



A History of TIMBER WINDOWS AND EXTERNAL DOORS IN JERSEY



Planning and Environment Committee
1999

Protecting Jersey's Architectural Heritage

CONTENTS

- A History of Traditional Timber Windows and Doors in Jersey
- A Drawing of a Typical Sash Window in Jersey, explaining Terminology
- Elevations and Sections of Some Typical Jersey Windows
 - 18th century single hung sash window (6 over 6)
 - 19th century double-hung sash window (6 over 6)
 - Victorian sash window (2 over 2)
 - Victorian sash window (1 over 1)



A BRIEF HISTORY OF TRADITIONAL TIMBER WINDOWS AND EXTERNAL DOORS IN JERSEY

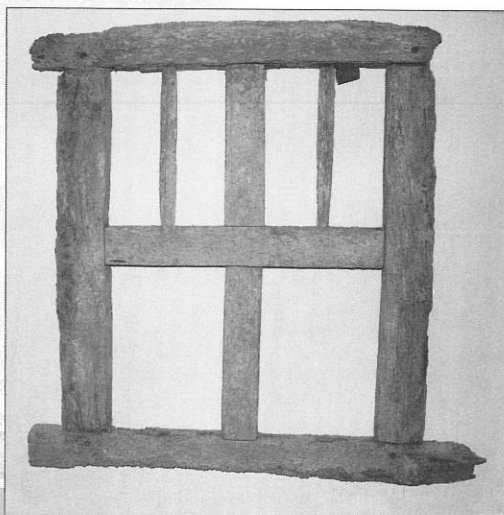
WINDOWS

The word 'window' comes from Norse words meaning 'wind eye', an opening in a wall or roof to let in air for the fire.

Originally protected by woven reeds or vertical timber bars, later developments include shutters and semi-transparent materials such as oiled cloth, thin horn or mica. Glass was manufactured in England by the Romans, but the technique was lost with them and not reintroduced until about 1200. Glass remained an expensive luxury until after 1600, however, and did not reach some parts of the British Isles until the 19th century.



Chamfered timber mullions, designed to allow the infiltration of as much light as possible, Hamptonne, St Lawrence.



17th century oak window frame from Ville a L'Eveque, Trinity, now held in the Jersey Museum

The small glass panes generally in use before about 1700 were set between lead strips, which are called "comes". The resulting composite panels were tied to strengthening cross bars and then inserted in stone, timber or iron window frames. In Jersey, these bars were usually of timber rather than iron.

Lead lights were invariably fitted in side-hung casement windows or as fixed lights. These traditionally opened inwards in Jersey and examples still exist *in situ*.

Early inward-opening small-pane casement, St Peter.



Fixed leaded light set within oak frame, Hamptonne, St Lawrence.

The Sliding Sash

The timber side-hung casement window, which in Jersey almost invariably opened inwards, was the commonest form of window type until well into the 18th century. These windows were usually recessed within the wall thickness to afford protection from the weather. The pane size and glazing bar pattern varied widely.

In the later 17th century, window design was revolutionised by the development of the sliding sash. First found in France in the early 17th century, early designs have one fixed sash and the other supported by pegs when open. The design was developed by the English and Dutch through the invention of the pulley and counter-weight mechanism. This allowed first one - a **single-hung sash** - and then both sashes - a **double-hung sash** - to open. Some of the earliest examples of Jersey sash windows - in Hue Street, St Helier - have both sashes able to move, but restrained only by the friction of the stiles against the frame. Sliding-sash windows gradually displaced the side-hung casement which tended to be relegated to rear elevations and outbuildings.



One of the earliest sash windows in St Helier at Hue Street - the building is dated 1756. Note the very wide & flat glazing bars, typical of this early style.

From the time of the Middle Ages, small glass panes, usually diamond in shape, had been cut from **crown glass** or **broadsheet glass**. During the 17th and 18th centuries both glass production and pane size increased using both crown and **cylinder glass** techniques. The 'fire finish' of crown glass, obtained on one side only as the disc of glass was spun in front of the fire, was particularly sought after until the mid 19th century. It gives a brilliant effect as the slight irregularities in the glass surface reflect sunlight. The pane size of the earliest windows in Jersey tends to be smaller than those typically found in England. This is true of both sash and casement windows, which continued in use in vernacular housing throughout the 18th and early 19th centuries.

Wars with France during the 18th century rapidly led to the importation of building materials, techniques and architectural styles from England rather than the Continent. From the early years of the 17th century Baltic, Scottish and North American softwoods are found in Jersey as in England. 'Deal' was the most widely used timber for windows and external joinery from the 1720s.

