



**M**  **STERSPEC<sup>®</sup>**

# **User's Guide**

**MASTERSPEC<sup>®</sup>**

**A Product of The American Institute of Architects (AIA)**

**Exclusively Published for the AIA by**

**ARCOM**

**Architectural Computer Services, Inc.**

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**Alexandria, Virginia 22314-2875**

MASTERSPEC®

## User's Guide

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# MASTERSPEC® Specification System with MASTERWORKS™ License Agreement

This is a License Agreement, not a sales agreement. Issued by Architectural Computer Services, Inc. (ARCOM) for The American Institute of Architects (AIA). It is a legally binding Agreement between you and ARCOM. This license gives you the right to use the MASTERSPEC Specification System for a one-year period, which may be extended in one-year increments, up to four (4) years, by License renewal. By signing this Agreement you are agreeing to the terms and conditions listed below. Your order cannot be processed until we receive this signed Agreement and your full payment.

**Terms and Conditions:** Throughout this License Agreement the word MASTERSPEC refers to the AIA-copyrighted MASTERSPEC Specification System comprised of the MASTERSPEC specification text and Supporting Documents in all formats, the ARCOM MASTERWORKS software, the computer distribution CDs, the MASTERSPEC and MASTERWORKS User's Guides, and periodic updates. MASTERSPEC is copyrighted by the AIA and is exclusively published by ARCOM for the AIA. MASTERSPEC is a registered trademark of the AIA. MASTERWORKS is a SPECWARE® software product of and are copyrighted by ARCOM.

**Governing Law.** This Agreement will be governed in all respects by the laws of the District of Columbia.

**Who May Enter Into This License Agreement.** This license is intended primarily for individuals and organizations preparing construction project specifications for specific construction projects and others specifically approved by ARCOM. It is not intended for building product and component manufacturers as a marketing, sales, or technical support tool. For this purpose a PRODUCT MASTERSPEC License Agreement is available through the ARCOM Consulting Services Group.

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**ARCOM grants you a nonexclusive and nontransferable site license to use MASTERSPEC** solely and exclusively within your organization at one physical address, or in the case of an Enterprise License, only at the physical addresses indicated on Exhibit A. MASTERSPEC may be used only to produce office-edited versions (office masters) for your organization and/or construction project specifications prepared by your organization for use on your organization's specific construction projects.

**Specification consultants** may prepare project specifications for other firms but may not prepare specifications for manufacturers, products, or prepare office masters for non-Licensed Users.

**Building Product Manufacturers** may use MASTERSPEC at the one physical address indicated in the order form, or in the case of an Enterprise License, only at the physical addresses indicated on Exhibit A, for internal technical reference or to produce project specifications for their own construction. They may not use MASTERSPEC in sales, consulting, or to produce and distribute product specifications based on MASTERSPEC inside or outside of their organization without a PRODUCT MASTERSPEC License from the ARCOM Consulting Services Group.

**No Component of MASTERSPEC may be used** to update a competing master specification system.

**You may network MASTERSPEC** so it can be used on other computers or terminals within your organization so long as all use is limited to the one physical address, or in the case of an Enterprise License, only at the physical addresses indicated on Exhibit A and each individual who uses MASTERSPEC is familiar with the terms of this Agreement. A copy of this Agreement is included in the MASTERSPEC User's Guide.

**You may make MASTERSPEC available** to individuals who work for the organization at the one physical address, or in the case of an Enterprise License, only at the physical addresses indicated on Exhibit A, or who telecommute via a WAN, an Intranet, or other secure electronic means, subject to other restrictions herein. No part of MASTERSPEC may be placed on the Internet.

**You may not** (i) allow access to MASTERSPEC to anyone outside of your organization; (ii) decompile, reverse engineer, decrypt, disassemble, or otherwise reduce the software in MASTERSPEC into hard-copy form; nor (iii) otherwise copy, distribute, rent, loan, disseminate, publish, sell, or transfer any portion of MASTERSPEC except as permitted in this Agreement.

**You may reproduce and distribute** outside of your organization a project specification produced through use of MASTERSPEC provided that distribution of the specification is solely and exclusively in connection with a single construction project for which the specification was originally produced. ARCOM grants Licensed Users permission to copyright as a derivative work a project specification prepared by your organization for use on your organization's specific construction projects or for your clients if you are a specification consultant.

**You may not resell, publish,** or otherwise distribute any such specification or any portion of MASTERSPEC for any other purpose, such as, but not limited to, advertising purposes, or general informational, or educational services without prior written permission from ARCOM. The AIA and ARCOM retain all rights to

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**You understand and agree** that you must review and edit MASTERSPEC before incorporating it into an office master or project specification. You also agree that if you find errors or ambiguities in MASTERSPEC or software problems in MASTERSPEC you will promptly notify ARCOM.

**Updates:** ARCOM will continue to develop new sections and update existing sections of MASTERSPEC and to add features and improvements to MASTERWORKS. Your license fee will cover technical support services, updates, and enhancements issued by ARCOM during the term of this License.

**Refund Policy:** If you are not satisfied with MASTERSPEC you may cancel this License within 30 days of receipt of MASTERSPEC by returning all components of MASTERSPEC to ARCOM accompanied by a letter on your letterhead certifying that all copies, project specifications, and office masters that have been made have been destroyed and that MASTERSPEC is not being used in any form. The license fee, less a 15 percent service charge, will be refunded. Refunds will not be provided for cancellations made more than 30 days after receipt of MASTERSPEC. You may exchange damaged or non-functional components of MASTERSPEC within 30 days of receipt at no charge, except when damage has resulted from improper usage.

**Termination:** This License will automatically terminate at the end of one full year from the time you receive MASTERSPEC unless you renew the License by paying an annual renewal fee. ARCOM will automatically send you an annual invoice for the renewal fee. If this License is terminated for any reason, you agree to discontinue using MASTERSPEC, the MASTERWORKS software, and office masters derived from MASTERSPEC. You further agree to return to ARCOM or destroy all components of MASTERSPEC and to certify in writing that MASTERSPEC has been removed from your continued access and use, including all copies and office-edited versions or "masters" derived from MASTERSPEC, and that MASTERSPEC has not been made available for use by any other party. Printed project specifications you create from MASTERSPEC during the term of this license may be used after termination.

**Changes in Terms and Conditions:** Following the term of this Agreement, ARCOM reserves the right to revise future prices of MASTERSPEC at any time and following the term of this Agreement, to change these terms and conditions on written notice to Licensed Users.

060105WD

## I HAVE READ AND AGREED TO THE ABOVE TERMS AND CONDITIONS.

Authorized Signature	Date
Name and Title	Firm Name



# Chapter 1 Introduction to **MASTERSPEC®** and **ARCOM**

## **MASTERSPEC**

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MASTERSPEC® is a product of The American Institute of Architects (AIA) and is produced and published for the AIA by Architectural Computer Services, Inc. (ARCOM). MASTERSPEC has been the specification system of choice by design and specification professionals for over 36 years. Currently, more than 10,000 design firms, developers, contractors, manufacturers, institutions, and government agencies rely on MASTERSPEC. ARCOM also produces the SPECWARE® family of specification editing and production software.

MASTERSPEC is recognized worldwide as the most complete, technically correct, and thoroughly reviewed commercial master specification system. Insurers offer discounts on professional liability insurance to MASTERSPEC Licensed Users. Current litigation frequently relies on MASTERSPEC as the representative standard of professional care.

## **Endorsements**

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The following organizations endorse MASTERSPEC and participate in the MASTERSPEC Review Committees:

- AIA The American Institute of Architects
- ACEC American Consulting Engineers Council
- ASID American Society of Interior Designers
- ASLA American Society of Landscape Architects
- CASE Consulting American Structural Engineers
- NLA National Landscape Association
- NSPE National Society of Professional Engineers

MASTERSPEC also has strategic alliances with the Construction Specifications Institute (CSI) and the International Interior Design Association (IIDA).

## **Review Committees**

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An independent committee of MASTERSPEC Licensed Users reviews new and updated MASTERSPEC sections. The committees meet quarterly for two days in the ARCOM Alexandria, Virginia office. The AIA and the endorsing organizations fund these committees. Current committees include the following:

- MASTERSPEC Architectural Review Committee (MARC)
- MASTERSPEC Engineering Review Committee (MERC)
- MASTERSPEC Interiors Review Committee (MIRC) as needed

- MASTERSPEC Landscape Review Committee (MLRC) by correspondence
- Manufacturers, product and industry groups, and standards organizations also review MASTERSPEC on invitation from ARCOM.

### **MASTERSPEC Libraries**

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MASTERSPEC is available in the following Full Length, Short Form, and Outline libraries organized by design discipline. Each library is updated quarterly.

