BUILDING TECHNOLOGIES

Job/Task Analysis for a **Facility Manager: Public Comment Draft**

September 2011

U.S. DEPARTMENT OF Energy Efficiency & Renewable Energy

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Facility Manager Job Description

A Facility Manager is a building maintenance specialist and property administrator who conducts building operations and maintenance activities, coordinates facility programs and projects, and supervises building personnel; by inspecting the facility, analyzing building data, forecasting future needs, solving problems, and communicating with others; to ensure the efficient and sustainable operations of the facility and the satisfaction of the facility occupants.

A proposed content outline resulting from this Job/Task Analysis follows.

	Facility Manager		
А	Managing Facility O&M Programs		
В	Managing People/Personnel		
С	Managing Other Internal/External Facility Programs		
D	Managing Facility Projects		
Ε	Managing Facility Finances		
F	Conducting Strategic Planning Activities		
G	Managing Facility Assets		
Н	Managing Facility Resources		

This Job/Task Analysis used input from a broad group of industry practitioners and was facilitated by Professional Testing, Inc. for the National Renewable Energy Laboratory and the U.S. Department of Energy.

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1.0 Introduction

The National Renewable Energy Laboratory secured the services of Professional Testing to help develop a job/task analysis (JTA) for facility managers.

JTA is a procedure for analyzing the tasks performed by individuals in an occupation, as well as the knowledge, skills, and abilities required to perform those tasks. Specifically, a JTA can be defined as "any systematic procedure for collecting and analyzing job-related information to meet a particular purpose" (Raymond 2001). JTA can be used to describe, classify, and evaluate jobs; ensure compliance with legal and quasi-legal requirements; develop training, promote worker mobility, plan workforces, increase efficiency and safety, and appraise performance (Brannick et al. 2007).

JTA is traditionally used by secondary and postsecondary educators, test developers, and business, industry, government, and military trainers to help identify core knowledge areas, critical work functions, and skills that are common across a representative sampling of current practitioners.

This project used the "developing a curriculum" (DACUM) method to conduct a JTA. DACUM is an occupational analysis led by a trained facilitator, where practitioners in a specific occupation come together for a multiday workshop to provide input about the specific tasks, knowledge, and skills needed to perform their job.

This document provides draft results of the analysis and will form the basis for a subsequent "industry validation" phase, where a larger group of industry practitioners will evaluate the list of job-related tasks. This group will ensure that the identified tasks and weighting factors accurately represent the job of a facility manager. This step will also provide an opportunity for industry to identify any missed tasks or any that were included erroneously.

The content presented in this document was created by industry practitioners and is intended to portray the job of a facility manager as currently practiced.

2.0 Subject Matter Expert Selection Process

Professional Testing helped to establish the criteria for selecting the DACUM panel of subject matter experts (SMEs). To be eligible for the workshop panel, applicants were required to submit an electronic application and to demonstrate that they were active practitioners in their field. To create a representative panel of practitioners, Professional Testing selected SMEs from a larger applicant pool to ensure:

- Geographic diversity
- Representation of a wide range of experience levels (novice to expert)
- No single organization or organization size dominated the group
- All sectors were represented with no single sector dominating (public versus private)
- Diversity of industry-related credentials, represented by the panelists.

Twelve applicants meeting the above criteria were selected to create the facility manager SME panel.

3.0 Job/Task Analysis Workshop

The facility manager JTA workshop was held in Greenwood Village, Colorado, June 7-9, 2011.

Day 1 consisted of an introduction to the DACUM process. The trained DACUM facilitator explained the

The DACUM Philosophy:

- Practitioners can describe and define their jobs more accurately than anyone else.
- One of the most effective ways to define a job is to describe the tasks practitioners perform.
- All jobs can be effectively and sufficiently described in terms of the tasks successful workers perform.
- All tasks, to be performed correctly, demand certain knowledge, skills, abilities, attributes, and tools.

JTA process and provided the SME panel with duty and task statement definitions. A duty reflects a large area of work for a specific profession; multiple tasks describe how to perform each duty. The presentation then shifted to a discussion about facility managers, more specifically the "who, how, what, and why" of the profession. The SME panelists compiled this information into a comprehensive list to capture key facility manager job components.

The next step was to identify duty (or domain) areas. Once the SME panelists reached consensus on the duty areas, they delineated each duty by identifying the required tasks.

On Day 2, the facilitator projected a spreadsheet that contained the identified duty areas and corresponding task statements. The SMEs were asked to list the steps under each task and to identify the knowledge, skills, abilities, and tools needed to complete each task.

On Day 3, work concluded with the SMEs finalizing an overarching job description for facility managers.

4.0 Results

This document presents aspects of a facility manager, as captured by the 12-member panel during the June 7-9, 2011 JTA workshop in Greenwood Village, Colorado. The tables that follow reflect job requirements and are meant to provide a clear understanding and detailed description of the work performed.

5.0 References

Brannick, M. T., Levine, E. L., & Morgeson, F. P. (2007). Job and work analysis: Methods, research and *applications for human resource management*. Thousand Oaks, CA: Sage.

Raymond, M.R. (2001). Job analysis and the specification of content for licensure and certification examinations. *Applied Measurement in Education* 14(4), 369-415.

6.0 Nomenclature

Table 1 provides a list of the acronyms and abbreviations used in this document. In addition to increasing the efficiency of communications, many technical and process acronyms are useful in memory retention and learning. Occupational acronyms are therefore of interest to trainers and curriculum designers.

Nomenclature	Definition	
AED	Automatic external defibrillator	
AHJ	Authority having jurisdiction	
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers	
BAS	Building automation system	
CAFM	Computer assisted facility management	
CMMS	Computerized maintenance management system	
СРМ	Critical path methods	
CPR	Cardio pulmonary resuscitation	
CSP	Critical spare parts	
DACUM	Developing a curriculum	
EPP	Environmentally preferred product	
ESCO	Energy service company	
F	Fahrenheit	
FAR	Federal Acquisition Regulation	
FFE	Furniture, fixtures, equipment	
FMEA	Failure mode effects analysis	
GAAP	Generally accepted accounting principles	
HAZMAT	Hazardous materials	
HR	Human resources	
HVAC	Heating, ventilation, and air-conditioning	
IT	Institutional technology	
JTA	Job/task analysis	
KPI	Key performance indicator	
MAC	Moves, adds, changes	
MMS	Maintenance management systems	
MSDS	Material safety data sheet	
0&M	Operations and maintenance	
OBM	Occupant behavioral modification	
RFI	Request for information	
RFP	Request for proposal	
RIF	Reduction in force	
ROI	Return on investments	
SME	Subject matter expert	
SLA	Service level agreements	
SOX	Sarbanes Oxley	
SWOT	Strengths, weaknesses, opportunities, and threats	

Table 1: List of Acronyms and Abbreviations

7.0 Proposed Content Blueprint

The SMEs rated the list of job-related duties and tasks defined during the JTA workshop based on a twofactor scale: the importance of the duty area or task to overall job performance and the frequency with which duties and tasks are performed. The result is a weighted ranking of the duties and tasks known as a *content blueprint*.

The proposed content blueprint provides an initial basis from which an assessment (e.g., a certification or licensure examination) may be constructed and provides curriculum developers with a model to align training to the core needs of the occupation.