It was not only sash windows that were adopted in the Island: the Georgian style of architecture was rapidly assimilated and transformed the character of Jersey. Glazing patterns settled into a standard form of six panes in each sash. Pane size varied, although the overall size of the window opening was generally kept in strict proportion with the rest of the façade, following the classical theory of composition.



A fine pair of traditional 12-pane Georgian sash windows, complete with external and internal shutters, St Helier

Details

It is evident that local joiners incorporated their own details into windows, doors and other joinery items. Glazing bars, horn shapes, decorative chamfers and stop-beads were used by tradesmen to "sign" their work, making each window distinctive, different and local. Owners, too, have made windows their own through the use of distinctive colour schemes: it is common to find moving sashes and sash boxes painted different colours where buildings are not part of a formal terrace or crescent, in which case it is preferable that uniformity of appearance should over-ride individual colour schemes.

The influence of the Continental mainland is reflected in the appearance of Jersey buildings.

Some mid-18th century houses, such as

Le Marinel, St John, have distinctly French detailing throughout. Some local sash windows, too, show that Jersey's closest neighbour still exerted some influence: it is common to find windows with a thick central vertical glazing bar with a decorative groove run down the centre. This detail is an imitation of casement windows, which are still common in France. It is a detail unique to Jersey.



Single-pane sash with chamfered meeting rail, diamond chamfer stop and decorative horns, St Helier

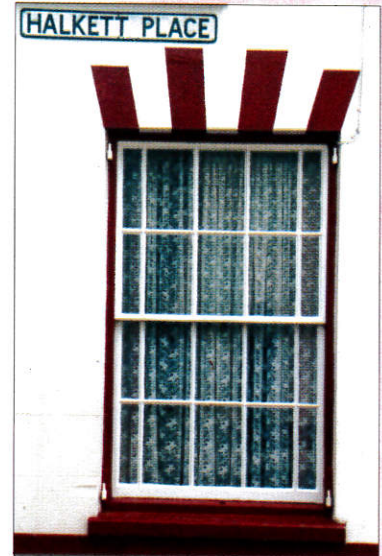


Four-pane sash with grooved central vertical glazing bar and an alternative style of horn, St Martin

Not all details are local, however. During the late 18th century, interest in gothic architecture led to the introduction of curved window heads and tracery, both found in the Island. Other Victorian devices are unequal divisions in the glazing, paired and triple sashes and the use of coloured glass in margin and quarter lights.



A pair of pretty sash windows with curved upper sashes and render detail above, St Helier



A traditional 12-pane sash that incorporates margin lights and is painted in the traditional Jersey fashion, St Helier

Twentieth Century Developments

Although later 19th century interest in vernacular architecture led to renewed use of the casement window, the dominant window form of the 18th, 19th and 20th centuries has been the sliding sash.

Although predominantly made from timber, different materials have been used in the manufacture of sash and casement windows. Cast-iron and copper sashes are found from the mid-18th century, and casements - both side and top-hung - from the mid 19th century. The

development of quantities of hot rolled steel from about 1900, however, enabled firms like W F Crittall to revolutionise the worldwide use of **steel windows**. The new windows were slim, strong, cheap and fire-resistant. Above all, their sleek design appealed to architects of the Modern Movement and they were widely specified between the Wars. Jersey has a few surviving examples, notably the Airport building, opened in 1937, and Les Lumières at St Brelade which was the first building in the world to have 'HOPE Slide and Glide' metal windows installed.



1930's metal windows, Les Lumières, St Brelade

Other technical developments have affected window design and appearance during the 20th century. **Float glass** was introduced in 1952. Its perfectly flat surface cannot reflect light in the same way as Georgian crown or plate glass, although it is available in sizes that allows large display or picture windows to be installed.

Mass production of timber frames in recent years has altered the appearance of windows too. Decorative mouldings have been simplified or removed to reduce costs. Opening frames often fit over and outside the main window frame, rather than within it, and frames are often placed flush with the wall face rather than recessed.

New materials have also been introduced, particularly aluminum and PVCu. The structural properties of these materials dictate different section sizes from timber: aluminum is strong and light and consequently lends itself to slim frame sizes. PVCu is not as stiff as wood or metal and frames usually have a relatively large cross-section, often reinforced with a metal tube or channel.

None of the standard components used in the fabrication of these mass-produced products are locally made. Consequently, none have the distinctive detail of locally-made joinery. Nor do they have the wealth of ornament on glazing bars, frames or boxes found in traditional joinery. Furthermore, they cannot replicate the brilliant effect of light on early glass in multiple pane sashes or casements, or offer the possibility of individual paint schemes, picking out frames and boxes in different colours of any hue.



