



Facilities

DHA BUILDER™

Implementation Resource Guide

FINAL DRAFT

This document provides implementation guidance for the BUILDER™ Sustainment Management System for the Defense Health Agency (DHA). Implementers can use this guide to determine how information will be collected during initial stand-up, how configuration settings will be set to generate consistent investment requirements across the portfolio, and how to properly resource and operate the program for its lifespan.

Table of Contents

Section 1 - Background	3
Defense Health Agency Background.....	3
DHA BUILDER Team	6
Section 2 –BUILDER™ Data Collection Standards.....	7
Intent.....	7
Government Provided Data	7
Sectioning Requirements.....	9
Assessment Requirements.....	10
Attachments.....	11
BRED Data Management	12
Implementation Process	12
IMPLEMENTATION ROLLOUT	12
SITE VISITS.....	13
EXISTING DATA SOURCES	14
Section 3 – Enterprise Configuration Settings	15
Work Planning.....	15
Section 4 – BUILDER™ Program Sustainment.....	16
Asset Management Intent	16
FCA Sustainment Process.....	16
Section 5 - Training For Government Stakeholders.....	16
Training Expectations.....	16
Course Descriptions	17
Section 6 – Applicability and Conclusion	19
Coordination with DHA Headquarters / Command HQ.....	19

Appendix A-1 – Section Naming Conventions

Section 1 - Background

Defense Health Agency Background

With Initial Operating Capability as of 1 October 2013, the Defense Health Agency" (DHA) is an agency of the Department of Defense (DoD) under the Under Secretary of Defense for Personnel and Readiness (USD(P&R)) that operates under the authority, direction, and control of the Assistant Secretary of Defense for Health Affairs (ASD(HA)). The DHA is designated a Combat Support Agency, with oversight by the Chairman of the Joint Chiefs of Staff (CJCS) in accordance with DoD Directive 3000.06, "Combat Support Agencies." DHA is responsible for shared services, functions, and activities in the Military Health Services (MHS), including but not limited to the TRICARE Health Plan, pharmacy programs, medical education and training, medical research and development, health information technology, facility planning, public health, medical logistics, acquisition, budget and resource management, and other common business and clinical processes.

DHA BUILDER Implementation Goals

A primary use of the DHA BUILDER™ database will be the unified and consistent reporting of facility condition for all of the DHA's assets. The scope of work for DHA Facility Condition Assessments (FCA) includes surveying, recording and analyzing the condition of all DHA facility assets. The survey identifies the existing facility condition and provides the data necessary to begin planning and programming the repairs, maintenance, and modernization of the DHA inventory through the use of Sustainment Management System (SMS) applications, primarily USACE's BUILDER™. The condition assessment includes examination and reporting of the general condition of the real property and specific assessment broken into Uniformat II building components.

The completed FCA is intended to be a planning tool and its output is meant as a technical document to assist DHA in making any number of decisions needed to support mission requirements and sustain infrastructure. The FCA report is meant to objectively measure building conditions and summarize the results for use in making budgetary decisions. Results and findings of this FCA are a measure of the data and information obtained during the course of the field work processes and the application of that information into a standard BUILDER™ database format used to reveal the results.

The software is a product of the US Army Corps of Engineers Construction Engineering Research Laboratory (USACE-CERL). The database is designed to facilitate facility data management which promotes more effective reinvestment. DHA and other stakeholders have the ability to log-on to the database for data review and real-time reporting.

Purpose of this Guidance

This guidance provides a brief introduction to the DHA's specific use of BUILDER and sustainment management system (SMS) concepts. CERL has actively engaged to develop BUILDER™ information for the DHA; specifically BUILDER™ has had additional component inventory added to provide the medical facility components and system conditions which are not normally found in other non-medical facility types. This guidance also serves as a supplement to other BUILDER documentation. Emphasis is on procedures and guidance for the initial

implementation (inventory and assessment) at Defense Health Agency (DHA) facilities. It is not intended to provide complete guidance for BUILDER inventory, inspection and ongoing use as some systems discovered will not be listed in cataloged lists, but will require assessment regardless. Full instructions for BUILDER implementation are available in the BUILDER software documentation, manuals, and other training materials.

Medically experienced personnel will be responsible for implementing BUILDER™ because of their understanding and appreciation of Patient safety within the active healthcare environment. Patient safety is goal #1 and includes the understanding, knowledge, and necessity of Infection Control Risk Assessments, Interim Life Safety Measures (ILSM), and Joint Commission requirements for operating within the healthcare environment. Past experience in BUILDER™ is desired with the understanding that BUILDER™ experience is less scarce than that of knowledge of the immuno- and mobility compromised patient populations that will be present. Both skill sets will be required to successfully assess the DHA enterprise in BUILDER™.

In case of conflict between the AE Scope of Work and this document, the AE Scope of Work will take precedence.

What is the BUILDER™ Sustainment Management System?

BUILDER is a software system developed to perform lifecycle management of facilities. By considering the entire lifecycle, facility managers can optimize the investments that must be made in and on their facilities. Facility managers need consistent and objective facility investment guidance for:

- systematic assessment to identify maintenance requirements for increased reliability
- analysis of the performance gap between the current state and requirements, with investments planned to close this gap and optimize return on investment
- prioritization of scarce resources according to economic and mission priorities
- prediction of the effects and consequences of decisions to ensure mission readiness

Figure 1 shows the continuous SMS process cycle which facility managers oversee, and which is aided by the BUILDER™ methodology.

