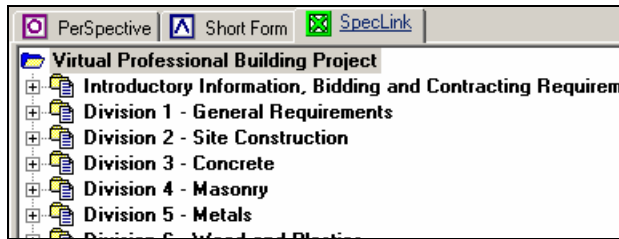


# Using SpecLink Effectively

In this Chapter you will learn:

- how and why the data on the three SpecLink tabs was developed,
- basic premises underlying the design of the three SpecLink tabs,
- how the three SpecLink tabs can be used for design-build and design-bid-build projects,
- how to use the [PerSpective](#) tab to prepare an owner's requirements document or Request for Proposal (RFP),
- how to prepare schematic design and design development specs using the [Short Form](#) tab,
- basic workflow suggestions for improving productivity on the [SpecLink](#) tab, and
- differences between proprietary and non-proprietary sections on the SpecLink tab.

## Origins of the Three SpecLink Tabs



At least since the pyramids were built, owners have procured facilities by contracting directly with a single entity—a master builder—who had responsibility for both design and construction. However, as buildings became more programmatically and technologically complex, the roles of architect, engineer, and contractor became more distinct, then diverged, and finally responsibilities for design and construction were divided among them. In recent decades in the United States, the system of first designing, and then bidding projects to several builders (the design-bid-build process) has been used more often than the ancient design-build process.

During the late nineteenth and through most of the twentieth century, construction contracts, design documentation systems, and the bidding process evolved rapidly. When contractors competed on the basis of a fixed price, it was crucial that designers' documents leave no doubt about design intent and the systems and materials to be used. In response to a need for standardization of product specifications and project manuals, the Construction specifications Institute (CSI) and Construction Specifications Canada (CSC) developed *MasterFormat*<sup>™</sup>, *SectionFormat*<sup>™</sup>, and *PageFormat*<sup>™</sup>. Using these standardized formats, Building Systems Design, Inc. developed BSD SpecLink and marketed it to design professionals for producing detailed construction specifications for the dominant design-bid-build market. That original product is now the third tab (SpecLink) in the expanded BSD SpecLink product.

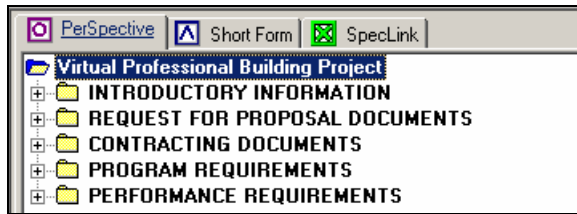
Design-build has made a comeback in the past couple of decades, due mostly to owners' desire for the simplicity of a single contract and early agreement on a fixed price. With designer and builder on the same team, imperfections in design documents have less impact on the owner, and less frequently result in litigation. When designer and builder form a single legal entity jointly responsible to the owner, collaboration can exist between them, and the role of master builder is reconstituted in the design-builder. Welcome byproducts of this delivery method have included compressed procurement schedules and moderately reduced construction costs. However, there were no software tools for the production of specifications suitable for design-build projects. In their absence, most design-build RFPs and proposals used specifications based on *MasterFormat*. However, this approach has proven unsatisfactory. *MasterFormat* was developed to document *completed* designs, while design-build contracts are often executed before the parties know exactly what systems, products, and materials will be used.

Some design-builders organized their proposals according to *UniFormat*<sup>™</sup>. This is an elemental- or systems-based format more suitable for documenting designs in their early stages of development, and for conceptual cost estimating. But while this systems-based approach is an improvement over a product-based approach, other problems must be solved. First, although several commercial master specifications (including the original BSD SpecLink product) are based on *MasterFormat*, none made use of *UniFormat*. Consequently, design-builders had little guidance when they wrote facility descriptions. Second, although it made sense to use performance specifications to define the quality and standards of performance of undetermined building systems, no whole-building master performance specifications were commercially available.

Soon after its founding in 1993, the Design-Build Institute of America (DBIA) determined that a performance specifications tool was needed to assist practitioners of design-build, and that such a tool would contribute to greater use of this project delivery method. In 1995 DBIA and CSI agreed to work together on a project to develop performance specifications for whole buildings organized according to *UniFormat*, and a year later the *PerSpective*<sup>®</sup> project was underway. Over the next two-and-a-half years, Building Systems Design, Inc. (BSD) developed *PerSpective* under contract to CSI-DBIA, and it was subsequently marketed by CSI as a stand-alone product. When *PerSpective* failed to achieve commercial success on its own, BSD contracted with CSI-DBIA to incorporate it into the BSD *SoftLink*<sup>®</sup> suite of software products and to market it as one component in a group of related products that would eventually be linked. During this period, BSD came to realize that *PerSpective*, which was originally developed to address the problems of specifying for the design-build process, was equally applicable to the early phases of design-bid-build projects.

For three years, *PerSpective* was distributed as one of several separate products on the BSD *SoftLink* CD-ROM, with quarterly updates. In 2004, BSD decided it was time to merge *PerSpective* with BSD *SpecLink* into a single, comprehensive specifications product that could be used for all types and all phases of building projects. *PerSpective* became the first two tabs of the new, comprehensive BSD *SpecLink* product—with the performance specifications becoming the *PerSpective* tab and the associated product specifications becoming the *Short Form* tab. As part of the original *PerSpective* product, the first two tabs were already linked. To complete the merger between *PerSpective* and *SpecLink*, links were created between the *Short Form* tab and the *SpecLink* tab, allowing decisions made at early phases to “pre-edit” the specs produced during the construction documents phase.

## The PerSpective Tab



### Basic Premises of the PerSpective Tab

#### Flexible Owners Generally Get Better Results

The most basic assumption underlying the design of the PerSpective performance specifications is that, with few exceptions, the greater the owner's flexibility in defining its needs, the more likely the project is to be successful. This tends to be true for all project delivery types, but it is especially true for design-build projects.

- **For design-build:** The design-build process offers owners the benefits of direct collaboration between designers and constructors. Design decisions made by the owner prior to contracting with a design-builder reduce the design-build team's flexibility, diminishing options for creative solutions that might otherwise be equally acceptable to the owner, while also being faster or less expensive to construct.
- **For design-bid-build:** During the programming stage, owners should think about their actual needs, rather than acceptable solutions with which they are familiar. The PerSpective data, used as a hierarchical checklist, helps the owner avoid the trap of imposing predetermined design decisions on the ultimate project designer.

#### Owners' Needs Should Be Stated in Performance Terms Wherever Possible

For maximum flexibility, an owner's facility requirements should be stated in *performance terms*. These statements should define an owner's needs, rather than impose a method of meeting them. They should explain the *what*, not the *how*. This approach leaves the design-builder or the project designer the greatest flexibility in meeting the owner's stated objectives.

#### Different Owners Need Different Degrees of Control

Federal, state, and city government owners have traditionally been more risk-averse than private-sector owners. Many government owners are bound by laws that do not apply to most private-sector owners. Therefore, the PerSpective tab is designed to offer a continuum along which owners of all types should be able to find a comfort level as they balance their need for control against their desire to take maximum advantage of the

creativity of the design-build team or the project designer on a design-bid-build project. PerSpecView also makes it possible for an owner either to prescribe the use of a particular product, system, or assembly or exclude it from use in the facility, if it is necessary to do so (Owners who choose to identify acceptable products, systems, or assemblies may choose to expand their descriptions by editing and including corresponding abbreviated specifications on the Short Form tab).