		Duties and Tasks	Weighting
Α		Managing Facility O&M Programs	32%
	1	Manage the Work Order Program	3%
	2	Manage MMS Programs (CMMS, CAFM, etc.)	3%
	3	Manage Building Automation Systems	3%
	4	Manage Access Control Systems (mechanical and electrical)	3%
	5	Manage Security Systems	3%
	6	Manage Fire and Life Safety Systems	3%
	7	Manage the Preventative Maintenance Program	3%
	8	Coordinate with Public Utilities	3%
	9	Manage the Building Systems	4%
	10	Manage the Building Services	4%
В		Managing People/Personnel	15%
	1	Conduct Operational Meetings (personnel, staff, planning, etc.)	4%
	2	Conduct Staff Development Activities	3%
	3	Perform HR Activities	4%
	4	Conduct Relationship Management Activities	4%
С		Managing Other Internal/External Facility Programs 15%	
	1	Develop an Enterprise Risk Management Strategy	3%
	2	Manage Amenity Programs	3%
	3	Manage Sustainability Programs	3%
	4	Manage Tenant/Landlord Related Programs	3%
	5	Manage Procurement Programs	3%
D		Managing Facility Projects	10%
	1	Initiate a Facility Project	3%
	2	Execute Facility Project	4%
	3	Close Out Facility Projects	3%
Ε		Managing Facility Finances	11%
	1	Develop Facility Budgets	4%
	2	Administer the Budget	4%
	3	Reconcile the Budget	3%
F		Conducting Strategic Planning Activities	5%
	1	Gather Reference Information for Strategic Planning	2%
	2	Implement Strategic Plan	3%
G		Managing Facility Assets	7%
	1	Acquire Facility Assets (real property and other assets)	2%
	2	Optimize Facility Assets	3%
	3	Dispose of Assets (property, fixtures, etc.)	2%

Table 2: Proposed Content Blueprint for Facility Managers

	Duties and Tasks	Weighting
Н	Managing Facility Resources	5%
1	Manage Administrative Resources	3%
2	Manage Equipment, Tools, and Supplies	2%
Total		100%

Table 2 (Continued): Proposed Content Blueprint for Facility Managers

8.0 Knowledge

The SMEs identified and categorized specific types of knowledge needed to be a proficient facility manager (Table 3). General knowledge areas (calculations, basic measurements, and communications), although not exclusive to this occupation, were also identified using a group consensus process (Table 4). The panelists concluded that a practitioner must master the knowledge in both tables to be competent as a facility manager.

Specialized KnowledgeAccounting principlesBusiness strategyAHJ regulations and requirementsCapital planningAlternative sources of funding/revenueCapital sources and funding basisAlternative work strategiesChange order processesAmenity budgetsCharacteristics of program consumer/end userAudit requirementsCommand and controlAvailable amenity programsCommissioning processes
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Audit requirements Command and control
Audit requirements Command and control
Available amenity programs Commissioning processes
BAS knowledge Communications plans
Baseline energy consumption Computer skills
Basic facility processes Conduct specialized meetings
Basic accounting principles/systems Conservation strategies
Basic contract law Construction close-out processes
Basic document management Construction management processes
Basic environmental regulations Construction processes/practices
Basic fire and life safety codes Consultant/service contracts
Basic fire and life safety systems Contract administration/management
Basic human psychology Contract law
Basic materials and practices Contract requirements
Basic ordinances and regulations Contract specifications
Basic principles of finance Contract terminology
Basic real estate law Contractor capabilities
Basic security options Control sequences
Basic suppression system capabilities and risks Core business industry
Basic threats facing facilities Corporate core values and mission statements
Best industry practices Corporate vision
Bid processes CPR and utilize AEDs
Budgeting processes Critical infrastructures
Building certifying entities CSP (critical spare parts) program
Building codes Current and pending regulations
Building functions Database usage/management
Building services (trash, room setups, etc.) Deferred maintenance impact
Building services and contract obligations Detailed mechanical systems
Building services/operations Document retention policies
Building system operations Economics
Building systems, equipment, and services Emergency escalation protocols
Building systems/components interoperability Emergency response procedures
Building technologies Employee work environments
Building trades Energy management
Business growth or contraction forecasts Enforcement expectations

Table 3: Specialized Knowledge Required of Facility Managers

Specialized Knowledge			
External funded programs and strategies	MAC knowledge		
Facilities maintenance processes	Managing equipment warranty programs		
Facilities management industry	Mapping maintenance processes		
Facility equipment and systems	Market conditions and trends		
Facility security operations	Market data and indicators		
Finance principles	Market knowledge		
Financial analyses/reconciliation	Market local service providers		
Financial lien processes	Master keying systems hierarchy		
Fire and life safety testing procedures	Meeting formats		
FMEA processes	MMS knowledge		
Forms of reinforcement (positive, etc.)	MSDS		
GAAP	Organizational culture		
General access control systems	Organizational needs and priorities		
General building trades	Organizational objectives		
Globalization impact on workforce/business	Organizational policies and procedures		
HR policies and procedures	Organizational standard practices and terms for		
	contracts		
HR regulatory requirements	Organizational strategy		
Impacts of construction	Organizational vision, mission, core values		
Industry systems/and services best practices	Outage procedures		
Infrastructure required to support new work tools	Par levels (acceptable levels of stock)		
Insurance liability	Personnel motivation techniques		
Insurance policies	Physical security principles		
Insurance programs	Power distribution and loads		
Insurance regulations	Processes for challenging invoices		
Internal financial policies	Procurement processes		
Inventory management	Program needs		
Job roles and tasks	Project bonus payments and penalty clauses		
Job specifications	Project budgets		
Key control	Project forecasting		
Labor contracts	Project impacts		
Labor market	Project management tools		
Labor relations	Purposes of strategic plans		
Landlord/tenant law	Real estate knowledge/principles		
Lease accounting	Real estate tax structures		
Lease escalation clauses	Reduction strategies		
Lease terminology	Regulatory requirements		
Leases/lease obligations	Renewable energy credits		
Lien laws/processes	Reporting requirements		
Life cycle analysis processes	Resource scheduling		
Local deregulation requirements	Risk assessment procedures		
Local emergency personnel	Risk mitigation strategies		
Local market compensation structures	Safety requirements		
Local ordinances/codes	Scheduling processes and systems		
Local response capabilities	Space management principles		
Locksmith knowledge	Space planning principles		

Table 3 (Continued): Specialized Knowledge Required of Facility Managers

Specialized Knowledge			
Standard maintenance intervals	Techniques for fostering relationships		
Strategic plan development	Tenant demographics		
Supply chain	Types of training available for staff		
Sustainability best practices	Use of various facilities		
SWOT analyses	Utility rate structures		
System failures	Utility rebates		
Technical aspects of facilities	Utility responsibilities versus facility		
· · · · · · · · · · · · · · · · · · ·	responsibilities		
Techniques for empowering staff	Value engineering processes		
Security systems/hardware	Vendor and suppliers		
Service level requirements (minimum air	Warranty management processes		
temperatures, etc.)			
Site planning	Work priorities (routine, emergency, etc.)		
SOX requirements	Work scope development		
Techniques for fostering positive morale	Zoning and permitting requirements		
-	Systems		
Access control systems	Lighting systems		
Architectural systems	Mechanical systems		
Communication systems	Parking control systems		
Control systems	Plumbing systems		
Electrical systems	Security systems		
Fire/Life Safety systems	Structural systems		
Foundation/subsurface systems	Vertical transportation systems		
Hardscape systems	Window washing systems		
Irrigation systems			
Building	Services		
Catering/dietary/food service	0&M		
Concierge	Pest control		
Environmental health and safety	Parking management		
Event support	Printing		
Finish carpentry	Recycling		
Fleet management	Security		
Janitorial	Switchboard		
Landscaping	Transporters		
Life safety	Trash removal		
Locksmith	Utilities		
Mail room	Vertical transportation		
Metal, stone and wood	Wellness		
Movers	Window washing		

