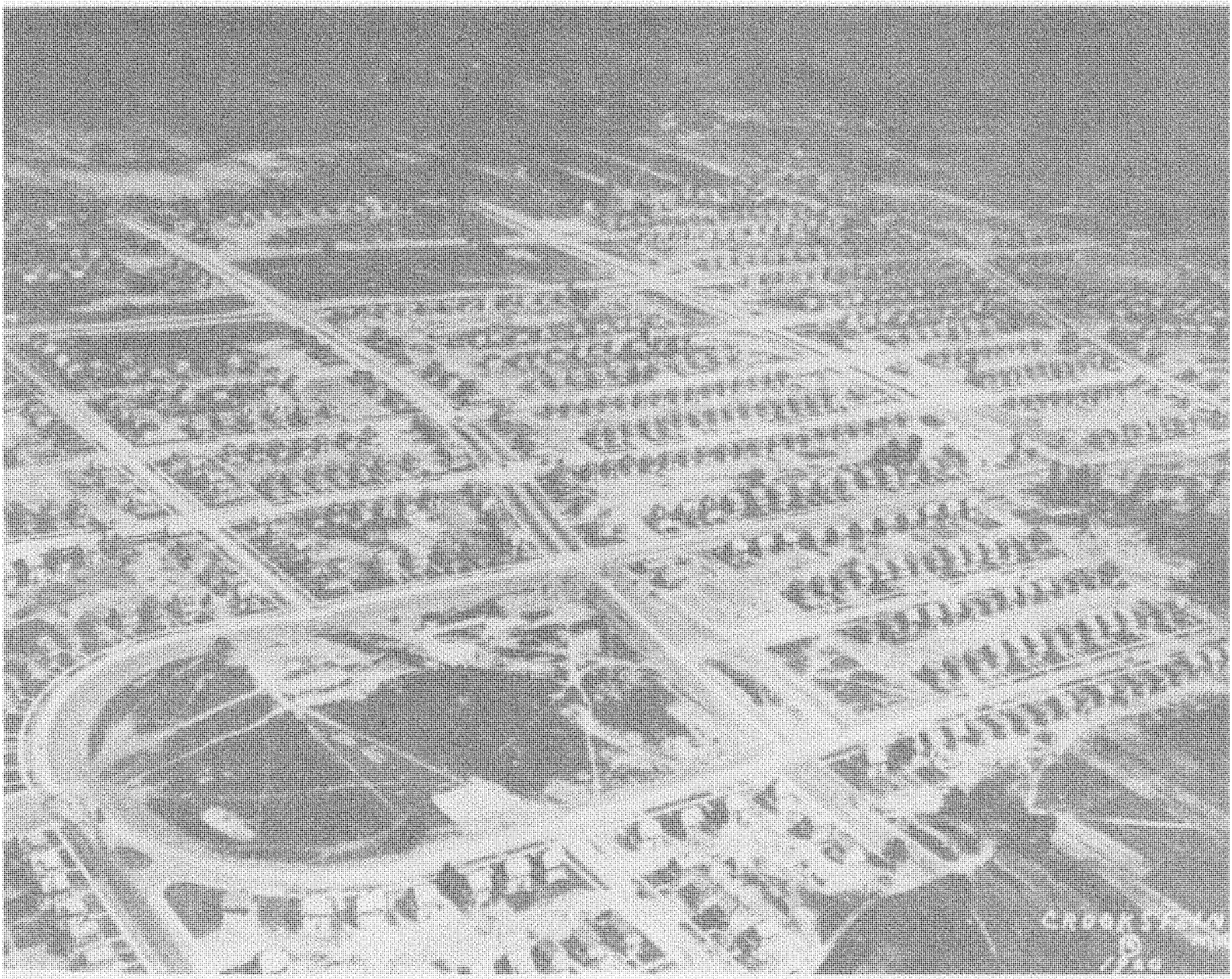
CIVIC PARK

Home Preservation Manual



Civic Park
Home Preservation Manual

Prepared by:

TOMBLINSON, HARBURN, YURK & ASSOCIATES INCORPORATED ARCHITECTS AND PLANNERS
705 Kelso Street
Flint, Michigan 48506

and

WILLIAM KESSLER & ASSOCIATES, consulting architects
733 St. Antoine Street
Detroit, Michigan 48226

For:

FLINT NEIGHBORHOOD IMPROVEMENT AND PRESERVATION PROJECT INC.
1206 S. Saginaw
Flint, Michigan 48502

and

CITY OF FLINT, Mayor James W. Rutherford
1101 S. Saginaw
Flint, Michigan 48502

funded by a grant from the

CHARLES STEWART MOTT FOUNDATION
Flint, Michigan 48502

CITY OF FLINT MICHIGAN 48502

OFFICE OF THE MAYOR

1101 S. Saginaw St. ● ph: 313 766-7346

Honorable James W. Rutherford

July, 1981

Dear Friends:

The City of Flint is pleased to present the Civic Park Home Preservation Manual. I hope you will find it helpful in your home renovation projects. Through the efforts of people like yourselves who translate this guide into improvements to their homes, we will be able to help retain the architectural character of this National Historic Community.

The Civic Park Home Preservation Manual is a first for Flint. It was developed as a result of a local concern for preserving and revitalizing this historic neighborhood.

This book is dedicated to you, the residents of Civic Park who are maintaining the legacy of early residents, enhancing the quality of life in our city today and preserving it for future residents to live in and enjoy.

Sincerely yours,

James W. Rutherford
Mayor, City of Flint

ACKNOWLEDGEMENTS

CHARLES STEWART MOTT FOUNDATION
William S. White, President

CITY OF FLINT
James W. Rutherford, Mayor

FLINT NEIGHBORHOOD IMPROVEMENT & PRESERVATION PROJECT, INC.
A. Robert Kucab, Executive Director
Anthony P. Martin, Project Manager
Robert A. Bartlett, Rehabilitation Specialist

CITY OF FLINT DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT
Jack A. Litzenberg, Director

TOMBLINSON, HARBURN, YURK & ASSOCIATES INCORPORATED ARCHITECTS & PLANNERS
Gerald J. Yurk, AIA, Principal-In-Charge
Ronald R. Campbell, AIA, Project Architect

WILLIAM KESSLER & ASSOCIATES
Edward D. Francis, FAIA, Consulting Architect
Lorri Sipes, Consulting Architect

MICHIGAN HISTORY DIVISION, DEPARTMENT OF STATE
Martha M. Bigelow, Director
Janet Kreger, Regional Preservation Officer

CIVIC PARK COMMUNITY LEAGUE
Sharon Goth-Kovall, President
Julia Chase, Past President

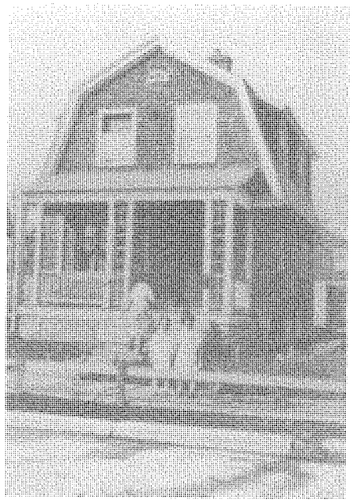
CIVIC PARK CITIZENS ADVISORY COMMITTEE
David A. Hoyt, Chairperson

E. I. duPont deNemours & Co.

FLINT HISTORIC COMMISSION
Robert F. Richardson, Chairperson

CIVIC PARK RESIDENTS
Past and present residents, too numerous to mention individually whose interest, knowledge and dedication to their community is invaluable to the preservation of this historic neighborhood, Civic Park.

TABLE OF CONTENTS



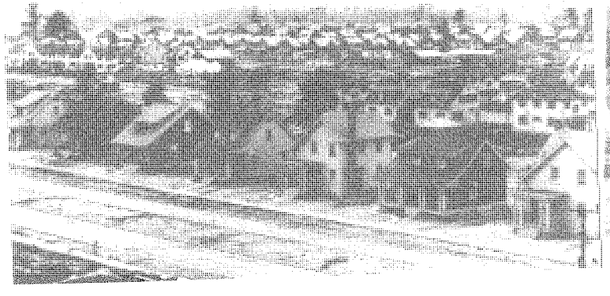
The streets, parks, churches and homes found in a small area of northwest Flint tell a fascinating and remarkable story of a community. It is a story of social concern, of a vision of human effort and engineering feats that combined to form a well-planned, attractive community whose residents, 60 years later, still speak of it with pride and love, a community known as Civic Park. If you are a resident of Civic Park then you have the unique honor of residing in one of the largest districts listed on the NATIONAL REGISTER OF HISTORIC PLACES. The register recognizes those properties that have been judged to be historically significant. This recognition confirms the belief that Civic Park is an important part of not only Flint and Michigan's history but of our nation's history. Civic Park is worth preserving.

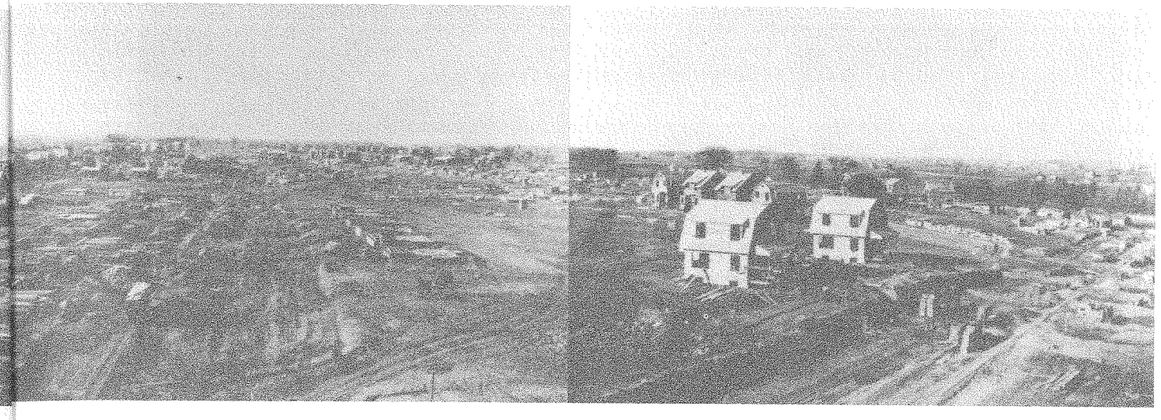
The end of World War I saw a post-war boom in the automobile industry the likes of which have never been seen since. Flint, the birthplace of the corporate giant General Motors, was going to be pushed into the 20th Century, as few towns would be. The boom created jobs. At one point, the hiring in the Flint plants reached 5,000 new employees in a month's time. In twenty years, from 1900 to 1920, the population of Flint increased seven-fold and then doubled again in the next ten years. That would be equivalent to the Flint of 1980 growing to almost twice the size of Detroit in the next 30 years.

Such growth placed immense burdens upon the city and residents. Flint's housing shortage was acute, over 700 families lived in tarpaper shacks and tents. Recognizing the desperation of newcomers to find adequate living quarters, a number of business leaders in Flint formed the Civic Building Association in 1917 with the goal of promoting new housing in a congested city. The association purchased 400 acres of land outside the City of Flint, hired William Pitkin, a landscape architect from Boston to lay out the plat and architects Davis, McGrath & Kiessling of New York to design the homes.

For a variety of reasons, the Civic Building Association was unable to see their dream much beyond this point. Still the housing shortage grew worse and appeared that it was not going to diminish. Experts throughout the nation warned that "cities and employers had to respond to the housing shortage" and that it was "essential to the welfare of the country".

Recognizing a responsibility to assist in post-war revitalization efforts, General Motors began to investigate the conditions in communities where it had plants. For Flint, this meant immediate attention to be given to the housing shortage. Within a short time, GM acquired all the property of the Civic Building Association. With additional land from the Stockdale and Durant Farms, the project grew to approximately 280 acres and would be known as Civic Park.





The Dupont Company, with controlling share of GM stock at the time, was placed in charge of the Modern Housing Corporation, a home building subsidiary of GM. The Dupont Family directed Allen J. Saville, head of the Modern Housing Corporation, to "Go to Flint and build a thousand homes. Start work about mid May...be completed by December. Good Luck". Saville and other Dupont engineers in Flint studying the Civic Park site determined that many of the original plans developed by the Civic Building Association could be utilized. The Dupont team implemented most of the street and landscaping plans of William Pitkin. The original home designs by Davis, McGrath & Kiessling were used with unknown architect(s) adding a few new styles and details.

* Photographs courtesy of Mrs. Bigler

LOOKING WEST ALONG CHEVROLET AVENUE AT THE INTERSECTION OF DAYTON

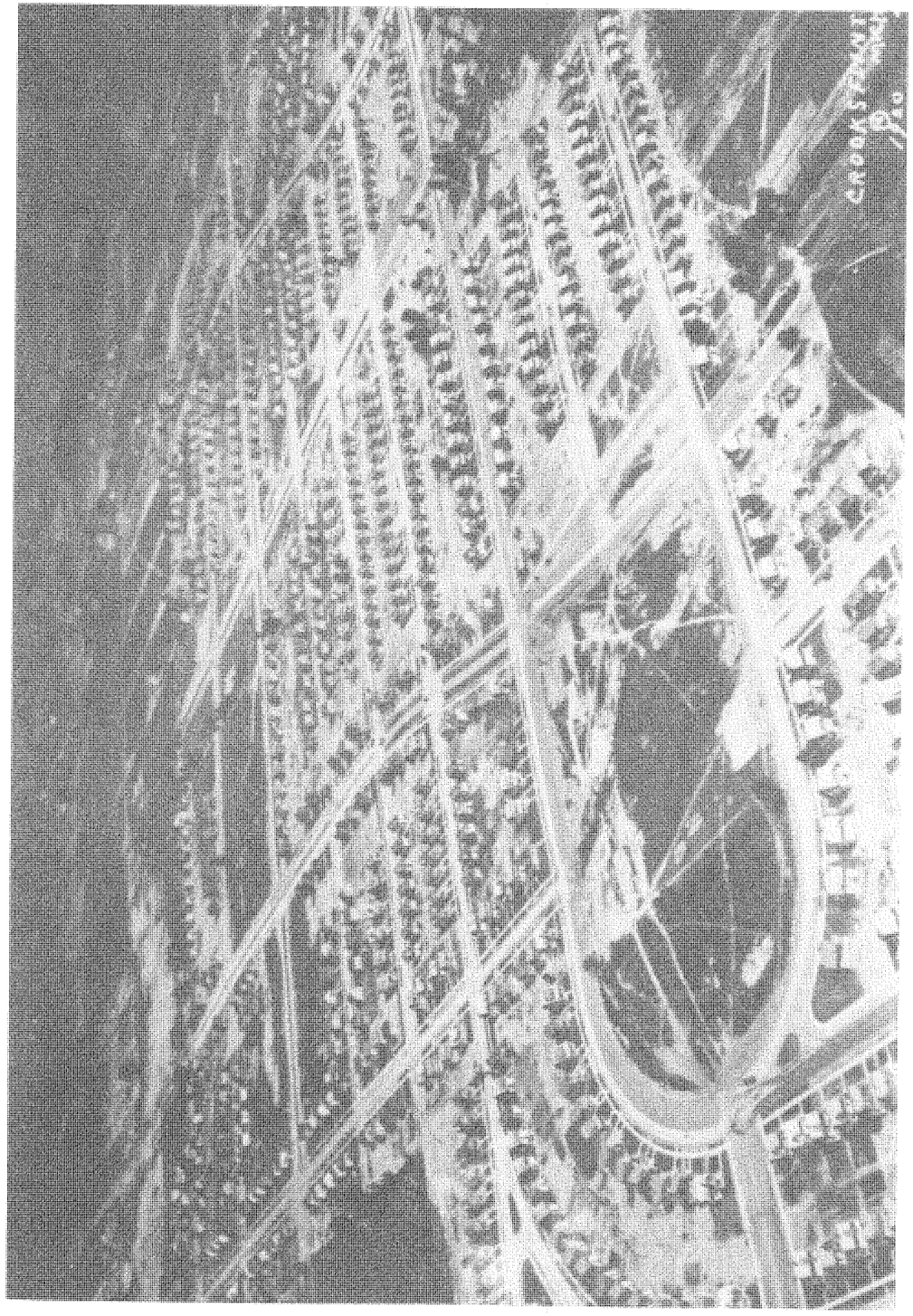
The first crew of construction workers arrived at the site on April 12, 1919. Their first assignments included the building of bunkhouses and mess halls to house the workers, and a railroad from the Chevrolet Plant to various sites in Civic Park. The railroad was an effective means of getting supplies to the site. As the pace of construction increased, 15 trains carried 2,000 tons of materials each day, leaving the supply station every six minutes, 24 hours a day. Five separate sawmills spaced throughout Civic Park worked 24 hours a day cutting hemlock and yellow pine for each home's rough framing, siding and trim.

Entire walls of individual homes were 'pre-fabricated' at these sawmills, moved to the new home site and laid up on the foundations and the first floor framing already in place. Follow-up teams moved from house to house completing the stucco, brick, clapboard and other finishes. The construction method was a modified version of the auto assembly lines - rather than the product moving from team to team of workers, the team of workers moved from house to house. A heated canvas kimona or tent devised to enclose an entire house during construction made working conditions better and allowed construction to continue in all weather conditions.

At the peak of construction, over 4,600 were employed as part of the workforce in Civic Park. A small city was created to build a community. The work camp included, in addition to the railroads and sawmills, 96 bunkhouses, two commissaries that could feed 1,500 workers at a sitting, a cafeteria, barber shop, shoe repair and several open-air theatres. The efficiency of the construction process and size of the work force involved resulted in an engineering feat. In five months, 600 homes had been completed. The hectic pace of building a completely finished home every seven hours continued for another three months as did the building of 16 miles of roads, sidewalks and public utilities. With the economic slump of 1920, the funding capital exhausted and internal disagreement among GM executives of cost over-runs of more than $8 million, the massive building project in Civic Park came to an end, 50 homes short of its target quota of 1,000.

GM maintained Modern Housing Corporation as a subsidiary but greatly reduced its responsibility, limiting its involvement to financing only basic community improvements and marketing finished units that continued to be built by private developers. Within Civic Park, GM limited the price of the homes to a range of $3,500 to $8,500, down payment of 5%, credit of $800 on the home purchase contract with a minimum of five years service at GM and a dollar for dollar savings account match up to $300. With these incentives, GM promoted the purchase of the new homes by its employees. One of the last construction projects by Modern Housing Corporation was the creation of Bassett Park and the Haskell Community Center.

Civic Park experienced only slow growth after 1920. Civic Park School was built and several small commercial areas that served the immediate neighborhood took hold. Today, 60 years later, the spindly trees planted in an area devoid of vegetation now grace in a stately manner the streets, the parks, the churches and the homes of a community called CIVIC PARK.



MANUAL INTRODUCTION

Civic Park is a National Historic Residential District, a distinction it shares with such places as Williamsburg, Virginia; Georgetown in Washington D.C. and Bayview, Michigan. It is only natural that the residents want to maintain and restore their historic property. The Civic Park Home Preservation Manual (HPM) is a major element in helping preserve your historic property.

The goal of the HPM is to define those architectural elements of Civic Park homes which must be preserved in order to maintain the visual and historic character and integrity of the neighborhood. Based upon a clear understanding of the architectural character of Civic Park, these exterior guidelines were developed to define acceptable preservation actions and provide technical reference for the maintenance and repair of a historic home.

There are two components of the HPM: Government standards for the preservation of historic neighborhoods, as defined by the Secretary of the Interior and specific technical information on the preservation of the exterior architectural elements of the Civic Park homes. As a result, the HPM can be used by both the professional and the homeowner.

The Secretary of the Interior, Heritage, Conservation and Recreation Service, Technical Preservation Services Division of the US Government have set standards for a wide range of actions that can be taken on historic property.

Consistent with the Secretary of the Interior's Standards and Guidelines, the HPM is organized into three major categories: Neighborhood, Building Site, and Building. In further detail, the Building section is then subdivided into materials and details which are found in Civic Park. Thus, discussions of stucco and slate roofing will be found, but stone and cast iron will not. Each section (for example: brick) will present a general introduction to the material and its use in Civic Park; the Standards of the Secretary of the Interior and specific guidelines for the maintenance, cleaning and repair of the material.

The user will find five sections which are not found in the Secretary of the Interior's Standards but which are felt to be important considerations in the preservation of Civic Park. These include ARCHITECTURAL STYLES, VINYL, ASBESTOS AND ALUMINUM SIDING, COLOR, ENERGY CONSERVATION and a MAINTENANCE CHECKLIST.

The HPM is meant to be a guidebook. Current industry practices are not to be ignored but rather complemented. The concern for the preservation of Civic Park as an example of industrial housing of the early 20th Century makes it important to identify those materials and architectural features which make Civic Park what it is.

The homeowner should become familiar with any one of a number of maintenance manuals which are currently available. These manuals are not aimed at historic preservation but rather at repair and maintenance. (The Home Preservation Manual remains the primary guide for restoring a Civic Park home.) These manuals include:

- Readers' Digest, Complete Do-it-Yourself Manual
- Popular Science, Homeowners' How-to Treasury
- New York Times, Complete Manual of Home Repair
- Time/Life, How Things Work in Your Home
- Popular Mechanics, Complete Manual of Home Repair & Improvement
- Sunset Editors, Basic Home Repair Illustrated
- Family Handyman Magazine, The Family Handyman Encyclopedia of Do-it-Yourself Projects
- Better Homes & Gardens, Complete Guide to Home Repair, Maintenance and Improvement

MANUAL SUMMARY

This summary defines the architectural and community elements of Civic Park which must be preserved in order to maintain the historic character and integrity of the neighborhood.

1. Neighborhood identification such as signs, banners, street lights or individual home placards should be placed to mark the boundaries of Civic Park and increase the awareness of visitors and residents that they are in a historic neighborhood.

2. Open spaces originally planned as parks should not only be maintained, but enhanced. Tennis courts, walking paths, playlots and neighborhood garden plots could be built; streets, curbs and boulevards should be maintained.

3. Additions to a Civic Park house should be limited to the rear. This preserves the original rhythm of the street, which has houses equally spaced apart, and preserves three historically important facades.

4. Garages and building additions should be built in a design which is sensitive to the style of the house in scale, form, color and material.

5. Fences should be wood, not metal, and be located in the rear yard, not the front. Color should blend with the color and design of the house.

6. Driveways, sidewalks and any other paving should be well-maintained concrete or asphalt surfaces.

7. Architectural style as defined by proportion, scale, massing, and texture of each house is a fundamental determinant of the character of Civic Park.

8. Structural systems should be maintained dry and insect-free.

9. Roof forms, including dormers, exposed rafters and eave details should not be altered or covered up.

10. Slate roofs should be preserved or restored.

11. Brick chimneys should be maintained and preserved.

12. Gutters and downspouts are important functional elements which should be maintained in order to protect the other building materials.

13. Wood, brick or stucco siding should be preserved or restored to its original conditions.

14. Aluminum or vinyl siding should not be installed. This is a cover-up of the original materials so important to the character of Civic Park. Often the installation of siding encourages such problems as moisture, rot and insect attack.

15. Windows should be preserved or restored and their original placement, design and material retained.

16. Storm windows and doors should be wood.

17. Awnings should be canvas and color coordinated with the house and trim paint.

18. Porches should be preserved or restored to their original materials and design including railings, columns, trellis work and color.

