

Design and Submittal Standards for Design/Build Project

Spokane VA Medical Center

As applies to: **Remodel 7th Floor**

VAMC Project NO: 668-12-104

Date: REVISED 04/19/2012

Standards for Design

Design Standards cover all VA topics and must be adhered to by the Designers for each section as follows that pertains to the project requirements. Failure to adhere to these standards will result in redesign at no cost to the Government. If any questions arise then the Contracting Officer needs to be contacted for further assistance. Submittals will be reviewed by the VA staff. However; review of the submittal does not relieve the design team from adhering to these standards. Exceptions to these standards may be made and only allowed with specific instructions from the Contracting Officer.

VA Design Manuals (Program Guide PG 18-10)

Design Manuals are available at the *VA Office of Construction & Facilities Management, Technical Information Library* [<http://www.cfm.va.gov/til/dManual.asp>] Use all areas that are appropriate to the project.

VA Design Guides (Program Guide PG-18-12)

Design Guides are available at the *VA Office of Construction & Facilities Management, Technical Information Library* [<http://www.cfm.va.gov/til/dGuide.asp>] Use all series that are appropriate to the project.

Design and Construction Procedures (PG 18-3)

Established VA policies defining the minimum level of excellence in the design, construction, and alteration of VA facilities and are available at the *VA Office of Construction & Facilities Management, Technical Information Library* [<http://www.cfm.va.gov/til/cPro.asp>] Use all topics that are appropriate to the project.

NFPA and Fire Protection Design Manual

Comply with Fire Protection Design Manual, NFPA 101 Life Safety Code, and NFPA 90A Standard for Installation AC and Venting Systems, which are available at the web site [<http://www.cfm.va.gov/til/dManual/dmfpfire.pdf>]

Technical Summaries (HVAC)

Technical Summaries cover HVAC criteria for specific applications and are available at the *VA Office of Construction & Facilities Management, Technical Information Library*.

[\[http://www.cfm.va.gov/til/techSumm.asp\]](http://www.cfm.va.gov/til/techSumm.asp) Use all summaries that are appropriate to the project.

Space Planning Criteria for VA Facilities (PG-18-9)

Available at the website of *VA Office of Construction & Facilities Management*.

[\[http://www.cfm.va.gov/til/space.asp\]](http://www.cfm.va.gov/til/space.asp) Use all areas that are appropriate to the project.

VA A/E Quality Alerts (for reference or recommendation only)

Read through the A/E Quality Alerts available at the website of the *VA Office of Construction & Facilities Management, Technical Information Library*.

[\[http://www.cfm.va.gov/til/alert.asp\]](http://www.cfm.va.gov/til/alert.asp) This is a series of the most common design errors made by Architects and Engineers on VA projects.

VA Design Review Checklists (for reference or recommendation only)

Checklists cover each stage of the submittal process and are available at *VA Office of Construction & Facilities Management, Technical Information Library*.

[\[http://www.cfm.va.gov/til/projReq.asp\]](http://www.cfm.va.gov/til/projReq.asp) Ignore requirements for BIM on this web site.

The Spokane VA welcomes the use of Building Information Modeling for its 3-D modeling and coordination benefits; however the Spokane VA does not require it at this time.

Coordination may be accomplished through 3-D modeling or another fashion. Regardless of what software is used, AutoCAD drawings must be produced.

Free Technical and Design Support (for reference or recommendation only)

The VA's Consulting Support Services (CSS) provides free technical and design support to VA facilities and projects. Phone numbers and email addresses for staff members can be found at the website of the *VA Office of Construction & Facilities Management*.