### Users Should Be Design Professionals

Although the PerSpecView tab is fairly user-friendly, it was designed for use by design professionals familiar with the functional aspects of buildings and skilled in the production of construction documents, whether working in the service of owners or design-builders. Although facility requirements are stated in performance terms—what the building must do for the owner—criteria required to confirm that these requirements are enforceable are often highly technical and difficult for novices to understand and interpret.

The PerSpecView tab is therefore designed under the assumption that owners will use the services of a design professional to prepare a program for design-bid-build projects or to prepare a design criteria package for design-build projects—in one of three ways:

- By using in-house design professionals to develop a building program and an accompanying set of design criteria or performance requirements. On design-build projects, these in-house professionals would also evaluate proposals received from design-builders,
- By hiring outside design professionals, also known as criteria consultants, to develop a building program and an accompanying requirements statement for release to design-builders or to deliver to a selected design professional on design-bid-build projects.
- By negotiating with an architect or a design-builder to produce such a package for the owner's approval before beginning design of the proposed facility.

Members of any design-build team using SpecLink will also be design professionals, either in-house members of the design-build firm or consultants to it.

### For Design-Build, Owners Should Work High in the Hierarchy; Design-Builders Should Respond in More Detail

For design-build projects, it's important that owners stay at the highest level of the hierarchically organized requirements (those of lowest specificity) commensurate with the need for control of the details of the project *at the time of contract execution*. Through definition of the design-development review process, owners can always mandate their continuing participation and require formal or over-the-shoulder reviews of the developing design at predefined points. Therefore, unless there are aspects of the project that must be established *before the design-build contract is executed*, it is in everyone's interest that owners proceed no farther down the organizational hierarchy than is strictly necessary to define only what cannot be left to the design-builder's discretion.

## The PerSpective Tab Includes Requirements for “Commercial” Buildings

Although the database of performance descriptions will be continually improved and expanded, initially it was designed to produce requirements for commercial buildings, defined as indicated below:

### Office Buildings

Commercial/Professional  
Governmental  
Institutional

### Residential/Hospitality

Dormitories, barracks  
Hotels, motels, boarding houses  
Multi-family residential  
Nursing homes

### Low-Tech Institutional

Schools and colleges  
Places of worship  
Police and fire stations, post offices  
Animal clinics, kennels, pounds  
Child and elder day care facilities  
Laundries (self-service)  
Motor vehicle showrooms  
Print shops  
Low hazard warehouses

### No/Low-Tech Commercial

Retail shops and stores  
Theaters, movie houses Barber/beauty shops  
Bars and restaurants  
Banks  
Dry-cleaning delivery stations  
Florists and plant nurseries  
Community centers  
Convention halls  
Exhibition spaces, galleries, museums  
Libraries  
Outpatient clinics

Although users may be able to produce performance requirements for the building fabric of most other facility types as well, the database is not comprehensive and lacks many special requirements for the following facility types:

Single family residential  
Health Care: Hospitals,  
    mental hospitals, research  
    laboratories  
Detention: Prisons, jails  
Stadia and other very large  
    audience facilities.  
Recreational: Ice  
    rinks/natatoria  
Automotive service, car  
    washes  
Utility Facilities: Water and  
    waste treatment,  
    telecommunications,

power generation, trash  
incinerators

Industrial and Factories: Warehouses housing high-hazard materials, clean rooms, film studios, food-processing facilities, paint shops,

canneries, tanneries, fisheries, boat-building  
Mortuary or funerary facilities

The PerSpective database does not address bridges, highways, and other transportation facilities, flood control and marine facilities, very large tanks and towers, special industrial storage such as silos, or pipelines or transmission lines.

## PerSpective Tab Section Organization and Performance Specs

The organization of the sections in the Performance Requirements folder of the PerSpective tab is similar to CSI/CSC's *SectionFormat* in that each section is organized into three main parts. In the case of the PerSpective tab, however, the parts are labeled as *Performance, Products, and Methods of Construction*. Generally, the owner will use the text available under *Performance*. The designer or design-builder will respond with text from either *Performance* or *Products*, or both, depending upon the owner's instructions. *Methods of Construction* may be used by a design-builder to inform the owner or for instructions to team members during the proposal, preliminary design, and design development phases of the project. This last part of the performance sections is the least likely to be used by an architect or other design professional.

### Performance Requirements

Each section begins with *Performance*. Under this heading the fundamental performance requirements are grouped together under *Basic Function*. Following that subheading are performance requirements grouped into five major areas of concern to owners: *Amenity and Comfort, Health and Safety, Structure, Durability, and Operation and Maintenance*. Under each area of concern are issues relating to that particular element of the building or site. For example, for users concerned with ensuring the Amenity and Comfort provided by the Exterior Enclosure (B2), one issue worth consideration is airborne sound transmission. An exterior enclosure that keeps out street noise provides both amenity and comfort. Such issues, or attributes, become subjects for performance specification within each section of the PerSpective tab.

### Elements of Performance Specification

The four main elements of any performance specification comprise an attribute, a performance requirement that makes a qualitative statement of desired outcome concerning that attribute, a criterion or measurable or observable statement about that performance, and a method of testing for conformance with the criterion. Here is how those four parts of a performance specification are developed in SpecLink:

<b>Attribute:</b>	Airborne Sound Transmission
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<b>Performance requirement: (paraphrased)</b>	Block sound transmission so interior quiet areas remain quiet when expected exterior sound levels reach their peak.
<b>Measurable criterion:</b>	Achieve an outdoor-indoor level (OILR value) of 54 for quiet spaces (NC values of 20-30) with a deafening (dBA values above 80) exterior noise source . . .
<b>Tests:</b>	. . . when tested in accordance with ASTM E 966-1992 and classified in accordance with ASTM E 413-1987(94).

### “Déjà Vu All Over Again?”

Performance requirements are organized under the same five areas of concern for the four degrees of specificity in PerSpective. Some issues are relevant to many different components of the project—thermal transmittance and water penetration, for instance—from facility performance in Section 111 through the most detailed element performance requirements. For this reason, users may see very similar performance requirements on several levels, depending upon how far they proceed through the hierarchy. Because they apply to different elements of the facility, these performance statements are not duplicates, though they may refer to the same test numbers and have similar or identical values.

For example, you can specify overall thermal performance requirements of the building shell in Section B. Some users may wish to further define different thermal performance requirements for particular assemblies, such as exterior enclosure, in Section B2. It is possible to go even further, with a further refinement of thermal performance requirements for particular building elements, such as windows, in Section B22. Users who find themselves choosing what seem to be repetitious requirements should check to see that they are not over-specifying. Remember, if the more inclusive requirements at an upper level are sufficient, there is no need to repeat them at a lower level, unless the more specific requirements differ substantially from those above.

### Substantiation

Because the contract between the owner and the architect or design-builder will be executed before the design has been completed, the owner needs a way to confirm, as the design develops, that the architect or design-builder is providing systems, products, and/or materials that will satisfy the stated criterion when measured by the prescribed test methods. Confirmation is generally achieved by requiring substantiation at key milestone points that the design-builder’s solution is likely to meet specified performance requirements.