Table 3 (Continued): Specialized Knowledge Required of Facility Managers

General Knowledge			
Calculations			
Change numbers from fractions into decimals and back	Perform mathematical operations with fractions		
Change numbers from percentages into decimals and back	Perform simple math operations of addition		
Collect information to solve a problem	Perform simple math operations of division		
Compare numbers	Perform simple math operations of multiplication		
Figure averages	Perform simple math operations of subtraction		
Make rough estimates	Solve percent problems		
Multiply and factor algebraic expressions	Solve problems with graphs		
Perform math operations using signed (positive and negative) numbers	Solve ratio problems		
Perform math operations using single and multiple digit numbers	Transfer number sequences from a source into a column		
Perform mathematical operations with decimals	Use a calculator		
Basic Meas	surements		
Calculate the perimeter and areas of common figures	Measure temperature to within 1 degree F		
Convert measurements from one unit into another (English to metric, etc.)	Measure volume (cubic inches, liters, etc.)		
Estimate and approximate measurements	Measure weights using devices calibrated in ounces		
Find distances and directions on land maps	Measure weights using devices calibrated in pounds		
Find the dimensions of an object from a scale drawing	Read and apply coefficient measurements indicated in a table or chart		
Make simple scale drawings	Read and use the scale of a drawing		
Measure area (square inches, square centimeters, etc.)	Read measurements taken with common measuring tools		
Measure board feet	Read, interpret, and use size-scale relationships		
Measure length to 1/32 of an inch	Record measurements, using appropriate unit notations (feet, yards, etc.)		
Measure linear distances (length, width, etc.)	Use tools to measure quantities and solve problems involving measurements		
Commur	lications		
Apply assertiveness	Evaluate options/alternatives		
Ask questions	Evaluate solutions		
Communicate using the vocabulary/terminology of a related trade	Explain procedures		
Communicate with co-workers and/or business people in writing (letters, memos)	Find information in catalogs		
Communicate with co-workers and/or business	Find information in references (machinery		
people verbally (face-to-face)	handbooks, tap/drill charts, etc.)		
Communicate with co-workers and/or business people verbally (telephone, radio)	Follow verbal job instructions		
Compare names	Listen		

Table 4: General Knowledge Required of Facility Managers

General Knowledge		
Communications		
Participate in brainstorming	Read information from tables and graphs (bar,	
	circle, etc.)	
Present to others	Read statistical data	
Read and follow a map, chart, plan, etc.	Research information	
Read and follow directions found in equipment	Speak to large groups	
manuals and code books		
Read and interpret directions found on labels,	Summarize information	
packages, or instruction sheets		
Read codes (building codes, electrical codes,	Muite reports	
standards, etc.)	Write reports	
Read drawings and specifications sheets	Write words and numbers legibly	
Read flowcharts		

Table 4 (Continued): General Knowledge Required of Facility Managers

9.0 Skills, Abilities, and Attributes

A proficient worker possesses key skills, abilities, and attributes that influence job success. Skills are developed through experience and training and may apply to a wide range of tasks; proper skills enable workers to perform their tasks with precision and quality.

Abilities and attributes are more fundamental than knowledge and skills; they represent underlying, enduring traits, both cognitive and physical, that support the successful performance of a wide range of job tasks.

The panelists identified task-specific skills and abilities, as well as broad attributes (e.g., analytic, creative, patient), to define the recommended traits a facility manager should possess (Table 5).

Human Resource professionals and job analysts often analyze skills, abilities, and attributes to compare jobs in terms of worker characteristics.

Skills, Abilities, and Attributes		
Ability to communicate highly technical content in layman's terms	Analytical skills	
Ability to compare bid packages	Appropriate dresser/personal hygiene	
Ability to conduct exercises	Assessment skills	
Ability to construct a business case	Basic math skills	
Ability to create a CPM schedule	Basic mechanical skills	
Ability to create and evaluate contracts	Basic understanding of IT	
Ability to design exercises	Big picture thinking skills	
Ability to develop fire and life safety plan	Coaching skills	
Ability to develop innovative solutions to building system problems	Collaborative	
Ability to diagnose building system issues or problems	Command and control skills	
Ability to document procedures	Common sense	
Ability to ensure final project meets the expected outcome	Computer skills	
Ability to obtain buy-in	Confidence/self-esteem	
Ability to operate fire and life safety systems (panels)	Conflict resolution skills	
Ability to operate security systems	Conscientious	
Ability to operate/remain calm under pressure	Contract administration skills	
Ability to perform financial analyses	Contract negotiation skills	
Ability to rally support of internal resources	Cooperative	
Ability to read a contract	Cost benefit analysis skills	
Ability to read a utility meter	Courteous	
Ability to read and interpret construction drawings	Creative problem solving skills	
Ability to translate technical content into financial terms	Creativity	
Ability to use emergency equipment	Credibility	
Accurate/precise	Critical thinking skills	
Adaptable/flexible	Customer service skills	
Administrative skills	Customer-oriented	

Table 5: Skills, Abilities, and Attributes Required of Facility Managers

Skills, Abilities, and Attributes			
Data analysis skills	Organizational skills		
Data collection skills	Patience		
Database management skills	Persistent		
Dependable	Persuasive		
Detail-oriented	Plan reading ability		
Eager to learn new things	Planning skills		
Enthusiasm	Political savvy		
Ethical	Positive attitude		
Facilitation skills	Presentation skills		
Financial accounting skills	Pride in job		
Financial modeling skills	Prioritization skills		
Focused	Problem solving skills		
Forecasting skills	Procurement skills		
Free of substance abuse	Professional		
Friendly	Punctual		
Goal-oriented	Quality focused		
Helpful	Reading comprehension skills		
Honest/trustworthy	Researching skills		
Industrious	Respectful		
Initiative	Responsible/accountable		
Inspection skills	Risk analysis skills		
Integrity	Safety conscious		
Interpersonal skills	Salesmanship		
Interpretation skills	Scheduling skills		
Interviewing skills	Self-discipline		
Leadership skills	Self-motivated		
Listening skills	Sense of humor		
Manage stress/pressure	Social skills		
Management skills	Spatial analysis ability (ability to determine		
	amount of space that will be required for people)		
Manual dexterity	Tactful		
Marketing skills	Team player		
Media/press management skills	Time management skills		
Mediation skills	Tolerant		
Motivational skills	Training skills		
Multi-tasker	Trend analysis skills		
Negotiation skills	Unbiased		
Networking skills	Visualization skills		
Open-minded to change	Work efficiently (resources)		
Organizational savvy	Written and verbal communication skills		

Table 5 (Continued): Skills, Abilities, and Attributes Required of Facility Managers

10.0 Tools, Equipment, and Resources

Each occupation requires a unique set of support materials. It is important to identify the tools, equipment, and other tangible objects, as well as the resources (e.g., information technologies, codes and standards) required for a worker to effectively accomplish tasks. Table 6 lists the panelist-identified inventory of tools, equipment, and resources necessary to perform the identified tasks.

