



MAINTENANCE PLANNING GUIDE

2009 – 11 Capital Budget

University of Wisconsin System Administration
Capital Planning & Budget
May 2007

**Maintenance Planning Guide
University of Wisconsin System**

Table of Contents

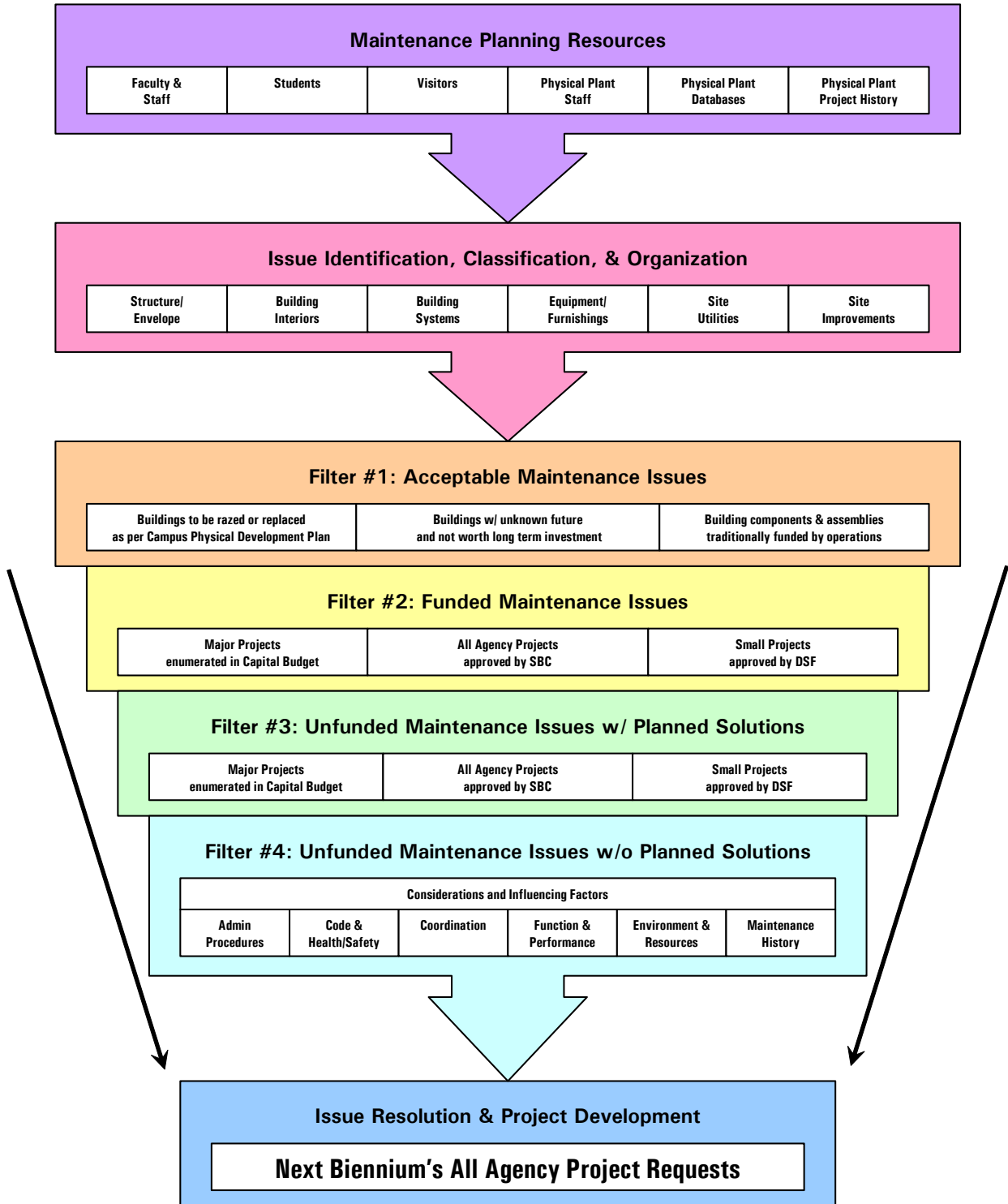
<u>Topic</u>	<u>Page</u>
MAINTENANCE PLANNING PROCESS	3
Maintenance Planning Process Abstract	4
Overview	5
Issue Identification and Definition	5
Issue Analysis and Theme Identification	7
Issue Filtering and Evaluation	7
Issue Resolution and Project Development	8
Influencing Factors and Considerations	9
Issue Priorities	12
MAINTENANCE PLANNING DOCUMENTATION	13
Maintenance Planning Documentation Abstract	14
Maintenance Planning Documentation Components	15
Step 1: Maintenance Issues Worksheet	15
Step 2: Campus Profiles	16
Step 3: Comprehensive Planning Issues	20
Step 4: Comprehensive Strategic Goals	20
Step 5: All Agency Project Requests	20
All Agency Project Request – Documentation Criteria	21



Maintenance Planning Process

University of Wisconsin System Administration
Capital Planning & Budget
April 2007

Maintenance Planning Process Abstract



Overview

This is a general description of the maintenance planning process used throughout the university system, though the specific methods of implementing the process differ between institutions. Though implemented differently, in concept and result, each institution achieves the goals of identifying and collecting maintenance problems (more commonly called planning issues), evaluating and sorting them for significance and urgency of need, and determining the most prudent and cost effective means to resolve the issues requiring immediate attention. The process results in definition of capital maintenance/improvement projects that address the most critical maintenance needs. This is especially important in times of scarce resources for maintaining the university's physical plant. This rigorous planning process results in applying available resources in a manner that promotes continuing operations while minimizing unexpected equipment and facility failures.

The maintenance planning process can be difficult to manage effectively without the proper organization and tools to track progress. The potential for important issues to fall through the cracks unaccounted and unresolved grows with each biennium. This guide should provide consistency in approach and implementation across the System.

Issue Identification and Definition

Maintenance planning issues are identified through various methods and sources, primarily through the physical plant operations. Interviewing physical plant staff about their daily experiences and historic knowledge of campus infrastructure provides a reality based condition assessment and broad contextual information for analyzing information from database management systems such as Capital Asset Management/Planning Information Systems, Computerized Maintenance Management Systems, Fleet Management Systems, Inventory Control Systems, Key/Security Management Systems. Depending on the database management system and the types of information collected, each system can provide unique insights into trends and past practices that may not be readily apparent through staff interviews. Additionally the campus community provides unsolicited feedback on the condition of the physical plant throughout the year, and may also be selectively interviewed for additional detail and understanding of the maintenance issues identified and the effect on program operations.

