding Examples,” for further guidance. Refer to <http://www.udot.utah.gov/go/standardsreferences> and to the Specification Writers’ and Drawing Developers’ Guide for the links to these documents.

Table 7
Hyphenated Words, Compound Words, Word Separation, and Standard Phrasing for use in Standard Specifications

Instead of ...	Use ...
&	And
air entraining	air-entraining
attaining	obtaining
center line	centerline
cross section	cross-section
guard rail	guardrail
high-early-strength	high early strength
pre-construction	preconstruction
right of way	right-of-way
steel wheel	steel-wheel
straight edge (the tool)	straightedge
sub-base	subbase
water reducing	water-reducing
work force	workforce

Cross-References

Refer to sections or articles of Standard Specifications by number. UDOT does not refer to sections by number and title except in the “Related Sections” article. Capitalize the word “Section” and “Article” when making such a reference.

The preferred wording for cross-references is “refer to” or “according to.”

Example: Use Pozzolans according to Section 03055 and ASTM C 618.

Use water reducers or plasticizers according to Section 03055.
Refer to Section 01455.

Refer to a specific article or paragraph only within the same section.

Example:

Refer to this Section, Article 1.6.

Do not refer to a specific article or paragraph in cross reference to another section.

Example:

Refer to Section 00515.

All Web references in specifications are to the Standards References Web page.

Example:

The UDOT Guidelines for Crash Cushion and Barrier End Treatments is maintained by the Division of Traffic and Safety and available through the Department Web site. Refer to <http://www.udot.utah.gov/go/standardsreferences>.

Obtain the newest version at time of bid of the Department ATMS test procedure forms from <http://www.udot.utah.gov/go/standardsreferences>.

The reference is maintained on the Standards References Web page so that changes to various locations do not generate a change to a Standard.

Coordination and Approvals

All contact by the Contractor with outside individuals or groups is done through the Engineer.

Example:

Contact the Highway Referencing Specialist through the Engineer to determine the preferred action.

Do not allow subcontracted work to begin until the request to sublet work is approved by the Engineer.

Test according to this Section, Article 3.3 when directed by the Engineer.

Test according to this Section, Article 3.3 when directed by Hydraulics Engineer through the Engineer.

Contractions

Do not use contractions in Specifications or Drawings.

Example:

Correct Example: do not

Incorrect Example: don't

Correct Example: cannot

Incorrect Example: can't

Correct Example: is not

Incorrect Example: isn't

Chapter 12 - Specification Writer's Checklist

Use this checklist to verify that the common problems in specification writing are addressed and corrected as well as to verify the accuracy of the general content of each specification.

Table 8

Specifications Writer's Checklist

- Check accuracy of content.
- Determine that the text is complete and presented in a logical order. Make sure no portions of text were inadvertently dropped while preparing the document.
- Check for proper date and document format. ([Chapter 2](#)) Update the date on project specific Special Provisions so it is current for the project if using a previously used copy. Do not change the date of a Department Special Provision unless the content of that particular Special Provision is modified. Modification of a Department Special Provision is permissible for a project but notification must be given to the owner of that section such as the Materials Engineer. This notification allows the Department to update Department Special Provisions so that repeated changes on future projects are minimized. Refer to the "Instructions" area under both types of Supplemental Specifications ([Chapter 2](#)) and in the examples ([Appendix 2](#) and [3](#)) for text to add between the Section Title and Part 1 for Supplemental Specifications and Special Provision.
- DO NOT modify an approved Supplemental Specification in any manner if that Supplemental Specification is being put in a project. This includes changing the date, adding a project number, or removing the text "Supplemental Specification" from the top of the specification. Change Supplemental Specifications ONLY if the intention is to submit the change to the Standards Committee through the coordination process.
- Check that the title of an "S" Special Provision that replaces a Standard matches the Standard. A Special Provision cannot change the title of a Standard. A new Section number must be selected according to current procedures if a new title is required.
- Check that the proper "M" or "S" designation for a Special Provision is used when numbering a section and in cross-references.
- Check that the "END OF SECTION" text is used properly. Do not use on "M" Supplemental Specifications or "M" Special Provisions. ([Appendices](#))