[\[http://www.cfm.va.gov/consulting/\]](http://www.cfm.va.gov/consulting/) The CSS is staffed by experienced professionals, registered engineers and architects and provides services including but not limited to the following:

- Conceptual project planning and evaluation
- Project quality and code compliance
- Joint Commission compliance assistance
- Developing, reviewing and revising project schedules
- Scheduling software support/training
- Expertise on architectural and engineering issues:
 - Architectural
 - Boilers/Steam Distribution
 - Electrical
 - Elevators/Automatic Transport
 - Heating, Ventilating and Air Conditioning

- Landscaping/Environmental/NEPA
- Plumbing/Sprinklers/Medical Gases
- Structural/Seismic

Seismic Design Requirements (H-18-8)

The Spokane VAMC is located in a Seismic Zone 2B. Seismic Design Requirements are available at the website of *VA Office of Construction & Facilities Management*.

[<http://www.cfm.va.gov/til/seismic.asp>]

VA Accessibility Standards

Use both of the following:

- **Architectural Barriers Act and Accessibility Standard** (ABAAS) is available at the website of the *US Access Board* [<http://www.access-board.gov/ada-aba/final.cfm>]
- **VA Barrier Free Design Guild** (PG 18-13) a Supplement to the Uniform Federal Accessibility Standards (UFAS) available at the website of the *VA Office of Construction & Facilities Management, Technical Information Library*. [<http://www.cfm.va.gov/TIL/accessibility.asp>]

Signage

Interior signage is generally provided and installed by the VA and is not the responsibility of the A/E. However your scope of work **might** include exterior signage. Refer to The Signage Design Guide which is available at the website of *VA Office of Construction & Facilities Management*. [<http://www.cfm.va.gov/til/spclRqmts#SIGN.asp>]

Sustainable Design & Energy Reduction Manual

The manual includes sustainability goals, LEED strategies, methods, budget considerations, case studies, and checklists and is available at the website of *VA Office of Construction & Facilities Management*. [<http://vawww.cfm.va.gov/til/sustain.asp>]

Standards for Cost Estimates

Spokane VA Standards for Cost Estimates

Separate estimates are to be submitted for new construction, alteration work and site work with a combined summary estimate. Cost Estimates are to follow the same organized systems/subsystems as the divisions and sections listed in the VA Master Specifications and formatted similar to R.S. Means publications showing as a minimum; quantities, unit prices and totals. Labor amounts can either be separate or included in the unit prices. Estimate amounts are to be based on the date of the Cost Estimate. For comparison and information the **Manual for Preparation of Cost Estimates** is available at *VA Office of Construction & Facilities Management*. [<http://www.cfm.va.gov/til/dManual/dmCOST.pdf>]. This also includes, as examples, Estimate Worksheet and Cost Summary Sheet.

Standards for Construction Schedule Estimate

At the completion of the construction documents a schedule is to be submitted that will estimate the probable time required to complete the construction of the project. A breakdown showing major areas of work that supports the estimated construction time must correspond with the Cost Estimate to facilitate comparison. The schedule should show a sequence in time to support the total amount of calendar days for completion for construction. If the project requires phasing during the construction then the schedule is to incorporate these phasing periods.

Standards for Specifications

VA Specifications

As a template for Specifications, use the **VA Master Construction Specifications** (PG-18-1) which is available at the website of the VA Office of Construction & Facilities Management, Technical Information Library. [<http://www.cfm.va.gov/til/spec.asp>]

Local Exceptions to the VA Specifications as adopted by the Spokane VA Medical Center

Sole Source Products, Material Requirements and Procedures that relate to the Spokane facility and are required for this project are listed in the *Amendments to VA Master Spec for A-E Design projects and Design/Build projects* dated MM/DD/YYYY and is attached to this document.

Standards for Drafting

National CAD Standards

Adhere to the **NCS** available at the website of the *National Institute of Building Sciences, Building Smart Alliance*. [<http://www.buildingsmartalliance.org>] Standards include, but are not limited to: layer naming, sheet naming, file naming, and organization of drawing sets.

Text

- Text shall be 1/8" minimum height. This includes the text in dimensions. 3/32" is allowed for details.
- Do not use stacked fractions. This includes the text in dimensions.
- Where practicable, avoid special AutoCAD characters (i.e. Use "DIA" instead of the special character for diameter: %%C.)
- Use font: Caibri, or submit as similar font to the COTR for approval.