- |  |     |
|--|-----|
| • Architectural/Structural/Civil           | ASC |
| • Structural/Civil/Landscape               | SCL |
| • Structural                               | STR |
| • Site/Civil                               | SCV |
| • Landscape Architecture                   | LAN |
| • Interiors                                | INT |
| • Interiors Supplement to ASC              | INS |
| • Roofing                                  | RFG |
| • Security and Detention                   | S&D |
| • Security and Detention Supplement to ASC | SDS |
| • General Requirements                     | GNR |
| • Mechanical/Electrical                    | M&E |
| • Mechanical                               | MCH |
| • Electrical                               | ELE |
| • Fire Protection                          | FPT |

### **MASTERSPEC Formats**

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Each library is divided into the following three formats:

- |                 |   |
|-----------------|---|
| • Full Length   | The most regularly used sections and frequently encountered conditions for a wide range of project sizes and types.   |
| • Short Form    | Short Form sections are condensed from and compatible with MASTERSPEC full-length sections. Short Form sections include a limited range of products, streamlined material and quality-control requirements, and concise specifying methods. |
| • Outline       | Outline specifications for preliminary project use.   |
| • Small Project | A special use library for less complex projects, updated every two years.   |

## **MASTERSPEC Versions**

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Each quarterly updated library also has two versions:

- **Basic** The most regularly used sections and frequently encountered conditions for a range of project sizes and types.
- **Expanded** The Basic sections plus Supplemental sections in which the subject matter is limited in scope and the work is more specialized or custom than covered in Basic.

Instructions for your specific MASTERSPEC library and version are included in Chapter three.

## **MASTERSPEC Small Project Libraries**

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The MASTERSPEC Small Project libraries are abbreviated specification versions for less complex projects. Small Project is updated every two years. Small Project is available with Section Text only or with Section Text and Supporting Documents.

- Small Project ASC
- Small Project ME
- Small Project Combined

## **Supporting Documents**

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Each Basic, Supplemental, and Short Form MASTERSPEC section includes the following Supporting Documents. The Supporting Documents are optional with Small Project.

Cover	Describes the content of the section text; related products and work, including products that could be inserted into the section if required, similar work normally specified elsewhere; and closely related work specified in other sections. Includes summary of changes in the update.
Evaluations	Describes characteristics and criteria for specifying the products and materials included in the section. The Evaluations include editing instructions; the scope of the section, product characteristics; design and detailing considerations, environmental and LEED requirements, referenced standards; reference materials; and a list of manufacturers. Product comparisons and sample schedules are included in some sections.
Section Text	In three-part format with editor's notes, alternative text, in-line optional text, and insert notes.

Drawing Coordination Checklist	Drawing requirements organized and related to the section content. Indicates items that should be shown on the drawings because they are not in the section text.
Specification Coordination Checklist	Includes a list of specification sections and requirements that relate to the section content.

## **Editing Assistance**

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MASTERSPEC is the only master specification system with Supporting Documents. The Evaluations provide editing instructions for each specification section as well as product comparisons; a list of national manufacturers; referenced standards; references; and a discussion of the section topic and graphics. Where appropriate, environmental and LEED requirements are included. The Section Text includes editor's notes with instructions for editing and selecting alternative text, in-line optional text in square brackets ([ ]). All Section Text is displayed for your review and editing by any combination of the software available from ARCOM and other providers. Editor's notes and units of measure appear on-screen in color. Editor's notes are in hidden text and may be toggled on and off in your word processor or with MASTERWORKS. MASTERSPEC includes instructions when text is to be replaced in insert notes shown in angle brackets (< >).

You can edit MASTERSPEC using your word processor, your word processor enhanced with ARCOM's MASTERWORKS™, the LINX automated specification editor, or them all, starting with LINX. Instructions for editing with your word processor are in Chapter 2. Instructions for editing with MASTERWORKS are in the MASTERWORKS User's Guide. Instructions for editing with LINX are in an on-line tutorial. Tutorials for MASTERWORKS and LINX are installed on your computer along with the software. LINX only operates with the full-length Basic and Expanded Libraries. You may also edit MASTERSPEC from other providers including ADS from Architectural Data Systems (ADS) and e-SPECS from InterSpec. e-SPECS also provides a LINX editing capability as well as linkage to CAD drawings and 3-D models.

## **ARCOM**

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ARCOM is a unique firm of architects, engineers, computer scientists, specification writers, editors, technical support personnel, product representatives, and marketing staff. ARCOM began in 1972 as a division of an architectural firm in Salt Lake City, Utah, offering a MASTERSPEC editing service and the distribution of MASTERSPEC on magnetic tape to larger architectural and engineering firms.

When design firms began to use minicomputers and then personal computers, ARCOM developed word-processor versions of MASTERSPEC and started an automation service for the AIA. In 1988, the AIA selected ARCOM as the sole source for MASTERSPEC quarterly updates. In December 1994, the AIA selected ARCOM to assume all responsibilities of MASTERSPEC. On January 1, 1995, the staff of the AIA Professional Systems Division and all research, writing, editing, marketing, sales, production, and support of MASTERSPEC transferred to ARCOM. ARCOM has been the exclusive publishers of MASTERSPEC for ten years.

ARCOM has offices in Salt Lake City, Utah, and Alexandria, Virginia. The Salt Lake City office includes administration, accounting, word processing, programming, production, fulfillment, technical support, marketing, and sales functions. The Alexandria office includes specification research, writing, editing, word processing, technical support, and MASTERSPEC Review Committee support. The MASTERSPEC Technical Library is located in the Alexandria office.

## **ARCOM SPECWARE®**

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ARCOM SPECWARE is the family of specification enhancement software provided by ARCOM to MASTERSPEC Licensed Users. SPECWARE includes the following:

**MASTERWORKS™** Software that enhances your word processor to simplify editing of alternative text, select options to keep or delete, insert required text, and add project notes. The Multi File features automate spell checking, searching and replacing, formatting, and other text appearance functions. Specification output formats include project manuals, sheet specifications, drawing notes, and outline specifications. MASTERWORKS can also automate headers and footers, reports, and tables of contents.

**LINX™** A stand-alone automated editor for MASTERSPEC that operates on Full Length MASTERSPEC sections in the ARCOM Structured Text™ database format. Text elements in each section are linked together hierarchically and semantically. All linked dependent text elements are marked for deletion when a parent text element is marked for deletion. This allows easy removal of large quantities of text. LINX includes an interactive question-and-answer edit and an on-screen edit (including manual editing and override of system edits, automatic edits, and translation to a word processor format of your choice). LINX includes an extensive on-line help system with access to all MASTERSPEC Supporting Documents as help files and tutorials while you are editing.

## **ARCOM SPECWARE Software Providers**

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ARCOM has agreements with software developers to make MASTERSPEC Libraries available for editing with their software.

**Architectural Data Systems  
ADS** Online software to edit MASTERSPEC, select products and produce schedules for CAD drawings.

**InterSpec  
e-SPECS** Software to integrate MASTERSPEC with CAD drawings and 3 dimensional models. The e-SPECS LINX versions include LINX capability.



## Chapter 2 Installing and Editing MASTERSPEC®

### Introduction

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MASTERSPEC® is a copyrighted text database. Your Site License Agreement authorizes you to install the MASTERSPEC Section Text and Supporting Documents files on a server for use on any number of computers, or you may install the files on any number of computers at one office location. You are also authorized to install one additional copy for backup purposes. From MASTERSPEC you are authorized to produce office masters and project specifications for the projects produced by your organization. You do not have authorization to do installations or to make copies for any other purpose. If your organization has more than one office location, you must have a separate license for each location. An enterprise license is available for larger organizations. For more information, refer to the Terms and Conditions in your License Agreement, or call an ARCOM Product Representative.

MASTERSPEC is not a software program. MASTERSPEC is a database of specification files for use with your specific word processor, with MASTERWORKS, LINX, or other ARCOM approved software program.

MASTERWORKS is an ARCOM software program that must be installed if you want to take advantage of the time saving editing and automation tools provided. Currently, this application is available for Microsoft® Word 97/2000, XP (2002), 2003, Microsoft Office X for Macintosh and WordPerfect 8/9/10/11. LINX is an ARCOM automated editor that operates on MASTERSPEC in a relational database. LINX is separately licensed and is available on the LINX CD.

ARCOM has agreements with two software vendors to package the MASTERSPEC database with their software. Currently the Short Form ASC version is available from Architectural Data Systems with the ADS® online software and all versions of MASTERSPEC are available from ARCOM and InterSpec with the e-SPECS® software.

### Installation

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Close all Windows programs prior to installing MASTERSPEC. If your computer is on a network, you may need administrator privileges to install the MASTERSPEC Section Text and Supporting Documents files.

Insert the CD into the drive. The install program should start automatically. If not, double click on the **My Computer** icon and the **CD** icon on your desktop. Then double click the file **SETUP**.

Follow the instructions that appear on your screen. Installation time could take ten or more minutes depending on the speed of the processor in your computer.

You will first be presented with a License Agreement (Figure 1) that defines your rights to use the MASTERSPEC System. To indicate that you have read and accept the terms of the agreement, select the **Yes** radio button, and then click the blue arrow to continue.



Figure 1 - MASTERSPEC License Agreement

In the next dialog, **ARCOM Installer for MASTERSPEC** (Figure 2), enter your 20-letter MASTERSPEC License Key, four letters per box. The system will tab forward automatically as you type in your key. If your computer does not request the 20-letter key, you do not have administrator privileges; the program cannot be installed until your system administrator assists you or assigns you installation privileges.