Maintenance planning issues identified through this process are typically organized into logical groupings, which may vary by institution as the issues are dependant on each institution's unique organization and circumstances. A typical organization of common maintenance areas is provided below. Organization of the issues within these general areas will vary depending on issue specificity and replication of the same or similar issues. Issues may be organized by building with the infrastructure systems noted below as subcategories, or if similar issues are found in multiple locations across an institution, buildings may be listed as examples of where particular system issues exist.

Building Structure & Envelope

Including, but not limited to: foundations, structure, and envelope (exterior doors, exterior walls, exterior windows, roofing)

Building Interiors

Including, but not limited to: interior ceilings, interior doors, interior floors/stairs, interior partitions (railings/balustrades, walls), interior signage, and interior windows

Building Systems

Including, but not limited to: conveying systems (cranes/hoists, elevators/lifts), electrical systems, fire protection systems, HVAC/mechanical systems, plumbing systems, security/alarm systems, telecommunication systems (clocks/program, data, radio, public address, television, voice)

Central Utilities

Including, but not limited to: heating & chilling plants, site utilities (chilled water, compressed air, domestic water, electrical, fuel, natural gas, sanitary sewer, steam, storm sewer, telecommunication)

Equipment & Furnishings

Including, but not limited to: equipment (athletic, food service, laundry/dry cleaning, library, loading dock, parking, recycling/waste, security, theatrical, vehicle service) and fixed furnishings (casework, seating, window treatments)

Site Improvements

Including, but not limited to: landscaping, pavements (parking lots, pedestrian walkways, plazas, roadways, stairs), and site development (athletic/recreational fields, fencing/railings, foot bridges, fountains, retaining walls, security telephones, signage, site lighting, street furnishings/shelters)

Miscellaneous/Other

Issues not captured in the groupings above.

Issue definition and description should be independent of proposed or intended solution. Issue statements should concisely and accurately describe specific characteristics or problems identified through the planning process related to a specific component, assembly, subsystem, or system. Issue statement may need to provide quantitative values in terms of unit of measure to help clarify the magnitude, but do not need to provide quantitative values in terms of project budgets or maintenance estimates.

Issue Analysis and Theme Identification

Collecting and recording the maintenance issues in a consistent format is essential for analysis, evaluation, and identifying common themes. Typically, as the issues list grows, it becomes helpful to add sorting categories to organize the overall list based on general analysis and emerging themes. The more sorting categories included in this list presents the most comprehensive and most flexible issues analysis tools.

The "Maintenance Issues Worksheet" tool includes four built-in sorting arrays: Physical Plant Category (as described in the "**Issues Identification and Definition**" section of this document), Priority (as described in the "**Issues Priorities**" section of this document), Filter No.'s 1-4 (as described in the "**Issues Filtering and Evaluation**" section of this document), and Project Solutions (as described in the "**Issue Resolution and Project Development**" of this document). The sorting arrays not only help organize the issues into understandable categories, but also help track the progression of the planning process and decisions made along the way.

Issue Filtering and Evaluation

After issues have been organized in a logical manner, an initial filtering occurs to screen out issues which do not require resolution for a variety of reasons, have solutions defined that are not yet implemented, or are in the process of being resolved. The "*Campus Physical Development Plan*" plays a significant role in this process, since it provides the comprehensive context for all decisions relative to the planned changes to the physical plant. The filtering process reduces the number of issues requiring further evaluation and planned project solutions.

Filter #1: Acceptable Maintenance Issues

This filter removes those issues the institution is willing to accept at the present time. Each issue will require re-evaluation during each subsequent planning cycle in relation to varying factors. Examples of issues removed by Filter #1 include, but are not limited to:

1. Buildings to be razed
2. Buildings not worth long term investment
3. Assemblies/components traditionally funded by operational maintenance

Filter #2: Funded Maintenance Issues

This filter removes those issues for which funding to resolve the issues have been secured, but until the projects are completed are still considered current maintenance issues. Examples of issues removed by Filter #2 include, but are not limited to:

1. Major projects (enumerated)
2. All Agency Projects (approved by State Building Commission)
3. Small Projects (approved by Division of State Facilities)

Filter #3: Unfunded Maintenance Issues **with** Planned Project Solutions

This filter removes those issues with planned and preferred project solutions identified in the "*Campus Physical Development Plan*" and/or existing and not funded projects identified in the current biennium. Each issue will require re-evaluation during each subsequent planning cycle in relation to the preferred and most appropriate project solution. Examples of issues removed by Filter #3 include, but are not limited to:

1. Major projects identified in Campus Physical Development Plan
2. All Agency Projects (submitted, not yet approved)
3. Small Projects (submitted, not yet approved)

Applying filters 1-3 separates the issues addressed in the development plan and previous planning cycles from those not yet evaluated to the same degree, thus reducing the maintenance issues list requiring further consideration. After the maintenance issues list has been reduced to those without identified solutions, the remaining issues must be evaluated and scrutinized to determine which issues require immediate, near future attention, and which issues are anticipated to require attention in the longer term. This decision process results in a fourth and final filter.

Filter #4: Unfunded Maintenance Issues **without** Planned Project Solutions

This filter removes those issues not requiring immediate (next biennium) resolution. Although it is anticipated these issues will require resolution in the near future (6-10 year horizon), attempting to predict exactly how and when these issues will be resolved is unnecessary and impractical. During the next biennium, these unsolved maintenance issues can be further researched with UW System Administration A/E staff to jointly develop appropriate project solutions and timelines. Examples of issues removed by Filter #4 are as follows:

1. Maintenance issues which do not need to be addressed in the planning biennium, but will require resolution at some point in the near future

Issue Resolution and Project Development

The planning process methodically reduces the maintenance issues from the complete list to only the highest priority issues requiring immediate (next biennium) resolution, while still identifying future biennial maintenance concerns.

Issues passing through all four filters are the most critical to resolve in the next biennium and should be addressed in the project scope of one project solution (either a Major Project Request or an All Agency Project Request) requested for the planning biennium. Appropriate project solutions are based on the applicable influencing factors and considerations. Since the maintenance conditions are continually evaluated throughout each biennium, it is understood project definitions, budgets, and priorities may require periodic modification to ensure the most critical maintenance is addressed in a timely fashion.