Tools, Equipment, and Resources				
General Tools, Equ	uipment, and Resources			
Access to the strategic planning process	Contracts			
Accounting software	Cost database			
Accounting system	Current financial information			
Accounting tools	Data input/output device (bar code reader, data			
	entry person, etc.)			
Administrative support	Database			
Analytical data	Depreciation schedules			
ASHRAE standards	Design drawings			
Asset inventory tools	Document control system			
Audio visual media	Document protection systems			
Availability of funding incentives	Drawings and floor plans			
Benchmark data	Emergency communication devices			
Bids	Emergency preparedness plan			
Body of precedence	Employee database (real time access)			
Budget	Engineering reports			
Budgeting software	Evaluation tools			
Building automation systems manual	Expediters			
Building codes	Facilitators			
Building plans	Facility budget			
Building professional organizations	FAR			
Business continuity manual	Financial data			
Business plan	Financial expertise			
Calculator	Fire and life safety systems equipment			
Cameras	Fire codes			
Close out package	Forecasting data			
Codes	Forecasting software and/or system			
Commissioning documents	Historical data			
Communication devices	HR policy and procedures manuals			
Competitor's and other market data	Industry costs			
Computer	Industry standards			
Computer software	Internal champions			
Construction blueprints	Internal public affairs department			
Construction budgets	Inventory management tools			
Construction management programs	IT policy manual			
Construction scheduling tools	Labor agreements			
Consumer Price Index and other financial	Leases			
information				
Contract matrix	Leasing laws			
Contractor/consultant database	Legal expertise			

Table 6: Tools, Equipment, and Resources Used by Facility Managers

Tools, Equipment, and Resources				
General Tools, Equipment, and Resources				
Life cycle analyses	Promotional avenue			
Life cycle plan	Punch lists			
Life safety codes	Real estate broker			
List of suppliers and vendors	Real estate laws			
Local businesses	Real estate property tax information			
Local regulatory requirements	Regulatory requirements			
Market data and indicators	Safety equipment			
Meeting place	Sample sustainability plans			
Methods to record meetings	Security systems and hardware			
MMS software	Service providers			
MSDS	Spend data/budgets			
Organizational data	Storage equipment			
Organizational HR policies and procedures	Storage space (onsite, offsite)			
Organizational plans	Subject matter experts and consultants			
Personnel files	Support materials			
Position descriptions	Sustainability organizations			
Preventative maintenance tools	Tech support			
Price sheets	Training budget			
Productivity software	Turnstiles			
Project plans	Urban planning data			
Project space allocations	Utility meters			
Project specifications	X-ray machines			
Projected capital plan	Zoning information			
Projections				
Inspection	Equipment			
Camera	Light meters			
Decibel meters	Multi-tool			
Flashlight	Safety glasses			
Flow meter	Screwdrivers			
Hardhat	Tape measure			
Infrared measuring device				
Building Res	ource Library			
Blueprints	Photo library			
Building operations plan	Policies and procedures			
Operating manuals	Start up manuals			
Permits and licenses	Warranties			

Table 6 (Continued): Tools, Equipment, and Resources Used by Facility Managers

11.0 DACUM Chart

The DACUM chart (Table 7) is a tabular representation of the JTA. Capital letters identify major job duty areas. Numbers identify tasks, and lowercase letters identify the steps required to accomplish each task. Moving horizontally across the chart, adjacent columns detail (1) specialized knowledge, (2) skills and abilities, and (3) tools, equipment, and resources required to perform each task. The information contained in these columns is related to each task and does not necessarily correspond to a specific step.

The importance of the DACUM chart is to show the relationship between job tasks and the specialized knowledge, skills and abilities, and tools, equipment, and resources required to perform each task. This concept, called *job-relatedness*, is essential to compliance with key legal and professional validity standards pertaining to the use of JTA information in employee selection. Such information is also critical to the development of high-stakes assessments for occupational licensing and certification examinations.

The DACUM chart depicts the job element relationships associated with each task, and can therefore easily be used to assess the relevance of current programs (curriculum), develop instructional objectives and training content, sequence instructional materials, and develop examination, competency, and performance evaluation instruments.

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
А	Managing Facility O&M Programs			
1	Manage the Work Order Program			
а	Identify if a request is a work order	Basic facility processes	 Ability to 	 Communication
b	Identify type of work order (IT, maintenance, etc.)	• Building services (trash,	operate/remain calm	devices
С	Receive and distribute work orders	room setups, etc.)	under pressure	 Computer
d	Prioritize work orders	 Building systems 	 Analytical skills 	 Database
e	Capture status change	 Building trades 	 Credibility 	
f	Ensure quality control	• Leases/lease	 Critical thinking skills 	
g	Perform the work	obligations	 Customer service 	
h	Capture effort associated with the work (man	 Safety requirements 	skills	
	hours, costs, etc.)	 Scheduling processes 	 Interpersonal skills 	
i	Define the work	and systems	 Multi-tasker 	
j	Notify occupants of work	Work priorities	 Scheduling skills 	
k	Document the results of the work order activities	(routine, emergency,	• Time management	
	Close out the work order	etc.)	skills	
m	Identify capabilities of in-house staff		 Written and verbal 	
n	Identify facility processes		communication skills	