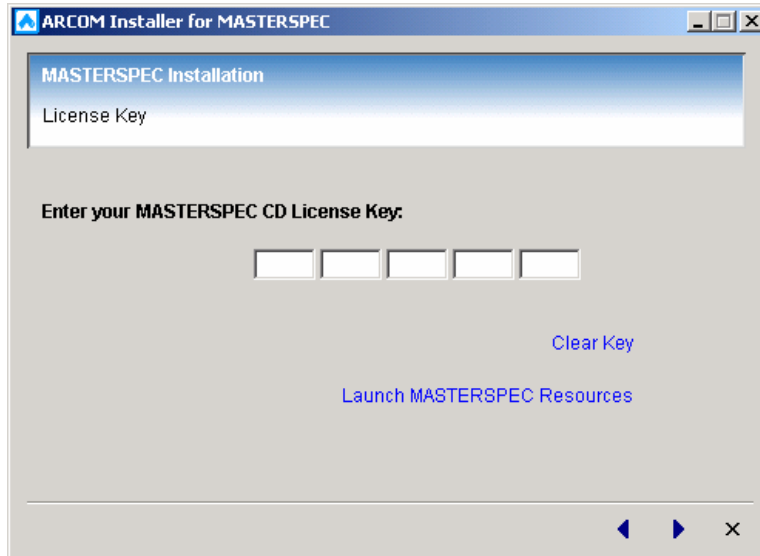


Figure 2 - Enter MASTERSPEC License Key

To clear the boxes in the window, click the **Clear Key** button.

To launch the MASTERSPEC Resources, including Help files, a Consolidated Table of Contents, user's guides, tutorials, and these installation instructions, click **Launch Masterspec Resources**.

Click again on the blue arrow to advance to the next dialog where you will **Choose a Component to Install** (Figure 3). If you intend to install MASTERWORKS and the Supporting Documents (recommended), remember to install MASTERSPEC first. The Supporting Documents include only the Covers for Small Project text only versions.



Figure 3 - Select Component to Install

By clicking the **MASTERSPEC** button, you open a dialog with installation options including format, location, and word processor support (Figure 4).

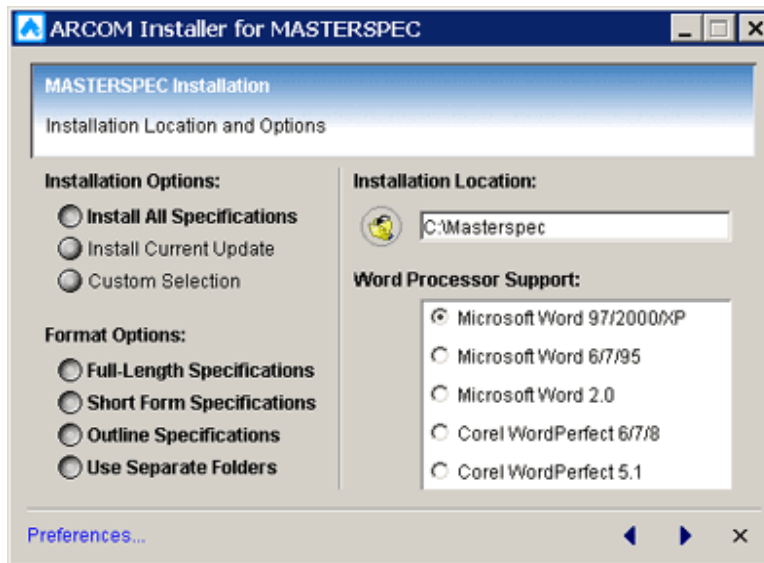


Figure 4 - Installation Location and Options

The three options for installation are: **Install All Specifications** (the default option), **Install Current Update**, and **Custom Selection**. If you click on the second or third options, a

subsequent dialog will allow you to select individual sections or entire divisions for installation (Figure 5).

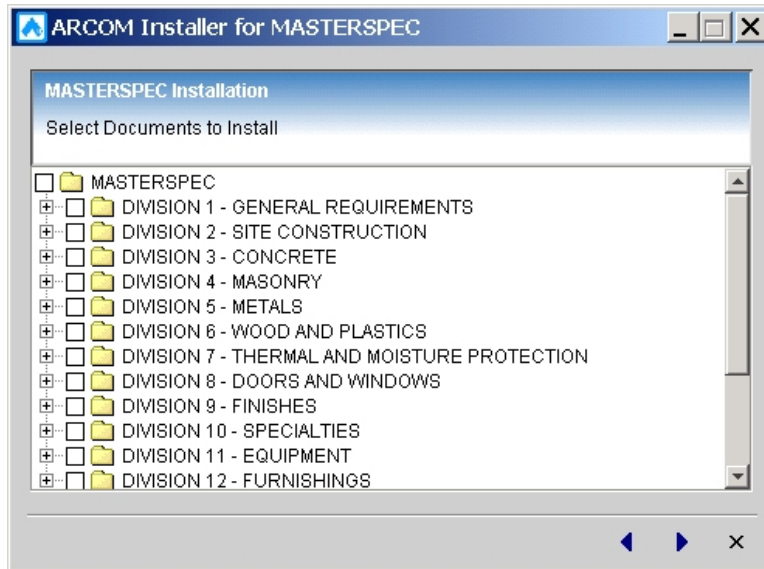


Figure 5 – Custom Document Selection

For installation location options, an edit window provides a default location of **C:\MASTERSPEC**. If you choose to install MASTERSPEC in a different location, type in the file destination here or use the **browse** button to indicate a folder on your system.

Select one of five options for word processor support in Microsoft Word or Corel WordPerfect.

Additional options are available by clicking the **Preferences** item at the bottom of the Installer dialog (Figure 4). This will open the **Preferences Dialog** (Figure 6).

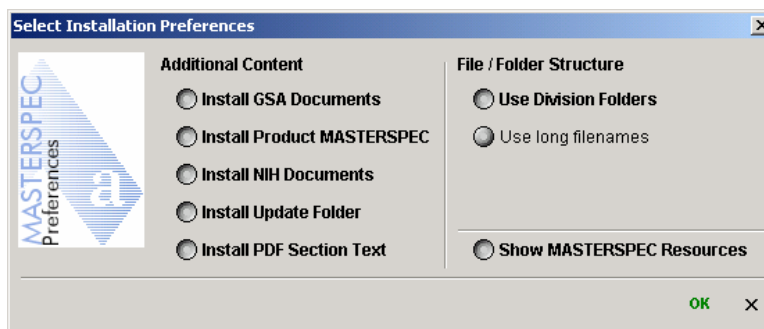


Figure 6 – Preferences

The **Preferences** dialog opens with most of the options already selected. The program default will install the GSA documents, NIH documents, and Product MASTERSPEC sections. To exclude any of these options, click the appropriate button in the Preferences dialog to deselect.

The **Install Update Folder** option will create a new folder on your system for the current MASTERSPEC update. This will be a separate folder in where all update-related information will be installed. If you do not wish to use the update folder, deselect this option in the Preferences dialog.

MASTERSPEC will by default install all of the specification sections into separate folders organized by division. If you would prefer to have all of the sections installed into a single folder, deselect the **Use Division Folders** option in the Preferences dialog.

The **Use Long Filenames** option will install MASTERSPEC sections with section titles included in the filename. If left unselected, sections will be installed with only the section number and type as the filename.

**Show MASTERSPEC Resources**, if selected, will show the MASTERSPEC Resources dialog (Figure 7) whenever the ARCOM Installer is started.



Figure 7—MASTERSPEC Resources Dialog

The MASTERSPEC Resources dialog contains information about MASTERSPEC, MASTERWORKS, and LINX. It contains user's guides, tutorials, the ARCOM *SpecPress* newsletter, and other information to keep you updated on changes to MASTERSPEC, MASTERWORKS, and LINX.

Close the MASTERSPEC Resources dialog to return to the Preferences dialog. When finished with the Preferences dialog, click the OK button to accept your changes. To cancel, click the Exit button.

After you have selected each of your options and clicked the blue arrow, the ARCOM Installer will save files to your hard drive. This operation may take several minutes depending on the speed of the processor on your computer. When the Installer is finished, a screen message will confirm that you have successfully installed your files.

For more detailed information on installing MASTERSPEC, MASTERWORKS, and the Supporting Documents, see the MASTERWORKS User's Guide.

## **MASTERSPEC Section Text Naming Convention**

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Each MASTERSPEC section follows CSI/CSC's PageFormat and Section Format and is numbered and named according to CSI/CSC's 1995 or 2004 *MasterFormat*. The *MasterFormat* 1995 and 2004 versions of MASTERSPEC are each on an ARCOM CD. A comprehensive table of contents that lists the section number and title for all sections in *MasterFormat* 1995 and 2004 is found in MASTERSPEC Resources. You can print either or both table of contents for reference. Sections in *MasterFormat* 1995 have a five-digit number in one of sixteen divisions and in *MasterFormat* 2004 have a six-digit number in one of fifty divisions. A few narrower scoped sections in *MasterFormat* 2004 will have an eight-digit number with a period before the last two digits. The suffix on the section number indicates whether the section is Full Length, Short Form, Outline, or Small Project.

