
C Support Services

C8 STERILE PROCESSING SERVICES

C8.1 SERVICE DESCRIPTION

C8.1.1 Scope of Clinical Services

This section C8 sets out the requirements for the centralized facilities for the Facility's Sterile Processing Services Department (SPD) to be achieved or accommodated by Project Co in providing the Works and the Services. The range of services to be provided within this component includes:

- Decontamination and disassembling/processing
- Washing/sanitizing
- Pasteurizing of respiratory equipment
- Cleaning/assembly
- Sterilizing (steam only)
- Sterile storage for case cart items and items destined for care units
- SPD administration
- Case cart picking from sterile storage

Sterile Processing Services for the Abbotsford Hospital & Cancer Centre will include the processing of most supplies and equipment requiring on-site preparation, including the controlled sterilization of most goods and equipment in support of the surgical case cart system, cleaning and control of certain equipment required by selected care units, and preparation and control of special trays for selected areas (e.g., Medical Imaging, outpatient clinics, Emergency, General Day Care Unit, respiratory therapy, Laboratory (glassware), and the Cancer Centre). All items requiring ethylene oxide (ETO) sterilization will be transferred off-site to one of FHA's other facilities and then returned to the sterile storage area ready for distribution.

The Cancer Centre's requirements will comprise 1-day sterilization turn around of re-usable supplies and equipment used by ambulatory care, chemotherapy/medical day care, dentistry and radiation therapy, plus daily top-up of the sterilized equipment inventory (workload details/weekly).

Items such as regular patient beds, stretchers, and wheelchairs will not be handled in this area. These items will be washed on the inpatient units and will be sent to Plant Services for repair when necessary. Stretchers and wheelchairs will be cleaned by Housekeeping staff.

Patient equipment such as infusion pumps, and suction devices, all respiratory equipment, ventilators, special beds, etc. will be routed through this area, with patient contact surfaces and components changed, washed, or sterilized as required.

C8.1.1.1 *Current Trends*

In providing the Works and Services, Project Co shall take into account the following trends:

- *Increased requirements and changing standards resulting from new infectious diseases (e.g., SARS, CJD).*
- *Increasing use of disposables, including wrappers for bundles and custom procedure packs.*

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C8.1.2 Scope of Education Services

None

C8.1.3 Scope of Research Services

None

C8.1.4 Specific Exclusions

This specification excludes sterile processing services/ requirements provided elsewhere, including:

- Materiel Services (see section E7 Materiel Services)
 - Surgical Services (see section C7 Surgical Services)
 - General Day Care Unit (endoscopy) (see section A3 General Day Care Unit)
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C8.2 OPERATIONAL DESCRIPTION

C8.2.1 Minimum Hours of Operation

Hours of operation for the component are 0600h to 2400h, 7 days/week.

C8.2.2 Patient Management Processes

Not applicable

C8.2.3 Patient Information Management

SPD will be connected to the OR booking management system, receive slates and the pick lists for all OR cases.

Also refer to Output Specifications, Section 3: Non-Clinical Services, subsection D1 Information Management; Section 5: Design and Technical, subsection 5.3.17 Technology and Communication Systems; and Section 6: IT/Tel Services.

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C8.2.4 Staff Work Processes

C8.2.4.1 Disassembly/Decontamination/Processing

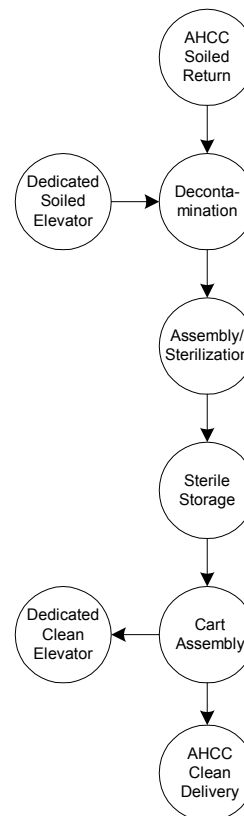
The decontamination area provides a centralized area for the cleaning of all items (including all surgical instruments) following use in any functional area of the facilities.

