



BUILDING 2014
INNOVATION

National Institute of
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CONFERENCE & EXPO

COBie

Overview & Team Organization

a presentation for bSa information exchange day

by bill.east@us.army.mil



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07-Jan-14



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“much valuable data associated with the design, construction, and operation of a facility are lost during its life span”

National Research Council (1983) “A Report from the 1983 Workshop on Advanced Technology For Building Design and Engineering, National Academy Press, Washington, DC. 1984.



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COBie is a specification
of minimum required
product, equipment, O&M
deliverables

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COBie is delivered in one of four possible formats

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FINISH SCHEDULE																												
ROOM NO.		ROOM NAME		FLOOR		WALLS												CEILING		REMARKS								
						BASE				NORTH				EAST							SOUTH				WEST			
						MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	MAT.	COLOR				MAT.	COLOR	MAT.	COLOR	MAT.	COLOR		
1401	PAST ADMIN/RECEPTION	CP	CP4	RB	RB1	DMP	P11	DMP	P11	-	-	-	DMP	P11	ACT	ACT11	2400											
1402	TRICARE OFFICE	CP	CP4	RB	RB1	DMP	P11	DMP	P11	DMP	P11	DMP	P11	DMP	P11	ACT	ACT11	2400										
1403	TRICARE OFFICE	CP	CP4	RB	RB1	DMP	P11	DMP	P11	DMP	P11	DMP	P11	DMP	P11	ACT	ACT11	2400										
1404	TRICARE OFFICE	CP	CP4	RB	RB1	DMP	P11	DMP	P11	DMP	P11	DMP	P11	DMP	P11	ACT	ACT11	2400										
1405	TRICARE OFFICE	CP	CP4	RB	RB1	DMP	P11	DMP	P11	DMP	P11	DMP	P11	DMP	P11	ACT	ACT11	2400										
1406	TRICARE OFFICE	CP	CP4	RB	RB1	DMP	P11	DMP	P11	DMP	P11	DMP	P11	DMP	P11	ACT	ACT11	2400										
1407	TRICARE OFFICE	CP	CP4	RB	RB1	DMP	P11	DMP	P11	DMP	P11	DMP	P11	DMP	P11	ACT	ACT11	2400										
1408	PHARMACY OFFICE	CP	CP4	RB	RB1	DMP	P11	DMP	P11	DMP	P11	DMP	P11	DMP	P11	ACT	ACT11	2400										

DOOR #	METH	HEIGHT	WALLS												REMARKS
			S	E	E	E	E	E	E	E	E	E	E	E	
1401	85	2125	45	A	TL										
1402	85	2125	45	A	TL										
1403	85	2125	45	A	TL										
1404	85	2125	45	A	TL										
1405	85	2125	45	A	TL										
1406	85	2125	45	A	TL										
1407	85	2125	45	A	TL										
1408	85	2125	45	A	TL										
1409	85	2125	45	A	TL										
1410	85	2125	45	A	TL										
1411	85	2125	45	A	TL										
1412	85	2125	45	A	TL										
1413	85	2125	45	A	TL										
1414	85	2125	45	A	TL										
1415	85	2125	45	A	TL										
1416A	85	2125	45	A	TL										
1416B	85	2125	45	A	TL										
1417	85	2125	45	A	TL										
1418	85	2125	45	A	TL										
1419	85	2125	45	A	TL										
1420	85	2125	45	A	TL										
1421	85	2125	45	A	TL										
1422	85	2125	45	A	TL										
1423	85	2125	45	A	TL										
1424	85	2125	45	A	TL										
1425	85	2125	45	A	TL										
1426	85	2125	45	A	TL										
1427	85	2125	45	A	TL										
1428	85	2125	45	A	TL										
1429	85	2125	45	A	TL										
1430	85	2125	45	A	TL										
1431	85	2125	45	A	TL										
1432	85	2125	45	A	TL										
1433	85	2125	45	A	TL										
1434	85	2125	45	A	TL										
1435	85	2125	45	A	TL										
1436	85	2125	45	A	TL										
1437	85	2125	45	A	TL										
1438	85	2125	45	A	TL										
1439	85	2125	45	A	TL										
1440	85	2125	45	A	TL										
1441	85	2125	45	A	TL										
1442	85	2125	45	A	TL										
1443	85	2125	45	A	TL										
1444	85	2125	45	A	TL										
1445	85	2125	45	A	TL										
1446	85	2125	45	A	TL										
1447	85	2125	45	A	TL										
1448	85	2125	45	A	TL										
1449	85	2125	45	A	TL										
1450	85	2125	45	A	TL										
1451	85	2125	45	A	TL										
1452	85	2125	45	A	TL										
1453	85	2125	45	A	TL										
1454	85	2125	45	A	TL										
1455	85	2125	45	A	TL										
1456	85	2125	45	A	TL										
1457	85	2125	45	A	TL										
1458	85	2125	45	A	TL										
1459	85	2125	45	A	TL										
1460	85	2125	45	A	TL										
1461	85	2125	45	A	TL										
1462	85	2125	45	A	TL										
1463	85	2125	45	A	TL										
1464	85	2125	45	A	TL										
1465	85	2125	45	A	TL										
1466	85	2125	45	A	TL										
1467	85	2125	45	A	TL										
1468	85	2125	45	A	TL										
1469	85	2125	45	A	TL										
1470	85	2125	45	A	TL										
1471	85	2125	45	A	TL										
1472	85	2125	45	A	TL										
1473	85	2125	45	A	TL										
1474	85	2125	45	A	TL										
1475	85	2125	45	A	TL										
1476	85	2125	45	A	TL										
1477	85	2125	45	A	TL										
1478	85	2125	45	A	TL										
1479	85	2125	45	A	TL										
1480	85	2125	45	A	TL										



