

CECW-E

Regulation  
No. 1110-1-8155

30 October 2015

Engineering and Design  
SPECIFICATIONS

1. Purpose. This regulation prescribes specifications policy and requirements for both Civil Works and Military Construction, incorporates Total Army Quality principles and the Project Management Business Process, implements MIL-STD-3007, "Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications," and enables Headquarters U.S. Army Corps of Engineers (HQUSACE) elements and U.S. Army Corps of Engineers (USACE) commands to produce quality project specifications.
2. Applicability. This regulation is applicable to all HQUSACE elements and USACE commands having design or construction responsibilities.
3. Distribution. This regulation is approved for public release; distribution is unlimited.
4. References. Required and related publications are at Appendix A.
5. Definitions.
  - a. Design Agency. A HQUSACE element or USACE command having military and/or civil works design responsibilities.
  - b. Specifier. A specifier may be a Technician, Architect or Engineer within a design agency who is assigned the preparation of project specifications and coordination of the specifications with the other construction documents. The Specifier works under the direction of a Specifications Engineer or Designer.
  - c. Specifications Engineer. An Architect, Engineer or Technician within a design agency who is assigned primary responsibility for overseeing the collective preparation of project specifications/construction documents on an individual project and has the responsibility for overall coordination of the final "ready to advertise" package for the individual project.
  - d. Designer. An Architect or Engineer within a design agency who has design responsibility for certain features of a project involving one or more engineering and design disciplines, e.g., architectural, structural, mechanical, electrical.
  - e. HQUSACE Specifications Proponent. The individual within HQUSACE designated to address the needs and concerns of design agencies related to the preparation of quality guide specifications and project specifications

f. MIL-STD-3007, "Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications." The standard that establishes procedures for the development and maintenance of Unified Facilities Criteria (UFC) and Unified Facilities Guide Specifications (UFGS) and prescribes their use by the Army, Navy, Marine Corps, Air Force, Department of Defense (DOD) agencies and DOD Field Activities.

g. USACE Technical Proponent. An individual assigned the responsibility for coordinating the unification and maintenance of a criteria document or UFGS in accordance with MIL-STD-3007.

h. USACE Technical Representative. An individual designated to serve as technical expert for a certain UFGS or criteria document where USACE has been designated the Participating Organization.

i. Unified Facilities Guide Specifications (UFGS). A system of master guide specifications that define the qualitative requirements for products, materials, and workmanship for work features that occur in construction projects on a repetitive basis in accordance with MIL-STD-3007.

j. Criteria Change Request (CCR). Conduit for submitting suggestions, questions and comments on UFC and UFGS. A recommended solution with rationale for the changes must accompany a CCR. Submit CCRs under the specific document listing on the Whole Building Design Guide (WBDG) pages for UFC ([https://www.wbdg.org/ccb/browse\\_cat.php?o=29&c=4](https://www.wbdg.org/ccb/browse_cat.php?o=29&c=4)) and UFGS ([https://www.wbdg.org/ccb/browse\\_cat.php?c=3](https://www.wbdg.org/ccb/browse_cat.php?c=3)). Upon submission, CCRs will be automatically forwarded to the assigned Discipline Working Group and Technical Representatives.

k. USACE UFGS Database Manager. This person is responsible for maintaining a master database of UFGS sections for which USACE is designated as the preparing agency.

l. TECHINFO (TECHNICAL INFORMATION). An Internet-based construction criteria information system that is managed for HQUSACE by the U.S. Army Engineering and Support Center, Huntsville (<http://www.hnc.usace.army.mil/Missions/Engineering/TECHINFO.aspx>).

m. Construction Criteria Base (CCB). A database developed by the National Institute of Building Sciences and available on the Internet. A part of the WBDG, the database contains design and construction documents from federal and private organizations, including UFGS, and UFC documents. <http://www.wbdg.org/ccb/ccb.php>

n. SPECSINTACT (SPECIFICATIONS KEPT INTACT). A software program, copyrighted by the NASA, mandated for use in producing USACE project specifications and maintaining guide specifications. The software provides state-of-the-art specification automation to users and incorporates a wide range of quality control features. The software is a cooperative effort by Army, Navy, and NASA that provides greater uniformity and better transportability of guide specifications between other departments and agencies. SPECSINTACT software is available from the SPECSINTACT web site and CCB.

