Appendix F Dr. and Mrs. Brent Moelleken – Full Letter

Appendices

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August 15, 2019

BY EMAIL

I4

Jerry L. Blum,
Countywide Plan Coordinator - Land Use Services Department
County of San Bernardino
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415

Re: Comments on Draft Environmental Impact Report

Dear Mr. Blum:

This letter is written on behalf of Dr. and Mrs. Brent Moelleken, owners of a property located in Lake Arrowhead, County of San Bernardino, California. The Moelleken's property is known as Shady Cove. Shady Cove is on the National Registry of Historic properties, and it is subject to an easement with restrictive covenants. The purpose of these comments is to provide evidence and request that the Draft Environmental Impact Report (DEIR) be supplemented with additional analysis of the impacts of the County of San Bernardino continuing to fail to adopt Mills Act ordinances to preserve its historic properties. I4-1

Along with this letter is a Dropbox link with supporting documentation. We would be happy to work with your team in supplementing the DEIR on these points. The Moellekens, along with many other organizations, are committed to ensuring that valuable historic resources are preserved given the aesthetic, environmental and economic benefits they confer on neighborhoods and, conversely, the negative impacts that ultimately occur when these structures deteriorate and/or are demolished.

The 2007 General Plan recognized the value of historic preservation and included aspiration goals for the County to adopt an ordinance pursuant to the Mills Act under which property owners are granted relief under the tax code based upon the contributions made by those owners to restore and to preserve the resource. Unfortunately, the Board of Supervisors has yet to adopt an ordinance to implement those goals. The current draft General Plan and DEIR similarly recognize the aspirational values of preservation but without analyzing the environmental and economic impacts if the Board of Supervisors fails to adopt an ordinance as the General Plan recommends.[1] Just as affirmative actions have impacts requiring evaluation and mitigation, so do "inactions" -- in this case, the absence of a I4-2

[1] Policies CR-2.1 and CR-2.2 found on page 5.5-30 of the Draft EIR.

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procedure at the County level (available in many of the incorporated San Bernardino cities) to encourage and to facilitate the preservation of historic resources.

I4-2 Cont'd

Further enclosed is a draft proposed Ordinance similar to that adopted by the County of San Diego in 2004, that serves as an excellent model for San Bernardino County. Staff in San Diego could also provide you with additional documentation and information concerning the net environmental and economic values of preservation.

HISTORIC BUILDINGS ARE A VALUABLE, EXISTING RESOURCE, THE LOSS OF WHICH IMPACTS THE ENVIRONMENT.

Aside from the aesthetic benefits, retaining a stock of historic properties and avoiding unnecessary demolition and replacement has several benefits to the environment. In a 2004 Brookings Institution report, demolishing and rebuilding properties requires vast amounts of energy and materials, both of which are increasingly in short supply. In addition, demolition and waste have profound adverse impacts on our landfills. For example, building-related construction and demolition debris constitute about two-thirds of all non-industrial solid waste generation in the United States with average building demolition yielding 155 pounds of waste per square foot while the average new construction project yields 3.9 pounds of waste per square foot of building area.[2]
San Bernardino County alone has approximately 75 structures on the National Historic Registry.[3]

I4-3

HISTORIC BUILDINGS TYPICALLY ARE MORE ENERGY EFFICIENT

Historic buildings are often incorrectly perceived as inefficient energy consumers. Rather, mounting evidence reaches different conclusions. For example, data from the U.S. Department of Energy (DOE) indicates that commercial buildings constructed before 1920 use less energy per square foot than buildings from any other decade up until 2000 (EIA, 2003). Many historic buildings were designed with passive systems before the invention of electric lighting and powered heating and cooling. As a result, these buildings were designed to take advantage of natural

I4-4

[2] Bernstein, Ken. "'Top Ten Myths' of Historic Preservation." *"Top Ten Myths" of Historic Preservation | Office of Historic Resources, City of Los Angeles*. City of Los Angeles Office of Historic Resources.https://preservation.lacity.org/resources/"top-ten-myths"-historic-preservation.

[3] "National Register of Historic Places - San Bernardino County." National Register of Historical Places - CALIFORNIA (CA), San Bernardino County, n.d. https://nationalregisterofhistoricplaces.com/ca/san bernardino/state.html.

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daylight, ventilation, and solar orientation—the very characteristics that are being used as "sustainable" design attributes today. In addition, historic structures often were constructed with traditional, durable materials such as concrete, wood, glass, and steel. When properties are properly maintained with the help of tax credits, these materials can have a much longer lifespan. In both residential and commercial buildings, energy consumption is dominated by space heating, venting, air conditioning (HVAC) and lighting (DOE, 2008). Buildings accounted for 72% of total U.S. electricity consumption in 2006 and it is predicted this number will rise to 75% by 2025. Fifty-one percent of that total was attributed to residential building use. In historic buildings - as well as new ones - using efficient technologies can reduce greenhouse gas emissions by reducing energy use.[4] I4-4 Cont'd

PRESERVING BUILDINGS ALLEVIATES CLIMATE CHANGE

In the United States, 43% of carbon emissions and 40% of total energy use is attributed to the construction and operation of buildings. The negative environmental impact of buildings is even more significant when taking into consideration the greenhouse gas emissions associated with manufacturing building materials and products. As a key element in sustainable development, the preservation, reuse and "greening" of existing historic buildings present excellent opportunities to reduce our nation's energy consumption and carbon emissions.[5] I4-5

The DEIR therefore should include in its mitigation measures for climate change the requirement that the County adopts a Mills Act ordinance to provide financial assistance through tax incentives to preserve structures and hence reduce greenhouse gases.

Finally, although economic considerations are not an element of CEQA analysis, numerous studies conclusively demonstrate that historic designation and the creation of historic districts or preserving historic properties like Shady Cove increases property values. Historic designation provides a neighborhood or an individual historic site a caché that sets it apart from ordinary properties, and many buyers desire the unique qualities and ambiance of a historic property. Historic designation also gives potential homebuyers two rare and economically valuable I4-6

[4] Bernstein, Ken. "'Top Ten Myths' of Historic Preservation." *"Top Ten Myths" of Historic Preservation | Office of Historic Resources, City of Los Angeles*. City of Los Angeles Office of Historic Resources.https://preservation.lacity.org/resources/"top-ten-myths"-historic-preservation.

[5] Merlino, Kathryn Rogers. "Report on Historic Preservation and Sustainability." *Report on Historic Preservation and Sustainability*. Washington State Department of Archeology and Historic Preservation, September 2011. https://dahp.wa.gov/sites/default/files/sustainability_SummaryReport.pdf.

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assurances: that the very qualities that attracted them to their neighborhood will actually endure over time, and that they can safely reinvest in sensitive improvements to their home without fear that their neighbor will undermine this investment with a new "monster home" or inappropriate new development. I4-6 Cont'd

Please incorporate it and the referenced documents in the Administrative Record for the County of San Bernardino General Plan Update and feel free to contact me if you have additional questions or would like more information. I4-7

Very truly yours,

Collin Walcker

Enclosures

https://www.dropbox.com/sh/trvhgp25yaj7cns/AAB_c_-DaugJNn3JGRf8ocoBa?dl=0

San Bernardino County Draft EIR

Bernstein, Ken. "'Top Ten Myths' of Historic Preservation."

National Register of Historic Places - San Bernardino County

Merlino, Kathryn Rogers. Report on Historic Preservation and Sustainability.

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Economic Benefits

- **Myth #2: "Historic designation will reduce my property values."**
    - Fact: Study after study across the nation has conclusively demonstrated that historic designation and the creation of historic districts actually increase property values. Why? In part, historic designation gives a neighborhood or an individual historic site a caché that sets it apart from ordinary properties. Many buyers seek out the unique qualities and ambiance of a historic property. Historic district designation gives potential homebuyers two rare and economically valuable assurances: that the very qualities that attracted them to their neighborhood will actually endure over time, and that they can safely reinvest in sensitive improvements to their home without fear that their neighbor will undermine this investment with a new "monster home "or inappropriate new development.
- **Myth #5: "Historic preservation is bad for business."**
    - Fact: Historic preservation is at the very heart of our nation's most vibrant economic development and business attraction programs. From Southern California examples such as Old Pasadena or San Diego's Gaslamp Quarter, to traditional, historic southern cities such as Charleston or Savannah, to the recent boom in "heritage tourism, "today's economic development strategies no longer see preservation and business development as competing values.

      The National Main Street Center, a program that uses historic preservation to revitalize town centers and neighborhood commercial districts, has actually tracked economic results in 1,700 Main Street communities nationally. These preservation-based programs have created over 231,000 new jobs and resulted in over $17 billion in reinvestment to date, with every dollar spent on a Main Street program yielding $40 in economic reinvestment.

- **"Live, Work & Play Downtown L.A.," LAEDC report, 2006, p. ii**
    - *There are 154 privately funded adaptive re-use and new construction projects [in downtown Los Angeles], with estimated total construction costs of $8.7 billion. The economic impacts generated by these projects include: about 124,000 annual FTE (full-time-equivalent) jobs; earnings of $5billion in wages and salaries; and $18.5 billion in total (direct and indirect) business revenues.*

- **California OHP, *California Statewide Historic Preservation Plan*, 2006, p. 37**
    - *The benefits of historic preservation are widely publicized in terms of aesthetics, cultural, and social impacts, however the economic benefits are less documented and publicized. The fact that preservation work can leverage significant amounts of private capital, create local jobs, and stimulate economic activities including heritage tourism provides a strong basis for support of existing and new incentives.*

- **Federal Historic Preservation Tax Incentives Program: Investment Tax Credits**
    - The Federal Historic Preservation Tax Incentives Program (commonly known as the Federal Rehabilitation Tax Credits), a partnership between the National Park Service and the Internal Revenue Service, in conjunction with State Historic Preservation Offices (SHPOs), encourages the preservation and substantial rehabilitation of income-producing

certified historic buildings (buildings listed on or formally determined eligible for the National Register) and older, non-historic buildings (those that do not meet the certification requirements). The credit applies to multifamily rentals and to commercial, agricultural, and industrial buildings but not to owner-occupied housing. There are two types of tax credits: (1) the 20 percent credit that provides an income tax credit equal to 20 percent of the certified rehabilitation expenditures for certified historic structures; and (2) a 10 percent credit that applies to the substantial rehabilitation of a nonresidential, non-historic building constructed before 1936. Tax credits are frequently layered with other incentives such as the Mills Act and the ARO. (Between 1998 and 2006, the program was used for nearly sixty projects in Los Angeles, stimulating approximately $500 million in rehabilitation work on historic commercial properties.)

The tax credit is especially attractive because qualified rehabilitation expenses can include planning and construction costs such as professional fees, rehabilitation of historical architectural features and structural components, intro- duction of new mechanical systems (e.g., elevators and escalators), and seismic retrofit expenses. Rehabilitation of historic structures of every period, size, style, and type has been put into motion. Among the projects that have employed Federal Rehabilitation Tax Credits are Hollywood's 1917 Mediterranean revival-style Hillview Apartments and downtown's Welton Becket-designed, mid-twentieth-century General Petroleum Company Building, which was converted into the Pegasus Apartments. Historic properties that have used the Federal Rehabilitation Tax Credits have been essential components in the revitalization of downtown, Hollywood, and other commercial areas.

Other state and federal tax credit programs, though not intended specifically for use with historic properties, can be successfully used in concert with the Federal Historic Preservation Tax Incentives in revitalizing and preserving historic structures. In a number of instances, the Federal Low-Income Housing Investment Tax Credit has been used in tandem with the Federal Rehabilitation Tax Credits to create affordable housing, as in the rehabilitation of the St. Andrews Bungalow Court in Hollywood and the Dunbar Hotel in South Los Angeles.

Environmental Benefits

- BUILDINGS CONSUME ENORMOUS AMOUNTS OF OUR RESOURCES.
    - In the United States, 43% of carbon emissions and 40% of total energy use is attributed to the construction and operation of buildings[2]. The environmental impact of buildings is even more significant when we take into consideration the greenhouse gas emissions associated with manufacturing building materials and products. As a key element in sustainable development, the preservation, reuse and "greening" of existing historic buildings present excellent opportunities to reduce our nation's energy consumption and carbon emissions.
- HISTORIC BUILDINGS ARE A VALUABLE, EXISTING RESOURCE.
    - A study conducted in 2004 by the Brookings Institution reported that if we continue with national trends of development, by 2030 we will have demolished and rebuilt nearly one-third of our entire building stock – a staggeringtotalof82billionsquarefeet.[3] The energy required to do so would power the entire state of California – 37 million people – for an entire decade. Demolishing and rebuilding takes vast amounts of energy and materials, both of which are increasingly in short supply. In addition ,demolition and waste have profound adverse impacts on our landfills. Building-related construction and demolition

(C&D) debris constitute about two-thirds of all non-industrial solid waste generation in the United States (US).[4] The average building demolition yields 155 pounds of waste per square foot while the average new construction project yields 3.9 pounds of waste per square foot of building area.[5] In Washington State, even with our 45% diversion rate into recycling, an estimated 1,383,998 tons of debris per year ends up in landfills, most of which comes from demolition and new construction projects. This averages an additional 2.2 pounds of garbage to our landfills per day per person in Washington.[6] When we reuse our historic buildings rather than replacing them, less debris ends up in our landfills and our environment is healthier.

- HISTORIC BUILDINGS CAN BE ENERGY EFFICIENT, TOO
    - Buildings accounted for 72% of total U.S. electricity consumption in 2006 and it is predicted this number will rise to 75% by 2025. Fifty one percent of that total was attributed to residential building use, while 49 % was a result of commercial building use.[10] Although historic buildings are often dismissed as inefficient energy consumers, mounting evidence reaches different conclusions. For example, data from the U.S. Department of Energy (DOE) indicates that commercial buildings constructed before 1920 actually use less energy per square foot than buildings from any other decade up until 2000 (EIA, 2003).
        - WHY?
            - Many historic buildings were designed with passive systems before the invention of electric lighting and powered heating and cooling. As a result, these buildings were designed to take advantage of natural daylight, ventilation, and solar orientation- the very characteristics that are being used as “sustainable” design attributes today. In addition, historic structures often were constructed with traditional, durable materials such as concrete, wood, glass and steel. When properly maintained these materials can have a much longer lifespan. In both residential and commercial buildings, energy consumption is dominated by space heating, venting, air conditioning (HVAC) and lighting (DOE, 2008). In historic buildings - as well as new ones - using efficient technologies can reduce greenhouse gas emissions by reducing energy use.

Measuring Economic Impacts *of* Historic Preservation

A report to the Advisory Council on Historic Preservation
by PlaceEconomics

PRESERVE AMERICA
Explore and Enjoy Our Heritage

Measuring Economic Impacts *of* Historic Preservation

A report to the Advisory Council on Historic Preservation by PlaceEconomics

November 2011
(Second ed. September 2013)

Donovan R. Rypkema and Caroline Cheong
PlaceEconomics
Washington, DC
and
Randall F. Mason, PhD
School of Design, Historic Preservation Program
University of Pennsylvania

Preserving America's Heritage

An independent federal agency, the Advisory Council on Historic Preservation (ACHP) promotes the preservation, enhancement, and sustainable use of our nation's diverse historic resources and advises the President and Congress on national historic preservation policy. It also provides a forum for influencing federal activities, programs, and policies that affect historic properties. In addition, the ACHP has a key role in carrying out the Preserve America program.

Milford Wayne Donaldson, FAIA, of Sacramento, California, is chairman of the 23-member ACHP, which is served by a professional staff in Washington, D.C. For more information about the ACHP, contact:

Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, NW
Suite 803
Washington, DC 20004
Phone: 202-606-8503
Web site: www.achp.gov and www.preserveamerica.gov

Explore and Enjoy Our Heritage

Front cover photography:
Historic downtown Rutland, Vermont

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ACKNOWLEDGEMENTS

The Advisory Council on Historic Preservation (ACHP) wishes to extend its appreciation and thanks to the Department of Commerce, Economic Development Administration (EDA) for providing funding for this study. The report responds in part to Presidential Executive Order 13287, "Preserve America," which directed the Secretary of Commerce "working with the Council and other agencies" to "assist States, Indian tribes, and local communities in promoting the use of historic properties for heritage tourism and related economic development in a manner that contributes to the long-term preservation and productive use of those properties" (E.O. 13287, March 5, 2003, Sec. 5). The report also follows a specific recommendation for a methodological study that came out of the Preserve America Summit held in New Orleans, Louisiana, in October 2006 as part of the commemoration of the 40th anniversary of the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq., as amended).

In addition to other individuals named in the report, we also wish to single out the following persons who actively participated in the research, writing, review, and production of this report:

Donovan R. Rypkema, Principal, PlaceEconomics (principal investigator and principal author)

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EXECUTIVE SUMMARY

BACKGROUND

This study, commissioned by the Advisory Council on Historic Preservation (ACHP), seeks to identify a finite number of indicators that can be used to regularly, consistently, meaningfully, and credibly measure the economic impact of historic preservation over time.

This interest in the economic aspects of historic preservation is a reflection of how the preservation movement has evolved. The historic preservation movement began in the United States a century and a half ago. Many of the philosophical and legal approaches to preservation in America were taken from countries in Western Europe. But over the last 150 years American historic preservation has responded to the particular American political and economic context.

Today historic preservation is a complex matrix of laws, incentives, policies, and advocacy groups at the national, state, and local level. There is active participation from the public, private, and non-profit sectors. This network of interests spans geographical, political, social, and economic perspectives.

Downtown Kissimee, Florida

More importantly, however, historic preservation has become a fundamental tool for strengthening American communities. It has proven to be an effective tool for a wide range of public goals including small business incubation, affordable housing, sustainable development, neighborhood stabilization, center city revitalization, job creation, promotion of the arts and culture, small town renewal, heritage tourism, economic development, and others.

It was to better understand the economic roles and impact of historic preservation that this study was commissioned.

THE STUDY

In meeting the goals for this study five specific steps were taken:

1. An extensive literature review of the preservation/economics link was undertaken to understand what has been measured, by whom, how, and what have been the general findings.
2. Interviews were conducted among knowledgeable parties in the public, private, and non-profit sectors. Interviewees were selected based on two criteria:
   a. their knowledge, expertise, and/or experience in historic preservation
   b. the likelihood that they would be potential users of historic preservation economic data if it were available.

3. An international symposium was held to better understand the current best practices in preservation economics analysis and to receive recommendations from scholars and practitioners in the field.
4. Interim briefings and updates were provided to the Advisory Council on Historic Preservation for comments and suggestions.
5. The final report and two related documents – a brief "popular report" and a PowerPoint presentation were prepared and delivered to the ACHP.

FINDINGS

Based on the lessons learned from existing studies and publications, interviews, and a symposium convened at the University of Pennsylvania School of Design in February 2011, seven conclusions were reached:

1. Various aspects of historic preservation have substantial economic benefits as well as economic costs. While many may argue that the benefits to society, both financial and otherwise, outweigh the costs, the relationship between preservation and the economy as well as overall societal benefit remains imperfectly understood and only partially documented.
2. Research into the relationship between economics and historic preservation is critically needed.
3. There are multiple constituencies for this information, many of whom need the data and information presented in different forms.
4. Information must be consistent and credible, and its collection and dissemination ongoing.
5. While the research and methodologies require scholarly robustness, the information needs to be presented in non-academic terms.
6. While government needs to play an important role in data collection, analysis, and dissemination, it will probably be necessary for a number of private as well as public institutions to gather and evaluate the data.
7. However, there will need to be one entity that is responsible for annually releasing relevant metrics on a predictable basis.

RECOMMENDATIONS

The table on page 14 summarizes the recommendations for what should be measured including Jobs/Household Income, Property Values, Heritage Tourism, Environmental Measurements, and Downtown Revitalization. It also suggests why it should be measured, suggested methodology, and the reason the current approaches are in inadequate.

This study was commissioned in order to: 1) understand what has been learned to date about the nexus of historic preservation and economics; 2) learn what

specific information would be most valuable to preservation advocates and how that information would be used; and 3) receive recommendations on specifically what should be measured and by whom.

It was also expected, however, that the report would identify the next steps that should be taken in order to reach the goal of regularly, consistently, meaningfully, and credibly measuring the economic impact of historic preservation over time.

1. **Identify and reach agreement with responsible parties to undertake the ongoing research and data collection for each of the recommended indicators.**
   Because of the diverse nature of the proposed research as well as costs and other issues, it is recommended that there be a collaboration of several entities each committed to conducting a portion of this research. Among these research partners might be: ACHP, National Park Service, Department of Commerce, General Services Administration, Department of Defense, National Trust for Historic Preservation, the nascent Ellis Island Preservation Resource Center, and universities including Rutgers, the University of Pennsylvania, the University of Maryland, and others.

2. **In conjunction with the responsible parties, create a long-term research, evaluation and reporting plan.**
   At the outset, the research partners will need to reach agreement as to: (1) who will conduct which research; (2) how and when will that research be provided; (3) who will aggregate the individual research projects into a single report; and (4) how and when will the results of the research be published and distributed.

3. **Establish baseline(s) for each of the recommended indicators.**
   As it is the hope that the recommended research will be conducted and released annually, there will need to be a base established against which change is measured. As the first step in each research component, the responsible research partner should identify what that base will be and how the data that constitutes that base will be acquired.

4. **Work with the identified parties to systematize data collection.**
   While it will be important that the reports of the research are written in such a fashion as to be understandable by a non-technical audience, the methodologies and research approaches utilized will need to be both transparent and defensible under scholarly scrutiny. Each participating research entity should, therefore, identify a data collection and analysis procedure that is academically robust and replicable from year to year.

Historic preservation will not reach its optimum potential to contribute to the American economy or American society without such research being done.

INTRODUCTION

The historic preservation movement in the United States began with a focus on protecting and restoring individual monuments of national importance. By the time the National Historic Preservation Act (NHPA) was passed in 1966, however, the range of what constituted "heritage" and the purposes that protecting that heritage advanced had widened considerably. The NHPA specifically noted that:

> *…the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people;*

and further that:

> *…the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans.*[1]

As in most countries, the beginning of the historic preservation movement in America focused on the preservation of individual monuments. In the case of the United States the beginning of historic preservation is usually identified as the efforts in 1853 of Ann Pamela Cunningham to acquire and preserve Mount Vernon, the home of the first president, George Washington.

Just over 50 years later the federal government first became involved with the passage of the Federal Antiquities Act in 1906. The act was passed in part because of concern

Town green in Keene, New Hampshire

1 National Historic Preservation Act of 1966 as amended, Section 1(b)

about plundering of Native American sites in the southwest United States. This law was largely confined to federal lands. It authorized the President to declare areas within federal ownership as National Monuments and prohibited the excavation, destruction or appropriation of antiquities on federal lands without a permit.

In the 1920s and 1930s two American cities – Charleston, South Carolina and New Orleans, Louisiana – each adopted what are now known as historic district commissions to protect neighborhoods of historic houses.

These events represent the ongoing evolution of historic preservation in the United States – from monument to archeology to neighborhood. That evolution continues. Today "historic preservation" means attention to cultural landscapes, the role of historic buildings in comprehensive sustainable development, downtown revitalization, heritage tourism, the contribution of historic sites, trails, and corridors to outdoor recreation, and – the focus of this report – economic development.

The structure and focus of today's historic preservation was codified with the passage of the National Historic Preservation Act in 1966. To celebrate 40 years of progress in historic preservation throughout the country under the National Historic Preservation Act and to look forward to its milestone 50th anniversary in 2016, the ACHP convened the Preserve America Summit in New Orleans in October 2006. Keynoted by then-First Lady Laura Bush, serving as the Honorary Chair of Preserve America, the Summit brought together a wide range of individuals, organizations, and agencies that are committed to promoting historic preservation and its benefits. The Summit resulted in a number of ideas for improving the national historic preservation program and its integration with other important public priorities, including economic and community development.

One of the recommendations emerging from that Summit was to:

> *Measure and share preservation's benefits by developing consistent ways to measure direct and indirect impacts (particularly economic) and by pursuing and promoting necessary research.*

It was as an outgrowth of that recommendation that the ACHP commissioned the analysis of which this document is the final report. Specifically the purpose of this effort was identified as follows:

> *The Advisory Council on Historic Preservation (ACHP) is seeking proposals for conducting research on the most effective methods for quantifying and measuring the economic impacts of historic preservation, including both local impacts (e.g., property rehabilitation, job creation, property values, tax incentives, and investment) and regional impacts (e.g., spending from heritage tourism). The ACHP is particularly interested in the best means for measuring and expressing local and regional economic sustainability through the preservation and use of historic assets; the creation of economic base jobs and infrastructure investment; the ripple effect of historic preservation and*

heritage tourism through local, statewide, and regional economies; and any indicators of potential success (including leveraging) in future historic preservation investment.

The economic development consulting firm *PlaceEconomics* in conjunction with the graduate program in Historic Preservation at the University of Pennsylvania was selected to undertake this analysis. Between November 2010 and May 2011 the following steps were undertaken to respond to the requirements of the assignment:

1. A literature review was conducted of the analyses, academic papers, impact studies, and other documents that have been completed on the topic and in related fields since the release of the comprehensive literature review completed by Dr. Randall Mason and the Brookings Institution in 2005 entitled *The Economics of Historic Preservation*. http://www.brookings.edu/reports/2005/09metropolitanpolicy_mason.aspx (See Appendix D)
2. All of those economic impact studies of historic preservation were collected, and the areas included in the research and the methodologies used were identified. All studies completed and released subsequent to 2005 were included if the primary focus of the report was on the economic impact of historic preservation. Studies that were primarily tourism studies, for example, but only addressed historic preservation in passing and/or not in a quantifiable manner were not included.
3. An international symposium on the economics of historic preservation was held at the University of Pennsylvania to help inform the analysis and offer insights into fruitful approaches.

Historic car "Cruise Night" in Lemoine, Illinois

4. A series of interviews was conducted with persons in federal agencies, state agencies, the national education/advocacy preservation community and the private sector. The purpose of the interviews was to gain an understanding of the importance of research on the economics of historic preservation and the types of data the interviewee thought might be valuable based on his or her particular experience or insight. Interviewees offered comments and critiques of existing analysis with which the interviewee was familiar and suggestions as to types of methodologies that might be useful in future preservation economic research. Discussions also elicited the ways such research might be used in the future and the desired target audience(s) for this information from each interviewee's perspective.
5. Interim presentations were made to ACHP members and staff to allow comments, suggestions, and interactions prior to the preparation of the final report.
6. Based on all of the above, the consultant team tried to answer the following questions:
    a. What indicators of economic activity are currently being measured as resulting from historic preservation?
    b. What are the methodologies that are being used in each area?
    c. Are the methodologies being used robust, credible, and understandable by ultimate users of the information?
    d. What are the economic measures that should be evaluated?
    e. What are the recommended methodologies for those areas?
    f. Who might be responsible for the collection and analysis of the data in each area?

Based on that construct for this report, the consultant team simplified the assignment as follows:

Identify a finite number of indicators that can be used to regularly, consistently, meaningfully, and credibly measure the economic impact of historic preservation over time.

The report that follows is meant to fulfill that assignment.

INTERVIEWS

In December 2010 and January 2011, we conducted interviews with the persons listed below in order to ascertain the existing perceptions of economic impact analysis within the broader governmental and historic preservation community. Interviewees were selected from the public, non-profit, and private sectors, and each had experience, expertise, or direct responsibilities in historic preservation and had either knowledge about or had utilized historic preservation economic analyses. Participants were asked for their opinions of extant data and methodologies and what, if any, data and methodology they thought would be useful in the future.

PERSONS INTERVIEWED FOR THIS REPORT

Caroline Alderson	General Services Administration
Serena Bellew	Department of Defense, Strategic Environmental Research and Development Program (Deputy Federal Preservation Officer)
David Brown	National Trust for Historic Preservation (Executive Vice President)
Francisco Carillo	Department of the Interior
Sarah Cline	Department of the Interior, Office of Policy Analysis
Jim Galvin	Department of Defense, Strategic Environmental Research and Development Program
Frank Giblin	General Services Administration
Peter Grigelis	Department of the Interior, Office of Policy Analysis
Erik M. Hein	Preservation Action
John Leith-Tetrault	National Trust for Historic Preservation, Community Investment Development Corporation
Jeffrey Jensen	General Services Administration
Jennifer Martin	Center for Resource Solutions (Environmental Planner/Economist)
Ruth Pierpont	Deputy State Historic Preservation Officer, New York
Paul Neidinger	Architect
Constance W. Ramirez	National Park Service, Federal Preservation Institute
Douglass Reed	Preservation Associates (Cost Estimator)
Dorothy Robyn	Former Deputy Undersecretary of Defense, Installations & Environment
Beth Savage	General Services Administration, Office of the Chief Architect (Federal Preservation Officer)
David Shiver	Bay Area Economics
Benjamin Simon	Department of the Interior, Office of Policy Analysis (Economist)
Rhonda Sincavage	National Trust for Historic Preservation, Office of Policy
Pat Sparks	Sparks Engineering
Al Tetrault	Tetrault & Associates
John Sprinkle	National Park Service, Federal Preservation Institute
Richard Waldbauer	National Park Service, Federal Preservation Institute
Amy Webb	National Trust for Historic Preservation
Cherilyn Widell	Seraph LLC

FINDINGS AND ISSUES FROM THE INTERVIEWS

During our discussions, several themes emerged. These include but are not limited to:

1. **The importance.** There has been substantial if not universal agreement on the need for quantifiable metrics on the economic impact of historic preservation. One interviewee said the need was for information that was usable, sustainable, and annualizable. Whether or not it was possible to obtain information on an annual basis, it certainly should be available on a regular and systematic basis.

2. **The audience.** It has become very clear that there is not just one "audience" for this information. Among the target audiences identified have been: Congress, the President, the Office of Management and Budget, colleagues within a Cabinet department, other Cabinet departments, senior political appointees, state legislators, local public officials, preservation advocates, and the general public. Certainly what each of these groups would do with the information and how it should be articulated and presented for that group would vary considerably.

Christmas parade in Virginia Hunt Country, Middleburg, Virginia

3. **The methodology, clarity, and transparency.** A number of observations were received regarding methodology, some of them mutually contradictory:

   a. The need for further, detailed explanation of a study's methodology and approach, highlighting a need for transparency and clarity in assessments (this comment came primarily from economists or academics who felt that a study's validity lay in understanding the methodology).

   b. In contrast, several interviewees stated a strong preference for simply presented facts absent of detailed explanations of methodology and details, emphasizing approachability and easy comprehension.

   c. Methodologies are not universal – while there is an acknowledged need to identify key measurables or values, local context and factors must be taken into account.

   d. Measurements on a state, regional, town or Congressional district level would be useful.

   e. However, there is an acknowledged need for standardized measurables across reports so that data can be more easily compared and analyzed, particularly over longer periods of time. Currently it is difficult to aggregate or even compare data from one report to another, as they are commissioned by different clients at different times using different researchers. Having a standardized model or set of measurables also contributes to the overall validity of such economic impact assessments.

   f. Methodologies (software or other reporting/data collection and analysis mechanism) need to be accessible and usable ("simple") for those collecting and analyzing data.

   g. Data collection, in terms of type and objectivity of data, frequency of collection, and who collects it and where it is collected, needs to be improved. This also raises a funding issue.

   h. The economic impact of historic preservation regulations and/or local zoning with preservation implications on property values is a necessary measurable.

   i. Data in general needs to be more readily available and shared among states.

4. **Broader definition of *economic*.** There has been agreement that clearly economic data such as property values and job creation is important. However, there is widespread and growing consensus that also important are the "economics once removed"

data, particularly on the environmental side. Reliable and defensible data on factors such as landfill impact, embodied energy, reuse of infrastructure, life cycle costing, et al, are seen as critical. It was noted that in spite of a federal mandate to agencies to reduce their carbon footprint and the emphasis on sustainable buildings, the data that would include the attributes of a building already in existence are not currently included in the calculus.

DETAILED SUMMARY OF INTERVIEWS

The following are comments received from the interviewees. In writing this it was decided that a range of opinions would be represented in summarizing the key points, recognizing that there are occasionally contradictory comments. In several instances the authors of the report do not necessarily concur with the interviewee's response, but this section is intended to reflect the varied opinions of other experts in historic preservation and/or economic analysis.

KEY POINTS

- Some respondents had heard from colleagues that, while the data collected and presented by historic preservation organizations was appreciated, it was biased because it came from the preservation field. Therefore, there is a need for data that is collected and analyzed by an independent institution, perhaps an academic one. However, others felt that this issue of impartiality is not as important because the developers and local officials with whom some officials work do not focus on the study's author.
- Data, methodology and subsequent studies need to be accessible and understandable in cost, collection and analysis for local and state officials and preferably not require a third-party analyst. They also need to have longer relevance and applicability beyond just the initial data collection or study years. Methodologies in particular should be stand-alone and accessible for annual updates. Ideally, the historic preservation field would have an official model, endorsed by the National Trust for Historic Preservation, the National Park Service, the ACHP, and academic institutions, with funding behind it so that it can be updated annually. This model should be available and usable by anyone – metrics should be simple and applicable to states, regions, tribes, and communities of different sizes.
- One respondent said that the majority of preservation-related studies the person had seen have been environmental impact assessments that fail to convey the net economic benefits that may accrue from preservation. This raises questions regarding the investment costs of tax credits, and the return on investment (ROI). Many studies discuss the impacts, but not the benefits.
- States are increasingly looking at the impact of federal, state and local tax credits on their overall budgets.

- Data is lacking – there is a need for primary research.
- Most of the studies currently produced are tenuous. Models are too hypothetical and all different. However, there cannot be one model for the whole industry as historic places need to be considered within their context. Models need to reflect that.
- Many felt that the federal government is not currently using existing tools to their fullest capabilities. For example, applications for receiving the federal tax credit require both the building's square footage and the amount spent. But the National Park Service does not make the relatively simply calculation – rehabilitation cost per square foot. Since historic preservation is often accused of being excessively expensive, a report showing the range of projects costs could be a simple but exceedingly useful annual calculation.
- In spite of labor intensity, historic preservation seems to have weak support among labor unions.
- Data, methodologies, and studies need to show not only what is happening at the national and state level, but also, and perhaps most importantly, at the local level.

INTERVIEWEE COMMENTS ON DATA

- Data should focus on jobs created, how private investment is leveraged, how incentives like the federal tax credit generate more benefits and revenue than they cost in lost tax revenues. (A good example comes from Michigan where a study was conducted that compared the economic impact of the Community Rehabilitation and Reinvestment Act with that of the Homeowner's Tax Credit.) A community needs baseline data to use through the ups and downs of social and economic cycles. This data should be as geographically specific as possible, as legislators want to know what is happening in their district. However, the localized data also should be amenable to aggregation so that broader trends can be seen across states or nationally.
  - Data could perhaps connect census data and property values. In measuring property values, the quality of school districts could be used as a control to isolate the impact of historic district designation. Transactional data is more reliable than census data, so including market transactions would help but probably not be sufficient on its own.
  - Data needs to indicate who is getting the jobs that are created and filter them through demographic categories such as income and industry. It also needs to track, for example, what happens in a historic commercial building after a rehabilitation project is completed. For example, jobs data needs to help people articulate the direct, indirect, and induced impacts of these jobs, particularly to legislators, with geographic specificity. This data should also emphasize the fact that historic preservation jobs often require advanced skills and pay higher wages. Union involvement should be explored.

- Data collection needs to be improved. This process could be built into the model. Collection needs to begin at census tract and congressional district levels.
  - Some thought that data collection should start with tax credits, and then look at buildings that are more than 50 years old. This could pull from data collected by the American Institute of Architects and Urban Land Institute in addition to the National Park Service and the State Historic Preservation Offices.
- Data can also highlight the relationship between the National Register of Historic Places, tax credits, and poverty.
- Data on the economic impact of heritage tourism is not readily available, in part because it is not separable from other tourism industry, public lands, or outdoor recreation data. Data that is available is collected with different baselines and methodologies.
- Tourism professionals want data that identifies the big numbers (i.e. "heads in beds," lodging and entertainment tax revenues) and for marketing purposes. Key questions are: How much do heritage travelers spend compared to other tourists? Do they stay longer? How many heritage travelers are there and what are their characteristics?
  - The definition of a "heritage site" is changing to include "attractions" beyond museums or commercial properties that charge admission. Currently, these sites are not well-accounted for in heritage tourism data in a regular way.
- Perhaps data could be approached by looking at it in terms of the future – "what are our unmet needs? What kinds of economic activity would we have generated if we were fully funded over X years? How does this relate to broader trends such as Baby Boomer retirement and leisure travel, or climate change?"

INTERVIEWEE COMMENTS ON METHODOLOGY

- A methodology needs to be stand-alone and accessible for annual updates. It should also have longevity so that what is tracked now can be used for comparative purposes in 25 years, just as weather records are tracked. However, state and local partners are not currently equipped to measure economic impacts in such a format. Nonetheless, the methodology needs to:
  - account for degrees of historic preservation, from complete preservation and restoration to demolition and interpretation of vacant sites
  - allow for dollar-for-dollar comparisons across industries
  - be accessible and approachable so that advocates can find data easily
  - be quick to produce so that data can be readily available and not require the contracting of a third-party to either collect or process data
  - be simple to gather and not just an academic tool, standardized and official (which would require a steady funding source and perhaps the credibility of a university)

- Collection and methodology needs to be standardized so that information is regular and comparable.
- End audience is: local officials, legislators, politicians, private foundations and funders. Local governments are most important.
- Case studies need to be developed and shared so that their lessons can be applied locally and successful strategies replicated.

INTERVIEWEE COMMENTS ON FURTHER STUDY

- A compelling study of any particular measure needs to lay out the benefits, costs, who receives the benefits, who pays the costs and how. There needs to be a systematic technique or model that is transparent in its methodology.
- Studies need to present data and analysis in the context of broader issues such as community vitality, quality of life and environmental sustainability. The economic data is important, but studies should be careful not to be too detailed and confusing – they need to be approachable by and understandable to the average reader.
- For historic rehabilitation, a study needs to measure the impact of a project after it is serviced, not just at the beginning and end of the construction period. Individuals look at the benefits demonstrated in studies in the short-term, while a community takes a longer-term perspective. However, there is difficulty in generalizing from anecdotal evidence, or from general assertions about the tourism potential of a historic resource.
  - There are currently too many caveats in existing analyses and methodologies.
- Any study must demonstrate a positive cost-benefit: that the cost to protect and use the historic site or resource is equal to or less than the value of the protected object to society. If it is not, then protection may not be in the public interest.
- Some respondents would like to see a study that analyzes the connection between the costs and benefits of preservation based on ultimate property values and return on investment from tax credits.

INTERVIEWEE COMMENTS ON THE FEDERAL REHABILITATION TAX INCENTIVE

- Currently, two-thirds of approved projects for the federal tax credit are in low-income areas. This could be a new target area for a credit
  - The current format for analyzing the impact of federal tax credits differentiates between money spent on new construction and rehabilitation of existing structures. More data is needed on the pluses and minuses of the credit – what costs are included in the listed costs? Where are the real savings from using extant buildings and how are they quantified?

- In order to analyze the relationship between the Federal Rehabilitation Tax Incentive and low-income areas, applications should ask for census tract and congressional district. Additionally, every time a Part 3[2] is approved a letter could be sent to the congressional representative. This would increase the credit's visibility and benefits.
- Some respondents would use the data to lobby for federal tax credit support, including expanding the use of tax credits to non-commercial properties.
- Data should consider the tax base's impact on the provision of the credit, as the cost of administering the credit is scaled. It also needs to consider the size of the credit market – there is a threshold issue with the tax credits in looking at the size of the market below $1.
- Modeling of tax credit and investment trends at a local and regional level would be very useful.
- Data regarding Federal Rehabilitation Tax Credits needs to dig deeper into the impacts of money spent on extant structures.

2 "Part 3" refers to the form submitted to the National Park Service after completion of a historic rehabilitation project. It is on the approval of a Part 3 that a property owner is entitled to take the federal tax credit.

SYMPOSIUM

As part of the research project, a one-day symposium was convened at the University of Pennsylvania's School of Design on February 8, 2011. The goal of the symposium was to lend additional depth to the team's exploration of best practice in conceptualization and measurement of the economic values of historic preservation.

The symposium framed possibilities for applying economic methods to practical, policy, and political problems encountered in historic preservation—as opposed to regarding economic studies as ends in themselves. The goal was to bridge academic research and practical application; to match the needs of advocacy and policy workers with the capabilities of academic (particularly economic) researchers.

Historic rehabilitation project of the Philtower in downtown Tulsa, Oklahoma

Keynote presentations were made by Drs. Guido Licciardi of the World Bank and Christian Ost of the ICHEC Brussels Management School, followed by commentary and responses from Erica Avrami of the World Monuments Fund, Dr. Jeff Adams of Beloit College, and Dr. David Listokin of Rutgers University. The symposium highlighted the following points, among many others:

- Economic studies set up decisions but they do not make the decisions. The results of studies are used—or ignored—in the context of "political will," perceptions of political gain or risk, and the political economy of government action and/or investor profit motive.
- It is a danger to focus too narrowly on economic values. Studies of economic value should contextualize this among the other values of historic preservation (cultural, aesthetic, etc.)
- There is a lack of serious evaluation work, using accepted econometric methodologies, in the historic preservation field.
- Preservation consists of both private goods and public goods; this "mixed" nature yields both confusion and opportunity when it comes to choice of methods to evaluate and measure economic impacts.
- We tend to understand "economic benefits" in a single-time snapshot, static way that is too narrow. Historic preservation yields "process" benefits as well, such as community cohesion, social capital, etc., that are not captured by looking just at property values. Our tools need to be matched to the whole spectrum of benefits we wish to measure.

A more complete report on the symposium is found in Appendix A.

CURRENT DATA, METHODOLOGIES, AND PROGRAMS

Over the last 15 years a number of studies have been undertaken to measure the economic impact of historic preservation. Most of these have been done on a statewide basis. While there are variations among the studies, included in nearly all of them is an effort to measure that impact in four areas: the creation of jobs and household income from the rehabilitation process itself; the impact of heritage tourism; the impact on property values stemming from the protections of a local historic district; and economic development indicators from preservation-based downtown revitalization programs such as *Main Street*.

Less common, but included in some statewide studies are: 1) environmental impacts of historic preservation; 2) analysis of the effectiveness of state tax credit and grant programs; 3) the role of historic preservation in providing affordable housing; and 4) such environmental/social measurements such as walkability.

Despite these commonalities, there is no standard template of indicators or methodology to guide those conducting historic preservation economic impact assessments. However, the resultant diversity in approaches and methodology should not be considered detrimental to measurement efforts, as preservation economics is still an emerging discipline and this variety currently serves to further develop and enhance the field.

MISSING THE QUALITATIVE SIDE

While existing studies have provided valuable information on the quantitative side, many of the positive impacts still go unmeasured. Historic preservation yields both private and public goods. In economic terms this means that the benefits flowing from these goods include those traded in markets (by definition the private) and those provided outside of markets (by definition the public; provided by government agencies or philanthropic organizations). While some of the approaches discussed below capture private/market values well; qualitative methods are warranted as a complement to quantitative econometrics because the public goods are poorly understood in terms of price. It follows that some combination of qualitative and quantitative methods are appropriate to the two-fold task of, first, capturing the full range of economic and noneconomic values in measurements; and secondly, mitigating against the isolation of just a few values and privileging private values by overemphasizing quantitative, econometric measures.

Without casting doubt on the insights to be gained from econometric studies of historic preservation, qualitative methods have particular contributions to make to heritage economics as a complement to quantitative studies. While specific qualitative measurements are not among the five specific indicators recommended in this report,

Restoration at Monocacy National Battlefield, Maryland (photo courtesy National Park Service)

suggestions of this type of research that might be carried out independently or in the future are discussed at length in Appendix D.

Below is discussed each of the areas of research that has been included in existing studies, including a brief description of what is measured and the methodology used and the strengths and weaknesses of each approach.

JOBS AND HOUSEHOLD INCOME

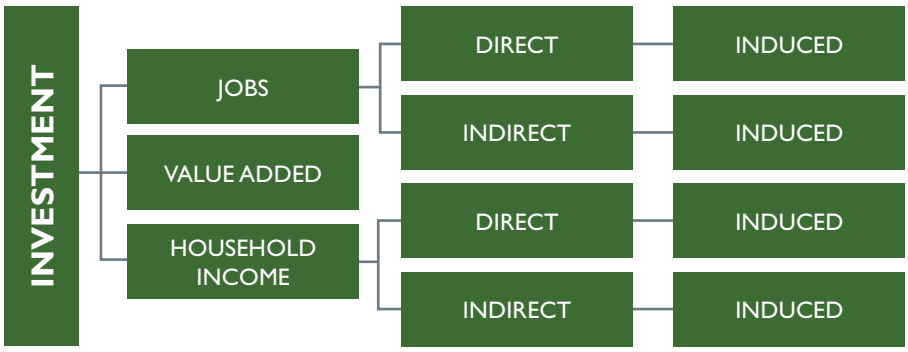
The most frequently cited indicator of the economic impact of historic preservation is the number of jobs and amount of household income created through the process of rehabilitating a historic building. This measurement is included in nearly every analysis for a number of reasons. First, data on private investment is generally readily available as owners and investors must report their expenditures to be eligible for federal and state tax credits. Second, widely recognized and accepted methodologies are available to translate investment into numbers of jobs and amount of household income. Finally, local elected officials, economic development proponents, and taxing jurisdictions are all eager to discover local economic activity that generates jobs.

Table 1: Recommended Economic Measures for Historic Preservation

MEASUREMENT	PURPOSE	METHODOLOGY	WHY NEW APPROACH IS NEEDED
Jobs/Household Income	Quantify job creation and income generated by historic rehabilitation activity or other preservation-related employment	Input-Output Multipliers (RIMS, ImPlan, etc.)	• Only done sporadically on statewide levels • Generally only includes projects that are receiving tax credits; • Does not take fullest advantage of data that could be retrieved from NPS, Commerce, Labor, and GSA reports • Need to distinguish permanent full-time vs. seasonal or part-time short duration employment
Property Values	Demonstrate impact on property values of being within local historic district	Measurement of year- to-year value change relative to local market in general; Will require selection of representative communities and annual testing by national real estate data firm.	• Research is done irregularly and only on local or sample communities within a state. • No national data. • Measurement approaches vary widely. • Recent regional and local market fluctuations skew picture and may create difficulties for baseline
Heritage Tourism	Quantify absolute economic impact of heritage tourism and incremental impact relative to other forms of tourism	1. Establish definition of "heritage tourism" 2. Incorporate 2-3 questions that will more clearly identify heritage tourists into existing regular tourism surveys 3. Based on surveys quantify absolute `and relative contribution of heritage tourism over time.	• No clear definition of "heritage tourist" or focus of "heritage tourism" visits • Specific research on heritage tourism impact irregular and rarely on national level. • No way to track on an annual basis if heritage tourism is growing, shrinking, changing, etc., especially since visitation lumped with other travel and recreation
Environmental Measurements	Demonstrate the contribution of historic preservation to broader "sustainable development," "Smart Growth," "energy conservation," and environmentally-sensitive or "green" community planning	Develop 2-3 standard measurables that might include: 1) infrastructure costs savings from historic rehabilitation; 2) embodied energy of rehabilitated buildings; 3) greenfields not developed because of historic preservation activity	• No standard definitions or approaches for measuring historic preservation/environment relationship • No national data • Weak understanding among environmentalists, preservationists, and general public of link
Downtown Revitalization	Understand the role of historic preservation and downtown, commercial district revitalization.	Expand and supplement existing aggregated data collected by the National Main Street Center. Commission regular academic analysis of comparative and non-Main Street approaches to revitalization and how historic resources are incorporated or used in the process.	• Main Street data as currently gathered while useful, does not meet the standards of robust, defensible research. • There is no ongoing measurement of preservation-based commercial revitalization not affiliated with Main Street, except in limited ways through CDBG • There is no comparison of what is happening in Main Street communities and similar non-Main Street communities.

WHAT IS MEASURED?

Based on dollars of expenditure, calculations are made that reveal: number of jobs (direct, indirect, and induced), amount of household income (direct, indirect, and induced), and sometimes *value added* through the rehabilitation process. The expenditure amounts generally come from the amount reported for projects utilizing the Federal Rehabilitation Tax Credit. Where applicable the investment in projects utilizing state historic tax credits and, when they exist, state grant programs is also converted into jobs and household income. Graphically the analysis is as follows:



HOW IS IT MEASURED?

The calculation of the above, including jobs and household income, are calculated using sophisticated econometric modeling systems such as the RIMS II – the Regional Input-Output Modeling System created by the Bureau of Economic Analysis of the US Department of Commerce – or the IMPLAN system – (IMpact analysis for PLANning) economic impact modeling system. Some studies have also used Rutgers University Center for Urban Policy Research's and the National Park Service's *Preservation Economic Impact Model* (PEIM).[3] All of these databases are commonly used by planners, economists and other professionals in creating economic impact models and analysis within a variety of industries. The widespread acceptance and use of such econometric modeling systems standardizes their application within the historic preservation field.

STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

The strengths of the methodology are:

- It is well known and commonly accepted.
- It is relatively easy to apply.
- Historic rehabilitation (mostly construction) can be directly compared with other industries as to job creation and household income per million dollars of output.

Because of the labor intensity of the rehabilitation process and because construction jobs are generally well paid, particularly for those without advanced formal education, the local economic impact is not only significant but significantly greater per amount

3 See **Appendix B** for a full description of RIMS II, IMPLAN and PEIM.

Skating rink in historic downtown Syracuse, New York

of output that most other sectors of economic activity, particularly manufacturing. Further, since the models themselves are created by those disinterested in any particular industry, there is less risk that the findings are seen as "tainted" by an advocacy position.

There are weaknesses, however. First it is only the expenditure data from tax credit projects and grants that is readily available. But those amounts are far from the total amount invested annually in historic rehabilitation. A homeowner who restores her historic house is not eligible for the federal tax credits, nor is the religious institution, fraternal organization, non-profit entity, or most colleges or hospitals. Further many property owners, who would otherwise be eligible for federal or state tax credits, simply choose not to use them or don't even know they exist. Government at all three levels invests in historic buildings but rarely are those systematically disaggregated from overall capital budgets and separately reported as historic rehabilitation investments. Conservatively the total amount of "historic rehabilitation" in any given year is likely to be three to five times the amount reported for tax credit and grant projects.

The second weakness is that "historic rehabilitation" is not a specific category of industry for which data is directly available. Therefore proxy indicators must be derived from existing categories. Most often used in ImPlan, for example, is the category *Maintenance and repair construction* for either residential or non-residential activity. Because historic rehabilitation is in most cases even more specialized and labor intensive than just typical "maintenance and repair construction" the impacts on jobs and household income is probably understated. RIMS II formerly had a maintenance and repair construction category but no longer provides separate multipliers in that area, so an indirect method must be used to calculate the greater numbers of jobs and household income than is generated by new construction.

Finally, the third weakness is a definitional one – what, exactly, constitutes "historic preservation"? Here the use of tax credit projects is useful since: a) those buildings are, by definition, "historic," and b) there is a quality control imposed by the use of the Secretary of Interior's Standards for Rehabilitation which is a prerequisite for receiving the federal and most state tax credit awards. Additionally the work by federal government entities on historic buildings under their purview would in most cases qualify under most definitions of "historic preservation" since it is generally held that they are obligated to appropriately treat the buildings as part of their obligations under the National Historic Preservation Act. In most cases historic buildings subject to review by a local historic district commission (or its equivalent) *where there are good design standards* would count as "historic preservation."

But there are thousands of other projects (and hundreds of millions of dollars of investment) each year for which determining "Is this historic preservation?" is much more problematic. Examples of these situations are:

» Institutional (e.g. universities, hospitals, religious institutions) investment in historic structures where there are no specific guidelines to which the work must conform.

» Investment in historic residential structures where there is no applicable tax credit and no preservation program oversight.

» Rehabilitation of historic buildings by state and local governments where there is not a local equivalent of the standards the federal government sets..

» Historic building rehabilitation of commercial structures, absent a tax credit application to the state, where there is no local preservation commission.

» Most new construction in local historic districts that is not subject to preservation review.

» Remodeling of historic buildings where the work is entirely on the interior and not subject to any preservation review.

In the United States there are more than 18,000 units of local government (cities, towns, villages, counties, etc.) but the National Park Service reports that only 2,700 of them have local preservation commissions that have been certified under the program. So what about the "historic preservation" in the other 15,000 or so?

The point is that if there were a consistent definition of what constitutes "historic preservation" and there were a means of estimating the amount of investment for those areas where data is not currently available, the jobs/household income calculations would more accurately reflect the totality of that sum of historic preservation's economic impact. We believe that the number would be much larger than those reported in existing studies.

Stagecoach and historic hotel in downtown Medora, North Dakota, near Theodore Roosevelt National Park

HERITAGE TOURISM

Often when "historic preservation" and "economics" are mentioned in one sentence, the default response is "Oh, you must mean heritage tourism." What is known is that tourism is a growth industry worldwide, there seems to be consistent evidence that heritage tourism is one of the fastest growing segments of that industry, and many states report that tourism is one of their largest industries, particularly when measured by number of employees.

WHAT IS MEASURED?

Because of the size and sophistication of the tourism industry (at least on a state and national level) a number of variables are regularly measured. An extended list of these variables is found on the next page. Because *heritage tourism* is a sub-set of total tourism, most analyses of this sector do not include the full range of variables. Among those that are commonly included in heritage-specific tourism studies are the measures depicted in Table 2.

TOURISM MEASUREMENTS

ON THE *DEMAND* SIDE

- Number of visitors
- Duration of stay
- Origin of visitors
  - In-state, out-of-state
  - International/domestic
- Purpose of visit
  - Leisure
  - Professional/Business
  - Other
- Means of transportation
- Place of lodging
- Destination(s)
- Visitor characteristics
  - Age
  - Sex
  - Number of travellers in party
  - Income
  - Race
  - Education
  - Employment status
  - Household composition
  - Propensity to travel
  - Activities undertaken during trip
  - Organization of trip (individually organized, group tour, travel agent assisted, etc.)

ON THE *SUPPLY* SIDE

- Accommodations
  - Hotels and motels
  - B&Bs, Inns
  - Hostels
  - Campgrounds
  - Private residence (paid)
  - Private residence (non-paid; with family, friends)
  - Owned dwelling (second home, time-share)
  - Other
- Activity venues (often merged with "Activities undertaken during trip"
  - Sports and recreation
    - Observational
      - Professional
      - Semi-professional
      - Amateur
    - Participatory
      - Golf
      - Tennis
      - Swimming
      - Boating/sailing/surfing
      - Skiing, skating
    - Parks
    - Beaches
    - Hiking trails
    - Climbing
    - Fishing/hunting
    - Other
  - Events
    - Theater
    - Concert
    - Opera
    - Ballet
    - Festivals
    - Amusement parks and theme parks
    - Circus
    - Sports car races
    - Other
  - Gambling
    - Casinos
    - Horse, dog racing
    - Other
  - Education and heritage
    - Museums
    - Educational short courses (not related to profession)
    - Exhibitions
    - Historic sites
    - Zoos
    - Nature reserves
    - Botanical gardens
    - Other
  - Sightseeing
  - Shopping
  - Meetings and conventions
    - Conferences
    - Trade shows
    - Symposiums
    - Exhibitions
  - Passive leisure
    - Sunbathing
    - Relaxing
    - Eating and drinking

TOURISM SEGMENTS

This category varies greatly based on who is doing the analysis and where the tourism study is being done. But common categories of tourism segments include:

- Business tourism
- Recreational tourism
- Adventure tourism
- Religious tourism
- Cultural tourism
- Heritage tourism (often included as part of cultural tourism)
- Eco-tourism
- Architectural tourism
- Gaming tourism
- Health and wellness tourism
- Rural/agricultural tourism
- Visiting friends and relations tourism
- Holiday leisure tourism
- Voluntarism tourism
- Recreational vehicle tourism
- Winter sports tourism

TOURISM ECONOMIC MEASUREMENTS

Depending on the purpose and the depth of the analysis, comprehensive tourism studies might measure:

- Hotel room occupancy rates
- Jobs and household income associated with tourism
- Dollars spent per day
- Dollars spent per trip
- Allocation of expenditures
- Taxes generated:
- Sales
- Gasoline
- Bed tax
- Income tax (indirect)
- Property tax (indirect)

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Table 2. Measuring Heritage Tourism

DEMAND SIDE	SUPPLY SIDE	ECONOMIC MEASUREMENTS	SATISFACTION INDICATORS
Number of visitors	Activity venues*	Expenditure per day	Difference between expectation and experience
Duration of stay	Museums	Expenditure per trip	Value of visitation relative to cost
Origin of visitors	Civil War sites	Allocation of expenditures	Quality of exhibits
Means of transportation	Historic sites	Employment generation	Opportunity to learn
Place of lodging	Other	Tax generation (sales, income)	Facilities*
Destination(s)		Relative per-day and per-trip expenditures of heritage visitors as compared to all tourists	Staff**
Visitor characteristics			Inclination to return
Depth of visitor emphasis*			
Heritage visitors as percentage of all visitors			
Other sites visited			
* How strongly were heritage-related activity a driver for the choice of where to go and what to do	* Often merged with "Activities undertaken during trip"		* Cleanliness, condition, sense of safety, gift shop or purchase opportunities ** Helpfulness, friendliness, knowledge of site/history

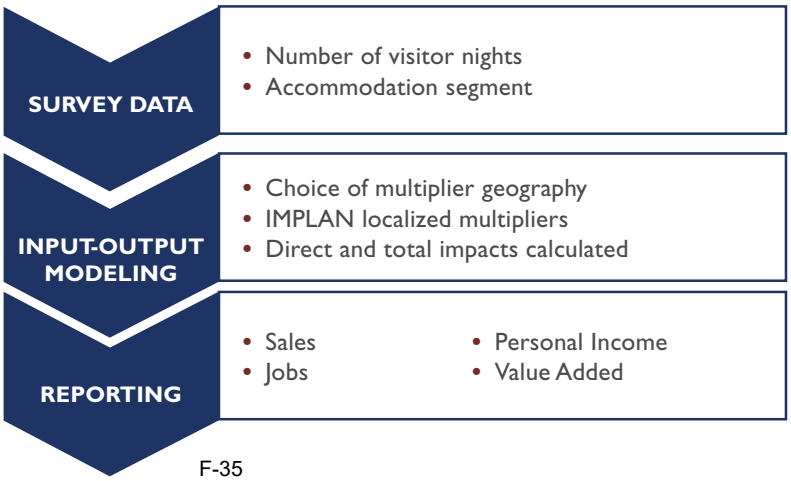
HOW IS IT MEASURED?

Tourism impact studies are survey based. The Tourism Industry Association (TIA) commissions massive surveys, the results of which are available for a fee to members. This data is also sortable and is frequently purchased by state tourism offices and used as the base for their own analyses and subsequent strategies. The Department of Commerce conducts in-flight surveys among international visitors arriving in the US by plane. Several states regularly conduct visitor surveys at welcome centers and at state-owned visitation sites.

Crow Fair Parade on the Crow Tribe Reservation, Montana

For the past several years the National Park Service has evaluated the economic impact of park visitors using MGM2 – Money Generation Model. This relatively user-friendly approach requires the park to enter three basic pieces of information: number of visitor nights; visitor segments (based on nature of accommodations); and a choice of multipliers (rural, small metro area, large metro area, or region). Based on this input the MGM2 system will calculate: sales, jobs, personal income and value added, broken down in the twelve industries most affected by tourism expenditures.

Graphically the process could be represented as follows:



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While every study will have some customization, this process most often used is first, estimating the number of visitors and daily expenditures through surveys; and then aggregating those expenditures and applying I-O (input-output) multipliers.

Finally surveys are often included as an original research component of commissioned tourism studies. Depending on the scale of the analysis, these surveys may be conducted as one-on-one surveys at a historic site, or as telephone or mail surveys among a target group likely to be travelers. More recently online surveying has been utilized in the tourism industry but some analysis suggests that the accuracy of internet-based surveys is significantly less than telephone or mail surveys.

Again, since heritage tourists are a sub-set of all tourists, typically heritage tourism analysts will simply start with larger scale tourism data and disaggregate that portion of the whole defined as heritage tourists. In cases where attempting to define "total impact" seems problematic given the base data, some analyses have simply calculated the incrementally greater impact of heritage tourists versus tourists in general. In nearly all the comparative analyses, heritage tourists (however defined) tend to stay longer, visit more places, and spend more per day than tourists in general, thereby having a significantly greater per trip economic impact.

Lock Fest water festival at Willamette Falls, 1873 West Linn canal and locks, West Linn, Oregon

Demonstration of dugout canoe making, Etowah Mounds site, Cartersville, Georgia

STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

Surveys are a perfectly adequate means of gathering base data upon which overall impacts can be calculated using I-O models or other methods, if: 1) the survey base is large enough (one national survey interviews between 22,000 and 25,000 households quarterly); and 2) if the questions are properly drawn. The problem is quantity – regular surveys of large numbers of households are an expensive undertaking.

Furthermore, some recent heritage tourism surveys have had, arguably, sufficient numbers of respondents to be reasonably accurate on first-level questions (male/female; origin of trip, etc.) but the numbers become so small as to provide questionable reliability on "drill down" percentages (i.e., responses of women who arrived by airplane).

And certainly with tourism survey data there is a definitional problem on two levels: 1) what counts as a "heritage tourist"; and 2) how much of the visitor's expenditures should be included in the impact analysis? Further, especially when trying to calculate impacts locally, what about transportation costs? This is particularly true of visitors arriving by plane or other form of public transportation. Since a major budget item for any tourist is transportation, where are those impacts measured? At the corporate headquarters of the airline? At the point of origin of the trip? At the arrival point? Allocated between both?

In candor, there are probably few industries where greater amounts of data are presented with as much confidence as with the tourism industry. But much of that data should be viewed with significant skepticism, not because the data is consciously skewed by the analysts, but because the "what should count" question is rarely adequately addressed.

PROPERTY VALUES

Because of concerns of "property rights" and a widespread suspicion of regulation among property owners, the creation of local historic districts is not infrequently an issue of heated debate. Among the arguments used by opponents is "a local historic district will constitute another layer of regulation and more regulation, *prima facie*, will have an adverse effect on property values." Historic property owners may also resent being regulated more than their neighbors, when they may have already agreed through their stewardship to devote extra care for a historic resource. Because of this, the relationship between local historic districts and property values has been the most studied area of preservation economics in the United States.

WHAT IS MEASURED?

Most studies of the relationship between historic designation and property value look at the value of the affected properties, the rate of value change of the properties, or the contributory value of being within a local historic district.

In the first category two approaches are common:

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Historic Victorian homes in Bellingham, Washington

- Simple value comparison. What is the difference in value between a property in a historic district with a similar property not in the district?
- Before and after designation. What was the average value of houses in the neighborhood before historic designation and after historic designation?

In the second category common types of analysis are:

- Appreciation compared to the local market. At what rate did properties in the historic district appreciate (or decline) in value over time and how does that value change compare with properties in the local market that are not in a historic district?
- Appreciation compared to similar neighborhood. At what rate did properties in the historic district appreciate (or decline) in value over time and how does that value change compare with properties in a similar neighborhood that is not a historic district?

The third category of analyses is the most sophisticated and attempts mathematically to identify the monetary contribution of each of the significant variables that affect the price of a property (size, number of bedrooms, garage, pool, etc.). Once all the other variables are accounted for the difference, if any, of being within a local historic district can be isolated.

HOW IS IT MEASURED?

Property values (and value changes) are measured in two alternative ways: actual transactions in the marketplace, or a proxy for those transactions. Since in most places in the United States, property taxes are levied on an ad valorum basis, the assessed value for taxation purposes can usually be effectively used as a proxy for sales prices. The advantages of using assessed valuation are:

- The numbers of properties are large, obviating the small sample problem that is encountered when using actual transactions.
- The assessed data is generally in the public record so can be easily accessed (which is not always the case with Multiple Listing Services of local Boards of Realtors®).
- Many jurisdictions have all of their property records computerized so sorting and evaluating becomes easier.
- Most of the variables between properties (size of lot, zoning, size of house, number of bathrooms, etc.) are usually included in the property records.
- Assessed value databases facilitate the use of GIS representation of findings.

Since there is a great variety among residential properties, however, it is always necessary to convert the data and make the representations using a *unit of comparison*, typically dollars per square foot of livable area.

When there are enough transactions over an extended time period, some studies have used resales of the same property. If a property sold more than once during the study

Historic home on historic district tour in Provo, Utah

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period, what was the value change and how does that value change compare to the appreciation rates for non-designated property?

The most sophisticated analysis that has been used in heritage property value studies is known as *hedonic pricing*. This method tries to identify the individual components of a property and each component's contribution to the overall property value. One study of historic neighborhoods in the US used a limited number of rather straightforward variables:

- Number of bedrooms
- Number of bathrooms
- Square feet of living area
- Square feet of lot
- Number of garage spaces
- Availability of swimming pool
- Age of property

Then having calculated the relative contribution of each of those elements a final distinction was made – historic designation. The assumption was that when the contributory value of all of the other variables was accounted for, any remaining difference in price was attributable to that designation.

Other studies have had a more comprehensive list of variables which have included such things as distance to the center city, proximity to water, architectural style, condition of the building, character of the neighborhood, population density, existence of a garden, and others. The selection of which variables to use is dependent on a knowledge of which variables are significant to buyers and sellers in the marketplace.

STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

The strength of this methodology is that the base source of data is indifferent to historic preservation so it is relatively free from charges of advocacy bias. When assessment data is complete, computerized, and sortable, the issue of the relationship between property values and location within a historic district can be evaluated in depth and in a variety of ways. Because virtually every property in a local jurisdiction will have parallel value and other information, the quantity of data far outweighs any minor error that a individual property value estimate might include. Further, it is not necessary that each value estimate is "right" as to the probable sales price tomorrow, as long as there is a consistent ratio between the market value and the assessed value for tax purposes.

This approach is not without challenges, however, including:

- There is a wide variation in experience and competence among local assessors around the country. While most are highly professional and reliable with their value estimates, some simply are not.

» Assessed values tend to trail movements in the marketplace (in both directions) so "current estimates" may, in fact, be a number of years behind.

» Some jurisdictions have a rolling reassessment, so that even properties within the jurisdiction are not adjusted at the same time. Comparisons between properties may, therefore, lead to erroneous conclusions.

» There are reasons why a property's assessed valuation increases may not be attributable to a general upward movement in the market. Adding a garage, for example, would likely add to the assessed value. If the only thing that is considered is the assessed value between two points in time, this capital improvement could be misinterpreted as appreciation. (Even so, because the numbers of properties involved will generally be large, it is a reasonable assumption that properties both within and outside of a local historic district will have had capital improvements, so on a comparative basis the errors probably offset each other).

When actual transactions are used, rather than assessed values, a greater understanding of the peculiarities of any given property is possible. However, because the number of sales will be limited, even in an active market, the chance that an "outlier" transaction statistically affects the conclusions is greater.

Northern Hotel rehabilitation in downtown Fort Collins, Colorado, historic district

MAIN STREET/DOWNTOWN REVITALIZATION

National Main Street is a program of the National Trust for Historic Preservation. In simplest terms it is downtown revitalization within the context of local business activity in historic buildings. In the past thirty years more than 2,500 communities (and a hundred or so urban neighborhoods) have had Main Street programs. It has been called the most cost-effective economic development program in America. Local Main Street programs generally receive technical assistance, but rarely money, from the state agency that coordinates the program (most but not all states have a state coordinator) and from the National Main Street Center of the National Trust. From a measurements perspective, almost from the beginning the National Main Street Center has required that local programs keep track of a handful of indicators to measure their success.

WHAT IS MEASURED?

All state coordinating programs are asked to provide five pieces of information annually for aggregation at the national level. The states gather and transmit information from each of their active local Main Street communities. The basic data collected or calculated by all state programs include net new jobs (new jobs less loss of jobs); net new businesses (businesses opening less businesses closing; amount of public and private investment in physical improvements; and number of building rehabilitations. Some state programs collect volunteer hours; attendance at downtown festivals; buildings sold; business expansions; façade improvements; and number of housing units created.

Finally, the total investment is divided by the average local community financial support for the Main Street program to calculate a "leverage" figure of investment to program costs.

HOW IS IT MEASURED?

All of the data is gathered by the local Main Street manager and forwarded to the state coordinating program. The data from each participating town is then aggregated and sent to the National Main Street Center. The local manager is responsible for identifying how to acquire and verify each piece of information.

STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

The consistent gathering, aggregating, and reporting of this finite number of indicators for nearly thirty years is certainly a strength. And for the most part the information that is being gathered is appropriate to the program.

Unfortunately the weaknesses of this approach are numerous:

- There is no comparative analysis. There is no data to demonstrate that these communities are doing better, worse, or the same as other similar towns without Main Street programs.
- The process of gathering the basic data is done by a local manager who has every motivation to report numbers as positively as possible. While there is no evidence of conscious inflation of the "good news" by local managers, the "advocate as data source" would not qualify as a robust research methodology.

This is not to say the numbers are not useful, or that they should not continue to be gathered. However, a comparative approach and a more neutral source of the data would strengthen the credibility of the Main Street numbers.

Food festival in downtown Newton, New Jersey

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Renovated county courthouse in downtown Georgetown, Texas

HISTORIC PRESERVATION, THE ENVIRONMENT, AND SUSTAINABILITY

The most recent area of significant research is the relationship between preservation and the environment, particularly the contribution of historic preservation to sustainable development and *Smart Growth*. Although these measures emerge from environmental metrics, they often have a considerable economic consequence, particularly in the area of public infrastructure expenditures. While other measurements of the economic impact of historic preservation are usually expressed as dollars gained (property values, household income, etc.) the environmental measurements are often dollars saved.

Historic buildings are often regarded as energy inefficient in measurement systems that focus solely on annual energy usage. This approach ignores two important factors: 1) the annual energy use in an appropriately rehabilitated historic building is not measurable greater than for a new building; and 2) Fifteen to thirty times as much energy is used in the construction of a building than its annual operation. For an existing building the energy expended in construction has already been "embodied" in the structure.[4] When the energy consumption analysis is approached from a life cycle perspective wherein both the energy needed to construct the building as well as annual energy usage is included, the energy inefficiency claim against historic buildings largely disappears. This is an area, however, where more research and more widely dispersed research is necessary.

WHAT IS MEASURED?

In studies conducted to date that included some environmental component, the measurements have been:

- Reduced land fill from buildings being reused rather than razed.
- Savings in infrastructure from buildings being reused rather than razed.
- The embodied[4] energy in an existing building that would be lost if the structure were demolished.
- Reduced vehicle miles traveled (VMT) and CO^2 emissions because existing buildings are reused rather than replaced with new ones.
- Amount of "greenfield" acreage left undeveloped if existing building are reused as the alternative.

HOW IS IT MEASURED?

Most of the measurements are of the "what if" variety in a cost-benefit sense. That is to say, what would be the environmental consequences of building a new structure of the same utility and razing an existing historic structure? First either an actual rehabilitated building or a hypothesized building (assuming a given size, materials, type of construction, and use) is chosen as an example. Then calculations are made on a variety of environmental metrics.

4 *Embodied energy* is the sum of the energy consumed by extracting raw materials, processing those materials into a finished product, transporting them to the building site, and installing the building components into a structure.

In some cases (specifically the Maryland/Abell Foundation report; See Appendix D) calculations were made on a composite basis using all of the projects that received state tax credits as the alternative to demolition and new construction.

The data sources for making these calculations include factors generated by the Environmental Protection Agency, the Urban Land Institute, the Construction Materials Recycling Association, and others.

STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

The methodology is valuable for several reasons:

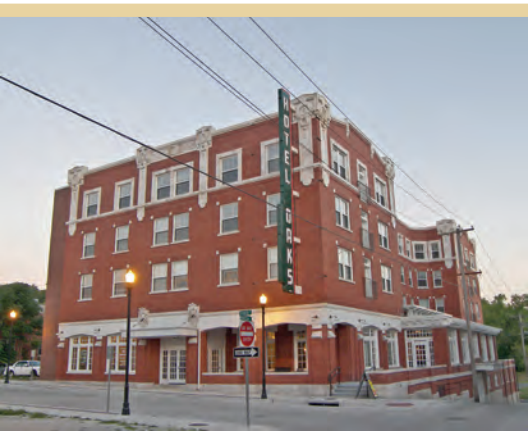
1. It makes the historic preservation case in terms environmental advocates understand.
2. It shows a demonstrable connection between where development is encouraged (or accepted) and the public costs of accommodating that development, and is therefore a measure of community support.
3. As in other approaches, the bases upon which the calculations are made come from non-preservation sources so the "research by advocacy" criticism is lessened.
4. The field of environmental economics is growing in sophistication so there will likely be more cross-over measurements in the future.

To the extent that there is a weakness, it is in the hypothesized nature of the approach. "If this building had been torn down rather than reused, then…" On measurements such as vehicle miles travelled and cost of infrastructure, the same score would be achieved by tearing down the existing historic structure and building on the same site.

Rehabilitated passenger train station and Greenway trail in Muncie, Indiana

EFFECTIVENESS OF STATE HISTORIC PRESERVATION PROGRAMS

Under fiscal and political pressures many state government are requiring all departments to defend their various programs on some type of cost/benefit or effectiveness measurements. Historic preservation programs are subject to these same requirements. Some states, therefore, have commissioned analyses of how well their programs are working and this is often measured in economic terms.



Excelsior Springs, Missouri, hotel transformed into senior housing

WHAT IS MEASURED?

The particular analysis is dictated by the programs available through the State Historic Preservation Office. Because every state reviews projects applying for the Federal Rehabilitation Tax Credit, that program is always included. Where there is a state tax credit, the activities utilizing that program are usually also included. Beyond those two types of programs, however, there is a great variety from state to state on what else is studied. Grant programs, when they exist, are sometimes reviewed. Other programs, such as the share of Transportation Enhancement funds that are directed toward preservation related projects, are also the focus of some studies.

HOW IS IT MEASURED?

Regarding tax credit projects – either federal or state – the approach is as described in the *Jobs and Household Income* section above. Additionally, however, in the context of *Effectiveness of State Programs* commonly there is a discussion of the amount of leveraged funds that the existence of the tax credit program generates. For the federal tax credit the minimum leverage ratio is four to one (since the federal tax credit is 20%) but the actual leverage is generally higher as a result of two factors: 1) acquisition costs are not eligible for federal tax credits, so the dollars represented in the purchase price constitute additional investment (and therefore leverage) by the private sector; and 2) not all of the expenditures are eligible for tax credits (site improvements, landscaping, etc.). As a result, when comprehensive numbers are available, the actual leverage is often found to be five to one or greater.