- _____ Check that all reference citations are correct. Verify references to numbers and titles of sections, subsections, forms, and figures from Standard Specifications are correct and are correctly capitalized and punctuated. ([Chapter 2](#) and [7](#))
- _____ Check that notes are accurate and numbered correctly in the text.
- _____ Check that all Parts, Articles, and Paragraphs are formatted properly. ([Chapter 2](#))
- _____ Check that all Related Sections and References articles are cross-referenced properly within the body of the specification. ([Chapter 11](#) and [Appendix 1](#))
- _____ Check all Related Section and Reference changes when creating a modification using an “M” Supplemental Specification or “M” Special Provision. Check that the Related Sections and References articles are still cross-referenced properly within the body of the specification if a Related Section or Reference is removed or added by the modification. If not, add or remove the appropriate article in the modification. ([Chapter 11](#) and [Appendix 1](#))
- _____ Check that the footer is formatted correctly. ([Chapter 2](#))
- _____ Use accurate, current, and appropriate abbreviations and acronyms. ([Chapter 4](#))
Spell out acronyms when first used.
- _____ Use correct symbols for measurement. ([Chapter 4](#))
- _____ Use correct symbols for bid and pay units. ([Chapter 4](#))
- _____ Use correct mathematical signs and symbols. ([Chapter 4](#))
- _____ Check proper use of periods. Do not use a period after a symbol, except at the end of a sentence. ([Chapter 4](#))
- _____ Punctuate lists consistently. ([Chapter 6](#))
- _____ Avoid overcapitalization. ([Chapter 7](#)) For example use “Engineer” and “Contractor” not “ENGINEER” and “CONTRACTOR.”
- _____ Format tables consistently. Check that all tables have titles and are numbered correctly and that all entries in tables are correct and located in proper rows and columns, under correct headings, and placed in the correct position in the text. ([Chapter 8](#))

- _____ Check text descriptions of tables against information in the tables.
- _____ Check that equations and formulas are complete and accurate and placed in the correct position in the text.
- _____ Phrase sentences in the active voice by stating the action and imperative mood by giving direction or instruction to the contractor. ([Chapter 10](#))
- _____ Avoid unnecessary words and jargon. ([Chapter 11](#))
- _____ Use italicized font for non-UDOT published documents.
- _____ Use MS Word's spell check feature to check for spelling errors.
- _____ Double check accuracy of content.
- _____ Proofread the document. Have another person proofread the document also. Double check all electronic changes for accuracy.
- _____ Consider whether the Special Provision you wrote may become a Standard and contact the Standards and Specifications group for a specification number if it will or you think it might.
- _____ Complete any other review of your document that you think will make it a better specification from a technical and formatting standpoint.

Chapter 13 - Drawing Developers' Checklist

Use this checklist to verify that the common problems in drawing development are addressed and corrected as well as to verify the accuracy of the general content of each drawing.

Table 9

Drawing Developers' Checklist

Contact Jim Buckley at jbuckley@utah.gov and Barry Axelrod baxelrod@utah.gov to request a copy of the required drawing for a change to a current drawing or for a copy of another drawing in the series for a new drawing. Included a short reason for the change and whether the change is anticipated to be editorial or not.

Continue after the drawing has been updated or created.

Check accuracy of content.

Determine that the drawing details are complete and presented in proper order. Make sure no portions of drawing text were inadvertently dropped, moved, or placed in the incorrect area while preparing the drawing.

Check for proper date and drawing format. ([Chapter 3](#)) The signature date on Standard Drawings for the implementation of the 2017 Standards is "JAN.01,2017." Do not enter any information in the Revision Box area for drawings related to the January 01, 2017 implementation. The signature date on Supplemental Drawings is the Standards Committee (Committee) meeting date where that drawing is approved by the Committee or the meeting date for editorial changes related to the drawing publishing cycle. Enter the required information in the Revision Box for Supplemental Drawings. ([Chapter 3](#))

DO NOT modify an approved Supplemental Drawing in any manner if that Supplemental Drawing is being put in a project. This includes changing any information or date no matter how minor.