This function is organized internally into three major areas corresponding to the sequential flow of soiled items through the decontamination process, as follows:

- Receiving, sorting, washing, sanitizing/sterilizing
- Cart wash
- Equipment wash

Receiving, sorting, washing, sanitizing/sterilizing provides an initial entry point for soiled materials. These may be on carts, on manual conveyances or hand-carried.

All items are separated initially by type, processing method and size. Large items such as equipment are routed directly to the equipment wash area. Respiratory equipment will be processed through liquid sterilizing (pasteurmatic) machines and dryers. Delicate equipment will be processed through ultrasonic machines. Patient contact surfaces and components are removed from the equipment for disposal or sterilization. The remainder of the equipment is decontaminated normally by washing and/or disinfection, and then transferred to the clean equipment assembly/storage area for reassembly and holding.



Process Flow Diagram

Sorted items are moved to the appropriate decontamination equipment and automatically processed.

Soiled linen and trash, if received, will be collected in hampers and later transferred to their respective collection destinations.

Following decontamination operations, all items are unloaded into the packaging and preparation area for subsequent processing. Clean racks and similar containers are returned to decontamination for re-use following the removal of the clean materials. All soiled carts used to transfer soiled materials are collected following unloading and routed to the cart wash facilities for decontamination. There, the carts/conveyances are automatically cleaned and dried. They are transferred after decontamination into the cart queuing area for re-use or holding. The placement of the cart wash facility should be contiguous to the final cart unloading area to eliminate needless circulation.

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C8.2.4.2 Clean Supplies Packaging/Assembly/Sterile Storage/

Clean and sanitized/sterilized items arrive in the packaging and assembly area following the decontamination process. Small items are removed from the racks, trays or other containers and placed on sorting tables. Equipment is reassembled and either stored in the equipment stores/assembly room or returned via dispatch to the department to which it belongs.

Carts are routed either to cart assembly and holding, case cart marshalling or to the department to which they belong. Small items are sorted, instruments placed in the instrument library and items transferred to the setup/packaging tables for processing. The primary function of packaging and assembly is to prepare various instruments, utensils and supplies in packs, trays and packages for issue.

Packaging and assembly staff will select items needed, inspect for quality and assemble them into standard and special order packs, trays or packages. Disposable supply goods necessary for the assembly of packs, trays or packages such as needles, soft goods, etc. are supplied by sterile stores. Linens, wrappers, towels, etc. are supplied as part of the E6 Service Category. All items requiring sterilization are loaded into sterilizer carts upon completion. Any items not requiring sterilization are transferred to clean storage.

Linen bundles and processed goods loaded on autoclave cart and awaiting sterilization are held in a waiting area near the sterilizers. The steam sterilizers are loaded and when the cycle is completed goods are removed and held in a cooling area. After goods have been cooled they are placed on mobile shelving in the sterile storage area.

Case cart goods are stored together in one area of sterile storage on carousels. All other sterile goods are stored on wire carts allowing medical/surgical supply carts to be wheeled through the storage area for cart replenishment.

After case carts have been assembled, they are held in the cart marshalling area for dispatch via a dedicated lift to the sterile core areas of the Surgical Suite and Maternal Care Unit. Picking items for case carts will utilize automated software supply management systems integral to the carousels. Case carts for Medical Imaging will be delivered by Materiel Services portering personnel.

Equipment and other large apparatus which are not easily stored in the processed stores mobile carts or shelves are kept and maintained in this space. Similar to processed stores, items of equipment are required as common issue on a regular basis as supplements to shelf top-up supplies and equipment continuously stored in user components.

C8.2.5 Materiel Services

Refer to Output Specifications, Section 4: Facility Management Services, subsection E7 Materiel Services.

C8.2.6 Linen/Housekeeping Services

Refer to Output Specifications, Section 4: Facility Management Services, subsections E5 Housekeeping Services and E6 Laundry/Linen Services.