For grant programs as well, leverage is often discussed, but because many grants require only a 50% match, and sometimes less, the public-to-private investment ratios will be less dramatic than for tax credit programs.

Additionally, grants and other state programs are frequently described through their geographic distribution throughout a state. This is assumed to convey the message to the public that there are historic resources everywhere and to legislators that their district, too, is benefiting from state historic preservation resources.

STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

To the extent that adequate data is available for the state tax credit projects, the job/household income calculations are generally reliable. What is not considered in most analyses is what percentage of those projects would have been completed were the tax

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credit(s) not available. While some surveys of tax credit users (See particularly P*rosperity through Preservation: Virginia's Historic Rehabilitation Tax Credit Program*) (See Appendix G) indicate that there is a very high percentage of projects that would not have gone forward without the credits, there is not typically an adjustment for projects in this regard.

Public budget analysts make a distinction between direct expenditures (i.e. funds spent by a unit of government) and "tax expenditures", the latter being a reduction of taxes payable generally though an incentive in the tax code. From a budgeting perspective it is argued that a reduction of tax receipts has the same net effect as the expenditure of collected funds. State tax credits are a "tax expenditure" and grants a direct expenditure of taxpayers' dollars. But in either case something else, theoretically, could have been spent on something else, e.g. instead of paying for ten more teachers the state could have hired ten more highway patrolmen. In the studies to date there has not been any comparative analysis of the impacts on a state's economy had those resources been spent in a manner other than for historic preservation.

As to grant programs, while there is typically a reporting requirement from an audit standpoint (i.e., evidence that the monies were actually spent on the project for which they were rewarded) there often is not a requirement to report on the results of the project. In evaluation terms, what is being measured is "outputs" rather than "outcomes."

SOCIAL IMPACTS OF HISTORIC PRESERVATION

WHAT IS MEASURED?

As was noted earlier, very little research has been done in the United States on the social impacts of historic preservation. The exception is that many reports identify the number of low- and moderate-income housing units that were created using (usually in conjunction with other incentives) the Federal Rehabilitation Tax Credit.

Elsewhere in the world, however, particularly in Great Britain and a few countries in Western Europe, there has been some primary research on the relationship between heritage conservation (and/or heritage conservation-based programs) and social impacts. Probably the most comprehensive has been the analysis of both the economic and social impacts of the use of lottery funds for heritage conservation in England.[5]

HOW IS IT MEASURED?

In the study of the impacts of English lottery funds, citizen surveys and focus groups were conducted to supplement the "hard data" on money invested, leverage of public funds, numbers of buildings rehabilitated, and new businesses started.

The European Union funded a network of five European cities that used heritage conservation as the bases of center-city revitalization programs. Their measurements

5 See especially Kate Clark and Gareth Maeer, "The Cultural Value of Heritage: Evidence from the Heritage Lottery Fund," *Cultural Trends* 17.1 (2008).

were on both the "hard" and "soft" side and included the categories of Immediate Economic, Strategic Economics, Social and Environmental. These indicators and what was measured and how are listed on page 34.

Individual preferences as expressed by market prices and transactions are important but there are also public-good aspects of historic preservation that are, by definition, beyond individual preferences. These are not well captured in markets and have to be measured via other methodologies. These other methodologies range from the purely qualitative (narrative accounts of decisions or conflicts over preservation issues) to the very quantitative (statistical analysis of demographic data from the Census).

STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

Since there is nearly no US-based research on the social impacts of historic preservation, the biggest weakness of the methodology is that it does not exist (or at least does not exist in application form. There is obviously social impact analysis with focuses other than historic preservation that could readily be adapted.)

The strength of the European Livable Cities evaluative approach is that it is comprehensive and captures change over time. The weakness is not in the methodologies but in the fact that they are both extraordinarily time consuming and expensive. It might be possible, however, for preservation to partner with other entities with an urban focus to jointly conduct this type of research.

Biking on recreation trail over historic Whipple Truss bridge in Licking County, Ohio

Qualitative Measurements of Historic Preservation

LONGITUDINAL PUBLIC OPINION RE: HISTORIC PRESERVATION

Two particular applications of qualitative methods would be useful complements to market-based quantitative analyses: 1) understanding of social and psychological contexts of decision-making within political structures and organizations; and 2) understanding public preferences and opinions directly related to cultural, spiritual, aesthetic, and political meanings of heritage, which are only indirectly and imperfectly represented by market measures

It would be useful to undertake studies of the political and decision-making processes in which economic considerations of preservation are embedded. Such investigations would be related not just to how preservation decisions are made about significance, integrity, and the like but also to resource allocation questions, both within the preservation field and putting the field in context of other alternative kinds of investments or policies.

What should be measured

Public opinion surveys and other narrative forms would be effective for understanding the aggregation of individual preferences, to build a "public" snapshot as well as the reasoning behind preferences. Additionally, following quantitative findings with ethnographic methods would provide insights on how the trade-offs are perceived both by individual consumers/owners and also by the decision-makers who possess greater power to create and decide public policies, make regulatory decisions, etc.

How it should be measured

To understand the nuances of public perception of historic preservation, three discrete approaches are recommended:

1. Decision-maker surveys: Since the principal audience for economic research on historic preservation is decision-makers (politicians, public agency heads, bankers, etc.), small-sample surveys or interviews of typical decision-makers would yield direct insight into the types of information, arguments, and expectations these important stakeholders regard as most relevant. Delphi studies[6] or focus groups could be conducted regularly at relevant professional meetings or other regular gatherings (legislative meetings, annual conventions of city managers, U.S. Conference of Mayors, American Planning Association, CEOs for Cities, Mayors Institute for City Design, etc.)
2. Community indicators: A number of American cities have, in the past ten years, established community indicator projects to measure the provision or perception of a variety of outcomes usually unmeasured because there is no easily available data, the data is inaccessible, or the community scale is not the level of aggregation. Many of the indicator projects are motivated by better understanding sustainability and how to achieve it at the community scale. Historic preservation indicators could be added to these creative, longitudinal efforts. One particularly effective and prominent indicator system is used in Baltimore, where there is also a robust historic preservation community. Baltimore's effort could be used as a test case, later to be promoted nationally.
3. Annual survey of bellwether preservation sites: A range of places should be studied, including publicly and privately operated sites; historic districts; interpreted historic sites and museums. A small number of sites could be measured to broadly encompass market and nonmarket (educational, aesthetic) values. One basis for the educational methods is Parks Canada's process for gauging the commemorative integrity of its historic sites, which includes interviewing some visitors about the effectiveness of site interpretation, and interpreting the interviews within a clear framework relating outputs to outcomes.

Where the information could be found

A great deal of valuable insight would be gained by creating qualitative, longitudinal data sets tracking public preferences and perceptions of historic preservation. Survey questions specific to historic preservation values could be included in existing, long-standing public surveys such as the Chicago social survey, Michigan consumer preference survey, one of the regular surveys conducted by the Pew Charitable Trust, or others. Building on the example of the *Presence of the Past*[7] survey, these could be designed to focus on educational questions as well—not just consumer preferences but what people are actually seeking and learning in their experiences with historic places.

SOCIAL IMPACTS OF PRESERVATION

Metrics concerning the social impacts of historic preservation are meant to test and support the assumption that greater levels of historic preservation activity in a place are associated with improved quality of life (vis-à-vis similar places, or the population at large) or higher levels of social well-being. In other words, are well-preserved

6 Delphi studies are a type of survey methodology with two important distinctions from general surveys: 1) the persons questioned are experts in the area being studied (as opposed to a random sample of the general population), and 2) the process is usually iterative with surveys being refined and retaken after initial results are received.

7 *Presence of the Past: Popular Uses of History in American Life*, Roy Rosenzweig and David Thelen, Columbia University Press, 1998

places also places that are reflective of higher education levels, more stable, and safer, with populations that are more diverse?

A second area of research into the social impacts of preservation concerns urbanistic impacts – correlating places where higher levels of preservation is implemented with other measures of environmental quality or design.

What should be measured

The specific kinds of social benefits that could be explored include:

- Levels of education (% of residents with college education, or standardized school test scores, for instance)
- Ethnic, class, racial, and age diversity;
- Length of housing tenure (a gauge of community stability)
- Incidence of crime
- Other categories of data about social phenomena that are hypothesized to have some connection to historic preservation

On the urban quality side, the use of the *Walk Score*[8] metric, for example, enables the precise mapping of an index about the pedestrian-friendly quality of a property's surrounding context. And there is a growing body of research on measuring the "grain" of urban fabric (related to building scale, street design, intensity of street activity, etc.). To the extent these methodologies prove successfully it would present another way to associate preservation activities with particular empirical qualities of the built environment more generally.

How it should be measured

Because most of this social data is collected as part of the decennial Federal Census, longitudinal analysis, tracking change in these relationships through time is enabled. It is much more useful to be able to understand processes of change through longitudinal studies than to glimpse only an isolated snapshot in time.

Straightforward statistical regression can be carried out to determine correlations between historic preservation activity (designation, tax credit investments, etc.) and one (or multiple) other factors.

It should be cautioned that these analyses would yield insight about the *correlation* of preservation and social factors, without necessarily determining *causal* relationships. In other words, the studies would not *prove* that better preserving a neighborhood will lead to great diversity, etc., only that it is *associated* with greater diversity.

Notwithstanding the limitations of regression analysis, it would be illuminating to document objectively the association between places that pursue historic preservation also being places where citizens enjoy greater levels of social well-being. And, if one is able to study change over time, a clear understanding of the direction of chance (positive or negative), if not its precise magnitude, would be a significant finding in itself. This would be useful, among other reasons, as a contribution to debates about preservation and gentrification.

Shops in downtown Bardstown, Kentucky, historic district

8 See Appendix C

Table 3. European Livable Cities Project

INDICATOR	MEASURE	TECHNIQUE
	IMMEDIATE ECONOMIC	
Pedestrian activity	People flows	Manual counts, cameras, surveys of special events
More Expenditure	Expenditures (retail, leisure, hotel, on street event)	Interviews, surveys (on street, self-completion, operators)
More uses on street	Number of: cafes, street traders, stalls, events	Before & after survey
More repair/regeneration of sites	Level of activity	Exterior condition surveys, planning applications, repair frequencies, occupier surveys
Increased local distinctiveness	Number of independent shops Number of distinctive events User attitude Image change	Audit of shops Audit of events User surveys Survey of distinctive elements
	STRATEGIC ECONOMIC	
Improvement in town's performance	Performance of shops Tourism performance Quality of life	National retail rankings National tourism rankings Various surveys
New strategic roles for public space	Role changes	Before & after surveys
Integration of latent economic assets	More effective use	Audit of new economic activity Before & after surveys of vacant sites
Creation of new economic quarters	Diversity	Audit of changes in cultural/social/econ offerings
Improvement in quality of life	Overall quality	User surveys Indicator surveys
Creation of new image **Image changes**	Image changes	Surveys (user, business, opinion maker, media)
	SOCIAL	
Reduction in road deaths, injuries	Accidents	Before & after surveys
Wider health and well-being benefits	Health	User surveys General health records
Reduction in actual threat	Crime, anti-social behavior	Before & after surveys
Reduction in perceived threat	Fear	User surveys
Reduction in social exclusion **Engagements**	Before & after surveys	Observation (cameras) User surveys
More efficient walking trips	Routing	User surveys, camera surveys, GPS monitoring
Greater community ownership	Sense of civic pride	User perception surveys, plotting of new community initiatives
	ENVIRONMENTAL	
Reduction in noise pollution	Audible quality	Noise surveys Ambient sound surveys
Reduction in air pollution	Air quality	Air quality surveys
Reduction in vehicle use	Vehicle presence	Flow surveys Parking surveys
Reduction in visual intrusion	Visual quality	Environmental audit User surveys
Reduction in vehicle infrastructure	Infrastructure presence	Infrastructure audit
More sustainable use of urban space	Space use	Before & after surveys Camera surveys

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RECOMMENDATIONS ON METRICS FOR FUTURE DATA AND METHODOLOGIES

BROAD CATEGORIES FOR WHICH WE SHOULD HAVE ANNUAL DATA

Mud plastering workshop at Ohkay Owingeh Pueblo, New Mexico (photo by Tania Hammidi)

The intent of this project was to identify a finite number of metrics demonstrating the link between historic preservation and economics. The data for these measurements would be gathered annually and, it is assumed, publicized and promoted. It was not within the scope of the project to provide detailed descriptions of particular methodologies to be used. Rather it was to provide recommendations on what data should be collected, and to provide a general idea of how that data would be gathered and what would be measured.

Based on the activities described earlier in this report, it is recommended that there be the collection, evaluation, and dissemination of five categories of data: jobs, property values, heritage tourism, environmental measurements, and downtown revitalization/*Main Street.* Most of the categories have been part of one or more statewide preservation impact studies and are discussed in detail in the *Current Data, Methodologies and Programs* section of this report. The descriptions of the categories below, therefore, are brief.

METRIC 1 – JOBS

This is the measurement of number of jobs that are created annually through the rehabilitation of historic buildings and the household income that those jobs generate. This data should be compiled reflecting direct, indirect, and induced jobs and household income accompanied by adequate and understandable definitions of what those categories mean.

WHAT SHOULD BE MEASURED

Historic rehabilitation should include the following:

- Projects receiving the Federal Rehabilitation Tax Credit
- Projects receiving state tax credits for historic preservation
- Federal, state, and local government projects that are considered historic preservation
- An estimate of activity that would be defined as "historic preservation" but is not reflected in any of the categories above

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HOW IT SHOULD BE MEASURED

The dollar amounts aggregated from the four categories above would be converted into jobs and household income using ImPlan, RIMSII, or other reliable Input-Output methodology.

WHERE THE INFORMATION COULD BE FOUND

For projects receiving the Federal Rehabilitation Tax Credit

- From National Park Service data (perhaps supplemented with SHPO data)

For projects receiving state tax credits for historic preservation

- Aggregated annual reports from State Historic Preservation Offices of state tax credit investment (making sure projects are not included that also received the federal credit, so as not to double count)

For federal, state, and local government projects that are considered historic preservation

- General Services Administration
- State Historic Preservation Offices (from data gathered from their respective state's equivalent of the GSA)
- Modeling of estimates of local government expenditures on capital improvements to buildings and percentage of those expenditures going to the rehabilitation of historic buildings

An estimate of activity that would be defined as "historic preservation" but is not reflected in any of the categories above

- Estimates based on a model that would include the following:
  - Total rehabilitation expenditure
  - Percentage of that expenditure within local historic districts overseen by Certified Local Governments (CLGs)
  - Percentage of total spending in local historic districts not overseen by CLGs
  - Percentage of total spending on the appropriate rehabilitation of historic buildings not covered by any local historic district
  - Percentage of institutional expenditures (hospitals, colleges, etc., not included in any of the above) that is considered the appropriate rehabilitation of historic buildings

METRIC 2 – PROPERTY VALUES

This is a measurement of the impact on property values attributable to being located within a local historic district and/or a National Register Historic District.

WHAT SHOULD BE MEASURED

While a number of variables might be measured, for simplicity of explanation and data collection, two measurements are recommended:

- What is the year-to-year change in property value for residential structures within historic districts as compared to property value change for houses in the rest of the local market not within historic districts.
- What, if any, is the "heritage premium[9]" paid for properties within historic districts.

HOW IT SHOULD BE MEASURED

- Based on a representative sample of cities, and using either assessed valuation or actual transactions, calculate on a dollar-per-square-foot basis the change in property values year to year within historic districts as compared to properties in the local market not within historic districts. The data should be represented as follows:
  - Percentage change in per-square-foot value of properties within local historic districts

9 A *heritage premium* is the amount, if any, that the marketplace pays for a property in a historic district after all other variables are accounted for. This would typically be done using a hedonic pricing methodology.

Historic Eastern Market food hall, Washington, DC

- » Percentage change in per-square-foot value of properties within National Register Historic Districts but not within local historic districts
- » Percentage change in per-square-foot value of properties within both National Register and local historic districts
- » Percentage change in per-square-foot value of properties in neither local nor National Register historic districts

» Based on a localized hedonic pricing model, determine what is the difference in value (if any, and if positive or negative) for properties within historic districts as compared to similar properties not within historic districts after all other variables in value contribution have been accounted for.

WHERE THE INFORMATION COULD BE FOUND

Because there needs to be consistent analysis and data over time, it is recommended that research be conducted in conjunction with (or by) one of the national data and research firms the regularly report on change in real estate values. Two firms/systems to be considered are the S&P/Case-Shiller Home Price Indices[10] and Zillow Real Estate Research. With relatively minor additional data input factors (i.e., in or out of historic districts), one of these ought to be able to provide useful data vis-a-vis value and historic designation. The S&P/Cash-Shiller Composite 20 Metro Areas might be a useful base.

METRIC 3 – HERITAGE TOURISM

WHAT SHOULD BE MEASURED

Again, for consistency and simplicity a finite number of measurements should be sought to determine:

» What is the total number of tourists that would be considered "heritage tourists" and what percentage do they represent of all tourists

» What are the trip characteristics of the heritage tourist including:

- » Number of annual trips
- » Number of places visited
- » Daily expenditures
- » Total expenditures

» How do the numbers from 2 above contrast with tourists not considered heritage tourists

» What are the demographic characteristics of heritage tourists and how do they contrast with all other tourists

10 Methodology explained at http://www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldata&blobtable=MungoBlobs&blobheadervalue2=inline%3B+filename%3DMethdology_SP_CS_Home_Price_Indices_Web.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1243624745188&blobheadervalue3=UTF-8.

HOW IT SHOULD BE MEASURED

This information should be measured through regular, comprehensive, and consistent surveys.

WHERE THE INFORMATION COULD BE FOUND

There already exist major, comprehensive, regular, and consistent surveys regarding tourism using large national samples. For *heritage tourism* data three things must be done:

- Establish a reasonable definition of what attributes/activities a tourist needs to have (and in what magnitude) to fall in the category of "heritage visitor" (including distinguishing these visitors from other tourists who engage in cultural activities such as attending concerts).
- Write two to four questions that would reveal those attributes/activities as part of a survey.
- Incorporate those questions into an existing national survey.

Once that is done, the "drilling down" to reveal the information desired is a relatively straight forward process. There does not need to be a heritage-specific tourism survey – only questions within an existing survey that identifies "heritage tourists."

Historic excursion steam railroad in Durango, Colorado

METRIC 4 – ENVIRONMENTAL MEASUREMENTS

Quantifying the contribution of historic preservation to the environment is, as was noted earlier, the most recent area of research. That research continues to evolve. The "Green Lab" of the National Trust for Historic Preservation is both compiling existing research and conducting original research of the preservation/environment nexus. Additionally the Department of the Army has commissioned an in-depth look at issues such as life cycle costs and environmental impacts. The statewide analysis of the tax credit program in Maryland[11] in 2009 tested a variety of approaches to measure the environmental savings spawned by opting for rehabilitation rather than new construction on undeveloped land.

WHAT SHOULD BE MEASURED

A variety of measurements could be undertaken annually. Examples of calculations might be:

- Embodied energy in buildings rehabilitated
- Infrastructure cost savings of rehabilitation rather than new construction at an outlying location
- Reduction of emissions and vehicle miles travelled
- Reduced impact on land fill and corresponding dollar savings
- Comparative analysis of annual operating costs of rehabilitated historic buildings with new buildings
- Life cycle energy use calculations that include both operating expenditures and energy used in construction

Because the research in this area is new and evolving, and because alternative approaches are being tested, it is the recommendation of this report that there certainly should be an environment/preservation annual measurement but the specifics of what is measured and how be deferred for a few years until more is learned through existing research programs.

METRIC 5 – DOWNTOWN REVITALIZATION/MAIN STREET

The role of historic preservation in downtown revitalization efforts is apparent in nearly every town and city in the country where the center has begun to return from a four-decade period of decline. The Main Street program of the National Trust for Historic Preservation has been the one national program that has been specifically defined as *economic development within the context of historic preservation*. By almost any measure Main Street has been an extraordinary success and the Main Street Approach has

11 http://www.abell.org/pubsitems/arn309.pdf

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Historic district in Liberty, Missouri

been adopted as the set of organizing principles for downtown revitalization even by communities that are not formally participants in the Main Street process.

WHAT SHOULD BE MEASURED

The data currently gathered by state Main Street programs and then forwarded to and aggregated by the National Main Street Center is certainly valuable measurements: net new jobs, net new businesses, amount of investment, number of buildings rehabilitated. The research deficiencies of the current approach notwithstanding, this data should continue to be collected. The consistency of the information gathered, the size of the database, and the length of time the information has been assembled to a significant degree offset research weaknesses from an academic perspective.

What is missing from these numbers are: 1) comparable numbers from cities that have had successful downtown revitalization programs, but have not used historic preservation as part of their strategy; and 2) a detailed analysis of the catalytic impact of an individual historic preservation project on the economy of the immediately surrounding area.

HOW IT SHOULD BE MEASURED

The credibility of data on the historic preservation/downtown revitalization connection would be enhanced if:

- The information were gathered by a third party and/or all of the data came from public record sources
- There were a comparison of the activity in the program area with commercial districts elsewhere in the community or with comparable downtowns which did not have a preservation-based revitalization strategy

The catalytic measurement should be done on a before-and-after basis (five to ten years before and after the project completion) and consider such variables as: property values, retail sales, investment, net new jobs, net new businesses, and commercial occupancy rates.

WHERE THE INFORMATION COULD BE FOUND

To obtain data that is parallel to what the National Main Street Center accumulates, city building permit records, city directories, Chamber of Commerce listings, business improvement district data, and business owner surveys would provide most of the requisite information.

For the catalytic impact of preservation projects, the above data sources on a before-and-after basis, as well as ad valorum property tax records and building owner surveys, would be useful.

CONCLUSIONS

There was a consistent message from the existing research, from the interviews, and from the symposium: research on the relationship between historic preservation and economics is critical and needs to be provided on a regular basis. To be useful, however, while the research must be conducted on an academically robust level, research findings and resultant recommendations need to be written so that they are comprehensible to preservation advocates, public servants, elected officials, and the general public.

Five areas of research demonstrating (directly or indirectly) the link between historic preservation and economics are recommended in this report:

- Jobs
- Property values
- Heritage tourism
- Environmental measurements
- Downtown revitalization

It is unlikely that a single institution would have the resources to cost-effectively conduct annual research into each of these areas. **Rather it is recommended that the research be "farmed out" and then assembled, distributed, and publicized by a single agency.**

Of the five areas of suggested research, one of them, heritage tourism, is primarily survey based. It is recommended that a limited number of questions (2-3) be incorporated into larger, existing surveys currently conducted.

For property values it is recommended that a historic property subcomponent analysis be commissioned within one of the existing national real estate value analyses.

Because of the evolving nature of the research on the connection between historic preservation and the environment, it is recommended that any decisions on exactly what is measured and the investigation of the connection between historic preservation and environment be deferred until more has been learned from ongoing studies and their methodologies.

There is an acceptable methodology for measuring the job creation impact of historic rehabilitation activity. There has been an analysis on a national level of the economic impact of the Federal Historic Tax Credit that is reportedly going to be updated annually. An expanded methodology needs to be developed, however, that includes historic preservation activity nationwide that is not reflected in federal tax credit projects.

Finally the National Trust and its National Main Street Center are encouraged to continue aggregating and publicizing the data that have been collected over the last 25

years. If, however, the contribution of historic preservation to downtown revitalization is to be credibly demonstrated, additional research needs to be undertaken using more rigorous methodologies and needs to consider the preservation/revitalization link in downtowns that have not been part of the Main Street program. Because these stories may well be better understood on a case study rather than a comprehensive quantitative basis, graduate students might be encouraged to make this the focus of their masters theses and PhD dissertations. An annual report could be produced summarizing that year's research findings.

This report was not commissioned to develop specific methodologies, to identify specific research institutions, or to suggest funding sources and amounts that this research would require. Rather this report was intended to identify whether such research is necessary, to document what has been learned in existing research, and to recommend areas of research in the future.

To that end:

» Research on the connection between historic preservation and the economy is critical

» A growing body of research has been conducted and while much of that research is useful, it is not being done on a regular, consistent, national level

» An ongoing program of preservation/economics research should be initiated that would include: jobs, property values, heritage tourism, environmental impacts, social impacts, longitudinal public opinion, and downtown revitalization

The next steps in this process are recommended as follows:

1. **Identify and reach agreement with responsible parties to undertake the ongoing research and data collection for each of the recommended indicators.**
   Because of the diverse nature of the proposed research as well as costs and other issues it is recommended that there be a collaboration of several entities each committed to conducting a portion of this research. Among these research partners might be: ACHP, National Park Service, Department of Commerce, General Services Administration, Department of Defense, National Trust, the nascent Ellis Island Preservation Resource Center and universities including Rutgers, University of Pennsylvania, University of Maryland, and others.

2. **In conjunction with the responsible parties, create a long-term research, evaluation, and reporting plan.**
   At the outset the research partners will need to reach agreement as to: 1) who will conduct which research; 2) how and when will that research be provided; 3) who will aggregate the individual research projects into a single report; 4) how and when will the results of the research be published and distributed.

3. **Establish baseline(s) for each of the recommended indicators.**
   As it is the hope that the recommended research will be conducted and released annually there will need to be a base established against which change is

measured. As the first step in each research component the responsible research partner should identify what that base will be, and how the data that constitutes that base will be acquired.

4. Work with the identified parties to systematize data collection.
While it will be important that the reports of the research are written in such a fashion as to be understandable by a non-technical audience, the methodologies and research approaches utilized will need to be both transparent and defensible under scholarly scrutiny. Each participating research entity should, therefore, identify a data collection and analysis procedure that is academically robust and replicable from year to year.

Historic preservation will not reach its optimum potential to contribute to the American economy or American society without such research being done.

Historic building rehabilitated into apartments and retail in Casper, Wyoming

APPENDIX A: SYMPOSIUM SUMMARY

As part of the research project, a one-day symposium was convened at the University of Pennsylvania's School of Design on February 8, 2011. The goal of the symposium was to lend additional depth to the team's exploration of best practice in conceptualization and measurement of the economic values of historic preservation.

The symposium framed possibilities for applying economic methods to practical, policy, and political problems encountered in historic preservation—as opposed to regarding economic studies as ends in themselves. The goal was to bridge academic research and practical application; to match the needs of advocacy and policy workers with the capabilities of academic (particularly economic) researchers.

Two international scholar/practitioners (themselves bridging in some manner the worlds of research and practice) were invited to present keynote speeches; three distinguished researchers with yet different combinations of academic focus with practical application were invited to comment on the speeches. This summary captures the main points raised and discussed during the day of formal presentations and informal discussions.

The day's workshop was introduced by Prof. Randall Mason; Donovan Rypkema presented the overall context and challenges presented by the research project commissioned by the ACHP.

The two invited keynote presenters were:

- Guido Licciardi, PhD: Urban Specialist, Urban Development and Local Government, The World Bank.
- Prof. Christian Ost: Professor and former Dean, ICHEC Brussels Management School; 2008-09 Guest Scholar, Getty Conservation Institute.

HIGHLIGHTS FROM THE TWO MORNING KEYNOTE SPEECHES

Licciardi: Presenting heritage economics through the lens of the World Bank (Bank) and its processes for internal project monitoring and evaluation, Licciardi argued that a greater appreciation of econometrics applied to heritage is possible, productive, even urgent, given the threats presented by urbanization (particularly in developing countries). The Bank's growing work on urban regeneration as a poverty reduction measure attests to the centrality of heritage (especially in its form as historic urban centers). The pursuit of this work by the Bank's Urban department will require an increasing effort to measure the economic values of heritage outcomes. A detailed presentation of Bank evaluation procedure and the role of econometrics was enhanced by a case study from Shandong province, China, and a short video highlighting a recent Bank project in Tunisia. In 2010 the World Bank published *The Urban Rehabilitation of Medinas* which highlights many of these issues, including fiscal and social policies.

Ost: Professor Ost presented some of his ongoing work in spatial analysis of heritage towns, using the case study of Djenne, Mali, (a World Heritage site) as an example. Ost takes as a starting point the multivalent nature of urban heritage and proceeds to create, through fieldwork and surveying, mappable data representing the different values for a historic urban center. Economic values, importantly, are presented as one among several significant value types including use and non-use values, vacancy rates, building conditions, and others. His work is an exciting and promising extension of the kinds of quantifying research so central to the economics field regarding the multiple social processes and variables characterizing urban heritage. The fundamental role of GIS in his work represents an important future direction of research and practice, as the management and synthesis of data related to economic and cultural values of heritage places remains a challenge for practitioners. It is also a potential boon to the understanding of decision-makers.

AFTERNOON DISCUSSION

Following formal presentations in the morning, much of the afternoon was devoted to wide-ranging discussion among a larger group of participants, which included colleagues from the world of policy and public service, academic colleagues, and graduate students. Three leading thinkers in areas related to economic values of heritage and other public goods were

invited to comment on the keynote speeches and kick off the afternoon discussion. They were:

- Erica Avrami, Director of Research and Education, World Monuments Fund
- Dr. Jeff Adams, Professor of Economics, Beloit College
- Dr. David Listokin, Professor, Center for Urban and Policy Research, Rutgers University

As with the key points of the interviews enumerated in the body of this report, the main points of the discussion were included to reflect the range of opinions of the participants, even though some of them are contradictory and other subject to dissent by the authors of this report.

Main points from the open discussion:

- Corresponding to the mix of participants from the academic, professional, and policy sectors, the discussion yielded a range of ideas and topics, including essential conceptual issues regarding the application of economic thinking to heritage phenomena as well as practical topics related to what kinds of arguments hold sway with decision-makers.
- Economic studies (or other academic studies for that matter) set up decisions but they do not make the decisions. The results of studies are used – or ignored – in the context of "political will," perceptions of political gain or risk, and the political economy of government action and/or investor profit motive.
- It is a danger to focus too narrowly on economic values. Studies of economic value should contextualize this among the other values of historic preservation (cultural, aesthetic, etc.).
- There is a lack of serious evaluation work, using accepted econometric methodologies, in the historic preservation field. Many opportunities for *ex post facto* economic analysis of preservation projects/policies exist. For example there is no known report that systematically compares the effectiveness and efficiency of state historic rehabilitation tax credit programs with other state-provided incentives meant to encourage local economic development.
- Evaluations are always subjective, no matter how successful our efforts to quantify them.
- Studies quantifying the economic value of preservation, no matter how professional and sound, always exist (or will be used) within a political context. So the "political will" to act on the studies will remain a major variable in determining whether such studies are successful. Since the decisions based on economics are so highly determined by politics, we might think in terms of "political economy" instead of "economics.
- Preservation consists of both private goods and public goods; this "mixed" nature yields both confusion and opportunity when it comes to choice of methods to evaluate and measure economic impacts. For the private goods in preservation (individually owned homes, for instance), economic value is relatively straightforward; for the public-good aspects remain difficult. Embracing the public-good aspects can serve as a kind of conceptual bridge to social and political questions shared more widely in society (outside of preservation), as with the idea of the loss of the public commons and the nature of social cooperation.
- The alleged culture and habits of the preservation field (single-mindedness, resistance to change) present barriers to accepting economic concepts and methodologies. Many in preservation want data "to make the case" (i.e., advocate what they would have advocated anyway) without really opening up to understanding how economic research could shape, change, and improve the field's understanding of how historic preservation should work as well as preservation's potential and actual benefits. As a field, preservation needs to recognize the inevitability of change and determine the best strategies to respond, not just fear change and the associated risks. Perhaps thinking of historic preservation in terms of portfolio management (as agencies like GSA or NPS must do) would be a way to adapt economic thinking to a "managing change" approach for evaluating preservation policies and making sensible decisions that are not isolated from the overall goal of improving the portfolio's performance.

- We tend to understand "economic benefits" in a single-time snapshot, static way that is too narrow. Historic preservation yields "process" benefits as well, such as community cohesion, social capital, etc., that are not captured by looking just at property values (though may be indicated in metrics such as depth of local government support for preservation, or existence of special incentives, permanent professional and technical jobs created). Our tools need to be matched to the whole spectrum of benefits we wish to measure. Perhaps the notion of "environmental services" as compared to "architectural" or "historic preservation" services is a useful analog (from the environmental conservation sector) in this regard.
- How effective are quantitative expressions of preservation benefits to decision-makers? We assume that numbers are the most effective means for swaying people to support preservation, but this is an unexamined, or at least anecdotal, belief. Rational arguments may not matter as much as well-articulated but irrational arguments crafted to identify with an audience/decision-maker more emotionally (such as community pride or identity associated with history and culture).
- In choosing metrics to collect, it is critical to ensure they can be collected regularly and into the future so longitudinal studies can be undertaken over some length of time.
- It is important that the metrics not only relate to market values but also captures core "outputs" of historic preservation such as educational outcomes, community cohesion, etc. Threat, risk, and price are not the only (or most relevant) measures.
- Issues such as the relationship between urban density and preservation policy, or competing market interests, raise the stakes for including some kinds of econometric analyses in preservation discourse and debate. It is obvious that the market plays a key role in shaping discussions over both commercial and residential density, so we better know how it works, how to measure outcomes, and how to talk about markets.
- The solutions to our problems cannot be found just within our sector; we have to collaborate.

In addition to the invited participants already mentioned, those active in the afternoon discussion included:

- Ron Anzalone, Advisory Council on Historic Preservation
- David Brown, National Trust for Historic Preservation
- Caroline Cheong, PlaceEconomics
- Brian Daniels, Penn Center for Cultural Heritage
- Scott Doyle, Pennsylvania Historical and Museum Commission
- Cory Kegerise, Maryland Historical Trust
- Brent Lane, University of North Carolina
- Constance Ramirez, National Park Service
- Donovan Rypkema, PlaceEconomics
- Benjamin Simon, Department of Policy Analysis, Department of Interior
- Erika Stewart, National Trust for Historic Preservation and National Trusts Community Investment Corporation
- Cherilynn Widell, Preservation consultant

APPENDIX B: ECONOMIC ANALYSIS METHODS—RIMS II, IMPLAN, AND PEIM

RIMS II

US Department of Commerce
Bureau of Economic Analysis
Regional Economic Accounts
https://www.bea.gov/regional/rims/brfdesc.cfm

OVERVIEW

Effective planning for public- and private-sector projects and programs at the state and local levels requires a systematic analysis of the economic impacts of these projects and programs on affected regions. In turn, systematic analysis of economic impacts must account for the interindustry relationships within regions because these relationships largely determine how regional economies are likely to respond to project and program changes. Thus, regional input-output (I-O) multipliers, which account for interindustry relationships within regions, are useful tools for conducting regional economic impact analysis.

In the 1970s, the Bureau of Economic Analysis (BEA) developed a method for estimating regional I-O multipliers known as RIMS (Regional Industrial Multiplier System), which was based on the work of Garnick and Drake.[1] In the 1980s, BEA completed an enhancement of RIMS, known as RIMS II (Regional Input-Output Modeling System), and published a handbook for RIMS II users.[2] In 1992, BEA published a second edition of the handbook in which the multipliers were based on more recent data and improved methodology. In 1997, BEA published a ***third edition of the handbook*** that provides more detail on the use of the multipliers and the data sources and methods for estimating them.

RIMS II is based on an accounting framework called an I-O table. For each industry, an I-O table shows the industrial distribution of inputs purchased and outputs sold. A typical I-O table in RIMS II is derived mainly from two data sources: BEA's national ***I-O table,*** which shows the input and output structure of nearly 500 U.S. industries, and BEA's regional economic accounts, which are used to adjust the national I-O table to show a region's industrial structure and trading patterns.[3]

Using RIMS II for impact analysis has several advantages. RIMS II multipliers can be estimated for any region composed of one or more counties and for any industry, or group of industries, in the national I-O table. The accessibility of the main data sources for RIMS II keeps the cost of estimating regional multipliers relatively low. Empirical tests show that estimates based on relatively expensive surveys and RIMS II-based estimates are similar in magnitude.[4]

BEA's RIMS multipliers can be a cost-effective way for analysts to estimate the economic impacts of changes in a regional economy. However, it is important to keep in mind that, like all economic impact models, RIMS provides approximate order-of-magnitude estimates of impacts. RIMS multipliers are best suited for estimating the impacts of small changes on a regional economy. For some applications, users may want to supplement RIMS estimates with information they gather from the region undergoing the potential change. Examples of case studies where it is appropriate to use RIMS multipliers appear in the ***RIMS II User Handbook.***

To effectively use the multipliers for impact analysis, users must provide geographically and industrially detailed information on the initial changes in output, earnings, or employment that are associated with the project or program under study. The multipliers can then be used to estimate the

1 See Daniel H. Garnick, "Differential Regional Multiplier Models," *Journal of Regional Science* 10 (February 1970): 35-47; and Ronald L. Drake, "A Short-Cut to Estimates of Regional Input-Output Multipliers," *International Regional Science Review* 1 (Fall 1976): 1-17.

2 See U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Input-Output Modeling System (RIMS II): Estimation, Evaluation, and Application of a Disaggregated Regional Impact Model* (Washington, DC: U.S. Government Printing Office, 1981). Available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; order no. PB-82-168-865; price $26.

3 See U.S. Department of Commerce, Bureau of Economic Analysis, *The Detailed Input-Output Structure of the U.S. Economy, Volume II* (Washington, DC: U.S. Government Printing Office, November 1994); and U.S. Department of Commerce, Bureau of Economic Analysis, *State Personal Income, 1929-93* (Washington, DC: U.S. Government Printing Office, June 1995).

4 See U.S. Department of Commerce, *Regional Input-Output Modeling System (RIMS II)*, chapter 5. Also see Sharon M. Brucker, Steven E. Hastings, and William R. Latham III, "The Variation of Estimated Impacts from Five Regional Input-Output Models," *International Regional Science Review* 13 (1990): 119-39.

total impact of the project or program on regional output, earnings, and employment.

RIMS II is widely used in both the public and private sectors. In the public sector, for example, the Department of Defense uses RIMS II to estimate the regional impacts of military base closings. State transportation departments use RIMS II to estimate the regional impacts of airport construction and expansion. In the private sector, analysts and consultants use RIMS II to estimate the regional impacts of a variety of projects, such as the development of shopping malls and sports stadiums.

RIMS II METHODOLOGY

RIMS II uses BEA's benchmark and annual I-O tables for the nation. Since a particular region may not contain all the industries found at the national level, some direct input requirements cannot be supplied by that region's industries. Input requirements that are not produced in a study region are identified using BEA's regional economic accounts.

The RIMS II method for estimating regional I-O multipliers can be viewed as a three-step process. In the first step, the producer portion of the national I-O table is made region-specific by using six-digit NAICS location quotients (LQs). The LQs estimate the extent to which input requirements are supplied by firms within the region. RIMS II uses LQs based on two types of data: BEA's personal income data (by place of residence) are used to calculate LQs in the service industries; and BEA's wage-and-salary data (by place of work) are used to calculate LQs in the non-service industries.

In the second step, the household row and the household column from the national I-O table are made region-specific. The household row coefficients, which are derived from the value-added row of the national I-O table, are adjusted to reflect regional earnings leakages resulting from individuals working in the region but residing outside the region. The household column coefficients, which are based on the personal consumption expenditure column of the national I-O table, are adjusted to account for regional consumption leakages stemming from personal taxes and savings.

In the last step, the Leontief inversion approach is used to estimate multipliers. This inversion approach produces output, earnings, and employment multipliers, which can be used to trace the impacts of changes in final demand on directly and indirectly affected industries.

ACCURACY OF RIMS II

Empirical evidence suggests that RIMS II commonly yields multipliers that are not substantially different in magnitude from those generated by regional I-O models based on relatively expensive surveys. For example, a comparison of 224 industry-specific multipliers from survey-based tables for Texas, Washington, and West Virginia indicates that the RIMS II average multipliers overestimate the average multipliers from the survey-based tables by approximately 5 percent. For the majority of individual industry-specific multipliers within these states, the difference between RIMS II and survey-based multipliers is less than 10 percent. In addition, RIMS II and survey multipliers show statistically similar distributions of affected industries.

ADVANTAGES OF RIMS II

There are numerous advantages to using RIMS II. First, the accessibility of the main data sources makes it possible to estimate regional multipliers without conducting relatively expensive surveys. Second, the level of industrial detail used in RIMS II helps avoid aggregation errors, which often occur when industries are combined. Third, RIMS II multipliers can be compared across areas because they are based on a consistent set of estimating procedures nationwide. Fourth, RIMS II multipliers are updated to reflect the most recent local-area wage-and-salary and personal income data.

APPLICATIONS OF RIMS II

RIMS II multipliers can be used in a wide variety of regional impact studies. For example, the U.S. Nuclear Regulatory Commission has used RIMS II multipliers in environmental impact statements required for licensing nuclear electricity-generating facilities. The U.S. Department of Housing and Urban Development has used RIMS II multipliers to estimate the impacts of various types of urban redevelopment expenditures. RIMS II multipliers have also been used to estimate the regional economic and industrial impacts of: opening or closing military bases, tourist expenditures, new energy facilities, energy conservation, offshore drilling, opening or closing manufacturing plants, shopping malls, new sports stadiums, and new airport or port facilities.

IMPLAN

David Mulkey and Alan W. Hodges
University of Florida, IFAS Extension
http://edis.ifas.ufl.edu/fe168

THE IMPLAN DATABASE

The economic data for IMPLAN comes from the system of national accounts for the United States based on data collected by the U.S. Department of Commerce, the U.S. Bureau of Labor Statistics, and other federal and state government agencies. Data are collected for 528 distinct producing industry sectors of the national economy corresponding to the Standard Industrial Categories (SICs). Industry sectors are classified on the basis of the primary commodity or service produced. Corresponding data sets are also produced for each county in the United States, allowing analyses at the county level and for geographic aggregations such as clusters of contiguous counties, individual states, or groups of states.

Data provided for each industry sector include outputs and inputs from other sectors, value added, employment, wages and business taxes paid, imports and exports, final demand by households and government, capital investment, business inventories, marketing margins, and inflation factors (deflators). These data are provided both for the 528 producing sectors at the national level and for the corresponding sectors at the county level. Data on the technological mix of inputs and levels of transactions between producing sectors are taken from detailed input-output tables of the national economy. National and county level data are the basis for IMPLAN calculations of input-output tables and multipliers for local areas.

IMPLAN MULTIPLIERS

The IMPLAN software package allows the estimation of the multiplier effects of changes in final demand for one industry on all other industries within a local economic area. Multipliers may be estimated for a single county, for groups of contiguous counties, or for an entire state; they measure total changes in output, income, employment, or value added. Definitions are provided below. More detail on the derivations of multipliers is available in the earlier cited IMPLAN Users Guide.

For a particular producing industry, multipliers estimate three components of total change within the local area:

- Direct effects represent the initial change in the industry in question.
- Indirect effects are changes in inter-industry transactions as supplying industries respond to increased demands from the directly affected industries.
- Induced effects reflect changes in local spending that result from income changes in the directly and indirectly affected industry sectors.

IMPLAN allows the analyst to choose from multipliers that capture only direct and indirect effects (Type I), multipliers that capture all three effects noted above (Type II), and multipliers that capture the three effects noted above and further account for commuting, social security and income taxes, and savings by households (Type SAM). Total effects multipliers usually range in size from 1.5 to 2.5 and are interpreted as indicated below:

- Output multipliers relate the changes in sales to final demand by one industry to total changes in output (gross sales) by all industries within the local area. An industry output multiplier of 1.65 would indicate that a change in sales to final demand of $1.00 by the industry in question would result in a total change in local output of $1.65.
- Income and employment multipliers relate the change in direct income to changes in total income within the local economy. For example, an income multiplier for a direct industry change of 1.75 indicates that a $1.00 change in income in the direct industry will produce a total income change of $1.75 in the local economy. Similarly, an employment multiplier of 1.75 indicates that the creation of one new direct job will result in a total of 1.75 jobs in the local economy.
- Value added multipliers are interpreted the same as income and employment multipliers. They relate changes in value added in the industry experiencing the direct effect to total changes in value added for the local economy.

PEIM

Preservation Economic Impact Model, created by Rutgers University Center for Urban Policy Research for the National Park Service
Excerpted from *Economic Impacts of Historic Preservation in Oklahoma* (2008)
Prepared by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey for Preservation Oklahoma.
www.okhistory.org/shpo/econimpact.pdf

The Preservation Economic Impact Model (PEIM) was produced by Rutgers University Center for Urban Policy Research for the National Park Service. The PEI Model produces very accurate estimates of the total regional impacts of an economic activity and employs detail for more than 500 industries in calculating the effects.

This model and its predecessors have proven to be the best of the non-survey-based regional input-output models at measuring a region's economic self-sufficiency. The models also have a wide array of measures that can be used to analyze impacts. In particular, PEIM produces one of the only regional economic models that enable an analysis of governmental revenue (i.e., tax) impacts and an analysis of gains in total regional wealth.

The results of PEIM include many fields of data. The fields most relevant to this study are the total impacts with respect to the following:

- **Jobs:** *Employment, both part- and full-time, by place of work, estimated using the typical job characteristics of each detailed industry.* (Manufacturing jobs, for example, tend to be fulltime; in retail trade and real estate, part-time jobs predominate.) All jobs generated at businesses in the region are included, even though the associated labor income of commuters may be spent outside of the region. In this study, all results are for activities occurring within the time frame of one year. Thus, the job figures should be read as job-years; i.e., several individuals might fill one job-year on any given project.
- **Income:** *"Earned" or "labor" income—specifically wages, salaries, and proprietors' income.* Income in this case does not include non-wage compensation (i.e., benefits, pensions, or insurance), transfer payments, or dividends, interest, or rents.
- **Wealth**: *Value added—the equivalent at the subnational level of gross domestic product (GDP).* At the state level, this is called gross state product (GSP). Value added is widely accepted by economists as the best measure of economic well-being. It is estimated from state-level data by industry. For a firm, value added is the difference between the value of goods and services produced and the value of goods and nonlabor services purchased. For an industry, therefore, it is composed of labor income (net of taxes); taxes; non-wage labor compensation; profit (other than proprietors' income); capital consumption allowances; and net interest, dividends, and rents received.
- **Output**: Of the measures in any input-output report, perhaps the least well defined one is that labeled "output." *Output is defined as the value of shipments, which is reported in the Economic Census.* The value of shipments is very closely related to the notion of business revenues. Thus it is NOT the "output" to which most other economists refer and which is better known as "gross domestic product" (GDP). Input-output analysis "output" is not the same as business revenues for several reasons, however. First, establishments often sell some of their output to themselves and therefore do not ship it. Hence, such sales cannot be included in the Census's tally of the value of shipments. Second, to avoid some double counting in national accounts (those used to produce input-output tables), "output" in the wholesale and retail trade industries is measured simply as their margins, which is value added plus the costs of inputs used in the course of doing business. That is for these trade industries, "output" does NOT include the value of the items stocked on shelves.
- **Taxes**: *Tax revenues generated by the activity.* The tax revenues are detailed for the federal, state, and local levels of government. Totals are calculated by industry.

- *Federal tax* revenues include corporate and personal income, social security, and excise taxes, estimated from the calculations of value added and income generated.
- *State tax* revenues include personal and corporate income, state property, excise, sales, and other state taxes, estimated from the calculations of value added and income generated (e.g., purchases by visitors).
- *Local tax* revenues include payments to sub-state governments mainly through property taxes on new worker households and businesses. Local tax revenues can also include revenues from local income, sales, and other taxes.

APPENDIX C: WALK SCORE

http://www.walkscore.com/methodology.shtml

Street Smart Walk Score calculates a score by mapping out the walking distance to the closest amenity locations of 9 different amenity categories. Different numbers of amenities are counted in each category (for instance the first 10 restaurants and bars are counted, while only 1 park is counted), which are referred to as counts.

Each category receives different weights as well, which shows that category's importance relative to other categories. The distance to a location, the counts and the weights determine a base score of an address, which is then linearly expanded to range from 0 to 100. After this, an address may receive a penalty for having poor pedestrian friendliness metrics, such as having long blocks or low intersection density.

The following categories, counts and weights are used:

```
amenity_weights = {
"grocery": [3],
"restaurants": [.75, .45, .25, .25, .225, .225, .225, .225, .2, .2],
"shopping": [.5, .45, .4, .35, .3],
"coffee": [1.25, .75],
"banks": [1],
"parks": [1],
"schools": [1],
"books": [1],
"entertainment": [1],
}
```

The numbers after a category indicate the assigned weight and number of counts of that amenity. More than one number means that more than one count of that amenity is included, with the second nearest amenity of that type receiving the weight of the second number, etc. At this point, the weights indicate the relative importance of categories to one another. So having a grocery store nearby is 3 times as important as having a bank nearby.

These weights were determined from the research literature and testing the algorithm. Lee and Moudon (2006) find evidence that nearby grocery stores, restaurants/bars, banks and schools increase walking, as do areas with grocery/retail/restaurant clusters. Moudon et al. (2006) and Cerrin et al. (2007) both cite collected survey data showing that grocery stores, restaurants/bars, retail locations, coffee shops, and banks are common walking destinations. The Cerrin et al. (2007) survey responses find that people frequently walk to parks as well. The categories we use here are also similar to ones used in studies and work on walkability by Iacono et al. (2010), El-Geneidy and Levinson (2010), and Piekarski (2009).

The amenity categories have been determined from the available research to be of either of high importance to walkability, medium importance or low importance. This is reflected in the category weights. Grocery store and restaurants/bars have total category weights summing to 3, while shopping and coffee shops have weights summing to 2, while the other categories sum to 1.

Grocery stores receive the heaviest weight because they have been found to be drivers of walking (Lee and Moudon 2006), as well as the most common walking destination in surveys (Moudon et al. 2006, Cerrin et al. 2007).

Restaurants and bars are combined into a single category due to their overlapping nature: many restaurants have bars and many bars serve food. Restaurants/bars are found to be some of the most frequent walking destinations (Moudon et al. 2006, Cerin et al. 2007), so this category has a combined total weights of 3.

Variety and options are important, so 10 counts of restaurants/bars are included, with the first counts receiving greater weight than the later counts to account for diminishing returns. Including 10 counts of restaurants also allows for more differentiation among high scoring locations, as 10 restaurants or bars must be very nearby to receive a perfect score.

The shopping category includes clothing stores and stores categorized as "gift shops", which defines a broad range of retail locations (e.g. specialty food store, flower store, children's store, etc.). The "gift shop" category is used as a proxy for the breadth of retail stores near an address.

Shopping and retail are commonly used categories in the research literature, are one of the more common walking destinations (Cerin et al. 2007) and are found to increase walking (Lee and Moudon 2006). The category has a combined total weight of 2, and there are 5 counts included. Giving this category 5 counts demands a certain density of shopping locations for an address to score well. The stores looked at in this category are important in themselves, but are also meant to proxy to a degree for other shopping stores. Not every retail location falls under clothing store or gift shop, but an address that scores well in this category is likely to have these other retail locations close by as well.

For coffee shops, variety is also important, but not to the same degree that it is for restaurants and shopping. Two counts are included, so that in the ideal walkable area some choice is available. Additionally, coffee shops are found by both Cerin et al. (2007) and Moudon et al. (2006) to be important destinations, and the presence of nearby coffee shops gives an indication of the overall walkability of an area. Because of this, we have made the total weight of this category 2.

The other categories are deemed to be more or less equal and all receive a weight of 1 and have 1- count. The literature does not give a clear indication of which of these other categories should have a greater weight, while still indicating that they are important. However, they are not generally found to be as important as grocery stores, restaurants/bars, and retail, and it does not seem appropriate to include more than one count for any of them.

APPENDIX D: LITERATURE REVIEW – UPDATE

Since Randall Mason's 2005 Brookings Institute Report, numerous studies, reports, and papers focusing on the economic impact of historic preservation have been produced. Both academics and practitioners have written about the various aspects of this diverse topic, some deepening the extant body of knowledge and others opening new avenues to explore. This report collects literature published since 2005 that is intended to be a continuation of Mason's report. Within each category, sources that focus directly on the subject or are particularly relevant are summarized; other interesting but less-relevant works are also listed, but not summarized. Overall, the intention of this document is to call attention to the most useful and illuminating literature for practitioners and decision-makers, not to list exhaustively everything published on a topic.

Some of the published work relevant to the economics of heritage and preservation are difficult to categorize. For example, many of the national and statewide economic impact reports contain tourism information and analysis. Regarding cultural and heritage tourism in particular, much of the current research and resultant publications on its economic impact is subsumed under tourism in general or focuses on reporting visitor spending habits and travel services, rather than econometric analysis. This is an area within cultural and heritage tourism that warrants further analysis.

Since 2005, the literature on environmental sustainability has grown dramatically and issues of sustainability have taken center stage in the thinking and practice of those involved in evaluating the economic impact of historic preservation. The additional category "Sustainability and Historic Preservation" is thus necessary to sample some key works that put this recent shift in focus. Similarly, new technologies have opened doors to new and innovative ways of visualizing and presenting economic data by placing it within its geographic context. The additional category of "Geographic/Information Technology and Historic Preservation" is thus necessary. It should also be noted that public lands and outdoor recreation is a growing focus due to the creation and promotion of National Heritage Areas, National Heritage Corridors, and other public lands. However, literature currently focuses on the reporting of data rather than scholarly or economic assessment.

Mason's 2005 Brookings Institute report, *Economics and Historic Preservation: A Guide and Review of the Literature*, can be found here: http://www.brookings.edu/~/media/Files/rc/reports/2005/09metropolitanpolicy_mason/20050926_preservation.pdf.

ECONOMICS AND PRESERVATION: REVIEW AND RESULTS FROM THE LITERATURE

NEW CATEGORIES:

1. SUSTAINABILITY AND HISTORIC PRESERVATION

Literature focusing on the connections between sustainability and historic preservation is varied and growing. Articles focus on such topics as the impact of historic preservation regulations on property values, the reuse of historic buildings, LEED standards, and the integration of culture in sustainability measurements. The linkages between sustainability and heritage conservation are becoming increasingly prominent and receiving more attention from practitioners and academics alike.

Stubbs, Michael. "Heritage-Sustainability: Developing a Methodology for the Sustainable Appraisal of the Historic Environment." *Planning, Practice & Research* 19. 3 (August 2004): 285–305.
This article sets out to establish a framework for appraising sustainability in the heritage sector. Focusing ostensibly on case study material, a methodology is advanced for the promotion and appraisal of other projects that seek to promote sustainability. The hypothesis tested by this work is that policy makers in the heritage sector need to pay regard to a 'bespoke' application of sustainability when devising indicators to measure the consequences of their actions. It follows that the null hypothesis, therefore, is that such projects

can be measured by generic indicators, applicable to both heritage and non-heritage projects.

Young, Robert. "Striking Gold: Historic Preservation and LEED." *Journal of Green Building* 3.1 (2007). This article explores the growth and emergence of the preservation movement as an increasingly recognized and important form of sustainable design. The article provides an overview of the relationship between the preservation and environmental movements, exemplifying how to multiply the benefits of historic preservation and environmental stewardship. The article uses the case study of the W. P. Fuller Paint Company Building in Salt Lake City. This project is among the first to simultaneously incorporate LEED and Historic Preservation Tax Incentives to achieve a "Gold" rating by LEED while meeting conformance requirements to the Secretary of the Interior's Standard for Rehabilitation and earning a 20% historic preservation tax credit.

APT Bulletin: The Journal of Preservation Technology "Special Green Issue" 36.4 (2005).

Caramitru, Ion, et al. "Session III: Policies for Culture in Sustainable Development." Proceedings of Culture Counts: Financing, Resources, and the Economics of Culture in Sustainable Development, October 4-7, 1999, Florence, Italy. Washington, DC: The World Bank, 2000. 49-60.

Chusid, Jeffrey M. "Natural Allies: Historic Preservation and Sustainable Design." In Steven A. Moore, ed. *Pragmatic Sustainability: Theoretical and Practical Tools*. New York: Routledge, 2010.

Deakin, Mark, et al, eds. *Sustainable Urban Development Volume 2: The Environmental Assessment Methods*. Oxford: Taylor & Francis, 2007.

De Groot, R. "Function-Analysis and Valuation as a Tool to Assess Land Use Conflicts in Planning for Sustainable, Multi-Functional Landscapes." *Landscape and Urban Planning* 75.3-4 (2006): 175-186.

Farr, Douglas. *Sustainable Urbanism: Urban Design with Nature*. Hoboken, NJ: John Wiley & Sons, Inc., 2007.

Gražuleviciute, I. "Cultural Heritage in the Context of Sustainable Development." *Environmental Research, Engineering and Management* 3.37 (2006): 74-79.

Lombardi, P. and P.S. Brandon. "A Framework for Understanding Sustainability in the Cultural Built Environment." Cities & Sustainability: Sustaining Our Cultural Heritage, Conference Proceedings, Vishva Lekha Sarvodaya, Sri Lanka, cap.IV, 2000. Eds. Lombardi, P., et al. 1-25.

McMahon, Edward T. "Sustainability and Property Rights." *Urban Land*, June 2005: 30-33.

Moreno, Y.J., W. Santagata, and A. Tabassum. "Material Cultural Heritage, Cultural Diversity and Sustainable Development." ACEI, 13th International Conference on Cultural Economics, June 3-5, 2004, University of Illinois at Chicago, Department of Economics, Chicago, Illinois.

National Trust for Historic Preservation website: http://www.preservationnation.org/issues/sustainability/

Rypkema, Donovan. "Economics, Sustainability, and Historic Preservation." National Preservation Conference, October 1, 2005, Portland, Oregon.

- "New Life in Warehouse Districts: The Inherent Sustainability in the Adaptive Reuse of Industrial Sites." *Sustainable Urban Redevelopment* (Spring 2008): 6-12.
- "Economics, Sustainability, and Historic Preservation." *Forum Journal* 20.1 (2005).
- "Historic Preservation as Sustainable Development." *North Carolina Preservation Magazine*, Spring 2005.

Stubbs, Michael. "Heritage-Sustainability: Developing a Methodology for the Sustainable Appraisal of the Historic Environment." *Planning Practice and Research* 19.3 (August 2004): 285-305.

Tweed, Christopher and Margaret Sutherland. "Built Cultural Heritage and Sustainable Urban Development." *Landscape and Urban Planning* 83.1 (2007): 62-69.

Wheeler, Stephen M. and Timothy Beatley, eds. *The Sustainable Urban Development Reader*. New York: Routledge, 2004.

2. GEOGRAPHIC / INFORMATION TECHNOLOGY AND HISTORIC PRESERVATION

Recent innovations in technology have opened new avenues and possibilities for measuring the economic impact of historic preservation. Mapping techniques have allowed for the visualization of valuable information that informs policy makers, practitioners, academics, community members, and other stakeholders by presenting data in an easily understood format. Other forms of media technology have altered the way in which information is conveyed, changing the landscape of cultural economics and heritage. The relationship between technology and historic preservation is expanding and will likely continue to create new ways in which the values of heritage resources can be communicated.

Ost, Christian. "A Guide for Heritage Economics in Historic Cities: Values, Indicators, Maps, and Policies." Getty Conservation Institute. (2009).
Ost uses familiar language but approaches measurement of heritage economics in a values-based framework, beginning with use value then distinguishing between direct and indirect values and the *indicators* that can be used to measure heritage's economic impact. Some of his suggested indicators are specific, such as the visitor/resident ratio to measure tourism pressures, full- versus part-time residency, population decline/increase, and rental rates. He also suggests *mapping* as a powerful tool, then describes various methods for *policy* approaches, including cost-benefit analysis and multi-criteria analysis.

Indicators – explains how to measure the economic value by the use of indicators. Based on definitions of the economic values of a historic city's cultural heritage, it suggests categories of indicators for each component of the total economic values. It also describes economic and strategic analysis of historic cities using heritage indicators.

Indicators are used to communicate performance and guide decision-making. They are well regarded as a way to test a city's performance. Heritage's contributions to a city's economic performance can also be measured by indicators. Page 41 has a good chart of examples of such indicators. He suggests their use because they're low-cost, and can be gathered without a huge amount of difficulty or time.

Mapping – explains how to present economic landscapes, from data or indicators to maps. The mapping process is defined, along with its specific software and on database requirements. The purpose of this section is also to prepare the decision-making process by using mapping techniques compatible to urban-planning methods.

Policies – proposes methodologies to city authorities – as macroeconomic policy makers – to enhance planning and managing of heritage conservation, such as cost-benefit analysis and multi-criteria analysis applied to historic cities, with the goal of achieving a balance between conservation and city development.

Bodurow, Constance C., Calvin Creech, Alan Hoback, and Jordan Martin. "Multivariable Value Densification Modeling Using GIS." *Transactions in GIS* 13 (2009): 147-75.
The article focuses on the development and use of a GIS mapping tool – called the Value Densification Community Mapping Project (VDCmp) – used primarily to evaluate density of resources and physical features. The authors focused on Southwest Detroit, Michigan, as a case study. This project was developed to explore how aspects of the post-industrial city can be understood, communicated, and leveraged in service of equity and sustainability and to use technology to reveal data about the city in order to convince community, political, and economic leadership to embrace a broader interpretation of value. The VDCmp digital interface is unique in that it models "social exchanges" in three dimensions and allows the user to overlay social and infrastructure layers with physical density. These techniques have allowed the community groups to visually identify over- or under-served resources, conflicting planning objectives, environmental health impacts, or areas of social inequality, with an end-goal of developing a dynamic, unified development and preservation strategy for the community.

OTHER

Heuer, Tad. "Living History: How Homeowners in a New Local Historic District Negotiate Their Legal Obligations." *The Yale Law Journal* 116.4 (2007): 768-822.
American historic preservationists are increasingly emphasizing the need to preserve not only prominent landmarks but also the vernacular architectural culture of "ordinary neighborhoods." Preserving such neighborhoods often requires convincing homeowners to agree to legal restrictions on how they maintain their homes, yet to date there has been no empirical research on how homeowners have responded to the policy tradeoffs inherent in making such a decision. This Note fills that gap, using extensive original empirical research to examine how homeowners in New Haven's recently approved City Point Local Historic District viewed and managed their legal obligations.
This Note then draws upon these data to develop policy recommendations for improving local preservation efforts nationwide. (Abstract taken from publication)

Kaminski, Jaime, Jim McLoughlin, and Babak Sodagar. "Assessing the Socio-economic Impact of Heritage: From Theory to Practice." *Technology Strategy, Management and Socio-economic Impact*. Budapest: Archaeolingua, 2007.
This chapter describes the key dimensions and interconnections that drive impact and combines this with a typology of impacts and accompanying measurement considerations. This theoretical construction is converted into a practical tool for assessing and measuring impact through the new 6Cs HIT (Heritage Impact Training) model, which is designed to help heritage managers, strategists, and policy makers implement coherent and effective approaches to capturing the socio-economic impacts of heritage.

Rypkema, Donovan. *Feasibility Analysis of Historic Buildings*. Washington, DC: National Trust for Historic Preservation, 2007.
Rypkema provides a thorough methodology for assessing the feasibility for reuse of a historic building. Through step-by-step guidelines, he takes users through the stages of determining the potential outcomes for a heritage building, emphasizing the importance of capitalizing upon each team member's strengths and the economic impact of potential uses.

ANNOTATED BIBLIOGRAPHY

Below is a listing of pertinent additions to Mason's 2005 Brookings Institute annotated bibliography.

A. "FIRST TEN READINGS"

Peacock, Alan, and Ilde Rizzo. *The Heritage Game: Economics, Policy, and Practice*. Oxford: Oxford University Press, 2008.
A notable feature in cultural life is the growing demand to preserve and promote public access to historical buildings and sites, and artistic treasures of the past. Governments are increasingly involved in financing and regulating private attempts to meet this growing demand as well as extending their own provision of these treasures in state and locally owned museums and galleries. These developments raise important issues about the scope, content, and relevance of heritage policies in today's world. Written by two leading figures in the field of cultural economics, this authoritative book focuses on the impact of economic analysis on the formulation and implementation of heritage policy. (Abstract taken from publication)

Journal of Cultural Economics

Journal of Cultural Heritage Management and Sustainable Development

B. OVERARCHING WORKS ON ECONOMICS AND HISTORIC PRESERVATION

Bowitz, Einar and Karin Ibenholt. "Economic Impacts of Cultural Heritage – Research and Perspectives." *Journal of Cultural Heritage* 10.1 (January-March 2009): 1-8.

Doyle, Gillian. "Why Culture Attracts and Resists Economic Analysis." *Journal of Cultural Economics* 34 (2010): 245-259.

Glaeser, Edward. *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Healthier and Happier*. New York: Penguin Press, 2011.

Mason, Randall. "Be Interested and Beware: Joining Economic Valuation and Heritage Conservation." *International Journal of Heritage Studies* 14.4 (2008): 303-318.

Snowball, J.D., *Measuring the Value of Culture: Methods and Examples in Cultural Economics*. Berlin: Springer, 2008.

C. ECONOMICS OF THE ARTS AND CULTURE

Anheier, Helmut K., and Yudhishthir Raj. Isar. *The Cultural Economy: Cultures and Globalizations*. London: Sage, 2008. This second volume *The Cultural Economy* analyses the dynamic relationship in which culture is part of the process of economic change that in turn changes the conditions of culture. It brings together perspectives from different disciplines to examine such critical issues as:

- the production of cultural goods and services and the patterns of economic globalization
- the relationship between the commodification of the cultural economy and the aesthetic realm
- current and emerging organizational forms for the investment, production, distribution, and consumption of cultural goods and services
- the complex relations between creators, producers, distributors, and consumers of culture
- the policy implications of a globalizing cultural economy

Currid, Elizabeth, "How Art and Culture Happen in New York: Implications for Urban Economic Development." *Journal of the American Planning Association* 73.4 (2007). This article looks closely at the mechanisms that structure and drive the cultural economy and suggests possible avenues for cultural economic development and policymaking based on these mechanisms. The author focuses on how cultural producers obtain jobs, advance their careers, gain value for their goods and services, and interact with each other.

Butcher, Jim. "Cultural Politics, Cultural Policy and Cultural Tourism." *Cultural Tourism in a Changing World: Politics, Participation and (Re)presentation*. By Melanie K. Smith and Mike Robinson. Clevedon, UK: Channel View Publications, 2006: 21-35.

Cowen, Tyler. "Why Everything Has Changed: The Recent Revolution in Cultural Economics." *Journal of Cultural Economics* 32.4 (December 2008): 261-273. DeNatale, Douglas and Gregory H. Wassall.

"Creative Economy Research in New England: A Reexamination." White paper prepared for discussion at the Research Convening of the New England Research Community, New England Foundation for the Arts (March 27, 2006).

DeNatale, Douglas and Gregory H. Wassall. "New England's Creative Economy: The State of the Public Cultural Sector – 2005 Update. A new research methodology." New England Foundation for the Arts (August, 2006).

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Madden, Christopher. "Indicators of Arts and Cultural Policy: A Global Perspective." *Cultural Trends* 14.3 (September 2005): 217-247.

Markusen A. "Urban development and the politics of a creative class: evidence from a study of artists." *Environment and Planning* 38.10 (2006): 1921 – 1940.

Potts, Jason, Stuart Cunningham, John Hartley, and Paul Ormerod. "Social network markets: a new definition of the creative industries." *Journal of Cultural Economics* 32.3 (2008): 167-18.

"Culture and Economic Performance: What strategies for sustainable employment and urban development planning?" *Forum d'Avignon*. Prepared by Ineum Consulting and Kurt Salmon Associates. 2010. http://www.forum-avignon.org/sites/default/files/editeur/2010_Etude_Ineum_UK.pdf

D. ENVIRONMENTAL ECONOMICS

Cato, Molly Scott. *Green Economics: An Introduction to Theory, Policy and Practice*. London: Earthscan, 2009.

Davis, Steven M. "Preservation, Resource Extraction, and Recreation on Public Lands: A View from the States." *Natural Resources Journal* 48.303 (2008).

E. WORKS ON THE NOTION OF VALUE

Maskey, Vishakha, Cheryl Brown, and Ge Lin. "Assessing Factors Associated With Listing a Historic Resource in the National Register of Historic Places." *Economic Development Quarterly* (2009).
The authors focus on the socioeconomic, institutional, and location factors behind a community's reasons for approving or disapproving of historic district listings. Findings are summarized here: Two separate models of total historic listings and rate of historic house listings in the National Register identify the following: number of higher education institutions and older houses, rural area, more than one historic preservation organization, proportion of females, and the share of income in the service economy. Age, poverty rate, and the Gini coefficient of income inequality have an inverse relationship with listing.

Levi, Daniel J. "Does History Matter? Perceptions and Attitudes toward Fake Historic Architecture and Historic Preservation." *Journal of Architectural and Planning Research* 22:2 (Summer 2005).

Mason, Randall. "Theoretical and Practical Arguments for Values-Centered Preservation." *CRM: The Journal of Heritage Stewardship* 25 (Summer 2006): 21-48.

Provins, Allan, David Pearce, Ece Ozdemiroglu, Susana Mourato, and Sian Morse-Jones. "Valuation of the historic environment: the scope for using economic valuation evidence in the appraisal of heritage-related projects." *Progress in Planning* 69 (2008): 131-175.

F. BASIC COST STUDIES / DESCRIPTIVE WORK

Ozdil, Taner R. "Assessing the Economic Revitalization Impact of Urban Design Improvements: The Texas Main Street Program." Diss. Texas A&M University, 2006.

G. ECONOMIC IMPACT STUDIES

Many of these studies have focused on the holistic economic impact of a state's tax credit and grant programs, non-profit activities, and private investment, while others have more narrowly analyzed the impact of specific programs. Standard indicators such as jobs, household income, and private investment continue to be used as primary quantitative units of measurement. However, the expansion of thinking within urban planning and public policy towards sustainability and the creation of livable neighborhoods has led many academics and practitioners to focus on new indicators that are representative of these shifting priorities. These include walkability, embodied energy, infrastructure savings, and waste saved from landfills.

The subcategories below – National, State, Tax Credits, Tourism, and Public Lands and Outdoor Recreation – attempts to distinguish the focus of the studies by theme, however it should be noted that in some cases there is significant overlap. For example, a statewide study may include tourism impacts in its scope. Similarly, a tourism study may focus entirely on an outdoor recreation area.

For more details on the focus of each study, please see Appendix B.

a. National

Measuring the Economic Impact of Federal Historic Properties (2005)
Prepared by the Federal Preservation Institute.
https://www.historicpreservation.gov/c/document_library/get_file?uuid=6d67e144-49b2-4088-8506-46694fab5757&groupId=14502
This 45-page report discusses the difficulties in measuring the economic impact of preservation and advocates for federal agencies to engage in measuring the economic impacts of their historic preservation programs. It describes in detail the metrics and methodologies commonly used and their implications for the agencies. Measuring such impacts would help agencies understand the economic contributions of their historic preservation activities.

Blue, Gray, and Green: A Battlefield Benefits Guide for Community Leaders (2006)
Prepared by Davidson – Peterson Associates for The Civil War Preservation Trust.
http://www.civilwar.org/land-preservation/blue-gray-and-green-report.pdf
The full report analyzes the economic impact on local communities of the preservation of 20 historic battlefields.

b. State

The Economic Benefits of Historic Preservation in Colorado (2005)
Prepared by Clarion Associates of Colorado, LLC in association with BBC Research and Consulting for The Colorado Historical Foundation.
http://www.blm.gov/heritage/adventures/HT_Resources/Colorado%20Historical%20Foundation/ECONOMIC%20BENEFITS%20OF%20HISTORIC%20PRESERVATION%20IN%20COLORADO%20.pdf
This report looks at the state and federal historic preservation tax credit, the state historical fund, heritage tourism, property values, and Colorado's Main Street program.

Banking on Tennessee's History: The Economic Value of Historic Preservation to the People of Tennessee (2005)
Prepared by the Tennessee Preservation Trust.
http://www.sitemason.com/files/evPV1C/Banking%20on%20Tennessee%20History.pdf
This report addresses public/private partnerships, downtown revitalization, job creation, heritage tourism, and property values.

Economic Impacts of Historic Preservation in Arkansas (2006)
Prepared by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey for the Arkansas Historic Preservation Program.
http://www.arkansaspreservation.org/economic-benefits/
The report was prepared during the advocacy for a state historic preservation tax credit. It examines economic impacts of the federal historic preservation tax credit, rehabilitation, grant programs, heritage tourism, Main Street, and property values.

Contributions of Historic Preservation to the Quality of Life of Floridians (2006, 2010 update)
http://www.flheritage.com/preservation/economic-impact.cfm
Two reports are available. Sections include: "Quality of Life Indicators"; "Preservation Law and Policies"; "Heritage Tourism"; "History Museums"; "Historic and Affordable Housing."

Report Card: The Economic Impacts of Historic Preservation in Michigan (2006)
Original 2002 report prepared by Clarion Associates for the Michigan Historic Preservation Network.
http://www.preservationnation.org/issues/rehabilitation-tax-credits/addtional-resources/Michigan-Report-on-Tax-Credit.pdf
Two reports are available. Key chapter/section titles of the original report: "Rehabilitation of Historic Buildings"; "Historic Districts and Property Values"; "Preservation and Michigan Tourism."

Preservation at Work for the Nebraska Economy (2007)
Prepared by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey for the Nebraska State Historical Society and the Nebraska State Historic Preservation Office.
http://www.nebraskahistory.org/histpres/publications/EconImpactReport.pdf
This 16-page illustrated report summarizes the findings of the study referenced below, *Economic Impacts of Historic Preservation in Nebraska*.

Economic Impacts of Historic Preservation in Nebraska (2007)
http://www.nebraskahistory.org/histpres/publications/Nebraska_Hist_Pres_Econ.pdf
This full report addresses rehabilitation, heritage tourism, the Main Street Program, historic sites and museums, historic tax credits, and historic property valuation.

The Economic Benefits of Historic Preservation in Washington State: Technical Report (2007)
Prepared by Matt Dadswell, Tetratech, Inc and William Beyers, University of Washington for the Washington Department of Archaeology and Historic Preservation.
http://www.dahp.wa.gov/pages/HistoricSites/documents/FinalTechnicalReport_January30.pdf
This report focuses on the economic impact of federal and state historic preservation tax credits, Main Street programs, heritage tourism, and the impact of historic designation on property values.

