RESIDENTIAL HERITAGE CONSERVATION IN ST. JOHN'S

Robert Mellin

Heritage Foundation of Newfoundland and Labrador

Canada's Historic Places / Lieux patrimoniaux du Canada

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The Canadian Register of Historic Places; Standards and Guidelines; Commercial Heritage Properties Incentive Fund; and a suite of products to help municipalities recognize and protect buildings of significance.

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Figures 1 and 2: House and laneway on Masonic Terrace. This terrace house was one of the first houses to be restored in the East End of St. John's (restored by Affinities Ltd.: Joe Carter, Peter Munroe, Ron Schwartz, and Peter Pope) in the mid-1970's.

Preface

Preface

In 1978, the St. John's Heritage Foundation published a small book titled *The Heritage Look: Renovating Your Home*. Over the years, requests have been made to re-issue this helpful book, which was one of the first publications to offer practical guidance on heritage conservation in St. John's. In recent times, the approach to heritage conservation has evolved, and we probably would not use the same title for a similar book if we were publishing it for the first time today. We believed, however, that reissuing David Webber's drawings of details from *The Heritage Look* would be a worthwhile endeavour because of the information they provide on exterior cladding elements, ornamentation, windows and doors. In this edition, we have had the opportunity to add new material that briefly updates heritage conservation strategies and issues. Although much of the information relates to St. John's, many aspects of exterior cladding technology, materials, architectural elements, architectural style, and urban design are applicable to other areas of the province. Although most of the houses in rural areas of Newfoundland and Labrador are quite different in type and appearance from the houses in St. John's, there are many similarities in exterior cladding construction technology. The chapter on the exterior of the house contains information on techniques that are relevant for traditional wood cladding in both the urban and rural context in Newfoundland and Labrador.

Unfortunately, it was not possible to scan and reprint David Webber's original drawings of details in *The Heritage Look*. The thin paper of the original book permitted too much image bleed-through, and many hand-drawn dimensions and lines were too faint to scan or were incomplete as originally printed. The views expressed in this publication are not the official views of the Heritage Foundation of Newfoundland and Labrador or the official views of Canada's Historic Places Initiative. Every architect has different approaches to heritage conservation detailing, so mine are not the final words on these topics. I hope, however, that my contribution, particularly on the subject of the house exterior, will complement the re-issue of the details in *The Heritage Look.* Before presenting this topic, I provide some background on the issues of heritage conservation and urban design in St. John's. Urban design may ultimately be an area of greater

concern for heritage conservation than the fine restoration detailing of individual houses. I then present a brief outline of reasons for the urgent need to recognize and conserve Newfoundland and Labrador's early modern architecture. Guidance on exterior cladding details follows this summary, with photographs showing how components like clapboards and trim boards can be installed to avoid maintenance problems. This is followed by the drawings of details from *The Heritage Look.*

Portions of the graphics and text from the exemplary and ground-breaking *St. John's Heritage Conservation Area Study* prepared by Sheppard, Burt and Associates and Arends and Associates in 1976 for Heritage Canada and The Newfoundland Historic Trust were incorporated into the 1978 publication *The Heritage Look: Renovating Your Home.* In the 1976 study, more information is presented on various formal architectural styles found in the older residential areas of St. John's than was subsequently included in *The Heritage Look.* It is beyond the scope of this publication to re-present this information on architectural styles, but more information on this topic may be obtained from the City Archives.

Figure 3: The courtyard behind houses on Gower Street.

Acknowledgements

All photographs and drawings by Robert Mellin, except for David Webber's drawings in the Appendix (digitally redrawn by Carla Myrick from Waterwerks Communications Inc: the print quality of *The Heritage Look* made it impossible to scan and reprint the original drawings). Graphic design by Robert Mellin and Waterwerks Communications Inc (St. John's).

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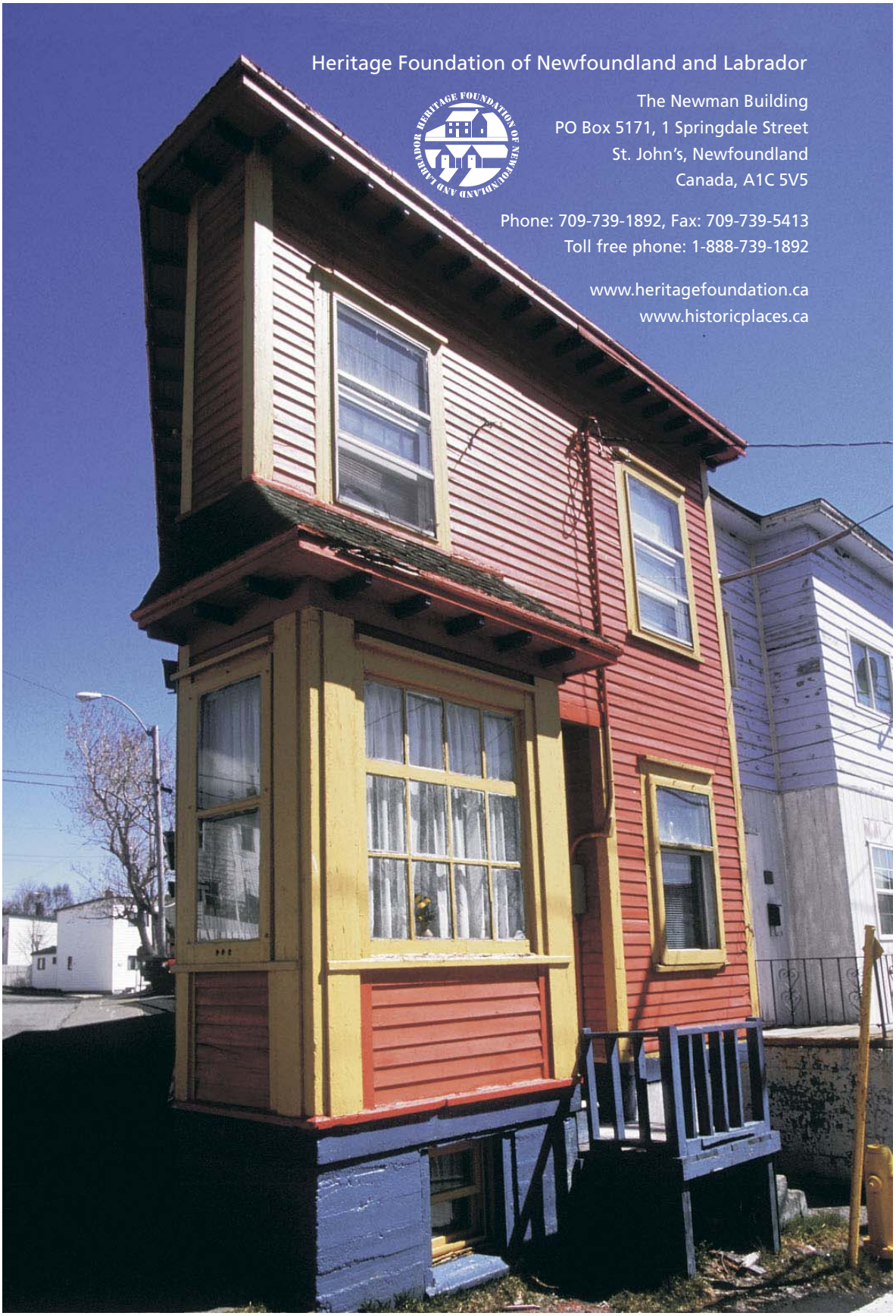
The original drawings of the details in the Appendix were by David Webber for the book *The Heritage Look: Renovating your Home (1976),* published by the St. John's Heritage Foundation. Webber was an expert draftsperson, artist, and exhibit designer/builder. Webber was manager of the St. John's Heritage Foundation when *The Heritage Look* was produced, and he later worked for the Arts Centre in Charlottetown. Other drawings in the book *The Heritage Look* (not reproduced here) were produced in 1976 by the firm Sheppard, Burt and Associates as part of the work for their *St. John's Heritage Conservation Area Study* (Beaton Sheppard and Carl Yetman did the façade drawings for this study). Philip Pratt made a significant contribution to the St. John's Heritage Conservation Area Study when he worked with Sheppard, Burt and Associates. Beaton Sheppard now practices architecture in his firm Sheppard Case Architects Inc., Carl Yetman practices architecture in his firm Contemporary Architecture and Design Inc., and Philip Pratt practices architecture in his firm the PHB Group Inc.

Editing by Helen Dyer, The Last Word



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Heritage Conservation

Excellent progress has been made in heritage conservation in St. John's since the start of this movement in the mid-1970's. Awareness of the benefits of heritage conservation has increased dramatically, and even outside the heritage conservation areas many residents have decided to maintain the original appearance of the exteriors of their houses. They take pride in the fact that they are accomplishing something for posterity. However, this may be a good time to fine-tune the approach to restoration of the exteriors of houses. In some recent restoration projects, the original spare character of the exterior has been replaced by overly elaborate and highly decorative trim and architectural elements. For many houses in St. John's heritage conservation areas, the exterior details were plain, and in some cases, austere. Understatement was the order of the day, even in the choice of paint colours and painting patterns. More important than the expression of individuality was the way the houses related to each other, creating larger compositions of residential blocks, and defining the space of the street.

Many residential heritage conservation projects would greatly benefit from some research in the early stages of the process, and like the popular interest in genaeology, this type of research can be fun to do and very informative. You may wish to consult the City Archives to search for an old historic photograph of your house or the houses in your neighbourhood, or interview people who may know something about the history of your house. Try to proceed with caution if you have to remove materials and architectural elements while making repairs so you can determine the history of construction and maintenance. Consider selecting elements that come as close as possible to the character and size of the originals, elements which will help your house to relate in a congenial manner to the other houses in the neighbourhood. Consider hiring a local artisan, a woodworker or a blacksmith, to make by hand some of the things that could easily be purchased from a renovator's catalogue, but which may never have been originally used on houses in St. John's.

Figures 4 and 5: Houses on Atlantic Avenue in the West End.

Figure 6: Houses in the West End

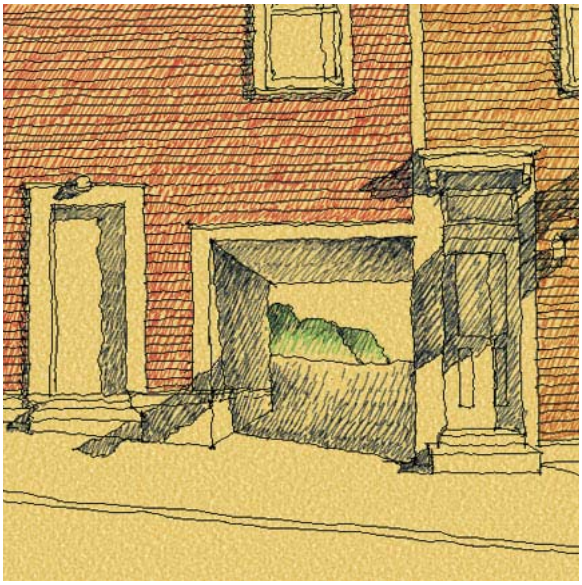


Figure 7: Prescott Street Archway

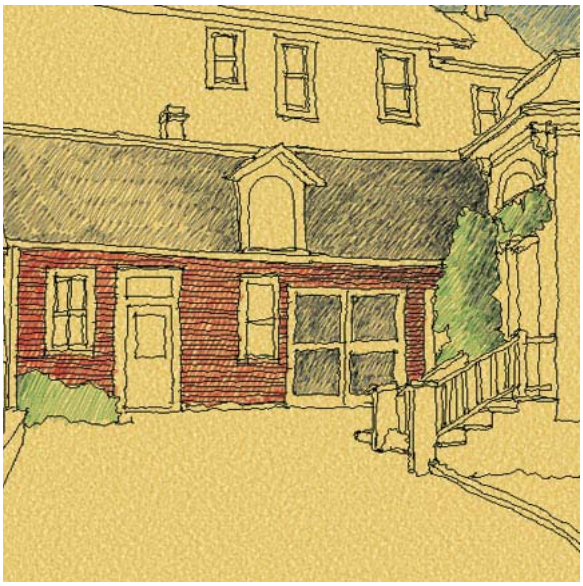


Figure 8: Outbuilding on Rennie's Mill Road

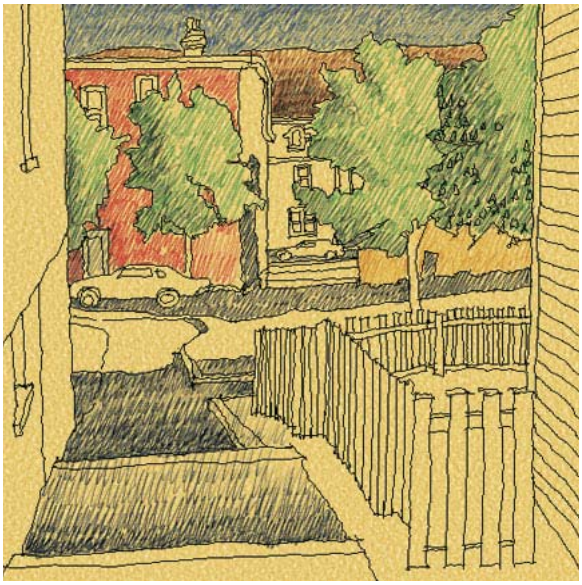
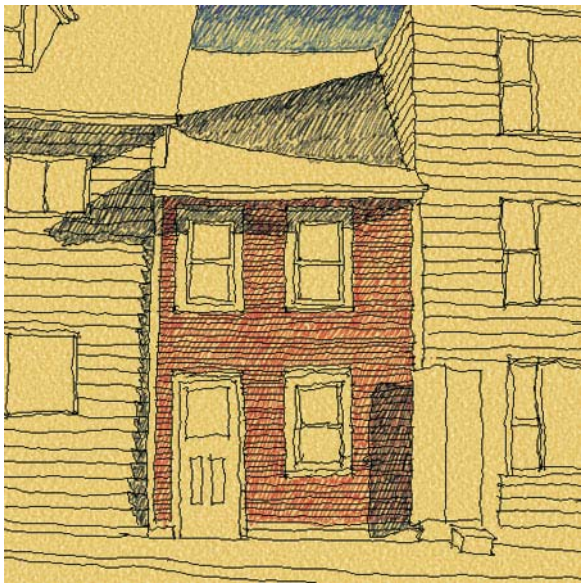


Figure 9: Lane in the East End

Consider the impact small finishing details can have on the exterior appearance of a house. These small details have great symbolic value, and many heritage conservation areas outside Newfoundland and Labrador provide guidelines for small things, even the types of exterior hardware that can be used (for example, in St. John's, a common detail was the plain metal thumb latches used for traditional wooden "V" groove board storm doors). This may seem like over-regulation, but there is a significant cumulative effect based on the appearance of small details.

We should not ignore the demographic changes taking place in heritage conservation areas. Infill dwellings for people with lower income levels are not, to my knowledge, being constructed in St. John's today, and most of the present day infill houses are aimed at the high-end residential market. It would be well to remember the generosity of an earlier era that tolerated the construction of very small, affordable houses (figure 10), some of which have extremely narrow and economical lot proportions.

Figure 10: A small, narrow house on Bannerman Street in the East End.



Concerning the unique sense of place evident in our heritage conservation areas, we should pay more attention to enhancing and preserving the irregular. St. John's once contained strange and irregular buildings and streetscapes, but in recent years we have lost many of these for the sake of efficiency and traffic flow. Much of the vitality of the downtown area can be ascribed to the distorted geometry of its streets and buildings, to the irregular, and even the misbehaved. These are features that make St. John's a memorable place. One of my favourite small buildings, the Crown Taxi stand situated on the paved roadway of Springdale Street, lost the battle with traffic flow and snow clearing when it was demolished a few years ago. It was a local landmark and a tourist attraction for visitors interested in offbeat vernacular architecture.

A large part of the character of residential neighbourhoods in the heritage conservation areas of St. John's is dependent on the contrast between the formal, hard-surface space of the street and the less formal, green space of the courtyards behind houses. It would be preferable to maintain this contrast, rather than being overly eager to try to "green" the space of the street with "Allan block" and pressure-treated wood planters (figures 38 and 39). These interventions detract from St. John's unique cultural landscape. Greening the city is an admirable objective, and it helps to boost awareness of environmental issues. However, for houses in St. John's heritage conservation areas where there were no setbacks from the sidewalk, it may be more appropriate to use a substantial hard-surface material for paving infill between the sidewalk and the house rather than installing a planter, and there are many alternatives to asphalt for this purpose. For houses where there were originally setbacks with small front gardens, there are still a few examples of these gardens that used more substantial landscape elements like concrete, stone, and wrought iron. As shown in figure 40, these "mediating" elements added visual layers between the street and the house, creating the impression of spatial depth.

Figure 11: An old house in the West End, nearly encroaching on the street.

Figure 12: House near Mundy Pond accommodating an irregular lot shape and a right-of-way.

Urban Design

St. John's is a city with a historic core that offers seemingly endless points of interest and surprises. There are many areas with a strong sense of neighbourhood identity and history. What is especially remarkable is the congenial, irregular, and sometimes eccentric character of the streets and the architecture, built largely without the professional expertise of architects, engineers, and planners. The higher density of the old residential areas, combined with fences, outbuildings, and alleyways, creates a kind of congenial congestion. You experience a sense of enclosure in your immediate surroundings, but at the same time the viewplanes make you aware of the larger space created by the harbour and the surrounding hills.

First time visitors are often perplexed by the newer suburban development in St. John's. How can there be such a contrast between the old and the new? What happened in the process of city planning? In the decades following World War II, planning regulations that paid little attention to local conditions and opportunities were adopted in an attempt to expedite traffic flow and economic development. Possibly the last time anyone comprehensively addressed the artistic and qualitative aspects of urban design and city planning in St. John's

Figure 13: Houses on the east end of Gower Street, near the Anglican Cathedral

was when Sir Brian Dunfield wrote his remarkable reports for the Commission of Enquiry on Housing and Town Planning in St. John's (commission appointed in 1942).

Until Newfoundland entered Confederation with Canada in 1949, planning and architectural design was informed by a sense of civic duty and decorum. In the larger centres like St. John's, there was common agreement about the architect's responsibility for urban design: to relate one building to another in terms of form, materials, and proportions. Architects were content to work within the constraints of attached buildings and higher densities. There was also agreement about a hierarchy of building types, as expressed in terms of height, decoration, and architectural elements. Residential and commercial buildings usually kept a low profile, with the city skyline interrupted only by church towers and a few public buildings. Today, the architectural integrity of old St. John's is still based on the hierarchical character of its skyline. However, despite the remarkable interest shown in the restoration of individual houses we have witnessed in St. John's in the past thirty years, we need to do more to promote good urban design even in some of our heritage conservation areas. Urban design guidelines are needed to address the way buildings relate to each other in terms of height, volume, viewplanes, setbacks, size, and proportions. Without these guidelines, it is difficult to properly evaluate development proposals. In sensitive heritage conservation areas in some European cities, full-scale mock-ups must be constructed on site to demonstrate the impact of a new building on its surroundings, and this is followed by public debate. I am not suggesting that we need to do full-scale mockups in St. John's, but we can easily do something similar today using three-dimensional computer modeling software.

A distinguishing feature of some St. John's heritage conservation areas is the lack of any front setback for houses and other buildings. Houses were constructed in common agreement that the building line and block form would be maintained and enhanced. Houses on the

Figure 14 (left): Congenial congestion in a well-defined laneway in the East End.

Figure 15: View of The Narrows from the front steps of The Basilica, before the construction of townhouses with parking under the houses blocked the view. With on-street parking, more of the view would have been preserved for this significant public space.

corners of blocks provided opportunities for expression, anchoring the composition of the whole block by special building forms (roof shape, cornices) and architectural elements (angled entrances, bay windows). There was common agreement and purpose that the form of the block should be preserved, which resulted in a consistent character for the space of the street and the space of the courtyards behind buildings. In St. John's today, setback regulations acknowledge the historical situation of buildings that were built to the sidewalk. However, some recently constructed multi-unit housing projects and some commercial and public projects do not always follow this pattern, thus eroding the space of the street.

Adequate parking has always been a problem in old St. John's. In my opinion, we should avoid off-street parking under infill houses. The City of St. John's still permits ground floor parking under new infill houses in heritage areas. This, however, detracts from the pedestrian-scale character of our streets and greatly reduces contact between

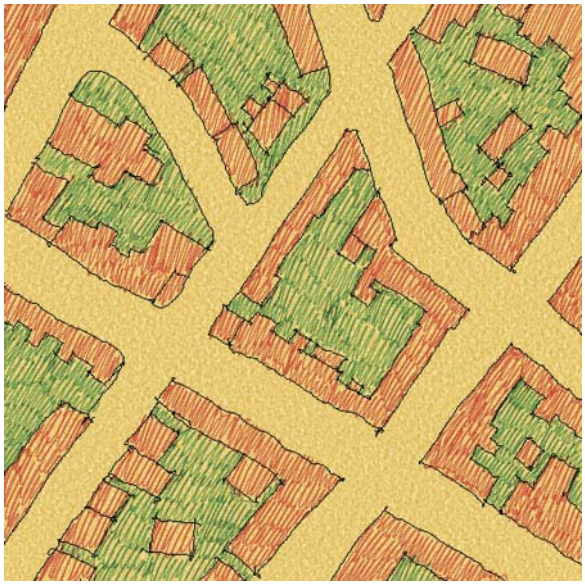


Figure 16: Well-defined blocks in the East End.

Figure 17: Detail of a block in the East End.

neighbours. The streets take on a vacant appearance that is potentially unsafe for pedestrians. It also eliminates visual connections between the interior of the dwelling and the public space of the street, an aspect of many older residential neighbourhoods in St. John's that has largely been forgotten. Tourism potential in these areas is also diminished. In addition, ground floor parking under houses offers no real advantage, because it eliminates the possibility of an on-street parking space next to the house. According to basic "New Urbanist" planning principles, on street parking provides a beneficial barrier between vehicles and pedestrians, and it tends to make drivers more cautious.

Figure 18: A small parking lot in a courtyard in the East End.

Figure 19: A house (red) and back yard (green) in a typical East End block.

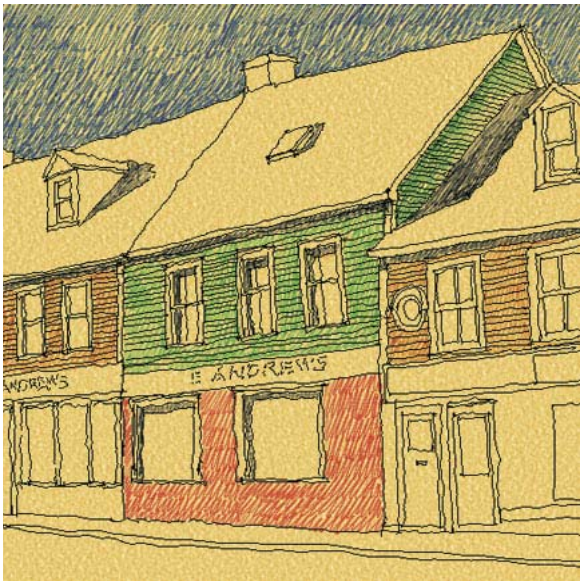


Figure 20: The old Andrews Range on New Gower Street (demolished).

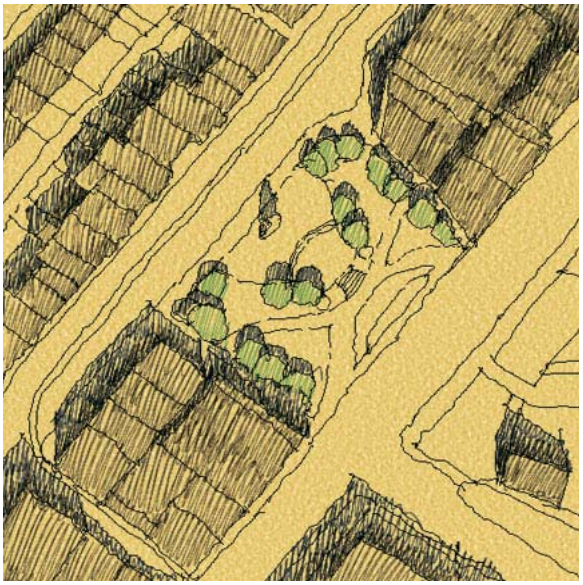


Figure 21: The War Memorial in the East End, a space simultaneously enclosed yet open to the view of the harbour.

We need to broaden our thinking about heritage conservation and consider not only the memory of the past but also the planning and development legacy we wish to establish for the future. There is much to be learned from the way people lived in the older traditional neighbourhoods of St. John's. In terms of land use, the cultural landscape, and even many energy conservation and resource conservation aspects of the Kyoto Protocol, we now consider these types of higher-density older neighbourhoods to be healthier places to live and more environmentally friendly than new low-density suburbs where people are entirely dependent on the automobile. Studies have shown that people living in older, high-density neighbourhoods tend to walk or bicycle more than people living in remote suburbs, and this translates into better all-around health (even lower average body weight!). Houses that are attached to each other provide significant energy savings, and this type of housing often creates courtyards and protected open areas that provide wind protection. The higher density of this type of housing also makes it possible to support an efficient and affordable public transit system.

With regard to contemporary projects, it is distressing to see so many recent residential, commercial, and institutional developments that detract from their surroundings, not because there were budget limitations but mainly because of a lack of appreciation for the basic architectural and urban design principles that informed the traditional architecture of St. John's. A good resource for contemporary projects in heritage conservation areas is the writing of Alexander Tzonis and Kenneth Frampton on "critical regionalism," which challenges architects to base their designs on concepts that relate to the construction traditions, architectural precedents, and environmental requirements of a region without overtly copying the forms of the past (see Kenneth Frampton, "Towards a Critical Regionalism: Six Points for an Architecture of Resistance," in *Labour, Work, and Architecture,* Phaidon Press Ltd., 2002).

Figure 22: New development in the West End, turning its back on the older residential neighbourhood.

Regarding the issue of urban design, what is most evident about the deficiencies of some recent projects is the lack of thought given to the connections between buildings. In old St. John's, you will still find evidence of these connections. The quality of the connections and of the spaces in between buildings provides us with a yardstick for appraising contemporary architecture and urban design. By this measure, many new developments in the old downtown seem disconnected from their surroundings. Recent new award-winning work in architectural design seems less focused on the design of heroic and acrobatic freestanding buildings, and reflects a concern with the fit between a building and its surroundings. This work also reflects a concern for leftover, abandoned, or marginal sites. In St. John's, we need more small scale, careful contextual interventions that make repairs to the urban fabric.

For more information on this topic, a report that I wrote a few years ago for Canada Mortgage and Housing Corporation (CMHC) titled "A City of Towns: Alternatives for the Planning and Design of Housing in St. John's, Newfoundland (CMHC CR File 6585-M108) is available free of charge from CMHC. It uses three-dimensional computer models, photographs, and drawings to interpret and analyze the older residential areas of St. John's. The purpose of this research was to determine what we could learn from the older residential areas in St. John's that would be applicable to new residential development.

Figure 23: A well-defined block of houses in the East End.

Early Modern Architecture

Houses from the Victorian era are fairly well protected in our heritage conservation areas, but St. John's also had many remarkable houses from the early modern period dating from just before and after Newfoundland's confederation with Canada. In this period, a few Newfoundland architects bravely tried to reconcile their awareness of contemporary modern architectural design work done elsewhere with local conditions. Today, the work of these architects is threatened by unsympathetic renovations and demolition. Present-day historic preservation by-laws seem to be based on a selective interpretation of history that largely excludes this period of Newfoundland's architecture.

I have documented some of these houses with the photographer Ned Pratt, and it seems there has been some progress in boosting awareness of the need for a heritage conservation strategy for early modern architecture. Some noteworthy early modern houses in St. John's are the Goldstone Residence (recently restored by Derrick and Linda Rowe) on Rostellan Street by architect Paul Meschino (figures 24 and 25) and the Clouston Residence by architect F.A. Colbourne, at the corner of Rostellan Street and Elizabeth Avenue (figure 26). Colbourne also designed a house for the Kinsmen in the early 1950s across from Churchill Square on Elizabeth Avenue (figures 27 to 30). This house was constructed in aid of the Kinsmen's General Charitable Fund, and it was offered as the first prize in a raffle. At about the same time, Colbourne also designed a similar private residence for the MacDonald family at #3 Forest Avenue (figures 31 and 32: recently restored by Scott Jamieson and Anne Thareau).

Figures 24 and 25 (left): The Goldstone Residence designed by architect Paul Meschino (restored by Derrick and Linda Rowe, with Keith Pierce as the restoration contractor). This project won a Southcott Award.

St. John's residents are not used to thinking about neighbourhoods planned in the 1940s and 50s as historic, but the legacy of the planning work for Churchill Park and the houses in this area designed by architect Paul Meschino just after Confederation are worthy of preservation (figures 33-35). When this residential area was first developed, it was held in high esteem by the residents of St. John's as a modern alternative to sub-standard housing conditions downtown. Today, it is one of the most appealing suburban residential areas in the city, due mainly to its convenient location and mature landscaping. The character of the area is changing quickly, however, as the original houses are being demolished in favour of the construction of new houses that are too large for their sites. Urban design regulations to guide the massing and disposition of new projects in existing neighbourhoods would help to address these problems.

For more information on early modern architecture in St. John's, see my article "Modernism in Newfoundland," in the March 2002 edition of *The Canadian Architect*, pages 18-21.

Figure 26: The Clouston Residence, designed by architect F. A. Colbourne in the early 1950's.

Figures 27-30: The house designed by architect F. A. Colbourne for the Kinsmen's General Charitable Fund.

Figures 31 and 32: The MacDonald Residence at 3 Forest Avenue, restored by Scott Jamieson and Anne Thareau.

Figures 33-35: Two Bungalows designed by architect Paul Meschino as part of the original work for Churchill Park, showing how his house designs responded to variations in topography. The corner window detail on the red house included a vent panel.

The Exterior of the House

Today it is rare to see renovated houses with their original materials and architectural details preserved. There are only a few examples left of original trim and ornamental detail, as shown in this plain doorway in the East End (figure 36) and in this more ornate but locally crafted and authentic door trim in the West End (figure 37). Original details like this are usually the first thing to go in a restoration project because it is too much trouble to make the required repairs. Overly precious "heritage" moulding profiles tend to be used on many recent restoration projects. From a distance, it appears that history is being preserved in the neighbourhood, but upon close inspection it is clear that the particular character of individual buildings is being erased by standardized trim and ornament. Researching and preserving the history of the architecture is no longer part of the restoration process.

Soon it may be difficult to find any of the plain and reticent detailing that once characterized many of the older working class houses.

Figure 36: Plain detailing of a doorway in the East End.

Figure 37: Original detail in a house in the West End.

Preservation architects would never think of applying inappropriately ornate mouldings and details to historic Shaker village or Amish farm architecture, but this is what is often happening to old houses in St. John's. Beyond exterior trim, window details, and moulding profiles, small curb side planters, often constructed with pressure treated wood (figure 38) or Allan block (figure 39) (a material I have come to think of as the "vinyl siding" of landscape architecture), seem out of character in front of some houses in the East End. People have forgotten that where small ornamental gardens were originally created by a small setback of the house from the street, more formal and permanent details were used in the past, such as stone walls or concrete posts with wrought iron fencing (figure 40).

For exterior cladding in old St. John's, four-inch exposure spruce or pine clapboards or four inch exposure wood shingles were typically

Figure 38: Pressure-treated wood planter in the East End.

Figure 39: Allan block planter in the East End.

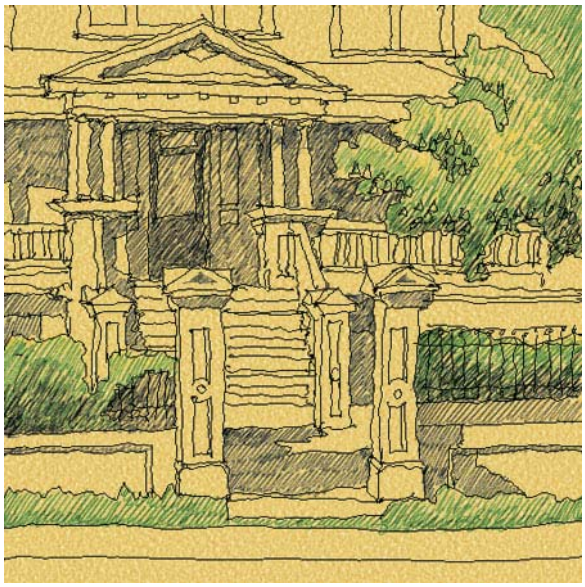


Figure 40: Traditional wall and gate in the West End near Mundy Pond.

used (sometimes a combination of shingles and clapboards with clapboards at the base of the wall and shingles above), with slightly wider trim boards and corner boards and significantly wider trim at the base of the wall known as a "water table." The water table (figures 41 to 43) could be as wide as eight to twelve inches, but it was always wider than the corner boards and the trim boards that framed windows and doors. The water table typically had a cap or projecting sill to divert rain away from the foundation wall, and this projecting sill was usually one and a half inches thick or greater. Water table sills were mitred at the corners and did not terminate at the corner trim boards. Often the thickness of the water table sill corresponded to the thickness of window and doorsills, as well as to the projecting sill for the head trim of windows and doors. On some recently restored houses where water tables and sills have been reconstructed, the sills are not thick enough and the trim is not wide enough. This creates an awkward appearance in relation to the rest of the wall, giving the impression that a strong, structural base is missing, or that the materials used are not substantial enough to be authentic.

Figures 41-43: Water table trim board and sill details (design by Robert Mellin; Garnet Kindervator, contractor).

Ideally, the thickness of trim boards should be full one-inch board, not three-quarter inch as is sometimes used. With full one-inch board, the thickness of the overlap of the clapboards will not inappropriately project beyond the face of the trim boards. Full one-inch thick jack pine is the preferred material for trim boards, and it is often readily available for heritage conservation projects.

In recent years, Canada Mortgage and Housing Corporation (CMHC) and other organizations like the National Research Council (NRC) have been researching exterior cladding details that respond to Canada's weather conditions. In St. John's, storms, high winds, dampness, and long winters provide significant challenges for the maintenance of the exterior cladding typically found on older houses. The higher cost of materials and labour for this type of cladding, combined with justifiable reservations about the need to do continual maintenance work for peeling paint and decayed elements like clapboards, trim boards, window sills, and eaves, would make any home owner think twice about restoring a home using original materials.

