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A Standard Divided

Mar 1, 2006 12:00 PM, By Beck Finley, Staff Writer

Electrical construction experts offer advice for bidding and working under CSI's MasterFormat



Not without controversy, the Construction Specifications Institute (CSI) officially published MasterFormat 2004 in August of that same year. The new standard — consisting of a series of six- to eight-digit numbered sections in each of 48 technical divisions, one “Procurement and Contracting Requirements” division (00), and one “Reserved” (49) — received its harshest criticism from electrical contracting firms and associations representing the electrical industry.



The loudest complaint, stemming from an accusation about the lack of an electrical contracting presence on the decision-making board of the CSI during the formation of the new standard, was that the breakdown of Division 16 would unduly complicate the bidding process by creating confusion about the domain of scope for general contractors charged with subbing out work. “The last thing the general contractor wants to be doing is coordinating a fire alarm system guy and an electrical contractor,” says Bill Dean, president and CEO of Dulles, Va.-based firm M.C. Dean. “What a nightmare.”



Full-service electrical contractors were also worried that the new standard would be used to prescribe a breakdown of work and that previously completed tasks would be farmed out to sub-subcontractors. MasterFormat 2004 was seen by many to contain the elevation of low-voltage specifications out of the domain of the electrical contractor.

Despite these fears, MasterFormat 2004 is gaining nationwide acceptance as the standard for organizing specifications and other documents for commercial and institutional building construction projects. In support of the updated standard, the American Institute of Architects (AIA) — through Salt Lake City-based ARCOM Master Systems — has revised its MasterSpec and SpecWare formats to match the new CSI subgroups, divisions, and sections. In addition, Sweet's, a division of McGraw-Hill Construction, and First Source, Norcross, Ga., have made their construction product catalogs compatible with MasterFormat 2004.

Discrete divisions

The advantage of the update to the MasterFormat standard is that the clarification of divisions suits an industry where more and more buildings are requiring a heavy technology component — data, video, audio, security — to be built into their infrastructure. “This is more of a pure end-user/building owner need and desire to have that type of system in their building instead of waiting until after the fact to build it in,” says Chip Chapman, president of The Knowledge Group, a Columbus, Ohio-based firm that specializes in designing technology systems for commercial buildings. “For a number of years that’s what happened: They’d just wait until the shell and the basic infrastructure were finished, and then they’d come back and handle it on their own. A lot of the architects didn’t want to deal with it. So we’re starting to see more of the players adopt it, get involved, and understand how critical the technology is.”

CSI estimates that MasterFormat 2004 could result in a 5% to 10% cost savings to owners — if only by designing network centers and conduit/wiring systems into the building plans — who are currently driving the adoption of the revised standard. “The owners are the ones who are seeing the real benefit,” says Greg Ceton, CSI’s technical programs manager. “As it runs down the line, they’re engaging their prime designers and the design consultants to make these changes, and then the projects are being put out for bid based on the new standard. When the project eventually gets to the subcontractors, it will have gone through quite a bit of development, so electrical contractors may be among the last to see the new standard coming out of a project.”

Therefore, when a bid package finally reaches the electrical contractor, it may not be very different from packages in previous years, even with the current breakdown of divisions. Depending on the scope of capabilities of the electrical contracting firm, it may still be the sole subcontractor on the project. "It's certainly in the customer's best interest to stay with a single point of responsibility, rather than breaking it up into a lot of different bid packages," say Rob Colgan director of marketing for Bethesda, Md.-based National Electrical Contractors Association (NECA). "A customer shouldn't have to deal with six different electrical contractors on a project, and in most cases wouldn't want to."

Scope of work

For full-service electrical contracting firms, the advice from NECA is to take care to include the entire scope of work when using the new standard for putting together bid packages. "We advise our members to make sure that when they bid they're getting all the parts that they intend to bid," Colgan says. This may mean putting together five different specification sections instead of one."

Instead of working solely with Division 16, firms must now incorporate each division for the system it wants to install. "Electrical contractors now have to stitch together five different specification sections instead of one," Dean says. "Everybody needs to start just saying that repetitively, especially the major guys. Then the major generals will follow suit. Our intention would be to make it crystal clear that these divisions are all in our scope of work."

However, for electrical contractors with a more limited scope of work capabilities, the new standard may lessen the burden of taking on or subcontracting tasks they'd rather not have to deal with.