A modest town house enlivened by the use of a two-tone colour scheme, St. Helier



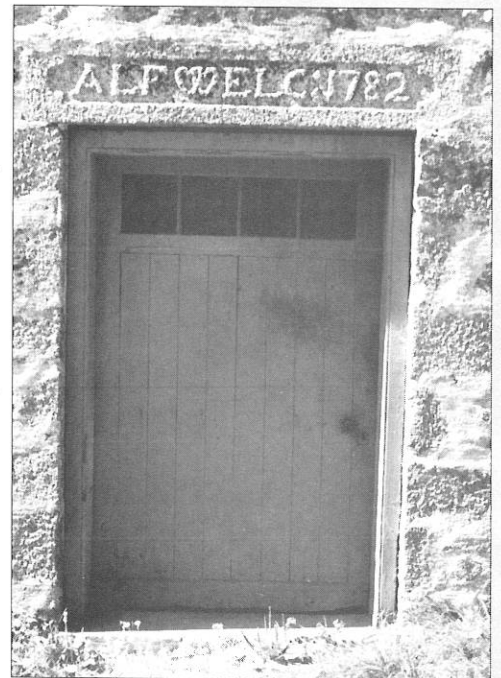
DOORS

The front door tends to be one feature of the house where high quality workmanship and decorative detail are applied. Timber doors are usually associated with glazed fan-lights, which allow daylight into the entrance hall. 18th and early 19th century doorways often have decorative doorcases with columns or pilasters, capped with a flat entablature or occasionally a triangular or semi-circular pediment. Few doors from before the 18th century survive and these are likely to have been planked rather than panelled. 18th century doors are often restrained in their detail but their decorative fan-lights, often made in cast iron, can be quite elaborate. During the 19th century, the arrangement of door panels became more varied and the mouldings applied to them were often more exuberant. Some doors have side glazing to throw more light into the increasingly spacious hallways and the pattern of glazing bars often echo that of the glazed fan-light.

Planked Doors

Throughout the mediaeval period and into the 17th century it was usual for doors of all types to be constructed of vertical planks. These were usually fixed to horizontal members (ledges) on the less-important face whilst high quality doors were backed by a second layer of horizontal or diagonal planks. From the later 17th century panelled doors became the preferred design for any building displaying a degree of classical influence. Planked doors were relegated to the service areas of polite buildings, and, although the ledge-and-planked doors continued in use in vernacular architecture into the 20th century, its construction remained essentially unchanged.

Early planked doors, that is pre-18th century, sometimes have a peaked 'crease' moulding which is applied to cover the joints between the planks. Long strap hinges were attached to the rear of the door and hung on an iron pin - a 'pintle' - driven into the door jamb. In the later 17th century 'H' and 'HL' hinges were developed as alternatives to the strap hinge, as were simple butt hinges.



18th century planked door with integral glazing, St Peter

Panelled Doors

Interest in classical forms of architecture from the mid 17th century influenced door design. Panel sizes were varied to reflect the proportions of the classical orders and by the late 17th century it was common to find doors with only two panels, the upper one larger than the lower, corresponding to the two lower tiers of room panelling. Heavy bolection mouldings (which project beyond the face of the door) were often used, comprising combinations of classical mouldings.

From the start of the 18th century both external and internal doors were often arranged in pairs and were made with six, eight or ten panels, in reference to Palladian proportion. Eight or ten panel doors were more common early in the century, but by the mid 18th century the six panel door had become established as the characteristic Georgian door. Eight or ten panel doors were sometimes cut down later to form a six panel door with fanlight over. Classical mouldings continued to be used as decoration on both internal and external doors. The complexity of decoration shows a door's position in the hierarchy of rooms within a house. Doors of any prominence were given raised and fielded panels.



*Six raised-and-fielded panel door,
with fanlight over, St Helier*



DOORCASES

Fanlights first appeared in England around 1720 and it is in this early Georgian period that the Palladian or *aedicular* doorcase became established, comprising columns or pilasters supporting a pediment. These features were later adopted in Jersey.

Two six-panel doors with their respective door-cases & decorative fanlights, St Helier



Towards the end of the 18th century, two new doorcase designs were introduced. The first incorporated a fanlight. The second, popularised by the Adam brothers, ran a very large fanlight across both the door and the sidelights flanking it.

During the later 18th century fanlight design became more complex. Metal replaced wood for the construction of the frame, enabling delicate and intricate designs incorporating diagonals, circles and loops in addition to 'batwing', 'umbrella' and 'teardrop' motifs.