Influencing Factors and Considerations

There are numerous influencing factors and considerations affecting evaluation of issues and decisions on how to deal with each issue. These factors can be grouped into general themes, including but not limited to administrative procedures, codes, health and safety, environment, coordination, functionality and performance, institution environment; institution resources, and maintenance history. To provide structure to the evaluation process, the factors are grouped by theme along with objective and subjective examples of considerations.

Administrative Procedures

Procedural limitations of each institution influence decisions regarding the who, what, when, where, how, and why issues receive attention. In many cases these limitations vary by institution and directly influence the scale and philosophy for developing project solutions.

Administrative Procedures Factors	Objective Considerations	Subjective Considerations
Political	Limits	Alternatives
Procedural	Limits	Alternatives

Code, Health/Safety, and Environmental

Code, Health/Safety, and Environmental factors are regulatory influences on institution operations. Failing to address issues in this category may result in legal and monetary penalties.

Code, Health/Safety, Environmental Factors	Objective Considerations	Subjective Considerations
Building Codes	Citations/Fines	Compliance
Code/Statute Updates	Mandatory	Advisory
Health, Safety, & Environment	Incidents/Reports	Impact (concerns/hazards)
Insurance/RISK Management	Claims/Incidents	Assessments/Reports

Coordination

Coordination factors are operational realities each institution faces when planning and implementing projects. There is a delicate balance between keeping the infrastructure and operations synchronized, and minimizing the interruptions to both when maintenance and improvement projects are implemented.

Coordination Factors	Objective Considerations	Subjective Considerations
Institutional Calendar	Scheduled Events	Scheduling Alternatives
Project Delay	Expense	Impact on Operations
Project Economy (combined work)	Expense	Efficiency
Project Schedule	Construction Duration	Construction Window
Project Sequence	Under Construction	Planned
Seasonal Calendar	Seasonal Work	Scheduling Alternatives
Temporary Accommodation/Relocation	Spaces Available	Acceptable Alternatives

Functionality & Performance

Factors relating to the quality of the physical plant and environmental aspects of an institution focus on how something functions and/or performs in relation to current needs. While a facility or infrastructure component may be usable or functioning, it may not be meeting the needs; e.g., a room may be too small or an air handler may be undersized.

Functionality & Performance Factors	Objective Considerations	Subjective Considerations
Circulation/Traffic	Adjacency	Wayfinding
Circulation/Traffic	Volume	Patterns
Facility/Equipment/System Capacity	Current Demand	Future Demand
Facility/Equipment/System Intent	Operability	Functionality/Performance
Facility/Equipment/System Redundancy	Yes/No	Necessity
Security System	Breaches/Incidents	Effectiveness
Space Type	Availability	Quality
Space Use	Function	Flexibility
Type of Facility	Occupants/Programs	Public/Semi-Private/Private
Type of Facility	Construction Type	Construction Alternatives

Institution Environment

Each institution serves a multitude of constituents, each perceiving the institution differently, depending on the degree and frequency of interaction each has with the institution. There are many factors influencing constituent perceptions of the institution's unique character, mission, operation, and vision.

Institution Environment Factors	Objective Considerations	Subjective Considerations
Action vs. No Action	Expense	Consequences
Aesthetic Impact	Yes/No	Effectiveness/Importance
Assessable Improvements	Yes/No	Alternatives
Campus Mission/Initiative Impact	Yes/No	Effectiveness/Importance
Community Outreach Impact	Yes/No	Effectiveness/Importance
Historical Impact	Yes/No	Effectiveness/Importance
Physical Plant Impact	Percent in Construction	Intensity of Construction
Projects Approved	Yes/No	Relationship to
Projects Defined	Yes/No	Relationship to
Real Estate Transaction	Developed/Undeveloped	Appropriate for Intent
Regional Development	Adjacency/Proximity	Consequences

Institution Resources

The quantity, quality and reliability of institution resources directly affects its ability to effectively plan and manage maintenance issues. Limited resources, for example staffing, affects maintenance planning, project identification, and project implementation.

Institution Resources Factors	Objective Considerations	Subjective Considerations
Campus Physical Development Plan	Yes/No	Quality
Capital Funding	Limits	Alternatives
Data/Drawings/Records	Yes/No	Quality/Reliability
Institutional History/Memory	Yes/No	Quality
Operational Funding	Limits	Alternatives
Staff Availability	Yes/No	Expertise

Maintenance History

Planning issues may be very general or specific to an infrastructure component. In either case, ultimately the history of individual assemblies or pieces of equipment must be evaluated. Maintenance history factors relate to an item's operability, maintainability, and remaining useful life. Evaluating the status of an item's operability, maintainability, and remaining useful life directly influences the item's condition assessment. Condition assessment evaluations along with an analysis of repair vs. replacement cost alternatives, determines the most appropriate economical and efficient resolution of the issue.

Maintenance History Factors	Objective Considerations	Subjective Considerations
Energy Consumption	Expense	Efficiency
Facility/System/Equipment Maintainability	Life Expectancy	Life Remaining
Facility/System/Equipment Maintainability	Part Availability	Obsolescence
Facility/System/Equipment Operability	Age	Condition
Facility/System/Equipment Status	Present	Future
Failure/Breakdown	Incidents	Consequences
Maintenance Backlog	Estimated Level	Acceptable Level
Operational Maintenance	Expense	Efficiency
Repair vs. Replacement Cost	Economy	Efficiency
Repair vs. Replacement Cost	FCl Rating	Life Cycle Costing
Technology	Incompatibility	Obsolescence
Trouble Calls	Frequency	Severity

Maintenance planning is a continual and incremental process of identifying, sorting and evaluating issues, evaluating alternatives, and developing project solutions. Each planning cycle re-evaluates the known issues and the appropriateness of identified solutions within the comprehensive institutional context. Each planning cycle extracts a select set of issues requiring immediate attention, and defines capital projects to resolve the issues. The evaluative process is repeated until the resulting and cumulative project solutions reaches funding, timing/sequential, or other limitations.