Verify that the "SUPPLEMENTAL DRAWING" box has been placed in the lower right side of the drawing, below any details, or notes when required. ([Chapter 3](#))

Verify that the "DESIGN ONLY DRAWING" box has been placed in the lower right side of the drawing, below any details, or notes when required. ([Chapter 3](#))

Verify that all cross references to Standard Specifications, Standard Drawings, and notes refer to the correct number and are formatted correctly. ([Chapter 3](#))

- _____ Check that notes are accurate and numbered correctly in the drawing text and details.
- _____ Verify that the correct border file is being used. ([Chapter 3](#))
- _____ Verify correct clouding annotation and cloud color for each change on the drawings. ([Chapter 3](#))
- _____ Use accurate, current, and appropriate abbreviations and acronyms. ([Chapter 4](#))
Spell out acronyms when first used.
- _____ Use correct symbols for measurement. ([Chapter 4](#))
- _____ Use correct mathematical signs and symbols. ([Chapter 4](#))
- _____ Check proper use of periods. Do not use a period after a symbol, except at the end of a sentence. ([Chapter 4](#))
- _____ Punctuate lists consistently. ([Chapter 6](#))
- _____ Format tables consistently. Check that all tables have titles and are numbered correctly and that all entries in tables are correct and located in proper rows and columns, under correct headings, and placed in the correct position in the text. ([Chapter 9](#))
- _____ Check that equations and formulas are complete and accurate and placed in the correct position in the drawing.
- _____ Phrase sentences in the active voice by stating the action and imperative mood by giving direction or instruction to the contractor. ([Chapter 10](#))
- _____ Avoid unnecessary words and jargon. ([Chapter 11](#))
- _____ Use Microstation's spell check feature to check for spelling errors.
- _____ Double check accuracy of content.
- _____ Proofread the document. Have another person proofread the document also.
Double check all electronic changes for accuracy.
- _____ Complete any other review of your document that you think will make it a better drawing from a technical and formatting standpoint.

Appendices

- [Appendix 1](#) Format for Standard Specifications
- [Appendix 2](#) Supplemental Specification (New section added, current standard completely replaced, or current standard deleted)
- [Appendix 3](#) Supplemental Specification (Partial section added, modified, or deleted)
- [Appendix 4](#) Special Provisions (All types)
- [Appendix 5](#) Standard Drawing Example
- [Appendix 6](#) Supplemental Drawing Example
- [Appendix 7](#) Summary of Changes

**Appendix 1
Format for Standard Specifications**

SECTION 00000

TITLE HERE

PART 1 GENERAL

1.1 SECTION INCLUDES

A.

B.

Or for “Not Used” option the following 1.1 alternate applies.

1.1 SECTION INCLUDES Not Used

Note: “Not Used” option applies if one of following designated Articles does not apply for the Section. Include the designated articles SECTION INCLUDES, RELATED SECTIONS, REFERENCES, DEFINITIONS, AND SUBMITTALS in all Sections in Standard Specifications, Supplemental Specification, and Special Provisions. The tab set for the “Not Used” text for articles 1.1 through 1.5 is at 2.5 inches.

1.2 RELATED SECTIONS

A. Section 00000: Title here

B. Repeat for each specification referenced in the body of this section listing in numerical order by Section number

or

“Not Used” option

1.3 REFERENCES

A. AASHTO M 288: Geotextile Specification for Highway Applications

B. ASTM A 252: Welded and Seamless Steel Pipe Piles

C. Repeat for each item referenced in the body of this section

- D. List all AASHTO references first, followed by ASTM references, and finally all others as applicable. List each document or reference only once even if a document is listed several times in the body of the section, each referring to a different chapter or section. For AASHTO and ASTM references just list the main subject part of the title. Do not include the “Standard...for” or similar text.

or

“Not Used” option

1.4 DEFINITIONS

- A. List alphabetically as needed.
- B. Repeat for each required definition.

or

“Not Used” option

1.5 SUBMITTALS

- A. List as needed.
- B. Repeat for each required submittal or to expand as needed.

or

“Not Used” Option

1.6 TITLE AS APPLICABLE (Enter title for remaining articles as required and paragraphs as needed.)

PART 2 PRODUCTS

2.1 TITLE AS APPLICABLE

- A.
- B.