<i>MasterFormat</i> 1995 Section Text	Example
• fl_ Full Length Formats	08620fl_.doc
• sf_ Short Form Formats	08620sf_.doc
• ot_ Outline Formats	08620ot_.doc
• sp_ Small Project	08620sp_.doc

<i>MasterFormat</i> 2004 Section Text	Example
• _fl Full Length Formats	086200_fl.doc
• _sf Short Form Formats	086200_sf.doc
• _ot Outline Formats	086200_ot.doc
• _sp Small Project	086200_sp.doc

## **GSA Documents**

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MASTERSPEC Division 1 Sections may not be used for U. S. Government projects without extensive editing. There are significant differences between Government and private acquisition and contracting practices. For this reason the General Services Administration has developed GSA Division 1 Sections to correspond, where practical, in subject matter, title and section number with the 1994 and 1998 drafts of MASTERSPEC Division 1 sections. The current MASTERSPEC Division 1 sections are dated 2002. The GSA documents are located on the MASTERSPEC CD and may be installed with the ARCOM Installer. A readme.txt file is included in the folder to explain the similarities and differences between the GSA and MASTERSPEC Division 1 sections. GSA Documents are included with Full Length versions only.

## **NIH Documents**

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The Project Manual is tied together by the content in Division 1 Sections, which includes general, administrative, and procedural requirements that apply to Sections in Divisions 2 through 16. Because of its significance, a well-organized and -coordinated Division 1 is important to MASTERSPEC® Licensed Users and ARCOM.

ARCOM has worked with the National Institute of Health (NIH) to create customized Division 1 sections for the use of both in-house personnel and consultants who design NIH projects.

With few exceptions, each Division 1 Section is based on a MASTERSPEC Section, but each has been modified to work with the agency's contract provisions rather than AIA Document A201. Many requirements are the same, but some are significantly different. Because Division 1 affects every other Section in the MASTERSPEC library, ARCOM worked closely with this agency to ensure that the requirements referenced by other MASTERSPEC Sections were retained. NIH Documents are included with Full Length versions only..

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## **PRODUCT MASTERSPEC**

Sections in PRODUCT MASTERSPEC are custom-edited by building product manufacturers and trade associations under license from ARCOM. The edits include modification of requirements and the addition of manufacturers and products. Manufacturers add products they believe are comparable to those in MASTERSPEC. All added text in PRODUCT MASTERSPEC is shown as underline and deleted text is shown as ~~strikeout~~. You make the decision of which edits to keep or delete.

These versions help specification writers find and compare additional meaningful product information in a consistent manner. You can easily determine if a product fits your project requirements and specify additional products by name. PRODUCT MASTERSPEC was developed as an added value for MASTERSPEC Licensed Users at no additional cost.

Licensed users of Full Length and Short Form version, receive Product MASTERSPEC sections with initial licenses as well as with regular library updates. The ARCOM Installer will install the PRODUCT MASTERSPEC sections if the button on the Preferences dialog is selected. Manufacturers may also distribute the licensed sections to design professionals and specifiers in print, on diskette, via CD, or as downloadable files from their Web site.

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## **Adobe Acrobat Reader**

Many of the documents provided with MASTERSPEC are also included in the printer-friendly Adobe<sup>®</sup> Acrobat<sup>®</sup> format. To view these files, it is necessary to install the Acrobat Reader software, if it is not already installed on your computer. This software is included on your MASTERSPEC CD, or it can also be downloaded at no cost from the Adobe website at [www.adobe.com](http://www.adobe.com).

It is not necessary to install the Adobe Acrobat Reader software to use MASTERSPEC unless you also plan to use the PDF documents included on the MASTERSPEC CD.

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## **Creating Project Specifications**

You can create project-specific specifications with MASTERSPEC using the following steps:

For each Section:

- Review help, reference, and tutorial information in the Supporting Documents in hard copy reference manuals or on-line with MASTERWORKS.
- Review editor's notes included to help select and edit alternative text. These notes appear in blue and are in hidden text. They will not print unless the hidden text option is turned on.
- Select from alternative text and delete inapplicable article titles, paragraphs, and subparagraphs. Note: When you delete a paragraph, you must also delete all the subparagraphs or they will be incorrectly subordinate to the preceding paragraph.
- Select optional text (options) in **boldface** and in brackets ([ ]) and delete inapplicable options.
- Insert required text where instructed by insert notes (notes) in **boldface** and in angle brackets (< >). Insert other project-specific text.
- For a proprietary specification with manufacturers and products listed, select manufacturers and products where instructed, add additional manufacturers and products as appropriate, and retain requirements that define salient features.
- For a nonproprietary specification with manufacturers or products listed, select manufacturers and products where instructed, add additional manufacturers and products as appropriate, retain and add to requirements that define salient features.
- For a nonproprietary specification that is descriptive only, delete manufacturers and products, retain and add to requirements that define salient features.
- Select units of measure to remain by choosing either English (IP) units shown in teal or SI (metric) units shown in red. You may also leave both units of measure.
- Edit headers and footers.
- Select section format.

For the Project:

- Print all sections.
- Produce and print the table of contents.

## **Supporting Documents**

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You should review the help, reference, and tutorial information in the Supporting Documents (Cover, Evaluations, and Drawing and Specification Coordination Checklists or Covers only for Small Project). The Supporting Documents are available from the drop down menu of MASTERWORKS and under help in LINX. Each selection will launch your browser to access the Supporting Documents for each section in HTML.

If you wish to make the Supporting Documents available without also installing MASTERWORKS or LINX, you can independently install the Supporting Documents and make them accessible with an icon on the desktop.

## **MASTERSPEC Section Text Format**

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Each MASTERSPEC Section Text file contains the following text elements:

- Header
- Footer
- Editor's Notes
- Section Title
- Three Parts: GENERAL, PRODUCTS, and EXECUTION (Except in Outline sections)
- Article Titles
- Paragraphs and subparagraphs (5 possible levels of subordination)
- Tables
- Data Sheets
- END OF SECTION Title

## **Introduction to Styles**

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MASTERSPEC Section Text created for Microsoft Word and Corel WordPerfect are formatted using styles. Styles are a set of formats that you can easily apply to text. For each paragraph in a Word document, there is a predefined style that includes left and right margins, tab settings, paragraph numbering, etc. Pairs of style codes are used in WordPerfect, one before and one after each text element. In WordPerfect you can see the style codes using Reveal Codes. Styles are used in MASTERSPEC Section Text for three reasons.

1. Styles provide consistent and accurate formatting of the paragraph indenting and text wrapping used in the paragraph-numbering system.
2. Styles ensure that paragraphs renumber correctly when sections are edited.
3. Styles allow you to specify and quickly change the formatting characteristics for all paragraphs with the same style. To change the format of paragraphs, simply change the format definition in the style; all the paragraphs with that style will automatically reformat to reflect the change.

MASTERSPEC sections have eight levels of automatic paragraph numbering with unique styles listed in the table below.

Style Name	Description
PRT = Level 1	A paragraph in hidden text that corresponds to the Part titles.
ART = Level 2	The style used for the Article titles.
DST = Level 3	An outline level used only in sections that contain Data Sheets and is used for the Data Sheet title.
PR1 = Level 4	Paragraph level 1 follows Article titles and Data Sheet titles. Number style is an uppercase letter. <i>Example: A.</i>
PR2 = Level 5	Subparagraph level 2 follows a paragraph level 1 and is a number followed by a period. <i>Example: 1.</i>
PR3 = Level 6	Subparagraph level 3 follows a Subparagraph level 2 and is a lowercase letter followed by a period. <i>Example: a.</i>
PR4 = Level 7	Subparagraph level 4 follows a subparagraph level 3 and is a number followed by a parenthesis. <i>Example: 1)</i>
PR5 = Level 8	Subparagraph level 5 follows a subparagraph level 4 and is a lower case letter followed by a parenthesis. <i>Example: a)</i>

### **Editing in Corel WordPerfect®**

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The WordPerfect Section Text files contain Editor's Notes formatted as hidden text. To benefit from the instructions in the Editor's Notes, you should always toggle hidden text on while editing on-line. Otherwise, the editor's notes remain hidden. To turn on hidden text, select the **View** menu then click **Hidden Text**.

You can edit MASTERSPEC Section Text and prepare project manuals using WordPerfect only, but a considerable amount of time can be saved, with reduced errors by using MASTERWORKS. Editing instructions using MASTERWORKS are covered in detail in the MASTERWORKS User's Guide.

### **Editing in Microsoft® Word**

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The MASTERSPEC Section Text files are in an automatically numbered outline format that allows you to easily insert and remove text. Word will automatically renumber the remaining or inserted paragraphs. The outline numbering is not affected by any text that is not part of the outline such as Editor's Notes, Project Notes, tables, etc.