Half glazed door with large elaborate fanlight extending across glazed sidelights, St Brelade

19th Century Doors

Whereas during the 18th century there was relatively little variation from a few standard patterns, the 19th century saw ever-increasing variation in the designs used.

In the early part of the century doors with two vertical panels were found, sometimes with

the panels tapering towards the top following the fashion for Greek, rather than Roman detailing. Greek versions of mouldings are also found.

The six-panel door continued to be produced well into the century, but some or all panels might be bead and butt rather than recessed. Four panels were introduced, usually with square but sometimes with round heads to the upper panels. Diamond or circular panels were found too. Arched heads arrived with the Gothic revival. Mouldings became progressively heavier and more elaborate during the course of the century, notably after the development of machine production of timber sections.



Four-panel door with side-lights and arched Gothic fanlight, St Saviour

In addition to the standard arrangement of four panels, the distinctive Victorian contribution to door design is the introduction of glass into the door itself. Although glass is found in Georgian doors in side lights and occasionally in the small upper panels of six panel doors, both the large upper panels of Victorian four panel doors were often glazed. Brilliant cut or 'stained' glass was used, as was acid-etched (and later sand-blasted) glass to provide privacy and to add ornamental effect.



Exuberant Victorian detailing with stained-glass side-lights and glazed door panels, St Helier



Pretty acid-etched glass in four-panel door, St Saviour

Another notable Victorian development was the letter-plate. Following the introduction of the Penny Post in England in 1840, letter-plates were installed in a lock rail enlarged to take increasingly complex designs, which sometimes incorporated a pull bar or door knocker. Only the wealthy could afford polished brass door furniture: most letter plates and knockers were of wrought or cast iron with a japanned or 'Berlin' black finish, or painted to match the door.

Unless made of expensive hardwood, doors were invariably painted. Graining in imitation of oak or other hardwoods was common and although it fell out of fashion the technique was still widely used in modest houses until well into this century. Flat dark colours, such as olive green or chocolate were favoured after about 1870, and towards the turn of the century, white, a standard Georgian colour, was rediscovered.



Modest two-panel door with central oval letter plate, St Helier

Edwardian and Early 20th Century Doors

Just as late 19th century, neo-vernacular Arts and Crafts architects reintroduced the casement window, ledge and planked doors, complete with strap hinges and thumb latches were designed for use in new houses of the time.



The Modern Movement

The Modern Movement's main impact in door design was the introduction of the flush door. Facing an existing panelled door with hardboard was an easy way to update the home with a 'modern' and 'functional' look and contemporary magazines showed homeowners how to transform not only doors in this way but staircase balustrading too. New flush doors, either completely plain or with a tiny porthole or glazed vertical panel, appeared in 1930s houses.