For example, at the Preliminary or Schematic Design Phase, the design-builder or architect might be required to submit documentation to indicate in general terms the systems proposed for sound-blocking of the exterior enclosure, and to offer the credentials of its

design professional. At the Design Development Phase, the architect or design-builder might submit an analysis of the system design approved at the Preliminary Design Phase, indicating predicted sound-transmission values. At the Construction Documentation Phase, when actual products have been chosen, the architect or design-builder might verify that sound-blocking values of the actual products chosen have been tested to achieve the overall values for the system analyzed and approved during Design Development. If sound-blocking were a very important attribute—if the facility contained recording studios, for example—the owner might deem it worth the expense to require that the architect or design-builder provide laboratory tests of a full-scale mock-up at the Construction Phase.

The PerSpective tab offers a reasonable number of substantiation options for many of the specified attributes, but owners are advised to be judicious in their use, because it is the owner who will ultimately cover the costs of whatever substantiation submittals are required. On occasion, owners may wish to add requirements to those offered in the database.

## Using the PerSpective Tab for Design-Build Projects

### System Description

The process of reaching an agreement between the owner and a design-builder is usually iterative. Typically it begins when the owner releases some kind of statement of need, which might be as simple as a conversation over lunch or as complex as a full-fledged RFP for a public-sector project. The number of exchanges required before the parties are confident in their agreement might depend on considerations such as whether the process is to be negotiated or competitive, how well developed the design will be before the contract is signed, and whether the payment method will be a version of cost-plus or lump sum. Generally, the more risk involved for one or both parties, the more rounds of communication will occur before a final contract for a fixed sum is executed.

The PerSpective tab can be used by either party, independent of methods used by the other party. However, the iterative process works best when both the owner and the design-builder have access to the same version of SpecLink, which is the master database from which each will derive their documents. The owner's criteria professional will begin by creating a new project file or "overlay" to the database, which will be developed into the project manual for the RFP. As one component of the project manual, the criteria professional will prepare the technical performance requirements for the facility.

He or she also will assemble components referenced in the project manual but not produced using SpecLink. At a minimum, these would include the agreement and conditions of the contract. Unless preparation of a program is part of the design-builder's scope of work, the owner must also provide a project program. Usually the owner will furnish site drawings and geotechnical information. Representations and certifications, bonds and insurance certificates, and similar documents may also exist. The owner will probably have a schedule for the selection process and will request a design-and-construction schedule from proposing design-builders. These documents may all be in

electronic format, a mix of paper and electronic formats, or all on paper. However, to reap the greatest benefits from the automation features of the SpecLink software, the project manual should also be available to all parties in electronic format.

Once assembled and cross-referenced, this RFP package will be sent to one or more design-builders. Those wishing to respond will copy and rename the project file (as instructed by the owner), and make additions and alterations to it that will constitute the technical portion of the offer or proposal.

Parties negotiating a legal agreement often exchange successive versions with new text underlined and unacceptable text struck out until they reach an agreement. SpecLink can be used in the same way. By using the Compare Projects feature (see the Chapter “Comparing Projects” in this manual), each party may run an electronic comparison of the requirements document or RFP to the proposal returned by the design-builder. The owner may compare several proposals to one another and to the RFP. Because the Compare Projects feature automatically displays all differences between the documents, changes or discrepancies are less likely to be overlooked.

## **Project Manual Format and Text**

Whether in paper or electronic form, the project manual is the first place a reader will look to understand what is included in an RFP or proposal package, and how the pieces are related. SpecLink’s combination of master text and templates offers users an armature or skeleton for organizing and referring to all components of an RFP or proposal package, no matter what software application is used to produce them.

Accordingly, the first four level 1 folders of the PerSpective tab contain templates for listing and cross-referencing adjunct documents which, with the performance requirements for the facility, make up the RFP or proposal package. These first four folders are titled “Introductory Information,” “Request for Proposal Documents,” “Contracting Documents,” and “Program Requirements.”

### **Introductory Information**

This folder contains templates for naming the project and offering basic information on its scope (Section 00001 - Project Title Page and Section 00005 - Project Information), identifying the responsible designer, if that is required, when design work has been done (Section 00002 - Certifications Page, Section 00003 - Seals Page), and listing the contents of the package (Section 00010 - Table of Contents, Section 00015 - List of Drawings and Schedules).

### **Request for Proposal Documents**

The contents of this folder are instructions and forms applicable only to Requests for Qualifications (RFQs) and RFPs. They include Section 00200 - Instructions to Proposers,

Section 00300 - Information Available to Proposers, Section 00400 - Proposal Form, and if necessary, a template in Section 00490 - RFP Addenda.

### Contracting Documents

Both text and templates are provided in this folder. Using Section 00500 - Agreement and Conditions of the Contract, Section 00800 - Supplementary Conditions, Section 00570 - Contract Definitions, Section 00840 - Referenced Documents, and Section 00830 - Design and Construction Procedures, the owner indicates which agreement and contract conditions will be used, how important terms are defined, what standards are referenced, and how the contract will be administered. Use templates provided in Section 00600 - Bonds and Certificates, Section 00810 - Statutory Requirements, Section 00820 - Insurance to reference these forms, and the template in Section 00940 - Modifications if modification is required.

### Program Requirements

This folder provides Section 1 - Program Summary, which is not meant to substitute for a fully developed program, but which may serve as an outline when the design-builder is tasked with developing a program for the owner. Also included is Section 11 - Project Program, which is merely a location for referencing the full program.

## Performance Requirements

The specifications are organized hierarchically, beginning with facility requirements and extending through groups, assemblies, and elements.

### Facility Performance

Section 111 - Facility Performance contains performance standards that apply to the project as a whole, rather than to its component elements, and it comprises the broadest and most fundamental performance requirements.

### Groups, Assemblies, and Elements

Having stated requirements for the whole facility in Section 111 - Facility Performance, users may elect to go no farther down the hierarchy of performance requirements. However, many will want to proceed to sections at the next level of specificity, where requirements for the major groups of systems are stated. SpecLink's organization allows users to work from the largest to the smallest elements of a facility, defining the performance of its interrelated groups of systems, assemblies, and elements, in that order. If still more detail is required, the user may specify material requirements by using the Short Form tab. The objective is to allow owners to define their needs in the broadest terms consistent with their needs for detailed definition before execution of the contract.

The PerSpective tab’s organization of elemental building and site performance requirements is loosely based upon the *UniFormat* system and is organized into the following seven major system groups:

- Section A Substructure
- Section B Shell
- Section C Interiors
- Section D Services
- Section E Equipment and Furnishings
- Section F Demolition
- Section G Sitework

Each of these sections has subsections in which the contents are further subdivided into assemblies, each of which may be further subdivided into elements for more detailed requirements. For example, the content of Section B is further defined by the following hierarchically arranged subsections:

Section 111 - Facility Performance			
Section B - Shell			
B1 - Superstructure	B2 - Exterior Enclosure	B3 - Roofing	B9 - Other Shell Elements
B11 - Elevated Floors B12 – Roofs B19 - Other Superstructure Elements	B21 - Exterior Walls B22 - Exterior Windows& Other Openings B23 - Exterior Doors B24 - Exterior Wall Fixtures B29 - Other Exterior Wall Elements	B31 - Roof Coverings B32 - Roof Openings B33 - Roof Fixtures B39 - Other Roofing Elements	

As depicted above, elemental performance specifications for each major topic under *UniFormat* are organized into sections of increasing detail and specificity.

