Staff Report for Item 9

To:	Chairman Bryan Green and Historic Architectural Review Commission Members
From:	Kelly Perkins, MHP HARC Assistant Planner
Meeting Date:	October 25, 2016
Applicant:	H.E. Goodley, Contractor
Application Number:	16-3452
Address:	#516 Bahama Street

Description of Work:

Replacement of historic windows with new wood windows.

Site Facts:

The structure at 516 Bahama Street is listed as a contributing resource, constructed in 1908 according to the survey. The one and a half story frame vernacular structure first appears on the 1912 Sanborn maps. The building has many historic windows including five original windows on the right side of the structure, which are being proposed to be replaced. The windows need repairs, but do not appear to be in such poor condition that they cannot be restored.

Guidelines Cited in Review:

Secretary of the Interior's Standards for Rehabilitation (pages 16-17), specifically Standards 2, 5, and 6.

Secretary of the Interior's Guidelines for Rehabilitation, Windows section.

Windows (Pages 29-30), specifically guidelines 1 and 2.

Preservation Brief 9: The Repair of Historic Wooden Windows
https://www.nps.gov/tps/how-to-preserve/briefs/9-wooden-windows.htm

Staff Analysis

This Certificate of Appropriateness proposes the removal of original windows, important historic fabric to this contributing structure. The windows have thin muntins and cylinder glass, typical for 19th century and early 20th century residential properties in Key West. This form of glass making shows important craftsmanship that cannot be recreated. In addition, the wood used in the windows would be historic Dade County pine, which is irreplaceable.

The windows need repairs, reglazing, and repainting, but those are standard repairs with historic windows. The applicant has noted that many of the window sills are rotted, which is not surprising, as the lower portion of the window is the most susceptible to water infiltration. The replacement of the window sill has no impact on the window itself. Once the windows have been removed, the wood dried, and the glazing removed, the muntins can really be evaluated for their soundness.

While the applicant has claimed that many of the windows have new glass, staff has a differing opinion, concluding that window #1 has at least 4 original window panes, window #3 has all 12 original panes of glass, window #5 has 11 original windows panes. It is not surprising that a window over one hundred years old will have had some glass pane replacement.

Any rot that is found can be removed and filled in with epoxy; patch and repairs are normal for historic windows. If certain parts of the window are too far gone, such as the bottom sash, they can be replaced without needing to replace the entire window.

Consistency with Guidelines

1. Our guidelines state, "Original windows should be repaired by patching, stripping, reinforcing or rebuilding to prevent replacement of historic windows whenever possible." They also state that "Historic window features including frames, sashes, thin muntins, glazing, sills, jambs, and moldings should be preserved."
2. The Secretary of the Interior's Standards for Rehabilitation state, "The historic character of a property should be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided." Standard 5 states, "Distinctive features, finishes and construction techniques that characterize a historic property shall be preserved." Standard 6 states, "Deteriorated historic features shall be repaired rather than be replaced."
3. The Secretary of the Interior's Guidelines for Rehabilitating Historic Buildings say that it is recommended to identify, retain, and preserve "windows – and their functional decorative features – that are important in defining the overall historic character of the building." These original windows are important in defining the overall historic character of the building. It is not recommended to replace "an entire window when repair of materials and limited replacement of deteriorated or missing parts are appropriate." The applicant has provided evidence that the parts of the windows are deteriorated and will need repair and limited replacement. The guidelines also state, "Replacing a window solely because of peeling paint, broken glass, stuck sash, and high air infiltration" is not

recommended. “These conditions, in themselves, are no indication that windows are beyond repair.”

4. Preservation Brief 9: The Repair of Historic Wooden Windows offers advice on the repairing and evaluation of historic windows, stating that it recommends “the retention and repair of original windows whenever possible…Wooden windows which are repaired and properly maintained will have greatly extended service lives while contributing to the historic character of the building. Thus, an important element of a building’s significance will have been preserved for the future.” The brief also states that, “Even badly damaged windows can be repaired.” The brief gives three different class of repairs: routine maintenance, stabilization, and splices and parts replacement. These windows will probably need a combination of all three of these categories.
5. The applicant has provided a letter stating that the windows need to be replaced due to the cost of repairs, time to repair each window, ease of repairs, and look. Preservation is not always the cheapest, fastest, and easiest solution, and owners of historic buildings are stewards, charged with preserving this history that is important to our educational, cultural, and economic welfare. In addition, this property is a hotel located in a city with one of the highest daily room rates with highest occupancy in the state. In this case, all should be done to repair the 100+ year old windows.

It is staff’s opinion that proposed replacement of historic windows is inconsistent with the guidelines, the Secretary’s Standards for Rehabilitation, the Secretary of the Interior’s Guidelines for Rehabilitating Historic Buildings, and Preservation Brief 9. The proposed project will negatively affect the character of the building and will lead to a significant loss of historic material. The applicant should try to repair the windows, and if during the process to repair the windows, it becomes apparent the windows are not salvageable, the applicant should contact staff about replacement.

Windows

A highly decorative window with an unusual shape, or glazing pattern, or color is most likely identified immediately as character-defining feature of the building. It is far more difficult, however, to assess the importance of repeated windows on a facade, particularly if they are individually simple in design and material, such as the large, multi-paned sash of many industrial buildings. Because rehabilitation projects frequently include proposals to replace window sash or even entire windows to improve thermal efficiency or to create a new appearance, it is essential that their contribution to the overall historic character of the building be assessed together with their physical condition before specific repair or replacement work is undertaken.

Recommended	*Not Recommended*
Identifying, retaining, and preserving windows—and their functional and decorative features—that are important in defining the overall historic character of the building. Such features can include frames, sash, muntins, glazing, sills, heads, hoodmolds, panelled or decorated jambs and moldings, and interior and exterior shutters and blinds.	Removing or radically changing windows which are important in defining the overall historic character of the building so that, as a result, the character is diminished.
	Changing the number, location, size or glazing pattern of windows, through cutting new openings, blocking-in windows, and installing replacement sash which does not fit the historic window opening.
	Changing the historic appearance of windows through the use of inappropriate designs, materials, finishes, or colors which radically change the sash, depth of reveal, and muntin configuration; the reflectivity and color of the glazing; or the appearance of the frame.
	Obscuring historic window trim with metal or other material.
	Stripping windows of historic material such as wood, iron, cast iron, and bronze.
Protecting and maintaining the wood and architectural metal which comprise the window frame, sash, muntins, and surrounds through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and re-application of protective coating systems.	Failing to provide adequate protection of materials on a cyclical basis so that deterioration of the windows results.
Making windows weathertight by recaulking and replacing or installing weatherstripping. These actions also improve thermal efficiency.	Retrofitting or replacing windows rather than maintaining the sash, frame, and glazing.
Evaluating the overall condition of materials to determine whether more than protection and maintenance are required, i.e., if repairs to windows and window features will be required.	Failing to undertake adequate measures to assure the preservation of historic windows.
Repairing window frames and sash by patching, splicing, consolidating or otherwise reinforcing. Such repair may also include replacement in kind of those parts that are either extensively deteriorated or are missing when there are surviving prototypes such as architraves, hoodmolds, sash, sills, and interior or exterior shutters and blinds.	Replacing an entire window when repair of materials and limited replacement of deteriorated or missing parts are appropriate.
	Failing to reuse serviceable window hardware such as brass lifts and sash locks.
	Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the window or that is physically or chemically incompatible.

Replacing in kind an entire window that is too deteriorated to repair—if the overall form and detailing are still evident—using the physical evidence to guide the new work. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Removing a character-defining window that is unrepairable and blocking it in; or replacing it with a new window that does not convey the same visual appearance.

The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be considered after the preservation concerns listed above have been addressed.

Recommended

Not Recommended

Design for Missing Historic Features

Designing and installing new windows when the historic windows (frame, sash and glazing) are completely missing. The replacement windows may be an accurate restoration using historical, pictorial, and physical documentation; or be a new design that is compatible with the window openings and the historic character of the building.

Creating a false historical appearance because the replaced window is based on insufficient historical, pictorial, and physical documentation.

Introducing a new design that is incompatible with the historic character of the building.

Alterations/Additions for the New Use

Designing and installing additional windows on rear on other-non character-defining elevations if required by the new use. New windows openings may also be cut into exposed party walls. Such design should be compatible with the overall design of the building, but not duplicate the fenestration pattern and detailing of a character-defining elevation.

Installing new windows, including frames, sash, and muntin configuration that are incompatible with the building's historic appearance or obscure, damage, or destroy character-defining features.

Providing a setback in the design of dropped ceilings when they are required for the new use to allow for the full height of the window openings.

Inserting new floors or furred-down ceilings which cut across the glazed areas of windows so that the exterior form and appearance of the windows are changed.

U.S. Department of the Interior
National Park Service
Cultural Resources
Heritage Preservation Services

Preservation Briefs: 9
The Repair of Historic Wooden Windows

John H. Myers

The windows on many historic buildings are an important aspect of the architectural character of those buildings. Their design, craftsmanship, or other qualities may make them worthy of preservation. This is self-evident for ornamental windows, but it can be equally true for warehouses or factories where the windows may be the most dominant visual element of an otherwise plain building (see figure 1). Evaluating the significance of these windows and planning for their repair or replacement can be a complex process involving both objective and subjective considerations. The *Secretary of the Interior's Standards for Rehabilitation*, and the accompanying guidelines, call for respecting the significance of original materials and features, repairing and retaining them wherever possible, and when necessary, replacing them in kind. This **Brief** is based on the issues of significance and repair which are implicit in the standards, but the primary emphasis is on the technical issues of planning for the repair of windows including evaluation of their physical condition, techniques of repair, and design considerations when replacement is necessary.

Figure 1. *Windows are frequently important visual focal points, especially on simple facades such as this mill building. Replacement of the multi-pane windows here with larger panes could dramatically change the appearance of the building. The areas of missing windows convey the impression of such a change. Photo: John T. Lowe*

Much of the technical section presents repair techniques as an instructional guide for the do-it-yourselfer. The information will be useful, however, for the architect, contractor, or developer on large-scale projects. It presents a methodology for approaching the evaluation and repair of existing windows, and considerations for replacement, from which the professional can develop alternatives and specify appropriate materials and procedures.

Architectural or Historical Significance

Evaluating the architectural or historical significance of windows is the first step in planning for window treatments, and a general understanding of the function and history of windows is vital to making a proper evaluation. As a part of this evaluation, one must consider four basic window functions: admitting light to the interior spaces, providing fresh air and ventilation to the interior, providing a visual link to the outside world, and enhancing the appearance of a building. No single factor can be disregarded when planning window treatments; for example, attempting to conserve energy by closing up or reducing the size of window openings may result in the use of *more* energy by increasing electric lighting loads and decreasing passive solar heat gains.

Historically, the first windows in early American houses were casement windows; that is, they were hinged at the side and opened outward. In the beginning of the eighteenth century single- and double-hung windows were introduced. Subsequently many styles of these vertical sliding sash windows have come to be associated with specific building periods or architectural styles, and this is an important consideration in determining the significance of windows, especially on a local or regional basis. Site-specific, regionally oriented architectural comparisons should be made to determine the significance of windows in question. Although such comparisons may focus on specific window types and their details, the ultimate determination of significance should be made within the context of the whole building, wherein the windows are one architectural element (see figure 2).