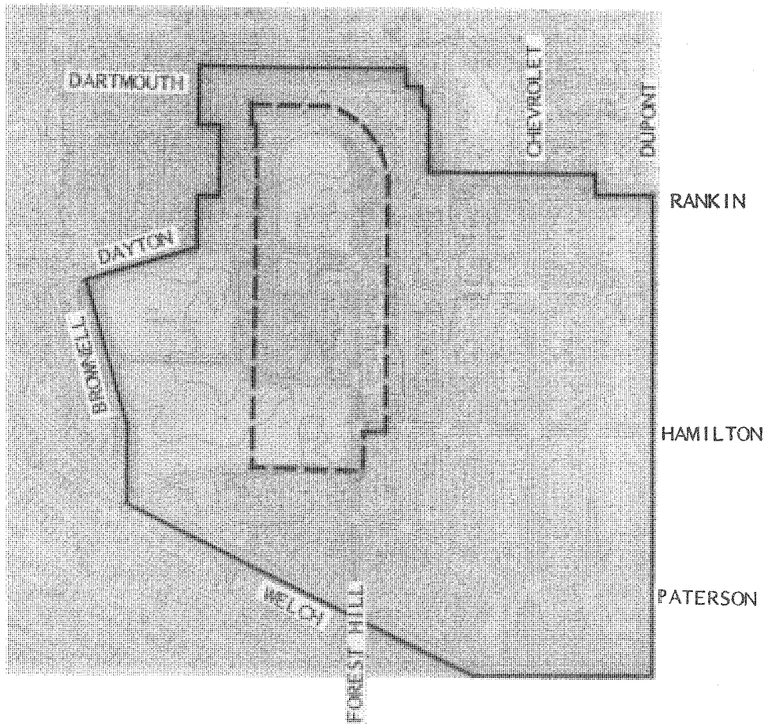
19. Concrete or concrete block foundations should not be painted or covered.

20. Paint colors should be selected from the palatte of original colors.

21. Energy conservation measures should be used which do not alter the original design. This might include: planting trees for shade, attic insulation, sealing cracks and installing energy-conserving equipment.

NATIONAL REGISTER HISTORIC DISTRICT

LOCAL HISTORIC DISTRICT



introduction

Civic Park is a neighborhood of curving streets and boulevards, mature trees which canopy the streets, open spaces and modest, single-family, detached homes of a similar architectural style. The character of the neighborhood is directly related to its planning and construction. Civic Park was an entirely new, planned residential community of 900 homes and 20 commercial and public structures when built in 1920. Since then an additional 100 homes have been built, all of which blend into the basic architectural character. The original 900 homes were constructed in less than a year, a phenomenal construction accomplishment which attests to the power of mass production.

Mass production implies, by definition, a similarity, if not unwavering repetition, of style, detail, size and materials. However, variety and individuality were important elements in the planning of Civic Park and as a result, there are a number of different types of houses.

The Michigan History Division identified 26 types of houses in its nomination to the National Register of Historic Places. All the original houses of Civic Park can be placed within two broad architectural styles: Colonial Revival/Queen Anne and Bungalow. These are discussed in detail in ARCHITECTURAL STYLES, page 23.

Aspects of mass production left their mark on Civic Park. All of the original homes are similar in their placement in relation to the street and to each other; in materials and texture (brick, stucco, wood shingles and slate roofs); in size, scale, proportion and roof form and in the type of windows, doors, vents and detailing. The result is a rhythmic, cohesive streetscape and neighborhood.

secretary of the interior standards for historic preservation

Recommended	*Not Recommended*
Retaining distinctive features such as the size, scale, mass, color, and materials of buildings (including roofs, porches, and stairways) that give a neighborhood its distinguishing character.	
Retaining extant light fixtures and devices, signs, telephone poles, and other street furniture that may possess associative value with the historic scene.	Removing signs, wires, and street furniture that possess associative value with the historic scene.
Retaining landscape features such as parks, gardens, street lights, signs, benches, walkways, streets, alleys, and building set-backs that have traditionally linked buildings to their environment.	

civic park guidelines

Civic Park was not frozen in time in 1920. It has grown and changed with individual homes reflecting some of that change. The maturity of the neighborhood is seen not only in the tree cover, but the construction of garages, driveways, (neither of which were built in 1920) building additions and the deterioration of some of the original fabric. However, the character of Civic Park remains fundamentally the same as in 1920, a factor essential to its designation as a Historic Residential District.

MAINTENANCE: A simple but important element which is often ignored and can then lead to more problems. City services which require attention and areas of concern are:

1. Keeping streets and curbs free from holes.
2. Removal of dead trees; pruning and landscape treatment to prevent tree loss.
3. Keeping public areas free from debris.

Private areas for concern are:

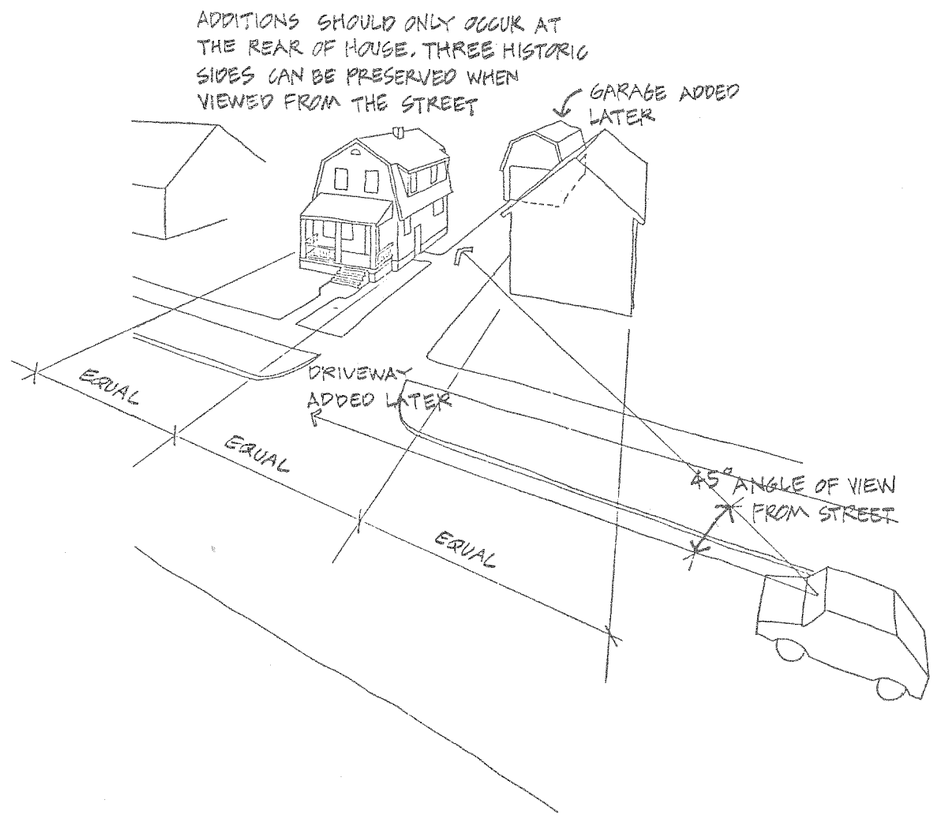
1. Keeping individual building lots free from debris and clutter; individual home maintenance.
2. Maintaining grounds and exteriors of abandoned homes.

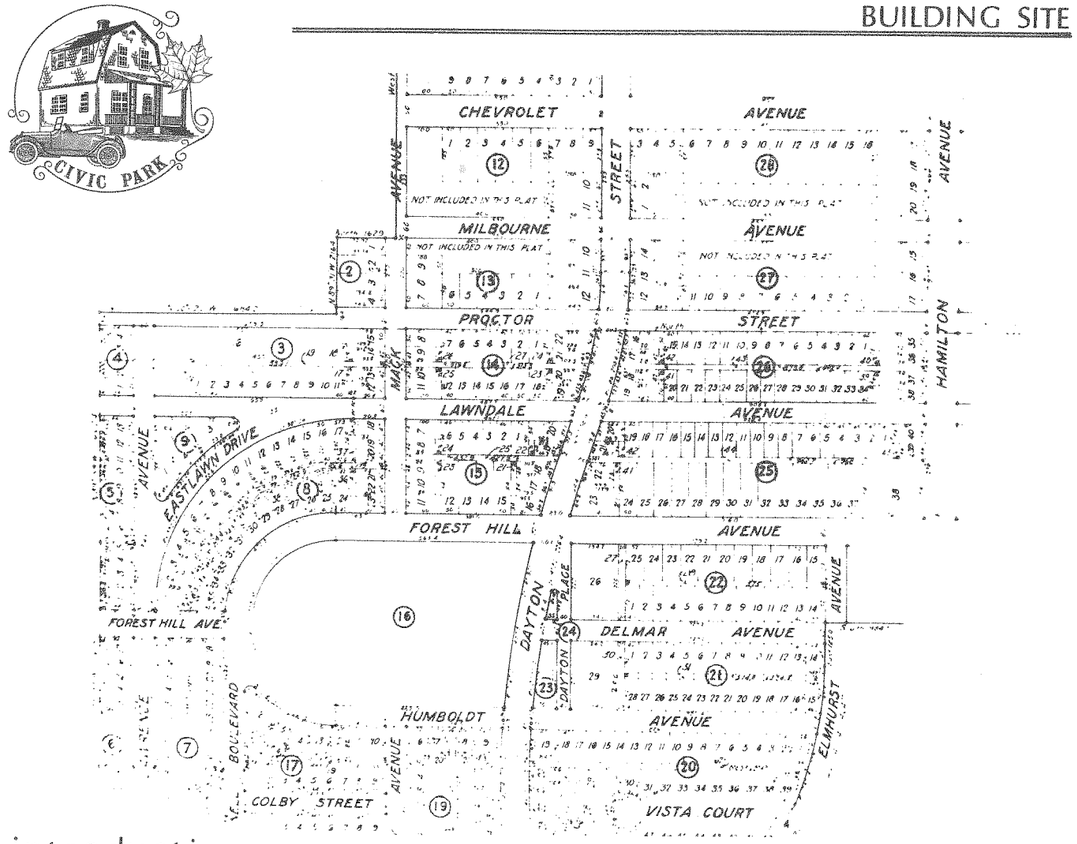
REPAIRING:

1. Repair deteriorated curbs, streets, catch basins, sidewalks and public open spaces.
2. Repair damaged or missing materials and details of individual homes.

REPLACING:

1. Building additions should be limited to the rear of the house. See ADDITIONS AND NEW CONSTRUCTION, page113.
2. New buildings or homes should be complementary to the existing architecture.
3. The important architectural elements and amount of open space should be preserved and maintained in all buildings and building lots.
4. Install street furniture, distinguished light posts, placards, bicycle paths, tennis courts, playlots and other public services.
5. Install a signage or placard system identifying Civic Park as a neighborhood.
6. Identify the boundaries of the Civic Park National Historic District.





introduction

A typical building lot in Civic Park is 50 feet wide and 100 feet deep, rectangular in shape. There are a few lots with rear alleys. Corner lots, lots facing major streets and lots east of Chevrolet tend to be larger than the average. The community was planned and constructed with only the house and landscaping on each site. Driveways, garages, fences, were all later additions.

The house is placed on the site parallel to the street, in line with all of the houses on the block. On each block, houses are equally spaced about 25 feet apart. The possibility of future garages and driveways was apparently considered. This is seen not only in the equal spacing of houses, but also the placement on many of the houses, of a side door which would access that future garage and sometimes shared driveway.

secretary of the interior standards for historic preservation

Recommended

Identifying plants, trees, fencings, walkways, outbuildings, and other elements that might be an important part of the property's history and development.

Not Recommended

Making changes to the appearance of the site by removing old plants, trees, fencings, walkways, outbuildings, and other elements before evaluating their importance in the property's history and development.

Retaining plants, trees, fencings, walkways, street lights, signs, and benches that reflect the property's history and development.

Providing proper site and roof drainage to assure that water does not splash against building or foundation walls, nor drain toward the building.

civic park guidelines

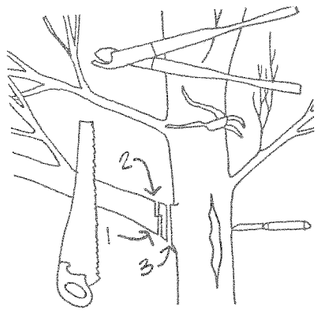
The building sites in Civic Park contain, in addition to the house itself, a great variety of materials and elements from metal fences to wood garages. This variety contrasts to the similarity of all the original houses.

Deteriorated site elements such as unpainted and broken fences, poorly maintained or designed garages, unkept lawns and unpaved drives give a cluttered impression of the neighborhood.

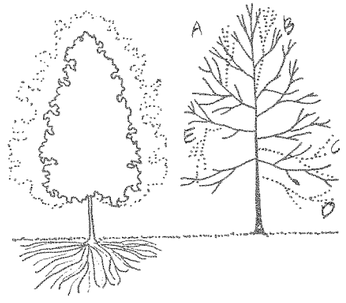
MAINTENANCE AND REPAIR

1. Landscaping, consisting of lawn, trees, shrubs and flowers should be regularly pruned, watered, fertilized and cared for; dead material removed and new landscaping planted as needed.

   Sewer lines that become clogged with the roots usually require professional cleaning. To lengthen time between professional cleanings, use copper sulfate every 3 to 6 months as directed on the package. This can be purchased at many nurseries or hardware stores.

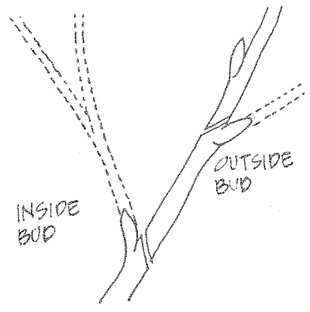


USE THE RIGHT TOOL FOR THE SIZE CUT NECESSARY. WHATEVER THE TOOL, BE CERTAIN IT IS SHARP. RAGGED EDGES CAN LEAD TO ROT AND DISEASE. CUTS OF ANY SIZE SHOULD BE SEALED WITH TREE PAINT. SAWING A LARGE LIMB SHOULD BE DONE WITH 3 CUTS AS SHOWN ABOVE WITH THE LAST TO SHORTEN THE STUB WITH A CLEAN CUT



WHEN PRUNING TREES, BALANCE MUST BE MAINTAINED BETWEEN TOP AND BOTTOM GROWTH. IF ONE IS CUT BACK, THE OTHER SHOULD BE ALSO. CUT OUT ALL:

A. CROSSING BRANCHES
B. NARROW CROTCHES
C. CROWDED LIMBS
D. LOW LIMBS
E. BROKEN BRANCHES



CONTROL DIRECTION OF GROWTH BY CUTTING TO AN OUTSIDE BUD OR INSIDE BUD. THIS APPLIES TO RELATIVELY LARGE LIMBS

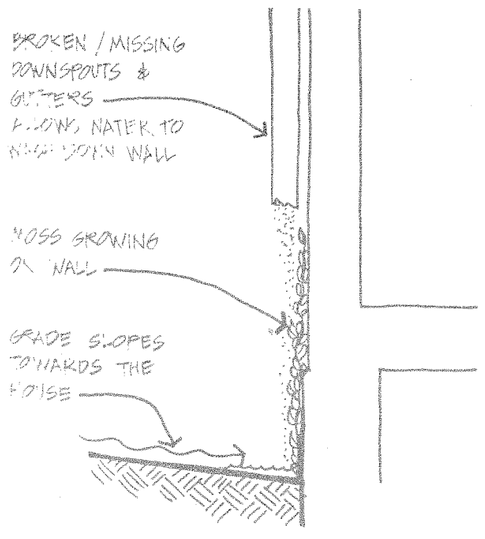
2. Fences have been built in both wood and metal. Regularly check for and repair damages to fences. Repaint at the first sign of deterioration. Wood fences which have rotted should be removed as they are not only unsightly but also dangerous. Replace with a decay-resistant wood treated with a preservative such as Wolmanized ® or creosote wood which is in direct contact with the ground.

3. Garages in Civic Park present a variety of styles, materials and conditions. Existing garages should be regularly painted, re-roofed and repaired as needed. Structurally unsound (leaning or sagging) garages should be removed. Doors should be checked and repaired regularly.

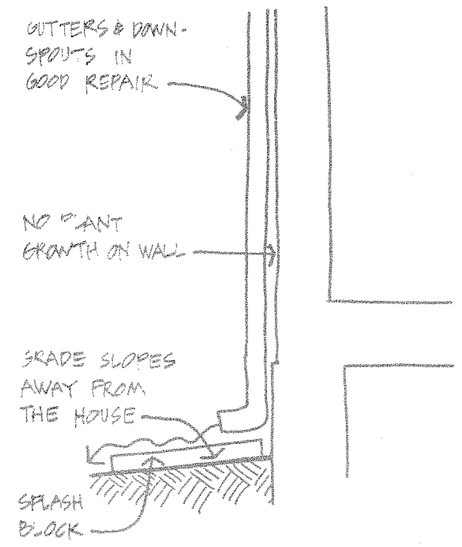
4. Pavement has been added as driveways and patios. Regularly check for and repair cracks or holes in concrete and asphalt; and loss of gravel. Finish dirt driveways with gravel or concrete.

5. Drainage of water away from the building is necessary to prevent damage to the building materials. Slope grade away from foundations, fill low areas with topsoil soil and seed. Keep downspouts and gutters repaired. Use splashblocks to direct water away from house. Remove any moss or algae growing on the house and determine the source of water which is supporting growth.

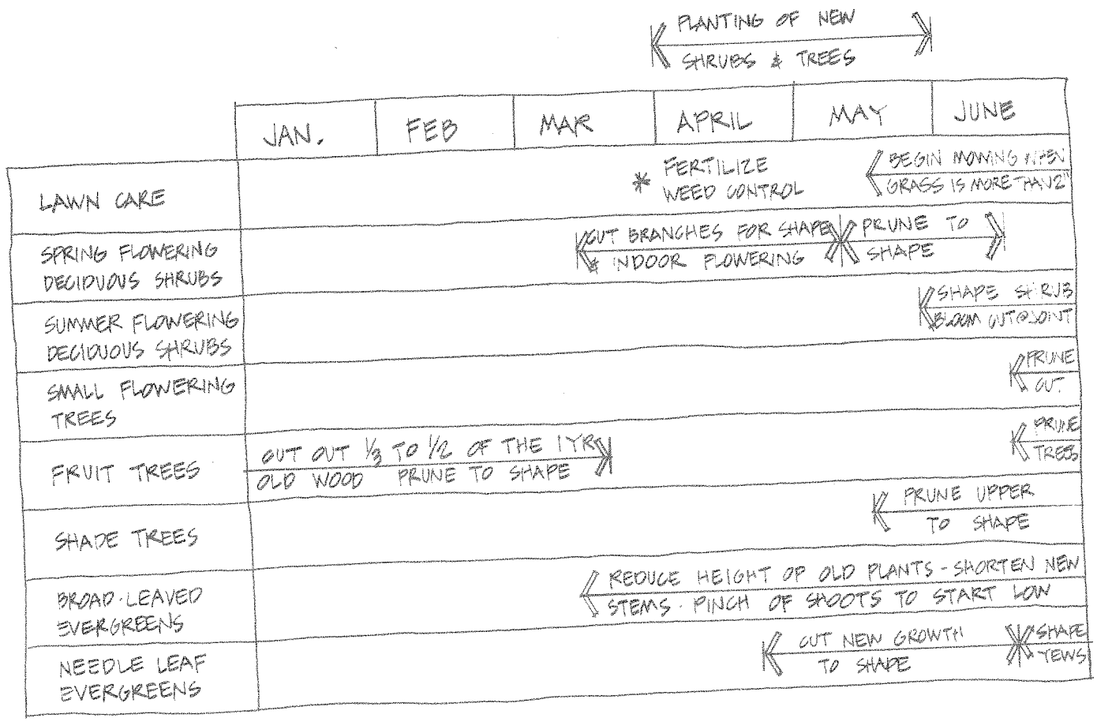
   Many times water leaking into the basement can be corrected with adding 2" to 6" of top soil at the foundation and sloping it away from the house for a distance of 2 feet.



POOR DRAINAGE



GOOD DRAINAGE



REPLACING:

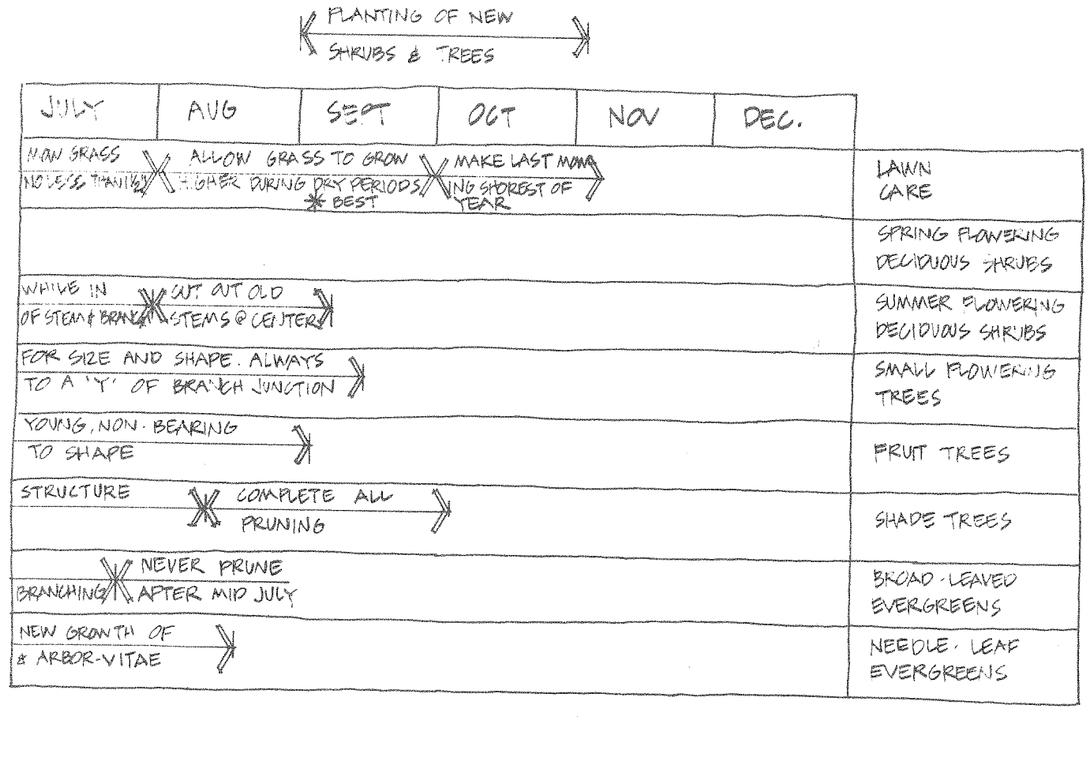
The following guidelines are directed at additions and new construction on a site.

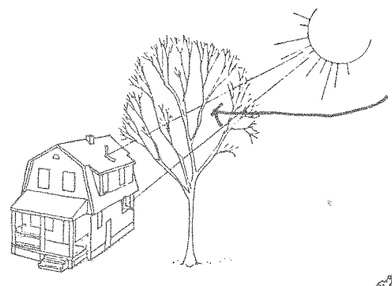
1. Landscaping can be an energy saver if trees are positioned to shade the house. Do not plant large trees near paving surfaces or building foundations as root growth will cause movement of the paving or foundation. Plant deciduous trees which lose their leaves in the winter, thus admitting sun into the house.

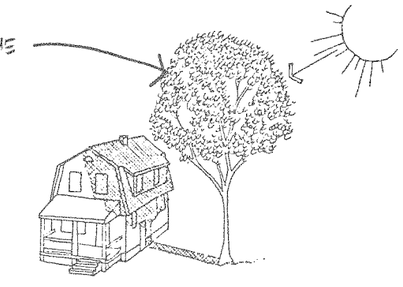
2. Fences should be built of wood, not chain link. They should not be more than three feet high if located in front of the house. Rear fences, which have less visual impact should be wood not be more than six feet high. Vines could be planted at existing chain link fences. Within a few years, the growth will cover the fences and soften its effect. Another solution is to paint chain link fence black.