o. Construction Specifications Institute (CSI). A non-profit organization with members from all areas of the construction and engineering industry that establishes and publishes formats and organization standards for use in the preparation of construction specifications and other construction documents. In addition CSI establishes the roles and responsibilities of a Specifier, to include recommendations on educational background and leadership and proficiency traits/skills which are beneficial for a the Specifier to develop.

p. CSI Project Delivery Practice Guide and Construction Specifications Practice Guide. These are industry-recognized references that contain recommended methods and practices for preparing, organizing, and formatting construction specifications and other construction documents.

q. CSI MasterFormat®. CSI MasterFormat® is a master list of numbers and titles classified by work results or construction practices, used throughout the North American construction industry to organize project manuals, detailed cost information, and relate drawing notations to specifications. CSI updates this document annually and refers to it by the latest update, i.e. MasterFormat® 2012.

r. Project Specifications. Specifications (also known as construction specifications but excluding those produced by a construction or design-build contractor) produced, using the UFGS, that define construction requirements applying to a specific project. For design-build projects, only those specifications that form a part of the Request for Proposal (RFP) are project specifications.

s. Standard Specifications for Military Construction. Specifications that are developed under direction of HQUSACE (CECW-CE) as part of a standard design package that provides unique requirements for facilities intended for site adaptation at several locations, e.g., Petroleum, Oil, and Lubricant (POL) Storage Facilities. Standard specifications are based on UFGS and are developed in sufficient detail to serve as construction documents after site-specific requirements are incorporated. Standard specifications are packaged with the design drawings to which they apply and are available through TECHINFO. The standard specifications are for guidance only. Use the standard specification sections if UFGS are not available.

t. Federal Specifications and Standards (FED-SPECS and FED-STDS). Documents issued or controlled by the General Services Administration (GSA) that are sometimes referenced in UFGS to define requirements. Active FED-SPECS and FED-STDS cited in DOD documents are available from the GSA Federal Supply Service Bureau.

u. Military Specifications and Standards (MIL-SPECS and MIL-STDS). Documents issued or controlled by one of the military departments that are sometimes referenced in UFGS to define requirements. Active MIL-SPECS and MIL-STDS are available from the DOD Single Stock Point (DoDSSP) and DLA Document Services ASSIST.

v. Reference Standards. Documents that contain requirements set by authority, custom, or general consensus and are established as accepted criteria. Trade associations, professional societies, standards-writing organizations, governments, and institutional organizations, e.g., the American National Standards Institute (ANSI) and ASTM International (ASTM), publish them. The UFGS and project specifications reference these documents to define qualitative and performance requirements for materials, equipment, systems, test methods, and workmanship.

w. Resident Management System (RMS) and the Contractor's mode of RMS. The RMS and the Contractor's mode of RMS, which replaces the Quality Control System (QCS), are quality management and contract administration programs designed by Resident Engineers. The systems provide an efficient method to plan, schedule, and control all aspects of construction. The Government Staff use the RMS program and the Contractor Staff use the associated Contractor's mode of RMS.

6. HQUSACE Specifications Proponent. The HQUSACE specifications proponent uses input from a variety of sources to ensure that specifications issues affecting USACE are addressed at the headquarters level. The specifications proponent maintains a liaison between the Military Programs and Civil Works Directorates at HQUSACE, as well as the specifications proponents from other agencies and DOD departments. The HQUSACE specifications proponent represents USACE specifications concerns and issues in discourse with other agencies and departments as appropriate, e.g., SPECSINTACT enhancements and CCB issues.

7. Corps Specifications Steering Committee (CSSC). ER 15-1-41 established the CSSC to review specification practice and provide recommendations for improving UFGS and project specifications.

8. UFGS.

a. Purpose. UFGS provide design agencies and their contractors a set of master guide specifications reflecting technical policy that will enhance productivity, quality, and uniformity of DOD and NASA construction. UFGS are revised and reissued periodically to incorporate lessons learned and technological advances. UFGS are published quarterly; February, May, August and November.

(1) UFGS promote full and open competition in procurement in accordance with Federal Acquisition Regulation (FAR) Subpart 11.002 and maximize construction economy consistent with sound functional, aesthetic, environmental, energy conservation, and architectural and engineering practices.

