

Exhibit A
CDC Chapter 25
Proposed Code Amendment

(pending)



CITY OF
West Linn

Memorandum

TO: Chris Jordan, City Manager

FROM: Peter Spir, Associate Planner
Sara Javoronok, Associate Planner

DATE: March 22, 2010

SUBJECT: Community Development Code (CDC) Chapter 25 Historic District Code Amendments (CDC-09-01)

At the March 8, 2010 hearing regarding the proposed amendments to CDC Chapter 25, the public and City Council members made numerous comments about the proposal. Staff has incorporated these comments from the hearing and subsequent correspondence into the attached table.

The table is organized in the order the issues appear in Chapter 25. It identifies the general topic of the issues raised and any related code citation. The page reference is to the draft reviewed by the Council at the March 8, 2010 meeting. Staff's response is included in the adjacent column. Any code revisions based on the comments are included under "Recommended Code Revision". This includes new language relating to ADUs which is intended to alleviate the confusion regarding that topic. The final column is in response to Council's request for information as to how the proposed changes would affect the historic district.

Proposed Amendments To CDC Chapter 25
Summary of Comments from the March 8, 2010 Public Hearing-to date and Responses
 March 12, 2010

Issue	Code Citation (Page numbers refer to the March 8 draft containing the Council's proposed amendments)	Comments	Response	Recommended Code Revision	Effect on the Historic District's Integrity
Public Hearing Notice		A notice error was identified by Beth Kieres, President of the Willamette Neighborhood Association. Some people received a notice with only the top half of the notice printed.	City Attorney Tim Ramis noted at the March 8, 2010 hearing that a Measure 56 notice has already been completed so there is no technical defect in the notice requirements. Also, the top half of notice that a few people received contains the substantive information: "who, when, where, and what" so effective notice was accomplished (people who received the notice attended the hearing). Nevertheless, staff sent out a new notice to neighborhood residents for the continued March 22, 2010 hearing.	N/A	N/A
Purpose Statements	25.010, p. 5	Add to the "purpose" language that the intent of the special provisions will not conflict with other code language, i.e., the special district provisions will provide for good pedestrian access (sidewalks), not creating parking conflicts, allow good traffic flow, support improved sustainability and carbon footprint reductions, e.g., access to solar.	The proposed language can be added, however code is already required to be in compliance with the Comprehensive Plan so it would be redundant to declare the commitment to multi-modal (pedestrian) facilities, efficient and safe traffic flow (through meeting the Transportation Planning Rule), sustainable land use and policy solutions, etc. Indeed Chapter 25's purpose statement already declares in its first sentence that the intent is to implement the goals and policies of the Comprehensive Plan. The remainder of the purpose statement appropriately lists the specific historic objectives of that chapter rather than the broader goals of the Comprehensive Plan.	None.	The primary purpose of the historic district is to preserve the character and architectural features of the era the district represents. The proposed changes imply that the historic integrity of the district should be compromised to achieve other community goals. This could have the effect of diminishing the integrity of the historic district.
District Map	Figure 1, p. 8	<p>The map is unreadable</p> <p>The map is outdated</p> <p>Just showing the boundary of the district would be better</p> <p>The map does not reflect the boundaries of the National Register district</p>	A map update was not intended to occur in this phase of the update. Consequently, the legal notice did not refer to it. A revision would require new DLCD notice. The elimination of the map or the shading would cause a problem with code language referring to "primary" and "secondary" structures since the map is the only place where the properties are classified. The National Register district boundary is smaller than the local district boundary because it was based on the areas that had sufficient integrity to qualify for the National Register. A map update will occur with Phase II of the code update.	As an interim measure until the map is updated, a note beneath it will state that " site visits will be required to verify the classification of the structures ".	<p>None, staff will visit the site and use the reconnaissance level survey forms completed as part of the National Register nomination to determine the significance of a particular property.</p> <p>The Phase II map update can include the National Register boundary on the map, but staff would not recommend altering the local district boundary to the smaller National Register boundary.</p>