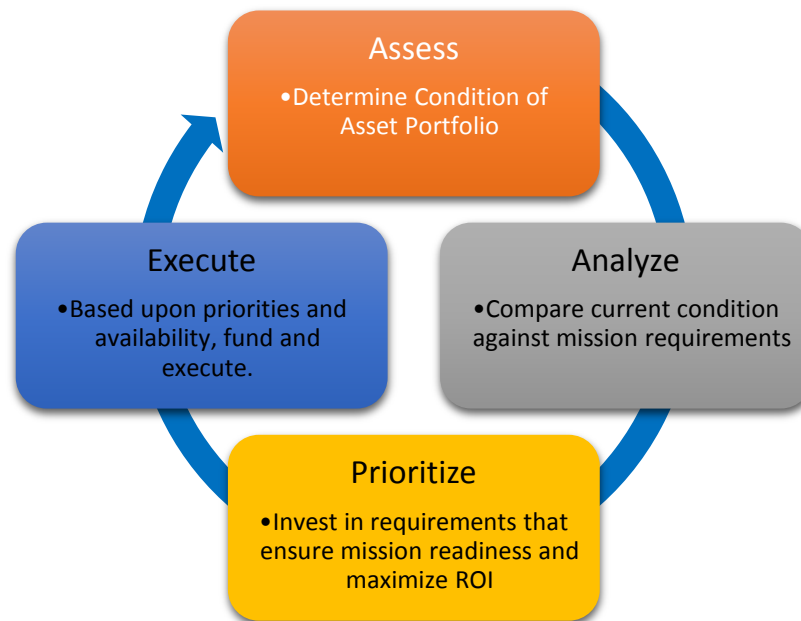


Figure 1 - BUILDER Facility Management Cycle

The BUILDER™ Sustainment Management System (SMS) is a web-based software application developed by the US Army Corps of Engineers at the Engineer Research and Development Center – Construction Engineering Research Laboratory (ERDC-CERL). BUILDER helps engineers, architects, technicians, and managers decide when, where, and how to best maintain building infrastructure.

Because building assets are so vast and diverse, a “knowledge-based” philosophy streamlines the BUILDER process and prevents it from becoming unmanageable. Building upon the existing real property records, a computer inventory is modeled and/or collected for each facility. Objective and repeatable inspections can then be performed on facility components to verify their actual condition and predict future performance. Unlike other assessment methods, this condition is expressed with an objective, 100 point scale, the condition index (CI). The level of detail and frequency of these inspections are not fixed; they are dependent on knowledge of component criticality, the expected and measured condition and rate of deterioration, and remaining maintenance and service life. This “knowledge-based” inspection focuses attention on the most critical components at the time. In addition to these condition assessments, functionality assessments can be performed to evaluate user requirement changes, compliance, and obsolescence issues. BUILDER provides a comprehensive picture of the overall performance of building assets and their key components.

For more information, visit <http://sms.cecer.army.mil> for product updates, manuals, and presentation materials.

DHA BUILDER Team

In order to implement and sustain the DHA Builder Asset Management Program roles and responsibilities are defined as follows:

DHA Level Service Senior Program Manager: (DHA LSS PM) Accountable for overall program per Service. Coordinate with MST leadership for A-E list and performance. Provide any and all updates to the MST regarding procedures, guidance for entering data for Knowledge Base Inspections KBI and any future changes.

DHA Builder Analyst: Maintain Builder data base through coordination with Regions Leads, Facility Managers and Builder Technicians. Pull reports, work plans and funding scenarios requested by Leadership. Assist and Coordinate with CERL-USACE in the event of upgrades/changes in Builder.

Regional Lead (RL): RL are responsible for ensuring that Builder data is update and current and that Policy and Guidance is adhered to. RL will assist with the coordination for the implementation and sustainment of the Builder program with input from FM's.

Facility Manager (FM): Will work with the DHA LSS PM, Shall have an understanding of the condition of all facilities that have been inspected. FM shall coordinate with the Builder Team with Site Assessments and assistance of maintaining and sustaining Builder. The FM or Medical Service Regional Lead will have the basic responsibility of making data available to the BUILDER AE (i.e. drawings, DMLSS data, RPIE data, inventory information, etc).

Facility Condition Assessment Site Coordinator (FCA SC): The FCA Site Coordinator is a Corps of Engineers asset responsible for the coordination of the entire site visit. All issues that come up during the site visit will be communicated to the FCA Site Coordinator. The FCA Site Coordinator will coordinate the issue resolution and responses with the DHA Level Service Senior Program Manager. This role will also play a critical role in ensuring the impact to patient care is minimized at every step. This will be done by ensuring maximum coordination for AE assessments to minimize scheduling impacts to facility scheduled Preventive Maintenance routines . Also critical will be this role's ability to lessen the impact on the FM through answering questions and troubleshooting issues.

Facility Condition Assessment Quality Assurance (FCA QA): Governments' representative responsible for assurance that data collected by Inspectors is consistent in quality. QA is responsible for ensuring that all information is complete and accurate. Ensure A-E is accurately applying condition rating to all inventory items according to the definition of Green, Amber, Red developed by the Construction Engineering Research Laboratory (CERL-USACE). The FCA QA will discuss data with the team at the end of each day. Support A-E to remove obstacles while on site. Ensure all A-E site personnel display proper identification and wear all the required Personal Protective Equipment (PPE) at all times while onsite. Ensure all photographs taken do not depict unauthorized images and that they are properly submitted and conform to the standard naming conventions and sizes in the FCA Report. Ensure photographs of deficient inventory items are taken and included in the FCA Report. Ensure A-E is adhering to the suggested Level 4 UNIFORMAT II classification for all data collection as outlined. Ensure all inventory items with an Amber rating or below and have an associated comment. Ensure all inventory and inspection comments are succinct and accurate. Attend the Out-brief on the last day of site visit. Participate in the Lesson Learned, review collected field data comments and forward comments back to FCA Site Coordinator and A-E. Review Draft and Final report, provide comments.