You can edit MASTERSPEC Section Text and prepare project manuals using Word only, but a considerable amount of time can be saved, with reduced errors by using

MASTERWORKS. Editing instructions using MASTERWORKS are covered in detail in the MASTERWORKS User's Guide.

## **Styles Used in Microsoft Word**

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The styles used in Word sections are hierarchical. Each style is based on one of the other styles. Every style originates from the Word Normal style. The Normal style is the only style that contains any font information. If you want to reformat the entire section in another font, change the font in the Normal style.

## **MASTERSPEC Section Text Template**

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SECTION 99999 – SAMPLE SECTION

PART 1 - GENERAL (*Paragraph Style PRT*) – Not used in Outline sections.

- 1.1 ARTICLE TITLE (Paragraph Style ART)
- A. Paragraph (Paragraph Style PR1)
- 1. Subparagraph (Paragraph Style PR2)
- a. Subparagraph (Paragraph Style PR3)
- b. Subparagraph (Paragraph Style PR3)
- 1) Subparagraph (Paragraph Style PR4)
- a) Subparagraph (Paragraph Style PR5)
- 2. Subparagraph (Paragraph Style PR2)

PART 2 - PRODUCTS (*Paragraph Style PRT*) – Not used in Outline sections.

- 2.1 ARTICLE TITLE (Paragraph Style ART)
- A. Paragraph (Paragraph Style PR1)
- 1. Subparagraph (Paragraph Style PR2)
- a. Subparagraph (Paragraph Style PR3)
- 2. Subparagraph (Paragraph Style PR2)

PART 3 - EXECUTION (*Paragraph Style PRT*) – Not used in Outline sections.

- 3.1 ARTICLE TITLE (Paragraph Style ART)
- A. Paragraph (Paragraph Style PR1)
- 1. Subparagraph (Paragraph Style PR2)
- 2. Subparagraph (Paragraph Style PR2)
- B. Paragraph (Paragraph Style PR1)

END OF SECTION 99999



## Chapter 3 Preparing Project Specifications

### Introduction

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MASTERSPEC<sup>®</sup> sections are organized according to CSI's three-part section format that places subject matter in a uniform location in each section. CSI's *SectionFormat* defines the three parts as follows:

- |                    |  |
|--------------------|--|
| Part 1 - General   | Administrative, procedural, and temporary requirements unique to the section.  |
| Part 2 - Products  | Materials, products, equipment, systems, and assemblies required for inclusion in the project.                                   |
| Part 3 - Execution | Preparatory actions and methods used to incorporate products into the project. In some sections product schedules follow Part 3. |

Information in each specification part is organized into articles, with subordinate paragraphs and subparagraphs following each article. Article titles are also organized according to CSI/CSC's guidelines. MASTERSPEC uses an alphanumeric paragraph-numbering system to designate parts, articles, paragraphs, and subparagraphs in a section. The paragraph-numbering system uses alternating letters and numbers to indicate levels of subordination. You may change the numbering system to a decimal system, delete the paragraph-numbering system, or add line numbering using MASTERWORKS<sup>™</sup>. See the *MASTERWORKS User's Guide*, Chapter 4 – "Multi File Features, Document Format Dialog, Page Format Tab". MASTERWORKS can be used to change many default formats in MASTERSPEC.

MASTERSPEC can be edited manually on printed copy, on-screen using a word processor, on-screen using a word processor enhanced with MASTERWORKS, on-screen using the LINX Automated Editor, or other ARCOM-approved software. The following instructions apply to all types of editing. The *MASTERWORKS User's Guide* has instructions on the use of MASTERWORKS to enhance your word processor. Documentation for the LINX Automated Editor software is included with the software.

### Section Numbering and Naming Convention

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MASTERSPEC sections follow CSI/CSC's *PageFormat* and *SectionFormat*. Each new and updated section is numbered and titled according to CSI/CSC's *MasterFormat* 1995 or 2004. In *MasterFormat* 1995, each number is five digits, in one of sixteen divisions, e.g., 06420. In *MasterFormat* 2004, each number is six, or in a few cases, eight digits, e.g. 064200. *MasterFormat* 2004 also includes fifty divisions. In word processor versions, a three-character suffix indicates the MASTERSPEC Library and Version, and the file extension indicates the word processor version, e.g. 06402fl.doc. The MASTERSPEC Consolidated Table of Contents lists by division, the section number, section title, and a list of libraries containing the section, the issue date, and a description of the section content.

## **MASTERSPEC CDs from ARCOM**

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MASTERSPEC section text files, Supporting Documents and MASTERWORKS software are distributed on the MASTERSPEC CD from ARCOM. Section Text files are included on the CD in Word and WordPerfect.

The Supporting Documents on the CD include the Cover, Evaluations, Drawing Coordination Checklist, and Specification Coordination Checklist.

All MASTERSPEC Section Text, Supporting Documents, and MASTERWORKS files must be installed using the ARCOM Installer.

The LINX Automated Editor is distributed on a separate CD that includes the LINX Installer.

## **Getting Started**

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If sufficient hard-disk space is available on a personal computer or a network file server, create a MASTERSPEC master folder. All MASTERSPEC specification files should be installed from the distribution CD to the master folder. MASTERWORKS will also create the master folder for you.

To start a project specification, select the sections you need from the appropriate MASTERSPEC Library Table of Contents or from the Consolidated Table of Contents. A hard copy Consolidated Table of Contents is included with each quarterly update and is also available in MASTERSPEC Resources. Individual library Tables of Content are located in the folder with your Section Text following installation. Create a project folder and copy the appropriate Section Text files from the master folder to the project folder for editing. **DO NOT** edit the specification files in the master folder. If you wish to create office masters from the MASTERSPEC files, create an office master folder and copy the MASTERSPEC Section Text to that folder.

Project specifications can be created directly from the MASTERSPEC Section Text, but you can also prepare office masters with a pre-edit of Section Text. One method is to edit each section for manufacturers and products and then add office standard or client-required language. Another method is to create several narrower scope sections from one MASTERSPEC section by deleting alternative and optional text. For example, you can create the following office masters from SECTION 07511 - BUILT-UP ASPHALT ROOFING.

07511fl1	Three or four ply with mineral cap over nailable deck.
07511fl2	Three or four ply with mineral cap over non-nailable deck.
07511fl3	Three or four ply with mineral cap over insulation.
07511fl4	Three or four ply with aggregate over nailable deck.
07511fl5	Three or four ply with aggregate over non-nailable deck.
07511fl6	Three or four ply with aggregate over insulation.

These office masters may take less time to edit for each subsequent project, but must be updated when the MASTERSPEC section is updated. There should never be a need to completely rewrite MASTERSPEC sections to create office masters.

## **Editor's Notes**

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Editor's Notes are included in section text where the selection or editing of alternative text is required. In the word processor files, they are in hidden text, blue color, do not have paragraph numbers, start at the left margin, and end at the right margin. Editor's Notes will not display or print unless hidden text is turned on in Word or WordPerfect. You can print sections with or without Editor's Notes, and select whether or not to display them on-screen. Editor's notes should always be displayed when editing on-screen, and should be printed on all hard copy for manual editing. This will reduce the possibility that guidance in Editor's Notes will be overlooked. Some Users delete each Editor's Note that has been addressed and leave applicable notes when a decision has not been made.

Editor's Notes provide guidance to help you retain, delete, revise, or replace text, and typically include the following information:

- Mandatory choice of alternative articles, paragraphs, and subparagraphs
- Optional choices that can be left to the Contractor
- Refer to Editing Instructions and additional criteria in the Evaluations
- Coordination required with other choices located elsewhere in the section
- Criteria to be used in making choices
- Consideration of choices, such as cost, energy efficiency, etc.
- Required additional text

## **Alternative Text**

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Sections include alternative and optional text (options) that you select to keep or delete for each project. MASTERSPEC sections include more materials, products, and applications than would apply to a single project. Text not required in a project is considered alternative text and includes articles, paragraphs, and subparagraphs. Keep alternative text applicable to each project and delete text that is not applicable.

## **Optional Text (Options)**

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Options are words and phrases enclosed in square brackets ([ ]) and in boldface for easy identification. In some cases, only one option from those shown should be selected. In other cases, you may select one or more options. When deleting options, the text, bracket pair, and the boldface must be removed. When selecting an option to keep, the text remains, but the bracket pair and boldface must be removed. MASTERWORKS software helps you select options to keep or delete, remove bracket pairs and boldface text, delete options entirely, and insert additional options. See *MASTERWORKS User's Guide*, Chapter 3, "Single-File Features," for instructions on the automated selection of optional text. After removal of selected options, you must check spacing and punctuation of the remaining text.

## **Insert Notes (Notes)**

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MASTERSPEC Section Text includes Insert Notes (Notes) that are phrases enclosed in angle brackets (< >) and in **boldface** for easy identification. The phrases prompt you to fill in the appropriate information and may offer an example. In some cases, Notes are included after Options and prompt you to add a custom requirement to the listed requirements. For each project, Notes can be replaced with appropriate text, deleted if inappropriate, or kept for later editing. Notes can be edited or custom Notes added when you are creating office masters. See the *MASTERWORKS User's Guide*, Chapter 3, "Single-File Features," for instructions on how to replace Notes with text, remove bracket pairs and **boldface**, delete Notes, and insert additional Notes.