Issue	Code Citation	Comments	Response	Recommended Code Revision	Effect on the Historic District's Integrity
Membership in the Historic Review Board	25.040 C, p. 10	Under "terms of service" add West Linn appointees, while serving 3 years, shall serve until replaced.	This is not part of the scope of the Phase I amendments. A new historic review board will be established this year, this section of the code will be updated at that time.	None.	N/A
Parking	25.070 C, p. 15	Clarify language that alleys are not for parking but for access to parking, e.g., garages.	Staff agrees the language should be clarified. See the recommended revised language.	C. PARKING. Parking in Willamette Town traditionally was handled from the alleys or along "streets" (as opposed to avenues). Detached garages along the alleys or "streets" characterize many homes in the district. Alleys were established to provide for access to off-street parking, including garages. Alleys were established to provide for parking out of view; with this older pattern, garages are much less dominant than in newer residential areas.	N/A
Windows	25.070 H(1), p. 20	We should not disallow replacing windows with more energy-efficient double pane windows even if we require original materials (e.g., wood) and sizes.	The language continues to encourage repair rather than replacement.	None.	The replacement of historic windows, even the glass, can have an effect on the integrity of the historic district. This is particularly true in windows where the replacement of glass necessitates the replacement of the muntins. Double pane glass may require much wider muntins and alter the character and appearance of the window. Studies have shown that when properly maintained, weather-stripped, and with a storm window historic wood windows can be as energy efficient as new windows. See attached National Trust Tip Sheet (Attachment 1)
	25.070 H(2), p.20	I support putting back the language on Aluminum windows but ask for language stating it must only be used when Aluminum windows are original to the house. Mill aluminum - only "shiny" not dull prohibited?	Staff agrees. Staff supports aluminum windows only when the windows were the original material.	2. Aluminum windows are prohibited unless they were the original material and meet dimensional standards.	The use of aluminum windows is only appropriate where they were the original material.
Roofs	25.070 K(2), p. 22	We should not disallow architectural comp shingles. They look good and disallowing them may drive residents to more expensive or lower quality (shorter lifecycle) shingles because that is what is being manufactured and selling.	Staff agrees.	2. Roofing materials may be asphalt composition shingles or milled cedar shingles. Cedar shakes are not permitted. Cedar shakes were not used in period construction. Milled cedar shingles were used and are permitted.	While asphalt composition (including 3-tab and architectural) shingles may not have been the original roofing material, their use does not significantly affect the integrity of the district. Such roofs are common in the district.

Issue	Code Citation	Comments	Response	Recommended Code Revision	Effect on the Historic District's Integrity
	25.070 K(2), p. 22	<p>Milled cedar shingles should not be allowed for the following reasons: 1. A common roofing material of the period was composition and is allowed. Therefore wood is not essential for authenticity. 2. Cedar is scarce and expensive because old growth cedar trees are scarce to the point they are commonly the target of thieves. 3. Sustainability of cedar in the forest is an issue. 4. Wood roofs are a fire hazard and they are commonly treated with toxic preservative chemicals which may not be good for our neighbors or the environment.</p> <p>Since milled cedar shingles were an original material and lie below the asphalt shingles of some of the houses in the district, they should be allowed</p>	Staff understands the concern regarding milled cedar shingles and we doubt that many people would use them. However, staff recommends that they remain permitted since they were an original material.	See previous page.	See previous page.
Accessory Dwelling Units	25.070 N(2), p. 23-28	I do not understand what is being proposed, e.g., is there a difference between attached or detached ADUs?; one story is 600 sq. ft. total but a 2-story is 500 sq ft total?; existing vs. new?	There is not a difference between attached and detached ADUs. As proposed, new one-story ADUs are limited to 600 sq. ft. while new two story ADUs would be allowed a total of 500 sq. ft. This is to encourage single floor ADUs.	<p><u>N. ACCESSORY DWELLING UNIT (ADU). The provisions of CDC Chapter 34 shall not apply to ADUs in the Historic District. The following requirements apply to ADUs in the Historic District.</u></p> <p><u>1. ADUs may be allowed in one of the following configurations:</u></p> <p><u>(a) Within an existing primary single-family house; or,</u></p> <p><u>(b) in an addition to an existing house's footprint or building envelope; or</u></p> <p><u>(c) in a new accessory structure; or,</u></p> <p><u>(d) by converting or adding to an existing accessory structure, such as a garage or barn, located on the same lot as the existing house.</u></p> <p><u>2. ADUs shall meet the following conditions:</u></p> <p><u>(a) Public services are available to serve the ADU.</u></p> <p><u>(b) The ADU shall not have more than one bedroom.</u></p> <p><u>(c) ADUs shall be sized consistent with the following:</u></p> <p><u>(i) ADUs shall not exceed 30 percent of the gross square footage of the house on the lot or 250 square feet, whichever is more, and a maximum of 1,000 square feet in size.</u></p> <p><u>(ii) Single story ADUs in structures approved after March 22, 2010 shall have a maximum size of 600 square feet and two story ADUs approved after that date shall have a maximum size (total of both floors) of 500 square feet.</u></p> <p><u>(iii) ADUs in existing accessory structures such as workshops, offices, garages, etc., approved prior to March 22, 2010 may occupy 1,000 square feet.</u></p>	<p>Generally, the loss of existing contributing historic outbuildings/accessory structures can negatively affect the historic character of the district. New construction of compatible outbuildings will not significantly affect the integrity of the district.</p> <p>The construction of an attached or detached ADU that is compatible in size and character with the existing dwelling will not affect the integrity of the district.</p> <p>A compatible conversion of an existing outbuilding to an ADU will not affect the character of the district.</p>
	25.070 N(2)(b), p. 22	Why is there a proposed limit of three occupants in ADUs?	Elsewhere in the code, there is an occupancy limit in ADUs of one family. As proposed, ADUs are limited to one bedroom. The proposed limit of three occupants is not needed. Therefore, staff recommends that it be removed.		