2.2 TITLE AS APPLICABLE (Continue as needed)

A.

B.

PART 3 EXECUTION

3.1 TITLE AS APPLICABLE

A.

B.

3.2 TITLE AS APPLICABLE (Continue as needed)

A.

B.

END OF SECTION

(Footer information for a Standard Specification)

Title
00000 - Page x of y

Date goes here

Appendix 2
Supplemental Specification
(New section added, current standard completely replaced,
or current standard deleted.)

Supplemental Specification
2008 Standard Specification Book

SECTION 00000

TITLE HERE

(Double space here)

NOTE: Enter instructions on what actions to take with respect to this Supplemental Specification. Three examples follow:

Delete Section 00000 and replace with the following:

Or

Add Section 00000

Or

Delete Section 00000 in its entirety. (No other text follows this line for this type of change. The details of the deleted Section are not covered by another section.)

Delete Section 00000 in its entirety. Refer to Section 00000. (No other text follows this line for this type of change. The details of the deleted Section are covered by the referenced section.)

PART 1 GENERAL

1.1 SECTION INCLUDES

Refer to Appendix 1 for additional formatting for all Parts (1 - 3).

(Footer information for this type of supplemental specification)

Title
00000 - Page x of y

Date goes here

Appendix 3
Supplemental Specification
(Partial section added, modified, or deleted)

This example is not all inclusive, but gives a general idea of the format.

Supplemental Specification
2008 Standard Specification Book

SECTION 00000M

TITLE HERE

(Double space here)

NOTE: Enter instructions on what actions to take with respect to this Supplemental Specification. Each set of instructions are independent of each other. Four examples follow:

Add Article 1.2, paragraph D:

D. Section 01315: Public Information
(Double space here)

Delete Article 1.14, paragraph E and replace with the following:

E. From the total value of work, the Department deducts and retains five percent until after the entire Contract has been completed in an acceptable manner, with the following exceptions:

(Double space here)

Delete Article 1.2 and replace with the following: (Note when deleting and replacing an entire article include the article number and name as part of the change.)

1.2 RELATED SECTIONS

A. Section 02056: Embankment, Borrow, and Backfill

B. Section 02842: Delineators

C. Section 02892: Traffic Signal
(Double space here)

Delete article 3.3:

(Footer information for this type of supplemental specification)

Title
00000M - Page x of y

Date goes here

**Appendix 4
Special Provisions**

Formatting similar to both types of supplemental specifications except as follows:

Date goes here for special provisions, right justified (this is not in a header)

SPECIAL PROVISION

PROJECT #

PIN #

SECTION 0000S or 0000M

TITLE HERE

Formatting from this point for special provisions is similar to a supplemental specification except for the footer. Refer to the NOTE in either Appendix 2 or 3, depending on the type of Special Provision (S or M) being formatted.

(Footer information for this type of special provision. Select the appropriate one.)