Table 7: DACUM Chart for Facility Managers

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
2	Manage MMS Programs (CMMS, CAFM, etc.)		-	
а	Set up the program	 Building systems 	 Analytical skills 	 Administrative
b	Populate the program with the data	 Building 	 Computer skills 	support
С	Identify items to be measured (equipment, space,	systems/components	 Manual dexterity 	Computer
	etc.)	interoperability	 Procurement skills 	• Data
d	Establish baselines (standards, priorities, naming	 Building trades 		input/output
	conventions)	 Database 		device (bar code
e	Establish process for how work will be	usage/management		reader, data
	accomplished	 Facilities maintenance 		entry person,
f	Establish maintenance schedules	processes		etc.)
g	Determine reporting needs	 Mapping maintenance 		 MMS software
h	Set up reports	processes		 Records, data,
i	Establish inventory control			inventory
j	Establish inter-operability with accounting system			 Tech support
k	Establish inventory thresholds/levels			
I	Determine maintenance tasks			
m	Determine user roles (access levels)			
n	Identify system administrators			
0	Establish close-out procedures			
р	Process departmental charge-backs			
q	Determine costs/pricing structure (labor,			
	materials, overhead, etc.)			
r	Ensure system maintenance			
S	Back up data			
t	Develop data archiving strategy			
u	Train users			
v	Set up dashboard			
w	Identify in-house skill levels			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
3	Manage Building Automation Systems			
а	Enter equipment into BAS	 Basic energy 	 Analytical skills 	 Building
b	Schedule system	 Building system 	 Basic math skills 	automation
C	Establish control strategies	operations	 Computer skills 	systems manual
d	Set up overrides	 Control sequences 	Problem solving skills	 Commissioning
е	Set up trends to be monitored	 Detailed mechanical 	_	documents
f	Define reports required	systems		 Communication
g	Obtain expertise to modify the system (training or			devices
	external)			 Computer
h	Conduct system oversight			
i	Set up alarms			
j	Respond to alarms			
k	Adjust operating schedule to comply with lease			
	agreements			
I	Report variances for billing			
m	Tie the BAS to the MMS to the accounting system			
n	Identify building schedules (meetings, etc.)			
0	Map equipment to spaces served			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
4	Manage Access Control Systems (mechanical and el	ectrical)		
a b	Define levels of access Define specifications for particular levels of access	 Computer skills General access control 	Computer skills	ComputerComputer
С	Enter personnel data into control system	systems		software
d e f	Conduct audits of access Qualify personnel for access (citizenship, etc.) Program access cards/keys	 Key control Locksmith knowledge Master keying systems 		 Contractor/ consultant database
g	De-program access cards/retrieve keys/change locks	hierarchyPhysical security		 Design drawings Employee
h i	Map access points Prepare access reports	principles		database (real time access) • Fire codes
J k	Interface to security system Manage access records/documents			 Fire codes Life safety codes
l n	Design access control system Manage access control design documents (wiring diagrams, etc.)			
n	Conduct maintenance activities with access control system			
о	Troubleshoot problems			
р	Identify interface between access control system and alarm systems			
q r	Physically set locks on doors Define controls of primary and secondary access systems			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
5	Manage Security Systems			
а	Assess current security situation	 Basic ordinances and 	 Ability to operate 	Cameras
b	Determine security equipment	regulations	security systems	 Security systems
C	Determine security staffing	 Basic security options 	 Analytical skills 	and hardware
d	Audit personnel monitoring security	 Basic threats facing 	 Assessment skills 	 Turnstiles
e	Determine type of security personnel desired	facilities	Collaborative	• X-ray machines
	(uniforms, coat/tie, etc.)	 Facility security 	 Command and 	
f	Determine type of reporting desired	operations	control skills	
g	Determine frequency of reporting	 Local response 	 Critical thinking skills 	
h	Document escalation procedures (post orders)	capabilities	 Training skills 	
i	Maintain security hardware	 Security 	 Written and verbal 	
k	Train security personnel	systems/hardware	communication skills	
I	Collaborate with local authorities			
m	Develop a security plan			
n	Determine third party monitoring needs			
0	Back up data			
р	Evaluate surrounding environment			
q	Conduct background checks on personnel			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
6	Manage Fire and Life Safety Systems			
а	Conduct regular testing of fire alarms and systems	 AHJ regulations and 	 Ability to develop 	 Fire and life
b	Maintain fire alarm and system certifications	requirements	fire and life safety	safety systems
С	Conduct fire drills	 Basic fire and life safety 	plan	equipment
d	Conduct evacuation drills	codes	 Ability to operate 	 Life safety codes
e	Conduct life safety drills	 Basic fire and life safety 	fire and life safety	
f	Create fire and life safety plans	systems	systems (panels)	
g	Post evacuation routes	 Basic suppression 	 Ability to 	
h	Communicate fire and life safety plans	system capabilities and	operate/remain calm	
i	Participate in fire Marshall, insurance, etc.	risks	under pressure	
	inspections	 CPR and utilize AEDs 	 Ability to use 	
j	Maintain code compliance of the fire and life	 Enforcement 	emergency	
	safety system	expectations	equipment	
k	Review fire and life safety design	 Fire and life safety 	 Collaborative 	
I	Inspect all components of the fire and life safety	testing procedures	 Persuasive 	
	systems (exit lights, fire extinguishers, emergency	 Local emergency 	 Plan reading ability 	
	light bulbs, etc.)	personnel	 Training skills 	
m	Implement interim life safety measures		 Written and verbal 	
n	Identify fire wardens		communication skills	
0	Train fire wardens			
р	Create personnel accountability system			
q	Direct emergency response team			
r	Establish communications plan			
S	Test emergency generator/power backup systems			
t	Identify locations for people with mobility			
	disabilities and create evacuation plan			
u	Establish occupancy levels for meeting spaces and			
	community spaces			
v	Monitor occupancy during events			
w	Ensure clear egress			
x	Conduct HAZMAT drills			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
6	Manage Fire and Life Safety Systems			
У	Document fire and life safety drills, tests and activities			
Z	Identify person to respond to incidents			
7	Manage the Preventative Maintenance Program			· -··- · -
a b	Identify equipment or assets to be maintained Build and maintain an inventory for preventative maintenance	 Building systems Building systems/components 	 Ability to diagnose building system issues or problems 	 ASHRAE standards Preventative
с	Identify maintenance procedures	interoperability	Ability to document	maintenance
d	Identify maintenance frequencies	• Facility equipment and	procedures	tools
е	Obtain manufacturer's recommendations	systems	 Analytical skills 	
f	Customize the manufacturer's recommendations based on an FMEA or facility needs	 FMEA processes Managing equipment 	 Basic mechanical skills 	
g	Identify resources required for preventative maintenance (tools, time, equipment, manpower, etc.)	 warranty programs Resource scheduling Standard maintenance 	 Critical thinking skills Organizational skills Written and verbal 	
h	Conduct a job/hazard assessment for the task	intervals	communication skills	
i	Establish maintenance philosophy	System failures		
i	Document maintenance procedures	-,		
k	Report results of the preventative maintenance program			
I	Analyze results of the preventative maintenance program			
m	Ensure equipment history for all tasks performed			
n	Follow up on issues identified during preventative maintenance			
0	Establish a naming convention for equipment (identification tags, etc.)			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
А	Managing Facility O&M Programs			
8	Coordinate with Public Utilities			
а	Identify utilities	Basic environmental	 Ability to read a 	 Utility meters
b	Identify options to utilities	regulations	utility meter	
С	Identify utility suppliers	 Energy management 	 Basic math skills 	
d	Identify utility supplier contacts	 Local deregulation 	 Negotiation skills 	
e	Validate utility billing	requirements	 Written and verbal 	
f	Obtain copies of utility rate schedules	 Outage procedures 	communication skills	
g	Identify utility meters	 Power distribution and 		
h	Read utility meters	loads		
i	Identify local utility programs (curtailment, ESCO,	 Renewable energy 		
	etc.)	credits		
j	Negotiate rate contracts and discounts	 Utility rate structures 		
k	Establish utility access procedures	 Utility rebates 		
I	Establish utility emergency procedures/contacts	• Utility responsibilities		
m	Coordinate planned consumption with utilities	versus facility		
n	Coordinate work with utility departments (locate hidden lines)	responsibilities		

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
9	Manage the Building Systems			
a b c d e f g h i j k	Develop a building operations plan Manage the architectural systems Manage carpeting/flooring maintenance Manage mechanical systems (HVAC, plumbing, etc.) Manage the elevator program Manage the electrical systems Conduct painting and carpentry maintenance Conduct building envelope maintenance Manager vendor contracts Create and maintain building systems documents Implement a continual improvement plan	 BAS knowledge Basic accounting principles/systems Building codes Building functions Building services and contract obligations Building systems Building systems/components interoperability Contract terminology Deferred maintenance impact Industry systems/and services best practices Market local service providers MMS knowledge Service level requirements (minimum air temperatures, etc.) 	 Ability to develop innovative solutions to building system problems Ability to diagnose building system issues or problems Ability to read and interpret construction drawings Analytical skills Computer skills Contract administration skills Critical thinking skills Data analysis skills Data collection skills Management skills Negotiation skills Problem solving skills Written and verbal communication skills 	 Building resource library Codes Computer Construction blueprints Database

