

TM

Rooms Inventory
Rooms Condition
Rooms Adequacy

Building Assessment Information for Central Butte Royal Manor

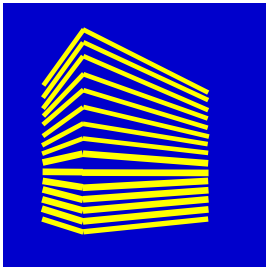
Keys Management Furniture Inventory Lease Management

(CADD Resources)
(Computerized Maintenance Management Systems)



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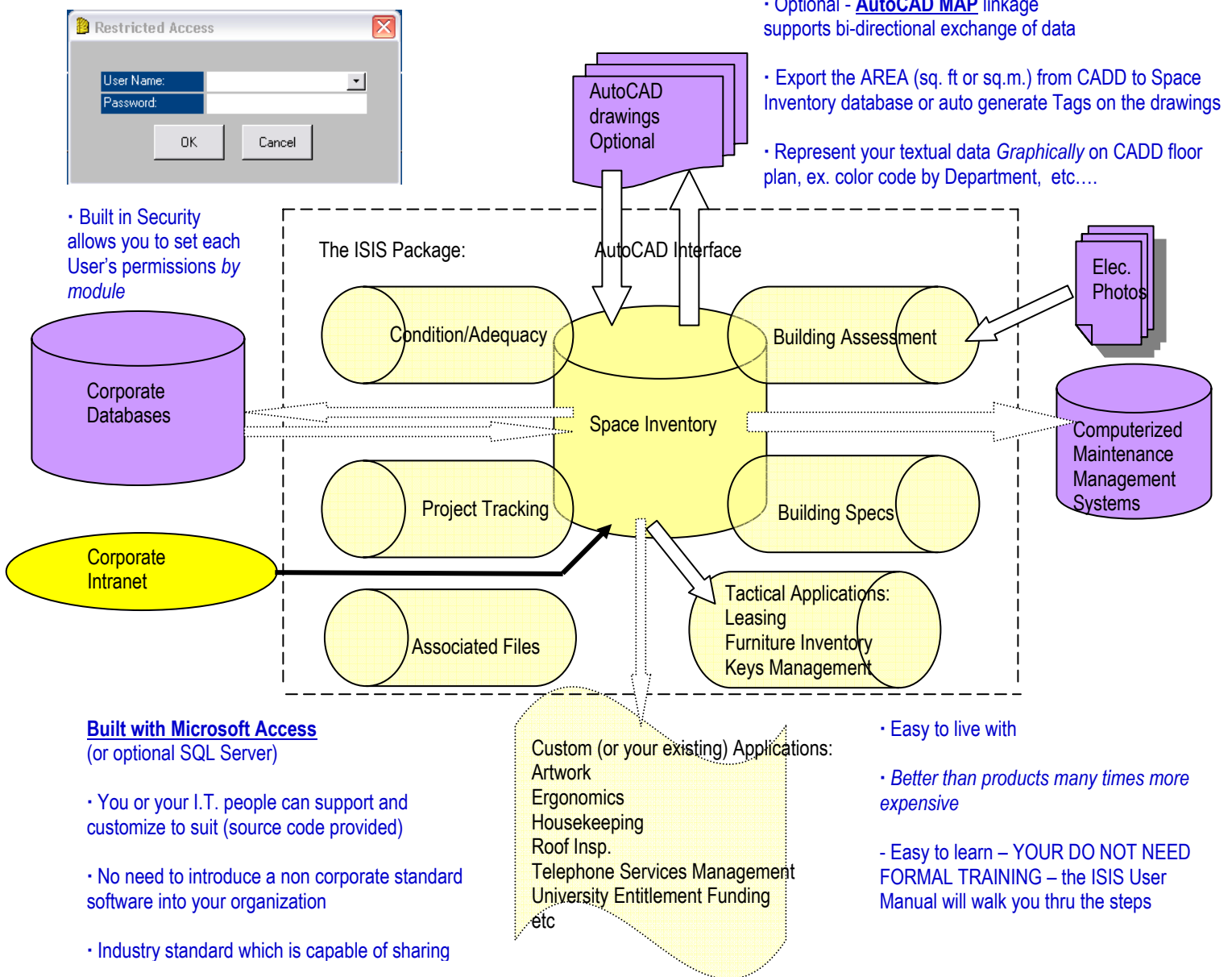
201 - 2114 11th Avenue, Regina, SK, Canada S4P 0J5 Bus: (306) 789-2060 Fax: (306) 789-2725 www.caddfm.com



ISIS: Integrated Space Inventory System

Business Need: To effectively and efficiently manage and operate facility assets requires a considerable amount of data. As each Facility Management function requires specific data, the solution is to build a suite of individual applications, each addressing a specific business need, but which are integrated/linked together to deliver easy access to a spectrum of high quality data.

What is ISIS: ISIS is a database (MS Access/SQL) which combines multiple Facility Management application modules into one integrated system. Included with ISIS, but optional to use, is an AutoCAD interface to integrate your CADD resources with the database.

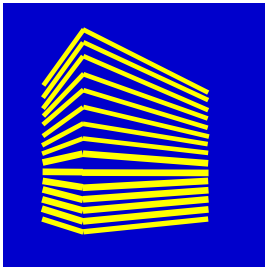


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Building Assessment

Business Need: To have a structured and professional method of recording and reporting Assessment information on the Building Components in your facilities, and the related estimated Expenditures to maintain them for the next 5 years: for **Capital Planning**, **Maintenance Strategies/priorities**, and **Building Studies**.