Historic Preservation in Kentucky (2008)
Prepared by John I. Gilderbloom, Erin E. House and Matthew J. Hanka for Preservation Kentucky.
http://sun.louisville.edu/preservation/PreservationinKentucky201-29-08.pdf
The report focuses on affordable housing, property values, tax incentive programs, Main Street programs, heritage tourism, rural heritage, jobs, and environmental benefits. It also provides a demographic background of the state's population and recommendations for local and state government.

Economic Impacts of Historic Preservation in Oklahoma (2008)
Prepared by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey for Preservation Oklahoma.
www.okhistory.org/shpo/econimpact.pdf
www.okhistory.org/shpo/econimpactes.pdf
Two reports are available: a 393-page technical report and a 34-page executive summary. The study includes a detailed analysis of the economic impacts of general rehabilitation work in Oklahoma; of redevelopment completed under the federal and state rehabilitation tax credits programs; of the Oklahoma Main Street Program; of heritage tourism initiatives; and of local historic district designation.

The Abell Report: March 2009 –- Heritage Tax Credits: Maryland's Own Stimulus to Renovate Buildings for Productive Use and Create Jobs, an $8.53 Return on Every State Dollar Invested (2009)
Prepared by Lipman Frizzell & Mitchell and Northeast-Midwest Institute for the Abell Foundation.
http://www.abell.org/pubsitems/arn309.pdf
This report addresses economic impacts such as job creation, leverage of historic preservation investment, generation of state and local taxes. Significantly, it also includes a substantial section on environmental impacts. These are measured using infrastructure savings, calculations of landfill savings, embodied energy, walkability, climate change, and greenfields. Some of the key findings include:

- The reuse of extant historic structures over the past 12 years resulted in an infrastructure investment "savings" of $102-$163 million.
- Assuming each tax credit preservation project to be an alternative to demolition, the state's investment in historic commercial properties has "saved" 387,000 tons of material from landfills over the past 12 years. This amount of landfill material is the equivalent of filling a football stadium to a depth of 50-60 feet.

The Economic Impact of Historic Preservation in Philadelphia (2010)
Prepared by Econsult Corporation for the Preservation Alliance of Greater Philadelphia.
http://www.preservephiladelphia.org/wp-content/uploads/Econ_Report_Final.pdf
The report examines federal historic preservation tax credit projects, investment on other real estate projects, investment by government and other non-profit entities, residential conversions, heritage tourism, the impact of the film industry in Philadelphia, historic resources and the urban form, and the real estate impact of historic designation.

The Economic Impact of Historic Preservation in Southwestern Pennsylvania (2010)
Prepared by the Young Preservationists Association of Pittsburgh.
http://www.youngpreservationists.org/YPADocs/Economic%20Impact%20in%20SW%20PA.pdf
The study examines construction and trade-related jobs produced during rehabilitation, new permanent employment positions established as a result, new business development, housing unit creation, and annual tax benefit generated.

Good News in Tough Times: Historic Preservation and the Georgia Economy (2011)
Prepared by PlaceEconomics for the Historic Preservation Division, Georgia Department of Natural Resources.
http://www.gashpo.org/Assets/Documents/Economic_impact_study.pdf
The report looks at the impact historic preservation has had on spurring investment, attracting visitors, revitalizing historic downtowns, and effectively leveraging scarce resources.

Investment in Connecticut: The Economic Benefits of Historic Preservation (2011)
Prepared by PlaceEconomics for the Historic Preservation and Museums Division, Connecticut Commission on Culture & Tourism.
Two reports will be available: a four-page summary report and a longer, technical report. The study includes an analysis of job creation, private investment, walkability, household income, geographic diversity and distressed neighborhoods.

c. Tax Credits

Rhode Island Historic Preservation Investment Tax Credit Economic and Fiscal Impact Analysis (2005)
Prepared by Lipman Frizzell & Mitchell LLC for Grow Smart Rhode Island.
http://www.ncshpo.org/current/pdfinitiatives/RhodeIsland.pdf
A 16-page report that discusses employment impact, fiscal impact, the necessity for tax credits, and return on state investment.

Economic and Fiscal Analysis of Changes to the Historic Preservation Tax Credit Program in Maryland (2006)
Prepared by Richard Romer and Kristen Waters for Dr. Jacqueline Rogers, School of Public Policy, University of Maryland, College Park.
http://www.preservationmaryland.org/pdf/Historic%20Tax%20Credit%20Report.pdf
A series of studies of Maryland historic rehabilitation tax credits.

The Economic Benefits of State Historic Preservation Investment Tax Credits (2007)
Prepared by Wendy Wichman, Preservation Associates for The Historic Hawaii Foundation.
http://www.preservationnation.org/issues/rehabilitation-tax-credits/addtional-resources/State_Tax_Credit_Rept_Jan2008-1.pdf
This 15-page study of state preservation investment tax credits nationwide was prepared for the Historic Hawaii Foundation as the Hawaii State Legislature considered creation of a state historic preservation tax credit.

Prosperity Through Preservation: Virginia's Historic Rehabilitation Tax Credit Program (2008)
Prepared by the Virginia Commonwealth University Center for Public Policy *for the Virginia Department of Historic Resources*.
http://www.dhr.virginia.gov/pdf_files/Prosperity%20through%20Preservation.pdf
This 42-page, full-color, illustrated report summarizes effects of the program after a decade in operation.

Iowa's Historic Preservation and Cultural and Entertainment District Tax Credit Program Evaluation Study (2009)
Prepared by Zhong Jin and Mike Lipsman for the Tax Research and Analysis Section, Iowa Department of Revenue.
http://mpra.ub.uni-muenchen.de/14794/

The Delaware Historic Preservation Tax Credit Program: Good for the Economy, Good for the Environment, Good for Delaware's Future (2010)
Prepared by PlaceEconomics for the Delaware Division of Historical and Cultural Affairs.
http://www.preservationnation.org/issues/rehabilitation-tax-credits/addtional-resources/Rypkema-Report-on-Delaware-Tax-Credit-2010.pdf
This report focuses on job creation, affordable housing, household income, smart growth, leveraging of private funds, and a comparison of historic preservation activity with construction activity.

The Statewide Economic Impact of Federal Historic Preservation Investment Tax Credit Projects in Southeastern Pennsylvania (2010)
Prepared by Econsult Corporation for the Preservation Alliance of Greater Philadelphia.
http://www.pennsylvaniaworks.org/news/Study_20100428_HistPresSE.pdf

Economic Impact of Historic Rehabilitation Tax Credits in Kansas (2010)
Prepared by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey for Kansas Preservation Alliance.
http://www.kshs.org/preserve/documents/Kansas_40_Page_Report_for_Web.pdf
The report focuses on trends regarding geographic dispersion of tax credits projects, jobs, income, tax base, and a comparison of activity before and after the implementation of the Kansas state historic rehabilitation tax credit.

An Evaluation of the Missouri Historic Preservation Tax Credit Program's Impact on Job Creation and Economic Activity Across the State (2010)
Prepared by Sarah L. Coffin, Rob Ryan and Ben McCall, Saint Louis University for The Missouri Growth Association.
http://www.novoco.com/historic/resource_files/research/slu_mo_hptc_0310.pdf
The 35-page report examines the impact of the state's tax credit via jobs, income, affordable housing and environmental impact.

First Annual Report on the Economic Impact of the Federal Historic Tax Credit (2010)
Prepared by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey for the National Trust Community Investment Corporation.
http://www.preservationnation.org/issues/community-revitalization/jobs/Rutgers-Report.pdf
The report provides a cumulative look at the economic impact of the federal historic tax credit using data provided by the National Park Service. It includes such indicators as jobs, income, affordable housing and taxes.

The Economic and Fiscal Impact on Maine of Historic Preservation and the State Historic Preservation Tax Credit (2011)
Prepared by Planning Decisions, Inc for Maine Preservation.
http://www.novoco.com/historic/resource_files/research/me_htc_impact_042111.pdf
This 27-page report provides a summary of impact of preservation in Maine from 2007-2011, highlighting jobs, income, affordable housing and property values.

Second Annual Report on the Economic Impact of the Federal Historic Tax Credit (2011)
Prepared by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey for the National Trust Community Investment Corporation.
http://www.preservationnation.org/issues/community-revitalization/jobs/2nd_Annual_Rutgers_Report.pdf
The report provides an update of the first report, using updated data from the National Park Service.

d. Tourism

2005 Heritage Tourism Spending in Delaware and Lehigh National Heritage Area (2005)
http://www.nationalheritageareas.com/documents/DL_MGM2_Final_2005_Fact_Sheet.pdf
Produced by Public Works.
This short fact sheet highlights the impact of tourism spending on jobs, income, and total direct and indirect economic impact to the region.

Economic Impact of Heritage Tourism Spending (2005)
http://www.nationalheritageareas.com/documents/ANHA_Eco_Imp_Report_2005_MGM2.pdf
Produced by the Alliance of National Heritage Areas.
The study focuses on job creation, visitor spending, visitor behavior, profits and rents, indirect business taxes, and income.

Cultural Tourism in Indiana: The Impact and Clustering of the Arts and Creative Activities in this Recession (2009)
Prepared by Ball State University's Center for Business and Economic Research (CBER).
http://cms.bsu.edu/Academics/CentersandInstitutes/BBR/CurrentStudiesandPublications.aspx
The study found that the arts and creative activities account for $4.9 billion in direct economic activity and employ 43,000 workers in Indiana.

e. Public Lands and Outdoor Recreation

Economic Impact of Pennsylvania's Heritage Areas: A Study in Success (2008)
http://www.heritagepa.net/publication_files/summary-of-economic-impact-study.pdf
Sponsored by Heritage PA.
The study used visitor surveys and the MGM2 model to identify job creation, visitor spending, direct and indirect economic effects.

The Economic Impact of Arizona's State Parks (2009) http://www.pr.state.az.us/publications/downloads/2009_ASP_Economic_Impact_c.pdf
Prepared by The Arizona Hospitality Research & Resource Center, Center for Business Outreach, Northern Arizona University.
The study found that the total economic impact of Arizona State Parks on the state during FY 2007 was $266,436,582. Of that, historic parks accounted for $35.4 million.

A Development and Economic Impact Study of the South Carolina National Heritage Corridor (2010)
Prepared by University of South Carolina – Clemson University Tourism Research Partnership, Alfred P. Sloan Foundation – Travel & Tourism Industry Center.
http://www.hrsm.sc.edu/travelandtourism/documents/2010ADevelopmentEconomicImpactStudySCNationalHeritageCorridor.pdf
The study focuses on stakeholder interviews, economic impact scenarios, travelers' needs and preferences, and product development.

H. REGRESSION ANALYSES

Noonan, D. S. "Finding an Impact of Preservation Policies: Price Effects of Historic Landmarks on Attached Homes in Chicago, 1990-1999." *Economic Development Quarterly* 21 (2007): 17-33.
The article attempts to provide an example of an assessment of impact of landmark designation on property values without methodological limitations and biases. Examples of such bias include an omitted variable such as important unobserved characteristics that likely correlate with landmark designation and can bias results. Second, if designations depend on property values or neighborhood housing market conditions, the endogenous selection process further undermines inferences about preservation policies' effects. The article outlines more robust empirical strategies and presents new evidence on landmark designation effects on property values. For a sample of Chicago home sales during the 1990s, a hedonic price analysis suggests that landmark buildings and districts sell at a small premium. To address the omitted-variable bias, a repeat-sales approach demonstrates significant spillover effects of landmark designation on prices. These estimates are also robust to sample selection bias and some forms of spatial autocorrelation.

Ruijgrok, E. C. M. "The Three Economic Values of Cultural Heritage: A Case Study in the Netherlands." *Journal of Cultural Heritage* 7 (2006): 206-213.
The paper demonstrates that conservation of historic properties is a sound investment and that the costs of conservation are outweighed by the benefits. The authors use three measurements: a housing comfort value, a recreation value, and a bequest value. The housing comfort value is measured using the hedonic pricing method, while the recreation and bequest value are measured using the contingent valuation method.

Narwold, A., J. Sandy, and C. Tu. "Historic Designation and Residential Property Values," *International Real Estate Review* 11 (2008): 83-95.

I. STATED-PREFERENCE STUDIES: CONTINGENT VALUATION AND CHOICE MODELING

Choi, Andy S., Franco Papandrea, and Jeff Bennett. "Assessing Cultural Values: Developing an Attitudinal Scale." *Journal of Cultural Economics* 31.4 (2007): 311-35.
The authors outline the limitations of existing attitudinal valuation methods, including contingent valuation methods. They explore the potential for the identification of latent variables that are likely to help explain the multidimensional nature of cultural value. In particular, they outline the development of a cultural worldview scale. The scale is a measure of people's underlying general attitudes such as primitive beliefs and perceptions in the major dimensions of perceived cultural value, which are represented as a limited number of latent variables.

Tuan, T. and S. Navrud. "Capturing the Benefits of Preserving Cultural Heritage." *Journal of Cultural Heritage* 9.3 (2008): 326-37.
This paper details the results from a contingent valuation (CV) study in My Son, Vietnam. The authors provide advice on the policy use of the results and the ways these benefits could be captured and used to improve the condition of the sites by using the estimated benefits for visitors to assess optimal entrance fees that maximize revenues for the site. They also perform a cost-benefit analysis of the preservation project, and show how the outcome can be used to justify investments in cultural heritage preservation.

Boter, Jaap, Jan Rouwendal, and Michel Wedel. "Employing Travel Time to Compare the Value of Competing Cultural Organizations." *Journal of Cultural Economics* 29.1 (2005): 19-33.

J. APPRAISAL STUDIES

Reynolds, Judith. *Historic Properties: Preservation and the Valuation Process*, Chicago, IL: The Appraisal Institute, 2006.

Roddewig, Richard. *Appraising Conservation and Historic Preservation Easements*. Chicago, IL: The Appraisal Institute, 2010.

Winson-Geideman, Kimberly and Dawn Jourdan. "Historic façade easements and single-family home value: a case study of Savannah, Georgia (USA)." *International Journal of Housing Markets and Analysis* 4.1, (2011): 6-17.

Winson-Geideman, Kimberly and Dawn Jourdan and Shawn Gao. "The Impact of Age on the Value of Historic Homes in a Nationally Recognized Historic District." *Journal of Real Estate Research 33.1 (2011): 25-48.* http://aux.zicklin.baruch.cuny.edu/jrer/papers/pdf/new_current/vol33n01/02.25_48.pdf

K. POLICY AND DECISION-MAKING SUPPORT

Frey, Patrice. "Building Reuse: Finding a Place on American Climate Policy Agendas." National Trust for Historic Preservation. 2009. http://www.preservationnation.org/issues/sustainability/additional-resources/buillding_reuse.pdf

Kurtz, Rick S. "Public Lands Policy and Economic Trends in Gateway Communities." *Review of Policy Research* 27.1 (2010): 77–88.

Noonan, D.S. and D. Krupka. "Determinants of Historic and Cultural Landmark Designation: Why We Preserve What We Preserve." *Journal of Cultural Economics* 34 (2010): 1-26 .

Schwartz, Harry K. "State Tax Credits for Historic Preservation." The National Trust for Historic

Preservation's Center for State and Local Policy. (Updated October 2010).

Throsby, David. *The Economics of Cultural Policy*. New York: Cambridge University Press, 2010.

"Historic Preservation's Critical Role in the Economic and Sustainable Development Policy of New York State." The Preservation League of New York State. 2007. http://www.uticalandmarks.org/Research/histprespolicyNY.pdf

L. CASE STUDIES

"HeritageWorks: The Use of Historic Buildings in Regeneration – A toolkit of good practice." English Heritage (2007).
This toolkit provides valuable case studies of large-scale regeneration projects in the UK, detailing the role of historic resources in this process. The economic impact of these projects is discussed.

Gilderbloom, John I., Matthew J. Hanka, and Joshua D Ambrosius. "Historic preservation's impact on job creation, property values, and environmental sustainability." *Journal of Urbanism* 2.2 (July 2009): 83-101.
This study examines the impacts of historic preservation on jobs, property values, and environmentalism in Kentucky and its largest city, Louisville.

Coulson, N. Edward and Michael L. Lahr. "Gracing the Land of Elvis and Beale Street: Historic Designation and Property Values in Memphis." *Real Estate Economics* 33.3 (2005): 487–507.

Productivity Commission (Australian Government). Conservation of Australia's Historic Heritage Places Inquiry report, 2006. http://www.pc.gov.au/projects/inquiry/heritage/docs/finalreport.

Vishakha Maskey, Cheryl Brown, Alan R. Collins, and Hala F. Nassar. "What Is Historic Integrity Worth to the General Public? Evidence from a Proposed Relocation of a West Virginia Agricultural Mill." *Agricultural and Resource Economics Review* 36.1 (April 2007) 39–52.

M. ECONOMIC DEVELOPMENT AND HISTORIC PRESERVATION

Tweed, C. and M. Sutherland. "Built Cultural Heritage and Sustainable Urban Development." *Landscape and Urban Planning* 83.1 (2007): 62-69.

The paper considers changing definitions of built heritage before outlining the broad contribution it can make to sustainable urban development. The paper then considers how the built environment contributes to the satisfaction of human needs by providing symbolic meanings that bind cultural groups and communities across generations. Results from the development and application of a novel survey method, designed to assess different people's perceptions of and attitudes to urban historical areas, are presented before describing a case study of recent urban development in Belfast that highlights the problems of intangible heritage. The paper concludes with a brief discussion of shortcomings of existing approaches to urban regeneration and suggests how these might be overcome through a greater understanding of how people interact with the urban environment and its heritage.

Department for Communities and Local Government, Regeneration. "Valuing the Benefits of Regeneration." United Kingdom, December 2010.

The report is designed to provide an analytical framework that will underpin a research methodology on the value of the benefits from regeneration and how they compare with the relevant costs. The intention for such a framework is to establish a robust evidence base, identify potential challenges, and provide constructive suggestions on how these could be overcome. Section 2 of the final report identifies three main themes of regeneration activity: Worklessness, Skills and Business Development (18.8% of public sector expenditure on regeneration in period 2009-2011); Industrial and Commercial Property and Infrastructure (11.3% of expenditure); and Homes, Communities and the Environment (69.9% of expenditure). Within each of these three over-arching themes eight Activity Categories are identified and then a series of Activity Types. The study developed logic chains for each of the Activity Types that show how regeneration investment in each type generates different outputs that in turn contribute to outcome change.

Greenblatt, A. "Downtown Renaissance: Are Center Cities Finally Returning to Health?" *Congressional Quarterly Researcher* 16.24 (2006): 553-576.

Leinberger, Christopher B. *Turning Around Downtown: Twelve Steps to Revitalization*. Washington, DC: Brookings Institution Center on Urban and Metropolitan Policy, 2005.

Lindberg, James. "Rural Development Trends and Opportunities for Historic Preservation." *Historic Preservation Forum* 20.4 (Summer 2006): 6-14.

Mallach, Allan. *Bringing Buildings Back: From Abandoned Properties to Community Assets: A Guidebook for Policymakers and Practitioners*. New Jersey: Rutgers University Press, 2006.

Rypkema, Donovan. *Strengthening Communities through Historic Preservation*. Washington, DC: Department of Housing and Urban Development, to be released 2011.

Rypkema, Donovan. *Feasibility Analysis of Historic Buildings*. Washington, DC: National Trust for Historic Preservation, 2007.

Thurley, Simon, Louis Armstrong, and Liz Peace. *Heritage Works: The Use of Historic Buildings in Regeneration. A Toolkit of Good Practice*. England: RICS, British Property Federation, English Heritage, and Drivers Jonas, 2006. http://www.rics.org/site/download_feed.aspx?fileID=8385&fileExtension=PDF

Wagner, Fritz W., et al, eds. *Revitalizing the City: Strategies to Contain Sprawl and Revive the Core*. Armonk, NY: M.E. Sharpe, 2005.

N. GENTRIFICATION

Freeman, Lance. *There Goes the 'hood: Views of Gentrification from the Ground Up*. Philadelphia, PA: Temple University Press, 2006.

Rather than hewing to theory by asking professionals about gentrification in minority-dominated urban areas, Columbia assistant professor Freeman takes a practical approach, bringing his questions to the residents themselves. Focusing on New York City neighborhoods Harlem, in Manhattan, and Brooklyn's Clinton Hill, he asks residents about everything from widespread retail development to expensive apartments and residential developments. What he uncovers is a "nuanced reaction toward gentrification. ... welcomed by some and feared and loathed by others, and even dreaded and welcomed at the same time by the same people." It's Freeman's pursuit of this duality that makes the book strong – he's willing to admit that gentrification is both a pleasure and a problem, rather than setting up camp on one side. He explores the reasons that residents welcome gentrification, and the very real, though by no means universal benefits imparted by it. Simple experiences like grocery shopping in a clean, well-lit store, or eating at a decent restaurant, are new and much-appreciated by indigenous residents – except that those residents must struggle to afford such places, despite the measure of economic opportunity created by them. That sense of balance, combined with the powerful voices of the folks involved makes this study important and informative. (From *Publisher's Weekly*)

Lees, Loretta, Tom Slater, and Elvin K. Wyly. *Gentrification*. New York: Routledge/Taylor & Francis Group, 2008.

This [was] the first ever textbook on the topic of gentrification, written for upper-level undergraduates in geography, sociology, and planning. The gentrification of urban areas has accelerated across the globe to become a central engine of urban development, and it is a topic that has attracted a great deal of interest in both the academy and the popular press. *Gentrification* is the first comprehensive introduction to the subject. It explains the theories surrounding gentrification and includes numerous case studies explaining how it works. The book has international coverage, but also features a sharp analysis of gentrification in the United States. (Publisher abstract)

Hutton, Thomas A. *The New Economy of the Inner City: Restructuring, Regeneration and Dislocation in the 21st Century Metropolis*. New York: Routledge, 2008

D. AFFORDABLE HOUSING AND HISTORIC PRESERVATION

Arigoni, Danielle, Robin Surratt, and Janice Clark. *Making the Connection*. The Smart Growth Network Subgroup on Affordable Housing. 2009. (http://www.smartgrowth.org/pdf/epa_ah-sg.pdf)

Ceraso, Karen. "Eyesore to Community Asset: Historic Preservation Creates Affordable Housing and Livable Neighborhoods." National Housing Institute: Shelter Force Online.

Johnson, Helen. *The Economics of Rehabilitation for Affordable Housing Projects: Are the Secretary of Interior's Standards for Rehabilitation a Significant Barrier to Project Completion*. MA thesis. University of Pennsylvania, Philadelphia, Pennsylvania. 2010. http://repository.upenn.edu/cgi/viewcontent.cgi?article=1143&context=hp_theses&sei-redir=1#search="affordable+housing"+historic"

Listokin, David et al. *Best Practices for Effecting the Rehabilitation of Affordable Housing: Framework and Findings (Vol. I)*. Washington, DC: US HUD, Office of Policy Development and Research. 2006.

Rosenthal, Larry A. and David Listokin *New or Rehab: Striking A New Balance Under California's Affordable Housing Standards*. UC Berkeley: Berkeley Program on Housing and Urban Policy. 2009. http://escholarship.org/uc/item/6099j2wr

Woodward, P. Historic preservation and revitalization in working-class communities. M.S. dissertation. Clemson University, Clemson, South Carolina. 2007. http://proquest.umi.com/pqdlink?Ver=1&Exp=04-11-

2016&FMT=7&DID=1296119531&RQT=309&attempt=1&cfc=1

"Affordable Housing and Historic Preservation." The Advisory Council on Historic Preservation. Washington, DC. 2007. http://www.huduser.org/portal/publications/pdf/historic_preserv.pdf

"Comments from NCSHPO on the Advisory Council on Historic Preservation 2005 Policy Statement on Affordable Housing and Historic Preservation." National Conference of State Historic Preservation Officers. 2005.

"Making Affordable Housing in Historic Buildings." Heritage Consulting, Inc. Sponsored by Preservation New Jersey. 2011. http://www.heritageconsultinginc.com/blog/wp-content/uploads/2011/04/Making-affordable-housing-in-historic-buildings-report-.pdf

"The ACHP Task Force on Affordable Housing and Historic Preservation: Final Report." The Advisory Council on Historic Preservation. Washington, DC. 2005.

P. URBANIZATION AND HISTORIC PRESERVATION

Chan, E.H.W. and G.K.L. Lee. "Critical Factors for Improving Social Sustainability of Urban Renewal Projects." *Social Indicators Research* 85.2 (2008): 243-256.

Grodach, C. "Cultural Development Strategies and Urban Revitalization." *International Journal of Cultural Policy* 13.4 (2007): 349-370.

Szold, Terry S. "True Urbanism: Living in and Near the Center." *Journal of the American Planning Association* 74.2 (2008): 261-262.

Q. TAX ISSUES AND HISTORIC PRESERVATION

Pickard, Rob. "A Review of Fiscal Measures to Benefit Heritage Conservation." RICS Research Paper Series 7.6, July 10, 2007. (http://www.rics.org/site/download_feed.aspx?fileID=3508&fileExtension=PDF)

R. TOURISM AND HISTORIC PRESERVATION

Campbell, George Adrian, Thomas James Straka, Robert M. Franklin, and Ernie P. Wiggers. "Ecotourism as a revenue-generating activity in South Carolina Low country plantations." *Journal of Ecotourism*, 1747-7638, First published on 30 March 2011.

Cela, Ariana, Sam Lankford, and Jill Knowles-Lankford. "Visitor Spending and Economic Impacts of Heritage Tourism: a Case Study of the Silos and Smokestacks National Heritage Area." *Journal of Heritage Tourism* 4.3 (2009): 245-56.

Burr, Steven W. and Jascha M. Zeitlin. "A Heritage Tourism Overview." *Utah Recreation and Tourism Matters*. Utah State University Institute for Outdoor Recreation and Tourism, January 2010.

Cerina, Fabio, Anil Markandya, and Michael McAleer. *Economics of Sustainable Tourism (Routledge Critical Studies in Tourism, Business and Management)*. New York: Routledge, 2010.

Cuccia, T. and R. Cellini. "Is Cultural Heritage Really Important for Tourists? A Contingent Rating Study." *Applied Economics* 39.2 (February 2007): 261-271.

Hampton, M.P. "Heritage, Local Communities and Economic Development." *Annals of Tourism Research* 32.3 (2005): 735-759.

Kirshenblatt-Gimblett, B. "World Heritage and Cultural Economics." *Museum Frictions: Public Cultures/Global Transformations*. Eds. Ivan Karp, et al. North Carolina: Duke University Press, 2006. 161-203.

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The author details the role historic buildings can play in responding to the growing demand for housing. Residential construction has seen a trend in conversions of historic buildings to residential spaces due to scarcity in vacant land and difficult entitlement processes. The value and use of federal and state tax credits is explored. Conversion of historic high-rises is generally more cost effective than building new ones.

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APPENDIX E: DATA AND PROGRAMS INCLUDED IN ECONOMIC IMPACT STUDIES

STATE GENERAL REPORTS

		RESULT					PROGRAM					
STATE	STUDY NAME	JOBS	HOUSE-HOLD INCOME	LEVERAGING PRIVATE FUNDS	PROPERTY VALUES	AFFORDABLE HOUSING	HISTORIC REHAB	TAX CREDITS	MAIN STREET	HERITAGE TOURISM	OTHER	LINK
Arkansas	Economic Impacts of Historic Preservation in Arkansas (2006)	●	●	●	●		●	●	●	●	Grants Historic designation	http://www.arkansaspreservation.org/economic-benefits/
Colorado	The Economic Benefits of Historic Preservation in Colorado (2002)	●	●	●	●	●	●	●	●	●	Rural preservation Preservation indicators	www.coloradohistory-oahp.org/publications/1620.htm
	The Economic Benefits of Historic Preservation in Colorado (2005)	●	●	●	●	●	●	●	●	●		http://www.blm.gov/heritage/adventures/HT_Resources/Colorado%20Historical%20Foundation/ECONOMIC%20BENEFITS%20OF%20HISTORIC%20PRESERVATION%20IN%20COLORADO%20.pdf
Florida	Economic Impacts of Historic Preservation in Florida (2002)	●	●	●	●		●		●	●	Museums	http://www.law.ufl.edu/cgr/pdf/executive_summary_2010.pdf www.law.ufl.edu/cgr/technical-report.shtml
	Contributions of Historic Preservation to the Quality of Life of Floridians (2006)			●		●	●	●	●	●	Museums	http://www.flheritage.com/qualityoflife.pdf
Georgia	Profiting From the Past: The Economic Impact of Historic Preservation in Georgia (1999)	●			●	●	●	●	●	●		http://www.gashpo.org/assets/documents/profiting_from_the_past.pdf
	Good News in Tough Times: Historic Preservation and the Georgia Economy (2011)	●	●	●	●	●	●	●	●	●		http://www.gashpo.org/content/displaycontent.asp?txtDocument=148
Kentucky	Historic Preservation and the Economy of the Commonwealth: Kentucky's Past at Work for Kentucky's Future (1996)											www.preservationbooks.org/
	Historic Preservation in Kentucky (2008)	●	●	●	●	●	●	●	●	●	Demographics	http://sun.louisville.edu/preservation/PreservationinKentucky201-29-08.pdf
Maryland	The Value of Historic Preservation in Maryland (2000)	●	●	●	●		●		●	●	Museums and the arts Film production Sustainable communities Transportation enhancements Smart Growth	http://www.preservationmaryland.org/pdf/PM_Value_scn.pdf
	Investing in Our Communities: Maryland's Heritage Areas Program (2003)	●	●	●					●	●	Grants	http://mht.maryland.gov/documents/pdf/mhaa_economicimpact_2003.pdf
Massachusetts	Economic Impacts of Historic Preservation in Massachusetts (2002)	●	●	●			●	●		●		http://www.sec.state.ma.us/mhc/mhcpdf/Economic_Impacts_2002.pdf
Maine	The Economic and Fiscal Impact on Maine of Historic Preservation and the State Historic Preservation Tax Credit (2011)	●	●	●	●	●	●	●				http://www.novoco.com/historic/resource_files/research/me_htc_impact_042111.pdf
Michigan	Investing in Michigan's Future: The Economic Benefits of Historic Preservation (2002)	●	●	●	●		●	●	●	●		www.michigan.gov/documents/hal_mhc_shpo_econ_benies_115616_7.pdf

continued

State General Reports continued

STATE	STUDY NAME	RESULT					PROGRAM					LINK
		JOBS	HOUSE-HOLD INCOME	LEVERAGING PRIVATE FUNDS	PROPERTY VALUES	AFFORDABLE HOUSING	HISTORIC REHAB	TAX CREDITS	MAIN STREET	HERITAGE TOURISM	OTHER	
	Report Card: The Economic Impacts of Historic Preservation in Michigan (2006)	●	●	●	●		●	●		●		http://www.preservationnation.org/issues/rehabilitation-tax-credits/addtional-resources/Michigan-Report-on-Tax-Credit.pdf
Missouri	Economic Impacts of Historic Preservation in Missouri (2001-2002)	●	●	●			●	●	●	●		www.dnr.mo.gov/shpo/RutgersStudy.pdf
Nebraska	Economic Impacts of Historic Preservation in Nebraska (2007)	●	●	●	●	●	●	●	●	●	Historic sites and museums	http://www.nebraskahistory.org/histpres/publications/Nebraska_Hist_Pres_Econ.pdf
New Jersey	Partners in Prosperity: The Economic Benefits of Historic Preservation in New Jersey (1998)	●	●	●	●		●	●		●	Historic sites and organizations	http://www.njht.org/dca/njht/publ/downloading_partners_prosperity.html
New York	New York: Profiting Through Preservation (2000)	●	●	●		●	●			●	Arts and culture	http://www.placeeconomics.com/pub/PlaceEconomicsPUB2001.pdf
North Carolina	Profiting from the Past: The Impact of Historic Preservation on the North Carolina Economy (1998)											www.preservationbooks.org/
Oklahoma	Economic Impacts of Historic Preservation in Oklahoma (2008)	●	●	●	●	●	●	●	●	●		www.okhistory.org/shpo/econimpact.pdf
Pennsylvania	The Economic Impact of Historic Preservation in Philadelphia (2010)	●	●	●	●			●	●			http://www.preservephiladelphia.org/wp-content/uploads/Econ_Report_Final.pdf
	The Statewide Economic Impact of Federal Historic Preservation Investment Tax Credit Projects in Southeastern Pennsylvania	●	●	●		●		●	●			http://www.preservationnation.org/issues/rehabilitation-tax-credits/additional-resources/Study_20100428_HistPresSoutheastern.pdf
Rhode Island	Economic Effects of Historic Preservation in Rhode Island (1996)						●	●				www.preservationbooks.org/
South Carolina	Smiling Faces Historic Places: The Economic Benefits of Historic Preservation in South Carolina (2003)	●	●	●	●	●			●	●		http://shpo.sc.gov/NR/rdonlyres/AAB5C630-95E3-408E-8694-08C8A382DA70/0/hpEconomicsbooklet.pdf
Tennessee	Banking on Tennessee's History: The Economic Value of Historic Preservation to the People of Tennessee (2005)	●		●	●		●	●	●	●	Public private partnerships	http://www.sitemason.com/files/evPV1C/Banking%20on%20Tennessee%20History.pdf
Texas	Historic Preservation at Work for the Texas Economy (1999)	●			●		●		●	●		www.thc.state.tx.us/publications/reports/EconImpact.pdf
Virginia	Virginia's Economy and Historic Preservation: The Impact of Preservation on Jobs, Business, and Community (1995)											www.preservationbooks.org/
Washington	The Economic Benefits of Historic Preservation in Washington State (2007)	●	●		●		●	●	●	●		http://www.dahp.wa.gov/pages/HistoricSites/documents/FinalTechnicalReport_January30.pdf
West Virginia	Economic Impact of Historic Preservation in West Virginia (1997)	●	●		●		●	●	●	●	Grants	www.pawv.org/econimpact.htm

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STATE TAX CREDIT REPORTS

STATE	NAME	JOBS	TAX BASE	AFFORDABLE HOUSING	HOUSEHOLD INCOME	SMART GROWTH/ ENVIRONMENTAL IMPACT	LEVERAGING OF PRIVATE FUNDS	CONSTRUCTION	OTHER	LINK
Delaware	The Delaware Historic Preservation Tax Credit Program: Good for the Economy, Good for the Environment, Good for Delaware's Future (2009)	●		●	●	●	●	●		http://history.delaware.gov/pdfs/rypkemaReport.pdf
Iowa	Iowa's Historic Preservation and Cultural and Entertainment District Tax Credit Program Evaluation Study (2009)								Primarily reporting tax credit activity – number of tax credits/year and geography	http://www.iowa.gov/tax/taxlaw/HistoricPreservationCreditStudyMar09.pdf
Kansas	Economic Impact of Historic Rehabilitation Tax Credits in Kansas (2010)	●	●		●		●	●	Comparison of activity before and after state tax credit	http://www.kshs.org/preserve/documents/Kansas_40_Page_Report_for_Web.pdf
Maryland	State of Maryland Heritage Structure Rehabilitation Tax Credits: Economic and Fiscal Impacts (2002)	●	●		●		●	●		http://www.preservemd.org/html/resources.html
	Maryland Heritage Structure Tax Credit Program Economic and Fiscal Impacts (2003)	●				●			Forecast of eligible properties, high cost rehab projects, rehab expenditures and environmental impact	
	Final Report of the Governor's Task Force on Maryland's Heritage Structure Rehabilitation Tax Credit Program (2004)	●	●		●		●	●		
	Economic and Fiscal Analysis of Changes to the Historic Preservation Tax Credit Program in Maryland (2006)	●	●		●					
	The Abell Report: March 2009 – Heritage Tax Credits: Maryland's Own Stimulus to Renovate Buildings for Productive Use and Create Jobs, an $8.53 Return on Every State Dollar Invested (2009)	●	●		●	●	●		Revitalization	http://www.abell.org/pubsitems/arn309.pdf
	The Environmental and Energy Conservation Benefits of the Maryland Historic Tax Credit Program (2009)	●				●		●		http://www.preservationnation.org/issues/rehabilitation-tax-credits/additional-resources/EnvEnergyImpactsMDHistTaxCredit.pdf
Missouri	An Evaluation of the Missouri Historic Preservation Tax Credit Program's Impact on Job Creation and Economic Activity Across the State (2010)	●		●		●	●	●		http://www.novoco.com/historic/resource_files/research/slu_mo_hptc_0310.pdf
North Carolina	A Profitable Past, A Priceless Future: The Economic Impact of North Carolina's Historic Tax Credit (2008)	●	●		●		●		New economic activity	http://www.presnc.org/index.php?option=com_docman&task=doc_download&gid=94&Itemid=103
Rhode Island	Rhode Island Historic Preservation Investment Tax Credit Economic and Fiscal Impact Analysis (2005)	●	●	●	●		●	●		http://www.ncshpo.org/current/pdfinitiatives/RhodeIsland.pdf
Virginia	Prosperity Through Preservation: Virginia's Historic Rehabilitation Tax Credit Program (2008)	●	●		●	●	●		Revitalization	http://www.dhr.virginia.gov/pdf_files/Prosperity%20through%20Preservation.pdf
National	First Annual Report on the Economic Impact of the Federal Historic Tax Credit (2010)	●	●	●	●		●	●		http://www.preservationnation.org/issues/community-revitalization/jobs/Rutgers-Report.pdf
National	Second Annual Report on the Economic Impact of the Federal Historic Tax Credit (2011)	●	●	●	●		●	●		http://www.preservationnation.org/issues/community-revitalization/jobs/2nd_Annual_Rutgers_Report.pdf
						OTHER				
Hawaii	The Economic Benefits of State Historic Preservation Investment Tax Credits	This report does not focus on tax credits in Hawaii, but rather provides a summary of study results from other states to encourage the creation of a Hawaii state credit. LINK?								http://www.historichawaii.org/WhyPreserve/State_Tax_Credit_Rept_Jan20_2008.pdf

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The Los Angeles Historic Resource Survey Report

A Framework for a Citywide Historic Resource Survey

The Getty Conservation Institute

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A Framework for a Citywide Historic Resource Survey

Prepared by Kathryn Welch Howe

The Getty Conservation Institute
Los Angeles

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The Getty Conservation Institute works internationally to advance conservation practice in the visual arts—broadly interpreted to include objects, collections, architecture, and sites. The GCI serves the conservation community through scientific research, education and training, model field projects, and the dissemination of the results of both its own work and the work of others in the field. In all its endeavors, the GCI focuses on the creation and delivery of knowledge that will benefit the professionals and organizations responsible for the conservation of the world's cultural heritage.

Front cover: The former Eastern Star Home (HCM #440), now the Archer School for Girls, Brentwood (top); a home in the proposed Balboa Highlands HPOZ, Granada Hills (middle); the Griffith Observatory (HCM #168), Griffith Park (bottom). Photos: Emile Askey.

Back cover: Airport Theme Building (HCM #570), Los Angeles International Airport. Photo: Gail Ostergren.

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Foreword

Information from a historic resource survey can form the foundation for nearly every decision affecting a city's historic buildings and neighborhoods. The compilation of information in a survey can help guide the planning, maintenance, and investment decisions of owners, city officials, neighborhood groups, and investors, and can have the more intangible benefit of raising civic awareness and pride. As has been recognized in cities around the world, historic resource information is an essential component of effective historic preservation, city planning, and community development.

Since 2000, the Getty Conservation Institute has conducted and overseen research leading to the implementation of a citywide historic resource survey by the city of Los Angeles. The Getty's interest in assisting in the development of a citywide survey has been twofold. First, the work continues the trust's wide-ranging support for organizations and projects representing the diverse heritage of our hometown. Second, the survey presents an opportunity for the Getty Conservation Institute to contribute its professional expertise to a field in which many cities worldwide are active.

The Los Angeles Historic Resource Survey Report is another milestone in this collaboration between the GCI and the city of Los Angeles. In 2001, the GCI published its assessment of the purpose and value of a Los Angeles historic resource survey, the *Los Angeles Historic Resource Survey Assessment Project: Summary Report*. A year later, based on that assessment, the Los Angeles City Council adopted a resolution requesting the Getty's assistance in developing the goals of a citywide survey. The Getty offered to contribute research and advisory assistance on historic resource survey methods and on the function of a survey as part of broader community and historic preservation planning efforts.

In 2004, the GCI presented eight research papers to senior city staff representing thirteen municipal departments to help determine the potential value of the survey to their work. Using a best practices model, the research papers addressed survey standards and historic resource criteria, the role of a historic context statement, community engagement, the uses of survey data by public agencies, geographic information systems and databases, the role of incentives, and funding. During this time, the GCI also published *Incentives for the Preservation and Rehabilitation of Historic Homes in the City of Los Angeles: A Guide for Homeowners,* which summarized the benefits available to owners of the city's historic homes.

Following endorsement of the research papers by city managers, the Los Angeles City Council unanimously passed a series of resolutions further advancing the city's commitment to pursuing a survey. In response to this expression of leadership, in 2005 the Getty Foundation extended a matching grant commitment to the city of Los Angeles for the survey over a five-year period. The city agreed to match this commitment and has since created the Office of Historic Resources and hired experienced professional staff, selected consultants, and taken significant steps to implement the survey. The citywide historic resource survey will be conducted over the next five years; the GCI will continue to provide research, technical, and advisory assistance throughout the course of the project.

This report is largely based on the 2004 research papers mentioned above and reflects further research as well as new initiatives and resources now available to the survey. It describes key elements of the comprehensive survey and how these elements will work together. These include clear survey standards and historic resource criteria, the role of the citywide historic context statement, the importance of centrally managing survey information and integrating it with other municipal property data, and the adoption of appropriate technology and means of communication to ensure effective use by public agencies as well as access to the data by the general public.

This report is perhaps best viewed as a road map through the often challenging procedural requirements and technical components of a survey undertaken on an enormous scale. The material is presented with the goal of explaining the process and providing information and research that the city of Los Angeles might use to help guide the process. This report is both a reference for the survey process and an indicator of the tools and best practices for accomplishing a survey. It is our hope that this framework, and the explanations and suggestions presented here, will be of value both in Los Angeles as

the city implements its survey, and to others around the country who may wish to undertake comparable work.

I would like to acknowledge the achievements of Kathryn Welch Howe, who has led the GCI's efforts in the Los Angeles Historic Resource Survey Project, balancing her research and publication responsibilities concurrently with advising the city on survey methods and implementation. Kathryn prepared this report and continues to advise the survey project as a consultant to the Getty. We are grateful for her dedication to the project and the care with which she undertook it. In the preparation of *The Los Angeles Historic Resource Survey Report* and in all aspects of the project, she was assisted by Frank Gilbert, senior project adviser, National Trust for Historic Preservation. Richard Starzak, a principal at Jones and Stokes, provided valuable technical expertise as well as many of the examples of historic buildings and areas used in the report. James Carberry, of Carberry Communications, and Catherine Barrier provided assistance in writing case study material for the report. Kathryn Welch Howe defined the scope of the project and directed the research for the papers completed in 2004 and drafted by GCI staff members David Myers, Gail Ostergren, Chris Seki, and Rand Eppich. These papers form the foundation of this report. Lynne Kostman edited the manuscript and Gail Ostergren performed a final technical edit. Carol Hahn, also of the GCI, undertook the compilation of the online Los Angeles Historic Resource Survey Bibliography (gcibibs.getty.edu/asp/). She and Yoko Coleman also provided valued administrative support.

The GCI also benefited greatly from the important contributions of a wide range of individuals and organizations too numerous to mention individually. Preservation professionals, public officials, government staff, and educators, as well as neighborhood, business, real estate, and civic leaders, were a part of this effort from the beginning. This work builds on the guidance provided by the National Park Service, the California Office of Historic Preservation, and cities across the country that have conducted community historic resource surveys. We want to thank everyone who contributed for their thoughtful assistance and counsel.

We especially want to thank our partners in the city of Los Angeles, including the Office of the Mayor, the members of the City Council, the Office of the Chief Legislative Analyst, and the Department of City Planning and its Office of Historic Resources, as well as state and federal agencies. All recognized the importance and magnitude of this effort and provided consistent, unwavering support. Special thanks also go to members of the professional peer group who reviewed both the initial research papers and this report, offering insightful and timely comments.

In 1962, the city of Los Angeles enacted one of the country's first citywide preservation ordinances, which called for the maintenance and survey of the city's historic assets. Since that time, the city has grown and developed enormously in terms of both population and international stature. The Cultural Heritage Ordinance will reach its fiftieth birthday, nearly coincident with the completion of the citywide survey. The survey will be a fitting accomplishment with which the city can celebrate its impressive achievements and heritage while charting its future path.

TIMOTHY P. WHALEN
Director
The Getty Conservation Institute
June 2008

Foreword

A historic resources survey serves as a basic building block of any local historic preservation program: a city can take steps to protect its significant historic resources only if it knows what it has. More than four decades after the city of Los Angeles's first historic preservation ordinance called for a citywide survey, however, the city had never launched a comprehensive effort to identify its historic resources, nor had it developed the well-integrated municipal historic preservation program worthy of Los Angeles's remarkable architectural legacy and diverse cultural heritage.

Quite simply, it has been the leadership of the J. Paul Getty Trust, embodied in the research represented in this survey report, that has dramatically changed Los Angeles's historic preservation landscape. A comprehensive historic resources survey in a city as enormous and complex as ours would never have been possible without the Getty's active engagement to address the pressing conservation needs of its home city. Its leadership included a generous five-year matching grant to the city from the Getty Foundation that has made the project financially feasible.

This survey report represents the culmination of years of research by the Getty Conservation Institute's team, skillfully overseen by Kathryn Welch Howe. The report has given the city of Los Angeles a workable blueprint for conducting the nation's largest and most challenging citywide historic resources survey. The Getty's intellectual contributions and institutional credibility proved instrumental to securing the city's commitment to pursue the survey project.

When the city's Office of Historic Resources opened in 2006, we immediately drew on this report's research to give us a comprehensive guide to best practices in survey methodology and a workable approach to managing Los Angeles's survey process. This report also makes a major contribution to the field of historic preservation: it will serve as a valuable reference for other cities, large and small, that are seeking to identify their own historic resources.

The survey report represents the Getty's multiyear preparatory work for the survey and the progression of the project up to April 2007. Since that time, the city of Los Angeles has used this report as an indispensable starting point, and the project has continually progressed and evolved. The OHR renamed the project "SurveyLA: The Los Angeles Historic Resources Survey" and has worked diligently to implement and further refine the key components of the survey outlined in this report. These components include the following:

- A citywide Historic Context Statement to distill Los Angeles's architectural and historic patterns, themes, property types, and architectural styles into a workable framework for the survey
- A *Field Guide to Survey Evaluation* to help ensure consistent assessments by survey teams
- A state-of-the-art survey database
- Interdepartmental coordination among more than a dozen public agencies
- Public participation and outreach strategies, including a volunteer SurveyLA speakers bureau to serve as the project's ambassadors, multilingual project materials, and a half-hour survey video for the city's cable channel (LA Cityview, channel 35)
- The initiation of pilot field survey work in three major areas of Los Angeles

Interested readers should refer to the SurveyLA Web site, www.surveyla.org, for regular updates on the progress of the project.

SurveyLA marks a coming-of-age for historic preservation in Los Angeles. On behalf of the city of Los Angeles, we wish to thank Timothy P. Whalen of the Getty Conservation Institute, Deborah Marrow of the Getty Foundation, and the entire Getty team for giving Los Angeles and its residents this remarkable gift—one that truly will keep on giving.

KEN BERNSTEIN
Manager
Office of Historic Resources
City of Los Angeles
June 2008

Introduction

> *At the turn of the 21st century, cultural resources professionals are faced with identifying, evaluating, and registering cultural resources that challenge commonly held assumptions about what is "historic" and worthy of preservation. The concept of significance changes with the passage of time, new scholarship, and a better understanding of the need to recognize historic places associated with all of the diverse cultural groups.*
>
> — Carol D. Shull, "Evaluating Cultural Resources"

A historic resource survey conducted in 1980 by the Los Angeles Department of City Planning identified Highland Park as a potential historic district, known in Los Angeles as a Historic Preservation Overlay Zone (HPOZ). The survey sparked the active involvement of the city and its neighborhood residents, and Highland Park was transformed from an area marred by demolition and blight into a community filled with a renewed sense of vigor and rejuvenation. The survey documented the value of the neighborhood's built heritage—namely, more than twenty-five hundred late-nineteenth- and early-twentieth-century historic properties—and led the way to rehabilitating, reclaiming, and regenerating physically, economically, and socially one of the many important and diverse historic neighborhoods that characterize Los Angeles.

The recent renaissance of downtown Los Angeles also relates to historic resource surveys undertaken by the Los Angeles Community Redevelopment Agency and the Los Angeles Conservancy during the 1990s. These surveys identified the downtown area's remarkable collection of late-nineteenth- and early-twentieth-century commercial buildings. Many of these properties have since been rehabilitated using Los Angeles's Adaptive Reuse Ordinance, the Federal Rehabilitation Tax Credits, and the Mills Act Historical Property Contract Program. The $6 billion invested in historic buildings as of August 2006 has generated more than eight thousand new apartments and condominiums, with an additional three thousand planned, helping to establish a vibrant, diverse downtown community.[1]

Such results point to the merit of a citywide historic resource survey, which will allow all parties involved, from the individual property owner to the mayor, to identify the wealth of the city's historic

A house in the Highland Park HPOZ, which was designated in 1994. A 1980 survey identified the Highland Park neighborhood as a potential HPOZ based on its history as an early residential community and as a center for Los Angeles arts and culture at the turn of the 20th century. The LAHRS can guide homeowners in maintaining the character and value of historic homes and neighborhoods. Photo: John C. Lewis.

The Pacific Electric Lofts Building (HCM #104). This building's conversion into apartments was achieved through the layering of preservation incentives, including the city's Adaptive Reuse Ordinance, the Mills Act, and Federal Rehabilitation Tax Credits. Prior surveys identified many significant historic commercial buildings in downtown Los Angeles, leading to the use of local, state, and federal preservation incentives for their rehabilitation. Photo: Emile Askey.

resources, and which will facilitate discussion of the management of, utilization of, and investment in the city's valuable heritage assets. Aimed at making the historic resource survey process and results widely accessible, the eight chapters of this report provide the framework for a comprehensive, citywide historic resource survey methodology and describe the Getty Conservation Institute's (GCI) research findings on key survey elements, such as the citywide historic context statement, survey standards, survey criteria and classifications, and community participation. The report also focuses on survey management, including information technology designed to capture historic resource data and ensure public access to it, the use of survey information by public agencies, the role of preservation incentives, and issues of cost, timing, and funding.

This report outlines a systematic but flexible framework for conducting research and documenting resources, identifying and evaluating properties using professional standards, engaging the public, and ensuring access to survey results for both community agencies and city agencies. Prior surveys, contexts, and evaluations are taken into account, along with practical considerations such as the availability of information and expertise. As the survey is implemented, planning concerns such as development pressures and planning priorities and goals may influence decisions about the areas to be surveyed. In using this framework, it is anticipated that a large number of resources can be researched, identified, evaluated, and recorded within a reasonable period of time at a reasonable cost.

A Los Angeles citywide historic resource survey that utilizes community support and contemporary survey methods and technology may be accomplished economically. Success depends on meeting three specific challenges:

1. Reliability of information—creating and maintaining a reliable record of historic resources, and consistently meeting professional standards given the large geographic area, while also providing for updates over time
2. Depth of information—obtaining sufficient depth of information in order to identify and evaluate a range of diverse resources representing the city's history and architectural heritage
3. Community discourse—engaging the community and disseminating survey findings so that historic resource information is widely used

This report addresses these three challenges.

Components of a Citywide Survey

Many elements of the historic resource survey are defined according to survey standards set forth by the United States secretary of the interior and further defined by the California Office of Historic Preservation (OHP). The sections that follow outline the major survey components and management considerations essential to undertaking a comprehensive citywide survey of Los Angeles.

1. Survey Standards

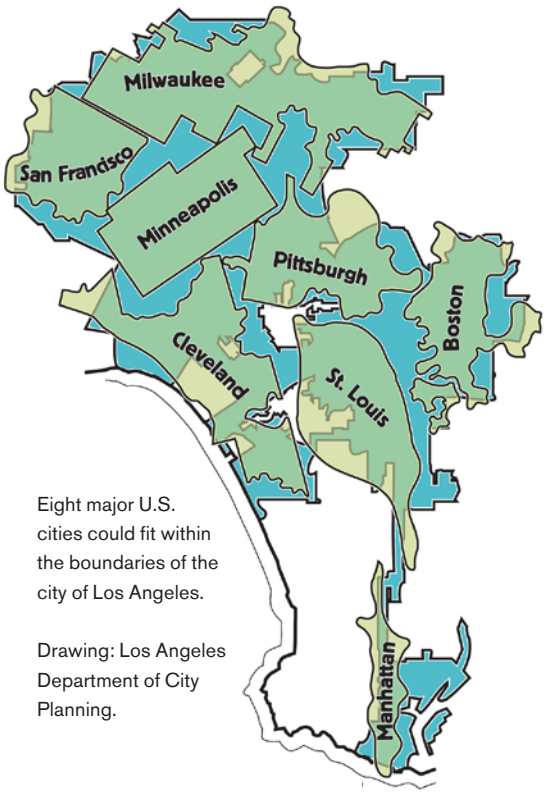
National and state professional standards, as well as municipal preservation ordinances, should be incorporated into the survey methodology so that information gathered is consistent and satisfies government programs and reviews at all levels (see appendix A for a summary of historic preservation programs, agencies, and organizations). These standards will inform the survey's structure and serve as guidelines, covering issues such as the methods for gathering data, the level of research to be completed, and the professional qualifications required of surveyors.

Among the many types of historic resource surveys, the Multiple Property Submission (MPS) approach would be best suited for Los Angeles. It would match the scope and scale of the city and its diverse resources and would provide the benefits of a citywide perspective and in-depth research with which to evaluate and compare a wide range of properties and areas. This approach emphasizes the use of historic contexts as a streamlined way to organize research and fieldwork and to evaluate the significance of individual properties and areas as they are identified. The National Park Service developed the MPS format to facilitate the documentation and simultaneous listing in the National Register of properties related by theme, general geographic area,

(continued on page 4)

LOS ANGELES HISTORIC RESOURCE SURVEY PROJECT SELECTED FINDINGS

- At 466 square miles, Los Angeles contains 880,000 parcels of land and is larger than Milwaukee, San Francisco, Minneapolis, Pittsburgh, Cleveland, St. Louis, Manhattan, and Boston combined.
- Although many surveys have been completed in Los Angeles, 85 percent of the city has never been surveyed.
- The city's first preservation ordinance, passed in 1962, called for the preparation of a citywide survey; however, this was never undertaken because of lack of funding and other constraints. Since that time, there has been significant growth and expansion of historic preservation, and the Los Angeles Historic Resource Survey (LAHRS) will at last fulfill this forty-five-year-old mandate.
- Preservation activity involves a wide range of properties and districts that have historic, architectural, social, and cultural value.
- Survey methods include application of historic contexts and specific criteria that ensure consistency and reliability regarding the significance of properties.
- Technological advances now permit the efficient gathering of information; the layering and combination of visual, spatial, and research information; continual updating of data; and accessibility to a broad array of potential users.



Eight major U.S. cities could fit within the boundaries of the city of Los Angeles.

Drawing: Los Angeles Department of City Planning.

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and time period, though the method can also be used, as it will be in Los Angeles, to establish registration requirements and identify historic resources at all levels of significance without submitting nominations.

2. Historic Context Statement

The historic context statement is a written history of the physical development of the city. It organizes the architectural, historical, and cultural development of the city and its properties by theme, place, and time. Placed in context, individual properties and areas may be assessed against a chronological and historical framework relative to comparable resources within the city, state, and nation. The context statement uses the concept of property types, which are groupings of similar properties associated with the residential, commercial, industrial, and civic development of the city. It defines registration requirements, which spell out the features of buildings and areas that could qualify them as significant at the federal, state, or local level. The context statement standardizes the methods and criteria for evaluation, ensur-

The citywide historic resource survey will facilitate the consistent evaluation and documentation of architectural, historic, and cultural resources as diverse as Union Station (above, HCM #101) and the Munch Box (below, HCM #750). Union Station, a monumental Spanish colonial revival-style structure with streamline moderne and Moorish details, opened in 1939 and is the nation's last grand passenger railway terminal. The Munch Box, a classic roadside hamburger stand, was built in the burgeoning San Fernando Valley suburb of Chatsworth in 1956. Photos: Emile Askey.

ing that evaluations will be consistent and substantiated with research. It provides a systematic yet flexible approach with which to research, compare, and evaluate a wide range of similar types of properties and areas.

3. Historic Resource Criteria and Classifications

Evaluation criteria and classifications are used in conjunction with the historic context statement to determine architectural, historic, or cultural significance and the level of significance of an individual property or district. Survey evaluation criteria encompass city, state, and federal guidelines. While all properties in the city will be considered for inclusion in the survey, some areas may not be surveyed in detail based on age, lack of significance, or integrity of the property or area. The survey will make use of the California Historical Resource Status Codes (see appendix B), which were developed by the California OHP as a system of classifying and coding significant resources for listing in the California Register of Historical Resources.

4. Community and Owner Participation

Community participation is a cornerstone of historic resource surveys. The Department of City Planning has already established effective communication tools and methods of working with community organizations that can be built on to actively involve property owners and residents in the survey. Through its Web site and in community meetings, the city's Office of Historic Resources (OHR) may encourage residents to contribute information and opinions about specific buildings and neighborhoods and their place in the survey. Explanation of the survey's purpose, use, and technicalities should begin early in the process and may be facilitated by allied organizations and agencies.

5. Information Management and Development: Managing, Integrating, and Providing Survey Data

The survey will rely on a coordinated, sophisticated information management system. The Department of City Planning's Geographic Information System (GIS), with its public access portal, the Zoning Information and Map Access System (ZIMAS), provides the infrastructure. This system allows data from different sources to be integrated, updated, and linked to interactive maps, providing agencies, owners, and other users one-stop access to comprehensive and accurate property information. Narrative and graphic information, as well as a property's current historic resource status, may be recorded over time, ensuring the continual updating of the data. Handheld computers may be used in the field to record and document historic properties; appropriate software and guidance for using these instruments must be developed. Data collected through the survey will be made available to a range of users through ZIMAS and a historic resources Web site.

6. Departmental Uses

More than fifteen city agencies use historic resource information for environmental assessments, property management, and program activities. Current and projected uses of historic resource information will help guide the design of the citywide survey. The survey will provide all public agencies with a central, consistent resource to use in planning capital projects, conducting environmental reviews, identifying significant properties, shaping maintenance and investment priorities, and providing services and assistance to the community. For the OHR, the survey will facilitate the establishment of municipal preservation priorities and will enable the OHR to effectively assist other agencies and the public in identifying, managing, and protecting historic resources.

7. Preservation Incentives

A range of financial and regulatory incentives is available for the preservation and rehabilitation of both residential and commercial historic properties. The survey will provide an opportunity to inform the community about existing incentives and will help determine the properties that are eligible. The development of additional incentives to encourage investment in historic resources may be an outgrowth of the survey.

The Amelia M. Earhart Regional Branch Library (HCM #302), North Hollywood. The Los Angeles Library Foundation and the Department of Public Works collaborated on this prize-winning rehabilitation project and a compatible modern addition, which kept the 1928 structure in active use. The citywide survey will help government agencies identify opportunities to rehabilitate important publicly owned historic resources such as this library. Photo: Emile Askey.

8. Survey Cost, Timing, and Funding

The development of a comprehensive survey can be organized in two phases: survey initiation and survey implementation. Each will have its own cost requirements. Survey initiation will involve the development of the survey infrastructure: the historic context statement; the *Field Guide to Survey Evaluation;* historic resource enhancements to the city's GIS, databases, and Web sites; review and approval procedures; and community participation materials and schedules, information management tools, and pilot surveys to test and refine survey procedures. The survey implementation phase will entail completion of the fieldwork and the review, certification, and recording of survey findings, administration of historic resource data, and extensive public communications. (See appendix C for a sample time line.)

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USES OF THE LOS ANGELES HISTORIC RESOURCE SURVEY

The LAHRS will enable the city to have, for the first time, complete, accurate, and current information on all historic properties and districts and, equally important, to save time and money by integrating this information with other city data into its preservation, development, and planning processes. The value of the survey can be measured by the many ways in which it can be employed by a broad, diverse group of users:

- **City departments, elected officials, and board and commission members,** for use in planning for historic preservation, housing and commercial development, and regeneration of neighborhoods and business districts, as well as in building on citywide momentum in adaptive reuse, neighborhood conservation, cultural heritage tourism, and civic pride
- **Homeowners and neighborhood organizations,** for maintaining the character and value of historic homes and neighborhoods
- **Commercial property owners and investors,** for use in shaping plans for an area's development, including the use and rehabilitation

of historic resources, the use of incentives, and the identification of opportunities for new construction

- **The convention and tourism business,** for promoting the city's historic buildings, homes, and neighborhoods as visitor attractions
- **The entertainment industry,** for identifying historic properties for use as film locations or other creative venues
- **Educators, researchers, journalists, and writers,** for accessing a greater breadth and depth of historic information in researching and writing about the historic, architectural, and cultural assets of Los Angeles
- **Preservation groups and neighborhood organizations,** for educating the public about the city's historic resources and historic preservation
- **Real estate professionals,** for identifying historically valuable properties and directing clients and investors to them
- **Companies and business organizations,** for use in attracting and retaining businesses and employees, while recognizing that the city's historic resources add to the appeal of Los Angeles as a place to live and do business

Importantly, the survey will allow the city to meet its legal obligations for identifying historic properties (see chapter 1). The costs of the survey will be offset by the time and money saved in permitting and environmental reviews—not to mention in reduced litigation—that will result from establishing a predictable and legally defensible basis for decision making. Without the survey, uncertainties within the development and project review process may continue to discourage some public and private investment, plans for the city will be ill informed, and opportunities to merge the benefits of historic preservation with economic and cultural development will remain unrealized. A historic resource survey will enable Los Angeles to engage in systematic, coherent planning for the preservation and use of its many historic and cultural resources.

The Carthay Circle HPOZ, designated in 1998. Real estate professionals and community organizations, such as the Carthay Circle Homeowners Association, can use survey data to assist prospective owners in finding historic homes and using incentives to buy and rehabilitate them. Photo: John C. Lewis.

The cost of the survey will be based on estimates of preparing the context statement, creating or enhancing information systems, conducting the field survey and data reviews, and communicating survey progress and results. Most cities fund historic resource surveys from their general fund. In Los Angeles, the citywide survey will be funded through a collaborative agreement between the city of Los Angeles and the J. Paul Getty Trust, wherein each will contribute funding and services toward completion of the survey. The survey and budget will be organized on a five-year basis, with distinct costs associated with the two-year initiation phase and the three-year implementation phase.

The Next Steps in the Process

Given the existing tools, such as survey standards and evaluation criteria, community participation models, ZIMAS, and the California Historical Resource Status Codes, the next steps to be taken in the Los Angeles citywide historic resource survey process will focus on the following:

- Preparing a citywide historic context statement
- Developing an expanded information management system to increase public access to historic resource data
- Developing software for use in recording resources in the field
- Preparing the citywide survey standards and protocols
- Conducting pilot surveys
- Notifying and engaging the community, key stakeholders, and civic leaders through meetings, communication materials, and development of a Los Angeles historic preservation Web site.

Summary

At the conclusion of the survey, comprehensive information on each surveyed property in the city of Los Angeles will be consolidated in a single location and will be made accessible to a range of users. The survey will extend the benefits already realized in downtown Los Angeles and in neighborhoods throughout the city such as Highland Park. Residents, city officials, investors, and visitors will have invaluable documentation of Los Angeles's urban and architectural history. This shared resource will promote preservation planning as Los Angeles continues to grow and develop. Ultimately, the success of the survey will be measured by the extent to which the private and public sectors use survey-generated historic resource information in planning and development activities.

Notes

1. *Figures provided by Hamid Behdad, Los Angeles Mayor's Office of Economic Development, e-newsletter, August 4, 2006.*

CHAPTER 1 Survey Standards: Structuring the Citywide Survey

The survey marks a coming-of-age for historic preservation in Los Angeles. . . . We look forward to collaborating with all segments of the Los Angeles community in building creative partnerships that will take full advantage of this exciting opportunity.

— Ken Bernstein, Office of Historic Resources e-newsletter, 2007

The proposed design for the Los Angeles Historic Resource Survey (LAHRS) aims to identify and consistently evaluate a diverse range of properties as architecturally and historically diverse as the Western Heights Historic Preservation Overlay Zone (HPOZ), the modest Adams residence in Reseda designed by Lloyd Wright, and the Capitol Records Building in Hollywood. Well-conceived standards are essential for a successful survey. Standards and guidelines developed and published by the federal and state governments for use by local jurisdictions will serve as the foundation for the Los Angeles survey standards, ensuring that the data gathered will be useful for preservation, planning, and project investment purposes.[1]

Adoption of these existing standards will ensure that the survey meets the legal requirements for historic preservation under federal, state, and local laws (see appendix A). However, further definition is necessary to meet the city's specific needs. Time invested in carefully designing and codifying each facet of the process will ensure that survey data are consistent in quality and content and that historic resource information is accessible to all users and contributes in a meaningful way to the city's historic preservation, community planning, and development goals.

Historic Resource Survey Standards and Structure

The six historic resource survey standards and guidelines, as defined by the U.S. secretary of the interior, are (1) preservation planning, (2) identification, (3) evaluation of significance, (4) registration, (5) documentation, and (6) professional qualifications. These standards are employed by all federal and state agencies and by most municipal agencies, as well as by survey and preservation planning practitioners. They have been tested and utilized in a variety of communities for more than twenty years. These six standards form the basic components of the survey and are further described by guidelines and methodologies, as discussed in detail in this chapter. Using these professionally accepted standards, the LAHRS will provide the city government with a full

The Western Heights HPOZ. This neighborhood of early-20th-century craftsman residences was designated as an HPOZ in 2001. Survey standards will ensure that properties and districts of all types throughout the city are evaluated consistently. Photo: John C. Lewis.

picture of Los Angeles's historic resources so that decisions to recognize specific historic buildings are deliberate and legally defensible.

Many communities in the United States now employ the Multiple Property Submission (MPS) survey approach, which emphasizes the use of historic contexts as a streamlined way to organize research information and to evaluate potentially significant individual properties and districts as they are identified.[2] Using this method, the LAHRS will identify contextual themes, chronological periods, people, and places significant in Los Angeles history—such as the entertainment industry, post–World War II suburban development, designs by important early modern architects, or properties significant for specific ethnic associations—and will define the property types associated with each contextual theme. This will facilitate identification of historic districts and contextually related, thematic groups of properties, as well as individual resources that represent well-researched contexts. Such a comprehensive, focused approach will allow surveyors to predict the location of historic properties and to make evaluations and comparative judgments rather than conducting research and surveying on a property-by-property basis. In general, the research carried out to determine and document a context will be sufficient to document and record the related individual resources and historic areas. With nearly 900,000 properties to survey in Los Angeles, the MPS approach will yield significant benefits in survey and evaluation consistency, quality, and efficiency.

The MPS approach will allow surveyors to identify and compare properties within important historic contexts. Contexts might include "Industrial Development: The Modern Entertainment Industry" and might identify significant related properties such as the Capitol Records Building (HCM #857), shown here. Photo: Emile Askey.

This craftsman home in South Los Angeles (HCM #510) is one type of significant resource the survey will identify. Using professionally accepted standards, the survey can provide city government with a complete picture of the city's historic resources so that decisions to recognize specific buildings or areas will not be arbitrary. Photo: John C. Lewis.

In structuring the survey, the Department of City Planning's Office of Historic Resources (OHR) will be guided by an understanding of how the information generated will be used in the future by public agencies; by architecture, planning, preservation, and other land-use practitioners; and by property owners and the community. Standards that are carefully prepared will enhance the value of the survey and its use in Los Angeles.

Preservation Planning

Preservation planning organizes survey activities in a logical sequence and specifies how each activity should be carried out. The primary standards for preservation planning address the use of historic contexts, the methods for identifying and registering historic resources based on historic contexts, the involvement of the community in the survey, and the means of ensuring accessibility to survey data.

Establishing Historic Contexts

Historic context is a means of organizing information about historic properties that share common historic, architectural, or cultural themes. The Los Angeles citywide historic context statement will identify themes that represent the city's complex history and relate property types to those themes (see chapter 2). It will establish the priorities and sequence of the survey and draw on a combination of resources: published histories and archival research; preliminary fieldwork to identify significant properties and conditions throughout the city; oral histories and community input; and an understanding of community history, traditions, cultures, and values. Given the broad scope and diverse character of Los Angeles, the citywide historic context statement could be organized in terms of chronological development of the city and major land uses, such as residential, commercial, industrial, and civic and institutional development. The statement should be updated and refined during evaluation and property registration activities.

Using Historic Contexts to Develop Goals and Priorities

Establishing goals, priorities, and survey methodologies appropriate to budget is an important part of the planning process. First, goals are developed to ensure that the range of properties representing important aspects of each historic context is identified and evaluated. Priorities are then established, and survey activities are designed to achieve these goals within the available budget. For example, a goal for the development of the historic context, "Residential Development: Early Transit and Automobile Suburbs: Architecture: Craftsman, 1905–1929," might be to identify several property types (e.g., airplane bungalows, California bungalows, and bungalow courts). Priorities might be established for identifying outstanding individual examples, important concentrations, and unusual types. Goals may be set within certain contexts for identifying potential HPOZs.

Views of Westwood Village in 1932 (left)) and 2008 (inset), featuring the Janss Investment Company Building (HCM #364). The Janss Building, built in 1929, and the surrounding planned community of Westwood were modeled on Mediterranean villages, employing the Spanish revival and Monterey colonial architectural styles. As evident in these photos, much of Westwood Village's historic fabric remains intact. Organizing survey research by chronological period, related contexts, and comparable property types will distinguish important buildings from those of lesser importance. Photo (left): Courtesy of the University of Southern California, on behalf of USC Libraries. Photo (inset): Emile Askey.

The goals for survey activities for lower-priority property types, such as simple cottages with minor craftsman influence, will be designed to streamline the identification, evaluation, and registration effort and thereby conserve survey budget. The context statement will also eliminate some property types from further consideration. Less survey time will be spent in areas previously surveyed, such as Spaulding Square or the Adams–Normandie area, than in areas never surveyed, including Silver Lake and Pacific Palisades.

Emphasizing Community Participation

Early and continuing public participation is essential to the broad acceptance of the survey and to preservation planning decisions (see chapter 4). Citywide organizations, as well as local neighborhood groups, historical societies, and preservation organizations, can provide valuable input on the history and historic significance of their buildings and neighborhoods. A carefully planned public outreach strategy that provides clear information and makes it easy to contribute and obtain information will engender interest, enthusiasm, valuable information, volunteer support, and assistance.

Ensuring Accessibility to Survey Results and Information

Owners, investors, real estate professionals, educators, and public agencies will use historic resource data frequently. Early in the survey process, an expanded information management system should be developed to make survey information accessible to the public. It is essential to ensure that survey results and information can be easily transmitted in a usable form to those responsible for other planning activities. Some contexts may, for example, require survey work in redevelopment areas or adjacent to schools, freeways, and highways. In such instances, the plans of agencies such as the Community Redevelopment Agency (CRA), the Los Angeles Unified School District, and the California Department of Transportation could be affected.

Homes in the Angelino Heights HPOZ. This area was designated as the city's first HPOZ in 1983, initiated by property owners who wanted to preserve and enhance the historic character of their neighborhood, which contains some of the city's best remaining examples of Victorian architectural styles. The HPOZ designation process involves property owners extensively and may serve as a model for survey participation. Owners will be able to contribute to and obtain information from the survey regarding the historic merit of their properties. Photo: John C. Lewis.

A mechanism must be developed for such agencies and organizations to obtain and share survey information, including data from their own surveys (see chapter 5). Standardization of survey methods and procedures across city departments, along with improved sharing of information and resources, will expand dissemination of historic resource data (see chapter 6).

Identification

The second survey standard is identification of historic properties. This activity is based on archival research and field survey procedures consistent with the historic context. Typically, the identification process includes the following steps:

1. Developing a research design
2. Obtaining previous results from federal, state, and local inventories and surveys, as well as from community participation efforts
3. Conducting archival research
4. Performing a survey conducted by qualified city staff or consultants using accepted historic resource criteria
5. Review
6. Reporting results

The context-based MPS approach will provide a way to organize and present information.[3] Though designed by the National Park Service (NPS) as an efficient means of nominating thematically related properties to the National Register of Historic Places, this method can be used to structure a survey and facilitate evaluation of resources even if registration will not be the direct end result. It will streamline the survey process substantially, ensuring that important individual resources and historic districts are identified, and it will also identify those resources and districts that do not merit further consideration for historical significance.

The standards for preparing an MPS are presented in National Register Bulletin 16, Part B. The MPS for the city of Los Angeles will treat the entire city as the subject area, with a variety of associated historic contexts and associated property types within each context serving as the organization. Based on research and fieldwork, survey teams would seek out properties and districts that represent significant types within an important historic context. Forgoing analysis of resources that do not represent an important historic context will save time. For example, an important associated context of the "Industrial Development" theme might be "Modern Entertainment Industry in Hollywood and Environs, 1911–1964." Subcontexts might be (1) motion pictures, (2) television, (3) recording, and (4) radio. Associated property types might include studios; broadcasting stations; lots; support industries for props, scenery, film, equipment, and costumes; residences or offices of famous entertainment personalities; studio worker housing; and movie theaters.

Properties that satisfy registration requirements for quality, significance, and integrity would be surveyed and prioritized. If the research or survey encounters an important property type not anticipated, then the historic context for that property type could be considered and added. At the end of the identification effort, all of the research and field observations regarding a historic resource will be recorded, along with recommendations concerning its importance within a historic context and the evaluation criteria that it most likely will meet from the perspective of the responsible, qualified city staff and survey professionals.

Evaluation of Significance

Evaluation of significance, the third survey standard, should rely on criteria and guidelines provided by the National Register of Historic Places and the California Register of Historical Resources, and on precedents used to designate Los Angeles Historic-Cultural Monuments (HCMs) and HPOZs. Evaluation standards will also reflect the historic contexts established for Los Angeles. Survey teams and the OHR will review all surveyed property information using both the citywide historic context statement and the classifications set forth in the California Historical Resource Status Codes (see appendix B). These codes are discussed further in chapter 3. At the end of the evaluation effort, final decisions will be made as to whether the property or area is important within its historic context(s); its level of integrity—the degree to which the property retains its

physical and historical characteristics—and whether it meets federal, state, or local registration criteria (see chapter 3). This process will ensure consistency among the survey findings given the variety of contexts and the perspectives of individual surveyors.