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C8.2.7 Equipment Asset Management

Refer to Output Specifications, Section 4: Facility Management Services, subsection E2 Biomedical Engineering; and Section 7: Equipment.

C8.3 ACTIVITY INDICATORS

The table below summarized the projected activity for Sterile Processing Services which must be addressed by Project Co in performing the Works and the Services.

C8.3.1 Hospital Activity

Unit	Minimum Projected Yearly Activity
<u>Sterile Processing Services</u>	
# Beds	300
# Surgical Cases	14,000
# Surgery Hours	18,200
# Births	2,200
# Cystoscopies	3,749
# Endoscopies	6,748
# Bronchoscopies	350
# Minor OR Cases	7,612

C8.3.2 Cancer Centre Activity (Incl. in Hospital Activity above)

C8.4 PEOPLE REQUIREMENTS

This component will have a total staff complement in the range of 21 FTE, consisting of 1 coordinator, 1 supervisor, and 19 SPD aides.

It is anticipated that the key functional areas in the component will need to accommodate the following maximum number of people.

Functional Areas	Patients	Staff	Visitors	Others	Total
Administrative Area	0	2	0	1-2	3
Decontamination Area	0	3-6	0	1-2	4-8
Clean/Assembly Area	0	8-10	0	1-2	9-12
Sterilization Area	0	1-3	0	1-2	2-5
Sterile Storage/Clean Supplies/Assembly Area	0	2-5	0	1-2	3-7

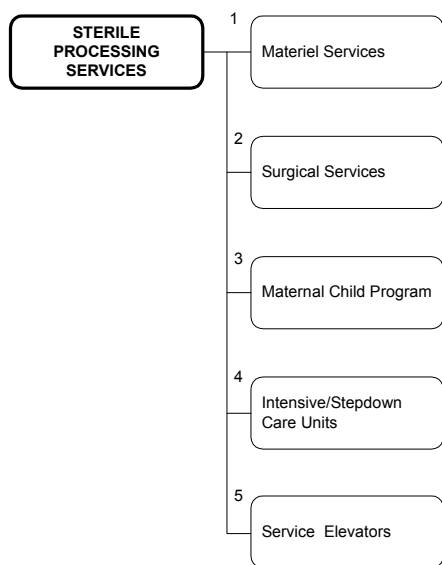
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C8.5 DESIGN CRITERIA

C8.5.1 Key External Relationships

The following key relationships will be achieved in the priority order as numbered for the purposes stated:



- 1 Provide direct access by internal circulation to Materiel Services for the movement of supplies, staff and waste.
- 2 Provide direct access by internal circulation (if on a different level, by dedicated clean and soiled elevators) to Surgical Services (the Surgical Suite) for the movement of case carts and other supplies.
- 3 Provide direct access by internal circulation (if on a different level, by dedicated clean and soiled elevators) to the Maternal Child Program (LBRP area) for the movement of case carts and other supplies.
- 4 Provide direct access by general circulation to Intensive/Stepdown Care Units (respiratory therapy area) for the movement of equipment.
- 5 Provide direct access by general circulation to the service elevators for the movement of supplies and equipment.

C8.5.2 KEY INTERNAL RELATIONSHIPS/ ENVIRONMENTAL CONSIDERATIONS

The following will be achieved:

C8.5.2.1 Zoning

Physical zones are to be established to achieve separation of flows for clean and soiled materials within the component.

The SPD staff working within the assembly and sterile supplies areas of the SPD should be segregated from staff working within the soiled areas of the SPD.

Provide controlled access to the decontamination and sterile processing areas of the component.

C8.5.2.2 Sterile Supplies Flow

In the Facility sterile supplies should not cross paths with soiled materials or the public, and those destined for the Surgical Suite and Maternal Child Program should leave and return the component via a dedicated elevator.