However, there are ways to keep the paint on and to reduce or largely eliminate maintenance work. One of the most helpful details that has evolved recently for exterior cladding is the "rain screen (figure 44)." This is like placing an umbrella all around your house, with a vented air space placed under the clapboards and trim boards. This detail is most often used for new houses, but I have used it for restoration work even in situations where I have retained the original windows and doors. The general principle is to construct a "forgiving" wall with regard to moisture behaviour. Ideally, a polyethylene air/vapour barrier is installed on the interior side of the wall or else a vapour barrier-type paint is used on the interior finish after openings in the interior finishes are sealed. This prevents excessive moisture from entering the wall. However, in most old houses, though, it is almost impossible to install a perfect air-vapour barrier and moisture will inevitably find its way into the wall. The rain screen detail permits moisture to harmlessly escape through the exterior of the wall without compromising the integrity of the exterior cladding and paint finish.

For a typical installation involving clapboards where the original windows and doors will be retained and where replacement of all the exterior cladding may be required, the clapboards are removed first and the wall sheathing is then repaired. The most vulnerable locations for decay were always the corner boards, so replacement of some of

Figure 44: Strapping under clapboards to create a rain screen.

the corner studs is often required. This is the proper time to assess the condition of the corner studs or any other framing that may be suspect. Removal of the trim boards from the existing window boxes is a delicate operation but it can be done with care. Quite often the original window boxes and windowsills are in reasonable condition, and it is preferable to try to salvage, rather than replace, the original windows, if possible. Window sashes are easy to replicate, and there are several qualified window makers in the province who still know how to do this kind of work. The old irregular glass still found in many original windows is valuable and adds to the character of the house, so this should be retained or recycled in new sashes wherever possible. On many ill-conceived restorations, replacing existing windows results in drastic downsizing of windows or a change in window proportions. A major feature of the character of the old houses in St. John's was the generous size and proportions of the original windows.

The next step is to install a protection membrane over the sheathing. Some contractors still use lightweight asphalt coated building paper (roofing felt is too heavy) but today most use spunbonded olefin. After the seams are taped, 1" x 3" wood strapping is installed vertically,

typically at 16” O.C. The compartments created by this strapping should be cross-vented above or under windows and doors, so gaps in the strapping should be left for this purpose. At the base of the wall, a narrow and continuous sheet of stainless steel screening is placed in back of the strapping and then folded under and over the front of the strapping and stapled in place. The screen prevents insects and vermin from entering the air space. This screened vent detail permits air to enter the space of the rain screen behind the water table (figure 45). At the top of the wall, the strapping can be left open to the air space of the soffit for the eaves, and appropriately sized vents should then be placed in the soffits. A similar screen detail is installed above windows and doors, but metal flashing must also be installed in these locations. The flashing should be carried slightly over the edge of the projecting head trim of the windows and doors, and the olefin membrane must be taped over the top of the flashing (figure 46).

Figure 45: Preparing the base of the wall for the rain screen vent.

Figure 46: Preparing the window head trim for the rain screen vent. Sealant must be used at the left and right corners of the flashing/ strapping junction to prevent wind-blown rain from entering the rain screen cavity.

Where clapboards meet trim boards, the vertical strapping should centre on this junction to provide support. Narrow pieces of strapping at corners and under window and door trim are preferable to wide strapping so that the air space is preserved under these elements. Placing 1" x 4" — or wider — strapping under the trim boards will negate the value of the rain screen. To retrofit and build out the window boxes of existing windows, a narrow strip of 3/4 inch thick trim is sealed and fastened to the window box, sometimes with a slight setback from the inside face of the box to create an edge to receive sealant. Where the original windowsills are to be preserved, these must be slightly extended in this type of installation in order to maintain the proper projection dimension. The front of the sill is planed and finish nails and a construction adhesive can be used to fasten the sill extension. Sealant between clapboards and trim boards is often installed in a hidden manner, with the ends of the clapboards forced into the sealant already applied to the junction of the trim board and strapping (good quality latex sealant is best). Stainless steel nails should be used for trim boards and clapboards. These are more expensive, but will resist rust in a coastal environment.

For houses with traditional wooden shingles, creating a rain screen is a bit more difficult but this is still possible. Instead of using vertical wood strapping, the use of a product designed specifically as an underlay for wood shingles will achieve a rain screen effect. One product on the market uses an expanded plastic mesh that is stapled over the building paper or olefin membrane, and the shingles are installed by nailing them on over this mesh. Keep in mind that wood shingles will absorb moisture and swell laterally, so be sure to follow the supplier's recommendations for the gaps that must be maintained between shingles (the same applies to wood shingles used on roofs).

There has been much debate on the use of rough side out vs. smooth clapboards and trim. Most of the older houses in St. John's used smooth side out for clapboards, trim, and window sashes. Rough side out was typically associated with buildings in rural Newfoundland, particularly outbuildings. Rough side out in St. John's started to be used when contractors began to look for alternative ways to reduce the peeling of oil base paint. It was thought that the paint would adhere better to the rough texture of the wood. Although there may be some marginal benefit to this, paint actually adheres to wood at the microscopic level, not at the level of the rough surface texture. Nevertheless, rough side out has become recognized as aesthetically pleasing in recent

Figure 47: Strapping and window head detail for the rain screen.

years and many residents prefer this texture. If you decide to use smooth side out pine clapboard, check the surface for a residue from the planning process called “mill glaze.” This must be removed by sanding, especially when using latex paint. Another difficulty with pine clapboards is the need to properly seal knots to prevent bleed through where light paint colours are used. The smooth side of local spruce clapboard does not seem to have this residue problem, and the knots are generally smaller and not as prone to bleed through. Using local spruce clapboards makes sense to reduce the transportation costs of construction materials (transportation costs figure prominently in LEED or “Leadership in Energy and Environmental Design” certification for environmental concerns).

Figure 48: Clapboards intersecting a roof: a diagonal trim board along the roof was eliminated to avoid potential leak problems.

Figure 49: Eave and soffit detail.

Carefully consider the type of paint you will use. Oil base paint and even oil base stain and oil base primer create a vapour barrier on the exterior of the house. This type of paint is forced off the wood when moisture travelling through the wall from the interior to the exterior encounters the vapour barrier created by the paint. I recommend using only high quality latex primer with two coats of high quality latex paint. Not only is latex paint better environmentally (oil base paint has been prohibited in some cities because of its contribution to air pollution), it is compatible with the concept of the "forgiving" wall described above. Moisture can pass through latex primer and paint, avoiding the unsightly peeling associated with paint failure. If you are not replacing clapboards and trim boards or if you are not installing a rain screen, it is important to remove all the existing oil base paint and oil base primer before painting with latex primer and paint.

There has also been some controversy about the use of latex stain vs. latex paint. I have found that both perform equally well with regard to permitting the diffusion of moisture, but on the south side of a house where stain is applied it seems stain does not provide sufficient U.V. light protection, occasionally resulting in paint chalking and cracks in clapboards. For new clapboards and trim boards, I advise priming all surfaces first with a tinted latex primer, then applying one finished coat

Figure 50: Eave, soffit, and new chimney detail.

to the surfaces that will be visible prior to installing the material. The final coat of paint should be applied once the installation is complete. If you are doing the construction in the fall, winter, or spring, try to wait until the summer for the application of the final coat of paint.

Never install clapboards and shingles directly over a spunbonded olefin membrane without a rain screen. This is especially important in more exposed seaside locations like The Battery, where exceptionally damp conditions prevail. Moisture will eventually get trapped behind the exterior cladding in this type of installation, and typically the cladding will not have enough time to dry out between storms or even between seasons, resulting in decay. I have seen significant decay in these circumstances after only two or three years, even where all new materials were installed.

Energy conservation is always an issue where existing windows are to be retained, as excessive air infiltration will result in significant heat loss. Most of the older houses in St. John's had heavy exterior storm windows. You had to risk life and limb to remove and service these, or put up with just a small built-in storm window vent if you chose to leave the storm windows on in the summer. Although these storm windows look authentic (some experts may feel they are essential for authenticity), I have occasionally had retrofit interior wood "storm windows" (the regular window sashes become the storm windows) made by local window makers. These can be made from three quarter inch stock, and if done well, they can be installed unobtrusively. The interior window stop is removed, and a custom made stop is installed to receive the new interior window. Weather stripping can be installed on these interior windows for extra protection, and this extends the principle of the air/vapour barrier from the walls to the windows. The idea is to seal the inside of the window, and to let the exterior breathe. The only special precaution for interior windows is when they are installed in bedroom windows required for egress. In these instances, it should be possible to remove the interior window without using tools.

Every heritage conservation project is unique and offers particular challenges. Time for adequate research and preparation will help to ensure good results. One important part of the process is to make sure the materials and components will be available when you need them. Being pressured into decisions on the spur of the moment, or compromising on the details or sequence of construction, because of resistance encountered from a carpenter or painter who has always done it his or her way can lead to disaster and disappointment. There is just too great an investment in time, money, and effort in a heritage conservation project, not to get it right in the first place.

Figure 51 (next page): Corner windows with corner trim using recessed panels instead of wide trim boards.

Appendix:
(details from *The Heritage Look*)

A. *Doors* **41**

B. *Doorways* **69**

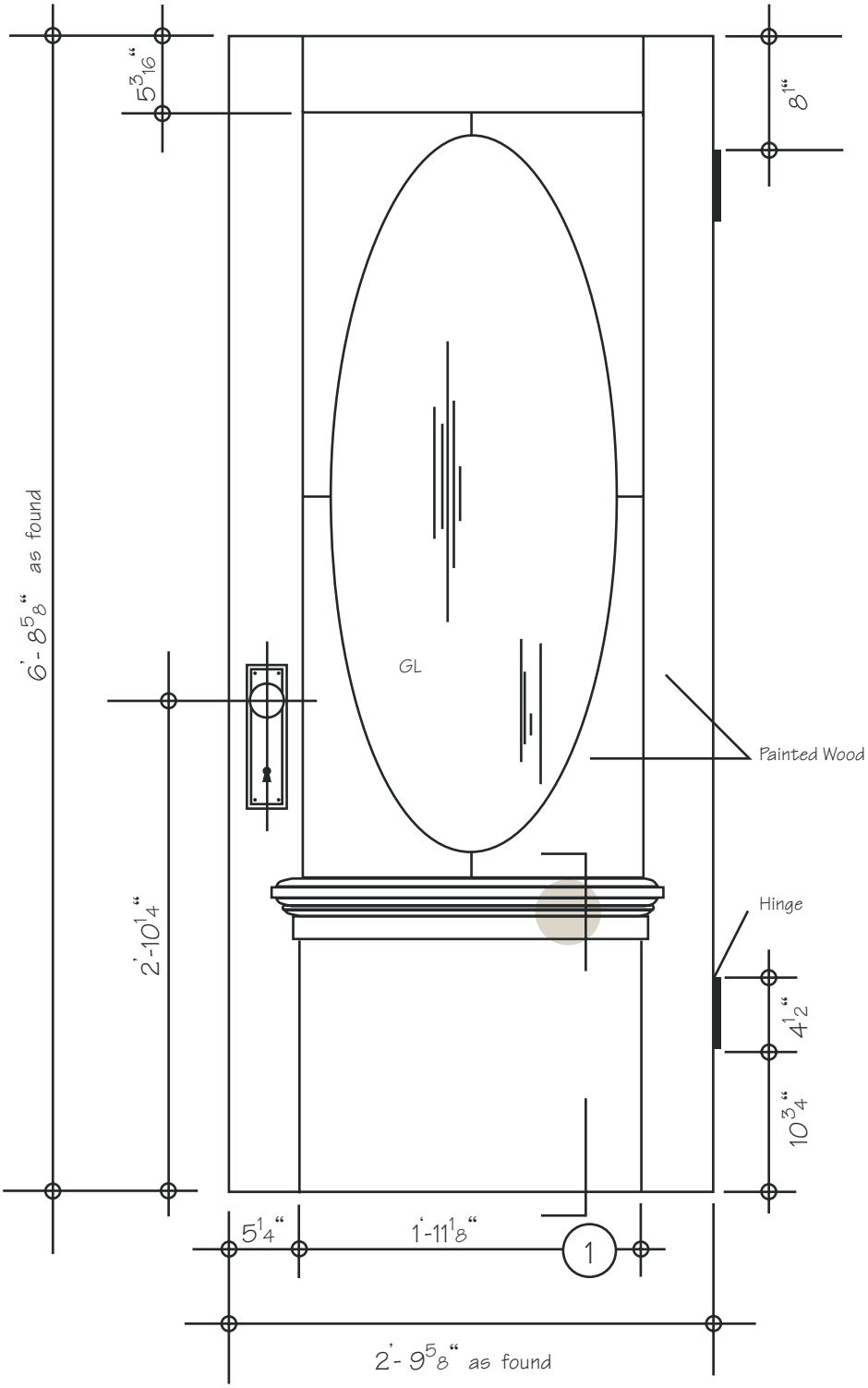
C. *Brackets* **84**

D. *Windows* **94**

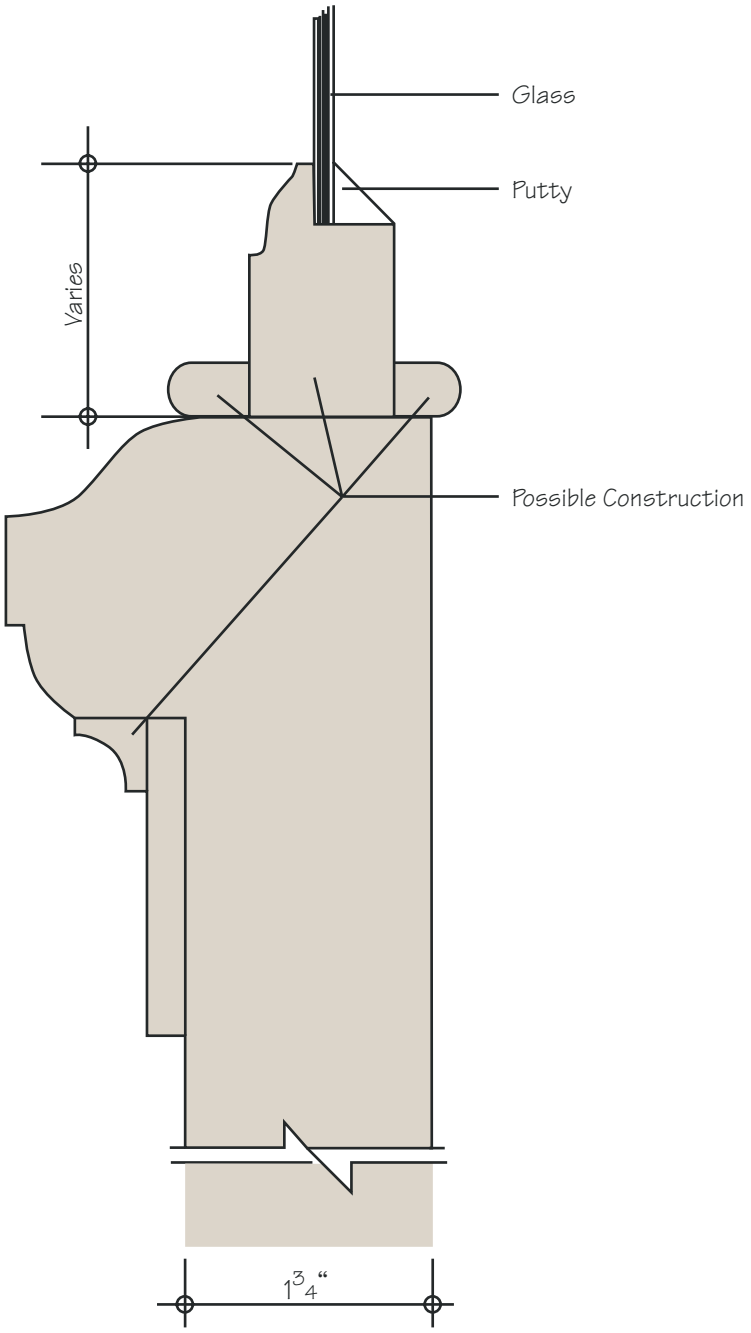
Appendix A:

Doors

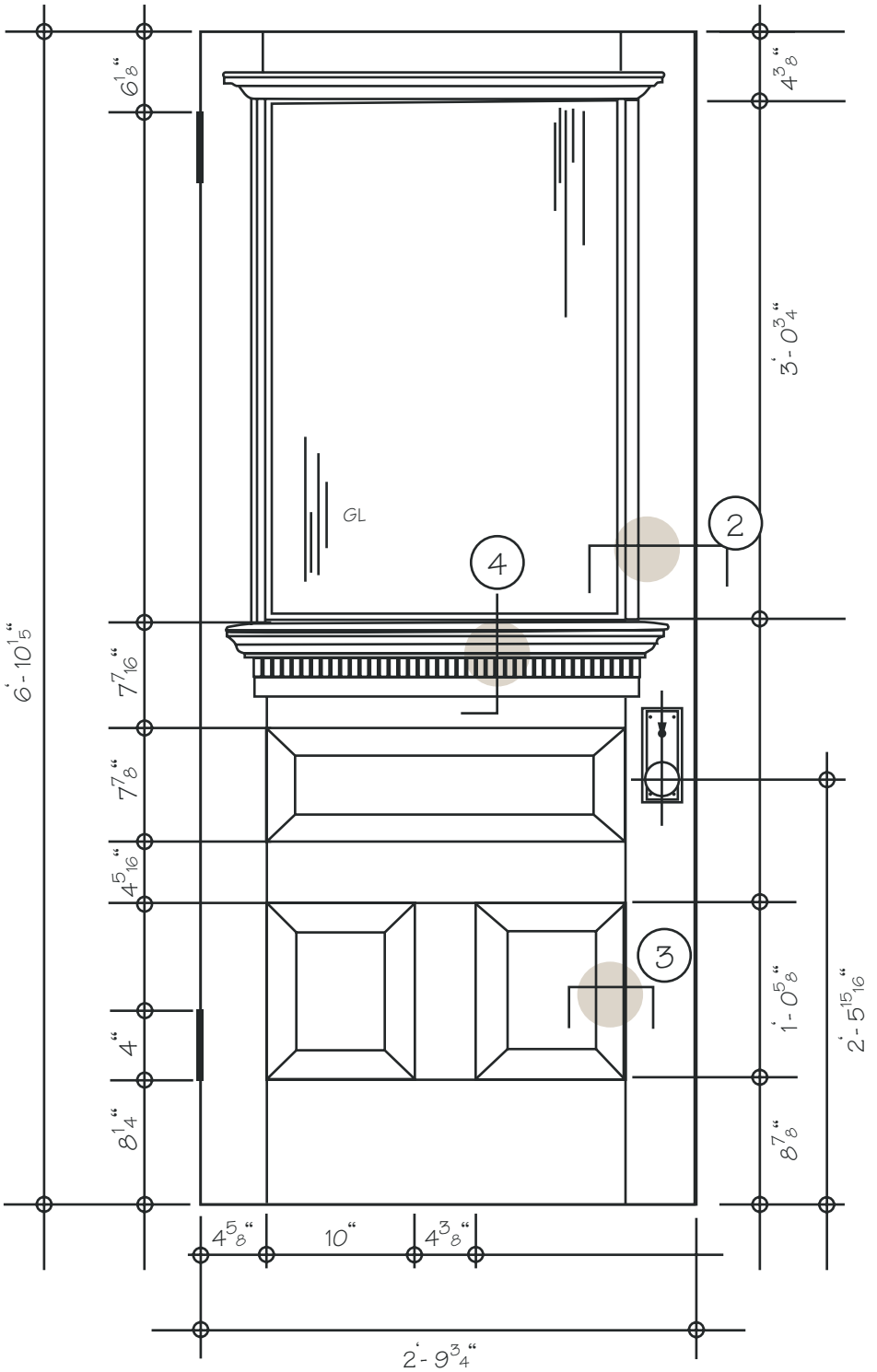
The doors illustrated were selected because they are found more than once in the Heritage Conservation Area, and because they reflect the builder's choice of designs popular after the great fire of 1892. Many are repeated throughout the area, others are found in isolated groupings, sometimes appearing in one range of buildings only. The common material is select pine.


5 3/16"
8"
6'- 8 5/8" as found
GL
Painted Wood
Hinge
2'-10 1/4"
4 1/2"
10 3/4"
5 1/4"
1'-11 1/8"
1
2'- 9 5/8" as found

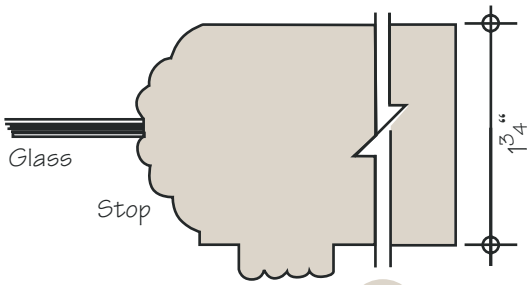
TYPE 1



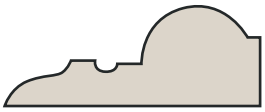
Section 1 Bottom Rail


6 1/8"
4 3/8"
3' - 0 3/4"
GL
2
4
6' - 10 15/16"
7 7/16"
7 7/8"
4 5/16"
3
4"
8 1/4"
1' - 0 5/8"
8 7/8"
2' - 5 15/16"
4 5/8"
10"
4 3/8"
2' - 9 3/4"

TYPE 2

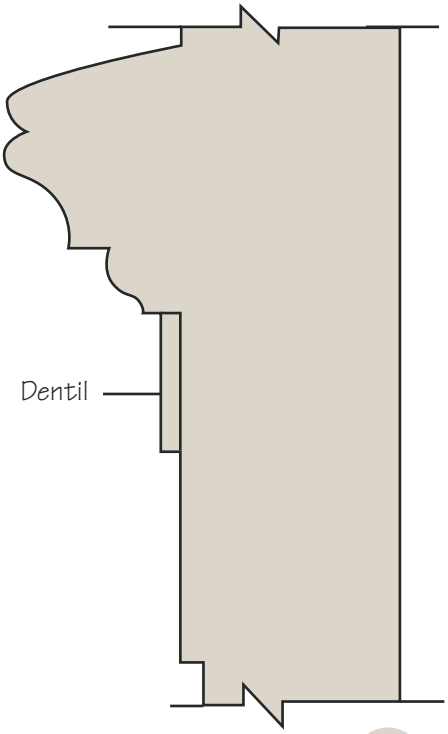


Section 2 Jamb

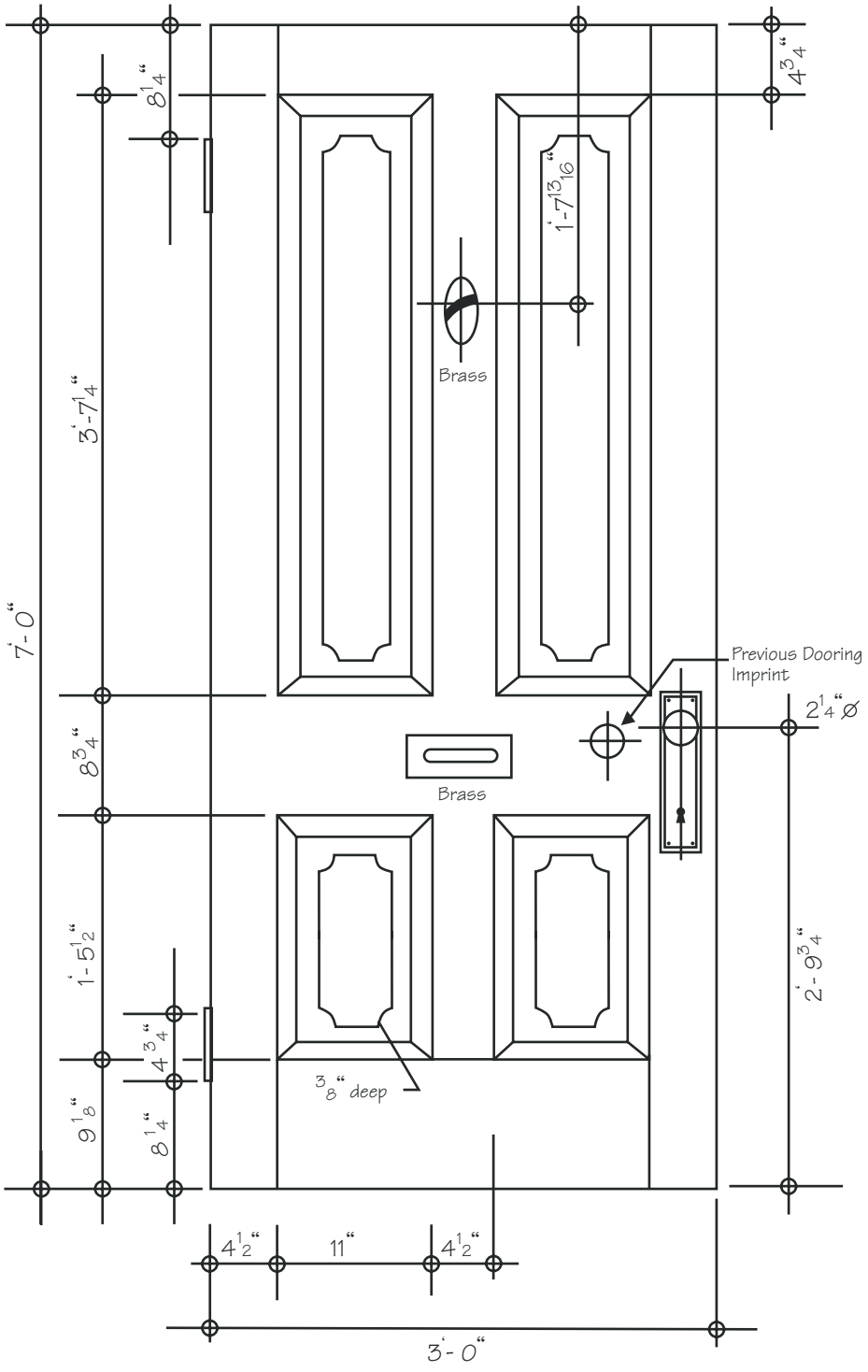


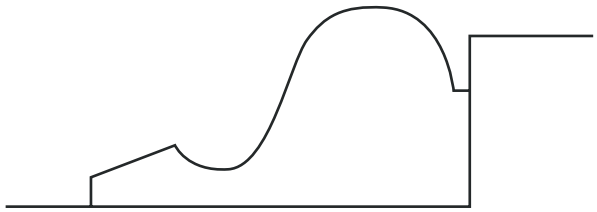
Exterior Panel Moulding
Section 3

Interior Panel Moulding

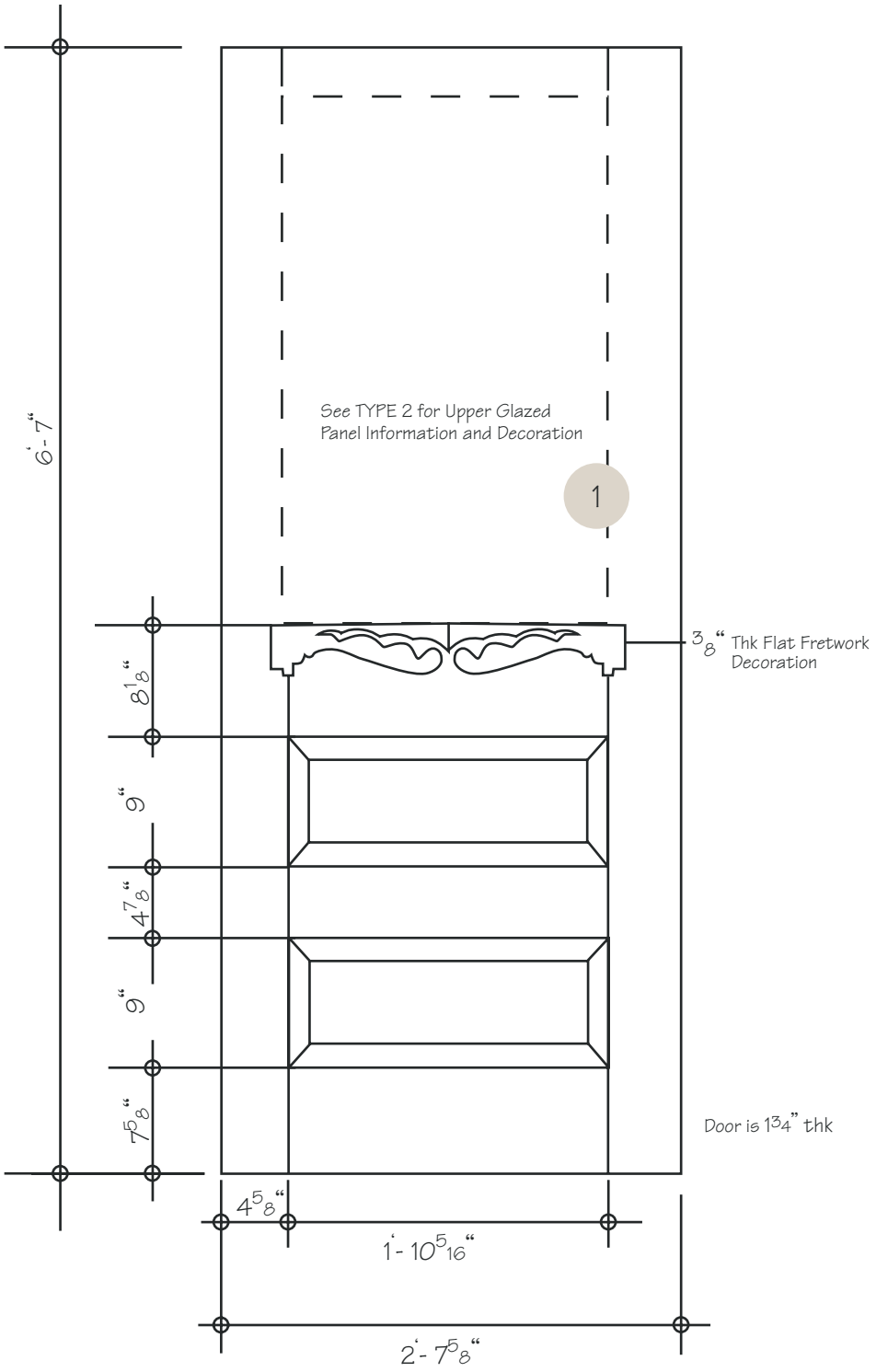


Detail Section 4

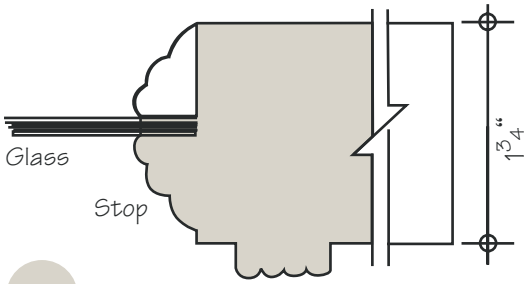

8 1/4"
4 3/4"
1'-7 13/16"
Brass
3'-7 1/4"
7'-0"
Previous Dooring Imprint
2 1/4" Ø
8 3/4"
Brass
1'-5 1/2"
2'-9 3/4"
4 3/4"
3/8" deep
9 1/8"
8 1/4"
4 1/2"
11"
4 1/2"
3'-0"



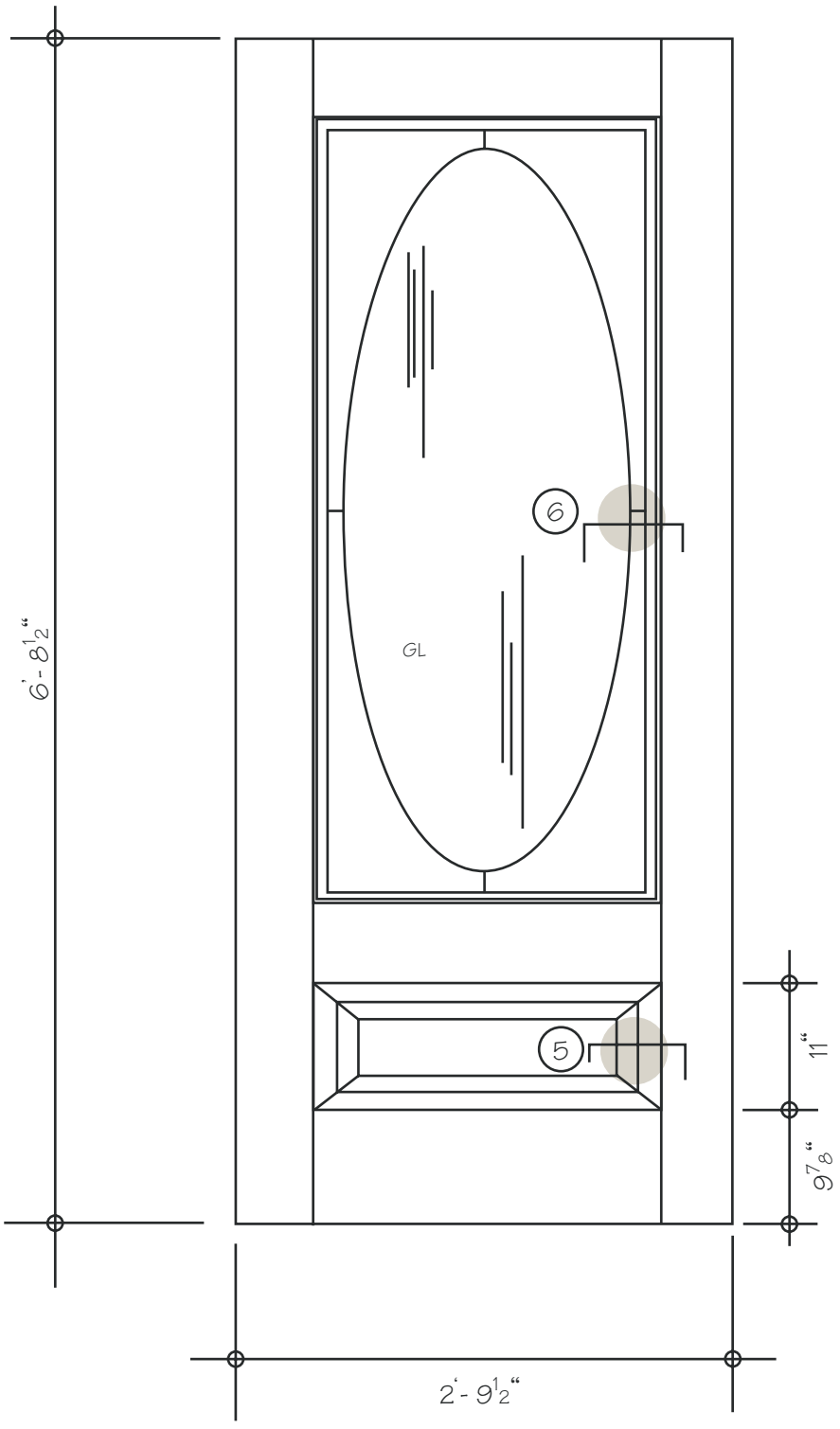
Interior Panel Moulding
(Interior panels have no
raised field decoration)