Issue	Code Citation	Comments	Response	Recommended Code Revision	Effect on the Historic District's Integrity
	25.070 N(2), p. 23-24	I'm concerned about the tighter square-footage restrictions inadvertently getting applied to preexisting structures to be used for accessory dwellings. We worked closely with staff to make sure that existing structures, some built for the purpose of becoming accessory dwellings, would be able to do so under the new code. Property owners were assured that the code change wouldn't impact them. A great deal of effort and care was put into this. Whatever the wording it needs to allow these structures to become accessory dwellings under the higher square footage rule while restricting the size of "new construction." (We were looking at the new buildings built in recent years. We expect some of the larger out buildings becoming accessory dwellings too. They should be able to do so.)	Under proposed language in the next column, existing structures converted to ADUs would have the same size limit as elsewhere in the city per Chapter 34: 1,000 sq. ft. for large, existing accessory structures and 250-1,000 square feet for other structures, provided it is not more than 30% of the gross square footage of the primary structure or 250 sq. ft, whichever is more. However, alterations to these structures must satisfy the minor and major alterations guidelines for the historic district	<p><u>(d) No more than one ADU is allowed per lot.</u></p> <p><u>(e) Existing accessory structures such as workshops, offices, garages, etc may be converted into ADUs under the following conditions:</u></p> <p><u>(i) The structure is located behind the house's front building line, preferably in the rear yard. Structures in the front yard shall not be converted to an ADU.</u></p> <p><u>(ii) If a second story is added to an existing garage or accessory structure, the existing structure must meet the setback standards in Subsection N (5) for two-story ADUs.</u></p> <p><u>(iii) The conversion of an existing structure is not required to meet the design standards in Subsection N (3) below, with the exception of Subsection N (3)(d), Windows. However, such ADUs shall conform to those standards to the greatest degree possible.</u></p>	
	25.070 N(2)(f) p. 24	I am looking to staff with specific historic district planning experience and knowledge to review changes by Councilor Carson that were specifically made for her property to see that they are of benefit for the entire district. Specifically, language the previously said the ADU's need to be in the rear of the property. The increase in square foots of ADU's, the lot size and shape of the property.	Under the proposed Subsection 25.070 N(2)(e) above under "Recommended Code Revision", existing accessory structures may be converted to ADUs only if they are located behind the house's front building line. Councilor Carson's barn is located behind the front building line on her lot. If her lot was partitioned, staff would recommend that the new lot face 4th Avenue. With this orientation, the barn would remain in the rear yard.		A compatible conversion of an existing outbuilding to an ADU will not affect the character of the district.
		<p>What is the relationship of f and g? Do they address different situations?</p> <p>Why did the size of the ADUs increase to 900 under (g)?</p>	The confusion regarding subsections (f) and (g) in the March 8 draft was due to staff's drafting error. The language in Subsection (g) was an alternative to Subsection (f) but was not identified as such. The Planning Commission recommends Subsection (f). The proposed 900 square foot size limit proposed under (g) in the March 8 draft was chosen, arbitrarily, as a point between the 600 square feet allowed in the Historic District and the 1,000 square foot amount allowed in CDC Chapter 34.030(A)(7) for pre-existing structures in the rest of the City. Staff recommends replacing both versions with the language above under "Recommended Code Revision."		
	25.070 N(2)(g), p. 25	Why shouldn't ADUs that are converted existing structures have to match the features of the principal dwelling?	The existing outbuildings and accessory structures were often simpler in construction and lacking in ornamentation compared to the residence. The conversion should not require the addition of features that were not original to the structure.		The proposed language would not diminish the character of the district.