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C8.5.2.3 Lighting

Provide glare-free full-spectrum, artificial or natural, lighting and special task types for technical work areas. The concept of "indirect" lighting should be used if reasonably possible. Interior design should ensure simple unobtrusive colour schemes that minimize interference with the concentration of the SPD staff working on fine detail.

Also refer to Output Specifications, Section 5: Design and Technical, subsection 5.3.16.12 Lighting Control.

C8.5.2.4 Ergonomics Considerations

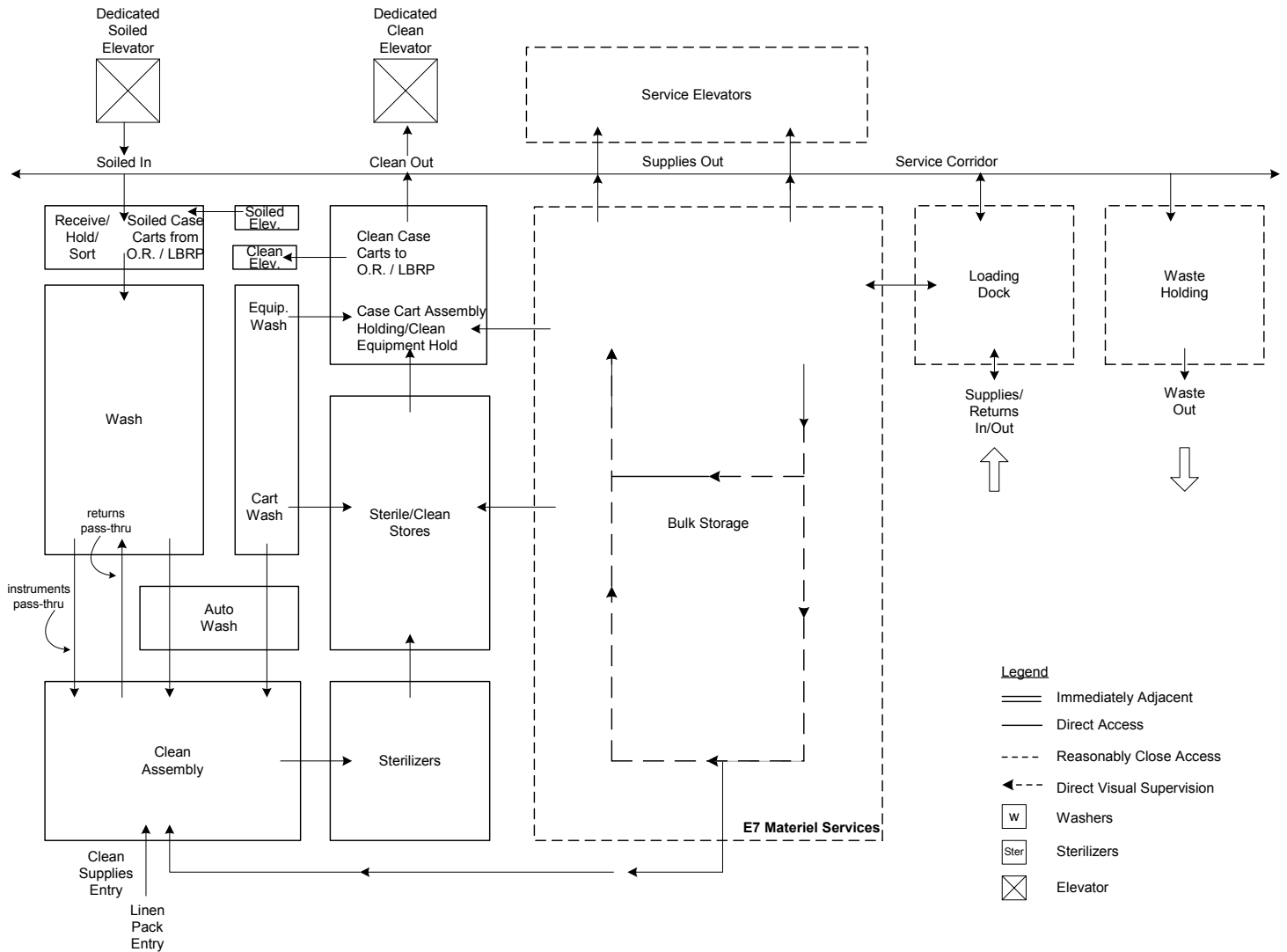
Refer to Output Specifications, Section 1: Key Site and Building Design Criteria, subsection 1.2.4.6 Ergonomics.