- Multiple reports per site (by Date)
- Building components organized to the CSC UNIFORMAT INDEX
- Add new sub sections as required (all standard sections pre entered)
- 'Dialogue' method of recording Condition and Recommendations is flexible and realistic
- Track 5 year Costs for each Building Component
- Add items that need immediate attention to your 'Make Work Order' list, or forward to your PROJECTS module
- Organize electronic photographs within UniFormat structure

Generate **Building Assessment Reports** with Details, 5 year Cost Summary, Findings Summary, and from the other modules add an Introduction, Executive Summary, Room Listings, Condition Reports, etc. *Very comprehensive, very professional*

FINDINGS SUMMARY

FINDINGS SUMMARY FOR Central Butte Royal Manor
Report Date 02/11/2004

Record #	Section Code	System, Subsystem or Component	Remaining Service Life	Recommended Action	Condition
1	A	Substructure	0 to 5 Years	Desirable	2
2	A10	Foundations	Over 15 Years	Mandatory	3
3	A1010	Standard Foundations	Over 15 Years	High Priority	5
4	A1010.10	Material	5 to 10 Years	Suggestion	2
5	A1010.10	Slab on Grade	10 to 15 Years	Mandatory	4
6	B	Shell	Over 15 Years	Varies See Det.	1
7	D	Services	5 to 10 Years	High Priority	2
8	D10	Plumbing	10 to 15 Years	Suggestion	6
9	D1010	Domestic Water Distribution	5 to 10 Years	High Priority	3
10	D1010	Sanitary Waste	Not Determined	Desirable	3
11	D1010.10	Rain Water Drainage	10 to 15 Years	Suggestion	2
12	B	Basement and Underground	10 to 15 Years	None	2
13	D10	Plumbing	20+ Years	Desirable	4
14	F	Special Construction and Details	5 to 10 Years	Code Upgrade	2
15	F20	Electrical Building Automation	N/A Operational	Code Upgrade	2
16	G	Building Site work	20+ Years	Code Upgrade	5

5 YEAR COST SUMMARY

Building Assessment Cost Summary
Central Butte Royal Manor
Report Date 02/11/2004
Author T. Ross
Address 2776 Thatcher Dr.

Section	Immediate	Y1	Y2	Y3	Y4	Y5
A. Substructure	\$1,000.00	\$2,000.00	\$1,000.00	\$1,000.00	\$4,000.00	\$1,200.00
A10 Foundations	\$0.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00
A1010 Standard Foundations	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00
A1010.10 Material	\$1,100.00	\$2,200.00	\$900.00	\$900.00	\$6,400.00	\$6,400.00
A1010.10 Slab on Grade	\$1,400.00	\$4,000.00	\$900.00	\$0.00	\$7,600.00	\$9,000.00
A1010.10 Foundations	\$4,500.00	\$7,700.00	\$2,500.00	\$1,800.00	\$9,300.00	\$9,300.00
A Total	\$2,500.00	\$15,400.00	\$5,400.00	\$4,600.00	\$15,200.00	\$15,200.00
B. Shell	\$97,000.00	\$0.00	\$0.00	\$0.00	\$0,700.00	\$0.00
B Total	\$97,000.00	\$0.00	\$0.00	\$0.00	\$4,700.00	\$0.00
D. Services	\$5,000.00	\$4,000.00	\$1,000.00	\$1,000.00	\$2,000.00	\$2,000.00
D10 Plumbing	\$1,400.00	\$1,400.00	\$1,000.00	\$9,700.00	\$9,400.00	\$9,700.00
D1010 Domestic Water Distribution	\$200.00	\$900.00	\$700.00	\$900.00	\$900.00	\$900.00
D1010 Sanitary Waste	\$0.00	\$900.00	\$900.00	\$1,200.00	\$1,200.00	\$1,200.00
D1010 Rain Water Drainage	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00
D1010 Plumbing	\$4,200.00	\$2,400.00	\$4,700.00	\$9,500.00	\$2,370.00	\$2,370.00
D Total	\$5,000.00	\$7,200.00	\$2,700.00	\$11,300.00	\$4,600.00	\$5,270.00

ASSESSMENT DETAIL

Building Assessment Information for Central Butte Royal Manor
Report Date 02/11/2004

Record # **1** Section Code **D1010** System **Sanitary Waste**

Author: **T. Ross** Invest. Depth: **Cursey examination**

CONDITION OR STATUS:
The sanitary waste system within the building consists of cast iron and copper waste lines. There has been several repairs to waste lines over the years.
The sanitary waste leaves the building and connects to the waste system in SVECC. It has
Remaining Service Life: **Not Determined** Condition: **3**

RECOMMENDATIONS:
Continue regular maintenance on the interior system, as required. Consider installation of a new buried waste system connected directly to the closest city main.

Action Priority: **Desirable**

Expenditures:
Immediate: **\$0.00** Y1: **\$900.00** Y2: **\$900.00** Y3: **\$1,000.00** Y4: **\$1,100.00** Y5: **\$1,200.00**

Make Project: ☐ Make Work Order: ☐ Work-Order Made: ☐

Record # **10** Section Code **D1010** System **Rain Water Drainage**

Author: **T. Ross** Invest. Depth: **Cursey examination**

CONDITION OR STATUS:
The rain water system within the building consists of cast iron and copper waste lines. There has been several repairs to waste lines over the years.
The rain water leaves the building and connects to the waste system in SVECC. It has
Remaining Service Life: **Not Determined** Condition: **2**

RECOMMENDATIONS:
Continue regular maintenance on the interior system, as required. Consider installation of a new buried waste system connected directly to the closest city main.