Dimensions

Dimensions can be English system. The metric system is not required.

Software

Use a recent version of AutoCAD, or you may use drafting software other than AutoCAD if that software can produce satisfactory .dwg files. Test the exporting process to ensure that the exported .dwg will be usable by the VA and will comply with these drafting standards.

VA CAD Tools

The following tools are available at the website of the *VA Office of Construction & Facilities Management, Technical Information Library*. [<http://www.cfm.va.gov/til/projReq.asp>]

- **NCS.ctb** is a plot style table containing all VA and National CAD Standard compliant Pen Weights and Colors. Use of this .ctb is required. We recommend renaming it "NCS VA.ctb."
- **NCS.lin** is a linetype definition file that contains special linetypes like "fire alarm," "high pressure steam," "fence," etc. Using this linetype file is optional.

VA CAD Details

Use of **VA Standard Details** where possible is optional (Program Guide PG-18-4.) Details may be downloaded at the website of the *VA Office of Construction & Facilities Management Technical Information Library*. [<http://www.cfm.va.gov/til/sDetail.asp>]

VA standards on Building Information Modeling (BIM)

The Spokane VAMC is not currently using BIM.

Standards for Drawings

Sheet Size

Use either 24" x 36" (preferred) or 30" x 42" (if required for plan size).

Cover Sheet

A copy of the Cover Sheet can be furnished by the COTR as an example. You may rearrange the information on the Cover Sheet and add information as needed, if space allows.

The following information must be shown on the Cover Sheet.

- Department of Veterans Affairs
- Spokane VA Medical Center
- 4815 North Assembly St.
- Project Title
- Building number(s) and floor number(s) if applicable
- VA project number. Spokane VA projects start with 668-....
- Spokane map showing the location of the VA
- VAMC campus map showing project location (furnished by the COTR)
- Index of Drawings

- List of the members of the design team and their disciplines. Phone numbers are not required.
- Title Block (including date and project status. See note on Title Block below)

Symbols and abbreviations are required and can appear on the Cover Sheet but are not required to be on this sheet. Photos and renderings may also be on the Cover Sheet but are not required as part of the documents.

Title block

- Use the standard Spokane VAMC title block (furnished by the COTR)
- Include the building number(s) in the Project Title.
- For renovations and remodel projects, include in the Project Title a generic description of the location of the project, (i.e. Building 1, 4th Floor-North)
- Do not include VA or VAMC in the Project Title
- Indicate the status of the project (i.e. 65% SUBMITTAL) in appropriate block
- The A/E's seal is not required until the Bid Document and the Conformed Document submittals
- Provide the File Name for each sheet. (i.e. AS102.dwg)
- Provide the date in this format: MM-DD-YYYY (i.e. 02-16-2012)

Sheet Numbering

- Provide sheet numbers: SHEET ___ OF ___ based on the total number of sheets. These sheet numbers are not required until the Bid and Conformed Document sets.
- Use the NCS system for sheet numbering and drawing organization, (i.e. AS-201 for Architectural Elevations, MH-501 for Mechanical HVAC Details etc.)
- Sheet numbers are to be a single line of text. i.e. AS-201 not AS
201

Temporary Facilities for Contractors

- Show staging area for contractor and location of contractor's construction trailer(s). Show construction fence if any. Show where parking will be allowed during construction.

Fire rated assemblies and smoke barriers

- Show all fire-rated wall assemblies and smoke barriers on architectural, HVAC, plumbing and electrical plans as well as the code review plan.
- Typically code related information should be shown separately on a sheet(s) at the beginning of the documents. This could be incorporated on the same sheet(s) as the construction schedule phasing when required.