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FINISH SCHEDULE													
ROOM NO.	ROOM NAME	FLOOR		WALL		NORTH		EAST		SOUTH		WEST	
		WAT.	COLOR	WAT.	COLOR	WAT.	COLOR	WAT.	COLOR	WAT.	COLOR	WAT.	COLOR
1A01	PAT. ADMIN. RECEPTION	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A02	RMO ANALYST	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A03	TRICARE OFFICE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A04	TRICARE OFFICE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A05	TRICARE OFFICE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A06	TRICARE OFFICE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A07	TRICARE OFFICE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A08	PHARM. OFFICE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A09	W. TOILET	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A10	LOUNGE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A11	JAN.	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A12	W. TOILET	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A13	STAFF E.L.T.	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A14	SUPER/NCOIC	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A15	COUNSELING	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A16	PHARM. DISP.	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A17	CENTRAL WAITING	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A18	CORRIDOR	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A19	CORRIDOR	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A20	CORRIDOR	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A21	CORRIDOR	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A22	STAFF	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A23	RECEIPT	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A24	SPECIALTY TOILET	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A25	BLIND DRINK	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A26	LAB	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A27	PAT. STAFF E.L.T.	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A28	LAB OFF.	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A29	RECEIPT	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A30	CENTRAL STORAGE	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A31	STAFF	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A32	STAFF E.L.T.	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A33	CLIN. SUPERVISOR	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A34	RECEIPT	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT
1A35	STAFF E.L.T.	04	04	RB	RB	04	04	PT	PT	04	04	PT	PT

COBie.Space Worksheet

	A	D	E	F	K	L	M
	Name	Category	Floor/Name	Description	Usable Height	Gross Area	Net Area
1	1A01	13-11 11 31: Reception Space	First Floor	PATIENT ADMIN. RECEPT.	2700	19,767	19,767
2	1A02	13-15 11 34 11: Office	First Floor	RMO ANALYST	2400	27,693	27,693
3	1A03	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	2400	8,874	8,874
4	1A04	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	2400	9,545	9,545
5	1A05	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	2400	8,999	8,999
6	1A06	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	2400	10,492	10,492
7	1A07	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	2400	8,73	8,73
8	1A08	13-15 11 34 11: Office	First Floor	PHARM. OFFICE	2400	10,45	10,45
9	1A09	13-15 11 34 11: Restroom	First Floor	W. TOILET	2400	10,854	10,854
10	1A10	13-15 11 34 11: Break Room	First Floor	LOUNGE	2400	10,272	10,272
11	1A11	13-15 11 34 11: Storage Room	First Floor	JAN.	2400	2,037	2,037
12	1A12	13-15 11 34 11: Restroom	First Floor	M. TOILET	2400	9,91	9,91
13	1A13	13-15 11 34 11: Restroom	First Floor	STAFF TOILET	2400	4,468	4,468
14	1A14	13-15 11 34 11: Office	First Floor	SUPER / NCOIC	2400	7,23	7,23
15	1A15	13-15 11 34 11: Other Healing Spaces	First Floor	COUNSELING	2400	6,398	6,398
16	1A16	13-15 11 34 11: Storage Room	First Floor	PHARM. DISP.	2400	67,549	67,549