Title

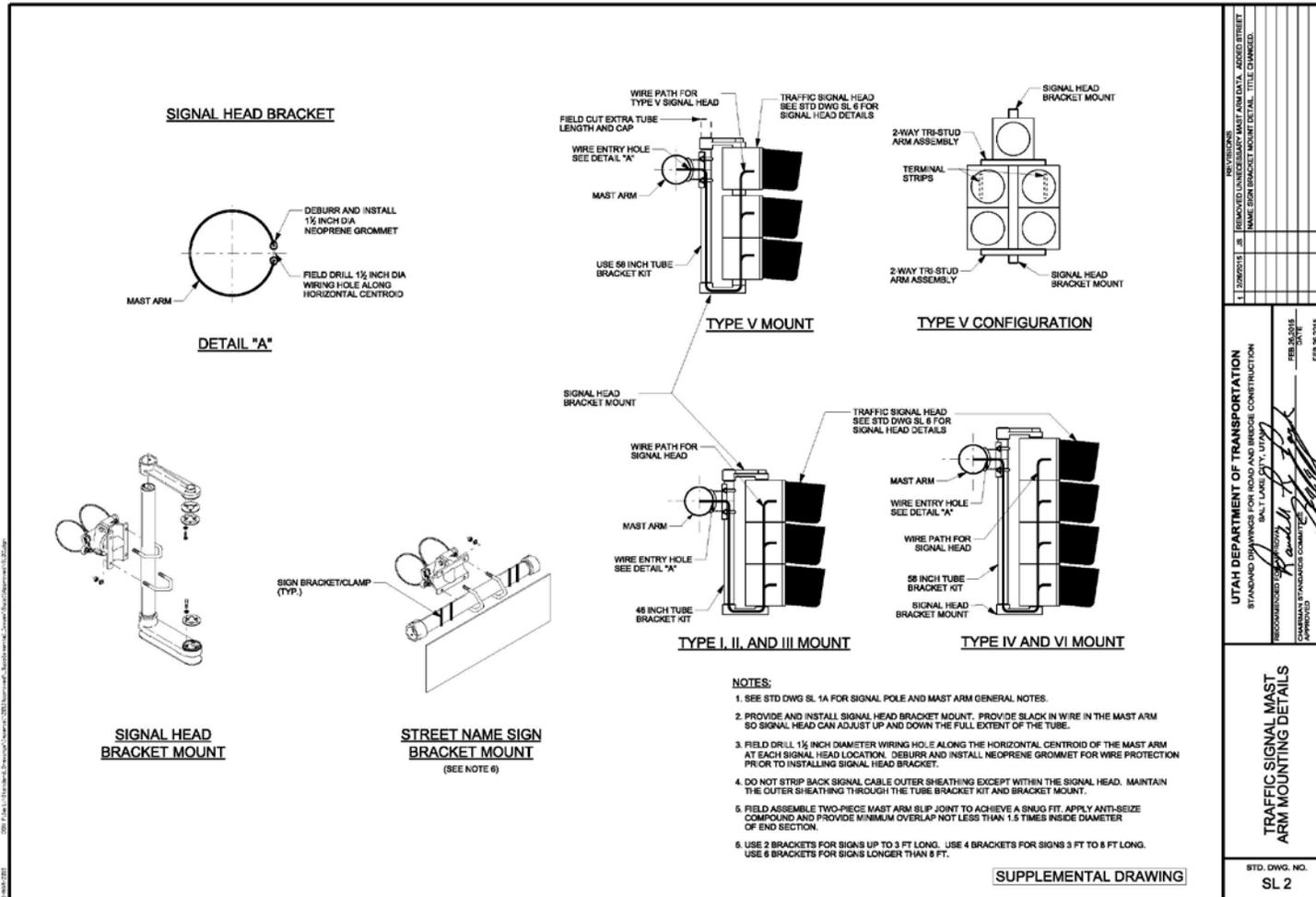
0000M - Page x of y

or

Title

0000S - Page x of y

Appendix 6 Supplemental Drawing



Appendix 7 Standards Review Instructions

GENERAL NOTES

- **Review this Appendix in its entirety before reviewing individual specification or drawing files.**
- Refer to the applicable chapters of this 2017 Edition of the Specification Writers' and Drawing Developers' Guide (2017 Guide).
- **Use only the provided files for your review. Do not use any other files you may have unless provided by the Standards Section from a request for files or as provided during the review process as indicated for use "moving forward." This applies to all Standards and Special Provisions.**
- **We will not accept Specification files with significant formatting issues covered by this 2017 Guide.**
- **We will not accept edited drawings if we have updated a drawing to CADD/PSDS and you use an old version or if you use an incorrect version.**
- Review all your Standards to determine whether each Standard requires changes and determine type of change. Types of changes are categorized as follows: (Refer to UDOT Policy 08A5-01, Standards Committee.)
 1. Priority 3 (Change applies to the current Standards.)
 - a. Editorial
 - b. Modified Approval Process (when allowed by the Policy)
 - c. Full Approval Process
 2. Priority 4 (Change applies only to a new edition of the Standards when implemented by the Standards Section.)
 - a. Editorial
 - b. Modified Approval Process
 - c. Full Approval Process
- Format of the change:
 1. Priority 3: Supplemental Specification or Supplemental Drawing
 2. Priority 4: Full Standard Specification or Standard Drawing