## **Project Notes**

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MASTERSPEC Section Text does not include Project notes, but does include a Project Note style. This style lets you insert project-specific notes and comments, to you, any member of the design team or the Owner. Project Notes are the equivalent of yellow, self-stick notes.

Project Notes are in hidden text and may be converted to Editor's Notes by changing the style to **CMT** or by selecting the "Keep" option in MASTERWORKS Single-File features.

## **Units of Measure**

---

Section text includes both inch-pound (IP) and Metric (SI) units in character styles. You may select either unit or both units. No editing is required if both units remain unless you want to change the appearance order with the help of MASTERWORKS. When selecting IP units with MASTERWORKS, the program deletes the IP and SI style codes, the SI parentheses, and SI text, leaving only the IP units. If you select SI units, MASTERWORKS deletes the IP and SI style codes, the IP text, and the parentheses around the SI unit, leaving only the SI text. See the *MASTERWORKS User's Guide*, Chapter 3, "Single-File Features, Units of Measure," for instructions on the automated selection of units of measure.

## **Preparation for Editing**

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Before editing each MASTERSPEC section, you should become familiar with the section. Review the Cover, Evaluations, Section Text, Drawing Coordination Checklist, and Specification Coordination Checklist. Review the section content, identify possibilities that could be overlooked, and identify subjects requiring further investigation.

The Cover describes the content of the section text and related products and work. It includes products that could be inserted into the section if required, similar work usually specified elsewhere, and closely related work specified in other sections.

The Evaluations describe characteristics and criteria for specifying the products and materials included in the section. They include an overview of products that might otherwise be difficult to extract from manufacturers' literature or websites. The Evaluations include the following:

- Editing instructions, which are also referenced in Editor's Notes in the section text
- Scope of the section
- Description of product characteristics
- Special design and detailing considerations, if applicable
- Referenced standards and suggested reference materials
- List of manufacturers
- Tables of products and manufacturers (not in all Evaluations)

At the beginning of many Evaluations, one or more editing instructions are included that generally relate directly to specific parts of the Section Text. An Editor's Note in the Section Text refers back to the applicable editing instruction number in the Evaluations. The editing instructions provide more extensive and detailed instructions than is possible with Editor's Notes. You should always scan these instructions and the remainder of the Evaluations before editing the Section Text.

The editing instruction that typically occurs in the Section Text where manufacturers and products are named is a reminder that these national and multi-regional manufacturers and products are only examples and are not recommended or endorsed by the AIA or ARCOM.

Drawing Coordination Checklists contain organized drawing requirements that relate to the section content. They indicate items not in the section text that should be on the drawings.

Specification Coordination Checklists contain a list of other sections and requirements that relate to the section content. They provide a location to indicate items to be furnished by the Owner; how to apply allowances, unit prices, and alternates to the section, if applicable; and other sections that may have requirements applicable to the section.

## **Editing MASTERSPEC**

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MASTERSPEC is a comprehensive commercial master guide specification system. Requirements are included in the section text for a range of materials, products, and applications. MASTERSPEC usually provides more information than is needed for a specific project. As a result, you must do the following as a minimum edit:

- Delete section text that is overly stringent, is redundant with another section, or does not apply to the project.
- Add requirements and special options unique to the project. Edit the manufacturers and/or products lists. Add local and regional manufacturers and products.

MASTERSPEC section text includes full articles, paragraphs, and subparagraphs as alternative text. You often select appropriate alternative paragraphs without the need for any further editing.

Only one of several alternative paragraphs is usually retained, unless more than one type of product or material is required, or unless the selection is left to the Contractor.

If more than one product or material is retained, each one must be uniquely identified both in the specifications and on the drawings. One method is to include designations as part of

the descriptive names in the specifications. These designations could be in the form of alphanumeric designations, such as in "Metal Locker ML-1" and "Metal Locker ML-2," or words and numbers, such as "Locker Type 1" and "Locker Type 2." The first method requires only the alphanumeric designations on the drawings. The second method requires both the name and designation on the drawings. If designations are not used, descriptive names such as "Athletic Lockers" and "Corridor Lockers" must be used to distinguish products and materials in the specifications and on the drawings.

Many MASTERSPEC sections have articles that contain requirements about only one type of activity, product, or material. This organization makes editing easier by allowing you to delete the article and all the subordinate text if it is not applicable. Example Article titles are "Preconstruction Testing", "Source Quality Control", and "Field Quality Control." Where the project work is minor, not critical, or not complex enough to justify these activities, the Articles and all their subordinate text can be deleted.

Leaving unnecessary or inapplicable MASTERSPEC text in the section can obscure the true extent of the work, causing bidders to allow for unnecessary contingencies in pricing the project. You should diligently remove all unnecessary text. Do not assume that quality control is increased and professional liability is reduced, by retaining requirements that do not apply to the project.

## **Editing Sequence**

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The first step with MASTERSPEC sections that contain manufacturers and products is to edit the manufacturers, products, and materials in Part 2. You should retain products and materials applicable to the project and delete those that are not. If appropriate, add local and regional manufacturers and products. This first step is the basis for editing installation requirements in Part 3 and general requirements in Part 1.

**Note:** Some sections, for example, those in Division 15 (MasterFormat 1995) or Divisions 21, 22, 23 (MasterFormat 2004) with piping, the first step is to edit the applications portion in Part 3. This is because the application paragraphs describe the components of the system specified in Part 2.

The second step is to edit Part 3. You should select and coordinate the installation requirements that relate to products and materials in Part 2.

The third step is to edit Part 1. You should coordinate the requirements of Part 1 with the products and materials specified in Parts 2 and 3. This includes editing the "Summary" Article to reflect the content of the section.

*Note: Items in Part 1 can add cost to the project while not necessarily adding quality. Requirements such as mockups or restrictive installer qualifications may not be necessary for smaller or less-complex projects.*

The "Related Sections" paragraph in Part 1 should also be edited. It should only list products, construction, and equipment that the Contractor might expect to find in this section but are specified elsewhere for the project. Other sections may contain requirements that need to be coordinated with the section being edited. These sections should not be listed in the "Related Sections" Paragraph, because no one would expect to find the requirements from these sections in the section being edited.

If required by the Owner, a "Reference Standards" Article can be added to Part 1 with standards copied from the Evaluations. If standards are added, you should always verify the designation, title, and date of the standard because an update of the standard may have occurred since the section was last issued. The current date of some standards such as ASTM can be checked online using Resource Links in the section Evaluations. If a more recent standard date is used, you should review the standard and the Section Text to determine if any changes are required.

## **Manufacturers and Products**

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Part 2 of many MASTERSPEC sections include lists of manufacturers' names and may include products. Only manufacturers with products that are distributed nationally or multi-regionally are included. You should delete inappropriate manufacturers and products from the list and add to the list other manufacturers or regional and local manufacturers whose products meet specified requirements.

You should verify that the standard products of each selected manufacturer comply with the specified performance and descriptive requirements. The section text should state if custom units are required as a result of your editing. When editing product requirements avoid restrictions or adding proprietary features that only one manufacturer can meet, unless you intend to limit selection to products from that manufacturer.

Manufacturer and product lists are preceded by standard MASTERSPEC paragraphs with options for you to determine how open or restrictive the Contractor's choices will be in the Project specification. The methods of specifying include:

- **Nonproprietary:** The Contractor may select a manufacturer or product listed in the specification, or propose another manufacturer or product that meets specified requirements. The Contractor is not required to submit the manufacturer or product as a substitution, but the selection must be shown to comply with requirements by following the submittal procedures for comparable products.
- **Semiproprietary:** The Contractor selects a manufacturer or product listed in the specification. The Contractor may be permitted to propose a substitution of a non-listed manufacturer or product that complies with requirements. Division 1 Section 01600 - PRODUCT REQUIREMENTS establishes procedures to be followed by the Contractor before substitution requests will be considered.
- **Nonproprietary, Nonrestrictive:** If you do not want to list manufacturers or products, delete these paragraphs and lists. The Contractor is required to provide a product that meets requirements in the section. This form of specification relies entirely on descriptive, performance, or reference standard methods, or a combination of these methods, to establish a product's salient characteristics.
- **Basis-of-Design:** The Contractor is informed that the design is based on a named product. The Contractor may select that product or submit another product of a manufacturer listed. The Contractor must show that the product proposed from another manufacturer complies with requirements and follow the submittal procedures for comparable products. The Contractor when permitted may propose

substitution of a non-listed product that complies with requirements. Division 1 Section 01600 - PRODUCT REQUIREMENTS establishes procedures to be followed by the Contractor before substitution requests will be considered.

### **Method of Specifying Examples**

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The Evaluations for SECTION 01600 - PRODUCT REQUIREMENTS describe the methods of specifying used in MASTERSPEC and provide a comparison to those defined in CSI's *Project Resource Manual*. A table is included that compares the wording in Division 1, individual sections of MASTERSPEC, and CSI specifying methods. MASTERSPEC can be edited to produce any of the specifying methods for manufacturers and products.