COBie.Attribute Worksheet

	A	D	E	F	G	H
	Name	Category	Sheet Name	Rev/Name	Value	Unit
58	BaseColor	RequireSpace	1A05	ROPPE - 40 FAWN - 4" HIGH RUBBER COVE	n/a	
59	BaseMaterial	RequireSpace	1A05	RUBBER BASE	n/a	
60	CeilingColor	RequireSpace	1A05	ARMSTRONG CEILING TILE - CIRUS REGULA	n/a	
61	CeilingMaterial	RequireSpace	1A05	ACOUSTICAL CEILING TILE	n/a	
62	FloorColor	RequireSpace	1A05	INTERFACE - CARIBBEAN #3080 ANTIQUA	n/a	
63	FloorMaterial	RequireSpace	1A05	CARPET	n/a	
64	WallColor-East	RequireSpace	1A05	DEVCO # 2W18-2 PRARIE BUFF	n/a	
65	WallColor-North	RequireSpace	1A05	DEVCO # 2W18-2 PRARIE BUFF	n/a	
66	WallColor-South	RequireSpace	1A05	DEVCO # 2W18-2 PRARIE BUFF	n/a	
67	WallColor-West	RequireSpace	1A05	DEVCO # 2W18-2 PRARIE BUFF	n/a	
68	WallMaterial-East	RequireSpace	1A05	GYPSUM WALLBOARD WITH PAINT	n/a	
69	WallMaterial-North	RequireSpace	1A05	GYPSUM WALLBOARD WITH PAINT	n/a	
70	WallMaterial-South	RequireSpace	1A05	GYPSUM WALLBOARD WITH PAINT	n/a	
71	WallMaterial-West	RequireSpace	1A05	GYPSUM WALLBOARD WITH PAINT	n/a	

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FAN SCHEDULE														
UNIT NO.	LOCATION	TOTAL AIR L/S	INTERLOCK WITH	TYPE FAN	MAX. RPM	EXT. S.P. Pa	DESIGN MOTOR WATTS	SONES ±	POWER			MAX. SOUND POWER LEVEL db 3m CODE BAND	DRIVE	REMARKS
									VOLT	PH	CYC			
RAF-1	2D-05	9130	AHU-1	1	1050	630	15000	-	480	3	60	84	BELT	SEE NOTE THIS SHEET
RAF-2	2D-05	8080	AHU-2	1	920	520	11000	-	480	3	60	82	BELT	SEE NOTE THIS SHEET
EF1-1	HF, BLOCK 1B	715	AHU-1	2	880	225	370	-	120	1	60	73	BELT	
EF1-2	HF, BLOCK 2B	860	AHU-1	2	775	155	250	-	120	1	60	73	BELT	
EF1-3	HF, BLOCK 1C	1365	AHU-1	2	925	225	750	-	480	3	60	76	BELT	*
EF1-4	HF, BLOCK 1C	70	AHU-1	2	1485	125	30	-	120	1	60	56	DIRECT	N/ SPEED CONTROLLER
EF2-1	2D-05	810	AHU-2	3	750	215	350	-	208	3	60	73	BELT	*
EF2-2	2D-05	1130	AHU-2	3	615	250	750	-	480	3	60	77	BELT	*
EF2-3	2D-05	270	AHU-2	3	1850	325	370	-	120	1	60	76	BELT	
EF-3	1E-15	450	THERMOSTAT	4	27.5	95	125	13.1	120	1	60	-	DIRECT	
SF-4	1E-15A	55	THERMOSTAT	4	20.6	95	62	13.2	120	1	60	-	DIRECT	
EF-5	1E-17	100	THERMOSTAT	4	20.6	95	62	13.2	120	1	60	-	DIRECT	
EF-6	1E-20	300	THERMOSTAT	4	20.6	95	62	13.2	120	1	60	-	DIRECT	
EF-7	1E-21	50	THERMOSTAT	4	20.6	95	62	13.2	120	1	60	-	DIRECT	
SF-1	2D-05	3100	THERMOSTAT	5	45.5	125	750	23	480	3	60	-	DIRECT	* INTERLOCK WITH SPACE SMOKE DETECTOR TO SHUT DOWN FAN IN SHUT DOWN MODE