- Whole facility requirements are specified in Section 111.
- System groups are represented above by Section B – Shell.
- Assemblies are represented above by Section B1 – Superstructure.
- Elements are represented above by Section B11 - Elevated Floors.

Including the whole facility performance specification in Section 111 - Facility Performance, the PerSpective tab therefore offers users performance specifications organized into four degrees of specificity. Owners are most likely to use the first two levels (whole facility and system groups) in stating their performance requirements, and design-builders offering proposals in response are most likely to use the lower two (assemblies and elements).

## Stop When You've Said Enough!

Users who edit sections below the level of facility performance need to understand the hierarchical nature of the performance requirements sections. The organization of these sections reflects the good practice of specifying no more detail than is necessary and ending the specifying process when a compelling need to restrict the design no longer exists. Once owners have said all they need to say on a subject, they should stop.

For example, if energy efficiency selections made at the whole facility level in Section 111 cover the shell sufficiently, there is no need to insert values for thermal transmittance in Section B - Shell. If the owner's requirements for fire resistance are satisfied by choices made in Section B - Shell, there is no need to restate them in Section B2 - Exterior Enclosure, unless some element in Section B2 needs protection which differs from requirements already stated in Sections 111 and B.

## Products

The *Products* portion of each section on the PerSpective tab contains lists of generic product types that might be suitable for the building elements described in performance terms under *Performance*. These product lists are typically grouped into *Use* and *Do Not Use* lists. To allow the design-builder the greatest possible latitude, the owner should refrain from using these product lists. They are offered primarily for the design-builder's use, to offer a set or class of products, or to promise that one will not be used.

Occasionally, however, an owner may want to limit or prohibit the use of a particular product or system—perhaps because of a previous bad experience. In such a case, the owner could use *Products* to issue a blanket prohibition, e.g.: *Do not use concealed flexible flashings*. The owner might also want to require use of a certain material, e.g.: *Use brick at the building's exterior walls, or Use granite at the building entrance*.

## Methods of Construction

The design-builder uses the *Methods of Construction* part of each to prescribe or prohibit construction methods that might be applicable to the particular building element, or to describe for the owner's information processes that will be used. PerSpective offers very few examples, except for standard language about existing elements that need to be preserved or removed. The design-builder can also use this section for intra-team communications, as a means of defining means and methods to cost estimators or schedulers, or for examining multiple options to achieve a performance requirement. Because of the nearly infinite number of possibilities for text here, blanks rather than text are usually offered.

On rare occasions, an owner may have a valid reason for using *Methods of Construction* in a particular section. For example, an owner may wish to prohibit use of a construction technique that has produced inferior results on similar projects.

## Preparing an RFQ or an RFP

Formal RFPs are not always required for design-build projects, although some sort of requirements document or criteria package is always needed. The owner's decision to issue an RFP may depend upon many considerations, including the following:

- Type of owner: Public-sector projects almost always use RFPs; for private-sector projects the decision is less automatic.
- Size or complexity of the project.
- Whether the selection process will be negotiated or competitive.
- How well the owner and pool of potential design-builders know one another.

The *Manual of Practice* published by DBIA contains comprehensive guidelines for design-build projects, among them recommendations for procuring design-build services through negotiated selection and competitive selection. Owners developing a methodology for design-build projects are advised to consult DBIA's *Manual of Practice* Document 201 "The D-B Process Utilizing Competitive Selection," Document 204 "The D-B Process Utilizing Negotiated Selection," Document 210 the "Design-Build RFQ/RFP Guide - for Major Public Sector Projects," and Document 510, "Design-Build Contracting Guide" for detailed guidance. An appendix to Document 201 also offers a "Framework for a Design-Build RFP."

Some RFPs are preceded by an RFQ, which the owner issues to prospective design-builders in order to identify a short list of RFP recipients. This approach is often referred to as a two-part or two-stage process.

In general, formal RFPs are not used with a negotiated selection process, in which a design-builder is selected from a short list, based upon factors important to, and weighted differently, by each owner. To some owners the design-builder's experience might be most important, to others pricing and fees might top the list. Owners might also focus on particular personnel available for their project, or the design-builder's reputation for on-time delivery or design excellence. When negotiated selection is used, the design-builder is selected almost immediately after the owner decides to build.

This method is also known as "direct design-build." In some cases, direct design-build contracting is done in two parts. The first contract is for services required to define the project and agree upon a fixed price for its delivery. The design-builder is tasked with assisting the owner in project definition—establishing target budgets, developing the program, evaluating a site or helping to select one, setting a design and construction schedule, and doing a preliminary design. The second contract covers both the design and documentation required to define the construction requirements and the actual construction itself.

## **Create a New Project File for the RFQ/RFP**

Refer to “Software Orientation” in this manual for an overview of the basics of using the SpecLink software: navigating, opening a project file, and using help. Then read the chapter called “Starting a New Project” for step-by-step instructions on naming the project file, choosing the type of document to be produced (in this case Building Design Criteria), establishing global options, and selecting sections. Chapter 5 in this manual, “Editing a Project,” explains navigating within a section, selecting and excluding text, and using embedded choices. Now you are ready to start producing an RFQ or an RFP.

## **RFQ**

Although an RFQ is not required for direct-design build projects, owners may produce an RFQ prior to short-listing a group of design-builders with whom to negotiate or from whom to request binding proposals. Issuance of an RFQ is also a standard procedure during competitive selection processes for public and institutional facilities.

The complexity and comprehensiveness of RFQs generally parallel the RFPs that follow them and tend to be more elaborate for public-sector projects. In general, however, all RFQs need to identify the owner, describe the project sufficiently to provoke interest, indicate minimum requirements for design-builders to be considered, and explain the short-listing or selection process, including what should be submitted, where, and when. Useful PerSpective sections for this purpose include Section 00001 - Project Title Page, Section 00005 - Project Information, Section 00010 - Table of Contents, Section 00200 - Instructions to Proposers, and Section 1 - Program Summary.

The last three sections listed above form the core of any RFQ. In addition to a capsule description of the project, Section 00005 includes a description of the selection process, including pre-qualification briefings scheduled, the names of already prequalified designers and constructors, and the availability of honoraria. Section 00200 prescribes required contents of the RFQ, date and time of submission, who the evaluators are and what criteria they will use, and procedures for dealing with questions, briefings, and examination of documents. Finally, Section 1 goes beyond the minimum of building type and size to a description of the functions, occupancy, indoor and outdoor spaces, and any existing conditions about which the design-builder should know.

## **How Do You Want the Design-Builder to Respond?**

Before beginning to prepare an RFP, consider the response you would like from the design-builder. The possibilities left open for a response by the proposer depend on how you edit the RFP, and what you need to know before you can comfortably execute a design-build contract. It may be reasonable to request significantly more design and documentation work for a best-value competition among a short list of compensated design-builders than for a competition among an uncompensated and large group.