*Typical 1930s door with three vertical panels,
St Helier*

SHUTTERS

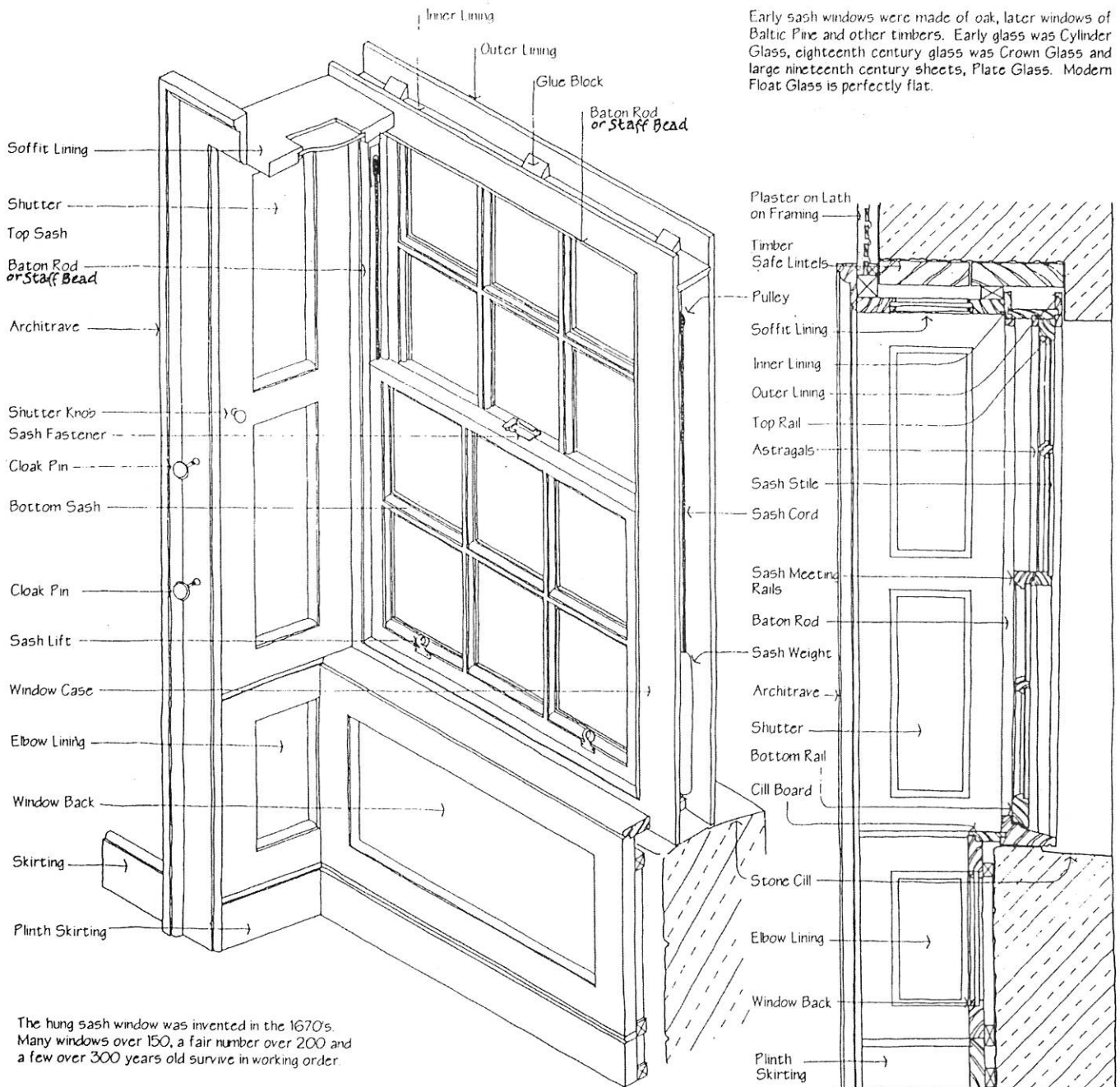
One of the commonest external features of 18th and 19th century buildings, now increasingly scarce, were external timber shutters. Early shutters were intended primarily for security purposes and were generally planked. During the 18th century these became more sophisticated and some examples of solid panelled shutters can still be found. But the most popular type was the louvred shutter based upon the French design and these are distinguished by a continuous decorative band which resembles a series of keyhole shapes cut into the timber. Shutters were an important feature of the exterior of the house and buildings which have lost them now look bland. As well as providing security, external shutters can also help to reduce traffic noise and enhance thermal insulation.



Two types of shutter found in St Helier - a louvred shutter with "keyhole" detail and a solid shutter. Note how the colours have been picked out to match the sash window boxes, cills and railings.

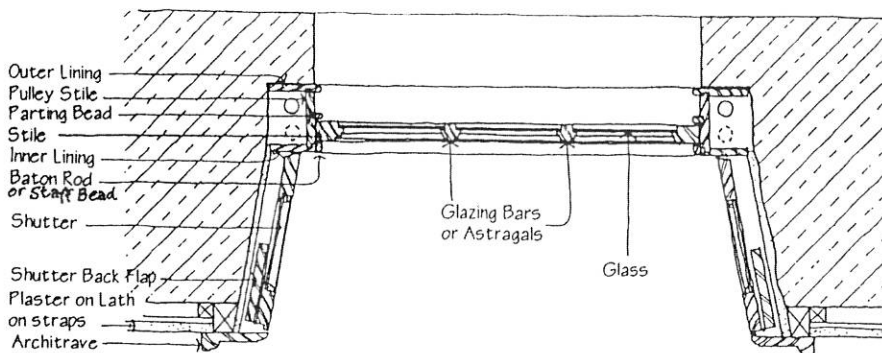
TYPICAL SASH WINDOW AND TERMINOLOGY

Early sash windows were made of oak, later windows of Baltic Pine and other timbers. Early glass was Cylinder Glass, eighteenth century glass was Crown Glass and large nineteenth century sheets, Plate Glass. Modern Float Glass is perfectly flat.

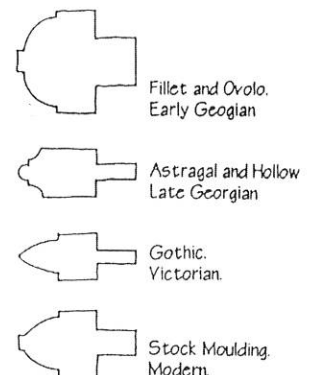


The hung sash window was invented in the 1670's. Many windows over 150, a fair number over 200 and a few over 300 years old survive in working order.