Inspector: Provided by AE to survey and assess building system components in a manner

consistent with providing patient safety at all times. Perform the assessments/ Knowledge Base Inspections (KBI) of collection of data to be entered into Builder while adhering to policies and guidance of DHA to provide a consistent, quality product. Assure that all information has been gathered for site/facilities. Report any problems such as safety issues, problems with site access and any changes that are encountered to the Site Coordinator. Adhere to all safety, security, regulations and rules as well as to local, state and federal policies and procedures. Complete all required training and acknowledge requirements needed to be allowed access to sites including but not limited to the compliance with/understanding of the following: Health Insurance Portability and Accountability Act (HIPAA), Infection Control Risk Assessment (ICRA), Interim Life Safety Measures (ILSM), Occupational Safety and Health Administration (OSHA), Medical Communications, Immunizations, Security and Special Clearances that will be provided prior to site visit.

Builder Technician (BT): Accountable for entering any and all new assessments and KBI's that will provide data to be used for Work Plans for next fiscal year's budget. If the AE is tasked with this entry, it will be specifically stated in the scope of work. Ongoing DMLSS facility activities will be evaluated for significance and entered into BUILDER if the qualifications have been met.

Section 2 –BUILDER™ Data Collection Standards

Intent

In order to provide consistent results across multiple implementation resources at multiple sites, this set of standards will provide guidance on how to collect inventory and perform condition assessments throughout the DHA portfolio. All BUILDER™ behavior, including lifecycle modeling, requirements identification, and forecasting, is based upon the component inventory structure, making consistency and alignment with management practices a critical item. This section describes these data collection standards and provides lessons-learned and best practices from other programs that will streamline and reduce confusion when performing these processes on site.

Government Provided Data

INVENTORY HEIRCHY

The BUILDER™ Database will be preloaded with inventory based on Real Property Database records. The below hierarchy tree will be used.

- Server = DHA
 - o Service
 - Command
 - Parent (optional layer)
 - o Base (RPSUID)
 - Name (RPUID)

An example from each service has been outlined below with color coding to assist.

- Organization
- Installation
- Site
- Facility

DHA				
MEDCOM				
RMC				MSC
Bragg		Fort Mead		Fort Detrick
BRAGG	Pope	Fort Mead	Fort Detrick – Med	Fort Detrick – Research
Womack Med Center	Clinic	Hospital	Clinic	RID

DHA				
BUMED				
Navy Med East				
Jacksonville				
Jacksonville	Key West	King's Bay	Albany GA	Mayport
Hospital, Clinic	Clinic	Clinic	Clinic	Clinic

DHA			
AFMS			
ACC	AFSPC		
(none)	Peterson		
OFFUTT	Peterson	Shriever	
Clinic	Clinic	Med Warehouse	Clinic

DHA			
MSM			
FIX			
Fort Shafter	Pearl Harbor		
Tripler	Kaneohe Bay	Makala	
Hospital	Clinic	Hospital	Clinic

EQUIPMENT TYPES REQUIRING ASSESSMENT

The statement of work outlines the specific Unifomat systems and components in the scope of effort. As a general guidance, the following types of equipment, as defined in AR 420-1 and other DoD publications, shall be included in the assessment.

Installed building equipment. Installed building equipment (IBE) includes items of real property affixed to or built into a facility that are an integral part of the facility.

The following types of equipment, shall not be included in the assessment.

Personal property (fixed). Personal property (fixed) consists of capital equipment and other equipment of a movable nature that has been fixed in place or attached to real property, but may be severed or removed from buildings without destroying the usefulness of the facilities.

Personal property (movable). Equipment that is movable and not affixed as an integral part of the facility is generally accounted for as personal property rather than real property.

Medical and dental equipment. Medical and dental supporting equipment are addressed in MIL-STD-1691F.

Sectioning Requirements

THE COMPONENT- SECTION (SECTION)

The Component–Section also called Section for short, is the most important inventory element in BUILDER™. Nearly all inspection, condition assessment, and maintenance & repair planning decisions are made at the Section inventory level. Thus, the Section is the management unit in the BUILDER object model. Conceptually, each section is unique in its Sustainment Restoration and Modernization (SRM) requirements over its life-cycle.

LEVEL OF DETAIL

For some components a very refined choice exists at the component subtype. An example is pipe diameter for D202001 Pipes & Fittings. Recognizing that different pipe diameters may exist, the use of the size most predominate will normally suffice for sectioning to support condition assessment and SRM planning purposes.

DHA SPECIFIC SECTIONING REQUIREMENTS

General Sectioning Rules: The following sectioning business rules are used:

- Physical Characteristics. Components are divided into sections when a significant variation exists in material or equipment category, age, construction history, or condition.
 - Example 1 - If a wing or addition was added to a much older building, the two areas of the building should be sectioned differently because the age and construction history is different.
 - Example 2 – If the building roof has multiple levels of similar materials in different conditions, these levels should be sectioned differently to capture the difference in condition.
- If building wings were constructed at the same time, the construction history is not significantly different. Therefore, the wing(s) may not be sectioned.
- Floors and Levels. Multi-story buildings shall be sectioned vertically by floor or level (in the case of a basement or mezzanine). Where they exist, interstitial spaces (typically found in more recent hospitals) shall be considered and treated as their own floors.
- Replacement Value. Due to approval limits and practical scheduling issues with such large and expensive projects, sections with a rough estimated value greater than \$500K should be sectioned separately.