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Α	Managing Facility O&M Programs			
10	Manage the Building Services		-	-
а	Maintain common areas	 Bid processes 	 Ability to read a 	 Building resource
b	Manage the landscaping program	 Budgeting processes 	contract	library
С	Manage the grounds program	Building	 Contract 	 Computer
d	Manage the cafeteria program	services/operations	negotiation skills	 Contracts
е	Manage the janitorial program	 Contract requirements 	 Customer service 	MSDS
f	Manage the parking program	Contractor capabilities	skills	
g	Set up rooms for conferences and meetings	Regulatory	 Problem solving 	
h	Manage the pest control program	requirements	skills	
i	Manage the facility fleet	 Scheduling processes 	Written and verbal	
j	Manage the recycling program	and systems	communication	
k	Manage the trash program	Tenant demographics	skills	
	Manage vendor contracts	Use of various facilities		
m	Identify building services	-		
n	Negotiate contracts for building services	4		
0	Develop SLAs and KPIs	4		
р	Identify in-house capabilities versus outsourced			
	services	-		
q	Identify obligations of ownership versus service			
B	provider			
B 1	Managing People/Personnel Conduct Operational Meetings (personnel, staff, pla	anning atc.)		
a	Develop resourcing requirements	Conduct specialized	Facilitation skills	Audio Visual
a b	Determine who needs to attend the meeting	• Conduct specialized meetings	Interpersonal skills	• Audio visual media
L L	Develop the purpose for the meeting	HR policies and	Organizational skills	Meeting place
d	Develop an agenda for the meeting	procedures	Written and verbal	Meeting place Methods to
e	Identify capabilities and limitations of staff	Meeting formats	communication	record meetings
f f	Allocate time for attendance at meetings	Project forecasting	skills	 Support materials
I	Anotate time for attenualite at meetings		31113	- Support materials

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
В	Managing People/Personnel			
2	Conduct Staff Development Activities			
а	Conduct team building activities	• Forms of reinforcement	 Interpersonal skills 	 Training budget
b	Conduct staff brainstorming sessions	(positive, etc.)	 Written and verbal 	 Organizational HR
С	Conduct cross-training activities	 Job roles and tasks 	communication	policies and
d	Provide training opportunities for staff	 Personnel motivation 	skills	procedures
e	Counsel/mentor facility personnel	techniques		
f	Communicate expectations/goals to personnel	 Techniques for 		
g	Provide growth goals and opportunities for	empowering staff		
	personnel (employee development assignments)	 Techniques for 		
h	Conduct a personnel gap analysis	fostering positive		
i	Develop a workforce plan	morale		
j	Identify aspirations of staff	 Types of training 		
k	Identify strengths and weaknesses of staff	available for staff		
I	Reinforce organizational culture			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
В	Managing People/Personnel			
3	Perform HR Activities			
a b c d e f s h i j k l m n o p q r s t	Perform HR ActivitiesRecruit facility personnelHire facility personnelNegotiate personnel contractsCreate job descriptions including scopes of authorityAssign personnel tasksPerform personnel performance evaluationsCounsel facility personnelNegotiate personnel grievancesArbitrate personnel disputesFire facility personnelConduct RIF activitiesInvestigate employee complaintsManage personnel and work remotelyDevelop performance award criteriaEstablish compensation rangesEstablish departmental cultureEnforce personnel policies and proceduresDevelop succession plansImplement a performance improvement planManage staffing coverage	 Basic human psychology Consultant/service contracts Employee work environments HR regulatory requirements Labor contracts Local market compensation structures Organizational policies and procedures 	 Coaching skills Conflict resolution skills Contract negotiation skills Creative problem solving skills Interpersonal skills Interviewing skills Mediation skills Motivational skills Written and verbal communication skills 	 Body of precedence Document control system HR policy and procedures manuals Labor agreements Personnel files Position descriptions

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
В	Managing People/Personnel			
4	Conduct Relationship Management Activities			
а	Interact with the media/press	Local ordinances/codes	 Interpersonal skills 	
b	Interact with professional trade associations	• Techniques for	 Media/press 	
С	Work with supervisors to obtain a common goal	fostering relationships	management skills	
d	Liaise with neighbors		 Networking skills 	
e	Liaise with other departments		 Organizational savvy 	
f	Maintain relationships with AHJ (fire marshal,		 Presentation skills 	
	code enforcement, etc.)		 Written and verbal 	
g	Respond to complaints		communication	
h	Coordinate activities with other organizations		skills	
i	Manage political activism programs			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
С	Managing Other Internal/External Facility Program	IS		
1	Develop an Enterprise Risk Management Strategy			
а	Manage an IT security plan	 Command and control 	 Ability to conduct 	 Business
b	Manage business continuity programs	Communications plans	exercises	continuity manual
С	Manage communication programs	Critical infrastructures	 Ability to design 	 Communication
d	Manage compliance programs	 Emergency escalation 	exercises	devices
е	Manage crises management programs	protocols	 Ability to develop a 	 Computer
f	Manage critical systems (data centers, life safety,	 Emergency response 	plan	 Emergency
	etc.)	procedures	 Ability to document 	communication
g	Manage emergency response programs	 Insurance policies 	procedures	devices
h	Manage incident notification programs	 Insurance programs 	 Ability to 	 Emergency
i	Manage risk management programs	 Regulatory 	operate/remain	preparedness
j	Manage safety programs	requirements	calm under pressure	plan
k	Manage security program	 Risk assessment 	 Basic understanding 	 IT policy manual
		procedures	of IT	
		 Risk mitigation 	 Multi-tasker 	
		strategies	 Prioritization skills 	
		 SWOT analyses 	 Written and verbal 	
			communication	
			skills	
2	Manage Amenity Programs	1		
а	Manage art programs	 Amenity budgets 	 Marketing skills 	 Internal public
b	Manage community service programs	 Available amenity 	 Negotiation skills 	affairs
C	Manage first impressions programs (visitors)	programs	 Written and verbal 	department
d	Manage literacy programs	Characteristics of	communication	Local businesses
е	Manage day care programs	program consumer/end	skills	 Promotional
f	Manage fitness programs	user		avenue
g	Manage wellness programs	 Program needs 		 Service providers
h	Align amenities with corporate objectives	 Regulatory 		 Space allotment
i	Manage outreach and education programs	requirements		
j	Manage conference and event rooms			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
С	Managing Other Internal/External Facility Progra	ms		
3	Manage Sustainability Programs			
а	Develop energy management program	 Alternative work 	 Ability to perform 	 Building
b	Develop recycling program	strategies	financial analyses	professional
С	Develop resource conservation program	 Baseline energy 	 Ability to rally 	organizations
d	Explore certification of programs	consumption	support of internal	 Computer
e	Develop green procurement program (EPP)	 Building certifying 	resources	 Industry
f	Develop alternative transportation strategies	entities	 Organizational skills 	standards
g	Develop HAZMAT reduction strategy	 Building systems, 	 Political savvy 	 Internal
h	Develop composting program	equipment, and	 Salesmanship 	champions
i	Develop water conservation measures	services	 Written and verbal 	 Local regulatory
j	Conduct benchmarking activities	Conservation strategies	communication	requirements
k	Communicate the impact of sustainability	Contract	skills	 Sample
	programs	administration/manage		sustainability
	Align the program with corporate objectives	ment		plans
m	Establish program milestones	Current and pending		 Sustainability
n	Measure and verify program data	regulations		organizations
0	Conduct audits and inspections	External funded		
р	Explore relationships with suppliers	programs and		
q	Explore alternative work strategies (space	strategies		
	optimization, etc.)	 Reduction strategies 		
r	Develop a green cleaning program	Sustainability best		
S	Establish carbon footprint	practices		
t	Develop an OBM strategy			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
С	Managing Other Internal/External Facility Program	ms		
4	Manage Tenant/Landlord Related Programs			
a b c d e f	Manage lease administration programs Manage tenant build-outs Manage tenant relations Manage landlord relationship Finding facility tenants Finding facility space	 Building codes Building systems, equipment, and services Construction processes/practices Landlord/tenant law Lease accounting Leases/lease obligations Market conditions and trends Typical Leases/lease 	 Ability to read a contract Ability to read and interpret construction drawings Administrative skills Negotiation skills Persuasive Written and verbal communication skills 	 Building codes Leases Legal expertise
		obligations		
5	Manage Procurement Programs			
a b c d e f g h	Develop procurement program Develop contract matrices Identify service providers Identify contracting philosophy Develop and implement an acquisition process (RFP, RFI, bid waivers, etc.) Define standard terms and conditions Administer contracts Develop standards of ethical conduct	 Basic contract law Contract administration/manage ment Contract terminology Database usage/management Insurance liability Organizational standard practices and terms for contracts 	 Analytical skills Basic math skills Detail-oriented Negotiation skills Reading comprehension skills Written and verbal communication skills 	 Computer Contract matrix Evaluation tools FAR Financial expertise Legal expertise