Standards for Project Manual

On the cover provide: (A copy of the Cover Sheet can be furnished by the COTR as an example)

- Project Title. Include the building number(s) and floor number(s) if applicable.
- VA Project Number
- Spokane VA Medical Center
- Department of Veterans Affairs
- Date
- Status of Project (i.e. 65% SUBMITTAL)
- Volume number (if project manual has more than one volume)

On each page of the project manual provide a header and footer indicating:

- VA Project Number preceded by VAMC:
- Name of the spec section
- Number of the spec section
- Date of this submittal
- Page number. Page number can be integrated with the section number (i.e. 08 71 00 - 3) or it can be separate (i.e. page 3).

The arrangement is optional as long as the spec section number appears on the lower right corner of the page. Other items that may appear on each page but are not required are the project name and the A-E project number preceded by the firm ID (i.e. XYZ: 01203).

Binding Edge

- On the binding edge of the final document manual provide Project Name, VA Project Number and Year in large text. Acceptable methods include adhesive-backed labels on a plastic comb binding and reusable 3-ring binders. Orient the text like the text on the spine of a book so that text reads in a downward direction when the manual is on a shelf.

Standards for CDs and DVDs

CDs / DVDs

Provide digital information (PDFs, DWGs, DOC's, XLS's, etc.) on CD or DVD. Discs can be hand-labeled or printer-labeled. Discs should be labeled with

- Project Title. Include the building number(s) and floor number(s) if applicable.
- VA Project Number
- Content (i.e. Drawings and Project Manual)
- Status of Project (i.e. Bid Documents or Amended Documents or As-Builts)
- Date

File names must be self-explanatory. For AutoCAD drawings and PDF drawings use NCS standards for file names

Standards for the Design Submittal Process

Site Survey (Predesign/Programming): Deadline: 7 calendar days

Provide the following to the COTR:

- 2 copies of Site Survey Report in an 8½ x 11 format (on paper and PDF file e-mailed). Photos and/or drawings are not required unless needed to further show information within the report. The following items, when applicable, are to be included:
 - Project scope
 - Design approach
 - Site features and other context
 - Security strategy
 - Sustainability
 - Energy conservation
 - Mechanical systems
 - Electrical systems
 - Structural systems
 - Security systems
 - Telecommunications systems
 - Fire Protections system
 - Project Phasing, if any
 - Functional adjacencies
 - Traffic patterns

Provide the following to the CO: (this may be e-mailed)

- Site Survey Report (PDF file)
- Copy of the transmittal that was sent to the COTR

VA Review of Site Survey Submittal: 7 calendar days

65% Submittal (Design Development): Deadline: 30 calendar days

Required minimal level of design documentation:

- Corrections made based on the review comments of the previous submittal.
- Title Sheet
- Scaled site plan (when required) showing building location, site features, property lines, roads, parking, sidewalks, preliminary grades and landscaping, survey (when required).
- Scaled building plans showing doors, windows, interior partitions, structural grid, critical areas with fixed dimensions, major M/E/P systems. Enlarged plans of major typical areas such as health care exam and patient rooms.
- Reflected ceiling plans to define major design elements and patient care rooms.
- Exterior elevations indicating materials, fenestrations, entries, special features, floor levels with dimensions.
- Building sections and wall sections to illustrate building shape and special features.
- Interior elevation if needed for major public areas. Can be provided in a presentation format.
- Material and color scheme in a presentation format with at least two color schemes.

Provide the following to COTR:

- 3 full size sets of Drawings (on paper)
- One half size set of Drawings (on paper)
- 2 copies of the Short Form Technical Specification (on paper)
- 2 copies of Product Literature (on paper combined with the specs)
- One copy of the Cost Estimate (on paper)
- Material and Color Schemes (minimum of 2 color schemes)

Provide the following to the CO: (these may be e-mailed)

- Copy of the transmittal that was sent to the COTR

VA Review of the 50% or 65% Submittal – 14 calendar days

95% Submittal (Review of Contract Documents): Deadline: 14 calendar days

Required full set of documents that would be considered basically completed for a full technical review including corrections made based on the review comments of the previous submittal. All areas of work must be shown with no missing items that have not been started.

