
C Support Services

C4 MORGUE & AUTOPSY

C4.1 SERVICE DESCRIPTION

C4.1.1 Scope of Clinical Services

This section C4 sets out the requirements for the Facility's comprehensive morgue and post mortem facilities 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:

- Specimen handling area
- Administrative functions (documentation of incoming or outgoing bodies report preparation)
- Receiving, preparation and temporary storage of cadavers
- Investigations into the cause of death by performing a PM examination of the body (including forensic autopsies)
- The demonstration of PM findings in cases of clinical interest, for teaching purposes or forensic purposes
- Mobile radiography
- Photography
- Family/police viewing and/or identification of the body

This component will provide facilities for the forensic autopsy service for Fraser Valley area, however, the coroner's administrative base will be provided elsewhere. A separate locked holding cooler will be provided in the component for forensic cases.

C4.1.1.1 Current Trends
None

C4.1.2 Scope of Education Services

This component will include resources in support of the following types/numbers of students:

- BCIT trainee, 1 at a time
- Pathology attendant trainee, 1 at a time

C4.1.3 Scope of Research Services
None

C4.1.4 Specific Exclusions
None

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C4.2 OPERATIONAL DESCRIPTION

C4.2.1 Minimum Hours of Operation

Hours of operation for the component will vary with each service as follows:

- Body storage area 24 hours/7 days/week
- Remaining areas 0800h to 1600h/5 days/week

C4.2.2 Patient Management Processes

Not applicable

C4.2.3 Patient Information Management

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.

C4.2.4 Staff Work Processes

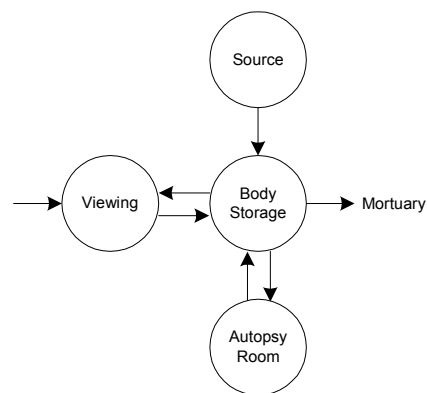
C4.2.4.1 Entrances

Cadavers will arrive in this component from various Abbotsford Hospital locations (e.g., Inpatient Units, Surgical Suite, Emergency, etc.) or from the community. Bodies will be held in refrigerated storage until required for autopsy or released to the coroner or funeral home.

Up to three entrances are required: one for staff, one for the delivery of bodies from the hospital or community (if appropriate) and for collection by undertakers, and one for visiting relatives and friends.

Bodies should not be taken in and out of the building within sight of patients and/or visitors. The external entrance for the collection of bodies and, if appropriate, delivery of bodies will be covered and screened from the view of patients and the public. The layout should also prevent overlooking of the body handling area within the building from outside by the provision of lobby doors or screening. The external entrance will be overlooked by the technician's office unless audio-visual intercoms are in operation. There will be sufficient space for large vehicles to manoeuvre. An exit to a subsidiary road, and nearby car parking space, is also desirable.

All external entrances should normally be kept locked. The entrance for relatives, which may be via a lobby, should lead into the visitors' waiting room. Communication devices with a clear and



Patient Flow Diagram

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appropriate notice will be provided at all entrances for visitors to summon the attention of mortuary staff.

C4.2.4.2 Body Viewing Suite

The body viewing suite should comprise, at the very least, a separate entrance, a waiting room, and a viewing room.

In the waiting room and viewing room a serene and reassuring environment is desirable. The choice of suitable colours, textures and lighting is important. It will be possible to dim the lights in the viewing room. Ventilation will be such that comfortable conditions are maintained in these areas and should prevent the entry of odours from other parts of the facility.

The waiting room should contain comfortable chairs and a small table. Lighting will be non-institutional with natural light where possible.

The viewing room will be capable of minor adaptation to suit the needs of all religious beliefs and for devising more appropriate arrangements for viewing bodies of infants. Where facilities for ritual washing are required these will have to be sited in an area that is accessible to visitors and also suitable for wet working. It should also be noted that religious beliefs may have an effect on the orientation of the body wash station.