After all of the factors have been evaluated, *windows should be considered significant to a building if they:* 1) are original, 2) reflect the original design intent for the building, 3) reflect period or regional styles or building practices, 4) reflect changes to the building resulting from major periods or events, or 5) are examples of exceptional craftsmanship or design. Once this evaluation of significance has been completed, it is possible to pro-

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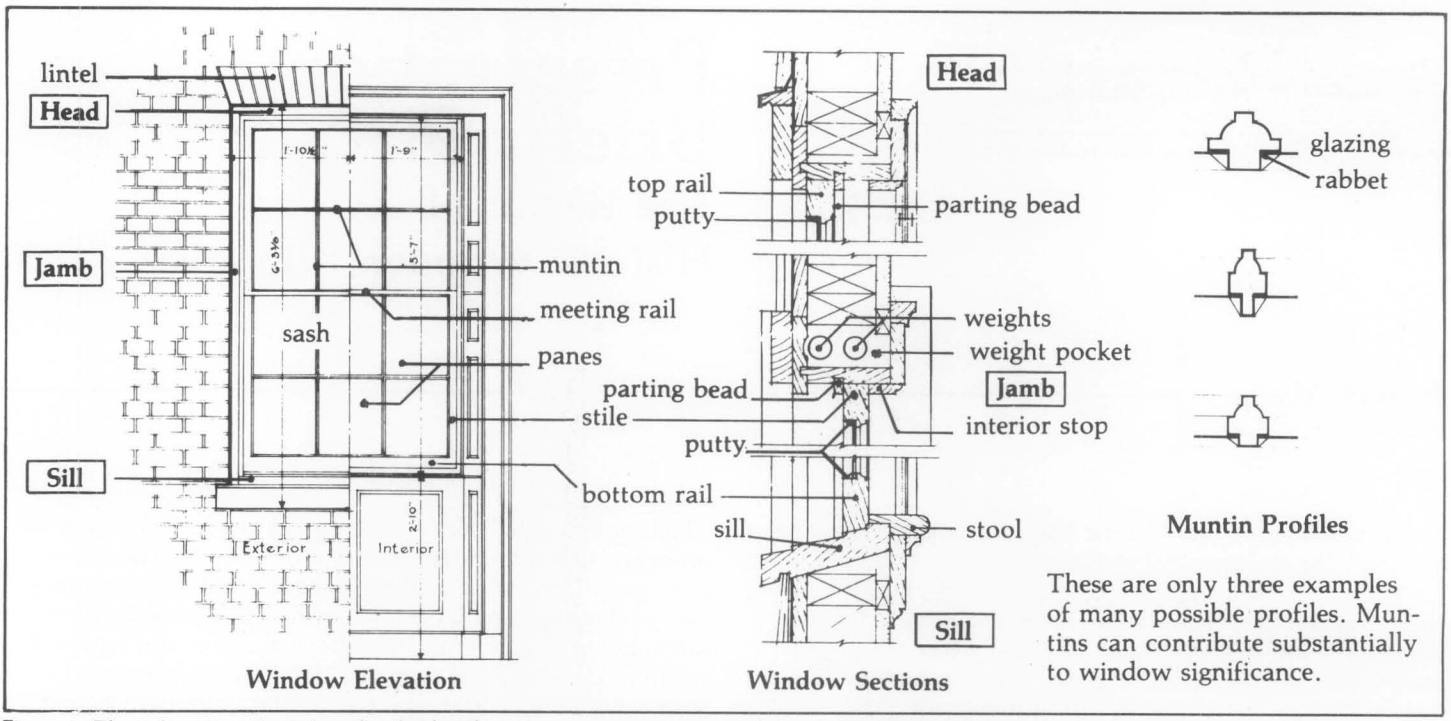


Figure 2. *These drawings of window details identify major components, terminology, and installation details for a wooden double-hung window.*

ceed with planning appropriate treatments, beginning with an investigation of the physical condition of the windows.

Physical Evaluation

The key to successful planning for window treatments is a careful evaluation of existing physical conditions on a unit-by-unit basis. A graphic or photographic system may be devised to record existing conditions and illustrate the scope of any necessary repairs. Another effective tool is a window schedule which lists all of the parts of each window unit. Spaces by each part allow notes on existing conditions and repair instructions. When such a schedule is completed, it indicates the precise tasks to be performed in the repair of each unit and becomes a part of the specifications. In any evaluation, one should note at a minimum, 1) window location, 2) condition of the paint, 3) condition of the frame and sill, 4) condition of the sash (rails, stiles and muntins), 5) glazing problems, 6) hardware, and 7) the overall condition of the window (excellent, fair, poor, and so forth).

Many factors such as poor design, moisture, vandalism, insect attack, and lack of maintenance can contribute to window deterioration, but moisture is the primary contributing factor in wooden window decay. All window units should be inspected to see if water is entering around the edges of the frame and, if so, the joints or seams should be caulked to eliminate this danger. The glazing putty should be checked for cracked, loose, or missing sections which allow water to saturate the wood, especially at the joints. The back putty on the interior side of the pane should also be inspected, because it creates a seal which prevents condensation from running down into the joinery. The sill should be examined to insure that it slopes downward away from the building and allows water to drain off. In addition, it may be advisable to cut a dripline along the underside of the sill. This almost invisible treatment will insure proper water run-off, particularly if the bottom of the sill is flat. Any conditions, including poor original design, which permit water to come in contact with the wood or to puddle on the sill must be corrected as they contribute to deterioration of the window.

One clue to the location of areas of excessive moisture is the condition of the paint; therefore, each window should be examined for areas of paint failure. Since excessive moisture is detrimental to the paint bond, areas of paint blistering, cracking, flaking, and peeling usually identify points of water penetration, moisture saturation, and potential deterioration. Failure of the paint should not, however, be mistakenly interpreted as a sign that the wood is in poor condition and hence, irreparable. Wood is frequently in sound physical condition beneath unsightly paint. After noting areas of paint failure, the next step is to inspect the condition of the wood, particularly at the points identified during the paint examination.

Each window should be examined for operational soundness beginning with the lower portions of the frame and sash. Exterior rainwater and interior condensation can flow downward along the window, entering and collecting at points where the flow is blocked. The sill, joints between the sill and jamb, corners of the bottom rails and muntin joints are typical points where water collects and deterioration begins (see figure 3). The operation of the window (continuous opening and closing over the years and seasonal temperature changes) weakens the joints, causing movement and slight separation. This process makes the joints more vulnerable to water which is readily absorbed into the end-grain of the wood. If severe deterioration exists in these areas, it will usually be apparent on visual inspection, but other less severely deteriorated areas of the wood may be tested by two traditional methods using a small ice pick.

An ice pick or an awl may be used to test wood for soundness. The technique is simply to jab the pick into a wetted wood surface at an angle and pry up a small sec-

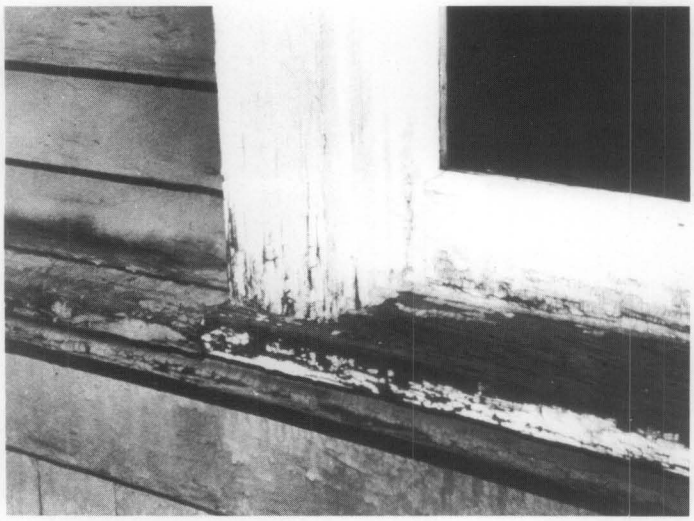


Figure 3. *Deterioration of poorly maintained windows usually begins on horizontal surfaces and at joints where water can collect and saturate the wood. The problem areas are clearly indicated by paint failure due to moisture. Photo: Baird M. Smith, AIA*

tion of the wood. Sound wood will separate in long fibrous splinters, but decayed wood will lift up in short irregular pieces due to the breakdown of fiber strength.

Another method of testing for soundness consists of pushing a sharp object into the wood, perpendicular to the surface. If deterioration has begun from the hidden side of a member and the core is badly decayed, the visible surface may appear to be sound wood. Pressure on the probe can force it through an apparently sound skin to penetrate deeply into decayed wood. This technique is especially useful for checking sills where visual access to the underside is restricted.

Following the inspection and analysis of the results, the scope of the necessary repairs will be evident and a plan for the rehabilitation can be formulated. Generally the actions necessary to return a window to "like new" condition will fall into three broad categories: 1) routine maintenance procedures, 2) structural stabilization, and 3) parts replacement. These categories will be discussed in the following sections and will be referred to respectively as Repair Class I, Repair Class II, and Repair Class III. Each successive repair class represents an increasing level of difficulty, expense, and work time. Note that most of the points mentioned in Repair Class I are routine maintenance items and should be provided in a regular maintenance program for any building. The neglect of these routine items can contribute to many common window problems.

Before undertaking any of the repairs mentioned in the following sections all sources of moisture penetration should be identified and eliminated, and all existing decay fungi destroyed in order to arrest the deterioration process. Many commercially available fungicides and wood preservatives are toxic, so it is extremely important to follow the manufacturer's recommendations for application, and store all chemical materials away from children and animals. After fungicidal and preservative treatment the windows may be stabilized, retained, and restored with every expectation for a long service life.

Repair Class I: Routine Maintenance

Repairs to wooden windows are usually labor intensive and relatively uncomplicated. On small scale projects this allows the do-it-yourselfer to save money by repairing all or part of the windows. On larger projects it presents the opportunity for time and money which might otherwise be spent on the removal and replacement of existing windows, to be spent on repairs, subsequently saving all or part of the material cost of new window units. Regardless of the actual costs, or who performs the work, the evaluation process described earlier will provide the knowledge from which to specify an appropriate work program, establish the work element priorities, and identify the level of skill needed by the labor force.

The routine maintenance required to upgrade a window to "like new" condition normally includes the following steps: 1) some degree of interior and exterior paint removal, 2) removal and repair of sash (including reglazing where necessary), 3) repairs to the frame, 4) weatherstripping and reinstallation of the sash, and 5) repainting. These operations are illustrated for a typical double-hung wooden window (see figures 4a-f), but they may be adapted to other window types and styles as applicable.

Historic windows have usually acquired many layers of paint over time. Removal of excess layers or peeling and flaking paint will facilitate operation of the window and restore the clarity of the original detailing. Some degree of paint removal is also necessary as a first step in the proper surface preparation for subsequent refinishing (if paint color analysis is desired, it should be conducted prior to the onset of the paint removal). There are several safe and effective techniques for removing paint from wood, depending on the amount of paint to be removed. Several techniques such as scraping, chemical stripping, and the use of a hot air gun are discussed in "Preservation Briefs: 10 Paint Removal from Historic Woodwork" (see Additional Reading section at end).

Paint removal should begin on the interior frames, being careful to remove the paint from the interior stop and the parting bead, particularly along the seam where these stops meet the jamb. This can be accomplished by running a utility knife along the length of the seam, breaking the paint bond. It will then be much easier to remove the stop, the parting bead and the sash. The interior stop may be initially loosened from the sash side to avoid visible scarring of the wood and then gradually pried loose using a pair of putty knives, working up and down the stop in small increments (see figure 4b). With the stop removed, the lower or interior sash may be withdrawn. The sash cords should be detached from the sides of the sash and their ends may be pinned with a nail or tied in a knot to prevent them from falling into the weight pocket.

Removal of the upper sash on double-hung units is similar but the parting bead which holds it in place is set into a groove in the center of the stile and is thinner and more delicate than the interior stop. After removing any paint along the seam, the parting bead should be carefully pried out and worked free in the same manner as the interior stop. The upper sash can be removed in the same manner as the lower one and both sash taken to a convenient work area (in order to remove the sash the interior stop and parting bead need only be removed from one side of the window). Window openings can be covered with polyethylene sheets or plywood sheathing while the sash are out for repair.