“Design-Build RFQ/RFP Guide - For Major Public Sector Projects,” published by DBIA offers some guidelines on industry norms. But keep in mind that owners who specify performance requirements in detail leave no room for the design-builder’s response within the PerSpective tab. Forcing the design-builder to respond outside off SpecLink reduces some of the benefits to the owner of using the system, among them the ability to run an electronic comparison of proposals and the RFP. Consider some of the following options for an RFP and response:

- Owner prepares all performance requirements to a uniform level of the hierarchy (perhaps to include all the System Group sections) and requires the response at one level lower (to include Assemblies sections).
- Owner prepares volumes to differing levels of specificity (System Groups, Assemblies, and occasionally Elements) and requests that proposals correspond to the RFP, always responding at one level more specific than the RFP (Assemblies and Elements, and sections in Product Specifications).
- Owner requests that responses be made by completing the *Products* portion of each section in which the owner edited the *Performance* portion.
- Owner requests that the response include a complete outline specification for the project, using the relevant sections in the Short Form tab.
- Owner uses the whole depth of the hierarchy, specifying all acceptable products in the Product Specifications folder, and requests that the response be in the form of a full-fledged descriptive specification using the Short Form tab.

## **General Order for RFP Document Preparation**

### **Define Project Information**

If no RFQ were needed for this project, owners should begin at Section 00005 - Project Information in preparing RFP documents. This section can stand alone as an Advertisement (or an Invitation) for Proposals. In addition, decisions made by selecting text in this section will preselect related sections that should also be included in the RFP, saving you time and jogging your memory.

### **Fill Out Table of Contents (TOC)**

If you have already edited Section 00005 - Project Information, you will find that parts of Section 00010 - Table of Contents have been selected by the software for you. Take advantage of the links from the TOC to other sections throughout the PerSpective tab by selecting sections or templates you know you will need, even if you don’t yet have all the information you’ll need to complete the editing. As in Section 00005 - Project Information, making choices will select text in other sections for inclusion or for your consideration. Going through the TOC at this point will also give you an idea of the scope of the RFP task and may serve as a checklist of issues to be decided and documents to be assembled.

### Prepare the Program

Unless the design-builder will be required to produce the building program as part of its contract (see discussions of negotiated selection and direct design-build above), the owner's next document prepared should be the building program.

Although an owner may be able to produce Section 1 - Program Summary without expert assistance, we recommend that owners without in-house design expertise consult either a specialist in building programming or a criteria professional for complete program preparation. PerSpective's Section 11 - Project Program provides a table of contents that serves as a guide to major program issues. A program can be created as a word-processing document and imported into Section 11, but it typically will be voluminous. For that reason, it is usually best to create and maintain the program outside SpecLink and refer to that separate document within SpecLink.

### Prepare or Review and Edit an Existing Program Summary

If no program summary yet exists, abstract the Program into Section 1. If the summary were developed as part of RFQ preparation, review and edit it to ensure conformance with the more developed Program.

### Edit Facility Performance—Highest Level Performance Requirements

Section 111 - Facility Performance deals with performance standards that apply to the facility as a whole, rather than to its component assemblies, systems, elements, products, or materials. Section 111 constitutes the highest, or most general, of five levels of performance specification offered in the PerSpective tab, and it is essential to the RFP. Performance specifications in Section 111 are organized according to the five areas of concern used for performance specifications in all other sections: Amenity and Comfort, Health and Safety, Structure, Durability, and Operation and Maintenance.

In addition to these whole-facility performance requirements, this section defines the codes and other laws affecting the design and construction of the project, tells the design-builder how to select products from options allowed, and defines and explains the substantiation requirements occurring throughout the performance specifications.

### Edit Systems and Assemblies

Owners who are comfortable with giving their design-build team the widest possible latitude and discretion may elect to stop at the Facility performance specifications. However, experience indicates that many will continue to System Groups (Sections A through G). Only when there is a compelling reason to do so should an owner go on to specify requirements for Assemblies and Elements—and then only to specify requirements for components that are especially critical. An example might be the need to specify a particular master lock system.

## Use Template Sections for Unusual Elements

Although the PerSpective database is very comprehensive, you may occasionally need to define a system or assembly that is outside its scope. For example, the database does not include descriptions of geodesic domes and windmills. Should your design require definition of such an element, begin by locating a template section in the logical location in the hierarchy for that element. Templates end in “9” —for example, Section B19 - Other Superstructure Elements, or Section B9 - Other Shell Elements—and contain the word “Other” in their titles. Then edit that template to define your element.

## Prepare RFP and Contracting Requirements

If Section 00200 - Instructions to Proposers were not completed as part of an RFQ package, prepare it now for the RFP. If it were used as part of the RFQ, you will need to edit it to reflect the new purpose of the document. Changing the document option will execute links that remove references to the RFQ. Complete any information you did not have when the RFQ package was issued. Complete Section 00400 - Proposal Form.

The final task is to complete the Contracting Requirements by editing Section 00500 - Agreement and Conditions of the Contract (if they were not used with the RFQ package), filling in the templates for Section 00600 - Bonds and Certificates, Section 00810 - Statutory Requirements, and Section 00820 - Insurance, if required, and “attaching” paper or electronic copies of the actual forms required. If drawings are included as part of the RFP, edit Section 00015 - List of Drawings and Schedules, by listing them under the heading “Drawings Prepared by Owner.”

## RFP Addenda

Should addenda become necessary, they may be handled in several ways:

- Make required changes throughout the body of the RFP, renaming it to indicate its status as an addendum to the original RFP. Instruct proposers to use the *Compare Projects* feature to determine the differences between the original and the addendum.
- Use Section 00490 - RFP Addenda to describe the changes that comprise the addendum. This single section may be printed and mailed or faxed to all proposers or exported to a Rich Text Format (RTF) word-processing file and sent electronically to all proposers. Should you require a second addendum, simply add the additional information to the original document, retitle it, and reissue it as the second addendum.

## Preparing Proposal Documents

The *Manual of Practice* published by the Design-Build Institute of America (DBIA) contains comprehensive guidelines for design-build projects, including recommendations for design-build negotiated (Document 204) and competitive (Document 201) selection procedures. Proposers responding to RFQ/RFP packages are advised to consult DBIA's Document 210 “Design-Build RFQ/RFP Guide - For Major Public Sector Projects,” and Document 510,

“Design-Build Contracting Guide” for detailed guidance. Document 303, “Executing the Design-Build Project,” also offers as an appendix a Key Date Schedule for Documents Production.

Design-builders typically produce two types of design-build proposal. The first type is the deliverable under a two-stage “direct” design-build or negotiated design-build contract. The first contract is for services required to define the project and agree upon a fixed price for its delivery. The design-builder is tasked with assisting the owner in project definition—establishing target budgets, developing a program, evaluating a site or helping to select one, setting a design and construction schedule, and performing preliminary design. The second contract covers design and documentation required to construct the project as well as the construction work.

Under this contractual arrangement, the proposal will not be in response to an owner’s RFP, but is a document generated wholly, or nearly so, by the design-builder. It is based on an owner-supplied or design-builder generated program, other information gathered from the owner or produced by the design-builder, and a preliminary or schematic design produced by the design-build team in collaboration with the owner. In this case, the proposal simply records the agreements on systems and assemblies, levels of quality, substantiation, and contractual matters previously worked out with the owner. It serves as the supporting documentation for the second part of the contract, in which the final design and construction work are achieved.

#### Design-Builder Originates Proposal File

This type of proposal is very much like an RFP prepared by an owner. Because the document generally starts with the design-builder, this description assumes that the design-builder originates the project file. Refer to “Software Orientation” in this manual for an overview of the basics of using the SpecLink software: navigating, opening a project file, and using help. Then read the chapter called “Starting a New Project” for step-by-step instructions on naming the project file, choosing the type of document to be produced (in this case Proposed Performance Specifications), establishing global options, and selecting sections. Chapter 5 in this manual, “Editing a Project,” explains navigating within a section, selecting and excluding text, and using embedded choices.