(2) UFGS contain designer notes providing guidance on use of the specifications and the coordination required with the other project specification sections and with the project drawings. UFGS also contain "tailoring options" in many sections that allows SPECSINTACT to globally delete products or requirements with a minimum of effort. Additionally, through the use of "brackets," the guide specifications identify fill in blanks and alternative text for selection by Designers.

(3) The UFGS in combination with SPECSINTACT automated processing methods improve project specification production, uniformity, consistency, and overall quality in accordance with DOD policy. Uniformity and consistency of project specifications aid contractors in their preparation of bids, improve quality of construction, and reduce cost to DOD customers.

b. UFGS Development and Update Process. UFGS are developed and maintained in accordance with MIL-STD-3007.

c. Recommended Changes. Design agencies are encouraged to submit proposals for new criteria and UFGS that may have DOD-wide application. Proposals for technical or editorial changes to existing criteria and UFGS that are necessary or desirable for general application or to reflect local availability of materials and construction practice are also encouraged. Submit such proposals to DOD electronically using the CCR System. Recommended changes may also be presented to CSSC members through the Technical Excellence Network (TEN) site, Specifications Sub Community page.

d. UFGS Points of Contact. Questions about an individual UFGS may be directed to the designated technical proponent for the document through the CCR System.

9. Project Specifications.

a. **General Requirements.** Design agencies will ensure that high-quality and concise specifications are prepared, that the preparation of project specifications is fully coordinated with agency construction and contracting representatives, and that the project specifications comply with industry standards for format and content as established by the CSI Practice Guides. It is recommended that each design agency designate a Specifications Engineer to oversee and coordinate the preparation of project specifications to ensure compliance with these requirements. A Specifications Engineer should have knowledge and experience in developing construction contract documents and project specifications.

b. **Use of Existing Project Specifications.** Where a previous project design is adapted for use on a project, where standard specifications are used for military construction, or where a project design has been completed and held in abeyance for more than six months, the project specifications will be reviewed and revised as necessary.

c. **Use of UFGS.** UFGS provide a set of master guide specifications that shall be used for developing project specifications (Under Secretary of Defense memo; subject: Department of Defense Unified Facilities Criteria). Tailor and edit the UFGS to fit specific project requirements. Preserve the intent and wording of UFGS to the extent practicable as they incorporate public laws, federal mandates, DOD policy, industry coordination, and lessons learned.

d. **SPECSINTACT.** The use of SPECSINTACT is mandatory for production of all project specifications, except for overseas area projects designed to host nation standards. Maximum efficiency and quality are obtained when project specifications are prepared using SPECSINTACT and the latest UFGS edited to suit the specific requirements of projects. SpecsIntact also produces and exports the Submittal Register data file that the RMS imports for contract administration.

e. **Specifications Development During Project Phases.** Project specifications, when combined with the project drawings, must provide a comprehensive set of construction documents that can be bid fairly and competitively and executed without change, except as necessary to resolve unforeseen conditions or changes made during construction. (See ER 1180-1-6 and ER 415-1-11 for guidance on Biddability, Constructibility, Operability, Environmental, and Sustainability (BCOES) Reviews.). Design agencies will identify and resolve unusual design or contract administration problems and assure that project specifications comply with technical policy established by HQUSACE. Close coordination between the Specifications Engineer, Specifiers and the Designers is important throughout all design phases to produce complete and accurate project specifications. Specifications Engineering and Designing are distinct professional functions that must be performed during specifications development. In some organizations, a person performing the Specifications Engineering function for a project specification may also perform some Design functions; in other organizations a person may be exclusively devoted to performing the Specifications Engineering function with others performing the Design functions. The Specifications Engineer is responsible for developing local processes to supplement the Quality Management System (QMS) Enterprise Standards for developing and tracking project specifications.

(1) Specifiers should assist Designers in identifying UFGS sections to use in the project, operating the SPECSINTACT software, and incorporating a Designer's technical requirements into the project specifications.

(2) Designers are responsible for the design of technical project features and are responsible for the technical content of the project specifications for those features. Specifiers are responsible for the format of all project specification sections and for ensuring that proper and non-contradictory contract language is used throughout. Specifiers are also responsible for determining the project-specific information that must be inserted into the non-technical provisions and the Division 01 General Requirements sections.