The sash can be stripped of paint using appropriate techniques, but if any heat treatment is used (see figure 4c), the glass should be removed or protected from the sudden temperature change which can cause breakage. An

Figure 4a. *The following series of photographs of the repair of a historic double-hung window use a unit which is structurally sound but has many layers of paint, some cracked and missing putty, slight separation at the joints, broken sash cords, and one cracked pane. Photo: John H. Myers*

Figure 4b. *After removing paint from the seam between the interior stop and the jamb, the stop can be pried out and gradually worked loose using a pair of putty knives as shown. To avoid visible scarring of the wood, the sash can be raised and the stop pried loose initially from the outer side. Photo: John H. Myers*

Figure 4c. *Sash can be removed and repaired in a convenient work area. Paint is being removed from this sash with a hot air gun while an asbestos sheet protects the glass from sudden temperature change. Photo: John H. Myers*

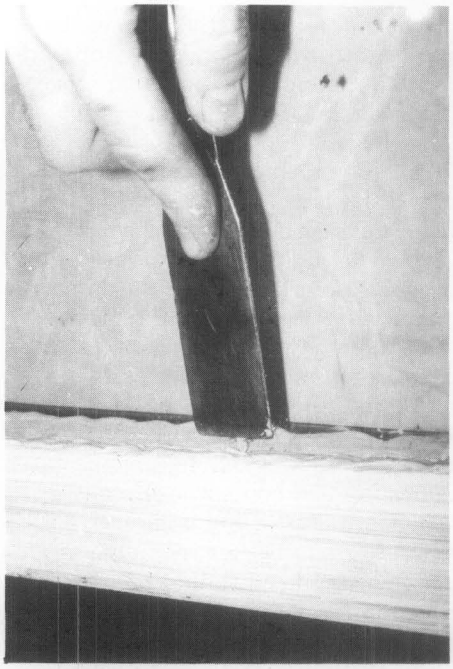


Figure 4d. *Reglazing or replacement of the putty requires that the existing putty be removed manually, the glazing points be extracted, the glass removed, and the back putty scraped out. To reglaze, a bed of putty is laid around the perimeter of the rabbet, the pane is pressed into place, glazing points are inserted to hold the pane (shown), and a final seal of putty is beveled around the edge of the glass. Photo: John H. Myers*

Figure 4e. *A common repair is the replacement of broken sash cords with new cords (shown) or with chains. The weight pocket is often accessible through a removable plate in the jamb, or by removing the interior trim. Photo: John H. Myers*

Figure 4f. *Following the relatively simple repairs, the window is weathertight, like new in appearance, and serviceable for many years to come. Both the historic material and the detailing and craftsmanship of this original window have been preserved. Photo: John H. Myers*

overlay of aluminum foil on gypsum board or asbestos can protect the glass from such rapid temperature change. It is important to protect the glass because it may be historic and often adds character to the window. Deteriorated putty should be removed manually, taking care not to damage the wood along the rabbet. If the glass is to be removed, the glazing points which hold the glass in place can be extracted and the panes numbered and removed for cleaning and reuse in the same openings. With the glass panes out, the remaining putty can be removed and the sash can be sanded, patched, and primed with a preservative primer. Hardened putty in the rabbets may be softened by heating with a soldering iron at the point of removal. Putty remaining on the glass may be softened by soaking the panes in linseed oil, and then removed with less risk of breaking the glass. Before reinstalling the glass, a bead of glazing compound or linseed oil putty should be laid around the rabbet to cushion and seal the glass. Glazing compound should only be used on wood which has been brushed with linseed oil and primed with an oil based primer or paint. The pane is then pressed into place and the glazing points are pushed into the wood around the perimeter of the pane (see figure 4d). The final glazing compound or putty is applied and beveled to complete the seal. The sash can be refinished as desired on the inside and painted on the outside as soon as a "skin" has formed on the putty, usually in 2 or 3 days. Exterior paint should cover the beveled glazing compound or putty and lap over onto the glass slightly to complete a weathertight seal. After the proper curing times have elapsed for paint and putty, the sash will be ready for reinstallation.

While the sash are out of the frame, the condition of the wood in the jamb and sill can be evaluated. Repair and refinishing of the frame may proceed concurrently with repairs to the sash, taking advantage of the curing times for the paints and putty used on the sash. One of the most common work items is the replacement of the sash cords with new rope cords or with chains (see figure 4e). The weight pocket is frequently accessible through a door on the face of the frame near the sill, but if no door exists, the trim on the interior face may be removed for access. Sash weights may be increased for easier window operation by elderly or handicapped persons. Additional repairs to the frame and sash may include consolidation or replacement of deteriorated wood. Techniques for these repairs are discussed in the following sections.

The operations just discussed summarize the efforts necessary to restore a window with minor deterioration to "like new" condition (see figure 4f). The techniques can be applied by an unskilled person with minimal training and experience. To demonstrate the practicality of this approach, and photograph it, a Technical Preservation Services staff member repaired a wooden double-hung, two over two window which had been in service over ninety years. The wood was structurally sound but the window had one broken pane, many layers of paint, broken sash cords and inadequate, worn-out weatherstripping. The staff member found that the frame could be stripped of paint and the sash removed quite easily. Paint, putty and glass removal required about one hour for each sash, and the reglazing of both sash was accomplished in about one hour. Weatherstripping of the sash and frame, replacement of the sash cords and reinstallation of the sash, parting bead, and stop required an hour and a half. These times refer only to individual operations; the entire process took several days due to the drying and curing times for putty, primer, and paint, however, work on other window units could have been in progress during these lag times.

Repair Class II: Stabilization

The preceding description of a window repair job focused on a unit which was operationally sound. Many windows will show some additional degree of physical deterioration, especially in the vulnerable areas mentioned earlier, but even badly damaged windows can be repaired using simple processes. Partially decayed wood can be waterproofed, patched, built-up, or consolidated and then painted to achieve a sound condition, good appearance, and greatly extended life. Three techniques for repairing partially decayed or weathered wood are discussed in this section, and all three can be accomplished using products available at most hardware stores.

One established technique for repairing wood which is split, checked or shows signs of rot, is to: 1) dry the wood, 2) treat decayed areas with a fungicide, 3) waterproof with two or three applications of boiled linseed oil (applications every 24 hours), 4) fill cracks and holes with putty, and 5) after a "skin" forms on the putty, paint the surface. Care should be taken with the use of fungicide which is toxic. Follow the manufacturers' directions and use only on areas which will be painted. When using any technique of building up or patching a flat surface, the finished surface should be sloped slightly to carry water away from the window and not allow it to puddle. Caulking of the joints between the sill and the jamb will help reduce further water penetration.

When sills or other members exhibit surface weathering they may also be built-up using wood putties or homemade mixtures such as sawdust and resorcinol glue, or whiting and varnish. These mixtures can be built up in successive layers, then sanded, primed, and painted. The same caution about proper slope for flat surfaces applies to this technique.

Wood may also be strengthened and stabilized by consolidation, using semi-rigid epoxies which saturate the porous decayed wood and then harden. The surface of the consolidated wood can then be filled with a semi-rigid epoxy patching compound, sanded and painted (see figure 5). Epoxy patching compounds can be used to build up

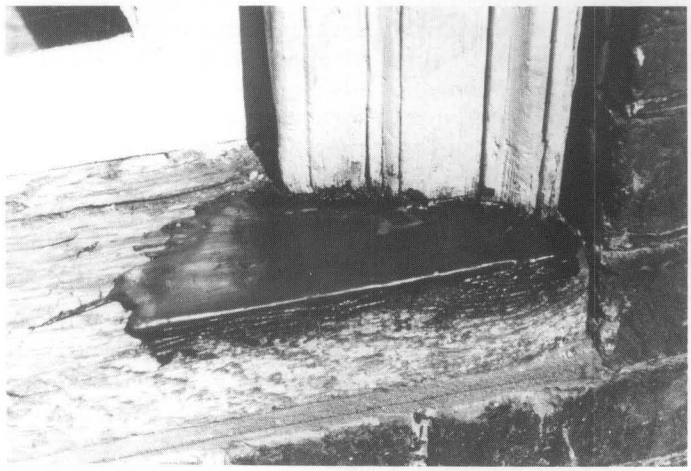


Figure 5. *This illustrates a two-part epoxy patching compound used to fill the surface of a weathered sill and rebuild the missing edge. When the epoxy cures, it can be sanded smooth and painted to achieve a durable and waterproof repair. Photo: John H. Myers*

missing sections or decayed ends of members. Profiles can be duplicated using hand molds, which are created by pressing a ball of patching compound over a sound section of the profile which has been rubbed with butcher's wax. This can be a very efficient technique where there are many typical repairs to be done. Technical Preservation Services has published *Epoxies for Wood Repairs in Historic Buildings* (see Additional Reading section at end), which discusses the theory and techniques of epoxy repairs. The process has been widely used and proven in marine applications; and proprietary products are available at hardware and marine supply stores. Although epoxy materials may be comparatively expensive, they hold the promise of being among the most durable and long lasting materials available for wood repair.

Any of the three techniques discussed can stabilize and restore the appearance of the window unit. There are times, however, when the degree of deterioration is so advanced that stabilization is impractical, and the only way to retain some of the original fabric is to replace damaged parts.

Repair Class III: Splices and Parts Replacement

When parts of the frame or sash are so badly deteriorated that they cannot be stabilized there are methods which permit the retention of some of the existing or original fabric. These methods involve replacing the deteriorated parts with new matching pieces, or splicing new wood into existing members. The techniques require more skill and are more expensive than any of the previously discussed alternatives. It is necessary to remove the sash and/or the affected parts of the frame and have a carpenter or woodworking mill reproduce the damaged or missing parts. Most millwork firms can duplicate parts, such as muntins, bottom rails, or sills, which can then be incorporated into the existing window, but it may be necessary to shop around because there are several factors controlling the practicality of this approach. Some woodworking mills do not like to repair old sash because nails or other foreign objects in the sash can damage expensive knives (which cost far more than their profits on small repair jobs); others do not have cutting knives to duplicate muntin profiles. Some firms prefer to concentrate on larger jobs with more profit potential, and some may not have a craftsman who can duplicate the parts. A little searching should locate a firm which will do the job, and at a reasonable price. If such a firm does not exist locally, there are firms which undertake this kind of repair and ship nationwide. It is possible, however, for the advanced do-it-yourselfer or craftsman with a table saw to duplicate moulding profiles using techniques discussed by Gordie Whittington in "Simplified Methods for Reproducing Wood Mouldings," *Bulletin* of the Association for Preservation Technology, Vol. III, No. 4, 1971, or illustrated more recently in *The Old House*, Time-Life Books, Alexandria, Virginia, 1979.

The repairs discussed in this section involve window frames which may be in very deteriorated condition, possibly requiring removal; therefore, caution is in order. The actual construction of wooden window frames and sash is not complicated. Pegged mortise and tenon units can be disassembled easily, *if* the units are out of the building. The installation or connection of some frames to the surrounding structure, especially masonry walls, can complicate the work immeasurably, and may even require dismantling of the wall. It may be useful, therefore, to take the following approach to frame repair: 1) conduct regular maintenance of sound frames to achieve the longest life possible, 2) make necessary repairs in place wherever possible, using stabilization and splicing techniques, and 3) if removal is necessary, thoroughly investigate the structural detailing and seek appropriate professional consultation.

Another alternative may be considered if parts replacement is required, and that is sash replacement. If extensive replacement of parts is necessary and the job becomes prohibitively expensive it may be more practical to purchase new sash which can be installed into the existing frames. Such sash are available as exact custom reproductions, reasonable facsimiles (custom windows with similar profiles), and contemporary wooden sash which are similar in appearance. There are companies which still manufacture high quality wooden sash which would duplicate most historic sash. A few calls to local building suppliers may provide a source of appropriate replacement sash, but if not, check with local historical associations, the state historic preservation office, or preservation related magazines and supply catalogs for information.

If a rehabilitation project has a large number of windows such as a commercial building or an industrial complex, there may be less of a problem arriving at a solution. Once the evaluation of the windows is completed and the scope of the work is known, there may be a potential economy of scale. Woodworking mills may be interested in the work from a large project; new sash in volume may be considerably less expensive per unit; crews can be assembled and trained on site to perform all of the window repairs; and a few extensive repairs can be absorbed (without undue burden) into the total budget for a large number of sound windows. While it may be expensive for the average historic home owner to pay seventy dollars or more for a mill to grind a custom knife to duplicate four or five bad muntins, that cost becomes negligible on large commercial projects which may have several hundred windows.

Most windows should not require the extensive repairs discussed in this section. The ones which do are usually in buildings which have been abandoned for long periods or have totally lacked maintenance for years. It is necessary to thoroughly investigate the alternatives for windows which do require extensive repairs to arrive at a solution which retains historic significance and is also economically feasible. Even for projects requiring repairs identified in this section, if the percentage of parts replacement per window is low, or the number of windows requiring repair is small, repair can still be a cost effective solution.