SECTION NAMING STANDARDS

The attached Appendix A-1 entitled Section Naming Conventions provides common section names and how the entries of these sections should be made into BUILDER in order to facilitate consistency between assessors and across multiple assessments.

Assessment Requirements

ASSESSMENT RULES

The default inspection method for DHA facilities shall be the Direct Condition Rating method. If the Direct inspection indicates the condition is in the Amber range, a Distress Survey shall be performed. Comments for ratings shall address issue, location of issue and possible recommendation of remedy to address the issue. The intent is to provide adequate detail for development of work plan and eventually repair project requirements for those components and systems offering the most potential for improvement in performance life. If facility, system, or component conditions preclude the performance of a required Direct or Distressed inspection, the assessor shall coordinate with the inspection supervisor to obtain concurrence with performance of an Age Based Survey for that specific component only. If a visual inspection of any component will not reveal the asset condition, an aged based assessment will be performed.

SAMPLING

Sampling can be used with either the distress survey or the direct condition rating method. Use sampling when a section has many items, is separated or very large. An example would be to use sampling when a section of 100 VAV boxes is to be inspected and time or separation does not allow all 100 to be inspected.

Sampling amounts should be as follows:

- 10% minimum, and
- 1 sample when component-section quantity (or potential samples) is 1-4, or
- 2 samples when component-section quantity (or potential samples) is 5-9, or
- 3 sample minimum (when component-section quantity (or potential samples) is 10 or more.

Sample Location Names

All sample locations require a “Name” for identification purposes. Location name should be descriptive (e.g. “Room 101,” “NW Entrance Door,” “Wall between Door 101 and Door 103,” etc.) When naming, think of the next inspection. Would the inspector be able to find this location easily for the next inspection?

The DHA Sample Location Name Policy is as Follows:

NOMENCLATURE	RPIE ID	FACILITY SYSTEM	FACILITY SUBSYSTEM	ASSEMBLY CATEGORY
BATTERY MONITORING UNIT*	BMU	ELECTRICAL POWER & DISTRIBUTION	SPECIAL SYSTEM	UNINTERRUPTABLE POWER SUPPLY (UPS)
CIRCUIT BREAKER	CB	ELECTRICAL POWER & DISTRIBUTION	SECONDARY POWER	PANEL BOARD
DISCONNECT SWITCH	DS	ELECTRICAL POWER &	SECONDARY POWER	MOTOR CONTROL CENTER

		DISTRIBUTION		
DISTRIBUTION PANEL	DP	ELECTRICAL POWER & DISTRIBUTION	SECONDARY POWER	PANEL BOARD
DOUBLE ENDED SWITCHGEAR*	DESG	ELECTRICAL POWER & DISTRIBUTION	SECONDARY POWER	<NA>
EMERGENCY SHUT OFF*	ESO	ELECTRICAL POWER & DISTRIBUTION	PRIMARY POWER	MAIN SWITCHBOARD
ELECTRICAL VACUUM BREAKER*	EVB	ELECTRICAL POWER & DISTRIBUTION	PRIMARY POWER	MAIN SWITCHBOARD

Figure 4: DHA Sample Policy

Representative vs. Non-representative Samples. Generally, samples will be “Representative” unless very different in condition from the average. If a sample is “Non-representative”, inspect the sample individually from the other samples. For example, a section of 100 unit heaters may have one badly damaged unit. The single unit could be sampled as a “Non- Representative” sample and rated Red. The other samples would then be sampled as “Representative” of the rest of the unit heaters.

Attachments

Documents and images can be added as attachments to the BUILDER™ hierarchy at the Site, Building, System, Component and Section Levels. Attachments can also be made for individual inspections. These are added on the Attachments tab for the currently selected item. Multiple attachments can be made through the Attachments tabs for file types of *.jpeg;*.jpg;*.png;*.zip; *.doc;*.pdf.



Figure 3 - Document Attachment at Section

IMAGERY

Photos will be taken of the following: Representative photos of the item, deficiency, all items rated Amber+ and below, and one overall of facility.

Images are to be saved as a JPG or JPEG file with a file size between 1 and 4 megabytes.

HEALTHCARE SPECIFIC SYSTEMS AND COMPONENTS

A BUILDER Catalog, specific to DHA requirements for medical and laboratory facilities will be utilized for DHA assessments. Components with their associated catalog costs will have been

added to the standard BUILDER catalog, to include items such as medical vacuum pumps that are unique to healthcare. If additional items are identified during the course of a survey that are not included in the DHA BUILDER catalog, the COR shall be notified so DHA and CERL in combination can determine if the item should be added or how the component information should be captured.

BRED Data Management

BUILDER™ has a companion program, the BUILDER™ Remote Entry Database (BRED) which facilitates creating and editing of inventory and condition assessment records in the field while not connected to the main system. Inspection supervisors check out (download) data files for the buildings they will be assessing and load these onto Microsoft Windows™ laptops or tablet computers. The BRED file is the editor for these data files. Upon completion of the assessment activity, these files are checked in (uploaded) back to the BUILDER™ application for import back into the enterprise database.

Prior work has shown that creating individual BRED files for each building for each assessor works best, as this allows the most flexible QC processes, balances management effort against data file size (for transferring over the network), and supports backup schemes for auditing. BRED files should be archived on another medium such as network drive, SharePoint, or other format to support auditing.