See TYPE 2 for Upper Glazed
Panel Information and Decoration
1
6'- 7"
8 1/8"
9"
4 7/8"
9"
7 5/8"
3/8" Thk Flat Fretwork
Decoration
Door is 1 3/4" thk
4 5/8"
1'- 10 5/16"
2'- 7 5/8"

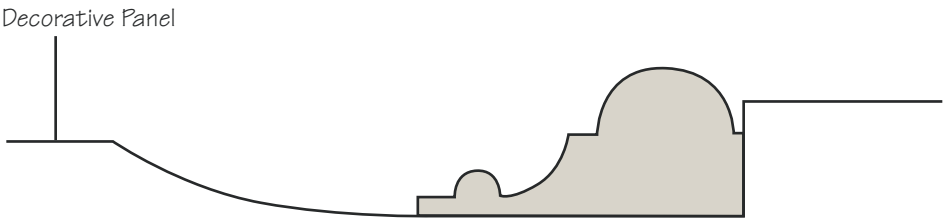
TYPE 4



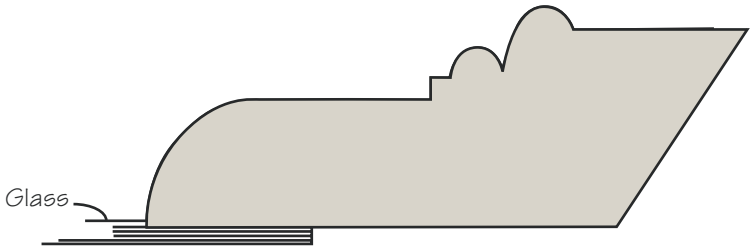
1



TYPE 5

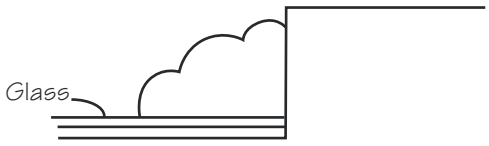


Moulding- Glazed Panel Section 5



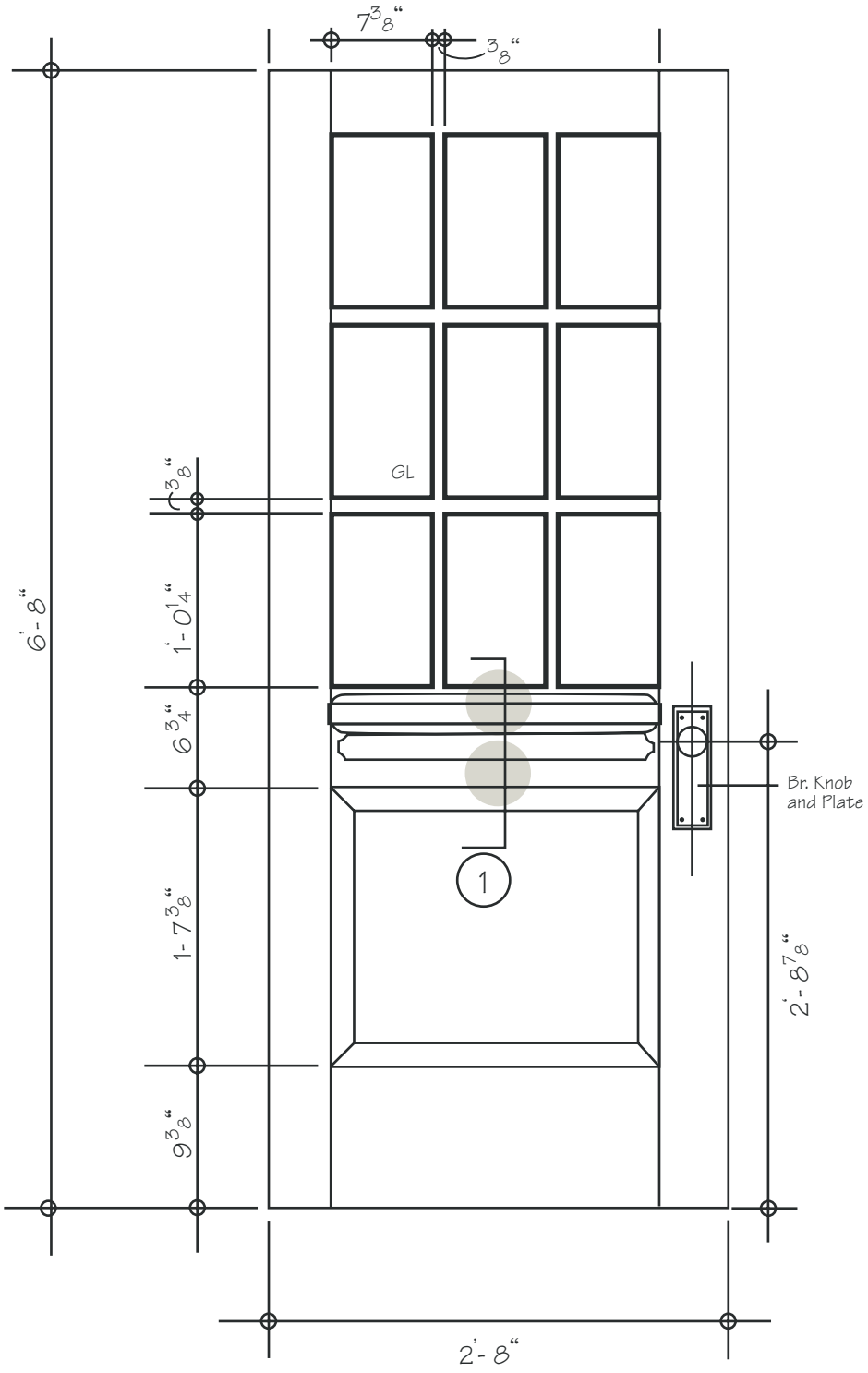
Spandrel Moulding Exterior

6

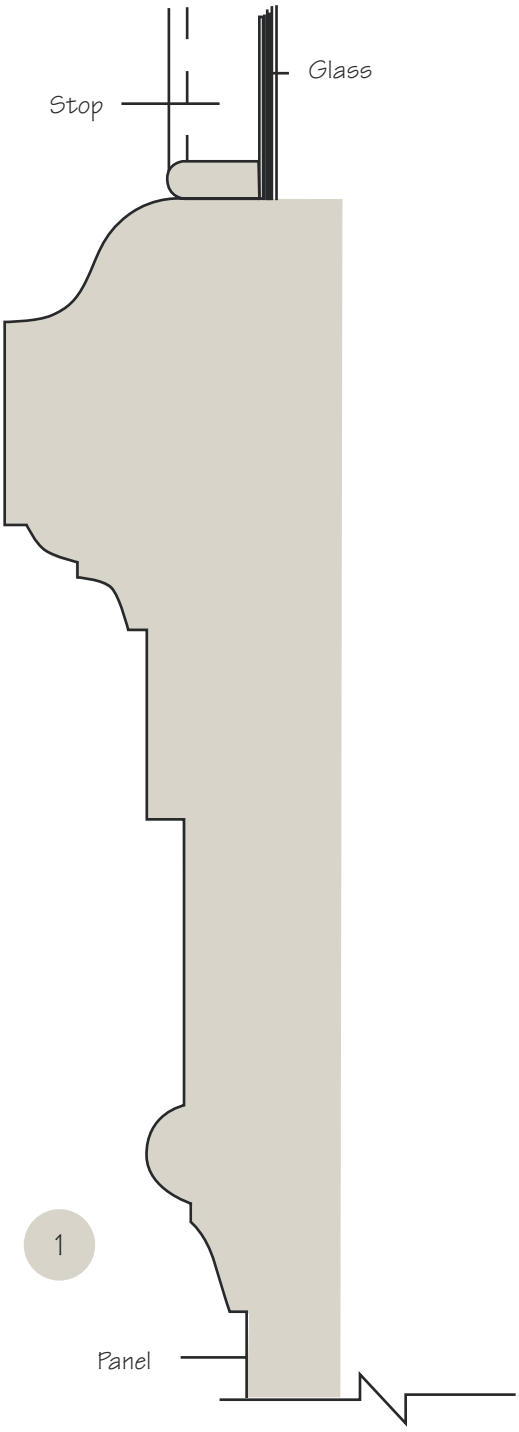


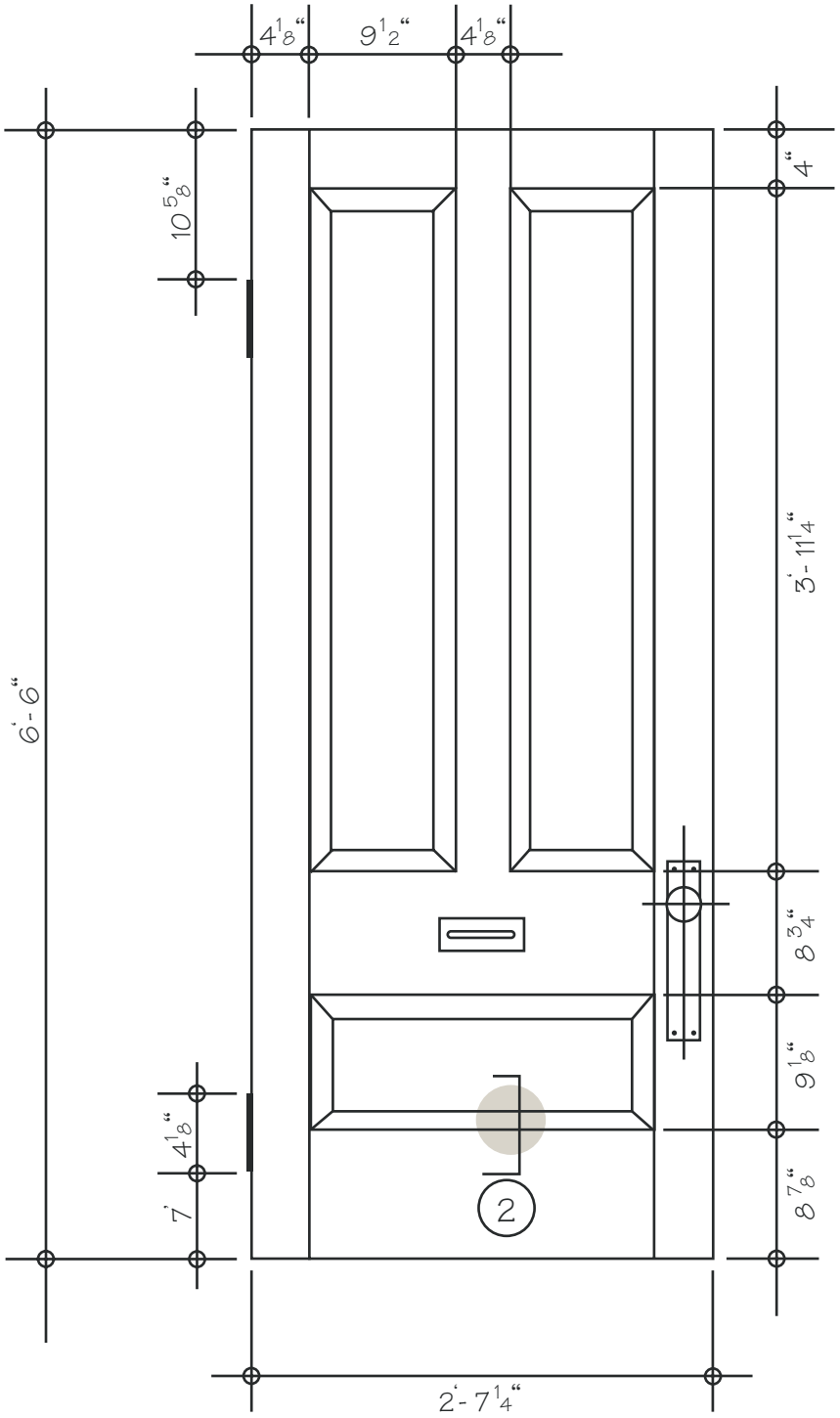
Glazing stop-Interior

(This moulding is in four parts and cut to follow the elliptical glass shape.)

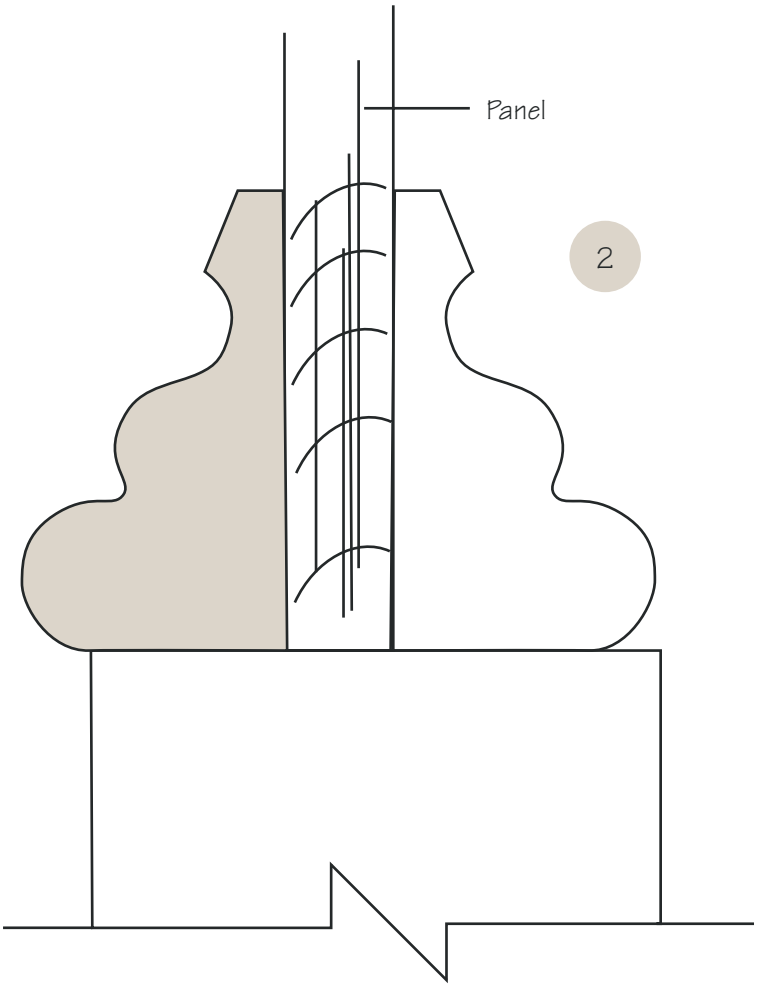


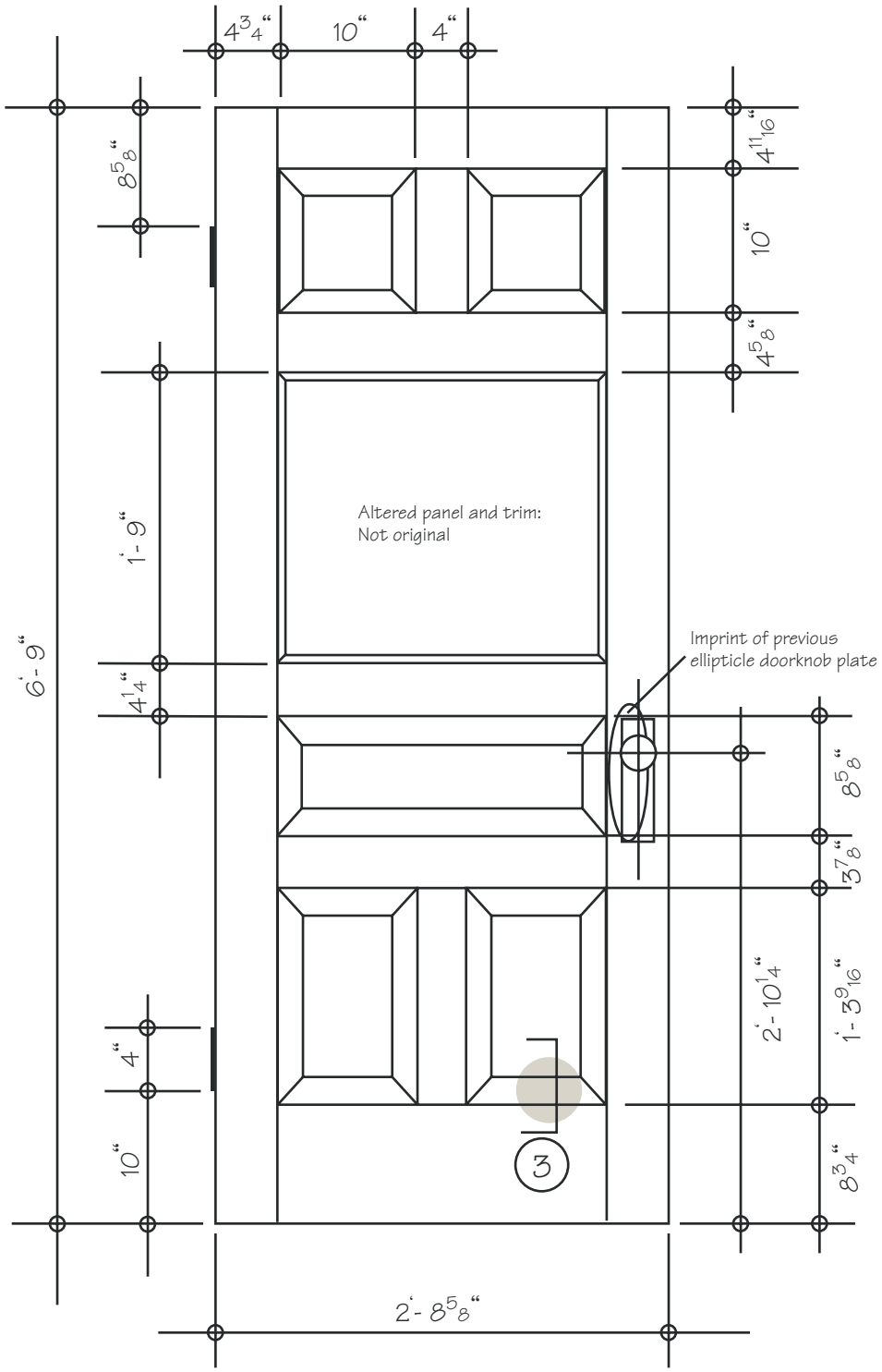
TYPE 6


Glass
Stop
1
Panel

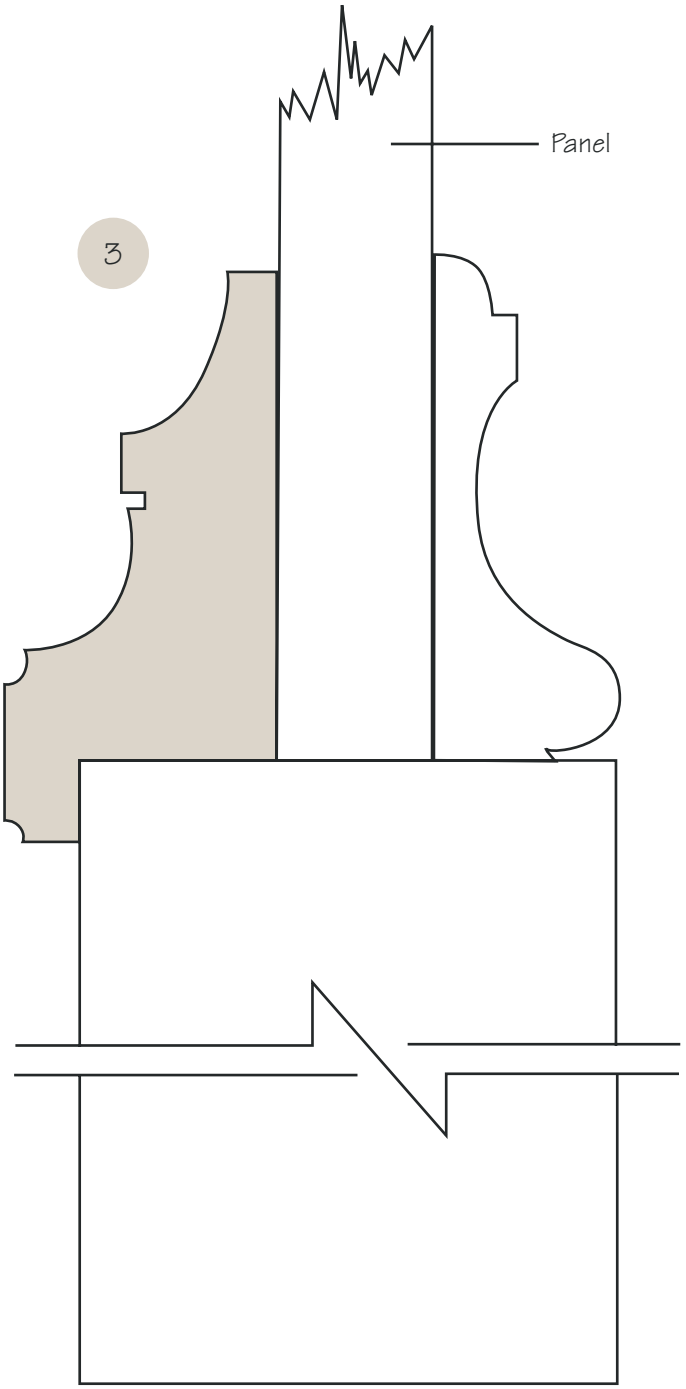


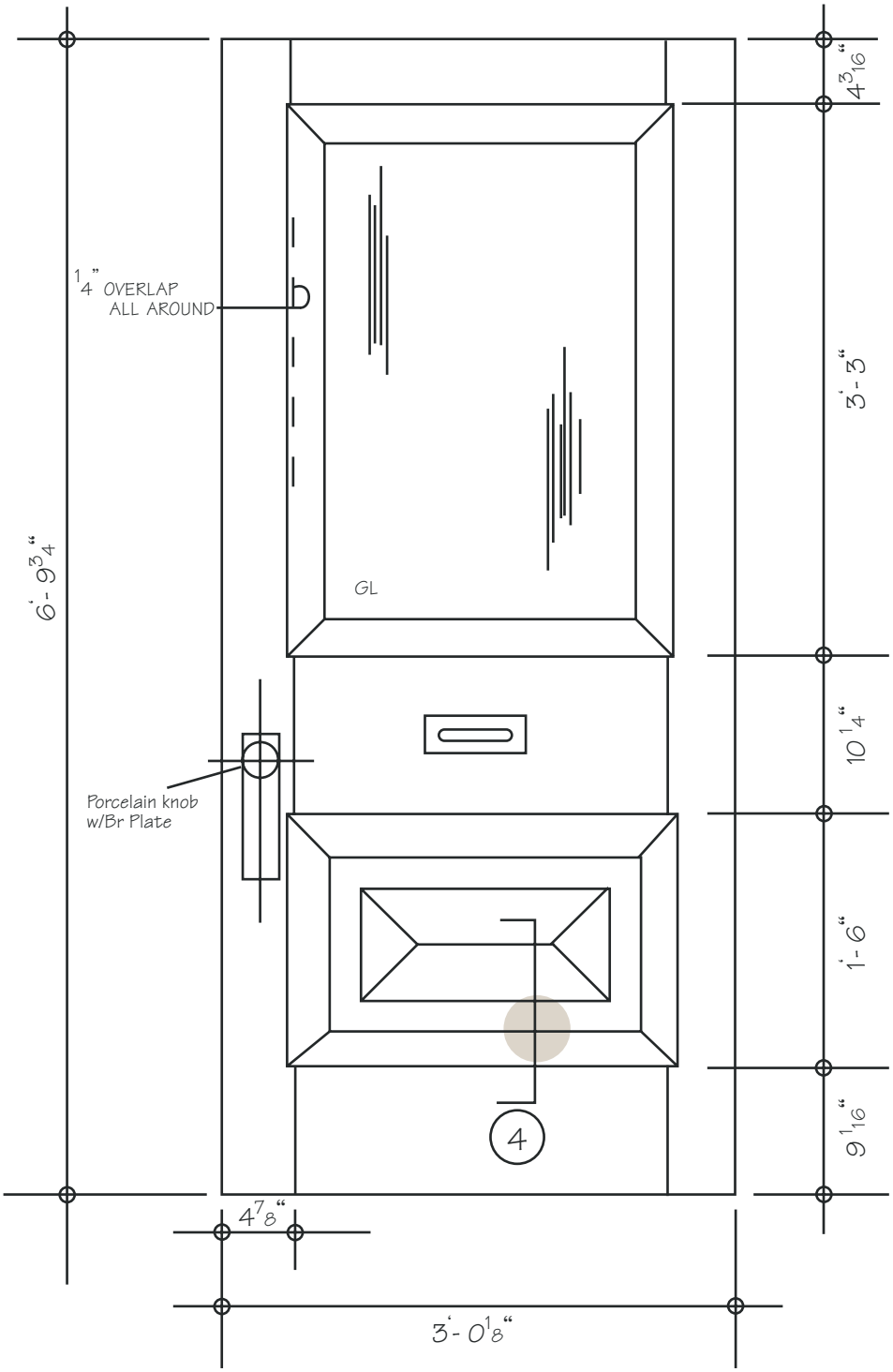
TYPE 6


Panel
2

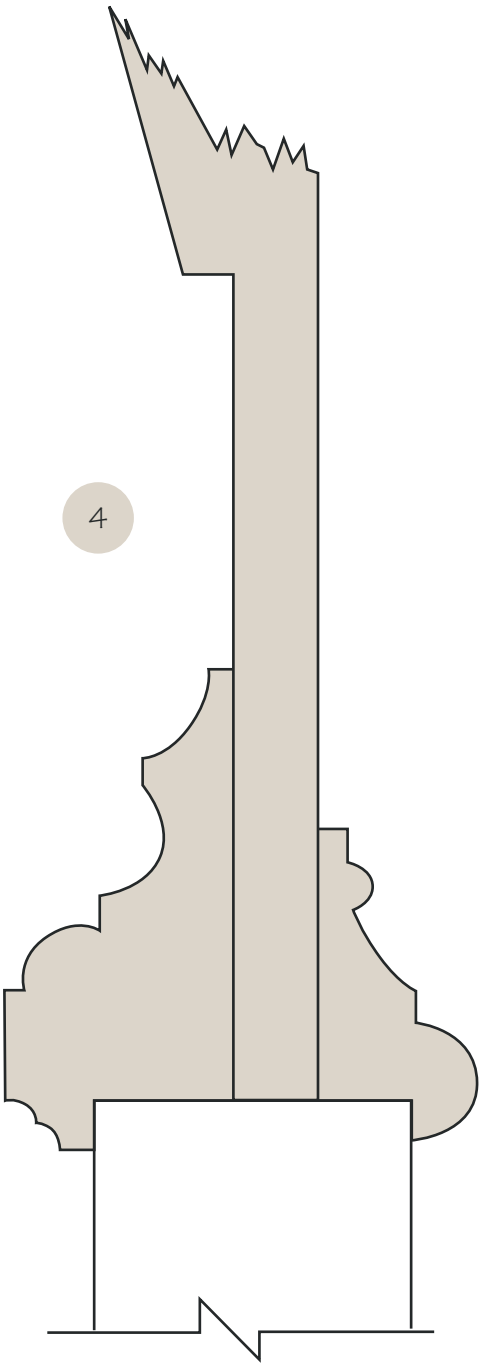

4 3/4"
10"
4"
8 5/8"
4 11/16"
10"
4 5/8"
1'- 9"
Altered panel and trim:
Not original
6'- 9"
4 1/4"
Imprint of previous
ellipticle doorknob plate
8 5/8"
3 7/8"
2'- 10 1/4"
1'- 3 9/16"
4"
10"
3
8 3/4"
2'- 8 5/8"

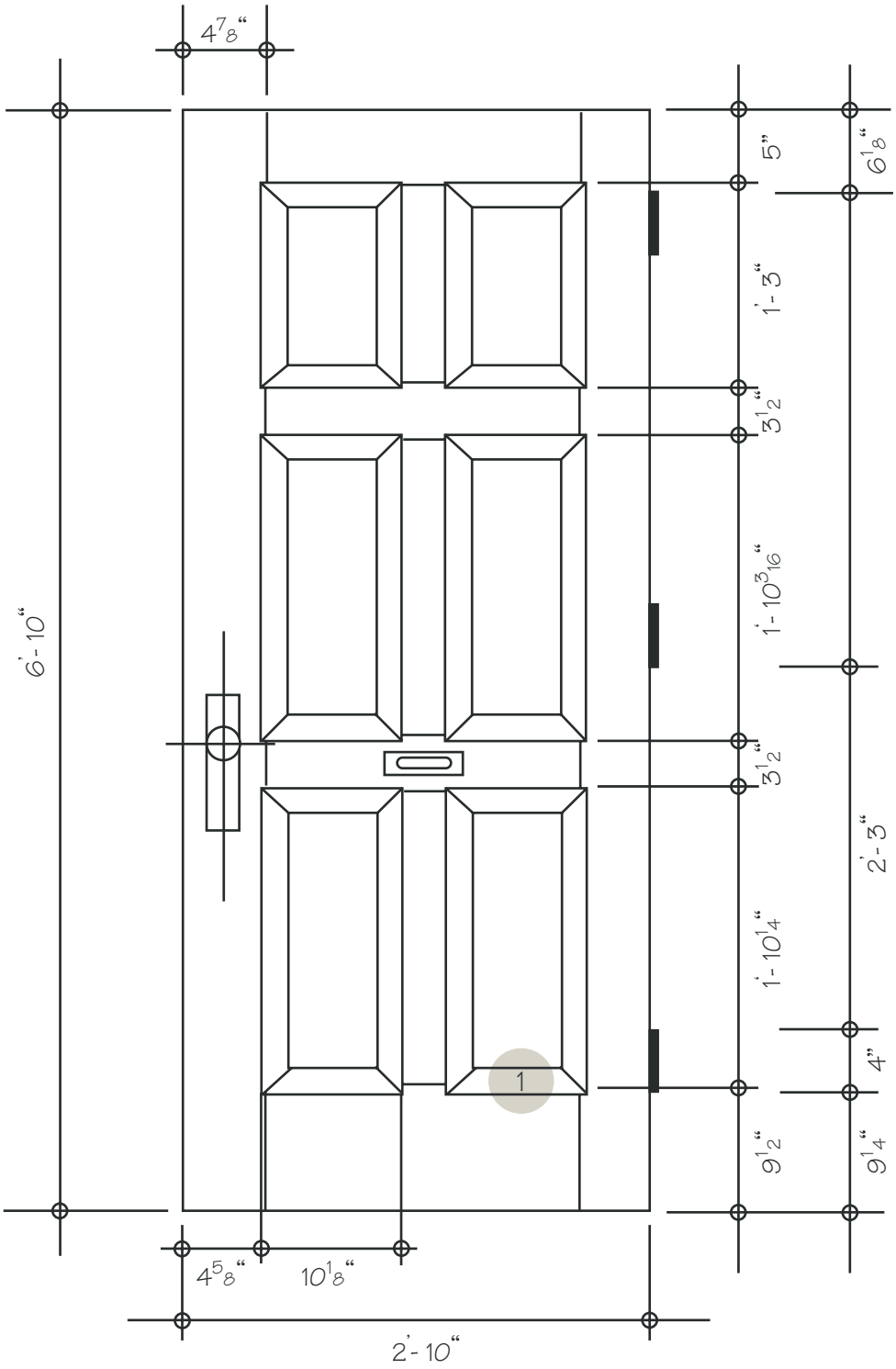
TYPE 8

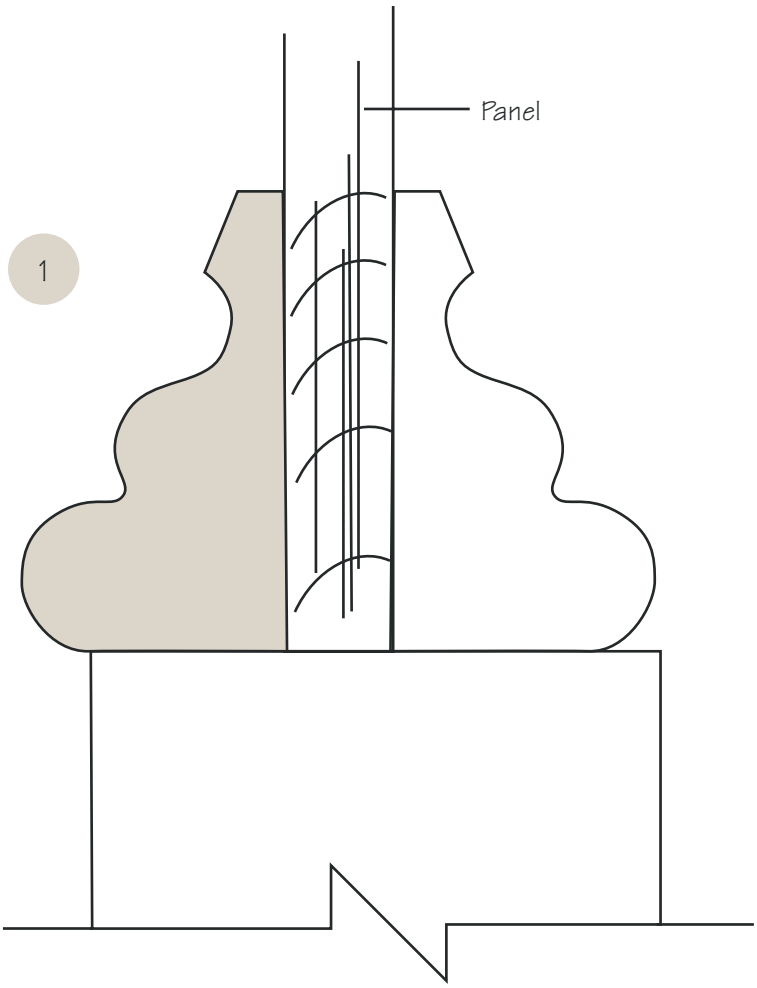

Panel
3

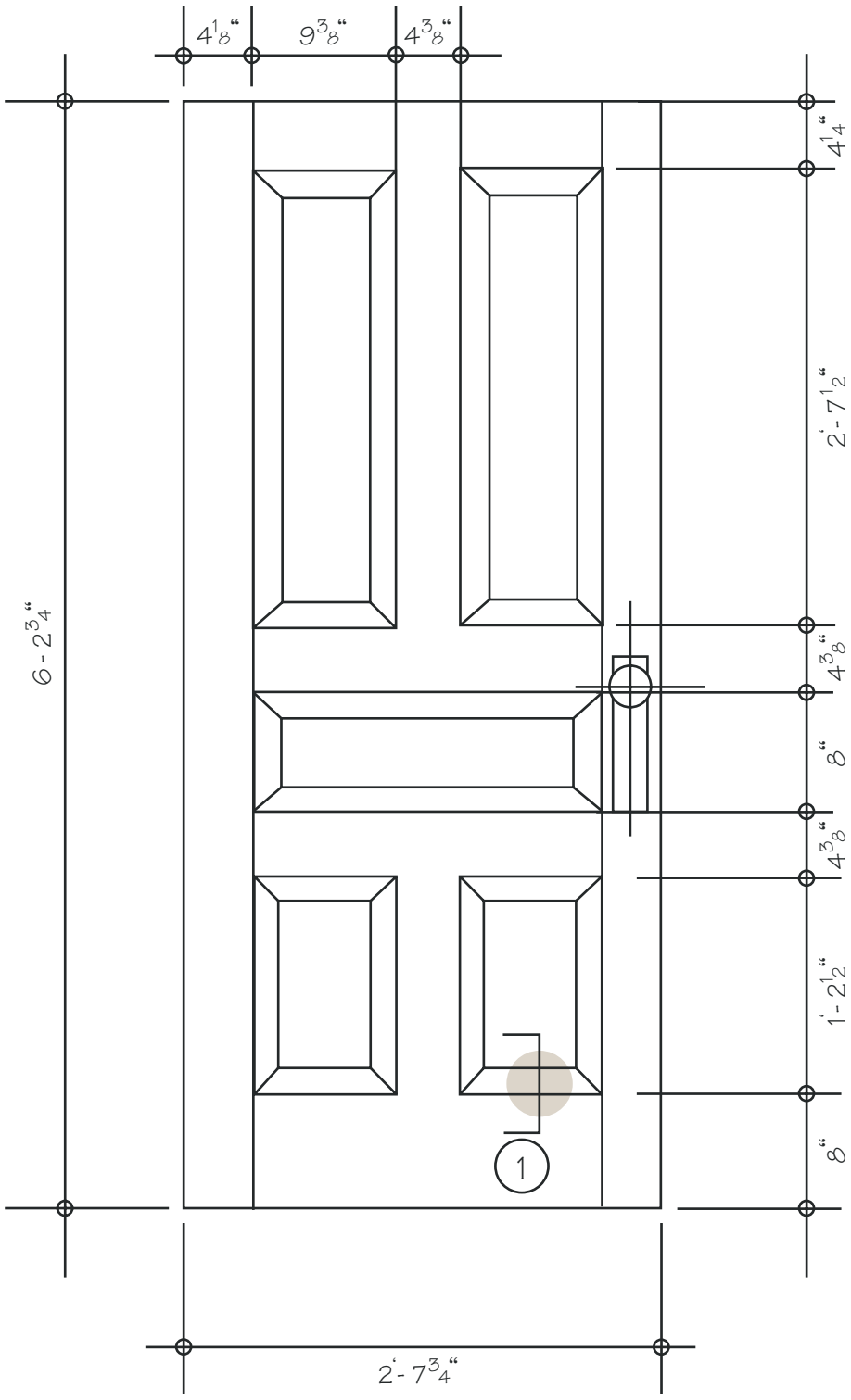

1/4" OVERLAP
ALL AROUND
GL
Porcelain knob
w/Br Plate
4
6'- 9 3/4"
4 3/16"
3'- 3"
10 1/4"
1'- 6"
9 1/16"
4 7/8"
3'- 0 1/8"