C4.2.4.3 Body Store and Body Handling Area

A refrigerated body store is required:

- To maintain bodies and/or fluids in a condition whereby the maximum scientific information can be obtained from a PM and subsequent analytical investigations
- To limit tissue decomposition while burial or cremation arrangements are being made
- To hold bodies and the occasional specimen for longer periods in conditions of security

Bodies usually remain in the morgue for one to four days. Sometimes the period is longer if further investigations have to be carried out by the pathologist, or if the next-of-kin are difficult to trace.

The body handling area will be adjacent to the autopsy room. Space is required in the body handling area for parking and manoeuvring trolleys. Space is also required for the reception of bodies on trolleys from the Abbotsford Hospital, the labelling or identification of bodies and entering details in a record book, or computer, the placing of shrouds on bodies, the transfer of bodies to the refrigerated body store, the removal and transfer of bodies from the body store to the PM room (where double-ended body stores are not available), the removal of bodies from the store, and confirmation of identity before handing over to undertakers or for police identifications. The PM room should accommodate mobile and fixed hoists, which will have implications on space requirements.

The body store consists of seven labelled compartment bays, (refrigerated at approximately 4°C), each containing three racks for holding the body trays upon which bodies are stored. Compartment bays are to be double-ended as pass-through fridges; the latter requires additional space on the PM room side to allow for extraction of bodies, are preferable for reasons of hygiene and efficiency. One of the compartment bays will be deep-freeze and one extra wide compartment bay must be provided to accommodate obese bodies.

All doors to the refrigerated compartment bays must open to give access to the body trays and also be constructed in such a manner that they will not fall closed while in use. All doors will be fitted with locks. High quality hinges and locks are an important consideration. Locks should

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also be operable from inside the compartment bay for safety purposes. All compartment bays will be capable of being drained. Internal rollers and racking holding body trays will be removable to permit clear entry to the compartment bay for cleaning purposes. The bottom tier of racking will be no lower than the lower position of the body hoist or adjustable height mortuary trolley, so that trays bearing bodies do not have to be lifted by the mortuary staff. The refrigeration plant must be fully accessible for maintenance.

The frequent movement of morgue trolleys, which could be heavily-laden, and mobile hoists, has implications that must not be overlooked. Corners, doors and certain areas of walls must be protected against damage. Doorways through which trolleys are to pass must be wide enough to reduce the chances of collision and consequent damage to property and injury to staff.

C4.2.4.4 Autopsy Room

The PM room, which is also known as the autopsy room, serves to carry out several functions. These include the opening of bodies, the weighing and dissection of organs, and demonstration of post mortems to clinical staff. Bodies are brought from the body store on a hydraulic body hoist or trolley and transferred on to a PM table. In the case of full body handling systems the body remains on the body tray during the PM, supported on the PM station. The dissection of organs should take place on a dissecting bench running along a length of wall.

Bodies for examination will be drawn directly from a double-ended body storage compartment into the PM room. Space will be needed in the PM room for safely manoeuvring trolleys, for loading or transferring bodies onto the PM table or station, and for storing and using a second hoist (where used), without risk of accident or injury. Where double-ended body storage compartments are not in use, bodies will be conveyed into the PM room on a trolley from the body handling area via a double-width doorway.

Tissues, organs and/or fluids obtained during PM examinations are infused in fixative in various sized containers. This work will be carried out at the dissection bench. The samples may be held for a short time within the PM suite or specimen store prior to despatch to the pathology department or other departments.

Adjustable height tables will be provided to comply with standards for working heights. Consideration should also be given to rotating tables.

Each table should have a hot and cold water supply and a waste outlet of about 75mm diameter, fitted with a suitable, readily accessible trap and drain pipe. They will be fixed to the floor, located over a drain and supplied with water at low pressure.

During an examination, there may be a need to dictate findings, take x-rays, examine x-ray films taken earlier, and use other portable electrical equipment.

C4.2.4.5 Soiled Utility/Instrument Store

This room should open directly off the PM room. It serves as a dirty utility room and for the storage of instruments. An automated washer-disinfector will be provided for the cleansing and disinfection of instruments after use. Where sterilization of instruments is required, they are appropriately transported to the sterile service department of Materiel Services for processing. Chemical solutions may also be prepared or dispensed in this room, according to local policy.

All wastes removed from this component will be considered as contaminated material and will be placed in biohazard containers before leaving the component for holding in special containers pending collection and removed as part of the E5 Service Category.