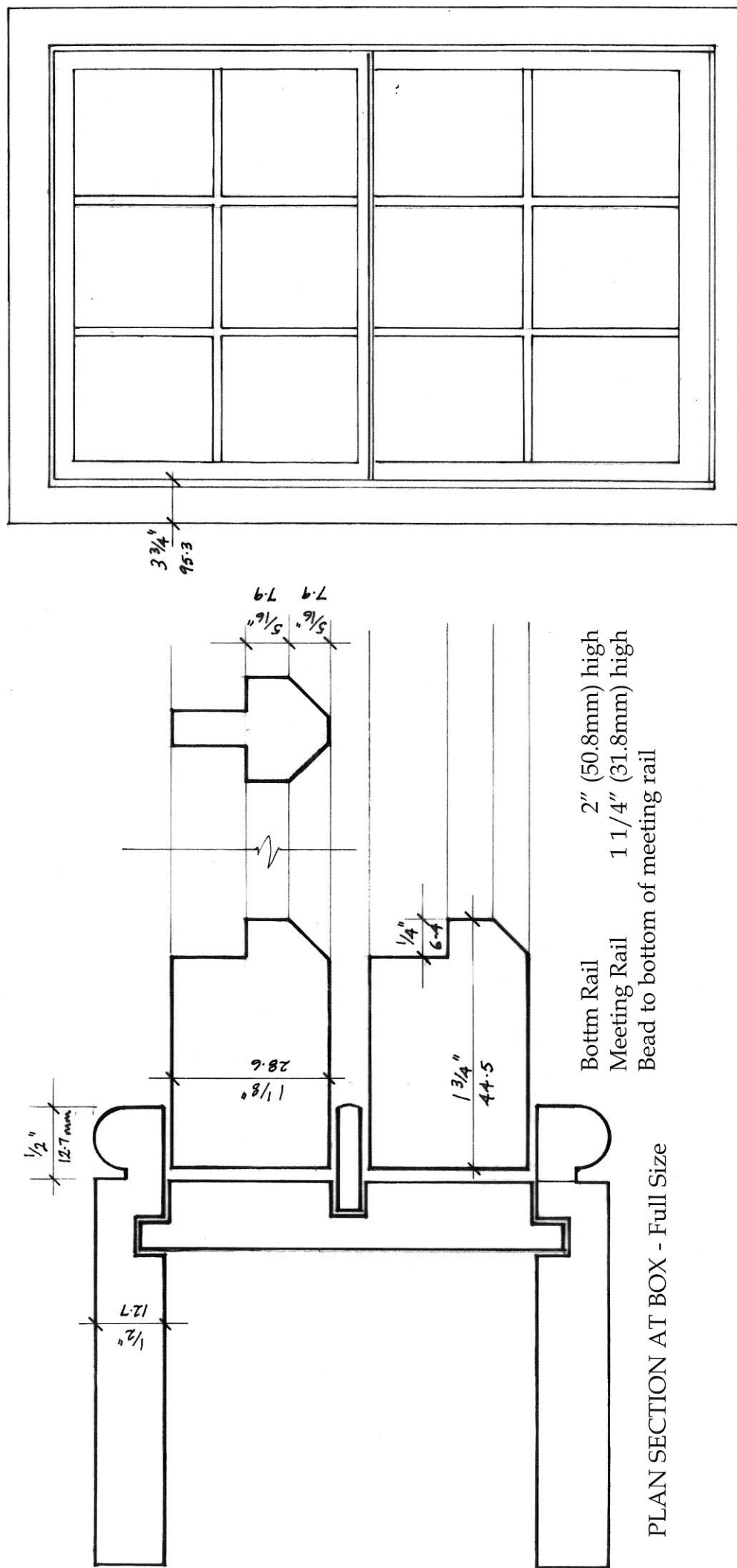
Section Through Window



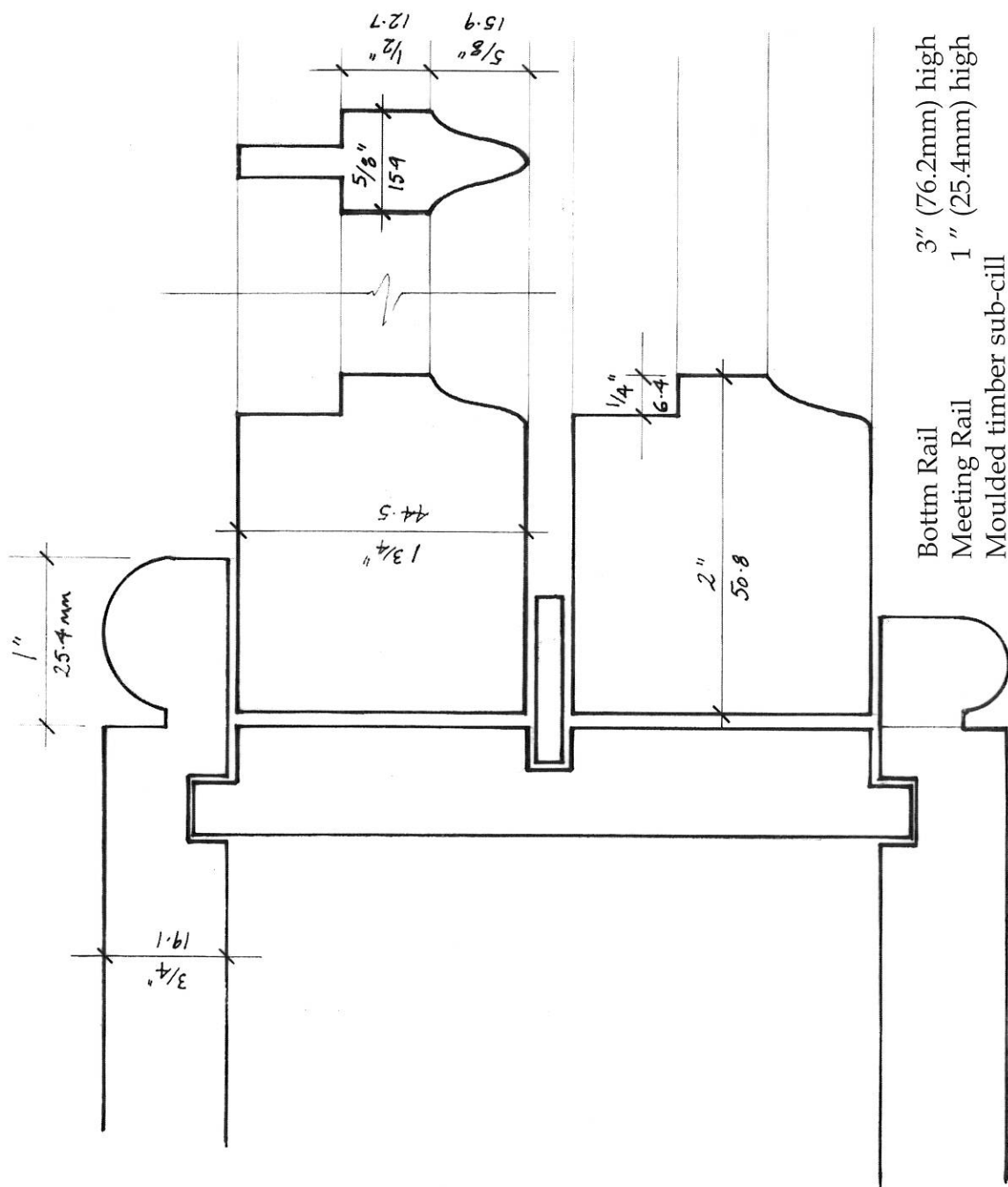
Plan Section Through Window



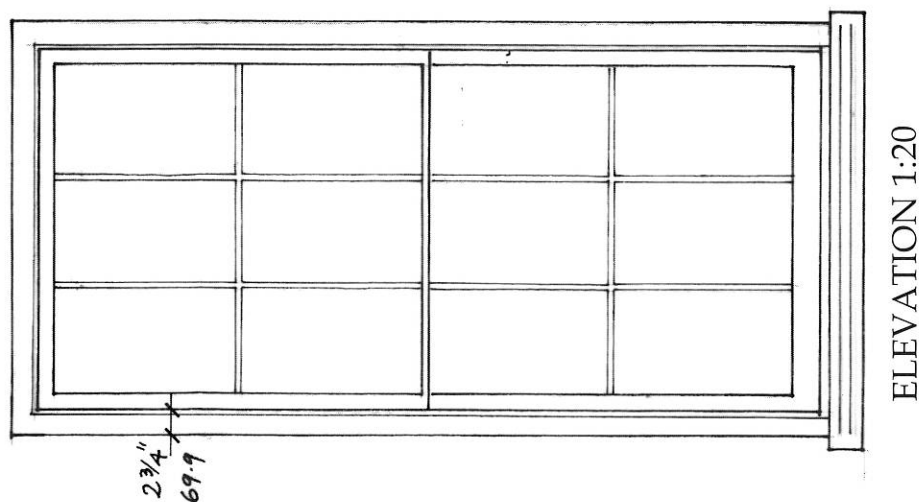