COBie.Component Worksheet

COBie.Attribute Worksheet

	A	D	E	F
	Name	Type/Name	Space	Description
1524	Fan- EF1-1	Fan- Roof Mounted Type 1	2R02	Centrifugal Fan- Roof Mounted
1525	Fan- EF1-2	Fan- Roof Mounted Type 2	3R01	Centrifugal Fan- Roof Mounted
1526	Fan- EF1-3	Fan- Roof Mounted Type 3	2R02	Centrifugal Fan- Roof Mounted
1527	Fan- EF1-4	Fan- Roof Mounted Type 4	2R02	Centrifugal Fan- Roof Mounted
1528	Fan- EF2-1	Fan- In Line Type 1	2D05	Centrifugal Fan- In Line
1529	Fan- EF2-2	Fan- In Line Type 2	2D05	Centrifugal Fan- In Line
1530	Fan- EF2-3	Fan- In Line Type 3	2D05	Centrifugal Fan- In Line
1531	Fan EF-3	Fan- Sidewall Type 2	1E15	Exhaust Fan
1532	Fan EF-5	Fan- Sidewall Type 3	1E17	Exhaust Fan
1533	Fan EF-6	Fan- Sidewall Type 3	1E20	Exhaust Fan
1534	Fan EF-7	Fan- Sidewall Type 3	1E21	Exhaust Fan
1535	Fan SF-1	Fan- Sidewall Type 1	2D05	Supply Fan
1536	Fan SF-4	Fan- Sidewall Type 3	1E15A	Exhaust Fan

	A	D	E	F	G	H
	Name	Category	SheetName	RowName	Value	Unit
6772	Design Motor	Requireme	Component	Fan- EF1-1	370	Watts
6773	Drive	Requireme	Component	Fan- EF1-1	Belt	n/a
6774	Ext. S.P.	Requireme	Component	Fan- EF1-1	225	Pa
6775	Frequency	Requireme	Component	Fan- EF1-1	60	Hertz
6776	Interlock With	Requireme	Component	Fan- EF1-1	AHU-1	n/a
6777	Max Speed	Requireme	Component	Fan- EF1-1	880	RPM
6778	Max. Sound Power Level	Requireme	Component	Fan- EF1-1	75	db
6779	Phase	Requireme	Component	Fan- EF1-1	1	n/a
6780	Remarks	Requireme	Component	Fan- EF1-1	n/a	n/a
6781	SONES	Requireme	Component	Fan- EF1-1	n/a	n/a
6782	Total Air	Requireme	Component	Fan- EF1-1	715	L/s
6783	Voltage	Requireme	Component	Fan- EF1-1	120	Volts

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AS-BUILT RECORD OF EQUIPMENT AND MATERIALS

Furnish [one copy] [[_____] copies] of preliminary record of equipment and materials used on the project [15] [_____] days prior to final inspection. This preliminary submittal will be reviewed and returned [2] [_____] days after final inspection with Government comments. Submit [Two] [_____] sets of final record of equipment and materials [10] [_____] days after final inspection. Key the designations to the related area depicted on the contract drawings. List the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA

Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used

REAL PROPERTY EQUIPMENT

Furnish a list of installed equipment furnished under this contract. Include all information usually listed on manufacturer's name plate. In the "EQUIPMENT-IN-PLACE LIST" include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. Furnish a draft list at time of transfer. Furnish the final list [30] [_____] days after transfer of the completed facility.

Source: UFGS 01 78 00 Closeout Submittals,
<http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2001%2078%2000.pdf>



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SPARE PARTS DATA

Submit [two] [____] copies of the Spare Parts Data list.

- a. Indicate manufacturer's name, part number, nomenclature, and stock level required for maintenance and repair. List those items that may be standard to the normal maintenance of the system.

PREVENTATIVE MAINTENANCE

Submit Preventative Maintenance, Condition Monitoring (Predictive Testing) and Inspection schedules with instructions that state when systems should be retested.

- a. Define the anticipated length of each test. test apparatus. number of personnel identified by responsibility, and a testing validation procedure permitting the record operation capability requirements within the schedule. Provide a signoff blank for the Contractor and Contracting Officer for each test feature; e.g., liter per second, rpm, kilopascal gpm, rpm, psi. Include a remarks column for the testing validation procedure referencing operating limits of time, pressure, temperature, volume, voltage, current, acceleration, velocity, alignment, calibration, adjustments, cleaning, or special system notes. Delineate procedures for preventative maintenance, inspection, adjustment, lubrication and cleaning necessary to minimize corrective maintenance and repair.
- b. Repair requirements must inform operators how to check out, troubleshoot, repair, and replace components of the system. Include electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting of the system after acceptance.