Issue Priorities

Setting priorities for the issues and resulting project solutions can be a difficult process to undertake, especially when the demonstrated need far exceeds the funding available and when numerous issues or project solutions seem to be equally important and/or have equal impact if not addressed. With limited funding to resolve maintenance issues, it is imperative the most critical maintenance issues are addressed in a timely fashion.

The issue filtering process previously described will likely result in a batch of issues which require resolution in the next biennial capital budget. Issues passing through all four filters will not only need to be prioritized among themselves, but also among the Filter #3 issues which had project solutions identified in a previous planning cycle, but were not funded. Each planning cycle requires re-evaluation of unfunded project solutions submitted in previous biennia along with the new critical issues which surfaced since the last planning cycle was completed. The goal is to reasonably address as many issues with each project solution defined, regardless of Priority or Filter designations. The higher priority issues should be the primary justification for developing a project solution, but the solution should be as comprehensive as possible to avoid redoing or undoing work completed in a limited project scope in the same area.

The following tables outline a general guideline and rationale for prioritizing the issues, and consequently, the resulting project solutions. While this guideline is not absolute, exceptions to this general approach should be few and far between.

Priority #1 Issue Rationale	Priority #2 Issue Rationale	Priority #3 Issue Rationale
If unresolved, the issue threatens the ability to continue operation and/or provide a safe environment.	If unresolved, the issue impedes delivery of essential programs and services, and/or compromises essential functionality or operations.	If unresolved, the issue impedes delivery of non-essential programs and services, and/or compromises non-essential functionality or operations.

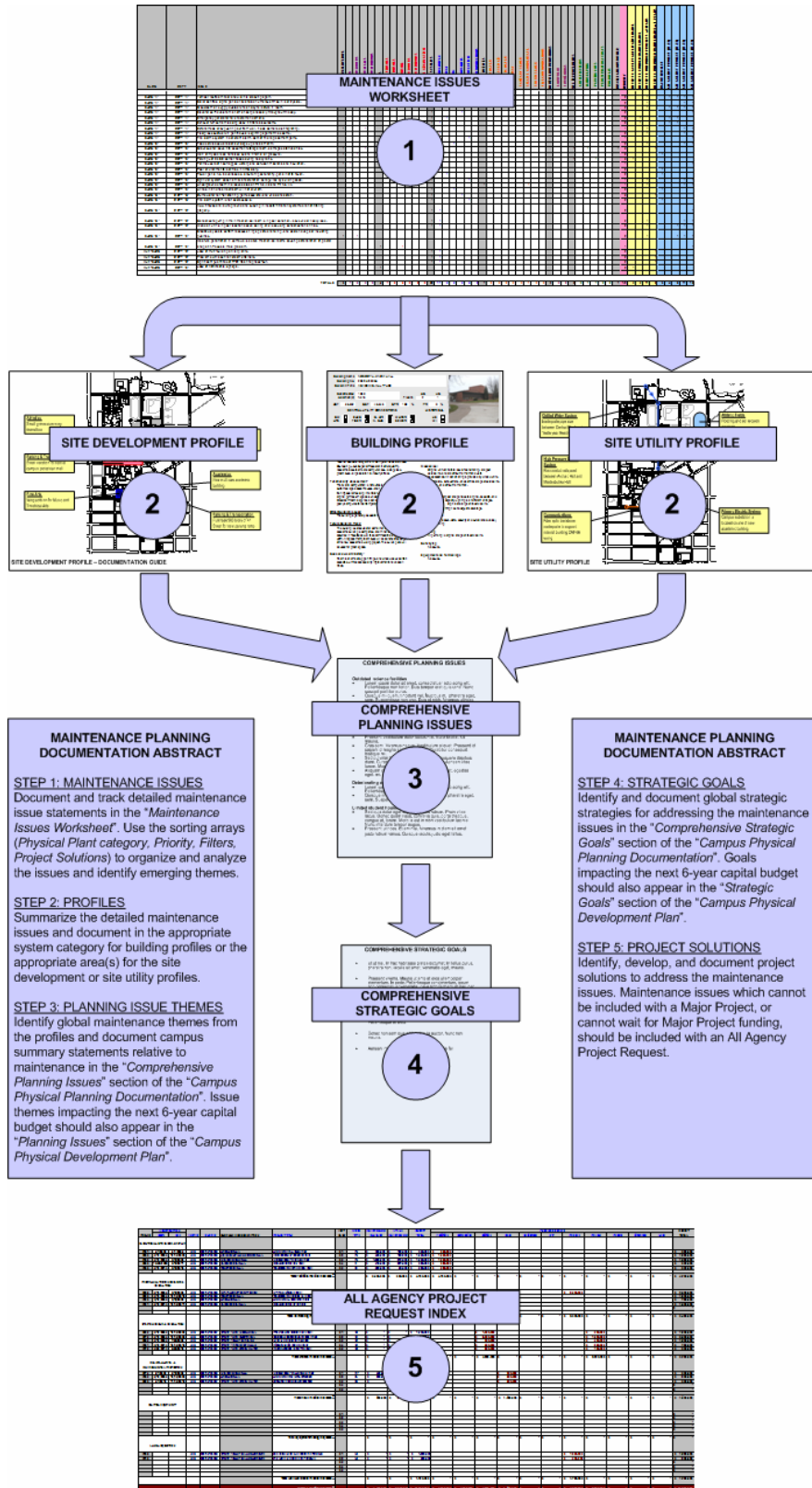
Priority #1 Issue Samples	Priority #2 Issue Samples	Priority #3 Issue Samples
Building code compliance Building envelope or structural integrity Health, Safety, and Environmental Protection MEP system operations Utility capacity and operations	Programs and Services <i>Academic</i> <i>Dining</i> <i>Housing</i> <i>Library Services</i> <i>Student Services</i> Functionality and Operations <i>Accessibility</i> <i>Accreditation</i> <i>Energy Efficiency</i> <i>Environmental Control</i> <i>Scheduling</i> <i>Sustainability</i> <i>Technology</i>	Programs and Services <i>Athletics</i> <i>Day Care</i> <i>Parking</i> <i>Recreation</i> <i>Student Organizations</i> Functionality and Operations <i>Adjacency</i> <i>Aesthetics</i> <i>Appearance</i> <i>Circulation</i> <i>Community Outreach</i> <i>Storage</i> <i>Wayfinding</i>



Maintenance Planning Documentation

University of Wisconsin System Administration
Capital Planning & Budget
May 2007

Maintenance Planning Documentation Abstract



statement individually, independent of intended project solution priority. The priority sorting column is useful for determining the primary justification for project solutions and should influence the resulting project solution priority.