Weatherization

A window which is repaired should be made as energy efficient as possible by the use of appropriate weatherstripping to reduce air infiltration. A wide variety of products are available to assist in this task. Felt may be fastened to the top, bottom, and meeting rails, but may have the disadvantage of absorbing and holding moisture, particularly at the bottom rail. Rolled vinyl strips may also be tacked into place in appropriate locations to reduce infiltration. Metal strips or new plastic spring strips may be used on the rails and, if space permits, in

the channels between the sash and jamb. Weatherstripping is a historic treatment, but old weatherstripping (felt) is not likely to perform very satisfactorily. Appropriate contemporary weatherstripping should be considered an integral part of the repair process for windows. The use of sash locks installed on the meeting rail will insure that the sash are kept tightly closed so that the weatherstripping will function more effectively to reduce infiltration. Although such locks will not always be historically accurate, they will usually be viewed as an acceptable contemporary modification in the interest of improved thermal performance.

Many styles of storm windows are available to improve the thermal performance of existing windows. The use of exterior storm windows should be investigated whenever feasible because they are thermally efficient, cost-effective, reversible, and allow the retention of original windows (see "Preservation Briefs: 3"). Storm window frames may be made of wood, aluminum, vinyl, or plastic; however, the use of unfinished aluminum storms should be avoided. The visual impact of storms may be minimized by selecting colors which match existing trim color. Arched top storms are available for windows with special shapes. Although interior storm windows appear to offer an attractive option for achieving double glazing with minimal visual impact, the potential for damaging condensation problems must be addressed. Moisture which becomes trapped between the layers of glazing can condense on the colder, outer prime window, potentially leading to deterioration. The correct approach to using interior storms is to create a seal on the interior storm while allowing some ventilation around the prime window. In actual practice, the creation of such a durable, airtight seal is difficult.

Window Replacement

Although the retention of original or existing windows is always desirable and this **Brief** is intended to encourage that goal, there is a point when the condition of a window may clearly indicate replacement. The decision process for selecting replacement windows should *not* begin with a survey of contemporary window products which are available as replacements, but should begin with a look at the windows which are being replaced. Attempt to understand the contribution of the window(s) to the appearance of the facade including: 1) the pattern of the openings and their size; 2) proportions of the frame and sash; 3) configuration of window panes; 4) muntin profiles; 5) type of wood; 6) paint color; 7) characteristics of the glass; and 8) associated details such as arched tops, hoods, or other decorative elements. Develop an understanding of how the window reflects the period, style, or regional characteristics of the building, or represents technological development.

Armed with an awareness of the significance of the existing window, begin to search for a replacement which retains as much of the character of the historic window as possible. There are many sources of suitable new windows. Continue looking until an acceptable replacement can be found. Check building supply firms, local woodworking mills, carpenters, preservation oriented magazines, or catalogs or suppliers of old building materials, for product information. Local historical associations and state historic preservation offices may be good sources of information on products which have been used successfully in preservation projects.

Consider energy efficiency as one of the factors for replacements, but do not let it dominate the issue. Energy conservation is no excuse for the wholesale destruction of historic windows which can be made thermally efficient by historically and aesthetically acceptable means. In fact, a historic wooden window with a high quality storm window added should thermally outperform a new double-glazed metal window which does not have thermal breaks (insulation between the inner and outer frames intended to break the path of heat flow). This occurs because the wood has far better insulating value than the metal, and in addition many historic windows have high ratios of wood to glass, thus reducing the area of highest heat transfer. One measure of heat transfer is the U-value, the number of Btu's per hour transferred through a square foot of material. When comparing thermal performance, the lower the U-value the better the performance. According to *ASHRAE 1977 Fundamentals*, the U-values for single glazed wooden windows range from 0.88 to 0.99. The addition of a storm window should reduce these figures to a range of 0.44 to 0.49. A non-thermal break, double-glazed metal window has a U-value of about 0.6.

Conclusion

Technical Preservation Services recommends the retention and repair of original windows whenever possible. We believe that the repair and weatherization of existing wooden windows is more practical than most people realize, and that many windows are unfortunately replaced because of a lack of awareness of techniques for evaluation, repair, and weatherization. Wooden windows which are repaired and properly maintained will have greatly extended service lives while contributing to the historic character of the building. Thus, an important element of a building's significance will have been preserved for the future.

Additional Reading

ASHRAE Handbook-1977 Fundamentals. New York: American Society of Heating, Refrigerating and Air-conditioning Engineers, 1978 (chapter 26).

Ferro, Maximillian. *Preservation: Present Pathway to Fall River's Future.* Fall River, Massachusetts: City of Fall River, 1979 (chapter 7).

"Fixing Double-Hung Windows." *Old House Journal* (no. 12, 1979): 135.

Look, David W. "Preservation Briefs: 10 Paint Removal from Historic Woodwork." Washington, DC: Technical Preservation Services, U.S. Department of the Interior, forthcoming.

Morrison, Hugh. *Early American Architecture.* New York: Oxford University Press, 1952.

Phillips, Morgan, and Selwyn, Judith. *Epoxies for Wood Repairs in Historic Buildings.* Washington, DC: Technical Preservation Services, U.S. Department of the Interior (Government Printing Office, Stock No. 024-016-00095-1), 1978.

Rehab Right. Oakland, California: City of Oakland Planning Department, 1978 (pp. 78-83).

"Sealing Leaky Windows." *Old House Journal* (no. 1, 1973): 5.

Smith, Baird M. "Preservation Briefs: 3 Conserving Energy in Historic Buildings." Washington, DC: Technical Preservation Services, U.S. Department of the Interior, 1978.

1981

Kelly Perkins

From: Kelly Perkins
Sent: Friday, September 02, 2016 10:06 AM
To: 'H E Goodley'
Subject: RE: HARC Application for 516 Bahama Street

Hi Bud,

Yes, if windows have the really thin muntins and have wavy glass panes, those are very old windows. They're actually very valuable, because you cannot make those today.

I don't know about changes to the windows of this building in the past.

I cannot deny an application, so you can put this application in front of the next HARC Commission, which will be the September 27th meeting. Or you can revise the application to something that I can staff approve.

Kelly Perkins, HARC Assistant Planner
Planning Department, City of Key West
3140 Flagler Avenue
Key West, Florida 33040-4602
P: 305.809.3975 | E: kperkins@cityofkeywest-fl.gov

From: H E Goodley [mailto:hegoodleyinc@bellsouth.net]
Sent: Thursday, September 01, 2016 5:33 PM
To: Kelly Perkins <kperkins@cityofkeywest-fl.gov>
Subject: Re: HARC Application for 516 Bahama Street

Kelly, The Windows I've Ordered from Island Door and window, are Lincoln windows, and I was under the impression, were all approved by HARC. since there on the same side of the building as the sixth window on that side, which was a new window, I assumed it had been approved by you. I had no Idea that some windows in the same building are historical and others aren't. What do I do now? Regards, Bud

On 9/1/2016 2:29 PM, Kelly Perkins wrote:

> Good Afternoon Bud,
>
> I have reviewed your application to replace five windows. I need to know exactly which windows. I went to the site, and the building has a lot of historic windows, which I cannot staff approve the removal of. That would need to go to the HARC Commission, because the windows look repairable. I created a window site plan, so if you could specific which windows you are proposing to remove.
>
> Here is the link to the Preservation Brief on how to restore/repair historic wood windows: https://www.nps.gov/tps/how-to-preserve/briefs/9-wooden-windows.htm
>
> Please let me know if you have any questions.
>
> Thank you,

Kelly Perkins, HARC Assistant Planner
Planning Department, City of Key West
3140 Flagler Avenue
Key West, Florida 33040-4602
P: 305.809.3975 | E: kperkins@cityofkeywest-fl.gov

APPLICATION

Bldg - NOC TO FOLLOW

COMBINATION APPLICATION: FLOODPLAIN, CONSTRUCTION AND HARC

$50.00 APPLICATION FEE NON-REFUNDABLE

City of Key West
3140 FLAGLER AVENUE
KEY WEST, FLORIDA 33040
Phone: 305.809.3956

HARC PERMIT NUMBER		BUILDING PERMIT NUMBER	INITIAL & DATE
		16-3452	8/24/16
FLOODPLAIN PERMIT			REVISION #
FLOOD ZONE	PANEL #	ELEV. L. FL.	SUBSTANTIAL IMPROVEMENT ___ YES ___ NO ___ %

ADDRESS OF PROPOSED PROJECT:	516 BAHAMA, KEY WEST		# OF UNITS 1
RE # OR ALTERNATE KEY:	1010014		
NAME ON DEED:	TANDA LLC c/o ALAN VAN WIEREN	PHONE NUMBER	
OWNER'S MAILING ADDRESS:	PO BOX 217	EMAIL	
	SAUGATUCK, MI 49453-0217		
CONTRACTOR COMPANY NAME:	H.E Goodley Inc	PHONE NUMBER 305-797-0559	
CONTRACTOR'S CONTACT PERSON:	Bud Goodley	EMAIL hegoodleyinc@bellsouth.net	
ARCHITECT / ENGINEER'S NAME:	N/A	PHONE NUMBER	
ARCHITECT / ENGINEER'S ADDRESS:	N/A	EMAIL	

30756/10889 ok

HARC: PROJECT LOCATED IN HISTORIC DISTRICT OR IS CONTRIBUTING: ✓ YES ___ NO (SEE PART C FOR HARC APPLICATION.)

CONTRACT PRICE FOR PROJECT OR ESTIMATED TOTAL FOR MAT'L., LABOR & PROFIT: $17,090.00

FLORIDA STATUTE 837.06: WHOEVER KNOWINGLY MAKES A FALSE STATEMENT IN WRITING AND WITH THE INTENT TO MISLEAD A PUBLIC SERVANT IN THE PERFORMANCE OF HIS OR HER OFFICIAL DUTY SHALL BE GUILTY OF A MISDEMEANOR OF THE SECOND DEGREE PUNISHABLE PER SECTION 775.082 OR 775.083.

PROJECT TYPE: ✓ ONE OR TWO FAMILY ___ MULTI-FAMILY ___ COMMERCIAL ___ NEW ✓ REMODEL
___ CHANGE OF USE / OCCUPANCY ___ ADDITION ___ SIGNAGE ___ WITHIN FLOOD ZONE ______
___ DEMOLITION ___ SITE WORK ___ INTERIOR ✓ EXTERIOR ___ AFTER-THE-FACT

DETAILED PROJECT DESCRIPTION INCLUDING QUANTITIES, SQUARE FOOTAGE ETC., REPLACE FIVE WOOD WINDOWS WITH NEW LINCOLN WINDOWS TO MATCH EXISTING, NEW CASINGS TO MATCH EXISTING, REBUILD 7 DETERIORATED SHUTTERS & PAINT TO MATCH EXISTING, REPLACE 8' FENCE SLATS AT REAR PORCH.

I'VE OBTAINED ALL NECESSARY APPROVALS FROM ASSOCIATIONS, GOV'T AGENCIES AND OTHER PARTIES AS APPLICABLE TO COMPLETE THE DESCRIBED PROJECT:

OWNER PRINT NAME:	QUALIFIER PRINT NAME: H.E. Goodley
OWNER SIGNATURE:	QUALIFIER SIGNATURE:
Notary Signature as to owner:	Notary Signature as to qualifier:
STATE OF FLORIDA; COUNTY OF MONROE, SWORN TO AND SCRIBED BEFORE ME THIS ___ DAY OF ______, 20___.	STATE OF FLORIDA; COUNTY OF MONROE, SWORN TO AND SCRIBED BEFORE ME THIS 24 DAY OF August, 2016.
	JILL E BROWNLOW MY COMMISSION # FF952134 EXPIRES January 20, 2020 (407) 398-0153 FloridaNotaryService.com
Personally known or produced ______ as identification.	Personally known or produced ______ as identification.

Oper: KEYWBLD Type: BP Drawer: 1
Date: 8/25/16 50 Receipt no: 27680
2016 3452
BP BUILDING PERMIT-NEW 1.00 $100.00
Trans number: 3090842
CK CHECK 6882 $100.00
Trans date: 8/25/16 Time: 13:44:28

PART B: SUPPLEMENTARY PROJECT DETAILS TO AVOID DELAYS / CALL-BACKS

PROPERTY STRUCTURES AFFECTED BY PROJECT: ✓ MAIN STRUCTURE ___ ACCESSORY STRUCTURE ___ SITE

ACCESSORY STRUCTURES: ___ GARAGE / CARPORT ___ DECK ___ FENCE ___ OUTBUILDING / SHED

FENCE STRUCTURES: ___ 4 FT. ___ 6 FT. SOLID ___ 6 FT. / TOP 2 FT. 50% OPEN

POOLS: ___ INGROUND ___ ABOVE GROUND ___ SPA / HOT TUB ___ PRIVATE ___ PUBLIC

PUBLIC POOLS REQUIRE BD. OF HEALTH LICENSE APPLICATION AT TIME OF CITY APPLICATION.