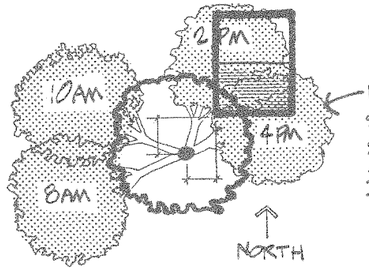
3. Garages should be built of the same material and in the same form and style as the house. This requires a conscientious design. There are many examples of both good and bad design in Civic Park which can be studied by the homeowner. Consider the following features when planning a garage:

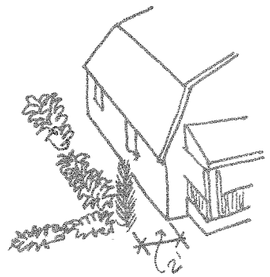
   The use of horizontal narrow lap wood siding, brick or stucco that matches the house is recommended. Garage roofs can be sloped to reflect the roof of the house. Use doors and windows similar to those of the house.



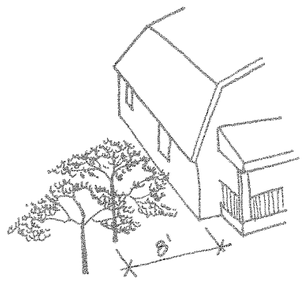




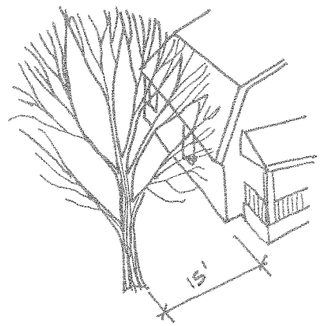




FOUNDATION PLANTING



SMALL FLOWERING TREES

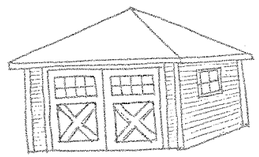


SHADE TREES

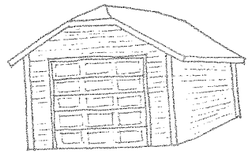
PLANTING DISTANCES

EXAMPLES OF ACCEPTABLE GARAGE TYPES

SIDINGS TYPICAL OF CIVIC PARK HOUSING. STUCCO, BRICK, WOOD OR SHINGLES

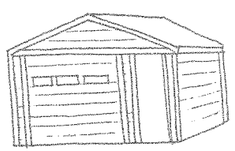


ROOF FORMS TYPICAL OF THE HOMES - GABLE, JERKINS HEAD ETC.

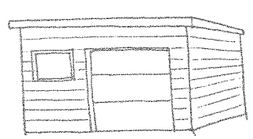


WOOD DOORS, SWINGING WITH PANELS AND GLASS OR WOOD PANEL OVERHEAD IS ACCEPTABLE

EXAMPLES OF UNACCEPTABLE GARAGE TYPES



- LOW ROOF SLOPE
- METAL OVERHEAD DOOR
- FLUSH ACCESS DOOR
- NO OVERHANGS



- FLAT ROOF
- LARGE SCALE METAL OR SYNTHETIC SIDING
- UNDIVIDED WINDOW PANE

ACCEPTABLE FENCES

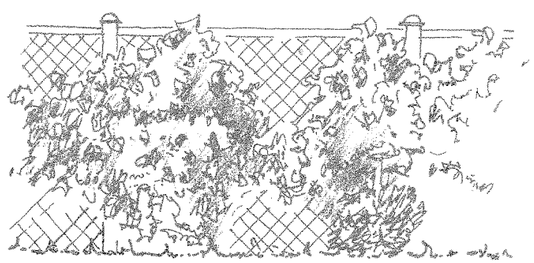
- WOOD
- OPEN OR SEMI-OPEN FEELING
- FINISH LUMBER CUT TO PERCISE EDGES
- MAXIMUM HEIGHT
  3'-0" FRONT YARD
  6'-0" REAR YARD
- DARK GREEN OR BLACK PAINTED CHAIN LINK FENCE
- PLANT VINES OR SHRUBS TO CONCEAL CHAIN LINK FENCE

UNACCEPTABLE FENCES

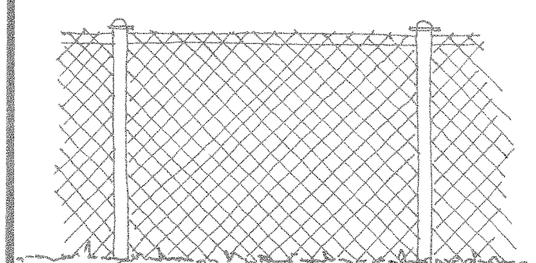
- SOLID FENCES SUCH AS 'STOCKADE', 'BASKETWEAVE', BRICK OR STONE
- UNFINISHED LUMBER – ROUGH SAWN SPLIT RAIL TYPE
- BARE FACE CHAIN LINK FENCE
- TALL OR SOLID FENCES THAT BLOCK VIEWS

WOOD PICKET

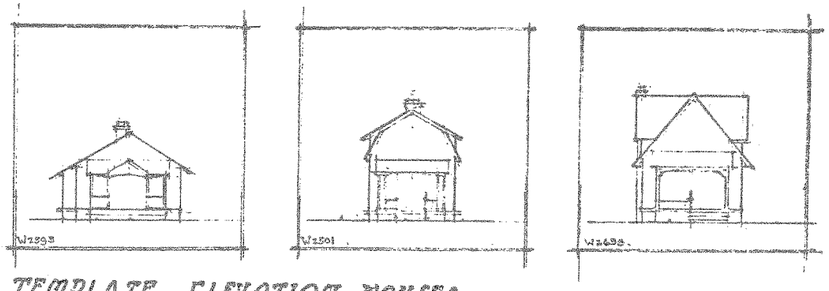
SPLIT – RAIL



VINES ON CHAIN LINK



CHAIN LINK

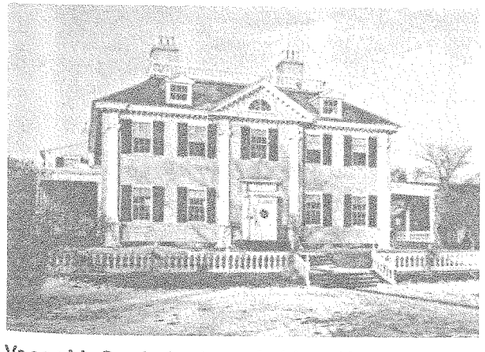


TEMPLATE ELEVATION HOUSES.

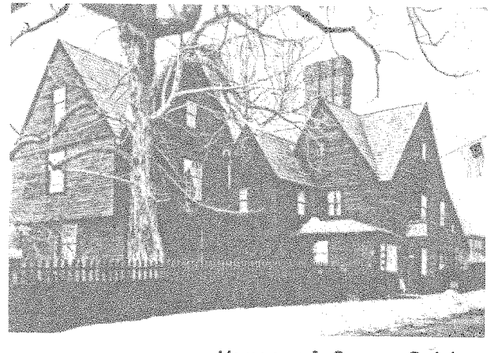
identifying buildings by an architectural style is the attempt to provide a visual impression through verbal means. It is useful many times in describing a particular time or specific feature of an architectural period. However, many terms such as colonial essentially refer to a historical and political period of this country. In architecture, the term colonial can be applied to the rambling house of the seven gables (c. 1668) in Salem, MA, or the symmetrical Vassall – Craigie – Longfellow House (c. 1759) in Cambridge, MA. In modern times, the term colonial is used in real estate jargon sometimes to describe an aluminum sided house with two car garage and a decorative eagle over the door even though these features were never heard of, let alone found in buildings during the colonial period.

An architectural style reflects the fashion and technology of the time. A building may exhibit a combination of elements from various periods to achieve a certain effect or it may represent a transition period as one style slowly evolves into another.

In a historic neighborhood such as Civic Park, it is important for homeowners to recognize the architectural style and features of their house in order that the features may be preserved. By doing this, the homeowner is preserving the fashion, technology and materials of the original 1920 Civic Park Home. To acquaint the homeowner with the architecture in Civic Park, this chapter will go from a broad overview of style to specifics which are identified by regional names.



Vassall–Craigie–Longfellow House



House of Seven Gables

Two basic architectural styles are found in the original 900 Civic Park homes, the hybrid Colonial Revival/Queen Anne and the Bungalow.

The Colonial Revival style was popular from 1870 to 1920 and the Queen Anne style from 1880 to 1900. In Civic Park, variations of the American Colonial architecture (French, English and Dutch) have been embellished with very definite Queen Anne details. This style is further categorized into seven variations, identified by the regional names, but all are characterized by the following features:

- Straightforward use of materials and expression of plan (New England Colonial)
- Box-like appearance (New England Colonial)
- Sparse distribution of windows (New England and Dutch Colonial)
- The 'salt-box' shape which extends the roof slope to include the porch (New England Colonial)
- Pavilion-type roof which projects beyond the walls (French Colonial)
- Steeply pitched gable or gambrel roof with overhangs (Dutch Colonial)
- Variety of color, texture and material (Queen Anne)
- Brick or stucco exterior at the first floor; shingles or horizontal boards above (Queen Anne)
- Multiple roofs which are predominantly gable but can also be gambrel and hip (Queen Anne)
- High roof (tall proportions (Queen Anne)
- Small scale, classical detailing (Queen Anne)

The Bungalow style is far more distinct than Colonial Revival/Queen Anne. It is a simple yet functional house which was popular from 1890 to 1940 and is characterized by:

- One story with gently pitched, broad gable roof
- Open or screen porch, often with battered (sloped) porch piers
- Rafters and ridge beams which extend beyond the wall and roof
- Predominance of wood shingles, left unfinished or stained earth-tone Colors as the exterior wall finish
- Double-hung sash windows

There are a number of design elements which define these eight types of houses and which must be preserved in order to maintain the character of Civic Park. These elements are scale, proportion, massing and texture.

SCALE: the ratio of the size of a building to the size of a person. Houses in Civic Park are either 1, 1½ or 2 stories in height. The detailing of the porch, the line of the roof and the texture of the building materials reduces the scale of the house.

PROPORTION: The relationship of the height of a house to its width. In Civic Park this varies from the low, horizontal Bungalow to the tall boxy Corner Style.

MASSING: The composition of the primary forms of a building. All houses are composed of a number of masses. The most important of those, the living areas of the house, are defined by the roof form, be it gable or gambrel. Refer to ROOF page 73 . Projecting from this mass are a number of smaller forms such as the porch, roof dormers of varying sizes and in some cases, a rectangular bay window at the first floor. The line and form of the main roof establishes the type of the house. The porch, dormers and bay windows serve to break up the box-like nature of the house itself and add visual interest.

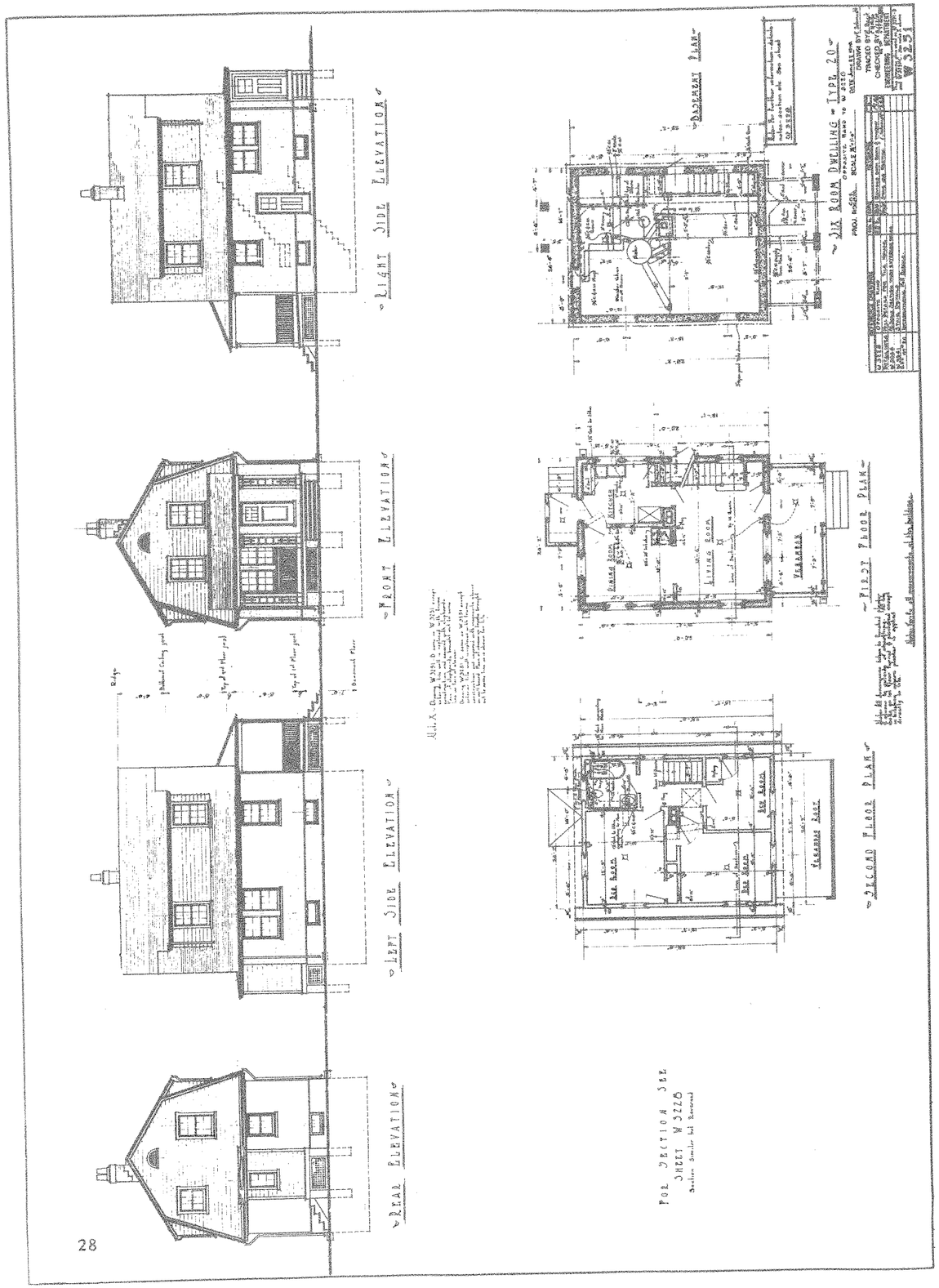
TEXTURE: The arrangement of the parts and materials of a building which affects its appearance or feel. The richness in the texture of the houses is a result of materials, color and detailing. Most of the original materials (slate, wood shingle siding, clapboard siding and brick) are very textured. Stucco which varies from smooth to rough, indicates its use as a material of texture also.

The color of the slate, asphalt shingles, wood shingle siding, brick and stucco was natural earth-tones. The wood trim, porch elements and clapboard siding were painted to harmonize with the other elements and finish the house.

The detailing of the houses brings all the elements of scale, mass and material together. Thus, the porch is simple yet finely detailed in wood with double columns, trellis-work, vertical balluster railings and wood trim. The simple wood detailing continues to the windows, doors and roof eaves. Separation of the first and second floors with different materials or colors gives the appearance of a larger house by calling out a heavy masonry base and a lighter wood top. The bungalows are sheathed in one material and detailed simply with wood trim and a porch.

	COLONIAL REVIVAL / QUEEN ANNE			
SCALE	DUTCH COLONIAL	NEW ENGLAND COLONIAL	CIVIC PARK SALTBOX	CORNER STYLE
PROPORTION	2 STORIES SQUARE	2 STORIES VERTICAL	1½ OR 2 STORIES HORIZONTAL	2 STORIES VERTICAL
MASSING	GAMBREL ROOF DORMERS PORCH BAY WINDOW	GABLE ROOF DORMERS PORCH BAY WINDOW	GABLE ROOF DORMERS PORCH	GABLE, JERKINS HEAD OR TRUNCATED GABLE DORMERS PORCH BAY WINDOW
TEXTURE MATERIAL	SLATE ROOF CEDAR SHINGLES STUCCO BRICK WOOD	SLATE ROOF CEDAR SHINGLES STUCCO BRICK WOOD	SLATE ROOF CEDAR SHINGLES STUCCO BRICK WOOD	SLATE ROOF CEDAR SHINGLES STUCCO BRICK WOOD
DETAILS	PORCH ROUND VENT	PORCH ROOF BRACKETS RECT. VENT	PORCH ROOF BRACKETS RECT. VENT	PORCH ROOF BRACKETS RECT. VENT

	COLONIAL REVIVAL / QUEEN ANNE			BUNGALOW
SCALE	3 - GABLE SALTBOX	URBAN TRADITIONAL	CIVIC PARK SUBURBAN	BUNGALOW
PROPORTION	2 STORIES SQUARE	2 STORIES VERTICAL	1½ OR 2 STORIES SQUARE	1 OR 1½ STORIES HORIZONTAL
MASSING	GABLE ROOF DORMERS PORCH	GABLE ROOF PORCH	HIP ROOF PORCH	GABLE, HIP OR JERKINS-HEAD GABLE ROOF DORMERS PORCH
TEXTURE MATERIAL	ASPHALT ROOF WOOD SIDING	ASPHALT ROOF WOOD SIDING	ASPHALT ROOF WOOD SIDING	ASPHALT ROOF WOOD SIDING
DETAILS	PORCH ROOF BRACKETS RECT. VENT	PORCH RECT. VENT	PORCH RECT. VENT	PORCH ROOF BRACKETS RECT. VENT



'Dutch Colonial'

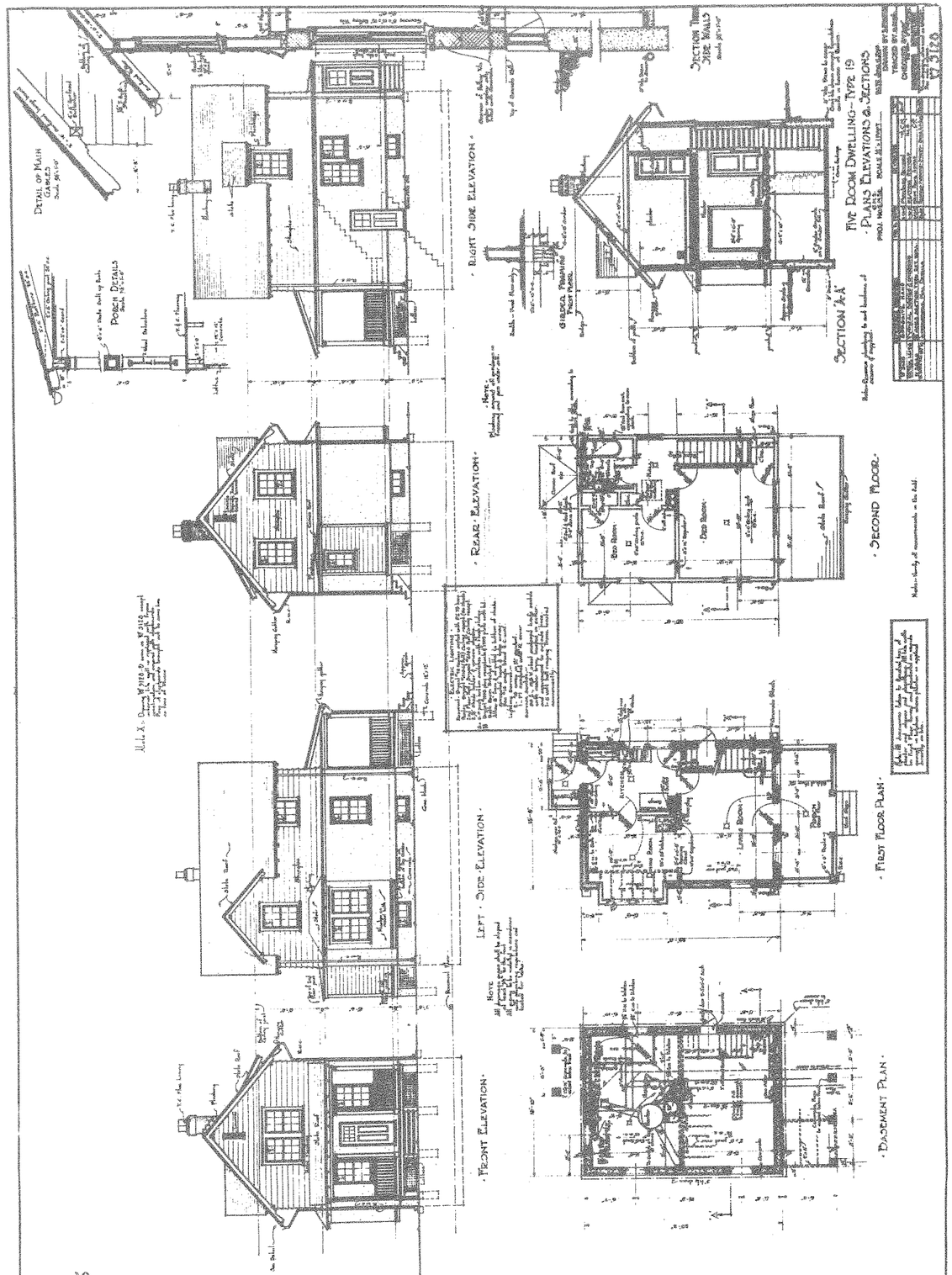
One of the most popular styles found in Civic Park is the "Dutch Colonial". The most outstanding feature is the gambrel roof which has nicknamed it the "barn style". The actual heritage of this roof cannot be traced to the Dutch, but developed during the 1700's in Northern Europe and England and was brought to the colonies.

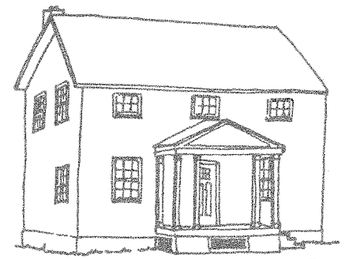
Besides the gambrel roof, all the Civic Park houses of this style originally had a one story open porch with a flat or shed roof with a few having the main roof covering the porch. Almost all these houses had slate roofs, and all had dormers. Most of the dormers are created with the upper slope of the gambrel roof extending past the break line of the two different slopes. A few homes have dormers with a gable roof (upper right), and one variation has the main roof formed by a gable roof intersecting a gambrel roof at a 90 degree angle (upper center). All the homes had wood on the second floor and wood, brick or stucco on the first floor. If the first floor was brick or stucco, the second floor was cedar shingles.

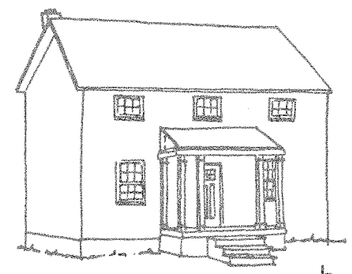
Wood shingles were a common material of the Civic Park homes, evolving from the Queen Anne and shingle style of the 1880's. Many architects from the east had a fondness for natural wood shingles and used them in many of their designs. The New York architects Davis, McGrath and Kiessling also showed fondness for them as they used them on many of their house designs in Civic Park in 1919. The original drawing of one variation is shown.

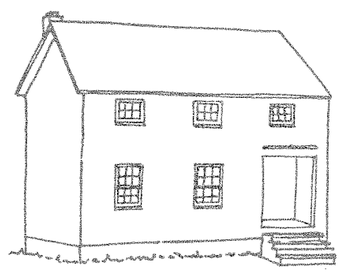
Other features of the original Civic Park "Dutch Colonial" houses included a number of common features, including wood double hung windows that are divided into 6 small window panes in both upper and lower sash. Exterior doors were solid wood panel. Attic vents were also wood and in the shape of a half circle. Chimneys were brick and corbelled at the top (each succeeding brick course projecting farther than the one under it).

The more of these features a Dutch Colonial house has in Civic Park, the more valuable the house is in a historic neighborhood.




a.

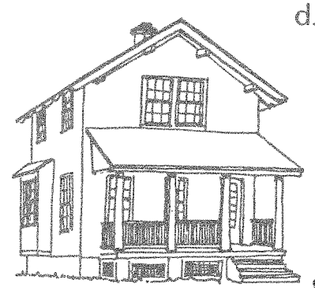

b.


c.