Source: UFGS 01 78 00 Closeout Submittals,
<http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2001%2078%2000.pdf>



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WARRANTY MANAGEMENT PLAN

- d. A list for each warranted equipment, item, feature of construction or system indicating:
- (1) Name of item.
 - (2) Model and serial numbers.
 - (3) Location where installed.
 - (4) Name and phone numbers of manufacturers or suppliers.
 - (5) Names, addresses and telephone numbers of sources of spare parts.
 - (6) Warranties and terms of warranty. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have extended warranties must be indicated with separate warranty expiration dates.
 - (7) Cross-reference to warranty certificates as applicable.
 - (8) Starting point and duration of warranty period.
 - (9) Summary of maintenance procedures required to continue the warranty in force.
 - (10) Cross-reference to specific pertinent Operation and Maintenance manuals.
 - (11) Organization, names and phone numbers of persons to call for warranty service.
 - (12) Typical response time and repair time expected for various warranted equipment.

Source: UFGS 01 78 00 Closeout Submittals,
<http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2001%2078%2000.pdf>



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WARRANTY TAGS

At the time of installation, tag each warranted item with a durable, oil and water resistant tag approved by the Contracting Officer. Attach each tag with a copper wire and spray with a silicone waterproof coating. Also, submit [two] [] record copies of the warranty tags showing the layout and design. The date of acceptance and the QC signature must remain blank until the project is accepted for beneficial occupancy. Show the following information on the tag.

Type of product/material	
Model number	
Serial number	
Contract number	
Warranty period from/to	
Inspector's signature	
Construction Contractor	
Address	
Telephone number	
Warranty contact	
Address	
Telephone number	
Warranty response time	

Source: UFGS 01 78 00 Closeout Submittals,
<http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2001%2078%2000.pdf>



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HARDWARE SCHEDULE

Prepare and submit hardware schedule in the following form:

Hardware Item	Quantity	Size	Reference Publi- cation Type No.	Finish	Mfr Name and Catalog No.	Key Control Symbols	UL Mark (If fire rated and listed	BHMA Finish Desig- nation

SIGNAGE, INSTALLATION

SIGNAGE PLACEMENT SCHEDULE				
Door/Room Number	Sign Type	Text	Insert (s)	Symbol/Remarks
[]	[]	[]	[]	[]

Source: UFGS 08 71 00 Door Hardware
<http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2008%2071%2000.pdf>