Consider, for example, the Lasky Film Laboratory in Hollywood, which would fit within the "Modern Entertainment Industry" context. The building has been heavily altered and lacks exterior integrity, but it is the last building associated with Paramount Studios that remains on its original site at Selma Avenue and Vine Street (the studio moved to its current location on Melrose Avenue in 1926). The survey would have to consider the context and weigh the physical characteristics of the structure against its importance in terms of the original location of Paramount Studios and the studio's significant role in early motion picture history. The survey would also have to determine which registration criteria, if any, the Lasky Film Laboratory meets. In this instance, the review likely would determine that the building is significant only in terms of local criteria, as opposed to state or national criteria, because of the change in its physical appearance.

The Famous Players Lasky Studio Barn, now the Hollywood Studio Museum, is a designated California Historical Landmark. The building might also meet national criteria for its unique association with the history of motion pictures, particularly the director Cecil B. DeMille, and as one of the first buildings of Paramount Studios. In the LAHRS, determination of property significance will be based on the citywide historic context statement, established evaluation criteria, and classification standards. Photo: Emile Askey.

A contrasting example would be the Famous Players Lasky Studio Barn (now the Hollywood Studio Museum). It was also on the original Paramount lot but was relocated to the studio's Melrose lot in the 1920s, and later to its present location on Highland Avenue in 1983. Those reviewing the survey data will have to decide if the barn's lack of integrity of location is overridden by its historical significance. In this case, the building might still meet national criteria because of the following factors: it was the first building in Hollywood where indoor motion pictures were shot, it was one of the first buildings of what would become Paramount Studios, and it can be directly associated with the pioneering film work of Cecil B. DeMille.

Registration

The fourth survey standard is registration, which is the formal recognition of properties identified as significant. Registration requirements will define the attributes of significance and integrity used to determine which properties and districts meet National Register criteria, California Register criteria, and/or city of Los Angeles HCM or HPOZ criteria. Although properties will not be registered as a direct result of the LAHRS, the establishment of registration requirements will facilitate evaluation of properties according to these standards. In the interest of clarity and to assure property owners that registration will not occur as a direct result of the survey, the OHR has elected to use the term *eligibility standards* rather than *registration requirements*.

The requirements provide specific information based on precedents established by previously designated historic properties, which can be used in comparing and making judgments about the potential eligibility of surveyed properties and areas. In addition to issues of integrity and significance, registration requirements address how effectively a specific property (or group of properties) illustrates the property type and how it relates to the historic context. Evaluations will state how and why a resource meets local, state, and/or national criteria and will describe the physical characteristics, associative qualities, or research potential that an example of the property type possesses. Registration

The Pellissier Building and Wiltern Theatre (HCM #118). The Pellissier Building could serve as a point of reference for the evaluation of other zigzag moderne commercial buildings. Historic resource registration requirements make use of precedents established by prior designations of historic properties in order to determine standards for property integrity and significance. Photo: Emile Askey.

requirements for historic resources, thematic groupings, and historic districts will be established in the historic context statement and will be linked to individual historic resources through the concept of property type (a group of properties defined by common physical and associative attributes).

To return to the "Modern Entertainment Industry" context example, registration and integrity requirements likely will be quite different for intact motion picture studio complexes such as Paramount, Vitagraph, and the Charlie Chaplin Studios than for remnant studio buildings like the Mack Sennett Studios or leased studio buildings such as the B-picture studios that once dominated Santa Monica Boulevard. If registration requirements determine that in order to meet *national* criteria, a motion picture studio must contain a complex of buildings, including sets, stages, offices, and storage buildings, then the largely intact Charlie Chaplin Studios might qualify.

In contrast, although the Mack Sennett Studios might initially appear eligible for the National Register based on its importance in film history and its association with the life of a significant person, so many of its buildings have been demolished that it no longer adequately represents the motion picture studio property type. The Sennett studio has, however, been designated a city of Los Angeles HCM based on the strength of its association with the famed silent movie director whose name it bears. This designation would be an important factor in establishing *local* criteria registration requirements for other remnant studio buildings.

Buildings of the Chaplin Studios (HCM #58). The Chaplin Studios is recognized both for its association with the famed actor-director-producer Charlie Chaplin and for its architectural integrity. (The building is currently home to the Jim Henson Company.) The citywide historic context statement will allow similar historic properties and districts to be compared and evaluated in chronological and thematic contexts. Photo: Emile Askey.

Furthermore, a B-picture studio building may not meet registration requirements for the motion picture studio property type because it was not a full complex and may not have had a long historical association with an important studio. If, however, it can be associated with the making of a singularly important film or was very important in the career of a noted film personality, and if it retains integrity from that era, registration requirements would be constructed to evaluate the building or district within its proper context (see chapter 2) and criteria (see chapter 3).

Documentation

The fifth survey standard is documentation, the collection of information that describes, locates, and explains the significance of a historic property. The California Office of Historic Preservation (OHP) has developed documentation standards that the LAHRS can follow in order to satisfy federal and state preservation laws.[4] Recording of resources using the OHP's format and series 523 forms (see appendix D) will ensure the consistency and completeness of information gathered through the survey.[5] The following forms will meet the documentation standards for the LAHRS:

- For individually significant properties, forms 523A (Primary Record) and 523B (Building, Structure, and Object Record)
- For historic districts, form 523D (District Record) for the district and form 523A for district contributors
- For MPSs, form 523D for the contextual theme or property type group, and form 523A for properties that meet the registration requirements

Using the District Record (forms 523D and 523A) will preserve the organization and economy that comes from the MPS approach while meeting the OHP requirements for identifying, evaluating, and recording the findings on series 523 forms.

Integration of historic resource data into the city's preservation planning programs and broader municipal planning system is essential. The results of identification activities will be reported for each resource to indicate that the survey was completed and to give the location, date, and author of the information gathered. Following evaluation, survey results will be submitted for appropriate local and state reviews to ensure that the standards of resource recording have been met. Once the reviews have been completed, the survey results will be entered into the city's planning systems and the statewide Historical Resources Inventory (HRI), maintained by the OHP. Results of the survey should also be made widely available in an organized way through public meetings, published materials, a historic resource Web site, and an expanded information management system.

Data Archives and Maintenance of the Survey

National and state standards have not yet been developed for maintaining the results of historic resource surveys. Regular updating and maintenance of historic resource data, however, will be extremely important to ensure that the city's records remain reliable. California state guidelines call for a five-year period for updating surveys if properties are to be considered for nomination to the California Register.

The city should develop standards for its historic resource data to be maintained and routinely updated. Simple methods to maintain results and add to the city's historic resource inventory could include the following:

- A mechanism could be developed for the Department of Building and Safety to flag historic resources when a building permit has been issued, so that its existing historic resource status can be evaluated and updated if necessary.
- When resources are identified and new surveys are conducted by other agencies (e.g., the OHP, Caltrans, the Community Redevelopment Agency), current results could be integrated into the LAHRS database, and the five-year period would start anew.
- Resources of a recent age or of a type not considered to be within an important context at the time the survey was conducted could be surveyed under a newly developed context once their significance is recognized. The citywide survey should identify ages and potential contexts in its final report to accommodate and guide this effort.

- Within the community, historical societies and other knowledgeable groups and individuals could report to the OHR when their research and work identify previously undocumented historic resources or changes to those already documented.

The use of a dynamic database system and employment of mechanisms to augment city records with new information on a regular basis will help maintain the value of the survey data.

Professional Qualifications

Utility of the comprehensive survey will rely heavily on the professionalism of the survey team, the final survey standard. Consistency, sophisticated professional judgment, and attention to detail are essential. The NPS and the California OHP have developed professional qualification standards for those individuals performing identification, evaluation, registration, and treatment activities. Survey staff and members of review committees typically have backgrounds in history, architectural history, and architecture. Increasingly, archaeologists, urban and cultural geographers, and ethnologists are also engaged. A graduate degree or equivalent experience and at least one year of full-time professional experience are considered the minimum requirements for surveyors.[6] Incorporating qualification requirements within requests for proposals is an important step toward achieving professionalism and consistency in survey work.

Outsourcing actual survey work to qualified consultants is often the most cost-effective approach. This course of action will be taken in Los Angeles, with professional staff from the city's OHR managing the overall survey process. These staff members must have experience in conducting historic resource surveys, in classifying historic resources, and in administering the local, state, and federal historic preservation process. They must also be able to work well with other municipal departments, state agencies, and federal program managers. A qualified survey review committee will be necessary to review the classifications applied to the properties surveyed and to approve the survey results.

Practices in Other Communities

A review of the best practices employed in other communities focused on three issues: the use of alternative standards and practices, local review procedures, and the impact of survey activity and findings on other municipal agencies and systems. The basic components of the survey process have been well established by National Register guidelines and by California OHP instructions. Most communities nationwide use the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation,* and in California, the OHP's *Instructions for Recording Historical Resources*. This common system provides the foundation for California cities participating in the Certified Local Governments program. Cities so designated participate in local review of resources for state and federal purposes. The system also facilitates the communitywide use of incentives.

In some cases, survey standards have been modified to adapt to local preservation and planning programs. Examples include Ontario, California, where detailed local criteria were included, and San Francisco, where survey data were associated with California Historical Resource Status Codes for use in local planning systems and significant resources were subject to design review. In Riverside, California, the planning department produced *Historic Resources Inventory Database Instructions for Recording and Viewing,* a reference manual for all city agencies and consultants using historic resource data. This document explains the scope and specificity with which data need to be gathered and managed.

Self-styled standards and classification methods such as ratings, color coding, and others based on a hierarchical system of high-priority to low-priority resources often present serious limitations as survey and preservation programs are implemented.

Summary

Survey standards and guidelines developed by federal and state agencies supply an organizing framework for the LAHRS. Structured according to these standards,

the survey will produce a consistent, high-quality record of the wealth of historical resources spread across the city's sizable geographic reach. In addition to meeting federal and state requirements, the survey can be refined and used productively over time for a variety of regulatory, planning, community development, and educational purposes by a wide range of users.

Notes

1. *U.S. Department of the Interior,* Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation; *Derry et al.,* Guidelines for Local Surveys; *California Office of Historic Preservation,* Instructions for Recording Historical Resources.
2. *For a detailed discussion of the MPS approach, see* National Register of Historic Places, Guidelines for Completing National Register of Historic Places Forms. Part B.
3. *"The components of the MPS approach (historic context statements, property types associated with each context, and evaluation criteria for each property type) provide a proven format for understanding the history of a community and a means of evaluating individual properties as they are identified." Keeper of the National Register of Historic Places and chief of the National Historic Landmarks Survey, National Park Service, e-mail message to author, January 7, 2004.*
4. *These laws include Section 106 of the National Historic Preservation Act and its implementation guidelines (specifically 36 CFR 800.4) and Section 15064.5(a) of the California Environmental Quality Act (CEQA) guidelines for identifying historical resources. For Section 106, however, the OHP may require the lead agency to prepare DPR 523 forms for the nonimportant properties in the Area of Potential Effects, so its requirements would be only partially satisfied by the LAHRS. For CEQA, survey results would have to be updated within five years, but this could be done during the CEQA compliance process, independent of the city's survey. National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470 et seq.);* California Code of Regulations. *Title 14: Natural Resources. Division 6: Resources Agency. Chapter 3: Guidelines for Implementation of the California Environmental Quality Act.*
5. *Detailed information can be found in California Office of Historic Preservation,* Instructions for Recording Historical Resources.
6. *For a detailed description of professional qualifications, see Derry et al.,* Guidelines for Local Surveys.

CHAPTER 2 The Historic Context Statement

> ***In 1910, Watts was advertised as a "distinctly home town" where "you could buy town lots on the hitherto unheard of terms of '$1 down, and $1 a week.'" As news of these terms spread, Watts became a workingman's city where laborers, domestic servants and factory workers owned their own homes. For many years, it was possible for almost every ethnic and immigrant group to participate in the "American Dream" in Watts.***
>
> — From Historic Resources Group, "South Los Angeles Historic Context Statement Project Sourcebook," p. 12

The above excerpt, from an unpublished report by the Historic Resources Group and the Los Angeles Conservancy, provides information essential to understanding the architecture and historic forces that shaped the Watts community in South Los Angeles. The context statement goes on to identify important property types, specific areas, and property examples that illustrate the community's historically significant features, and to suggest preservation priorities based on historical significance:

> The simplest, working class vernacular houses, mostly built after 1904 in Watts and surrounding areas, were wood frame cottages. Typically they were one-story buildings, small with front porches, little ornamentation, and modest additions in the rear. These cottages were joined by bungalows, many of which may be deteriorated, or significantly altered. Any early structures which do survive in relatively intact condition are significant as reminders of the first residents of Watts and the achievement which home ownership represented to them.... Surviving examples of the Craftsman and Colonial Revival styles are abundant in South Los Angeles and form remarkably intact neighborhoods. The neighborhood surrounding South Park...and the residential streets around Rosedale Cemetery provide a similar example to the north. Intact bungalow neighborhoods such as these are one of the most character-defining features of the Planning Area.[1]

This description of a range of building types and neighborhoods within the Watts area serves as the foundation for a more detailed context statement for Watts.

A historic context statement is a written history of the physical development of the city. It is used to analyze the historical development of the community and to identify and evaluate its historic resources. It appears in the form of a technical document with specific organizational and content requirements. These requirements help to standardize the research, identification, and evaluation of properties and areas and to ensure understanding and consistent evaluations of historic, architectural, and cultural significance. The historic context statement defines what will be considered a significant historic resource and sets forth the standards, criteria, precedents, and tests to evaluate properties throughout the city.

In its guidelines for historic context statements, delineated in National Register bulletins 16A and 16B, the National Park Service (NPS) defines historic context as "a body of information about historic properties organized by theme, place, and time." Historic context is linked with tangible historic resources through the concept of property type, a "grouping of individual

A historic view of Case Study House #8 (HCM #381), also called the Eames House. In reviewing the pioneering work of nationally significant and locally prominent developers, architects, planners, and civic leaders, the survey could be used to evaluate the remaining mid-20th-century modernist residences commissioned by *Arts and Architecture* magazine in relation to the Eames House and the three other Case Study houses currently designated as HCMs. Photo: © J. Paul Getty Trust. Used with permission. Julius Shulman Photography Archive, Research Library at the Getty Research Institute (2004.R.10).

properties characterized by physical and/or associative attributes."[2] The context statement also identifies the features that qualify a building or area as significant.

It is essential to draft a citywide historic context statement for Los Angeles early in the survey planning process. The draft will help to organize existing information on the city's historic resources, to facilitate evaluation of individual properties and districts through comparisons with resources that share similar physical characteristics and historical associations, and to furnish essential information for preservation planning. In this manner, the historic context statement will provide a framework with which to handle practical limitations (such as budget constraints) and to define planning priorities and goals. The historic context statement is necessary not only for organizing the survey and evaluating resources but also for the completion of the Multiple Property Submission (MPS) documentation process.

By providing a framework for describing the development of Los Angeles, the historic context statement will serve not only as the survey's defining document but also as a vehicle for understanding the city's dynamic heritage and for engaging the community in planning for the preservation of that heritage and for the city's future growth. Whether illuminating the significance of Richard Neutra's Lovell House, the Los Angeles Memorial Coliseum, historic neighborhoods such as Whitley Heights, or the Googie-style Pann's restaurant and coffee shop near Los Angeles International Airport, the context statement is a public document. It should be of high quality but flexible enough to be utilized in a variety of ways:

- To educate readers in the planning and development process
- To develop community education and informational documents
- To produce survey publications; to develop materials for community education and school use
- To promote heritage tourism initiatives
- To create exhibitions and walking tour notes
- To publicize historic areas and properties

Components of a Citywide Historic Context Statement

The basic components of the context statement are sections identifying historic themes, noteworthy patterns of physical development, associated property types organized by chronological period and geographic location, and registration requirements for each property type.

The Los Angeles citywide historic context statement could be organized chronologically, thematically, or geographically. One logical framework could start with a unifying historical overview to establish key chronological periods that have defined the city's growth, followed by primary themes that fall under major land-use categories:

- Residential Development: Housing and Neighborhoods
- Commercial Development: Buildings and Districts
- Industrial Development: Buildings, Districts, and Sites
- Institutional Development: Government and Civic Life

Each of these primary themes could become a chapter in the citywide context statement, and each chapter could include the elements listed below and detailed in the discussion that follows:

- Historical overview and analysis
- Definition of associated historic contexts
- Description of key associated property types and property type significance
- Registration requirements

Additional components of the historic context statement could be a discussion of geographic and natural features; visual materials, including topographic and chronological maps that illustrate the interrelationships between geography, development, and political boundaries; photographs and illustrations that convey key points; and relevant bibliographic references.

Historical Overview and Analysis

The historic context statement will provide an overall chronological history of the growth of the city of Los Angeles. It will identify overarching forces such as transportation, water, war, immigration, government policy, and economic factors that have shaped the city, as well as all categories of land use and urban development. It will also identify associative values such as architecture, community planning and development, entertainment/recreation, ethnic heritage, social history, and race relations. In addition to the general historical overview, each thematic chapter will detail the related historical patterns of development and how these patterns, as observed in Los Angeles, relate to national, state, and local contexts.

The forecourt of Grauman's Chinese Theatre (HCM #55). An opulent architectural fantasy, Grauman's was the second movie palace in Hollywood when it opened in 1927. It is a contributor to the Hollywood Boulevard Commercial and Entertainment National Register Historic District. The citywide historic context statement would establish the themes, chronological periods, persons, places, and events significant in Los Angeles history. Photo: Emile Askey.

Associated Historic Contexts

Such broad themes as "Residential Development," "Commercial Development," and "Industrial Development" will have a multiplicity of associated contexts that may emphasize various economic, social, political, and cultural forces, such as certain industries, government actions, and scientific or artistic developments. Architectural styles, buildings and structural types, and building materials and methods of construction may also serve as organizing devices for the historic context statement. Each context should be defined sufficiently and broadly to ensure its utility citywide. For example, in the "Residential Development" context, an associated context defined as the apartment house building type would be more useful than one defined as the two-story apartment house building type. The National Register bulletins provide useful guidance in the development of a wide range of associated contexts, including those related to historic or prehistoric trends and patterns, an individual or group of individuals, art, architecture, engineering, and landscape architecture.

Associated Property Types

A property type is a grouping of individual properties or a district that represents the context and has common physical or associative attributes. Physical attributes include style, period, structural type, size, scale, proportion, design and architecture, method of construction, plan, materials, workmanship, artistry, and environmental relationship. Associative attributes include the property's relationship to important persons, activities, and events based on date, function, cultural affiliation, relationship to important research areas, and other information. Specific physical and associative qualities that qualify a property for listing as a historic resource will be incorporated into the context statement.

Again using the "Residential Development" context as an example, the city of Los Angeles responded to the popularization of the automobile in the 1920s with the introduction of distinctive land-use patterns, neighborhoods, building types, and architectural styles. One of those architectural styles, moderne/art deco, may

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SAMPLE OUTLINE FOR CITY OF LOS ANGELES HISTORIC CONTEXT STATEMENT

The citywide historic context statement will describe historic patterns of development, events, individuals, and groups that have shaped the character and built environment of Los Angeles. Key periods reflecting significant social, political, and economic forces will be identified. Land-use categories can be employed to structure the historic context statement. A sample outline follows.

Title: Historic, Architectural, and Cultural Resources of the City of Los Angeles

Chapter 1: History of Los Angeles—Its Growth and Development

- Chronological history of Los Angeles, identifying key periods characterized by overarching forces that have shaped the city and driven all categories of land use and urban development, such as transportation, water, war, immigration, and industry
- Themes and associative values such as architecture, community planning and development, economics, entertainment/recreation, ethnic heritage, politics/government, and social history
- Key periods including Pre-European; Spanish and Mexican eras; Gold Rush and Westward Expansion; Late-Nineteenth-Century Growth; Early-Twentieth-Century Development; Pre–World War II Expansion; War and Urban Transformation; Late-Twentieth-Century Growth and Diversification

Chapter 2: Residential Development—Housing and Neighborhoods

- Overview of residential architecture, housing development, and neighborhood growth in Los Angeles: transportation, land and site development, house and yard, early Los Angeles neighborhoods, early transit and automobile suburbs, post–World War II and freeway suburbs
- Chronological periods of significance and/or geographic areas associated with significant introductions, innovations, trends, and declines of important architectural styles; architecture and land development practices; trends in subdivision design; design of the suburban home
- Important events, persons, and places associated with each context
- Property type descriptions and registration requirements for property types that would characterize each important residential architecture and land development context

Chapter 3: Commercial Development—Buildings and Districts

- Overview of commercial development and commercial centers in Los Angeles: transportation; land and site development; buildings, streets, and commercial centers; early Los Angeles shops and businesses; downtown and early-twentieth-century commercial development; and post–World War II and outlying commercial centers
- Chronological periods of significance and/or geographic areas associated with significant introductions, innovations, trends, and declines of each important commercial architecture and development context
- Important events, persons, and places associated with each context
- Property type descriptions and registration requirements for property types that would characterize each important commercial architecture and development context

Chapter 4: Agricultural and Industrial Development—Buildings, Districts, and Sites

- Overview of Los Angeles agricultural and industrial development, including cattle and dairy farming, significant crops, railroads, oil, motion pictures and entertainment, manufacturing, real estate, banking and finance, aviation, and automotive industries
- Chronological periods of significance and/or geographic areas associated with important introductions, innovations, trends, and declines of each important agricultural and industrial development context

- Important events, persons, and places associated with each context
- Property type descriptions and registration requirements for property types that would characterize each important agricultural and industrial context

Chapter 5: Institutional Development—Government and Civic Life

- Overview of the growth and development of the civic infrastructure of Los Angeles, including public works, transportation, education, and parks and recreation, as well as religious institutions and private institutions associated with health, education, welfare, arts, culture, and recreation
- Chronological periods of significance and/or geographic areas associated with important introductions, innovations, trends, and declines of each important engineering, infrastructure, and institutional development context
- Important events, persons, and places associated with each context
- Property type descriptions and registration requirements for property types that would characterize each important institutional building and infrastructure development context

Chapter 6: Other

- Any areas not covered in the categories set forth above, such as natural features

represent a property type with subtypes such as streamline moderne and the associated property types of apartments, bungalow courts, and single-family residences.

Property Type Significance

A historic resource represents "a significant part of the history, architecture, archeology, engineering, or culture of an area."[3] For each property type, the context statement will contain a statement that describes the significance of the property type as it relates to each historic context. It must contain (1) reference to the relevant historic contexts; (2) identification of relevant property types within the context and their characteristics; and (3) justification, using standards and tests provided in the registration requirements, that the property or district under consideration has the characteristics to qualify it as significant.

Registration Requirements

Registration requirements define the attributes of significance and integrity used to identify properties and districts that meet National Register, California Register, or local criteria. They are based on an analysis of property type, its significant features, and characteristics and integrity of representative examples of the type.

The registration requirements established for each property type and subtype will be incorporated into the historic context statement. Surveyors will use these requirements to determine how well a specific resource illustrates the property type and how well it relates to the historic context. The registration requirements will describe the "aspects of integrity (location, design, setting, materials, workmanship, feeling, and association)" that a property or district must retain in order to meet the criteria, as well as "an explanation of how each aspect is defined for the specific property type."[4] Substantial loss of character-defining features would render a property or district ineligible for further consideration as a historic resource. Registration requirements may identify master architects whose designs are considered significant in the understanding and execution of a style. They may also identify subtypes that are not as

effective in illustrating the property type. These requirements can be revised as the survey progresses and information becomes known about the relative quality and rarity of extant examples of a property type.

Putting It All Together: The Los Angeles Citywide Historic Context Statement

For survey purposes, historical research is conducted and historic contexts and property types are identified and delineated in order to establish historic property registration requirements that facilitate consistent evaluation of historic properties and districts. The context statement will be developed based on historical and architectural research drawing on primary resources, historical studies and monographs, and prior context statements, surveys, and historic resource nominations.

Given the central role of the context statement, public review and commentary will help to increase awareness and appreciation of the survey, as well as of the survey research and the resources to be considered. Fostering an understanding of historic significance will increase public support for the preservation and reuse of historic buildings and districts. A well-written, well-developed context statement that is accessible to both professional and general audiences is more likely to achieve these ends.

Ensuring consistency in methods and standards is a primary objective of the survey, therefore survey teams must be equipped to provide consistent identification and evaluation of historic resources. A detailed and comprehensive historic context statement, complemented by a *Field Guide to Survey Evaluation* (a new survey tool for the practical application of the historic context statement, described in chapter 6), will convey contexts, property types, and registration requirements clearly and simply. Survey teams will likely use hand-held computers, so database tools that simplify application of the context statement in the field should be developed.

The context statement and its components will be tested during pilot surveys and added to, amended, and refined as the survey progresses. Having official tested context statements and standard approaches to using

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PRELIMINARY SUMMARY OF A LOS ANGELES HISTORIC CONTEXT CHAPTER: RESIDENTIAL DEVELOPMENT: HOUSING AND NEIGHBORHOODS

The context statement for Residential Development: Housing and Neighborhoods could describe the development of residential land use and influences on location, growth patterns, and housing types that emerged within different chronological eras. Los Angeles's important residential subcontexts, such as neighborhood development and innovative housing, suburbanization, and modernism, could be defined, and property types related to these subcontexts could be identified and evaluated for their significance. The chronological narrative could provide a valuable overview, but the contexts and property types could be the most useful tools in surveying the city's resources.

The Residential Development context statement's chronological narrative could discuss prevalent housing types during the Spanish and Mexican eras. It could discuss the housing types that emerged in the 1870s with the advent of local sawmills and brickyards and greater American influences, and the railroad rate wars and boosterism of the mid-1880s that set in motion a population surge and real estate speculation, brought more affordable lumber, and spawned a residential building boom that introduced Victorian-era style residential buildings to Los Angeles. It also might show how, after 1900, these imported styles yielded to the locally inspired mission revival style, which recalled the city's Spanish colonial history, and to the craftsman style, which took advantage of the city's climate. The narrative could demonstrate how large-scale annexations from the 1890s through the 1920s created a vast city connected by a host of streetcar lines and led to the construction of subdivisions of affordable housing stock located within easy walking distance of public transit. It is likely to discuss how the popularity and affordability of the automobile in the 1920s created new housing distribution and street patterns and further decentralized the city, as well as how period revival and moderne styles fulfilled housing needs. It could extend through

the periods of post–World War II modernism and the proliferation of subdivisions with tract housing and define the development of the California ranch style and suburban neighborhoods.

Important themes such as suburbanization and modernism, identified from the narrative, will provide some of the most important survey tools. The context statement could discuss the different property types that demonstrate the important themes. Within the residential context, the subcontexts and the associated property types are likely to identify distinctive land-use patterns, neighborhoods, building types, and architectural styles. The property types might be further defined to establish registration requirements, which are those characteristics and factors of integrity that allow a property or area to be evaluated as significant.

For example, within the residential/modernism context, the subcontexts might include the following styles:

Moderne/Art Deco (ca. 1925–1940)

As described in the proposed University Park HPOZ plan,

> several impulses were merged in Art Deco architecture, most notably the urge to be modern without completely abandoning traditional forms or the integration of decorative elements into design. In its earlier phase, sometimes referred to locally as "zig zag moderne," a pronounced verticality articulated by uninterrupted stepped piers and cornices, can be observed with endless variations on triangular and chevron motifs. In the thirties, the skyward reach of buildings was tempered by a horizontal thrust suggestive of the streamlined, aerodynamic forms of the ocean liner, the locomotive, and the airplane.[5]

Subtype: Streamline Moderne

According to David Gebhard and Robert Winter, "In the 1930s, the Art Deco was followed by the Streamline Moderne (at the time called Modernistic) and a number of other Modernes, the WPA and Regency being the most conspicuous. All evoked an idea of the future."[6] The overall form was horizontal with gently curving corners, creating a sense of motion that reflected the era's fascination with speed and transportation. Roofs were flat, and walls generally were sheathed in cement stucco and stripped of traditional ornamentation. Instead, "raised bands of horizontal moldings, often doubled or tripled, canopies, and pipe railings appeared, along with rounded corners, porthole windows, and openings glazed with glass brick."[7] Metal elements in aluminum, stainless steel, and chrome—including casement windows, railings, and decorative panels and trim—were popular. Residential architectural designs were inspired by such streamline masterpieces as Robert Derrah's Coca-Cola Bottling Plant and Crossroads of the World, Wurdeman and Becket's Pan Pacific Auditorium (later destroyed by fire), Stiles O. Clements's Coulter's Department Store (later demolished) and Jefferson High School, and A. C. Martin and Samuel A. Marx's May Co. building (at Wilshire and Fairfax).

Thomas Jefferson High School, 1939. This notable example of monumental streamline architecture, designed by the architect Stiles O. Clements, was completed in 1936. Photo: Security Pacific Collection/Los Angeles Public Library.

The streamline moderne style is an example of a nationally significant contribution made by Los Angeles. While popular here, the Great Depression prevented it from developing extensively in most other major cities; it went out of vogue locally with the onset of World War II. Residential examples may appear anywhere in the city, usually as infill in subdivisions first developed in the 1920s and only rarely in groups. Important nonresidential groupings include the National Register-eligible Miracle Mile historic district on Wilshire Boulevard, and the old Pepperdine University campus on Vermont Avenue in South Los Angeles.

Streamline Moderne Residential Property Types

Apartments: Apartments were seldom more than two stories high, often sprawling with multiple levels, volumes, staircases, and walkways with pipe railings. The horizontality, light stucco color, and curved corners contrasted sharply with the brick four- and five-story apartment blocks built in the city in the 1920s. Sometimes the usual stucco surface was broken up with horizontal shiplap. Metal casement windows were the typical choice for fenestration, with glass-block surrounds and porthole or octagonal windows as accents. Important local architects of the style include Stiles O. Clements, Milton Black, Robert Derrah, and William Kesling.

Bungalow Courts: Although one-story bungalow courts were a fairly common Los Angeles housing type, streamline moderne bungalow courts were rather rare and employed streamline styling on an individual family-unit scale. The plan was usually six or more units arranged parallel along a linear courtyard. The units could be detached or connected but staggered.

Single Family: Single-family streamline moderne residences are quite rare, probably because economic conditions largely restricted their popularity to wealthy clients who could afford an architect and wanted to make a dramatic statement. The line between modernism and moderne was blurry and many important modernist architects incorporated moderne imagery into their work, as did Richard Neutra in his Josef von Sternberg House (later demolished).[8]

The Mauretania apartment building, ca. 1940 (top) and 2008. The Mauretania's high degree of architectural integrity is apparent. Photo (top): Security Pacific Collection/Los Angeles Public Library. Photo (bottom): Emile Askey.

These are the registration requirements for streamline moderne residential property types:

- To be eligible for the National Register, the property should be designed by an important architect, demonstrate exceptional quality of design and workmanship, and retain a very high degree of integrity.
- To be eligible for the California Register, it should be a good example of the style and retain most aspects of integrity.
- To be eligible as a city of Los Angeles HCM, it should be architect designed or feature a high degree of design quality and integrity.

- To be an HPOZ contributor, any alterations should be reversible, and its construction should fall within the period of significance of the district.

To maintain integrity of design, materials, and workmanship, the elements that are most durable and most representative of the property type are metal casement windows, glass block, metal banding, and smooth walls. If the stucco wall surface is not original, a smooth or only lightly textured surface could be considered to retain integrity. A rough lace stucco coating may be enough to determine that the building lacks integrity.

For example, the streamline moderne Mauretania apartment building is potentially eligible for the National Register, California Register, and city of Los Angeles HCM, and as an HPOZ contributor. It is a contributing element to the Hancock Park HPOZ. The structure retains a high degree of integrity. It was built in 1935 for the actor Jack Haley Sr. (who played the Tin Man in *The Wizard of Oz*) and his wife, who inhabited the penthouse for twenty years. In the summer of 1960, the Mauretania was John F. Kennedy's home for four days during the Democratic National Convention. The structure's architect, Milton Black, was one of Los Angeles's foremost designers of the streamline moderne style. His most notable extant streamline moderne works include the Cernitz House (1938), the Taylor House (1935), and a series of apartments and residences along the 100 block of Kings Road. As an excellent example of the streamline moderne style, as the work of a master architect, and because of its association with important historic persons, the Mauretania appears to meet several registration criteria.

them will increase consistency in survey activities and assessments, avoid duplication of effort, and reduce the time and cost associated with survey research not only for the OHR but for all agencies and others conducting survey and historic resource research in Los Angeles.

Practices in Other Communities and States

Awareness of the importance of citywide historic context statements is a relatively new aspect of the preservation process. The most useful context statements provide a thorough review of an area's history and development patterns, define an architectural typology of associated context property types, and characterize the requirements for property significance. Many cities have approached historic resource surveys on a neighborhood-by-neighborhood basis with the goal of identifying and registering significant properties. Few compelling examples effectively use an entire city as the subject of a multiple property survey.

In the city of Pasadena, theme-based citywide historic context statements have been prepared to guide survey work. Among these, one focuses broadly on economic development, while another documents the ethnic history of the city and emphasizes the role and contributions of eight ethnic groups to the city's development.[9] The context statements incorporate contemporary methods and standards and have made the field survey tasks more informed, manageable, and cost effective.

Of the context statements reviewed, Suburbanization Historic Context and Survey Methodology, from the Maryland Department of Transportation, State Highway Administration, developed for a Section 106 review of the I-495/I-95 freeway corridor, provides an especially instructive framework for a Los Angeles context statement.[10] Using the theme of suburbanization, the I-495/I-95 survey context statement identifies a range of community development themes and property types: the broad development patterns of unplanned suburban neighborhoods, planned suburban neighborhoods, and planned suburban developments. The characteristics of each of these community types are

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RESEARCH RESOURCES FOR PREPARING A LOS ANGELES HISTORIC CONTEXT STATEMENT

The historic context statement will be informed by the significant existing body of scholarship on Los Angeles's urban and architectural history. Both published and archival sources of information will be used in documenting property types and their respective historic contexts. Other potential sources are previous field surveys, theme studies, historic photographs and maps, oral histories, and public and private records. In addition, the GCI and the OHR have prepared a preliminary bibliography of historical studies and historic resource nomination forms for use in preparing the Los Angeles citywide historic context statement, drawing heavily on "A Historical Bibliography of the Built Environment in the Los Angeles Metropolitan Area."[11]

Between 1988 and 1996, the Department of City Planning's Community Plan Revision Program conducted historic resource surveys on a selective basis. These involved the preparation of context statements for nine of the city's eleven subregional planning areas.[12] Although they were not prepared in accordance with the recommended MPS standards, they form a foundation for further research for the citywide context statement.

Context statements developed to establish statewide significance as part of multiple property and National Register theme studies may be useful in preparing the Los Angeles historic context statement. These include contexts for resources such as "California Carnegie Libraries," "U.S. Post Offices in California 1900–1941," and the "Los Angeles Branch Library System."[13]

Both national multiple property listings and national theme studies prepared by the NPS and the National Register provide a comparative analysis of properties associated with important themes or periods of American history, which will prove useful in developing the Los Angeles context statement. For example, "Historic Residential Suburbs in the United States, 1830–1960, MPS" may offer valuable guidance for the development of the context for suburbanization in Los Angeles. Several National Historic Landmark theme studies, including "American Aviation Heritage," "Japanese Americans in World War II," "Labor History," and "World War II Home Front," may also prove useful in developing the Los Angeles context.[14]

Nomination forms for previously listed properties and districts provide essential references in preparing the registration requirements. Review of National Register (www.nr.nps.gov/nrloc1.htm), California Register, HCM, and HPOZ nominations will yield important information for defining registration requirements and evaluating significant properties in the citywide survey.

delineated, and the associated properties found within each community type are identified and defined, as are integrity considerations and registration requirements. The historic context statement documents the distinctive character of the area and the diverse types of historical suburban property development. It also organizes the survey plan and evaluation approach accordingly.

Undertaking a citywide survey without a historic context statement reduces the depth and value of the survey. Chicago sponsored such a survey, and evaluations were based primarily on architectural assessments. Subsequent work was undertaken to prepare area-specific context statements on a neighborhood-by-neighborhood basis. The Chicago experience shows that without historic contexts, there is limited basis for identifying aspects other than the architectural significance of properties and areas.

Summary

A citywide historic context statement will provide the necessary framework for the LAHRS. It will present key themes, chronological periods, and geographic considerations, and will reference the persons, events, property types, and areas that make up the history and urban fabric of the city. In conjunction with agreed-upon criteria, a well-developed context statement will be used to organize the survey and to provide a comparative basis for evaluation of individual properties. The use of historic context statements contributes to rational, consistent, and objective assessments and decisions. Use of the professional methods provided by the National Register and the California OHP will guarantee that the citywide historic context statement conforms to professional standards and statutory requirements. Formal adoption of a context statement will ensure its use by a range of public agencies and private users involved in historic preservation, planning, and development.

Notes

1. *Historic Resources Group and Los Angeles Conservancy, "South Los Angeles Historic Context Statement," 13–14.*
2. *National Register of Historic Places,* Guidelines for Completing National Register of Historic Places Forms. *Part B, 6, 14; National Register of Historic Places,* Guidelines for Completing National Register of Historic Places Forms. *Part A.*
3. *National Register of Historic Places,* How to Apply the National Register Criteria for Evaluation, *7.*
4. *National Register of Historic Places,* Guidelines for Completing National Register of Historic Places Forms. *Part B, 16.*
5. *Los Angeles Department of City Planning, Proposed University Park HPOZ, 44.*
6. *Gebhard and Winter,* An Architectural Guidebook to Los Angeles, *22.*
7. *Los Angeles Department of City Planning, Proposed University Park HPOZ, 44.*
8. *McMillian,* Deco and Streamline Architecture in L.A.

A house in the proposed Balboa Highlands HPOZ. The distinctive modern character of Balboa Highlands, an early 1960s residential neighborhood developed by Joseph Eichler and designed by A. Quincy Jones and Frederick Emmons, has prompted property owners to seek HPOZ designation. Use of previous research on post–World War II suburban development and architectural types will help streamline survey fieldwork. Photo: Emile Askey.

9. *City of Pasadena,* Ethnic History Research Project; *O'Connor and Urban Conservation Section,* Architectural/ Historical Development of the City of Pasadena.
10. *State of Maryland Department of Transportation, State Highway Administration,* Suburbanization Historic Context and Survey Methodology. *This historic context statement was prepared as part of the Maryland State Highway Administration's I-495/I-95 Capital Beltway Corridor Transportation Study.*
11. *Longstreth, "A Historical Bibliography of the Built Environment."*
12. *The Los Angeles Conservancy and Historic Resources Group prepared the nine context statements. The Los Angeles Department of City Planning, the Community Redevelopment Agency, and the Getty Grant Program provided support for the project.*
13. *Context statements from the National Register multiple property nominations within the state of California may be viewed at ohp.parks.ca.gov/?page_id=24544 or at www.nr.nps.gov/nrcover.htm (accessed July 14, 2008).*
14. *Information concerning National Historic Landmark theme studies may be viewed at www.nps.gov/nhl/INDEX.htm (accessed December 7, 2007).*

CHAPTER 3 Historic Resource Criteria, Evaluation Methods, and Classification Standards

> ***A Historic-Cultural Monument (Monument) is any site (including significant trees or other plant life located on the site), building or structure of particular historic or cultural significance to the City of Los Angeles, including historic structures or sites in which the broad cultural, economic or social history of the nation, State or community is reflected or exemplified; or which is identified with historic personages or with important events in the main currents of national, State or local history; or which embodies the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period, style or method of construction; or a notable work of a master builder, designer, or architect whose individual genius influenced his or her age.***
>
> — From the Los Angeles Cultural Heritage Ordinance

The above excerpt, from the Los Angeles Cultural Heritage Ordinance, part of the Los Angeles Administrative Code (sec. 22.171.7), sets forth the criteria used in Los Angeles to assess the potential significance of individual buildings as local historic resources. In the citywide survey, historic resource criteria—the general standards by which a property's historic significance is assessed—will be used in conjunction with the historic context statement. As described in chapter 2, the historic context statement provides the geographic, chronological, and thematic framework for applying National Register, California Register, and local criteria to properties and areas. In general, all federal, state, and local criteria test whether the resource is (1) associated with important events, (2) associated with important persons, (3) has distinctive architectural or physical characteristics, or (4) has information potential in terms of history or prehistory.

Historic resource criteria are used to identify disparate historic resources and may determine that these resources are significant within different but related historic contexts. For example, the Adams–Normandie Historic Preservation Overlay Zone (HPOZ) is a district—designated under a local ordinance—that is significant for its concentration of turn-of-the-twentieth-century shingle- and craftsman-style residential architecture. The Gregory Ain Mar Vista Tract HPOZ is another historic residential district designated under the same ordinance and criteria, but its context is quite different. The Mar Vista HPOZ is a nearly uniform neighborhood of tract homes built in 1948 that were designed by a significant architect, Gregory Ain, in the late modern style.

Homes in two Los Angeles HPOZs: Adams–Normandie (left) and the Gregory Ain Mar Vista Tract (above). Both this 1910 transitional Tudor craftsman (Furlong House, HCM #678) in the Adams–Normandie HPOZ, and this 1948 modern residence in the Gregory Ain Mar Vista Tract HPOZ, are contributing properties in one of the city's HPOZs and were recognized as such under the same ordinance. A well-defined set of historic resource criteria can be used to identify strikingly different resources, as evidenced by the city's HPOZs, which feature a range of architectural periods and styles. Photos: John C. Lewis.

The Los Angeles Historic Resource Survey (LAHRS) will identify important historic resources throughout the city using established and respected criteria, evaluation methods, and classification standards. The historic resources should include properties, sites, and districts as diverse as the city itself. The criteria used in the survey will also provide an objective means of evaluating properties based on research, documentation, and statements of value. Facts (including dates of construction and names of architects), interpretations of meaning, and values (social, scientific, cultural, spiritual, educational, etc.) will be balanced to reflect the history of Los Angeles, the state, and the nation. Documentation will address issues of integrity and authenticity of the site, alterations, and condition, while recognizing that these factors in and of themselves do not determine cultural value but are among the measures of a historic resource's significance. The evaluation of properties will take into account the fact that history is multifaceted and cannot be reduced to a single narrative. The survey should also carefully consider the concept of significance itself, mindful that different properties have significance for different audiences within a highly diverse population. The historic context will establish the means of assessing significance.

A property, district, site, area, object, or landscape must undergo a process of evaluation to assess significance. First, it must be a property type associated with an important historic context. Next, it must retain qualities and integrity identified with the registration requirements for that property type, as expressed in the historic context statement. Finally, it must meet at least one of the federal, state, or local criteria.

If the resource is associated with an important historic context and meets the criteria, it may be classified at the federal, state, or local level of significance based on the significance thresholds established in the context. Classification of properties as historic resources will not result directly in their designation or registration. Designation entails a separate nomination process that involves the property owner and the appropriate government agency and will not be carried out as part of the survey itself. Field surveyors will, however, confirm and record properties and districts that have previously been listed or determined eligible for listing in the National Register or the California Register, as well as those that have been designated as Los Angeles Historic-Cultural Monuments (HCMs) and HPOZs. They will verify that these properties are extant and address issues of integrity. Just as the survey will identify properties and areas that have historic and architecturally significant qualities and meet criteria but have not been previously evaluated, it will also identify properties and areas that do not merit further consideration for historical significance.

Clear classification and coding of surveyed properties using the California Historical Resource Status Codes (see appendix B), the official system used by government agencies in California to understand a property's significance and its eligibility for reviews and incentives, will provide a fair and consistent system to guide the actions of agencies and property owners.

Survey Criteria

An overview of federal, state, and local criteria and their associated status codes follows. For resources that are associated with an important historic context and that meet at least one of the criteria, the survey may provide documentation, an evaluation of significance, and classification. Staff of the Los Angeles Office of Historic Resources (OHR) and the California Office of Historic Preservation (OHP) will review evaluations and classifications.

Federal Criteria

The LAHRS will confirm and record resources listed in the National Register of Historic Places or determined to be eligible for listing. Properties listed in the National Register must meet at least one of the federal criteria for designation. Bullock's Wilshire, the city's first department store outside of the downtown area, and the Hollywood Boulevard Commercial and Entertainment District, a twelve-block-long business, commercial, and entertainment zone, are two examples of Los Angeles resources that meet one of these criteria.

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LOCAL, STATE, AND FEDERAL HISTORIC RESOURCE CRITERIA

National Register[1]	California Register[2]	L.A. Historic-Cultural Monument[3]	L.A. Historic Preservation Overlay Zone[4]
The quality of significance in American history, architecture, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:	An historical resource must be significant at the local, state, or national level, under one or more of the following four criteria:	An historical or cultural monument is any site (including significant trees or other plant life located thereon), building, or structure of particular historic or cultural significance to the City of Los Angeles, such as historic structures or sites:	To be contributing, structures, landscaping, natural features, or sites within the involved area or the area as a whole shall meet one or more of the following criteria:
A. that are associated with events that have made a significant contribution to the broad patterns of our history; or	1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or	in which the broad cultural, economic, or social history of the nation, State, or community is reflected or exemplified, or	a. adds to the historic architectural qualities or historic associations for which a property is significant because it was present during the period of significance, and possesses historic integrity reflecting its character at that time; or
B. that are associated with the lives of persons significant in our past; or	2. It is associated with the lives of persons important to local, California, or national history; or	which are identified with historic personages or with important events in the main currents of national, State, or local history or	b. owing to its unique location or singular physical characteristics, represents an established feature of the neighborhood, community, or city; or
C. that embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or	3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or	which embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period style or method of construction, or a notable work of a master builder, designer, or architect whose individual genius influenced his age.	c. retaining the structure would help preserve and protect a historic place or area of historic interest in the city.
D. that have yielded, or may be likely to yield, information important in history or prehistory.	4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.		

1. Code of Federal Regulations, *title 36, pt. 60.4.*
2. California Code of Regulations, *title 14, div. 3, chap. 11.5, sec. 4852.*
3. Los Angeles Administrative Code, *chap. 9, art. 1, sec. 22.171.7. Added by ord. no. 178,402 (April 2, 2007).*
4. Los Angeles Municipal Code, *chap. 1, sec. 12.20.3. Amended by ord. no. 175,891 (May 12, 2004).*

Properties determined eligible for listing in the National Register of Historic Places meet the same criteria as National Register listed properties. Classification as resources determined eligible for listing is typically the result of an environmental review process carried out as part of Section 106 of the National Historic Preservation Act, to start an application for the Federal Rehabilitation Tax Credit, or because the owner formally objected to a property's designation. Examples of Los Angeles resources determined eligible for the National Register include the Miracle Mile historic district.

The LAHRS will apply the National Register criteria to identify additional properties that meet at least one of these criteria and adhere to the registration requirement of an important context. As mentioned above, the actual National Register listing or determination of eligibility for listing is a separate process that will not be carried out as part of the survey. Existing National Register listed properties will provide valuable examples for the LAHRS in terms of establishing historic contexts and property-type descriptions, as well as clarifying registration requirements for federal classification.

The former Bullock's Wilshire Department Store (HCM #56). Los Angeles properties listed on the National Register include such masterworks as this building, designed by John and Donald Parkinson and opened in 1929. Following the department store's closure, the building was sensitively adapted for use as a library and classrooms by the Southwestern University School of Law. Photo: Emile Askey.

State Criteria

As with National Register properties, the citywide survey will confirm and record all Los Angeles properties and districts listed in or determined eligible for listing in the California Register. Typically, such an eligibility determination is made as part of an environmental review process carried out under the California Environmental Quality Act (CEQA) (see chapter 5). Examples of such properties include Union Station in downtown Los Angeles, and Glendon Manor Apartments in Westwood. Properties listed in the California Register of Historical Resources will also provide useful references for historic contexts and property-type descriptions, as well as establish registration requirements for state classification.

The LAHRS will apply the California Register of Historical Resources criteria and determine whether a property meets the registration requirements of an important historic context and at least one of the four California Register of Historical Resources criteria. The survey will identify these, apply other federal, state, and local criteria, and enter them into the city planning department historic resource database.

City of Los Angeles Criteria

The criteria for the city of Los Angeles are established in the Cultural Heritage and HPOZ ordinances. The LAHRS will confirm and record all existing HCMs as well as the boundaries of and contributing properties within the city's HPOZs. As of April 2007, there are nearly 870 designated HCMs and twenty-two HPOZs.

The survey will identify properties that appear to meet HCM criteria and determine whether an area, district, or group of resources might meet HPOZ criteria. Contexts will be used to evaluate resources, and ordinance criteria will be applied in concert with property-type descriptions and registration requirements for local classification.

Differences between Federal, State, and Local Criteria

Differences between federal, state, and local criteria are relatively modest, though they have important and distinct implications for project review and preservation planning. These differences generally fall within three areas: eligibility requirements, such as the types of resources considered eligible for consideration under the statutes; integrity requirements; and special criteria considerations. The distinctions are summarized below.

Eligibility Requirements

There are three distinct differences in the requirements and precedents for the National Register of Historic Places, the California Register of Historical Resources, and the Los Angeles statutes: age, inclusion of natural features, and consideration of archaeological resources.

Age

To allow sufficient time to gain historical perspective, both the National Register and the California Register use a minimum-age guideline of fifty years before a resource is considered eligible, though both also allow for the evaluation of resources that have achieved significance in the past fifty years if they are of exceptional importance.[1] Los Angeles's local ordinances do not include an age requirement, which has resulted in the designation of some recent resources as HCMs, including Claes Oldenburg and Coosje van Bruggen's giant binoculars in Venice. The general practice with respect to HPOZs has been to allow thirty years between date of completion (or period of significance) and evaluation. In recognition of local practice and the city's abundance of relatively recent cultural resources, the LAHRS might consider properties more than thirty years of age.

Natural Features

Unlike federal and California laws, both Los Angeles ordinances allow for the consideration of natural features. The Cultural Heritage Ordinance broadly defines natural features as significant trees and plant life, while the HPOZ Ordinance expands on that definition to include geographic or geologic features as well. The HPOZ Ordinance also allows for consideration of landscaping. The Los Angeles survey should adopt the broad local definitions of natural features and landscapes as eligible property types for survey purposes.

Archaeological Resources

The National Register and the California Register explicitly mention archaeological resources as eligible, whereas the Los Angeles ordinances do not. Most archaeological resources are evaluated under National Register Criterion D and California Register Criterion 4 as "resources that have yielded or are likely to yield information related to history or prehistory."[2] Given the distinct survey and recognition procedures used for archaeological resources, these will not be evaluated in the LAHRS but may be considered through a separate survey process.

These giant binoculars (HCM #656), designed by Claes Oldenburg and Coosje van Bruggen for Frank Gehry's Chiat/Day Building in Venice, were constructed in 1991 and designated as a Los Angeles HCM in 1998. Los Angeles's local ordinances do not impose a minimum age for consideration as a historic resource. Photo: Emile Askey.

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EXCERPTS FROM NATIONAL REGISTER BULLETIN 15: HOW TO APPLY THE NATIONAL REGISTER CRITERIA FOR EVALUATION (SEC. VI, PP. 11–24)

The National Register provides guidance for the application of its Criteria for Evaluation in National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation*.[3] Although the criteria for listing in the California Register and for designating a city of Los Angeles HCM are similar, state and local criteria are not accompanied by such guidance. The Los Angeles survey can use the National Register guidelines to develop guidance for applying state and local criteria.

The use of historic contexts provides a mechanism for translating the broad National Register criteria into locally meaningful terms. For example, the National Register criteria allow any property associated with the life of a significant person to be regarded as eligible for listing, but it is the historic contexts that define who such people are in a particular area.

The following summarizes the guidance provided in National Register Bulletin 15 (revised 1997) for the application of the four Criteria for Evaluation. Properties and areas can be evaluated as significant using one or more of the criteria. The Los Angeles survey will classify historic resources using the applicable National Register criteria and California Historical Resource Status Codes.

"The National Register criteria recognize different types of values embodied in districts, sites, buildings, structures, and objects. These values fall into the following categories:

- **Associative value (Criteria A and B):** Properties significant for their association or linkage to events (Criterion A) or persons (Criterion B) important in the past.
- **Design or Construction value (Criterion C):** Properties significant as representatives of the manmade expression of culture or technology.
- **Information value (Criterion D):** Properties significant for their ability to yield important information about prehistory or history." (p. 11)

Criterion A: Event

"To be considered for listing under Criterion A, a property must be associated with one or more events important in the defined historic context. Criterion A recognizes properties associated with single events, such as the founding of a town, or with a pattern of events, repeated activities, or historic trends, such as

The former Santa Fe Freight Depot (HCM #795). Built in 1906, the depot is listed on the National Register. The building, which was later adapted for use as the Southern California Institute of Architecture (SCI-Arc) campus, is also a Los Angeles HCM. It is significant under Criterion A for its association with the railway and the development of railroad operations in Los Angeles, and under Criterion C as one of the noted architect Harrison Albright's last extant designs, for its construction quality by Carl Leonardt, and as one of the last remaining railroad freight sheds. Photo: Emile Askey.

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the gradual rise of a port city's prominence in trade and commerce. The event or trends, however, must clearly be important within the associated context: settlement, in the case of the town, or development of a maritime economy, in the case of the port city. Moreover, the property must have an important association with the event or historic trends (or both), and it must retain historic integrity." (p. 12)

Criterion B: Person

"Criterion B applies to properties associated with individuals whose specific contributions to history can be identified and documented. [The term] persons 'significant in our past' refers to individuals whose activities are demonstrably important within a local, state, or national historic context. The criterion is generally restricted to those properties that illustrate (rather than commemorate) a person's important achievements." (p. 14)

Criterion C: Design/Construction

"This criterion applies to properties significant for their physical design or construction, including such elements as architecture, landscape architecture, engineering, and artwork. To be eligible under Criterion C, a property must meet at least one of the following requirements:

- Embody distinctive characteristics of a type, period, or method of construction
- Represent the work of a master
- Possess high artistic value
- Represent a significant and distinguishable entity the components of which may lack individual distinction [a.k.a. a historic district]" (p. 17)

Criterion D: Information Potential

"Certain important research questions about human history can only be answered by the actual physical material of cultural resources. Criterion D encompasses the properties that have the potential to answer, in whole or in part, those types of research questions. The most common type of property nominated under this Criterion is the archeological site (or a district comprised of archeological sites). Buildings, objects, and structures (or districts comprised of these property types), however, can also be eligible for their information potential." (p. 21)

The former residence of Nat "King" Cole, in the Hancock Park area, which served as the entertainer's home from 1948 until his death in 1967. Under Criterion B, the structure's significance could relate to Cole's residence during the period of his greatest influence and fame as a recording star. Also, the Cole family met with and struggled to overcome racial opposition to their purchase of a home in this neighborhood. Photo: Emile Askey.

Angelus Temple in Echo Park, listed as a National Historic Landmark, the highest level of significance afforded historic resources. Completed in 1923, the temple was the base of operations for Aimee Semple McPherson, a pioneer in radio evangelism and a model for modern evangelists. The building meets Criteria A, B, and C. Photo: Emile Askey.

Integrity Requirements

A property's level of integrity—the degree to which it retains its physical and historical character-defining features and is able to communicate its significance—is a key factor in determining whether it may be classified as a historic resource. While the local Los Angeles ordinances refer to integrity in general terms and do not define specific requirements, the National Register and the California Register define seven physical aspects of integrity against which a property or district must be evaluated: location, design, setting, materials, workmanship, feeling, and association. To maintain integrity, a property must possess at least several of these aspects, enough so that the essential physical features that enable it to convey its historic significance remain intact. Determining which aspects are important to integrity requires knowledge of why, when, and where the property is significant.[4] Drawing on the National Register guidelines, the Los Angeles survey should detail the means of assessing integrity in the registration requirements for each property type.

Criteria Considerations

In general, religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past fifty years are ineligible for listing in the National Register; the Los Angeles Cultural Heritage and HPOZ ordinances do not restrict listing of any of these types of properties. National Register guidelines include criteria considerations, which describe the factors that may allow consideration of a property or district that falls into one of these categories despite being otherwise ineligible. For example, a religious property may be eligible if it derives its primary historical significance from architectural or artistic distinction or historical importance.[5] The LAHRS guidelines should define criteria considerations for use in identifying and assessing resources in order to facilitate evaluation of properties at the federal, state, and local levels.

Applying Historic Resource Criteria: The California Historical Resource Status Codes

Because many historic resources and preservation situations in some way involve all three levels of consideration—local, state, and national—government officials and the public should have complete, accessible, and accurate information concerning the status of properties relative to the National Register, the California Register, and local programs. This can be facilitated through use of the California Historical Resource Status Codes (see appendix B).

The status codes are a database tool developed by the California OHP and used to classify historic resources identified as part of a local government survey or through a regulatory process for listing in the state's Historic Resources Inventory (HRI)—the listing of resources identified and evaluated through one of the programs administered by the OHP under the National Historic Preservation Act or the California Public Resources Code.[6] The codes provide a common way of identifying, evaluating, and understanding historic resources. Government agencies can also use them to flag designated or previously reviewed properties.

Adoption of these codes as part of the Los Angeles survey methodology will yield long-term benefits in planning and permit reviews; in making incentives such as the Mills Act Historical Property Contract Program or Federal Rehabilitation Tax Credits available to eligible properties; and for purposes of environmental review. The citywide survey may apply only a limited set of California Historical Resource Status Codes (see the highlighted codes in appendix B). The Los Angeles OHR will need to confirm the use of the codes with the OHP prior to the survey. Properties previously designated or formally evaluated will be recorded and their existence and data confirmed during the survey.

Completed survey results will be submitted to the OHP for incorporation into the California HRI; however, the HRI is not well suited to serve as the primary repository of information about the city's historic resources because it does not contain comprehensive information. The HRI records only one code per

resource for each evaluation event, such as a local survey or a Section 106 review. In cases where multiple codes are assigned to a resource during a single evaluation such as the LAHRS, only the one with the lowest initial number will be listed in the HRI. For example, a property that is a Los Angeles HCM (coded 5S1) *and* appears eligible for listing in the National Register (coded 3S) would be recorded as 3S. Given this situation, reliance on the HRI alone could lead to a serious oversight or error. In contrast, the Zoning Information and Map Access System (ZIMAS), based on the Los Angeles Department of City Planning's Geographic Information System (GIS), can easily record all applicable codes, making it a more reliable source for comprehensive historic resource information (see chapter 6 for a discussion of ZIMAS).

Official Adoption of Survey Results

One of the goals of the comprehensive survey is to establish a clear, smooth connection to the city's preservation, planning, and economic development processes. Los Angeles will need to develop a process to review survey results to ensure consistency. Certification and adoption of the completed survey by the Cultural Heritage Commission will confer an understanding that the survey and the evaluation process have been completed. Following certification, data on the city's historic resources can be incorporated into ZIMAS and the California HRI. Survey data will be valuable to the wide range of users looking for information about properties. Over time, the inventory will serve as a highly useful information resource that can help realize significant cost savings for government agencies and for property owners involved in planning, property investment, and resource surveying.

Practices in Other Cities

Research for the LAHRS included a review of survey criteria practices in other communities. Of particular interest were the criteria employed, the guidelines and standards used to interpret and apply the criteria, and the ways in which rankings, classifications, and coding are integrated into historic preservation, community planning, and development decision making.

A review of alternative evaluation and ranking systems identified a wide range of methods used in surveys conducted since 1970. Many of these locally developed systems simply attempted to rank resources on a superior-to-inferior scale; others provided detailed, extensive criteria to define and cover a specific range of resources and conditions. Some systems evidenced inherent weaknesses, most notably insufficient breadth and interpretations that were not framed appropriately within historical research and context. Often the only enduring value of these surveys is the photographic documentation and occasional written property descriptions.

Research confirmed the importance of a comprehensive survey that encompasses local, state, and federal programs and uses the professional qualifications, tested criteria, standards, and classifications provided by the National Register and instructions provided by the California OHP. Unifying the survey process to incorporate local, state, and national programs brings a better understanding of the goals, incentives, and benefits of historic preservation to the mainstream community and makes historic preservation an ally of municipal conservation and development goals. Cities as diverse as San Francisco, Riverside, Ontario, Sacramento, and Denver exemplify this trend. The use of National Register and state criteria and standards to survey, document, and evaluate property has given professionalism and credibility to local preservation programs.

As an administrative matter, the review of survey findings can be challenging even for experienced staff. Los Angeles should consider forming a survey review committee to review and approve survey findings. Many communities have created survey review committees of qualified, experienced individuals familiar with local, state, and federal criteria and classifications. In Riverside, a committee of professionals and local residents assesses survey findings prior to submission to decision-making bodies. In San Francisco, an evaluator reviews survey findings before survey recommendations are made to the commission. This advisory step appears to provide important input and to expedite the review

process, assuring city staff and elected officials that the survey has been carefully and professionally reviewed.

Summary

Survey criteria will help answer the fundamental question of the survey: Is the property or district a significant historic resource? The systematic application of historic contexts and evaluation criteria to the highly diverse resources of Los Angeles will yield consistent information. The use of tested and recognized criteria that encompass local, state, and federal preservation statutes will result in evaluations that are understood and employed by a variety of government officials, survey practitioners, property owners, and residents. Such clear criteria, processes, and procedures for evaluating historic resources will efficiently produce reliable data for use in property investment planning and in making defensible local land-use planning decisions. Codified, accepted criteria will facilitate the research, documentation, and recording process and will enable consistency of future data.

Notes

1. *For more on resources of the last fifty years, see Sherfy and Luce,* Guidelines for Evaluating and Nominating Properties.
2. *National Register of Historic Places,* How to Apply the National Register Criteria for Evaluation, *2.*
3. *National Register of Historic Places,* How to Apply the National Register Criteria for Evaluation.
4. *National Register of Historic Places,* How to Apply the National Register Criteria for Evaluation, *44–47.*
5. *For a detailed discussion of criteria considerations, see Sherfy and Luce,* Guidelines for Evaluating and Nominating Properties, *25–43.*
6. *California Office of Historic Preservation,* User's Guide to the California Historical Resource Status Codes and Historic Resources Inventory Directory.

CHAPTER 4 Communication and Community Engagement: Explaining the Survey and Engaging the Public

The City of Los Angeles has designated over 20 Historic Preservation Overlay Zones, and most are in lower- or middle-income neighborhoods of high ethnic density. Residents in the HPOZs have observed that if they can manage their community planning, then safety, security, education, and economic solutions begin to follow. Preservation becomes integral to planning and community development. Interest in preservation advances preservation work beyond the views of small groups to the mainstream cultures and ethnic neighborhoods.

— Kathryn Welch Howe, from a presentation at the American Planning Association Conference, 2005

One of the greatest potential benefits of the Los Angeles Historic Resource Survey (LAHRS) is that it will provide valuable information to guide residents and project planners in making decisions and investments. Engaging the community in the survey from the outset will assure that residents and planners understand one another. Making people aware of the city's heritage and historic resources, encouraging them to contribute information and opinions regarding the historic value of their properties and neighborhoods, and fostering a willingness to make changes as a result of their ideas will be vital components of the survey effort.

Allocation of staff, funds, and tools for communications and public outreach must be made from the outset. Outreach activities should be supportive of the administrative and technical survey work of the Office of Historic Resources (OHR) and the survey teams. A time line of these activities is central to the design of a communications program (see appendix C).

Los Angeles's built environment reflects an intricate and dense overlay of history and peoples, with varying and often conflicting motivations and desires. Given the immensity of the city and its highly diverse population, communications need to be strategic, multifaceted, and multilingual. Care must be taken to ensure that views reflective of the city's multicultural heritage are heard and incorporated into every aspect of the survey, especially in the historic context statement and survey evaluations.

Existing Communication and Public Outreach Resources

Survey staff can draw on the successful experiences of many city departments in designing effective outreach programs. Participation of the mayor's office, city council members and their staffs, neighborhood councils, and other city agencies, as well as community and civic organizations, preservation groups, historical societies, colleges and universities, and professional associations, should start early and will contribute to the perception of the survey as a mainstream activity.

Elected Officials

Mayor Antonio Villaraigosa, former mayor James Hahn, city council members, and their staffs have demonstrated continuous support for the citywide survey. Given their frequent and direct interaction with constituents, they can identify individuals and civic groups likely to be interested in assisting with the survey project in their respective districts. Council staff may participate in district meetings to support the survey and to gain an understanding of significant historic resources.

Department of City Planning and the Office of Historic Resources

The OHR was established within the Department of City Planning in 2005. It can serve as the central source of coordinated information for the survey, integrating community relations work strategically so that the public is well informed and easily able to access and participate in the survey process. Mailings, Web sites, and publications will be useful in encouraging public participation and directing users to historic resource information. Public meetings, workshops, and hearings can be carefully coordinated at key points in the survey work to ensure direct contact and dialogue with the communities being surveyed.

Community involvement has long been integral to the Department of City Planning's activities. Department staff routinely place advertisements and notices in local newspapers, convene meetings, and hold

A house in the proposed Stonehurst HPOZ. Local residents and the Little Landers Historical Society have provided crucial support to the proposed Stonehurst HPOZ, a Sun Valley neighborhood of modest buildings constructed of local river stone. Its HPOZ application is currently under consideration. The HPOZ designation process, which relies heavily on community involvement, may serve as a model approach to informing the public and involving the community in survey work. Photo: Emile Askey.

workshops and hearings to ensure that citizens have knowledge of and the opportunity to comment on procedures and proposals. Particularly instructive are the community participation procedures developed by the department for use in the HPOZ survey and nomination process and in the development and revision of plans for each of the city's thirty-five Community Planning Areas. These involve public communications and a range of public meetings, workshops, and hearings within the project area to obtain comments at key steps in the planning process. The events actively involving the community typically occur at the initiation of the planning program and when draft study and planning report findings are available. City Planning Commission meetings at which official actions may be taken are open to the public. This procedural framework provides a useful reference for the citywide historic resource survey.

The Department of City Planning also utilizes a Web site to provide a range of information regarding its many processes, including the municipal preservation program. This includes information on city preservation ordinances, the Cultural Heritage Commission, key programs, services, and forms, as well as lists of municipally designated historic properties and districts. The planning department is currently reviewing its Web presence to consider how its overall information is organized, as well as its navigational clarity and communicative efficacy.

An enhanced OHR Web site would be a valuable means of exchanging information on the survey and the city's historic resources with the public (see chapter 6). Information about the progress of the survey, the order in which areas will be surveyed, meeting schedules, answers to frequently asked questions, and key survey components such as the historic context statement and survey findings should be made available through the Web site. Ensuring that the Web site is easy to navigate and engages users with lively graphics, illustrations, and explanations will yield valuable benefits in informing and educating the public.

Presentation of survey and historic resource information in creative ways is essential in engaging the public. As an example, drawing on the historic context statement, OHR staff can draft lively descriptions of historic buildings and neighborhoods, or vignettes related to key people and events. Once posted to the OHR Web site, such stories may stimulate the public's interest in the city's heritage and its historic resources.

The OHR should consider incorporating a participative or interactive capability into its historic resources Web site. For instance, it could provide the public with a forum to review and comment on the context statement or to contribute information about properties and areas in the city, as does the Place Matters "Census of Places that Matter" in New York (www.placematters.net/flash/census). This public input could prove extremely valuable in capturing information about important persons or events related to specific properties that might not otherwise be found during meetings and the literature research phase of the survey.

Commission and Committee Briefings

The OHR will need to develop effective ways of interacting with official bodies and neighborhood leaders in order to obtain their input and complete the survey.

Cultural Heritage Commission

The Los Angeles Cultural Heritage Commission is responsible for verifying surveys under the Cultural Heritage Ordinance. The commission's twice-monthly meetings are open to the public. Agendas are posted at city hall and on the department Web site, and comments are invited. Cultural Heritage Commission meetings would be an appropriate place for review and comment on the citywide historic context statement, on the report of survey findings, and on historic resource information enhancements to the Zoning Information and Map Access System (ZIMAS) and the Web site. Public hearings and official adoption of the citywide survey can occur at commission meetings as elements of the survey are completed.

City Planning Commission

As the official body reviewing and approving HPOZ surveys, the City Planning Commission should be briefed regularly on the citywide survey. The commission would be interested in the background, purpose, and direction of the survey, because its findings may identify historic resources to be considered in community planning and zoning and may also suggest possible future HPOZ nominations.

Area Planning Commissions

The Department of City Planning's seven Area Planning Commissions are locally based bodies that review the administration of municipal land-use regulations. The boundaries of the Area Planning Commissions may prove appropriate for use in determining geographic divisions for the survey. These boundaries correspond to groupings of the thirty-five Community Planning Areas and of the Neighborhood Councils. The OHR might identify appropriate forums to introduce the survey and to report on survey findings in such areas.

Neighborhood Councils

Neighborhood Councils have the potential to play an important role in the survey as an avenue for communication with community residents. Under the Los Angeles City Charter, established in 2000, the councils were created to promote public participation in local governance and ensure that city government is responsive to neighborhood needs. The Neighborhood Council Congress, the Neighborhood Empowerment Academy, and such subregional councils as the Valley Alliance Neighborhood Council offer opportunities to reach the councils collectively.

HPOZ Boards

The twenty-two HPOZ boards can provide advice to survey personnel on communicating preservation precedents and issues within the HPOZ surveys. Their knowledge of preservation concerns and issues in areas being surveyed will inform the field survey.

Community Organizations and Cultural Institutions

Organizations such as the Los Angeles Conservancy as well as neighborhood-based preservation and community groups will be key partners in the citywide survey. These groups are already involved in historic preservation and neighborhood conservation.

A view of Village Green (HCM #174). The Landmark Watch neighborhood group provided information on Clarence Stein's significant planning and design features for the Baldwin Hills Village garden apartment complex (now known as Village Green) that was instrumental in securing National Historic Landmark designation for this complex. City Council offices, city departments, Neighborhood Councils, and local organizations can provide valuable information to the citywide survey. Photo: Courtesy of Steven Keylon.

Through its newsletter, Web site, tours, lectures, and other public programs, the conservancy could be a powerful resource for exchanging information with the community and raising awareness of the survey. The conservancy's Web site (www.laconservancy.org) is a clearinghouse for local and national information concerning historic preservation. The site features a valuable Historical Research Guide that provides detailed information for those wishing to conduct research on historic properties in the city. The conservancy's staff and volunteer committees, such as the Modern Committee and Historic Theatres Committee, have researched a range of architectural types and periods as part of their advocacy and education efforts. Such research could contribute to the survey.

Individuals and local historical societies can supply valuable information concerning the history of an area and places valued by community residents. For example, in the Department of City Planning's Community Plan Revision Program survey, the Wilmington Historical Society identified properties, sites, and districts that merited review by surveyors. In establishing HPOZs, the Highland Park Heritage Trust, West Adams Heritage Association, and San Pedro Historical Society contributed important information to survey teams that led to the creation of the Highland Park HPOZ, West Adams Terrace HPOZ, and Vinegar Hill HPOZ, respectively.

Community residents and experts in ethnic history may have personal knowledge that will prove useful in developing the historic context statement and in locating buildings and sites important to the history of a particular ethnic group or community. During the South Los Angeles Community Plan Revision Program survey process, resident experts highlighted the importance of Central Avenue as the locale where nationally recognized jazz flourished in Los Angeles from 1913 through the 1950s and might form the basis for a historic district. Organizations including the Little Tokyo Service Center and the Chinese Historical Society of Southern California, museums such as the California African American Museum and the Japanese American National Museum, and nonprofit community development corporations can provide important insight and direction for the citywide historic context statement and for specific area surveys.

The Far East Building was rehabilitated by the Little Tokyo Service Center in 2003, preserving an important historic resource while providing sixteen new units of affordable housing. It is a contributing property within the Little Tokyo National Register Historic District. Experts in community and ethnic history can make valuable contributions to the citywide context statement by locating buildings and sites important to the history of a particular ethnic group or community. Photo: Emile Askey.

Although the citywide survey will be conducted by professional survey teams, community volunteers could be involved in organizing community meetings, raising awareness of local historic resources, conducting oral histories, and gathering historical documentation from residents, as well as postsurvey community education activities.

Educational Institutions

The LAHRS could provide students in the graduate and certificate programs in historic preservation of the University of Southern California's School of Architecture with hands-on experience ranging from research and organizational work to documentation and recording. USC, UCLA, and other local and regional colleges and universities engage in a variety of community-based projects, many of which relate either directly or indirectly to historic preservation. The survey might contribute to and draw on work under way in UCLA's Center for Neighborhood Knowledge or USC's Southern California Studies Center, as well as the efforts of other educational institutions in documenting the built environment of Los Angeles.

Media Coverage

Early contact with the editorial boards and reporters of the *Los Angeles Times,* the *Daily News, La Opinion,* and other local papers; professional publications such as the *Planning Report;* and key organizational newsletters may generate interest, support, and publicity for the survey. Coverage could expand as significant properties and areas are identified and community appreciation for the quality and variety of Los Angeles neighborhoods and historic properties grows.

Television and radio coverage of historic preservation in Los Angeles has expanded significantly as more owners invest in historic homes and neighborhoods and as investment in commercial districts has transformed areas as diverse as downtown, Hollywood, and mid-Wilshire. Los Angeles radio programs such as KCRW's *Which Way L.A.?* and KPCC's *AirTalk, Patt Morrison,* and *Off-Ramp* regularly present features on civic affairs, while public television station KCET's popular *Visiting…With Huell Howser* explores neighborhoods throughout the city. Such local programs could provide an excellent avenue for reaching an audience committed to community issues. Special-interest Web sites and blogs could also be instrumental in publicizing the survey to particular communities.

Putting It All Together: Implementing the Public Participation Process

Creating an effective public participation program for the citywide survey will entail defining survey activities, identifying groups and individuals to contact, and establishing the types of community involvement activities and resources to be used. Using this information, the OHR can define an effective and meaningful community participation program within the context of survey administration and technical work. This will allow for strategic deployment of staff and resources.

The survey will be organized in two phases: survey initiation and survey implementation. Each phase will involve distinct activities with parallel opportunities to engage and inform appropriate individuals and organizations. Successful communication in each phase will contribute to the survey's progress. As community members become increasingly involved, the survey will be enriched by their comments and contributions and may be adjusted and modified in response. The sample time line in appendix C illustrates the close and essential relationship between community participation and survey activities.