### **Schedules**

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Some MASTERSPEC sections include a schedule at the end of Part 3. A schedule is a convenient way to present complex information in an abbreviated or tabular form. Schedules may provide related product information into a single form or may describe product and installation relationships for the Contractor's and specifier's convenience.

Examples of Schedules in MASTERSPEC include hardware schedules and painting schedules.

The following is an example of a completed door hardware schedule that you may use as a model to specify door hardware set requirements. The example contains the kind of data that would be inserted and the order in which it should be listed, as recommended by DHI. You must insert appropriate product requirements in the Door Hardware Schedule for each door hardware set required for the Project.

This example names actual manufacturers' products, using model numbers. Manufacturers are identified by abbreviations.

Products of randomly selected manufacturers are included in the sample to demonstrate how to specify names of products and manufacturers and not to indicate products equivalent in appearance and performance. Products and manufacturers named are neither recommended nor endorsed by The American Institute of Architects or ARCOM.

Sample Door Hardware Schedule

DOWNTOWN PROJECT #10

2/98

3.8 DOOR HARDWARE SCHEDULE (Example - Naming Manufacturers' Products)

Hardware Set No. 1

3	Hinges	TB2714	MCK	626
1	Lockset	8205 LNL	SGT	626
1	Closer	4011 – Regular - Alum	LCN	689
1	Kick Plate	#48 - 10 x 2 inches L.D.W.(254 x 51 mm L.D.W.)	NTQ	630
1	Wall Stop	407	IVS	626
1	Set Smoke Seal	5050	NGP	

Hardware Set No. 2

1	Electric Hinge	T4B3386 MM x NRP	MCK	626
1	Electric Hinge	T4B3386 CC x NRP	MCK	626
1	Hinge	T4B3386 x NRP	MCK	626
1	Electrified Panic Exit Device	E90075L x FSE x 9992L - M	VD	626
1	Cylinder	320200	MED	626
1	Closer	4110 Cush Alum	LCN	689
1	Kick Plate	#48 - 10 x 2 inches L.D.W. (254 x 51 mm L.D.W.)	NTQ	630
1	Threshold	R50SA x Miter	PEM	627
1	Weather Stripping	303AV Head and Jamb	PEM	627
1	Sweep	307AV	PEM	627
1	Access Control	7183 x 7804 Box	VD	
1	Relay	7000 (JB7)	VD	
1	Heater	7801	VD	
1	Set Communication Cable	7865, 7866, 7868	VD	
1	Power Supply	MPB-851	VD	

Access control shall release electrified panic exit device outside trim and shall shunt monitoring hinge. Monitor door position at security panel.

END OF SECTION 08711

DOOR HARDWARE

08710 - 37

## **LEED and Environmental Considerations**

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MASTERSPEC sections include environmental considerations and LEED Prerequisites and Credits in the Evaluations. The following paragraph is from SECTION 06185 - STRUCTURAL GLUED-LAMINATED TIMBER. Similar environmental information is included where appropriate in the Section Text. The information is not exhaustive and you may need to consider other environmental issues as required by individual owners and local regulations.

LEED Rating: The U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Rating System, Version 2.0, requires that a minimum of 50% of wood-based materials be certified as having been obtained from forests that comply with FSC 1.2. , Principles and Criteria, in order for a building to qualify for Credit MR 7. The Section Text includes optional paragraphs to require glulams produced from certified wood and to require documentation of chain-of-custody for the wood. Standard Structures of Santa Rosa, CA, ([www.standardstructures.com](http://www.standardstructures.com)) is currently certified for glulams made from Douglas fir; other manufacturers, especially those using plantation-grown southern pine, could surely become certified if the demand for certified products were sufficient. The Section Text also includes optional provisions for obtaining LEED Credit EQ 4 (low-emitting materials) that requires that composite-wood products contain no added urea-formaldehyde resins (Credit EQ 4.4).

## **Coordinating Drawings with Specifications**

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Producing good construction documents requires an intensive coordination effort involving both Drawings and Specifications. Because master guide specifications exist before Drawings are prepared for each specific project, they must be general and broad in scope. All checklist items may not apply to every project. With proper planning and communication, the production team can begin producing Drawings with an awareness of specification content. MASTERSPEC Drawing Coordination Checklists offer the principal means for simplifying and organizing the coordination process, but Editor's Notes within the Section Text and in the Evaluations often include instructions about what should be indicated on the Drawings.

Complementary functions are served by the Drawings and Specifications. Understanding which kind of information each should contain and how they should interrelate is essential. The following general rules are recommended for location of information on Drawings and in Specifications:

Drawings should contain information that is more clearly shown graphically. This includes the following:

- Locations
- Number of units
- Size - Exceptions include dimensions of manufactured products that are used repetitively. These are better described in the Specifications.
- Shape or configuration

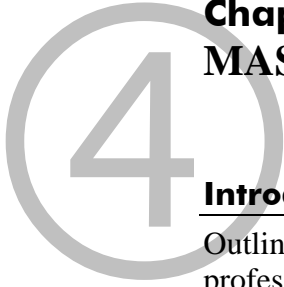
- Interrelationships between components and systems
- Names of products coordinated with the names used in the specifications to identify products generically as opposed to using proprietary product names. As little qualitative information as possible should be conveyed by names. This information should be in the specifications.

Specifications should contain information more easily presented in words. This includes the following:

- Quality required
- Procedures to be used
- Definitions of terms

Tables and schedules may be located either on the Drawings or in the Specifications. The choice is usually related to the table or schedule size, but it is also useful to consider traditional practice, for example, where the contractor will expect to find them. MASTERSPEC avoids using words "as shown on the Drawings" to enable this flexibility, but does use "as indicated" if the information is either on the Drawings or in separate schedules.

Although the AIA General Conditions of the Contract for Construction state that the Drawings and Specifications are complementary, i.e., they have equal weight, bidders often overlook types of materials or products that are not at least mentioned on the Drawings. Building officials, who frequently don't review the specifications, often require certain information placed on the Drawings despite the fact that it is better specified than drawn.



## **Chapter 4** **MASTERSPEC® Outline Specifications**

### **Introduction**

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Outline Specifications are designed to help you produce complete, accurate, and professional outline specifications with minimal time and effort. Each section of Outline is based on the Full Length and Short Form MASTERSPEC® section of the same number and title. Outline is a concise master guide specification version that directly corresponds in content and terminology to requirements that are appropriate for outline specifications.

MASTERWORKS software is included with Outline for use with your word processor to simplify many editing and formatting tasks. You can produce specifications in several formats including project manuals, sheet specifications, and drawing notes.

Full Length and Short Form MASTERSPEC libraries are available from ARCOM to help you produce project specifications for construction projects of any size, complexity, or duration. Significant editing of the text in Full Length or Short Form MASTERSPEC sections could produce outline specification sections, but the effort would be time consuming. Outline Specifications provide an appropriate guide to produce project outline specifications.

### **Appropriate Use**

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Outline specifications are typically produced during the design development stage of a project. AIA Document B141, the Agreement between the Owner and the Architect, along with drawings and other documents to "identify major materials and systems and establish in general their quality levels", requires them. Outline specifications are not for bidding, negotiation, or construction.

CSI's *Project Resource Manual*, Section 4.9.1, "Use of Outline Specifications," includes the following purposes for preparing an outline specification:

- Making product selection decisions early in the documentation process
- Recording product selection decisions and code requirements
- Making cost estimates for budget control
- Preparing time schedules
- Assisting the owner in understanding what materials and systems are proposed
- Coordinating construction documents
- Preparing the project manual

Outline helps you create project specifications that meet all of the above criteria.

## **Format, Section Numbering, and Naming Convention**

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Outline sections are written in brief, concise statements. They are in paragraph-numbered format and automatically renumber during editing. Sections follow CSI's recommended outline specification format. They are not in three-part format and do not include Part Titles. Each section is numbered and titled to match the corresponding Full Length MASTERSPEC section. The date on the right side of the header is the issue date of the Outline as well as the corresponding Full Length MASTERSPEC section.

Each Outline ASC section follows the order and uses the same terminology as the corresponding Full Length and Short Form MASTERSPEC section. This makes editing of the final project specifications based on Full Length or Short Form MASTERSPEC much easier. The Outline table of contents lists the issue date, section number, and section title. Outline ASC sections for *MasterFormat* 1995 include Divisions 1 through 14 with sections for architectural, structural, and civil work, and selected sections from Divisions 15 and 16 for mechanical and electrical work.

Outline ASC sections for *MasterFormat* 2004 include Divisions 1 through 14 with sections for architectural and structural work, selected sections from Divisions 21 to 28 for mechanical and electrical work, and Divisions 31 to 33 for site, civil, and utilities work.

There are a few sections in Full Length and Short Form MASTERSPEC A/S/C that are not in Outline A/S/C. The sections are Evaluations only and therefore no Section Text is available for inclusion in Outline.