Implementation Process

IMPLEMENTATION ROLLOUT

To handle the surge in resource requirements due to initial implementation, Architect-Engineer (A-E) contracts will be awarded to provide independent, third party assessors for the scheduled rollout:

Complete in Year 1 (20% of total DHA facility inventory):

Complete* in Year 2 (40% of total DHA facility inventory):

Complete* in Year 3 (40% of total DHA facility inventory):

*Additional Functionality Components to be incorporated in Year 2 and Year 3

Locations will be identified by DHA and will be coordinated with Points of Contact (POC) in those areas. Locations to be selected will be determined by geographic location. The Real Property Assets Database (RPAD) will be used to provide an inventory listing of facilities to be assessed. RPAD data will be pulled in October of each year for the next year's assessment. Temporary buildings will not be assessed, unless included by exception. Facilities Found on Site (FOS) and not in the inventory list will be addressed on a case by case basis and the need for inclusion in the task order by modification will be determined by the DHA LSS PM.

Defense Medical Logistics Standard Support (DMLSS) data, when available, will be pulled and supplied as additional data for the assessment. The future plan is to correlate/directly link DMLSS data with the BUILDER database.

The initial DHA BUILDER implementation will focus on Facility Condition Assessments (FCA) and development of condition indexes. Some of the BUILDER™ functionality components will be included that leverages the engineering roles already on site. Additional functionality items

will also be added for the next task order.

SITE VISITS

The Multi-Service Market (MSM) programmatic and site kick-off meetings as described in the scope of work shall be completed prior to the initial site visit.

The FCA SC will schedule, collect and coordinate the following for the FCA team:

- Site Contact – Name, Phone and Email of the activity POC - This person, often the FM, will coordinate the teams' activities with local stakeholders, to include the in brief and out-brief.
- Building contact- The name of the person to contact for each building (and their phone number). This should be someone who has keys to all spaces in the building and is aware of the inspection purpose.
- Maintenance contact- POC's for Electrical, Mechanical, HVAC, Roofing, and other Utilities.
- Notification- Have a Command POC notify each building manger, security and safety personnel regarding the purpose of the inspection, name of the contractor performing the inspection and the dates of the condition inspection.
- Security- What are specific site access and security requirements for the facilities to be inspected (assuming escort is provided by activity for each assessment team)?

What form of identification is required to access installation?

Badge Requirements (installation/facility)

Requirements/Permissions for use of Cameras

Vehicle Pass Requirements

Do any buildings have special security access or clearance requirements?

- Patient Privacy - Health Insurance Portability and Accountability Act (HIPAA) training and requirements
- Safety- Infection Control Risk Assessment (ICRA), Interim Life Safety Measures ILSM, Occupational Safety and Health Administration (OSHA), Medical Communications, Immunizations, Safety briefing, required PPE, procedures in the event of a disaster where are the shelter-in-place facilities, etc. Confined spaces and who is the confined space coordinator, will lifting tripod be required, if so is one available for use on site?
- Work space/area - Office/conference room area for the inspection team with 24/7 availability if possible. It should contain tables and chairs, wall space for maps/drawings and a power source to operate laptop computers and printer. If possible the room should be capable of being locked and unlocked by the SC, FM or QA.
- Communications - Access to a copier, fax machine and a telephone.
- Inspection schedule- Are there any special restrictions i.e. certain days, time of day, security, escorts, etc.?

List of any events that may prevent access or the assessment to be conduct on any particular day (i.e. scheduled medical procedures, command presentations, scheduled renovations/ construction/ maintenance/ inspections)

- Drawings - Obtain plans (floor plans, roof dwgs and foundation plan, i.e. basement) of all the facilities to be inspected. AUTOCAD files are preferable.

- Maps - Obtain installation site maps which identify building and street names.
Building list – Site Name, Facility number, category code, facility name, size, unit of measurement and year built along with renovation dates.
- o Maintenance Records - DMLSS and any other maintenance records for all facilities to be assessed.
- o Services calls- Provide list of active service calls and a 12 month history of completed service calls. Required history includes work input control backlog which may assist inspectors to look at previous work request to look for trends, a copy of the backlog of work with enough detail for the inspector to locate and validate the problem(s).
- o Projects – Provide a list of ongoing or planned repair/ alteration projects, demolition, special project (1391), or MILCONs in the buildings to be inspected, and a list of special project/MILCON history for the past 5 years with enough detail to determine the scope of work.
- o Reports - Access to the activity's Master Plan, Asbestos Plan and Lead Based Paint Plan or surveys, Deficiency Tabulation, and Joint Commission report (including the Statement of Conditions and any Plans for Improvement.)
- o Prior FCA – Obtain any previous inspection reports.
- o Utility Data - Utility information going back at least one year for the assessed facilities, name of all utility companies with contact information, all utility rate/fee structures, historical charges and usage for the last year, and all other relevant utility information if needed for the assessment report.
- o Warranties- request a list of any current warranties for the facilities/inventory to be assessed.
- o In brief – In-brief to address FCA POC's and buildings and schedule for the site visit.
Out-brief - To address findings, additions to inventory, life safety issues and any other concerns that might have arisen during the site visit.