The third sorting array is based on the four filters, as previously described in the **“Issue Filtering and Evaluation”** section of this guide. The filtering classification indicates which issues require further evaluation and subsequent project solutions for each planning cycle. To determine how many issues have passed through all four filters, and therefore require attention in the next biennium, select the “(Blanks)” value for all four filter columns and only those issues without a filters designation will remain in the filtered view.

Using the priority and filter sorting arrays in the *“Maintenance Issues Worksheet”* together is a good self-check mechanism to spot inconsistencies. The table below outlines the likely relationships of priority designations to the filter designations based on the priority being the primary justification for a project solution.

Priority #1 Issue to Filter Relationship	Priority #2 Issue to Filter Relationship	Priority #3 Issue to Filter Relationship
1 NEVER	1 NOT LIKELY	1 HIGHLY LIKELY
2 HIGHLY LIKELY	2 LIKELY	2 NOT LIKELY
3 LIKELY	3 HIGHLY LIKELY	3 NOT LIKELY
4 NEVER	4 NOT LIKELY	4 HIGHLY LIKELY
* HIGHLY LIKELY	* LIKELY	* NOT LIKELY

*** = NO FILTER ID DESIGNATED. ISSUE PASSES THROUGH ALL 4 FILTERS AS A CRITICAL ISSUE FOR THE PLANNING BIENNIUM.**

Since the intent is to develop comprehensive project solutions, addressing lower priority issues related to work necessary to resolve high priority issues is not only expected, but anticipated and efficient. Simply stated, project solutions are likely to address any to all priority levels, but the highest priority issues will be the primary justification.

The fourth sorting array is based on project solution, as previously described in the **“Issue Resolution and Project Development”** section of this guide. The project sorting array is useful for tracking issues through their resolution, so during each planning cycle, issues related to projects closed in the previous planning cycle can quickly be identified and eliminated from the *“Maintenance Issues Worksheet”*. Using the “Project No.” field is recommended for tracking purposes, even when a temporary project number (i.e. Z000 through Z999, Y000 through Y999) is assigned.

Step 2: Campus Profiles

Once the *“Maintenance Issues Worksheet”* is completed, the detailed issue statements must be distilled and summarized onto the appropriate *“Building Profile”*, *“Site Development Profile”*, or *“Site Utility Profile”*. The campus profiles begin the integration of maintenance planning issues with all other campus planning issues. Each profile type contains comprehensive campus planning issues, including maintenance issues.

The maintenance issues included on the campus profiles should not simply replicate the detailed issue statements, but they should capture the essence of the primary or most significant detailed issue statements. Each campus profile is unique both for intent and content. While aspects of the profiles may be similar, planned building addition(s) will appear on both the *“Building Profile”* and the *“Site Development Profile”*, the manner in which these aspects are documented and represented on the profiles is unique. All three profile types

should be viewed together to provide a comprehensive view of the campus physical development. The campus profiles are a useful reference when identifying and developing comprehensive project solutions.

Building Profile

Building profiles should be limited to a single page (8.5" x 11"). The intent is to provide a thumbnail overview of all planning issues and considerations impacting the building profiled. The profile includes static data for building name, building number, CDR building type, year constructed, wing addition(s) year(s) constructed, count of floors above and below ground, ASF, GSF, GPR %, PR %, central utility connections by system, and historical status. The profile also includes dynamic information for background and history, occupants and uses, functional and physical condition assessments, building code and health/safety assessments, and future building plans.

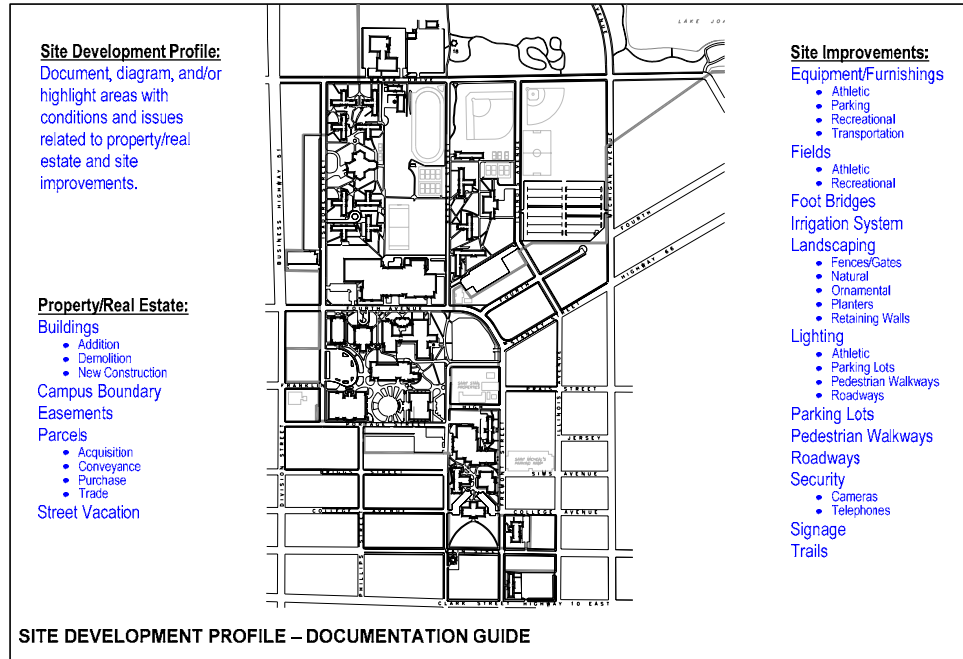
Building Name: NOBODY U. KNOW HALL Building No: 285-0X-8888X Building Type: ACADEMIC, MULTI-USE		
Constructed: 8888 Addition(s): 8888, 8888, 8888 Floors: 88 AG, 89 UG	Constructed: 1959 Addition(s): None Floors: 2 AG, 0 UG	
ASF: 888,888 GSF: 888,888 GPR: 888 % PR: 888 %	ASF: 36,942 GSF: 46,546 GPR: 100 % PR: 0 %	
CENTRAL UTILITY CONNECTIONS CW: <input checked="" type="checkbox"/> ELEC <input checked="" type="checkbox"/> C. AIR <input checked="" type="checkbox"/> WATER <input checked="" type="checkbox"/> HPS: <input checked="" type="checkbox"/> FIBER <input checked="" type="checkbox"/> N. GAS <input checked="" type="checkbox"/> SEWER <input checked="" type="checkbox"/>	HISTORICAL US: <input checked="" type="checkbox"/> WI: <input type="checkbox"/>	
88 FUNCTIONAL RATING	PHYSICAL RATING 88	
Background and History: building naming, previous use(s), historical status, addition(s), renovation(s)	Physical Condition Assessment: capacity, efficiency, obsolescence, operations and maintenance issues for the following:	Background and History: The building was designed as a laboratory elementary school, but was converted to a general academic building in the 1970's.
Occupant(s) and Use(s): current academies, departments, and programs	Architectural: academics, exterior envelope, finishes, interiors, locks and keys, structure	Architectural: The roof is in serviceable condition. The east wall leaks during heavy rain. Insulating glass seals on windows are failing. Doors are original. Except for the theater, most finishes are original, outdated, and worn. Greenhouse is badly deteriorated.
Functionality Assessment: accreditation issues, agency, configuration, environment, equipment and technology, space adequacy and quality	Mechanical: controls and instrumentation, ductwork, equipment (air handling, heating, reclaim, refrigeration), insulation, piping	Mechanical: Original unit ventilators lack air conditioning, are past service life, and are difficult to maintain due to obsolescence. Air conditioning is provided by window units. All handsets, exhaust fans, and controls are past service life, obsolete, and difficult to maintain.
Other Building Issues: master plan coordination issues	Electrical: cabling and wiring, equipment (emergency power, fire alarm, normal power), lighting, panels	Electrical: Building switchgear and panels are original, obsolete, and lack sufficient capacity. Lighting is of different vintage, much of it original and/or past its service life. Emergency lighting has inadequate coverage.
Future Building Plans: future activities, departments, and programs; remodeling, renovation, and/or demolition plans	Communication: equipment (locks, data, security and surveillance, voice), panels, wiring	Communication: equipment (locks, data, security and surveillance, voice), panels, wiring
Code and Health/Safety: accessibility, egress, hazardous materials, mold, new code requirements, security	Plumbing: equipment (domestic water, fire protection and suppression, sanitary sewer, storm sewer, swimming pool), fixtures, insulation, piping	Plumbing: All plumbing is original and past its service life.
	Conveying: cranes and hoists, dumbwaiters, elevators, escalators, lifts	Conveying: No issues.
	Equipment and Furnishings: athletic and recreational, classroom, food service, instructional, laundry, loading dock, theater, vehicular, and waste handling equipment: fixed furnishings	Equipment and Furnishings: No issues.