PUBLIC POOLS REQUIRE BD. OF HEALTH LICENSE PRIOR TO RECEIVING THE CITY CERTIFICATE OF OCCUPANCY.

ROOFING: ___ NEW ___ ROOF-OVER ___ TEAR-OFF ___ REPAIR ___ AWNING

___ 5 V METAL ___ ASPLT. SHGLS. ___ METAL SHGLS. ___ BLT. UP ___ TPO ___ OTHER

FLORIDA ACCESSIBILITY CODE: ___ 20% OF PROJECT FUNDS INVESTED IN ACCESSIBILITY FEATURES.

SIGNAGE: ___ # OF SINGLE FACE ___ # OF DOUBLE FACE ___ REPLACE SKIN ONLY ___ BOULEVARD ZONE

___ POLE ___ WALL ___ PROJECTING ___ AWNING ___ HANGING ___ WINDOW

SQ. FT. OF EACH SIGN FACE:

SUBCONTRACTORS / SPECIALTY CONTRACTORS SUPPLEMENTARY INFORMATION: N/A

___ MECHANICAL: ___ DUCTWORK ___ COMMERCIAL EXH. HOOD ___ INTAKE / EXH. FANS ___ LPG TANKS

A / C: ___ COMPLETE SYSTEM ___ AIR HANDLER ___ CONDENSER ___ MINI-SPLIT

___ ELECTRICAL: ___ LIGHTING ___ RECEPTACLES ___ HOOK-UP EQUIPMENT ___ LOW VOLTAGE

SERVICE: ___ OVERHEAD ___ UNDERGROUND ___ 1 PHASE ___ 3 PHASE ________ AMPS

___ PLUMBING: ___ ONE SEWER LATERAL PER BLDG. ___ INGROUND GREASE INTCPTRS. ___ LPG TANKS

RESTROOMS: ___ MEN'S ___ WOMEN'S ___ UNISEX ___ ACCESSIBLE

PART C: HARC APPLICATION FOR A CERTIFICATE OF APPROPRIATENESS

APPLICATION FEES: PAINTING SINGLE FAMILY: $10 STAFF APPROVAL: $50 COMMISSION REVIEW $100

PLEASE ATTACH APPROPRIATE VARIANCES / RESOLUTIONS FROM HARC, PLANNING BOARD OR TREE COMMISSION.

ATTENTION: NO BUILDING PERMITS WILL BE ISSUED PRIOR TO HARC APPROVAL.

PLEASE SEND ELECTRONIC SUBMISSIONS TO: harc@cityofkeywest-fl.gov

INDICATE TYPE OF CERTIFICATE. OF APPROPRIATENESS: ___ GENERAL ___ DEMOLITION ___ SIGN ___ PAINTING ___ OTHER

ADDITIONAL INFORMATION: ____________________

PROJECT SPECIFICATIONS: PLEASE PROVIDE PHOTOS OF EXISTING CONDITIONS, PLANS, PRODUCT SAMPLES, TECHNICAL DATA

ARCHITECTURAL FEATURES TO BE ALTERED:	ORIGINAL MATERIAL:	PROPOSED MATERIAL:
WINDOWS	WOOD	WOOD
SHUTTERS	WOOD	WOOD

DEMOLITION: PLEASE FILL OUT THE HARC APPENDIX FOR PROPOSED DEMOLITION.

DEMOLITION OF HISTORIC STRUCTURES IS NOT ENCOURAGED BY THE HISTORIC ARCHITECTURAL REVIEW COMMISSION.

SIGNAGE: (SEE PART B) ___ BUSINESS SIGN ___ BRAND SIGN ___ OTHER: ____________________

BUSINESS LICENSE #

IF FAÇADE MOUNTED, SQ. FT. OF FAÇADE ____________________

Oper: KEYWELD Type: BP Drawer: 1
Date: 10/18/16 50 Receipt no: 1017
2016
PT * BUILDING PERMITS-NEW
1.00 $50.00
Trans number: 3096079
CK CHECK 1398 $50.00
Trans date: 10/18/16 Time: 12:48:07

SIGN SPECIFICATIONS		
SIGN COPY:	PROPOSED MATERIALS:	SIGNS WITH ILLUMINATION:
		TYPE OF LTG.:
		LTG. LINEAL FTG.:
MAX. HGT. OF FONTS:		COLOR AND TOTAL LUMENS:
IF USING LIGHT FIXTURES PLEASE INDICATE HOW MANY:	INCLUDE SPEC. SHEET WITH LOCATIONS AND COLORS.	

OFFICIAL USE ONLY: HARC STAFF OR COMMISSION REVIEW		
___ APPROVED ___ NOT APPROVED ___DEFERRED FOR FUTURE CONSIDERATION ___ TABLED FOR ADD'L. INFO.		
HARC MEETING DATE:	HARC MEETING DATE:	HARC MEETING DATE:
REASONS OR CONDITIONS:		
STAFF REVIEW COMMENTS:		
HARC PLANNER SIGNATURE AND DATE:	HARC CHAIRPERSON SIGNATURE AND DATE:	

PART D: STATE OF FLORIDA OFFICIAL NOTIFICATIONS AND WARNINGS

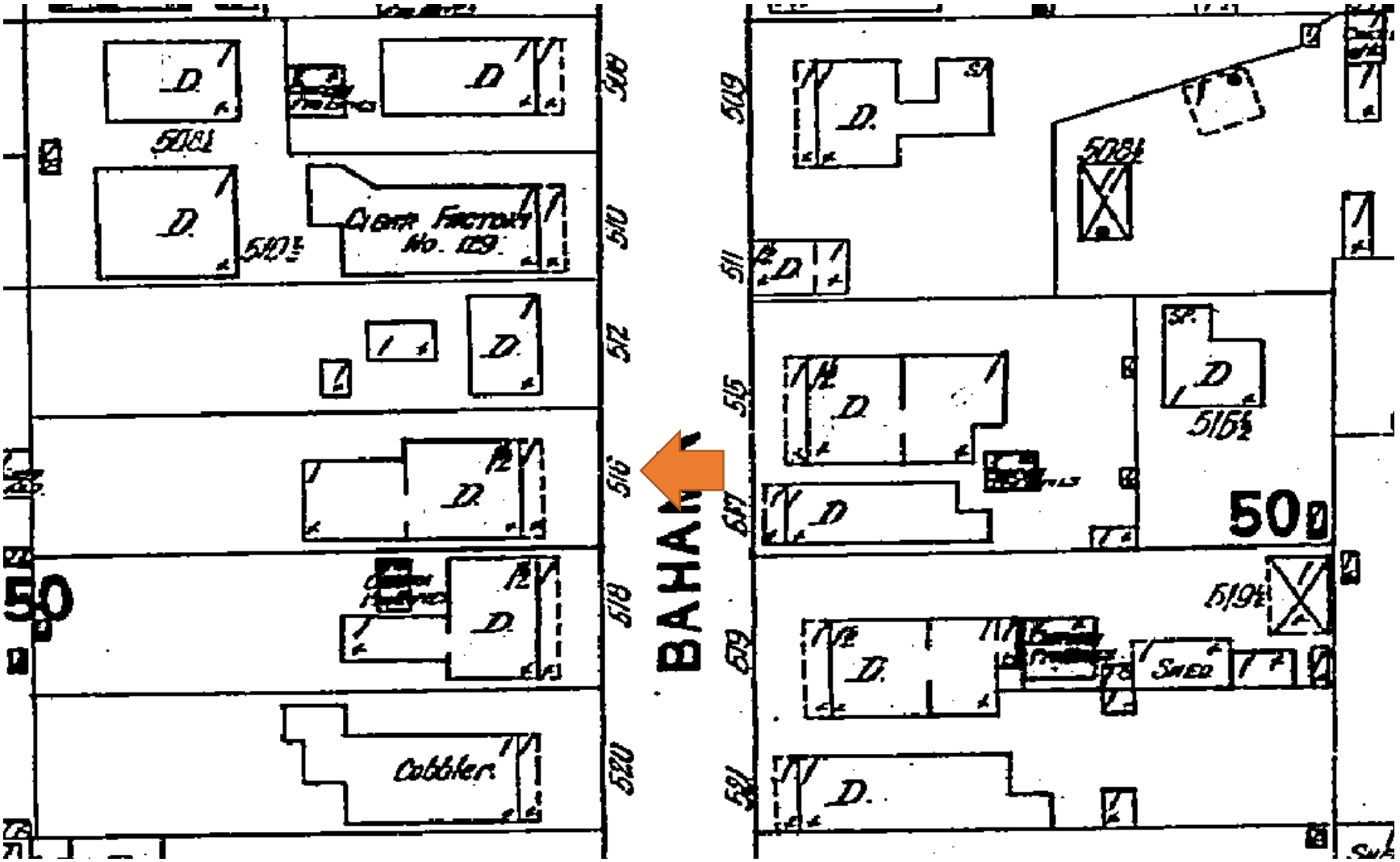
FLORIDA STATUTE 713.135: WARNING TO OWNER: YOUR FAILURE TO RECORD A 'NOTICE OF COMMENCEMENT' MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED WITH THE COUNTY RECORDER AND A COPY POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING A NOTICE.

FLORIDA STATUTE 469: ABESTOS ABATEMENT. AS OWNER / CONTRACTOR / AGENT OF RECORD FOR THE CONSTRUCTION APPLIED FOR IN THIS APPLICATION, I AGREE THAT I WILL COMPLY WITH THE PROVISIONS F. S. 469.003 AND TO NOTIFY THE FLORIDA D. E. P. OF MY INTENT TO DEMOLISH / REMOVE ASBESTOS. IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT APPLICATION, THERE MAY BE DEED RESTRICTIONS AND / OR ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF MONROE COUNTY AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENT ENTITIES SUCH AS AQUADUCT ATHORITY, FLORIDA DEP OR OTHER STATE AGENCIES; ARMY CORPS OF ENGINEERS OR OTHER FEDERAL AGENCIES.