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C8.5.2.5 Component Functional Diagrams

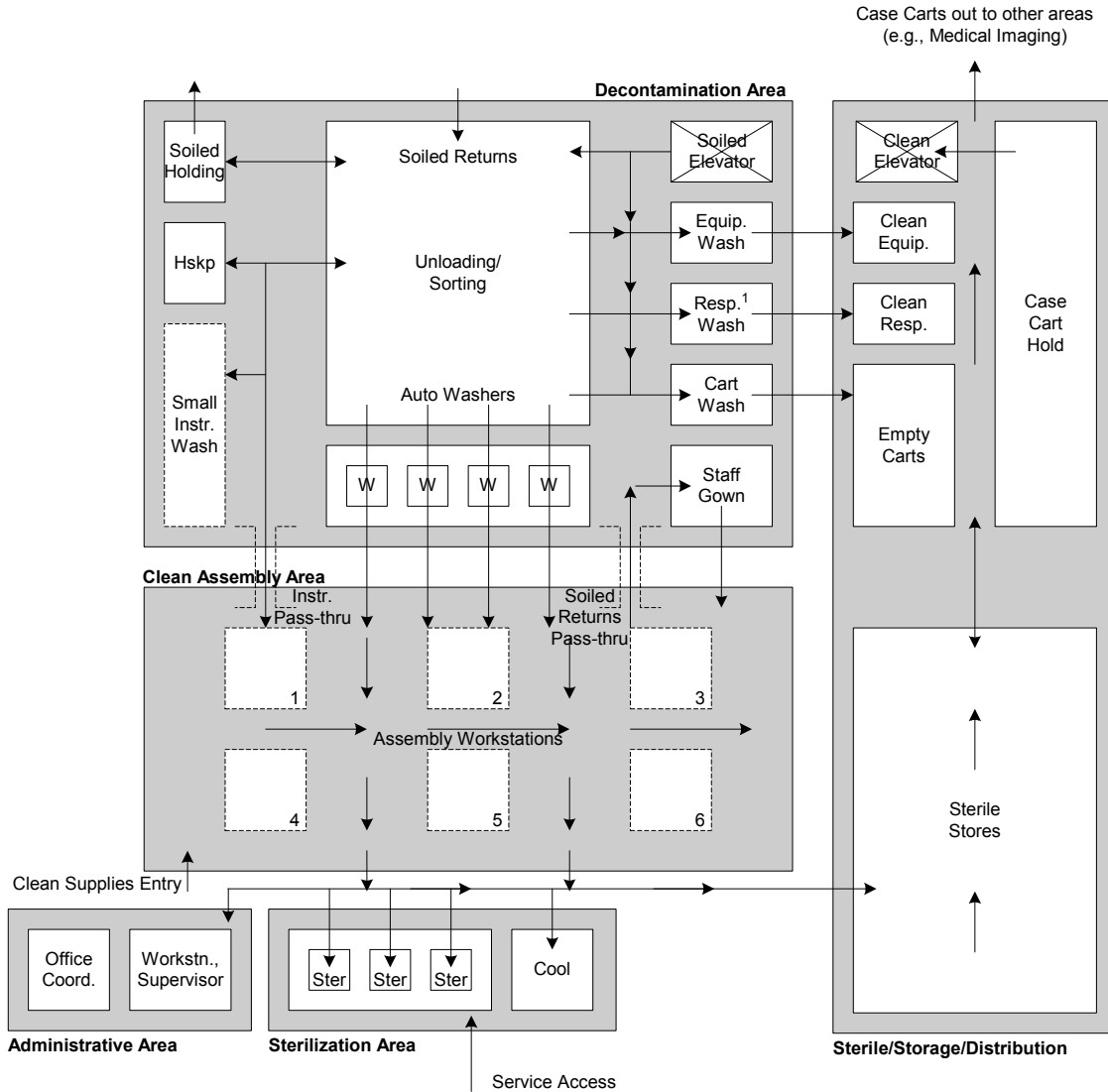
The spatial organization of this component will be generally as shown in the diagrams below.