Provide the following to COTR:

- 3 full size sets of Drawings (on paper)
- One half size set of Drawings (on paper)
- 2 copies of the Technical Specification (on paper)

Provide the following to the CO: (these may be e-mailed)

- Copy of the transmittal that was sent to the COTR

VA Review of the 95% Submittal – 14 calendar days

99% Submittal (Contract Documents): Deadline: 7 calendar days

NOTE: All documents must be completed. If documents are not completed by this submittal then they will be labeled incomplete and must be submitted again at no additional expense to the VA.

Required documentation:

- Corrections made based on review comments from the previous submittal.
- All documents are to be ready to be submitted for bid. One final review will be made by the VA to confirm that all comments from the previous review have been addressed.

- Drawings are not stamped or signed for this submittal.

Provide the following to COTR:

- One full size set of Drawings (on paper)
- One half size set of Drawings (on paper)
- One copy of the Project Manual (on paper) Note: include frontals supplied by COTR
- One copy of the Cost Estimate (on paper)
- One copy of the Construction Schedule Estimate (on paper)

Provide the following to the CO: (these may be e-mailed)

- Copy of the transmittal that was sent to the COTR

VA Review of the 99% Submittal – 7 calendar days

100% Submittal (Final Construction Documents): Deadline: 7 calendar days

Required documentation:

- All documents will be submitted for construction purposes.
- Drawings in PDF format are to be stamped and signed. AutoCAD drawings would not be stamped.

Provide the following to the COTR: (electronic files to be submitted on CD's or DVD's)

- One full size set of Drawings (on paper)
- One half size set of Drawings (on paper)
- Full set of Drawings (AutoCAD file and full size PDF file)
- One copy of the Project Manual (on paper)
- Project Manual (WORD file and PDF file)
- Also provide any additions documents or partial documents as need for permitting.

Provide the following to the CO: (these are to be submitted on CD's or DVD's)

- Copy of the transmittal that was sent to the COTR
- Full set of drawings (full size PDF file)
- Project Manual (PDF file)
- One copy of the Cost Estimate (Excel file)
- One copy of the Construction Schedule Estimate (Excel file)

No VA Review of the 100% Submittal should be required

Conformed Documents (Final Contract Documents):

Required documentation:

- Issue Drawings and Project Manual with new date.
- Conformed Documents should be prepared after the addenda are issued and the Notice of Approval of Construction Documents.

- The Conformed Drawings shall incorporate all addenda changes (clouded.) Drawings in PDF format are to be stamped and signed. AutoCAD drawings would not be stamped.
- The Conformed Project Manual does not need to incorporate the addenda in each spec section, but the addenda is to be bound into each copy of the Project Manual, at the back of the manual on colored paper.

Provide the following to the COTR: (electronic files to be submitted on CD's or DVD's)

- 2 full size sets of Drawings (on paper)
- 2 half size sets of Drawings (on paper)
- Full set of drawings (AutoCAD file and full size PDF file)
- 2 copies of the Project Manual including all Addenda (on paper)
- Project Manual and Addenda (PDF file)

Provide the following to the CO: (this may be e-mailed)

- Copy of the transmittal that was sent to the COTR

Design Review Meetings and Comments

A Design Review Meeting will occur approximately one week after each submittal except the final construction documents submittal. Design Review Meetings will be held at the VAMC and will be attended by the A/E, the Contracting Officer (CO,) the Contracting Officer's Technical Representative (COTR) plus any consultants and VA staff as needed. The VA and the A/E will determine which VA staff member and consultants who should attend the meeting as needed to review and coordinate various systems such as mechanical, electrical, security, furnishings, etc.

The VA's Infection Control Officer will assist with programming and attend all design meetings beginning with Schematic Design. (Site work projects are exempt.)

The A/E will provide Meeting Notes to all attendees within one week of the meeting. The Meeting Notes will serve as the VA's Comments. (If needed, the VA will modify the Meeting Notes as issued by the A/E.)

The VA may opt to provide Comments in writing in addition to (or in lieu of) the Design Review Meeting.

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