TYPE 9


4


4 7/8"
6' - 10"
5"
6 1/8"
1' - 3"
3 1/2"
1' - 10 3/16"
3 1/2"
2' - 3"
1' - 10 1/4"
4"
9 1/2"
9 1/4"
4 5/8"
10 1/8"
2' - 10"
1


Panel
1



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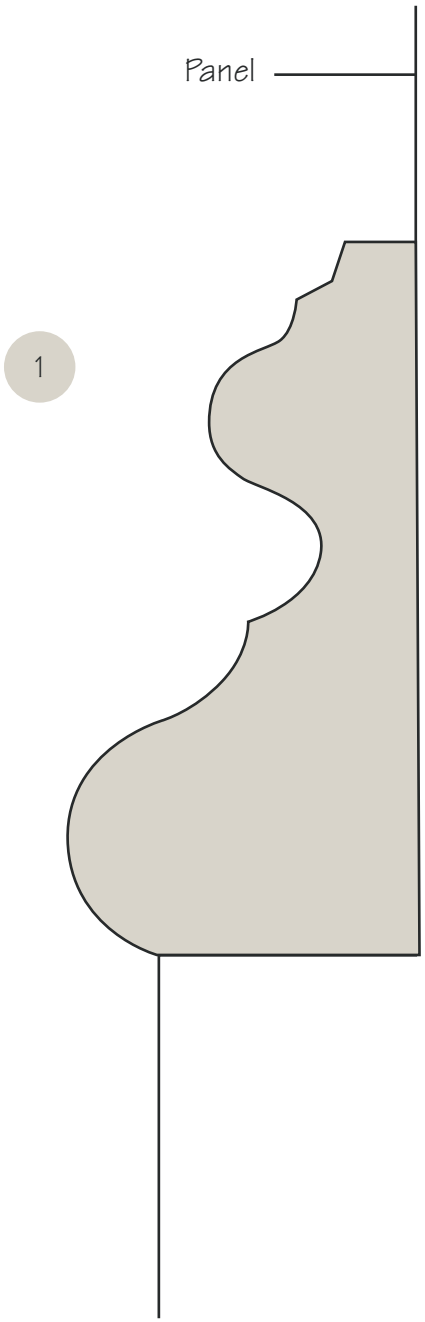
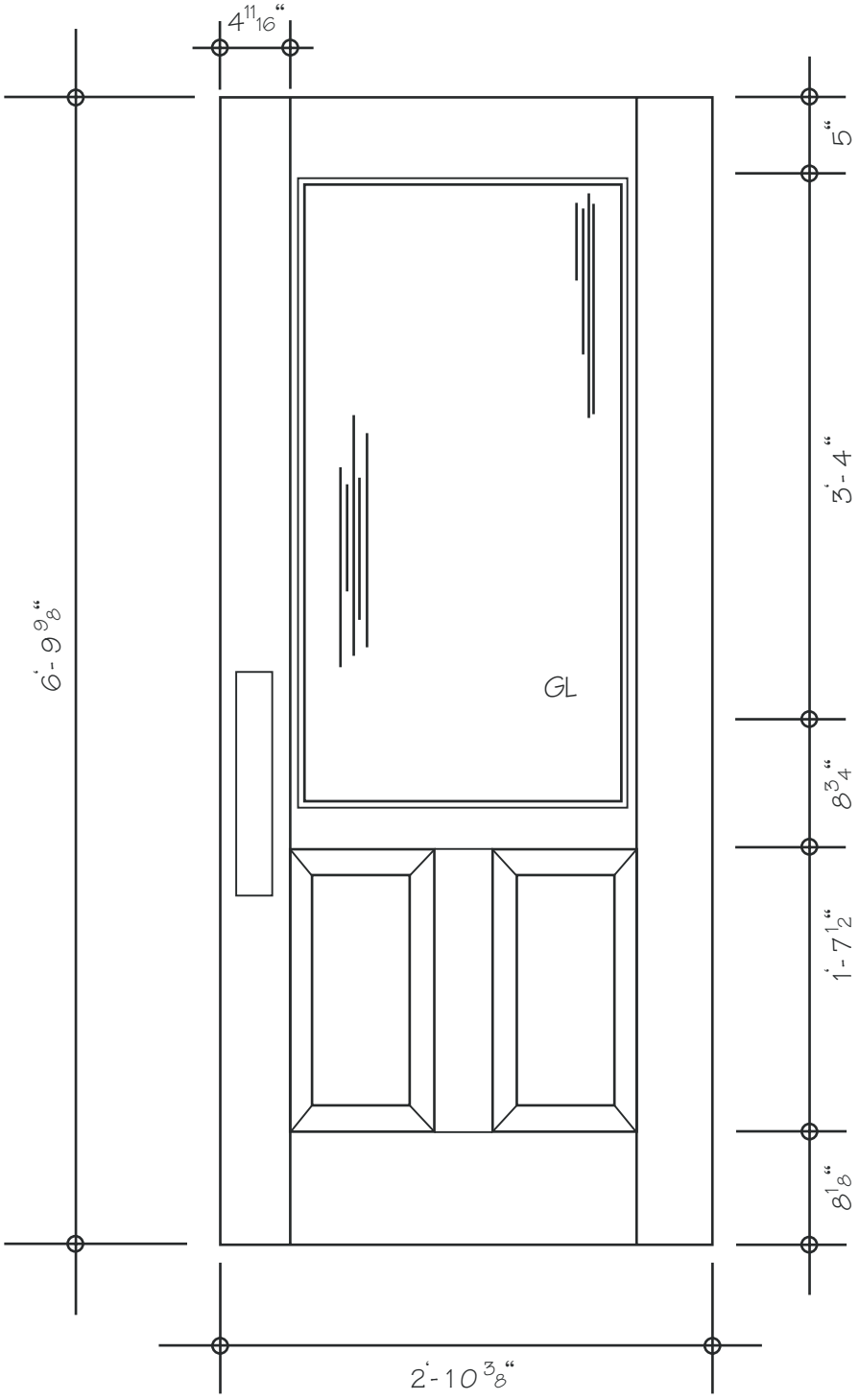
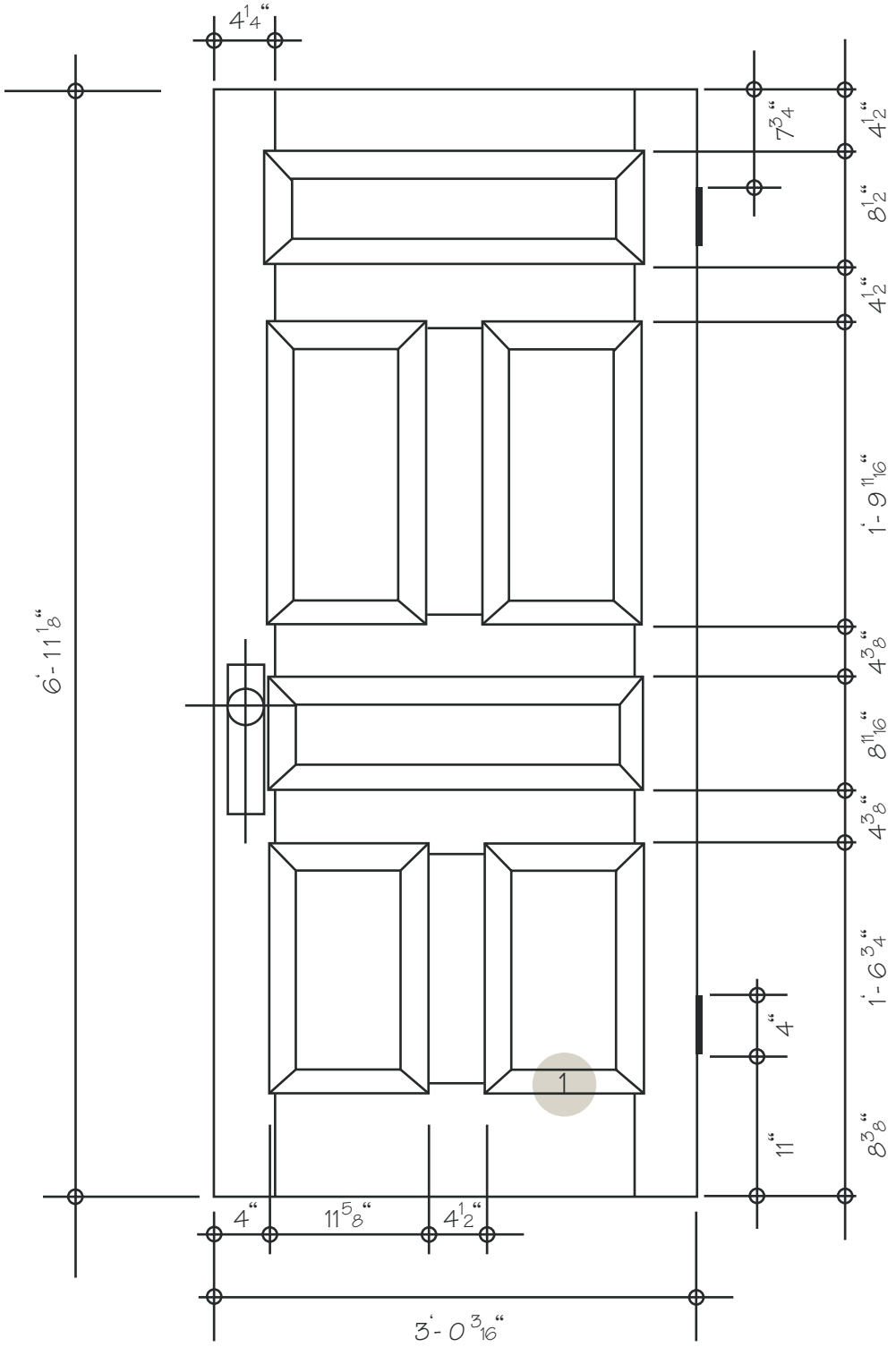
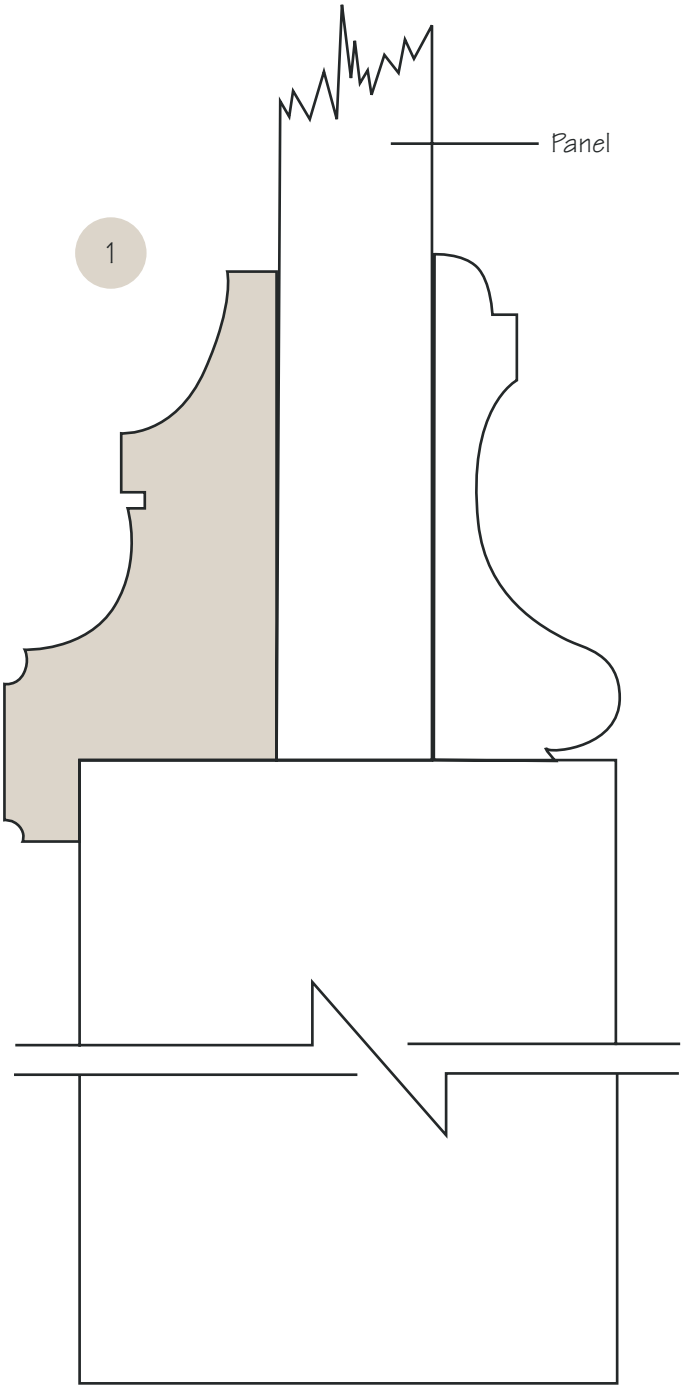

Panel
1

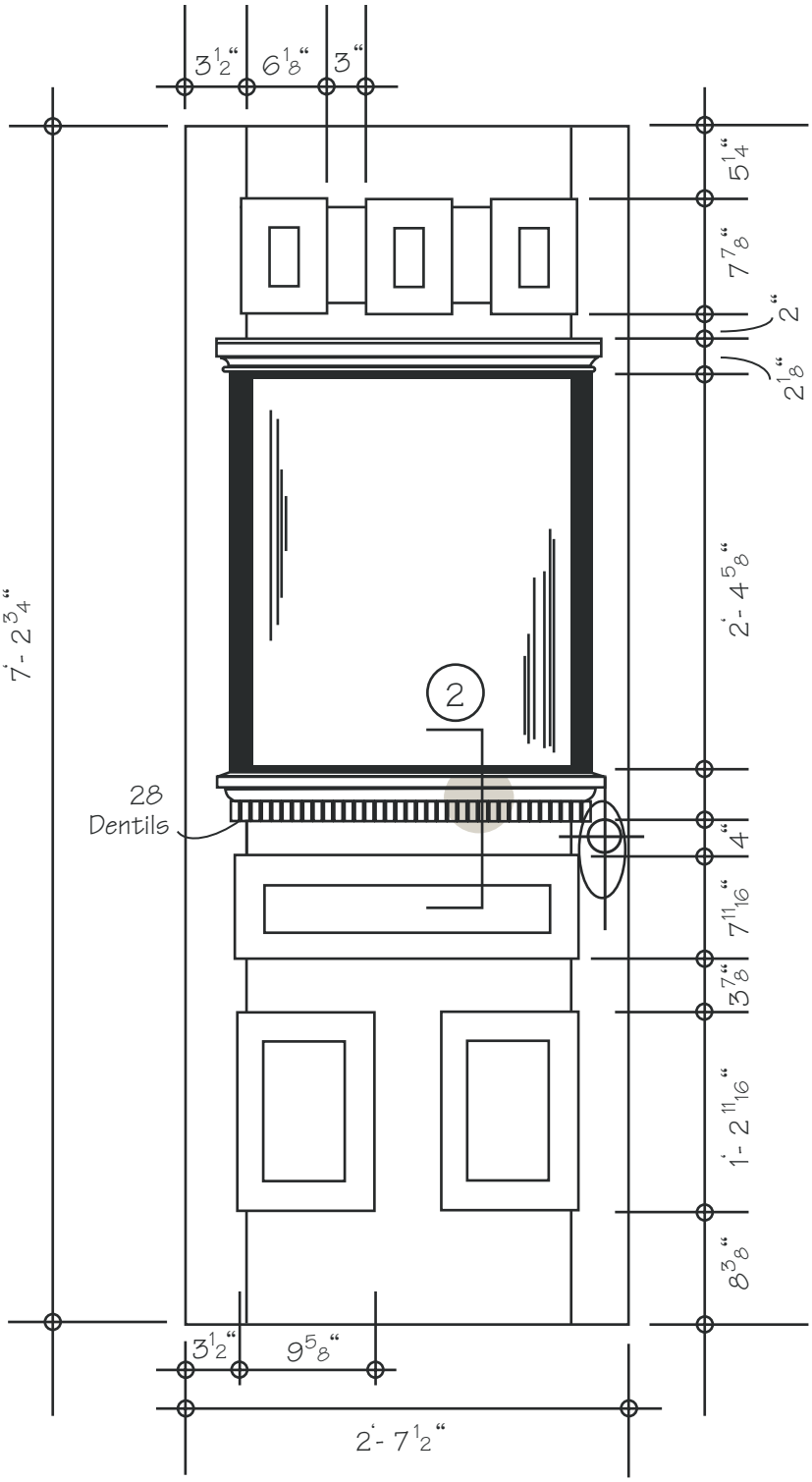


TYPE 12

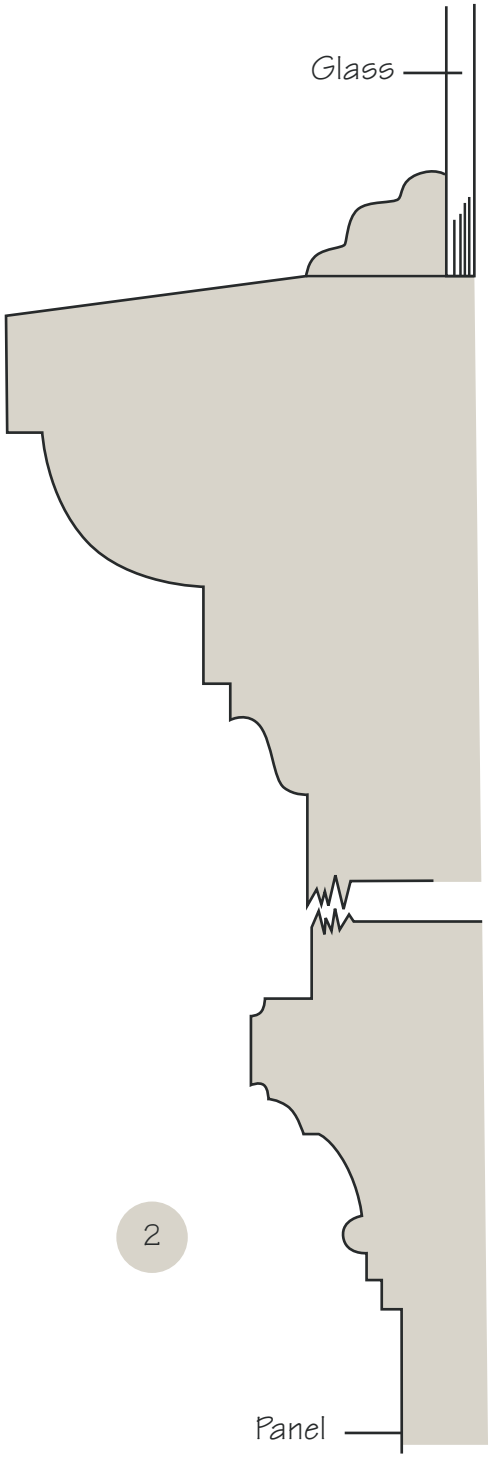

4 1/4"
7 3/4"
4 1/2"
8 1/2"
4 1/2"
1' - 9 11/16"
4 3/8"
8 11/16"
4 3/8"
1' - 6 3/4"
4"
11"
8 3/8"
6' - 11 1/8"
4"
11 5/8"
4 1/2"
3' - 0 3/16"
1

TYPE 13


Panel
1


3 1/2"
6 1/8"
3"
5 1/4"
7 7/8"
2"
2 1/8"
7' - 2 3/4"
2' - 4 5/8"
2
28
Dentils
4"
7 11/16"
3 7/8"
1' - 2 11/16"
8 3/8"
3 1/2"
9 5/8"
2' - 7 1/2"

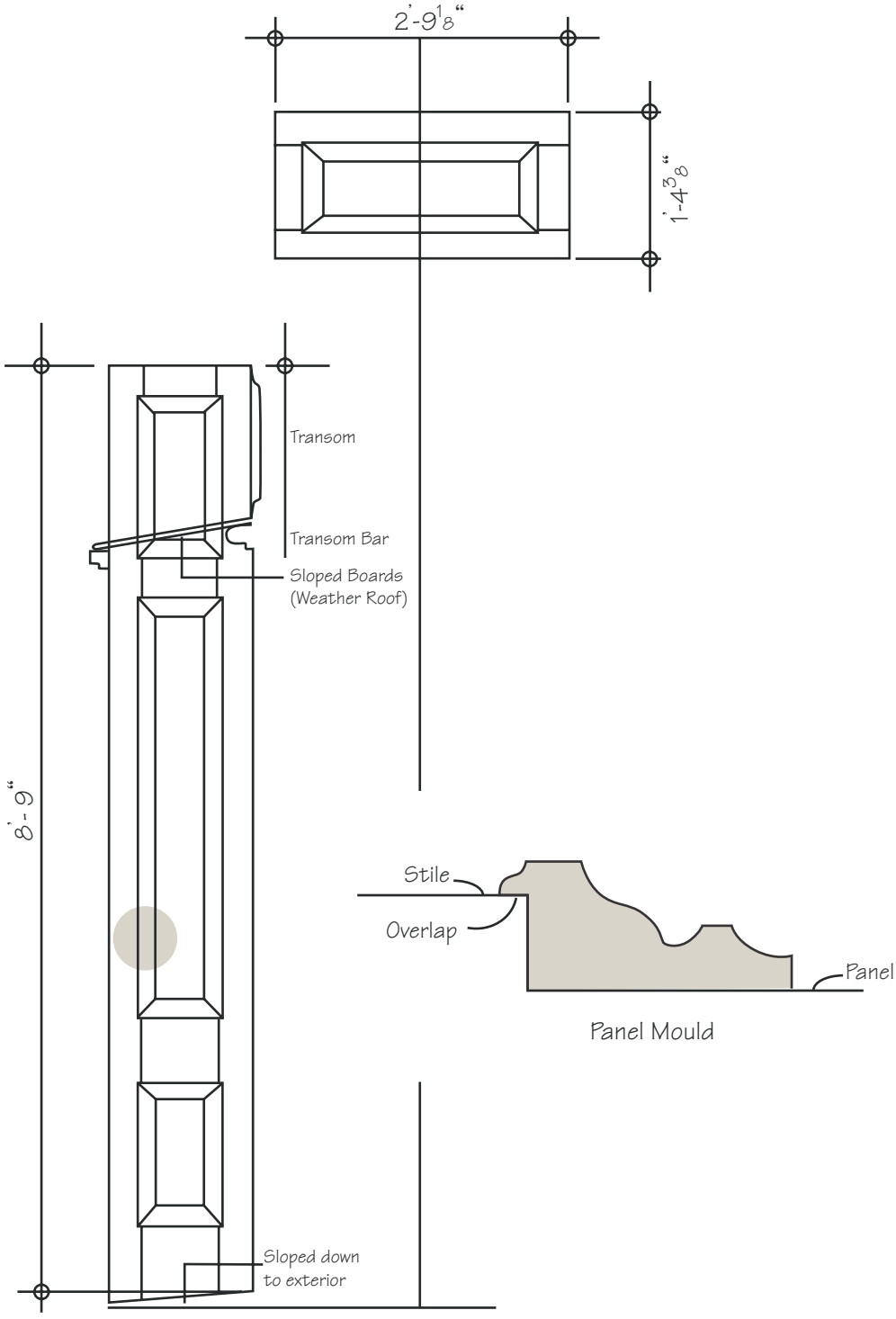
TYPE 14

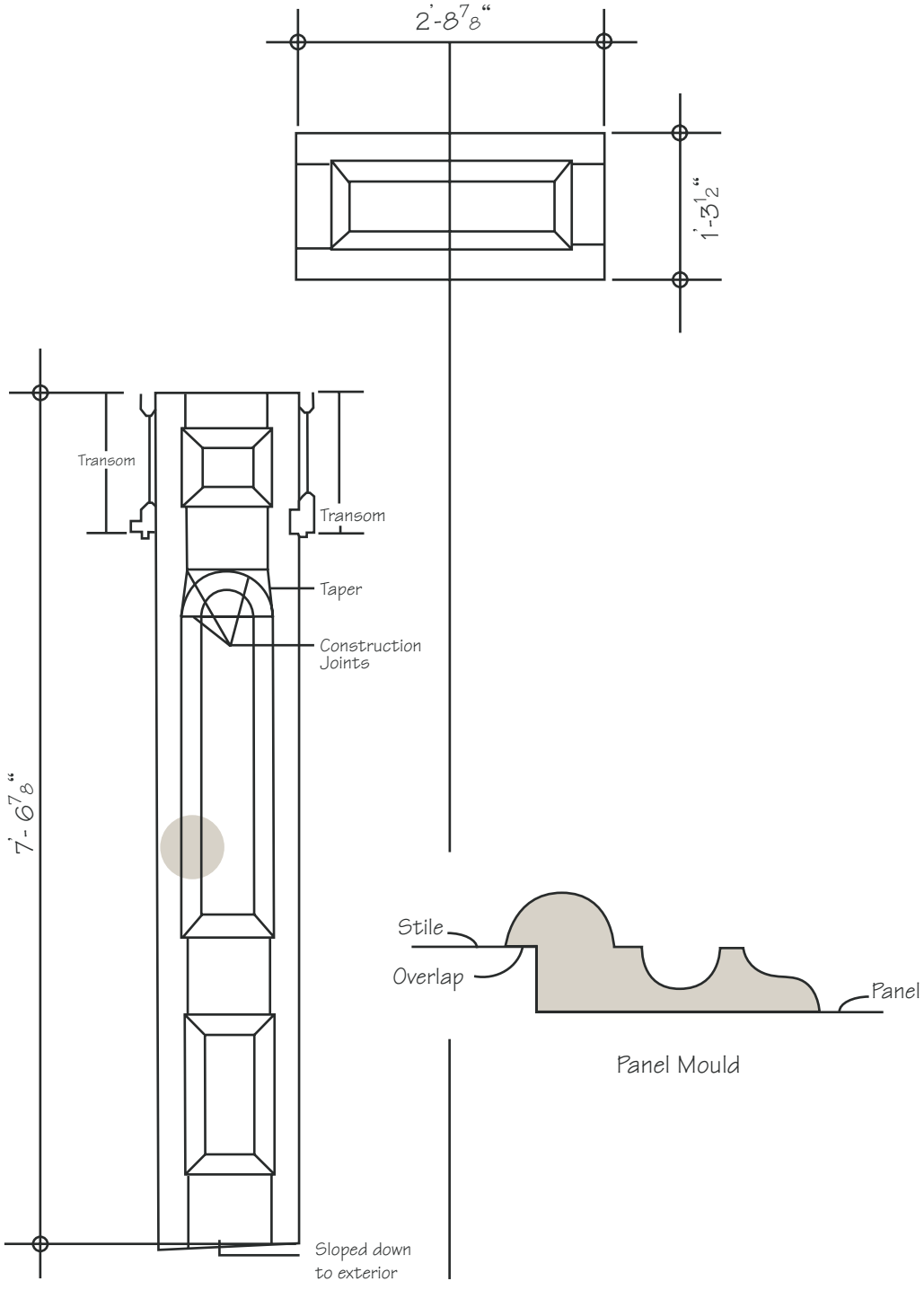

Glass
2
Panel

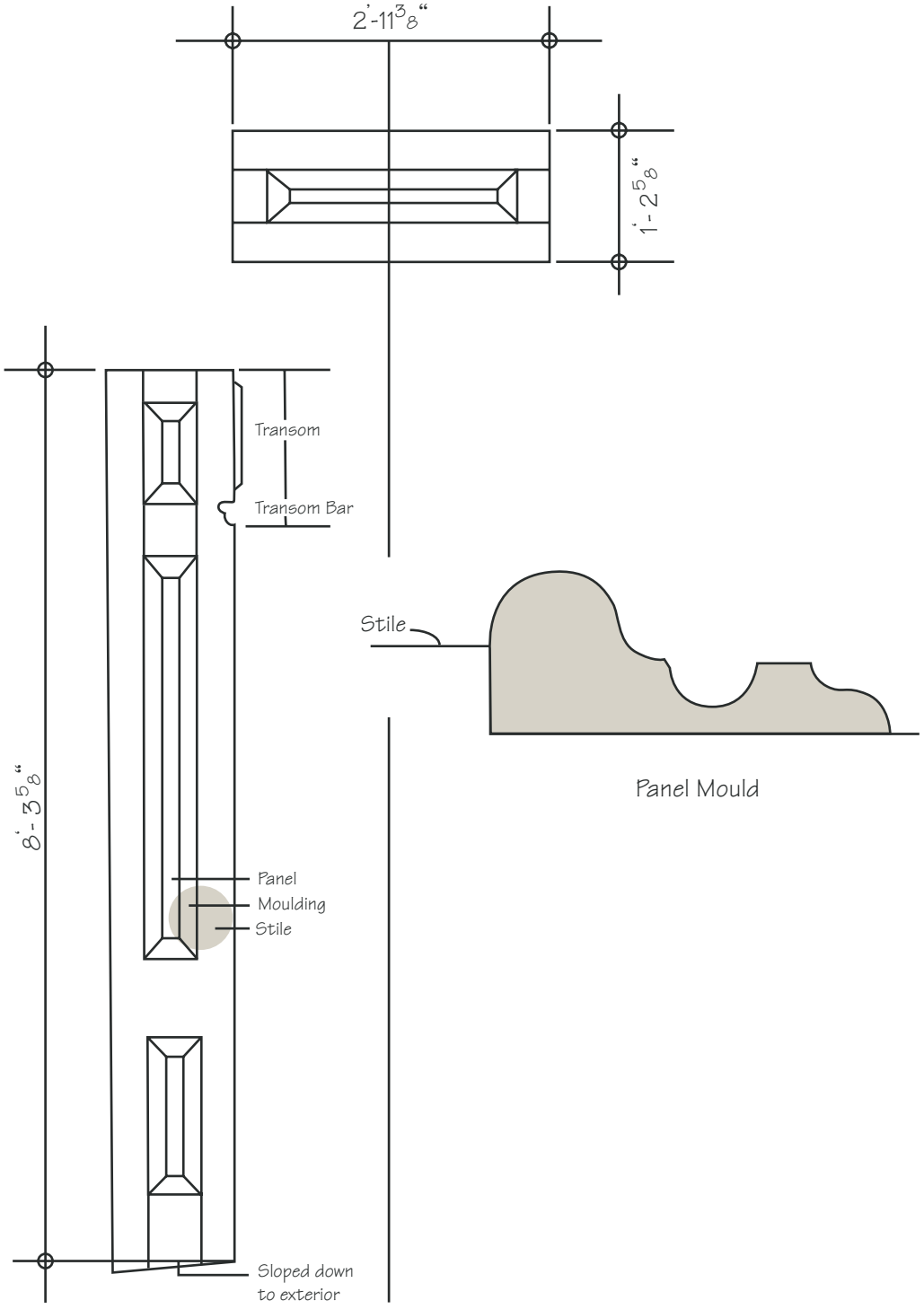
Appendix B:

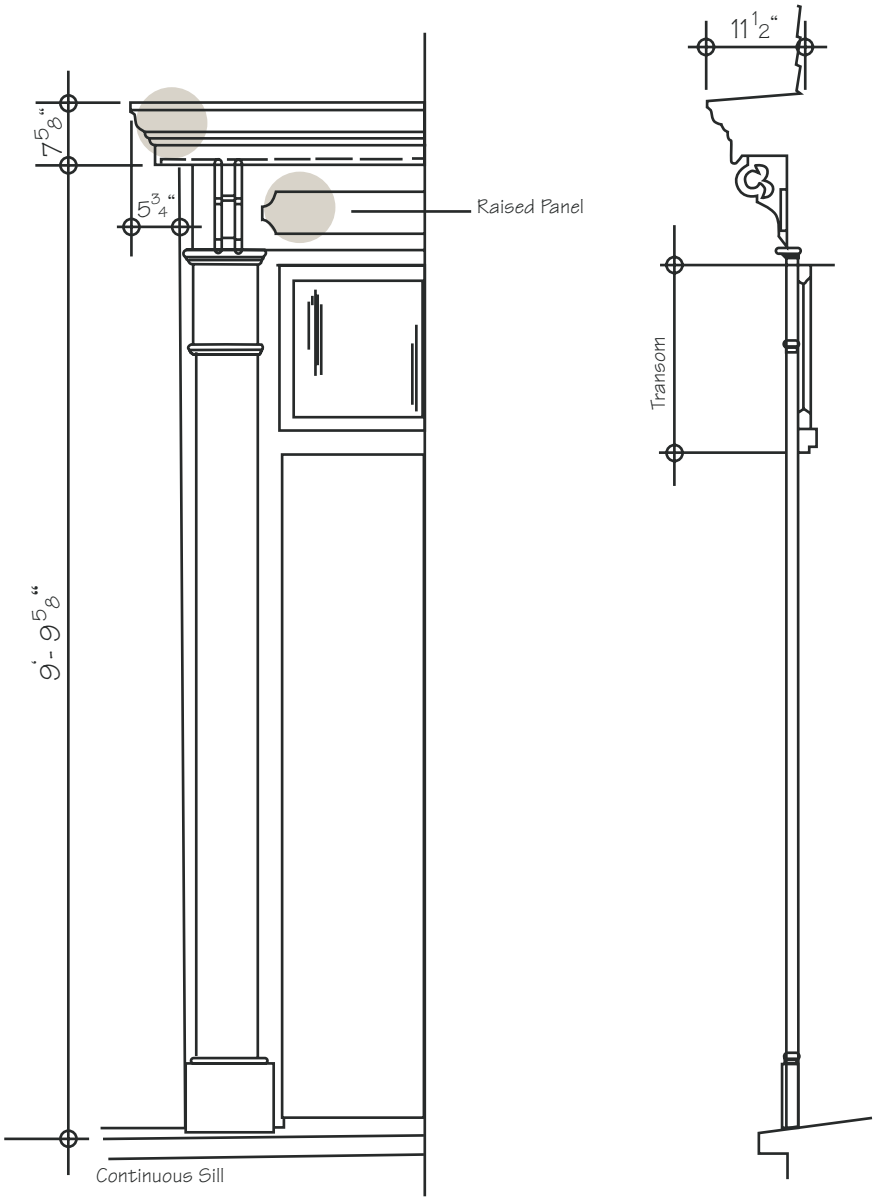
Doorways

The main entrance is the most important architectural feature in the façade of range houses. The doorway had much care lavished on the design of paneling and mouldings to form a frame for the front door and in many cases the proportions reflect an earlier and more classic approach to design than the rest of the exterior of the dwelling. Many St. John's houses had storm doors made of 1" x 4" vertical V groove board, sometimes with an additional hinge that permitted only one-third to one-half of the storm door to open in winter. Simple and economical metal thumb latches were used on these doors. These traditional storm doors enhanced local character in old St. John's.