EXISTING DATA SOURCES

DMLSS: The future plan, to assist in populating RPIE data contained in the Defense Medical Logistics Standard Support System into Builder, is to develop a Microsoft Access tool to select groups of RPIE from the data exported from the DMLSS XLS file format. This tool is proposed to allow the user to select one or more RPIE items, from the DMLSS data and define a new BUILDER section for that group categorizing them by the Builder Material/Equipment Category and Subtype, and specifying a quantity and year installed on the section. The default year installed and quantities may be pulled from the DMLSS data if logical rules can be applied. The tool then would pull the DMLSS data relevant to those items into the section details under the newly defined section in a BUILDER Remote Entry Database (BRED) format. That information could be edited in BRED then imported into the BUILDER database. Setup of the tool would require linking the Excel file to the tool and mapping the building IDs in the DMLSS data to the Building in an exported BRED file for the site being collected. The proposed interface would be form based. The following is a mockup of such a form.

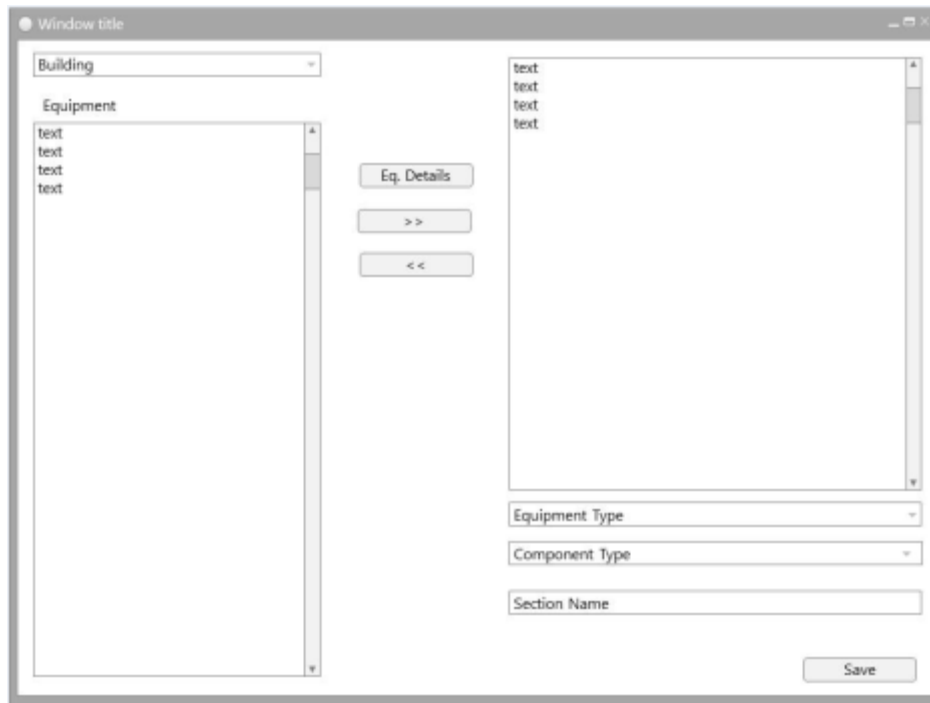


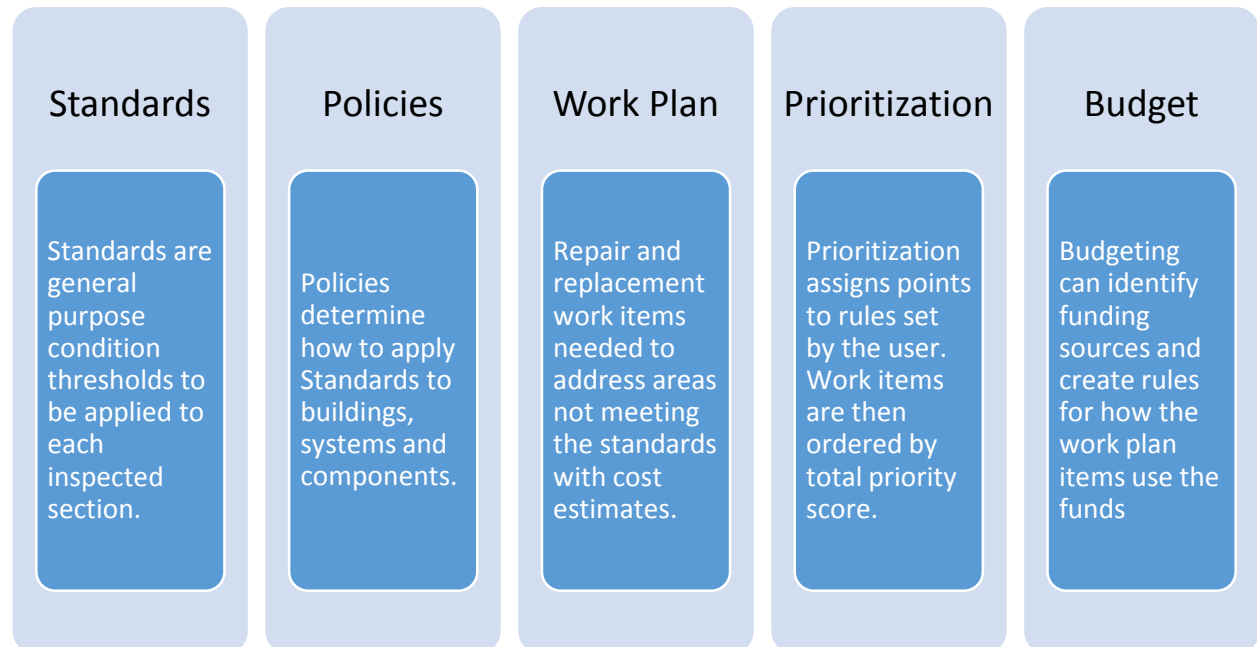
Figure 2 - DMLSS RPIE to BUILDER Section and Details Tool

LOCAL STAFF INTERVIEWS: Assessors/Inspectors shall interview local experts to obtain information regarding system/component purpose/use/performance history, known issues, etc. In many cases, the escort, who may be the Subject Matter Expert, will be the best resource.