SPECIFICATION RELATED INSTRUCTIONS AND REVIEW ACTIONS

- All Supplemental Specifications will be rolled into the supplied files when a new edition is being developed.
- All Supplemental Specifications approved as part of a new edition process will be rolled into the final draft files prior to distribution to owners.
- Do not modify any tab settings unless other increments are required for a specific reason. All are set to the default ½ inch increments.
- Apply proper use of word wrap within each paragraph. Use a hard return only at the end of a paragraph, not after every line within a paragraph.
- Do not use automatic paragraph numbering.
- Do not modify any fonts or heading codes.
 - Heading 1 Section number line
 - Heading 2 Section title
 - Heading 3 Part 1, Part 2, and Part 3 lines
 - Heading 4 Article number and Article title lines
- All Specifications whether a Standard Specification, Supplemental Specification, or Special Provision must have a Heading 1 and Heading 2. Only Standard Specifications, full Section Supplemental Specification replacements or additions, and full Section Special Provision replacement or addition use Heading 3 and Heading 4. No other Headings are to be used in a Specification.
- **Turn on Track Change before making any change, no matter how minor.**
- Format the change as required depending on the Priority.

REVIEW ACTIONS

1. Review each Specification and determine if a change is required.
2. Determine type and Priority of change. Update throughout the process as needed.
3. Report Sections that will not be changing or Sections that were initially reported as not changing that now have changes when monthly reporting is required as implemented by the Standards Section.
4. Determine a Standards Committee meeting date where change will be presented. Applies throughout the process. Update as needed.

5. Make changes as needed. This includes verifying all information in the Standard is correct even if not changing a given area.
6. Verify Related Sections and References cross check properly. All items listed in Article 1.2 and 1.3 must be called out in the Specification. All Sections or References called out in the Specification must also be listed as appropriate in Article 1.2 or 1.3. There are no exceptions to this requirement.
7. Verify that all Reference titles are correct, particularly for AASHTO and ASTM call outs and correct as needed. Do not assume those listed in the provided files are correct. Do not use "Current Edition" as part of any reference. Standard Specification 00100 states "reference to external publications is to the most recent version, issue, or edition in effect on the date of the *Notice to Bidders*, unless stated otherwise."
8. Check paragraph numbering to verify no number is skipped or duplicated. This is particularly important when information within a specific Standard is moved or deleted.
9. Verify that there is no auto-paragraph numbering and correct as needed.
10. Verify that "etc," "and/or," or any combination of word with a slash between words are not used and correct as needed. The requirement for no slashes does not apply to dimension or unit call outs.
11. Verify there are two spaces between sentences in the same paragraph and correct as needed.
12. Verify that definitions are listed properly in Article 1.4. Move any definitions that are found in other parts of the Section to Article 1.4. Look for words like "defined" or "means" when accomplishing this step.
13. Verify that submittals are listed properly in Article 1.5 **AND** are consistent with Section 001450 with regards to the process for submission and the disposition of submittals once received.
14. Review all changes for accuracy and correct as needed.
15. Review all changes for compliance with this Guide.

16. Email Word Doc files to the Standards Section for review according to Policy requirements with recommendation of approval level. Do not use thumb drives, CDs, Google Drive, ProjectWise, or a similar type method to transfer or provide files for this requirement. Only email provided attachments will be accepted. This minimizes the time it takes to process files as well as providing tracking history while providing confidence by the Standards Section that the correct files are being used. Do not include any PDF files unless they are for supporting documentation of the change.
17. Provide a Submittal Sheet for the change for all non-editorial changes at the same time the Standard is provided.
18. Confirm the Standards Committee meeting where change will be presented or work with the Standards Section to schedule a Modified Approval Process meeting.
19. Complete the Standards Committee coordination and approval process within Policy guidelines.
20. Verify page number is correct after the Section has been approved and all changes have been accepted. Don't worry about page numbering in the Track Change version. Correct as needed in the final, clean copy. Use automatic coding for the page number and a hard page number for the total number of pages. Do not use automatic coding for the total number of pages. This step may be accomplished by the Standards Section as part of the final processing steps of an approved Standard.
21. Repeat this process for each of your Standard Specifications.
22. Advise the Standards Section as soon as possible if the status of a Section changes.