2'-9 1/8"
1'-4 3/8"
8'-9"
Transom
Transom Bar
Sloped Boards
(Weather Roof)
Sloped down
to exterior
Stile
Overlap
Panel
Panel Mould

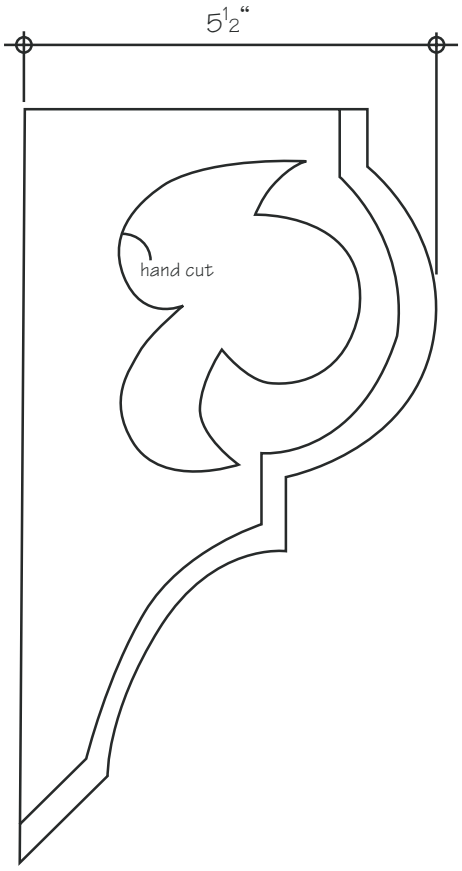

2'-8 7/8"
1'-3 1/2"
Transom
Transom
Taper
Construction Joints
7'-6 7/8"
Sloped down to exterior
Stile
Overlap
Panel
Panel Mould


2'-11 3/8"
1'-2 5/8"
Transom
Transom Bar
Stile
Panel Mould
8'-3 5/8"
Panel
Moulding
Stile
Sloped down
to exterior

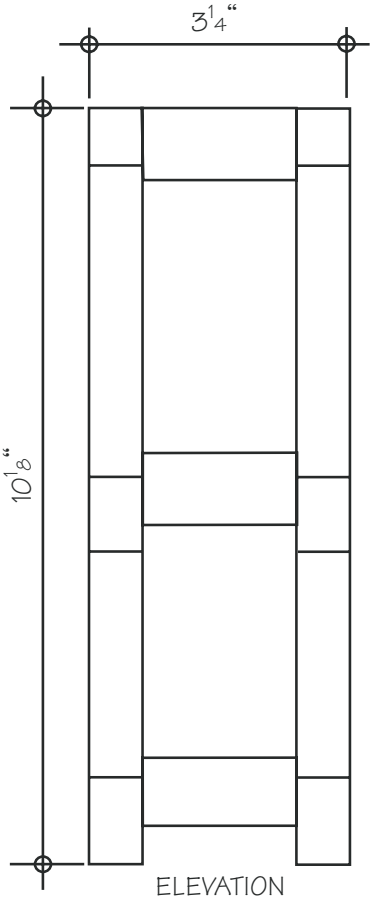


1/2 ELEVATION PROFILE

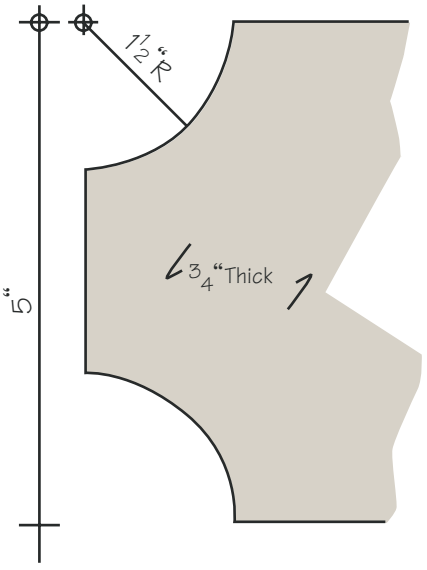
DOOR SURROUND



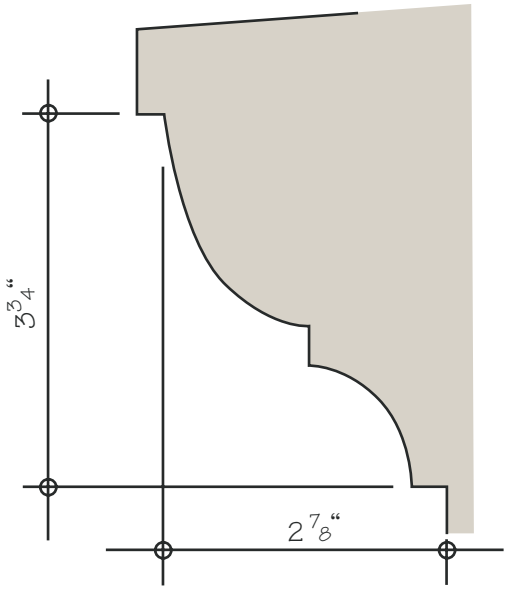
PROFILE



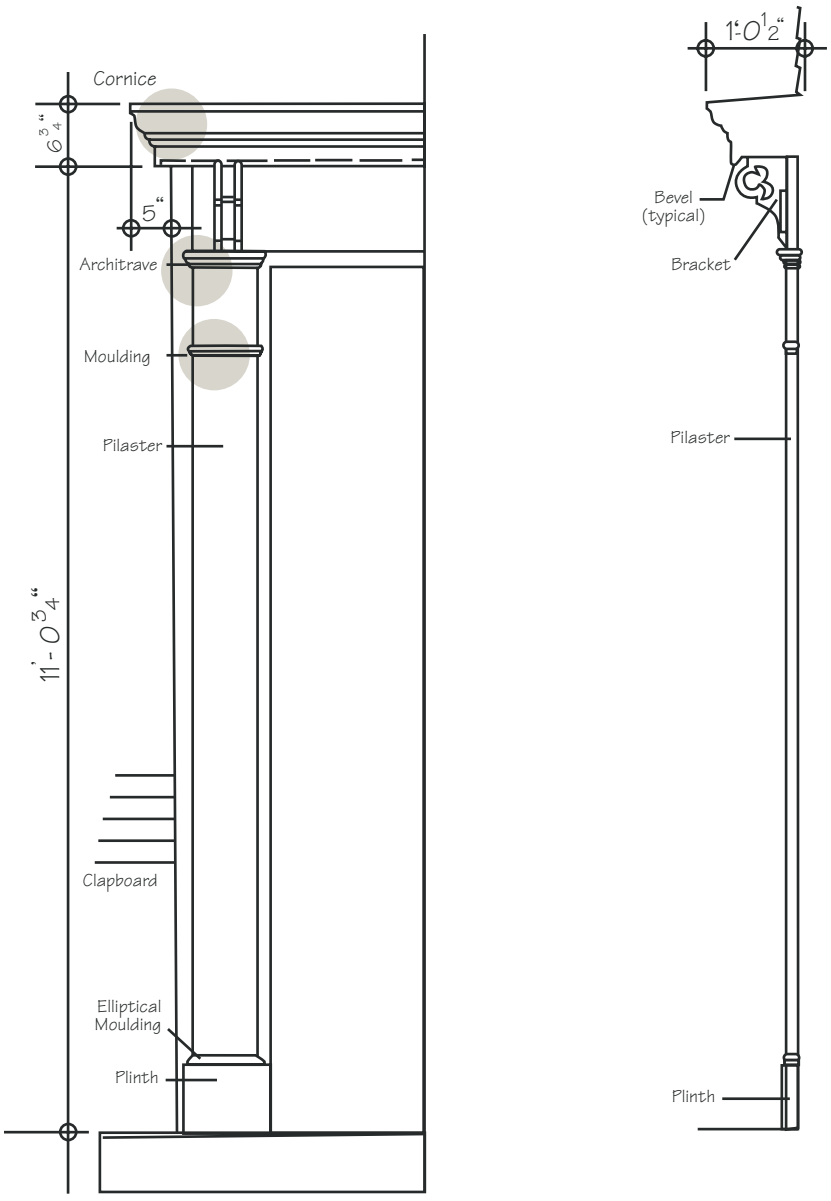
ELEVATION



Frieze Panel - Part Elevation

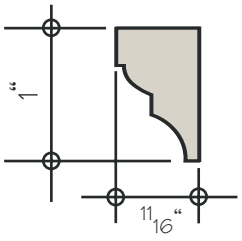


Cornice

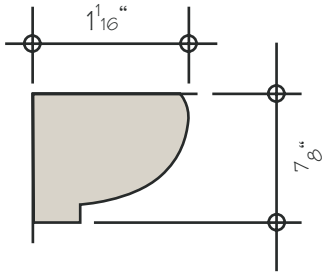


1/2 ELEVATION PROFILE

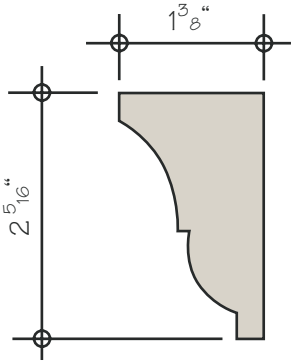
DOOR SURROUND



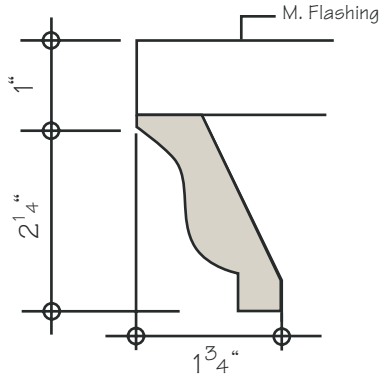
Plaster Moulding



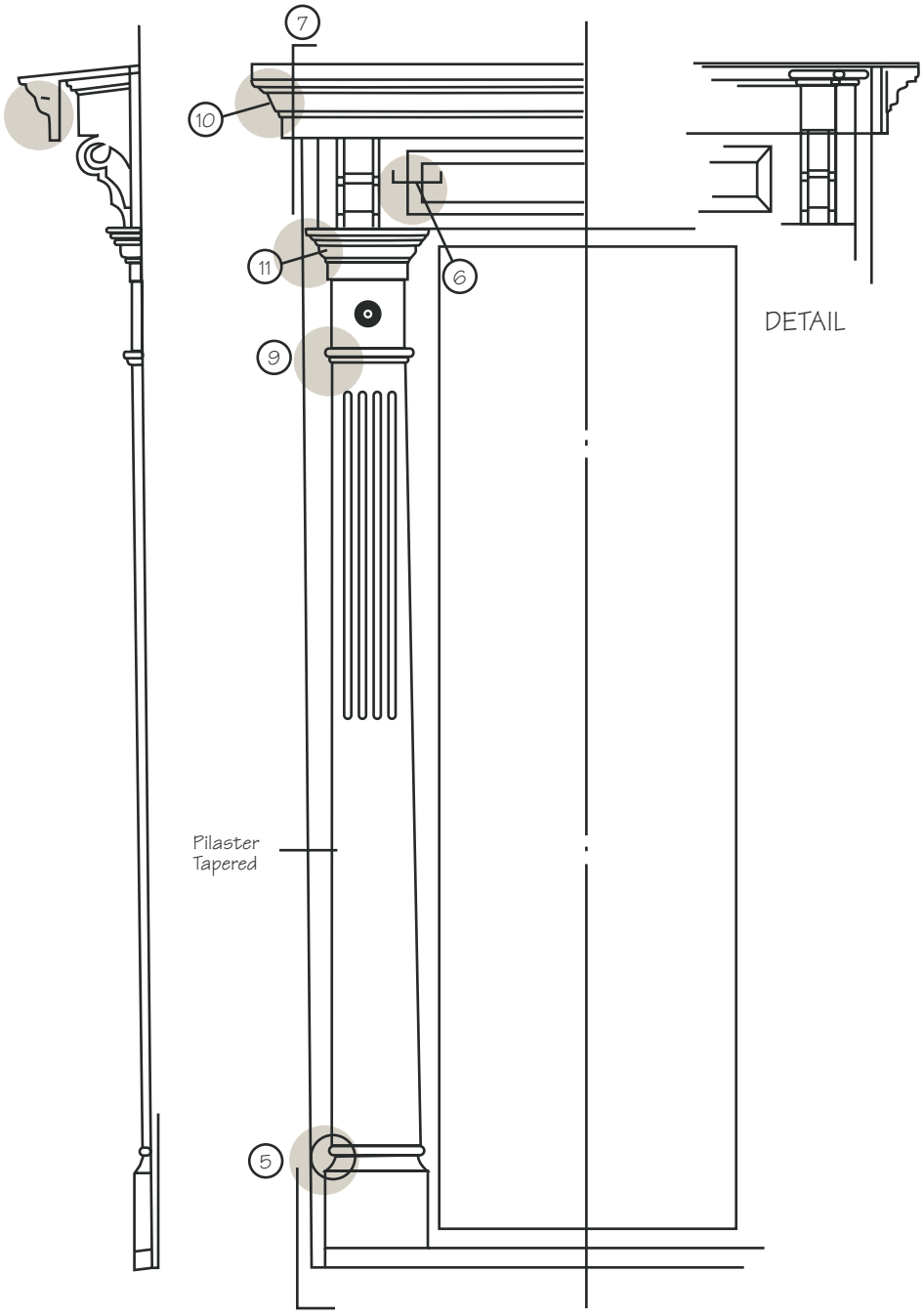
Cove Moulding

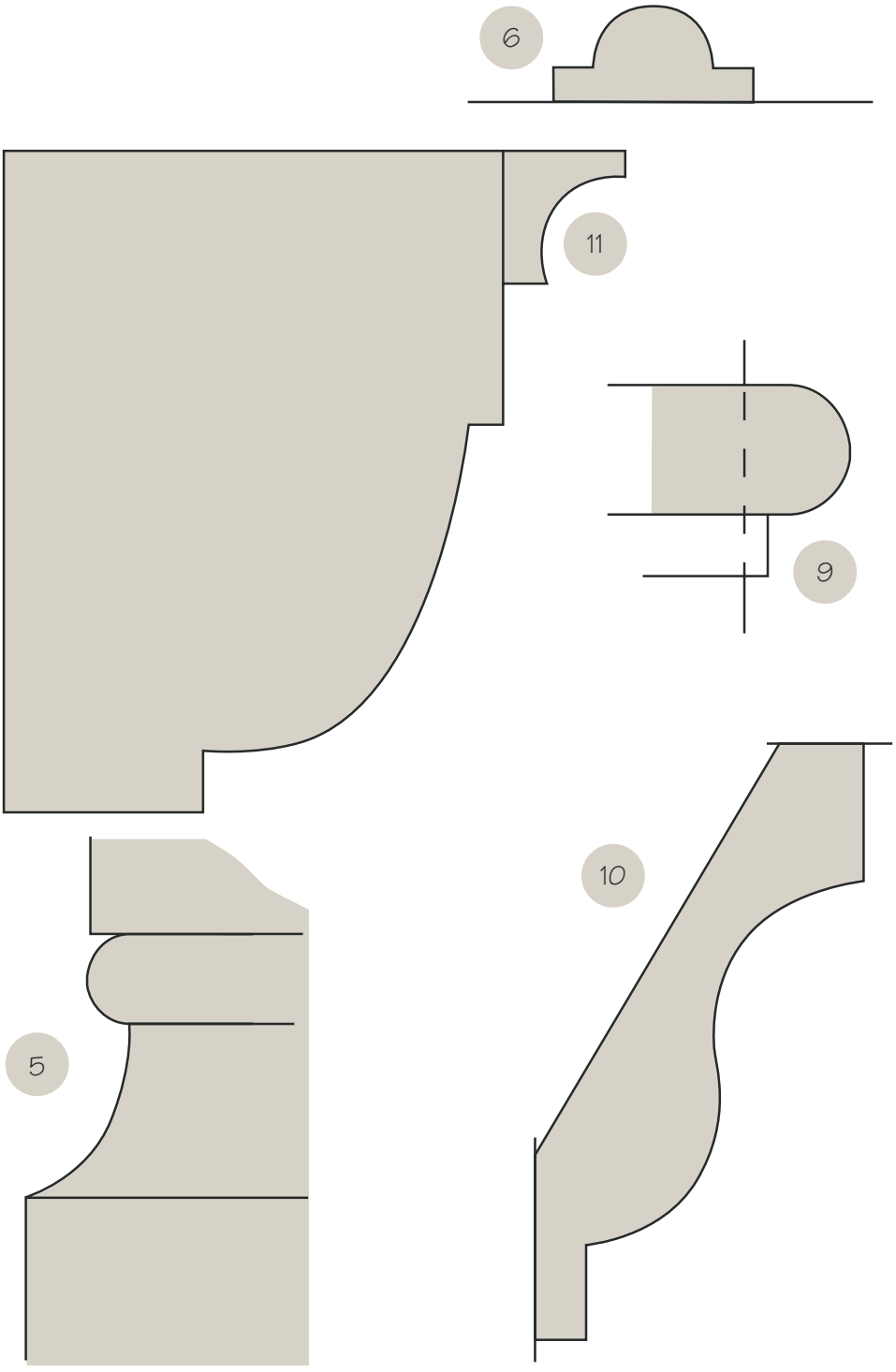


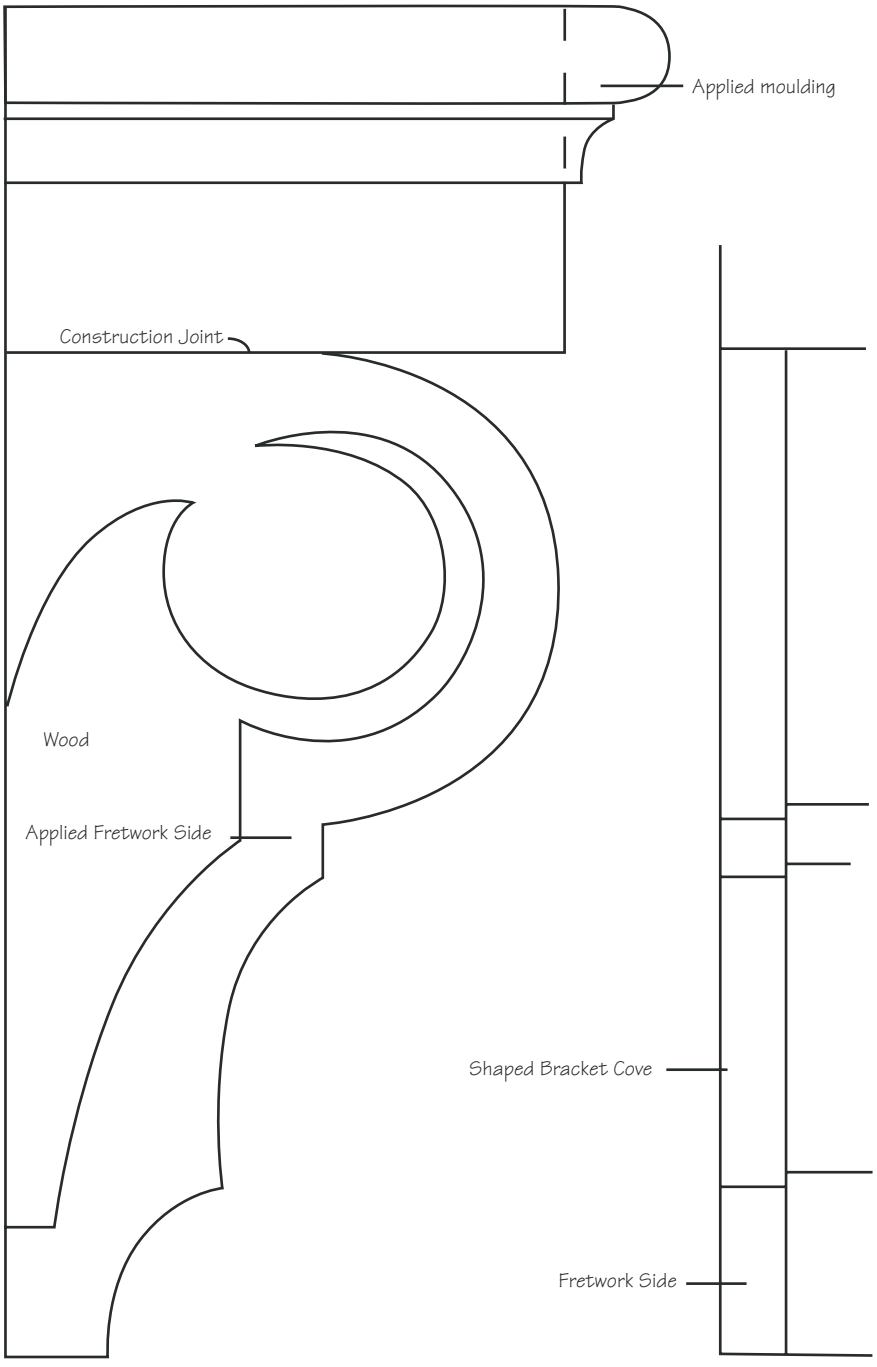
Architrave Moulding

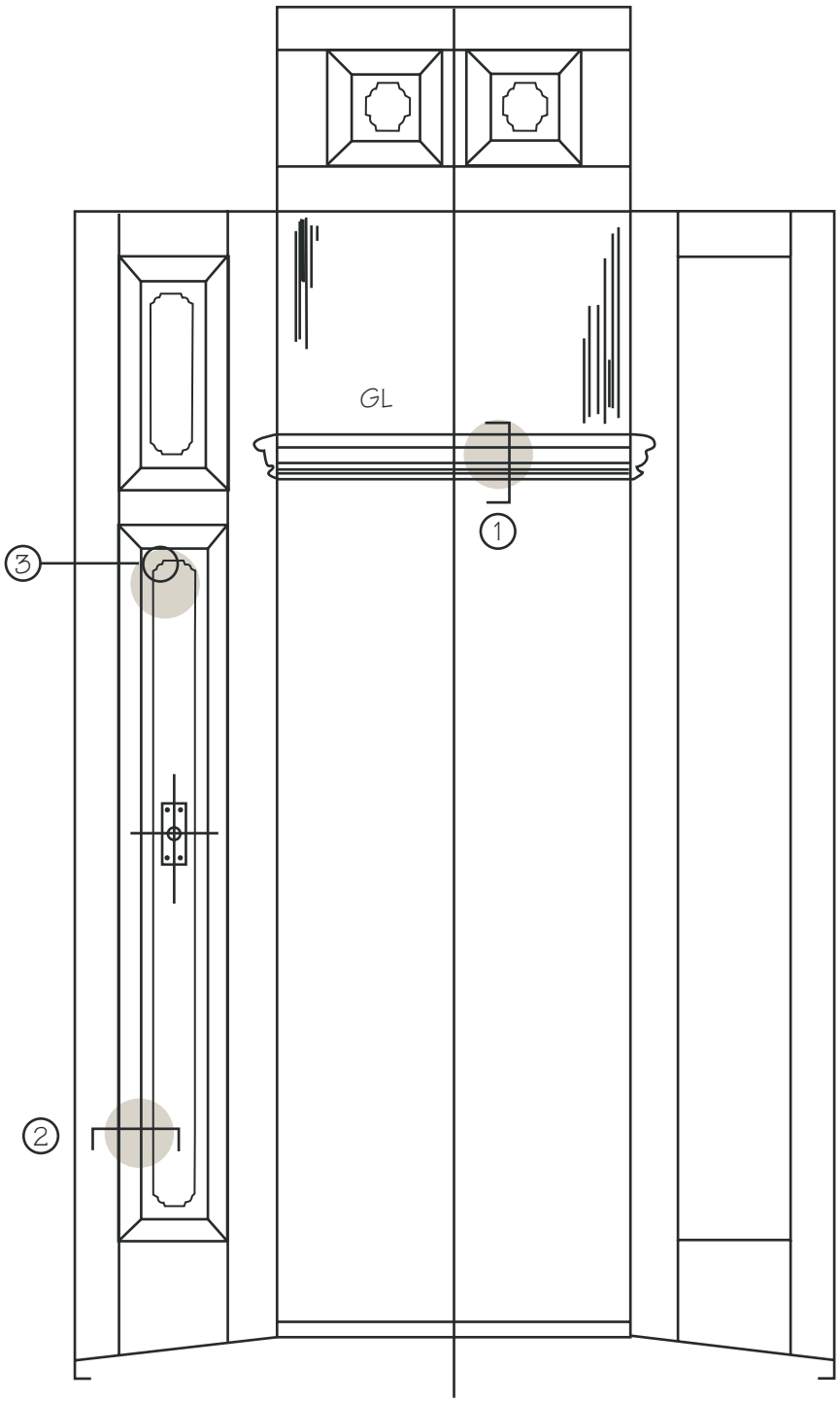


Cornice Moulding

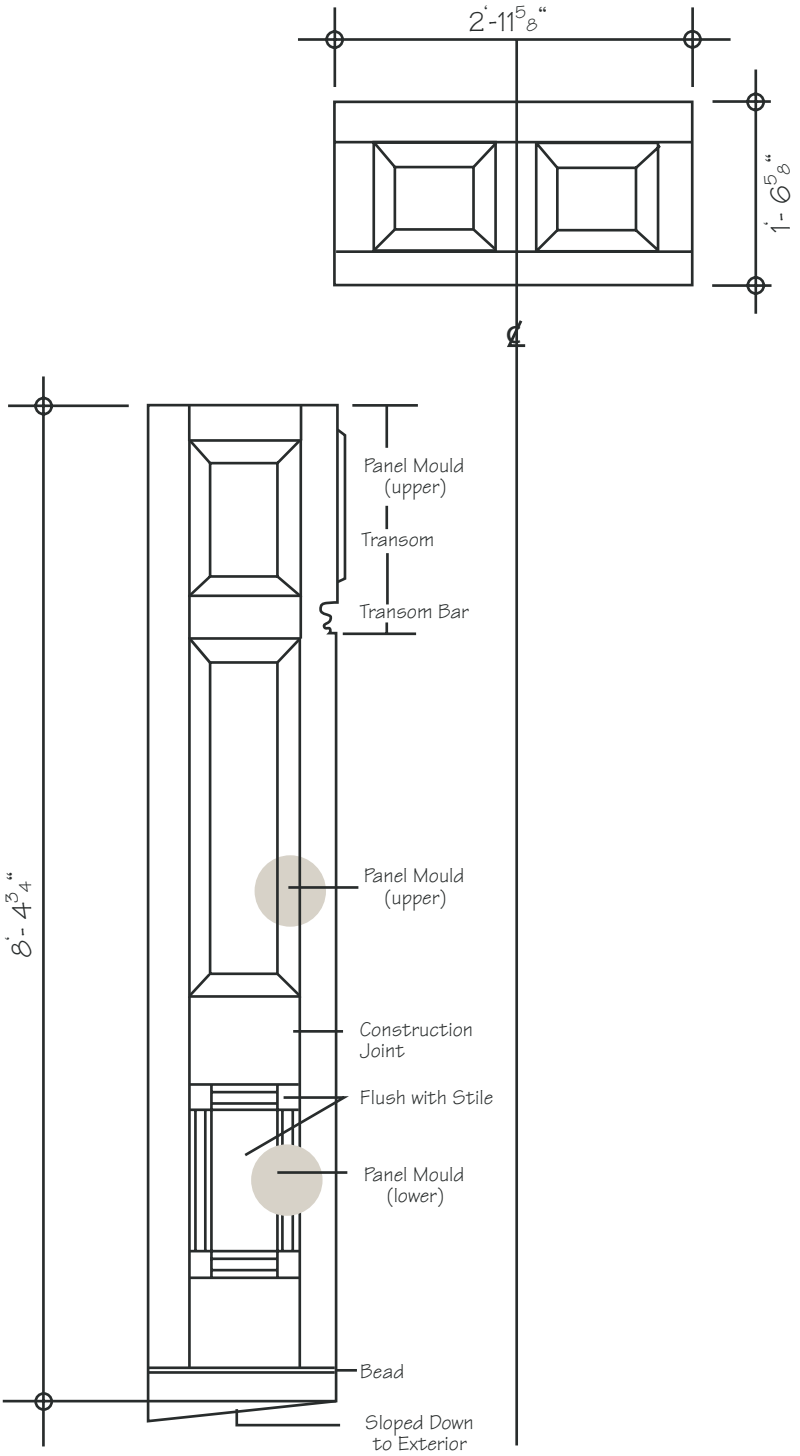

7
10
11
6
9
DETAIL
Pilaster
Tapered
5

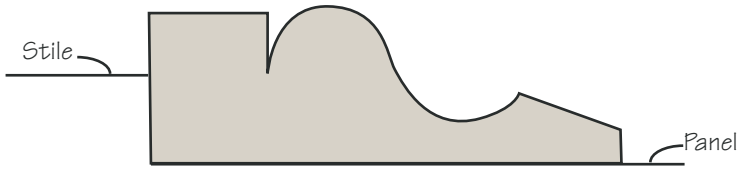

6
11
9
10
5


Applied moulding
Construction Joint
Wood
Applied Fretwork Side
Shaped Bracket Cove
Fretwork Side


GL
1
2
3


Transom Glazing
Wood
Modern Trim
1
Door
3
Detail
Raised Applied
Decoration
2


2'-11 5/8"
1'-6 5/8"
8'-4 3/4"
Panel Mould (upper)
Transom
Transom Bar
Panel Mould (upper)
Construction Joint
Flush with Stile
Panel Mould (lower)
Bead
Sloped Down to Exterior