## **Project Specification Formats**

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Although Outline sections follow the recommended CSI outline specification format, several options to format the final documents and condense each section to the shortest appropriate form are provided. MASTERWORKS helps you produce several final formats, including the following:

Project Manual format (default) includes:

- Section number and title
- Headers and footers
- Part titles
- Article titles
- Paragraphs and subparagraphs
- End of section titles
- Triple spacing of section titles and part titles
- Double spacing of article titles and paragraphs
- Single spacing of subparagraphs

Sheet specification format includes:

- Section number and title
- Article titles
- Paragraphs and subparagraphs
- Double spacing of section titles and article titles
- Single spacing of paragraphs and subparagraphs

Drawing notes format includes:

- Section number and title
- Paragraphs and subparagraphs
- Single spacing of section titles, paragraphs, and subparagraphs

See Chapter 4 - Multi File Features in the *MASTERWORKS User's Guide*, for information about automated formatting of alternative specification formats.



## Chapter 5 **MASTERSPEC® Small Project™**

### **Introduction**

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Small Project is designed to help you produce complete, accurate, and professional small project specifications with minimal time and effort. MASTERWORKS software is included for use with your word processor to simplify many editing and formatting tasks. You can produce specifications in several formats including project manuals, sheet specifications, drawing notes, and outline specifications. Best of all, Small Project is based on MASTERSPEC, the most complete, accurate, widely used master specification system available.

The Section Text in Small Project sections is an abridgement of the Section Text in one or more Full Length MASTERSPEC sections. Small Project is a concise master specification that is the result of a logical, consistent edit of each MASTERSPEC section to meet the requirements of projects of limited scope.

Full Length and Short Form MASTERSPEC libraries are available from ARCOM to produce project specifications for construction projects of any size, complexity, or duration, including small projects. You could produce small project specification sections by significantly editing the Section Text in Full Length MASTERSPEC sections, but this effort would require a large amount of time for each section. Small Project provides an appropriate set of master specification sections that you edit to create specifications for small projects.

### **Appropriate Use**

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Small Project specifications are for projects modest in size, scope, and complexity; brief in duration; and limited in budget. Small projects usually include single-family homes; light commercial, retail, institutional, and office design; additions; renovations; and interior fit-out work.

The Construction Specifications Institute's (CSI) *Project Resource Manual* describes appropriate projects and conditions for "shortform" specifications as follows:

- Small projects of limited extent and cost
- Design-negotiate-build project delivery
- Construction management project delivery
- Design-build project delivery
- Owner-build project delivery
- Interior design and tenant improvement projects
- Single prime contract
- Projects where a shortform specification is specifically requested

Small Project specifications are compatible with the American Institute of Architects (AIA) 1993 Small Project Edition of AIA Document A105, *Standard Form of Agreement Between Owner and Contractor*; AIA Document A205, *General Conditions of the Contract for Construction*; and AIA Document B155, *Standard Form of Agreement Between Owner and Architect*. These contract documents are "intended for use on a Small Project; one that is modest in size and brief in duration." They state: "*Warning: It may not be assumed that this document is a substitute for other AIA documents that are typically applicable to more complex projects. A business decision to use this document should be supplemented by advice from legal counsel.*"

Small Project specifications are solely for use on small projects that are modest in size and brief in duration. It should not be assumed that Small Project specifications could take the place of standard MASTERSPEC libraries typically applicable to complex projects. The decision to use Small Project should be made by a design professional who understands the consequences of using an abbreviated specification. Legal counsel should be sought when the application of Small Project specifications is in question.

### **Format, Section Numbering, and Naming Convention**

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Small Project sections follow CSI/CSC's *PageFormat* and *SectionFormat* for parts, articles, and paragraphs. Each section is numbered and titled according to CSI/CSC's *MasterFormat 1995 or MasterFormat 2004*. Both versions are included on the ARCOM Small Project CD. The Table of Contents for each *MasterFormat* version lists the issue date, section number, and section title. The complete Small Project sections include sections from Divisions 1 through 16 for *MasterFormat 1995* and sections from Divisions 1 through 33 for *MasterFormat 2004*, with sections in architectural; structural, civil, mechanical, and electrical engineering; interiors; and landscape architecture.

Although Small Project sections are based on standard MASTERSPEC sections, some Small Project section numbers and titles may be different where sections have been combined from one or more Full Length MASTERSPEC sections. There may also be more than one Supporting Document for these combined sections.

## **Project Specification Formats**

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Although Small Project specifications follow CSI's recommended short-form specification format, you have several options to format the final documents and condense each section to the shortest appropriate form. MASTERWORKS helps you produce several final formats that include the following:

Project Manual format (default) includes:

- Section number and title
- Headers and footers
- Parts 1, 2, and 3
- Article titles
- Paragraphs and subparagraphs
- End of section titles
- Triple spacing of section titles and part titles
- Double spacing of article titles and paragraphs
- Single spacing of subparagraphs

Sheet specification format includes:

- Section number and title
- Article titles
- Paragraphs and subparagraphs
- Double spacing of section titles and article titles
- Single spacing of paragraphs and subparagraphs

Drawing notes format includes:

- Section number and title
- Paragraphs and subparagraphs
- Single spacing of section titles, paragraphs, and subparagraphs

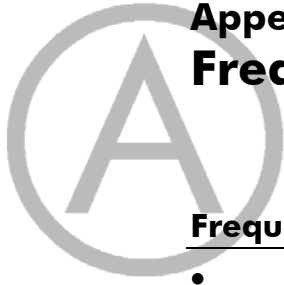
Preliminary material specification (an outline option) format includes:

- Section number and title
- Parts 1 and 3 removed
- Article titles, paragraphs, and subparagraphs from Part 2

Outline specification format includes:

- Section number and title
- Parts 1 and 2, article titles, paragraphs, and subparagraphs
- Part 3 title changed to read "Not Applicable"

See the *MASTERWORKS User's Guide* for alternative formats.

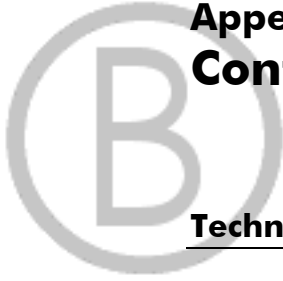


## Appendix A Frequently Asked Questions

### Frequently Asked Questions

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- What is included with MASTERSPEC?  
A CD containing the MASTERSPEC Section Text, the Supporting Documents, and the MASTERWORKS software for your word processor, and in the MASTERSPEC Resources, the *MASTERSPEC User's Guide*, and the *MASTERWORKS User's Guide*. A separate CD is available with the LINX automated editor and the MASTERSPEC libraries in a proprietary relational database.
- Are the specification sections ready for use on any project?  
MASTERSPEC specifications are master specification text that must be installed with the ARCOM Installer. Each Section Text file must be edited to be specific for each project. Selections must be made from alternative and optional text and additional project-specific text must be added. Selection of manufacturers and products must be made and additional manufacturers and products inserted, where applicable.
- What computer skills are required to use MASTERSPEC?  
You should have a working knowledge of Microsoft Windows including Windows Explorer. You should know how to create folders, copy files, and delete files. You must be familiar with one of the supported word processors, including editing tools and automatic paragraph-numbering methods, especially multilevel paragraph numbering for Microsoft Word.
- Do I need to install the specification sections on my computer?  
MASTERSPEC Section Text is provided in specific word processing formats. Each section is ready to use with your word processor following installation in a master folder on your computer hard-disk drive. You use the MASTERSPEC Section Text to create project specifications or office masters. For each project, create a project folder, and copy sections from the master folder to the project folder for editing.
- Is MASTERSPEC Section Text available for all word processors?  
MASTERSPEC Section Text, the Supporting Documents and MASTERWORKS software are available for the most recent versions of Microsoft Word for Windows, Word for Macintosh, and WordPerfect for Windows. MASTERSPEC versions are available for older versions of Microsoft Word and WordPerfect, but you will not have access to the additional capability of MASTERWORKS.



## **Appendix B Contact Information**

### **Technical Support**

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The MASTERSPEC<sup>®</sup> and MASTERWORKS<sup>™</sup> User's Guides and MASTERWORKS Tutorials will answer most questions about capability and use of the software. You may also contact the ARCOM staff by mail, e-mail, telephone, or fax.

#### **Offices**

ARCOM  
The Aspen Building  
332 East 500 South Street  
Salt Lake City, UT 84111-3309  
Telephone: (801) 521-9162

ARCOM  
King Street Station  
225 Reinekers Lane  
Alexandria, VA 22314-2875  
Telephone: (703) 684-9153

#### **Software and Technical Support by Telephone, Fax, or E-mail**

Telephone: (800) 424-5080  
Fax: (801) 521-9163  
E-mail: support@arcomnet.com

#### **Specification Writer and Information Specialist by Telephone, Fax, or E-mail**

Telephone: (800) 200-6652  
Fax: (703) 684-9182  
E-mail: support@arcomnet.com

#### **Internet and Electronic Mail Addresses**

ARCOM MASTERSPEC Web Site: [www.masterspec.com](http://www.masterspec.com)  
[www.arcomnet.com](http://www.arcomnet.com)  
E-Mail: [arcom@arcomnet.com](mailto:arcom@arcomnet.com)