SAMPLE: Building Profile – Documentation Guide and a completed building profile

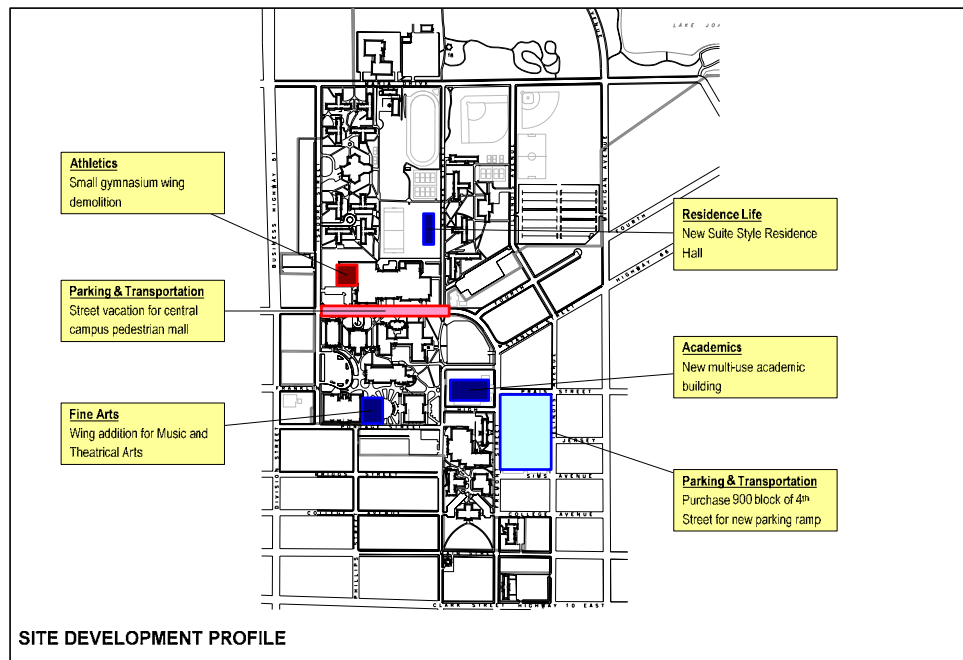
If a building with one or more wing additions is traditionally treated as a single building on campus, only one "Building Profile" is required. If one or more wing additions are traditionally treated as separate buildings or entities on campus, a "Building Profile" should be completed for each corresponding entity. If one or more wing additions have a significant difference in use or condition, you may also want to consider completing a separate "Building Profile" for those entities. For structures (ticket booths, press boxes, silos, etc.) and/or groups of similar building types (i.e. barns, cabins, storage buildings, etc.), it may be most efficient to complete a single "Building Profile" for multiple entities based on logical groupings.

Site Development Profile

Site development profiles should also be limited to a single page (11" x 17"). The intent is to provide a thumbnail overview of all planning issues and considerations impacting site development (property/real estate and site improvements).