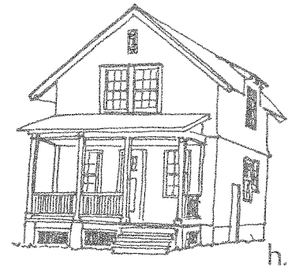

d.


e.


f.


g.

'New England Colonial'

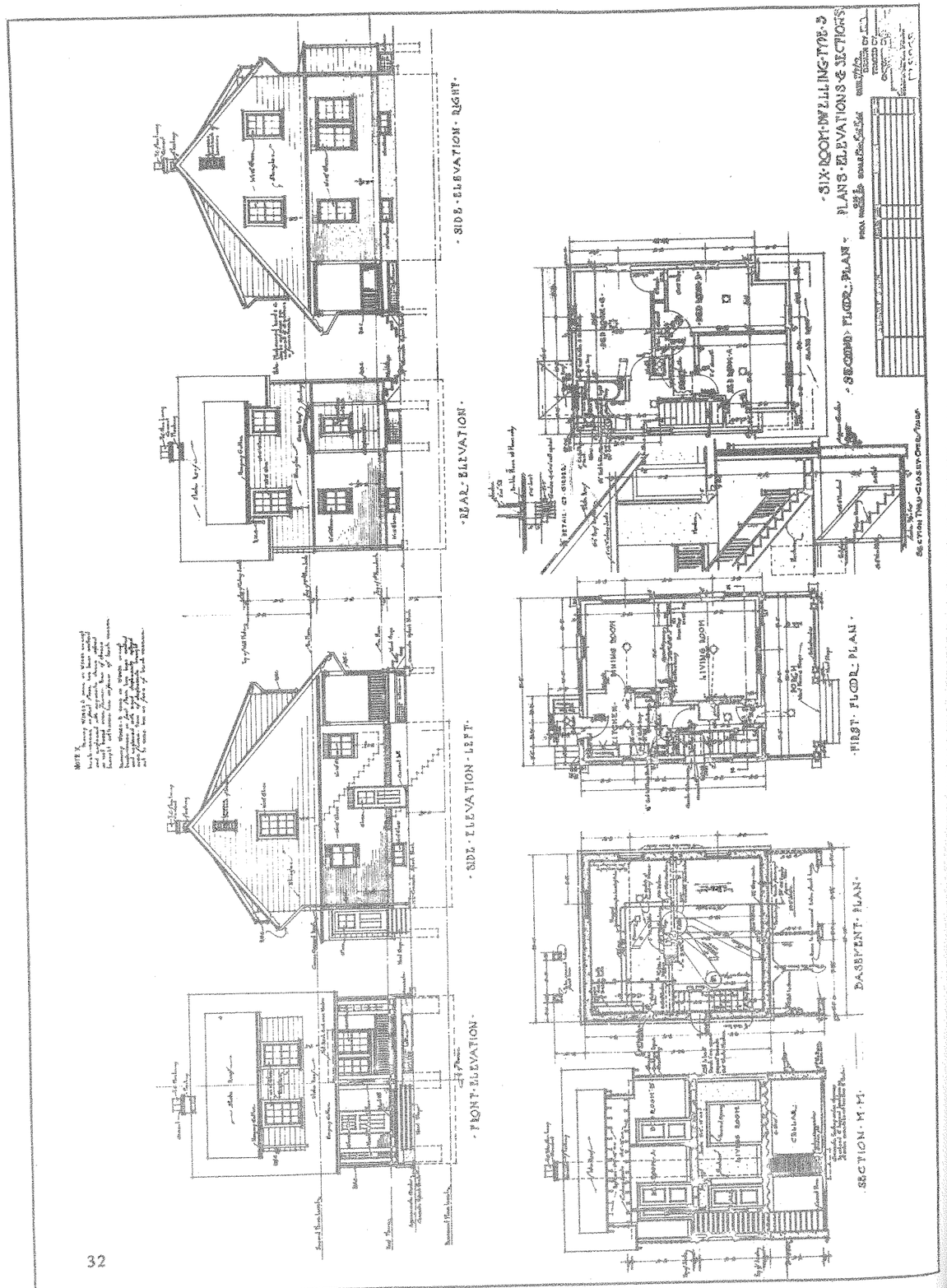

h.

A Civic Park housing style that we've termed "New England Colonial" is illustrated above. They reflect much of the same design character that the Puritans brought to North America during 1558–1625. Similar to the Puritans attitudes, their buildings were solid and direct.

Both the Civic Park house of this style and the early Puritan homes of New England combined a strong sense of verticality with steep pitch dominate roof lines, gable ends and symmetry of doors and windows. Both have few windows which are divided by muntins into small panes, as in the illustrations. Wood is a basic material and painted in dark browns, greens, tans and grays. Second floor window heads are close to the roof eave and shed roofs are common on dormers.

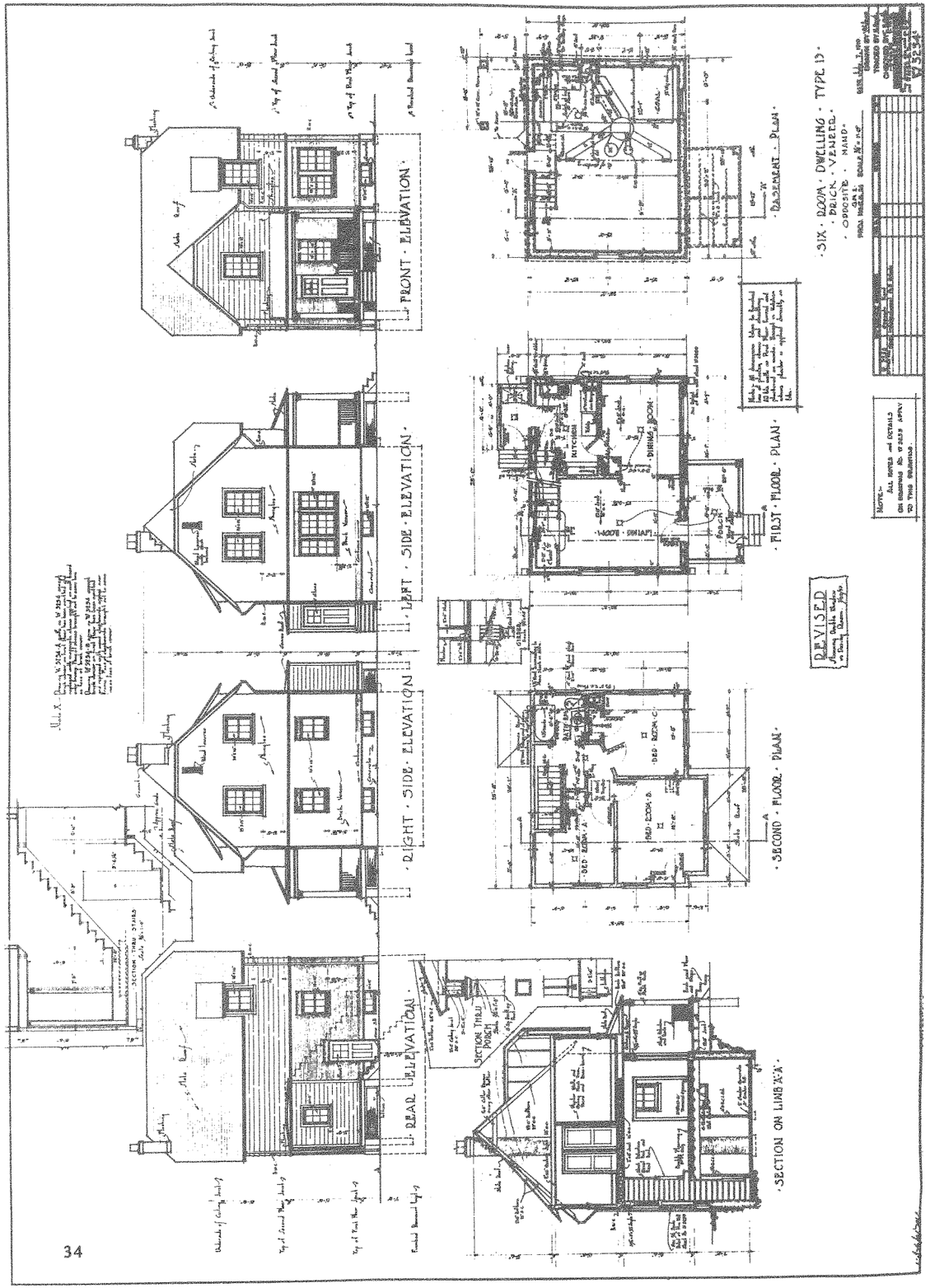
Architects Davis, McGrath and Kiessling used a number of common features on the Civic Park "New England Colonial" to link the various styles together. Such features include double hung windows, panel doors, rectangular attic vents, similar porch rail and column detailing, corbelled brick chimneys and materials. Clapboard siding was used on the houses in figures A, B, C, D and E. Figure F is a full two story brick or stucco house. Figures G and H have a brick or stucco first floor and cedar shingles second floor. The original drawing of one variation is shown.

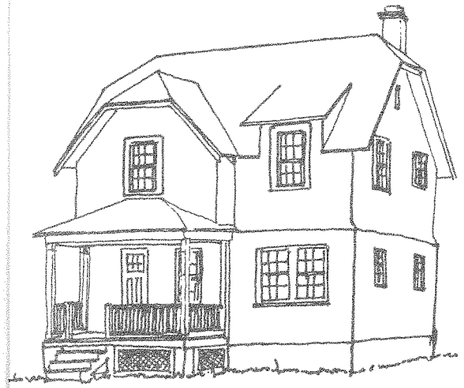
These features all add value to the New England Colonial in Civic Park.



'Civic Park Saltbox'

The influence of American Colonial architecture is seen in the Civic Park 'Hybrid Saltbox'. Frequently known in New England as the 'Cat's Slide' the true saltbox is a gable-roofed house in which the rear roof slope is much longer than the front. The reverse of this is true on most Civic Park homes illustrated below. Eave line facing the street, shed or gable dormers, open porches, rectangular attic vents and corbelled chimneys are common features. Wood clapboard is the most common siding found on these homes although some had brick or stucco on the first floor and cedar shingles on the second floor. These and other original features give the unique character and add value in a historic neighborhood.





'Corner Style'

The 'Corner Style' earned its name in Civic Park by its location. Usually found at corners and along boulevards, this house with its vertical proportions, provides a finish touch to the streetscape. The almost square floor plan and full second story with a large gable roof dormer creates an attractive visual method of turning the corner without interrupting the adjacent roof lines of other houses along either street.

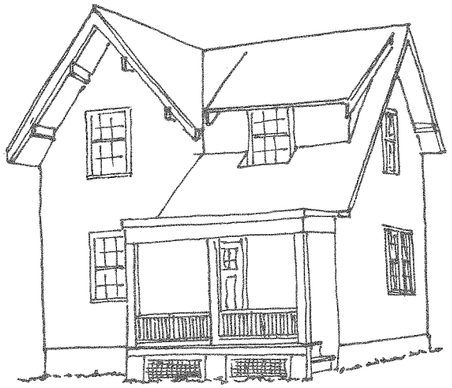
As with other housing styles in Civic Park, many of the 'Corner Style's display an interesting roof form known as Jerkins head or truncated roof. When a gable roof is bevelled off at its point, it is known as a Jerkins head. These roofs were popular in the Carolinas during the colonial period of this country.

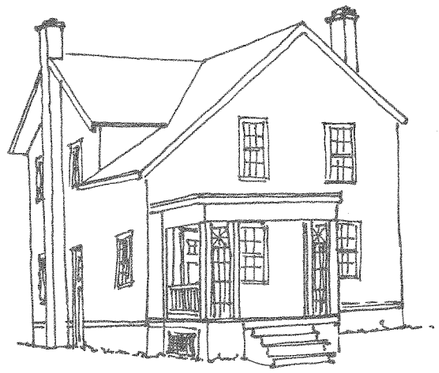
The variety of texture and materials on these homes are characteristic of the Queen Anne styles popular from 1880 to the early 1900's. Architects Davis, McGrath and Kiessling applied the features and beliefs of the Queen Anne style to the Civic Park houses in 1917. The Queen Anne was first introduced to America at the 1876 centennial Expositian in Philadelphia. Largely the creation of the English Architect Richard Shaw, the Queen Anne was a return to simple, solid construction methods practiced during the reign of Queen Anne in England.

In Civic Park, the variety of texture and materials range from slate roofs, second floor cedar shingles, brick or stucco first floor and a concrete foundation. The materials are clearly defined and their separation between first and second floor suggests a large house by calling out a heavy masonry base and lighter wood top.

Other features the 'Corner Style' has in common with other houses in Civic Park are double hung windows that are divided into 6 small window panes in both the upper and lower sash, corbelled brick chimneys, porch rail and column details.

Even with much of the same materials and detailing as other Civic Park houses, the 'Corner Style' is unique and interesting in itself. It is important to both the individual houses and the community as a whole that the original character of these historic homes be maintained.



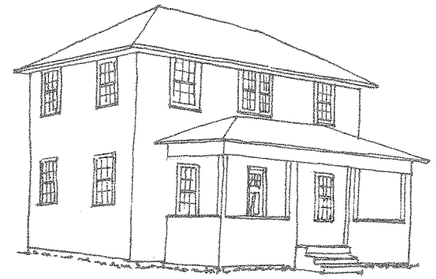


'3 Gable Saltbox'

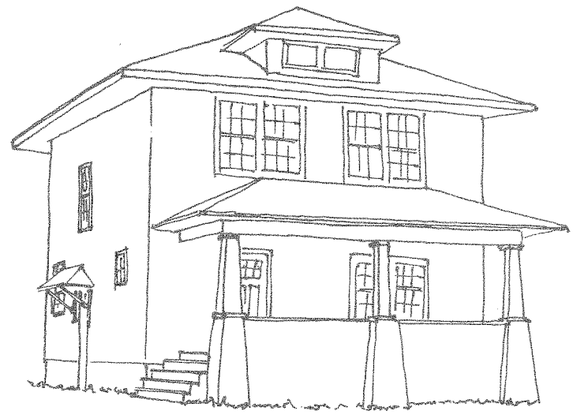
The style of this house is a unique adaptation that is distinctly Civic Park. Related to its Civic Park cousin, the "Saltbox" because of its steeply pitched gable roof in which one slope is larger than the other. Like its cousin, its origins are found in the New England states during the early colonial period. The "3 Gable Saltbox" is placed with a gable facing the street rather than an eave, as the other "Saltbox" does. The name "3 Gable Saltbox" comes from its three gable design, a main roof intersected by the side gable. Other original features include a flat porch roof, roof brackets, rectangular vents and towering twin chimneys. Double hung windows (6 lights in the upper sash only), wood panel doors, porch detailing and painted clapboard siding combine to compliment and visually unite it with other homes in Civic Park.

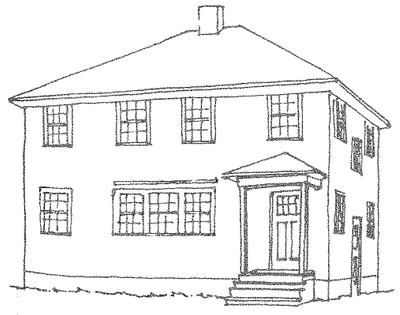
'Urban Traditional'

The "Urban Traditional" earned this regional name because of its similarity with the traditional rural farm houses of the late 1800's. Vertical proportions of both houses are similar, except with the typical wing of the rural houses is absent in Civic Park. The "Urban Traditional" is graced by gable roofs, with decorative roof brackets, on each elevation. The porch and rear pantry have shed roofs. A gentle curve forms the roof beam on the open porch. Solid panels with small decorative openings form the porch rails. Double hung windows have 6 panes in the upper sash and a single glass in the lower. Exterior finish was clapboard painted in the same original shades as other historic houses in Civic Park.



The Civic Park Suburban

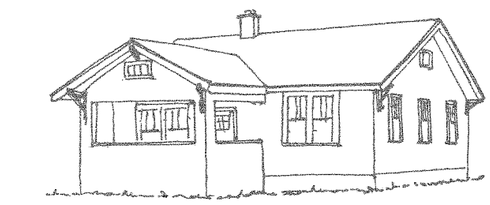




These large full two-story homes are more contemporary in design than other original Civic Park houses. Several variations retain the basic square proportions and illustrate the geometry and simplicity of design that was inspired by Frank Lloyd Wright during the early 1900's. Styles similar to the "Civic Park Suburban" (which was a suburb in 1920) were so popular from 1910-1930 that one major retailer sold mail order plans and kits.

Symmetry is a major feature. Doors and windows occur above one another and are symmetrical each side of the center of the house. Open porches, whether full house width or not, reinforce the feeling of symmetry. Another distinctive roof style is added to the architecture of Civic Park with the broad overhang hip roof of these houses. Occasionally third floor attic dormers occur on the street face. These orignal houses had clapboard siding, double hung windows and porch details that resemble the historic character of other Civic Park homes.

The 'Bungalow'



In the late 1800's America was introduced to a style of residential architecture completely new and unrelated to styles of the past. Economic setbacks of the 1890's created a need for simpler residences and the "Bungalow" met that need. The name and concept of the Bungalow style came from India. The name "Bungalow" is derived from the Hindu work bangla, which means "belong to Bengal". British administrators in India anglicized the word to describe low-single story resthouses built by the English along main roads to provide lodging for travelers.

The Civic Park Bungalow, like their namesakes, are single story houses with gently pitched roofs and broad gables. Rafters and ridge beams were exposed and many times roof brackets decorated the gable ends as they provide structural support for the roof overhang. A large gable roof covers the main portion of the house while a smaller gable covers the porch. Porches are an essential feature of the Bungalow and were originally designed by architects Davis, McGrath and Kiessling to be open from rail height up. Porch columns were often "battered" (receding or inclining slope from a wide base to a smaller top) and had a solid porch rail that extended to the ground. Some porches did have the base trellis and open porch rails that were common on many of the other Civic Park styles. Solid porch rails were finished in a wood horizontal siding, known as clapboard. Clapboard siding was also the exterior finish on the main portion of the house. The foundation is concrete block instead of concrete. Windows were double hung with three or six panes in the upper sash and one pane in the lower sash. Basement and attic windows were narrow three pane units. Maintenance and sensitive replacement of these features preserve the value of the Civic Park Bungalow.

introduction

The original houses feature quality materials and construction techniques. The structural system of all of the houses consists of poured concrete or concrete block foundations and basement walls, heavy wood framing of walls and floors, and heavy timber roof rafters.

A structural system of masonry and wood is standard house construction. In Civic Park the system is better than average quality in the use of heavy wood members and poured concrete.

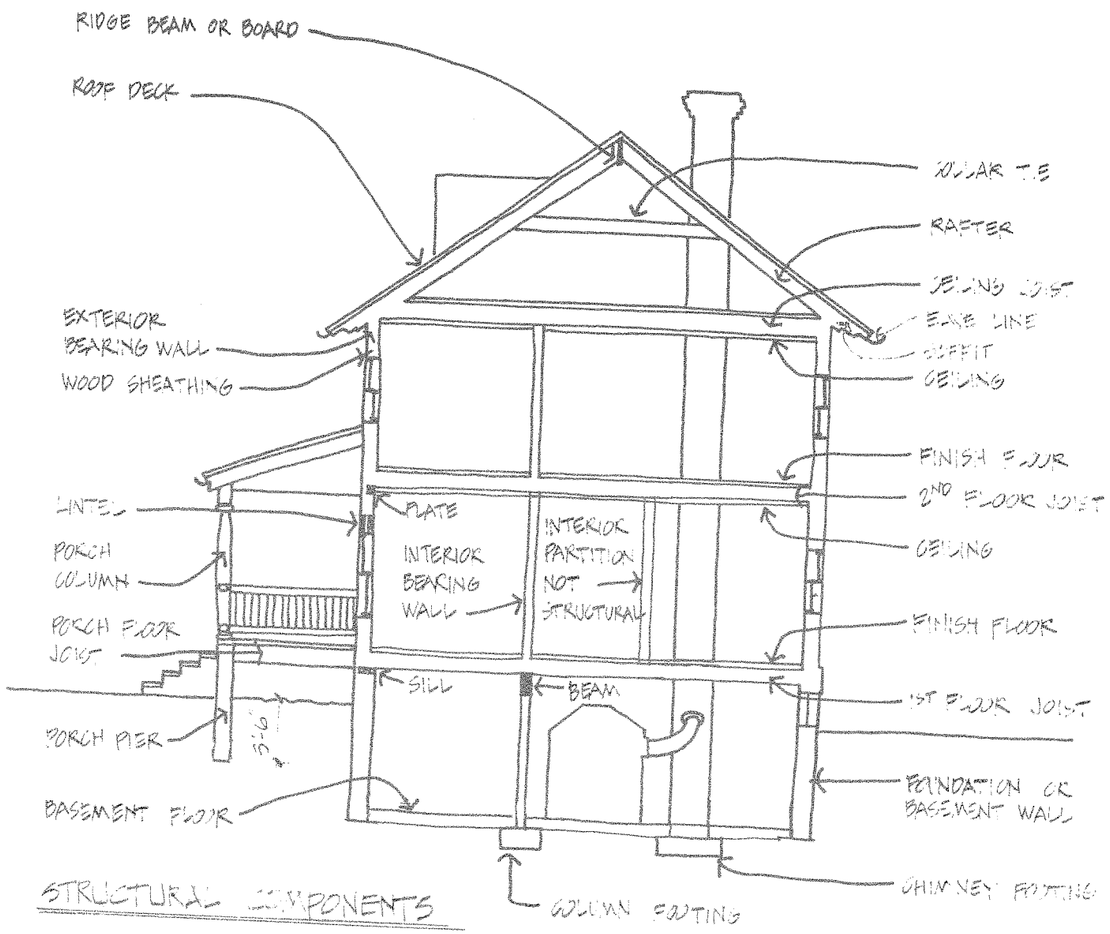
The assembly line construction of Civic Park had each building trade crew proceed from house to house. The first crew excavated the foundation; the second crew poured the concrete and the third crew erected the wall and roof framing of wood, thus completing the structural system.

secretary of the interior standards for historic preservation

Recommended	*Not Recommended*
Recognizing the special problems inherent in the structural systems of historic buildings, especially where there are visible signs of cracking, deflection, or failure.	Disturbing existing foundations with new excavations that undermine the structural stability of the building.
Undertaking stabilization and repair of weakened structural members and systems.	Leaving known structural problems untreated that will cause continuing deterioration and will shorten the life of the structure.
Supplementing existing structural systems when damaged or inadequate. Replace historically important structural members only when necessary.	

civic park guidelines

The deterioration or alteration of the structural system is the first thing to be considered in any preservation program. All aspects of Civic Park architecture depend upon the soundness of the structural system of the houses. If the structure has deteriorated (sagging roof, major concrete and masonry cracks, rotting wood members) any preservation action will first require major structural repairs, an expensive undertaking. If the structure is sound, however, repairs and restoration of the original finish materials are easier and less expensive.



STRUCTURAL COMPONENTS

There are two primary causes of deterioration in concrete or masonry foundations and wood framed walls and roof: movement and water. If the earth below the foundation settles differently from one side to another of the house, the foundation walls will move and cracks will result. Movement and cracks can also result if the roots of trees, planted too close to the building, push the foundation upwards. See BUILDING SITE page 20. Wood deterioration is most commonly seen as rot. If wood is allowed to become watersoaked, it will support the growth of fungus, that is, rot. This weakens the fiber of the wood, and if allowed to persist, results in total failure of the system.

Many of the "Saltbox" styles have a porch roof that sags in the middle. This may be the result of several factors. Some porch piers were constructed with brick and mortar and parged (covered) with concrete to give the appearance of solid concrete. Continued contact with water and the ground has deteriorated the brick and mortar to a point of weakening its strength. To correct the problem requires jacking the porch up slightly (too much will crack slate roofs) and removing the brick piers.