Action Priority: **Desirable**

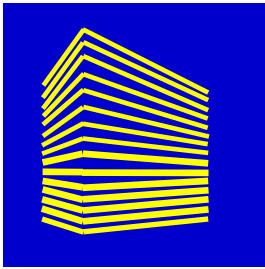
Expenditures:
Immediate: **\$0.00** Y1: **\$0.00** Y2: **\$0.00** Y3: **\$0.00** Y4: **\$0.00** Y5: **\$0.00**

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Building Specifications

Business Need: To have specific information on all the Components in all of your buildings. To be able to answer questions like “which of my buildings have a single membrane roof?”

- For each Building there is an general **Overview**, and then for each Building Component...

Integrated Space Inventory System - Rooms Version

Building: Central Butte Royal Manor
 Building Code: CBFM
 Building Name: Central Butte Royal Manor
 Building Address: 2770 Thatcher Dr
 Location Description: Central Butte
 Legal Location: 3130 MINERS AVE, LT 1, BLD 141
 GPS: 106/29/51 52/7745
 District/Area/Route: District 12/Area A/Route 2
 Primary Function: Cell Tower
 Secondary Function: Warehouse
 Site Phone Number: 306 807 4592
 Legal Speed Code: 15
 Year Built: 1996
 Lot Size: 1250
 Gas Meter ID: 012564
 Electrical Meter ID: 155063
 Building Manager: Albert Jones
 BM Phone Number: 306 123 4567
 Building Technician: Joe Smith
 BT Phone Number: 306 745 6123
 Signage: None
 Grounds: Grass, paved parking, sloped to east
 Notes: multipurpose building, built as part of 1995 general expansion

Uniformat Sections

- Building Overview
- A Substructure
- B Shell
- B10 Superstructure
- B20 Exterior enclosure
- B30 Roofing
- C Interior
- C10 Interior Construction
- C20 Stairs
- C30 Interior finishes
- D Services
- D10 Conveying
- D20 Plumbing
- D30 HVAC
- D40 Fire protection
- D50 Electrical
- E Equipment and Furnishings
- F Special Construction and Demolition
- G Building Site work

-Detailed information on each of the **UNIFORMAT** Sections

Integrated Space Inventory System - Rooms Version

Building: Central Butte Royal Manor
 Building Code: CBFM
 Building Name: Central Butte Royal Manor
 Building Address: 2770 Thatcher Dr
 Section Code: D5010
 Section Description: Electrical Service and Distribution
 Description: 500 Amp service, one main panel, split

Item	Value
main panel P1	500 amp
secondary panel P1-1	250 amp
secondary panel P1-2	250 amp

Record: 1 of 3

Uniformat Sections

- Building Overview
- A Substructure
- B Shell
- C Interior
- C10 Interior Construction
- C20 Stairs
- C30 Interior finishes
- D Services
- D10 Conveying
- D20 Plumbing
- D30 HVAC
- D40 Fire protection
- D50 Electrical
- D5010 Electrical Service and Distribution
- D5020 Lighting and Branching
- D5030 Communications and S...
- D5040 Special Electrical Syst...
- D5050 Electrical Controls and I...
- D5060 Electrical Testing
- D5070 Other Electrical System
- E Equipment and Furnishings
- F Special Construction and Demolition
- G Building Site work

Report on all the components within a building or...

Select specific information across all Buildings by UniFormat Section, Item and Value, (and you can select multiple items), ex. Report on all Buildings where the Foundation is a Grade Beam and the Main Panel is 500 amp service

Building Specifications Item Report

Section: D5010 Item: main panel P1 Value: 500 amp

Section	Item	Value
A1010	Foundation Type	Grade Beam
D5010	main panel P1	500 amp

Buttons: Add, Delete, Reset, Report, Cancel

Building Specifications Item Report

Section: D5010 Item: main panel P1 Value: 500 amp

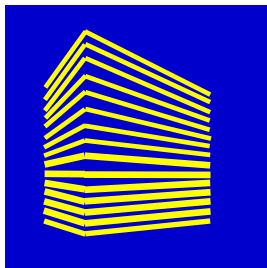
Section	Item	Value
A1010	Foundation Type	Grade Beam
D5010	main panel P1	500 amp

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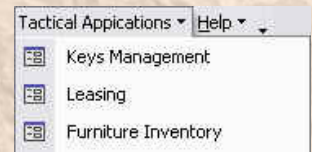
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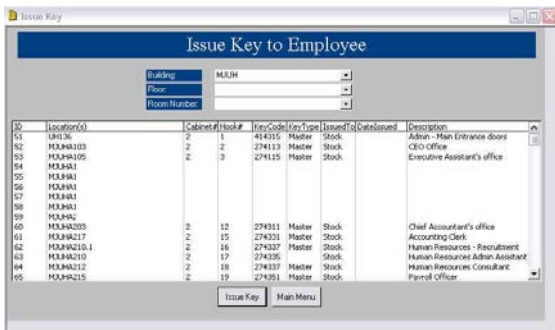


Keys Management Lease Management Furniture Inventory

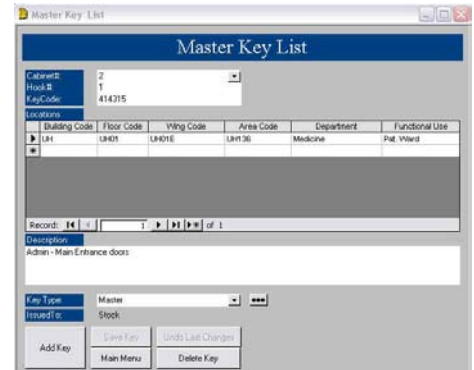


Keys Management

Business Need: To have a concise inventory of all Keys: what Keys are there, what Rooms do they access, where are the Keys, and who has what Key.