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		Why are ADUs not classified as a duplex?	Accessory dwelling units are permitted in conjunction with an existing single family dwelling and are limited to one bedroom. They typically take the form of basement or attic suites, or converted attached garages. They are typically a secondary use of the property. Duplexes typically have equal living spaces for both halves and may have multiple bedrooms. An attached ADU takes up a much smaller space at 30 percent of the square footage of the house, and is allowed a maximum 1,000 square feet in most of West Linn.		N/A
	25.070 N(3)(d), p. 26	I would like to review (pg 26) language restricting windows facing sideyards on upper levels of ADUs. It appears that the main purpose was preservation of privacy. Placing windows higher may not accomplish that as well as opaque glass could. Windows on upper floors provide natural light and ventilation thereby decreasing energy usage.	<p>The number one concern about second floor ADUs in the historic district is that with the lots being so small, second floor windows on the side wall would result in significant loss of privacy for the adjacent property owners. It was complaints along those lines that spurred the entire review of ADUs. Certainly the language could be reworded to allow dormers or other window forms with opaque glass but opening them for ventilation would bring back the issue of privacy. As staff saw it, it came down to a basic question of whose rights do we defer to? The prospective ADU owner who is asking for a special structure in addition to their house, or the adjacent homeowner who just has a house and simply wants a little privacy?</p> <p>One option would be dormers or skylights higher up in the roof to the extent that they could not be looked out of. That way, natural light could be increased at no loss of privacy. The downside is that a roofscape with skylights may be deemed inappropriate to period architecture.</p>		Compatible conversions of existing structures to ADUs or the construction of a new ADU that is compatible will not affect the integrity of the district. If added sensitively, skylights would not diminish the character or integrity of the district.
Sidewalks	25.070 O, p. 28-29	Do NOT allow the City Engineer to waive sidewalk requirement for in lieu. Get the sidewalk now or it will never happen.	Staff agrees with the comment about the need for sidewalks. The proposed subject code language duplicated in CDC Chapter 96.010 and therefore is not needed here.	Omit the following: The City Engineer may waive the requirement for sidewalks on street frontages where all other adjacent lots are built out and no sidewalks exist on that street side. Fees in lieu may be required.	N/A
Lot Sizes/Density	25.110, p. 32-33	Partitioning and Subdividing;(1) To address the change to the square footage requirement. A variance to reduce the minimum area of a lot shouldn't be possible. That would address the concerns. (2) The Historic Review Board's decision should be binding rather than advisory. Their responsibility is to protect the historic resource. The ability to place conditions on the approval will be hampered by not having the ability to make them binding through the rest of the process.	Staff supports Historic Review Board review of partitions and subdivision, but the approval of such should be left to the Planning Director and Planning Commission, respectively.	Editorial: remove the extra shall the last line in the opening paragraph of 25.110: The Historic Review Board shall review of the proposed subdivision shall be based on the following criteria.	Substantial increases in density could affect the integrity of the district. However, the R-5 and R-10 zones designated in the Comprehensive Plan and Zoning Ordinance do not permit this level of increased density.