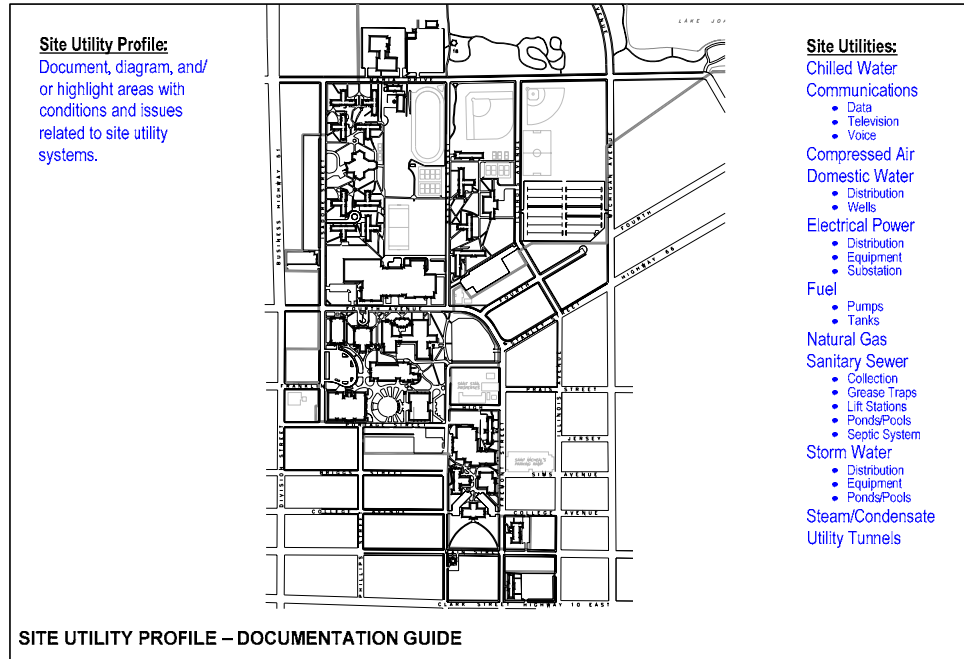


SAMPLE: Site Development Profile – Documentation Guide and completed site development profile

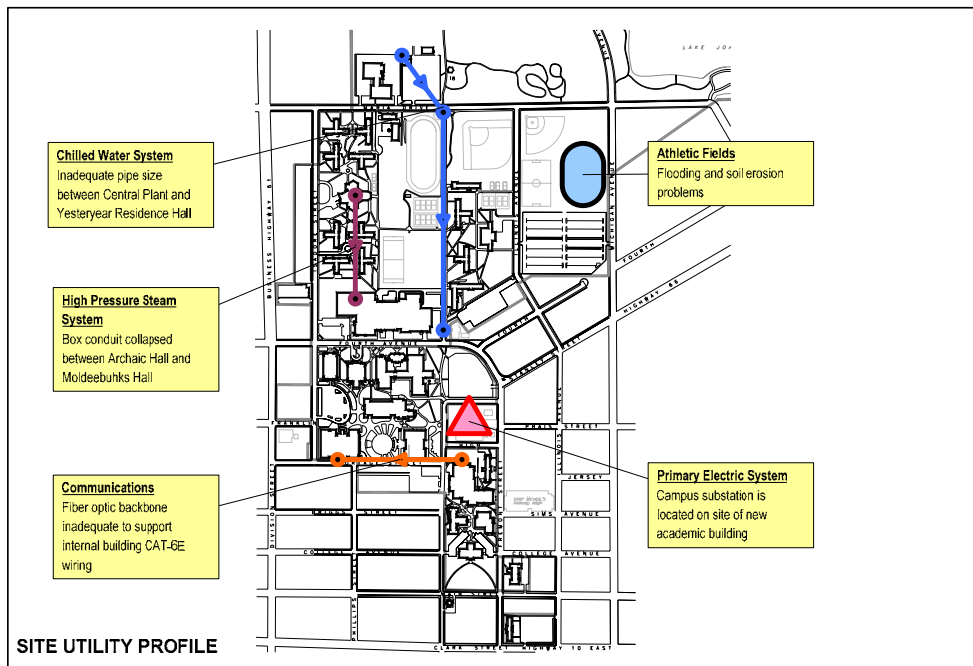


Site Utility Profile

Site utility profiles should also be limited to a single page (11" x 17"). The intent is to provide a thumbnail overview of all planning issues and considerations impacting site utilities (underground and above ground).



SAMPLE: Site Utility Profile – Documentation Guide and completed site utility profile



All Agency Project Request

2009-11 Biennium

Audience:

Author must assume reader has no knowledge of campus, building(s), organization, or project intent. The completed All Agency Project Request (AAPR) form will be posted on the web to advertise for each project. The AAPR form must completely, concisely, and accurately describe all aspects of the project and its intent to the audience groups listed below.

- University of Wisconsin System Administration
- Division of State Facilities & State Building Commission (Governor and legislators)
- Architectural/Engineering/Planning Firms and Contractors

<u>Agency</u>	<u>Institution</u>	<u>Building No.</u>	<u>Building Name</u>
University of Wisconsin	Enter your institution's name here.	285-0X-8888X	Enter the project location's building or site utility name(s) here.

<u>Project No.</u>	<u>Project Title</u>
(CPB staff will request a project number from DSF and complete this field.)	Project title should be simple, concise, accurate, and descriptive. Capital Accounting Project Information System and WisBuild's "Project Title" field truncates at 30 characters. Abbreviated or shortened building name and type of work are typical.

Useful Project Scope & Justification Background Information:

- Building ID and Building Name for each building included in project (multiple building projects)
- Building GSF and number of floors for each building included in project
- Building type (classroom, dry lab, wet lab, offices, etc.) and/or building departments affected by project scope
- Building/Wing original year of construction

Project Intent

Author should provide brief description (2-3 sentences maximum) of the overall project intent. What is this project solution intending to accomplish? What is/are the primary issue(s) this project solution will resolve?

Project Description

Author must include all aspects of project scope in this section (repair/replace/renovate, demo, restore, install, provide, study, programming, master planning, environmental assessment, etc.). Do not assume because the author understands what types of work are involved and/or what the expectations are for design or project work, the audience will equally understand if it is not articulated in the Project Scope narrative. Project Scope should indicate if replacement in kind is desired vs. some alteration (i.e. increased or reduced capacity, improved maintainability, increased energy efficiency, change of style or material selection, etc.) to existing condition; or whether the designer is to make a recommendation or determination.