DRAWING RELATED INSTRUCTIONS AND REVIEW ACTIONS

- All Supplemental Drawing and Revision Box information carries over to a revision unless removed or approved by the Standards Section.
- Removal of digital signatures can only be accomplished by the Standards Section.
- Do not modify any drawing settings without coordinating with the Standards Section.
- Cloud all changes including the drawing number and title if those are changing.
 - Clouding not required on new drawings.
 - Refer to Chapter 3, Clouding Requirements for color coding.
- Format the change as required depending on the Priority.

REVIEW ACTIONS

1. Review each Drawing and determine if a change is required.
2. Determine type and Priority of change. Update throughout the process as needed.
3. Report Drawings that will not be changing or Drawings that were initially reported as not changing that now have changes when monthly reporting is required as implemented by the Standards Section.
4. Determine Standards Committee meeting where change will be presented. Applies throughout the process. Update as needed.
5. Make changes as needed. This includes verifying all information in the Standard is correct even if not changing a given area.
6. Verify Standard Specification and Standard Drawing References are correct and formatted correctly. Update as needed.
7. Verify that all Reference titles are correct, particularly for AASHTO and ASTM call outs and correct as needed. Do not assume those listed in the provided files are correct. Do not use "Current Edition" as part of any reference. Standard Specification 00100 states "reference to external publications is to the most recent version, issue, or edition in effect on the date of the *Notice to Bidders*, unless stated otherwise."

8. Check paragraph numbering and lettering in Notes to verify no number or letter is skipped or duplicated. Remember regular Construction notes use numbers and that Design Only notes use letters.
9. Verify that all details are correct.
10. Verify that “etc,” “and/or,” or any combination of word with a slash between words are not used and correct as needed. The requirement for no slashes does not apply to dimension or unit call outs.
11. Verify that all “See Note X” call outs refer to the proper note and correct as needed. This is important if a Note is added or deleted as part of the change and when drawings are moved as part of renumbering.
12. Verify that all arrow leaders are pointing to the correct detail or part of a detail and correct as needed.
13. Check all spelling and correct as needed.
14. Delete the “Supplemental Drawing” box and all information in the Revision Box for Priority 4 changes if not already accomplished by the Standards Section.
15. Update the Revision Box as needed for Priority 3 changes. Do not remove any previously entered information. Increment the number as appropriate. Keep wording of the change as short as possible while still conveying the details of the change.
16. Review all changes for accuracy and correct as needed.
17. Review all changes for compliance with this Guide.
18. Email Microstation DGN files to the Standards Section for review according to Policy requirements with recommendation of approval level. Do not use thumb drives, CDs, Google Drive, ProjectWise, or a similar type method to transfer or provide files for this requirement. Only email provided attachments will be accepted. This minimizes the time it takes to process files as well as providing tracking history while providing confidence by the Standards Section that the correct files are being used. Do not include any PDF files unless they are for supporting documentation of the change.
19. Provide a Submittal Sheet for the change for all non-editorial changes at the same time the Standard is provided.
20. Confirm the Standards Committee meeting where change will be presented or work with the Standards Section to schedule a Modified Approval Process meeting.

21. Complete the Standards Committee coordination and approval process within Policy guidelines.
22. Remove any clouding on final file. This step may be accomplished by the Standards Section as part of the final processing steps of an approved Standard.
23. Repeat this process for each of your Standard Drawings.
24. Advise the Standards Section as soon as possible if the status of a Drawing changes.

SPECIAL PROVISION RELATED INSTRUCTIONS AND REVIEW ACTIONS

- This applies to all Department and Division Special Provisions currently on the 2012 Special Provision Web site as well as new Special Provisions that are being considered.
- This process does not apply for any Special Provision that is being converted to a Standard. Complete the above SPECIFICATION RELATED INSTRUCTIONS AND REVIEW ACTIONS part of this file for a Priority 4 change.