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C4.2.4.6 Staff Services

WCs/showers and lockable storage spaces will be provided in the staff changing area to allow for flexible use by both sexes.

C4.2.5 Materiel Services

Storage of selected reports, slides and blocks will be held within the Laboratory Medicine component (see section C2).

Also refer to Output Specifications, Section 4: Facility Management Services, subsection E7 Materiel Services, and Section 2: Clinical Services, subsection C8 Sterile Processing Services.

C4.2.6 Linen/Housekeeping Services

Following autopsy procedures, Clinical Waste (liquids, tissues, clothing) will be placed in appropriate biohazard containers before removal to the waste holding area in Materiel Services for daily removal and disposal off-site by a contracted disposal firm.

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

C4.2.7 Equipment Asset Management

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

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C4.3 ACTIVITY INDICATORS

The table below summarized the projected activity for morgue/autopsy services which must be addressed by Project Co in performing the Works and the Services.

C4.3.1 Hospital Activity

Unit	Minimum Projected Yearly Activity
Total Deaths	615
Total Autopsies	240

C4.3.2 Cancer Centre Activity (*Incl. in Hospital Activity above*)

C4.4 PEOPLE REQUIREMENTS

This component will have a total staff complement in the range of 2 FTE, consisting of 2 dieners.

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

Functional Areas	Cadavers	Staff	Visitors	Others	Total
Administrative/Office Area	0	2	0	1-2	3-4
Support Area	20	2	2-3	2-3	16-18

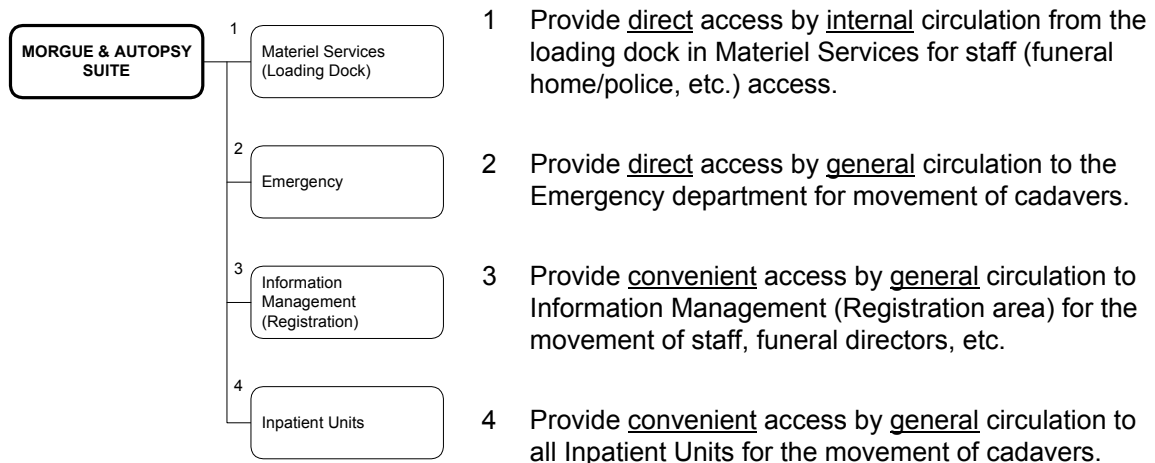
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C4.5 DESIGN CRITERIA

C4.5.1 Key External Relationships

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



C4.5.2 KEY INTERNAL RELATIONSHIPS/ ENVIRONMENTAL CONSIDERATIONS

The following will be achieved:

C4.5.2.1 Visitor Control

Provide for controlled separate visitor access into the component for visitor viewing. Body handling and autopsy procedure areas must not be inadvertently accessible to visitors. Provide visual surveillance of the visitor entry point.

C4.5.2.2 Ventilation

A highly efficient exhaust system will be required in procedure and support areas due to the extensive use of reagents such as formaldehyde and for the removal of odours and partial infectious aerosols produced during procedures.

Also refer to Output Specifications, Section 5: Design and Technical, subsection 5.3.15.14 Heating, Ventilation and Air Conditioning Systems.

C4.5.2.3 Sound Control

Provide sound absorptive materials wherever practical in autopsy areas to control noise.

Also refer to Output Specifications, Section 1: Key Site and Building Design Criteria, subsection 1.2.5.4 Acoustics.