New concete piers can be poured to a depth of 3'-6" so they are below frost depth. It is easiest to construct new piers above grade by using one full concrete corner block 16"X8" and one half corner block 8"X8" to duplicate the original pier width 25"X8". A wood shim between the top block and porch structure will adjust the porch height so that a 1" slope is provided for drainage. The concrete blocks can be parged (covered with a thin coat of cement) to achieve the same appearance as the original piers. The porch can be lowered and anchored to the new piers. This may require the help of an experienced professional.

Another factor of the sagging roof may be the result of the wood porch columns rotting at the base and sometimes the head. Three common types of columns appear in the original Civic Park architecture: solid 4"x4", 4"x4" columns covered with 1"x6" and a hollow column made up of 1"x6". To replace columns requires the porch roof be jacked up, removing the old columns and installing new columns that match the original. Hollow columns should be replaced by a 4"x4" solid member with 1"x6" covering. This may require the help of an experienced professional.

The third factor which may have accelerated the structural weakening is the additional weight of the second floor dormer that is carried by the porch columns and piers. This will no longer be a factor if the structural members causing the sag are corrected.

Another structural defect not uncommon in Civic Park appears along the gable eave of some houses. A slight bow or dip can be seen caused by the change of 1"x8" roof sheathing, over the house, to "beaded ceiling board" at the overhangs. Correction of this, if it becomes a major problem, is to remove the roof 3'-0" back from the edge. Remove the "beaded ceiling board" at the soffit and the 1"x8" roof sheathing from the wall to the first rafter inside. Nail a 2x6 on the outside face of the first rafter inside and install new 1"x8" roof sheathing from this point out to the original eave line. Install new felt and drip edge and replace the roofing. The underside of the overhang (soffit) can be covered with new "beaded ceiling board" to match the original appearance.

MAINTENANCE:

1. Regularly check for cracks in the foundation walls, both from the inside and the outside. If discovered, locate the source and repair immediately. Consultation with a qualified contractor or engineer may be necessary.
2. Regularly check for water leaks (which can be preceded by paint blisters) on the inside of the house. Wet ceilings or walls indicate that the roofing or siding is damaged or a water or drain pipe has cracked and needs repair, more important, the wood framing within the wall or roof is wet and is a good candidate for rotting. If water leaks are found, repair the source immediately.

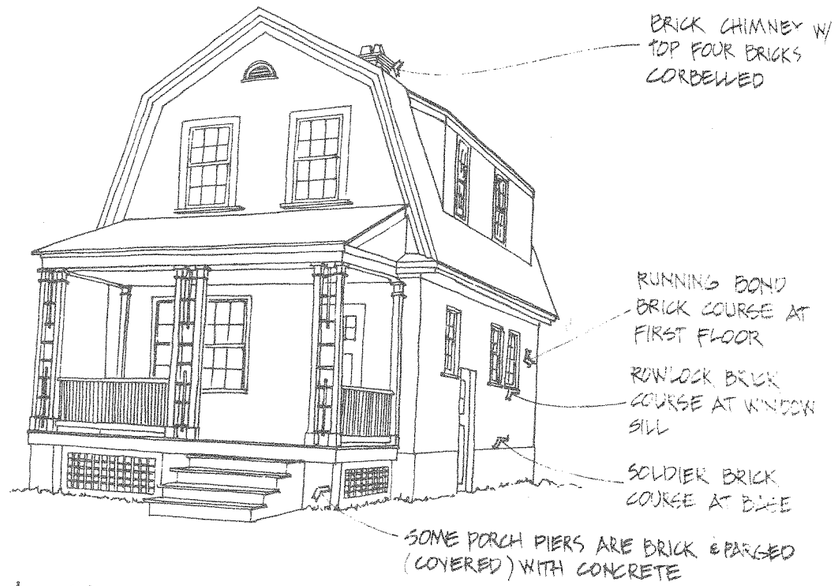
REPAIRING:

1. Structural repairs should be undertaken by professionals.
2. If foundation settlement is still occurring, the movement must be stabilized before any cracks in the masonry are repaired or the work will be pointless. This may involve the replacement of earth fill, the removal of large trees, or other stabilization measures.

3. If foundation movement has occurred sometime in the past, cracks must be repaired. Refer to the CONCRETE and CONCRETE BLOCK sections of this manual for specific methods.

4. Limited wood rot can be repaired simply, once the source of water is eliminated. Apply a fungicide to the damaged area, following manufacturer's recommendations. Reinforce the damaged area with new wood members on either side, bolting the assembly together where the original wood is still strong.

5. Structural wood members severely affected by rot must be replaced. This involves bracing, demolition and replacement.



material introduction

Brick is a man-made material which has been used in building since ancient times. It was originally mud and straw set in a form and baked in the sun. It is now (and has been for over a thousand years) clay, sand and aggregate which is oven-fired, giving it a hard exterior "crust". The permanence, structural capabilities, color, texture and minimal maintenance requirements of brick make it a beautiful and practical building material. In our current energy-consciousness, the thermal mass of brick and its long life have increased its advantage over thinner, more disposable building materials.

Mortar is the agent which bonds the bricks together to form the wall. It has evolved from soft lime mortar to today's portland cement, high-strength mortar which consists of cement, sand and water. Portland cement was introduced in the 1880's and is the basis of the mortar used in Civic Park homes.

The construction of brick masonry is labor-intensive. Each brick is individually laid in a bed of mortar and the joints struck. The success of the final product is therefore highly dependent upon the skill of the mason.

secretary of the interior standards for historic preservation

Recommended

Retaining existing masonry and mortar, whenever possible, without the application of any surface treatment.

Not Recommended

Applying waterproof or water repellent coatings or other treatments unless required to solve a specific technical problem that has been studied and identified. Coatings are frequently unnecessary, expensive, and can accelerate deterioration of the masonry.

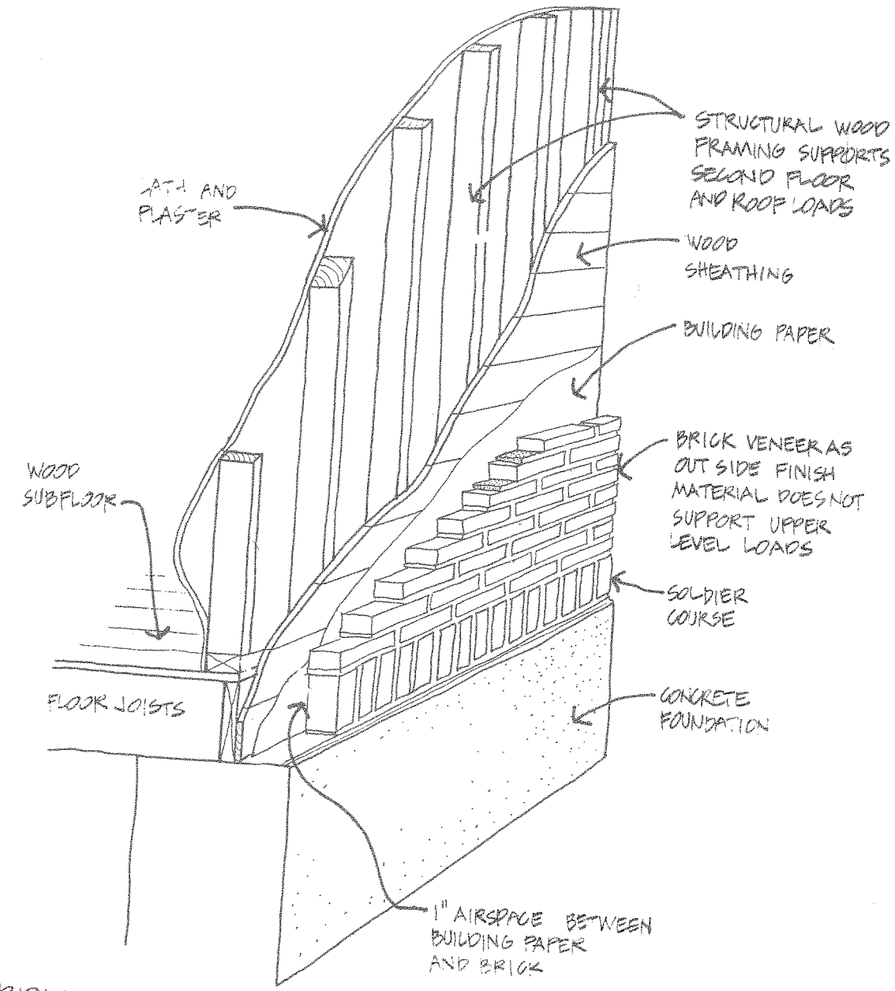
Recommended	*Not Recommended*
Repointing only those mortar joints where there is evidence of moisture problems or when sufficient mortar is missing to allow water to stand in the mortar joint.	Repointing mortar joints that do not need repointing. Using electric saws and hammers to remove mortar can seriously damage the adjacent brick.
Duplicating old mortar in composition, color, and texture.	Repointing with mortar of high Portland cement content, thus creating a bond that can often be stronger than the building material. This can cause deterioration as a result of the differing coefficient of expansion and the differing porosity of the material and the mortar.
Cleaning masonry only when necessary to halt deterioration and always with the gentlest method possible, such as low pressure water and soft natural bristle brushes.	Sandblasting, including dry and wet grit and other abrasives, brick, or stone surfaces; this method of cleaning erodes the surface of the material and accelerates deterioration. Do not use chemical cleaning products that would have an adverse chemical reaction with the masonry materials, i.e., acid on limestone or marble.
Repairing or replacing, where necessary, deteriorated material with new material that duplicates the old as closely as possible.	Applying new material, which is inappropriate or was unavailable when the building was constructed, such as artificial brick siding, artificial cast stone, or brick veneer.
Replacing missing architectural features, such as cornices, brackets, railings, and shutters.	Removing architectural features such as cornices, brackets, railings, shutters, window architraves, and doorway pediments.
Retaining the extant or early color and texture of masonry surfaces, wherever possible. Brick or stone surfaces may have been painted or whitewashed for practical and aestnetic reasons.	Removing paint from masonry surfaces indiscriminately. This may subject the building to damage and may change its historical appearance.

civic park guidelines

Brick is an important architectural element of the Civic Park house in its texture, color and sense of permanence. Every effort should be made to preserve the original brickwork and restore it to its original color and weathertightness. Brick should not be painted, covered or removed.

Brick masonry is used in Civic Park, for walls, chimneys and some porch piers. Wall construction is primarily brick veneer at the first floor level. Only one style of home in Civic Park has exterior brick walls of full two stories.

Brick veneer is attached to wood stud walls, that is, the wood wall is structural and the brick is merely a covering of that structure. All of the Civic Park houses have a brick chimney. These important architectural and functional elements vary from fully exposed end chimneys to central chimneys. Each chimney has a corbelled top and exposed chimney flue. Neither the walls or chimneys were originally painted.



BRICK VENEER WALL CONSTRUCTION

Deterioration of brick and mortar is almost always associated with the presence of water. Even though brick is a hard-fired product with an exterior "crust", it is porous and will allow the passage of water which may be continually present. This will occur if:

- rain water is not drained off the wall effectively or, through draining, washes continuously over a single area. Refer to the BUILDING SITE, page 17 .
- water is not drained from the base of the wall, but ponds and is absorbed by the wall or pier. Refer to the BUILDING SITE page 17 .
- there is humidity inside which condenses on the brick wall.
- algae, moss or plant life is allowed to grow on the wall.

Water in brick can cause damage by depositing dangerous chemicals (salts and pollutants) or crystals in the brick, causing discoloration or spalling. If water is retained in brick during freezing weather, the formation of ice will crack the brick or break the face off (spalling). This is a danger in the climate of eastern Michigan. Algae, moss or vines growing on a brick wall and receiving moisture from the wall and not the ground is an indication that water is present in the wall and serves to retain more moisture, ultimately leading to spalling or chemical damage.

Damage to walls can also occur if the foundation settles or structural movement of any kind occurs. Cracks along the same line passing through bricks and mortar are the first indications of this type of movement and should not be ignored.

The most vulnerable application of brick is the chimney which is continuously exposed to weather and brick porch piers which have been in contact with the ground for 60 years plus. The erosion of mortar and spalling of brick is most apparent here.

Loose mortar and bricks in the chimney can be seen upon close inspection or from the ground with binoculars. Brick porch piers below grade have disintegrated and result in the porch roof sagging. New concrete piers can be installed to give the same appearance of the brick/stucco piers. See STRUCTURAL SYSTEM page 40.

To avoid dangers or to repair any existing masonry problems, the following actions should be taken.

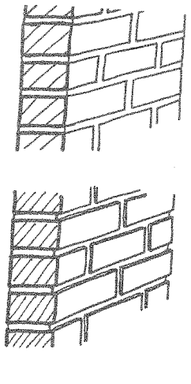
MAINTENANCE: Weathertight masonry protects the structural system of the house.

1. Keep roof gutters and downspouts clean and repaired, directing rain drainage away from brick.
2. Prevent ponding of water at the base of the house, slope drives and landscaping away from the building.
3. Remove any vines, moss or algae which is growing on brick walls, determine the source of water which is supporting the organic growth.
4. Check for structural cracks in the walls, piers or chimney; if found, locate the source.
5. Check for tilted or leaning chimney and piers.
6. Check for missing, loose or eroded mortar in walls, chimney and piers.
7. Check for cracked, loose or missing brick in the walls, chimney and piers.

Refer to the BUILDING SITE page 17 for site drainage.

CLEANING:

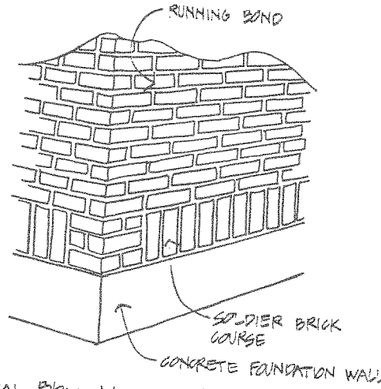
1. Remove dirt which supports plant growth or which has changed the color and texture of the original masonry.
2. Remove organic growth with a diluted ammonia solution.
3. Clean brick with strong detergent and water and a natural bristle brush.



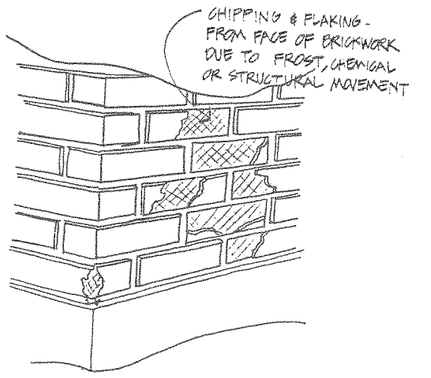
TYPICAL MORTAR JOINTS IN CIVIC PARK

FLUSH JOINT

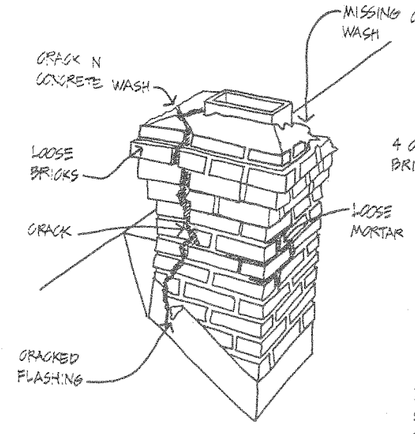
RAKE JOINT



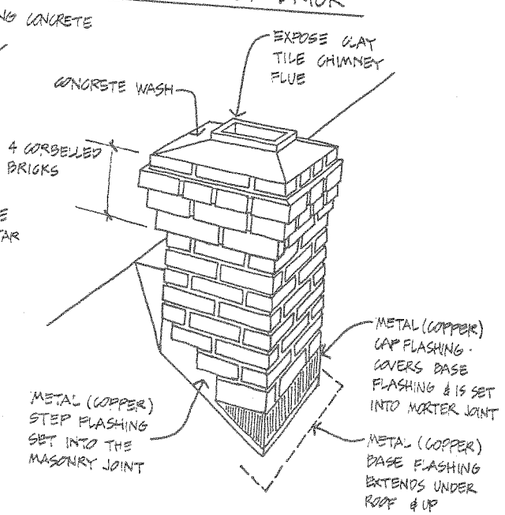
TYPICAL BRICK VENEER WALL IN CIVIC PARK



SPALLING OF BRICK



DETERIORATED CHIMNEY



CHIMNEY IN GOOD REPAIR

Rinse thoroughly with low pressure water wash (garden hose).

REPAIRING: Before any work is done, isolate the cause of deterioration, whether it might be water, movement, abuse, dirt, etc.

1. Repoint all eroded or loose mortar joints in the walls or chimney with mortar which matches the original in color, composition and strength. Often, only a small portion of a wall or the top of the chimney needs repointing. The costs are less than covering the brick with a new material and repointng preserves this important element. The chimney should not be shortened or replaced with a metal flue. Mortar analysis of a sample of original mortar revealed the following composition by volume:

   1 part lime + 1 part cement + 4 parts sand

   This is a rich mix compound of lime and hydraulic cement and should be used whenever repointing Civic Park brickwork. Steps in repointing are as follows:

   a. Remove all loose or deteriorated mortar to 3/4" depth with a proper size chisel. Do not use carborundum blades in a skill-saw as the danger of cutting or chipping brick is too great.

   b. Repoint mortar joint with mortar as described above, matching the width and shape of existing joints, thus preserving the appearance and texture of the original wall.

2. Replace any spalled, cracked or otherwise unsound bricks in either the walls or chimney.

   a. Use bricks which match the original in color, texture and size. Brickyards, used bricks or demolition companies may be a source of bricks for this purpose.

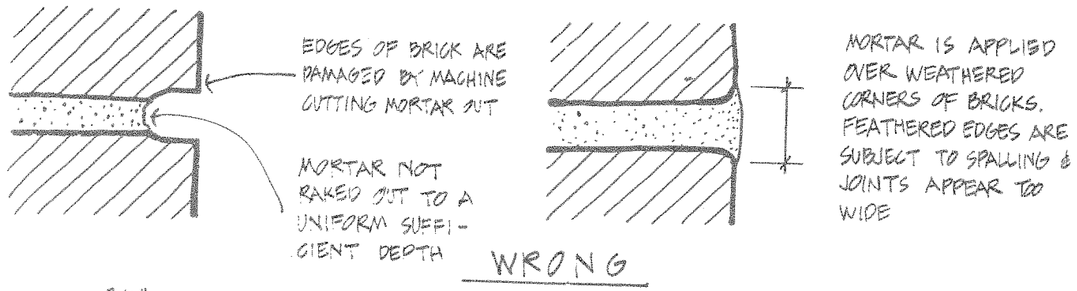
   b. Repoint this new brick as described above.

3. Covering damaged brick with another material does not solve the problem, but merely covers it up.

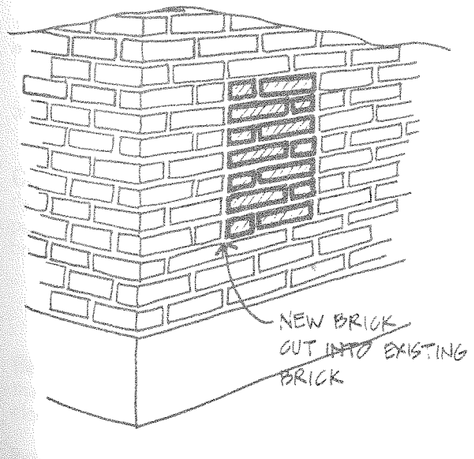
REPLACING:

1. The replacement of large areas of brick with other than matching brick is not an acceptable preservation action.

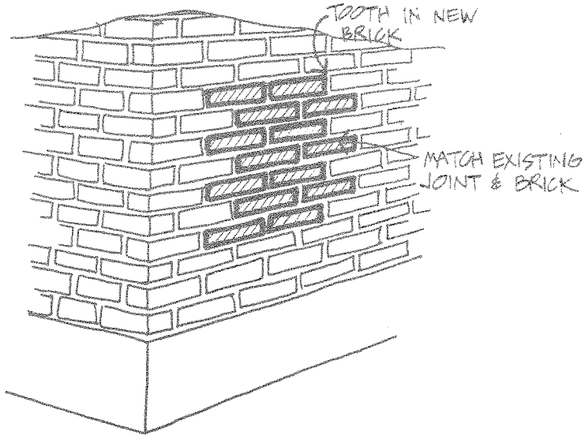
2. Remove any materials which are covering original brickwork and repair as needed.



REPOINTING OF MORTAR JOINTS



UNACCEPTABLE BRICK REPAIR WORK



ACCEPTABLE BRICK REPAIR WORK

material introduction

Concrete is a hard, monolithic masonry composed of cement, sand, gravel and water, and can be reinforced with steel rods called reinforcing bars. It is "poured" into place or "pre-cast" into the desired shape. Water evaporating in the mixture causes the cement to harden and thus binds the mass together. It is more dense and less porous than brick masonry.

Concrete was first used by the Romans, but not until the 1890s when Portland cement was developed, was it used in the U.S. Since 1910 its use has become commonplace. Its popularity is based upon its strength and its ability to be formed into any shape desired. If built with adequate support and drainage, it is a long-lasting material.

secretary of the interior standards for historic preservation

Recommended

Cleaning masonry only when necessary to halt deterioration and always with the gentlest method possible, such as low pressure water and soft natural bristle brushes.

Repairing or replacing, where necessary, deteriorated material with new material that duplicates the old as closely as possible.

Retaining the extant or early color and texture of masonry surfaces, wherever possible. Brick or stone surfaces may have been painted or whitewashed for practical and aestnetic reasons.

Not Recommended

Sandblasting, including dry and wet grit and other abrasives, brick, or stone surfaces; this method of cleaning erodes the surface of the material and accelerates deterioration. Do not use chemical cleaning products that would have an adverse chemical reaction with the masonry materials, i.e., acid on limestone or marble.

Applying new material, which is inappropriate or was unavailable when the building was constructed, such as artificial brick siding, artificial cast stone, or brick veneer.

Removing paint from masonry surfaces indiscriminately. This may subject the building to damage and may change its historical appearance.

civic park guidelines

Concrete is used in Civic Park foundations and basement walls. This high-quality construction is the basis for the lasting quality of the houses. The original concrete was left unpainted.

Concrete deterioration is caused by the continual presence of water in the material, as in any masonry construction. Refer to the BUILDING SITE page 17 for site drainage. The continual presence of water is due to:

- drainage of rainwater over the same area of concrete;
- ponding of water at the base of the concrete which then absorbs the water
- through capillary action;
- the condensation of humidity from inside the building;
- the growth of plant life on the concrete, which retains water.

The results of water in concrete are seen in the deposit of chemicals (particularly salt and air pollutants) on the surface, which then crystallize and break off the face of the concrete (spalling); freezing of water in the concrete which also results in spalling; and the migration of water to the steel reinforcing bars which can rust and spall the concrete face. Algae, moss or vines growing on a concrete wall is receiving moisture from the wall, not the ground and is an indication that water is present in the wall. The plant growth results not only in discoloration but also serves to retain more moisture, ultimately leading to spalling or chemical damage.

Damage will also occur and will be seen as cracks if the foundation settles or moves in any way. Trees planted near a house can in time grow beneath the foundation and cause such movement. Refer to the BUILDING SITE page 20 . There is also danger in attempting to waterproof, seal or paint concrete which is above ground. Paint will trap moisture from inside the house which, under normal circumstances, travels through the concrete as vapor without damage to the wall, but which, if trapped, may condense in the wall and cause moisture problems or a damp basement. An additional danger is that any flaw or crack in the sealant will trap water from the outside and can lead to spalling of the concrete or rusting reinforcing bars.

MAINTENANCE: It is important to maintain concrete foundation walls because they support the entire house.

1. Prevent ponding of water at the base of the house, slope drives and landscaping away from the building. Refer to BUILDING SITE page 17 .

2. Remove any vines, moss or algae which are growing on the concrete; determine the source of water supporting the growth.

3. Check regularly for structural cracks and locate their source if they occur.

CLEANING:

1. Remove dirt which supports plant life or which has changed the color and texture of the concrete.

2. Remove plant growth with a diluted ammonia solution.

3. Clean concrete with a strong detergent and water using a natural bristle brush. Rinse thoroughly with low-pressure water wash (garden hose).