Survey Initiation Phase

Giving the Survey an Identity

Materials with consistent names, logos, and other graphic identifiers can help the work of the OHR and the survey teams. The OHR might consider giving the survey an identifiable name such as "Survey Historic L.A.," so that the public immediately recognizes it and associates it with the project.

Interviews and Presentations

Interviews with and presentations to professional and community groups whose activities relate to preservation, planning, history, and land use will prove valuable during the initiation phase and throughout the survey and may set the stage for wider public consultation. Members of these groups will be interested in existing listings, prior surveys, and how they and their organizations can contribute to the survey. This interest should be anticipated and involvement should be solicited.

City leaders and knowledgeable preservation colleagues can identify key organizations whose activities would logically relate to the survey. Such groups might include the Los Angeles Conservancy and other local preservation-oriented nonprofits; business and industry organizations such as the Central City Association, Los Angeles Chamber of Commerce, Valley Industry and Commerce Association, Hispanic Chamber of Commerce, FilmL.A., and LA INC./The Los Angeles Convention and Visitors Bureau; cultural institutions and historical societies including the Historical Society of Southern California, Japanese American National Museum, California African American Museum, Skirball Cultural Center, Huntington Library, and Autry National Center; and local chapters of such professional associations as the Society of Architectural Historians, American Institute of Architects, American Bar Association, American Planning Association, and Urban Land Institute.

Survey Advisory Committee

Interviews and presentations could result in the identification of potential survey advisory committee members. The advisory committee would assist in development, implementation, and communication of accurate information about the survey. The committee can help to define the involvement of others in the survey and to assist in maintaining active support for it. Committee members might also be able to foresee and help to address opposition to various aspects of the survey.

Media and Mailings

The OHR and the planning department can use a variety of means to inform their constituencies and the public about the planning and implementation of the survey. A clear determination of the communication objectives will aid in choosing the appropriate means of reaching a particular audience. Some audiences must be informed regularly because of their roles as advisers or supporting organizations. The availability of funds and staff will influence decisions regarding the type of information to provide, to whom the information should be provided, and how frequently it should be provided.

During the initiation phase, for example, the OHR could develop various information-sharing activities, such as links on other Web sites, which would facilitate reaching the audiences identified in the initiation phase and as the survey progresses. The OHR's site could also be used to analyze the interest and response elicited by postings of news and documents.

The OHR may wish to work with local newspapers, historic preservation organizations such as the California Preservation Foundation and the National Trust for Historic Preservation, and key partners in the blogosphere to provide stories or to place prominent advertising explaining the survey and giving contact information. Early broad outreach of this sort could be more effective in terms of cost and exposure than more direct methods such as targeted mailings.

Pilot Surveys

Pilot surveys testing various tools and methods will be conducted in the initiation phase and should encompass areas that reflect the heterogeneity of the city in terms of population demographics and historic resources. The evaluation and refinement of communication materials and techniques are of particular importance. OHR staff will want to assess the content and value of workshops and meetings, survey materials, and use of the Web to post survey news, historic context information, survey findings, and the participation of community members. Results from the pilot surveys may suggest revisions to the form of communication, the amount of time allocated, and the message being sent.

Survey Implementation Phase

A clear, easily understood process will facilitate a smooth survey implementation. Providing the public with easy opportunities to contribute, review, and obtain information through all phases of the survey will be key to engaging the community in a meaningful way. During the survey, it is important to provide an unambiguous message and to manage expectations. It should be emphasized that the survey is a process aimed at assembling information that will ultimately be used for planning, preservation, and community development purposes. It is not a forum in which to discuss policy, regulations, incentives, or other planning processes.

Community Meetings, Public Notification, and Community Volunteers

Survey staff can organize meetings with residents of identified survey areas through Neighborhood Councils and other community groups. Extensive mailings might be considered after consultation with City Council district offices and other organizations. Consulting other public agencies with active programs in the survey area—such as the Housing Department, Community Development Department, and Department of Transportation—might identify opportunities for coordination as well as points of overlap.

A regular meeting of an established local forum in the subareas can provide an opportunity to describe the survey task. Community members may be interested in knowing, for example, that the focus of the survey is on the built environment rather than on general history, and in learning how survey information can be put to use in their neighborhoods. PowerPoint presentations that draw on research from the citywide context statement can pique interest and focus discussion. OHR staff and surveyors can describe architectural styles, review the history of the area, show details of local historic buildings, and expand on survey materials and procedures.

These introductory meetings will aid in identifying key individuals and groups that might help the survey—local historians, neighborhood associations, and interest groups that have research, documents, and an understanding of significant events, individuals, and places relevant to the history of the area. The survey might employ oral history as a method of capturing community histories and values not documented elsewhere. Working with local experts, survey staff can better define neighborhood boundaries, identify places of value, and clarify perceptions of integrity and significance.

Individuals should have an opportunity to discuss their properties and neighborhoods. To facilitate this discussion, survey teams can provide copies of the historic context statement and survey findings and solicit comments. In all communications, it is important to emphasize that there are historic resource standards and criteria that will define what material and historic resources will be considered. Community and public input can be evaluated and incorporated both before and after the field survey to ensure that important resources have not been overlooked when the survey is completed.

Subsequent community meetings will provide an opportunity to report survey findings—areas surveyed, properties identified, and information obtained—and to solicit further neighborhood input. Comments from the community meetings will be an important component of the final report.

Formal review of the survey findings will occur first at staff level, followed by a professional, paid survey review committee. Final review, verification, and certification of the survey will be conducted by the Cultural Heritage Commission and could take place at one of their regular public meetings.

Staying on Topic/Managing Expectations

In preparing for the survey and community meetings, it is essential to anticipate and assess the context of the survey areas. Understanding the broader social and economic concerns and makeup of the community can strengthen collaboration between staff and survey teams. The population of Los Angeles is very diverse. Clear, concise, multilingual printed materials should be produced early in the survey process so that accurate information is disseminated early on. Common concerns can be addressed through a "frequently asked

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COMMUNITY AND CULTURAL IMPACT OF HISTORIC PRESERVATION: HIGHLAND PARK

Just as historic preservation activities often result in measurable economic benefits, historic resource identifications can lead to significant positive cultural and community impact. Highland Park is one Los Angeles neighborhood that has experienced firsthand the benefits of being identified as historic.

Located northeast of downtown Los Angeles, Highland Park was first subdivided in 1869. New railroad lines to downtown Los Angeles ensured its place as a booming suburb in the last quarter of the nineteenth century. In 1895, the area was formally annexed to the city of Los Angeles. In the years that followed, arts institutions such as the Judson Studios and local luminaries such as Charles Fletcher Lummis, founder of the Southwest Museum, heavily influenced the development of the neighborhood, which became a thriving center of the American arts and crafts movement.

The architecture of Highland Park encompasses nearly every style popular between the 1880s and 1940s—Queen Anne, craftsman, mission revival, shingle style, and Tudor revival—although the arts and crafts movement in particular flourished in Highland Park, as evidenced by the wealth of craftsman architecture in the area. Highland Park also includes the Arroyo Seco Corridor, a National Scenic Byway.

Starting in the 1980s, residents of the area began working to gain recognition of the historic character of their neighborhood. In 1990, a historic resource survey conducted by the Department of City Planning officially identified the area's potential as a historic district. As a result of neighborhood initiative and City Council action, Highland Park was designated an HPOZ in 1994. The largest of the city's HPOZs, it encompasses approximately twenty-five hundred structures (including more than fifty Los Angeles HCMs) and was the first HPOZ to include commercial buildings.

Area residents have reported that identification as an HPOZ has resulted in sensitively designed projects that have dramatically improved the neighborhood. While some projects have primarily benefited the historic architectural character of the neighborhood, others have led to increased community cohesion, reduction in crime, and grassroots improvements to homes and commercial areas.[1]

Construction of the Highland Park Gold Line light rail station highlights how the identification of historic neighborhoods can result in projects that spark positive community change. Plans for the mile-long Marmion Way corridor segment of the Metro Gold Line in the mid-1990s caused great concern within the Highland Park community. The original project approach, proposed in 1995, contained proposals to

Views of Marmion Way before (top) and after Gold Line construction. The Highland Park historic resource survey provides objective data that can serve as a baseline for community planning decisions. Designers of the Highland Park Gold Line light rail station relied on survey information to develop a design sensitive to the area's history. The new station is located on the site of the historic Highland Park Santa Fe passenger depot and the tracks themselves follow the historic rail line's right of way. Photos: Courtesy of Fred I. Glick, Urban Design/Landscape Architecture.

demolish historic structures. Community members raised issues related
to the area's historic designation and lobbied for changes that would respect their neighborhood's unique character.

For the next two years, the Los Angeles Metropolitan Transportation Authority (MTA) responded by implementing an urban-design-focused community involvement process for the purpose of bringing the community and agency to a common understanding and shared vision of the proposed transitway. The project and its planning process have won multiple awards, including one awarded jointly by the Federal Highway Administration and Federal Transit Administration for excellence in transportation planning.

As a result of the MTA's recognition of the special character of the area, the eventual project design is a showpiece that reflects the craftsman heritage of the neighborhood. The small commercial streets leading to the Highland Park station have also changed dramatically as new shops, cafes, and other businesses have opened. The project's popularity has attracted small-scale developers to the area who have bought and refurbished nearby historic multifamily buildings that had once been neighborhood nuisances.

According to residents, the project has also sparked a renaissance of neighborhood pride. Highland Park resident Nicole Possert reports that "the project has completely changed people's perception of their neighborhood. Once the street was a badly maintained alley and people treated it badly. With the rail station improvements, you saw an immediate change in attitudes—people have a pride and awareness that Highland Park is an historic community."[2] In the few years since the station was constructed, nearly a third of the homes along the Marmion Way corridor have been improved by residents with new paint, rehabilitation, or landscaping.

questions" document and made available at meetings and posted on the Web.

No single formula for community participation will work in every neighborhood, but a consistent message needs to be conveyed. Community residents are entitled to know the purpose of the survey and how the information gathered will be used and made available. Survey teams can explain the survey task clearly and convey an understanding and appreciation of community concerns for identity, cohesiveness, and history and character of the area. It is important to communicate that the survey will create a working tool for the city and its residents. As such, the focus should be on developing a broad context for the city and identifying historic resources for planning and preservation purposes, not on addressing pet research questions or nominating properties.

Making Use of the Completed Survey in Communications, Education, and the Community

Survey data can serve a variety of purposes, and it is important to anticipate and plan for its subsequent use. Collaboration with the Los Angeles Public Library, the Cultural Affairs Department, the Los Angeles Conservancy, and other community, cultural, and educational institutions can help bring survey information to area residents. Popular interest in community heritage and an appreciation of the city's rich, eclectic history and architecture can be built through an innovative Web presence, exhibitions, talks, and lectures on topics and key themes; walking/biking/driving tours; and media coverage of rehabilitation projects. Interest in Los Angeles architecture is already strong and growing. The creative use and expanded availability of information on the city's heritage can bring many benefits for Los Angeles and its residents.

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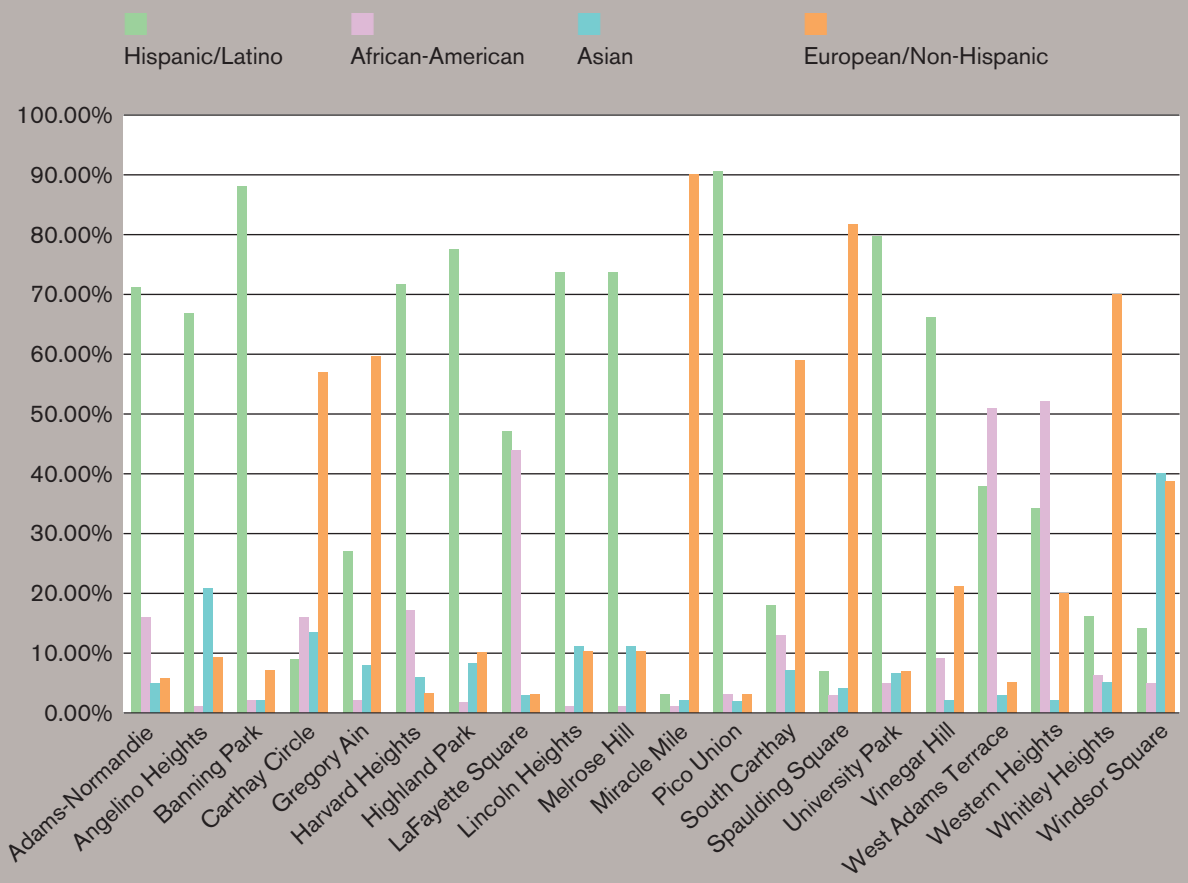
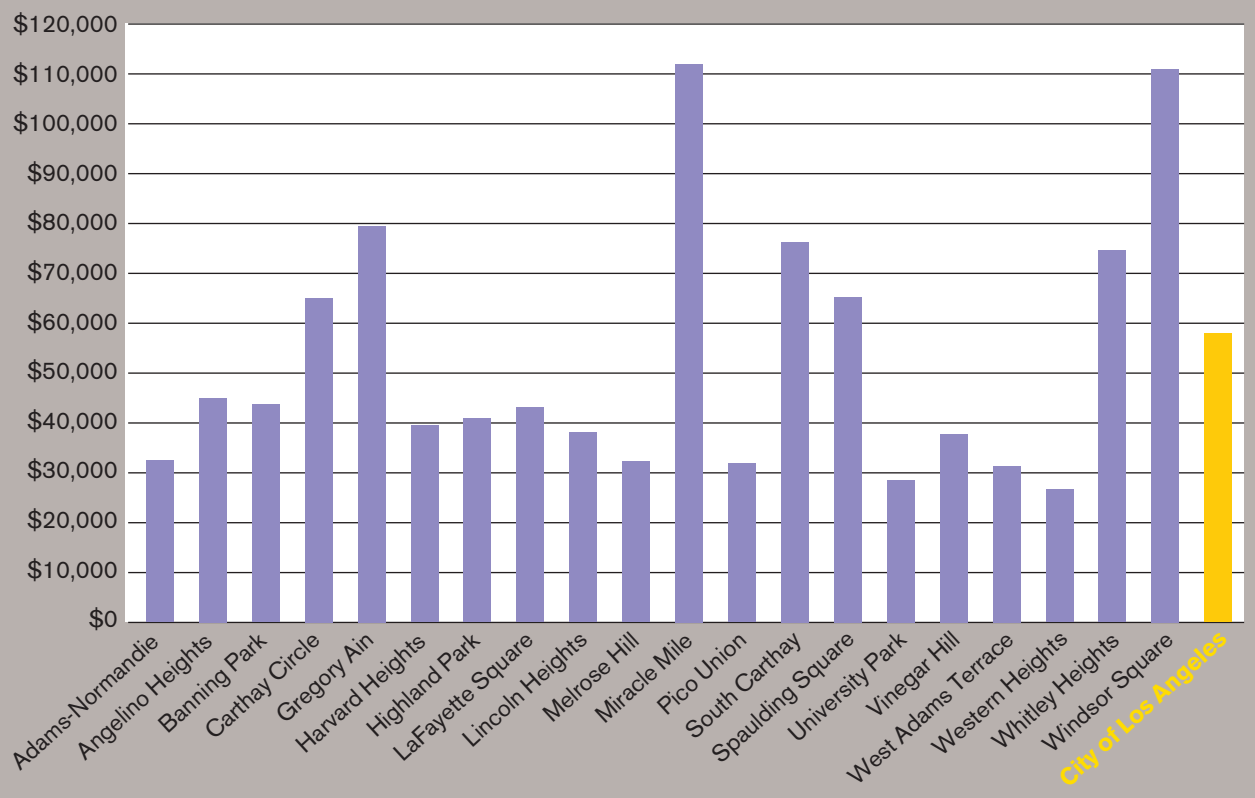
DEMOGRAPHICS, MAJOR ETHNIC GROUPS
LOS ANGELES PRESERVATION OVERLAY ZONES



The population of the HPOZs reflects the ethnic (this page) and economic (opposite) diversity of Los Angeles, as evidenced by demographic information drawn from the 2000 United States Census and provided here by Jeffrey Beckerman, Los Angeles Department of City Planning. HPOZ demographics also indicate a broad-based interest in and support of historic preservation throughout the city.

MEDIAN INCOME, CITY OF LOS ANGELES HISTORIC PRESERVATION OVERLAY ZONES



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Web Sites

The development of a database-driven Web site linked to ZIMAS and other data resources would allow all users to search and access a wide range of information about the city's historic resources, much in the same way a Google Earth, MapQuest, or Yahoo! search can provide access to a range of resources, data, or mapping (see chapter 6).

Although prototypes for such a dynamic site are limited, models for a searchable site that could provide customized information and maps are available. With this capability, a Los Angeles resident might create a tour map of modern architecture in the Hollywood Hills, a developer could identify the locations of properties that qualify for the Adaptive Reuse Ordinance, or the Los Angeles Convention and Visitors Bureau might plot hotels, meeting facilities, and historic sites on a single map in response to the varied interests of its convention groups.

Exhibitions, Public Programming, and Educational Materials

Public programs utilizing information gathered by the survey can further acquaint the community with the range and innovative qualities of Los Angeles architecture, neighborhoods, and urban history. Public programming can be one of the most dynamic elements of the survey. Museums and libraries across the city report that Los Angeles architecture exhibitions typically outpace visitation estimates. The Los Angeles Conservancy's creative education program, Curating the City, drew on historic resource information to treat Wilshire Boulevard as a living museum, offering architectural tours, events, and permanent education resources accessible at www.curatingthecity.org/. This highly successful program introduced the public and student participants to the continuum of architectural styles in Los Angeles; the dense, ethnically diverse neighborhoods; and the changing visions of urban life. Such programs can serve as prototypes for further efforts.

The Wilshire Boulevard Temple (HCM #116) is featured in the Los Angeles Conservancy's Curating the City project and was a stop on its Wilshire Boulevard tour in 2005. Neighborhood and citywide organizations can be valuable partners, contributing research, publicizing the survey, and fostering community awareness and support. Organizations such as the conservancy use historic resource information in developing their public programming. Photo: Emile Askey.

Survey data might also be used to develop elementary and secondary school curricula. This would provide a concrete return to the community on its investment in the survey process. Heritage education—the use of local cultural and historical resources in teaching children in K–12—can help generate an appreciation for the local community and its built environment while inculcating preservation values.

Technical Assistance

Many cities have developed technical assistance programs for property owners who want to research, maintain, and rehabilitate historic buildings. These programs recognize that more people might buy or rehabilitate historic properties if they knew what it entailed. Responding to community requests for such information can be a valuable part of the survey. The cities of San Jose and Atlanta, for example, prepared pamphlets providing basic information about their surveys that directed property owners to additional resources. The pamphlets also provided information about the benefits of historic property ownership.

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CULTURAL TOURISM

In many ways, the tools, services, and information used to inform and encourage citizen participation in the LAHRS can provide an important guide for visitors to Los Angeles. There is a strong, direct connection in Los Angeles between historic sites and cultural tourism. This connection is a tremendous source of economic benefit to the city and county of Los Angeles. Historic architecture and neighborhoods and the revitalized downtown and Hollywood districts are magnets for cultural tourists.

According to a study commissioned in 2005 by Arts + Culture LA and LA INC./The Los Angeles Convention and Visitors Bureau, historic sites are the primary reason cultural tourists visit Los Angeles, ranked above museums, art, dining, theater, film, and music.[3] In 2003, 2.58 million cultural tourists spent $1.1 billion in Los Angeles County, generating tax revenues of $54 million for the state, county, and city governments, according to the study "The Impact of Cultural Tourism on the Los Angeles County Economy," conducted in 2004 by the Los Angeles County Economic Development Corporation (LAEDC).[4] Growth in tourism revenue translates to job creation, increased state and local tax revenues, and higher profits for the retail, lodging, and restaurant industries.

The Leonis Adobe in Calabasas (HCM #1), seat of an important 19th-century San Fernando Valley sheep ranch and one of Los Angeles's many significant historic sites. In 1962, it was the first building to be designated as an HCM by the newly formed Cultural Heritage Commission. Visiting historic places is a leading activity for cultural tourists. Photo: Gail Ostergren.

Data gathered through the survey can be used to identify additional historically significant areas, as well as architectural, cultural, and historic resources and themes that can be incorporated into the city's tourism programs. The demand for historic venues and tour programs may increase as a result. The Confederation of Downtown Associations has already responded to this demand through its self-guided Downtown LA podcast tours—an expansion of its walking tours—to include a historic tour of the downtown area (www.downtownlawalks.com/?f=podcast). The Los Angeles Conservancy offers a variety of guided walking tours weekly and provides a self-guided walking tour podcast and map on its Web site, and would likely use survey data in developing additional tours.

ESTIMATED ANNUAL ECONOMIC IMPACT OF CULTURAL TOURISTS VISITING LOS ANGELES COUNTY IN 2003

Cultural Tourists	2,580,000
Tourist Spending	$535 million
Economic Output in L.A. County	$1.1 billion
Jobs in L.A. County	10,500
Wages in L.A. County	$286 million
State Taxes	$31 million
County Taxes	$4 million
City Taxes	$19 million

Sources: California Arts Council, LA INC., Los Angeles County Economic Development Corporation[5]

Increased marketing of cultural assets could double the number of cultural tourists to Los Angeles and have significant economic impact, according to the Los Angeles County Economic Development Corporation.

The LAHRS will yield valuable information on the city's historic resources and the variety of factors that influence investment, maintenance, and protection on the part of owners. The OHR can provide valuable assistance in directing property owners to key sources of technical advice.

Summary

Community participation and engagement is among the most important, dynamic, and gratifying components of the historic resource survey. Ensuring that community members understand the process, can communicate information and their feelings about their properties and neighborhoods, and are able to participate will be important measures of the survey's success. Stakeholders and individuals can be involved both in the survey and in using its results. Anticipating and planning a range of meaningful forms of participation before, during, and after the survey can engender innovative partnerships among city and community organizations and various industries. Making a significant investment of time, staff, and resources to enhance communication and involvement will yield great dividends to the survey, the city, and the community as a whole that will last far beyond the life of the survey itself.

Notes

1. *Nicole Possert and Catherine Barrier, pers. comm., April 25, 2005.*
2. *Nicole Possert and Catherine Barrier, pers. comm., April 25, 2005.*
3. *TNS/Plog Research, "LA Cultural Tourism Study," 46. This study defined cultural tourists as leisure travelers who engaged in one of the following as a primary activity or motivation for travel in the previous twelve months: historic sites, museums/art galleries, old homes/mansions, gardens, symphony/opera, theater, musical, jazz concert.*
4. *Los Angeles County Economic Development Corporation, "Impact of Cultural Tourism," 1.*
5. *Los Angeles County Economic Development Corporation, "Impact of Cultural Tourism," 4.*

The Lincoln Heights area is historically one of the oldest large subdivisions in Los Angeles. It was developed in the 1880's by John Downey as "East Los Angeles" and has managed to keep a large number of its earliest structures. Although many intrusions and significant alterations have occurred throughout this large area, there are still a high percentage of structures which were constructed before the turn of the century. The area also underwent significant redevelopment during the Craftsman movement of the 1900's through 1920's but this architectural style does not intrude on the earlier Vernacular and Queen Anne designs. The remaining unaltered structures are numerous enough to consider the entire neighborhood as a district, in the hope of not excluding some of the earliest extant homes in Los Angeles because they may have become isolated.

— From "Northeast Los Angeles Historic Context Statement Project Sourcebook II, Draft Historic Studies Section," 1990, p. 41

Homes in the Lincoln Heights HPOZ. First subdivided in 1873, the neighborhood contains a concentration of structures reflecting late-19th- and early-20th-century architectural trends. A 1990 planning department survey identified Lincoln Heights' historic significance as the city's first residential suburb and established a framework for subsequent planning and revitalization work. The Lincoln Heights HPOZ was designated in 2004. Photo: Emile Askey.

Based on research, fieldwork, and analysis of survey results, the Draft Historic Studies Section of the "Northeast Los Angeles Historic Context Statement Project Sourcebook II" (1990), completed by R. Starzak, L. Henmann, and the Los Angeles Conservancy as part of the Community Plan Revision Program of the Department of City Planning, concluded that a large area of Lincoln Heights met the criteria for a historic district. As a consequence of the survey findings and neighborhood initiative, the Lincoln Heights Historic Preservation Overlay Zone (HPOZ) was established in August 2004. That early survey has provided the basis for decisions by numerous city departments, homeowners, and investors, and has contributed to the revitalization of Lincoln Heights.

Bringing neighborhoods and commercial areas back to life through rehabilitation and adaptive reuse of historic buildings creates new housing, strengthens the tax base, and increases public safety. Los Angeles public officials are keenly aware of these potential benefits: the city's Adaptive Reuse Ordinance has stimulated investment of several billion dollars in underutilized historic properties, the HPOZ Ordinance has been the catalyst for improvements in twenty-two historic neighborhoods throughout Los Angeles, and significant investment in schools and libraries citywide has been directed toward rehabilitation of historic structures and introduction of compatible new buildings in historic neighborhoods. All of this work relies on historic resource information, which is essential to planning, reviewing, and implementing these ambitious projects and programs.

The use of historic resource information by public agencies is apparent across Los Angeles, and the city's municipal agencies have done a valiant job fulfilling their historic preservation responsibilities. It is evident downtown, where the Adaptive Reuse Ordinance (ARO) has been instrumental in transforming structures such as the historic Pacific Electric Building, which became an apartment complex with 315 loft-style units. Staffs at local and state agencies collaborated with the building's owner to put into place a variety of incentives (see chapter 7), to meet building and zoning regulations,

and to maintain the character and building fabric of this historic transportation center. In Miracle Mile North, Lincoln Heights, and other HPOZs, the Department of City Planning and HPOZ boards regularly work hand in hand, relying on historic resource survey information to ensure a timely two-week review for property owners who are planning alterations to significant residences.

Most municipal departments in Los Angeles utilize historic resource information, some frequently, as part of program and project planning, others only occasionally, when historic resources are affected by department actions or operations. Whether engaging in preservation, working on community development projects, or conducting environmental reviews, all of these city agencies require the same basic information.

Until recently, however, obtaining information on a property's historic resource status and on associated reviews and incentives has been a challenging and time-consuming task. As a result, many agencies developed their own means of identifying, documenting, and recording historic resource information. Typically, the information gathered was not updated, nor was it forwarded to a central location where other users would have access to it. Spending on surveys by public and private interests is estimated at more than $1 million per year, yet the city has had little to show for it. Ad hoc and sometimes duplicated efforts have given rise to conflicts within agencies, between agencies, and between agencies and the public. Other communities have resolved these problems by linking historic resource surveys with other property data so that multiple agencies and the public have access to unified historic resource data that they can use constructively and to greater effect.

The comprehensive Los Angeles Historic Resource Survey (LAHRS) will provide complete, current, and accurate data on historic properties and districts that will allow city departments and the public immediate access to information on a property's historic resource status. This will greatly improve the ability of public agencies to fulfill their mandates efficiently and effectively. The survey can assemble historic resource data and survey information already gathered by all agencies and organizations in one location, making it accessible to all users and facilitating regular maintenance and information updates. Survey staff may also explore opportunities for working cooperatively with other departments to ensure that future surveys are conducted to common standards.

Municipal Use of Historic Resource Information

Municipal involvement in historic preservation in Los Angeles began in the 1960s, a time when preservation of historic properties typically meant the creation of museums or monuments. These conditions contrast sharply with today's national and local practices, which view historic resources as an integral part of the built environment, as important economic assets, and as a key component of healthy, sustainable communities.

Best practice currently involves the recognition and inclusion of historic properties and areas in planning work and development projects, and the establishment of partnerships between local, state, and federal governments, as well as between property owners and the community, in order to facilitate this process. Preservation is increasingly integrated into local planning and community development activities. Rather than relying solely on the regulatory process, many cities also use incentives designed to encourage owners to invest in and reuse their historic properties. Although Los Angeles presently incorporates some elements of this approach, a focused and coordinated survey and municipal preservation program will improve the climate for property investment and ensure adherence to the city's legal and administrative requirements.

Municipal agencies make use of historic resource information in four basic ways:

1. Planning public and private projects
2. Identifying and nominating historic properties for purposes of recognition and preservation
3. Implementing environmental reviews as required under state and federal legislation, such as the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA), in connection with public and private investment and development projects
4. Property and program management

The potential of the comprehensive LAHRS to contribute to the city's work in each of these areas is discussed below.

Los Angeles's Historic Preservation Ordinances

The city of Los Angeles has two preservation ordinances, the Cultural Heritage Ordinance and the HPOZ Ordinance, administered by the Office of Historic Resources (OHR) and the Department of City Planning, respectively. These ordinances allow the city to identify and designate properties and districts that have architectural, historical, and cultural significance on a local, state, or national level. Historic properties and districts designated under city ordinances are eligible for a range of incentives, including the California Historical Building Code and the Mills Act Historical Property Contract. Proposed changes to significant features of Historic-Cultural Monuments (HCMs) and contributing structures in HPOZs are reviewed to ensure that properties and historic districts are conserved or sympathetically modified. There are currently more than eight hundred HCMs and twenty-two HPOZs, with fifteen additional HPOZ designations requested by members of the public and under consideration. More than eleven thousand properties are listed under the two programs, and the vast majority are privately owned.

The Chatsworth Community Church (HCM #14), built in 1903, one of the few New England vernacular-style wooden churches remaining in Southern California. The OHR will use the citywide survey in working with owners of HCMs. Photo: Emile Askey.

The Office of Historic Resources

The Los Angeles OHR, housed within the Department of City Planning, is responsible for most aspects of the municipal preservation program including administration of the Cultural Heritage Ordinance, providing staff support to the Cultural Heritage Commission, management of the HCM program, and implementation of the Mills Act Historical Property Contract Program. The OHR is committed to establishing strong, widely accepted historic preservation programs that further the work of the city, neighborhoods, property owners, residents, and businesses by recognizing, protecting, and reusing the historic and cultural resources of Los Angeles. Among the goals that the OHR considers its priorities are the following:

1. Conducting the citywide historic resource survey
2. Making historic resource data and preservation information available to government departments, residents, stakeholders, owners, and the public at large
3. Conducting outreach and training city staff, residents, and businesses to utilize the data in all forms of preservation and planning decision making
4. Providing information on incentives available for the preservation and rehabilitation of historic properties

Historic-Cultural Monuments

The OHR and the Cultural Heritage Commission review applications for the designation of HCMs to determine whether properties meet the appropriate criteria. The commission is responsible for maintaining information on the city's more than eight hundred designated HCMs with brief descriptions of each site, building, or structure and the reasons for its designation. Effective in 2005, each designated HCM, as well as each property under consideration, is to be routinely

identified in the Zoning Information and Map Access System (ZIMAS) (see chapter 6). This identification signals to other agencies and users that any proposed alteration must be reviewed and approved by the Cultural Heritage Commission before permits can be issued.

The Cultural Heritage Ordinance specifies that the city will maintain a survey of historic resources in Los Angeles to identify those properties worthy of preservation. Due largely to a long history of budget limitations, the Cultural Heritage Commission did not undertake a historic resource survey on its own. A comprehensive citywide survey of historic resources would provide the necessary framework to guide future decisions on the HCM program.

The Mills Act Historical Property Contract Program

The OHR also administers the Mills Act Historical Property Contract Program, which provides owners of contracted, city-designated historic resources with annual property tax reductions in exchange for maintaining their historic properties (see chapter 7). The comprehensive citywide survey will help property owners and OHR staff identify eligible properties. In addition, staff will be able to market the program more effectively to eligible current and prospective owners.

Department of City Planning

The Department of City Planning utilizes historic resource survey information to administer the HPOZ Ordinance, to manage the city's community planning process and zoning ordinances, and to function as the city's lead agency under CEQA (see next page). The department is responsible for assuring that the legally required environmental reviews are carried out prior to granting approval for nearly 90 percent of the private development projects in the city where discretionary approval by the city government is required (e.g., subdivision of land, zoning changes). To fulfill its mandate, the department maintains the city's primary Geographic Information System (GIS) for land use, which includes environmental, parcel, address, and zoning and planning-area boundary information (see chapter 6). This tool includes the Web-based portal known as ZIMAS, through which data may be accessed by other city departments and the public. In 2005, the department began to incorporate historic resource information into ZIMAS.

Community Plan Updates

The citywide survey can make a major contribution toward updating the city's thirty-five Community Plans, which constitute the required land-use element of the city's General Plan and, as such, are essential documents for planning and development. One of the main values of the survey is to identify neighborhoods and corridors that can be strengthened and conserved as well as those that may accommodate additional growth without adversely affecting significant historic resources.
In past community planning work, such as the Community Plan Revision Program of the late 1980s and early 1990s, historic resource surveys were conducted as part of the planning process but were not linked through ZIMAS or other means. Using citywide survey data will allow planners to overlay maps of historic resources onto maps illustrating areas of proposed change in density or land use.

Historic Preservation Overlay Zones

Interest in the designation of HPOZs—utilized to help retain the unique character of historic neighborhoods—is growing in Los Angeles. HPOZs have been established in architecturally, economically, and socially diverse neighborhoods. As of early 2007, there were twenty-two HPOZs. This number has more than doubled over roughly the past five years and is expected to grow as neighborhoods seek the community, economic, and marketing benefits that accompany the designation. Property owners initiate most requests for HPOZ designations. The evaluation process includes completion of a historic resource survey, which provides the historic context for the area, defines HPOZ boundaries, delineates significant features, provides information on character-defining features, and identifies contributing and noncontributing historic properties within the zone. The City Planning Commission and the

City Council have final approval over the designation of an HPOZ.

Once HPOZ status is established, an advisory board of five members, each with a demonstrated knowledge and interest in the history and architecture of the district, reviews any proposed exterior alterations prior to the granting of final approval by the director of the Department of City Planning and the issuance of permits by the Department of Building and Safety. The advisory board and city staff are guided in administering the HPOZ by the survey and by the HPOZ preservation plan, which sets forth design guidelines for the HPOZ. Each HPOZ, with assistance from the city planning department, devises its own preservation plan.

A comprehensive citywide survey of historic resources will provide a framework for future HPOZ designations and will help address the backlog of pending HPOZ designations, all of which must be surveyed. It will identify important architectural, historic, and cultural resources and districts and provide research data to support evaluations and comparisons. These actions will bolster future planning and preservation work with a more methodical approach to the identification of historic districts throughout the city.

CEQA Lead Agency for Private-Sector Projects

The Department of City Planning is largely responsible for fulfillment of the city's environmental review obligations under CEQA. As the lead agency for all private-sector projects and discretionary actions affecting the environment, the department reviews hundreds of projects and environmental assessment filings annually. The majority of projects involving the repair and rehabilitation of historic buildings require no discretionary approvals from the city of Los Angeles and qualify as categorically exempt under CEQA. For those projects subject to environmental review, CEQA requires the identification of historic resources within the project area and an assessment of impacts on those resources (see sidebar for a more detailed discussion of CEQA).

A comprehensive citywide historic resource survey and a common system for managing survey data would allow the Department of City Planning and other agencies in charge of environmental reviews to identify with ease all historic resources located within project areas, facilitating efficient completion of the first phase of the CEQA process. This process would be a dramatic change from the individual surveys now undertaken for CEQA purposes. Project-specific findings, such as the identification of historic resources discovered in the course of CEQA environmental reviews, could be captured in ZIMAS. The data would reinforce the city's survey efforts and eventually lead to cost savings as more and more sites are identified and gathered into a unified and accessible system.

Community Redevelopment Agency of the City of Los Angeles

The Community Redevelopment Agency (CRA) was established more than fifty years ago to attract private investment to economically depressed areas of Los Angeles. It operates thirty-two redevelopment project areas and three revitalization areas within the city of Los Angeles. The combined areas constitute approximately 12 percent of the city's land area, or nearly 50 square miles of property. Many redevelopment project areas lie within the city's oldest and most historic districts, such as downtown, Hollywood, and San Pedro. The CRA serves as the lead agency for CEQA reviews of all projects within its project area boundaries. Each redevelopment and revitalization project area was established after a historic resource survey was undertaken as part of a broader economic evaluation process. Many of the surveys used, however, were conducted nearly twenty years ago, and although they are still utilized in the CEQA review process, only a few have been updated. Recent historic resource surveys have been undertaken in preparation for the designation of additional redevelopment areas, including the Pacific Corridor Redevelopment Project (near the Los Angeles Harbor), the Central Industrial Project Area (east of downtown Los Angeles), and the City Center Project (within downtown Los Angeles). In general, CRA data are not entered into ZIMAS and are not available to other agencies. The CRA may begin conducting future surveys to standards and protocols developed by the OHR so that results can be incorporated into the citywide survey database.

(continued on page 62)

CEQA AND CULTURAL RESOURCES

The requirements of CEQA are important factors in the design of the LAHRS. CEQA is a state law that requires environmental review, including review of impacts on historic districts and sites, of many projects and actions funded or approved by government agencies. This review is intended to ensure that decision makers have all the relevant information about the effects of a project before taking discretionary action such as issuing permits or granting funding. A CEQA review, also known as a CEQA clearance, is triggered whenever the city of Los Angeles is asked to grant discretionary approval for a public or private project.

In the first step of the review process, the lead agency—the agency making the discretionary decision—must determine if the intended project site includes any historic resources. As defined by CEQA, a historic resource is any site or building listed on or eligible for listing on the California Register of Historic Places, listed on a local register, or identified as significant in a historic resource survey. In Los Angeles, this includes HCMs and contributing properties in HPOZs. Over 90 percent of the CEQA clearances in Los Angeles are currently conducted by the Department of City Planning.

The CEQA statute defines a number of categorical exemptions, which are classes of projects generally considered to have negligible impacts on the environment and therefore exempt from CEQA provisions. In these cases, a decision on discretionary action can be made without further environmental review. Approximately 75 percent of the four thousand projects processed by the Department of City Planning in 2005, including most projects involving single-family homes and small commercial buildings, were classified as categorically exempt. The majority of projects involving the repair and rehabilitation of historic homes require no discretionary approvals from the city of Los Angeles or qualify as categorically exempt under CEQA because they do not adversely affect the home's historic character.

If a project entails more complicated work and cannot be classified as categorically exempt, it may be necessary to use other mitigation measures. Typically these involve the use of approved plans and materials in conformance with the Secretary of the Interior's standards for rehabilitation. Other mitigation measures include preparation of a negative declaration, which certifies that the project will not harm the resource, or a mitigated negative declaration, which specifies steps that must be taken to resolve adverse impacts on the historic resource and the environment.

An example of a project that may qualify for a negative declaration, with or without mitigation measures, is the construction of a major addition to an HCM according to plans approved by the Cultural Heritage Commission. Of the one thousand or so projects reviewed by the Department of City Planning in 2005 that were not categorically exempt, over 95 percent were eligible for this kind of CEQA review. Negative declarations and mitigated negative declarations generally do not add significantly to the time required for a project and are prepared and processed by the Department of City Planning.

Demolition has an irreversible impact on historic resources. Issuance of a building permit to significantly alter or demolish a nonhistoric building does not require discretionary approval and is not subject to CEQA. Significant alteration or demolition of a designated historic resource, however, requires CEQA review before permits can be issued. In cases where significant environmental impacts cannot be ameliorated through mitigation measures, a document called an Environmental Impact Report (EIR) must be prepared to outline the project's effects on the environment and explore alternatives that might avoid adverse consequences.

An example of a successful project subject to the EIR process is the Cinerama Dome/ArcLight Cinemas complex on Sunset Boulevard in Hollywood. Built in 1963, the Cinerama Dome was designed by the prominent Los Angeles architectural firm Welton Becket and Associates to showcase the special Cinerama widescreen film process. The unique, concrete geodesic dome is a distinctive Hollywood landmark and was designated as an HCM in 1998. That same year, the owner, Pacific Theatres Corporation, announced it was considering plans for a new entertainment complex at the site. The project, which involved rehabilitation of the dome and

construction of a new entertainment and retail complex and parking lot, required discretionary approvals from the CRA and the Department of City Planning.

John Manavian, a vice president of Robertson Properties Group, Pacific's development arm, said, "We knew from the beginning that we had a historic building." Because of the dome's historic significance, the company involved historic preservation consultants and architects early in the ArcLight Cinemas project planning process. Even so, initial plans for the complex proposed changes to the dome's interior, entrance plaza, and lobby and blocked views of the dome from some angles with new construction, altering the building's historic character. CEQA requirements allowed public exploration of design alternatives that better preserved the dome's historic appearance. The owner engaged the CRA, preservation groups, concerned citizens, and city officials in a dialogue to achieve this design. The result was a modified plan that included both the restoration of the dome and the construction of a state-of-the-art entertainment complex. Manavian noted that in the end, the entitlements process was no longer than most in the city of Los Angeles.[1]

The citywide survey will provide property owners, the public, decision makers, and city agencies with information about sites in the city that are historic, lending greater certainty to the CEQA process. Reliable survey evaluations will also provide assurances that some sites are not historic. In the absence of a recent historic resource survey, determining if a building is eligible to be designated as a historic resource usually requires commissioning a study from a qualified architectural historian to research the building's history and evaluate its architecture. Survey evaluations of potential historical resources citywide will give owners, developers, city staff, neighborhood groups, and others critical information to help preserve the historic assets of the city's built environment while streamlining the permitting process.

Front entrance of the Cinerama Dome in Hollywood (HCM #659). The design and scale of the new entertainment complex built around this historic, Welton Becket-designed dome was influenced by public dialogue conducted during the environmental review process. When proposed projects require environmental reviews, historic resources must be identified and potential impacts upon them assessed. Photo: Emile Askey.

The El Portal Theatre in the North Hollywood Arts District (HCM #573). Identified as significant in a Los Angeles CRA survey, this historic theater was renovated and put back into productive use as a live-performance venue. The project served as a catalyst for economic development, including the renovation of additional historic structures along Lankershim Boulevard, North Hollywood's historic commercial strip. Photo: Emile Askey.

The North Hollywood Redevelopment Project Area illustrates how the CRA uses information derived from historic resource surveys to plan and encourage investment in commercial centers. In 1981, a survey of North Hollywood identified a number of historic buildings. Although many of these structures were subsequently demolished, others, including the 1896 Lankershim Depot, the 1926 Spanish Renaissance revival El Portal Theatre, and the 1939 streamline moderne Department of Water and Power Building, are extant. CRA staff members indicate that investment in these historic buildings has provided an anchor, establishing the North Hollywood Arts District (NOHO) and attracting new housing development such as the NOHO Commons. The survey has provided the necessary historic data for CEQA environmental reviews and has facilitated the CRA's work with investors, as well as other agencies such as the Metropolitan Transportation Authority (MTA) and Caltrans with reference to the construction of the Orange Line transitway in the area. The LAHRS would provide essential historic resource data for the administration of redevelopment project areas and for the identification of new areas throughout the city.

City of Los Angeles Department of Building and Safety

The Department of Building and Safety plays a central role in historic preservation through the enforcement of the city's building and safety codes. The department is frequently the first point of contact for owners seeking to build, remodel, demolish, or move any building or structure on their property. One of the department's crucial responsibilities is to refer property owners or applicants to the appropriate agencies for review and approvals.

It is critical, therefore, that the department have clear, up-to-date, and accurate information regarding a building's historic status and the appropriate procedures to be followed. The department developed the Plan Check and Inspection System (PCIS) to manage its data. PCIS relies, in part, on data provided on a monthly basis by the Department of City Planning concerning historic resources and zone changes. Together with ZIMAS, this system enables plan check engineers to refer applicants to the appropriate body for review of projects involving designated historic resources.

The Department of Building and Safety must ensure code compliance for projects using the ARO, the Mills Act Historical Property Contract Program, the Federal Historic Rehabilitation Tax Credit Program, and the State Historical Building Code. In implementing these programs, department officials work closely with owners to satisfy city codes. Work must also meet the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.[2] The survey will provide fundamental information regarding the status and features of historic buildings, which will assist property owners and officials as they invest time and money in rehabilitation projects.

Although department plan check engineers have access to information on historic resources, 85 percent of the city has not been surveyed and many significant properties and areas have yet to be identified. Late identification or failure to identify significant properties creates conflict and public concern. Properties such as the 14-acre Chase Knolls Garden Apartments in Sherman Oaks or the Cliff May Experimental House in Brentwood have been reviewed for demolition permits before being identified as historic. In 2006, the Soto-Michigan Jewish Community Center in Boyle Heights, designed by the internationally recognized modernist architect Rafael Soriano in 1936, was demolished without notice to the neighborhood or other city departments. A contractor for the U.S. General Services Administration proceeded through review processes without receiving indication of the building's architectural and historic significance. A comprehensive citywide historic resource survey and an accurate, common database would reassure agencies, owners, brokers, and investors, encouraging investment throughout the city and contributing to clarity and predictability. A common database would also alleviate the need for last-minute designation efforts that can cause unnecessary delays, increase development costs, and foster adversarial relationships.

The Soto-Michigan Jewish Community Center in Boyle Heights in 1939. Designed by the architect Rafael Soriano in 1936, it was demolished in 2005 without historic review. With a comprehensive citywide survey and a common historic resource database, Los Angeles can ensure that historic resources are identified and required reviews conducted before demolition permits are issued. This could prevent the loss of previously unidentified historic resources. Photo: © J. Paul Getty Trust. Used with permission. Julius Shulman Photography Archive, Research Library at the Getty Research Institute (2004.R.10).

The Mayor's Office of Economic Development

The Mayor's Office of Economic Development has employed historic resource information in promoting the city's ARO. This ordinance aids the adaptation of commercial buildings constructed prior to 1974 to residential or hotel uses by relaxing zoning and parking requirements and by providing a framework for the use of the California Historical Building Code. Initially limited to downtown Los Angeles and the Figueroa Corridor, the ARO was applied citywide beginning in late 2003. Between that time and August 2006, more than $6 billion was invested in older and historic commercial buildings under the ARO, creating nearly eight thousand housing units and revitalizing parts of downtown, Hollywood, the mid-Wilshire District, and other areas (see chapter 7).[3]

Although application of the ARO is not contingent on a building's historic resource status, significant designated historic buildings and areas, such as downtown's Old Bank District and Eastern Columbia Building and the former Broadway department store building in Hollywood, have employed the ordinance. A multidepartmental team has accelerated the completion of projects that use the ordinance in combination with other incentives such as the Mills Act, Federal

Historic Rehabilitation Tax Credit, and conservation easements. The historic resource survey will provide a valuable tool for city officials, owners, and investors in the identification of eligible older and historic properties. It will also be of use in initiating the development process. Survey data will expedite access to incentives and facilitate the review process for all parties concerned.

City of Los Angeles Community Development Department and Los Angeles Housing Department

In 1995, the Community Development Department (CDD) and the Los Angeles Housing Department (LAHD) entered into a programmatic agreement with the California Office of Historic Preservation (OHP) and the Advisory Council on Historic Preservation to retain a historic preservation consultant to fulfill the city's federal environmental review responsibilities as required in the course of administering federally funded programs, such as those supported by the U.S. Department of Housing and Urban Development (HUD).

The preservation consultant's role is to fulfill the requirements of Section 106 of the NHPA, which requires agencies receiving federal support to identify properties eligible for or listed on the National Register and assess impacts of projects on these resources (see appendix A). The consultant assists city departments with historic resource surveys in target program areas, impact assessments, and mitigation measures. This expedites the work of building inspectors and the management of community development programs. Data derived from the citywide survey will be valuable to the programmatic reviews conducted by the CDD and LAHD.

CDD projects have used historic properties to create important community facilities, such as Plaza de la Raza in Lincoln Heights, the Eagle Rock Community Center, and the award-winning Ziegler estate in Highland Park. Surveys prepared for the CDD helped the agency adapt or upgrade significant historic public buildings for use as community centers. These have included fire stations, among them Cypress Park Station 44, and former public office buildings, such as the historic Watts City Hall.

A house in Panorama City. The first planned development in the San Fernando Valley, Panorama City is an excellent example of early post–World War II community planning. As such, this neighborhood was formally determined eligible for the National Register under an environmental review process. The LAHD can use the LAHRS to ensure that its code enforcement requirements encourage appropriate improvements to properties and areas identified as significant. Photo: John C. Lewis.

The LAHD has done significant work with historic resources. For example, historic resource surveys completed by the LAHD using federal Community Development Block Grant funds with review under Section 106 have identified a number of potential National Register-eligible properties and districts in areas where the department provides grant and loan assistance. These include the World War II-era Parkside Manor, designed by Paul Revere Williams, one of the only planned neighborhoods in the Watts area (identified as National Register eligible in 2004), and Panorama City, an excellent example of modern community planning in the San Fernando Valley (identified in 2002). Properties identified as significant can obtain funds to complete necessary improvements while retaining their historic character.

The LAHD also plays an important role as the lead agency in code enforcement for all multifamily properties in Los Angeles. Survey data will help the housing department ensure that its code enforcement requirements, whether for habitability issues, lead-based paint, or other code requirements, do not mandate inappropriate alterations to historic structures.

A comprehensive historic resource survey will provide information on the city's residential, commercial, and public buildings that may have historic significance, thereby assisting the CDD and the LAHD in planning, housing, and community development programs and defining areas in which to work.

Departments and Agencies Involved in Asset Management

The city of Los Angeles owns and leases a wide range of historic resources. Historically, the city has commissioned leading architects—both nationally known and locally prominent—to design city facilities. These properties encompass office buildings, police and fire stations, libraries, museums, recreation and park facilities, and street lighting and lighthouses that embody the city's image and reflect its heritage and pride.

In recent years, the city government has increasingly recognized the important role historic public buildings play in the life of Los Angeles, renovating such landmarks as the Los Angeles Central Public Library, Los Angeles City Hall, Van Nuys City Hall, and Cabrillo Beach Bathhouse to great public acclaim. These buildings are important symbols of the city's heritage and have served as catalysts for renovation work in surrounding areas. In 1986, the city established a nonprofit organization, Project Restore, committed to the restoration and revitalization of historic municipal buildings. Project Restore has worked on the restoration of Los Angeles City Hall and Van Nuys City Hall and is currently focusing on streetscape improvements to First Street between Bunker Hill and Boyle Heights, which borders Los Angeles City Hall on the south side.

The Cabrillo Beach Bathhouse in San Pedro (HCM #571). Constructed in 1932 in the Mediterranean revival style, it is the last remaining beach bathhouse from its period. Its restoration has fostered appreciation of the park and surrounding area. Rehabilitation and restoration of public buildings can provide an important catalyst for area revitalization work. Photo: Emile Askey.

The management of public property is shared by many city and county departments, some of which have their own internal real estate or asset management divisions. These include the Los Angeles County Department of Beaches and Harbors, Los Angeles County Metropolitan Transportation Authority (MTA), Los Angeles Department of World Airports, Los Angeles Department of Water and Power, Los Angeles Unified School District (LAUSD), and City of Los Angeles Department of Recreation and Parks. Currently, these departments maintain their own lists of historic

The iconic Los Angeles Airport Theme Building (HCM #570), operated by the Department of World Airports. Designed by four of the city's leading architects and constructed in 1961, the space-age building features two intersecting parabolic arches that support a disc-shaped restaurant pod. More than fifteen Los Angeles governmental departments and agencies regularly use historic resource information for such diverse purposes as the preparation of transportation studies, capital program budgets, competitive grant applications, disaster response planning, economic analysis for redevelopment, and heritage tourism programming. Photo: Gail Ostergren.

The Stone House in Sun Valley before rehabilitation (top) in 2004 and after rehabilitation in 2008 (HCM #644). This once-derelict, craftsman-style house, constructed of river rock in 1925, was rehabilitated and adapted for use as the Sun Valley Youth Arts Center by the cultural affairs department in 2006. A former neighborhood eyesore and crime magnet, the building provides art classes and gallery and performance space to residents of this east San Fernando Valley community. Photo (top): John C. Lewis. Photo (bottom): Emile Askey.

resources and rely on consultants and on staff knowledge of the department's holdings. Several departments have noted that their lists tend to be dated, that the data were derived from a specific project or for a specific purpose, and that staff knowledge sometimes is not sufficiently comprehensive.

The city's Department of Cultural Affairs operates a number of community cultural centers and theaters located within or related to some of the city's significant historic sites. These include the Barnsdall Art Center and Municipal Arts Gallery, next to Frank Lloyd Wright's Hollyhock House, which the cultural affairs department manages on behalf of the Department of Recreation and Parks; the Sun Valley Youth Arts Center; the Watts Towers Art Center; and the Warner Grand Theatre in San Pedro.

The Department of Recreation and Parks manages more than four hundred municipally owned and operated parks and recreational facilities, including playgrounds, recreation centers, swimming pools, tennis courts, golf courses, youth camps, child care facilities, performing arts venues, and museums. Among these are

important historic resources and landscapes such as MacArthur Park, the Civil War-era Drum Barracks and Officers' Quarters in Wilmington, Wattles Mansion in Hollywood, the 1932 Olympic Swim Stadium (now LA84 Foundation/John C. Argue Swim Stadium) in Exposition Park, and the newly restored and expanded Griffith Observatory. To ascertain historic resource information, the department relies on staff members, its "Real Property Listing," consultation with the OHR, and the CEQA review process.

The Department of Public Works' Bureau of Engineering and the Department of General Services support many agencies in managing renovations to historic properties. These agencies have managed the restoration and seismic rehabilitation of Los Angeles City Hall, the restoration and fire- and life-safety upgrade of Point Fermin Lighthouse, the renovation and addition to the Amelia Earhart North Hollywood Regional Branch Library, and the renovation of the Garnier Building in El Pueblo de Los Angeles, home of the Chinese American Museum since late 2003. Because the LAHRS will not be limited to buildings, it will also identify less commonly recognized historic resources associated with the city's infrastructure, such as bridges, street lighting, historic landscapes, and streetscapes, which are under the purview of the Department of Public Works.

The Griffith Observatory (HCM #168) was designed by John C. Austin and F. M. Ashley and built in 1935 to provide public access to the discoveries of astronomy and modern science. The observatory is one of the city's finest examples of 1930s art deco. It was rededicated in 2006 following an extensive rehabilitation and the expansion of its exhibit areas. The city of Los Angeles built and owns many historic buildings that are important civic icons. The LAHRS will assist municipal departments in identifying significant buildings and guiding maintenance programs. Photo: © Griffith Observatory.

The Bureau of Engineering typically assumes responsibility for project planning, which includes the environmental assessment process to identify historic resources and project impacts in compliance with CEQA or Section 106 requirements. Using HUD Community Development Block Grant funding, the Bureau of Engineering has compiled an internal listing of historic resources based on its surveys. It uses this information to inform its analysis of historic sites and to update its internal historic property inventory. As is the case with the CRA, this survey information should be incorporated into a central database for shared departmental use.

A number of public agencies that lie outside the jurisdiction of the city of Los Angeles, including the LAUSD, the Los Angeles County MTA, and the Los Angeles County Department of Beaches and Harbors, have operations, properties, and facilities within the city. These agencies function in a coordinated manner with the planning, zoning, and environmental review practices of the municipality and are guided by federal and state regulations. In addition, the agencies conduct project-specific historic resource surveys for environmental review purposes such as those conducted by the MTA throughout the late 1980s and 1990s in connection with construction of the Red Line and Gold Line.

Between 2001 and 2003, while planning for the investment of several billion dollars in the School Construction and Modernization Program, the LAUSD completed a survey of its historically significant school properties. Throughout the 704-square-mile district, 790 older schools were identified. A windshield survey of 200 schools more than fifty years of age was conducted using the criteria of the National Register of Historic Places, California Register of Historical Resources, and Los Angeles Cultural Heritage Ordinance. LAUSD documented a representative sampling of forty-nine historic schools in greater detail on DPR 523A forms (www.laschools.org/historic-survey/). The district prepared a booklet, "Historic Schools of the

A view of the Glendale–Hyperion Viaduct (HCM #164) from the Los Angeles River. Spanning the river, the 1929 viaduct is constructed of a series of reinforced concrete arches encompassing nearly 1400 feet in length. The survey will identify historic resources such as bridges, street lighting, historic landscapes, and other public works to inform the planning and maintenance of the city's infrastructure. Photo: Emile Askey.

Los Angeles Unified School District," and materials for classroom use. LAUSD intends to use this information to conduct project-by-project environmental reviews that would analyze impacts on historic resources.

All of the public agencies involved in asset management would benefit from having—in one central location—clear, reliable historic resource information for the properties under their jurisdiction. Further, all these agencies ask the same questions and require essentially the same basic information. The comprehensive citywide survey will supply public agencies with clear, reliable, up-to-date information on a property's significance and historic resource status, which will facilitate determination of the necessary process, approvals, and rehabilitation or maintenance approach. Such reliable historic resource information will help managers to efficiently evaluate maintenance and investment priorities, expedite environmental review work, and guide renovation and adaptive reuse projects.

Best Practices

Research on methods and practices employed in other cities reveals three salient points. First, the use of a Geographic Information System (GIS) to house data is expanding rapidly as communities recognize the need for and value of tracking historic resources for preservation, city planning, environmental review, property management, and public information. Integrating historic resource data with other city data yields many advantages, the most important being that all departments will use the same historic resource data.

Motivated by the challenge of managing a dramatic increase in the number of resources that are meeting age requirements for historic resource eligibility, government agencies such as the Tallahassee–Leon County Planning Department are innovatively using GIS technology to manage and allow for quantitative analysis of their own historic resources. By integrating historic resource survey information into a common GIS, agencies can efficiently query and analyze tremendous amounts of data. This capability allows the consideration of the impact on historic resources as part of the preparation of transportation corridor studies, capital program budgets, competitive grant applications, disaster response planning, economic analysis for redevelopment, multidisciplinary studies, and the development of heritage tourism programming.

Second, cities in California are developing methods to survey and maintain information so that it will incorporate and respond to the provisions of their local ordinances, CEQA, the California Register of Historical Resources, Section 106 of the NHPA, and the National Register of Historic Places. It is critical that the stan-

dardization of survey methods and information management align with the various uses by diverse agencies.

The California OHP has worked closely with the cities of Ontario and Sacramento to develop a historic resources management system, California Historical Resources Inventory Database (CHRID). Although this model is not as fully integrated with other city data as will be necessary in Los Angeles and does not yet have a GIS interface, it provides a useful reference for developing standard historic preservation information and data fields for survey and environmental review purposes.

Finally, the functional quality of the survey and the resultant data are significantly enhanced by the professionalism with which the survey and ultimately the data are managed. Cities as diverse as San Francisco, Seattle, Denver, Chicago, and New York City have invested in their historic resource survey and preservation program staff and commissions to generate quality information and interagency collaboration.

Summary

Most public agencies in Los Angeles work with historic resource information at least occasionally as part of program and project planning or when historic resources are affected by department actions or operations. Whether engaging in preservation activities, working on community development projects, or conducting environmental reviews, all of these public agencies require the same essential information about historic resources. Many have developed their own processes for identifying, documenting, and recording historic resource data on an as-needed basis, though the data collected are not shared with other departments, nor have the data been linked with related property data for future use. The LAHRS will make complete, current, and accurate data on historic properties and districts readily accessible, as well as providing assurances that some sites are not historic, saving time and resources.

Notes

1. *John Manavian and Catherine Barrier, pers. comm., February 16, 2005.*
2. *The secretary of the interior's standards are designed to guide proper rehabilitation of historic structures. See Weeks and Grimmer,* The Secretary of the Interior's Standards for the Treatment of Historic Properties.
3. *Figures provided by Hamid Behdad, Los Angeles Mayor's Office of Economic Development, e-newsletter, August 4, 2006, and pers. comm. with the author.*

CHAPTER 6 Managing, Integrating, and Disseminating Survey Data

ZIMAS availability has totally changed our lives as planners. We get lots of calls on specific properties, and we can go to ZIMAS for the map, the report, and the summary of discretionary actions. We can get the customers the information they need immediately.

— David Gay, Department of City Planning, conversation with the author, March 1, 2005

A well-designed and well-executed Los Angeles historic resource survey database could provide users with a single online source to access information about all of the city's historic resources. By entering a street address or clicking on an interactive map, the user could call up an account of the historic significance of a property, the name of the architect, and an explanation of the incentives and city permits associated with the property. Searches would also provide documentary data, including historic and current photographs, architectural and historic research, and comprehensive planning, zoning, and preservation information. Property owners, developers, investors, businesses, public agencies, planners, community organizations, and the public could freely access and use this valuable information for project planning, property investment, education, environmental reviews, and cultural tourism purposes (see chapters 4 and 5).

Some components of such a powerful resource are already in place. The Department of City Planning's Geographic Information System (GIS)–based Zoning Information and Map Access System (ZIMAS)—accessible at zimas.lacity.org—could prove to be a fundamental tool in managing historic resource information. Through ZIMAS, city agencies and the public have access to municipal property planning and zoning information, including basic historic resource data, on each of the 880,000 public and private property parcels in the city of Los Angeles. The city may be able to expand on the historic resource information available through ZIMAS to include more detailed accounts of each of the resources documented during the citywide survey process.

GIS AND DATABASES: WHAT IS A GEOGRAPHIC INFORMATION SYSTEM?

A GIS is a computer-based system designed to manage, retrieve, display, and analyze the complex data related to physical places such as neighborhoods, buildings, districts, and infrastructure. Information stored in these databases can be displayed on interactive maps and can be selected and displayed using colors or textures to highlight particular parcels or areas that share common characteristics. In some systems, clicking on highlighted areas calls up reports detailing database information associated with the location in question.

GIS is the primary tool used by most cities and by all states for infrastructure planning and for determining zoning designations. It is currently used in planning and in building-permit departments in most medium-size to large cities in the United States. GIS is also used extensively as a business tool for investigating markets, planning locations, and researching demographics. GIS technology can greatly enhance historic survey efforts. It allows for the storage and retrieval of enormous amounts of information in an easily comprehensible format and is a powerful tool for strategic planning and public education.

The development of a historic resource information management strategy must be one of the first priorities of the Los Angeles Historic Resource Survey (LAHRS). The information collected and the way it is gathered should be reflected in the ultimate display, maintenance, and uses of historic resource data. These processes should be designed to be complementary. Adequate technological support for the survey will involve expansion and enhancements to ZIMAS, and it will require development and implementation of plans to standardize, manage, and share data while ensuring quality control.

Using ZIMAS and the Department of City Planning's Web site, the city of Los Angeles can manage its historic resource information in a way that will stimulate historic preservation, property ownership and

maintenance, neighborhood conservation, business investment, and cultural tourism. Following are the key components of a historic resource information management program:

- An integrated, centralized data system that enables the management of municipal property information, including historic resource data
- Clear responsibility for the coordination and maintenance of the data with regular updates
- Contributions to and use of the system by different agencies and private individuals
- Clear content and technical specifications so that all data (current and future) are accurate and consistent with the planned system and can be easily incorporated and maintained
- Easy-to-access information for all users, including a searchable system
- A Web site that illuminates and highlights historic buildings and neighborhoods and provides information on the citywide survey, as well as incentives, techniques, research, and advice on historic preservation

Management of Historic Resource Information in Los Angeles

After the city of Los Angeles consolidated its historic preservation programs and services within the Department of City Planning's Office of Historic Resources (OHR) in 2005, it began to unify historic resource data management and incorporate historic resource data into its centralized planning database. This made historic resource information for properties designated under local ordinances available on a parcel basis through ZIMAS. The department also offers information on preservation programs and services through its Web site at cityplanning.lacity.org/.

The Department of City Planning GIS and ZIMAS

The Department of City Planning has automated its manual mapping processes and converted its 1,888 paper maps, formerly used to provide information at public counters, to digital data. One of the goals of the GIS was to allow city agencies and the public to produce custom maps through a Web-based data access and display system. Completed in 1999, this enormous effort created ZIMAS, which provides high-quality mapping over the city of Los Angeles Intranet and the Internet. ZIMAS is used by land-use professionals and hundreds of city employees in many departments and has simplified work at the public counters by providing fast and accurate zoning data.

ZIMAS currently makes limited geographic, graphic, and text information on Los Angeles historic resources publicly available. For Los Angeles Historic-Cultural Monuments (HCMs), it provides a photograph, the monument number, the property name, and the location and date of listing, as well as links to special instructions to the city permitting staff, related preservation program and incentive information, and the most recent HCM listing report. For properties located within Historic Preservation Overlay Zones (HPOZs), ZIMAS provides a photograph of the property and indicates whether it is a contributing or noncontributing feature to the district, as well as links to the HPOZ boundary and survey maps; the HPOZ preservation plan, which defines the zone's character-defining features; and special instructions to permitting staff. ZIMAS has the capacity to store and display additional historic property details that could be used for survey data. Incorporation of citywide historic resource survey information into ZIMAS would allow government officials, property owners, and investors to access this information in the course of performing their routine research. Owners and investors could easily identify potential sites for adaptive reuse, taking advantage of preservation incentives, and they could also determine in the planning stages whether a site has historic value.

The Department of City Planning is also incorporating information on Los Angeles properties and districts included in the California Historical Resources Inventory (HRI) into ZIMAS. The HRI includes properties and districts that have been identified and evaluated by the California Office of Historic Preservation (OHP) through one of its programs. This includes resources that are listed in or have been determined eligible for listing in the California Register of Historical Resources

USES OF HISTORIC PROPERTY DATA IN ZIMAS BY THE CITY OF LOS ANGELES

City staff have access to an internal version of ZIMAS that includes more detailed information than is available to the general public. The site is accessed nearly four hundred times a day by city planners and by staff of other departments that use parcel and zoning information. For example, Department of Building and Safety staff members routinely use the system to determine if any special clearances, such as zoning variances, are needed when a property owner requests a building permit.

Within the Department of City Planning, ZIMAS is used extensively as a reference when preparing staff reports, answering inquiries, and preparing background research for exploratory meetings with developers and property owners. The department has found that ZIMAS can be a useful tool in tracking permit applications for designated historic properties and in keeping department staff and the Cultural Heritage Commission up to date on permit activity in HPOZs.

ZIMAS also allows the Department of City Planning to use historic resource classifications, increasing the quality of historic resource decision making. The department can, for example, overlay National Register Historic District information on the city's HPOZ data to compare boundaries and building evaluations and to ensure that significant structures are not overlooked.

GIS technology can yield other benefits in terms of long-term and strategic planning. Historic resource survey information stored in a GIS can be incorporated on a city or neighborhood map, quickly highlighting areas that may be potential historic districts or may be in need of other special attention in local planning. As the Los Angeles survey progresses, the Department of City Planning may incorporate such features into ZIMAS.

The Storer House (HCM #96). Constructed in 1923, the house is one of Frank Lloyd Wright's four Los Angeles area concrete "textile block" houses. It is listed at the local, state, and federal levels. A comprehensive historic resource database should contain information on each designation held by an individual property. Photo: Emile Askey.

and/or the National Register of Historic Places. In cases where a property possesses more than one listing—such as the Frank Lloyd Wright-designed Storer House, which is listed at the local, state, and federal levels—information on each designation will be reflected.

ZIMAS is heavily used by a range of government agencies as an information source for a wide array of planning and zoning data. In addition to information generated by the Department of City Planning, eleven city, county, state, and federal agencies—including the Community Redevelopment Agency (CRA), the Los Angeles County Assessor, the United States Census Bureau, and the Department of Housing and Urban Development (HUD)—provide information that is integrated into the system on a routine basis. The protocols guiding this interagency exchange of information may provide a template as the Department of City Planning assumes responsibility for maintaining and sharing historic resource data with other agencies.

The public uses ZIMAS at the average rate of two thousand visits a day. City planning department staff report that many visitors are attorneys, property owners, and prospective buyers or neighbors who are interested in looking up the zoning on a particular parcel. Easy-to-access GIS systems containing comprehensive information on historic resources can be used in the classroom to illustrate the patterns of development of

Los Angeles neighborhoods. They can also be used by researchers interested in the development of architectural styles, and by neighborhoods interested in learning more about community landmarks.

The Department of City Planning Web Site and Its Historic Preservation Component

The Department of City Planning's Web site, accessible at cityplanning.lacity.org/, provides a range of information related to Los Angeles's historic preservation programs. The historic preservation component of the site provides information about the Cultural Heritage Commission and HPOZ ordinances, a summary of selected preservation incentives, and guidance through the department's nomination, review, and administrative procedures for owners and agencies. The Web site houses a listing of HCMs as well as structures and districts listed on the National and California Registers. Information is also posted on HPOZs, including district guidelines, preservation plans, and color-coded district maps that distinguish contributing from noncontributing parcels.

Key Standards, Requirements, and Specifications in Management of Historic Resource Data

Although the Department of City Planning has already taken significant steps to incorporate historic resource data into its information management systems, serious consideration should be given to the integration and use of the wealth of information that will be generated by the citywide survey. Several key issues must be addressed for optimal management:

- The type of data system that will be used for this information
- Appearance of the user interface
- Data to be entered into the system
- Data entry and updating processes
- Coordination and maintenance of data
- How different agencies (local, state, and national) will share and use this data system
- How the public will use this system

Data System and User Interface

Designers of the information management system for the LAHRS and the OHR will need to understand and anticipate the range of users and the scope, requirements, and flow of historic resource information. They will have to consider scenarios as diverse as field surveys conducted using digital cameras and handheld PCs loaded with evaluation guidelines; the review of survey data by city officials and the community; and use of data by department staff, other agencies, and the public. Appropriate technology, consistent data collection, easy user access, and ongoing management are key to each of these aspects of the survey. Designers of the data system will need to anticipate how each step of the process contributes to the next, how data and users might be linked to other resources, and how to anticipate future developments so that the system is constantly updated and receives the broadest possible use.

Establishing a Central Repository of Historic Resource Information

Los Angeles should consider consolidating the existing historic resource databases maintained by other departments (see chapter 5) within ZIMAS in order to create a unified, universally integrated repository of all historic resource information data. At this time, ZIMAS is a valuable tool for professionals. It is accessible as the Web-based agency and public portal to property record data. ZIMAS may have the capacity to incorporate more extensive historic resource data, searches, and reporting. With modifications to create a more user-friendly historic resource component, survey data could be made easily available to a wide audience. With hardware and software enhancements, ZIMAS might be modified to perform the types of broad, flexible searches necessary to function as the sole repository of municipal historic resource information.

The city will also need to set standards for data recording and management so that field survey teams will record property information in a format compatible with city systems and survey standards. Hardware might include digital cameras and handheld PCs

(continued on page 76)

THE IMPORTANCE OF UNITING HISTORIC RESOURCE DATA WITH OTHER PROPERTY INFORMATION

Uniting historic resource data with other property and land-use information is essential to its effective management. By integrating historic resource data into a centralized GIS, the city and all potential users would enjoy a range of benefits unobtainable in alternatives such as a "parallel" or "dispersed" GIS (see below). The long-term advantages of integrated use and the sustainability of such a robust system justify the planning and coordination necessary to implement it. The distinctions and benefits of a centralized GIS are important as investment in a historic resource information program is made.

A Centralized GIS: Integrating Historic Resource Data with Land-Use Data

By combining resources and data, a centralized GIS creates a powerful tool for city government, for the public, and for businesses, providing the following advantages:

- GIS allows for a seamless integration of data on a city's built environment from all sources within the city and state.
- Data are regularly updated for accuracy and reliability.
- All agencies and users make decisions based on the same information, regardless of its source. This is particularly valuable in project planning and review, and in regulatory review processes such as those required under CEQA.
- Historic resource data are part of the central database and cannot be overlooked during project reviews and approvals; they are especially valuable at the commencement of development plans.
- Historic resource data are easily accessible to a wide number of users (not just historic resource officials), creating awareness of their importance.
- The standardization of data protocols and specifications for use by all agencies ensures that all data produced by current and future surveys are consistent and usable by the overall information system, thus eliminating duplicated survey time, expense, and energy.
- One agency is responsible for oversight, thereby promoting proper maintenance and quality control. The pooling of technical resources and talent into one responsible agency may reduce the overall budget for ongoing technical support.
- A centralized system amplifies the inherent value of a GIS in displaying various forms of information in a comparative environment, thereby allowing historic resource information to be paired with information from other sources (e.g., census data, tax assessor property data, building and safety permits).

Challenges of a Centralized GIS

A centralized GIS does present some challenges, although these are outweighed by the many benefits. Such a system is somewhat more difficult and time consuming to implement than a separate system. Among the lessons learned from the development of a centralized GIS for Tallahassee–Leon County, Florida (www.tlcgis.org/) are the following:

- It requires a strong commitment from senior officials to integrate historic resource data with other infrastructure, planning, and zoning data.
- Members of a centralized GIS technical staff require training and orientation in the specific requirements of integrating historic resource data to ensure that the system is useful to those who employ this information.
- Data entered into a comprehensive, centralized system take slightly longer to process than data entered into a separate, less complex system (such as a GIS dedicated solely to historic resources), as these data must meet the standards of the overall system.