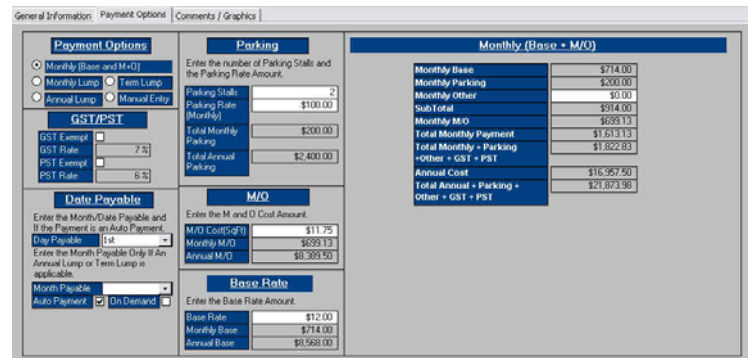
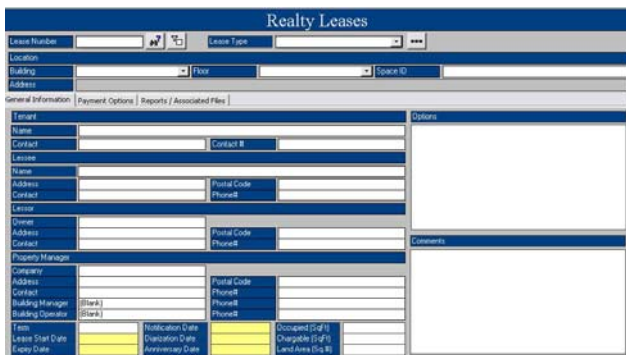
• Based on the traditional system of having a cabinet of keys on hooks with multiple copies, which may open one door or many doors (Masters), and which are distributed to staff.



Lease Management

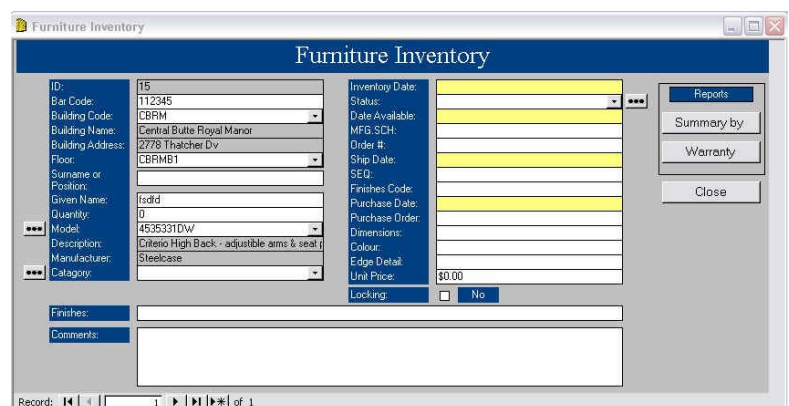
Business Need: To track all Leases, Revenue and Expense, with basic information. Six Date fields track from Diarization to Expiry so you never miss a date. Five different methods of payment options.

“General by:” reports which allow you to generate Fact sheets by any criteria (ex. all Leases which Expire next quarter).



Furniture Inventory

Business Need: To have a simple inventory of all your Furniture.

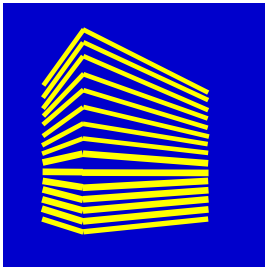


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Project Tracking Associated Files

Project Planning

Business Need: To have a *simple* listing of all the Projects, past, present, future, for each building. Record basic information like Funding, Budget, Priority, Status, Dates, Contacts, etc to help you have the 'big picture' on your projects.

Project	Cost	Scheduled Date	Priority	Status
Replace all Water Closets	\$2,000.00	02/18/2004	10	Not Started
Siding Replacement	\$8,000.00	08/18/2004	13	On Hold

Total Cost: \$10,000.00

• Each Projects's detailed info or a Summary of all Projects

Project Type	Primary Funding	Secondary Funding	Date Entered	Completed Date

Contact	Contact Phone #	Department

• Report any combination of Building, Department, Priority, and/or Scheduled Date

Associated Files

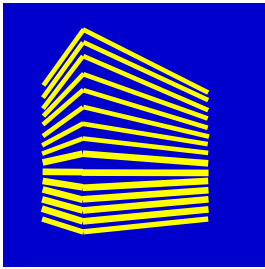
Business Need:

To organize and track all of the files associated with a Building or Project

And to be able to easily *view or edit* those files, regardless of the file type

File Name	File Path	Date Add
spaceAdeqQuestions.doc	C:\Documents and Settings\Demon\My Documents\1 - spaceAdeq	02/18/2004
RoomInfoExport.xls	I:\ROOM-Master\ISIS-Slony\Version2\RoomInfoExport.xls	02/18/2004
CBRM01A.dwg	Y:\FHRR\fac_dwg\icbmr\CBRM01A.dwg	02/18/2004
CBRM01A.dwg	Y:\FHRR\fac_dwg\icbmr\CBRM01A.dwg	02/18/2004

Record: 1 of 4



Condition/Adequacy

Business need: To track the type and condition of each Room's surfaces and systems. And to track the adequacy of each Room: *does the room serve the purpose*.