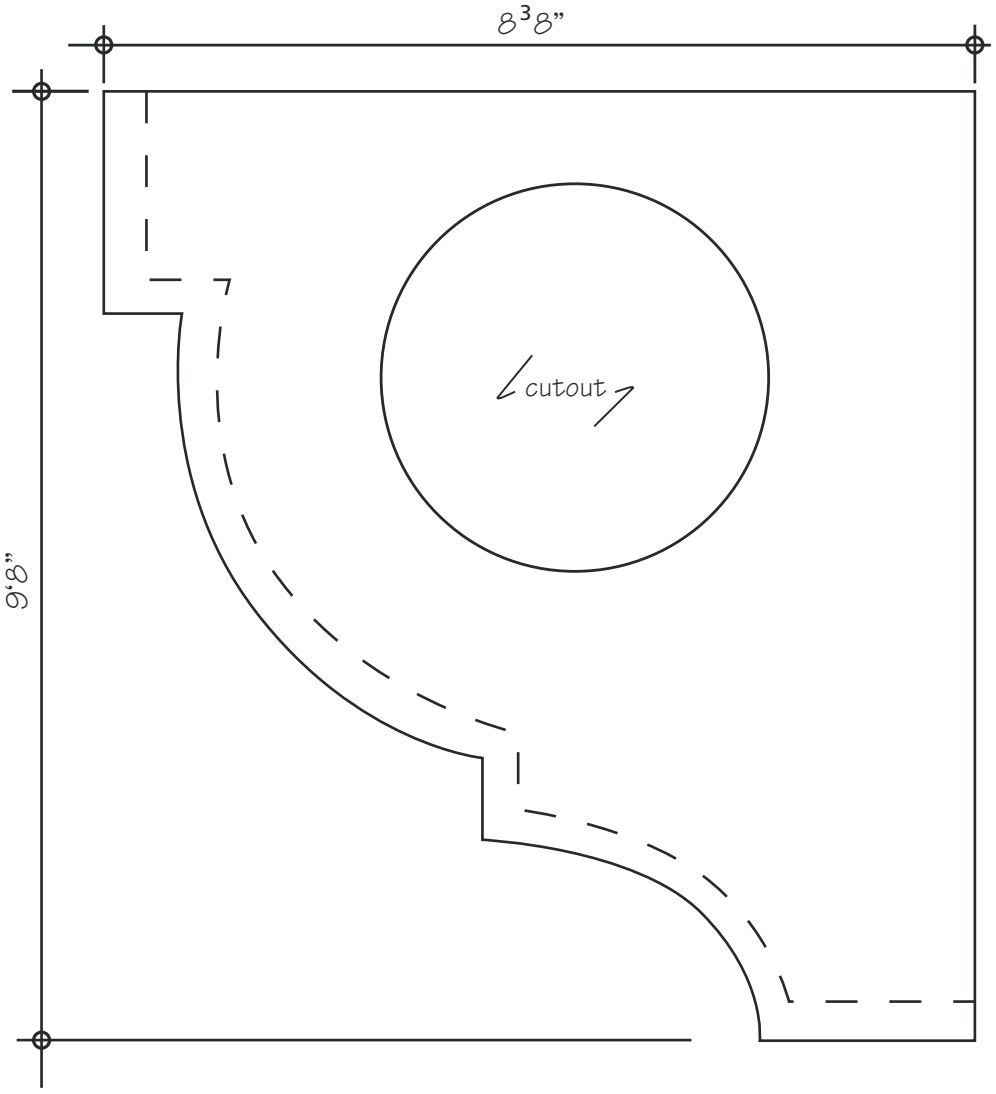
Panel Mould (upper)

Panel Mould (lower)

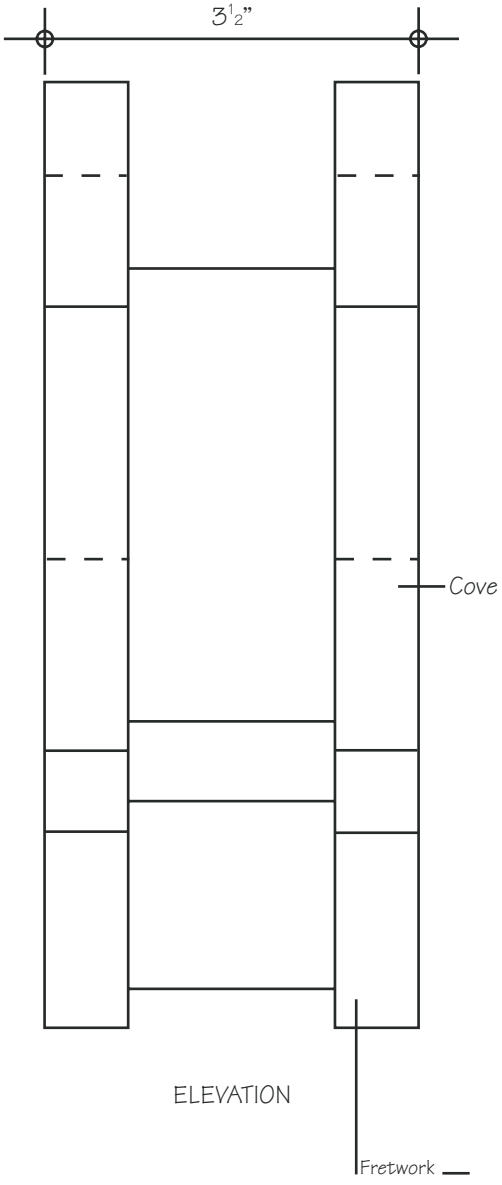
Appendix C:

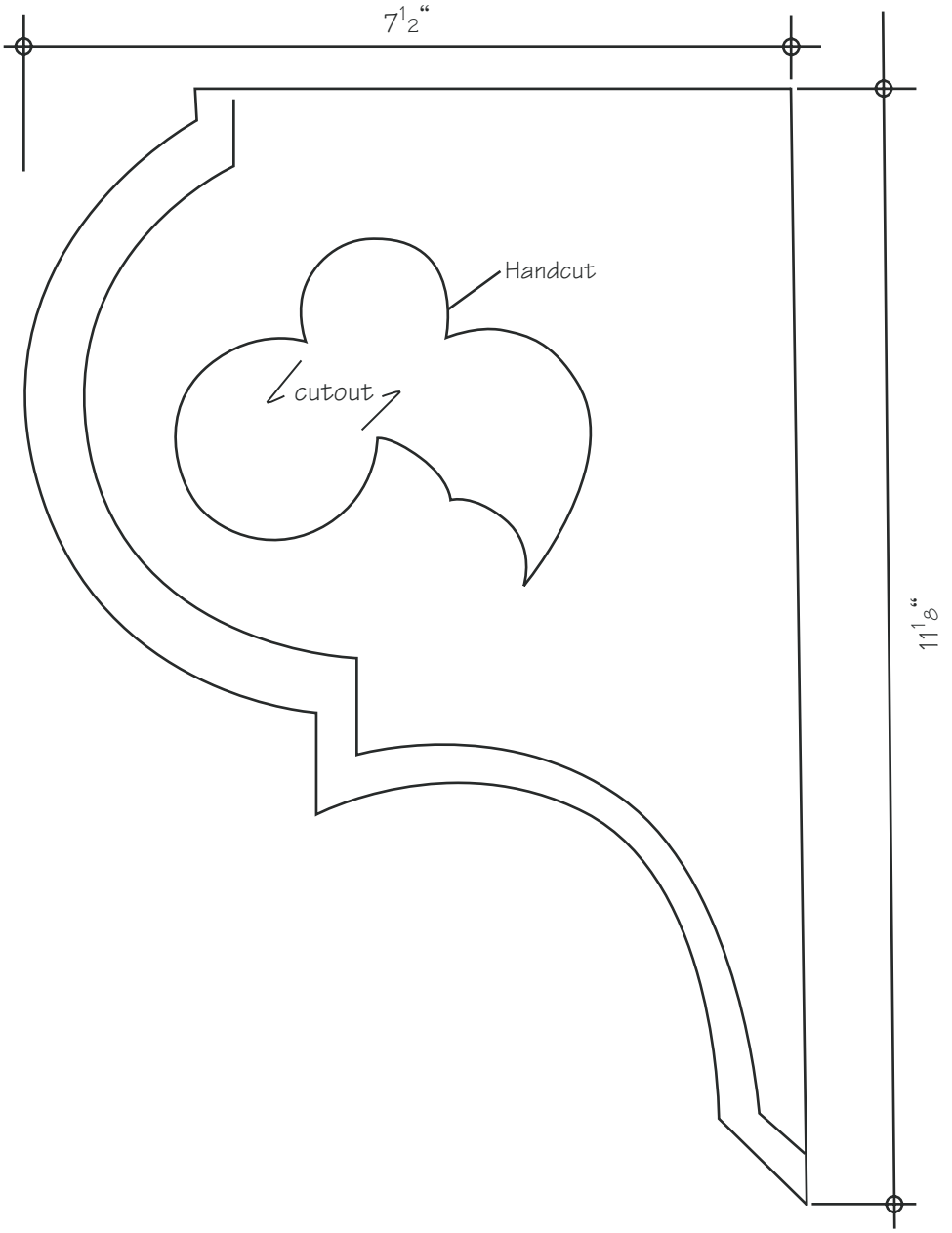
Brackets

On many houses, brackets abound on the eaves, above the windows and doorways, and they group in clusters around the bay windows of the houses built during Queen Victoria's reign. Of no structural value, brackets soften the otherwise hard horizontal line of the eaves and add a decorative touch. However, they were not used on all houses found in the Heritage Conservation Areas of St. John's. Some brackets are made of a lamination of three thicknesses of pine board, the two outside pieces having a fretted design. Retaining the size and shape of the original brackets is easy to do, and an existing bracket can be used as a template for making a new bracket.

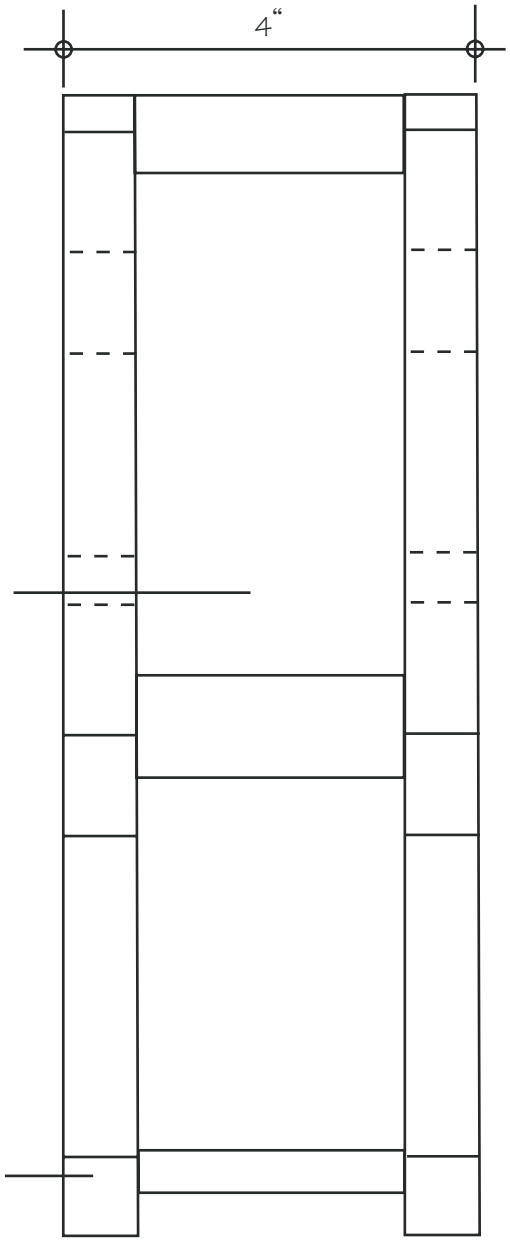


PROFILE

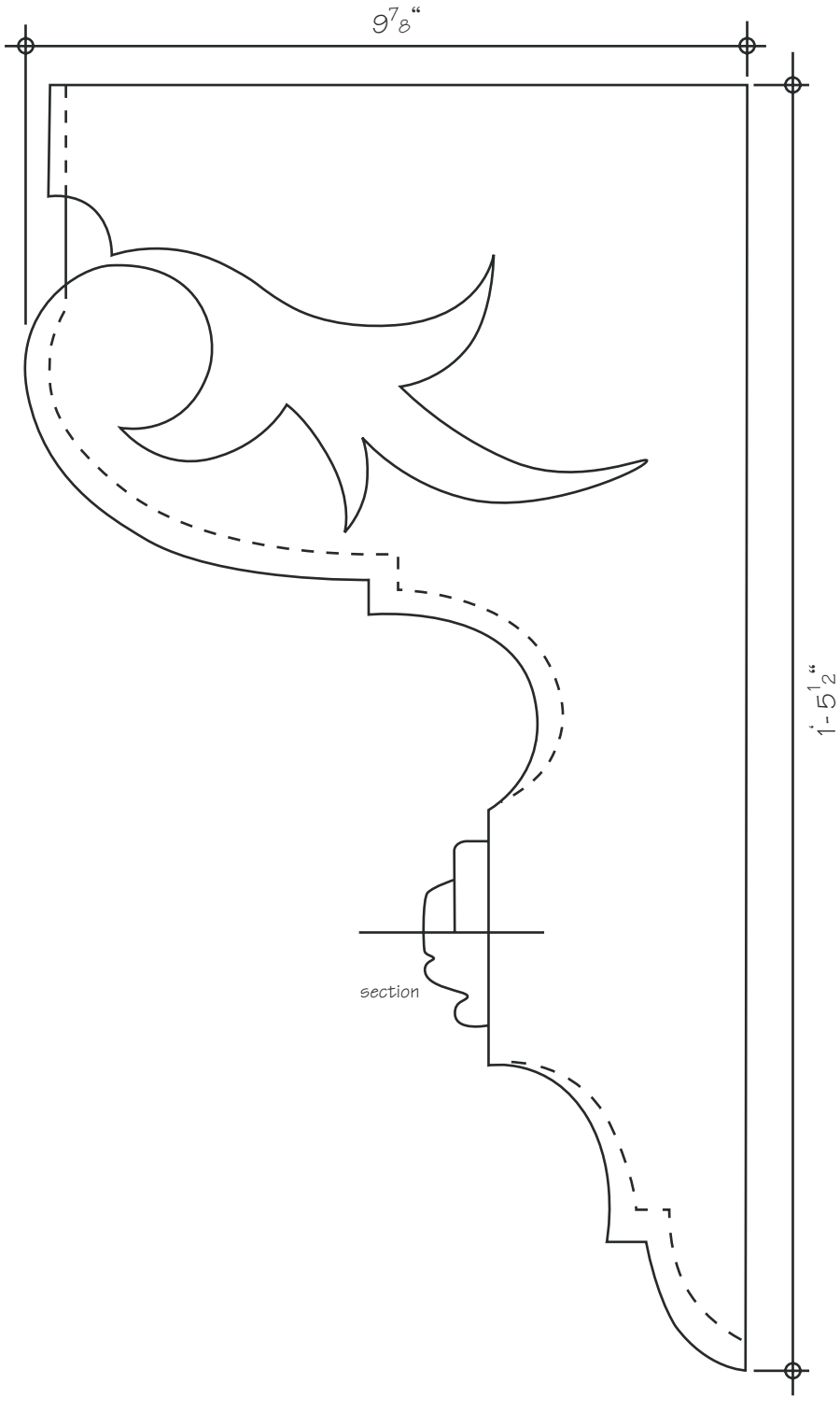

3 1/2"
Cove
ELEVATION
Fretwork

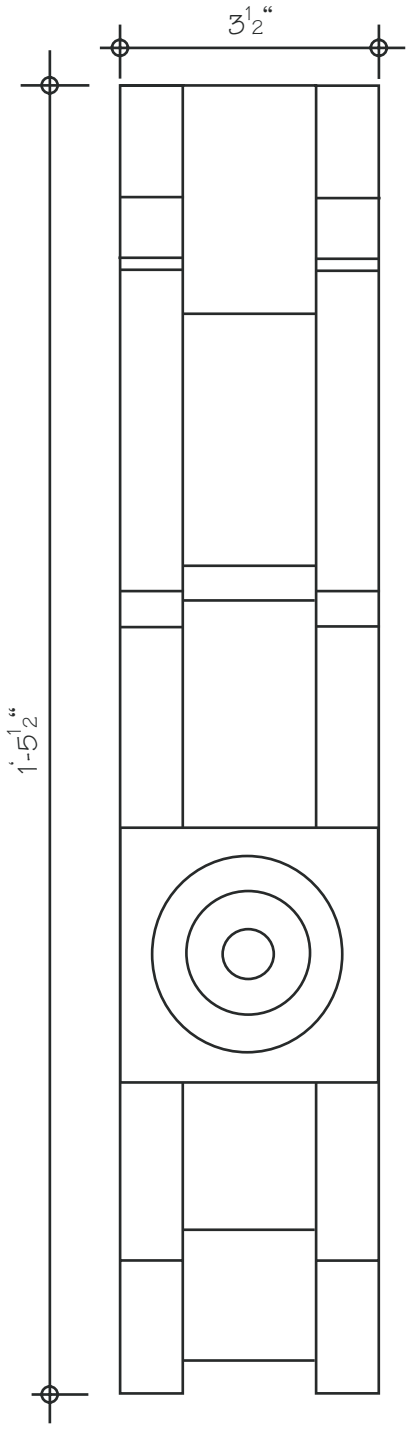


PROFILE

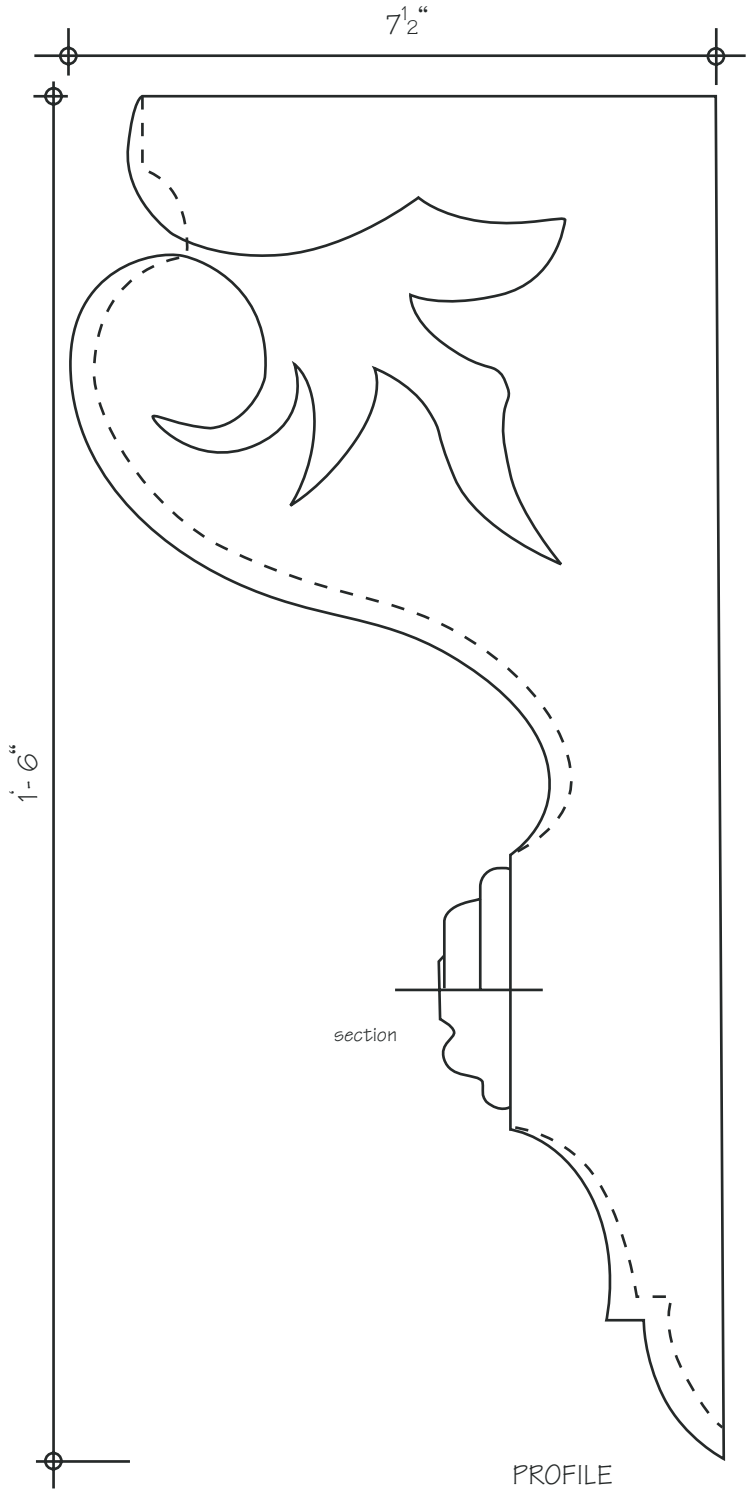


ELEVATION

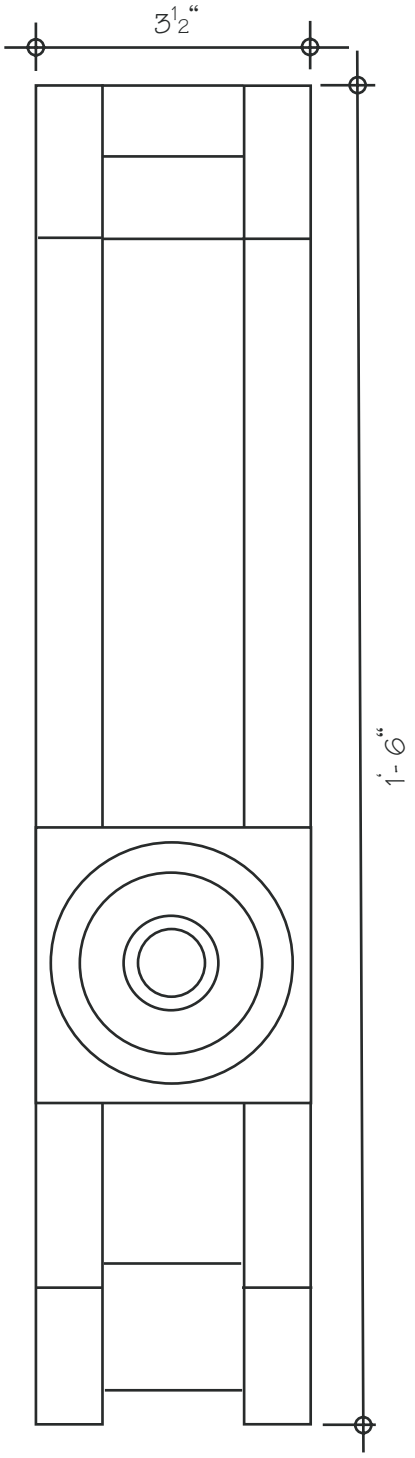

9 7/8"
1'-5 1/2"
section



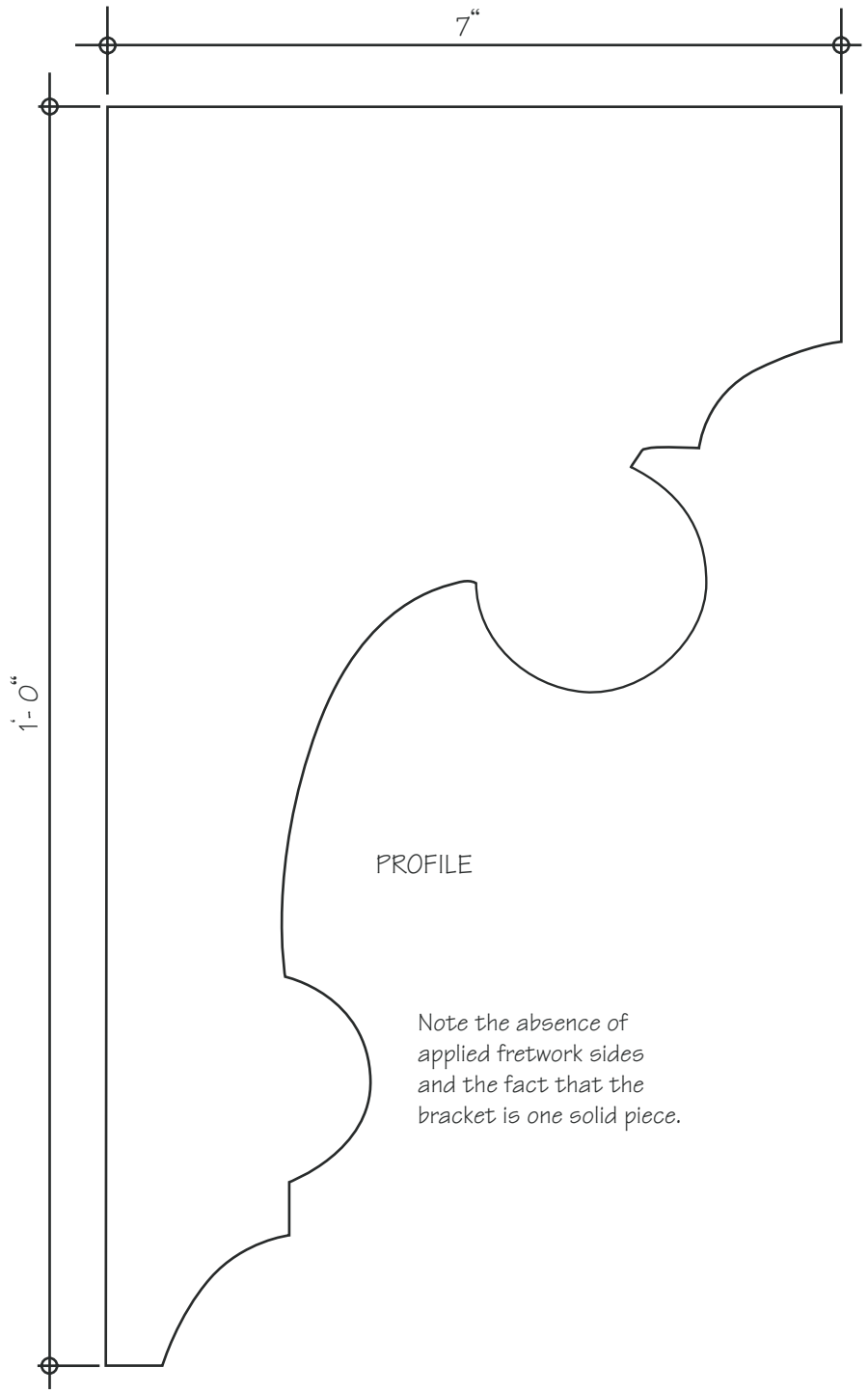
ELEVATION



PROFILE



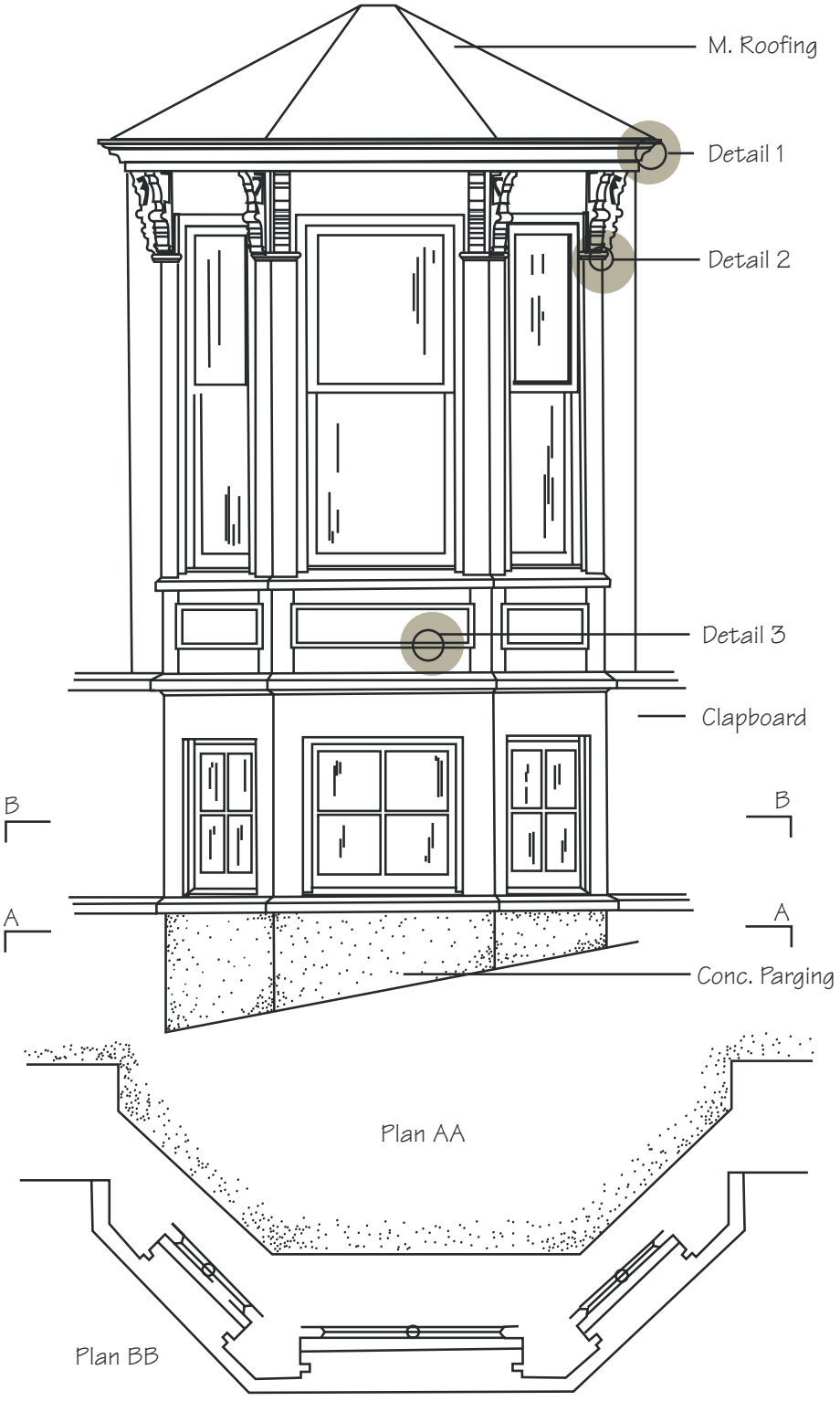
ELEVATION

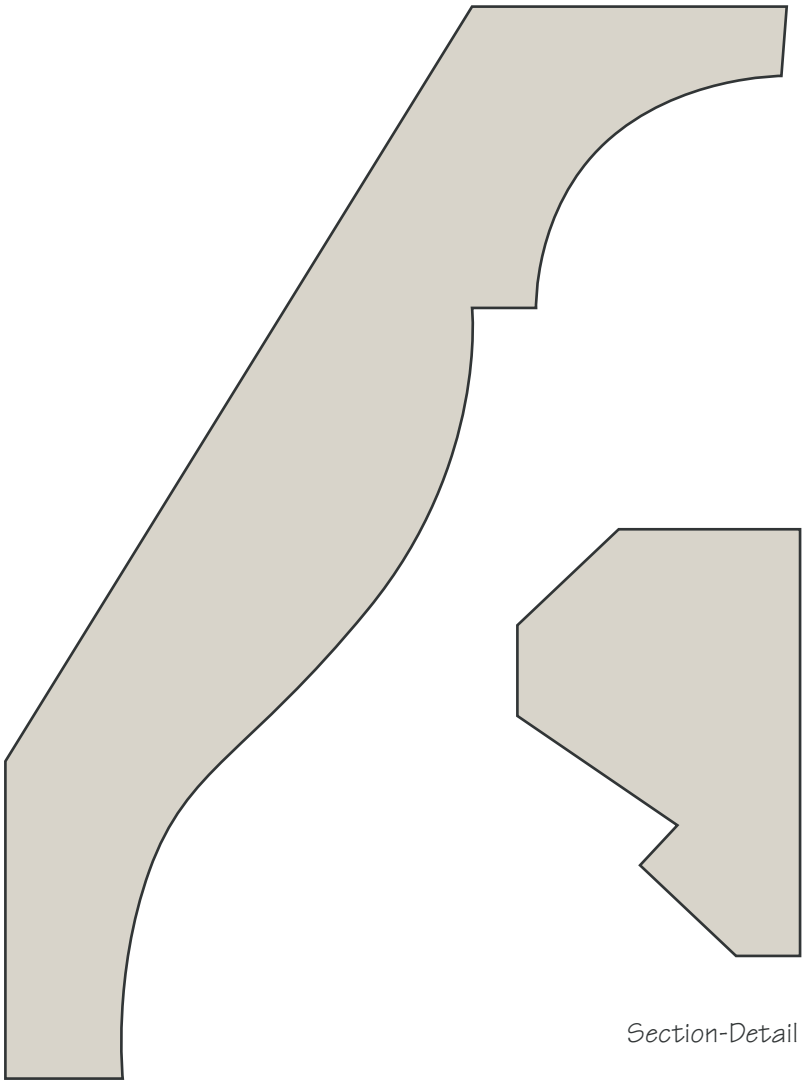

7“
1'-0“
PROFILE
Note the absence of
applied fretwork sides
and the fact that the
bracket is one solid piece.

Appendix D:

Windows

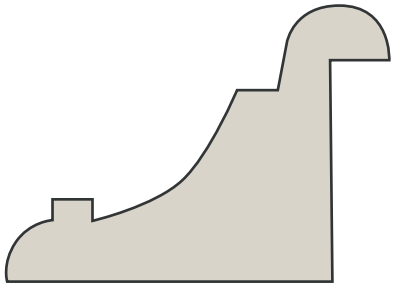
A walk through the older residential section of downtown St. John's will reveal to the discerning eye the irregularity of the spaces between the windows of the range dwellings. The paramount desire of the builder was to place the windows on the centre line of the major rooms and hallways on the first and second floors and space the dormers evenly on the roof above. This disregard for the more formal approach to fenestration resulted in a lopsided effect from the exterior of the building which adds much character to the typical dwelling built after the great fire of 1892.