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
D	Managing Facility Projects			
1	Initiate a Facility Project			
а	Conduct a needs assessment	Basic accounting	 Ability to compare 	 Building plans
b	Select project site	principles/systems	bid packages	 Computer
С	Estimate project costs	 Basic materials and 	 Ability to create a 	 Expediters
d	Define project requirements	practices	CPM schedule	 Facilitators
е	Justify project need	 Building codes 	 Ability to ensure 	 Project plans
f	Develop scope of work	 Building technologies 	final project meets	 Project space
g	Develop project plans	 Contract specifications 	the expected	allocations
h	Conduct requests for proposals	 Local ordinances/codes 	outcome	 Subject matter
i	Obtain project bids	 Project impacts 	 Ability to read and 	experts and
j	Secure project funding	 Project management 	interpret	consultants
k	Prepare project budget	tools	construction	
I.	Award project contracts	 Scheduling processes 	drawings	
m	Develop project timeline	and systems	 Analytical skills 	
n	Develop project communications plan	 Site planning 	 Mediation skills 	
0	Obtain project permits	Work scope	 Negotiation skills 	
р	Obtain certificates of insurance/bonds from	development	 Organizational skills 	
	contractors	 Zoning and permitting 	 Visualization skills 	
q	Review project plans	requirements		
r	Develop project accounting process			
S	Ensure regulatory compliance			

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
D	Managing Facility Projects			
2	Execute Facility Project			
а	Maintain services during ongoing construction	 Basic accounting 	 Ability to read and 	 Accounting tools
b	Assign project resources	principles/systems	interpret	 Building plans
С	Inspect project work	Change order processes	construction	Computer
d	Manage impacts of project on existing facility	Construction	drawings	 Construction
e	Conduct project meetings	management processes	 Basic math skills 	budgets
f	Report project progress	Construction	 Critical thinking 	 Construction
g	Monitor project costs	processes/practices	skills	management
h	Monitor project schedules	 Contract terminology 	 Interpretation skills 	programs
i	Produce project change orders	 General building trades 	 Organizational skills 	 Construction
j	Attend site reviews	 Impacts of construction 	 Training skills 	scheduling tools
k	Approve project payments/draws	 Job specifications 		 Project
1	Resolve project issues	 Labor market 		specifications
m	Obtain maintenance contracts	 Labor relations 		 Safety equipment
n	Secure project warranties	Value engineering		
0	Arrange staff training for new equipment	processes		
р	Develop spare parts lists	Warranty management		
		processes		

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
D	Managing Facility Projects			
3	Close Out Facility Projects			
а	Obtain project as-builts	 Building codes 	 Ability to ensure 	• Close out package
b	Perform project close-outs	Commissioning	final project meets	 Punch lists
с	Create and complete project punch-lists	processes	the expected	
d	Obtain certificate of occupancy	 Construction close-out 	outcome	
e	Accept beneficial use	processes	 Ability to read and 	
f	Commission the project	 Financial lien processes 	interpret	
g	Review lessons learned	 Lien laws/processes 	construction	
h	Obtain lien waivers/release of liens	 Project bonus 	drawings	
i	Issue final payment	payments and penalty	 Financial accounting 	
j	Create budget variance report	clauses	skills	
		 Project budgets 	 Inspection skills 	
		 Warranty management 	 Visualization skills 	
		processes		

Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
E Managing Facility Finances			
1 Develop Facility Budgets			
E Managing Facility Finances	 Alternative sources of funding/revenue Basic accounting principles/systems Budgeting processes Building systems Core business industry Facilities management industry Finance principles Leases/lease obligations Market data and indicators Organizational culture Organizational needs and priorities Regulatory requirements Technical aspects of facilities 	 Ability to communicate highly technical content in layman's terms Ability to construct a business case Ability to translate technical content into financial terms Basic math skills Computer skills Cost benefit analysis skills Negotiation skills Organizational savvy Presentation skills Salesmanship 	 Accounting system Bids Budgeting software Business plan Calculator Competitor's and other market data Computer Consumer Price Index and other financial information Cost database Forecasting software and/or system Historical data Leases Life cycle plan Projected capital plan Real estate property tax

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
E	Managing Facility Finances			
2	Administer the Budget			
а	Identify areas for reduction (cost cutting)	 Accounting principles 	 Analytical skills 	 Accounting
b	Identify sources of supply	 Audit requirements 	 Basic math skills 	software
С	Administer the operating budget	 Best industry practices 	 Critical thinking 	 Budgeting
d	Report on financial variances	 Budgeting processes 	skills	software
e	Approve invoices/expenditures	 Building 	 Detail-oriented 	 Computer
f	Collect facility revenue	services/operations	 Financial accounting 	 Current financial
g	Administer charge-backs	 Building systems 	skills	information
h	Revise financial projections	 Contract 	 Negotiation skills 	 Facility budget
i	Prepare financial reconciliations	administration/manage	 Organizational skills 	 Industry costs
j	Compare finances to benchmarks	ment	 Presentation skills 	 Leases
k	Challenge real estate taxes	 Finance principles 	 Written and verbal 	 Price sheets
	Conduct periodic financial reviews	 Financial 	communication	
m	Validate facility costs	analyses/reconciliation	skills	
n	Approve facility contracts	• GAAP		
0	Conduct monthly financial reporting	 Internal financial 		
р	Manage internal spend re-allocations	policies		
q	Prepare operating expense escalation statements	 Lease escalation 		
r	Prepare regular accruals	clauses		
		 Market knowledge 		
		 Processes for 		
		challenging invoices		
		 Procurement processes 		
		 Real estate tax 		
		structures		
		 SOX requirements 		
		 Supply chain 		

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
E	Managing Facility Finances			
3	Reconcile the Budget			
a b c d f f s h i j k l m	Document life cycle savingsIdentify areas for reduction (cost cutting)Prepare financial reconciliationsRevise financial projectionsValidate facility costsPrepare accrualsPrepare year-end presentationAssess financial performancePrepare annual reportManage the year-end audit processExplain year-end variancesClose out the financial yearDevelop new budgets from results of existing yearReconcile budget KPIs	 Basic accounting principles/systems Basic principles of finance Building services/operations Building systems Life cycle analysis processes 	 Basic math skills Political savvy Presentation skills Written and verbal communication skills 	 Analytical data Benchmark data Budget Computer Forecasting data Subject matter experts and consultants
F	Conducting Strategic Planning Activities	1		
1	Gather Reference Information for Strategic Planning	g		
a b c	Determine corporate strategy Review macro-economic indicators Review outsourcing versus insourcing models	 Core business industry Corporate core values and mission statements 	 Analytical skills Basic math skills Big picture thinking 	 Business plan Historical data Market
d f g	Conduct life cycle analyses Perform hedging on utility costs Forecast future needs Forecast future obsolescence	 Corporate vision Economics Life cycle analysis processes 	skillsForecasting skillsResearching skills	information Organizational data Projections
h	Review new technologies	 Market data and indicators 		 Reference information