Section 3 – Enterprise Configuration Settings

Work Planning

This document provides a starting point for discussions about how standards and policies can be set in BUILDER for the creation of work items and the associated FCI calculation.



Four standards have been set in BUILDER for the different levels of condition requirements.

High. With the CI requirement set to “90”, the condition must be maintained in a like new state. Care must be taken with anything set to “high” because as systems age, this requirement will not be met after roughly 20% of the service life passes.

Default. The CI value for all sections must stay above an “80”. This value ensures work is created when sections are within the “amber” category of the direct rating scale. The typical work activity type for inventory with a condition in the high 70’s will be a “Repair” suggestion.

Low. With a CI requirement of only “60”, the inventory will be allowed to approach the end of service life. A section can still be functioning and have a condition of 60. It can, however, be expected to not be performing at an optimal state and be reaching the end of service life.

Anything allowed to degrade to this level will create a “replacement” activity due to the significant degradation.

Run to Fail. The value of “20” set for a condition requirement will need a full system failure to require work activity. Only sections set to “Red –” will qualify for work.

The Policy, Policy Sequence, Prioritization and Budget configuration will be managed by DHA.

Section 4 – BUILDER™ Program Sustainment

Asset Management Intent

BUILDER™ enables DHA to use lifecycle-based performance measures in an improved decision support process to identify, plan, and program capital investments. BUILDER™ also enables DHA to use required methods for condition index calculation and reporting. The BUILDER™ approach to facility asset management provides the framework and decision support system to help facility managers achieve these objectives. It is a best practice, state-of-the-art approach, to proactive and accountable infrastructure management, for use at all levels of an organization.

FCA Sustainment Process

Knowledge Base Inspections (KBI) will be defined as an output of the initial FCA. The execution method for these ongoing inspections will be performance by in-house facility staff, contracted O&M support, or stand-alone contract actions. FCA and BUILDER training and refresher training will be provided as needed, pending scheduling and availability. It is likely that this ongoing training will make maximum use of online and/or video-based training, or peer to peer training provided by DHA/facility assets who have completed formal BUILDER training. The section updates will happen when a repair project is completed, Preventive Maintenance (PM’s) are performed, and/or when triggers indicate that Components are in need of a KBI.

Section 5 - Training For Government Stakeholders

Training Expectations

Prior to the commencement of the initial FCA at a site, training will ensure the local facility staff understands the BUILDER application fundamentals and inspection needs. This training serves to ensure the information collected by the SC and provided to the inspection teams is relevant.

The AE inspection teams are also required to provide additional training to local staff near the end of inspections. AE training of facility’s staff is described within the AE SOW. The AE training is to have facility organic staff (in-house and/or contract O&M staff) assess a minor facility, load this BRED data into BUILDER, check out BRED files for practice updating and recording systems repairs or KBIs within BUILDER. This will be a point of transition for local

staff to maintain the BUILDER database.

Course Descriptions

The initial training opportunities will be provided for Government staff to address the identified needs as two courses.

1. BUILDER Overview Training: Training will be available to provide the customer resources at a management level necessary to validate their inventory assets records and to provide prediction modeling for future project planning. The training course provides participants with the knowledge and skills necessary to file verify the asset inventories and maintain the BUILDER data base.

Introduction to BUILDER SMS – This brief history of Engineered Management Systems (EMS)/SMS introduces the EMS concept as alternative way of collecting facility investment requirements.

BUILDER Fundamentals - Covers the EMS/SMS process (Inventory, Assessment, Analysis, Work Planning, etc.) at a 50,000 level to give the participants an introductory overview (how to log in, how to navigate, common tools and functions, etc). The training covers inventory basics and how BUILDER organizes facility assets. It will familiarize attendees with the UNIFORMAT hierarchy and the four inventory levels of BUILDER (facility, system, component, and section).

Sectioning and Data Collection Best Practices - Covers best practices for implementation, provides guidance on when and how to use facility modeling (Rapid Inventory Estimating), facility templates, and BRED (concept only, not training on BRED), to provide the lowest cost implementation while maintaining the level of detail needed later to provide answers for anticipated management practices. Training will cover navigating the inventory screens in BUILDER, accessing information, and generating reports.

Condition Assessment Overview- This module introduces the concepts of distress survey and direct rating methods. It explains levels of effort for each inspection type, and the risk or uncertainty associated with each type.

Condition Assessment Data Collection and Best Practices - Covers best practices for condition assessment and requirements for inspection quality and level of detail based on management practices.

BUILDER Indexes, (Condition / Functionality / Performance) - Explains the types of Indexes calculated by the system. Functionality will be discussed, but not trained as part of this course. The primary purpose is to ensure the participant has a clear understanding of the distinction between condition and functionality in order to determine whether a facility predominately has sustainment (condition) or modernization (functionality) requirements.

Condition Assessment in Database-Covers assessment products, chiefly reports, that the participant can use to make more informed real-time decisions about their facilities.

Work Planning Configuration – This section discusses the effects of standards,

policies, and prioritizations on work requirements generation and inspection scheduling. **Work Analysis Theory** - Covers how BUILDER generates work cost estimates; how financial calculations are performed to provide repair/replace recommendation, and how to manually alter calculation parameters.