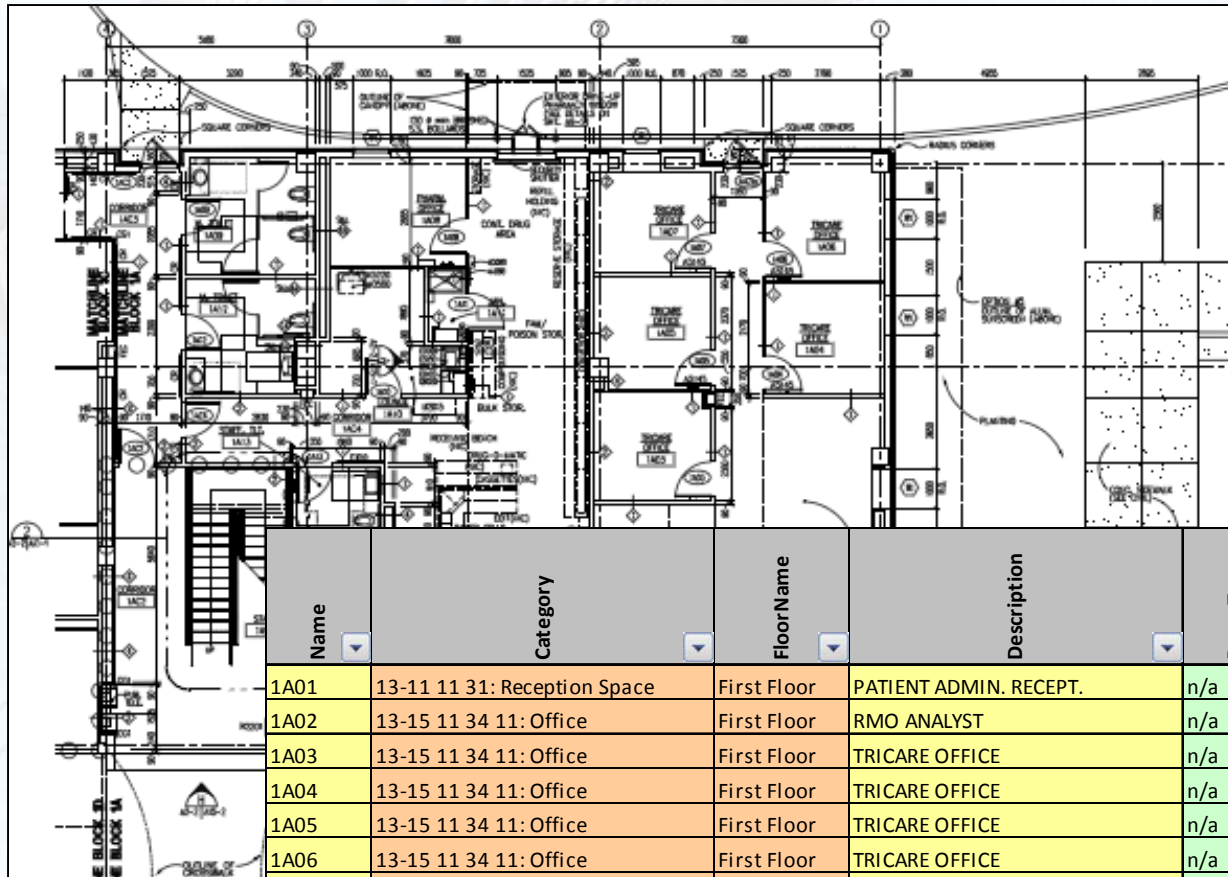
Source: UFGS 10 44 00 Interior
 Signage <http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2010%2044%2000.20.pdf>



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Name	Category	FloorName	Description	RoomTag	UsableHeight	GrossArea	NetArea
1A01	13-11 11 31: Reception Space	First Floor	PATIENT ADMIN. RECEPT.	n/a	2700	19.767	19.767
1A02	13-15 11 34 11: Office	First Floor	RMO ANALYST	n/a	2400	27.693	27.693
1A03	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	n/a	2400	8.874	8.874
1A04	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	n/a	2400	9.545	9.545
1A05	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	n/a	2400	8.999	8.999
1A06	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	n/a	2400	10.492	10.492
1A07	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	n/a	2400	8.73	8.73
1A08	13-15 11 34 11: Office	First Floor	PHARM. OFFICE	n/a	2400	10.45	10.45
1A09	13-41 11 14 21: Restroom	First Floor	W. TOILET	n/a	2400	10.854	10.854
1A10	13-51 11 21: Break Room	First Floor	LOUNGE	n/a	2400	10.272	10.272
1A11	13-75 11 11: Storage Room	First Floor	JAN.	n/a	2400	2.037	2.037



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construction signage

Name	Category	FloorName	Description	RoomTag	UsableHeight	GrossArea	NetArea
1A01	13-11 11 31: Reception Space	First Floor	PATIENT ADMIN. RECEPT.		2700	19.767	19.767
1A02	13-15 11 34 11: Office	First Floor	RMO ANALYST		2400	27.693	27.693
1A03	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	101,Dr. Jones	2400	8.874	8.874
1A04	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	102,Dr. Smith	2400	9.545	9.545
1A05	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	103	2400	8.999	8.999
1A06	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	106	2400	10.492	10.492
1A07	13-15 11 34 11: Office	First Floor	TRICARE OFFICE	105	2400	8.73	8.73
1A08	13-15 11 34 11: Office	First Floor	PHARM. OFFICE	105A	2400	10.45	10.45
1A09	13-41 11 14 21: Restroom	First Floor	W. TOILET		2400	10.854	10.854
1A10	13-51 11 21: Break Room	First Floor	LOUNGE	n/a	2400	10.272	10.272
1A11	13-75 11 11: Storage Room	First Floor	JAN.	n/a	2400	2.037	2.037