M. Roofing
Detail 1
Detail 2
Detail 3
Clapboard
B
B
A
A
Conc. Parging
Plan AA
Plan BB

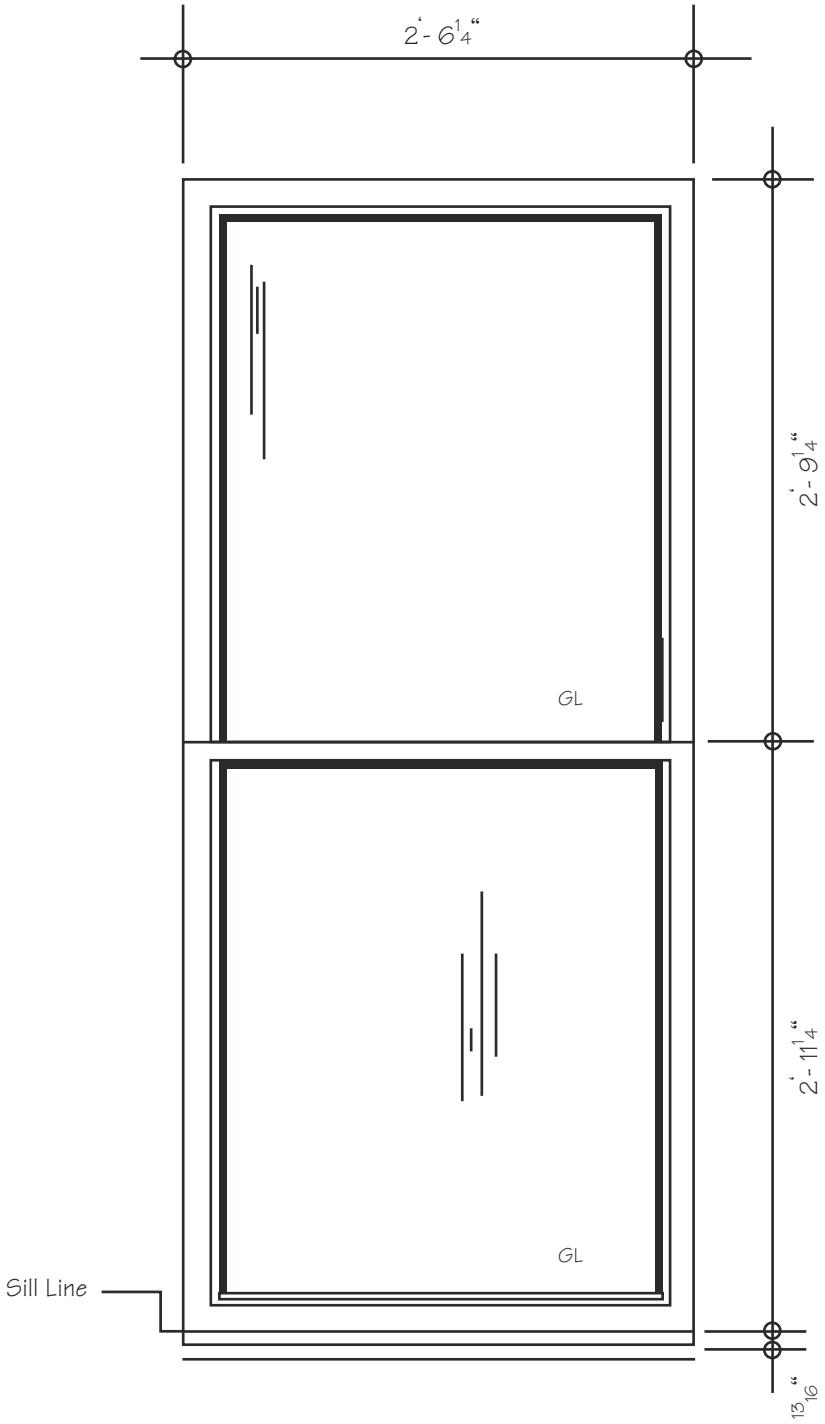


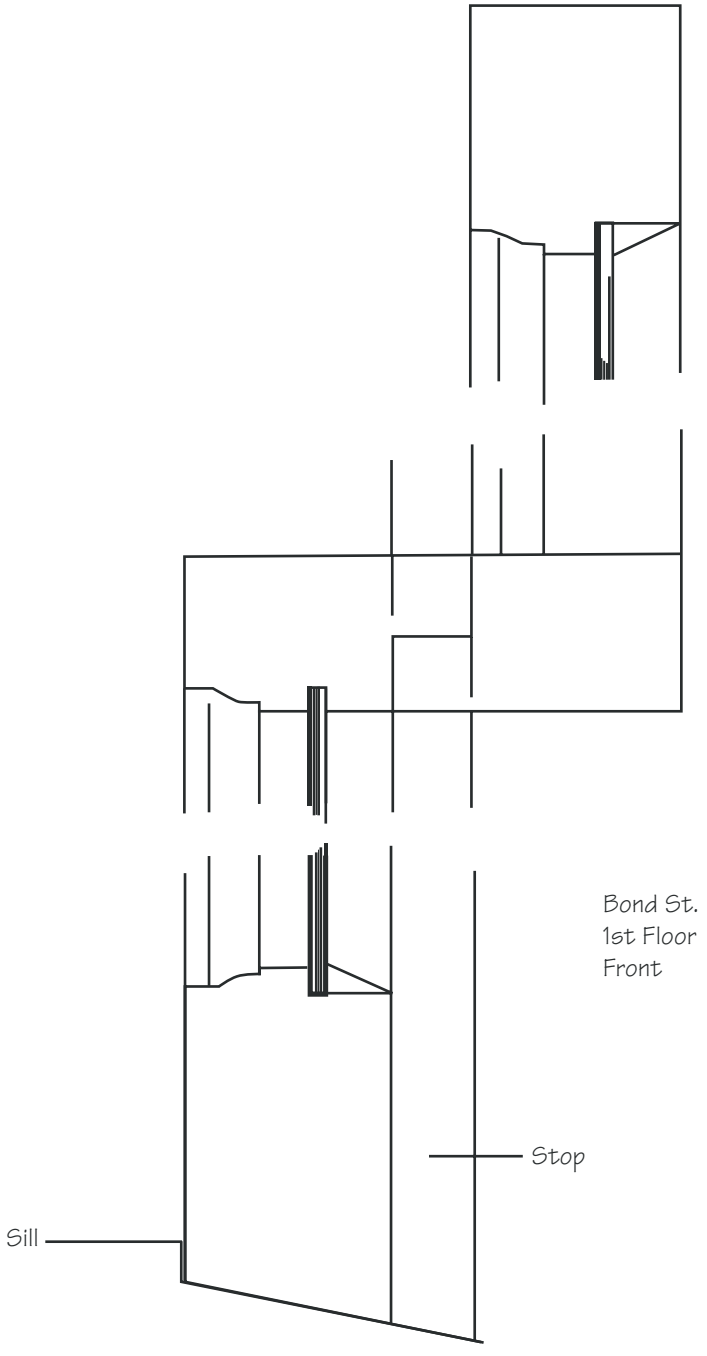
Section-Detail 1

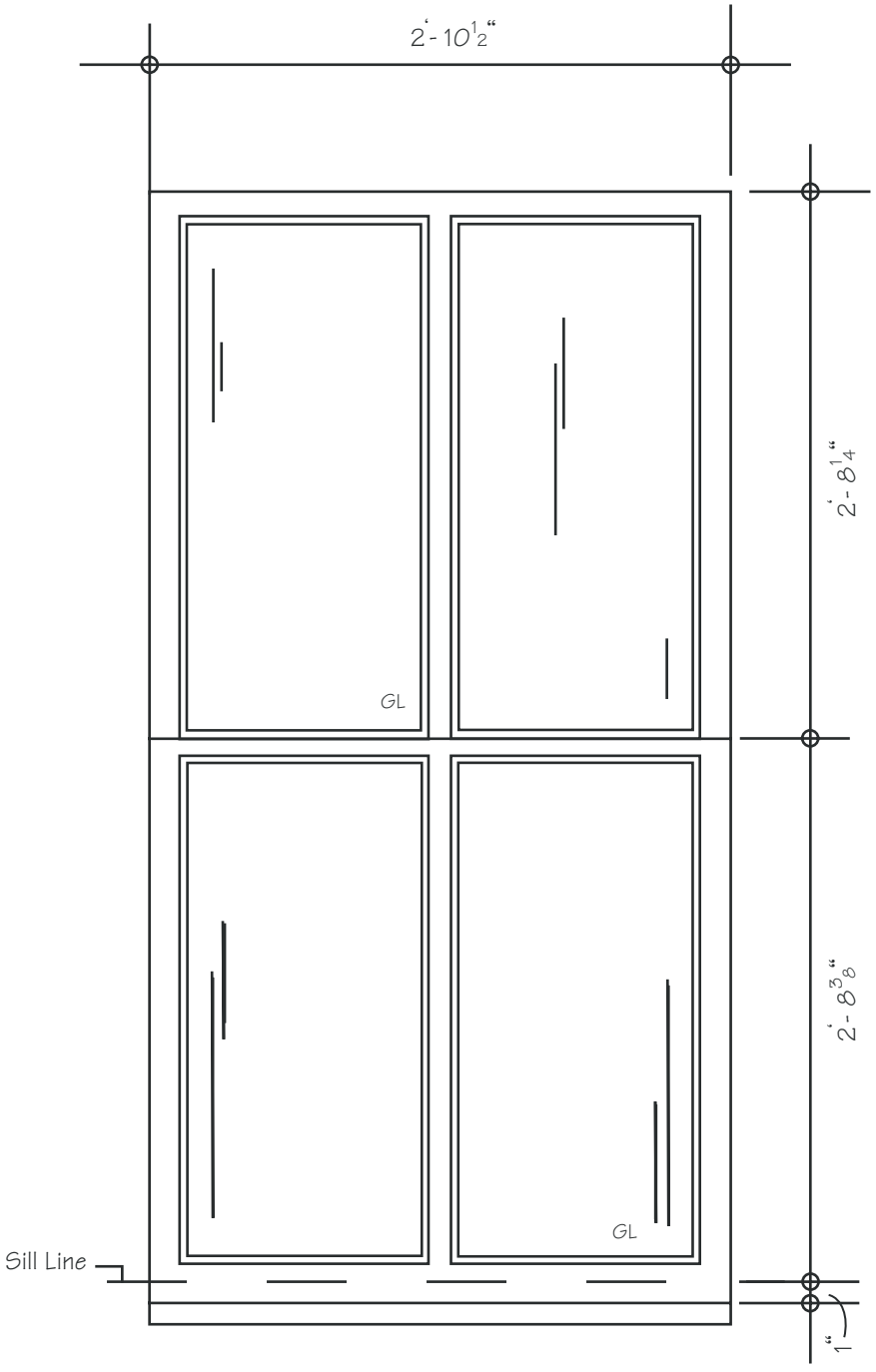
Section-Detail 2

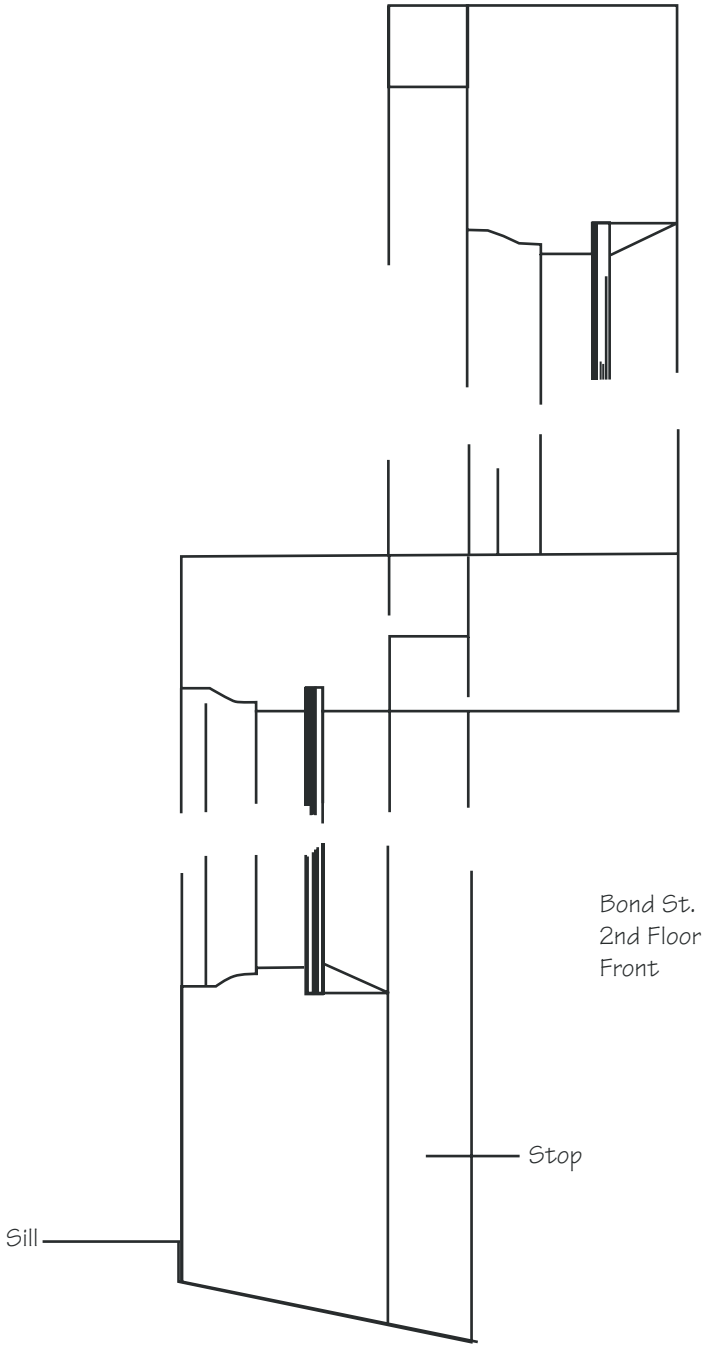


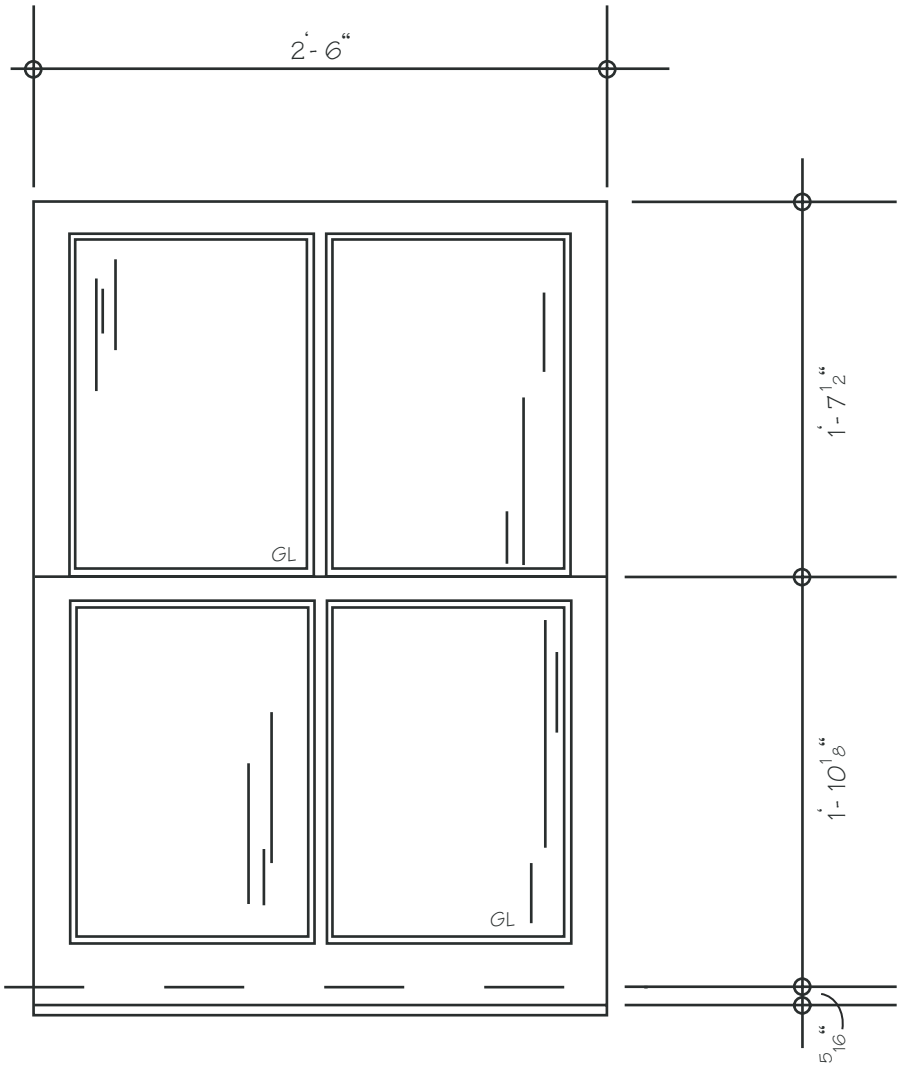
Section-Detail 3

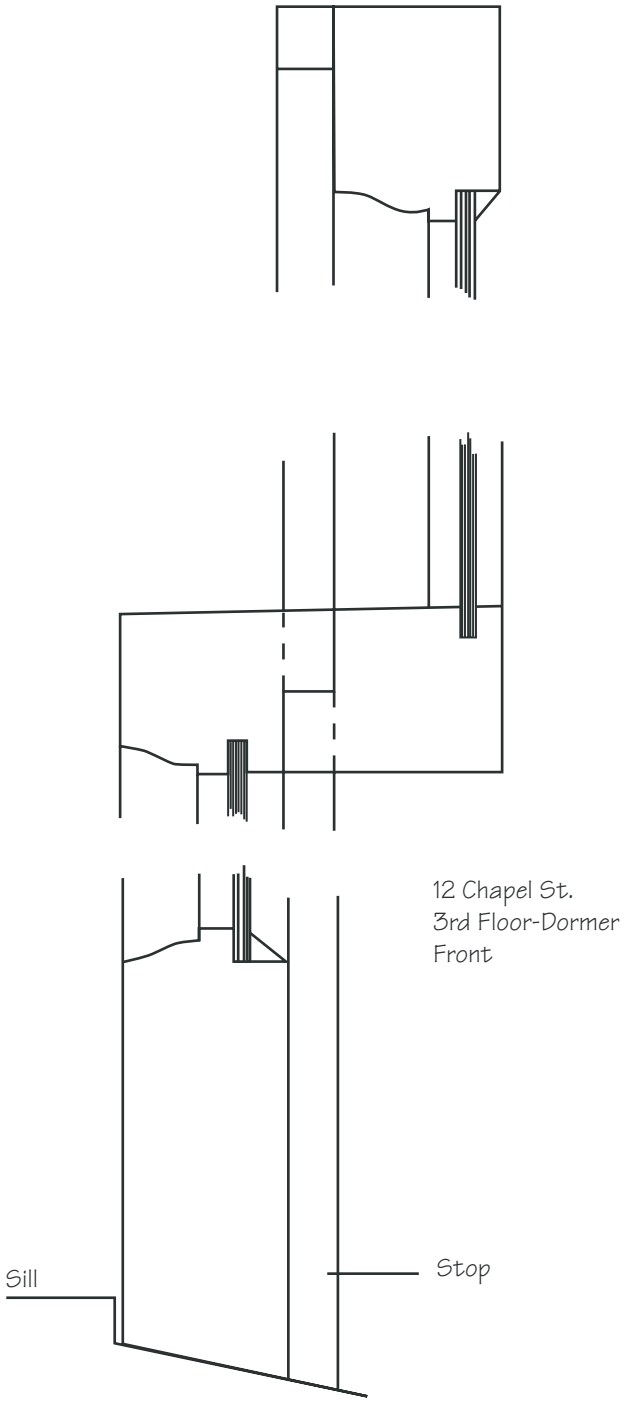

2' - 6 1/4"
2' - 9 1/4"
GL
2' - 11 1/4"
GL
Sill Line
13/16"

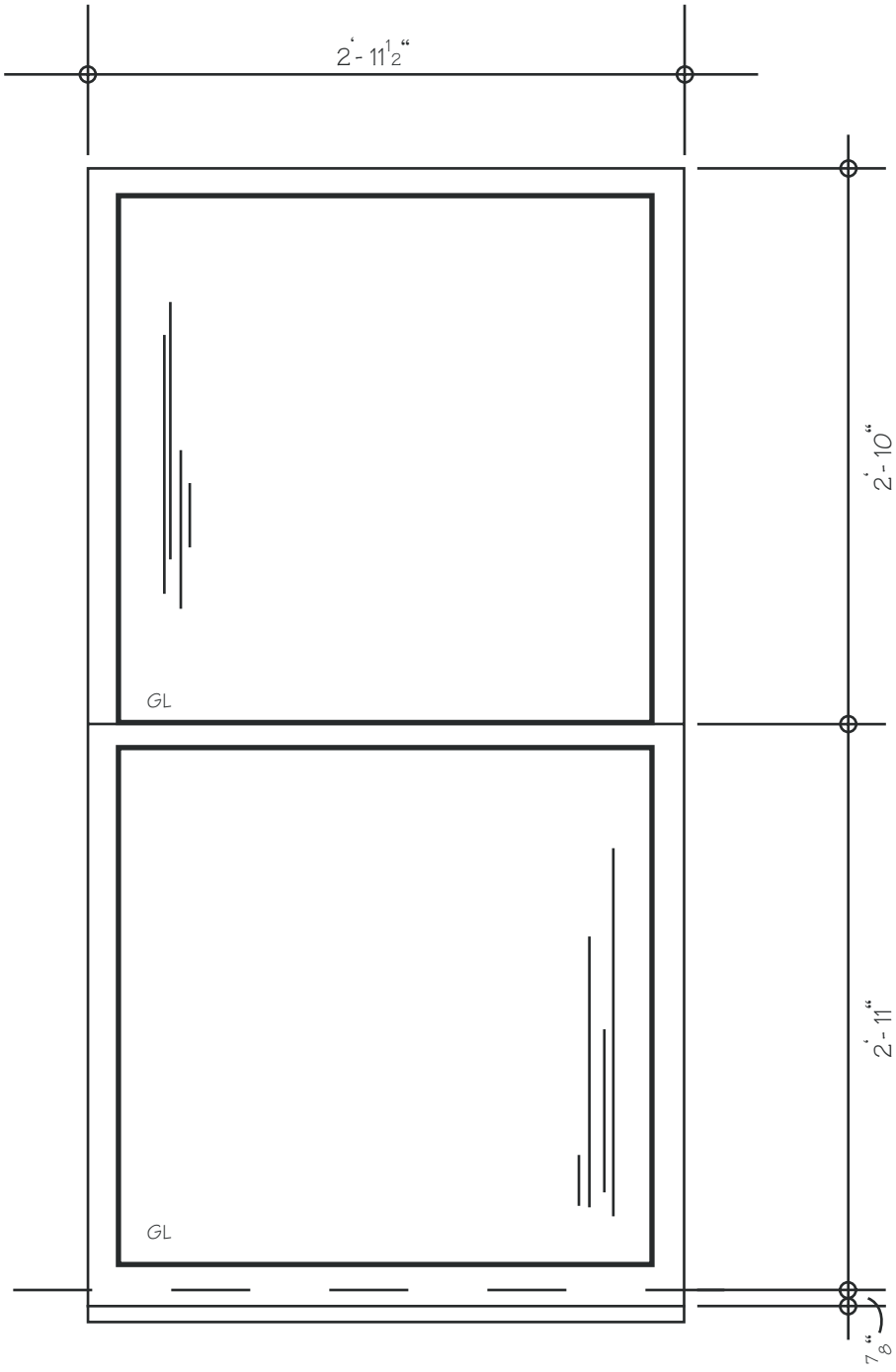

Bond St.
1st Floor
Front
Stop
Sill

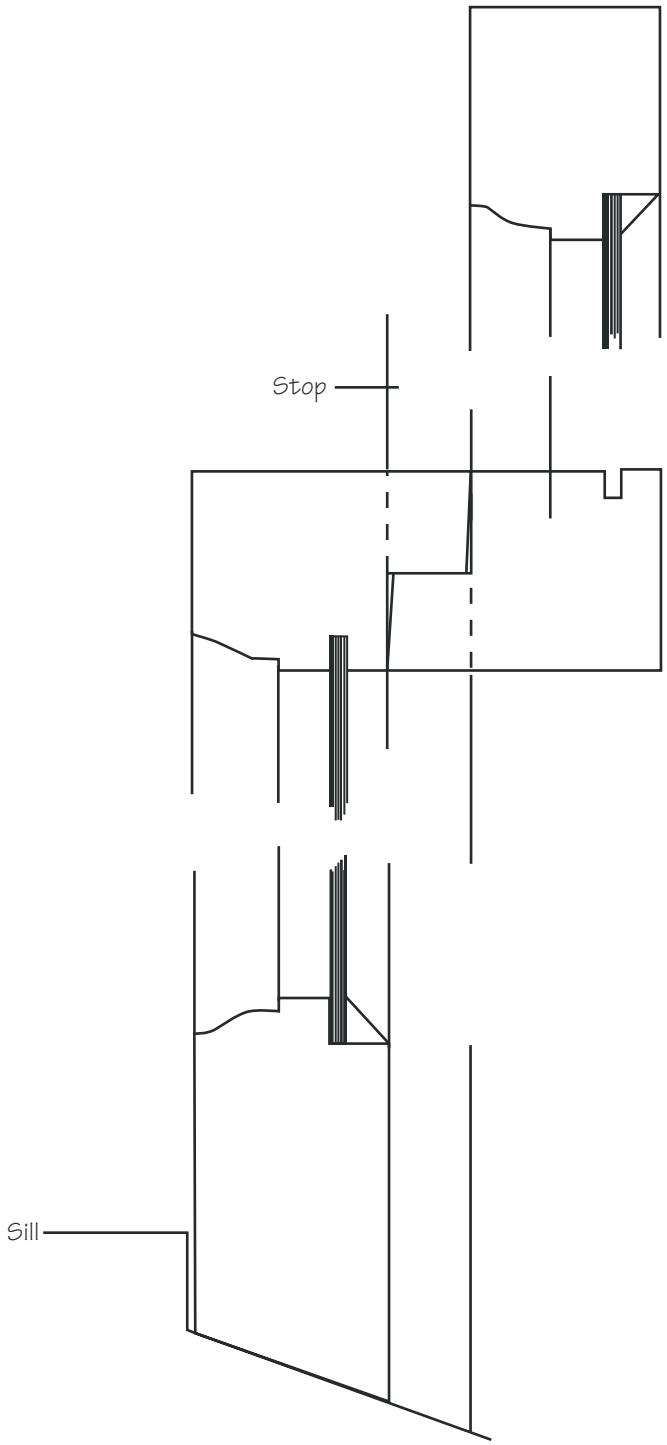

2'-10 1/2"
2'-8 1/4"
GL
2'-8 3/8"
GL
Sill Line
1"

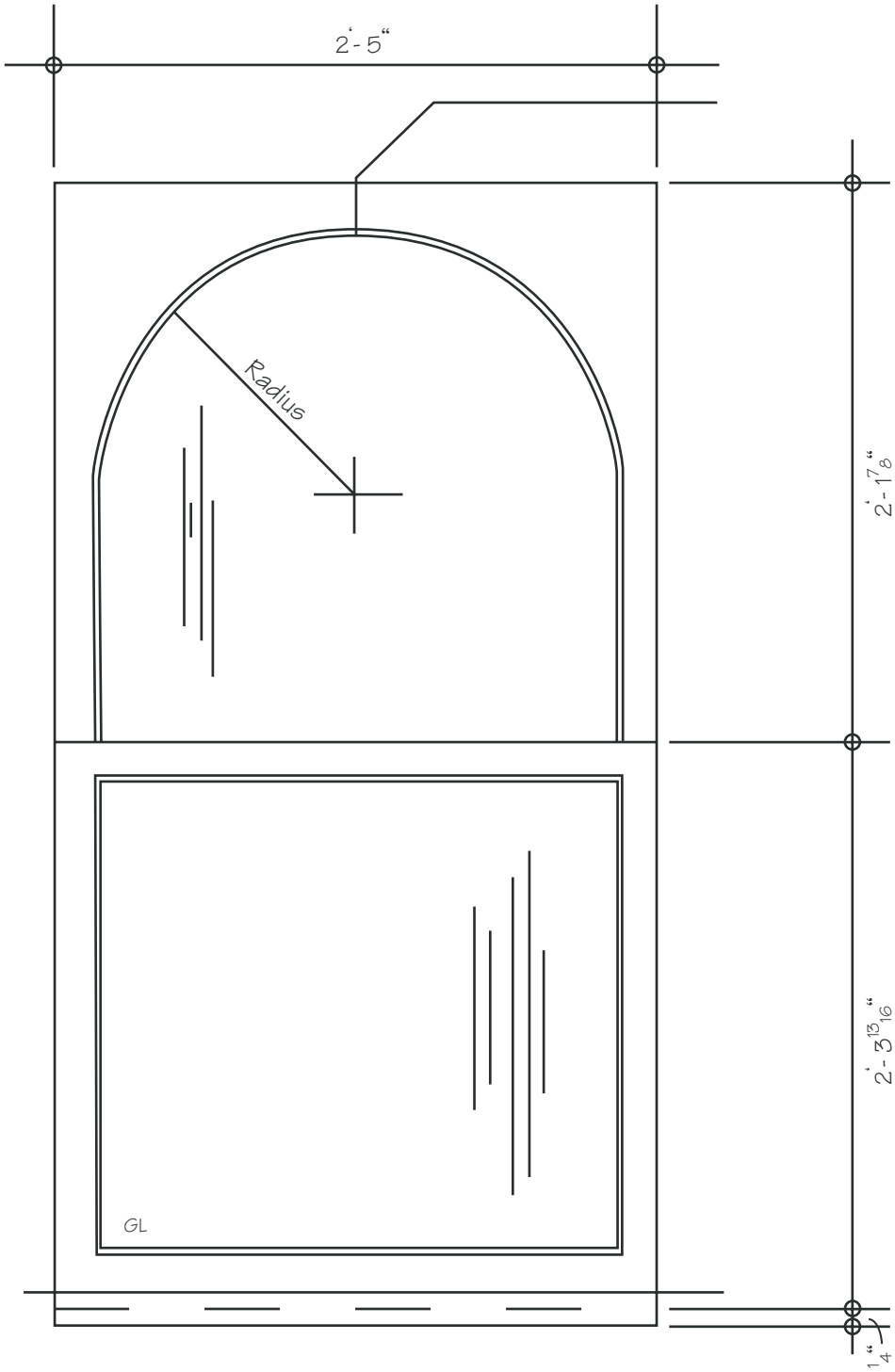

Bond St.
2nd Floor
Front
Stop
Sill

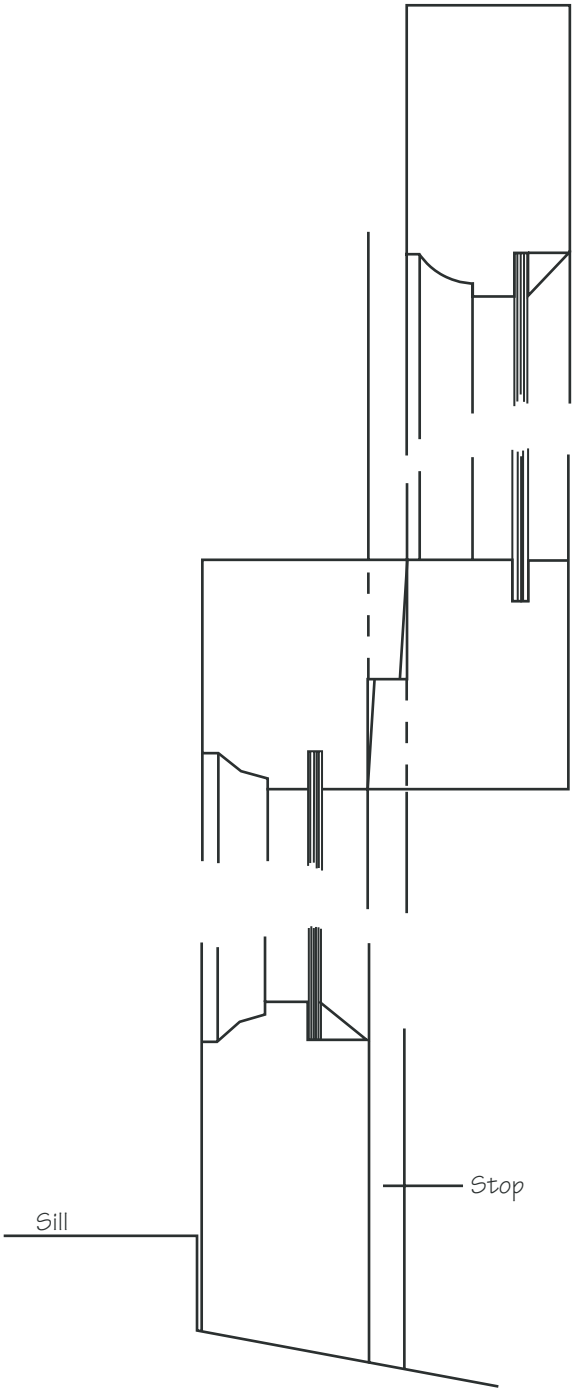

2'- 6"
1'- 7 1/2"
1'- 10 1/8"
5/16"
GL
GL

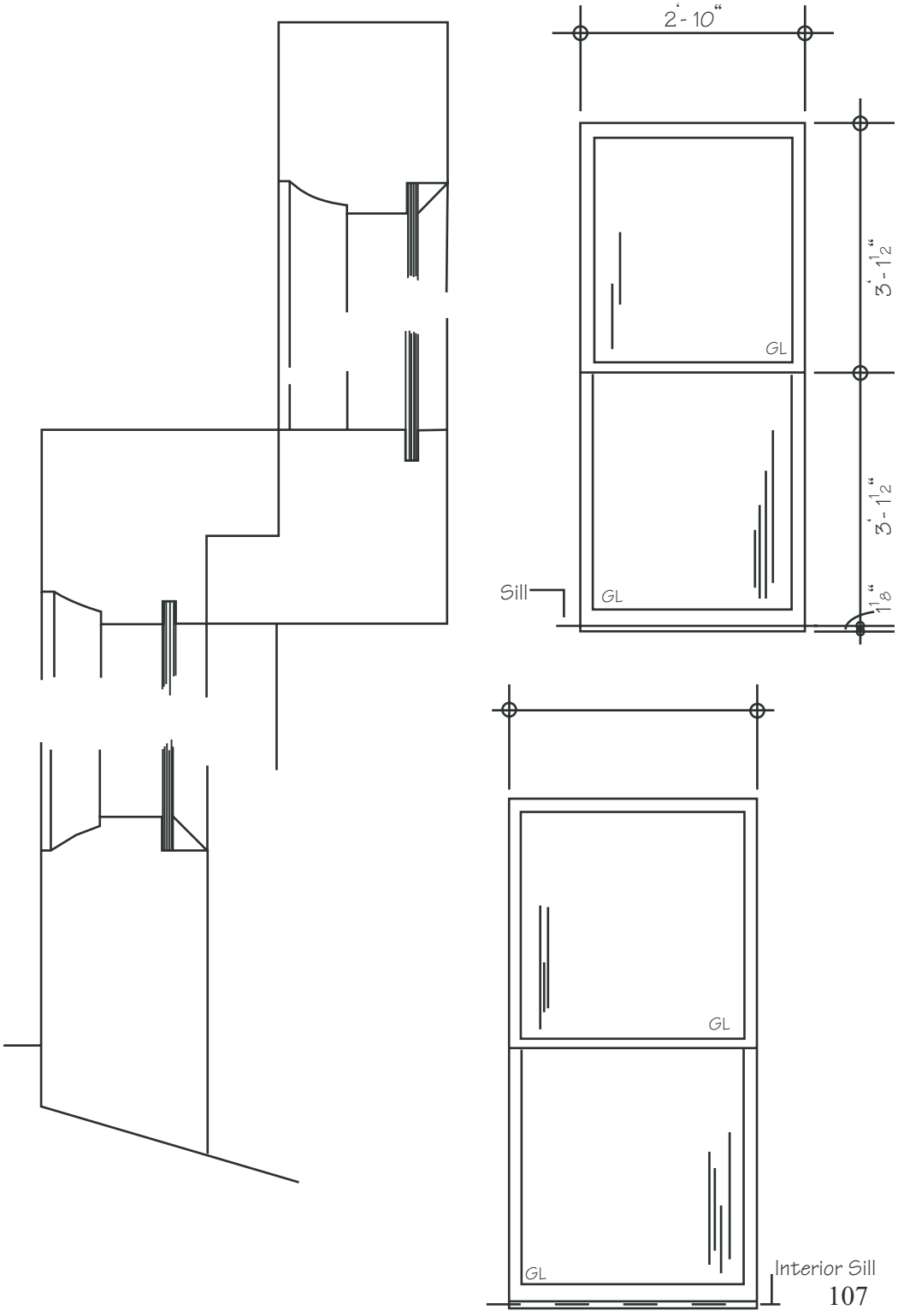

12 Chapel St.
3rd Floor-Dormer
Front
Sill
Stop

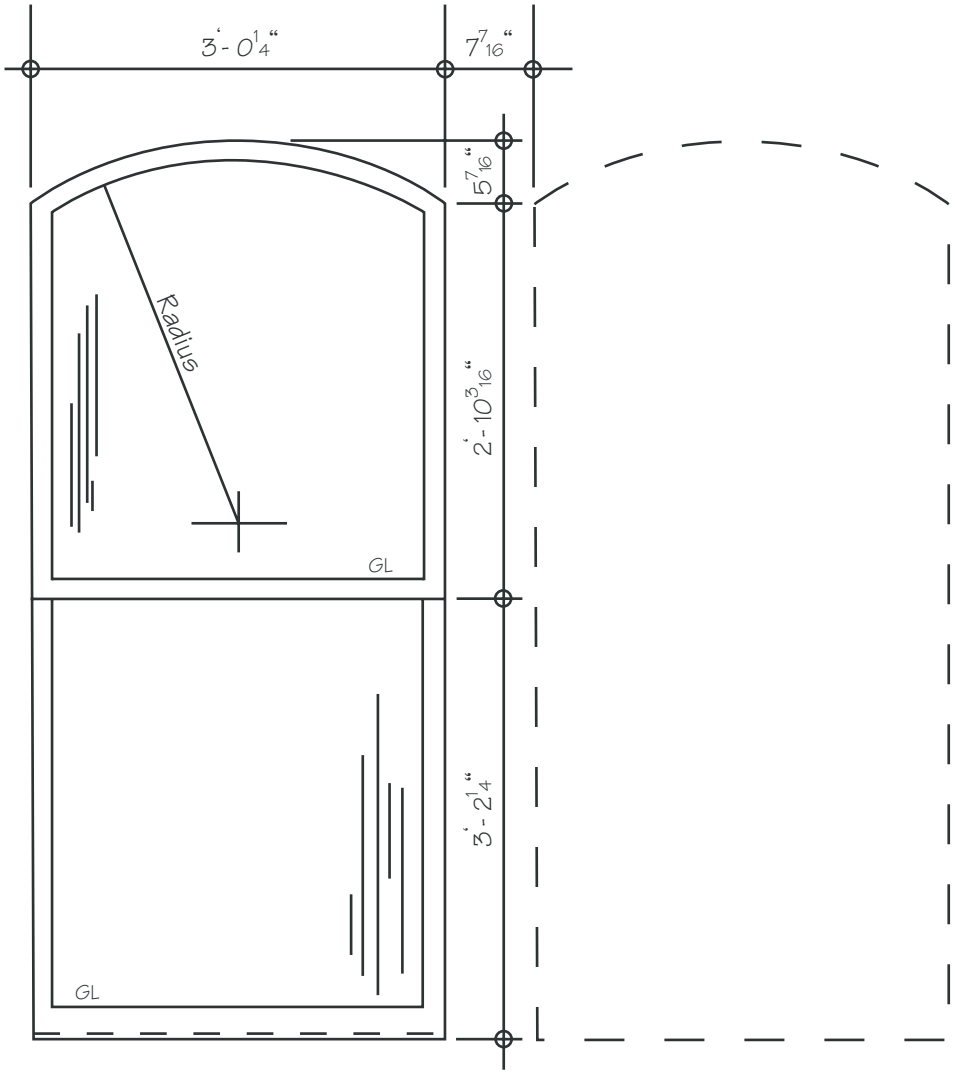

2' - 11 1/2"
2' - 10"
GL
GL
2' - 11"
7/8"