However, as noted above, the broad utility, timeliness, and reliability of the data strongly recommend the investment in a centralized system.

Use of a Parallel or Dispersed GIS for Historic Resource Data Management

Alternative approaches to the centralized GIS include a parallel GIS or a dispersed GIS for historic resource information management. Although these options offer an advantage in terms of a relatively quick and easy startup, they share a significant disadvantage in that interagency communication and data transfer concerning issues affecting historic resources can be difficult, inconsistent, or even nonexistent.

A parallel GIS for historic resources is completely separate from a city's primary infrastructure, planning, and zoning GIS system. Historic resource information is segregated from other property data and easily overlooked when land-use decisions are made. The city of Chicago implemented just such a parallel GIS for historic resource management (www.cityofchicago.org/Landmarks/). Chicago city officials have reported that the parallel approach isolated historic resource management from the city's decision-making processes and that the system is sometimes out of date.

In the dispersed GIS approach, the historic resource GIS remains a completely separate information system with a more formalized communication and data transfer protocol with the city GIS. The most serious disadvantage of a dispersed and separate information system is that historic resources are not perceived by decision makers to be as crucial as other resources within the central information system. Prior to 2004, the city of Riverside used a dispersed approach, but in recognition of the related problems began to integrate its historic resource data into its central GIS that year (olmsted.riverside.ca.gov/historic).

preloaded with software and databases that will improve efficiency and help guide the evaluation process. This software can include a field GIS with listed historic resources identified by parcel, property construction date, and other historical information imported from the Los Angeles County Tax Assessor, and key survey forms and data specifications. The handheld PCs might also contain software to guide how significance is established, based on the historic context statement and criteria thresholds: a new *Field Guide to Survey Evaluation*. Using software wizards, questions aimed at refining assessments—for example, "Have windows been replaced?" or "Have additions been made?"—could be built into the software. Using technology to standardize application of the registration requirements, as well as data collection and entry, will contribute to consistency in resource evaluations and to overall survey efficiency.

Anticipated uses of the data and ease of access are central concerns in the development of the hardware, software, and data standards. One of the first steps in developing the information management system will be the consideration of data identification and requirements for the full range of potential users. System planners will need to define the data sought and how it will be treated in GIS and Web site contexts. For example, where ownership spans several parcels, as is the case at Santee Court in downtown Los Angeles, the GIS should define the parcel and spatial recognition features.

Among the most significant technological issues to be addressed are access to and the search capability of historic resource data. At this time, ZIMAS can be searched by address and a few other parameters, such as community plan area or assessor parcel number; however, it may be difficult for public users to navigate, and it does not allow for the aggregation of data. A more flexible search capability is essential to the full utilization of historic resource data. Ideally, system planners will provide a query and search application that allows for searches by a wide range of criteria and keywords, including architectural style, architect, age, and location. This would allow a user to search, say, for a listing of all of the Queen Anne-style houses in Lincoln

The Watts Towers (HCM #15). If a property is known by more than one name, as is the case with the Watts Towers—also known as the Towers of Simon Rodia—this information should also be reflected. A well-designed historic resource database integrates historic property information with other municipal property data, and includes a photograph, architectural and historic information, and associated incentives and reviews. Photo: John C. Lewis.

Heights. Such a system would also search for related names and property identifiers, so that a search for information on the "Watts Towers" would locate the monument listed as the "Towers of Simon Rodia." The city will need to develop and test database search capabilities as part of the survey planning process.

Recognizing the Value of a Historic Resources Web Site

Because of the broad potential use of information on historic properties and the widespread interest in the citywide survey and historic preservation, a focused means of accessing relevant data is desirable. The OHR is planning to make this a priority and is developing a new Web page as part of the larger Department of City Planning site. Investment in a comprehensive, easy-to-use municipal historic preservation site will provide a valuable way to convey clear, up-to-date information on Los Angeles's historic properties and areas, preservation programs, OHR services and activities, and the progress of the citywide survey. A participative, interactive Web site component would allow the OHR to receive comments on key survey elements and findings and to encourage public contributions of information and research.

The OHR might look to other cities' Web pages as models, such as the Seattle Department of Neighborhoods Historic Preservation Program (www.seattle.gov/neighborhoods/preservation/), which clearly conveys a range of information about its historic resource survey. Tying the Web site integrally into Los Angeles's historic resources database is of central importance.

Data to Be Entered into the System

A significant component of planning for the LAHRS is determining what and how much information to gather on historically significant properties and districts and what portion of that information to include in the city's historic resource database. Data identification will establish what information should be available for a wide range of searches and queries.

Information required to meet local, state, and federal guidelines for historic resources is provided on the state's DPR 523 forms and has been further developed in the California Historical Resources Inventory Database (CHRID), the historic resources management system developed by the cities of Ontario and Sacramento in close collaboration with the OHP. This includes the property's location, date of construction,

original builder, architect, current owner, changes made to the building over time, the historic context(s) in which the property is important, and classifications based on California Historical Resource Status Codes. Use of the MPS standard will further define what information will be gathered and, importantly, what will not. The citywide survey will also confirm and record information for resources that have already been determined to be significant. During the course of survey planning, the city will need to determine how much of this information will be included in its historic resources database.

Development of the data standards and specifications for historic resources will impact what and how information is gathered and incorporated in the database and on the Web site. It is important to consider the entire sequence of the survey, the end uses of the data, and what data need to be maintained. At present, the CHRID provides a valuable data framework to establish the scope of the property record and to allow users to produce key programs, forms, and reports necessary for environmental reviews, inclusion in the state HRI, property nomination forms, and Certified Local Government reports.

Consulting with other agencies and private sector users on what further information will be necessary to facilitate their work is an important aspect of developing the survey data requirements. Planning for the Web site, ZIMAS, and databases can ensure that the data can be queried, easily searched, and produced on a custom basis.

Responsibility for Data Entry, Coordination, and Maintenance

Historic resource data input can follow the procedures already established by the Department of City Planning for other GIS data entry. The department has the technical staff and resources (software and hardware) to do so and has established systems for data development, maintenance, and GIS security. Currently, dedicated staff members input data sent by other agencies into the GIS database. The department might consider assigning responsibility for historic resource data input to one or two individuals to ensure quality control during integration. The department may require additional staff and resources if it is to assume responsibility for entering and maintaining survey data.

Sharing and Managing Data between Local, State, and National Agencies

Establishment of a single repository of historic resource information for the city of Los Angeles will require agreements between municipal agencies and with the California Office of Historic Preservation (OHP) to ensure that data standards and sharing protocols are clear and easy to manage. Using the data standards provided by the state through the DPR forms and the CHRID can ensure that data required for all reviews are obtained and properly recorded during the survey. Data standards related to the Los Angeles ordinances and reviews will need to be established. The data identifiers and requirements for other key users will need to be assessed and incorporated in the data requirements for the survey.

The Department of City Planning can establish ongoing processes with the California OHP so that the former is systematically notified following reviews and new registrations of Los Angeles properties in the California Register and the National Register. Several technical issues regarding the transfer of state HRI data to the city's database must be resolved before the transfer of data becomes routine:

- Address and parcel information must be corroborated to ensure that data derived from local, county, and state systems are in agreement with respect to the particular property parcel. The California HRI uses property addresses to identify historic resources. Records in the city of Los Angeles's GIS, however, are indexed and organized according to a variant of the Los Angeles County Assessor's Parcel Number (APN), known as a Parcel Information Number (PIN). Because different systems are used by different entities, these addresses often conflict, are missing, have incomplete address ranges, or lack complete information on the actual number of buildings or

units on a property and the addresses by which they are most commonly identified. A brief study conducted by the Getty Conservation Institute (GCI) indicates a disparity of approximately 20 percent between the property identification systems maintained by the city and the state.

- Individual buildings and resources on a property do not always correspond to individual parcels (as defined by PINs) and often span more than one parcel. Examples include the Hollywood Walk of Fame and the Hollywood sign on Mount Lee. Resolving these issues through clear protocols is essential to implementing a universally integrated GIS and to promoting interdepartmental data sharing within the city and with the California OHP.
- The California HRI lists properties located in some Los Angeles neighborhoods—North Hollywood, Van Nuys, Venice, and Woodland Hills, for example—as if they were other cities. Careful review of HRI listings will be necessary to ensure that all properties within the boundaries of Los Angeles are identified and confirmed as to location during the survey and that accurate APNs and PINs are provided.

The iconic Hollywood sign (HCM #111) on Mount Lee, an example of a historic structure that spans more than one individual property parcel. Not all historic resources correspond directly to individual parcels, and many span multiple parcels, complicating the transfer of historic resource data between the California OHR and the city. Photo: Emile Askey.

With the resolution of such issues, information on resources identified through state and federal programs can be appropriately incorporated in ZIMAS. Development of content and data protocols and agreements that give the Department of City Planning regularly updated information from these sources will ensure that the city's historic resource information database remains accurate, current, and valuable to the city and the public. It is important for the Department of City Planning and the California OHP to plan for the smooth, systematic exchange of data and reports.

Summary

Several components will need to be addressed in planning and expanding the systems for managing historic resource information. Los Angeles has a distinct advantage, however, in having a well-developed, well-managed GIS that is capable of integrating historic resource information. Decisions on content, the development of data standards, and establishment of sharing and exchange protocols with other agencies will be substantially assisted by work already under way at the Department of City Planning, at the OHP, and in other California cities. Expansion of information management systems, enhancements to ZIMAS, and further development of a citywide Web site will ensure that data on Los Angeles historic resources are accurate, timely, well maintained, and easily accessible.

CHAPTER 7 Historic Preservation Incentives and the Survey

> ***There are 154 privately funded adaptive re-use and new construction projects [in downtown Los Angeles], with estimated total construction costs of $8.7 billion. The economic impacts generated by these projects include: about 124,000 annual FTE (full-time-equivalent) jobs; earnings of $5 billion in wages and salaries; and $18.5 billion in total (direct and indirect) business revenues.***
>
> — "Live, Work & Play Downtown L.A.," LAEDC report, 2006, p. ii

> ***The benefits of historic preservation are widely publicized in terms of aesthetics, cultural, and social impacts, however the economic benefits are less documented and publicized. The fact that preservation work can leverage significant amounts of private capital, create local jobs, and stimulate economic activities including heritage tourism provides a strong basis for support of existing and new incentives.***
>
> — California OHP, *California Statewide Historic Preservation Plan,* 2006, p. 37

The economic activity in downtown Los Angeles, described in the extracts above, has been sparked in part by the availability of incentives that speed the development process and encourage high-quality preservation work. Historic properties may be eligible for tax, regulatory, and zoning incentives that can attract investment; facilitate the issuance of permits, reviews, and approvals for qualified historic preservation work; and expedite rehabilitation and adaptive reuse projects. The Los Angeles Historic Resource Survey (LAHRS) will identify the types of historically significant neighborhoods and buildings that might benefit from incentives.

The historic preservation incentives currently offered to Los Angeles property owners fall into two broad categories: regulatory and tax incentives. Two incentives are particularly valuable: the Mills Act Historical Property Contract Program and the Adaptive Reuse Ordinance (ARO). In addition, many investors in local historic commercial buildings have taken advantage of the Federal Historic Preservation Tax Incentives Program. Each of these incentives can facilitate the financing and maintenance of historic properties.

Historic preservation incentives are an essential component of a well-designed, comprehensive historic resource survey and preservation program. Property owners want to know what the incentives are, how they can be used, how accessible they are, and what the benefits are. In 2004, the Getty Conservation Institute (GCI) made such information available to owners of historic homes in the publication *Incentives for the Preservation and Rehabilitation of Historic Homes in the City of Los Angeles: A Guidebook for Homeowners* (www.getty.edu/conservation/field_projects/lasurvey/lasurvey_publications.html).

In planning and implementing the LAHRS, the Office of Historic Resources (OHR) might consider further publicizing the incentives that can be used by owners of designated historic properties.[1] By publicizing the availability of preservation and rehabilitation incentives, the OHR can generate community support for the survey, particularly among owners of previously unrecognized historic properties and neighborhoods that might benefit from existing incentives.

Regulatory Incentives

The Los Angeles Adaptive Reuse Program

The Los Angeles ARO provides a simple but powerful set of incentives to encourage the conversion of historically significant and other older, economically distressed buildings to apartments and condominiums, live/work units, and hotel facilities by easing zoning, parking, and review requirements. From the program's inception in 1999 to August of 2006, Los Angeles investors created more than eight thousand units of apartment and condominium housing through the rehabilitation and adaptive reuse of older buildings.

The ARO streamlines the process developers must follow to obtain project approval, resulting in substantial savings of time and money. The program features two components: a set of zoning incentives designed to facilitate the conversion of existing buildings to residential or hotel purposes, and flexibility in the approval and permitting process through fire- and life-safety provisions comparable to the California Historical Building

Code (CHBC). The city has assembled a team of key staff from various departments to facilitate the design, entitlement, plan check, permitting, construction, and inspection process of ARO projects.

The key to the success of the program is that it allows many buildings to proceed "by right" through the review and permit process, though appropriate reviews by the Cultural Heritage Commission or State Historic Preservation Officer are required if a building is listed or is taking advantage of other preservation incentives. Even with these reviews, the time saved by using the ARO can be considerable, allowing developers to save on substantial financing costs, taxes, fees, and other predevelopment expenses. Most developers redeploy these valuable investment dollars on rehabilitation work, leasing, and sales.

Although historic designation is not a program prerequisite, many of the most significant, previously underutilized historic commercial buildings in Los Angeles have been converted to productive use as apartments or condominiums. Award-winning projects include the Superior Oil Company Building, which was converted into the Standard Hotel, and the adaptive reuse of the former Subway Terminal Building as Metro 417, an apartment complex. Many buildings converted under the ARO have used other incentives, including the Mills Act Historical Property Contract Program and Federal Historic Preservation Tax Incentives Program.

Application of the ARO was initially limited to downtown Los Angeles, where it has produced dramatic results. As of September 2006, more than four thousand market-level and affordable apartments had been created. Another 4,025 were under construction, and more than three thousand were in the planning stages.[2] The ARO was expanded citywide in 2003, and currently, commercial properties and neighborhoods as diverse as Hollywood, San Pedro, Lincoln Heights, Koreatown, Central Avenue, Mid-Wilshire, and Chinatown are being revitalized under its provisions. The ordinance could serve as a model for structuring other incentive programs that streamline the application and permit process for historic properties and areas. The citywide historic resource survey will be an important factor in identifying other properties eligible for and meriting use of the ARO.

The Standard Hotel (HCM #686) in downtown Los Angeles. Conversion of the 1956 Superior Oil Company Building into the trend-setting Standard Hotel employed both a $7.2 million Federal Rehabilitation Tax Credit and the Los Angeles ARO, reducing development time and costs, taxes, fees, and other development expenses. Property owners can rely on historic resource survey data to shape plans for their property, including the use of incentives. Photo: Emile Askey.

DOWNTOWN HOUSING: THE IMPACT OF THE ADAPTIVE REUSE ORDINANCE

Since Los Angeles's ARO was passed in 1999, housing construction in downtown Los Angeles has increased tremendously.

2,500	Total downtown housing units before 1999
4,400	Housing units completed in adaptive reuse projects since the ordinance
4,025	Housing units under construction in adaptive reuse projects
10,925	Total downtown housing units 2006
3,900	Adaptive reuse housing units in planning and proposal stages

Source: PowerPoint presentation, Hamid Behdad, Mayor's Office of Economic Development, September 28, 2006.

California Historical Building Code

The CHBC offers designated historic buildings an alternative to the general California Building Code and local building codes, which regulate new construction and the alteration of all buildings.[3] Use of the CHBC can help property owners preserve a building's historic fabric and character, can be a cost-effective means of renovating a building, and can reduce waste by allowing repair rather than replacement of building materials. The code is performance based: the use of any alternative methods is allowed on a case-by-case and item-by-item basis and must be reviewed and approved by the Los Angeles Department of Building and Safety. The restored Bradbury Building and many of the projects constructed under the ARO are examples of the successful application of the CHBC.

Tax Incentives

The Mills Act Historical Property Contract Program: Tax Reductions

Owners of designated historic properties in Los Angeles may be eligible to take advantage of the Mills Act Historical Property Contract Program, which is designed to encourage and assist in the preservation, rehabilitation, and maintenance of historic properties. The program provides potential property tax reductions for Historic-Cultural Monuments (HCMs) and for contributing structures within the city's Historic Preservation Overlay Zones (HPOZs).

Interior court of the Bradbury Building (HCM #6). Constructed in 1893, the Bradbury is the oldest extant commercial building in downtown Los Angeles. Its significant features include a dramatic interior court, ornamental iron railings, and open-cage elevators, features preserved through the application of the CHBC during a 1990s rehabilitation. Designated as a Los Angeles HCM in 1962, the Bradbury Building is also a National Historic Landmark. Photo: Security Pacific Collection/Los Angeles Public Library.

Under an agreement between the city of Los Angeles and the owner of a locally designated residential or commercial property, the Mills Act offers an annual property tax reduction that may range from 5 to more than 50 percent of the property's assessed valuation. This reduction exists for the duration of the contract, which is initially ten years and can continue in perpetuity if no action is taken to cancel. The contract self-renews each year on its anniversary date, creating a new ten-year agreement unless a notice of nonrenewal is filed. The contract provides a powerful economic benefit during ownership and may prove an attractive incentive to potential buyers. It remains in effect when the property is sold, so it is not reassessed at the current market value for property tax purposes. Instead, the new owner enjoys the lower, preexisting property tax rate.

In exchange for this tax reduction, the owner of the historic property agrees to rehabilitate and maintain the property's historically significant features for the duration of the contract and to allow a periodic inspection, typically conducted annually. Rehabilitation and maintenance standards are reasonable; work must follow the ten standards outlined in the Secretary of the Interior's standards for rehabilitation (see Weeks and Grimmer), the CHBC, and/or the city's seven Mills Act historic property maintenance standards. Each of these reinforces the importance of the conservation of the historic property and regular, high-quality maintenance.

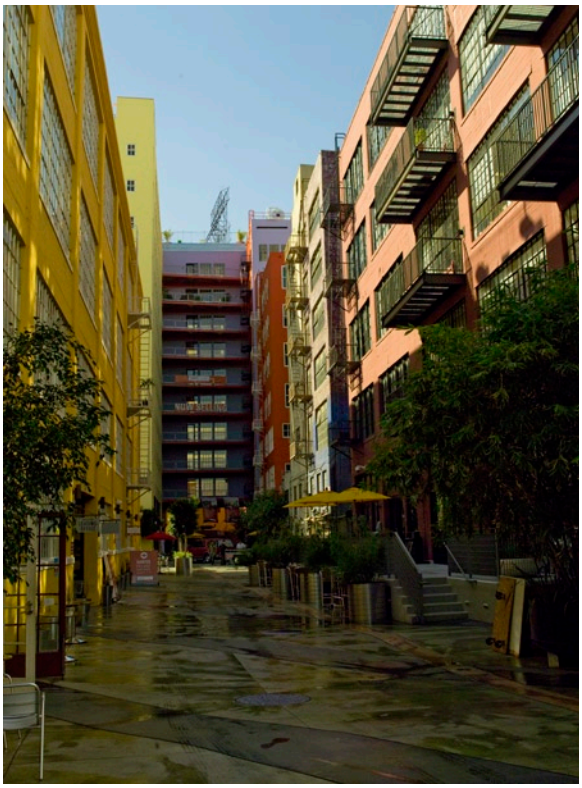
A wide range of Los Angeles historic residential and commercial properties currently take advantage of Mills Act contract incentives. Between 1997, when the first contracts were issued, and 2006, 314 contracts were awarded, 211 for single-family homes and 103 for multifamily dwellings and commercial buildings. This represents only 23 percent of the program's annual $1 million cap. About 75 percent of the properties are in the city's historic districts.

A house in the Angelino Heights HPOZ. Owners of designated historic properties can take advantage of significant property tax reductions after entering into a historical property contract. Through the Mills Act, the owner of this 1913 craftsman bungalow, a contributing feature in the Angelino Heights HPOZ, realized an annual property tax reduction of 51 percent, or a property tax savings of more than $1,200 per year. Photo: John C. Lewis.

Investors in the nine historic garment-manufacturing buildings that comprise Santee Court, a mixed-use apartment, condo, and retail adaptive reuse development located in the fashion district of downtown Los Angeles, realized property tax reductions through the Mills Act in two ways. During the extensive renovation period, the property tax was reduced to zero. As the property was successfully leased, the tax assessment was set at a level equal to its "base-year" value, that is, the year of purchase. When the buildings were sold, the property had appreciated 100 percent over this base-year value. The new owners benefited greatly from the Mills Act as their tax rate is now set at 50 percent of the property value. This annual savings has been used to complete more rehabilitation work, including terra-cotta repair, ongoing repairs of the steel sash windows, and repair of the glass-block sidewalk.

Federal Historic Preservation Tax Incentives Program: Investment Tax Credits

The Federal Historic Preservation Tax Incentives Program (commonly known as the Federal Rehabilitation Tax Credits), a partnership between the National Park Service and the Internal Revenue Service, in conjunction with State Historic Preservation Offices (SHPOs), encourages the preservation and substantial rehabilitation of income-producing certified historic buildings (buildings listed on or formally determined eligible for the National Register) and older, nonhistoric buildings (those that do not meet the certification requirements). The credit applies to multifamily rentals and to commercial, agricultural, and industrial buildings but not to owner-occupied housing. There are two types of tax credits: (1) the 20 percent credit that provides an income tax credit equal to 20 percent of the certified rehabilitation expenditures for certified historic structures; and (2) a 10 percent credit that applies to the substantial rehabilitation of a nonresidential, nonhistoric building constructed before 1936. Tax credits are frequently layered with other incentives such as the Mills Act and the ARO.



Santee Court (HCM #710 and #711). Under the Mills Act, the developers of Santee Court extensively rehabilitated the former M. J. McConnell Buildings—nine historic garment-manufacturing buildings—into a mixed-use development. Photo: Emile Askey.

Between 1998 and 2006, the program was used for nearly sixty projects in Los Angeles, stimulating approximately $500 million in rehabilitation work on historic commercial properties. The tax credit is especially attractive because qualified rehabilitation expenses can include planning and construction costs such as professional fees, rehabilitation of historical architectural features and structural components, introduction of new mechanical systems (e.g., elevators and escalators), and seismic retrofit expenses. Rehabilitation of historic structures of every period, size, style, and type has been put into motion. Among the projects that have employed Federal Rehabilitation Tax Credits are Hollywood's 1917 Mediterranean revival-style Hillview Apartments and downtown's Welton Becket-designed, mid-twentieth-century General Petroleum Company Building, which was converted into the Pegasus Apartments. Historic properties that have used the Federal Rehabilitation Tax Credits have been essential components in the revitalization of downtown, Hollywood, and other commercial areas.

Other state and federal tax credit programs, though not intended specifically for use with historic properties, can be successfully used in concert with the Federal Historic Preservation Tax Incentives in revitalizing and preserving historic structures. In a number of instances, the Federal Low-Income Housing Investment Tax Credit has been used in tandem with the Federal Rehabilitation Tax Credits to create affordable housing, as in the rehabilitation of the St. Andrews Bungalow Court in Hollywood and the Dunbar Hotel in South Los Angeles.

Tax credits supply investment capital for a rehabilitation project. The credits are typically sold or syndicated to generate equity capital as part of the overall project financing. In addition to the General Petroleum Company Building (now the Pegasus Apartments), the owners of the Orpheum Theatre and Lofts, also located in downtown Los Angeles, partially financed their rehabilitation projects through the syndication of rehabilitation tax credits.

Views of St. Andrew's Bungalow Court in Hollywood before (above) and after rehabilitation. This 1996 award-winning rehabilitation employed the Federal Rehabilitation Tax Credits and the Federal Low-Income Housing Investment Tax Credit to generate important equity capital as part of overall project financing. The once-dilapidated complex, constructed in 1919, now provides special-needs housing. Photo (above): Courtesy of Richard Barron/ Architects. Photo (below): John C. Lewis.

Conservation Easements: Tax Deductions

A conservation easement is a private legal agreement between a qualified nonprofit historic preservation organization or government agency and the owner of a building that is listed individually on the National Register of Historic Places or that is a contributing structure in a National Register Historic District. The owner agrees that future modifications to certain portions of the property—generally the exterior—will meet historic preservation standards. In return, the owner qualifies for a onetime income tax deduction equal to the value of the easement, which is typically 10 to 15 percent of the property value for single-family residences and possibly higher for income-producing properties. An easement donation may also result in a lowered property tax rate after the property is reassessed with easement restrictions in place.

Locally, the Los Angeles Conservancy accepts conservation easements. As of April 2007, the conservancy held easements on twenty-one Los Angeles properties, including such well-known buildings as the 1926 Lloyd Wright-designed Sowden House in the Los Feliz area and the Spanish colonial revival-style El Capitan Theatre on Hollywood Boulevard, as well as more modest buildings that include the Victorian-style Innes and Haskins houses on Carroll Avenue in Angelino Heights. Because a conservation easement is recorded on the property deed, it remains in effect even when the property changes ownership, providing direct, enduring preservation protection and attractive tax advantages.

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INCENTIVES FOR HISTORIC HOMES BY LEVEL OF HISTORIC DESIGNATION

This chart identifies programs that can be used to acquire or rehabilitate an older home. A few of these programs encourage good preservation practice and are available only for designated properties. Others are not specific to homes that have been officially recognized as historic. Incentives and their corresponding designation requirements are indicated by a •.

	National Register of Historic Places or contributing structure in a National Register Historic District	California Register of Historical Resources	Los Angeles HCM or contributing structure in an HPOZ	Historic home without an official designation
Mills Act Historical Property Contract			•	
Conservation easement	•			
California Historical Building Code	•	•	•	•*
Zoning incentives	•	•	•	
Film location	•	•	•	•
Renovation loans and mortgages	•	•	•	•
Reverse mortgages for seniors	•	•	•	•
Affordable mortgage products	•	•	•	•
Los Angeles Housing Department programs	•	•	•	•
Los Angeles Community Redevelopment Agency programs	•	•	•	•
State of California Department of Insurance Earthquake Grant Program	•	•	•	•

*If it has been officially determined eligible for listing at the national, state, or local level.

Potential for Additional Incentives in Los Angeles

A number of incentives designed for housing rehabilitation, code compliance, economic revitalization, and other purposes can and have been used to assist historic preservation work throughout the city. The sidebar on the previous page includes a summary of incentives available to homeowners. Though some of these programs are not specifically intended as preservation incentives, they recognize and support the rehabilitation of historic structures as an integral part of achieving their goals.

The LAHRS will provide the city with a picture of the range of its historic resources and will supply information needed to identify opportunities and challenges influencing the maintenance and rehabilitation of historic properties. As a result, the city may recognize additional actions that can be taken to reach its preservation goals, including the creation of new incentives.

Preservation incentive programs in other cities that appear to have a powerful effect include modest tax reductions, revolving loan funds, small matching grants for rehabilitation projects, design and technical assistance, and waivers of sales tax and building permit fees for historic properties. Such programs could serve as models for Los Angeles as the city expands its range of incentives. Even modest incentives for designated historic properties—which have a minor fiscal impact on the city and require little administrative time—can motivate property owners to renovate and maintain historic properties.

Summary

Historic preservation incentives are an essential component of a comprehensive preservation planning and survey program. Access to incentives makes the acquisition and preservation, renovation, or adaptive reuse of historic buildings more attractive to investors and homeowners. The city of Los Angeles currently offers several valuable incentives, including the Mills Act Historical Property Contract Program and the ARO. Further incentives will stimulate interest in the preservation and utilization of the city's historic building stock. A modest investment in a set of incentive programs that can be accessed through a clear process will aid the city in attaining its economic development and revitalization goals through historic preservation.

The Adams Residence (HCM #629) in Reseda. This modest house was designed by Lloyd Wright and constructed by the property owners over a period of years beginning in 1939. As a designated HCM, it could qualify for preservation incentives. Photo: John C. Lewis.

Notes

1. *Identification by the LAHRS will not automatically qualify the historic building for these incentives. The owner will submit a property-specific application to the appropriate government agency for review and approval.*
2. *Figures taken from a PowerPoint presentation by Hamid Behdad, Mayor's Office of Economic Development, September 28, 2006.*
3. *For further information, see the Division of the State Architect at www.dsa.dgs.ca.gov/SHBSB/default.htm.*

CHAPTER 8 The Citywide Historic Resource Survey: Funding Needs

> ***If we know what's historic in Los Angeles, then we can do a better job of preserving historic structures and avoid bruising political battles. The survey gives us a sustainable strategy for historic preservation.***
>
> — Jack Weiss, Los Angeles City Councilman[1]

Estimating the costs of each phase of the Los Angeles Historic Resource Survey (LAHRS) will help to determine priorities and to prepare a budget. Like the survey itself, the budget can be structured in two phases: survey initiation and survey implementation. Each will have its own cost requirements.

The first phase, survey initiation, will involve establishing the survey infrastructure. The primary expenditures include the following:

- Preparing the citywide historic context statement
- Preparing the *Field Guide to Survey Evaluation*, a survey standards and methodology guide
- Structuring the city's Geographic Information System (GIS) and databases to incorporate historic resource information
- Developing interdepartmental protocols and authority
- Developing a searchable, public historic resource Web site
- Arranging for necessary computer equipment and supplies
- Preparing public information materials and presentations
- Hiring pilot survey contractors and completing up to three pilot surveys designed to test and resolve survey methods, determine the efficacy of community engagement efforts, and evaluate information management protocols

Once the infrastructure is established and tested, the second phase, survey implementation, will entail managing the survey, administering and maintaining historic resource data, formally reviewing survey findings, and incorporating historic resource information in city records, GIS and Web site databases, and departmental plans.

Historic resource survey consulting firms hired by the city and supervised by city staff will conduct the survey. During implementation, the bulk of the costs will stem from the field survey work conducted by these firms. The primary costs are described below:

- Field surveys completed by historic resource survey consulting firms
- Survey communication materials and community outreach
- Final review of findings and data for consistency
- GIS, Web site, and data management
- Expenses related to the Historic Resource Survey Review Committee
- Publications related to the survey

Typically, personnel, management, and administrative costs for a citywide survey entail the following:

- Department head/survey director
- Deputy director/survey specialist
- GIS manager
- GIS technician
- Web manager
- Technical and administrative support
- Historic resource survey review committee

Municipal personnel costs will include city personnel working on the project. Costs are based on civil service titles, historic resource survey experience, and percentage of time spent on the project, as well as other criteria. In the case of the Office of Historic Resources (OHR), for example, the director will necessarily devote only a percentage of time to the survey. Similarly, within the Department of City Planning, the Zoning Information and Map Access System (ZIMAS) and the Mapping Division may support some GIS work. The department does not currently have a dedicated Web manager or Web master who could provide support for activities related to the survey.

Most cities allocate municipal funds over time to develop, maintain, and update historic resource surveys, which are recognized as a vital component of their preservation, planning, and development programs. Cities in California that qualify as Certified Local Governments (CLGs) can apply for modest matching grants from the State Historic Preservation Offices

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CERTIFIED LOCAL GOVERNMENT (CLG) GRANTS

The CLG program is a National Park Service program in partnership with state governments. To be eligible to participate, local governments must meet standards related to the operation of their preservation programs and the professional qualifications of the members of their historic resource commissions. In April 2007, Los Angeles became the fifty-third California municipality certified as a CLG. Cities participating in the program are eligible for grant funding, specialized technical assistance, and enhanced participation in reviews for some federal preservation programs, such as the National Register of Historic Places.

CLG grants have traditionally targeted planning efforts. Between the 1999–2000 and 2004–5 program years, twenty-three California cities received CLG grants to conduct local historic resource surveys. Of these, Riverside, Sacramento, and Ontario used CLG funds to develop databases to maintain historic resource inventories. The county of San Diego received grant funding to develop a GIS to display historic resource data.

The city of Riverside has received CLG grants for five projects: developing a state-of-the-art database cataloging its historic resources and making that inventory available on the Web, developing a preservation plan for the city, and funding three architectural surveys of historic neighborhoods. Riverside's historic resource database has combined information gathered from more than twenty-five years of historic resource surveys with data from more than ten thousand surveyed parcels and made this information available to all of its city agencies. Its Web presence allows public access to the city's historic resource information. The citywide preservation plan, now part of Riverside's general plan, has allowed city preservation staff to prioritize preservation projects and goals, such as maintaining and expanding an accessible historic resource inventory. CLG grants also funded architectural surveys that defined three new historic districts in the city's historic resource inventory. Grant funds received by Riverside through the program have totaled $98,000 and were used primarily for consultant fees. The city provided a 40 percent match in staff time and overhead.

The city of San Francisco is currently conducting a phased citywide historic resource survey. For the past five years, the city has received grants totaling $90,000, averaging about 30 percent of the total project costs. These grants have been used to pay a portion of the salaries of city staff members involved in the survey process. So far, staff members paid with CLG grants have completed intensive surveys of local historic districts encompassing more than 750 sites.

As a CLG since April 2007, the city of Los Angeles is now eligible to apply for CLG grants to assist with survey-related costs.

Los Angeles City Hall (HCM #150), a significant civic asset and an iconic symbol of the city itself. Nearly half the California cities that participate in the CLG program have received small matching grants to conduct local historic resource surveys. Los Angeles was designated a CLG in April 2007 and is now eligible to apply for such grants. Photo: Emile Askey.

(SHPOs). CLG grants have been used as seed money for historic resource surveys and to develop historic resource data management systems.

In Los Angeles, the citywide survey will be funded through a collaborative agreement between the city and the J. Paul Getty Trust, wherein each entity will contribute funding and services toward completion of the survey. The city will be responsible for funding, managing, and making use of the survey results. The Getty Foundation has provided a matching grant over a five-year period, and the Getty Conservation Institute (GCI) has offered to continue to provide technical and advisory services. For the projected LAHRS budget, see the sidebar at right.

The budget for these costs is highly dependent on a number of factors, including size of the city and scope of the survey, utility of previously completed historic contexts and historic resource surveys, availability of

THE LAHRS BUDGET: 5-YEAR PROJECTION

	Initiation Phase (2 Years)	
Year 1	Staff	249,500
	Information Management	75,000
	Survey Outreach	15,000
	Pilot Survey Contractors	100,000
	Year 1 Total	439,500
Year 2	Staff	249,500
	Information Management	75,000
	Survey Outreach	15,000
	Pilot Survey Contractors	100,000
	Year 2 Total	439,500
	Total Initiation Phase	**$ 879,000**
	Implementation Phase (3 Years)	
Per Year for Years 3–5		
	Staff	237,500
	Survey Outreach	15,000
	Survey Contractors	1,200,000
	Per Year Total	$1,452,500
	Total Implementation Phase	**$4,357,500**
	SurveyLA Total	**$5,236,500**

research on the built environment, and strength of the staff and technological infrastructure. In addition to the findings concerning historic resources and the methods associated with a citywide historic resource survey, the LAHRS will arrive at conclusions concerning the time, cost, and staffing of a citywide survey that will prove valuable to a range of other communities.

Notes

1. *These remarks were made by Councilman Weiss on August 9, 2005, when the Los Angeles City Council approved the Los Angeles Historic Resource Survey and Collaborative Agreement with the J. Paul Getty Trust, ensuring funding for a comprehensive citywide historic resource survey.*

APPENDIX A Summary of Historic Preservation Programs, Agencies, and Organizations

Federal, state, and local laws provide for the identification and designation of historic resources in Los Angeles, and government agencies at each level are charged with administering preservation-related mandates, incentives, and programs. Understanding and employing these programs in a positive, coordinated, and proactive manner will provide Los Angeles with significant benefits and inform the decisions of government, property owners, and investors. The Los Angeles Historic Resource Survey (LAHRS) will provide essential information to administer these programs positively and effectively. This summary lists the preservation programs, agencies, and organizations that administer programs and services related to the survey.

HISTORIC RESOURCES IN THE CITY OF LOS ANGELES, DECEMBER 2006[1]

Federal level	*National Register of Historic Places*	
	Properties listed in National Register	139
	Districts listed in National Register	14
	National Historic Landmarks	8
	National Historic Landmark Districts	1
State level	*California Register of Historical Resources*	
	Properties listed in the California Register	989
	Properties designated as California Historical Landmarks	34
Local level	*Historic-Cultural Monuments and Historic Preservation Overlay Zones*	
	Properties designated as Historic-Cultural Monuments	840
	Designated Historic Preservation Overlay Zones	22

This table identifies the number of properties and districts listed in the local, state, and national registers (the data are drawn from the Los Angeles Office of Historic Resources and the California Historic Resource Inventory) and is based on information provided by the Office of Historic Resources in December 2006. As a result of the citywide survey, information on surveyed and listed historic properties will be accessible in ZIMAS, the city's Web-based geographic information system (zimas.lacity.org).

Preservation at the National Level

Federal Preservation Statutes

The National Historic Preservation Act of 1966 (NHPA) established the National Register of Historic Places to identify properties and districts of architectural, historical, engineering, or archaeological significance at the local, state, or national level, and the National Historic Landmarks Program to recognize properties of exceptional significance to the nation. Selection of properties and districts for inclusion in the National Register is based on federal regulations that codify the listing criteria, including specific types of significance, physical integrity, and age.[2] National Register Historic Districts in Los Angeles include the Broadway Theater and Commercial District and the Venice Canal Historic District. Among the properties listed on the National Register are the Ralph J. Bunche House, Angel's Flight, and the Pellissier Building (Wiltern Theatre) (www.nr.nps.gov/nr/about.htm).

Any federal undertaking that may affect National Register-listed properties is subject to review in order to consider and mitigate potential negative impacts under Section 106 of the NHPA and the National Environmental Policy Act of 1969.

Federal Agencies and Programs

The U.S. Department of the Interior's National Park Service (NPS) administers the National Register of Historic Places and National Historic Landmarks Program. The NPS works in partnership with the fifty State Historic Preservation Offices (SHPOs) (in California, the Office of Historic Preservation [OHP]), as well as with tribal preservation offices and the president's Advisory Council on Historic Preservation. The State Historic Preservation Officer is officially responsible for administering state preservation programs and working with federal preservation programs.

The Department of the Interior and the NPS have prepared extensive guidance concerning historic preservation activities. Standards, guidelines, and technical documents address the evaluation of resources using the National Register criteria, the implementation of local

historic resource surveys, the rehabilitation and restoration of historic properties, and qualification standards for historic preservation practitioners. This guidance serves as the professionally accepted standard for historic preservation practice (www.nps.gov/history/hps/tps/tpscat.htm).

Resources listed in or eligible for the National Register may qualify for regulatory and financial incentives, including Federal Rehabilitation Tax Credits for historic commercial buildings. In California, these may also qualify for application of the California Historical Building Code (CHBC). Owners of National Register-listed properties may also receive federal tax deductions for the donation of preservation easements.

The NPS, in concert with the states, established the Certified Local Government (CLG) program to strengthen federal, state, and local partnerships in historic preservation. CLG communities receive training and technical assistance and work in collaboration with state and federal agencies on preservation planning matters. As of April 2007, fifty-three California local governments are CLGs, including the cities of San Francisco, San Diego, Sacramento, and Los Angeles.

National Nonprofit Preservation Organizations

The National Trust for Historic Preservation is a nonprofit, membership-based organization with the mission of providing leadership, education, and advocacy for the preservation of historic resources. The trust has regional offices, including one in San Francisco, that provide a wide range of advisory and financial assistance programs to help public and private preservation efforts at the state and local levels (www.nationaltrust.org).

Preservation at the State Level

California Preservation Statutes

The state of California identifies and designates cultural resources primarily through the California Register of Historical Resources. The California Register's eligibility criteria are based directly on National Register criteria. California has two other designation programs: California Historical Landmarks and California Points of Historical Interest. All California properties listed in or formally determined to be eligible for listing in the National Register, and all California Historical Landmarks numbered 770 and higher, are automatically listed in the California Register. California Points of Historical Interest may be included on recommendation by the State Historical Resources Commission. Properties can also be nominated directly to the California Register.[3] Los Angeles properties listed in the California Register include Mission San Fernando Rey de España and the Will Rogers Western Ranch House.

The California Environmental Quality Act (CEQA) is the state's principal statute providing a mechanism for the environmental assessment of projects.[4] Like the National Environmental Policy Act and Section 106 of the NHPA, CEQA requires the assessment of impact on cultural resources, but it applies specifically to the actions of state and local agencies, as opposed to federal agencies. CEQA is also applicable to projects undertaken by private parties that require discretionary approval from government agencies (see chapter 5).

California Agencies and Programs

The California Office of Historic Preservation (OHP)—the state agency primarily responsible for administration of California's state historic preservation program—is directed by the State Historic Preservation Officer. The State Historical Resources Commission, a nine-member review board appointed by the governor, has the primary responsibility for reviewing applications for listing historic and archaeological resources on the National Register and the California Register and for approving local historic resource surveys.

The OHP has developed standards and forms for identifying California's historically significant resources and districts that are based largely on National Register guidance and the California Historical Resource Status Codes (see chapter 3).[5] The OHP maintains information on significant historic resources identified and evaluated through one of the programs that the OHP administers under the NHPA or the California Public Resources Code in California in the California Historical Resources Inventory (HRI). Although the HRI includes

information on more than 200,000 resources, it is not a comprehensive listing of all historic resources in the state. Information on resources in the HRI is currently available through the twelve regional information centers of the California Historical Resources Information System (CHRIS) (www.ohp.parks.ca.gov/).[6]

California Nonprofit Preservation Organizations

The California Preservation Foundation is California's statewide, nonprofit, historic preservation education, advocacy, and membership organization. The foundation sponsors conferences and seminars, provides technical assistance, and supports preservation efforts through public policy advocacy throughout the state (www.californiapreservation.org/).

Preservation at the Local Level

For more detailed information on uses of historic resource information by local public agencies and on administration of the city's historic preservation ordinances, please see chapter 5.

Los Angeles Preservation Ordinances

The city of Los Angeles identifies historic resources in two ways: as individual landmarks known as Historic-Cultural Monuments (HCMs) and as Historic Preservation Overlay Zones (HPOZs), which are analogous to historic districts in other cities. The Los Angeles Cultural Heritage Ordinance provides for the designation of sites (including significant trees or plant life), buildings, and structures of historic, cultural, and architectural significance to the city as HCMs.[7] This broad definition has allowed the city to designate a wide range of residential, commercial, and public properties, from the Frank Lloyd Wright-designed Sturges House in Brentwood, to the Chinatown Gates and the Lincoln Heights Library.

The HPOZ Ordinance provides for the establishment of preservation zones within areas of the city having historic, architectural, cultural, or aesthetic significance.[8] The ordinance mandates that historic resource surveys be carried out in order to propose boundaries of potential HPOZs and to identify contributing and noncontributing resources located within those boundaries—information that is needed in the HPOZ nomination process. The survey information would be used extensively in administering the HPOZ, providing information on the history and character-defining features of the zone and the significant aspects of contributing resources. The majority of properties within an HPOZ must be determined to be contributing features, which may include structures, landscaping, natural features, and sites. HPOZs represent the architectural and cultural diversity of Los Angeles, with examples as varied as the Van Nuys, Pico-Union, and Carthay Circle HPOZs.

Los Angeles Agencies and Programs

More than fifteen agencies within the city of Los Angeles require historic resource data to administer programs, plan projects, and fulfill the requirements of the two Los Angeles historic preservation ordinances and state and federal programs (see chapter 5). The two agencies with the greatest responsibilities for historic resources are the Department of City Planning and the Department of Building and Safety.

Department of City Planning and Office of Historic Resources

The Los Angeles Department of City Planning and its Office of Historic Resources (OHR) administer the municipal preservation ordinances, advise city departments, and assist the public on historic preservation matters. The OHR is responsible for the bulk of the municipal preservation program, including administration of the Cultural Heritage Ordinance and management of the HCM Program, implementation of the Mills Act Historical Property Contract Program, direction of the citywide historic resource survey, and supervision of municipally maintained historic resource data. The OHR works closely with other agencies in fulfilling their preservation responsibilities within the city, while also serving as the primary point of contact for community members on preservation issues.

The Department of City Planning is charged with identifying and assessing potential HPOZs, managing the HPOZ nomination process, and implementing the HPOZ Ordinance within designated HPOZs. The department also manages the city's planning and zoning property data through the GIS-based Zoning Information and Map Access System (ZIMAS).

Department of Building and Safety

The Department of Building and Safety, which is responsible for administering the city's building and safety codes, also plays an important role in preservation-related activities. It serves as the first contact point for property owners who are planning significant changes to buildings and are applying for permits. The department is responsible for administering the California Historical Building Code (CHBC) and flags historic properties for appropriate review prior to the issuance of any building permit.

Los Angeles Nonprofit Preservation Organizations and Educational Institutions

Several community-based organizations are engaged in preservation-related activities in Los Angeles. The most prominent is the Los Angeles Conservancy (www.laconservancy.org), which represents more than eight thousand households and is one of the largest membership-based local historic preservation organizations in the United States. The conservancy's mission focuses on advocacy and education. Its activities include community outreach programs that promote awareness of the city's architectural resources through tours and events. Other local citywide preservation organizations include the HPOZ Alliance, an organization composed of members of the HPOZ boards. The mission of the alliance is to exchange information between HPOZ boards and between the boards and the city.

Several Los Angeles neighborhoods have formed local preservation groups, such as the Highland Park Heritage Trust, West Adams Heritage Association, and Hollywood Heritage. Other neighborhood historical societies and neighborhood associations, including the Wilmington Historical Society, Lincoln Heights Historical Society, Windsor Square Association, and Los Feliz Improvement Association, also pursue historic preservation.

The University of Southern California's School of Architecture serves as a local resource for the training of preservation professionals. USC offers both a master's degree and a graduate certificate program in historic preservation.

Notes

1. *Historic resources may be listed at more than one level of government. For example, the National Register districts of Carroll Avenue, Saint James Park, and Van Buren Place are located within the boundaries of Los Angeles HPOZs.*
2. Code of Federal Regulations. *Title 36: Parks, Forests, and Public Property. Chapter 1: National Park Service, Department of the Interior. Part 60: National Register of Historic Places.*
3. *For a thorough overview of California state law as it applies to historic preservation, see California Office of Historic Preservation,* California State Law and Historic Preservation; *California Register criteria are codified in* California Code of Regulations, *Title 14: Natural Resources. Division 3: Department of Parks and Recreation. Chapter 11.5: California Register of Historic Places. Sections 4850–58.*
4. California Public Resources Code, *Division 13, Chapter 2.6, Section 21084.1, is the section of the CEQA statute relating to historical resources.*
5. *California Office of Historic Preservation,* Instructions for Recording Historical Resources.
6. *The South Central Coastal Information Center in Fullerton maintains historic resource information for the counties of Los Angeles, Ventura, and Orange.*
7. Los Angeles Administrative Code. *Division 22: Departments, Bureaus and Agencies Under the Control of the Mayor and Council. Chapter 9: Department of City Planning. Article 1: Cultural Heritage Commission. Section 22.171.7: Definition of Monument. Added by ord. no. 178,402 (April 2, 2007).*
8. Los Angeles Municipal Code. *Chapter 1: General Provisions. Article 2: Specific Planning. Section 12.20.3: "HP" Historic Preservation Overlay Zone. Amended by ord. no. 175,891 (May 12, 2004).*

APPENDIX B California Historical Resource Status Codes

These codes were developed by the California State Parks Office of Historic Preservation as a system of classifying and coding significant resources for listing in the California Register of Historical Resources. They are available online at ohp.parks.ca.gov/?page_id=1069.

California Historical Resource Status Codes

1	**Properties listed in the National Register (NR) or the California Register (CR)**
1D	Contributor to a district or multiple resource property listed in NR by the Keeper. Listed in the CR.
1S	Individual property listed in NR by the Keeper. Listed in the CR.
1CD	Listed in the CR as a contributor to a district or multiple resource property by the SHRC
1CS	Listed in the CR as individual property by the SHRC.
1CL	Automatically listed in the California Register – Includes State Historical Landmarks 770 and above and Points of Historical Interest nominated after December 1997 and recommended for listing by the SHRC.
2	**Properties determined eligible for listing in the National Register (NR) or the California Register (CR)**
2B	Determined eligible for NR as an individual property and as a contributor to an eligible district in a federal regulatory process. Listed in the CR.
2D	Contributor to a district determined eligible for NR by the Keeper. Listed in the CR.
2D2	Contributor to a district determined eligible for NR by consensus through Section 106 process. Listed in the CR.
2D3	Contributor to a district determined eligible for NR by Part I Tax Certification. Listed in the CR.
2D4	Contributor to a district determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
2S	Individual property determined eligible for NR by the Keeper. Listed in the CR.
2S2	Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the CR.
2S3	Individual property determined eligible for NR by Part I Tax Certification. Listed in the CR.
2S4	Individual property determined eligible for NR pursuant to Section 106 without review by SHPO. Listed in the CR.
2CB	Determined eligible for CR as an individual property and as a contributor to an eligible district by the SHRC.
2CD	Contributor to a district determined eligible for listing in the CR by the SHRC.
2CS	Individual property determined eligible for listing in the CR by the SHRC.
3	**Appears eligible for National Register (NR) or California Register (CR) through Survey Evaluation**
3B	Appears eligible for NR both individually and as a contributor to a NR eligible district through survey evaluation.
3D	Appears eligible for NR as a contributor to a NR eligible district through survey evaluation.
3S	Appears eligible for NR as an individual property through survey evaluation.
3CB	Appears eligible for CR both individually and as a contributor to a CR eligible district through a survey evaluation.
3CD	Appears eligible for CR as a contributor to a CR eligible district through a survey evaluation.
3CS	Appears eligible for CR as an individual property through survey evaluation.
4	**Appears eligible for National Register (NR) or California Register (CR) through other evaluation**
4CM	Master List - State Owned Properties – PRC §5024.
5	**Properties Recognized as Historically Significant by Local Government**
5D1	Contributor to a district that is listed or designated locally.
5D2	Contributor to a district that is eligible for local listing or designation.
5D3	Appears to be a contributor to a district that appears eligible for local listing or designation through survey evaluation.
5S1	Individual property that is listed or designated locally.
5S2	Individual property that is eligible for local listing or designation.
5S3	Appears to be individually eligible for local listing or designation through survey evaluation.
5B	Locally significant both individually (listed, eligible, or appears eligible) and as a contributor to a district that is locally listed, designated, determined eligible or appears eligible through survey evaluation.
6	**Not Eligible for Listing or Designation as specified**
6C	Determined ineligible for or removed from California Register by SHRC.
6J	Landmarks or Points of Interest found ineligible for designation by SHRC.
6L	Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning.
6T	Determined ineligible for NR through Part I Tax Certification process.
6U	Determined ineligible for NR pursuant to Section 106 without review by SHPO.
6W	Removed from NR by the Keeper.
6X	Determined ineligible for the NR by SHRC or Keeper.
6Y	Determined ineligible for NR by consensus through Section 106 process – Not evaluated for CR or Local Listing.
6Z	Found ineligible for NR, CR or Local designation through survey evaluation.
7	**Not Evaluated for National Register (NR) or California Register (CR) or Needs Revaluation**
7J	Received by OHP for evaluation or action but not yet evaluated.
7K	Resubmitted to OHP for action but not reevaluated.
7L	State Historical Landmarks 1-769 and Points of Historical Interest designated prior to January 1998 – Needs to be reevaluated using current standards.
7M	Submitted to OHP but not evaluated - referred to NPS.
7N	Needs to be reevaluated (Formerly NR Status Code 4)
7N1	Needs to be reevaluated (Formerly NR SC4) – may become eligible for NR w/restoration or when meets other specific conditions.
7R	Identified in Reconnaissance Level Survey: Not evaluated.
7W	Submitted to OHP for action – withdrawn.

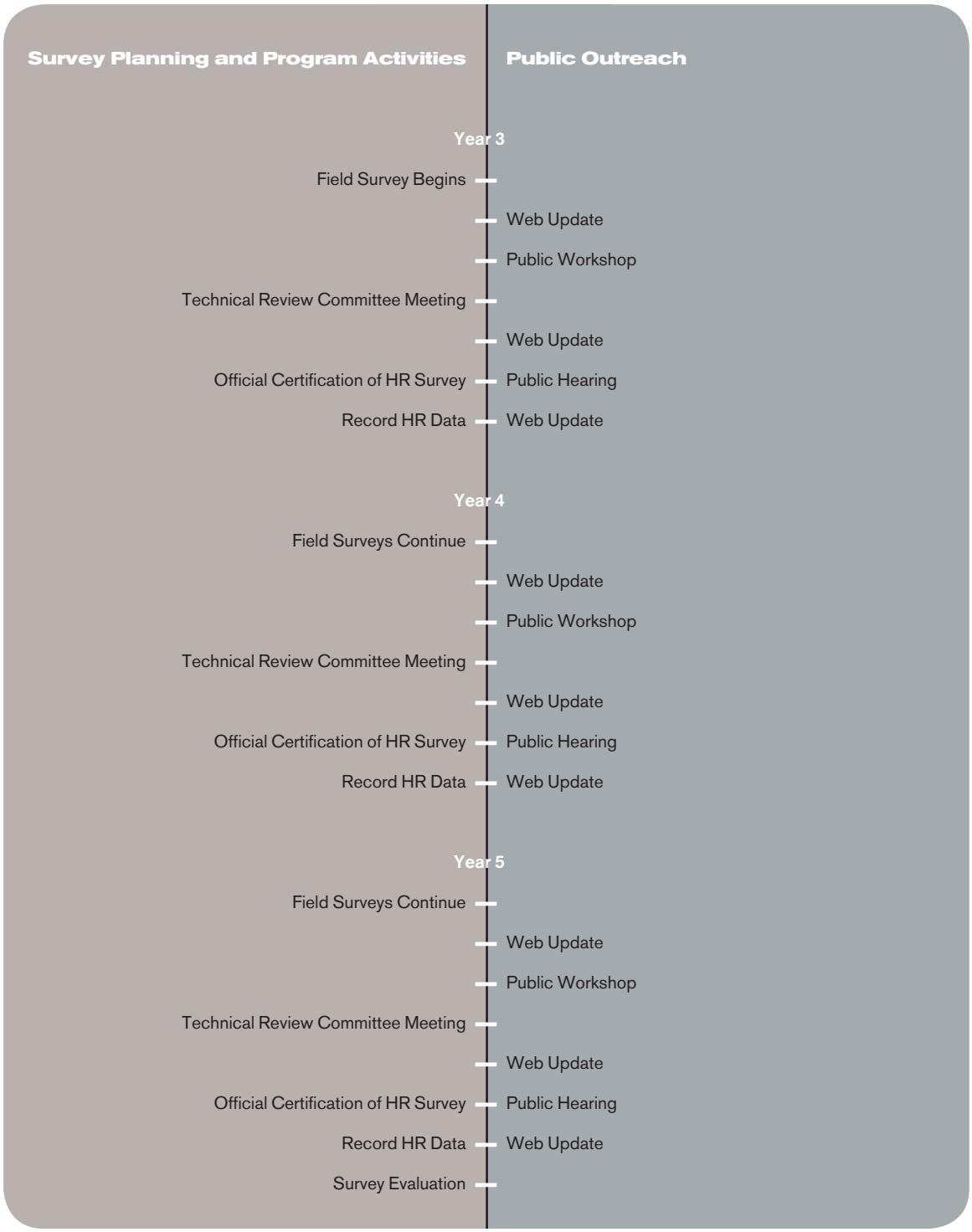
12/8/2003

APPENDIX C Sample Citywide Survey Time Line

Phase 1: Survey Initiation (2-Year Period)

Survey Planning and Program Activities	Public Outreach
Years 1–2	
Survey Initiation Phase Begins	
	Community Interviews
Create Survey Web Site	
Advisory Committee Meeting	
Begin Historic Context Statement (HCS)	Web Update
Develop GIS Enhancements for Historic Resources (HR)	
Advisory Committee Meeting	
	Web Update
Prepare HCS for Review	
Review of Official Preliminary Draft HCS	
	Public Workshop
Prepare *Field Guide to Survey Evaluation*	
Advisory Committee Meeting	
	Web Update
Conduct Pilot Surveys	Public Workshop
Technical Review Committee Meeting	
	Web Update
Final Draft HCS Complete	
Official Review of HCS and Pilot Surveys	
	Public Meeting
Complete GIS Enhancements	
	Web Update
Complete *Field Guide to Survey Evaluation*	
Advisory Committee Meeting	
Record HR Data in GIS and State Historic Resource Survey	
Publicize HCS	Web Update
Publicize *Field Guide to Survey Evaluation*	Web Update

Phase 2: Survey Implementation (3-Year Period*)



**Begins in third year of survey project*

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APPENDIX D

Primary Record; Building, Structure, and Object Record; and District Record Forms, California State Parks Office of Historic Preservation

Primary record form 523A from the California State Parks Office of Historic Preservation. Available online at ohp.parks.ca.gov/?page_id=1069.

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page _____ **of** ____ ***Resource Name or #:** (Assigned by recorder) _____

P1. Other Identifier: _____

***P2. Location:** __ **Not for Publication** __ **Unrestricted**

***a. County** _____ **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** _____ **Date** _____ **T** __; **R** ___; __ ▤ **of** __ ▤ **of Sec** __; _____**B.M.**

c. Address _____ City _____ Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone __ , _____ mE/ _____ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

***P3b. Resource Attributes:** (List attributes and codes)_____

***P4. Resources Present:** ___ Building ___ Structure ___ Object ___ Site ___ District ___ Element of District ___Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession #) _____

***P6. Date Constructed/Age and Source:** ___ Historic __ Prehistoric ___ Both

***P7. Owner and Address:**

***P8. Recorded by:** (Name, affiliation, and address) _____

***P9. Date Recorded:** _____

***P10. Survey Type:** (Describe)

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.") _____

***Attachments:** ___NONE ___Location Map ___Continuation Sheet ___Building, Structure, and Object Record
___Archaeological Record ___District Record ___Linear Feature Record ___Milling Station Record ___Rock Art Record
___Artifact Record ___Photograph Record ___ Other (List): _____

DPR 523A (1/95) ***Required information**

F-202

Building, structure, and object record form 523B from the California State Parks Office of Historic Preservation. Available online at ohp.parks.ca.gov/?page_id=1069.

State of California ◊ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** _____

Page _____ **of** _____ ***Resource Name or #** (Assigned by recorder) _____

B1. Historic Name: _____

B2. Common Name: _____

B3. Original Use: _____ B4. Present Use: _____

***B5. Architectural Style:** _____

***B6. Construction History:** (Construction date, alterations, and date of alterations)

***B7. Moved? __No __Yes __Unknown Date:** _____ **Original Location:**_____

***B8. Related Features:**

B9a. Architect: _____ b. Builder: _____

***B10. Significance: Theme** _____ **Area** _____

Period of Significance _____ **Property Type** _____ **Applicable Criteria** _____

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

B11. Additional Resource Attributes: (List attributes and codes) _____

***B12. References:**

B13. Remarks:

(Sketch Map with north arrow required.)

***B14. Evaluator:** _____

***Date of Evaluation:** _____

(This space reserved for official comments.)

DPR 523B (1/95) ***Required information**

F-203

District record form 523D from the California State Parks Office of Historic Preservation. Available online at ohp.parks.ca.gov/?page_id=1069.

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
DISTRICT RECORD

Primary# _____
HRI # _____
Trinomial _____

Page _____ **of** _____ ***NRHP Status Code** _____

***Resource Name or # (Assigned by recorder)** _____

D1. Historic Name: _____ D2. Common Name: _____

***D3. Detailed Description** (Discuss overall coherence of the district, its setting, visual characteristics, and minor features. List all elements of district.):

***D4. Boundary Description** (Describe limits of district and attach map showing boundary and district elements.):

***D5. Boundary Justification:**

D6. Significance: Theme _____ **Area** _____
Period of Significance _____ **Applicable Criteria** _____
(Discuss district's importance in terms of its historical context as defined by theme, period of significance, and geographic scope. Also address the integrity of the district as a whole.)

***D7. References** (Give full citations including the names and addresses of any informants, where possible.):

***D8. Evaluator:** _____ **Date:** _____
Affiliation and Address: _____

DPR 523D(1/95) ***Required information**

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The Getty Conservation Institute
www.getty.edu/conservation

The Top Ten Myths About Historic Preservation

by Ken Bernstein

It often surprises me how many misunderstandings abound concerning historic preservation—with some people closing their minds to preservation based on inaccurate information, and others clinging to unrealistic expectations about the impacts or benefits of preservation tools. As a starting point in clearing up these misconceptions, I offer up a "top ten" list of the most prevalent myths about historic preservation.

Myth #1: "If a property gets designated as a historic landmark, it's protected forever and can never be demolished."

Fact: Landmark designation ensures a more thorough review of demolition proposals, but it does not prohibit demolition outright. In the City of Los Angeles, designation as a City historic landmark (Historic-Cultural Monument) allows the City's Cultural Heritage Commission to object to the issuance of a demolition permit, but only for 180 days. The City Council may then extend the objection to demolition for an additional 180 days.

Many East Coast cities, including New York, do actually prohibit demolition of their landmarks, but these cities also leave an exception for cases of demonstrated economic hardship. Even listing in the National Register of Historic Places, which sounds more elevated than "mere" local listing, does not provide for more iron-clad protection.

Although demolition of a designated landmark in California additionally requires preparation of an Environmental Impact Report to assess the feasibility of alternatives to demolition, a truly determined property owner may be able to obtain approval to destroy even our most cherished landmarks.

Myth #2: "Historic designation will reduce my property values."

Fact: Study after study across the nation has conclusively demonstrated that historic designation and the creation of historic districts actually increase property values. Why? In part, historic designation gives a neighborhood or an individual historic site a caché that sets it apart from ordinary properties. Many buyers seek out the unique qualities and ambiance of a historic property. Historic district designation gives potential homebuyers two rare and economically valuable assurances: that the very qualities that attracted them to their neighborhood will actually endure over time, and that they can safely reinvest in sensitive improvements to their home without fear that their neighbor will undermine this investment with a new "monster home" or inappropriate new development.

Myth #3: "If my property is designated as a historic site, I won't be able to change it in any way, and I don't want my property to become like a museum."

Fact: Owners of designated historic structures may make very significant changes to their structures. Historic preservation laws, at their essence, are not meant to prevent change,

but, rather, to manage change. The tool to manage change is the Secretary of Interior s' Standards for Rehabilitation, the nationally accepted benchmark for evaluating changes to historic structures.

The Standards don t require that every element of a historic site remain intact: you need not keep every doorknob! However, the most significant, or "character-defining," historic elements of a property should be retained. New additions to the historic property are allowed, but should be compatible with the site s historic architecture. The Standards urge the repair of deteriorated historic features, but do allow for replacement where the severity of deterioration leaves no other option.

Myth #4: "Preservation is only for the rich and elite, and for high-style buildings."

Fact: Historic preservation isn t just about house museums anymore. Today s' preservation movement is increasingly diverse: here in Los Angeles, the two newest Historic Preservation Overlay Zones (HPOZs) are in Pico-Union and Lincoln Heights, home to economically and ethnically varied populations.

Preservation today also focuses not just on grandiose architectural landmarks, but on more modest sites of social and cultural significance. Just look at the small Ralph J. Bunche House in South Los Angeles, boyhood home of the pioneering African-American diplomat, and Little Tokyo s Far East Café, a beloved gathering place for the city s' Japanese-American community both recently restored. Or, consider a current preservation effort to save the modest Vladeck Center, a Boyle Heights building that was the center of the Jewish labor and immigrant resettlement movements of the 1930s. Such sites underscore that preservation can be about the "power of place" found at sites containing rich social and cultural meaning.

Myth #5: "Historic preservation is bad for business."

Fact: Historic preservation is at the very heart of our nation s most vibrant economic development and business attraction programs. From Southern California examples such as Old Pasadena or San Diego s Gaslamp Quarter, to traditional, historic southern cities such as Charleston or Savannah, to the recent boom in "heritage tourism," today s' economic development strategies no longer see preservation and business development as competing values.

The National Main Street Center, a program that uses historic preservation to revitalize town centers and neighborhood commercial districts, has actually tracked economic results in 1,700 Main Street communities nationally. These preservation-based programs have created over 231,000 new jobs and resulted in over $17 billion in reinvestment to date, with every dollar spent on a Main Street program yielding $40 in economic reinvestment.

Myth #6: Preservation is more expensive than new construction

This is certainly true at times, but, in fact, historic preservation is typically more cost effective than new construction. Why? Historic buildings certainly do sometimes need upgrades, but these are usually less expensive than the costs of building all-new foundations, structural systems, roofs and building finishes.

The National Trust for Historic Preservation reports that in Chicago, where the public school system is now spending $2.5 billion to upgrade facilities, bare-bones new construction is costing $155 per square foot -- but renovation is costing just $130.

Here in Los Angeles, the State of California learned the potential savings from historic preservation in comparing the construction of two State Office Buildings: the new Ronald Reagan State Office Building on Spring Street at 3rd St., and the Junipero Serra State Office Building just two blocks away on Broadway at 4th St., in the renovated former flagship location of the Broadway Department Store. The historic renovation not only reused and reinvigorated an important landmark from 1914, but it saved taxpayers money by delivering office space at about half the cost per square of the all-new Reagan building just a few years before.

Myth #7: If I buy a historic property, there s lots of government money available to help me fix it up

While it doesn t necessarily cost more to renovate a historic structure than to build anew, few large government or foundation grants are available to owners of historic properties, and even those few typically limit eligibility to government agencies or non-profits.

What **is** available tends to be tax incentives for private owners of historic buildings. Owners of sites listed in or eligible for the National Register of Historic Places may take advantage of a Federal Rehabilitation Tax Credit that provides a 20% tax offset for the cost of rehabilitation. National Register properties are also eligible to benefit from "conservation easements" - binding legal agreements with preservation organizations such as the Los Angeles Conservancy that can allow owners to claim a charitable deduction on their Federal income taxes. Finally, the State s Mills Act program, implemented by local governments throughout the State, including Los Angeles, allows historic property owners to take often-significant property tax reductions.

Myth #8: Old buildings are less safe

Although historic structures do sometimes require structural retrofits or the addition of fire sprinklers to enhance their safety, historic buildings typically perform better than newer construction in earthquakes and other natural disasters. What determines the safety of buildings is the quality of construction, not age, and, in many ways, "they just don t build em like they used to."

Los Angeles "signature historic structures have survived every major temblor of the past eight decades. Yet, in the 1994 Northridge earthquake, the most catastrophic damage occurred not to historic buildings but to newer construction such as parking garages, concrete tilt-up buildings, and newer apartments with "tuck-under" parking.

Myth #9: Preservation is an un-American violation of property rights

Historic preservation laws no more infringe on property rights than do many other laws and private rules that Americans have long accepted. Though everyone likes to believe "my home is my castle and I can do whatever I want," this statement simply doesn't reflect reality. Zoning laws prevent you from replacing your single-family home with an apartment building or a five-story vertical mansion. We should all be happy that such laws prevent our neighbor from putting a landfill or a skyscraper behind our back fence.

If you live in a condominium (or an Orange County gated community), your property rights are limited by Covenants, Conditions, and Restrictions (CC & Rs), documents that can legally prevent you from owning a pet, washing a car in your driveway, or having a basketball hoop over the garage. CC &R's restrictions are far more onerous than historic preservation laws, yet are commonly accepted even by vocal property rights advocates.

Myth #10: Preservationists are always fighting new development and only care about the past

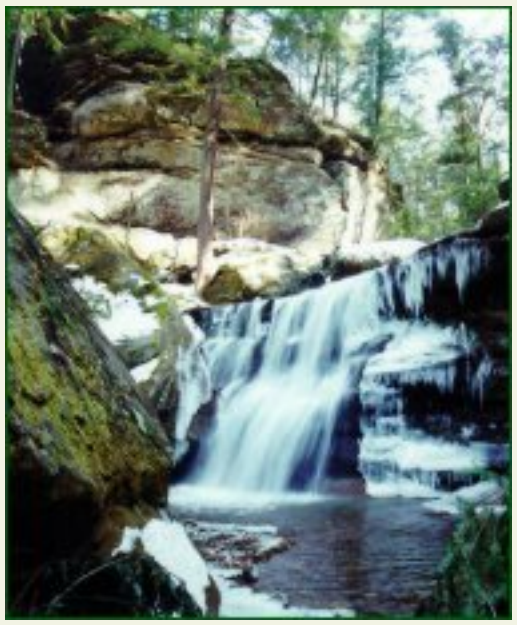
Historic preservationists do care deeply about the past -- generally not just to wallow sentimentally in a bygone era, but as a way of anchoring ourselves as we move forward confidently into the future. Historic preservation is not about stopping change and is certainly not about squeezing out creative and exciting new architecture and development. Preservation allows us to retain the best of shared heritage to preserve sites of unique quality and beauty, revitalize neighborhoods, spur economic revitalization, and, quite simply, create better communities.

Ken Bernstein is Director of Preservation Issues for the Los Angeles Conservancy.