Now refer to “Preparing an RFQ and an RFP” above for information on preparing the document. Note that in editing Section 00005 - Project Information, the option you will choose in the first paragraph after the title (Item 0001) will be “Proposal Data,” rather than “Request for Qualifications” or “Request for Proposals.”

#### Design-Builder Responds to an RFP

In this second type of proposal, the design-builder responds to a document prepared by the owner in whatever form the owner requests.

## Response to a SpecLink RFP

The first thing the design-builder must do is copy and rename the SpecLink project file originated by the owner. (See Copying an Entire Project File in the chapter called “Starting a New Project.”) Store the original as carefully as you would any original from the owner. Consider archiving a copy as well.

Name the copy something that will identify it as your proposal and immediately change the document type by going to the File menu, opening the Summary Information dialog box, and clicking on *Proposed Performance Specifications*. This global option changes the mood of key provisions throughout the project. Instead of the imperative mood that was appropriate for the owner’s document, the proposal document uses the indicative mood, appropriate for the design-builder’s response.

It is also very important that you edit Section 00005 - Project Information, to indicate that the documents now comprise a Proposal rather than a Request for Proposal. This change will activate links that remove from the proposal file all documents that will not form a part of the contract documents, including Section 00200 - Instructions to Proposers and Section 00300 - Information Available to Proposers. Section 00490 - RFP Addendum will remain unless specifically de-selected. In Section 00005, fill in the proposer’s name, address, phone, and fax numbers, and the name of the contact person. Then proceed as described below under “Completing a Proposal Document in SpecLink.”

## Response to a Non- SpecLink RFP

If the RFP were delivered on paper or in an electronic format other than SpecLink, the design-builder may nevertheless choose to respond using SpecLink. Begin the project by selecting the document type. Go to the File menu, open the Summary Information dialog box, and click on *Proposed Performance Specifications*. This global option establishes the mood of key provisions throughout the project, employing the indicative mood that is appropriate for a proposal. Then edit Section 00005 - Project Information, selecting the proposal data option. This selection activates links that exclude documents irrelevant to a proposal and include provisions required for a proposal. Then proceed as described below.

## Completing a Proposal Document in SpecLink

### Add Sections Required by the Owner

If certifications and seals are required, select Section 00002 - Certifications Page and Section 00003 - Seals Page. Determine whether to prepare word-processing documents containing certifications for importing into Section 00002, or to enter the data directly into the template provided. You may take the same approach with Section 00003.

The owner's instructions on the specificity of information required will guide you in determining the minimum level or levels in the performance specification hierarchy to use. A list of approaches owners might take to eliciting information from proposers includes the following options:

- Owner prepares all performance requirements to a uniform level of the hierarchy (perhaps to include all the System Group sections) and requires the response at one level lower (to include Assemblies sections).
- Owner prepares volumes to differing levels of specificity (System Group and Assemblies, and occasionally Elements) and requests that proposals correspond to the RFP, always responding at one level more specific than the RFP (Assemblies and Elements, and sections in Product Specifications).
- Owner requests that responses be made by completing the *Products* portion of each section in which the owner edited the *Performance* portion.
- Owner requests that the response include a complete outline specification for the project, using the relevant sections in the Short Form tab.
- Owner uses the whole depth of the hierarchy, specifying all acceptable products in the product Specifications folder, and requests that the response be in the form of a full-fledged descriptive specification using the Short Form tab.

Once you have determined which approach to follow, continue preparation of your proposal document by determining first which additional sections you will need to edit, then selecting them from Section 00010 - Table of Contents. This approach takes full advantage of the linking built into the database and helps you quickly establish the scope of the effort involved in documenting your proposed design. It may also affect how much design you decide to perform at the proposal phase.

### Perform Preliminary Design

Before attempting to complete the proposal within SpecLink, perform whatever preliminary design is required, including drawings sufficient to illustrate the design to the owner. Where written descriptions are required to "flesh out" the preliminary drawings or to provide additional information requested by the owner, seek locations for conveying this information within sections edited by the owner as part of the RFP or in new sections you need from the Table of Contents. In competitions based upon a fixed price and best design, design-builders may want to move significantly beyond the minimum requirements for graphic and written documentation.

### Use Template Sections for Unusual Elements

Although SpecLink's database is very complete, you may sometimes need to define a system or assembly that is outside its scope. For example, the database does not include descriptions of geodesic domes and windmills. Should your design require definition of such an element, begin by locating a template section in the logical location in the hierarchy

for that element. Templates end in “9” —for example, Section B19 - Other Superstructure Elements, or Section B9 - Other Shell Elements—and contain the word “Other” in their titles. Then edit the template to define your element.

### Confirm Receipt of Addenda and Complete Non-technical Sections

Once the drawings and schedules have been completed or their names and numbers are determined, edit Section 00015 - List of Drawings and Schedules. If the owner included drawings with the requirements document or RFP, those drawings will already be listed under the heading “Drawings Prepared by Owner.” List your drawings under the heading “Drawings Prepared by Design-Builder.” If necessary, create a new heading to list your schedules.

Complete Sections 00002 and 00003, if necessary. Complete Section 00600 - Bonds and Certificates and Section 00820 - Insurance, if required. “Attach” paper or electronic copies of the actual forms required.

Addenda may arrive in several different forms:

- A new project file in which changes have been made throughout the body of the RFP. In this case, the file will have been renamed to indicate its status as an addendum to the original RFP. Use the Compare Projects feature to determine the differences between the original and the addendum.
- Section 00490 - RFP Addenda, which may have been printed and mailed or faxed to all proposers or exported to an RTF word-processing file and sent electronically.

When the level of completion allows, complete Section 00400 - Proposal Form, and do a final check that all contract documents have been included or referenced and that no documents not a part of the contract are included.

## Using the PerSpective Tab for Design-Bid-Build Projects

### System Description

For design-bid-build projects, the first four folders on the PerSpective tab may or may not be required, depending on whether the design professional preparing the documents will also be designing the project. In the event the preparer is on the owner’s staff or is an outside consultant who has been retained to produce a program and accompanying design criteria, the folders for Introductory Information, Request for Proposal, Contracting Documents, and Program Requirements may be used much as described earlier in this chapter, under *Using the PerSpective Tab for Design-Build Projects*, except that the documents would be issued to one or more design professionals instead of to a design-builder.

## Performance Requirements

For design-bid-build projects, performance requirements are normally prepared to accompany a program of spaces required for the project. The program and set of performance requirements are given to the selected architect of record, together with a project budget, for the architect's use in preparing a project design that can be built within the owner's financial constraints. The specifications are organized hierarchically, beginning with facility performance requirements and extending through groups, assemblies, and elements.

### Facility Performance

Section 111 - Facility Performance contains performance standards that apply to the project as a whole, rather than to its component elements, and it comprises the broadest and most fundamental performance requirements.

### Groups, Assemblies, and Elements

Having stated requirements for the whole facility in Section 111 - Facility Performance, users may elect to go no farther down the hierarchy of performance requirements. However, many will want to proceed to sections at the next level of specificity, where requirements for the major groups of systems are stated. PerSpective's organization allows users to work from the largest to the smallest elements of a facility, defining the performance of its interrelated groups of systems, assemblies, and elements, in that order. If still more detail is required, the user may specify material requirements by using the Short Form tab. The objective is to allow owners to define their needs in the broadest terms consistent with their needs for detailed definition before execution of the contract.