- Use the Treeview to navigate thru the Buildings, Floors, Wings, to each Room
- Pick the **Finish** (which are User defined), from the pop-downs
- Assign a **Rating** (User definable)
- Overall Rating for that Room

Background Data | Reports | Export to Excel | Tactical Applications | Help

Integrated Space Inventory System - Rooms Version

Room Info | Physical Condition / Adequacy | Building Assessment | Building Specifications | Projects | Associated Files

Building: Central Butte Royal Manor

Room Code: CBRM101

Flooring Type: Carpet

Floor Condition: 4

Wall Finish: Ceramic Tile

Wall Condition: 3

Ceiling Finish: Exposed Concrete

Ceiling Condition: 3

Window: Exterior

Window Condition: 3

Window Treatment Type: Drapes

Window Treatment Condition: 4

HVAC Type: None

Ventilation Level: 1

Plumbing Fixture: Hopper Sink

Lighting: Incandescent

Lighting Level: 2

Data Outlet: ☒ Phone Outlet: ☒ Adequate Power Outlets: ☒

Physical Condition Rating: 3.17

Physical Condition Notes: Is in relatively good condition although carpet is not consistent with the rest of the area, and the exposed Concrete ceiling is also inconsistent.

Sufficient Space for Current Function: 2

Space Appropriate for Current Function: 3

Space Utilization: 1

Adequacy Rating: 2.50

Adequacy Notes: The space is adequate but 'out of place'

Reports - Physical Condition / Adequacy by Site/Building/Floor

Report by All Buildings

Building: Central Butte Royal Manor

Floor: Main

Department: Administration

Physical Condition Rating: less than

Rating: 0

Hide Details

Close

- If 'blank' then shows all values
- 'Hide Details' for Summary Report

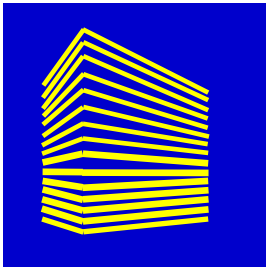
Physical Condition / Adequacy by Building/Floor/Dept																											
Building		Floor		Department																							
Central Butte Royal Manor																											
Main																											
Maintenance / Administration																											
Room	Flooring Type	Floor Condition	Wall Finish	Wall Condition	Ceiling Finish	Ceiling Condition	Window	Window Condition	Window Treatment	Window Treatment Condition	HVAC Type	Ventilation Level	Plumbing Fixture	Lighting Incandescence	Lighting Level	Phone Outlet	Adequate Power Outlet	Desk Outlet	Sufficient Space For The Function	Space Appropriate for The Function	Space Utilization						
CBRM101	Carpet	4	Ceramic Tile	3	Exposed	3	Exterior	3	Draper	4	None	0	Hopper Sink		2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2	3	1						
Area: 95.7		Functional Use: Office		Standard Area: 9.5																Physical Condition Rating		3.17		Adequacy Rating		2.50	
Physical Condition Comment: is in relatively good condition, although carpet is not consistent with the rest of the area, and the exposed concrete ceiling is also inconsistent.						Adequacy Comment: This space is adequate but 'out of place'.																					
ADMain		4.00	3.00	3.00	3.00	4.00	0.00	2.00	3.17	2.50																	
Administration / Human Resources																											
Room	Flooring Type	Floor Condition	Wall Finish	Wall Condition	Ceiling Finish	Ceiling Condition	Window	Window Condition	Window Treatment	Window Treatment Condition	HVAC Type	Ventilation Level	Plumbing Fixture	Lighting Incandescence	Lighting Level	Phone Outlet	Adequate Power Outlet	Desk Outlet	Sufficient Space For The Function	Space Appropriate for The Function	Space Utilization						
CBRM00	Carpet	2	C.T. & Wallboard	3	Exposed	3	Both	3	More Than	2	Free Stan	2	Acclit Tub		3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3	1	3						
Area: 57.4		Functional Use: HST		Standard Area: 0																Physical Condition Rating		2.57		Adequacy Rating		2.00	
Physical Condition Comment:						Adequacy Comment:																					
HRAdmin		2.00	3.00	3.00	3.00	2.00	2.00	3.00	2.57	2.00																	
CBRM01		3.00	3.00	3.00	3.00	3.00	1.00	2.50	2.87	2.25																	
CBRM		3.00	3.00	3.00	3.00	3.00	1.00	2.50	2.87	2.25																	
Monday, July 26, 2004																											
Page 1 of 1																											

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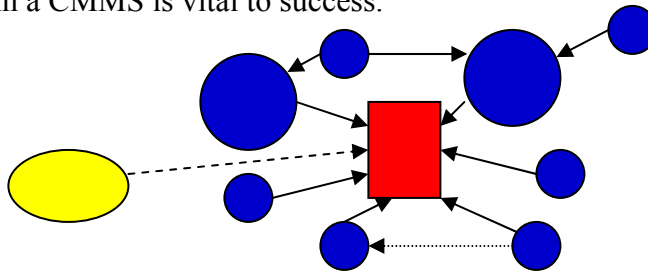
Computerized Maintenance Management Systems

Business Need: To optimize the performance, cost efficiency, and lifespan of a building through effective Maintenance Management.

Note: CADD:FM does not offer a CADD:FM developed CMMS package, nor is CADD:FM a vendor for any CMMS product, nor receive any kind of commission from vendors. CADD:FM works *with* organizations to help them implement, develop, and integrate their CMMS'.