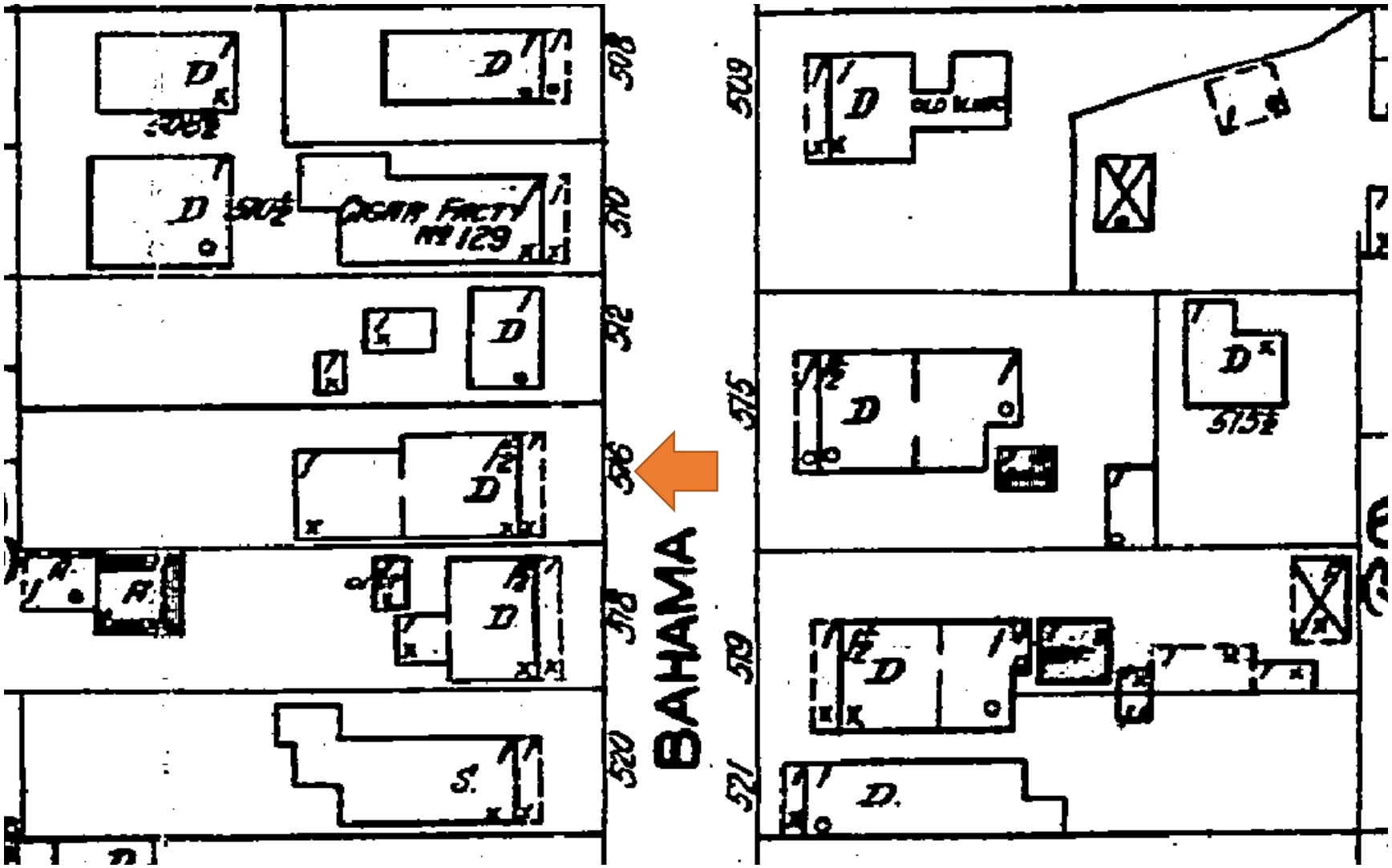
FEDERAL LAW REQUIRES LEAD PAINT ABATEMENT PER THE STANDARDS OF THE USDEP ON STRUCTURES BUILT PRIOR TO 1978.

OFFICIAL USE ONLY BY PLANS EXAMINER OR CHIEF BUILDING OFFICIAL:				
HARC FEES:	BLDG. FEES:	FIRE MARSHAL FEE:	IMPACT FEES:	CBO OR PL. EXAM. APPROVAL:
				DATE:

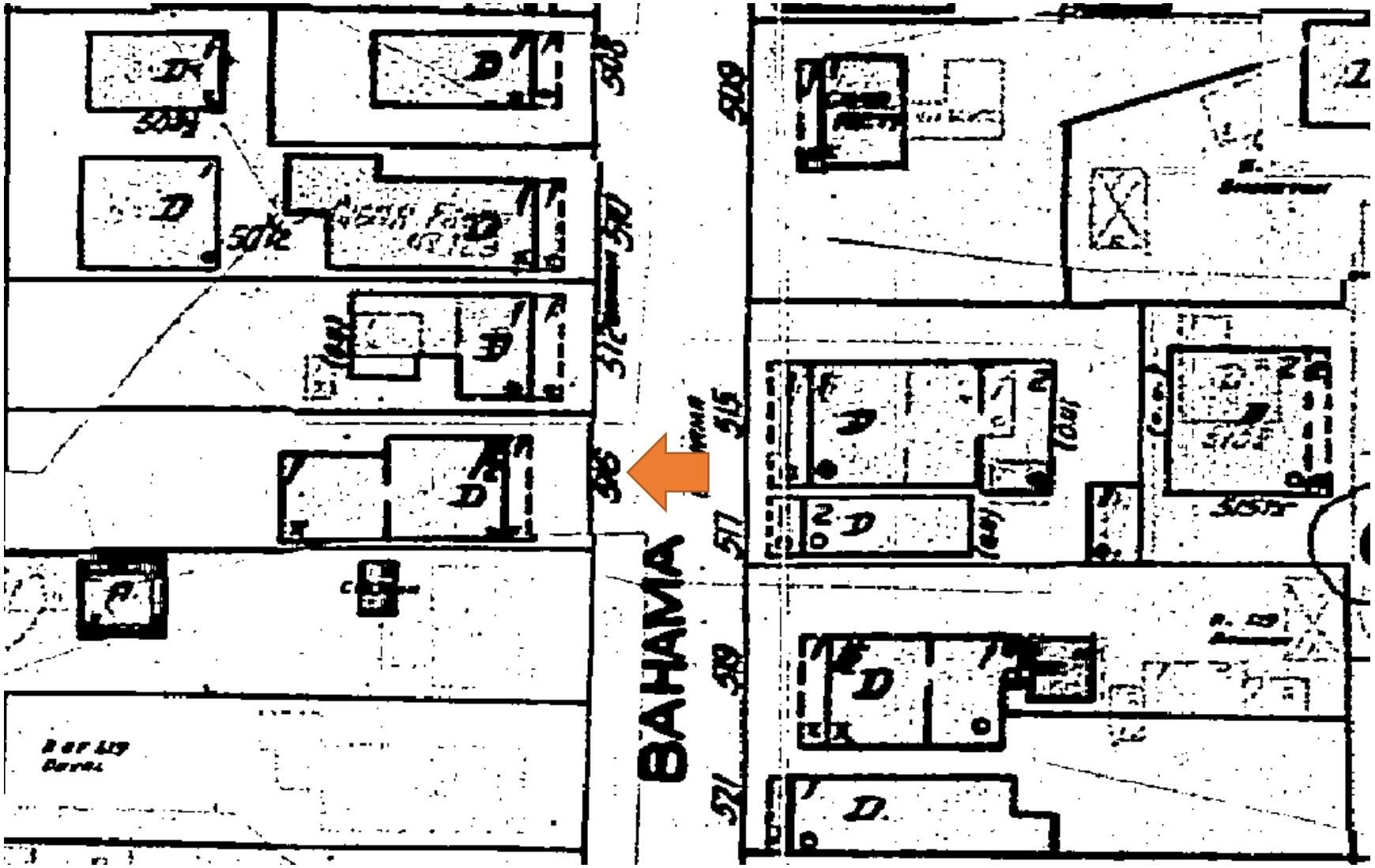
SANBORN MAPS



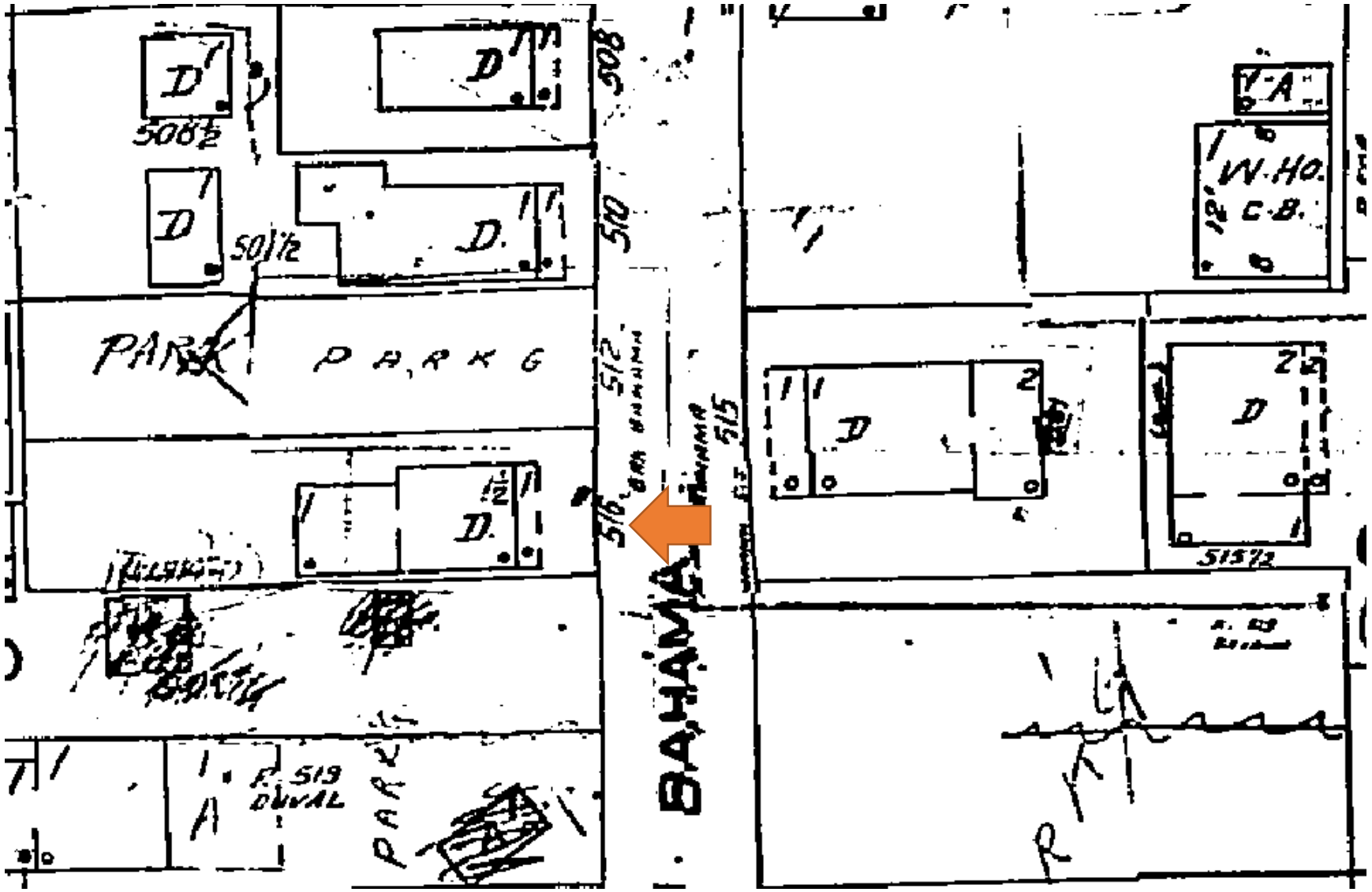
1912 Sanborn Map



1926 Sanborn Map



1948 Sanborn Map



1962 Sanborn Map

PROJECT PHOTOS

Monroe County Property Appraiser's Photo, c.1965. Monroe County Public Library.


516
BAHAMA STREET

Four of the windows proposed to be replaced.

Window #1

1H

1H

1H

1H

Window #2

#2

#2

#3

#2

#3

Window #3

#3

#4

#4

#4

Window #4

Four of the windows proposed to be replaced.