(3) Designers will prepare technical specification sections for which no UFGS exists. When a new specification section must be developed for a particular project, the Designer will provide the technical information and technical requirements to be included in the specification section. The Specifier will work with the Designer to ensure that the section contains proper language and is properly formatted in accordance with UFC 1-300-02 "Unified Facilities Guide Specifications (UFGS) Format Standard."

(4) Project Bid Schedules (also known as Pricing Schedules) will be prepared in close coordination with Contracting, Counsel, Project Management, Design, Cost Engineering, and Construction. For Civil Works projects, the lump sum and unit-priced items defined for incorporation in the bid schedule must be consistent with the work breakdown structure. Bid schedules will conform to USACE guidance and all aspects of the FAR (FAR Subpart 36.207). Contracting is responsible for incorporating the Bid schedule into the contract documents.

(5) As part of the routine quality assurance/quality control (QA/QC) process, Specifiers should perform quality checks (e.g., SPECSINTACT reports, visual scan of pages for errors, verification of specification inserts such as the submittal register, test requirement list, etc.) on project specifications prior to advertisement.

(6) Appropriate design staff should make field trips during the construction phase of projects to identify specifications and contract administration problems to be avoided in future project specifications. Implement corrective action to resolve problems identified during all project phases that could have been prevented by improved specifications, e.g., recommend changes in UFGS.

(7) Contact the Resident and Area Engineers during the design process and solicit their input, particularly for Division 01 sections.

f. Specifications Prepared by Architect-Engineer (A-E) Firms. Include the requirement to use SPECSINTACT for production of project specifications in all procurement of A-E design services. Give preference to A-E firms that utilize CSI Certified Construction Specifiers. Design agencies will provide the A-E copies of regulations, manuals, engineer technical letters, and other information not available on TECHINFO and CCB.

(1) Clearly specify in the A-E scope of work who will prepare the Division 01 sections. If the A-E is to prepare Division 01 sections, then provide guidance to A-E firms on preparation of Division 01 sections and provide agency-unique information to incorporate into the Division 01 sections.

(2) Furnish previous project specifications as samples of the form and content for completed work but should not be used where applicable guide specifications exist.

g. Construction Documents Format. Prepare construction contracts in accordance with the HQUSACE format for construction contracts, using the Electronic Contract Solicitation (ECS).

(1) Specification section numbering will follow CSI MasterFormat® (latest edition). If MasterFormat® lists a section number and title, then that is the number and title to use. If either one is changed, then change both the number and title so as to be a unique set.

(2) The UFGS utilize a fifth level section numbering scheme to designate agency specific sections; fifth level 10 indicates a USACE specific section. CSI MasterFormat classifies the fifth level numbering as user-defined for internal agency use only. Remove the fifth level from the numbers so the project specification packages are limited to Level 3 or Level 4. Take care to delete agency specific requirements when using Navy (20) or NASA (40) UFGS. Fifth level numbers assigned to USACE Districts for local masters are in Appendix B.

(3) The format of the sections within the specifications will be based on the CSI SectionFormat as modified under UFC 1-300-02.

h. Reference Publications. Describe materials, workmanship, and equipment, where possible, by reference to industry and government standards generally known to the construction community, citing the type, class, or other designation necessary to identify fully the item required. The reference approval date and the dates of any applicable amendment and revisions shall be included in the solicitation (FAR Subpart 11.201a). Reference standards should not be used to describe minor, non-critical items (such as incidental fasteners) when any commercially available product of that nature would be adequate. To the maximum extent practicable, references will be to nationally recognized industry and technical society specifications and standards. If industry documents are unavailable or unsuitable, refer to applicable Commercial Item Descriptions (CID). Publications referenced in project specifications need be no later than the editions cited in the current notice for the corresponding UFGS. Publications not readily available to bidders, such as locally developed policy or guidance, should not be referenced but if referenced shall be furnished with the solicitation (FAR Subpart 11.201b). In accordance with DOD direction, do not use FED-SPECS, FED-STDS, MIL-SPECS, and MIL-STDS in contracts unless exempted by HQUSACE. These publications cited in UFGS are approved for use. Federal Specifications, Standards, and Commercial Item Descriptions are on the GSA Federal Supply Service Bureau WEB Site. Government specifications and standards, and policy can be located through the Defense Standardization Program Office (DSPO) WEB site.