The PerSpective tab's organization of elemental building and site performance requirements is loosely based upon the *UniFormat* system and is organized into the following seven major system groups:

- Section A Substructure
- Section B Shell
- Section C Interiors
- Section D Services
- Section E Equipment and Furnishings
- Section F Demolition
- Section G Sitework

Each of these sections has subsections in which the contents are further subdivided into assemblies, each of which may be further subdivided into elements for more detailed requirements. For example, the content of Section B is further defined by the following hierarchically arranged subsections:

Section 111 - Facility Performance			
Section B - Shell			
B1 - Superstructure	B2 - Exterior Enclosure	B3 - Roofing	B9 - Other Shell Elements
B11 - Elevated Floors B12 - Roofs B19 - Other Superstructure Elements	B21 - Exterior Walls B22 - Exterior Windows & Other Openings B23 - Exterior Doors B24 - Exterior Wall Fixtures B29 - Other Exterior Wall Elements	B31 - Roof Coverings B32 - Roof Openings B33 - Roof Fixtures B39 - Other Roofing Elements	

As depicted above, elemental performance specifications for each major topic under *UniFormat* are organized into sections of increasing detail and specificity.

- Whole facility requirements are specified in Section 111.
- System groups are represented above by Section B – Shell.
- Assemblies are represented above by Section B1 – Superstructure.
- Elements are represented above by Section B11 - Elevated Floors.

Including the whole facility performance specification in Section 111 - Facility Performance, the PerSpecView tab therefore offers users performance specifications organized into four degrees of specificity. Owners are most likely to use the first two levels (whole facility and system groups) in stating their performance requirements, and design professionals offering proposals in response are most likely to use the lower two (assemblies and elements).

### Stop When You've Said Enough!

Users who edit sections below the level of facility performance need to understand the hierarchical nature of the performance requirements sections. The organization of these sections reflects the good practice of specifying no more detail than is necessary and ending the specifying process when a compelling need to restrict the design no longer exists. Once owners have said all they need to say on a subject, they should stop.

For example, if energy efficiency selections made at the whole facility level in Section 111 cover the shell sufficiently, there is no need to insert values for thermal transmittance in Section B - Shell. If the owner's requirements for fire resistance are satisfied by choices made in Section B - Shell, there is no need to restate them in Section B2 - Exterior Enclosure, unless some element in Section B2 needs protection, which differs from requirements already stated in Sections 111 and B.

## Products

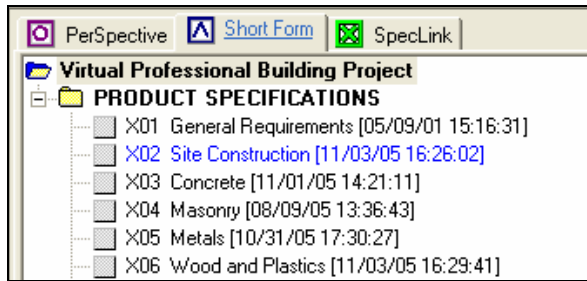
The *Products* portion of each section on the PerSpective tab contains lists of generic product types that might be suitable for the building elements described in performance terms under *Performance*. These product lists are typically grouped into *Use* and *Do Not Use* lists. To allow the design professional the greatest possible latitude, the owner should refrain from using these product lists. They are offered primarily for the design professional's use, to offer a set or class of products, or to promise that one will not be used.

Occasionally, however, an owner may want to limit or prohibit the use of a particular product or system—perhaps because of a previous bad experience. In such a case, the owner could use *Products* to issue a blanket prohibition, e.g.: *Do not use concealed flexible flashings*. The owner might also want to require use of a certain material, e.g.: *Use brick at the building's exterior walls*, or *Use granite at the building entrance*.

## Methods of Construction

On rare occasions, an owner may have a valid reason for using *Methods of Construction* in a particular section. For example, an owner may wish to prohibit use of a construction technique that has produced inferior results on similar projects. The PerSpective tab offers very few examples, except for standard language about existing elements that need to be preserved or removed. Because of the nearly infinite number of possibilities for text here, blanks rather than text are usually offered.

## The Short Form Tab



### Basic Organization and Uses

Unlike the PerSpective tab for performance specifications, which is organized according to *UniFormat*, content in the Short Form tab is organized according to the 16 Divisions of the 1995 edition of *MasterFormat*. The Short Form tab may be used both for design-build projects and design-bid-build projects.

There are only 16 sections on this tab, corresponding to the 16 divisions of *MasterFormat 95*. Each section, in turn, is divided into major articles that correspond approximately to the individual sections offered in each division on the SpecLink tab. The abbreviated text offered under each article heading consists primarily of product descriptions, with very few general requirements or installation instructions.

For design-build projects, an owner may occasionally need to expand upon the performance requirements specified by means of the PerSpective tab and may require the use of a particular product or material. In these special circumstances, an owner may use individual outline descriptive specifications from the Short Form tab to define, in significant detail, a product or material that must be incorporated into the project. More commonly, the descriptive outline specifications offered on this tab are useful for communications between design-builders and materials suppliers and subcontractors. As they evaluate design options during the proposal phase and, after contract execution, during the preliminary design and design development phases of the project, design-builders will need to exchange information on product performance, availability, and costs. The Short Form tab provides a convenient vehicle for that exchange.

For design-bid-build projects, the Short Form tab is useful in a number of circumstances. Since the content deals primarily with product descriptions, specifications produced through use of this tab are very useful at the schematic design or design development phases of a project, for conveying to an owner the material and system choices being proposed for the project by the design professional. Although the master text provided on this tab was not intended for use in construction documents, it is also possible to use it for that purpose on

projects of limited scope and complexity. The abbreviated specifications produced by using the Short Form tab may also be used as construction documents in situations where the contractor and the design professional have experience in working together and detailed specifications are not required, in the professional judgment of the designer. In the latter circumstance, it may be necessary for the user to supplement the master text by adding essential administrative requirements and critical installation instructions.

## The SpecLink Tab



### Basic Organization and Uses

Unlike the PerSpective tab for performance specifications, which is organized according to *UniFormat*, content in the SpecLink tab is organized according to both the 1995 and the 2004 editions of *MasterFormat* and may be flipped back and forth between the two by means of a global switch on the Summary Info dialog box. This tab was designed to produce detailed construction specifications that instruct a builder or contractor on the quality of materials and workmanship required for the project. The SpecLink tab may be used both for design-build projects and design-bid-build projects.

The following workflow suggestions may help you work with SpecLink in the most productive manner. These are not directions and as such have not been included in the step-by-step instructions in later chapters of this manual. However, they do provide information about specification concepts that may help you to use the SpecLink tab more effectively.

### Products First, Then Execution, Then General

Each specification section on the SpecLink tab is organized in the same way, according to the Construction Specifications Institute's (CSI) Three-Part Section Format. All similar topics are grouped into three parts of the specification:

- PART 1 - GENERAL,
- PART 2 - PRODUCTS, and
- PART 3 - EXECUTION.

Even though GENERAL is the first part of the specification, the topics in it are relevant only to the particular products specified in PART 2, and to installation or application requirements specified in PART 3. Therefore, we recommend beginning the editing of the section in PART 2 - PRODUCTS, rather than at the beginning of the section.