4. Concrete should not be painted. This not only changes the original appearance but can lead to water problems.

5. Painted concrete walls which are peeling should be scraped and cleaned.

REPAIRING: Before any work is done, the cause of the deterioration must be determined and then eliminated or the repair work will again be necessary.

Effective, loose or spalling portions of concrete should be patched with material which matches the original in color, texture and composition. Because of the structural nature of the concrete foundation wall, this work should be undertaken by qualified professionals.

REPLACING:

1. The replacement of large areas of concrete with other than matching material is not an acceptable preservation action.

2. Covering damaged concrete with another material does not solve the problem but merely covers it up.

3. Remove any materials which are covering concrete and repair the original material as needed.

material introduction

Stucco is a masonry material similar to plaster but of greater strength which is used in exterior applications. It is very durable and weather-resistant and has been used as a building material since the times of the ancient Greeks and Egyptians. In its earliest form it was a mix of crushed marble, lime and water which could be polished to simulate stonework. More recently, natural stucco is a mix of lime, water and sand aggregate. Cement stucco is a mix of portland cement, water and sand aggregate. Stucco has often been used as a base for painted decoration or molded into sculptured decoration. Today it is most commonly seen as large wall panels.

Stucco is seldom applied over wood lath, a typical plaster application, but rather is directly applied onto the exterior surface of a masonry wall. Like plaster, it is applied in a series of coats, usually three.

secretary of the interior standards for historic preservation

Recommended

Repairing stucco with a stucco mixture that duplicates the original as closely as possible in appearance and texture.

Cleaning masonry only when necessary to halt deterioration and always with the gentlest method possible, such as low pressure water and soft natural bristle brushes.

Not Recommended

Sandblasting, including dry and wet grit and other abrasives, brick, or stone surfaces; this method of cleaning erodes the surface of the material and accelerates deterioration. Do not use chemical cleaning products that would have an adverse chemical reaction with the masonry materials, i.e., acid on limestone or marble.

Applying new material, which is inappropriate or was unavailable when the building was constructed, such as artificial brick siding, artificial cast stone, or brick veneer.

Repairing or replacing, where necessary, deteriorated material with new material that duplicates the old as closely as possible.

Retaining the extant or early color and texture of masonry surfaces, wherever possible. Brick or stone surfaces may have been painted or whitewashed for practical and aestnetic reasons.

Removing paint from masonry surfaces indiscriminately. This may subject the building to damage and may change its historical appearance.

civic park guidelines

Stucco is an important building element in Civic Park. It was used as an exterior finish material on the first floor of some two story houses and finished in either a smooth or rough texture. It was applied to clay tiles and left unpainted. It is a high quality building material which conveys a series of permanence and stability; a major element of the Civic Park house.

The deterioration of stucco is accelerated by the presence of water, as in all masonry construction. The most common problem encountered is its loss of adhesion to the supporting structure. The cause of this failure is generally prolonged water penetration but can also be a result of foundation settlement or any other structural movement. Bonding between the clay tile wall and the stucco is achieved by the natural adhesive quality of stucco to masonry and also by the keying effect achieved by forcing the stucco into the joints between the masonry units. The penetration of moisture with subsequent freezing breaks that bond and loosens the stucco from its substrate. Water will penetrate the stucco in a number of ways. If the exterior face is sealed, moisture can be trapped inside the wall. Capillary action can draw water up from the base of the wall or rainwater which is drained over the same area of stucco can be absorbed.

Additional problems are caused by erosion where wind or water is constantly moving; the chemical effects or air pollution and salts and discoloration and water retention due to plants and algae growing on the surface. The basis of these problems is, fundamentally, water. Salt will travel in water solutions as will the acids in air pollution. Algae, moss or vines growing on a stucco wall and receiving moisture from the wall and not the ground is an indication that water is present in the wall and serves to retain more moisture, ultimately leading to spalling. Impact can also loosen or remove areas of stucco.

The majority of the stucco walls in Civic Park are in excellent condition. Nearly all of them have been painted, but the paint has been well maintained, and little water damage has occurred. Peeling paint usually is due to paint failure rather than moisture.

MAINTENANCE: The importance of regular maintenance of a stucco wall cannot be overstressed. Stucco is a hard covering which protects the structure of the house and therefore must be kept watertight.

1. Keep roof gutters and downspouts clean and repaired, directing rain drainage away from the stucco walls. Refer to the BUILDING SITE page 17 for site drainage.

2. Prevent ponding of water at the base of the house; slope drives and landscaping away from the building.

3. Remove any vines, moss or algae which are growing on stucco; determine the source of water which is supporting the growth.

4. Check for structural cracks in the wall; if found, determine their source.

5. Check for loose or missing stucco where the bond to the tile backing has deteriorated or where the stucco has been knocked off.

CLEANING:

1. Remove dirt which supports plant life or which has changed the color and texture of the stucco.

2. Remove plant growth with a diluted ammonia solution and natural bristle brush.

3. Clean stucco with strong detergent and water and a natural bristle brush. Rinse thoroughly with low-pressure water wash (garden hose).

4. Stucco should not be painted. This not only changes the original appearance but can lead to water problems.

5. Stucco walls which have been painted and are peeling should be cleaned. The specific cleaning process to be used depends on the type of paint to be removed. Chemical washes, which are generally used to remove paint from masonry, requires professional application. An initial detergent and water wash is recommended as this will certainly remove the loosened material.

REPAIRING: Before any repair work is done, the cause of the deterioration must be determined and then eliminated or the repair work will again be necessary.

1. Defective, loose or spalling portions of stucco should be patched with material which matches the original in color, texture and composition. A sample of stucco was analyzed and revealed the following composition by volume.

   1 part cement + 2 parts sand

   This mixture withstood 6000 pounds/sq. inch pressure in a lab test and should be used whenever repairing Civic Park stucco.

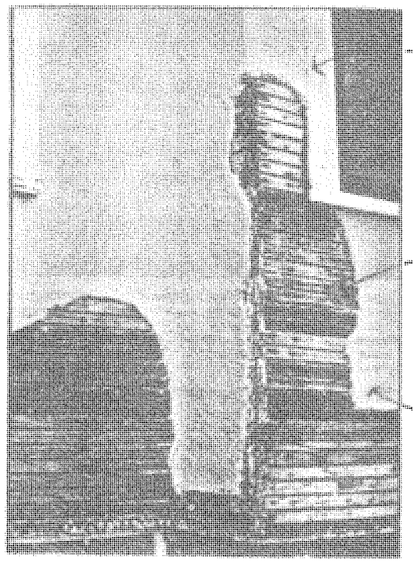
2. Cut away the defective area so there is a clean edge to work on and patch the area with the above-formulated mix. Do not feather the edges between the old and new material as these are likely to crack and spall. Refer to illustration on next page.

REPLACEMENT

1. The replacement of large areas of stucco with other than matching material is not acceptable preservation action.

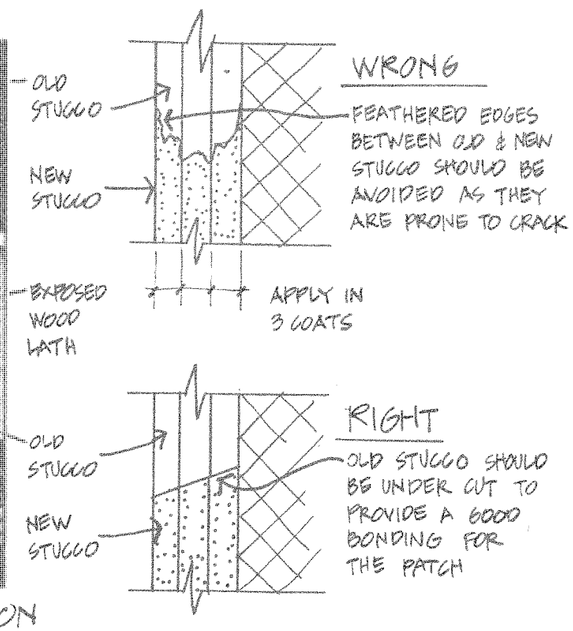
2. Covering damaged stucco with another material does not solve the problem but merely covers it up.

3. Remove any materials which are covering stucco and repair the original material as needed.

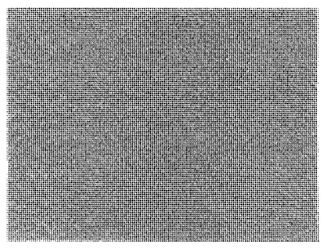


STUCCO DETERIORATION

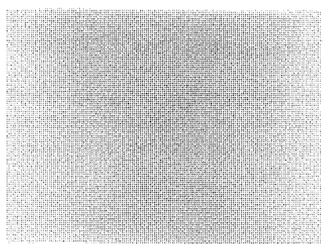
LOOSE STUCCO HAS BEEN STRIPPED TO EXPOSE LATH BELOW WHICH MUST BE CLEANED OF ALL STUCCO BEFORE NEW COATS ARE APPLIED



STUCCO REPAIR



ROUGH



SMOOTH

STUCCO TEXTURES IN CIVIC PARK

material introduction

When first manufactured in the 1860's, concrete block was called "artificial stone." As an exterior wall material it reached its height of popularity around 1915. During that popularity, it served as an inexpensive substitute for stone and brick. It was produced with one face textured to simulate stone, either in a dressed or rock face. After 1915 the flat-face block became popular and was used increasingly for basement walls and as backing for brick veneer. Today it is commonly used in basements and is manufactured with a natural concrete finish.

To make the blocks, concrete is cast in molds under pressure. It is a hollow unit and is often built in a wall with steel reinforcing rods and concrete filled voids. It is inexpensive and requires minimal maintenance when properly installed.

secretary of the interior standards for historic preservation

Recommended

Repointing only those mortar joints where there is evidence of moisture problems or when sufficient mortar is missing to allow water to stand in the mortar joint.

Duplicating old mortar in composition, color, and texture.

Cleaning masonry only when necessary to halt deterioration and always with the gentlest method possible, such as low pressure water and soft natural bristle brushes.

Repairing or replacing, where necessary, deteriorated material with new material that duplicates the old as closely as possible.

Retaining the extant or early color and texture of masonry surfaces, wherever possible. Brick or stone surfaces may have been painted or whitewashed for practical and aestnetic reasons.

Not Recommended

Repointing mortar joints that do not need repointing. Using electric saws and hammers to remove mortar can seriously damage the adjacent brick.

Sandblasting, including dry and wet grit and other abrasives, brick, or stone surfaces; this method of cleaning erodes the surface of the material and accelerates deterioration. Do not use chemical cleaning products that would have an adverse chemical reaction with the masonry materials, i.e., acid on limestone or marble.

Applying new material, which is inappropriate or was unavailable when the building was constructed, such as artificial brick siding, artificial cast stone, or brick veneer.

Removing paint from masonry surfaces indiscriminately. This may subject the building to damage and may change its historical appearance.

civic park guidelines

In Civic Park, concrete block is used as the foundation wall material in the Bungalow style of house. Every effort should be made to preserve the original block work and restore it to its original weathertightness. The block should not be painted, covered or removed. The block used was a dressed face unit.

Concrete block deterioration is caused by the continual presence of water in the material, as in any masonry construction. Refer to the BUILDING SITE page 17 for drainage. The continual presence of water is due to:

- drainage of rainwater over the same area of concrete.
- ponding of water at the base of the concrete which then absorbs
- the water through capillary action
- the condensation of humidity from inside the building.
- the growth of plant life on the concrete, which retains water.

The results of water in concrete block are seen in the deposit of chemicals (particularly salt and air pollutants) on the surface, which then crystallize and break off the face of the concrete (spalling); freezing of water in the concrete block which also results in spalling. The growth of plant life on the surface of concrete block which is receiving its moisture from the wall and not the ground, indicates that water is present. The plant growth results in not only discoloration but also spalling of the masonry because of freezing or chemical damage.

Damage will also occur and will be seen as cracks if the foundation settles or moves in any way. Trees planted near a house can in time grow beneath the foundation and cause such movement. Refer to the BUILDING SITE page 20 . There is also danger in attempting to waterproof, seal or paint concrete block which is above ground. A sealant will trap moisture from inside the house which, under normal circumstances, travels through the block as vapor without damage to the wall. If trapped it may condense in the wall and cause moisture problems or a damp basement. An additional danger is that any flaw or crack in the sealant will trap water from the outside and can lead to spalling of the masonry.

MAINTENANCE: It is important to maintain concrete block foundation walls because they support the entire house. Refer to BUILDING SITE page 17 for site drainage.

1. Prevent ponding of water at the base of the house, slope drives and landscape away from the building.

2. Remove any vines, moss or algae which are growing on the concrete; determine the source of water supporting the growth.

3. Check regularly for structural cracks and locate their source if they occur.

CLEANING:

1. Remove dirt which supports plant life or which has changed the color and texture of the concrete.

2. Remove plant growth with a dilluted ammonia solution.

3. Clean block with a strong detergent and water and a natural bristle brush. Rinse thoroughly with low-pressure water wash (garden hose).

4. Block should not be painted. This not only changes the original appearance but can lead to water problems.

REPAIRING: Before any work is done, the cause of the deterioration must be determined and then eliminated or the repair work will again be necessary.

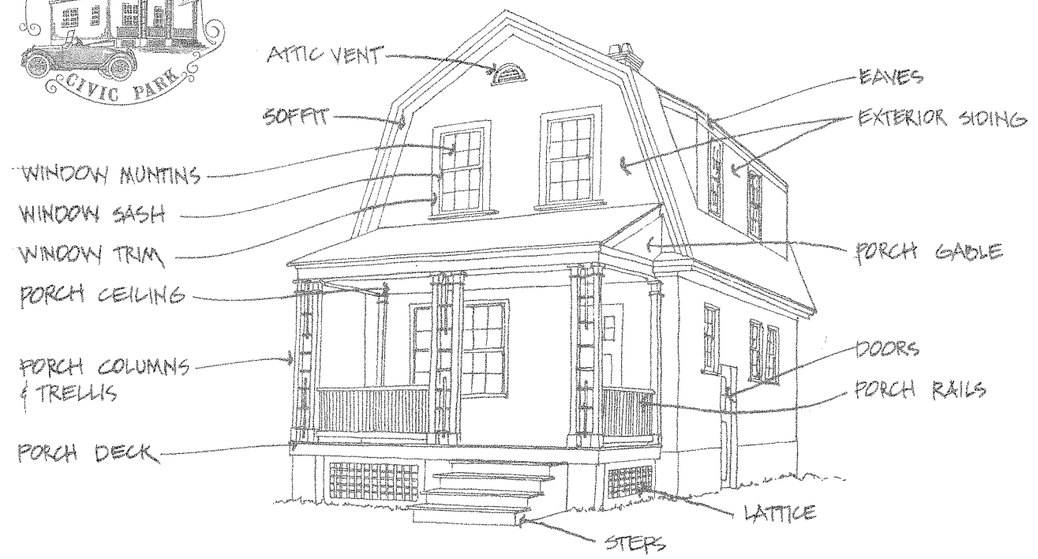
1. Defective, loose or spalling portions of concrete block should be patched with material which matches the original in color, texture and composition. Because of the structural nature of the foundation wall, this work should be undertaken by qualified professionals.

REPLACING:

1. The replacement of large areas of concrete block with other than matching material is not an acceptable preservation action.

2. Covering damaged concrete with another material does not solve the problem but merely covers it up.

3. Remove any materials which are covering concrete and repair the original materials as needed.



material introduction

Unquestionably, wood is the most common building material in the construction of a house. It was used in the United States in colonial days and remains today as one of our fundamental building materials. It is inexpensive in relation to other materials and is available in a variety of standard sizes, shapes and colors.

Wood is a cellular material which is strong, exceptionally workable and a good thermal insulator. When protected and maintained, it has a long life, as deterioration in a dry, insect-free environment occurs very slowly. The cellular nature of wood means that it is a porous; that it very easily absorbs and releases water. With seasonal variations in humidity, unprotected wood swells and shrinks.

There are many species of wood, all with different strengths, workability, color and resistance to decay. An appropriate species of wood should be chosen for any given use. That is, pine is not a durable exterior wood, but is a good framing wood.

Construction with wood involves the cutting and fitting of individual pieces. This is commonly called "stick construction". It has been standardized, but does involve a high degree of labor.

secretary of the interior standards for historic preservation

Recommended

Retaining existing material, whenever possible.

Not Recommended

Removing architectural features such as siding, cornices, brackets, window architraves, and doorway pediments. These are, in most cases, an essential part of a building's character and appearance that illustrates the continuity of growth and change.

Repairing or replacing, where necessary, deteriorated material with new material that duplicates in size, shape, and texture the old as closely as possible.

Resurfacing frame buildings with new material, which is inappropriate or was unavailable when the building was constructed, such as artificial stone, brick veneer, asbestos or asphalt shingles, and plastic or aluminum siding. Such material can also contribute to the deterioration of the structure from moisture and insects.

civic park guidelines

Wood is one of the most important architectural elements in Civic Park. The material and visual texture of wood creates much of the architectural character of each house. Wood is used on the exterior of Civic Park houses for:

- horizontal clapboard siding
- shingle siding
- roof eaves and overhangs
- door, window and attic vent trim
- porch steps, railing, columns and trim

Historical records indicate that the hemlock and yellow pine were used for structural framing. Both are varieties of softwoods and are best used as plywood or protected framing. They have equal strength and decay resistance. The shingle siding was cedar, a highly decay-resistant softwood.

Regardless of the specific use of wood, whether siding or decorative brackets, it deteriorates in a predictable manner under certain conditions. Wood is subject to weather and wear, rot due to moisture, decay due to insect attack or stress due to restrained swelling.

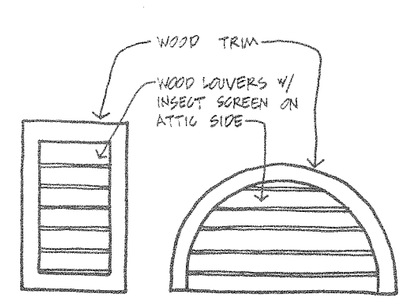
Weathering and wearing occur when wood is exposed unprotected to sun and rain. This results in cracks, brittleness and dryness and can be prevented by coating the wood with sealer or paint. Roof overhangs and adequate gutter systems also serve to protect siding and trim.

In the presence of moisture, high humidity or liquid water, the rapid deterioration of wood is unavoidable. Damp wood supports the growth of a fungus called "dry rot". The result is the destruction of wood cell. This deterioration can be arrested by adequate ventilation which reduces humidity inside a building; or by good drainage which removes rain and standing water from direct contact with wood. Moisture is very often trapped in wood walls when plastic, asbestos or aluminum siding is applied over the original wood. Refer to VINYL, ASBESTOS & ALUMINUM SIDING, page 69. The signals of wood damage due to moisture include peeling paint, white stains on exposed interior wood, powdery wood or swollen wood.

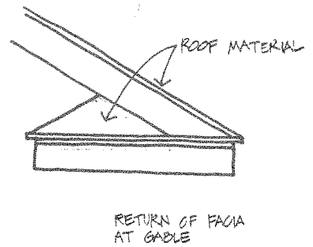
Insects attack wood when soil is moist and wood is in close proximity. Termites or carpenter ants are the most common of these and occur frequently in residential construction. Fumigation is the only effective treatment.

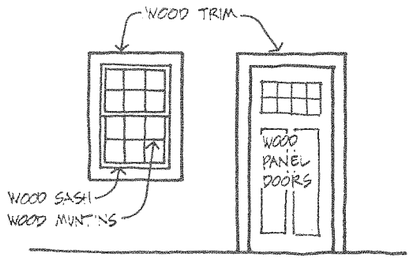
Every effort should be made to preserve the original wood which remains and to restore that wood which is damaged or missing. Wood siding and trim should not be replaced or covered with aluminum. Aluminum not only changes the appearance of original exterior, but can also creat future problems by trapping moisture and attracting insects.

The original wood in Civic Park has been severely compromised. Only a few examples of clapboard siding remain. Much of the wood siding and roof trim has been covered with asbestos, vinyl or aluminum siding. The cedar shingles (second floor) which remain in place and uncovered are in fair condition. Those which have been maintained (painted or sealed regularly) are in excellent condition. Those which have not been maintained are weathered and cracked. There is severe deterioration of the paint covering of wood trim. The wood trim itself, however, does not appear to have decayed or deteriorated.

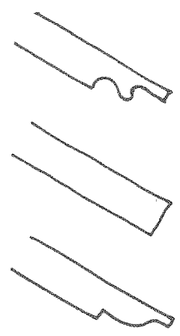


TYPICAL ATTIC VENTS IN CIVIC PARK

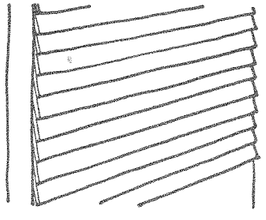




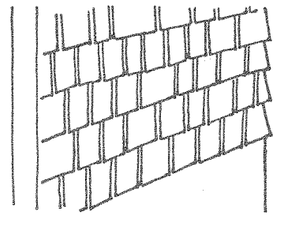
WINDOWS & DOORS



TYPICAL OVERHANG RAFTER PROFILES IN CIVIC PARK



CLAPBOARD SIDING



CEDAR SHINGLES

USES OF WOOD FOUND IN CIVIC PARK

MAINTENANCE:

1. Regularly check for signs of decay:

   a) missing wood elements such as railings, trim or detail
   b) peeling paint
   c) missing shingles
   d) powdery or stained wood
   e) active water leaks

2. Locate cause of decay and elimnate; repair decay.

3. Keep roof gutters and downspouts clean and repaired thus protecting siding from rain, and roof structure from water build-up.

4. Repaint or re-seal wood on a regular basis.

5. Keep basement and attic well-ventilated to protect against moisture-saturation of wood floor and roof members.

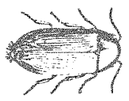
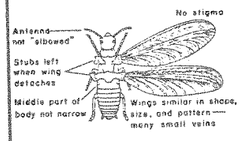
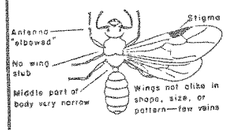
CLEANING

1. Before repainting, scrape or brush all chipped or peeling paint. If paint is peeling due to moisture in the wood, eliminate the source of moisture before repainting. New paint will not adhere properly to moist wood. Refer to PAINT, page 107.

REPAIRING:

1. Always repair wood with wood.

2. Use seasoned material of a species appropriate for the installation. Lumber suppliers can furnish information concerning the available woods.

*	Wood Destroying Insects	Conditions Promoting Infestation	Visible Symptoms	Type of Damage
	Powder-Post beetles	Green wood or damp environment	Fine sawdust near timbers, small shot-holes in wood	Meandering tunnels packed with fine dust
	Subterranean termites	Wood touching or near soil	Earthern tubes connecting wood to soil; termites swarm and shed wings in spring; collapse of wood	Hidden tunnels following grain, packed with mud
	Carpenter ants	Wood wet or touching soil	Coarse sawdust near timbers; may see ants	Tunnels following grain, no sawdust or debris in tunnels

3. The repair of dry rot damage requires the replacement or reinforcement of the affected members. Badly damaged siding, trim or decorative elements should be removed and replaced with wood members that match the original in size and texture. Prime and paint the replaced material to match existing color.

   Small amounts of decay can be repaired with epoxy consolidation. This is a process of injecting plastic into the wood to stabilize and strengthen it. The decayed material must be cleaned out, then epoxy injected. When dry, it can be sanded to original shape and painted to match. This process does not require the removal of the wood; it can be done in place and is easier than removal when there is only a small amount of decay.

4. When plastic, asbestos or aluminum siding is removed; repair any damage which has occurred below.

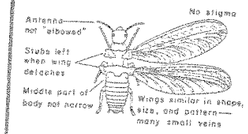
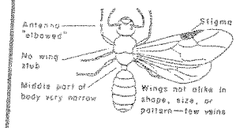
5. Arrest termite damage by chemical means. This should always be done by trained professionals.