Sample detail points to include in Project Description:

- quantity w/ unit of measure (i.e. ASF, GSF, LF, SF, Each, CFM, HP, KVA)
- size or typical size
- equipment/assembly/system name or description
- type (materials, style, function, etc.)
- special design considerations to match existing campus standards
- special design considerations to accomplish work (i.e. exterior work on 7-8th stories)
- type of work involved (renovate, repair, replace, dispose, new installation, etc.)
- location(s)...single vs. multiple vs. selected campus area(s)
- descriptive vs. prescriptive...fully describe intent and work required, but do not design solution
- special A/E services required (i.e. studies/evaluations to determine design solution, comparative design solutions)
Note: do not recommend specific A/E firm
- replace in kind vs. upsize or downsize (current capacity/load vs. intended or design capacity/load)
- hazardous materials/environmental survey (WALMS) completed?
- associated demolition work (door or window assemblies, partition walls, rough openings, ceiling systems, etc.)
- associated HVAC/mechanical work (testing/balancing, ventilation upgrades, ductwork modifications, etc.)

All Agency Project Request

2009-11 Biennium

Sample detail points to include in Project Description: (continued)

- associated electrical and/or telecommunications work (service upgrade, equipment replacement, etc.)
- associated plumbing work (increasing pipe sizes, equipment replacement, creating loop system, etc.)
- associated structural, egress, or fire protection work (adding sprinkler system, lintel changes/additions, etc.)
- associated site improvement/civil engineering work (pavement and/or landscaping repair/replacement after utility work, WEPA/environmental investigations, erosion control, etc.)
- associated acoustical, audio/visual, and/or other specialty work (classroom/auditorium acoustic design and instructional technology equipment, etc.)
- seasonal work and/or work limited by use of or access to project area (include phasing plans)
- deliverables other than record documents (program copies, studies, master plans, analysis report, etc.)
- other factors or complexities not apparent w/o a site visit

The project description should NOT include justification or background/history of the project. Abbreviations or acronyms should be written in full the first time the reference appears in the document, with the abbreviation or acronym in parentheses following the full reference. Thereafter, the abbreviation/acronym may be used.

Consultant Requirements

Consultants should have specific expertise and experience in the design and coordination of **(GENERAL DESCRIPTION OF DISCIPLINES AND SPECIALITIES RELATED TO THIS SPECIFIC PROJECT REQUEST)** as part of a design team. Work includes site surveys, acquiring field data, and verifying as-built conditions to assure accurate development of design and bidding documents, and production of necessary design and bidding documents. Consultants should indicate specific projects from past experience (including size, cost, and completion date) in their letter of interest and when known, include proposed consulting partners and specialty consultants.

- A consultant has been previously selected and approved for this project.

Project Justification

Author must include all aspects of the project justification and context in this section (including project area background information). Do not assume because the author understands why the specific project scope is being requested, the audience will equally understand if it is not articulated in the Project Justification narrative. Project Justification should indicate what issue(s) is(are) intended to be resolved, how the issue(s) impact current operations, and why the issue resolution cannot be deferred.

Sample detail points to include in Project Justification:

- life/health/safety and environmental concerns
- age of equipment/assembly/system
- condition assessment and/or performance evaluation
- repair history
- relationship to campus long range plan (sequence, "long term" solution, etc.)
- relationship to other ongoing work in same project area
- required by revised/new building code standards
- capacity/size restriction issues
- some background information is appropriate, but is not substitute for reason to do project
- anticipated losses or benefits (gifts or grants funding, research data, productivity, etc.)
- for project budget increases, indicate recent bids or budget estimates have exceeded authorized project budget and provide explanation for why the project budget increase is necessary

All Agency Project Request

2009-11 Biennium

Project Estimates:

- *develop Project Budget Worksheet for all remodeling/new construction proposals, and as needed for other maintenance/repair/renovation proposals*
- *uniquely identify hazardous materials project budget implications as separate line item*

Project Budget

Construction Cost:	\$	
Haz Mats:	\$	
Total Construction:	\$	
Contingency:	15 % \$	
A/E Design Fees:	8 % \$	
DFD Mgmt Fees:	4 % \$	
Equipment/Other:	\$	
	\$	

Funding Source

	<u>Total</u>
GFSB – <i>[insert appropriate fund category]</i>	\$
PRSB – <i>[insert appropriate fund category]</i>	\$
PR Cash	\$
Gifts	\$
Grants	\$
BTF – Planning	\$
Other -	\$
<i>Be sure Project Budget Total = Funding Source Total</i>	\$

Project Schedule

(MM/YYYY)

- SBC Approval: *CPB staff will complete this field*
- A/E Selection: *SBC Approval + 1 month minimum*
- Bid Opening: *Incorporate A/E contract signing time, design time, and bid duration*
- Construction Start: *Incorporate construction contract signing time and Institution schedule(s)*
- Substantial Completion: *Best guess relative to scope of work and Institution schedule(s)*
- Project Close Out: *Substantial Completion + 3 months minimum*

Project Contact

- Contact Name: *Enter the most knowledgeable contact for this project.*
- Email: *<__@__>*
- Telephone: *(__) __-__ x __*

All Agency Project Request

2009-11 Biennium

Project Scope Consideration Checklist:

- complete and respond as required...minimum #7 required for all project proposals
- be sure to indicate project schedule impact and hazardous materials types and quantities involved for #3 if answer is "Yes"

Project Scope Consideration Checklist

Y N

1. Will the building or area impacted by the project be occupied or have limited/restricted access during construction? If yes, explain how the occupants will be accommodated during construction.

All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.

2. Is the project an extension of another authorized project? If so, provide the project #...

3. Are hazardous materials involved? If yes, what materials are involved and how will they be handled?

Required hazardous materials abatement (ENTER TYPES AND QUANTITIES OF MATERIALS HERE) has been included in the estimated project schedule and project budget. Comprehensive environmental survey inventory data (IS/IS NOT) available on Wisconsin's Asbestos & Lead Management System (WALMS) <<http://walms.doa.state.wi.us/>> .

- OR -

Hazardous materials abatement is not anticipated on this project. Comprehensive environmental survey inventory data (IS/IS NOT) available on Wisconsin's Asbestos & Lead Management System (WALMS) <<http://walms.doa.state.wi.us/>> .

4. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent?

5. Will the project impact on the utility capacities supplying the building? If yes, to what extent?

6. Will the project impact the heating plant or the primary electrical system supplying the campus or institution? If yes, to what extent?

7. Have you identified the WEPA designation of the project, Type I, Type II, TypeIII?
Type III.

8. Is the project affected by Historic Status?

9. Are there any other issues affecting the cost or status of this project?

10. Will the construction work be limited to a particular season or window of opportunity? If yes, explain the limitations and provide proposed resolution.

Project work is seasonal. Preferred project work schedule should be limited to summer months if possible.