Glazing Bars or Astragals



6 - OVER - 6, 18TH CENTURY SINGLE-HUNG SASH WINDOW, ST. AUBIN



PLAN SECTION AT BOX - Full Size

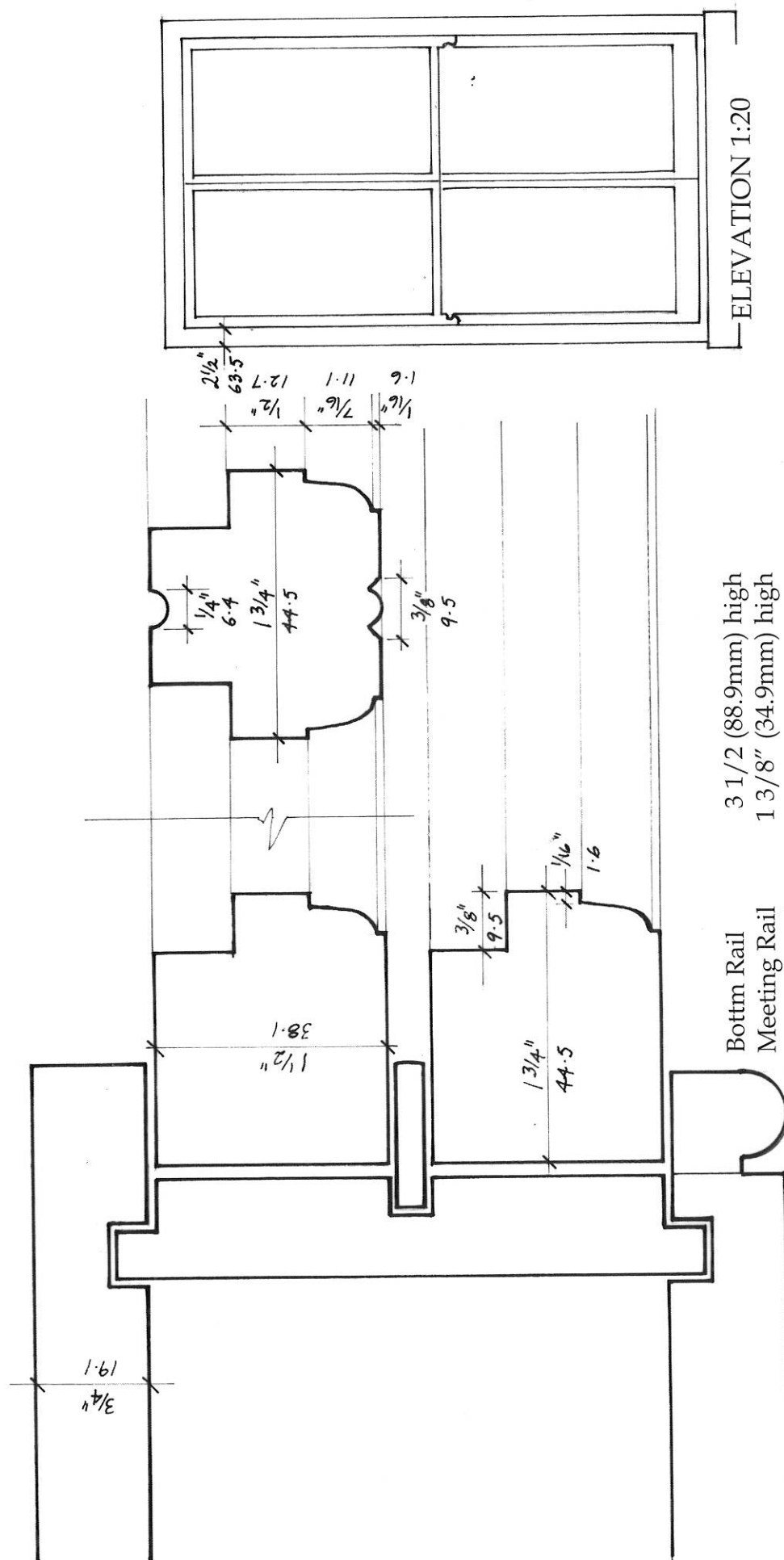


6 - OVER - 6, 19TH CENTURY DOUBLE HUNG SASH WINDOW, ST. HELIER



ELEVATION 1:20

17



PLAN SECTION AT BOX - Full Size

2 - OVER - 2, 19TH CENTURY DOUBLE-HUNG SASH WINDOW, ST. HELIER