Insect Treatment:

I. 2% chlordane in kerosene
II. 4% Rotenone dust
III. 5% Pentachlorphenol in kerosene
IV. 2% chlordane, 1% dieldrin or 1% benzene hexachloride
V. 0.5% lindane in kerosene

* data from the Old House Journal; June 1976

MSU Extension Service suggests that Diazinon, Korlan or Malathian used according to label instructions is effective in the elimination of carpenter ants.

Insect Appearance	Prevention	Treatment	Wood Destroying Insects	
Adults: winged beetles Larvae: white, no legs	Use dry wood, ventilation, dehumidify, vapor barriers	Dry the wood; paint or coarsely spray timbers with I or III	Powder-Post beetles	
Adults: thick waists, dark brown or cream colored (workers) with or without wings Larvae: white with legs	Clear wood debris around house, metal shield above foundation, treat soil with IV.	Chemical treatment of soil around house with IV	Subterranean termites	
Adults: black with or without wings; thread-like waists Larvae: white, no legs	Use dry wood, ventilation, vapor barriers, dehumidify.	Dry the wood; dust or spray with I or II	Carpenter ants	

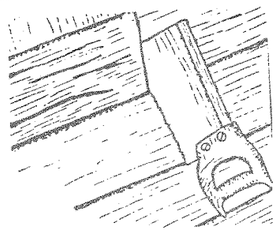
REPLACING:

1. Do not replace wood with any other material than wood.

2. Covering damaged wood with another material does not solve the problem but merely covers it up.

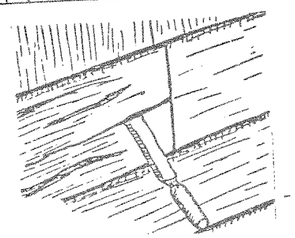
3. Remove any materials (vinyl, asbestos or aluminum) which are covering wood siding and trim and repair the original wood as needed.

PROCEDURE FOR REPLACING CLAPBOARD SIDING



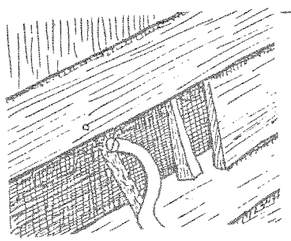
1

CUT DAMAGED BOARD CLOSE TO BOARD ABOVE



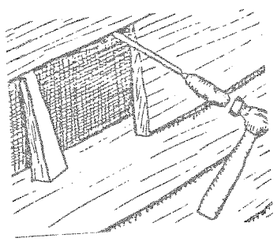
2

RIP OUT DAMAGED BOARD W/ CHISEL WITHOUT CUTTING BUILDING PAPER BELOW



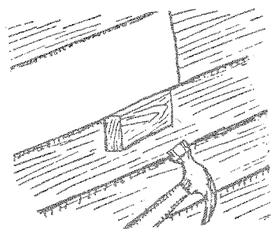
3

IF NAILS CANNOT BE REMOVED FROM THE FRONT, WEDGE CLAPBOARD OUT AND CUT NAILS WITH HACKSAW



4

CUT OUT REMAINDER OF CLAPBOARD BY WORKING CAREFULLY WITH CHISEL. TAKE SMALL CUTS.

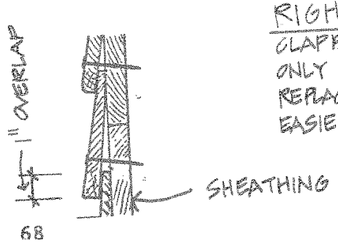


5

PATCH NICKS IN TAR PAPER W/ASPHALT ROOFING COMPOUND. TAP NEW SECTION IN PLACE WITH WOOD BLOCK & NAIL SIDING

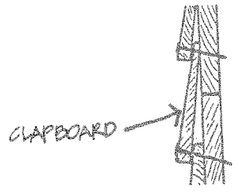
RIGHT

CLAPBOARD NAILED ONLY AT BOTTOM REPLACEMENT IS EASIER



WRONG

NAILED AT TOP AND BOTTOM RESISTS EXPANSION AND IS HARDER TO REPLACE



material introduction

Much of all the original siding on the houses of Civic Park has been covered with a different material. Asbestos, vinyl and aluminum sidings have been used. The popularity of substitute siding is not new, asbestos shingle siding dates from the 1930s. Any substitute siding is sold and installed for much the same reason:

- to reduce maintenance;
- to increase the insulation value of the wall;
- to cover deterioration; or,
- to "modernize"

It is available in shingles or plank siding, and is installed over the existing siding. In Civic Park, wood, stucco and brick have been covered. Substitute siding should be discouraged not only in historic preservation programs, but as a cover on any house. It may be acceptable as a completely new material or where existing siding is removed and the walls adequately ventilated prior to installation.

It is never an acceptable treatment of historic structures. It changes the architectural character of the exterior, it covers up deterioration problems which should be solved and it can accelerate or even lead to deterioration problems. Aluminum and asbestos siding destroy the integrity of the exterior of the Civic Park house. Important wood details such as roof brackets and eaves, attic vents, and porch columns and details, are covered up when it is installed. The new siding is not the same proportion as the original clapboard, shingles, brick or stucco siding. A flat appearance results as the details and the differentiation between materials is covered up.

New siding is often installed with the belief that it is maintenance free. Unfortunately, this is not correct. Aluminum and vinyl merely have different maintenance requirements than wood and masonry. Aluminum siding dents and scratches easily and the color coating will fade and can peel. Vinyl siding punctures and tears and will also fade. Replacing a damaged piece of siding is difficult because it cannot be matched in color once it has begun to fade.

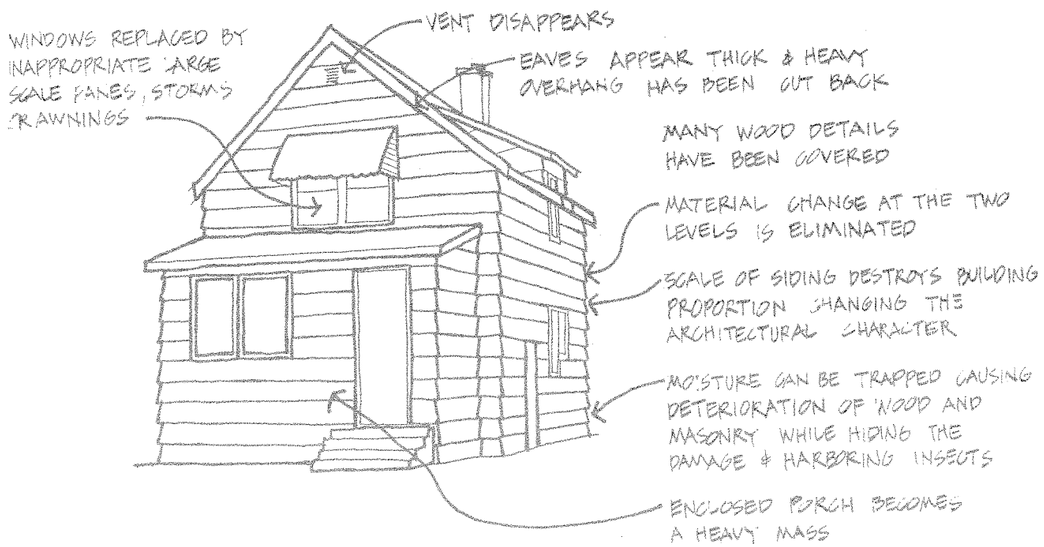
Aluminum and vinyl sidings are sometimes sold as insulating materials. "According to the Federal Trade Commission, synthetic sidings have little or no insulation value. It was the FTC's contention that even when insulated aluminum siding is correctly installed, there is little or no energy savings. As a result of these changes, the insulation value claim has disappeared from advertising."*

Although it is never mentioned in the sales literature, substitute siding can contribute to or accelerate physical deterioration of the old siding or structural system below. This is primarily due to increased moisture problems. The siding can act as a vapor barrier, trapping moist air inside the wall. If adequate air

CHANGE OF MATERIAL, COLOR AND TEXTURE FROM LOWER TO UPPER LEVELS

MANY FINE DETAILS AS IN ROOF EAVES, PORCH RAILINGS & COLUMNS, WINDOW PANES & TRIM DOORS

ORIGINAL APPEARANCE OF A CIVIC PARK HOME



EXAMPLE OF CIVIC PARK HOME AFTER NEW SIDING HAS BEEN INSTALLED

circulation between the new and old siding is not provided, the trapped moisture cannot evaporate. The water will build up at the base of the wall and cause rotting in wood and spalling in masonry. The same thing can occur if run off water finds its way to the old siding by way of a dent or rupture in the new siding.

The installation of siding can create a haven for insects. They are protected by the new siding and therefore, unseen. They have a steady supply of food in the old wood siding which is probably moist due to trapped water vapor. Finally, the original siding can be damaged by the installation of the new siding. Nails, furring and other attachments split the original material and many details may be cut or removed in order to install the new siding.

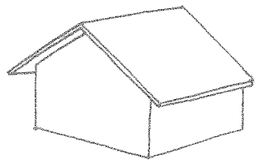
In summary, the disadvantages of asbestos, vinyl and aluminum siding far outnumber their advantages. This is particularly true in historic buildings where the preservation of the original siding materials is so important. Substitute siding is often installed in order to increase property values. This may be true in non-historic neighborhoods. In Civic Park, however, substitute siding decreases the historic value and therefore the property value of a home.

Substitute siding should not be installed. The original siding should be restored. Substitute siding which is already in place should be removed and the original siding below repaired and restored.

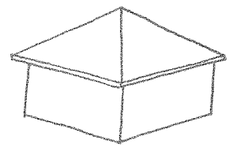
*Convay, Brian D., "The Case Against Substitute Siding," Old House Journal, Vol, VIII, No. 4, April 1980, p. 37.

The roof system of any building functions as the primary sheltering element protecting the interior of the building from the natural elements. The roof is also a structural element – in addition to carrying its own weight it must also carry the weight of snow, ice and wind. Beyond these functional aspects, the roof styles are one of the most outstanding architectural features found in Civic Park. The following graphics illustrate the types of roofs in Civic Park and the basics of roofing terminology.

TYPES OF ROOFS FOUND IN CIVIC PARK

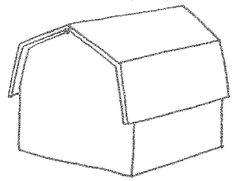


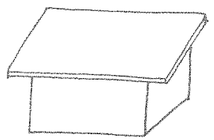
GABLE



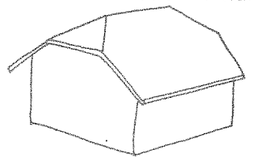
HIP ROOF

GAMBREL ROOF

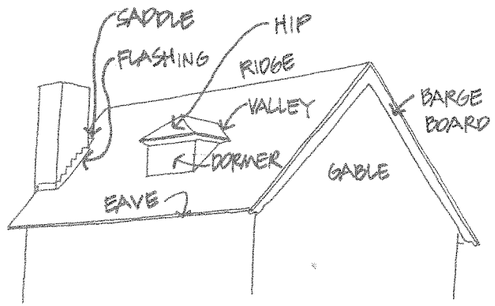


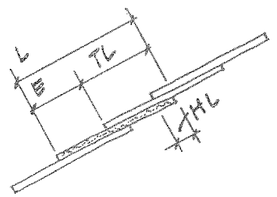


SHED ROOF



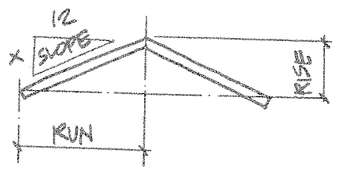
JERKINS HEAD OR TRUNCATED





SLOPE = RISE / RUN

PITCH = RISE / 2× RUN



L = LENGTH OF INDIVIDUAL SHINGLE
E = EXPOSURE
HL = HEAD LAP
TL = TOP LAP

ROOFING TERMINOLOGY

material introduction

Another ancient building material, natural slate is one of the most durable and permanent of all roofing materials. Historically, slate roofs were most common in the British Isles. When used early in the history of the U.S., slate was imported from Wales. Slate tiles are quarried from dense sound rock which becomes tougher with exposure to weather and is highly non-porous. Slates vary in thickness from 3/16" to 2" and in face size from 10" x 6" x 24" x 14". The average weight of a square (100 sq. ft. of covered area) of 3/16" slates is 700 pounds and of 2" slates is 8,000 pounds.

The use of slate in the U.S. was greatest from the mid 19th century until the 1920s when more economical, but less durable materials came into use. Its popularity has always been based upon its durability, low maintenance, fireproof qualities and beauty. It is available in a variety of colors, dependent upon the location in which the stones were quarried. All slates are grey and those with high mineral content take on colors of green, red, blue and purple. Its texture also varies from rough to smooth.

The installation and repair of a slate roof should be done by experienced slaters only. As a nearly permanent material, the original workmanship will play a major part in how well it performs over the years.

The portion of each slate which is exposed to the weather indicates the slate size. That is, with a 3" lap, a 6 1/2" exposed face indicates a 16" long slate (6 1/2" exposed fascia + 6 1/2" top lap + 3" head cap = 16"). Damaged slates should always be replaced with slates of the same size and thickness.

In most cases, the ridge of a slate roof is constructed with a saddle ridge or comb ridge detail. The ridge slate is shorter than the other slates, thus maintaining the size of the exposed face.

Slates are commonly machine punched with two nail holes located at the top. They should be laid with copper or aluminum nails, the heads just touching the slate so that the slate hangs on nails. Each slate should lay 3" over the second slate course below.

The 3" lap can be reduced to 20" on a vertical or wall surface. In all installations of slate roofing, no nails should be exposed nor any through joints from the roofing surface to the felt below. If aligned correctly, nails will go between the slates below, into the roof structure.

Flashing and the formation of valleys is an important part of the slate roof. Open valleys, where the metal flashing is exposed by holding the slates back at least 2" from the center of the valley, allows the free flow of rain water. The permanence of slate implies that the most durable and long lasting metal flashing should be used. To repair deteriorated valley flashing, roof slates must be removed and such work is expensive and can be troublesome. Copper is an acceptable material.

secretary of the interior standards for historic preservation

Recommended	*Not Recommended*
Preserving the existing roof shape.	Applying new roofing material that is inappropriate to the style and period of the building and neighborhood.
Retaining the existing roofing material, whenever possible.	Replacing deteriorated roof coverings with new materials that differ to such an extent from the old in composition, size, shape, color, and texture that the appearance of the building is altered.
Replacing deteriorated roof coverings with new material that matches the old in composition, size, shape, color, and texture.	
Preserving or replacing, where necessary, all architectural features that give the roof its essential character, such as dormer windows, cupolas, cornices, brackets, chimneys, cresting, and weather vanes, gutters, downspouts, and lightning rods.	Stripping the roof of architectural features important to its character.

civic park guidelines

Slate is a very important textural element which is part of the architecture of Civic Park. It was the original roofing material on approximately 60% of all the Civic Park houses. Three different sizes of slate appear to have been used, 12" x 12", 11" x 22" and 11" x 18", all of modeled colors (purple, brown, green andpink). Refer to COLOR, page 109.

The deterioration of slate tiles can be caused by water and ice, abuse or structural movement. Water trapped beneath or within the slate will freeze in the winter and cause delamination or breakage. Ice dams, which result from clogged gutters and downspouts, are the most dangerous of these conditions. If water is not drained from the slate quickly and efficiently , it will be retained and when frozen, delaminate the slates. Another water-related problem is the deterioration of the nails which secure the slates. Rusted galvanized nails eventually break and

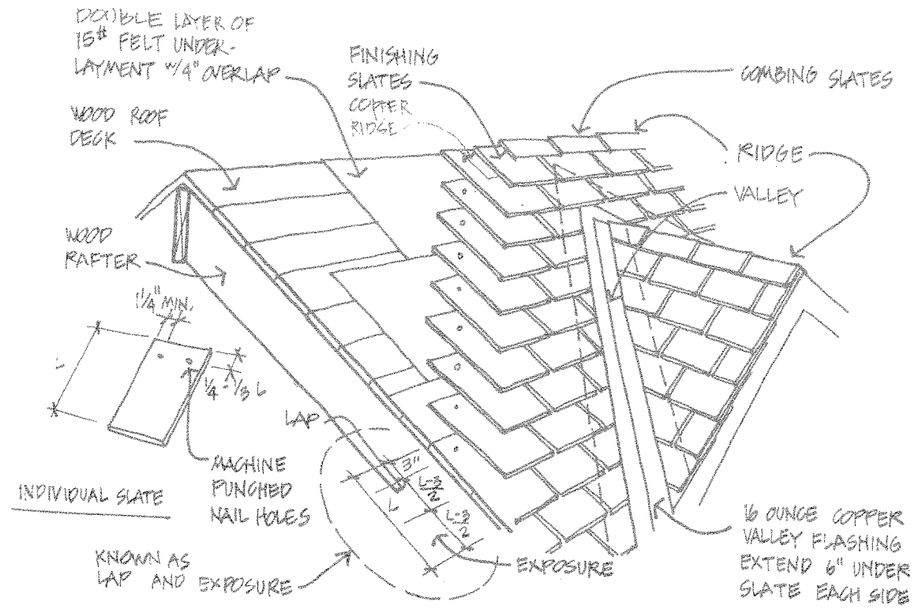
the slates fall off.

Damage due to abuse can be the result of walking on the roof, dropping tools or fallen trees. This will result in breakage. Structural movement of the roof itself can also cause breakage, particularly at the nail holes, the weakest point in the slate. Damage is caused by attaching gutters on top of slate, nailing the supports through the slate, attaching antennas to the slate; or, applying tar on top of slate which can trap water.

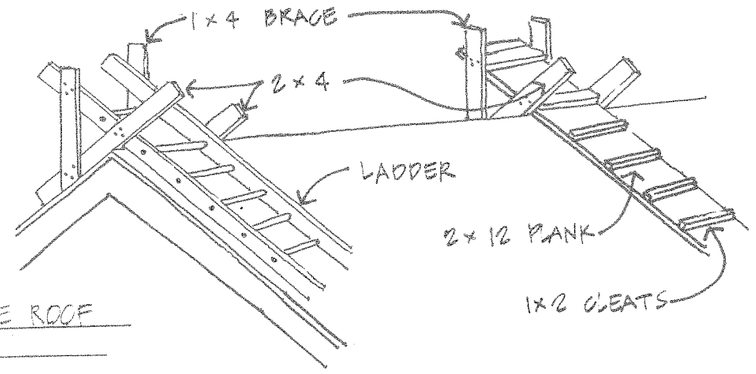
The two primary locations of problems are at the ridge and at the center of the roof over the front porch of the saltbox style. The ridge is the most vulnerable portion of the slate roof. Those porch roofs which have deteriorated at the center are sagging. This in part may be caused by the settlement of the center porch pier below. Refer to STRUCTURAL SYSTEM, page 40.

Slate is brittle and will not withstand bending, so it breaks. Consider this when outside maintenance is done at the second floor dormers or chimney. Two types of support rig are illustrated on page 78.

When slates are removed from a roof, they should be handled with care and salvaged for reuse by other homeowners. Used slate can be sold at profit yet reasonable price. As a community, Civic Park could organize a cooperative slate salvage and storage program. Such an effort would preserve this important material and make slates readily and inexpensively available to Civic Park residents. If you are replacing or repairing a slate roof, check with the Civic Park League, Flint Historic Commission at City Hall or the yellow pages under slate.



SLATE ROOF CONSTRUCTION



TYPES OF SLATE ROOF SUPPORT RIGS

MAINTENANCE: A weathertight roof is the basis of a sound structure. This element of the architecture must be maintained yearly to insure its continual stability.

1. Check the roof at least twice a year for damage. Inspect it from both the outside and from the attic space inside. Early warnings of leaks will appear on the inside after a storm or winter freezing.

2. Slates should not be walked on. Span the roof with a self supporting ladder hung from the ridge to inspect or do work on the roof or dormers.

3. Clean gutters and downspouts at least twice a year to prevent clogging and water back-up. Replace or install screens over gutter openings.

4. Consider installing snow and ice guards or 'brakes' on eaves to prevent large blocks of ice and snow falling and breaking slate on lower roofs. Use non-ferrous metals (copper, aluminum) to avoid rust stains. Ice guards are basically hooks attached to ends of rafters or eave board and extend several inches above the roof to catch the ice.

CLEANING:

1. Remove any organic growth from slate with a diluted ammonia solution.

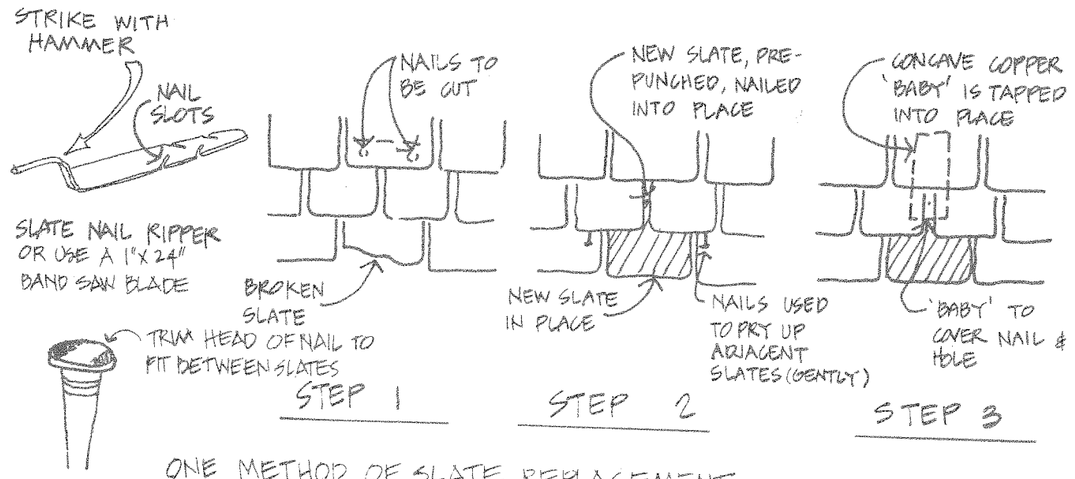
REPAIRING: Slate roofs should be repaired with slate, never with asphalt or wood shingles. Every effort should be made to preserve this important material. Small areas of deterioration (less than 25% of the roof area) can be easily repaired with new slate shingles and the original appearance of the roof preserved. The repair of a large portion of slate is, however, an expensive undertaking. If a large amount of deterioration has occurred and repair with another material is considered, the entire roof should be replaced. Patches or large areas of asphalt in an original slate roof undermine the visual integrity of the roof and its texture. Refer to COLOR page110.

1. Remove broken slate, cut the nails with a slate ripper or a 1" x 24" bandsaw or handsaw blade and remove any remaining small pieces of slate.

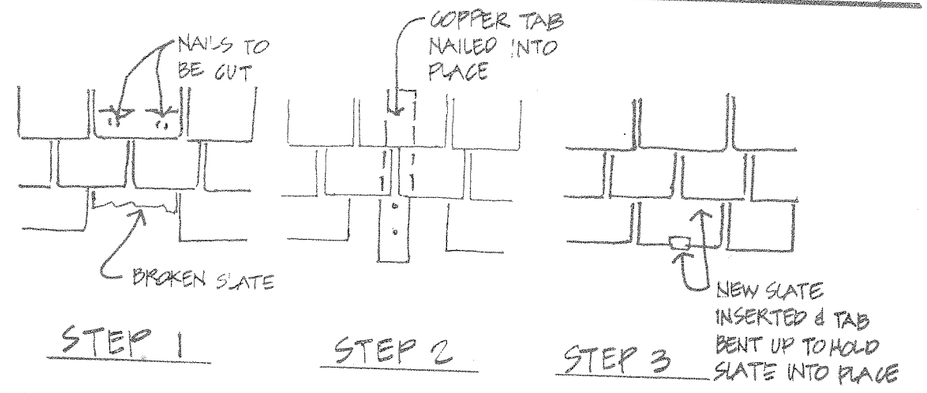
2. Insert new slate and nail this slate through the vertical joint of the slates overlapping it; over this nail insert a piece of copper approximately 3 inches in width by 8 inches in length.