Window #5

#3

#4

WINDOW #6

#5

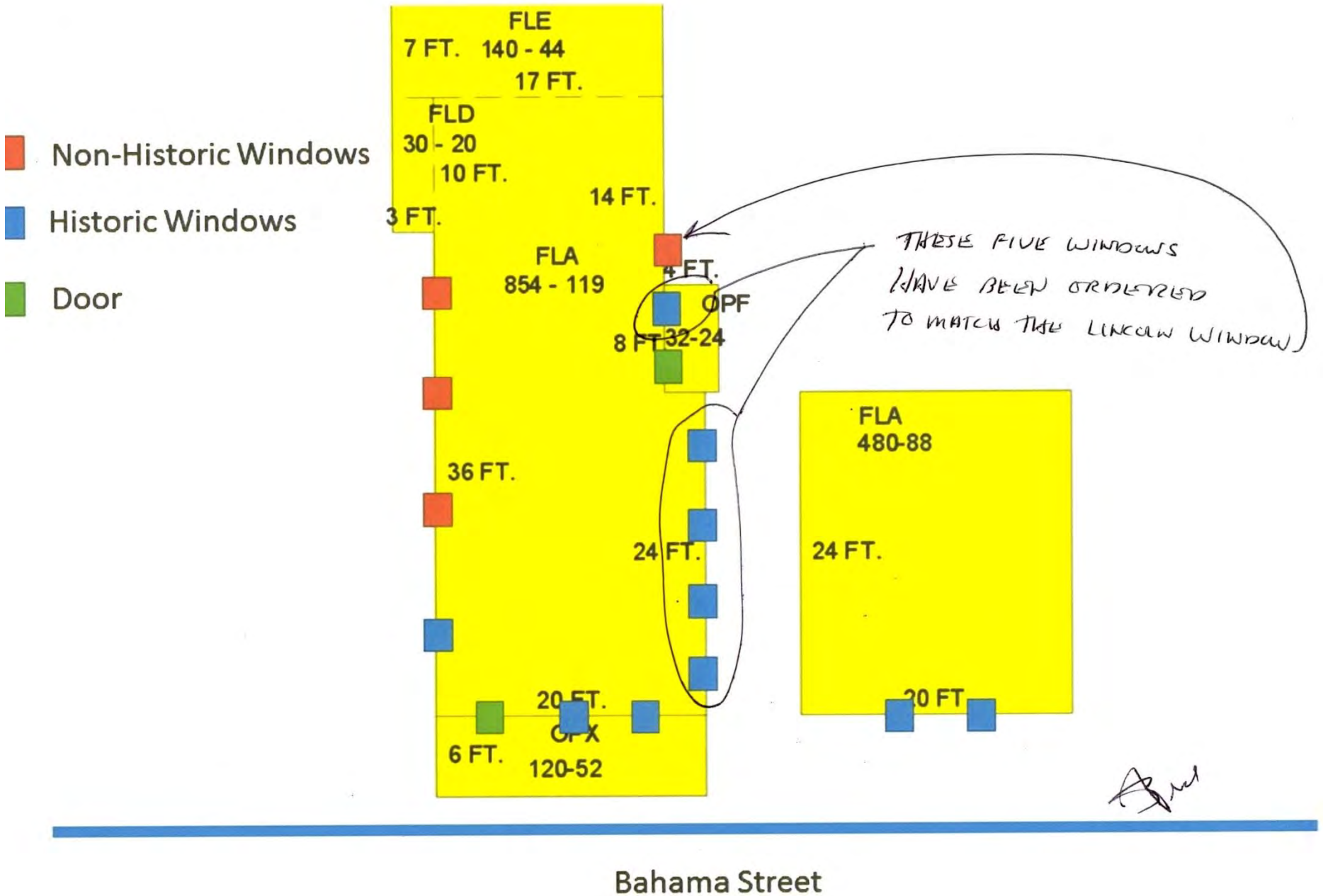
Window #5 with a new Lincoln 6/6 window

Window #5 with a new Lincoln 6/6 window


PARKING SPACE
RESERVED
FOR
517 Duval
Suite 200
VIOLATORS
WILL BE TOWED

PROPOSED DESIGN


Non-Historic Windows
Historic Windows
Door
FLE
7 FT.
140 - 44
17 FT.
FLD
30 - 20
10 FT.
14 FT.
3 FT.
FLA
854 - 119
4 FT.
OPF
8 FT.
32-24
36 FT.
24 FT.
20 FT.
OPX
6 FT.
120-52
FLA
480-88
24 FT.
20 FT
Bahama Street


Non-Historic Windows
Historic Windows
Door
FLE
7 FT. 140 - 44
17 FT.
FLD
30 - 20
10 FT.
14 FT.
3 FT.
FLA
854 - 119
4 FT.
OPF
8 FT 32-24
36 FT.
24 FT.
20 FT.
OPX
6 FT.
120-52
FLA
480-88
24 FT.
20 FT
THESE FIVE WINDOWS
HAVE BEEN ORDERED
TO MATCH THE LINCOLN WINDOW
Bahama Street

H.E. Goodley Inc.
State Certified General Contractor
CGC# 42022

6475 2nd. Street Unit F
Key West, Fl 33040
Ph: 305-296-0082
Fax: 305-296-0103

Oct. 19 2016

Kelly Perkins
HARC Assistant Planner
Planning Department, City of Key West
3140 Flagler Ave
Key West, Fl. 33040-4602
kperkins@cityofkeywest-fl.gov

Re: 516 Bahama, windows

Dear Kelly,

The first five windows on the North side of 516 Bahama are old windows in deplorable condition, and in my opinion in need of replacement. The sixth window on that side of the house is a newer Lincoln window, which I know has been approved by HARC in the past, and I had no reason to believe it wouldn't be approved now. I assumed, it being in a historically significant building it had your approval, hence on August 29th I ordered five new Lincoln windows to match the sixth window, and applied for the permit as I felt it would look rather strange not to have all windows match on the same side of the building and particularly in the same room.

You sent me a e-mail on 9-1-16 inquiring as to which windows I intended to replace along with a window plan, and a link to repairing /or restoring historic windows. I marked the plan to indicate the windows in question, and returned the plan. On 9-02-16 you replied the windows in question were Historic windows, and that I would have to go before the board for approval.

I went back to examine the windows to see if I needed to revalue my initial assessment, and found the following; (pictures attached)

Window # 1 closest to the street, rotted sill and staff bead at frame, rotted left hand corner lower sash, both stile and rail, broken muntin, 12 of the 12 panes were new glass.

Window #2, rotted sill, rotted lower sash left hand corner both rail and stile, rotted muntins, and meeting rail upper sash, 2 of 12 panes were new glass.

Window #3 rotted lower sash at lower rail and stile, actually a piece of the rail was missing large enough to stick your finger through, upper sash lower left rail and stile rotted, 6 of 12 panes were new glass.

Window #4, Sill rotted, Lower sash rotted lower left corner, upper sash rotted at meeting rail and left stile, muntins rotted, 6 of 12 panes new glass.

Window #5, Frame and staff bead rotted, upper sash at meeting rail and right stile rotted, replace muntins, 5 of 12 panes new glass.

All windows would have to be re-glazed, and removed the same as installing new windows, which would leave the customer with plywood covered openings for a much Longer time than if they installed new windows to begin with, even if they did one window at a time. The time frame would be around a month.
I've checked with a local wood worker who does this work, his ball park number was twenty to twenty-five man hours per window, at $100.00 per hour, plus materials. So you're talking about spending between twenty two hundred to twenty seven hundred per window to restore these windows , as opposed to spending the Eight hundred forty or so dollars that I've paid for the new windows that would look nice, be weather tight, save a great deal of time, and make my customer very happy
If this request should be rejected since the windows have been ordered, fabricated, paid for and are sitting in a shop in Key West, I will have over Four thousand dollars of windows I can't use, and the owner will have historic windows which are about ready to fall out .I am requesting this letter be submitted to the board for consideration, due to the above circumstances and pray for a favorable outcome, which would allow me to install the windows as ordered.

Respectfully Yours

H E "Bud" Goodley
President H. E. Goodley Inc.
State Certified General Contractor

LINCOLN WINDOWS

No WIND PRESSURE FOR THESE WINDOWS

DS

Product Catalog

WINDOWS AND PATIO DOORS

There are not only choices in the glass itself, there's also variation in glazing. Here is another opportunity to have your windows and doors made to fit the interior design, décor and style of the room. Additionally, the exterior interacts with the overall architecture and creates fantastic curb appeal. Enhancing windows and doors with lite divisions definitely puts the icing on the cake. Although there are standard lite configurations designated for all products, custom designs are also welcome.

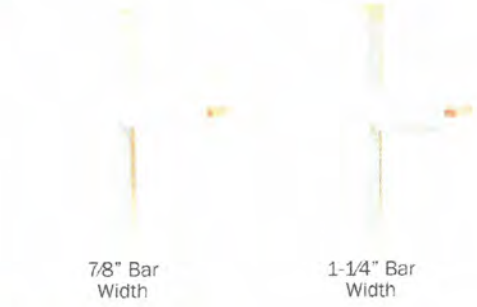
Simulated Divided Lites

Windows and doors may be enhanced with simulated divided lites. Both the interior wood bars and the exterior bars (aluminum or vinyl) are sealed to the glass with 3M adhesives. Simulated divided lite products may be ordered with or without an internal aluminum gridwork; internal grille choices include mill finish and bronze. Simulated divided lites are available in 7/8", 1-1/8" and 2" bar widths.

7/8" Bar Width | 1-1/8" Bar Width | 2" Bar Width

Lincoln Divided Lites

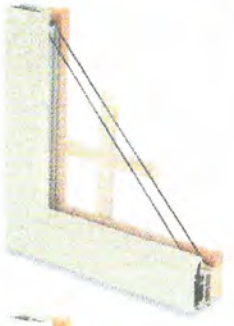
Authentic lite division produced with 7/8" and 1-1/4" bar widths, Lincoln Divided Lites are produced as primed units only. Utilizing the 1-1/4" bar enables the product to encompass insulated glass. The 7/8" bar, however, is only available in single glazed units.



7/8" Bar Width | 1-1/4" Bar Width

Removable Interior Wood Grilles

Interior wood grilles are available in single profile widths of 5/8", 1', and 1-1/4" and in a double profile width of 7/8". With or without a surround is an additional choice. Interior grilles offer the convenience of removal for the cleaning of interior glass. There is no obstruction to the exterior glass.



With Surround | Without Surround

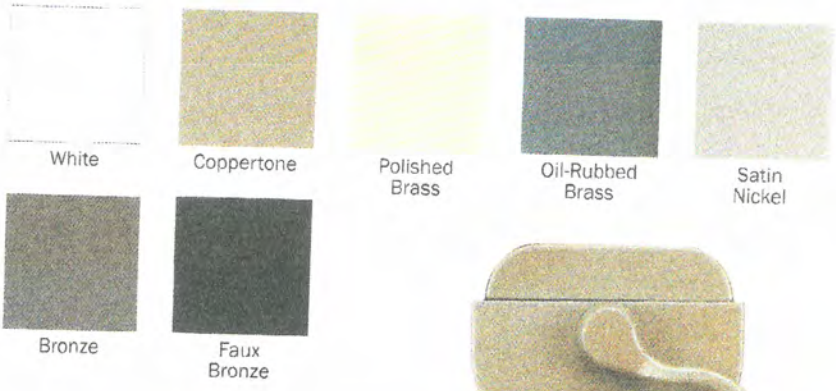
Internal Aluminum Grilles

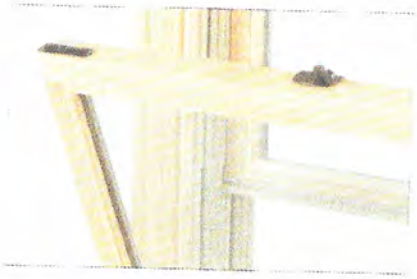
Another unobstructive manner of lite division is the addition of an internal aluminum grille. Inserted at time of insulated glass fabrication, internal aluminum grilles are 11/16" double profile and are available in all eight of our standard clad colors and six two-toned options.

1-1/16" Double Profile

Tilt Latch and Window Locks

Double hung locks and tilt latches are color matched in seven hardware finishes. Two low-profile pick resistant locks are used on units with 32" glass and wider. Units smaller than 32" have one lock. Tilt latches are set into the check rail of the bottom sash and concealed in the top rail on the upper sash. Spring loaded, they release to tilt in with ease. Made to last and stay out of sight, these lock options are sure to please.



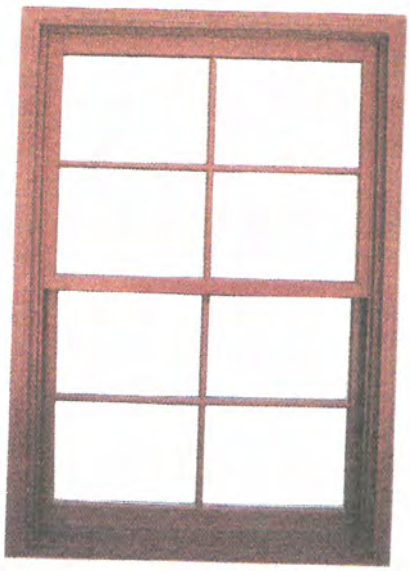


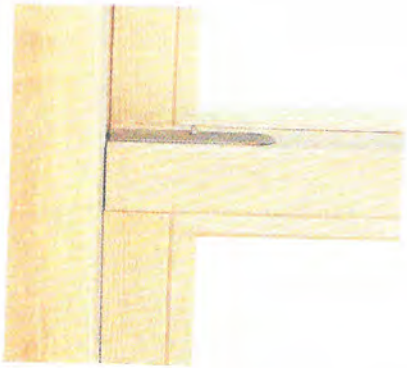
Concealed Jambliner

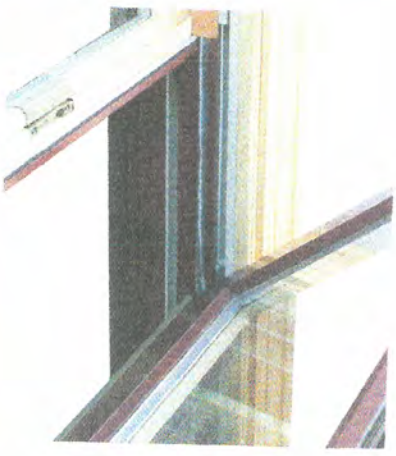
Take the traditional design and elegance of the Lincoln Double Hung window a step further with the addition of our Concealed Jambliner Upgrade. The upgrade gives you a softer look without sacrificing the optimum functionality of the window.