CALIFORNIA - San Bernardino County

A. K. Smiley Public Library (added 1976 - - #76000513)
125 W. Vine St. , Redlands

Historic Significance:	Event, Architecture/Engineering
Architect, builder, or engineer:	Donald,Davis, Griffith,T.R.
Architectural Style:	Other, Mission/Spanish Revival, Late Victorian
Area of Significance:	Art, Education, Architecture
Period of Significance:	1925-1949, 1900-1924, 1875-1899
Owner:	**Local**
Historic Function:	Education
Historic Sub-function:	Library
Current Function:	Education
Current Sub-function:	Library



The Hocking Hills
Geological History
on Display

Aiken's Wash National Register District (added 1982 - - #82002239)
Also known as **Upper Forks;Metate Cliff;The Dikes;Aiken's Cove;Aiken's Tank**
Address Restricted , Baker

Historic Significance:	Information Potential
Area of Significance:	Art, Science, Education, Prehistoric
Cultural Affiliation:	California Indians
Period of Significance:	1000-500 AD
Owner:	**Federal**
Historic Function:	Recreation And Culture
Historic Sub-function:	Work Of Art (Sculpture, Carving, Rock Art)
Current Function:	Education, Government

Archeological Site CA SBR 3186 (added 1981 - - #81000170)
Also known as **Aboriginal Rock Cairn Complex**
Address Restricted , Silver Lake

Historic Significance:	Information Potential
Area of Significance:	Prehistoric
Cultural Affiliation:	Shoshonean, Yuman

Period of Significance: 6500-6999 BC
Owner: **Federal**
Historic Function: Funerary
Historic Sub-function: Graves/Burials
Current Function: Other

Archeological Site CA-SBR-140 (added 2003 - - #03000119)
Also known as **CA-SBR-140**
Address Restricted , Baker

Historic Significance: Information Potential, Architecture/Engineering
Architectural Style: Other
Area of Significance: Prehistoric
Cultural Affiliation: Paleo-Indian, Early Archaic, Mojave Lake; Silver Lake
Period of Significance: 9000-9999 BC, 8500-8999 BC, 8000-8499 BC, 7500-7999 BC, 7000-7499 BC, 1000 AD-999 BC
Owner: **Federal**
Historic Function: Domestic
Historic Sub-function: Camp
Current Function: Landscape
Current Sub-function: Unoccupied Land

Archeological Site No. D-4 (added 1985 - - #85003435)
Also known as **D-4**
Address Restricted , Needles

Historic Significance: Information Potential, Architecture/Engineering
Area of Significance: Art, Prehistoric
Cultural Affiliation: Native American
Period of Significance: 3000-4999 BC, 1000-2999 BC
Owner: **Private**
Historic Function: Domestic
Historic Sub-function: Camp
Current Function: Landscape

Archeological Site No. D-6 (added 1985 - - #85003578)
Also known as **4SBr1077;AZ-050-0192;RC-04,RC-05;SBCM-3069**
Address Restricted , Needles

Historic Significance: Information Potential, Architecture/Engineering
Area of Significance: Art, Prehistoric
Cultural Affiliation: Prehistoric Native American
Period of Significance: 1499-1000 AD
Owner: **Private**
Historic Function: Recreation And Culture
Historic Sub-function: Work Of Art (Sculpture, Carving, Rock Art)

Current Function:	Landscape
Current Sub-function:	Unoccupied Land

Archeological Site No. E-21 (added 1985 - - #85003430)
Also known as **E-21**
Address Restricted , Parker

Historic Significance:	Information Potential, Architecture/Engineering
Area of Significance:	Art, Prehistoric
Cultural Affiliation:	Native American
Period of Significance:	3000-4999 BC, 1000-2999 BC
Owner:	**Private**
Historic Function:	Domestic
Historic Sub-function:	Camp
Current Function:	Landscape

Arrowhead, The (added 1974 - - #74002357)
N of San Bernardino , San Bernardino

Owner:	**Federal**

Atchison, Topeka and Santa Fe Railway Passenger and Freight Depot (added 2001 - - #01000025)
Also known as **San Bernardino Santa Fe Depot**
1170 W. 3rd St. , San Bernardino

Historic Significance:	Architecture/Engineering
Architect, builder, or engineer:	Cresmer, Manufacturing Co., Mohr, W.A.
Architectural Style:	Mission/Spanish Revival
Area of Significance:	Architecture
Period of Significance:	1900-1924
Owner:	**Local**
Historic Function:	Commerce/Trade, Transportation
Historic Sub-function:	Rail-Related, Restaurant
Current Function:	Transportation
Current Sub-function:	Rail-Related

Barton Villa (added 1996 - - #96001176)
Also known as **Barton Housr;Barton Ranch**
11245 Nevada St. , Redlands

Historic Significance:	Person
Historic Person:	Barton, Dr. Ben
Area of Significance:	Exploration/Settlement
Period of Significance:	1875-1899, 1850-1874
Owner:	**Local**
Historic Function:	Domestic
Historic Sub-function:	Secondary Structure, Single Dwelling
Current Function:	Vacant/Not In Use

Beale Slough Figures (added 1984 - - #84004030)
Also known as **Site D-9**
Address Restricted , Needles

Owner: **Federal**

Beverly Ranch (added 2004 - - #04000018)
Also known as **Fisk House**
923 W. Fern Ave. , Redlands

Historic Significance:	Architecture/Engineering
Architect, builder, or engineer:	Bishop, Corydon B., Donald, Daniel M.
Architectural Style:	Queen Anne
Area of Significance:	Community Planning And Development
Period of Significance:	1900-1924, 1875-1899
Owner:	**Private**
Historic Function:	Agriculture/Subsistence, Domestic
Historic Sub-function:	Agricultural Fields, Irrigation Facility, Single Dwelling
Current Function:	Agriculture/Subsistence, Domestic, Vacant/Not In Use
Current Sub-function:	Agricultural Fields, Single Dwelling

Bitter Spring Archaeological Site (4-SBr-2659) (added 1982 - - #82000981)
Also known as **4-SBr-2659**
Address Restricted , Barstow

Historic Significance:	Information Potential
Area of Significance:	Military, Historic - Non-Aboriginal, Historic - Aboriginal, Prehistoric
Cultural Affiliation:	Paleo-Indian, Shoshonean, Multiple
Period of Significance:	9000-10999 BC, 7000-8999 BC, 5000-6999 BC, 3000-4999 BC, 1900-1750 AD, 1749-1500 AD, 1499-1000 AD, 1000-2999 BC, 1000 AD-999 BC
Owner:	**Federal**
Historic Function:	Defense, Domestic
Historic Sub-function:	Battle Site, Camp
Current Function:	Defense, Landscape
Current Sub-function:	Underwater

Black Canyon--Inscription Canyon--Black Mountain Rock Art District (added 2000 - - #00001046)
Address Restricted , Hinkley

Historic Significance:	Information Potential, Architecture/Engineering
Area of Significance:	Religion, Prehistoric, Historic - Aboriginal, Art
Cultural Affiliation:	Early Archaic, et al., Late Prehistoric, Paleoindian

Period of Significance: 7000-8999 BC, 5000-6999 BC, 3000-4999 BC, 1900-1750 AD, 1749-1500 AD, 1499-1000 AD, 1000-2999 BC, 1000 AD-999 BC
Owner: **Federal**
Historic Function: Agriculture/Subsistence, Domestic, Industry/Processing/Extraction, Recreation And Culture, Religion
Historic Sub-function: Ceremonial Site, Hotel, Processing Site, Work Of Art (Sculpture, Carving, Rock Art)
Current Function: Landscape
Current Sub-function: Unoccupied Land

Blackwater Well (added 2000 - - #00001326)
Also known as **Blackwater Well Archeological District**
Address Restricted , Red Mountains

Historic Significance: Information Potential
Area of Significance: Prehistoric, Historic - Aboriginal
Cultural Affiliation: Great Basin Archaic, Late Prehistoric, Kawaiisu/Numic
Period of Significance: 1900-1750 AD, 1749-1500 AD, 1499-1000 AD, 1000-2999 BC, 1000 AD-999 BC
Owner: **Federal**
Historic Function: Agriculture/Subsistence, Domestic, Industry/Processing/Extraction
Historic Sub-function: Camp, Processing, Processing Site
Current Function: Landscape
Current Sub-function: Unoccupied Land

Bono's Restaurant and Deli (added 2008 - - #07001353)
15395 Foothill Blvd. , Fontana

Historic Significance: Event
Area of Significance: Transportation, Social History
Period of Significance: 1950-1974, 1925-1949
Owner: **Private**
Historic Function: Commerce/Trade
Historic Sub-function: Restaurant, Specialty Store
Current Function: Commerce/Trade
Current Sub-function: Restaurant, Specialty Store

CA SBr 1008A, CA SBr 1008B, CA SBr 1008C (added 1982 - - #82002241)
Also known as **Steam Well Petroglyphs Site**
Address Restricted , Johannesburg

Historic Significance: Information Potential, Event
Area of Significance: Art, Prehistoric, Social History, Religion
Cultural Affiliation: American Indian
Period of Significance: 1749-1500 AD, 1499-1000 AD

Owner: **Federal**
Historic Function: Recreation And Culture
Historic Sub-function: Work Of Art (Sculpture, Carving, Rock Art)
Current Function: Recreation And Culture
Current Sub-function: Work Of Art (Sculpture, Carving, Rock Art)

Cajon Pass Camp Site (added 1976 - - #76002306)
Address Restricted , San Bernardino

Calico Mountains Archeological District (added 1973 - - #73000430)
Address Restricted , Yermo

Historic Significance: Information Potential, Event
Area of Significance: Conservation, Education, Prehistoric
Cultural Affiliation: American Indian
Period of Significance: 1900-1750 AD, 1749-1500 AD
Owner: **Federal**
Historic Function: Domestic
Historic Sub-function: Village Site
Current Function: Education, Recreation And Culture
Current Sub-function: Museum

California Theatre, The (added 2009 - - #09001116)
Also known as **The California Theatre of the Performing Arts**
562 W. 4th St. , San Bernardino

Historic Significance: Event
Area of Significance: Entertainment/Recreation
Period of Significance: 1950-1974, 1925-1949
Owner: **Local**
Historic Function: Recreation And Culture, Social
Historic Sub-function: Auditorium, Civic, Music Facility, Theater
Current Function: Recreation And Culture
Current Sub-function: Auditorium, Music Facility, Theater

Camp Rock Spring (added 1982 - - #82005147)
Address Restricted , Ivanpah

Owner: **Federal**

Carnegie Public Library Building (added 1988 - - #88000894)
Also known as **City of Colton Public Library**
380 N. La Cadena Dr. , Colton

Historic Significance: Event, Architecture/Engineering

Architect, builder, or engineer:	Burnham,Franklin P., Kaiser & Loomis
Architectural Style:	Classical Revival
Area of Significance:	Social History, Architecture
Period of Significance:	1925-1949, 1900-1924
Owner:	**Local**
Historic Function:	Education, Health Care, Religion, Social
Historic Sub-function:	Clubhouse, Library, Meeting Hall, Religious Structure
Current Function:	Recreation And Culture
Current Sub-function:	Museum

Cow Camp (added 1975 - - #75000228)
SW of Twentynine Palms in Joshua Tree National Monument , Twentynine Palms

Historic Significance:	Event
Area of Significance:	Agriculture
Period of Significance:	1925-1949, 1900-1924, 1875-1899
Owner:	**Federal**
Historic Function:	Agriculture/Subsistence
Historic Sub-function:	Animal Facility
Current Function:	Landscape
Current Sub-function:	Park

Crowder Canyon Archeological District (added 1976 - - #76000514)
Also known as **Crowder Canyon**
Address Restricted , San Bernardino

Historic Significance:	Information Potential, Event
Area of Significance:	Science, Prehistoric
Cultural Affiliation:	American Indian
Period of Significance:	500-999 BC, 1000-500 AD, 1000-1499 BC
Owner:	**Federal**
Historic Function:	Domestic
Historic Sub-function:	Village Site
Current Function:	Education, Transportation

El Garces (added 2002 - - #02000537)
Also known as **Needles Atchison, Topeka & Santa Fe Depot**
950 Front St. , Needles

Historic Significance:	Event, Architecture/Engineering
Architect, builder, or engineer:	Wilson, Francis W.
Architectural Style:	Classical Revival
Area of Significance:	Commerce, Transportation, Architecture
Period of Significance:	1925-1949, 1900-1924
Owner:	**Local**
Historic Function:	Commerce/Trade, Transportation
Historic Sub-function:	Rail-Related, Restaurant

	Current Function: Vacant/Not In Use

	Euclid Avenue (added 2005 - - #05000843) Also known as **CA 83** From 24th St. in Upland to Philadelphia St. in Ontario , Ontario
	Historic Significance: Event, Architecture/Engineering Architect, builder, or engineer: Frankish, Charles, Chaffey, George Jr. and W.B, Area of Significance: Landscape Architecture, Community Planning And Development, Social History Period of Significance: 1925-1949, 1900-1924, 1875-1899 Owner: **Local** , **Private** Historic Function: Landscape, Transportation Historic Sub-function: Plaza, Rail-Related, Road-Related Current Function: Landscape, Transportation Current Sub-function: Plaza, Road-Related

	Euclid Avenue (added 2005 - - #05000843) Also known as **CA 83** From 24th St. in Upland to Philadelphia St. in Ontario , Upland
	Historic Significance: Event, Architecture/Engineering Architect, builder, or engineer: Frankish, Charles, Chaffey, George Jr. and W.B, Area of Significance: Landscape Architecture, Community Planning And Development, Social History Period of Significance: 1925-1949, 1900-1924, 1875-1899 Owner: **Local** , **Private** Historic Function: Landscape, Transportation Historic Sub-function: Plaza, Rail-Related, Road-Related Current Function: Landscape, Transportation Current Sub-function: Plaza, Road-Related

	First Christian Church of Rialto (added 2003 - - #03000037) 201 N. Riverside Ave. , Rialto
	Historic Significance: Architecture/Engineering Architect, builder, or engineer: Patterson, H.M. Architectural Style: Late Gothic Revival Area of Significance: Architecture Period of Significance: 1900-1924 Owner: **Local** Historic Function: Religion Historic Sub-function: Religious Structure Current Function: Recreation And Culture Current Sub-function: Museum

	Fontana Farms Company Ranch House, Camp No. 1 (added 1982 - - #82000982)

Also known as **Pepper Street House**
8863 Pepper St. , Fontana

Historic Significance:	Architecture/Engineering, Event
Architect, builder, or engineer:	Fontana Development Company
Architectural Style:	No Style Listed
Area of Significance:	Exploration/Settlement, Architecture
Period of Significance:	1900-1924
Owner:	**Private**
Historic Function:	Domestic
Historic Sub-function:	Single Dwelling
Current Function:	Recreation And Culture
Current Sub-function:	Museum

Fontana Pit and Groove Petroglyph Site (added 1980 - - #80000838)
Also known as **CA-SBr-716**
Address Restricted , Fontana

Historic Significance:	Information Potential, Architecture/Engineering
Area of Significance:	Art, Prehistoric
Cultural Affiliation:	Pomo
Period of Significance:	1749-1500 AD, 1499-1000 AD
Owner:	**Private**
Historic Function:	Recreation And Culture
Historic Sub-function:	Work Of Art (Sculpture, Carving, Rock Art)
Current Function:	Recreation And Culture
Current Sub-function:	Work Of Art (Sculpture, Carving, Rock Art)

Fossil Canyon Petroglyph Site (added 2003 - - #02000980)
Address Restricted , Barstow

Foxtrot Petroglyph Site (added 1995 - - #95000044)
Also known as **CA-SBR-161**
Address Restricted , Twentynine Palms

Historic Significance:	Information Potential
Area of Significance:	Prehistoric, Historic - Aboriginal
Cultural Affiliation:	Shoshonean, Desert Archaic, Patayan
Period of Significance:	5000-6999 BC, 500-999 BC, 499-0 BC, 499-0 AD, 3000-4999 BC, 1900-1750 AD, 1749-1500 AD, 1499-1000 AD, 1000-500 AD, 1000-2999 BC, 1000 AD-999 BC
Owner:	**Federal**
Historic Function:	Religion
Historic Sub-function:	Ceremonial Site
Current Function:	Defense
Current Sub-function:	Military Facility

Frankish Building (added 1980 - - #80000839)
200 S. Euclid Ave. , Ontario

Historic Significance:	Event, Architecture/Engineering
Architect, builder, or engineer:	Frankish,Charles
Architectural Style:	Other, Renaissance
Area of Significance:	Architecture, Community Planning And Development, Commerce
Period of Significance:	1900-1924
Owner:	**Private**
Historic Function:	Commerce/Trade, Domestic, Government
Historic Sub-function:	Business, Multiple Dwelling, Post Office
Current Function:	Commerce/Trade
Current Sub-function:	Business

Goffs Schoolhouse (added 2001 - - #01001102)
37198 Lanfair Rd. , Goffs

Historic Significance:	Event
Area of Significance:	Education, Military, Social History
Period of Significance:	1925-1949, 1900-1924
Owner:	**Private**
Historic Function:	Defense, Education, Social
Historic Sub-function:	Meeting Hall, Military Facility, School
Current Function:	Recreation And Culture
Current Sub-function:	Museum

Harvey House Railroad Depot (added 1975 - - #75000458)
Also known as **Casa Del Desierto**
Santa Fe Depot , Barstow

Historic Significance:	Event, Architecture/Engineering
Architect, builder, or engineer:	Coulter,Mary E.J.
Architectural Style:	Other
Area of Significance:	Architecture, Transportation, Engineering, Industry
Period of Significance:	1900-1924
Owner:	**Local** , **Private**
Historic Function:	Commerce/Trade, Transportation
Historic Sub-function:	Rail-Related, Restaurant
Current Function:	Vacant/Not In Use

Highland Historic District (added 2001 - - #01000333)
Roughly bounded by Cole and Nona Ave., Pacific and Church Sts. , Highland

Historic Significance:	Architecture/Engineering, Event
Architect, builder, or engineer:	Benton, Arthur B.
Architectural Style:	Bungalow/Craftsman, Queen Anne
Area of Significance:	Exploration/Settlement, Architecture, Transportation, Agriculture

Period of Significance: 1925-1949, 1900-1924, 1875-1899
Owner: **Local** , **Private**
Historic Function: Agriculture/Subsistence, Commerce/Trade, Domestic, Religion, Transportation
Historic Sub-function: Financial Institution, Processing, Rail-Related, Religious Structure, Single Dwelling
Current Function: Domestic, Industry/Processing/Extraction, Religion, Vacant/Not In Use
Current Sub-function: Manufacturing Facility, Religious Structure, Single Dwelling

Hofer Ranch (added 1993 - - #93000596)
Also known as **Ballou Ranch, Ben Haven**
11248 S. Turner Ave. , Ontario

Historic Significance: Architecture/Engineering, Event
Architect, builder, or engineer: Multiple
Architectural Style: Other
Area of Significance: Agriculture, Architecture
Period of Significance: 1925-1949, 1900-1924, 1875-1899
Owner: **Private**
Historic Function: Agriculture/Subsistence, Domestic
Historic Sub-function: Agricultural Fields, Agricultural Outbuildings, Single Dwelling
Current Function: Agriculture/Subsistence, Domestic
Current Sub-function: Agricultural Fields, Agricultural Outbuildings, Single Dwelling

Indian Rock Art Site (4SBR161) (added 1978 - - #78003511)
Also known as **4SBR161**
Address Restricted , Twentynine Palms

Owner: **Federal**

Iron Mountain Divisional Camp (added 2003 - - #03000114)
CA 62 , Iron Mountain Pumping Plant

Historic Significance: Information Potential, Architecture/Engineering, Event, Person
Architect, builder, or engineer: U.S. Army
Architectural Style: No Style Listed
Historic Person: Patton, Maj.Gen. George S. Jr.
Significant Year: 1942, 1944
Area of Significance: Military
Period of Significance: 1925-1949
Owner: **Federal**
Historic Function: Defense
Historic Sub-function: Military Facility
Current Function: Vacant/Not In Use

Iron Mountain Divisional Camp (added 1980 - - #80004626)
CA 62 , Cading

Owner: **Federal**

Kelso Depot, Restaurant and Employees Hotel (added 2001 - - #01000760)
Also known as **Kelso Depot**
Kelbaker Rd., jct. of Kelbaker and Cima Rds. at Union Pacific Railroad crossing , Kelso

Historic Significance:	Event, Architecture/Engineering
Architect, builder, or engineer:	Los Angeles and Salt Lake R.R.
Architectural Style:	Mission/Spanish Revival
Area of Significance:	Architecture, Community Planning And Development, Transportation, Engineering, Industry
Period of Significance:	1950-1974, 1925-1949, 1900-1924
Owner:	**Federal**
Historic Function:	Commerce/Trade, Domestic, Transportation
Historic Sub-function:	Institutional Housing, Rail-Related, Restaurant, Road-Related
Current Function:	Vacant/Not In Use

Keys Desert Queen Ranch (added 1975 - - #75000174)
Also known as **McHaney Ranch;Bill Key's Ranch**
SW of Twentynine Palms in Joshua Tree National Monument , Twentynine Palms

Historic Significance:	Person, Event
Historic Person:	Keys,William F.
Significant Year:	1969, 1894
Area of Significance:	Agriculture, Industry
Period of Significance:	1950-1974, 1925-1949, 1900-1924, 1875-1899
Owner:	**Federal**
Historic Function:	Agriculture/Subsistence, Domestic, Industry/Processing/Extraction
Historic Sub-function:	Animal Facility, Manufacturing Facility, Secondary Structure, Single Dwelling
Current Function:	Landscape, Recreation And Culture
Current Sub-function:	Museum, Park

Kimberly Crest (added 1996 - - #96000328)
1325 Prospect Dr. , Redlands

Historic Significance:	Architecture/Engineering, Person
Architect, builder, or engineer:	Dennis, O.P., et al., Farwell, L.P., et al.
Architectural Style:	Other, Late 19th And 20th Century Revivals
Historic Person:	Kimberly, Helen Cheney
Significant Year:	1908, 1897

Area of Significance: Architecture, Landscape Architecture, Social History, Education
Period of Significance: 1925-1949, 1900-1924, 1875-1899
Owner: **Private**
Historic Function: Agriculture/Subsistence, Domestic, Landscape
Historic Sub-function: Agricultural Fields, Garden, Secondary Structure, Single Dwelling
Current Function: Agriculture/Subsistence, Landscape, Recreation And Culture
Current Sub-function: Agricultural Fields, Garden, Museum

Lake Havasu Site (added 1984 - - #84004034)
Also known as **Site D-10**
Address Restricted , Needles

Owner: **Federal**

Maloof, Sam and Alfreda, Compound (added 2003 - - #03000471)
5131 Carnelian St. , Alta Loma

Historic Significance: Architecture/Engineering, Person
Architect, builder, or engineer: Maloof, Sam
Architectural Style: Other
Historic Person: Maloof, Sam
Significant Year: 1956
Area of Significance: Art, Architecture
Period of Significance: 1975-2000, 1950-1974
Owner: **Private**
Historic Function: Commerce/Trade, Domestic, Industry/Processing/Extraction
Historic Sub-function: Manufacturing Facility, Single Dwelling, Specialty Store
Current Function: Commerce/Trade, Domestic, Industry/Processing/Extraction, Recreation And Culture
Current Sub-function: Manufacturing Facility, Museum, Single Dwelling, Specialty Store

Mill Creek Zanja (added 1977 - - #77000329)
Also known as **The Sankey;Zanja**
Sylvan Blvd. E to Mill Creek Rd. , Redlands and

Historic Significance: Event
Area of Significance: Agriculture, Engineering, Social History
Period of Significance: 1900-1924, 1875-1899, 1850-1874, 1825-1849, 1800-1824
Owner: **Local** , **Private**
Historic Function: Industry/Processing/Extraction
Historic Sub-function: Water Works
Current Function: Agriculture/Subsistence, Industry/Processing/Extraction,

	Landscape Current Sub-function: Park, Water Works

	Moyse Building (added 1979 - - #79000522) Also known as **The Gray Building** 13150 7th St. , Chino
	Historic Significance: Event Area of Significance: Exploration/Settlement Period of Significance: 1875-1899 Owner: **Private** Historic Function: Commerce/Trade, Government Historic Sub-function: Department Store, Post Office Current Function: Vacant/Not In Use

	Newberry Cave Archeological Site (4SBR199) (added 1983 - - #83004699) Also known as **4SBR199** Address Restricted , Barstow
	Owner: **Federal**

	Newberry Cave Site (added 2000 - - #00001325) Also known as **CA-199** Address Restricted , Newberry Springs
	Historic Significance: Architecture/Engineering, Information Potential Area of Significance: Art, Prehistoric, Religion Cultural Affiliation: Gypsum Period Period of Significance: 500-999 BC, 499-0 BC, 499-0 AD, 1500-1999 BC, 1000-1499 BC Owner: **Federal** Historic Function: Domestic, Recreation And Culture, Religion Historic Sub-function: Camp, Ceremonial Site, Work Of Art (Sculpture, Carving, Rock Art) Current Function: Landscape Current Sub-function: Unoccupied Land

	Old San Antonio Hospital (added 1980 - - #80000840) 792 W. Arrow Hwy. , Upland
	Historic Significance: Person, Event, Architecture/Engineering Architect, builder, or engineer: Hunt,Myron, Hammil Construction Architectural Style: No Style Listed Historic Person: Craig,Dr. William,et al. Significant Year: 1907 Area of Significance: Architecture, Health/Medicine, Social History Period of Significance: 1900-1924 Owner: **Private**

Historic Function:	Commerce/Trade, Education, Health Care, Recreation And Culture
Historic Sub-function:	College, Hospital, Outdoor Recreation, Specialty Store
Current Function:	Religion
Current Sub-function:	Religious Structure

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Report on

Historic Preservation and Sustainability

SUMMARY REPORT

Prepared for:

Washington State

Department of Archeology and Historic Preservation

Prepared by:

Assistant Professor Kathryn Rogers Merlino

Department of Architecture

University of Washington

September 2011

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ii. INTRODUCTION

In the past several years, issues surrounding climate change and sustainability have been at the forefront of national and global agendas. Reducing energy consumption and greenhouse gas emissions (GHG) is an essential part of reducing the impacts human development has had on our natural ecosystems and human health. For the building industry this is a critical time, for the amount of energy consumption and GHG emissions from buildings is staggering. In terms of raw material extraction and land use, the construction industry has the greatest impact of any sector.[1] As a result, the building industry has been advancing towards its goals of 'green' building for the past two decades in order to reduce the impact on our environment and natural resources.

The concept of sustainability has long been embedded in the practice of historic preservation. Preservation and reuse of historic buildings reduces resource and material consumption, puts less waste in landfills and consumes less energy than demolishing buildings and constructing new ones. Over the past decade, advances in high performance or "green" buildings have been numerous, but primarily have focused on new construction. As a result, the preservation and adaptability of historic and older buildings has not always been at the forefront of the 'green' movement agenda. However, preservationists have long championed stewardship of our most important built resources, and have promoted how the repair and maintenance of historic buildings can support a variety of uses for generations to come. Historic buildings, often energy efficient from inherent characteristics, can be upgraded with new technologies to maximize energy performance. Historic features, such as windows, can be repaired and restored for higher efficiency. It has been said that the greenest building already exists, as our historic buildings represent existing, durable resources that can be reused for generations. In addition to saving existing resources and historic character, historic preservation means environmental, cultural and economic benefits for Washington communities.

This study was initiated by the Washington State Department of Archeology and Historic Preservation (DAHP), and was carried out by faculty and graduate students at the University of Washington's Department of Architecture. This effort was supported by the ideas and suggestions of an advisory panel that consisted of architects, planners, historic preservationists, energy consultants and related professionals, all with the interest and experience of sustainable construction and historic preservation. The goal of the report was to disseminate information to property owners, policy makers, architects, planners, preservationists, developers and other interested parties on the critical relationship between historic preservation and sustainability. The report is intended to initiate the discussion of historic preservation as a sustainable act, and to build upon

[1] UNEP, "Buildings and Climate Change: Status, Challenges and Opportunities.," (United Nations Environment Programme, 2007). Available at: http://www.unep.org/publications/search/pub_details_s.asp?ID=3934

current research that supports these goals. The report concludes that rather than demolishing and replacing historic buildings, it is better to reuse, repair and maintain them. It also takes on key issues of sustainable preservation, as well as suggests strategies for reducing energy consumption in historic rehabilitation projects. By reducing our resource consumption in buildings, reducing our landfill impact from new construction and demolition waste and upgrading our historic buildings to new energy efficient technologies, historic preservation in Washington State means environmental, cultural and economic benefit for our shared human and ecological future.

iii. EXECUTIVE SUMMARY

Historic Preservation and Sustainability in Washington State

HISTORIC PRESERVATION AND SUSTAINABILITY ARE NATURAL PARTNERS.

Preservation and reuse of historic buildings reduces resource and material consumption, puts less waste in landfills and consumes less energy than demolishing buildings and constructing new ones. Over the past decade, advances in high performance or "green" buildings have been numerous, but primarily have focused on new construction. As a result, the preservation and adaptability of historic and older buildings has not always been at the forefront of the 'green' movement agenda. However, this is changing. Historic buildings, often energy efficient from inherent characteristics, can be upgraded with new technologies to maximize energy performance. Historic features, such as windows can be repaired and restored for higher efficiency. In addition to saving existing resources and historic character, historic preservation means environmental, cultural and economic benefits for Washington communities.

BUILDINGS CONSUME ENORMOUS AMOUNTS OF OUR RESOURCES.

In the United States, 43% of carbon emissions and 40% of total energy use is attributed to the construction and operation of buildings[2]. The environmental impact of buildings is even more significant when we take into consideration the greenhouse gas emissions associated with manufacturing building materials and products. As a key element in sustainable development, the preservation, reuse and "greening" of existing historic buildings present excellent opportunities to reduce our nation's energy consumption and carbon emissions.

HISTORIC BUILDINGS ARE A VALUABLE, EXISTING RESOURCE.

A study conducted in 2004 by the Brookings Institution reported that if we continue with national trends of development, by 2030 we will have demolished and rebuilt nearly one-third of our entire building stock – a staggering total of 82 billion square feet.[3] The energy required to do so would power the entire state of California – 37 million people – for an entire decade. Demolishing and rebuilding takes vast amounts of energy and materials, both of which are increasingly in short supply.

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[2] United States Department of Energy, "Buildings Energy Data Book," (U.S. Department of Energy, 2008).

[3] Arthur C. Nelson, "Towards a New Metropolis: The Oppportunity to Rebuild America," (The Brookings Insitution Metropolitan Policy Program, 2004).

In addition, demolition and waste have profound adverse impacts on our landfills. Building-related construction and demolition (C&D) debris constitute about two-thirds of all non-industrial solid waste generation in the United States (US).[4] The average building demolition yields 155 pounds of waste per square foot while the average new construction project yields 3.9 pounds of waste per square foot of building area.[5] In Washington State, even with our 45% diversion rate into recycling, an estimated 1,383,998 tons of debris per year ends up in landfills, most of which comes from demolition and new construction projects. This averages an additional 2.2 pounds of garbage to our landfills per day per person in Washington.[6] When we reuse our historic buildings rather than replacing them, less debris ends up in our landfills and our environment is healthier.

PRESERVING HISTORIC BUILDINGS CONSERVES ENERGY AND RESOURCES.

Historic buildings have embodied energy in them that is lost if a building is demolished. Embodied energy is a measurement of energy used in the process of building, from the extraction of raw materials - such as harvesting trees - to the final installation of the finished material- such as framing lumber and carpentry. Embodied carbon represents the carbon emissions from the actual construction process. According to a study commissioned by the federal Advisory Council on Historic Preservation (ACHP), about 80 billion British Thermal Units (BTU) of energy are embodied in a typical 50,000 square-foot commercial building, the equivalent of about 640,000 gallons of gasoline.[7] If a building is demolished rather than reused, that expended energy and carbon is essentially wasted, and even more is expended for the demolition process and new construction.

Recent studies have successfully measured the impact of embodied energy and carbon and the implications to historic preservation. The United Nations Energy Programme estimates it takes 20 years of a typical building's 100 year operation just to offset the expenditure of its construction energy and materials.[8] Another report, focusing on the Grand Central Arcade in Seattle's Pioneer Square Historic District, concluded the embodied energy it would take to tear down the Arcade and reconstruct it to the same scale would be equal

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[4] Environmental Protection Agency, "Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2008," (2008).

[5] Linda Monroe, "Diverting Construction Waste," *Buildings* 2008.

[6] Washington State Department of Ecology, "Generation, Recyling and Per Capita Data (1986-2009)," (DOE, 2009).

[7] Allen & Hamilton Booz, "Assessing the Energy Conservation Benefits of Historic Preservation: Methods and Examples," (Advisory Council on Historic Preservation, 1979).

[8] UNEP, "Buildings and Climate Change: Status, Challenges and Opportunities.."

to 730,000 gallons of gasoline.[9] While embodied energy and carbon are only part of the picture, they represent tangible measurements of the value of buildings as an existing resource and how preservation contributes to a sustainable future.

HISTORIC BUILDINGS CAN BE ENERGY EFFICIENT, TOO

Buildings accounted for 72% of total U.S. electricity consumption in 2006 and it is predicted this number will rise to 75% by 2025. Fifty one percent of that total was attributed to residential building use, while 49 % was a result of commercial building use.[10] Although historic buildings are often dismissed as inefficient energy consumers, mounting evidence reaches different conclusions. For example, data from the U.S. Department of Energy (DOE) indicates that commercial buildings constructed before 1920 actually use less energy per square foot than buildings from any other decade up until 2000 (EIA, 2003).

WHY?

Many historic buildings were designed with passive systems before the invention of electric lighting and powered heating and cooling. As a result, these buildings were designed to take advantage of natural daylight, ventilation, and solar orientation- the very characteristics that are being used as "sustainable" design attributes today. In addition, historic structures often were constructed with traditional, durable materials such as concrete, wood, glass and steel. When properly maintained these materials can have a much longer lifespan. In both residential and commercial buildings, energy consumption is dominated by space heating, venting, air conditioning (HVAC) and lighting (DOE, 2008). In historic buildings - as well as new ones - using efficient technologies can reduce greenhouse gas emissions by reducing energy use.

REPAIR, RESTORE AND MAINTAIN - *NOT REPLACE* - YOUR HISTORIC WINDOWS, DOORS, SIDING, ETC.

Historic building components, particularly windows, are mistakenly regarded as one of the major sources of energy loss in buildings. However, the DOE concludes that only an average of 10% of energy loss in the average home is caused by windows. In fact, more energy is lost through plumbing openings and un-insulated ducts than through windows.[11] While it is often said that replacing old windows with new replacement windows will save energy, there is debate as to whether doing so in historic structures is either energy efficient or cost effective over time. Rehabilitating and maintaining historic windows with appropriate energy saving techniques can be an economical and effective energy-saving solution. This repair or

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[9] Patrice Frey, "Making the Case: Historic Preservation as Sutainable Development " (National Trust for Historic Preservation, 2007).

[10] Washington State Department of Energy, "2009 Biennial Energy Report with Indicators," (Department of Energy, 2009).

[11] United States Energy Information Agency, "Emissions of Greenhouse Gases Report," (U.S. Department of Energy, 2008).

rehabilitation not only reduces the disposal of the old windows into landfills, but also reduces new window manufacturing costs and effects on the environment. New or replacement windows, in comparison, last an average of 10 to 20 years. Their materials, such as glass, vinyl and aluminum, are not biodegradable or easily recycled. In addition, PVC (vinyl) windows are considered a toxic or "red" material by green building standards.[12] Therefore, keeping historic windows is both green and healthy for occupants, as well as the environment. Best of all, historic windows can last indefinitely if properly maintained.[13]

THE SECRETARY OF INTERIOR STANDARDS FOR REHABILITATION

For decades, the U.S. Secretary of Interior's Standards for Historic Rehabilitation (Standards) have provided guidance for appropriate rehabilitation of historic buildings that allow for updates and modern amenities while protecting historic design and building fabric. But with the introduction of energy efficiency measures and green building techniques, property owners have questioned whether historic buildings can be rehabilitated according to the Standards while at the same time increasing energy efficiency and meeting green building standards. The case studies featured in this report plus a growing body of historic rehabilitation work across the nation, clearly demonstrate that the Standards and green building technologies are compatible. While some of the principles set forth in the Standards may at first seem to be in conflict, most issues can be resolved by: early consultation with a qualified preservation designer; a clear understanding of the project's design and technical issues; and familiarity with applying the Standards. The most common conflicts are installing inappropriate solar roofing materials, insulating walls without restoring original trim details, adding non-historic features for day lighting such as dormers or inappropriate skylights, and removing historic character-defining features like doors and windows for energy efficiency.[14]

The good news is that many cost-effective strategies that reduce energy consumption in historic buildings can start with small, simple changes. Once the project is completed, following up with a consistent implementation and maintenance plan is vital, since many energy saving strategies can be achieved through occupant habits and building and system maintenance.

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[12] The International Living Building Institute, "The Living Building Challenge," http://ilbi.org/.(accessed: January 12, 2011).

[13] Walter Sedovic and Jill H. Goothelf, "What Replacement Windows Can't Replace: The Real Cost of Removing Historic Windows," *Association for Preservation Technology Bulletin* 36, no. 4 (2005).

[14] National Park Service, "Energy Efficiency, Sustainability, and Green Building Practices in Historic Buildings," http://www.cr.nps.gov/tps/standards/applying-rehabilitation/successful-rehab/energy-efficiency.htm. (accessed: January 18, 2011).

TIPS FOR SUSTAINABLE HISTORIC REHABILITATION PROJECTS

- Insulate unfinished areas first, such as attics and basements, where historic fabric is less likely to be altered.
- Diagnose existing insulation and infiltration conditions with technologies such as blower tests, energy audits and infrared thermo-graphic inspections that can detect where improvements can be made.
- Evaluate existing heating, ventilation and air conditioning (HVAC) systems to ensure they are functioning properly; replace with higher efficiency units if needed. Maintain units properly for best performance. Supplement with low-energy boosters like fans, shading devices and programmable thermostats.
- Check with qualified preservation consultants to see how renewable energy sources such as ground source heat pumps, solar panels and wind turbines can be appropriately integrated into your project. Search for rebates for renewable energy sources.
- Evaluate existing lighting conditions and consult a lighting contractor if needed. Prioritize electric lighting use only when needed, and install sensors that switch on and off with occupancy. Look for ways to improve interior natural day-lighting.
- Repair and maintain historic windows (see below), light monitors and skylights wherever possible. Add new skylights only on secondary facades or screened surfaces to bring in more natural light without losing historic integrity.
- Install low-flow plumbing fixtures and install aerators in existing fixtures to reduce water use by up to 40%. Provide rain barrels at downspouts to catch runoff and use water for landscape maintenance.

TIPS FOR HISTORIC WINDOW REPAIR, MAINTENAINCE AND EFFICIENCY

- Most heat loss occurs around the windows' perimeter through infiltration rather than through the actual glass. Therefore, keep seals tight and in good repair. Also, check sealant at all window muntins.
- Keep exterior surfaces painted, including putty, with durable low VOC [volatile organic compounds] exterior grade paints.
- Add weather stripping to your windows to increase efficiency as much as 50%. To reduce heat loss, weather-strip your doors around the perimeter and in any inset glazing.

- Use exterior or interior storm windows in the winter as studies show that a window fitted with a storm window can last longer and be just as energy efficient as replacement windows.
- Check the lock on the window – the locks' most important job is ensuring that the rails and sash are held together tightly, reducing air infiltration.
- If glass in historic windows needs to be replaced, consider laminated glass. It can be installed with low-emissivity (low-E) glazing that has energy and noise reduction benefits, is easy to install, and maintains a historic finish.
- Low-E glazing reduces heat transfer through glass and can be more energy efficient than regular glazing.
- Remember, windows are only part of the picture. Therefore, it is important to follow other tips for making the entire building more efficient through insulation, weather-stripping, and installing efficient/updated heating and cooling systems.

HISTORIC PRESERVATION AND SUSTAINABILITY IN WASHINGTON STATE:

- Fosters an ethic of reuse, repair and renewal rather than consumption and waste;
- Is energy efficient and reduces our reliance on fossil fuel and non-renewable energy sources;
- Reduces construction and demolition waste going to landfills;
- Promotes an increased use of salvaged and recycled buildings and their materials;
- Encourages the purchasing and use of locally sourced products, materials and labor;
- Promotes social and cultural sustainability through the stewardship of historic resources;
- Uses on-site water efficiently through improved infrastructure and reuse;
- Improves worker and occupant health and productivity through healthier environments.

1. HISTORIC BUILDINGS AND THE CONNECTION WITH SUSTAINABILITY

Introduction

Historic preservation and sustainability are natural partners. Preservation and reuse of historic buildings reduces resource and material consumption, puts less waste in landfills and consumes less energy than demolishing buildings and constructing new ones. Over the past decade, advances in high performance or "green" buildings have been numerous, but primarily have focused on new construction. As a result, the preservation and adaptability of historic and older buildings has not always been at the forefront of the 'green' movement agenda. However, this is changing. Historic buildings, often energy efficient from inherent characteristics, can be upgraded with new technologies to maximize energy performance. Historic features, such as windows can be repaired and restored for higher efficiency. In addition to saving existing resources and historic character, historic preservation means environmental, cultural and economic benefits for Washington communities.

In the past several years, sustainable development has been at the top of agendas across national and global debates on climate change and energy efficiency. However, the term "sustainability" is often confusing and used in many contexts, and therefore has come to mean different things to different people. In terms of sustainable design, construction and operations of buildings, the most commonly cited definition of sustainability is defined by the United Nations in 1987, when the Bruntland Commission on Environment and Development wrote:

> "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[15]

This definition illustrates the larger goal of sustainability in how it can apply to both built and natural resources. The word *sustainability*, according to Mirriam-Websters Dictionary originates back to 1727 and means:

> 1. capable of being sustained
> 2 *a*: of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged <*sustainable* techniques> <*sustainable* agriculture> *b*: of or relating to a lifestyle involving the use of sustainable methods <*sustainable* society>

[15] G. Bruntland, *Our Common Future: The World Commission on Environmental Development* (Oxford: Oxford University Press, 1987).

It implies that for anything - including architecture, to be sustainable, it must be protected so the resource is not depleted nor permanently damaged. In this way, the goal of sustainability is simple: to maintain and protect our existing resources.

One way to understand sustainability today is to look at the evolution in the mid-nineteenth century when writers began evoking the power and awareness of the natural landscape and discussing a profound respect for nature. For example, American author Henry David Thoreau (1817- 1862) published his seminal book Walden in 1848. The book told of Thoreau's two-year living experiment in the woods near Walden Pond, Massachusetts, where he spent his time walking around the woods and lake, reading books and growing his own food. His intention in his manuscript was to describe a harmony that humans can only experience when living with nature, written in an increasingly industrialized world. Later in the 1960s, attention was brought upon our agricultural landscapes and the effect that humans had on them, especially in the name of progress. Silent Spring, published by Rachel Carson in 1962, focused on industrial chemicals (previously considered to be a modern miracle) that were destroying the ecosystem of plants and soils and therefore humans who lived off of these plants. While Carson focused on pesticides and insecticides like DDT that poisoned wildlife and entered the human food chain through agriculture, she also pointed out that progressive practices were harming, rather than helping, our fragile ecosystems and those dependent on it. This type of writing unveiled a critical reevaluation of our understanding of how new technologies aren't always the most beneficial or sustainable path.[16]

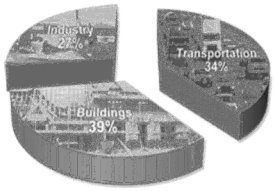
Likewise, we can consider that while new buildings and technologies can be good, old methods and ideas should also be worth preserving. In other words, if they worked well before 'new' technologies, they still do. While new construction will always be needed, the focus needs to shift to how we can fit new uses into existing resources as an alternative to building new. For the past several years the architecture and building industry has shifted most of its focus on new, higher performing structures that use less energy, more recycled material. While this is important, more emphasis must be given to the contribution existing buildings can make through historic preservation. As a practice that preservationists have been calling "sustainable" for years, historic preservation and adaptive reuse must be considered a critical component of any effort to promote green building practices, encourage environmental and cultural sustainability and counter the effects of global warming. It has been said many times that "the greenest building" is that which

[16] Kathryn Rogers Merlino, "Sustainability and the Transformative Power of Repair," *Proceedings of the Association of American Collegiate Schools of Architecture Annual Conference* (2009).

already exists.[17] Existing buildings are our single most sustainable resource in the built environment, and in many cases, may out-perform newer buildings in terms of energy consumption.[18]

1.2 IMPACTS OF BUILDINGS ON THE ENVIRONMENT

Understanding how buildings effect the environment is a critical part of moving towards a sustainable future. To begin to understand the impact our buildings make in the environment, consider that in the United States, buildings account for: 40% of all primary energy use[19], 68% of all energy use[20], 60% of all non-food / non-fuel raw materials use[21], 40% of all nonindustrial solid waste[22], 12% of potable water use[23] and 38% of all carbon dioxide emissions[24].



Total Carbon Dioxide Emissions from Energy Consumption by Sector, 2008[25]

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[17] Carl Elefante, "The Greenest Building Is...One That Is Already Built,," *Forum Journal: The Journal of the National Trust for Historic Preservation* 21, no. 4 (2007).

[18] Many older buildings were designed to take advantage of natural daylight, ventilation and solar orientation and utilize durable materials. In fact, according to a study by the US Energy Information Administration, our older commercial building stock - pre 1920 - performs at an average of 80,127 Btu/sf while new green buildings from 2003 perform at 79,703 Btu/sf. [18] These measurements illustrate how older buildings can be just as efficient as new, high performance buildings, and in fact, many of the reasons why – passive systems, climactic response design – are now being used in new 'green' building design. See section on "Historic Buildings and Energy Consumption."

[19] Ibid. This percentage is projected to rise up to 50% by the year 2030 at current rates of construction and operation,

[20] Congressional Budget Office, "Future Investment in Drinking Water and Wastewater Infrastructure," (2002); U.S. Department of Energy, "Monthly Energy Review," (Washington D.C.: U.S. Department of Energy, 2001).

[21] United States Geological Society, "Factsheet Fs-068-98 Materials Flow and Sustainability," http://pubs.usgs.gov/fs/fs-0068-98/fs-0068-98.pdf.

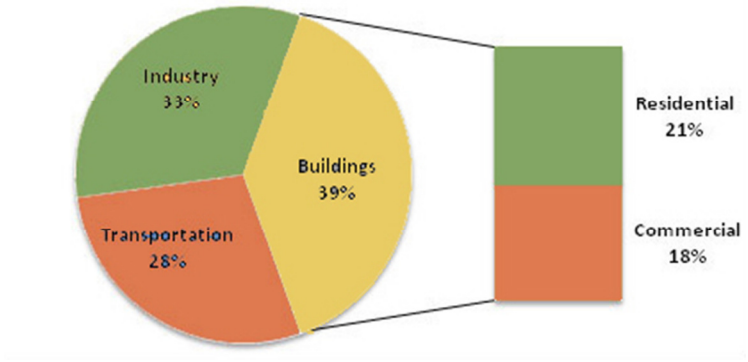
[22] Agency, "Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2008."; Washington State Waste Management, "Construction and Debris Collection and Recycling," (2010).

[23] Office, "Future Investment in Drinking Water and Wastewater Infrastructure."

[24] Agency, "Emissions of Greenhouse Gases Report."

[25] Pew Center for Global Climate Change, "Pew Center for Global Climate Change Basic Facts," http://www.pewclimate.org/global-warming-basics/facts_and_figures/us_emissions/usghgemsector.cfm.

Locally, in Washington State, buildings account for 514,366 billion BTU of energy consumption annually[26], 89.5 billion tons of carbon dioxide emissions[27], 694 million gallons water/day[28] and an additional 2.2 pounds of construction & demolition waste per resident annually[29] in addition to the national of average 4.6 pounds per day.[30] At a more domestic level, the average household spends at least $2,000 a year on energy bills — over half of which goes to heating and cooling.[31] Out of the total energy consumption in an average household, 50% goes to space heating, 27% to run appliances, 19% to heat water and 4% goes to air conditioning.[32]



Building Share of US Primary Energy Consumption[33]

Commercial and residential buildings account for nearly 39% of U.S. carbon dioxide (CO2) emissions and almost 39 percent of total U.S. energy consumption.[34] Nearly all of the greenhouse (GHG) emissions from the residential and commercial sectors can be attributed to energy use in buildings.

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[26] Energy, "2009 Biennial Energy Report with Indicators."

[27] Ibid.

[28] United States Geological Survey (USGS), "Estimated Water Use in Washington, 2005," in *Scientific Investigations Report 2009–5128* (U.S. Department of the Interior, 2005).

[29] Management, "Construction and Debris Collection and Recycling."

[30] Clean Air Council, "Waste and Recyling Facts," http://www.cleanair.org/Waste/wasteFacts.html.

[31] US EPA ENERGY STAR program, http://www.energystar.gov/index.cfm?c=thermostats.pr_thermostats

[32] Changes in Energy Usage in Residential Housing Units. DOE/EIA.
http://www.eia.doe.gov/emeu/recs/recs97/decade.html#totcons4

[33] Pew Center for Climate Change, "Buildings Overview: Climate Tech Book," (2010).

[34] Energy, "Buildings Energy Data Book.", Section 1.1.1., 2008.

Greenhouse gas emissions from energy use in buildings can be divided into two types: first, direct emissions from the on-site combustion of fuels for heating and cooking (domestic use on site) and second, emissions from the end-use of the electricity used to heat, cool and provide power to buildings.[35] These emissions can be reduced at a variety of levels. For example reducing use of energy on–site through more efficient appliances and lighting; improved energy efficiency of building envelopes; and reusing existing buildings to reduce energy use through demolition and new construction.

Factors effecting building-related emissions result from several building characteristics. Since buildings come in a variety of sizes, shapes, ages and construction types, there is no one singular cause. As a result, the best way to consider buildings is in a holistic way to ensure the best understanding of the causes of consumption and emissions in order to allow for the most successful rehabilitation strategies.

1.3 BUILDINGS AS ENVIRONMENTAL RESOURCES

Historic buildings are a valuable, existing resource. However, these are resources that our culture tends to disregard as a valuable commodity. A study conducted in 2004 by the Brookings Institution reported that if we continue with national development trends, by 2030 we will have demolished and rebuilt nearly one-third of our entire building stock – a staggering total of 82 billion square feet.[36] The energy required to do so would power the entire state of California – 37 million people – for an entire decade. Demolition and rebuilding takes vast amounts of energy and materials, both of which are increasingly in short supply.

Historic buildings are great repositories of embodied energy. The "embodied energy" in buildings can be described as the total energy used in the extraction, manufacturing, transportation, and construction of materials into a completed building. In this way, buildings begin their life with an energy "debt", and the concept of embodied energy is an attempt to quantify one significant part of this debt.[37]

Embodied Energy in Buildings

Embodied energy is often considered less significant because it is already 'expended' and assumptions are that a new, high performing building will outperform an old one. Yet, even the most energy efficient new building cannot offset its embodied energy for many years after construction. The federal Advisory Council on Historic Preservation (ACHP), in its study of embodied energy in 1979, produced a formula that created embodied energy calculations for specific building assemblies.[38] Using this information, they calculated that

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[35] Change, "Buildings Overview: Climate Tech Book.", p. 1.

[36] Nelson, "Towards a New Metropolis: The Oppportunity to Rebuild America."

[37] Jean Carroon, *Sustainable Preservation: Greening Existing Buildings* (Hoboken, New Jersey: John Wiley & Sons, Inc., 2010).

[38] Booz, "Assessing the Energy Conservation Benefits of Historic Preservation: Methods and Examples."

an average 50,000 square foot commercial building embodies approximately 80 billion BTU's (British Thermal Units, a common measurement of energy), or the equivalent of 640,000 gallons of gas – enough energy to drive a car an average of 12,000 miles a year for 1,333 years.

Using embodied energy is one useful way in a set of tools that facilitates an understanding of a building's existing worth in terms of expended and valuable resources. Embodied energy measurements can quantify the energy that was not only wasted when a historic building is torn down, but the energy it took to demolish, carry away, and build a new building in its place. While there are many tools available that measure embodied energy, one simple building calculator was released by the May T. Watts Society at www.thegreenestbuilding.org, which uses data from the 1979 ACHP study titled *Assessing the Energy Conservation Benefits of Historic Preservation: Methods and Examples*, devised to simplify building embodied energy calculations.[39]

Measuring the embodied energy can help quantify building energy value which can be translated for a better understanding in domestic terms. For example, a study of the Grand Central Arcade in Seattle's Pioneer Square calculated that to construct a new building of equivalent size would require 109 billion BTUs of energy, but preserving it would save 92 billion BTUs. This amount of energy is the same as 730,000 gallons of gasoline; the annual greenhouse gas emissions from 1,241 passenger vehicles; 6,490 metric tons of CO2; the carbon sequestered annually by 1,384 acres of fir forests; or the greenhouse gas emissions avoided by recycling 2,185 tons of waste instead of sending it to the landfill.[40]

Embodied energy can also be understood in terms of individual material value as well as overall building value. The chart below uses data from the ACHP study to quantify material energy value, which can be useful in construction and rehabilitation projects.

[39] Ibid.; http://www.thegreenestbuilding.org.

[40] Ibid.

Embodied Energy of Materials and Construction Per Square Foot of Construction[41]	
	MBTU/sq.ft.
Residential – Single Family	700
Residential – 2-4 Family	630
Residential – Garden Apartment	650
Residential – High Rise	740
Hotel/Motel	1130
Dormitories	1430
Industrial Buildings	970
Office Buildings	1640
Warehouses	560
Garages/Service Stations	770
Stores/Restaurants	940
Religious Buildings	1260
Educational	1390
Hospital Buildings	1720
Other Nonfarm Buildings	1450
a. Amusement, Social & Rec.	1380
b. Misc. Nonresidential Bldg.	1100
c. Laboratories	2070
d. Libraries, Museums, etc.	1740

[41] The values in MBTU/sq. ft. for each building type are presented as published in the 1979 Advisory Council on Historic Preservation report, *ASSESSING the ENERGY CONSERVATION BENEFITS of HISTORIC PRESERVATION: Methods and Examples*. (ibid. This report, published in 1979, forwarded the concept of embodied energy. The calculations published are based on new buildings constructed in 1967. These figures are being used here because they are the only identified database of embodied energy information complete at this time. These figures are taken from the May T. Watts Appreciation Society sponsored Embodied Energy Calculator, located at http://www.thegreenestbuilding.org.

Embodied Carbon in Buildings

Carbon dioxide, a major component in climate change, is emitted into the atmosphere with demolition and construction of buildings. In the United States, 40% of carbon dioxide emissions are from the construction and operations of buildings; in Washington State alone the emissions amount to 35 million metric tons of carbon dioxide annually.[42] Quantifying embodied carbon is an attempt to estimate the amount of carbon emitted as a result of the building process including material extraction, fabrication, transportation and final construction. Like embodied energy, it is another quantifiable way to understand the value of expended energy and material resources that make up an existing building, and how this embodied carbon is lost and more expended with demolition.

Studies have been carried out to understand the effects of embodied carbon. In 2006, Craig Jones and Geoff Hammond's Inventory of Carbon and Energy (ICE) drew data from secondary resources, including books, conference papers and internet charts. The report compared existing, older homes to new homes and found that when embodied CO2 was considered, a new, energy efficient home took up to 35-50 years to recover embodied carbon over an existing home. The same study found that even though the perception is that new homes are more efficient, older, historic homes can be four times more carbon efficient than new ones.[43] Other recent studies have successfully measured the impact of embodied energy and carbon and the implications to historic preservation. The United Nations Energy Programme estimates it takes 20 years of a typical building's 100 year operation just to offset the expenditure of its construction energy and materials.[44] While embodied energy and carbon are only part of the picture, they represent tangible measurements of the value of buildings as an existing resource and how preservation contributes to a sustainable future.

Life Cycle Assessment in Buildings

Life Cycle Assessment (LCA) is a method that evaluates pollution, water use and carbon emissions to understand a total view of a building's impact on the environment through its lifetime. Using LCA as a tool for quantifying a building's total environmental worth can be done with certain tools. One such tool is the Canadian based Athena Ecocalculator, which uses a formula of basic assumptions and construction assemblies to assess a building's Life Cycle and in turn, to quantify buildings in terms of their global warming potential (GWP), which then can be translated into different metrics.

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[42] Department of Energy. Agency, "Emissions of Greenhouse Gases Report."

[43] Empty Homes Agency and The Building and Social Housing Foundation (BSHF), "New Tricks with Old Bricks: How Reusing Old Bricks Can Cut Carbon Emissions," ed. Empty Homes Agency (London, England: Building and Social Housing Foundation, 2008).

[44] UNEP, "Buildings and Climate Change: Status, Challenges and Opportunities.."

One case study to illustrate a LCA was performed on Building 18, the former fire station in the Sand Point Naval Air Station Historic District, now part of Seattle's Magnuson Park. Using Athena's EcoCalculator, Building 18 represents a measurement of 11,114 MMBTUs of energy, which translates to the Co2 emission equivalent of: 430 gallons of gas from a vehicle; 77,060 propane tanks from barbeques; the burning of 9.7 railcars of coal; the GHG avoided by recycling 638 tons of domestic waste by diverting them from the landfill; and the amount of carbon sequestered by either 427 tree seedlings for a decade or 3.8 acres of pine forest annually.[45] When looking at the building using embodied energy calculators, Building 18 represents the amount of embodied energy that represents an individual driving a (fuel efficient) car every day, 24 hours a day, 365 days a year, for over 200 years. If Building 18 is demolished, embodied energy equivalents are equal to 1,972,830 aluminum cans that were diligently recycled.[46] While these tools need continued refinement – and many more are published and more are being developed – they give us a basic understanding of the physical and environmental value of buildings which are otherwise difficult to measure.

A current study from the National Trust for Historic Preservation's Preservation Green Lab based in Seattle is studying a LCA comparison between existing retrofitted buildings and new construction. The goal of the study is to develop four to six scenarios that explain differences in environmental impacts between new construction and building reuse in four different climate areas. These scenarios will reflect as accurately as possible the common circumstances in which buildings are demolished and replaced with new construction.[47]

1.4 ENERGY CONSUMPTION AND HISTORIC BUILDINGS

It is important to consider the physical energy value in historic buildings. Yet another critical component to sustainable preservation is operational energy. Historic buildings are often considered to be large consumers of energy compared to their higher performing, newer siblings. However, that is not necessarily the case. Data from the U.S. Department of Energy (DOE) indicates that commercial buildings constructed before 1920 actually use less energy per square foot than buildings from any other decade up until 2000.[48] Many older buildings were designed to take advantage of natural daylight, ventilation and solar orientation and utilize

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[45] http://www.athenasmi.org/tools/ecoCalculator/. From their website: The *EcoCalculator* offers architects, engineers and others access to instant LCA results for hundreds of common building assemblies. The results embedded in the *EcoCalculator* are based on detailed assessments completed with the ATHENA® *Impact Estimator for Buildings*, which in turn uses Athena's own widely-acclaimed datasets and data from the US Life Cycle Inventory Database." There are other LCA calculators used for building assessment, and more being developed.

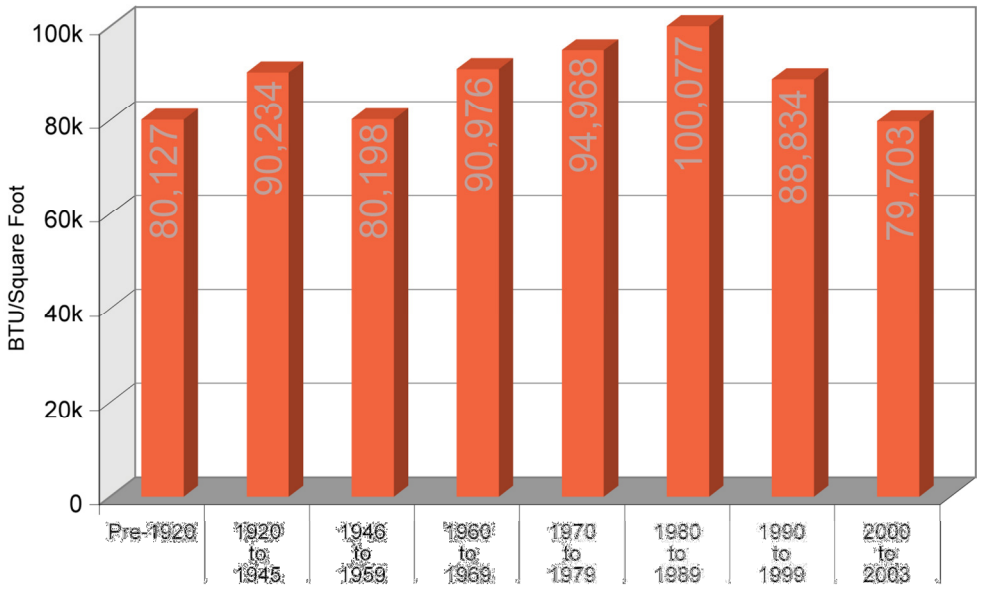
[46] http://www.epa.gov/cleanrgy/energyresources/.

[47] http://www.preservationnation.org/issues/sustainability/green-lab/research.html

[48] Energy, "2009 Biennial Energy Report with Indicators."

durable materials. They were designed before an era that relied on mechanical heating, cooling and shading devices, and utilized simple design solutions that kept human occupancy and comfort levels high. In fact, according to a study by the US Energy Information Administration, our older commercial building stock - pre 1920 - performs at an average of 80,127 Btu/sf while new green buildings from 2003 perform at 79,703 Btu/sf. [49] These measurements illustrate how older buildings can be just as efficient as new, high performance buildings, and in fact, many of the reasons why passive systems and climactic response design – are now being used in new "green" building design..

Successful greening of existing and historic buildings begins with an evaluation of the whole building system and a knowledgeable team of architects, engineers, and other experts who can guide building owners through a successful rehabilitation program. Usually, the most cost effective energy use reduction is achieved with simple moves such as efficient light bulb replacement, efficient heating and cooling systems, added insulation in walls and attics and standard repair of historic windows. While rating systems are not necessary for sustainable preservation, they can assist in the process of design, create a recognizable level of performance, and increase property values. Greening historic structures can make these buildings even more energy efficient, especially when holistic strategies are implemented in their rehabilitation.



Energy Consumption in Buildings, by decade

(Source: U.S. Department of Energy Information Agency, 2009)

[49] Energy, "Buildings Energy Data Book."

Many older buildings have inherent passive characteristics that are energy efficient. For example, electrical lighting is a major source of energy use in buildings. Yet, natural daylighting design is often seen in older buildings due to smaller footprints and well-oriented floor plans, larger windows and light wells or courtyards. Natural ventilation is another characteristic of historic buildings and one that is coming back strong as a new "green" building attribute. The ability to self-regulate climate as well as produce fresh air changes in indoor air quality is extremely important in building design. Many older, historic buildings relied on natural air movement; planning windows, doors and chimneys to circulate air through the building to cool as well as allow heat to updraft through floor vents. Low energy use fans helped spread the warm air and cool interior spaces.

Historic buildings were usually built with locally produced, indigenous materials. In today's global climate, many building pieces travel vast distances over land and sea before reaching their final destinations. While this is slowly changing, historic buildings always used locally sourced materials and ones that responded best to the local climate. The older and more historic the materials are, the more likely they were locally sourced due to transportation restrictions and cost. Green building is now turning to locally sourced "buy local" trends, of which older buildings have set the example.

Over their lifespan, historic buildings illustrate one of the best sustainable characteristics: durability and reparability. While the construction materials and assemblies contribute to this, the lower the technology of the material, the easier they are to maintain and repair; hence their durability. While the initial energy for some of these materials may be higher than newer construction assemblies, the long-term embodied energy payoff is worth the cost and length of stay through the maintenance of materials like stone, brick, concrete, steel and wood.

1.5 IMPACTS OF BUILDING DEMOLITION

Since the middle of the 20th century, the United States has led the consumption and waste pattern globally, by using 30% of the world's natural resources, even though we are just 5% of the global population. Of this 30%, 60% of the materials are attributed to construction practices. Nationally, this translates to 18% of the world's raw resources are being depleted to build buildings, roads, bridges and other types of structures considered under the "built environment" umbrella.[50] In this context, it makes sense to reuse these resources, rather than to demolish and rebuild, even in the name of higher efficiency.

[50] Society, "Factsheet Fs-068-98 Materials Flow and Sustainability."

Demolition and waste of buildings have profound adverse impacts on our landfills. A 2004 Brookings Institute study reported that by the year 2030, if we keep within current practices, we will have demolished and replaced 82 billion square feet of our current building stock in the United States.[51] Since it is estimated that there are about 300 billion square feet of space in the United States today, that means we anticipate demolishing nearly 1/3 of our building stock in the next 20-25 years, the largest component of which will be homes.[52] The implication of this trend towards demolition and new construction rather than rehabilitation is enormous. This results in nearly 62 billion tons of demolition debris. Rehabilitating existing buildings is the best means we have to reduce this trend of consumption and waste at local, national, and global levels.

Estimated Amount of Buildings in the U.S. to be demolished and rebuilt by 2030: 33% of all Building Stock. (Source: Brookings Institution, 2004. Graphic: author.)

Construction and Demolition Debris

Building-related construction and demolition (C&D) debris constitute about two-thirds of all non-industrial solid waste generation in the US.[53] The average building demolition yields 155 pounds of waste per square foot while the average new construction project yields 3.9 pounds of waste per square foot of building area.[54] In Washington State, even with our 45% diversion rate into recycling, an estimated 1,383,998 tons of debris per year ends up in landfills, most of this coming from demolition and new construction projects. This averages an additional 2.2 pounds of garbage per day per person in Washington to our landfills on top of the average 4.5 pounds of garbage per day (national average).[55] In Seattle alone, 100 cars are loaded with trash and head for a landfill each week. Of these 100 cars, at least 25 are filled with construction and demolition debris.[56]

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[51] Nelson, "Towards a New Metropolis: The Oppportunity to Rebuild America."

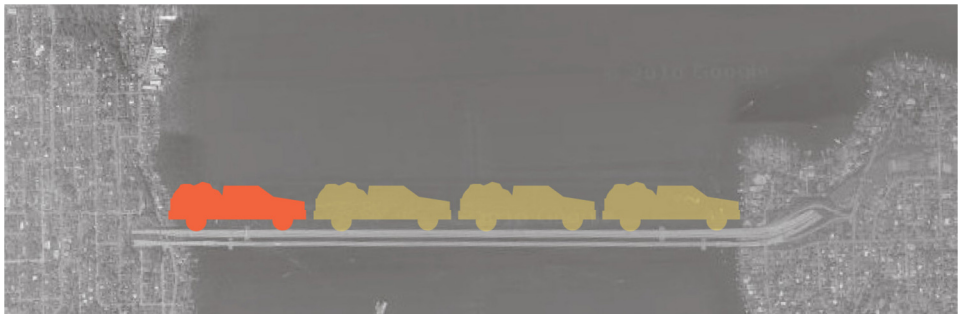
[52] Ibid; ibid.

[53] Agency, "Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2008."

[54] Monroe, "Diverting Construction Waste."

[55] Ecology, "Generation, Recyling and Per Capita Data (1986-2009)."

[56] Kathy Mulady, "Where Your Seattle Trash Ends Up: And You Thought Taking out the Garbage Was a Big Chore," *The Seattle Post Intelligencer*, July 2007.



In Seattle, 25% of Waste to Landfill is Construction & Demolition (C&D) waste.
(Source: Post-Intelligencer, Dept. of Ecology; Graphic, author)

Historic preservation, by reusing existing buildings and diverting them from the waste stream, naturally reduces consumption levels of raw materials that go into a landfill. When we reuse our historic buildings rather than replacing them, less debris ends up in landfills and our environment is healthier.

Recycling materials is often suggested as a positive outcome from building demolition. However, recycling demolition waste is energy intensive and expensive. Plus many construction materials that are considered recyclable are either not fully recyclable or too cost prohibitive to recycle. In Washington State, even with a 45% diversion rate of recycling, an estimated 1,383,998 tons of C&D debris ends up in landfills.[57] In 2008, Americans generated about 250 million tons of trash and recycled and composted 83 million tons of this material, equivalent to a 33.2 percent recycling rate. On average, Americans recycled and composted 1.5 pounds of our individual waste generation of 4.5 pounds per person per day.[58] While we are advancing our recycling practices, the best practice for our environment and budget is to reduce our throwaway material into recycling or waste streams.

New construction uses new, raw resources, and in the extraction process, waste ends up in landfills. Since 1900, use of construction materials such as crushed stone, sand, and gravel has increased from about 35% to 60% (of total non-food, non-fuel) of raw materials consumed in the United States, which illustrates the rate of new raw materials being consumed. Most of this is for new construction. From this, only approximately 10% of extracted materials go into the final product of a typical building material, which means that 90% is manufactured waste and ends up in landfills.[59]

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[57] Ecology, "Generation, Recyling and Per Capita Data (1986-2009)."

[58] Agency, "Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2008."

[59] William McDonough and Michael Braungart, Cradle to Cradle (New York: Northpoint Press, 2002).

Composition of C&D and Environmental Impacts

Reusing buildings and reducing demolition waste also reduces impacts from infrastructure on the site. C&D waste includes not just the debris from the construction, renovation and removal of buildings, but also the infrastructural debris – from the construction and demolition of roads, bridges and other non-building structures; as well as land-clearing debris such as rocks, vegetation, dirt and other miscellaneous materials. Since reusing buildings and historic properties does not require new roads or as much site development, it is inherently less productive of the broader types of C&D that typically are produced by construction processes.

All building-related construction debris and demolition (C&D) materials are commonly grouped as a single type of material, despite the fact that these two material streams come from different processes. Construction materials originate from construction, repair or remodeling activities. This materials stream typically consists of a variety of building products (such as concrete, roofing, gypsum wallboard, wood products, plastics, insulation, tile, and metal) as well as the packaging materials that building materials arrive in (such as cardboard and plastics). Construction materials are usually generated as a result of cutting a material down to size for installation (wood studs are notorious for this) or purchasing materials in excess of what is needed. Wood materials consists of wood scraps from dimensional lumber, siding, laminates, flooring (potentially stained), laminated beams, and moldings (potentially painted). Demolition materials are generated from the dismantling of buildings or the removal phase of remodeling. Typical constituents include concrete, wood, metal, insulation, glass, carpet, and other building materials. Debris from this process is often painted or chemically treated or is fastened to other materials, making separation difficult, and recycling near impossible.[60] Although data gaps are present from state to state, including Washington, it is clear that the three materials that stand at the top of the C&D heap are concrete (including rubble), wood and drywall [61] While some of these can be recycled, it depends on the condition, location and process of extraction.

Washington State Composition of C&D Building Materials[62]

Building Related C&D Material	Quantity Generated (million tons)	% of CD Debris Stream
Concrete Rubble	66-83	40-50%
Wood	33-49	20-30%
Gypsum Drywall	25-8	5-15%

[60] Franklin Associates, "Characterization of Building Related Construction and Demolition Debris in the United States," (2005).

[61] Ken Sandler, "Analyzing What's Recyclable in C&D Debris," *BioCycle* 44, no. 11 (2003).

[62] Ibid.

Asphalt Roofing	16-38	1-10%
Metals	8-10	1-5%
Bricks	8-10	1-5%
Plastics	8-10	1-5%

The EPA estimates that 164 million square tons of building-related construction and demolition (C&D) debris were produced in 2003. Approximately 47 percent of this was generated through construction and renovation activities, and 52 percent was generated through demolition activities.[63] While reuse or recycling of demolition materials is often touted as an acceptable alternative when a building is destroyed, it rarely happens at substantial levels because the material quality is not of the appropriate quality for reuse or recycling. Only about 50 % of C&D wood debris is of acceptable size, quality, and condition to be considered available for recovery. Factors limiting "availability" include contamination and the commingling of wood with other nonfood building products.[64] Therefore, the best way to 'recycle' building material is to leave it on site, if possible, and maintain it over time.

The amount of waste generated in Washington State that goes to a landfill is 4.4 pounds a day, per person. If the amount of annual C&D waste is averaged with the state's population, the additional amount of landfill waste would add another 2.2 pounds a day, for a total of each Washington resident contributing 6.6 pounds a day to landfills in total.[65]

Recycling vs. Down-cycling

While recycling of demolished buildings and construction debris is a better alternative than putting into a landfill, it is rarely recycled, or put into a sustainable pattern of indefinite reuse. Recycling is usually 'down cycling'; the process of turning one product into another. However, the process so heavily changes the characteristics it is rarely able to be recycled again. Materials are reclaimed, but changed. For example, most materials, other than some metals which keep their chemical composition, lose molecular integrity during the highly energy-intensive reprocessing. One example is glass. When heated over and over it loses its workability and strength. Plastic loses flexibility, one of the most highly prized characteristics of its

[63] Ibid.

[64] David B. McKeever, "Inventories of Woody Residues and Solid Wood Waste in the United States, 2002.," ed. USDA Forest Service (USDA Forest Service, 2002).

[65] Washington State Annual Waste Per Capita to a landfill, Washington State: Washington State Population: 6,664,195 (2009); Average waste per day to a landfill, domestic garbage: 4.4lbs/day; C&D waste when averaged per Washingtonian: 2.2 lbs./day

materiality. Paper fibers degrade in quality each time they are recycled, and after a few cycles, are unusable. The better alternative is that the material is recycled in its natural state enough where it can be reused for the same or a similar application, such as salvaged materials.

C&D Material Recycling in Washington State: Down-cycling

C&D Material Recycling in Washington State: Down-cycling route[66]	
Inserts	road base
cardboard/paper/plastics/metals	new products
clean wood	mulch or biomass fuel
dirt, rock and sand	ADC in landfills (daily cover)
crushed concrete	gravel or aggregate

While Washington State boasts one of the best recycling rates in the country, most of this is in the form of domestic recycling. Unfortunately, it often implies that over consumption is acceptable as long as the products are put into the recycle bin, which ignores the concept of down-cycling and limited reuse. Even so, products that are disposed in the correct recycling bin does not guarantee they will be properly reprocessed and recycled. While it is preferable to waste in landfills, it is important to note that renovations typically have more direct construction wastes per square foot than new construction, although the projects use fewer new materials for the final product. The EPA estimates that 41 percent of construction debris in 2003 came from renovations. The most environmentally appropriate way to reduce this C&D is adapting and maintaining use of buildings in their original use, even if it means for a compromise in floor plan organization or use.[67]

[66] Management, "Construction and Debris Collection and Recycling." (Accessed August 22, 2010)

[67] Carroon, *Sustainable Preservation: Greening Existing Buildings*.

2. SUSTAINABILITY AND THE SECRETARY OF THE INTERIOR'S STANDARDS FOR HISTORIC REHABILITATION

Introduction

The U.S. Secretary of the Interior is responsible for establishing standards for all programs under departmental authority and for advising federal agencies on the preservation of historic properties listed in or eligible for listing in the National Register of Historic Places. Known as The Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards), there are four treatments that pertain to the preservation of historic properties (preservation, rehabilitation, restoration and reconstruction); the Standards for rehabilitation are the most commonly used. In the Standards, "rehabilitation" is defined as: "…the act or process of making possible a compatible use for a property through repair, alterations and additions while preserving those portions or features which convey its historical, cultural, or architectural values. "[68]

The Standards are intended to assist with the maintenance and long-term preservation of historic materials and buildings. They pertain to historic buildings of all types of buildings, both interior and exterior; materials and constructions; sizes and occupancies. The Standards also pertain to the site, landscape and any additions to historic materials or buildings. To qualify for federal historic preservation tax purposes and credits, a rehabilitation project much be determined by the National Park Service on behalf of the Secretary of the Interior to be consistent with the historic character of the structure(s) and, where applicable, the district in which it is located.[69]

The Secretary of the Interior's Standards

Historic rehabilitation is defined by the U.S. Secretary of the Interior as "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and

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[68] National Park Service U.S. Department of the Interior, *The Secretary of the Interior's Standards for Rehabilitation* ed. Technical Preservation Services, Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings (2011). *The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings* was produced by Anne E. Grimmer and Kay D. Weeks, first published in 1992 and reprinted in 1997. The *Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings*, which are presented in the same format, replace the chapter on "Energy Conservation" in the 1992 publication.

[69] Ibid., p. vi.

cultural values."[70] The National Park Service describes the purpose of an historic rehabilitation as follows:

> *The intent of the Standards is to assist the long-term preservation of a property's significance through the preservation of historic materials and features. The Standards pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and interior of the buildings. They also encompass related landscape features and the building's site and environment, as well as attached, adjacent, or related new construction. To be certified for Federal tax purposes, a rehabilitation project must be determined by the Secretary to be consistent with the historic character of the structure(s), and where applicable, the district in which it is located.*
>
> *As stated in the definition, the treatment "rehabilitation" assumes that at least some repair or alteration of the historic building will be needed in order to provide for an efficient contemporary use; however, these repairs and alterations must not damage or destroy materials, features or finishes that are important in defining the building's historic character. For example, certain treatments--if improperly applied--may cause or accelerate physical deterioration of the historic building. This can include using improper repointing or exterior masonry cleaning techniques, or introducing insulation that damages historic fabric. In almost all of these situations, use of these materials and treatments will result in a project that does not meet the Standards. Similarly, exterior additions that duplicate the form, material, and detailing of the structure to the extent that they compromise the historic character of the structure will fail to meet the Standards.*[71]

While the act of preserving historic buildings is sustainable itself, the implementation of energy efficient characteristics in buildings is imperative along with appropriate historic considerations. Therefore, early planning is recommended to ensure the Standards are followed while maintaining energy performance goals. The first act should always be to carefully assess the condition of the building. While some requirements at first seem to be in conflict, most issues can be resolved with advanced consultation, understanding the issues, and familiarity using the Standards. The most common conflicts are installing inappropriate solar roofing materials, insulating walls without restoring original trim details, adding non-historic features for day lighting such as dormers or inappropriate skylights, and removing historic character-defining features like doors and windows for energy efficiency.[72]

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[70] The National Parks Service, Introduction to the Secretary of Interior Standards.

http://www.nps.gov/hps/tps/tax/rhb/stand.htm

[71] http://www.nps.gov/hps/tps/tax/rhb/stand.htm

[72] Service, "Energy Efficiency, Sustainability, and Green Building Practices in Historic Buildings." (accessed: January 18, 2011).

The good news is that many cost-effective strategies that reduce energy consumption in historic buildings can start with small, simple changes. Once the project is completed, following up with consistent implementation and maintenance plans is vital, since many energy saving strategies can be achieved through occupant habits and building and system maintenance.

The advantage of using the Standards and their guidelines, especially the publication, *Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings*, is that it helps guide professionals and individuals on the Standards and best practices for sustainable outcomes. These practices must be met in order to be eligible to receive federal preservation tax credits. Therefore, the best route is to consult a professional preservationist early in your rehabiltation project planning to avoid damage to historic fabric or incorrect installations.

The Stanards for rehabilitation are recommended to be applied to all historic properties and read as follows:

1. A property shall be used for its intended historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings shall not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distincive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features shall be reapired rather than replaced. Where the severity of deteriouration requires replacement of a distinctive feature, the new feature shall match the old in design, color, teture, and, where possible, materials. Replacement of missing features will be subtantiated by documenatry and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated

from the old and will be compatable with the historic materials, features, size, scale, and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its evironment would be unimpaired. [73]

Tax Incentives of Historic Rehabilitation

In Washington, owners of historic properties are eligible to take advantage of two tax incentive programs specifically for historic rehabilitation projects. The federal historic preservation tax incentive program, administered by the National Park Service in cooperation with the Internal Revenue Service, encourages the rehabilitation of older structures through federal tax credits. The main incentive is a 20 percent tax credit for the *substantial rehabilitation* of a certified historic structure A project is substantial when the amount spent on qualified project work is equal to or greater than the adjusted value of the building itself. To qualify, project work must be carried out in accordance with the *Secretary of the Interior's Standards for Rehabilitation* and *Guidelines for Rehabilitating Historic Buildings*. This incentive program is available to income producing properties listed in, or determined eligible for listing in, the National Register of Historic Places. To ensure your project meets both the Standards and sustainable building practices, be sure to start early in your planning and consult with qualified professionals.