"Before, everything was lumped together so electrical contractors didn't have a choice," says Chapman. "There are still a lot of systems some electrical contractors won't touch, and so they're having to subcontract that work, and sometimes that gets a little messy. But ultimately, it gives the client a better solution, and electrical contractors are giving up some risks too."

Also, in some cases, the clients may request certification for installers of certain systems, so the electrical contractor would need to subcontract that portion of the job. "Most electrical contractors don't invest in particular manufacturers or particular types of technology," Chapman says. "They're not able to certify, so they're having to rely on that partner or that subcontractor to come in and fill that part of the contract for them."

Planning ahead

For now, the MasterFormat 2004 standard has been used mostly for planning purposes. "It's really smart from a design tool perspective," says Dean. "It's a more comprehensive design guide." Some industry experts agree that Divisions 16 and 17 left out systems that are now considered essential in most buildings. However, Dean warns of following the architect's lead in using the new standard for a breakdown of work.

"This is a planning tool for designers," Dean says. "So it's really important that electrical contractors embrace the very wording of the AIA and do everything they traditionally did before this new specification. This means you have to map out about four or five different sections: It's not under Division 16 anymore."

Under the 1995 version, Division 16 did prescribe the breakdown of work, and electrical contractors were okay with that. Under the new system, however, most electrical contractors agree that can never be allowed to happen. "The biggest risk for electrical contractors is the possibility of designers prescribing a work breakdown when using it," Dean says. "But as long as that never happens, it should be nothing but an improvement."

Understanding MasterFormat 2004 Section Numbers and Titles

Under CSI's MasterFormat 2004, work previously grouped into one section — Division 16 (Electrical) — has been broken down into four Level 1 divisions:

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Division 25:	Integrated Automation
Division 26:	Electrical and Lighting
Division 27:	Communications
Division 28:	Electronic Safety and Security

Within Level 1 divisions are levels that provide even more detailed specifications, formerly called "Broad Scope" in the 1995 MasterFormat. For example, in the updated version, Division 28 contains five Level 2 sections:

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28 00 00	Electronic Safety and Security
28 10 00	Electronic Access Control and Intrusion Detection
28 20 00	Electronic Surveillance
28 30 00	Electronic Detection and Alarm
28 40 00	Electronic Monitoring and Control

Under each Level 2 section, there are additional Level 3 subsections, formerly called "Medium Scope." Under 28 30 00 Electronic Detection and Alarm, there are five Level 3 sections:

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- 28 31 00** Fire Detection and Alarm
- 28 32 00** Radiation Detection and Alarm
- 28 33 00** Fuel-Gas Detection and Alarm
- 28 34 00** Fuel-Oil Detection and Alarm
- 28 35 00** Refrigerant Detection and Alarm

Under each Level 3 section, there are Level 4 subsections, formerly referred to as "Narrow Scope." For example, under 28 31 00 Fire Detection and Alarm, the Level 4 sections include:

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- 28 31 13** Fire Detection and Alarm Control, GUI, and Logic Systems
- 28 31 23** Fire Detection and Alarm Annunciation Panels and Fire Stations
- 28 31 33** Fire Detection and Alarm Interfaces
- 28 31 43** Fire Detection Sensors
- 28 31 46** Smoke Detection Sensors
- 28 31 49** Carbon-Monoxide Detection Sensors
- 28 31 53** Fire Alarm Initiating Devices
- 28 31 63** Fire Alarm Integrated Audio Visual Evacuation Systems

Finally, under each Level 4 section, there is one final subsection, formerly called "User Defined." For example, under 28 31 33 Fire Detection and Alarm Interfaces, the Level 5 subsections include:

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- 28 31 33.13** Fire Detection and Alarm Interfaces to Remote Monitoring
- 28 31 33.16** Fire Detection and Alarm Interfaces to Access Control Hardware
- 28 31 33.23** Fire Detection and Alarm Interfaces to Access Control System
- 28 31 33.26** Fire Detection and Alarm Interfaces to Intrusion Detection
- 28 31 33.33** Fire Detection and Alarm Interfaces to Video Surveillance
- 28 31 33.43** Fire Detection and Alarm Interfaces to Elevator Control

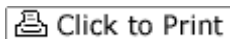
For more on MasterFormat 2004, visit CSI's Home page at www.csinet.org and click on the MasterFormat logo in the right-hand column.

Easing the Transition

CSI recommends using word processing software to write specifications using the MasterFormat 2004 standard. In word processing software, there are automated features such as global search-and-replace, styles, macros, and other productivity tools that can reduce the paperwork once required to transition to the new edition of MasterFormat.

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