In PART 2, the products are usually organized into primary materials and accessories, and occasionally other topics such as fabrication and finishes. The first decision is which major products to include. The second decision is what method is to be used to specify them.

After that, it may be useful to edit PART 3 to identify the types of applications involved, in order to determine whether that affects the choice of accessories, fabrication, or finishes. It may be necessary to switch back and forth between PART 3 and PART 2 several times until all decisions on products and execution are resolved.

Once the scope of the section is clear, and the details of the products and execution worked out, the general requirements issues are usually simple and are based on the needs of the project. Each Article (level 2) in PART 1 covers a different type of provision, from the scope of the section (Section Includes) to materials provided for ongoing maintenance (Extra Materials). Each article usually can be edited independently of the others, and many are completely optional.

**EXAMPLE:** In Section 07313 - Wood Shingles and Shakes, the first choice is whether you want "shingles" or "shakes," or both, and then whether they are red cedar or redwood. After that, the remaining products in PART 2 are various types of accessory products, such as underlayment, eave protection membrane, flashings, etc., the proper selection of which is dependent on the needs of the project, the slope of the roof, and the application.

Links in the sections, connecting related provisions, are most helpful when editing is begun in PART 2. For instance, in Section 07313, there are 4 types of underlayment available in PART 2. The selection of any of the 4 types automatically determines that installation of underlayment is required. If editing begins in PART 3, however, and underlayment installation is specified, the links merely highlight all 4 of the types of underlayment for the user's selection.

## Build the Structure First, Then Finish It

There is no need to finish each section before starting a new one. In fact, that may be counterproductive, resulting in changes due to decisions made too early. Because all the sections in a project are in the same database, they can all be linked together for coordination. This makes it logical to select all the products required, adding all the sections needed for the project, before going on to details of submittals, quality assurance, etc.

You may want to follow these steps:

1. Add all the sections you think you'll need to the project by selecting them, or importing them from an existing project (see Chapter 4 for importing instructions).
2. Edit PART 2 of each section.
3. Check each section for related products that need to be specified in other sections and add them. Use the RELATED SECTIONS article in PART 1 as a partial checklist.

4. Scan PART 2 and PART 3 for cross references to other sections, particularly references that say something like "...work specified in this section is to be done according to provisions in ..... [another] section."
5. Review the Table of Contents for other products you may not originally have anticipated needing.
6. Review the appropriate edition of MasterFormat for products not included in the master database. Make new sections using the "New Section" function and add those products.
7. Finally, determine the level of detail required for such things as submittals, quality assurance, etc., and finish the sections. If you concentrate on one PART 1 topic at a time, all the sections will be more consistent. Remember that you can have more than one section open at a time; that helps a lot when reviewing.

## Making the Transition

BSD SpecLink is not a word processor. That fact is likely to change the way specifications are produced in your office in ways that are not immediately apparent.

The most important thing to realize is that the best person to use BSD SpecLink is the project design professional who knows the most about the project, not a clerical person. Selecting paragraphs and making choices is analogous to red-marking a draft copy of a word processing file; you are making decisions that the word processing person cannot or should not make.

## Red-Marking Drafts

If you have been accustomed to red-marking draft copies, it's not actually necessary to change at all. You can have Master Draft copies of the required sections printed out, red-mark them, and then have the edits done in BSD SpecLink by a word processing person. This works but is not particularly efficient, since the links are essentially ignored and in some cases may have to be overridden.

## Reviewing Other People's Work

If specifications in your office are prepared by project personnel and reviewed by a specialist or expert, the review can take place directly on screen. If the project personnel are encouraged to use the notes to record the basis for decision-making, the reviewer is better able to evaluate the result.

## Re-Using Previous Projects

In an office where a lot of projects are in the works simultaneously, using an office master is a well-established procedure. Since nothing is actually ever deleted from the BSD SpecLink

master, a project copied to a new project contains all the master text available for use on the new project.

## Proprietary Specifications

Proprietary sections are identified in the Tree Panel by black titles. All proprietary sections also are identified by a 3 or 4 letter acronym following the title (corresponding to the name of the manufacturer of the products included), in contrast to the BSD acronym, which identifies non-proprietary or "generic" sections.

The proprietary sections are sponsored by individual manufacturers and are automated and integrated into the SpecLink database. They are free to all SpecLink subscribers, because they are sponsored by the manufacturers whose products are included.

Except for the fact that proprietary sections are based on specific building products, the sections themselves are otherwise indistinguishable from the non-proprietary sections. All section titles and numbers conform to CSI's 1995 and 2004 editions of MasterFormat™, depending upon which of the two has been selected in the Summary Info dialog box. Section organization follows CSI's 3-part format. The proprietary sections also are linked within each section, to each other, and to the non-proprietary sections.

## Using Proprietary Sections

As mentioned previously, there are no obvious differences between the BSD non-proprietary sections and those that are proprietary, except for the fact that the latter are written around specific products. Users can choose to create totally proprietary sections by simply choosing the brand names desired and selecting the option "Substitutions are not acceptable."

On the other hand, virtually all of the proprietary sections include descriptive and performance requirements in addition to brand names. Users who want to use the proprietary sections without limiting bids to the named products can specify on the basis of descriptive or performance criteria and can either add the names of other acceptable products or allow substitutions by referring to the appropriate section in Division 1 for Product Requirements under the MANUFACTURER article in Part 2.

Probably the best way to use these sections is to employ the sponsoring product as the basis of design, but to allow substitution of equivalent products. Of course, under this scenario, it is important to include enough relevant performance or descriptive information in the specification to help in subsequent evaluation of proposed substitutions. Also, it is very important to establish in Division 1 (or 01) exactly what procedures the bidders (or contractor) must follow in submitting alternatives to the products named in the specifications.

## Using the SpecLink Tab to Communicate with Materials Suppliers and Subcontractors

At many points during the project development, and particularly during the Preliminary and Design Development phases, project team members may want to communicate with materials suppliers and subcontractors. Generally they will be seeking input as they evaluate the effects of various systems, assemblies, and products on the price, ease of construction, and schedule of the project.

SpecLink lends itself to that process because it is a convenient method for keeping together in a single file the owner's requirements (perhaps in the form of project notes) the design team's selections for products that will be used or prohibited (the *Products* part of each section), the means and methods (Part 3 of each section), and the response of the suppliers and subcontractors.

### Providing and Receiving Information

Because it is likely that subcontractors and suppliers will not have access to SpecLink, it may be easiest for the design team to print information from the project file for fax transmission. An alternative would be to export the appropriate sections to an RTF file and send them as e-mail attachments (See Chapter 8 Printing for more detail). Such fax or e-mail information might consist of several sections written by a specialist in a certain area, like electrical or mechanical.

In some cases, the design team will edit an outline specification, using primarily Part 2 of the relevant sections. In other cases, the design team might ask the subcontractor or supplier to edit a paper version of the outline specification in compliance with the owner's expressed requirements, to reflect the products or materials the subcontractor or supplier proposes. In the latter case, the design-builder will need to send a master draft version of the outline specification. See the chapter "Printing" in this manual for instructions. Information received, in whatever form, from subcontractors and suppliers should be incorporated into the appropriate technical sections of SpecLink by the design team. Specifications received in electronic form are much easier to incorporate, since word-processing files can be imported directly into SpecLink.