From the exterior, the jambliner is concealed by color matched cladding. From the interior, the jambliner design utilizes a clear pine laminate to give more wood warmth when the window is closed. The perfect option when choosing one of our five alternative wood species.

Another great feature of this jambliner upgrade is the equal sash design. Both sash will share equal dimensions and will allow the site lines to match up vertically.







NOTICING

Public Meeting Notice

The Historic Architectural Review Commission will hold a public hearing **at 5:30 p.m., October 25, 2016 at Old City Hall, 510 Greene Street**, Key West, Florida. The purpose of the hearing will be to consider a request for:

REPLACEMENT OF HISTORIC WINDOWS WITH NEW WOOD WINDOWS.

FOR- #516 BAHAMA STREET

Applicant – H.E. Goodley **Application #H16-3452**

If you wish to see the application or have any questions, you may visit the Planning Department during regular office hours at 3140 Flagler Avenue, call 305-809-3975 or visit our website at www.cityofkeywest-fl.gov.

THIS NOTICE CAN NOT BE REMOVED FROM THE SITE UNTIL HARC FINAL DETERMINATION

ADA ASSISTANCE: It is the policy of the City of Key West to comply with all requirements of the Americans with Disabilities Act (ADA). Please call the TTY number at 800-955-8771 or 800-955-8770 (Voice) or the ADA Coordinator at 305-809-3731 at least five business days in advance for sign language interpreters, assistive listening devices, or materials in accessible format.


516
BAHAMA STREET
Public
Meeting
Notice
REPLACEMENT OF HISTORIC WINDOWS
WITH NEW WOOD WINDOWS.
FOR- #516 BAHAMA STREET
Applicant - H.E. Goudey
Application #H16-2452

PROPERTY APPRAISER INFORMATION

Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

Property Record Card -
Maps are now launching the new map application version.

Alternate Key: 1010014 Parcel ID: 00009750-000000

Ownership Details

Mailing Address:
TANDA LLC
C/O VAN WIEREN ALAN
PO BOX 217
SAUGATUCK, MI 49453-0217

Property Details

PC Code:	39 - HOTELS,MOTELS
Millage Group:	10KW
Affordable Housing:	No
Section-Township-Range:	06-68-25
Property Location:	516 BAHAMA ST KEY WEST
Legal Description:	KW PT LOT 4 SQR 50 XX-175 CO JUDGES DOCKET #78-231 & #79-102 OR787-1318/1320 OR847-1606 OR1054-1120 OR1069-1623-C OR1166-2088 OR1218-1150 OR1677-1390/91Q/C OR1887-1628/29R/S OR2293-222/23Q/C

Click Map Image to open interactive viewer

Land Details

Land Use Code	Frontage	Depth	Land Area
100D - COMMERCIAL DRY	27	108	3,305.00 SF

Building Summary

Number of Buildings: 1
Number of Commercial Buildings: 0
Total Living Area: 1504
Year Built: 1908

Building 1 Details

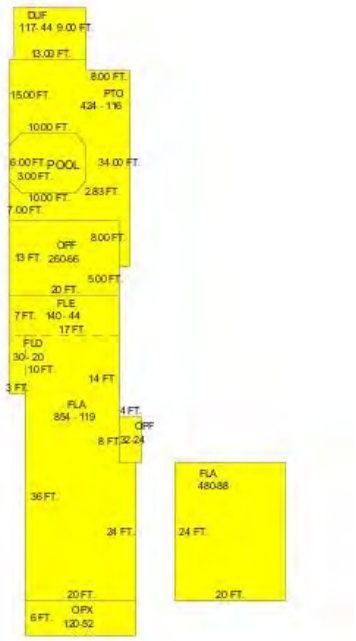
Building Type	R1	**Condition**	G	**Quality Grade**	550
Effective Age	19	**Perimeter**	270	**Depreciation %**	26
Year Built	1908	**Special Arch**	0	**Grnd Floor Area**	1,504
Functional Obs	0	**Economic Obs**	0		

Inclusions: R1 includes 1 3-fixture bath and 1 kitchen.

Roof Type	GABLE/HIP	**Roof Cover**	METAL	**Foundation**	WD CONC PADS
Heat 1	FCD/AIR DUCTED	**Heat 2**	NONE	**Bedrooms**	2
Heat Src 1	ELECTRIC	**Heat Src 2**	NONE		

Extra Features:

2 Fix Bath	0	**Vacuum**	0
3 Fix Bath	1	**Garbage Disposal**	0
4 Fix Bath	0	**Compactor**	0
5 Fix Bath	0	**Security**	1
6 Fix Bath	0	**Intercom**	0
7 Fix Bath	0	**Fireplaces**	0
Extra Fix	0	**Dishwasher**	0



Sections:

Nbr	Type	Ext Wall	# Stories	Year Built	Attic	A/C	Basement %	Finished Basement %	Area
1	FLA	12:ABOVE AVERAGE WOOD	1	1990	N	Y	0.00	0.00	854
2	OPX		1	1990	N	N	0.00	0.00	120
3	FLD	12:ABOVE AVERAGE WOOD	1	1994	N	Y	0.00	0.00	30
4	FLE	12:ABOVE AVERAGE WOOD	1	2002	N	Y	0.00	0.00	140
5	OPF		1	1994	N	N	0.00	0.00	260

6	OPF		1	1990	N	N	0.00	0.00	32
7	FLA	12:ABOVE AVERAGE WOOD	1	1990	N	Y	0.00	0.00	480
8	PTO		1	2004					616
9	DUF	1:WD FRAME	1	1991					117

Misc Improvement Details

Nbr	Type	# Units	Length	Width	Year Built	Roll Year	Grade	Life
1	FN2:FENCES	500 SF	100	5	1993	1994	2	30
2	PO3:RES POOL GNIT	135 SF	0	12	2004	2005	5	40
3	WF2:WATER FEATURE	1 UT	0	0	2004	2005	1	20
4	PT2:BRICK PATIO	96 SF	24	4	2002	2003	2	50
5	PT2:BRICK PATIO	120 SF	20	6	2002	2003	2	50

Appraiser Notes

2007-04-20 - REVEALED THIS PARCEL IS A TRANSIENT RENTAL. BAHAMADREAMING.COM - JEN

Building Permits

Bldg	Number	Date Issued	Date Completed	Amount	Description	Notes
	14-2034	05/14/2014		2,850	Commercial	REMOVE & DISPOSE EXISTING A/C DUCTLESS. INSTALL NEW 12,000 BTU MITSUBISHI. HEAT PUMP.
1	B910158	05/01/1991	07/01/1994	10,000	Commercial	RENOVATIONS
2	B931645	06/01/1993	07/01/1994	2,200	Commercial	ADDITION
3	B933531	12/01/1993	07/01/1994	3,000	Commercial	WOOD DECK
4	B940791	03/01/1994	10/01/1995	900	Commercial	PORCH
5	M952820	08/01/1995	10/01/1995	4,400	Commercial	3.5 TON AC
6	E952871	08/01/1995	10/01/1995	300	Commercial	1HP & 3HP MOTORS
7	9600857	02/01/1996	08/01/1996	300	Commercial	ELECTRICAL
8	9801844	06/16/1998	10/20/1999	15,000	Commercial	RENOVATIONS/NEW BATH
9	9802114	07/08/1998	10/20/1999	2,000	Commercial	NEW CENTRAL AC
10	0101437	04/19/2001	08/13/2002	10,000	Commercial	EXTEND KITCHEN INTO PORCH
11	0102561	07/17/2001	08/13/2002	400	Commercial	INSTALL 4 WATER HEATERS
12	0103314	10/02/2001	08/13/2002	800	Commercial	ROOFING
13	0103910	12/11/2001	08/13/2002	250	Commercial	NEW WOOD SCREEN DOOR
14	0103948	12/14/2001	08/13/2002	1,500	Commercial	INSTALL BRICK WALKWAY
15	03-3947	11/14/2003	03/02/2004	2,613	Commercial	REPAIR ROOF
16	04-0116	01/20/2004	12/02/2004	10,000	Commercial	PAINT EXT & INT, FLOORS,SIDING
17	04-1305	05/06/2004	12/02/2004	4,385	Commercial	METAL ROOF VALLEYS
18	04-1538	05/27/2004	12/02/2004	13,600	Commercial	INSTALL GUNITE POOL & WATERFALL
19	06-2530	04/25/2006	07/05/2006	2,200	Commercial	REPLACE EXISTING LATTICE REAR PORCH AND FRAMING

20	06-2531	04/25/2006	07/05/2006	2,400	Commercial	INSTALL VCRIMP ON EXISTING PORCH
21	07-4998	11/07/2007	11/13/2007	1,000	Commercial	EMERGENCY REPAIR REPLACE EXISTING METER CAN 200 AMP

Parcel Value History

Certified Roll Values.

View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2016	190,590	15,633	634,598	499,433	499,433	0	499,433
2015	190,995	13,672	489,874	499,433	499,433	0	499,433
2014	194,804	12,987	476,634	499,433	499,433	0	499,433
2013	204,794	13,427	584,822	499,433	499,433	0	499,433
2012	209,999	13,984	584,822	499,433	499,433	0	499,433
2011	209,789	14,478	649,803	482,544	482,544	0	482,544
2010	214,784	15,105	403,677	482,544	482,544	0	482,544
2009	217,281	15,599	388,338	518,865	518,865	0	518,865
2008	219,779	16,209	429,650	665,638	665,638	0	665,638
2007	222,276	13,846	429,650	665,772	665,772	0	665,772
2006	372,535	12,842	313,975	699,352	699,352	0	699,352
2005	234,859	13,243	280,925	529,027	529,027	0	529,027
2004	187,364	4,231	231,350	422,945	422,945	0	422,945
2003	242,700	4,345	72,710	319,755	319,755	0	319,755
2002	197,679	1,278	92,540	291,497	291,497	0	291,497
2001	184,046	1,348	92,540	277,934	277,934	0	277,934
2000	184,046	1,404	69,405	254,855	254,855	0	254,855
1999	126,960	1,188	69,405	197,553	197,553	0	197,553
1998	115,418	1,132	69,405	185,955	185,955	0	185,955
1997	115,418	1,170	62,795	179,383	179,383	0	179,383
1996	70,982	744	62,795	134,521	134,521	0	134,521
1995	67,699	776	62,795	131,270	131,270	0	131,270
1994	46,179	0	62,795	108,974	108,974	0	108,974
1993	24,561	0	62,795	87,356	87,356	0	87,356
1992	24,561	0	62,795	87,356	87,356	0	87,356
1991	24,561	0	62,795	87,356	87,356	0	87,356
1990	26,346	0	52,880	79,226	79,226	0	79,226
1989	23,232	0	52,054	75,286	75,286	0	75,286
1988	19,495	0	51,228	70,723	70,723	25,000	45,723
1987	16,758	0	28,562	45,320	45,320	25,000	20,320
1986	16,831	0	27,603	44,434	44,434	25,000	19,434
1985	16,426	0	27,762	44,188	44,188	25,000	19,188
1984	15,573	0	27,762	43,335	43,335	25,000	18,335
1983	15,573	0	13,403	28,976	28,976	25,000	3,976

1982	15,811	0	13,403	29,214	29,214	25,000	4,214

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification
4/18/2003	1887 / 1628	490,000	WD	Q
4/1/1991	1166 / 2088	100,000	WD	Q
2/1/1982	847 / 1666	45	QC	U

Monroe County Property Appraiser
Scott P. Russell, CFA
P.O. Box 1176 Key West, FL 33041-1176