Issue	Code Citation	Comments	Response	Recommended Code Revision	Effect on the Historic District's Integrity
	25.110 C(2), p. 33	Is it appropriate to require that all partitions in the district produce 5,000-6,000 square foot lots when some properties are zoned R-10 (10,000 square foot minimum lot size) and thus unable to meet that smaller lot size?	Staff notes that the district comprises two different zoning classifications, R-5 and R-10. Staff agrees that the R-10 zoning must be accommodated and that it is important to avoid language that relates only to the R-5 zone.	<u>2. All new lots shall be rectangular or approximately the shape of traditional lots elsewhere in the district.</u>	Staff supports infill development in a pattern similar to lots created with the original Willamette Falls Plat (approximately 5,000 square feet). Smaller lots or substantial increases in density within the boundary of the historic district would have a negative effect on the integrity of the district, particularly within the bounds of the National Register District.
	25.110 C(3), p. 33	I do not support prohibiting flag lots. Discouraging them may be ok but not prohibiting. Flag lot may be the only way to subdivide a larger than zone (R-5) lot. We have to build up if we don't want to build out a la Stafford.	The majority of the lots in the historic district will not benefit from permitting flag lots.	None.	Flag lots were not historically part of development in the district. Their creation would have a negative effect on the integrity of the district, particularly within the bounds of the National Register District.

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This tip sheet on historic wood windows was developed as part of the National Trust for Historic Preservation's [Sustainability Initiative](#).

About the Initiative:

Historic preservation can – and should – be an important component of any effort to promote sustainable development. The conservation and improvement of our existing built resources, including reuse of historic and older buildings, greening the existing building stock, and reinvestment in older and historic communities, is crucial to combating climate change.

Learn more about Preservation and Sustainability on the web: www.preservationnation.org/issues/sustainability

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Introduction

There is an epidemic spreading across the country. In the name of energy efficiency and environmental responsibility, replacement window manufacturers are convincing people to replace their historic wood windows. The result is the rapid erosion of a building's character, the waste of a historic resource, and a potential net loss in energy conservation. Typically replacement windows are vinyl, aluminum, or a composite with wood, and none will last as long as the original window. Repairing, rather than replacing, wood windows is most likely to be the "greener option" and a more sustainable building practice.

Research shows that most traditionally designed wood-frame buildings lose more heat through the roof and un-insulated walls than through the windows.¹ A historic wood window, properly maintained and fitted with a storm window, can be just as energy efficient as a new window.² Replacing a historic single-pane window also may not save you much money in the long run. While the exact figure will vary depending on the type of window installed and whether or not a storm window is used, studies have found that it could take 100 years or more for a replacement window to pay for itself in energy savings.³ According to information published in a recent *Old House Journal* article, it could take 240 years to recoup the cost of replacing a single-pane window-storm window combination with a low-e glass double-pane thermal replacement window.⁴ Also, a historic wood window can easily last more than 100 years, while a new window may not last 25.

Not every wood window can be repaired and there are situations where replacement is appropriate. However, many historic wood windows can and should be repaired, especially if the windows were manufactured before about 1940. Wood windows made before this



Historic windows are among the most important elements of a building. Simple repairs and routine maintenance coupled with storm windows make for energy efficiency that in most cases matches, if not exceeds, the efficiency of replacement windows. Workshops throughout the region have taught building owners easy ways to care for their historic windows. At the Woodlawn Museum in Ellsworth, ME, a grant from the National Trust for Historic Preservation helped fund a window repair workshop. Photo courtesy of the Woodlawn Museum

time were constructed with individual parts, each of which can be repaired or replaced. The wood itself is denser and of higher quality than what is grown today, and it is generally more rot- and warp-resistant than modern wood.

These are just some of the practical reasons to repair rather than replace historic wood windows. In addition, repairing the historic window helps maintain a building's authenticity. Once original material is removed from a building, it is gone forever. There are many more benefits to repairing your wood windows, so keep reading.

1. Rypkema (2006); James *et al* (1996); Klems (2002). 2. James *et al* (1996); Klems (2002). 3. Sedovic (2005); e.g. research by Keith Heberern, calculations available at www.historichomeworks.com/hhw/education/windowshandout/windowenergyanalysis.pdf. 4. "Let the Numbers Convince You: Do the Math." *Old House Journal* 35 no. 5 (September/October 2007).