REVIEW ACTIONS

1. Review each Special Provision and determine if a change is required.
2. Report Special Provisions that will not be changing or Special Provisions that were initially reported as not changing that now have changes when monthly reporting is required as implemented by the Standards Section.
3. Complete the “Special Provision Review Sheet and Process” form for every Special Provision on the Standards Special Provision Web page that applies to your area according to requirements listed on the Form. This includes Special Provisions that are not changing based on the periodic review requirements.
4. Make changes as needed. This includes verifying all information in the Special Provision is correct even if not changing a given area.
5. Verify Related Sections and References cross check properly. All items listed in Article 1.2 and 1.3 must be called out in the Specification. All Sections or References called out in the Specification must also be listed as appropriate in Article 1.2 or 1.3. There are no exceptions to this requirement
6. Verify that all Reference titles are correct, particularly for AASHTO and ASTM call outs and correct as needed. Do not assume those listed in the provided files are correct. Do not use “Current Edition” as part of any reference. Standard Specification 00100 states “reference to external publications is to the most recent version, issue, or edition in effect on the date of the *Notice to Bidders*, unless stated otherwise.”
7. Check paragraph numbering to verify no number is skipped or duplicated. This is particularly important when information within a specific Standard is moved or deleted.
8. Verify that there is no auto-paragraph numbering and correct as needed.

9. Verify that “etc,” “and/or,” or any combination of word with a slash between words are not used and correct as needed. The requirement for no slashes does not apply to dimension or unit call outs.
10. Verify there are two spaces between sentences in the same paragraph and correct as needed.
11. Verify that definitions are listed properly in Article 1.4. Move any definitions that are found in other parts of the Section to Article 1.4. Look for words like “defined” or “means” when accomplishing this step.
12. Verify that submittals are listed properly in Article 1.5 **AND** are consistent with Section 01450 with regards to the process for submission and the disposition of submittals once received.
13. Review all changes for accuracy and correct as needed.
14. Review all changes for compliance with this Guide.
15. Obtain approval from your Division leader. Standards Committee process and approval isn’t required for Special Provisions.
16. Email Word Doc files to the Standards Section for review. Do not use thumb drives, CDs, Google Drive, ProjectWise, or a similar type method to transfer or provide files for this requirement. Only email provided attachments will be accepted. This minimizes the time it takes to process files as well as providing tracking history while providing confidence by the Standards Section that the correct files are being used.
17. Verify page number is correct after the Section has been approved and all changes have been accepted. Don’t worry about page numbering in the Track Change version. Correct as needed in the final, clean copy. Use automatic coding for the page number and a hard page number for the total number of pages. Do not use automatic coding for the total number of pages. This step may be accomplished by the Standards Section as part of the final processing steps of an approved Standard.
18. Repeat this process for each of your Division Special Provisions.
19. Advise the Standards Section as soon as possible if the status of a Section changes.

Appendix 8 Summary of Changes

September 2016

Updated Chapter 2 and Chapter 3

- Add reference to Appendix 7 for Review Requirements

Updated Chapter 11

- Add Slash (/) Symbol usage requirements

Appendix 7

- Added new appendix for Standards Review Instructions

Appendix 8

- Renumbered from Appendix 7

July 2016

Updated Chapter 2

- Cross Reference requirements for Specifications.

Updated Chapter 3

- Notes, Design Only Drawing and Notes, and General Notes

Updated Chapter 4

- Clarified singular vs plural unit call outs

Updated Chapter 5

- Words and number combination information

Updated Chapter 8

- Clarified how AASHTO and ASTM references are shown in Article 3.

Updated Chapter 10

- Added a statement dealing with prepositional phrases

Updated Chapter 13

- Added step for Design Only Drawing box

September 2015

Updated for 2017 Standards

Guide name changed to UDOT Specifications Writers' and Drawing Developers Guide

Guide updated September 2015 to include:

- Changes related to the addition of drawing related information
- New and changed requirements and additional examples related to specification related information