The Washington Special Valuation Program is the other tax incentive program specifically tailored to encourage historic rehabilitation projects. This locally adopted property tax incentive program allows applicants to deduct the historic rehabilitation costs of a property from the new assessed value once the rehabilitation is completed. Properties eligible for this program include buildings that are either listed individually in the National Register or contribute to a National Register or locally designated historic district, or individually listed in a local register of historic places. To qualify, project work must be carried out in accordance with the Standards and Guidelines for Rehabilitating Historic Buildings. Although authorized as state law, local jurisdictions are required to adopt an ordinance in order to allow property owners to take advantage of the property tax reduction.[74]

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[73] Ibid. For The Standards and more information, visit http://www.nps.gov/hps/tps/standguide/.

[74] William B. Beyes and Matt Dadswell, "The Economic Benefits of Historic Preservation," (Washington State Department of Historic Preservation, 2006). For more information on economics and preservation, see: http://www.dahp.wa.gov/economic-benefits.

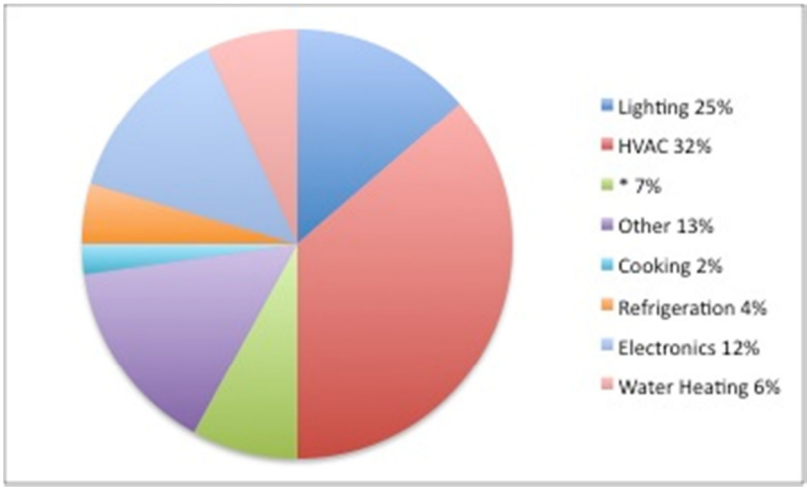
3. EVALUATION AND STRATEGIES FOR SUSTAINABLE PRESERVATION

Introduction

Moving toward sustainable goals with historic buildings requires some planning and consultation, but many changes can be done with cost-effective, simple moves. While every building project will have restraints based on building codes, property owners, location, social and financial considerations, the overall goals should be evaluation and consultation. The most effective approach is to integrate a team of knowledgeable professionals and work together on a holistic approach to the project.

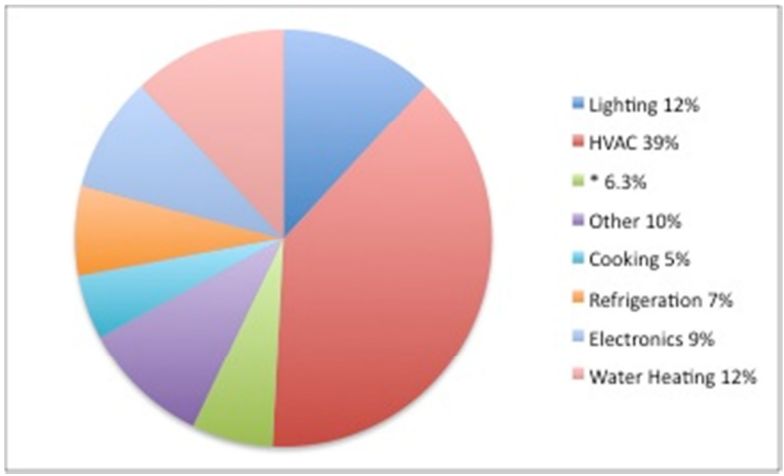
Increasing End-Use Efficiency

Increasing energy end-use efficiency is usually the simplest and most cost effective. Moderating energy use can be best achieved by understanding where the greatest changes can be made for the best results, by first understanding where energy losses occur, and then testing and evaluating your building and system. In both residential and commercial buildings, most energy consumption comes from lighting and heating, ventilation and air conditioning systems. Improving the building envelope through insulation, caulking and sealing so air flow is restricted along with updated systems are the most efficient way to reduce energy use. The second largest energy consumer is electric lighting. Efficient light bulbs, sensor lights and emphasis on natural day-lighting where appropriate are simple fixes that can reduce heating loads. In both cases, an analysis and diagnosis of existing systems is critical to understand the best path for every project.



Commercial Sector Buildings Energy End Use, 2006[75]
(*7% is a result from reconciling two datasets)

[75] Change, "Buildings Overview: Climate Tech Book."



Residential Sector Buildings Energy End Use, 2006[76]

(*6.3% is a result from reconciling two datasets)

Heating, Ventilation and Air Conditioning (HVAC)

HVAC systems are responsible for 39% of residential and 32% of commercial building energy end use in buildings. Diagnosing the building envelope through testing, adding insulation where appropriate and maintaining proper seals in doors and windows will result in better performance from heating and cooling systems. In addition, passive responses such as natural ventilation from operable windows, window shading and seasonal additions such as shutters and storm windows boost mechanical systems. Many historic buildings have these features that may have been removed over the years as part of upgrades. Adjustments to HVAC systems are most effective when sealing windows, adding insulation and other whole-building methods are implemented.

Lighting

Energy use in lighting can be reduced in two ways: reducing the amount of artificial lighting needed and using more efficient technology where artificial lighting is used. Reduction of artificial lighting is not always feasible in historic buildings due to the historic character of the building, but often some adjustments can be made. However, upgrading to more efficient light bulbs, such as changing from incandescent bulbs to fluorescent or solid-state lighting options is critical. In addition, using automatic sensors for rooms that are unoccupied can have a profound impact on the overall energy consumption from lighting.

[76] Ibid.

3.1 TIPS FOR SUSTAINABLE HISTORIC REHABILITATION PROJECTS

- Insulate unfinished areas first, such as attics and basements, where historic fabric is less likely to be altered.
- Diagnose existing insulation and infiltration conditions with technologies such as blower tests, energy audits and infrared thermo graphic inspections that can detect where improvements can be made.
- Evaluate existing heating, ventilation and air conditioning (HVAC) systems to ensure they are functioning properly; replace with higher efficiency units when needed. Maintain units properly for best performance. Supplement with low-energy boosters like fans and shading devices.
- Check with qualified consultants to see how renewable energy sources such as ground source heat pumps, solar panels and wind turbines can be appropriately integrated into the project. Search for rebates for renewable energy sources.
- Evaluate existing lighting conditions and consult a lighting contractor if needed. Prioritize electric lighting use only when needed, and install sensors that switch on and off with occupancy. Look for ways to improve interior natural day lighting.
- Repair and maintain historic windows, light monitors and skylights wherever possible. Add new skylights on secondary facades or screened surfaces to bring in more natural light without losing historic integrity.
- Install low-flow plumbing fixtures and install aerators in existing fixtures to reduce water use by up to 40% in existing buildings. Provide rain barrels at downspouts to catch runoff and use water for landscape maintenance.

Sustainable Materials for Historic Rehabilitation

Ensuring that materials used for rehabilitation are environmentally cultivated, extracted, produced or manufactured is an important component of sustainable preservation. Doing so is an important part of "green" preservation, but can be challenging to decide which is the best solution or product. Product certification is not standardized, although there are certain companies, such as EcoLogo that attempts to certify certain products.[77] While a single "list" is nearly impossible to create due to changing product lines, research and availability, some common sense is required. Products that require less energy to produce, are durable, and are easy to maintain are the best products to begin with.

[77] EcoLogo Certified Program, "Ecologo Third-Party Cerification of Environmentally-Preferabble Products," http://www.ecologo.org/en/index.asp.

A comprehensive list might look like the following when looking for "green" products in building and rehabilitation:

- They are durable, have low maintenance, and a history of longevity (rather than experimental).
- They have been salvaged from a previous project and require little change or re-manufacturing, therefore needing little energy expenditure.
- They are made using renewable resources.
- They promote healthy indoor air quality, with no formaldehyde and low Volatile Organic Compounds (VOC's).
- No toxic substances or compounds are contained in the product or in the byproduct of their manufacturing.
- They use post-consumer waste, repurposed and/or recycled content.
- They do not contain Chlorofluorocarbons (CFCs), Hydro chlorofluorocarbons (HCFCs), or other ozone-depleting substances.
- They can be recycled after their initial use is over.
- They are produced locally or from a locally-sourced manufacturer.

While there are many green products that can be used, there are also many to be avoided. The Cascadia Regional Green Building Council, as part of the Living Building Challenge, has produced and constantly updates what they call a "Materials Red List" that names products and materials that need to be phased out and eliminated from building projects.

The Red List of Materials to Avoid in Rehabilitation

According to the Living Building Challenge, projects cannot contain any of the following materials or chemicals:[78]

Asbestos
Cadmium
Chlorinated Polyethylene and Chlorosulfinated Polyethylene
Chlorofluorocarbons (CFCs)
Chloroprene (Neoprene)

[78] Institute, "The Living Building Challenge." Cascadia has adopted a Red List of materials that the LBC believe should be phased out of production due to health/toxicity concerns. This list is currently planned to be
be updated as new science emerges.

Formaldehyde (Added)
Halogenated Flame Retardants
Hydro chlorofluorocarbons (HCFCs)
Lead (Added)
Mercury
Petrochemical Fertilizers and Pesticides
Phthalates
Polyvinyl Chloride (PVC)
Wood treatments containing Creosote, Arsenic or Pentachlorophenol

For wood products, the most respected green products are certified by the international Forestry Stewardship Council (FSC). The FSC is an independent, non-governmental, not-for-profit organization that was established to promote the responsible management of the world's forests. Founded in 1993, the organization certifies that products carrying the FCS label that come from environmentally appropriate, socially beneficial and economically viable forest management practices. As a multi-stakeholder organization, FSC applies the directive of its membership to develop forest management and chain of custody standards, deliver trademark assurance and provide accreditation services to a global network of committed businesses, organizations and communities. FSC certification provides a credible link between responsible production and consumption of forest products, enabling consumers and businesses to make purchasing decisions that benefit people and the environment as well as providing ongoing business value.[79] While FSC is nationally represented in more than 50 countries around the world, there are 167 certified businesses in Washington State that produce certified products.

Washington State Businesses with FSC Certified Products:[80]

Adpro Litho, Inc.		Mason County Forest Products
Alexandria West Alexandria Moulding Inc.		Matheus Lumber Company Inc.
Alliance Door Products, LLC		McFarland Cascade
Allied Building Products, Edmonds		McGregor Door & Hardware
AllpakTrojan		McKillican International, Inc.
Allweather Wood LLC		Metropolitan Hardwood Floors, Inc.

[79]

[80] Forestry Stewardship Council, National Database, update 2011. For database and other information: http://www.fscus.org/certified_companies/index.php?num=*&state=WA&letter=&order=Organization+Name&type=companie

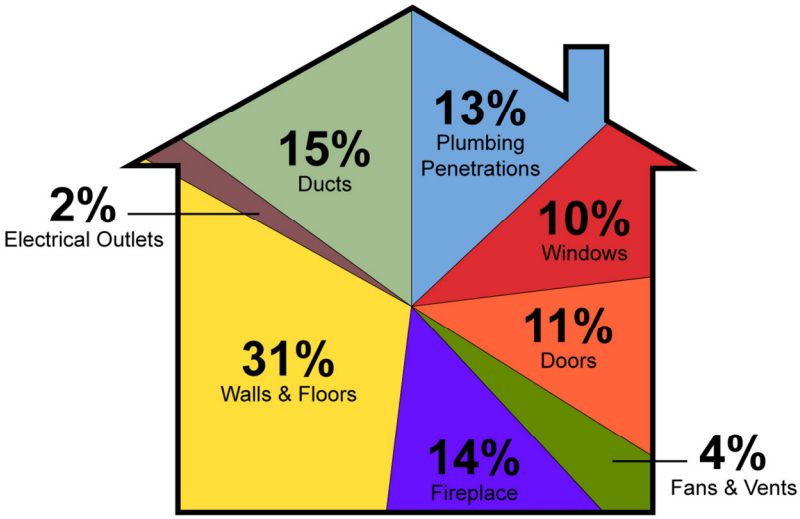
Alpha Graphics - US297		Moulding & Millwork Manufacturing Group / Ferndale
AM Hardware Co., Inc.		Mt. Baker Products, Inc. dba Mt. Baker Plywood
Architectural Woods, Inc.		National Envelope
Arclin Surfaces - Tacoma		Nippon Paper Industries USA Co. Ltd.
Bamboo Hardwoods		Northwest Label/Design, Inc.
Belco Forest Products		Northwest Millwork & Door Co., Inc.
Bellingham Millwork Supply Co.		Northwest Millwork, Inc.
Benson Industries, LLC		Northwood Cabinets, Inc.
Boise Cascade Building Material Distribution		OI Forest Products, Inc.
Boise Cascade Building Material Distribution		Olympic Panel Products, LLC
Boise Cascade Building Material Distribution		Olympus Press, Inc.
Boise Cascade Building Material Distribution		OrePac
Brazier Lumber Co., Inc.		Pac Paper Inc.
Builders Alliance Corporation, LLC		Pacific Lumber & Shipping, LLC
C-K Graphics Inc.		Pacific Lumber & Shipping, LLC
Cabinet Tech, LLC		Pacific Lumber & Shipping, LLC
Cahan Wood Products, Ltd.		Pacific Rim Tonewoods
Calvert Glulams		Pacific Source, Inc.
Capitol City Press		Pacific Western Lumber
Cascade Hardwood, LLC		Paneltech International, LLC
Cascade Print Media		ParaTimber Works LTD
CCS Digital, Inc.		Parr Lumber Company
Cenveo Inc.		Pearson Millwork, Inc.
City of Seattle Cedar River and South Fork Tolt River Municipal Watersheds		Pinnacle Lumber and Plywood
Color Press		Port Townsend Paper Corporation
ColorGraphics (a Cenveo Company)		Price & Visser Millwork, Inc.
Columbia Vista Corp		Print Management Corporation
Combat Sports Group Inc./ Sales & Marketing		KML Corporation
Compton Lumber & Hardware		Print NW
Consolidated Press Printing Company, Inc.		Printery Communications
Consortium of Papers		PrintWest, Inc.

Continental Hardwood Co. (Kent and Portland), a division of Johnson International Industries, Inc.		ProBuild
Contract Hardware, Inc. (Bothell, WA)		ProBuild - Auburn
Custom Source Woodworking, Inc.		ProBuild - Kennewick
DCG West, dba McCallum Print Group and Mailhandlers		ProBuild - Olympia
DCGWest, dba McCallum Print Group and Mailhandlers		ProBuild - Spokane
Dearborn Lumber Co., Inc. dba Alki Lumber Co.		ProBuild - Yakima
Duluth Timber Company, Inc.		Rainier Plywood, dba Rainier Richlite
Dunn Lumber Company		Rainier Veneer Inc.
E. B. Bradley Co. / West Coast Laminating		Read Products, Inc.
E. Roko Distributors-Kent, Washington		ReBinder
East Teak Fine Hardwoods, Inc.		
Ecohaus		Roof Truss Supply / RTS Lumber Co.
Ecohaus - Seattle		Rose City Printing & Packaging
Edensaw Woods, Ltd.		Seattle Warehouse
Edwin Enterprises Inc. dba Defiance Forest Products		Silver Star Cabinets, Inc.
Evergreen Construction Specialties, Incorporated		Sonderen Packaging
Fasson Roll North America		Sonoco Sumner Mill
Forestry Branch, Fort Lewis Military Installation		South Everson Lumber Inc.
Fritch Forest Products, Inc.		Specialty Forest Products, Inc.
Gascoigne Lumber Company		Spicers Paper - Kent
Genothen Holdings, LLC		Swifty Printing & Digital Imaging, Inc.
Gray Lumber Company		Synsor Corporation
Grays Harbor Paper L.P.		Telepress, Inc.
Hancock Natural Resource Group McCloud Tree Farm		Teragren LLC
Hardwoods Specialty Products LP		The Cronin Company
HASEGAWA INTERNATIONAL LTD.		The Cronin Company
Higuera Hardwood, LLC		The Cronin Company
Hillprint, Inc. dba Printco		The Magellan Group Ltd.
idX Corporation		Typesetter Corporation d.b.a. Printex Press
Inside		Unisource Worldwide, Inc.

Interior Construction Specialties, Inc.		Unisource Worldwide, Inc.
Interior Environments		University Publishing at Washington State University
International Forest Products Limited - Site		Vancouver Door Co. Inc.
K&H Printers		W. W. Wells Millwork LLC
K/P Corporation		Wapato Converting
Kaye-Smith		Washington Alder, LLC
Kimberly-Clark Corporation		Washington Architectural Hardware
Louis and Company - Seattle		Washington Hardwoods
Lacey Door and Millwork		Washington State Department of Printing
Larson-Juhl - Seattle, WA		West Coast Laminating, LLC
Lawton Printing, Inc.		West Coast Paper
Litho Craft, Inc.		West Coast Paper - Spokane
Livingston Printing, Inc. dba Windward Communications Group		West Coast Paper - Sumner
Lynden Door Inc.		Weyerhaeuser NR Company, South America Sales & Marketing
		Whale Bay Woods, LLC
		Wright Business Forms Inc. dba Wright Business Graphics
		Xerox Corporation - Seattle, WA
		Yadon Construction Specialties, Inc.

3.2 HISTORIC WINDOWS

Historic windows are significant architectural features of a building, and once removed and discarded, they are lost forever. Unfortunately, historic windows are commonly considered to be one of the major sources of energy losses in buildings. However, recent studies increasingly show that old windows are not necessarily the energy drain that many people believe them to be. The U.S. Department of Energy (DOE) reports that only 10% of energy loss in the average home is caused by windows; more energy is lost through plumbing openings and un-insulated ducts than through windows.[81] While it is common to hear that replacing old windows with new replacement windows will save energy, there is debate whether doing so in historic structures is either energy efficient or cost effective over time. The proper repair and maintenance, historic windows can be as energy efficient as new replacements and can last indefinitely whereas replacement windows are found to last an average of 10-20 years.[82]



Heat Loss through an Average Home.

(Source: Buildings Energy Data Book, U.S. DOE, 2009. Graphic by author)

In 2009, the U.S. government created a federal tax credit on the purchase price of new windows up to $1500 for homeowners if new, qualified, Energy Star windows that met requirements were installed. Unfortunately, this led to the assumption that new windows were desirable over existing windows in rehabilitation and existing projects. Ongoing studies and research contribute to an ever-growing

[81] Energy, "Buildings Energy Data Book."

[82] Goothelf, "What Replacement Windows Can't Replace: The Real Cost of Removing Historic Windows."

body of articles, studies and guidelines that document and demonstrate how existing windows can be repaired to reduce the transfer of air and come close to matching the performance of new windows. Repairing, sealing and maintaining historic windows in combination with additional strategies such as shading, storm windows, glazing films, shutters and insulated curtains, can improve the thermal quality.

Other studies compare the energy efficiency of historic windows with double-glazed windows. One study in Vermont made a side-by-side comparison with historic, single pane windows next to double paned insulated units. This study concluded little difference in thermal performance.[83]

In 2003, a Berkeley storm window research compared infiltration rates of a low-e storm and historic window to a low-E replacement window. One significant conclusion was "the addition of low-e storm windows to the prime window provided performance very similar to that of the replacement window."[84]

At the Massachusetts Institute of Technology, a 2009 study of the windows and facades of the buildings known as the "Main Group" identified heat loss as the primary source of energy consumption, although the expectations had been that cooling loads would dominate. An initial assumption began that a double window, which would slow or prevent solar loads from entering the building, offered the best solution actually proved incorrect because solar gains through a window in winter can offset the heating loads.[85]

Other studies have looked at the environmental impacts of window construction, in order to assist in choices for windows that must be replaced if needed. One study in 2007 conducted in Australia evaluated windows with Life Cycle Assessment tools consistently found that aluminum clad wood windows had the lowest environmental impact, followed closely by wood windows. The highest

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[83] Andrew Shapiro Brad James, Steve Flanders and David Hemenway, "Testing the Energy Performance of Wood Windows in Cold Climates: A Report to the State of Vermont Division of Historic Preservation Agency of Commerce and Community Development," (National Center for Preservation Technology and Training, 1996).

[84] J. H. Klems, "Measured Winter Performance of Storm Windows," (Berkeley, California: Lawence Berkeley National Laboratory, 2003). Available at: *www.parks.ca.gov/.../berkeley%20storm%20window%20research.pdf.*

[85] Carroon, *Sustainable Preservation: Greening Existing Buildings*. Carroon references an unpublished study in March 2009 for the MIT Department of Facilities with a team of investigators led by Transsolar Energietechnick GMBH, Simpson Gumpertz, Energysmiths, Building Conservation Associates and Daniel O'Connell's Sons.

impact was polyvinyl chloride (PCV) windows and aluminum windows. Aluminum clad wood windows had less of an impact as they were cladding a softer variety of wood, and therefore had more flexibility in origin and less miles travelled, which affected the outcome.[86]

In addition, studies show that economics also play a role in historic window performance. One study illustrated that it can take up to 240 years to recoup enough money in energy savings to pay back the cost of installing replacement windows. In summary, both in energy and economics, it pays to repair rather than replace. [87]

TIPS FOR HISTORIC WINDOW REPAIR, MAINTENAINCE AND EFFICIENCY

- Most heat loss occurs around the windows' perimeter through infiltration rather than through the actual glass. Therefore, keep seals tight and in good repair. Also, check sealant at all window muntins.
- Keep exterior surfaces painted, including putty, with durable low VOC [volatile organic compounds] exterior grade paints.
- Add weather-stripping to your windows to increase efficiency as much as 50%. To reduce heat loss, weather-strip your doors around the perimeter and in any inset glazing.
- Use exterior or interior storm windows in the winter, as studies show that a window fitted with a storm window can be just as energy efficient as the more expensive replacement window – and last longer.
- Check the lock on the window – the locks' most important job is ensuring that the rails and sash are held together tightly, reducing air infiltration.
- If glass in historic windows needs to be replaced, consider laminated glass. It can be installed with low-e glazing that has energy and noise reduction benefits, is easy to install and maintains a historic finish. Low-e, or low-emissivity, glazing reduces heat transfer through glass, and can be more energy efficient than regular glazing.
- Remember, windows are only part of the picture, so follow other tips for making the entire building more efficient through insulation, weather-stripping and efficient, updated heating and cooling systems.

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[86] Ibid; Australian Government Forest and Wood Products Research and Development Corporation, "Comparitive Service Life Assessment of Window Systems," (2008).

[87] Carol Krause, "Old Homes Can Be Green," *Herald Times Online*, August 29, 2009.

- Repair or reopen historically operable windows if possible. These add to natural ventilation and better indoor air quality.
- Historic steel windows can be retrofitted with more efficient caulking or sealants, and often with storm windows for better thermo-efficiency.
- Glazing can be retrofitted with new, Low-e (low-emissivity) glass when needed in damaged historic glass.
- When replacement windows are absolutely necessary, replace with locally sourced products that are efficient, recyclable and repairable.

For more information about the repair and maintenance of historic windows, see the resource bibliography at the end of this report, and also visit the Department of Archeology and Historic Preservation website.[88]

[88] Washington State Department of Archeology and Historic Preservation, "Windows Preservation Guidance," http://www.dahp.wa.gov/window-preservation-guidance; ibid.

3.3 WATER AND SITE STRATEGIES FOR REHABILITATION PROJECTS

Experts conclude that it will be water that will be the most desired and needed resource in the future, therefore managing its use and reuse is critical. Water conservation and on-site management are some of the most important strategies in all development projects, and can easily be incorporated into historic preservation. Sustainable water use is sustainable historic preservation. Similar to embodied energy and carbon of buildings, water is also being measured as having embodied qualities. Embodied water is a term used to describe the water load of any given product or service. The *Pharos Materials Database* defines it as "the quantity of water used directly or indirectly during the production of a product from cradle to gate."[89] It is similar to the notion of embodied energy or embodied carbon, for one source cites a common example of embodied water: on average it takes 39,090 gallons of water to make one new car.[90]

Water and Building Use Statistics

- Building occupants use 13 percent of the total water consumed in the United States per day. Of that total, 25.6 percent is used by commercial building occupants, and 74.4 percent by homeowners (1995).[91]
- Between 1950 and 2000, the U.S. population nearly doubled. However, in that same period, public demand for water more than tripled. Americans now use an average of 100 gallons of water each day—enough to fill 1,600 drinking glasses.[92]
- Faucets account for more than fifteen percent of indoor household water use—more than 1 trillion gallons of water across the United States each year. Showering accounts for approximately 17 percent of residential indoor water use in the United States—more than 1.2 trillion gallons of water consumed each year. A leaky faucet wastes gallons of water in a short period of time. A leaky toilet can waste 200 gallons per day.[93]
- Of the 26 billion gallons of water consumed daily in the United States, approximately 7.8 billion gallons, or 30 percent, is devoted to outdoor uses. The majority of this is used for landscaping.[94]

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[89] Pharos, Embodied Water: http://www.pharoslens.net/framework/definitions/id/7

[90] Carroon, *Sustainable Preservation: Greening Existing Buildings*.

[91] (USGS), "Estimated Water Use in Washington, 2005."

[92] Environmental Protection Agency, "Watersense, Why Water Efficiency?,"

http://www.epa.gov/watersense/water/why.htm. .

[93] US EPA, WaterSense program: http://www.epa.gov/watersense/kids/fixleak.htm

[94] US EPA, WaterSense program: http://www.epa.gov/WaterSense/docs/water-efficient_landscaping_508.pdf

- The typical suburban lawn consumes 10,000 gallons of water above and beyond rainwater each year. [95]
- Currently, about eight percent of U.S. energy demand goes to treating, pumping, and heating water and is equal to enough electricity to power more than 5 million homes for an entire year. Water heating accounts for 19 percent of home energy use and 13 percent of the average utility bill. [96]

The major cities of the Puget Sound Lowlands, such as Seattle, Tacoma and Olympia, receive an average of 42 inches of rain a year, much of which overflows directly into Puget Sound before or after being treated at a wastewater treatment plant. [97] Better on-site stormwater management in and around historic buildings is a non-intrusive and easy sustainable strategy for reducing polluted runoff. Low-Impact Development (LID) [98] techniques offer excellent guidelines for sustainably managing stormwater on-site. Porous or pervious pavement, vegetated swales or rain gardens can drain and infiltrate rainwater on-site and regulate off-site water. Green roofs and walls in acceptable areas can help reduce the urban heat-island effect and absorb rainwater on-site. Barrels or cisterns can slow down peak water flow during heavy rain seasons and be harvested to use on site for non-potable water uses such as flushing toilets or watering plants and gardens. Water saving fixtures reduces overall water use in a building and are easily replaced in historic buildings as a low cost measure.

Stormwater and Wastewater

Managing stormwater and wastewater on-site and in buildings is a major part of sustainable development, including the sustainable development of historic properties.

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[95] Ibid.

[96] US EPA, Office of Water: www.epa.gov/water/water_efficiency.html

[97] The National Climatic Data Center's "Climate of Washington" (http://cdo.ncdc.noaa.gov/climatenormals/clim60/states/Clim_WA_01.pdf): "Puget Sound-Lowlands…Annual precipitation ranges from 32 to 37 inches from the Canadian Border to Seattle, and then gradually increases to 47 inches in the vicinity of Centralia."

[98] The Puget Sound Partnership and Washington State University have put together an excellent guide on LID strategies called "Low Impact Development: Technical Guidance Manual for Puget Sound," which is available online here: http://www.psparchives.com/our_work/stormwater/lid.htm

The Puget Sound Partnership has identified stormwater runoff as the biggest cause of water pollution in Puget Sound.[99] As the *News Tribune* reported in May 2010: "Each year, researchers say, an estimated 14 million pounds of oil and grease, heavy metals, bacteria, flame retardants, pesticides and fertilizers wash into Puget Sound from roads, parking lots and suburban lawns. The contaminants have deadly effects on marine life, from the smallest organisms to clams, oysters, and salmon." [100]

In addition to sustainably managing stormwater, developing urban sites and buildings to sustainably manage wastewater is important. Generally wastewater, or sewage, is a combination of potable water and non-potable stormwater, graywater and blackwater. From a building use perspective wastewater is primarily generated from using sinks, showers, dishwashers and laundry machines, and toilets. Commonly, potable water is piped in to a building, used and contaminated with soaps, detergents or organic matter, and then piped out in to the sewers to make its way to a treatment plant for screening, cleaning and discharge.

In addition, urban stormwater events (large storms when street systems can't dispose of the water run off fast enough) are forced to use combined sewer outputs (CSO) that exacerbate stormwater runoff issues and create direct wastewater discharges. During heavy rains sewers that convey both stormwater and wastewater (aka combined sewers) can overflow. Instead of overflowing onto streets or into homes, overflows are built into the system to directly discharge all the extra water. The result is that increased amounts of raw sewage and polluted stormwater get discharged into local water bodies during heavy rain.

TIPS FOR SUSTAINABLE WATER MANAGEMENT IN HISTORIC BUILDINGS

There are many ways to reduce stormwater runoff and wastewater runoff and disposal by sustainably developing buildings and building sites. The intention behind many of the suggested solutions list below is to recognize and utilize water as an asset rather than treat it as a liability. Additionally, many of the design strategies suggested propose the use of natural systems instead of mechanical systems for managing stormwater, which of course often have many other sustainable benefits embedded in their design besides sustainable water management.

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[99] *Stormwater & Low Impact Development*. Puget Sound Partnership. Web. 17 Oct. 2009. <http://www.psp.wa.gov/stormwater.php>.

[100] http://www.thenewstribune.com/2010/05/02/1170993/saving-the-sound-from-water.html

Stormwater

The best way to mitigate the negative impacts of stormwater is to reduce its flow into municipal sewers. Low-Impact Development (LID)[101] techniques offer excellent guidelines for sustainably managing stormwater on-site. Here are some of the strategies that could be applied to historic properties:

Porous or Pervious Pavement – allows water to infiltrate into the ground, which recharges the water table and slows down runoff. Porous surfaces can decrease or eliminate the need for detention basins. Porous pavement is available in many different forms, from pervious concrete to prefabricated pavers, and can be implemented on both large and small areas of a site. Porous pavement could be used to replace older impervious surfaces on a site to make it more water-friendly while also respecting the original design of the site.

Vegetated Swales or Rain Gardens – allows water to infiltrate into the ground, and prevents runoff during heavy rains by catching the water in depressed, vegetated basins and slowing it down. Additionally, swales and rain gardens remove many pollutants from polluted stormwater through natural filtration processes (also known as "bio-filtration" and "bio-retention"). Swales and rain gardens could be added to a historic site or incorporated into a new landscape plan. In addition to their stormwater management capabilities, they provide valuable habitat services and are commonly considered an amenity for a property.

Soil Amendments[102] – restores on-site soil from compaction from construction in order to increase water absorption and retention on-site, as well as to reduce need for pesticides, fertilizers and irrigation, which lowers toxic runoff and water use requirements. Soil amendments are specially designed for each site and could be easily applied to any historic property.

Green Roofs – can reduce runoff by absorbing rainwater on a roof surface; absorption rates are dependent on soil depths and intensity of rainfall. According to the Center for Neighborhood

[101] The Puget Sound Partnership and Washington State University have put together an excellent guide on LID strategies called "Low Impact Development: Technical Guidance Manual for Puget Sound," which is available online here: http://www.psparchives.com/our_work/stormwater/lid.htm

[102] For more on soil amendments see pages 90-97 of the "Low Impact Development: Technical Guidance Manual for Puget Sound" (http://www.psparchives.com/publications/our_work/stormwater/lid/LID_manual2005.pdf)

Technology in Chicago, runoff can be absorbed by between 15 and 90 percent.[103] The soil depth and intensity of a green roof design would probably be somewhat dictated by the structural capacity of an existing historic building. "Extensive" green roofs are thinner and lighter than "Intensive" green roofs.[104] Green roofs can be combined with a rain water harvesting system by directing unabsorbed runoff into a rain barrel or cistern. A green roof could be an unobtrusive addition to a historic building that could assist with stormwater management.

Green Walls or Living Walls – can dispose of captured stormwater through evapotranspiration when designed in conjunction with a larger water catchment and harvesting system. A green wall is a vertical vegetated surface that can be applied to the interior or exterior of a building. Because a green wall has a rather strong visual presence, it may be challenging to apply to a historic building that has strict design protections.

Rain Barrels or Cisterns – slows down peak water flow during heavy rain by catching and storing rainwater. This water could then also be harvested and used on-site for irrigation needs or other non-potable uses where allowed. A rain barrel or cistern would be a relatively easy component to add on to a historic site or building, but its design and placement would have to be carefully considered. Implementing LID techniques to remove or lower the amount of stormwater that enters municipal sewers are beneficial at reducing both stormwater overflows and CSOs.

Wastewater

The best way to mitigate the negative impacts of wastewater, from both untreated and treated discharges, is to reduce its flow into municipal sewers and to recognize and use different kinds of water appropriately. For example, potable water does not need to be used to flush toilets – why make the cleanest water perform the dirtiest function? Rather, captured rainwater or treated graywater can be used in flush toilets; or further still: composting toilets can be used and water removed altogether. Here are some strategies for sustainably managing wastewater that could be applied to historic properties:

Composting Toilets – reduces overall water use in a building and removes blackwater from wastewater stream. There may be legal or maintenance barriers to installing composting toilets in some areas. Check your local regulations.

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[103] Green Roofs: http://greenvalues.cnt.org/green-infrastructure

[104] See http://www.greenroofs.com/Greenroofs101/faqs.htm for more facts about green roofs.

Water Saving Fixtures – reduces overall water use in a building. Fixtures are a very easy thing to replace in historic buildings and include sink faucets, shower heads and low-flow toilets. Water efficient appliances, such as dishwashers and laundry machines, can additionally significantly cut down on water use.

Graywater System – reduces overall water use in a building and cleans graywater for reuse; creates a sustainable on-site water cycle; requires on-site water treatment. Graywater, which can include collected stormwater, can be collected, treated, and reused for all non-potable water needs. Some common uses for treated graywater include irrigation, toilet flushing, and use in a cooling tower. Depending on the level of treatment performed by the system, the water source, and local regulations, treated graywater could also potentially be used for non-drinking water needs like laundry.

Rainwater Harvesting – reduces overall water use in a building and, where allowed, prevents potable rainwater from becoming wastewater; creates a sustainable on-site water cycle; requires on-site water treatment. Rainwater can be collected, treated and use for potable water needs. The technology currently but legal barriers currently prevent actual activation of these systems in the state of Washington. Additionally, rainwater harvesting system could be integrated with a graywater system to cycle back any potable water that goes down the drain after use, thereby closing the water use cycle with perpetual treatment and reuse.

On-Site Water Treatment – can eliminate or reduce the amount of wastewater that needs to be sent to a central treatment facility; creates a sustainable on-site water cycle; can integrate with a larger graywater reuse system/strategy. On-site treatment systems can vary from compact, mechanical systems inside buildings, to larger, natural-mechanical systems, such as Living Machines or Eco-Machines™, [105] that work indoors and out. The correct on-site treatment system for any given historic property would depend on the system requirements, the area available for installation, and whether or not the system could be visible.

[105] Eco-Machines™ are a type of Living Machine system trademarked by Dr. John Todd (http://toddecological.com/) .

4. GREEN BUILDING RATING SYSTEMS IN WASHINGTON STATE

"Green" building rating systems function as tools for decision making in historic rehabilitation projects. They encourage education in new systems, and assist with goal setting for design and construction teams on projects. While not all rating systems are designed with rehabilitation in mind, they do help with setting up a framework for projects and opening up discussion for possibilities and solutions for sustainable projects. While there are the market leaders in rating systems, there are often smaller, more regional systems that can be taken advantage of. Both types can help promote projects as "green" as well as assist on the long term understanding and maintenance of critical performance issues.

Washington State has many national and local programs for green ratings, including: Leadership in Energy and Environmental Design (LEED™), The Living Building Challenge, Built Green, Earth Advantage Institute, Evergreen Sustainable Development Standards for Affordable Housing, National Green Building Standard and The Washington Sustainable Schools Protocol. LEED™ is currently recognized as the leader in rating programs, with several hundred certified buildings in Washington state. Of State government-funded projects, 25% of the LEED™ rated buildings were significant historic rehabilitation projects.

State-Mandated Green Building Certification Programs

During the 2005 legislative session, the Washington State Legislature passed the country's first law requiring that all new buildings and renovation projects that receive state funding be built to one of three green building standards (Chapter 39.35D RCW High-performance Public Buildings). Projects that receive funds from the capital budget must achieve the LEED Silver standard. All K-12 schools that receive funding from the Office of the Superintendent of Public Instruction must be built either to the Washington Sustainable Schools Protocol (WSSP) or LEED Silver standard. Finally, projects that receive funding from the Department of Commerce Housing Trust Fund must comply with the Evergreen Standard for Affordable Housing. Check if your historic rehabilitation project comes within the purview of these state-mandated requirements.

Evergreen Sustainable Development Standards for Affordable Housing[106]

The Evergreen Sustainable Development Standards (ESDS) were developed to promote sustainable building practices in affordable housing projects in Washington state, and are based on Enterprise Community Partners' Green Communities™ program. The criteria promote public health, energy

[106] http://www.commerce.wa.gov/site/1027/default.aspx

conservation, and reduction in long term operational costs. ESDS believe that "Green building practices improve the economics of managing affordable housing while enhancing quality of life for residents" and that locating affordable housing near urban amenities such as transit will create walkable, livable communities and decrease "sprawl-related transportation impacts". Complying with ESDS criteria is mandatory for an affordable housing project to qualify for Housing Trust Fund grants or loans in Washington state. ESDS contains eight sections including: Integrated Design Process, Site Location and Neighborhood Fabric, Site Improvements, Water Conservation, Energy Efficiency, Materials Beneficial to the Environment, Healthy Living Environment and Operations & Maintenance. Fulfillment of the criteria requires complying with mandatory requirements within each section and earning at least 40 points for rehabilitation projects. Sections specifically dealing with reuse projects include: 5-2, 5-8, 5-14, 5-15, 5-16, 7-16, 7-17, 7-22, and Appendix B.

Leadership in Energy and Environmental Design (LEED™)[107]

Leadership in Energy and Environmental Design (LEED) is an internationally recognized green building certification system developed and administered by the United States Green Building Council (USGBC). The USGBC began certifying buildings using the LEED rating system in 1998, and to date has certified more than 14,000 projects throughout the US and 30 countries around the world. The most current version of LEED, v 3.0, covers projects at all scales through one of seven different rating systems including: Homes, Neighborhood Development, Commercial Interiors, Core & Shell, New Construction (NC), Schools & Healthcare and Existing Buildings: Operations and Maintenance. LEED offers four levels of certification: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points) and Platinum (80 or more points). Certification is dependent first on meeting a mandatory number of required prerequisites. The level of certification is then based on a project's total accumulation of up to 100 points (plus 10 bonus points for innovation) in five different areas of focus. The five areas are: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources and Indoor Environmental Quality.

The number of points possible in each area differs slightly among the seven rating systems, but all systems are most heavily weighted in the Sustainable Sites and Energy & Atmosphere categories which combined, account for over 60% of the available points. To date, the LEED rating system does not consider post-occupancy building performance in the certification process, but instead relies only on computer modeling and prescriptive guidelines during the design phase of projects as a way of dealing with projects' energy conservation. Clients wishing to adaptively reuse existing (and

[107] http://www.usgbc.org/

possibly historic) projects will most likely apply under the LEED NC system, which also covers major renovations. These projects face a steep challenge, as there are only 4 available points for use of existing structures, under the Materials and Resources section.

The Washington Sustainable Schools Protocol[108]

The Washington Sustainable Schools Protocol is one of two ways (the other being LEED for Schools) to comply with the State's green building requirements for public schools (K-12). Compliance requires meeting one or more perquisites in each of five areas including: two for Site (16 points possible), one for Water (6 points possible), one for Materials (17 points possible), two for Energy (20 points possible) and four for Interior Environmental Quality (21 points possible) and accumulating at least 38 of the possible 86 points available (eight extra credit points are available, of which a maximum of four can be used. Also, at least four points from the Energy section must be used). The Protocol contains no information or guidelines for school renovation.

OTHER GREEN BUILDING CERTIFICATION PROGRAMS

Living Building Challenge[109]

The Living Building Challenge (LBC) was issued in 2006 by the Cascade Green Building Council. In 2009, the International Living Building Institute (ILBI) was formed to administer the LBC, and has recently certified its first three projects. The current version of the LBC, v 2.0, contains seven petals: Site, Water, Energy, Health, Materials, Equity and Beauty, which combined encompass a total of 20 imperatives. To achieve Living Building status, a building must demonstrate that it has met all 20 imperatives through a full year of occupation and undergo a third party audit. The ILBI has recently certified the first three buildings as meeting the LBC. They include: Washington University's Tyson Living Learning Center in Eureka, Missouri; The Omega Center for Sustainable Living in Rhinebeck, New York; and Eco-Sense, a home in Victoria, BC (Eco-Sense has gained "Petal Recognition" status for meeting four of the six petals of the LBC v 1.0). There are currently over 70 more projects working towards achieving Living Building Status.

NAHBGREEN - National Green Building Program[110]

The National Association of Home Builders focuses on single and multi-family residential projects in the United States, and has certified more than 115,000 homes in various green building programs

[108] http://www.ecy.wa.gov/programs/swfa/greenbuilding/law.html

[109] https://ilbi.org/lbc

[110] http://www.nahbgreen.org/

between 1995 and 2008. NAHB and The International Code Council partnered in 2008 to establish a national standard for "green homes". ICC 700-2008 National Green Building Standard™ defines green building for new construction and remodel projects while attempting to provide the flexibility to allow "regionally appropriate best green strategies". Homes follow prescriptive code based sets of criteria and can achieve ratings of Bronze, Silver, Gold or Emerald after independent certification from the NAHB Research Center.

Built Green[111]

Formed in 1996, Built Green Washington is a non-profit organization that represents eleven regional Built Green programs throughout the state, serving 30 of Washington's 39 counties. Built Green programs throughout the state each set their own requirements for certification, and vary in project type from only dealing with single family new construction to also covering multi-family residential and residential remodel projects. Regardless of the requirements for certification, all Built Green projects must be verified by third-party organizations prior to certification. All Built Green certified projects demonstrate achievement in the following areas of environmental responsibility: "Preserving natural processes through responsible site and water management"; "Lowering operating costs through energy-efficient equipment and systems"; "Reducing toxins and pollutants for a healthier indoor environment"; and "Minimizing waste by careful materials selection and jobsite recycling". Certification levels range from one to five stars based on the total number of standards meet by each project.

Earth Advantage Institute[112]

The Earth Advantage Institute (EAI) is a nonprofit organization focusing primarily on new residential and small commercial (less than 70,000 square feet) green building projects in Oregon State. EAI's mission is to "create an immediate, practical and cost-effective path to sustainability and reduction of carbon in the built environment". In addition to third party certification of projects, EAI offers numerous other services to individuals and organizations pursuing green building projects including help with sustainable financing, Energy Score report cards to help compare green buildings and classes and workshops surrounding various issues of sustainability in the built environment. The Earth Advantage Commercial program for small commercial spaces is in the pilot stages, with its first project nearing the certification process, and the second in the middle of construction after breaking

[111] http://www.builtgreen.net/

[112] http://www.earthadvantage.org/

ground last summer. The cities of Portland and Eugene are considering including EAI certification in their green building codes as an alternative to LEED certification for public projects.

EAI certifies buildings based on five areas: energy efficiency (buildings must comply with Northwest Energy Star), limited impact to site, healthy buildings, safe and durable materials and reduction in water consumption. Certification requires two third party inspections during construction (one at the conclusion of rough-in and the second at the conclusion of construction) as well as performance testing. Projects are certified at either the Silver, Gold or Platinum level.

5. RECOMMENDATIONS FOR NEXT STEPS TO ADVANCE SUSTAINABILITY AND HISTORIC PRESERVATION

The role of historic preservation in sustainability strategies and reducing carbon emissions is rapidly changing. A growing body of research and the completion of green historic rehabilitation projects keeps the topic one of expanding interest and lively debate. However, much remains to be done by the rest of us to make sure that existing buildings and communities, both urban and rural, are fully utilized to reach sustainability goals as well as enriching quality of life. Following is a discussion of various issues surrounding the discussion as well as recommended approaches for research and implementation.

Preservation and Sustainable Neighborhoods

In recent years, land has been developed in the United States at a rate nearly triple the rate of population growth. The average American uses five times more land than 40 years ago, and every year, 1 million acres of farmland is given over to new development in the United States.[113] The carbon impact of this trend can be seen not only in the new buildings constructed over vacant land, but in the vehicle miles travelled that are used commuting out to sprawling areas; those who live in the sprawling areas travel 20-40% more than those who live in denser urban areas. Many historic neighborhoods and communities were developed before dominance of the automobile and by nature have a more compact urban landscape. Revitalization of these historic neighborhoods supports a reduction of vehicle miles travelled to places of work, shopping, and schools by maintaining activity near transit lines, bike trails, and promoting alternative transportation modes. In Washington, transportation accounts for nearly half (47%) of the total greenhouse gas emissions, including emissions from cars, trucks, planes, and ships. According to the U.S. Census Bureau, the statewide drive-alone rate has decreased from 73.9 percent in 1990 to 73.3 percent in 2000. Preserving historic neighborhoods can help reduce this rate even further.[114]

The use of historic preservation as a tool to promote compact, sustainable communities can be seen in many places in Washington, such as those that use the National Trust for Historic Preservation's Main Street approach to development. At the neighborhood and street level, these walkable neighborhoods are critical pieces of the sustainability puzzle. However, as cities move towards higher density, historic neighborhoods are being lost at an increasing rate. Often maximizing lot coverage or economic needs, new buildings built for higher neighborhood density lack a sense of pedestrian quality, historic character and sense of place. Reconciling the desire to retain older buildings, neighborhood character including old and new development must be stitched into the future of our cities through historic preservation at both a building and neighborhood level as well as at the policy level of the many jurisdictions that have authority over our built environment.

Policy and Code Changes for Historic and Existing Buildings

Historic buildings present complex energy challenges that need individual, careful evaluation. Current energy codes often prescribe solutions that do not fit the framework of historic buildings, and often result in an unintended financial or energy solution that is not always successful and often cost prohibitive. If the goal is for aggressive energy savings in existing buildings, a review of alternative paths of energy code modeling is needed to evaluate a better outcome for energy performance.

Making New Connections

New partnerships and collaborations need to be established between historic preservation groups; policy makers; green designers, planners, builders; and government officials. While many institutions are investigating energy performance in historic structures, more collaboration is needed for transparent information sharing and most effective measures to be implemented. This is critical to create more efficient, cost effective and successful sustainable historic rehabilitation projects.

Education and Research

Education needs to be increased across all fields on how historic preservation and sustainable rehabilitation can be incorporated successfully in all projects, not just a few.

Window Performance Studies

Windows are often at the top of historic building debates. Historic window performance needs more research so that informed choices of repairing, retrofitting, and ultimately as a last choice, replacement can be made. In addition, more knowledge of passive additions (such as storm windows and interior/exterior shading) to historic windows needs to be available.

Advisory Committee End Goals for Washington State Sustainable Historic Preservation:

- Foster a culture of reuse, repair and renewal rather than consumption and waste;
- Promote sustainability through the stewardship of historic resources;
- Is energy efficient and reduces our reliance fossil fuel and non-renewable energy sources;
- Reduce construction and demolition (C&D) waste going to landfills;
- Promote increased use of salvaged and recycled materials;
- Use locally-made products and materials;
- Improve worker and occupant health and productivity;
- Increase employment opportunities by promoting labor intensive preservation projects, skills, and trades;

- Reduce vehicle miles traveled by conserving historic community centers and walkable neighborhoods;
- Use on-site water efficiently through improved infrastructure and recycling;
- Reduce stormwater runoff into streams, rivers, lakes and Puget Sound by ecologically treating water on-site before it enters into municipal systems.

7. SELECTED CASE STUDIES IN WASHINGTON STATE

The following case studies were compiled by UW graduate students in the Department of Architecture and represent a variety of historic rehabilitation projects in Washington State.

Case Study: King Street Station, Seattle

Built: 1906

Rehabilitation: ongoing as funding allows

Architect: ZGF Architects

Contractor: Sellen Construction

Historic Registry: National Register 4/13/1973, Pioneer Square Historic District

Other Registry: LEED Silver expected

Photo Credit: Author

Sustainable Design Strategies:

The restoration of King Street Station revives the building's original grandeur through a number of sustainable strategies. Natural ventilation and lighting are restored by the removal of a tile ceiling in the waiting room and restoring access to clerestory windows. The clerestory windows will be controlled mechanically based on ventilation needs. Other spaces in the building that are regularly occupied will have more controlled systems installed. The upper level spaces will be left to future tenants to finish, but

guidelines and mechanical systems will be installed that meet energy efficiency standards. Insulation has been also added to the masonry walls to reduce the temperature swing in the space.

A ground source heat system takes advantage of the ground's constant temperature to heat and cool the building. Radiators and high efficiency unit ventilators will efficiently distribute the heat. The mechanical room is strategically located as a potential location for a streetcar electrical substation, allowing its heat to be captured and used for the building. A district strategy for water collection is also being considered. King Street Station would collect more water than it can reuse for itself, and this system would allow other buildings to use the excess.

Historic materials are being reused wherever possible, with replacements being sustainably sourced. During excavation, granite that matches the existing granite was uncovered and will be used in the restoration. Original windows are being repaired and reused. Aluminum replacement windows are being removed, recycled, and replaced with new wood frame windows that replicate the original windows. The original glass will be reused where possible, and replacements will be uncoated insulated glass. In several areas of the building, historic features exist underneath elements that had been added over the years. A grand staircase is being uncovered and its marble, granite, brick, and brass handrails will be reused. In the waiting area, the original ornate ceiling has been uncovered and will be restored.

In addition to energy and material sustainability, there will be improvements to the building's social sustainability. On the north side of the building, a former parking lot will be turned into a public plaza, reintegrating the building with pedestrian activity.

Energy:

- ground-source heat technology for heating and cooling
- space for eco-district utilities and ability to reuse heat from a streetcar substation
- space for future smart grid equipment
- daylight improved by removal of drop ceiling and exposure of clerestory windows
- cross-ventilation restored by removal of drop ceiling and exposure of clerestory
- clerestory windows controlled mechanically based on ventilation needs
- wall and roof insulation improved
- insulated glass used for new glazing
- high-efficiency unit ventilators
- guidelines and systems to match energy efficiency standards for unfinished spaces

Materials:

- 60,000 square feet of existing building reused
- original windows repaired and original glazing reused where possible
- granite found during excavation used to match historic granite
- staircase made of marble, granite, brick, and brass handrails uncovered and reused
- original ornate ceiling restored above the removed suspended tile ceiling in lobby
- historic canopies lining the west side of the building removed and replaced
- seismic upgrades enhance the longevity of the building
- replacement materials to match old, sourced within the United States

Water and Site:

- district roof water collection with neighboring properties (potentially)
- excess water from King Street Station used by other properties

Private Residence, Walla Walla

Built: 1917

Rehabilitation: 2009

Architect: Strata Architects

Contractor: Barber Construction

Historic Registry: Walla Walla Register of Historic Places, 2009

Other Registry: 4-Star rating King/Snohomish County Built Green®

Back of the house with expansion, courtesy of Sandra Cannon

Sustainable Design Strategy:

The primary goals of the renovation were to "preserve, protect, prepare." The homeowner works for the U.S. Department of Energy and has served on Walla Walla's historic preservation commission. Her home shows that homes can be sustainable while maintaining historic character.

Energy consumption was reduced by improving air-tightness of the building envelope. Blower door testing helped to determine placement of insulation. For a five-star Built Green rating, a higher R-value of wall insulation was needed. This was not done because the existing walls would need to be torn out to do so. Improvements included attic insulation, floor and wall insulation, weather stripping, and ceiling fans. New wood windows were installed to meet energy requirements, and old windows were reused in the unconditioned basement stairwell. The wood frames were not thick enough for insulated glass, and storm windows were installed instead.

The heat source was changed from a finite to renewable source. A ground source heat system provides heat to the main level of the house. Radiators and radiant flooring systems replaced a forced air system. By using a formula from the Oregon Geothermal Institute, the load capacity for the system was calculated to be 2 tons, rather than 4 tons by standard formulas. The installed heat pump has a capacity of 3 tons, chosen as the most up to date product available not containing freon.

Existing vegetation was protected during construction. Plants were moved to safe areas and 100-year old trees were fenced off. New vegetation is drought resistant and pervious materials reduce storm water run-off. A gray water system is in place, but initiation is on hold until an environmental cistern system is found. Other energy saving features include WaterSense labeled water faucets, dual flush, low-flow toilets, 18 ENERGY STAR qualified lighting fixtures, and wiring for future photovoltaic (PV) panels on the garage.

Reused materials include doors, flooring, lumber, siding, and nails. Old concrete and 3-gallon toilets were used as fill for a new patio. New materials containing recycled content include fly ash concrete, carpet pad, insulation, paint, roofing, and tile. Construction waste was either donated (bathroom sinks with cabinets, carpet and pad, gutters) or recycled (cardboard, metal, plastics, roofing, and unusable lumber).

Indoor air quality was emphasized as early as the contract, which stated that there be no formaldehyde, volatile organic compounds (VOC), or vinyl. New carpet was all-wool carpet with jute backing. Interior paint was commercial grade recycled with low (17 grams/liter) VOC's, and the exterior paint was commercial grade with low (20-51 grams/liter) VOC's.

Energy:

- 18 ENERGY STAR qualified lighting fixtures
- calculated energy load reduced from 4 tons to 2 tons
- ground source heat system installed
- finite energy source changed to renewable source
- radiators and radiant heat in floors improve heat delivery
- increased air-tightness of building envelope
- insulation added to attic space
- insulation improved in floors and walls
- storm windows enhance energy performance
- garage (steep south facing sun) pre-wired for future PV panels

Materials:

- 97% construction waste diverted from landfill
- existing vegetation, including 100 year-old trees, preserved
- reused doors, flooring, lumber, and siding
- concrete and toilets used as fill for new patio and ramp
- reused non-code compliant windows for unconditioned basement stairwell
- recycled cardboard, metal, plastics, roofing, and unusable lumber
- donated bathroom sinks with cabinets, carpet and pad, gutters, and other such items
- recycled-content products were carpet pad, insulation, paint, roofing, and tile

Water:

- runoff reduced by pervious materials
- less water demand with drought resistant new plants
- gray water system-equipped for the future
- WaterSense labeled water faucets
- low-flow and dual flush toilets

Finishes:

- only low or no VOC content materials and finishes used
- interior and exterior paint with low VOC content
- no formaldehyde or vinyl used
- wool carpet installed with jute backing

Back of the house before expansion, courtesy of Sandra Cannon

Current Photos:

Installation of ground source heat system, courtesy of Sandra Cannon

Installation of cellulose insulation, courtesy of Sandra Cannon

Materials reuse stations, courtesy of Sandra Cannon

Nails pulled from siding and both materials reused, courtesy of Sandra Cannon

Concrete to be crushed and reused as fill for new patio, courtesy of Sandra Cannon

Martin Woldson Theater at the Fox, Spokane

Built: 1931

Rehabilitation: 2007

Architect: NAC | Architecture, Spokane

Contractor: Walker Construction Company

Historic Registry: National Register 11/30/2001, Spokane Register of Historic Places 12/10/2001

New Market Tax Credits, Historic Tax Credit

Honors: Valerie Sivinski Award for Outstanding Achievement in Historic Rehabilitation (2008)

Fox Theater interior. Photo courtesy of NAC|Architecture, Spokane

Sustainable Design Strategy

The Fox Theater project involved the acquisition and rehabilitation of a historic Art Deco style theater located in downtown Spokane. The Fox Theater has been a significant Spokane landmark since it opened in 1931 and was in constant operation as a movie palace and performance facility until 2000, when it was threatened by demolition. Broad-based community support saved the Fox from the wrecking ball and the nonprofit Spokane Symphony spearheaded fund-raising and rehabilitation work. Upon completion, the Fox (renamed the Martin Woldson Theater at the Fox in honor of a local benefactor) assumed its new role as home to the Spokane Symphony as well as a mid-sized venue for a variety of performing arts, entertainment, business and private events.

The major design problem was transforming a 1931 movie theater into a multi-use performing arts facility while preserving the original art deco architecture and murals that were featured on almost every wall and

ceiling surface. Any changes that were made had to be in accord with the *U.S. Secretary of the Interior's Standards for Rehabilitation* in order to qualify for federal historic preservation tax credits.

All of the changes occurred while allowing the preservation and restoration of the Fox's original murals, lighting, and other art deco details. In some cases this meant existing murals had to be stripped of non-original paint to expose the original artistry, and then re-painted by art restorers. Historical light fixtures were kept, cleaned and restored, while missing fixtures were recreated to match the originals. For example, the well-known glass sunburst in the auditorium and the lay light in the lobby ceiling were restored to original condition. The construction took advantage of local artists, employing them to recreate missing, broken or non-original panes.

Throughout the restoration process, most elements were refurbished and reused, consistent with historical restoration requirements and significantly reduced potential waste. In addition, insulation was added to the roof and exterior walls where possible to increase the efficiency of the building. Single-glazed windows were replaced by new insulated windows with thermal breaks and custom frames that matched the profile of the original windows. A new mechanical system was also installed. The energy efficient system combined with the upgrades to the exterior envelope, significantly improved the performance of the building. Ultimately, an Art Deco treasure has been saved and restored, and the Fox Theater has become a catalyst for additional rehabilitation projects in downtown Spokane that sets an example for sustainable building methods applied to restoration projects.

Energy:

- new high-efficiency mechanical system installed to increase energy performance
- single-pane windows replaced with custom, insulated windows with thermal breaks
- new insulation added in roof and exterior walls to increase efficiency

Materials:

- reuse of existing building shell and core
- restoration of existing finishes and materials reduces use and waste

The Cobb Building, Seattle

Built: construction began in 1909, completed in 1910

Rehabilitation: 2006

Architect: Howell and Stokes (1909), GGLO (2006)

Contractor: Lease Crutcher Lewis (2006 GC)

Historic Registry: National Register of Historic Places, Washington Heritage Register, Historic Tax Credits

Other Registry: LEED Silver (NC 2.0/2.1)

The Cobb Building after 2006 rehabilitation (photo: GGLO)

Sustainable Design Strategy

Like many historic rehabilitations in Washington, a seismic upgrade and structural reinforcement was vital and required for the building. However, beyond seismic upgrades, the Cobb's design reflects the architect's and owner's pursuit of LEED certification. Many sustainable features were easily incorporated into the renovation without compromise to the building's character-defining features. However, some existing conditions posed a challenge to sustainability goals. Project architect GGLO's integrated approach to the

design process for this rehabilitation began with an interdisciplinary team of architects, interior designers, and landscape architects that aimed at both historic preservation and sustainable goals.

Sustainability goals sought to maximize the efficiency of the building envelope to improve comfort while reducing energy use. The historic significance of the terra cotta exterior and window sashing precluded re-glazing the windows with higher performance glass or adding exterior insulation to the walls. The compromise was to apply a removable low-e film to the existing glass in order to improve thermal performance and comply with the Washington State Energy code. Along the same line of conservation, the units were heated and cooled using a "hybrid" heat pump system that saves about 5% a year over a water source heat pump. Further, all carpet, adhesives, sealants, and paint are low VOC. Carpet was limited to the corridors, with hard surface flooring throughout the units.

Architectural efforts maximized rental square footage while providing seismic reinforcement and maximizing daylighting through the use of existing windows. Units range from studios to two bedroom apartments, and all offer light and open floor plans with high ceilings and movable barn doors

Energy:

- low-E film was applied to original windows to increase efficiency
- hybrid heat-pump system for heating and cooling uses rejected heat to preheat domestic hot water

Materials:

- Reuse of existing building, including existing windows, exterior brick and terra cotta
- Diverted at 95% of construction waste from landfills through recycling and reuse
- Recycled materials used included metals, wallboard, insulation, acoustical ceiling panels and concrete

Water:

- Rooftops were converted into garden space, reducing runoff by 38%
- Reduced water usage by 30% and sewage by 40% using dual flush toilets, lavatory fixtures and Energy Star appliances

Finishes:

- Low VOC/emitting finished used for paints, carpets and adhesives

Health and Comfort:

- User-controlled conditioning systems
- Daylighting and views for 90% of spaces

The rehabilitated Cobb Building, detail (photo: by GGLO)

The Cobb Building after 2006 rehabilitation (photo by GGLO)

Cobb Building, interior. Photograph by GGLO

Cherry Parkes Building, Tacoma

Built: 1890-1904

Rehabilitation: 2004

Architect: McGranahan Architects with BOLA Architecture + Planning

Contractor: Lease Crutcher Lewis

Historic Registry: Contributing buildings in the Union Depot-Warehouse Historic District, National Register of Historic Places

Certification: LEED Silver

Renovated Cherry Parkes Building, photo from University of Washington, Tacoma

Sustainable Design Strategy

Virtually all state-funded construction projects in Washington must meet minimum standards to achieve USGBC LEED-Silver certification. Yet, prior to the renovation of Cherry Parkes in 2004, the University of Washington, Tacoma (UW-T) established a commitment to environmental stewardship, setting their goals above and beyond this compliance. The University committed to being a positive force in environmental issues, not just in research, but in facility and resource management as well. Selection by UW-T of the Union Depot-Warehouse Historic District as the setting for this branch campus clearly demonstrates this commitment.

The UW-T Phase 2B capital project comprised five former warehouse buildings. The Cherry Parkes Building and the nearby Mattress Building renovation involved the adaptive re-use and complete modernization of 135,000 square feet of building area. Cherry Parkes combined three formerly independent buildings into one with space for classrooms, broadcast studio, technology center, and faculty offices.

The University was committed to appropriately weaving an educational facility within an existing urban commercial context. The cross fertilization has benefited the surrounding neighborhood and the campus. This was the first LEED Silver certified project for the University of Washington as well as the city of Tacoma and incorporates an educational tour of key sustainable building elements and systems.

Energy:

- energy efficient lighting design used in conjunction with natural daylighting
- high performance glazing in windows to increase envelope efficiency
- daylighting was used to offset lighting use

Materials:

- reused existing buildings and brownfield for development
- 82% of existing exterior walls and structural party walls were successfully reused
- existing timbers were salvaged, milled and repurposed as stair treads & hand rails
- existing cast iron pilasters were conserved and restored
- 78% of construction debris was diverted from landfills through recycling & salvage
- all 456 historic windows were salvaged, refurbished and reused by local businesses

Water:

- new plumbing fixtures are ultra-low flow for water use reduction

Finishes:

- building materials & finishes were selected based on recycled content & proximity
- low emitting finishes include paint and carpet throughout

Other:

- spaces were programmed to maximize natural daylight availability
- mechanical ducts and piping were upgraded to improve thermal comfort and ventilation
- operable windows for occupant comfort

Rehabilitated Cherry Parkes Building, BOLA Architecture + Planning

Fire Station No. 9 (Design Source, Incorporated), Spokane

Built: 1930

Rehabilitation: 1992-1993

Architect: Arthur Crowley (1930), Design Source, Inc. (designer, 1992)

Contractor: 1930 building by fire fighters

Historic Registry: contributing building in the Ninth Avenue Historic District National Register of Historic Places and Spokane Register of Historic Places

Other Registry: Innovation in Green Building - Spokane SMART Business Recognition Program

Rehabilitated Fire Station No 9, photograph by Design Source, Inc.

Sustainable Design Strategy

Historic Fire Station No. 9 was rehabilitated by new owners, Design Source, Inc., prior to the LEED rating system, but sustainability was still a goal in the project. Design Source, a Spokane architecture and design firm, takes pride in the fact that they are located in a dense residential neighborhood within walking distance of many businesses and public transportation. Interiors were retained or reused, such as doors and windows, interior walls, floors and finishes. Low VOC paints and coatings were used, and space planning considers window placement for maximum occupant comfort. High efficiency lighting is used and less efficient lighting is controlled to complement natural day lighting of the large window openings.

In order to retain the existing windows, historically appropriate storm windows were custom made for each of the 29 openings to achieve better energy efficiency and preserve the embodied energy of what existed; all windows were retained.

Surplus wood trim found in the basement was fashioned into display rails for the conference room, and existing surplus doors were modified to add glass to showcase the call board relocated to the hose tower. The hose tower was modified to gain useable space on both floors. However, the large wooden brackets and names carved into the walls have been retained and preserved. All wood trim, brass stair nosing, and one of the two brass fire poles were all retained. The second pole is stored in the basement. Storage racks in the basement once used to store barrels of fire-fighting chemicals were modified for storage of project files. In lieu of conventional broadloom carpet installation, double stick mesh carpet was used so as not to damage the original hardwood floors on the second floor. Wood floors were exposed and refinished to lengthen usable life span.

Energy:

- storm windows custom manufactured to retain existing windows and increase envelope efficiency
- high efficiency lighting and task light complement daylighting to decrease overall energy use

Materials:

- repointed and restored all exterior materials
- repaired and restored all historic windows
- interior walls, floors and finishes were reused; existing and salvaged materials include storage lockers, trim that was repurposed into railing

Finishes:

- low VOC/emitting finished paints and coatings, and carpets

Other:

- user-controlled conditioning systems
- daylighting and views throughout

Fern Hill Elementary School, Tacoma

Built: 1911

Rehabilitation: 2006

Architect: BLRB Architects

Contractor: Babbit Neuman Construction Company

Fern Hill Elementary School. Courtesy of the Tacoma School District,

Sustainable Design Strategy:

Fern Hill puts historic preservation in a "green" context. The school was designed to comply with the recently adopted State of Washington Sustainable Schools Protocol for High Performance Schools. Sustainable features include water conservation by way of rainwater harvesting and the use of rain gardens for storm water management. Daylighting is maximized, and all electric lighting is controlled by occupancy sensors and photo-cell controls. The design called for the reuse of existing building materials and the selection of many building materials with high recycle content. All interior finishes were carefully selected to be non-toxic with low- or no-VOC content. (BLRB Architects website)

Fern Hill Elementary School was designed to meet standards adopted by the State of Washington's Sustainable Schools Protocol. When the school district announced plans to tear down the building, a community-led effort convinced the administration to change its course. Architecture firm BLRB was charged

with designing a facility that met educational program goals, while celebrating the school's long history and honoring long-running ties to the community.

With strong public support for preservation, it was clear the architect would need to turn to the community for the project to reach its fullest potential. The design process included extensive and formal community outreach, the key to delineating the goals of sustainability and preservation.

The design called for re-using and upgrading the historic, three story building and adding new construction to house the changing needs for a contemporary elementary school. A new bell tower on the main building provides visibility for the historic bell, an element of the Fern Hill School since 1888. A new school entrance leads into the "Heritage Hall", a display space celebrating school and community history. Thus, the team was able to capitalize on the goal of preserving history for the community and meet sustainability guidelines as outlined by the state.

Energy:

- daylight and views provided by existing large classroom windows
- daylight in all occupied areas with switched zones to reduce use of artificial lighting
- 2-pipe fan coil system and a computerized energy management system boost HVAC system efficiency

Materials:

- over 27,000 square feet of the existing building retained
- overall footprint reduced by a two-story addition that replaced the demolished wing
- salvaged and reused truss and framing timbers, brick, hardwood flooring, stone parapet copings, door casings, chalkboards with wood trim
- recycled content in structural steel, concrete, GWB, carpet, masonry, roofing, woodwork
- carpet removed, remade at a carpet factory, and reinstalled as new
- lumber, flooring, cabinetry, plumbing and light fixtures, lockers, chalkboards, playground equipment were salvaged and stocked into local second-hand stores
- all interior finishes are non-toxic, low- or no-VOC

Water:

- raingarden provides natural stormwater treatment
- decreased impervious area reduces stormwater runoff
- drought-resistant, native landscaping eliminates the need for irrigation system
- roof-top cistern collects rainwater for education and demonstration garden

Mattress Factory Building, Tacoma

Built: 1912

Rehabilitation: 2004

Architect: Miller|Hull Partnership

Contractor: Lease Crutcher Lewis

Historic Registry: Contributing building Union Depot Warehouse Historic District, National Register of Historic Places

Other Registry: LEED Silver

Mattress Building after rehabilitation

Sustainable Design Strategy:

The rehabilitation of the building had to address common issues associated with reuse: seismic reinforcing, energy upgrades, and hazardous materials abatement including arsenic and lead, and contaminates due to the industrial past of the neighborhood. The building was re-roofed and insulated, including some new aluminum-clad insulated windows to replace the existing wood ones that were deteriorated and not considered historically significant. Windows that were in good shape were saved. The building is located within and contributing to a designated historic district. As a result, the rehabilitation was subject to review by the Tacoma Landmarks Commission.

The masonry character of the building was exposed where possible at the internal partition wall, and furred out on the exterior walls for added insulation for greater energy performance. The existing structure was also revealed where possible, mostly on the exterior of the building. A few new interventions (exterior stair, north wall opening, and clerestory) were designed to highlight and distinguish themselves from the historic building fabric.

Energy:

- new skylight between the two buildings brings light in along the masonry partition wall
- clerestory added at the south end
- operable windows
- exterior walls furred to add insulation
- energy upgrades

Materials:

- reused existing building
- 78% construction waste recycled (whole complex)
- $1+ million in existing materials salvaged and refurbished, including brick, wood beams and columns, and historic windows (whole complex)
- sustainable-minded materials selection, wheatboard
- exterior facades restored to preserve character

City Hall Rehabilitation and Expansion, Port Townsend

Built: 1892

Rehabilitation: 2006

Architect: ARC Architects

Contractor: Dawson Construction

Historic Registry: National Register of Historic Places 05/14/1971, Port Townsend Historic District 05/17/1976, Port Townsend National Historic Landmark 05/05/1977

Port Townsend City Hall viewed from Madison and Water Streets, Kelly Laleman.

Sustainable Design Strategy:

The rehabilitation of the Port Townsend City Hall displays the city's pride in preserving its 19th century government center, while wanting to incorporate forward thinking green building strategies. The new City Hall Annex is strategically designed to buttress the existing building, providing seismic reinforcement with minimal impact to the historic building. In the original building, less historically significant spaces were utilized as office spaces, which minimized the footprint of the annex.

Ninety-five percent of construction waste was diverted from the landfill. Of new materials, 65% were regionally manufactured and 40% were regionally extracted. Two roof beams were replaced with stronger beams, and those beams were reused for stairs and benches in the new annex. In addition to reusing wood,

58% percent of new wood was FSC certified. Many other materials contained recycled content, including rebar, brick, structural steel, insulation, wood doors, tile and carpet.

Heat loss was reduced by adding insulation to the interior of the masonry walls, improving roof insulation, re-sealing and re-puttying windows, and refurbishing storm windows. Heat gain was reduced by a highly reflective roof surface and interior roller shades. A high efficiency boiler and radiator system replaced a duct system that had been installed. Water consumption was reduced by 38% by using low-flow fixtures and planting native and drought-resistant plants. Electrical demand was reduced by motion sensors, and the annex roof is equipped to hold PV panels. Wind power has also been utilized as a renewable energy source.

Individual thermal comfort is achieved by having at least one operable window and one lighting control zone provided per 200 square feet of perimeter space. Daylight is provided to 82% of regularly occupied space. Timed gauges allow building occupants to regulate non-perimeter airflow, and adjustable radiators create various thermal zones. Indoor air quality was addressed by using several low VOC finishes and copy rooms having independent exhaust systems.

Energy:

- original windows re-sealed to be more energy efficient
- reflective roof reduces heat gain
- annex roof built to hold PV panels in the future
- wind-power energy from Renewable Choice Energy
- motion sensors for lighting control
- insulation placed along exterior masonry walls
- roof insulation improved
- boiler and radiator system re-introduced
- high efficiency boilers installed
- roller shades control sun
- 82% of regularly occupied space provided with daylighting
- 92% of occupants have view through windows to the outdoors
- independent exhaust for copying and printing rooms
- radiators adjust individually to create different thermal zones
- timed gauges allow regulation of non-perimeter airflow
- at least 1 operable window and lighting control zone per 200 square feet of perimeter
- no CFCs in base building HVAC&R systems
- non-CFC-based refrigerants in all fire suppression systems

- no HCFCs or Halons in base building HVAC, refrigeration and fire suppression equipment

Materials:

- 95% of construction waste recycled
- 58% of wood based building materials considered FSC certified
- plywood, Douglas Fir lumber, and finish wood all met FSC certification
- 23% of materials were recycled-content products
- rebar, brick, structural steel, insulation, wood doors, tile, and carpet contained recycled content
- 65% of materials were regionally manufactured
- 40% of materials were regionally extracted
- gravel, concrete, steel, lumber, plywood, and paint obtained within 500 mile radius
- size of the annex addition minimized by using existing non-historic spaces for offices
- annex designed to reinforce the existing building as a seismic upgrade
- existing brick re-pointed on both interior and exterior
- existing windows resealed and re-puttied
- storm windows refurbished and reused
- two beams removed from roof structure reused for stairs and benches in annex
- low VOC content weatherproofing sealant, silicone, paints, coatings and carpet

Water:

- 38% reduction in water consumption
- native and drought-resistant plants reduce irrigation
- parking lot runoff drains to a rain garden
- low flow fixtures
- dual flush toilets and waterless urinals
- motion-activated faucets and other low-flow fixtures

Original windows maintained, Kelly Laleman.

Seismic bracing at Annex entry ties to the historic structure, Kelly Laleman.

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