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FAN SCHEDULE

UNIT NO.	LOCATION	TOTAL HP L/S	INTERLOCK WITH	TYPE FAN	MFR. RPM	EXT. S.P. Po	DESIGN MOTOR RATTS	SCALES ±	POWER			MAX. SOUND POWER LEVEL @ 3rd OOTHE BASE	DRIVE	REMARKS
									VOLT	PH	CYC			
RAF-1	2D-05	9130	AHU-1	1	1050	620	15000	=	480	3	60	84	BELT	SEE NOTE THIS SHEET
RAF-2	2D-05	8290	AHU-2	1	950	520	11000	=	480	3	60	82	BELT	SEE NOTE THIS SHEET
EF1-1	WF. BLOCK 1E	715	AHU-1	2	880	225	370	=	120	1	60	75	BELT	
EF1-2	WF. BLOCK 2B	860	AHU-1	2	775	155	290	=	120	1	60	73	BELT	
EF1-3	WF. BLOCK 1E	1365	AHU-1	2	925	225	750	=	480	3	60	75	BELT	*
EF1-4	WF. BLOCK 1E	70	AHU-1	2	1485	125	30	=	120	1	60	56	DIRECT	W/ SPEED CONTROLLER
EF2-1	2D-05	810	AHU-2	3	750	215	550	=	208	3	60	73	BELT	*
EF2-2	2D-05	1130	AHU-2	3	615	250	750	=	480	3	60	77	BELT	*
EF2-3	2D-05	270	AHU-2	3	1650	325	370	=	120	1	60	76	BELT	
EF-3	1E-15	450	THERMOSTAT	4	27.5	95	125	13.1	120	1	60	=	DIRECT	
SF-4	1E-15A	50	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	=	DIRECT	
EF-5	1E-17	100	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	=	DIRECT	
EF-6	1E-20	100	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	=	DIRECT	
EF-7	1E-21	50	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	=	DIRECT	
SF-1	2D-05	3100	THERMOSTAT	5	45.5									

	A	D	E	J	K	L	M	N	O
1	Name	Type Name	Space	Serial Number	Installation Date	Warranty Start Date	Tag Number	Bar Code	Asset Identifier
534	Fan- EF2-1	Fan- In Line Type 1	2D05	n/a	n/a	n/a	n/a	n/a	n/a
535	Fan- EF2-2	Fan- In Line Type 2	2D05	n/a	n/a	n/a	n/a	n/a	n/a
536	Fan- EF2-3	Fan- In Line Type 3	2D05	n/a	n/a	n/a	n/a	n/a	n/a
537	Fan- EF1-1	Fan- Roof Mounted Type 1	2R02	n/a	n/a	n/a	n/a	n/a	n/a
538	Fan- EF1-2	Fan- Roof Mounted Type 2	3R01	n/a	n/a	n/a	n/a	n/a	n/a
539	Fan- EF1-3	Fan- Roof Mounted Type 3	2R02	n/a	n/a	n/a	n/a	n/a	n/a
540	Fan- EF1-4	Fan- Roof Mounted Type 4	2R02	n/a	n/a	n/a	n/a	n/a	n/a
541	Fan- SF-1	Fan- Sidewall Type 1	2D05	n/a	n/a	n/a	n/a	n/a	n/a
542	Fan- EF-3	Fan- Sidewall Type 2	1E15	n/a	n/a	n/a	n/a	n/a	n/a
543	Fan- EF-5	Fan- Sidewall Type 3	1E17	n/a	n/a	n/a	n/a	n/a	n/a
544	Fan- EF-6	Fan- Sidewall Type 3	1E20	n/a	n/a	n/a	n/a	n/a	n/a
545	Fan- EF-7	Fan- Sidewall Type 3	1E21	n/a	n/a	n/a	n/a	n/a	n/a
546	Fan- SF-4	Fan- Sidewall Type 3	1E15A	n/a	n/a	n/a	n/a	n/a	n/a