i. Submittals. Construction submittals, such as shop drawings, samples, test reports, certificates, and manufacturer's instructions are not required for non-critical items of relatively low value when the cost of making the submittal exceeds the benefit to the project (see ER 415-1-10). Avoidance of such submittal requirements is particularly encouraged for small projects. Design agencies must keep submittals requiring Government approval to a minimum due to funding limitations. Only those submittals that are critical to safety, construction execution, or system or facility operation should be required for Government approval. Specify submittals not requiring Government approval when it is important to verify that the contractor is complying with contract requirements. Critical

submittals requiring Government approval are extensions of design, critical materials, deviations, O&M manuals, or those involving equipment that must be checked for compatibility with the entire system.

j. Testing. Ordinarily, testing is the responsibility of the contractor under the Contractor Quality Control (CQC) provisions of the specifications (see ER 1180-1-6). Requirements in the specifications making testing the contractor's responsibility will not be written in such a way as to void the right of the Contracting Officer to perform confirmation testing and Quality Assurance (QA) testing or to witness testing by the contractor. Keep Government testing at Government expense (i.e. outside of the tests performed by the contractor under the CQC procedures) to a minimum and only specify it when necessary to assure the quality of critical construction. SpecsIntact produces a Test / Requirements List that includes all the Test Requirements cited in the text, along with the Sections and Subparts. Provide this report to the Resident Engineer when required.

k. Warranties. Warranty requirements extending beyond the normal one-year construction warranty period or such other period required by UFGS will be specified only for materials, equipment, or systems for which longer warranties are normally provided in the industry. Evaluate the increased cost of the extended warranties and the costs of administering and enforcing such warranties prior to their specification.

l. New Materials and Methods. Designers are encouraged to consider the use of new, unusual, or innovative materials, equipment, systems, or methods in designs when evidence shows that such use is in the best interest of the Government in terms of value, lower life-cycle costs, and quality of construction. Manufacturers are to prove the merits of their product by certified laboratory results, evidence of satisfactory installation under conditions similar to those anticipated for the proposed construction and compliance with appropriate industry standards, if they exist. For a specific project, where different requirements from those in UFGS are specified, and where the requirements may have application beyond that specific project, design agencies will submit a recommended change using the CCR web site to report the new, unusual, or innovative items to DOD. The recommended changes will allow DOD to implement changes to criteria.

m. Brand Names and Proprietary Items. Specifying items peculiar to one manufacturer (closed proprietary), either by brand name or by peculiar characteristic, is prohibited unless specially justified and approved (FAR, Subpart 11.105). Use brand name or equal (open proprietary) descriptions with great care and discretion. Where the brand name or equal description is used, the contract provisions shall include those salient features of the item or items specified upon which equality can be determined (FAR, Subpart 11.104, Subpart 11.107, and Subpart 36.202(c)).

n. Contractor's Options. Optional materials and methods of construction that are acceptable are included in UFGS as a means of increasing competition and reducing project costs. Project specifications should include all contractors' options contained in UFGS. Specify additional optional materials and methods if a study of conditions affecting a particular project shows that other options are consistent with good architectural and engineering practice, are economically justifiable, and provide the best value to the Government. Where a contractor's option is specified that is not part of a UFGS section and the specified contractor's option may have application beyond



that specific project, the design agencies will submit recommended changes electronically using the CCR web site.

10. Training. Design agency staff involved in project design and, in particular, preparation of specifications should attend the Proponent-Sponsored Engineer Corps Training (PROSPECT) Course 185 "Specifications for Construction Contracts." Training should also be provided in bidding procedures and the preparation of the non-technical provisions of contract documents, SPECSINTACT, and, if SPECSINTACT is used on a network, in network operation and software.

11. Certification. Specifications staff should be encouraged to become certified under the CSI Certified Construction Specifier Program.