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
F	Conducting Strategic Planning Activities			
2	Implement Strategic Plan			
а	Recommend new work tools (IT, equipment, etc.)	 Accounting principles 	 Ability to obtain 	 Access to the
b	Recommend new business lines	 Budgeting processes 	buy-in	strategic planning
С	Project new technologies, trends, opportunities	 Building 	 Analytical skills 	process
	and threats	services/operations	 Financial skills 	 Computer
d	Align facility strategy with corporate strategy	 Building systems 	 Forecasting skills 	Reference
е	Develop property positioning for space marketing	 Capital planning 	 Marketing skills 	materials
f	Develop a space needs plan	 Finance principles 	 Persuasive 	
g	Develop a five- and ten-year capital plan	 Globalization impact on 	 Trend analysis skills 	
h	Develop a facilities master plan	workforce/business	 Written and verbal 	
i	Communicate the strategic plan	 Infrastructure required 	communication	
j	Align budget with strategic plan	to support new work	skills	
k	Project personnel space needs	tools		
1	Develop a succession plan	 Market conditions and 		
m	Plan for trends and changes	trends		
		 Organizational vision, 		
		mission, core values		
		 Purposes of strategic 		
		plans		
		 Space planning 		
		principles		
		 Strategic plan 		
		development		

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
G	Managing Facility Assets			
1	Acquire Facility Assets (real property and other asse	ets)		
а	Conduct site feasibility analysis	 Basic real estate law 	 Ability to create and 	 Availability of
b	Select site	Building	evaluate contracts	funding incentives
C	Buy real estate	services/operations	 Analytical skills 	 Computer
d	Acquire assets	 Building systems 	 Basic math skills 	 Market data and
e	Develop a space utilization plan	 Business growth or 	 Financial modeling 	indicators
f	Conduct asset life cycle analyses	contraction forecasts	skills	 Organizational
g	Evaluate the master portfolio plan	 Capital sources and 	 Negotiation skills 	plans
h	Evaluate the facility plan	funding basis	 Planning skills 	 Subject matter
i	Conduct due diligence	 Contract law 	 Spatial analysis 	experts and
j	Conduct RFPs, negotiations, etc.	Economics	ability (ability to	consultants
k	Identify organizational need	Financial	determine amount	 Urban planning
1	Identify vendor/supplier for asset	analyses/reconciliation	of space that will be	data
m	Justify costs of asset	 Lease terminology 	required for people)	
n	Evaluate options (purchase vs. lease;	 Leases/lease 	 Written and verbal 	
	suppliers/brands/sites; etc.)	obligations	communication	
0	Decide on purchase	 Market knowledge 	skills	
р	Conduct market research	 Organizational needs 		
q	Coordinate the external facility lease process	and priorities		
	(locate properties to lease)	 Procurement processes 		
r	Create and execute leases	 Space planning 		
		principles		

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
G	Managing Facility Assets			
2	Optimize Facility Assets			
а	Conduct space management activities	Accounting principles	 Analytical skills 	Computer
b	Conduct space planning activities	Building	 Basic math skills 	 Depreciation
С	Allocate facility space	services/operations	 Critical thinking 	schedules
d	Manage furniture, fixtures, and equipment	 Building systems 	skills	 Drawings and
e	Maintain the master facility plan	 Building technologies 	 Negotiation skills 	floor plans
f	Manage the churn rate	 Finance principles 	 Organizational skills 	 Engineering
g	Inspect the facility assets	 MAC knowledge 	 Planning skills 	reports
h	Monitor the financial performance of assets	 Market data and 	 Political savvy 	 Historical data
i	Evaluate the feasibility of decommissioning	indicators	 Presentation skills 	 Inspection
	inefficient space	Organizational	 Written and verbal 	equipment
k	Evaluate rental rates	objectives	communication	• Leases
1	Conduct market analyses	Real estate	skills	 Market data
m	Evaluate alternative methods for energy	knowledge/principles		 Real estate broker
	efficiency	 Space management 		Reference
n	Evaluate total cost of ownership	principles		materials
0	Evaluate rental terms	 Zoning and permitting 		 Spend
р	Analyze depreciation	requirements		data/budgets
q	Evaluate ways to reduce costs and/or increase			 Subject matter
	revenue			experts and
r	Coordinate the internal facility lease process			consultants
	(locate tenants to lease space)			 The organization's
S	Identify broker to market space			plan

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
G	Managing Facility Assets			
3	Dispose of Assets (property, fixtures, etc.)			
а	Sell real estate	Accounting principles	 Analytical skills 	 Asset inventory
b	Sell other assets (FFE)	Building	 Basic math skills 	tools
С	Market the asset	services/operations	 Facilitation skills 	 Computer
d	Identify expert to dispose of asset (Broker,	 Building systems 	• Financial accounting	 Contracts
	vendor, furniture company representative, etc.)	 Business strategy 	skills	 Depreciation
e	Establish the value of asset	Finance principles	 Marketing skills 	schedules
f	Identify market comparables	 Market knowledge 	 Negotiation skills 	 Financial data
g	Write asset off books	Organizational strategy	 Written and verbal 	 Historical data
h	Identify potential buyers	Real estate	communication	 Leases
i	Adjust asset tables	knowledge/principles	skills	 Leasing laws
j	Inventory assets			 Life cycle analyses
k	Determine sell versus donate			 Market data and
1	Evaluate the asset			indicators
				 Real estate laws
				 Regulatory
				requirements
				 Zoning
				information

	Duties, Tasks, and Steps	Specialized Knowledge	Skills and Abilities	Tools, Equipment, and Resources
Н	Managing Facility Resources			
1	Manage Administrative Resources			
а	Obtain administrative resources	 Basic document 	 Database 	 Computer
b	Prepare document retention policy/procedures	management	management skills	 Database
С	Document procedures and processes	 Document retention 	 Organizational skills 	 Document
d	Maintain facility documents	policies		protection
e	Manage legacy programs	• MSDS		systems
f	Manage document filing and storage systems	 Reporting requirements 		 Storage
	(electronic and paper)			equipment
g	Managing reporting processes			 Storage space
h	Dispose of documents			(onsite, offsite)
2	Manage Equipment, Tools, and Supplies			
а	Manage materials and supplies	 Building 	 Computer skills 	 Computer
b	Manage spares inventory	services/operations	 Detail-oriented 	 Database
С	Manage maintenance tools	 Building systems 	 Organizational skills 	 Inventory
d	Manage technology tools/equipment	 CSP (critical spare 		management
e	Manage internal communication tools/equipment	parts) program		tools
f	Manage external communication	 Insurance regulations 		 List of suppliers
	tools/equipment	 Inventory management 		and vendors
g	Manage uniform program	• MSDS		 Productivity
		 Par levels (acceptable 		software
		levels of stock)		 Storage space
		 Vendor and suppliers 		

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