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FAN SCHEDULE														
UNIT NO.	LOCATION	TOTAL AIR L/S	INTERLOCK WITH	TYPE FAN	MAX. RPM	EXT. S.P. F.D.	DESIGN MOTOR RATTS	SCALES ±	POWER			MAX. SOUND POWER LEVEL @ 3rd OOTIE BASE	DRIVE	REMARKS
									VOLT	PH	CYC			
RAF-1	2D-05	9130	AHU-1	1	1050	620	15000	-	480	3	60	B4	BELT	SEE NOTE THIS SHEET
RAF-2	2D-05	8290	AHU-2	1	950	520	11000	-	480	3	60	B2	BELT	SEE NOTE THIS SHEET
EF1-1	WF. BLOCK 1E	715	AHU-1	2	880	225	320	-	120	1	60			
EF1-2	WF. BLOCK 2B	860	AHU-1	2	775	155	290	-	120	1	60			
EF1-3	WF. BLOCK 1E	1365	AHU-1	2	925	225	750	-	480	3	60			
EF1-4	WF. BLOCK 1E	70	AHU-1	2	1485	125	30	-	120	1	60			
EF2-1	2D-05	860	AHU-2	3	750	215	550	-	208	3	60			
EF2-2	2D-05	1130	AHU-2	3	615	250	750	-	480	3	60			
EF2-3	2D-05	270	AHU-2	3	1650	325	320	-	120	1	60			
EF-3	1E-15	450	THERMOSTAT	4	27.5	95	125	13.1	120	1	60	-	DIRECT	
SF-4	1E-15A	50	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	-	DIRECT	
EF-5	1E-17	100	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	-	DIRECT	
EF-6	1E-20	100	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	-	DIRECT	
EF-7	1E-21	50	THERMOSTAT	4	25.6	95	62	13.2	120	1	60	-	DIRECT	
SF-1	2D-05	3100	THERMOSTAT	5	45.5		A				D		E	

warranty start

tag list

	A	D	E		N	O			
	Name	Type Name	Space		Serial Number	Installation Date	Warranty Start Date	Tag Number	Asset Identifier
1									
534	Fan- EF2-1	Fan- In Line Type 1	2D05	n/a					
535	Fan- EF2-2	Fan- In Line Type 2	2D05	n/a	DJH2385	2011-02-2	2011-02-2	n/a	
536	Fan- EF2-3	Fan- In Line Type 3	2D05	n/a	DJH2386	2011-02-2	2011-02-2	n/a	
537	Fan- EF1-1	Fan- Roof Mounted Type 1	2R02	n/a	01L02592	2011-02-2	2011-02-2	n/a	
538	Fan- EF1-2	Fan- Roof Mounted Type 2	3R01	n/a	01L02593	2011-02-2	2011-02-2	n/a	
539	Fan- EF1-3	Fan- Roof Mounted Type 3	2R02	n/a	01L00717	2011-02-2	2011-02-2	n/a	
540	Fan- EF1-4	Fan- Roof Mounted Type 4	2R02	n/a	01L04326	2011-02-2	2011-02-2	n/a	
541	Fan- SF-1	Fan- Sidewall Type 1	2D05	n/a	01L04305	2011-02-2	2011-02-2	n/a	
542	Fan- EF-3	Fan- Sidewall Type 2	1E15	n/a	01L04322	2011-02-2	2011-02-2	n/a	
543	Fan- EF-5	Fan- Sidewall Type 3	1E17	n/a	01L04186	2011-02-2	2011-02-2	n/a	
544	Fan- EF-6	Fan- Sidewall Type 3	1E20	n/a	897210	2011-02-2	2011-02-2	n/a	
545	Fan- EF-7	Fan- Sidewall Type 3	1E21	n/a	5820872	2011-02-2	2011-02-2	n/a	
546	Fan- SF-4	Fan- Sidewall Type 3	1E21A	n/a	01L01027	2011-02-2	2011-02-2	n/a	
					01L01028	2011-02-2	2011-02-2	n/a	
					01L01029	2011-02-2	2011-02-2	n/a	
					01L01035	2011-02-2	2011-02-2	n/a	

installed equip.

installed equip.

06-Jan-14

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COBie team organization

07-Jan-14

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COBie producers and consumers

phase	produce	consume
programming	X	
planning	X	X
design	X	X
construction	X	X
comissioning	X	X
operations		X
service orders	X	X
work orders	X	X
renovations	X	X



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COBie producers and consumers

phase	produce	consume
programming	X	
planning	X	X
design	X	X
construction	X	X
comissioning	X	X
operations		X
service orders	X	X
work orders	X	X
renovations	X	X

COBie Construction Team

COBie O&M Team



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COBie team charters

awareness, train, implement, and test

- select & organize venues
- evaluate change requests
- testing as-needed
 - once testing has produced zero errors & results replicated
 - test new products/major versions
 - otherwise test once every three (3) years



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COBie

Overview & Team Organization

a presentation for bSa information exchange day

by bill.east@us.army.mil