FOR THE COMMANDER:

2 Appendices  
Appendix A – References  
Appendix B – District Fifth Levels

  
D. PETER HELMLINGER  
COL, EN  
Chief of Staff

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## APPENDIX A – References

### 1. Required Publications.

- a. Federal Acquisition Regulation (FAR), Part 11, Describing Agency needs
- b. Federal Acquisition Regulation (FAR), Part 36, Construction and Architect---Engineer Contracts
- c. MIL-STD-3007, current edition, Department of Defense Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications.
- d. UFC 1-300-02, Unified Facilities Criteria (UFC) Unified Facilities Guide Specifications (UFGS) Format Standard.
- e. The Under Secretary of Defense memo dated 29 May 2002, subject: Department of Defense Unified Facilities Criteria.
- f. ER 5-1-11, U. S. Army Corps of Engineers Business Process.
- g. ER 15-1-41, Corps of Engineers Specifications Steering Committee (CSSC).
- h. ER 415-1-10, Contractor Submittal Procedures.
- i. ER 415-1-11, Biddability, Constructibility, Operability, Environmental, and Sustainability (BCOES) Reviews.
- j. ER 1180-1-6, Construction Quality Management.
- k. CSI Project Delivery Practice Guide and Construction Specifications Practice Guide, Construction Specifications Institute (CSI), 601 Madison Street, Alexandria, VA 22314.

### 2. Related Publications.

- a. AR 5-1, Total Army Quality Management.
- b. ER 690-1-414, Proponent-Sponsored Engineer Corps Training (PROSPECT).
- c. ER 1110-1-12, Quality Management.
- d. ER 1180-1-9, Design-Build Contracting
- e. ER 1110-2-1150, Engineering and Design for Civil Works Projects.
- f. ER 1110-2-1302, Civil Works Cost Engineering.
- g. ER 1110-3-1300, Military Programs Cost Engineering.
- h. ER 1110-345-100, Design Policy for Military Construction.
- i. ER 1110-345-700, Design Analysis, Drawings, and Specifications.

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APPENDIX B

**USACE District Fifth Levels**

<b>District</b>	<b>5<sup>th</sup> Level</b>
<i>CEHNC (Huntsville)</i>	01
<i>CELRB (Buffalo)</i>	02
<i>CELRC (Chicago)</i>	03
<i>CELRE (Detroit)</i>	04
<i>CELRH (Huntington)</i>	05
<i>CELRL (Louisville)</i>	06
<i>CELRL-PM-R (Army Reserve)</i>	48
<i>CELRN (Nashville)</i>	07
<i>CELRP (Pittsburgh)</i>	08
<i>CEMVK (Vicksburg)</i>	09
<i>CEMVM (Memphis)</i>	11
<i>CEMVN (New Orleans)</i>	12
<i>CEMVP (St. Paul)</i>	13
<i>CEMVR (Rock Island)</i>	14
<i>CEMVS (St. Louis)</i>	15
<i>CENAB (Baltimore)</i>	16
<i>CENAE (New England)</i>	17
<i>CENAN (New York)</i>	18
<i>CENAO (Norfolk)</i>	19
<i>CENAP (Philadelphia)</i>	21
<i>CENAU (Europe)</i>	22
<i>CENWK (Kansas City)</i>	23

<b>District</b>	<b>5<sup>th</sup> Level</b>
<i>CENWO (Omaha)</i>	24
<i>CENWP (Portland)</i>	25
<i>CENWS (Seattle)</i>	27
<i>CENWW (Walla Walla)</i>	28
<i>CEPOA (Alaska)</i>	29
<i>CEPOF (Far East)</i>	31
<i>CEPOH (Honolulu)</i>	32
<i>CEPOJ (Japan)</i>	33
<i>CESAC (Charleston)</i>	34
<i>CESAJ (Jacksonville)</i>	35
<i>CESAM (Mobile)</i>	36
<i>CESAS (Savannah)</i>	37
<i>CESAW (Wilmington)</i>	38
<i>CESPA (Albuquerque)</i>	39
<i>CESPK (Sacramento)</i>	41
<i>CESPL (Los Angeles)</i>	42
<i>CESPN (San Francisco)</i>	43
<i>CESWF (Fort Worth)</i>	44
<i>CESWG (Galveston)</i>	45
<i>CESWL (Little Rock)</i>	46
<i>CESWT (Tulsa)</i>	47
<i>CETAM (Middle East)</i>	49

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