Wood Window Basics

Using this 12-over-12, double-hung wood window as our example, here are the basic terms used for wood window parts. This window is called 12-over-12 because there are 12 panes of glass in each sash. Both sashes are moveable so it is called double-hung. If only the bottom sash moves, it is called single-hung.

Jamb (the wood that frames the window opening)

Top Sash (upper section of window, may slide down to open)

Meeting Rail or Check Rail (the rail where the two sash come together)

Bottom Sash (lower section of window, typically slides up to open)

Sill (exterior, horizontal piece at the bottom of the window frame, commonly wood, stone, or brick)

Stool (interior shelf-like board at the bottom of a window against which the bottom rail of the sash rests)



A c. 1846 wood window in the former Robbins and Lawrence Armory, now the American Precision Museum in Windsor, VT.

Rail (horizontal part of sash)

Stile (vertical part of sash)

Muntin (horizontal, vertical, diagonal, or curved pieces that frame and provide mounting surface for the lights) The shape, or profile, of the muntin provides a clue to the window's age.¹

Light/lite/pane (glass, held in place by glazing putty and metal glazing points)

1. Garvin (2002).

My Windows Are Old and Drafty, Why Shouldn't I Buy New Ones?

1. **More heat is typically lost through your roof and un-insulated walls than through your windows.** Adding just 3 and 1/2 inches of insulation in your attic can save more energy than replacing your windows.¹
2. **Replacement windows are called "replacement" for a reason.** Manufacturers often offer lifetime warranties for their windows. What they don't make clear is that 30% of the time, a replacement window will be replaced within 10 years.¹
3. **Replacement windows that contain vinyl or PVC are toxic to produce and create toxic by-products.** Installing these in your house is not a 'green' approach.²
4. **If your wood windows are 60 years old or older, chances are that the wood they are made of is old growth—dense and durable wood that is now scarce.** Even high-quality new wood windows, except for mahogany, won't last as long as historic wood windows.
5. **Studies have demonstrated that a historic wood window, properly maintained, weatherstripped and with a storm window, can be just as energy efficient as a new window.²**
6. **According to studies, it can take 240 years to recoup enough money in energy savings to pay back the cost of installing replacement windows.³**
7. **Each year, Americans demolish 200,000 buildings. That is 124 million tons of debris, or enough waste to construct a wall 30 feet high and 30 feet thick around the entire U.S. coastline.⁴** Every window that goes into the dump is adding to this problem.
8. **With a little bit of practice, it can be easy—and inexpensive—to repair and maintain your wood windows.⁵**
9. **Not a DIY-er? There are people near you who can do it for you. Hiring a skilled tradesperson to repair your windows fuels the local economy and provides jobs.¹**
10. **Historic wood windows are an important part of what gives your older building its character.**

1. Rypkema (2006). 2. Sedovic (2005). 3. e.g. Calculations by Keith Heberern available at www.historichomeworks.com/hhw/education/windowshandout/windowenergyanalysis.pdf. 4. Hadley (2006). 5. e.g. www.historichomeworks.com

Basic Maintenance

There are many good, practical books and magazine articles to guide a handy person in the basic maintenance of wood windows. Several publications are listed in the references section of this tip sheet. To get you started, here are some of the keys to many years—and generations—of life with older wood windows.

1. Keep the exterior surfaces painted, including the glazing putty. Paint protects the wood and putty from water and extends their service life. Be especially attentive to horizontal surfaces where water may collect.
2. Glazing putty will eventually dry out and is meant to be periodically replaced. You can do spot repairs initially, but eventually it will be easier to re-glaze the whole sash.
3. Keep movable surfaces, such as the inside jamb, free of paint build-up so that the sash can slide freely.
4. If your sashes are hung with cord, keep the rope free of paint. This will improve the window's operability. Cord will eventually dry out and break but can be replaced. When replacing the cord you can also re-hang the weights so that the sash will be balanced.

Winter Tips

Most of the heat transfer occurs around the perimeter of the sash rather than through the glass. So the tighter the seal around the window and between the upper and lower sash, the more energy efficient the window will be. Here are some tips to help you save on your heating bills.