CADD:FM's CMMS philosophy:

1. CMMS delivers the most tangible benefits of all of all the Facility Management functions.
2. The success of a CMMS is determined by people, more so than any other FM function – the people who use the CMMS must *know* maintenance, and those people must be committed to proactive and documented maintenance (i.e., not have a breakdown mentality).
3. From a systems perspective CMMS software's are the most concentric of all the FM applications: a multitude of tables culminate in the Work Order. Understanding the dynamic data relationships within a CMMS is vital to success.



CADD:FM understands Maintenance Management: the various approaches, the people issues, the financial issues, the management issues. And we understand buildings and building systems, and why MM and PM are so very important to ensuring the Facility Assets are a resource in supporting the mission of the organization.

CADD:FM's Services:

Needs Assessment	Documentation
Software Acquisition	Training
Implementation	Data Collection
Customization	Management Reporting
Designing Data Standards	Systems Integration
Designing Procedures	Systems Support
Designing Preventative Maintenance Strategies	Application Support

CADD:FM has worked with several large organizations in providing the above services. Some of the CMMS packages involved have been MP2, PMC2000, iMaint, Maximo, and Archibus. In some cases we have integrated (linked) the Client's CMMS software/data with ISIS so that the 'Location' data is supplied from the Space Inventory database. Having the CMMS integrated, or at least consistent with the Building Controls, is another important consideration.

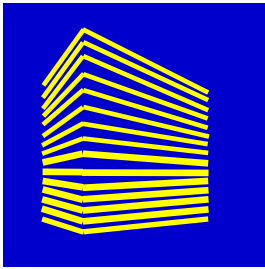
Implementing a CMMS is a tough job - do it right or don't do it at all.

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AutoCAD Interface



Autodesk

Registered Application

Developer

Business Need: To use CADD drawings as the *source* in creating a very accurate Space Inventory, and be able to use the CADD drawings as *Graphic Reports*.



PROCESS

- In AutoCAD, draw polylines in your floor plans to demark the rooms and floor (gross)
- With your Autodesk Map, open the provided CADD interface and ISIS Work Session drawing, *Link* the records in the provided ISIS MS Access (or SQL Server) database to the polylines
- Using the provided ISIS tools, export the Area (ft. or m.) from the CADD drawing to the database and then have the Room Tags auto generated

- **Toolbar guides you through the process**

G118
STAFF RM
ORR



G132
RECOVERY
ORR

Data View - A_ROOM

File Edit View Format Records Links Highlight Help

Link Template: Room_Link

RoomID	BldgCode	BldgName	FloorCode	FloorName	GroupName	DepartmentName	FunctionalUseName	Room_Area
RUH78-G104.2	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	VEST	19.3
RUH78-G105	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	JAN	143.1
RUH78-G106	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	S WRM	104.4
RUH78-G107	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	STORAGE	407.9
RUH78-G108	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	S WRM	119.4
RUH78-G109	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	OR#11	474.5
RUH78-G11	RUH78	78 Building	RUH78-G	Ground Floor	EmergencyPre-Hospital Services	EMERGENCY	EXAM 1	62
RUH78-G110	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	DR.CHANGE	163.6
RUH78-G110.1	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	S WRM	20.7
RUH78-G111	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	OFFICE	107.5
RUH78-G112	RUH78	78 Building	RUH78-G	Ground Floor	Surgical Services	OPERATING ROOM	STAFF KITCHEN	94.4

Record 18 of 334

1 Object(s) found matching 1 selected Record(s).

HIGHLIGHT NONE



G111
OFFICE
ORR

- Graphically represent your database queries – ex. show me all the rooms that belong to the 'Emergency' dept

- ISIS uses Autodesk's GIS technology
 - **proven**
 - **robust**
 - **capable**
 - **mature data management**

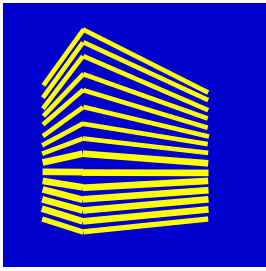
- Much better than the more expensive 3rd party proprietary systems