Work Requirements Generation, Funding and Projects - Covers how to generate work requirements. Covers how to set up funding rules, including practices to fence funds for special initiatives and how funding rules affect work plan accomplishment. Participants will learn various rules for project creation, and the drawbacks and pitfalls to be aware of when grouping work items in the project.

Scenarios and Long Term Planning- Covers use of the Scenarios module to perform alternative courses of action analysis and bring awareness of the [future] consequences of decisions which may not be readily apparent after just one or two years of using a particular decision-making policy. Participants will provide typical outcome questions and how to configure the scenario settings to develop these answers. Covers how to integrate Work Planning and Scenarios results to manage and manipulate a multi-year work plan to effectively package work for further development of execution packages.

Future Years Defense Program (FYDP+2) requirements/Next Steps- Includes discussion of best practices, Computerized Maintenance Management System (CMMS) integration for real property and work order tracking, maintenance activity, execution and long range planning. Provides an open forum for users to ask questions they may have not had an opportunity to ask in earlier lessons, as well as provide an opportunity for peer-to-peer learning with class participants that may already have some BUILDER experience.

1. BRED Assessor Training: Training will be available to provide the customer resources at an execution level, necessary to validate the condition of their inventory assets records and to provide prediction modeling for future project planning. The course will provide participants with the knowledge and skills necessary to field verify the asset inventories and to perform condition assessments of that property.

Course Outline:

- Inventory Overview**
- Sectioning and Data Collection Best Practices**
- Condition Assessment Overview**
- BRED - Builder Remote Entry Database**
- QC - Quality Control of Data**

The Facility Condition Assessment Training Course is organized to include both classroom and field training over the span of one week. Students are provided foundational knowledge about the assessment process and then are provided field exercises to practice their skills. There is an intentional progression of difficulty built into the field exercises following the colloquial model of “crawl-walk-run”.

Additional references include:

- Blank copies of the field assessment forms
- Example final product report

Example Tracker sheets
 DHA “The Process” document
 BUILDER Catalog (all inventory items available within DHA’s database)
 BUILDER RED Demonstration slides
 Direct Condition Ratings Cheat Sheet
 Distress Condition Ratings Cheat Sheet
 FCA Training Course Acronym List
 Quality Assurance Checklist
 FEMA 154 – Edition 2 (March 2002) Seismic Hazard Handbook
 Building Assessment Manual

Section 6 – Applicability and Conclusion

This Resource Manual provides DHA-specific goals, objectives, processes, policies, and guidelines that are unique to DHA’s implementation of the BUILDER program and the resulting data. Information on BUILDER itself is available in other documents available through the <http://sms.cecer.army.mil> website. The information in this document applies to both Government and contract (AE) execution of BUILDER implementation and sustainment at all DHA sites. In the case of a conflict between this document and a contractual award document, the contractual document shall have precedence.

Coordination with DHA Headquarters / Command HQ

Implementation of BUILDER™ for DoD medical facilities is a DHA-level initiative. Service leads within DHA will be able to offer lessons-learned from previous procurements and implementations of BUILDER™, and can provide up-to-date guidance and requirements. Contact information is as follows:

DHA Facilities (Chief, Facilities Management Operations Section):

Mr. Roy Hirschak

roy.d.hirschak.civ@mail.mil

Air Force AFMSC Contact	Navy BUMED Contact	Army MEDCOM Contact
Mr. David Christiansen David.Christiansen@us.af.mil	Mr. Ryan Bredahl Ryan.Bredahl@med.navy.mil	Mr. Scott Lehmkuhl scott.k.lehmkuhl.civ@mail.mil

APPENDIX A-1

Section Naming Conventions

Type	Convention	Example	Notes
Not Applicable	N/A		BUILDER's default entry if nothing is entered
By Floor	FLx	FL1, FL2, FL10	
By Wing	Wingx	WingA	
By Bay	Bayx	Bay1, Bay2	
By Cardinal Direction	NORTH SOUTH EAST WEST NE NW SE SW		
By Space	RMx OFFICE MEZZ WAREHOUSE MECHROOM STORAGE RESTROOM ROOF CORRIDOR STAIRWELL	RM123	
By Roof Section	Secx	SecA, SecB	Roof section plan map preferred
By Equipment Type	ACx AHUx WHx VAVx UHx CHx RTUx RAFx	AC1 AHU1 WH1 VAV1 UH1 CH1 RTU1 RAF1	Air Conditioner Unit Air Handling Unit Water Heater Variable Air Volume Box Unit Heater Chiller Rooftop Unit Return Air Fan

REFx	REF1	Refrigeration Unit
SAFx	SAF1	Supply Air Fan
XFMRx	XFMR1	Transformer
MAUx	MAU1	Makeup Air Unit
SBx	SB1	Switchboard
PANELx	PANEL1	Electrical Panel
BOILERx	BOILER1	Boiler
PUMPx	PUMP1	Pump
HWPx	HWP1	Hot Water Pump
CWPx	CWP1	Chilled Water Pump
HPx	HP1	Heat Pump
HEx	HE1	Heat Exchanger
FACPx	FACP1	Fire Alarm Control Panel
FCUx	FCU1	Fan Coil Unit
EFx	EF1	Exhaust Fan
ERUx	ERU1	Energy Recovery Unit
DXx	DX1	Direct Expansion Unit
CUx	CU1	Condenser Unit
CTx	CT1	Cooling Tower
UPSx	UPS1	Uninterruptible Power Supply
EGx	EG1	Emergency Generator