Check the lock. Most people think the sash lock is primarily for security. It does help with security, but the lock's most important job is to

ensure that the meeting rails are held tightly together. A tight fit greatly reduces air infiltration.

Weather stripping—add it or renew it. Adding weather stripping to your window can increase the window's efficiency by as much as 50%. It's an inexpensive way to boost your window's efficiency. There are many different kinds from which to choose. Refer to the articles listed at the end of this tip sheet. The staff at your local hardware store should also be able to assist you.

Storm windows—use them! There are many styles from which to choose, including storms that can be fitted on the interior of the window. Many studies have shown that a wood window in good condition fitted with a storm window can be just as energy efficient as the more expensive replacement window. Due to the thermal exchange properties of wood, there is also a growing interest in traditional wood-framed storm windows as they transfer less heat than metal-framed storms.

Condensation. If you find condensation on the inside of your primary window, cold air leaking through the storm window is likely the culprit. If the condensation is forming on the inside surface of the storm window, warm air from the building interior is leaking in around the primary window. When warm and cold air are present on opposite sides of glass, condensation forms (think of a cold glass of lemonade on a hot day). When condensation forms on your window glass, water can collect on the horizontal wood parts of the rails, muntins, and sill, which can lead to paint failure and rot. To reduce condensation, you need to limit the amount of leaking air. Add or re-

place weather stripping, make sure the sash are meeting properly and that the sash lock is tight, and check the seal around the exterior of the storm window and caulk if necessary. When caulking around the perimeter of exterior storms it is important to leave weep holes at the bottom so that any condensation or infiltration that does occur can drain out.

What About Lead?

If your windows retain paint that was applied prior to 1978, chances are there is lead paint on them. Just because there may be lead paint on the windows does not mean they are unsafe or that they need to be replaced. There are steps you can take to protect yourself and others if you suspect lead paint may be present. **Before beginning work, consult your local or state ordinance to determine the legal method for handling and disposing of lead paint in your area.**

- Children and pregnant women should not be allowed in the work area.
- Do not smoke or eat or drink in the area you are working in and wash your hands and face before doing so.
- Wear disposable gloves and eye protection.
- Use a respirator if there is friable paint, or if you are scraping or sanding paint.
- Use a wet sanding technique to minimize dust.
- Vacuum using a HEPA filter.
- Wash your work clothes separately from your household laundry. You can also wear a tyvek suit to protect your clothes. Take it, and your shoes, off before you leave your work area.
- Place tarps under your work surface to collect loose paint. Seal off the work space from other rooms and from HVAC systems. Cover any furniture and other items in the work area with

(Continued on page 4)

Lead continued

- 6 mil plastic taped to the floor.
- Eating a nutritious diet rich in iron and calcium will reduce the amount of lead absorbed by your body if any does happen to be ingested.
- For more tips on how to work lead-safe, see "Lead Paint Safety: A Field Guide for Painting, Home Maintenance, and Renovation Work" available at www.hud.gov/offices/lead/training/LBPguide.pdf and the National Park Service Brief #37, "Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing" at www.nps.gov/history/hps/TPS/briefs/brief37.htm.
- John Leeke's website www.historichomeworks.com also has practical tips on lead-safer work practices.

References

This list is a place to start—it is not intended to be comprehensive, nor does the inclusion of a business or organization serve as an endorsement.

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Additional Help

With nearly half of greenhouse gas emissions attributed to the construction and operation of buildings, older and historic buildings are central to our efforts to address climate change. The **National Trust for Historic Preservation's Sustainability Initiative** promotes the reuse of existing buildings, reinvestment in existing communities, and green retrofit of older and historic buildings to help lower carbon emissions. For more information visit www.preservationnation.org.

Additional help may be available from your **State Historic Preservation Office** (SHPO). Find your SHPO at www.ncshpo.org/. Private **statewide and local preservation groups** serve as the network centers and representatives of local preservation activities within their states. The nine **Regional and Field Offices of the National Trust for Historic Preservation** (NTHP) bring the programs and services of the NTHP to preservationists within their regions. Find your nearest NTHP Regional Office and state and local preservation organizations at www.preservationnation.org/about-us/partners/statewide-local-partners/contacts.html