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CADD Resources



Autodesk

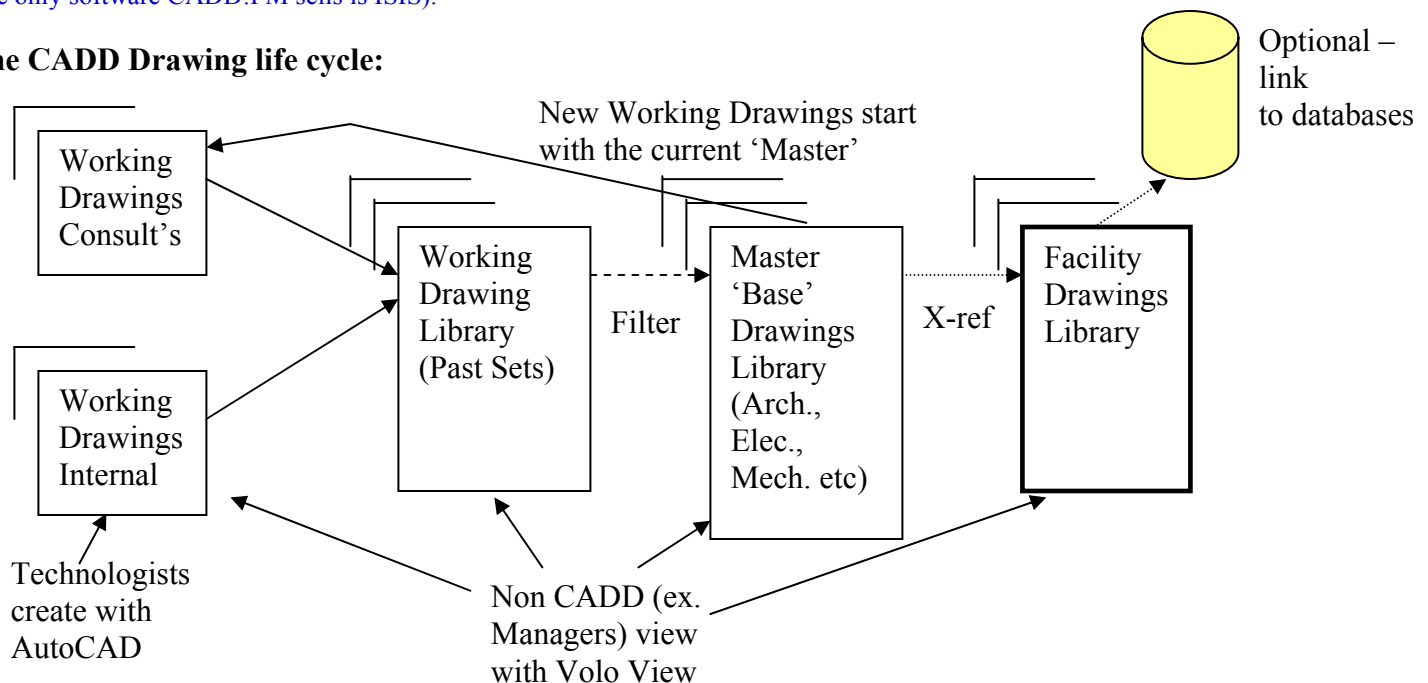
Registered Application Developer

Business Need: To position your CADD systems and data as a **resource** in the ongoing *Operations* and *Management* of your facilities, not just as a drafting tool for the technologists.

To achieve this: 1) Design, document, and implement CADD Standards and Procedures (for both internal and external use), 2) Integrate and/or reconcile the CADD Resources with your other information systems, 3) Empower non-cadd users with the ability to view and print the CADD drawings.

Note: CADD:FM Management Services Ltd. is not an Autodesk dealer. We do not sell AutoCAD or any other CADD software's (the only software CADD:FM sells is ISIS).

The CADD Drawing life cycle:



Facility Drawings- Contain the graphic information for Managing and Operating facilities. Layers of information relating to your FM business functions: Code drawings (ex. Code Red routes), Fire (ex. main sprinkler valve locations, fire extinguishers, etc), Room Identification and Usage (Room Numbers, Occupants, Use, Area, etc.), Communications (ex. cabling and drops, telephone equip. etc.).

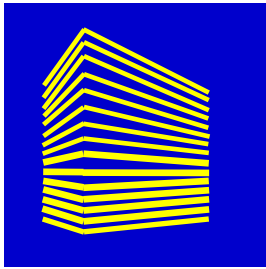
CADD drawings, unlike blueprints, are dynamic – they can be used over and over again throughout the life cycle of a building. And they can be used for more than just construction drawings, but as a resource in day to day operations and planning. Progressive Facility Managers work *with* their Design Consultants in sharing CADD drawings (i.e., contract deliverables) and then leveraging these electronic deliverables in working with other groups, both internal (ex. cut/paste a floor plan into an email/letter) or external (ex. provide the CADD drawings to your Building Controls vendor). But only well managed (CADD drafting Standards and Procedures) and organized (drawing libraries) CADD drawings can be used as a resource.

CADD:FM is Saskatchewan's premier Facility Management Information Systems business solutions provider

Regina (306) 789-2060

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About

CADD:FM Management Services Ltd.



Autodesk

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CADD:FM's Mission: To help organizations have the information they need to effectively manage and operate their Facility Assets.

CADD:FM's Approach: To provide *desktop* solutions which are **simple, capable, inexpensive, technically strong**, are **easy** to use and maintain, and deliver very **high quality usable data** through **flexible reporting**. CADD:FM works with you in leveraging your existing data, systems, practices, and human resources to deliver a successful and **pragmatic** solution. CADD:FM will provide whatever services suit the situation – from needs analysis and system design, through development, implementation, training, data collection/development, and support. Our business style is based on building relationships and providing excellent **service**.

CADD:FM Management Services Ltd. is an Information Services consulting and software development firm specializing in Facility Management applications. Since 1989, CADD:FM has been assisting organizations across Western Canada in applying CADD and CAFM technologies to develop Facility Management business solutions. CADD:FM's expertise is in business systems analysis, system design and development, data development, data management and interactive graphics-database applications, particularly in the AutoCAD Map and Microsoft Access environment. Since 1998 **ISIS** has been the main product/service of CADD:FM.

Services:

- Business Systems Analysis:
 - Feasibility Studies
 - Business Needs Assessment
 - On Site Investigations - Existing Systems/Data
- Computer Aided Facility Management
 - CAFM System Development/Management Strategies
 - CAFM Data Development/Management
 - Space Inventory systems (ISIS)
 - Building Assessment Systems
 - FM Database applications (MS Access/Office Suite)
 - CADD<>Database *linked* applications
 - Systems Integration
- CADD Resources Development
 - AutoCAD Development
 - CADD Management
 - Autodesk Map FM Applications
 - CADD Data Development (ex. Intelligent Symbols Library)
 - CADD Viewing systems
- CMMS Implementation/Support:
 - MP2
 - PMC2000 / iMaint
 - Crystal Reports

Some past and Current Clients:

- Health:
 - Five Hills Health Region
 - Regina Qu'Appelle Health Region
 - Sun Country Health Region
 - Saskatoon Health Region
 - Prince Albert Health Region
 - Sask Health
- Government:
 - City of Saskatoon
 - City of Winnipeg, Civic Buildings Department
 - City of Winnipeg, Police Department
 - Public Works Canada
 - Sask. Government Insurance
- Education:
 - University of Alberta
 - University of British Columbia
 - University of Regina
- Other:
 - Alberta Construction Association
 - Dominion Construction
 - Great West Life Insurance Company

Evolution of ISIS:

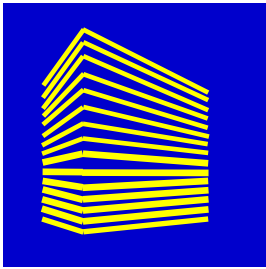
Although CADD:FM has always been in the CAFM business, in 1994 CADD:FM created the first client specific version of ISIS (AutoCAD 12/ADE with dBase IV). But this version had limitations and was not as good a product as the major 3rd party CAFM systems and therefore was not offered to the public. Eventually technology advancements made it possible to create the first AutoCAD Map/MS Access version of ISIS in 1998. This resulted in a huge improvement in the product, in many ways better than the major 3rd party products which (still) use proprietary technology. ISIS uses modern database management structures in a non-proprietary environment, combined with the robust strength and mature data management of G.I.S. technology. ISIS/CADD:FM was now a company worthy of becoming an Autodesk Registered Developer. Ironically, just as desktop technology was becoming strong enough to handle *most* CAFM needs, the major 3rd party software's abandoned the desktop for the Enterprise environment. But most organizations do not justify the large expenditures and high maintenance of enterprise solutions. In fact the first install of ISIS was to replace an existing enterprise solution. A good install base evolved with each successive ISIS Client developing new applications which utilized the core Space Inventory data. The latest version, ISIS FM, is the consolidation of the best of those 'add-on' applications, combined with refinements from sixteen years of real life use. ISIS is currently being used to track the space in **tens of millions** of sq. ft of space. Soon to be released to the public shall be the BOMA version which tracks space in commercial offices following the BOMA method (beta versions already tracking over a million sq.ft.).

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Case Study – Sun Country Health Region

In 1998 the South Central Health District had a solid infrastructure of enterprise and desktop systems deploying the usual standard operating environment (financial systems, Office, etc) but did not have an organized suite of applications to support the Maintenance and Facility Management functions. The SCHD had two main hospitals and 8 smaller Health Centers. Most were older buildings and in various states of repair. Maintenance funding was insufficient, particularly as changes within the health system were driving closures/consolidations and renovations. Even so, the SCHD was still one of the more successful Health Districts at maintaining it's properties because their Physical Plant centrality managed maintenance to the District. However, there was a need to implement a more structured and formal approach to Preventative Maintenance.

1998

- The Director of Physical Plant, Don Rose, and the V.P. of Finance Ken Adams make a decision to implement technology into Physical Plant Management and hire CADD:FM to conduct a Feasibility Study.
- CADD:FM implements the Plan, starting with the collection of the existing CADD drawings of past projects from the Architects/Engineers and then begins creating the Space Inventory.
- A Computerized Maintenance Management System (CMMS) software, PMC2000 (by DPSI Inc) is installed. A CMMS dispatch person is hired. CMMS procedures and Standards are implemented. **Demand Work Orders are generated** and a Close Out process enforced (Tammy makes this system work day to day).
- **CADD Library/Space Inventory completed**, is linked to PMC. Management viewing software implemented to allow use of CADD Resources.
- **Tactical applications** using the Space Inventory are explored: Keys Management, Project Tracking, Housekeeping, Furniture Inventory, Building Assessment. **Layers of information** are created in the CADD Library, ex. Code Red Signage.
- **Management Reporting** of CMMS data developed using Crystal Reports – custom editable reports provide comprehensive breakdown of maintenance functions. Reports also identify where there is incomplete or inconsistent data.
- New V.P., Lloyd Searcy, continues support, expects results.
- CMMS standards and procedures are re reviewed, particularly data naming conventions, system matures
- SCH District becomes Sun Country Health Region - now have 26 buildings over a region stretching 500 km.
- Space Inventory expanded to include new sites, (ongoing).
- **Preventative Maintenance** module within PMC2000 is implemented. One person, (Emile) in SCHR identified to identify PM requirements (Schedules/Procedures) and build the data in PMC2000. Methods for Wide Area distribution and return of Work Orders (both PM and Demand) are implemented.
- **Parts Inventory** implemented, **Cost Centre** numbers used to track all costs. Management Reporting adjusted. New large central hospital commences construction – all systems expanded to include. Make effort to collect relevant M&O data during construction
- Professional engineer comes on staff, Brian Cowan, bringing a method for doing **Technical Building Evaluations** – system built into ISIS. Evaluations of existing buildings begins.
- All systems migrated to **Citrix Server** so that these resources are available to staff everywhere in Region.

2004

The Sun Country Health Region Physical Plant was/is successful because of one reason – **people**. It started with a Director of Physical Plant who had a vision. He was fortunate to have executive management who were/are willing to invest in the future and not just 'survive' with a breakdown mentality (no coincidence that this Region maintains a surplus every year). The Director created a team made up of the employees of SCHR Physical Plant, SCHR I.T., and CADD:FM. Most importantly, it was made clear by the Director that this is how the maintenance business shall be conducted in SCHR Physical Plant. Now it is to the credit of front line maintenance people, the Chris's, Larry's, and Brian's out there who can take pride in having one of the best Maintenance departments in Health.

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