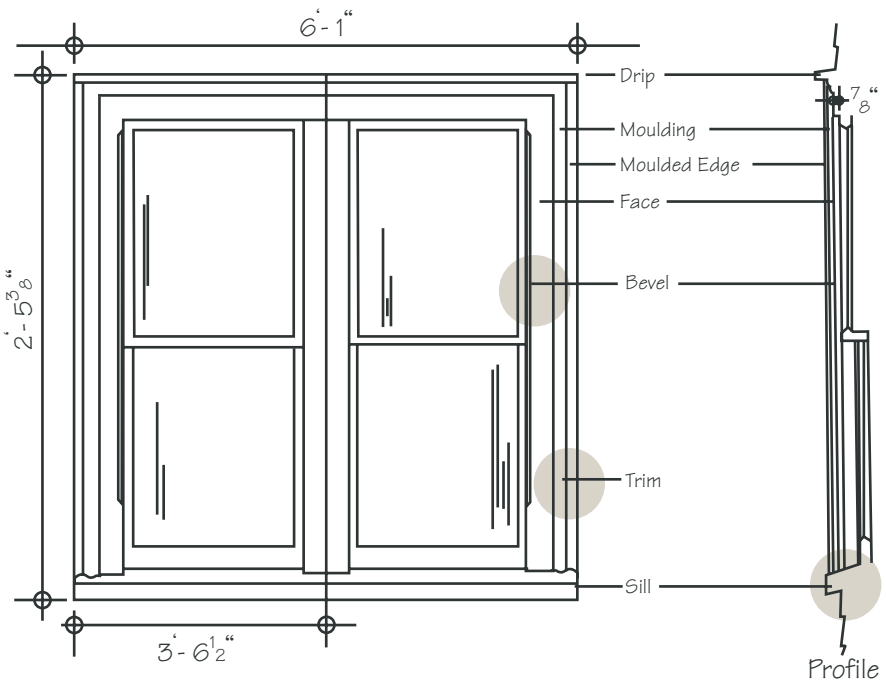

Stop
Sill


2' - 5"
Radius
2' - 1 7/8"
2' - 3 13/16"
GL
1/4"


Stop
Sill

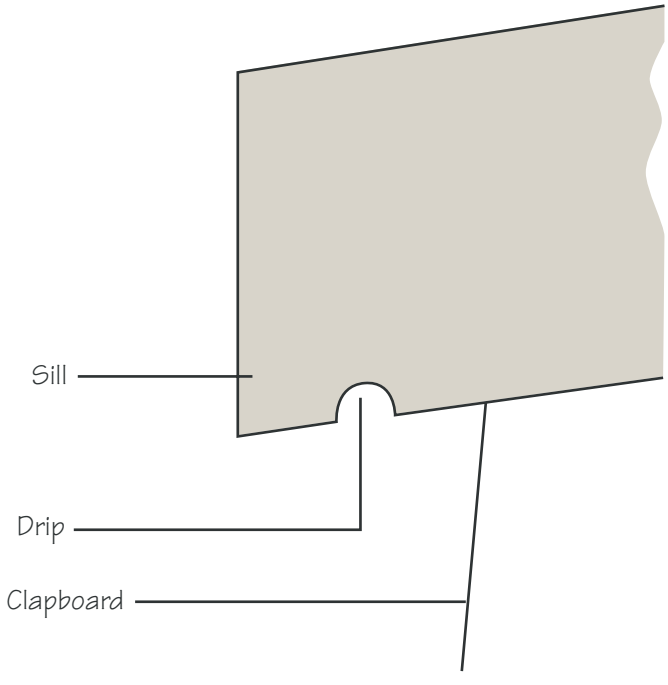

2' - 10"
3' - 1 1/2"
3' - 1 1/2"
1 1/8"
GL
GL
Sill
GL
GL
Interior Sill


3' - 0 1/4"
7 7/16"
5 7/16"
Radius
2' - 10 3/16"
GL
3' - 2 1/4"
GL

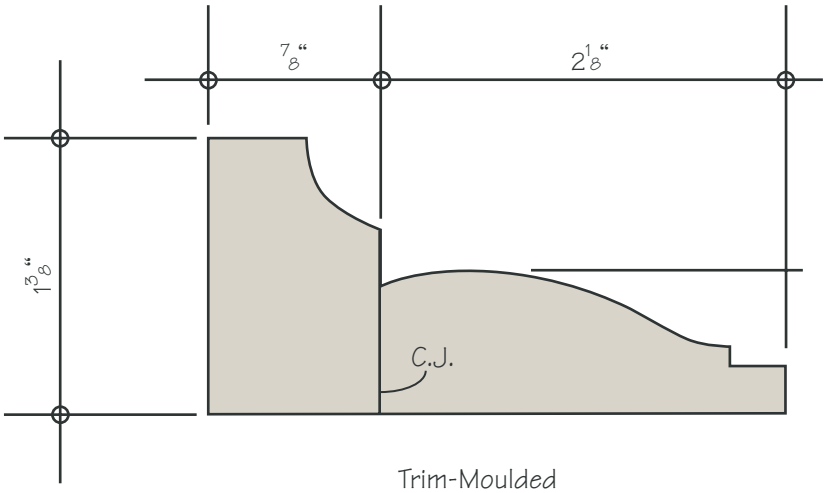


Elevation

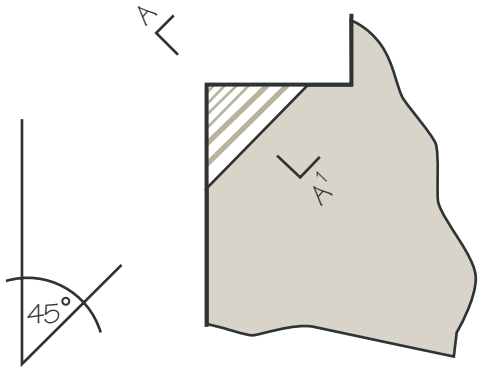
Ground Floor Window



Sill Detail-2nd Floor

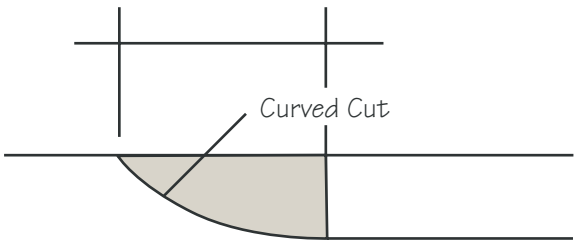


Trim-Moulded

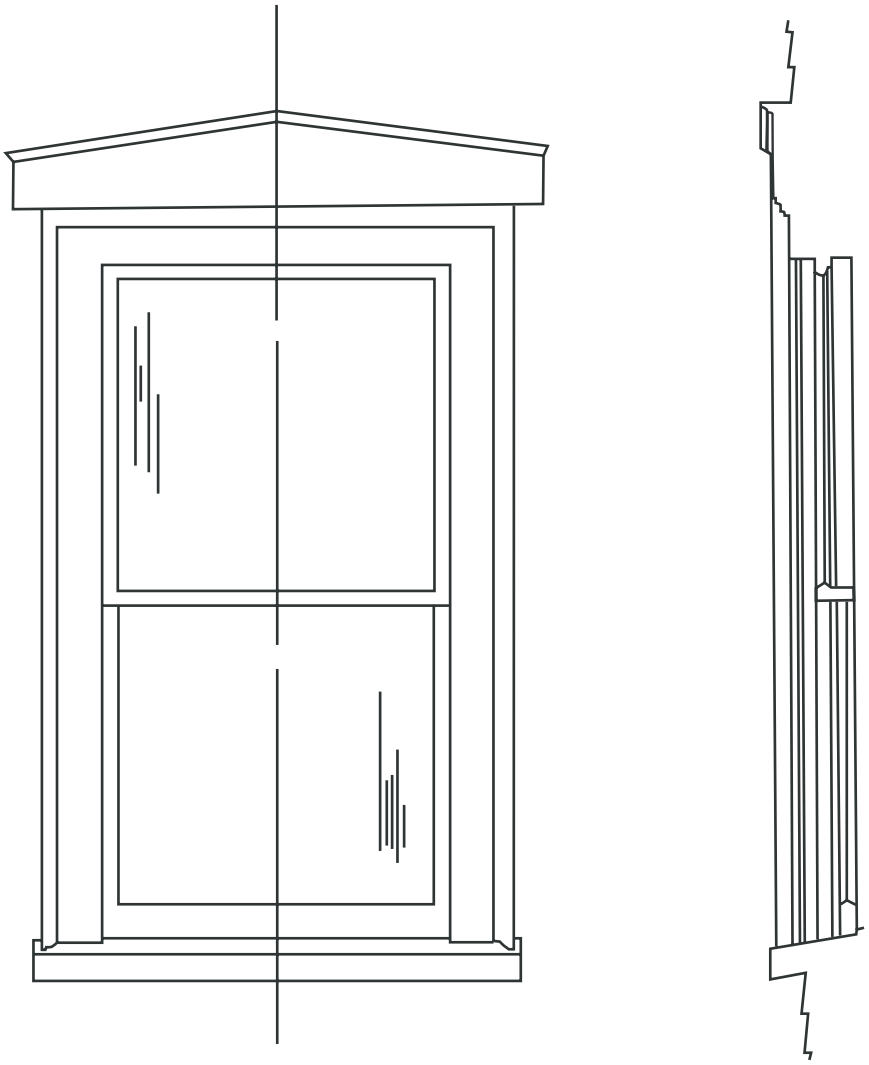


Plan-Jamb
at Bevel

Bevel



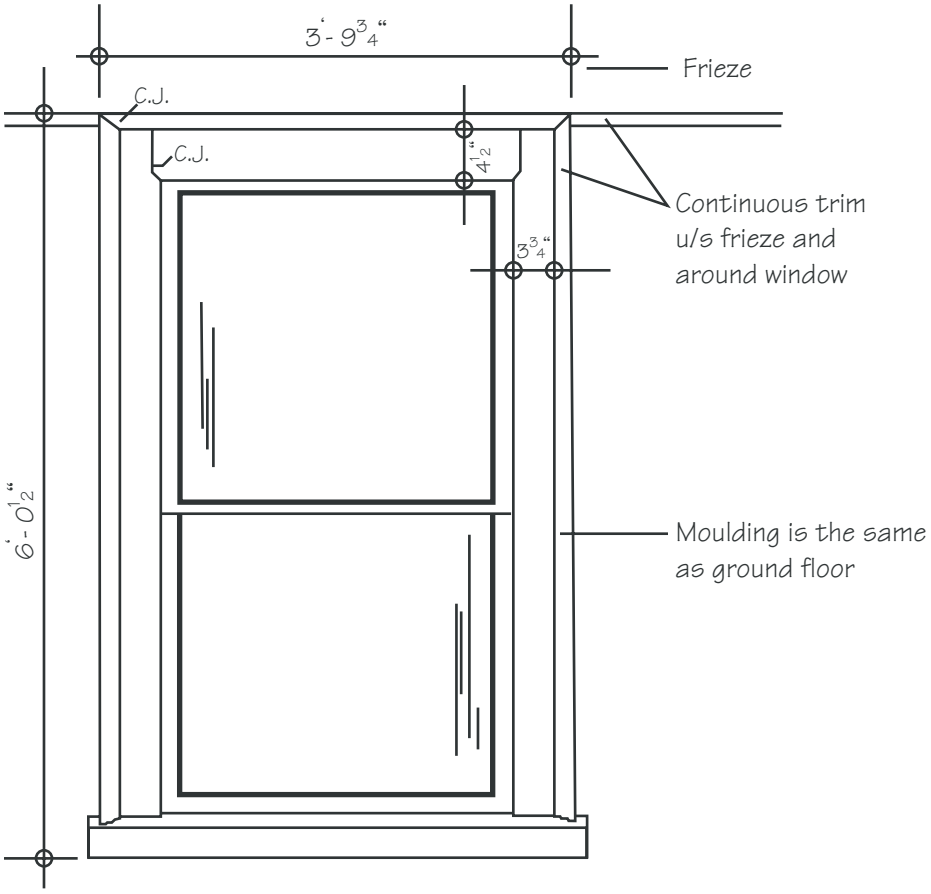
Section A-A1



Elevation

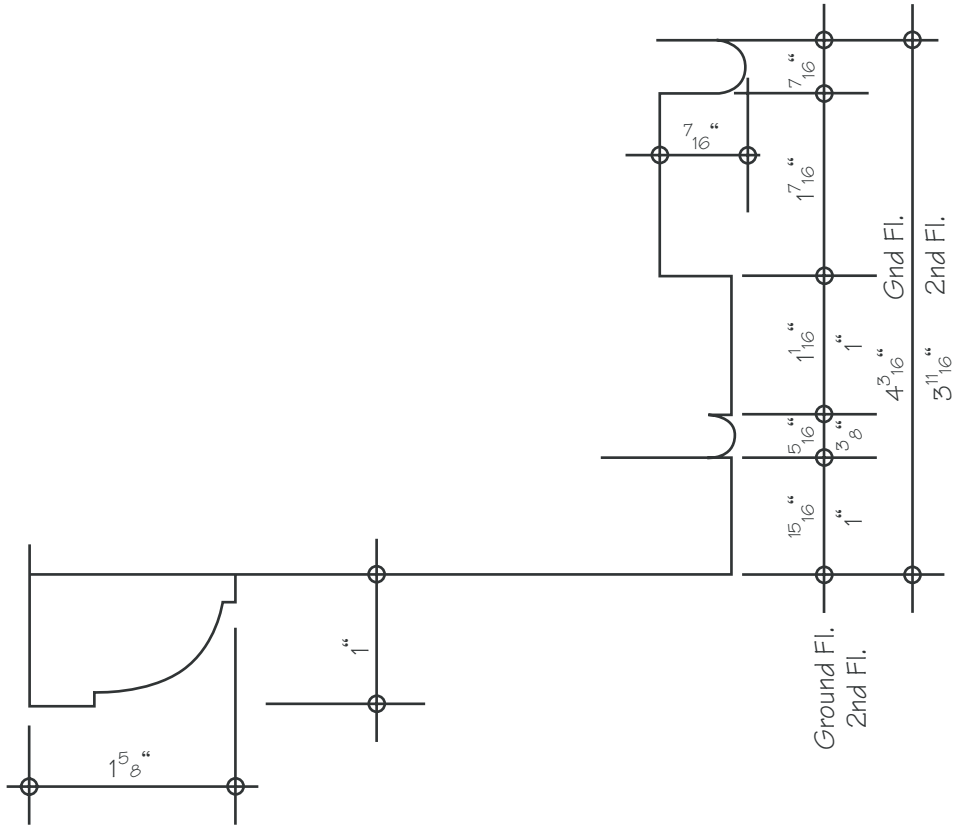
Profile

Ground Floor Window

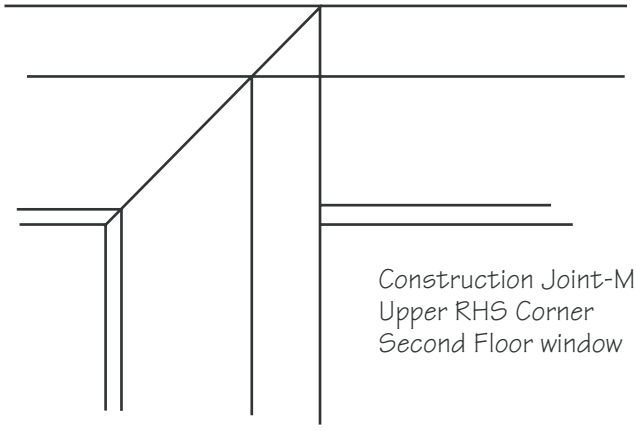


Elevation

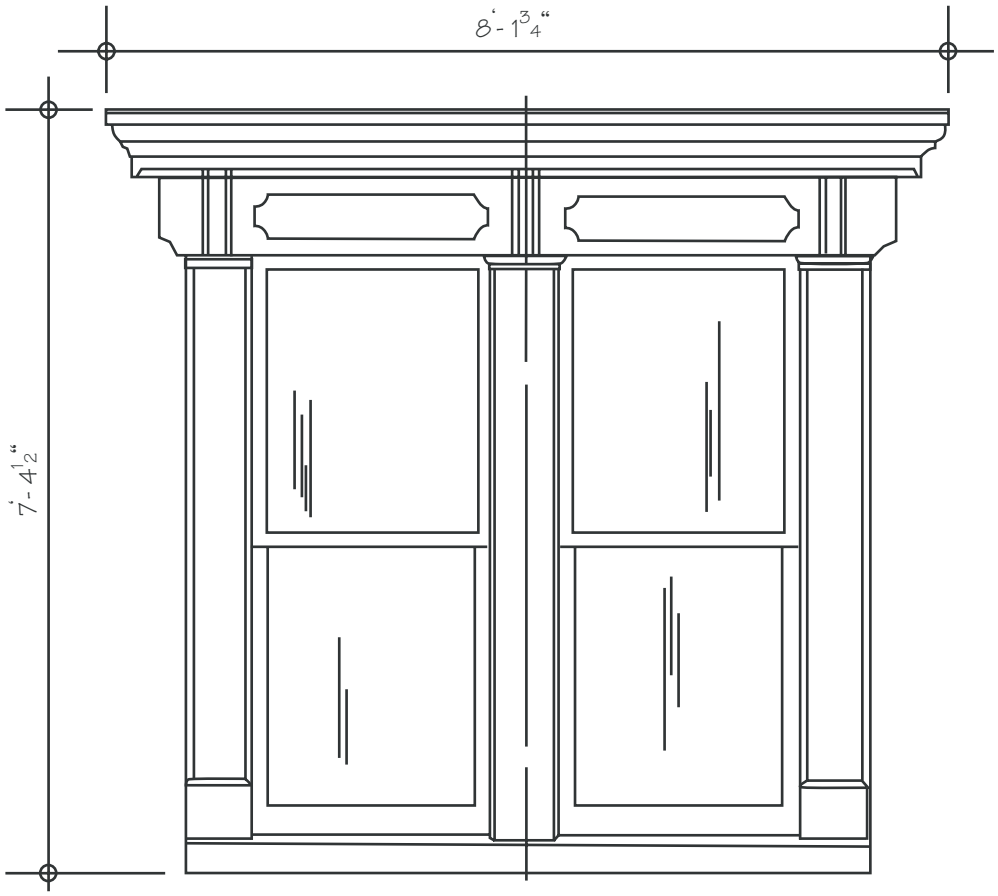
Second Floor Window

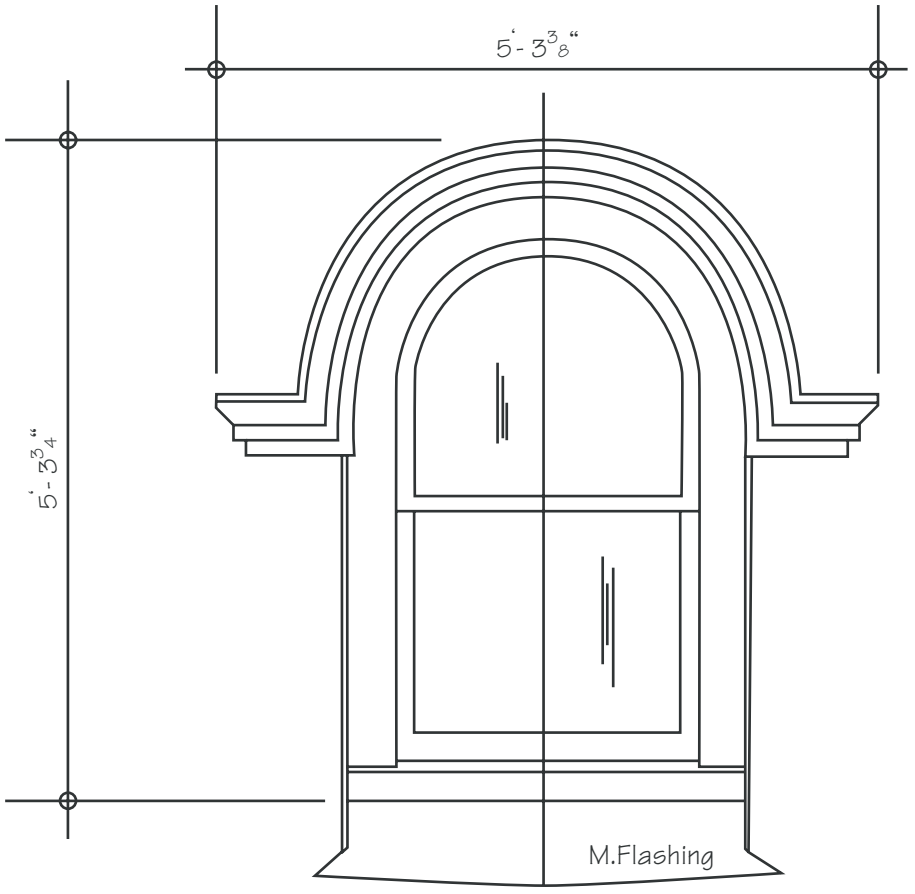


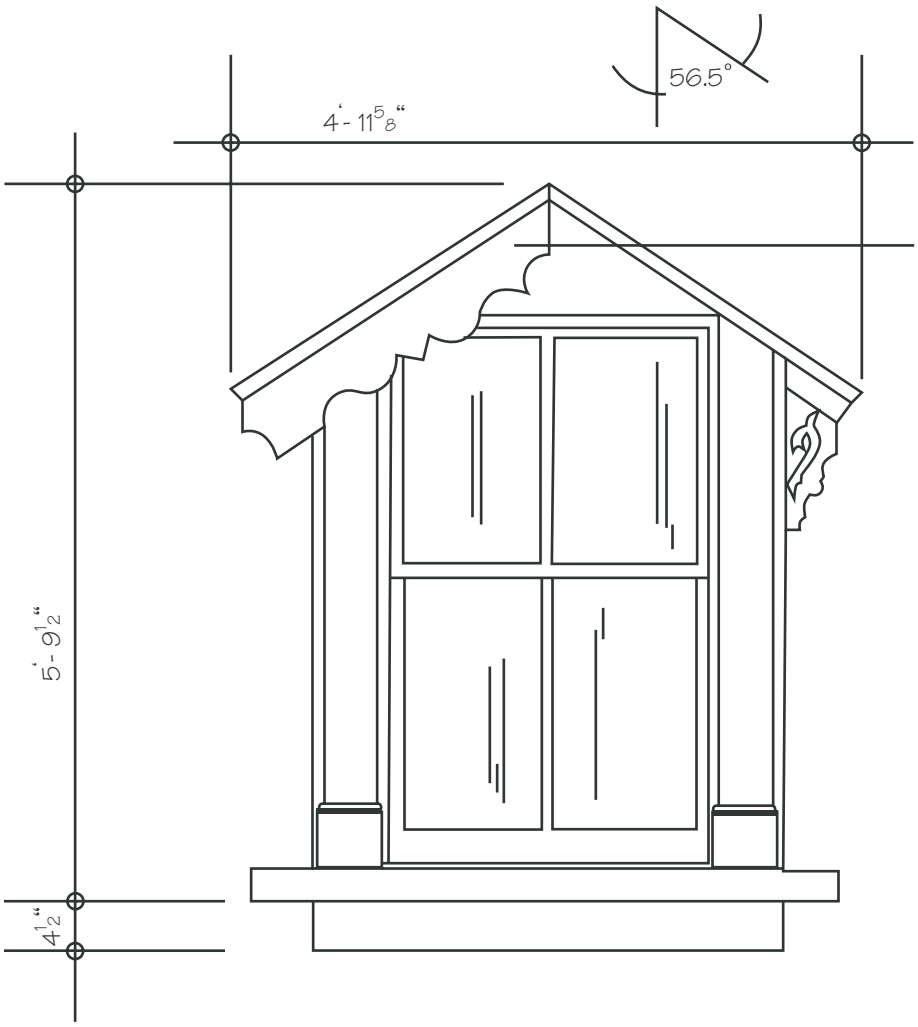
Jamb Profile-Ground Floor

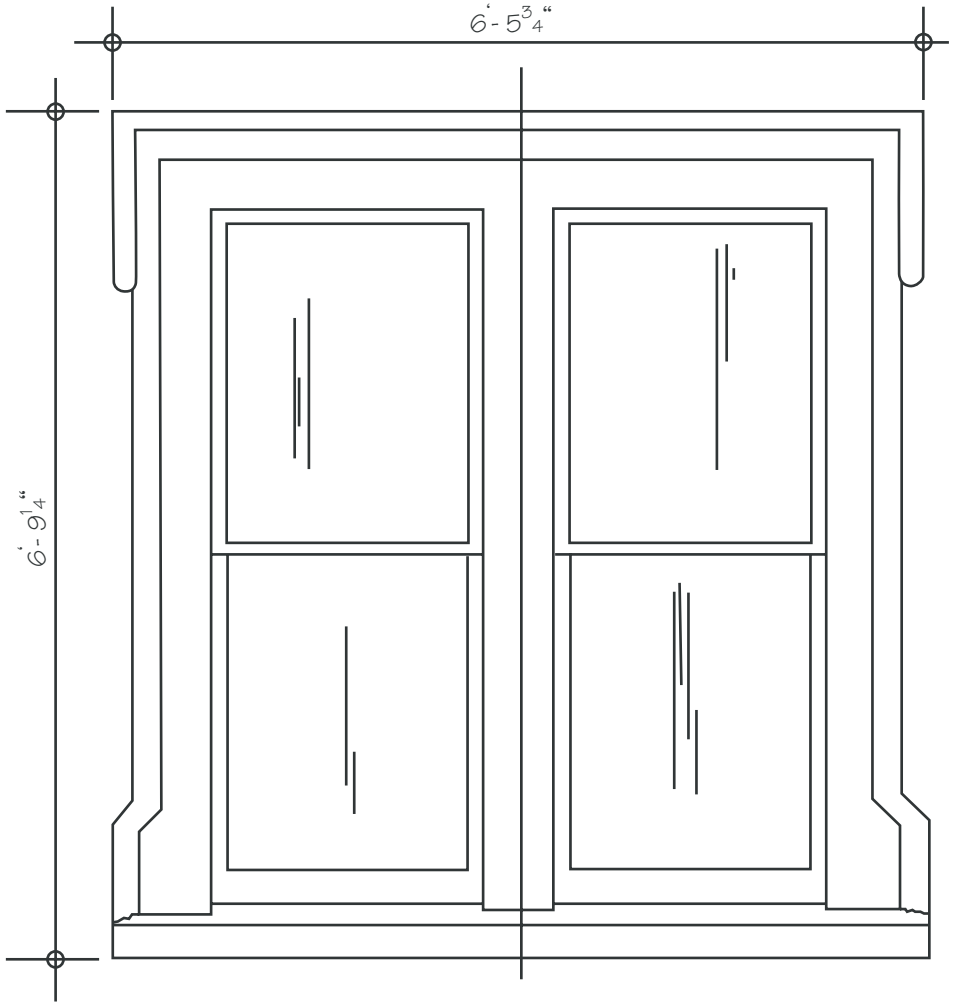


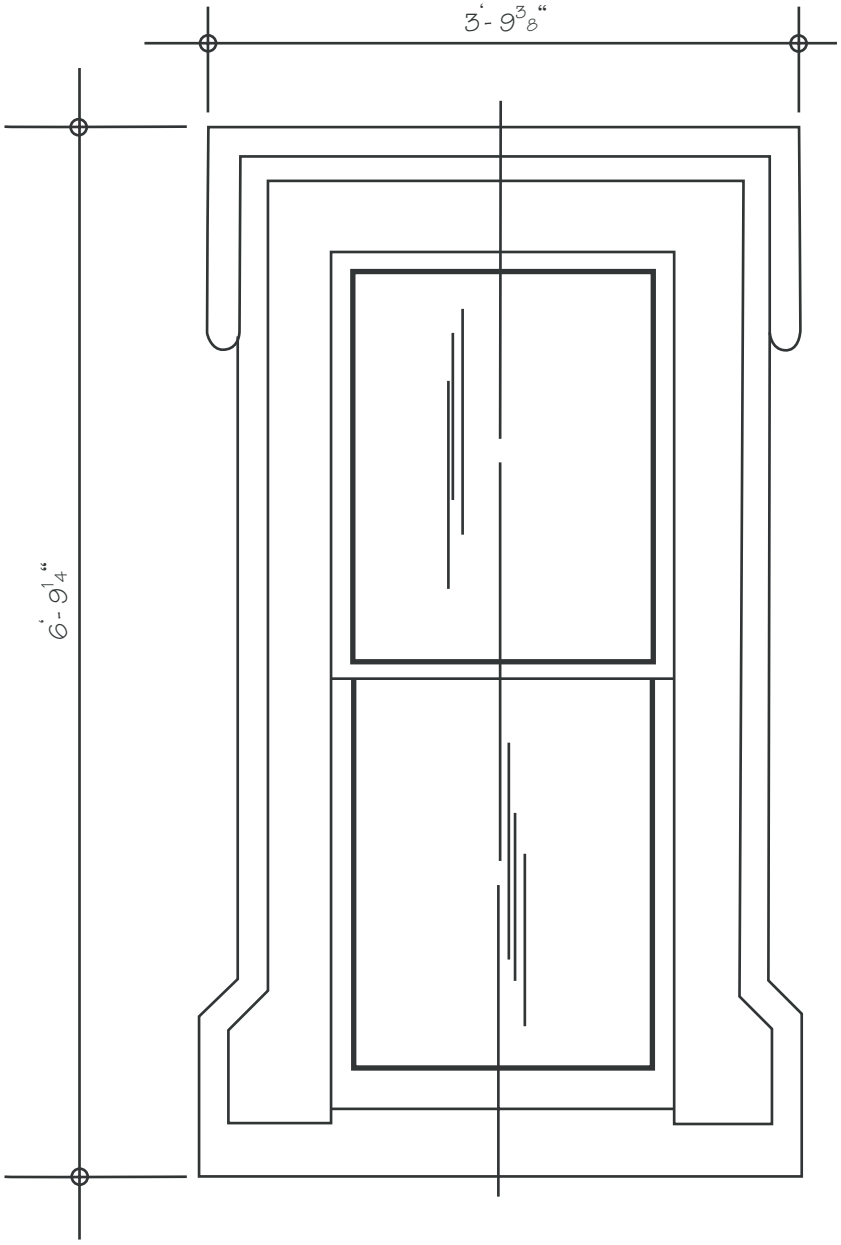
Construction Joint-Moulding
Upper RHS Corner
Second Floor window


8' - 1 3/4"
7' - 4 1/2"


5‘- 3 3/8“
5‘- 3 3/4“
M.Flashing


56.5°
4' - 11 5/8"
5' - 9 1/2"
4 1/2"


6'-5 3/4"
6'-9 1/4"


3' - 9 3/8"
6' - 9 1/4"