Macro Relationship Diagram



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Micro Relationship Diagram



Legend

- ==== Immediately Adjacent
- Direct Access
- Reasonably Close Access
- ←--- Direct Visual Supervision
- W Washers
- Ster Sterilizers
- ⊗ Elevator

Note:

- 1 Part (or all) of respiratory equipment may be routed through the assembly area instead of directly through to the distribution area.
- 2 Ethylene oxide (ETO) is not part of the plan for this site. ETO requirements will be met by accessing FHA services available at another site.

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C8.5.3 Schedule of Accommodation (Note: Spaces listed in parentheses () are spaces supporting services provided by Project Co and are included in the total net square metres.)

Ref	Space	Area Requirements		
		units	nsm/unit	nsm
	<u>Administrative Area</u>			
01	Office, Coordinator	1		9.0
02	Office, Supervisor	1		9.0
03	Break Room, Staff	1		15.0
04	Staff Change/Shower/Room, Female	1		16.0
05	Washroom, Staff, Female	1		3.5
06	Staff Change/Shower/Room, Male	1		12.0
07	Washroom, Staff, Male	1		3.5
	Subtotal			68.0
	<u>Decontamination Area</u>			
08	Soiled Case Cart Holding Area	1		26.0
09	Storage, Detergent	1		8.0
10	Receiving/Soiled Returns Holding Area	1		20.0
11	Unloading/Sorting/Washing Area	1		60.0
12	Soiled Holding Room	1		15.0
13	Automatic Washing/Sanitizing Area	1		50.0
14	Cart Wash Area	1		30.0
15	Equipment Wash Area	1		20.0
16	Respiratory Equipment Wash Area	1		36.0
17	Housekeeping Closet (Soiled)	1		(5.0)
	Subtotal			270.0

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Ref	Space	Area Requirements		
		units	nsm/unit	nsm
	<u>Clean/Assembly/Prep Area</u>			
18	Clean Equipment/Case Cart (35) Holding Area	1		10.0
19	Cart Wash Wipedown/Drying Area	1		26.0
20	Packaging and Assembly Area	1		70.0
21	Clean Linen Pack Holding Area	1		(5.0)
	Subtotal			111.0
	<u>Sterilization Area</u>			
22	Sterilizing Area, Steam	1		15.0
23	Holding Area, Transfer Carts/ Cooling Area	1		9.0
24	Quarantine Holding Area	1		15.0
	Subtotal			39.0
	<u>Sterile Storage/Clean Supplies/Picking Area</u>			
25	Sterile Stores	1		140.0
26	Pneumatic Tube Station	1		1.0
27	Case Cart (Empty) Holding Area	1		30.0
28	Case Cart/Sterile Supply Cart Holding Area	1		50.0
29	Orthopedic Supply Room	1		9.0
30	Housekeeping Closet (Clean)	1		(5.0)
	Subtotal			235.0
	Total			723.0

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C8.6 DESIGN GUIDANCE

Project Co shall comply with:

- Canadian Standards Association (Z314.1, Z314.2, Z314.8-M88, Z314.8-00, Z314.10-97, Z314.3-M91, Z314.15-03)

C8.7 OTHER SPECIFICATIONS

Sterile processing services are primarily based in the Sterile Processing Services component, however, other specifications that will be consulted are:

- E7 Materiel Services
- C7 Surgical Services