C4.5.2.4 Special Cadaver Holding Requirements

Provide separate, locked holding facilities for forensic cases.

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Provide 2-way access to body containers, one side for the body holding room/funeral home access, the other from the autopsy room.

C4.5.2.5 Finishes and Fittings

Walls and floors must be finished with hard and durable surfaces, which are easy to clean, impervious to liquids and resistant to disinfectants. Floors must be very hardwearing, non-slip, raised at the junction with the walls. The floor will be self-draining towards a drainage outlet. Joints in flooring and joints between floors and walls should have waterproof seals.

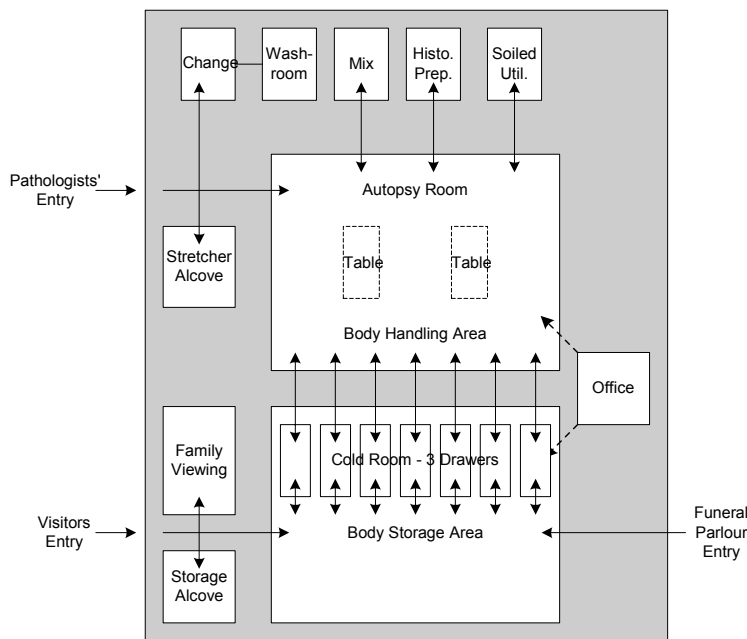
When selecting ceiling materials, account will be taken of the damaging effect of the damp atmosphere following frequent cleaning of the room with hot water.

Plastic laminate on wood, and wooden fittings, are not suitable as fixed work surfaces. Porcelain and stainless steel are satisfactory materials for sinks. Porcelain, although having a high quality finish, is expensive and liable to damage. All fittings will be ergonomically designed. All taps will be hands-free.

Also refer to Output Specifications, Section 5: Design and Technical, subsection 5.2.4.3 Floor Finishes.

C4.5.2.6 Component Functional Diagrams

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



- Legend**
- ==== Immediately Adjacent
 - Direct Access
 - Reasonably Close Access
 - ←-- Direct Visual Supervision

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C4.5.3 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/Office Area</u>			
01	Office, Multipurpose	1		9.0
	Subtotal			9.0
	<u>Procedure Area</u>			
02	Morgue Stretcher Storage Alcove	1		2.5
03	Body Storage, Compartments, Refrigerated	5	2.5	12.5
04	Body Storage, Compartments, Freezer	1		2.5
05	Body Storage, Compartments, Refrigerated, Obese	1		3.0
06	Body Handling Area	8	3.5	28.0
07	Refrigeration Plant Room	1		[9.5] ¹
08	Autopsy Room	1		70.0
09	Soiled Utility Room	1		(8.0)
	Subtotal			126.5
	<u>Support Area</u>			
10	Histology Preparation Area	1		10.0
11	Mixing Room and Storage	1		10.0
12	Change Room, Staff	1		2.5
13	Washroom/Shower, Staff	1		4.0

¹ Area assumed included in the building area grossing factor.

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Ref	Space	Area Requirements		
		units	nsm/unit	nsm
14	Housekeeping Closet (small)	1		(2.5)
	Subtotal			29.0
	<u>Body Viewing Suite</u>			
15	Waiting Room, Visitor	1		8.0
16	Body Viewing Room	1		11.0
	Subtotal			19.0
	Total			183.5

C4.6 DESIGN GUIDANCE

None

C4.7 OTHER SPECIFICATIONS

Morgue & Autopsy services are primarily based in the Morgue & Autopsy component, however, other specifications that will be consulted are:

A2 Emergency