3. The copper piece should be first bent slightly concave or convex which will insure it remaining tightly in place.

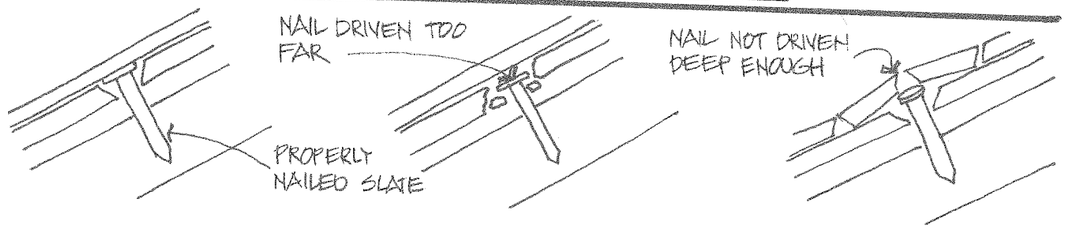
4. Replacement slates must be same size, thickness and color range of the original.



ONE METHOD OF SLATE REPLACEMENT

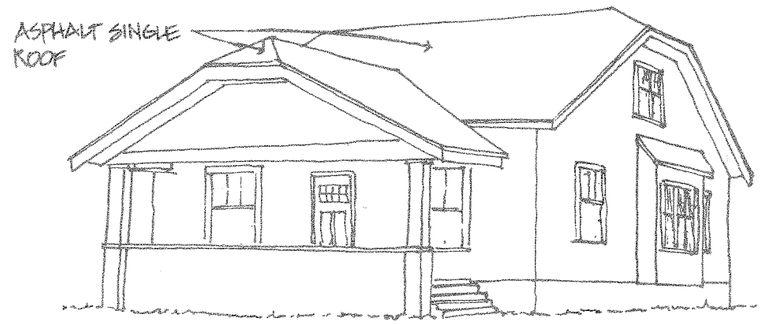


ALTERNATE METHOD OF SLATE REPLACEMENT



REPLACING:

1. If a large amount of deterioration has occurred in an original slate roof, the most preferred action is to repair it in slate, thus preserving the original roof material. If, however, repair with asphalt shingles is considered, remove all slate and roof the entire area in asphalt. Patches or large portions of asphalt in an original slate roof undermine the visual integrity of the house. The roof should be all slate or all asphalt. There are three acceptable patterns of asphalt, shingles which are illustrated in the asphalt shingle section. An appropriate color of shingle should also be chosen from the color chart, page111.



material introduction

Asphalt shingles are a modern day building material. Ninety percent of all roofing applied in the last few decades has been some form of asphalt roofing material. Asphalt itself was used by the ancient Sumerians over 5,000 years ago for waterproofing and paving. It is found or left in nature as a residue in the distillation of petroleum, which is our primary source today.

Asphalt roofing was first manufactured in the U.S. in 1892. Its popularity since then is due to the fact it is durable, resistent to acids and alkalis; fireproof; waterproof and in the highest quality shingles, tears or openings are self-healing.

Shingles vary in size, color and weight per square (100 sq. ft.) They are available in 1'-0" to 3'-0" lengths, 10'-0" or 1'-4" widths, and weights from 165 to 325 pounds per square. The color of the shingle is determined by the colored granules of slate, marble and granite which are embedded in the asphalt when manufactured.

The success of an asphalt shingle roof depends to a great extent upon the installation technique. Nails should be larged-headed, sharp-pointed aluminum or hot galvanized steel with barbed or deformed shanks. The heads should be 3/8" to 7/16", the shank 11 to 12 gauge wire and they should be at least 1 1/4" long. This insures 3/4" penetration into the wood roof structure. The shingles should never be installed in temperatures below 45°F. The ridge, valley, eaves, gable end and flashing are critical area where a watertight seal must be achieved.

secretary of the interior standards for historic preservation

Recommended	*Not Recommended*
Preserving the existing roof shape.	Applying new roofing material that is inappropriate to the style and period of the building and neighborhood.
Retaining the existing roofing material, whenever possible.	Replacing deteriorated roof coverings with new materials that differ to such an extent from the old in composition, size, shape, color, and texture that the appearance of the building is altered.
Replacing deteriorated roof coverings with new material that matches the old in composition, size, shape, color, and texture.	
Preserving or replacing, where necessary, all architectural features that give the roof its essential character, such as dormer windows, cupolas, cornices, brackets, chimneys, cresting, and weather vanes, gutters, downspouts, and lightning rods.	Stripping the roof of architectural features important to its character.

civic park guidelines

Asphalt shingles are the original roofing material on the Bungalow houses. They have been used to replace damaged slate on the other styles of houses in Civic Park.

Asphalt shingles react to sun and abuse. They can become brittle over time due to weathering. A more serious problem is the attachment of any elements over the shingles such as gutter straps, vent flashing or snow-melting cables. To hold the elements in place, nails must penetrate the shingles causing potential leaks and tearing the shingle. This allows water to pass through to the roof deck below and is the beginning of a roof leak. Problems can also result from improper edging or flashing; from use of the wrong nails or roofing cement; or from the build-up of water and ice in gutters. This water finds its way under shingles and into the roof structure and interior finishes below.

There is a great variety of color and size of shingles in Civic Park which detracts from the visual unity of the neighborhood. Only the three patterns illustrated here should be used. These patterns reflect the original pattern of slate which is rectanglular. Staggered edge or irregular shingles should not be used.

MAINTENANCE:

1. Check the roof at least twice a year for damage. Inspect it from both the out side and from the attic space inside. Early warnings of leaks will appear on the inside after a storm or winter freezing.

2. Clean gutters and downspouts at least twice a year to prevent clogging and water back-up. Replace or install screens over downspout openings.

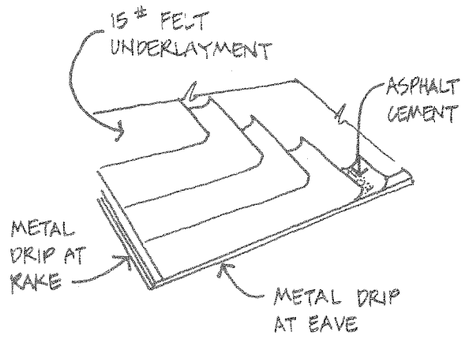
REPAIRING:

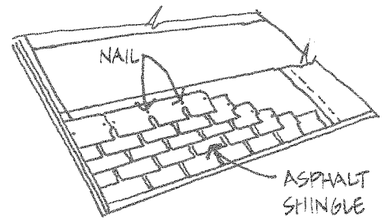
1. Remove all attachments to the asphalt shingles. Reinstall flashing and rehang gutters from underneath the shingles. This involves removing the shingles from the roof deck, securing the gutter or flashing and re-installing the original shingles using new sealant or roofing cement. The old nail holes or

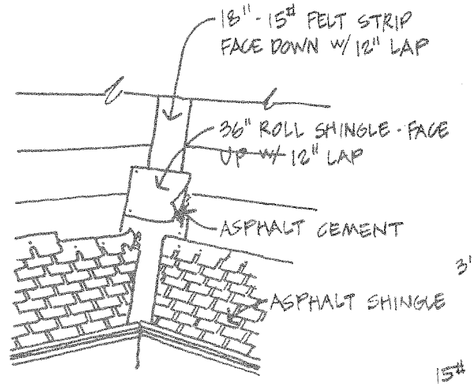
other penetrations should then be sealed with roofing cement.

2. Replace all damaged shingles and install new shingles where they are missing.

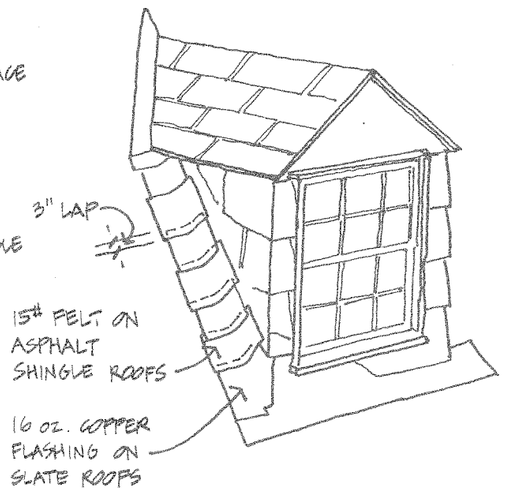
3. Replacement shingles should match the original shingles in color, size, texture and detail.







OPEN VALLEY



DORMER FLASHING

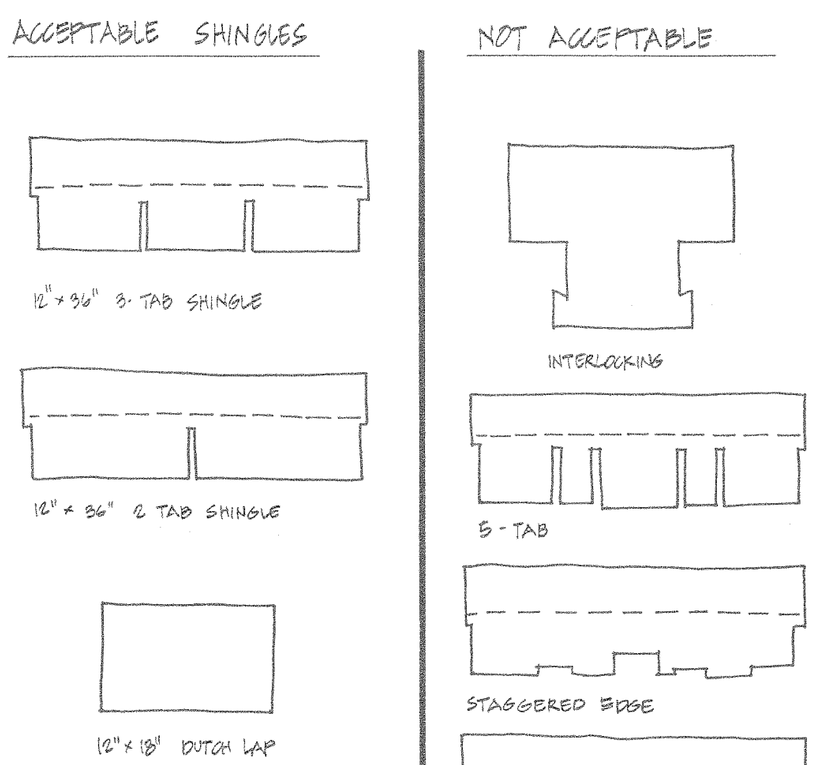
WOOD SHINGLES & ROOFING MATERIAL WILL COVER FLASHING

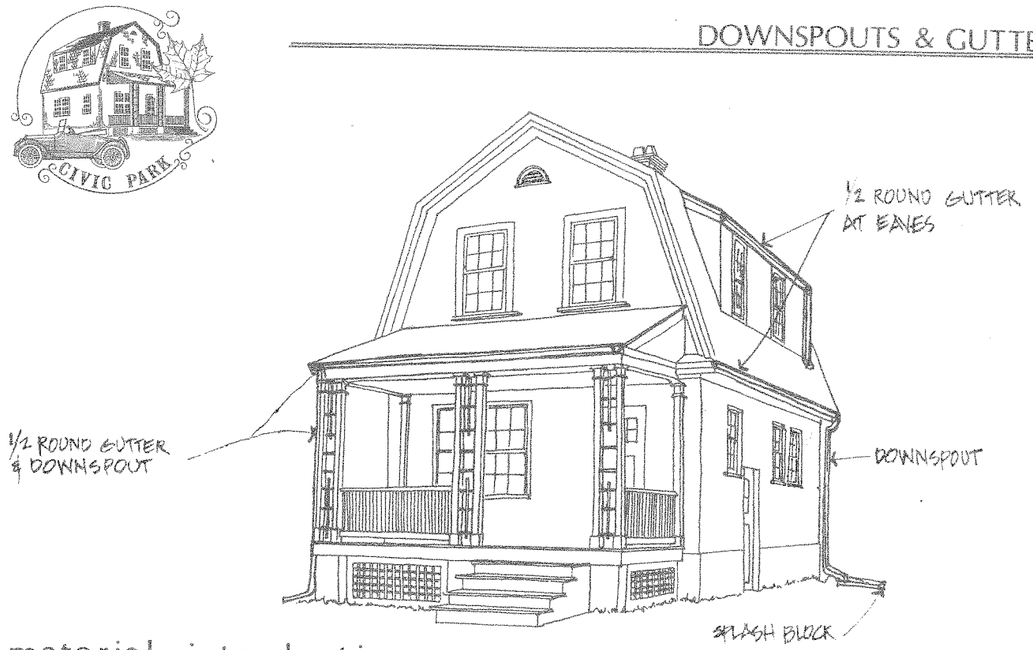
* AN ASPHALT SHINGLE ROOF SHOULD NEVER BE REROOFED OVER THE EXISTING SHINGLES MORE THAN ONCE. IF REROOFING WILL RESULT IN MORE THAN TWO LAYERS OF ASPHALT SHINGLES, THEN STRIP AWAY OLD ROOF TO THE WOOD SHEATHING & BEGIN WITH NEW FELT UNDERLAYMENT

REPLACING:

1. A severely deteriorated asphalt shingle roof should be entirely replaced. It is generally more expensive to repair and patch a badly damaged roof than to replace it entirely.

2. Reroofing should never result in more than two layers of asphalt shingles on the roof. If reroofing does result in more than two layers, the old shingles should be removed to expose the wood sheathing. Replace deteriorated areas in the sheathing and lay new 15 pound felt as illustrated before installing the new shingles.





material introduction

The function of any gutter and downspout system is to direct rain water and melting snow away from roof and wall surfaces as quickly and efficiently as possible. In this manner, exterior materials are protected from water saturation, the most damaging of the natural elements. Metal hung gutters, or eaves troughs as they are also called, were part of the original construction in Civic Park.

Galvanized metal is the typical material used in gutters, although copper is more long-lasting. The most usual form is half-round (in profile) and the gutter is hung under the eaves. A slope of 1/4 inch to the foot of gutter insures positive drainage of water. The downspout connects to the gutter and carries water down to the ground. At the discharge point, water is directed away by splash blocks, masonry gutters or connection to the underground storm sewer. Downspouts should not empty onto other roof surfaces. Gutters should not cross each other or pass dormers unsupported.

The gutter should be 2 inches larger than the downspout for a good connection. Metal hangers or straps which hold the gutter in place should be placed a maximum of 2'-6" apart and be attached to the wood roof structure below the slate or asphalt shingles, never on top of the shingles.

secretary of the interior standards for historic preservation

Recommended	*Not Recommended*
Cleaning, when necessary, with the appropriate method. Cast iron and steel are usually not affected by mechanical cleaning methods while pressed tin, zinc, and aluminum should be cleaned by the gentlest method possible.	Removing architectural features that are an essential part of a building's character and appearance and thus illustrate the continuity of growth and change. Exposing metals that were intended to be protected from the environment. Do not use cleaning methods that alter the color or texture of the metal.

civic park guidelines

The original gutters in Civic Park appear to have been half-round metal members. They were held in place with twisted wire hangers which were attached to the roof structure between the slates.

Metal gutters and downspouts require care and replacement on a regular basis. They are subject to severe weather; rain, snow and ice; to abuse due to movement, impact and wind. Rust can attack the metal following any flaw or damage to the paint finish. Ice which forms in a clogged gutter greatly increases the weight of the gutter which can cause the hanger straps or the gutter itself to break. If ice builds up onto the roof, it damages the roof material whether slate or asphalt shingles.

MAINTENANCE:

1. Clean gutters and downspouts at least twice a year to prevent clogging and water back-up. Replace or install screens over downspout openings.

2. Repaint any marred surface of metal.

3. Regularly check for broken straps, falling gutters or displaced downspouts.

REPAIRING:

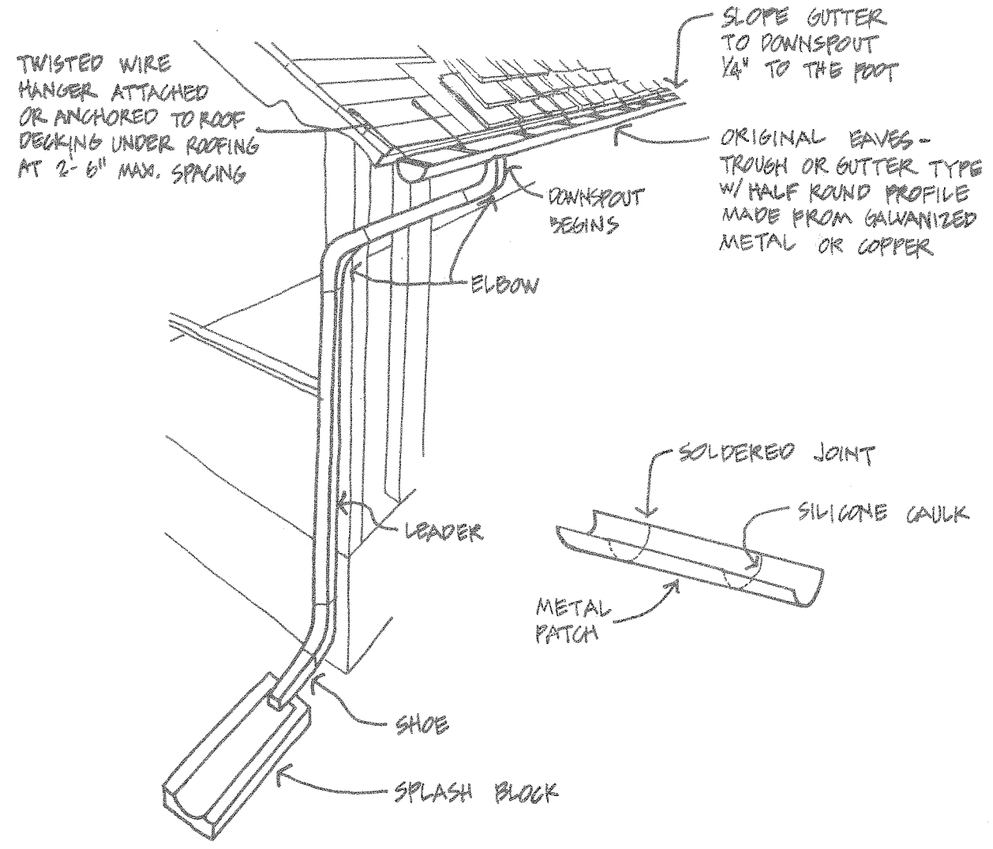
1. Replace any broken hanger straps and attach to wood roof structure below shingles.

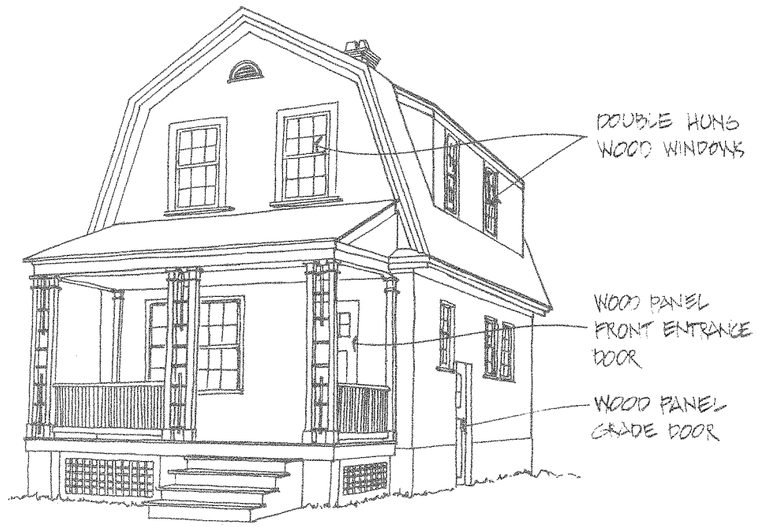
2. Replace badly dented, broken or misssing gutters and downspouts. Make attachments to eaves 2'-6" apart and to wall 6'-0" apart.

3. Repair seams which are broken to insure a water tight condition.

REPLACING:

1. Replace all hanger straps which are attached on top of shingles. This is very damaging to the roofing material. Rehang gutters from the wood roof structure and replace the shingles.





introduction

The openings in an exterior wall surface fulfill very specific functional requirements. Doors provide access for people and furnishings. Windows provide access for light and ventilation into the building. The placement of doors and windows also fulfills an important architectural function; they provide texture and scale in the visual composition.

The original doors and windows in Civic Park were made of wood. The cellular nature of wood makes it an excellent insulator and thus an energy-efficient material. This is an advantage over aluminum or steel doors and windows which are not good insulators. Wood doors and windows also keep the original architectural character of Civic Park.

Exterior wood doors were manufactured in 1920, as solid panel construction. That is, the door is constructed of solid wood members and then coated with a water protective finish, usually varnish. Door openings are sealed with weatherstripping around the frame. They are mounted on hinges which allow them to swing open. Latches and locks are installed on the side opposite the hinges.

Double-hung wood windows are composed of two sashes which slide up and down in tracks in the frame. The windows installed in 1920 are held open by counterweights attached to ropes or chains in the wall. Storm windows and screens can be installed on the outside. Wood is the preferred material. Metal (usually aluminum) can be painted and should have the same number of sashed and general appearance as the original windows which they cover.

Windows are commonly described by counting the number of panes, or pieces of glass in each sash. For example, if the upper sash has six pieces of glass and the lower one has six, it is called "six-over-six".

secretary of the interior standards for historic preservation

Recommended

Retaining existing window and door openings, including window sash, glass, lintels, sills, architraves, shutters, doors, pediments, hoods, steps, and all hardware.

Installing storm or insulating windows when old glass, art glass, or fragile sash require protection from the weather. Protective windows should be as unobtrusive as possible and should be removable without damaging original fabric.

Using existing doors and door hardware when they can be repaired and used in place.

Not Recommended

Altering the size of window panes or sash. Such changes destroy the scale and proportion of the building.

Installing inappropriate new window or door features such as aluminum storm and screen window combinations that require the removal of or cause damage to original windows and doors.

Discarding original doors and door hardware when they can be repaired and reused in place.

civic park guidelines

The standardization of parts of the Civic Park houses included doors and windows. All original installations used the same units. This reinforces the unity of the architecture of the houses. In Civic Park, the preservation of the doors and windows cannot be overstressed. Maintain all existing original units and restore those which have been removed or changed.

The deterioration of doors and windows can lead directly to air and water leaks. Because they are built of wood, they are susceptible to water-related problems of swelling, shrinking, rot and weathering if left unprotected, or if continuously exposed to water. Refer to WOOD, page 63.

Specific door deterioration includes:

- Hardware (hinge, latch, lock) failure which prevents door from moving properly.
- Bad weatherstripping around the edges which allows air to pass into the building.
- Peeling paint or varnish on door, frame or sill which allows water to penetrate the wood which can cause rot or weathering.
- Broken glass in door.
- Rotten or swollen wood due to lack of maintenance or seal.
- Deterioration of the bond between pieces of wood which can cause the entire unit to crumble.

Window problems include:

- Poor operation or inoperation due to swollen wood, painted shut or broken ropes to counterweights.
- Air and water leaks due to broken glass, bad caulking and sealing around perimeter of window unit.
- Rotten or loose wood members of sash, sill and frame due to water penetration.
- Peeling paint which can lead to water problems.
- Hardware failure which keeps window from locking or sliding.

The doors and window problems in Civic Park include the removal of original units; the installation of shutters which are not original; and, the installation of aluminum screens and storms which do not have the same number of panes of glass or which are not painted to match the original sash. The deterioration of door and window is a matter of maintenance. Metal awnings have been installed on some houses. This is not acceptable as it radically alters the original architectural character of the house. Shade can best be provided by planting large trees. Refer to the BUILDING SITE page 19 and ENERGY CONSERVATION page 115. If awnings are installed canvas rather than metal should be used. Canvas awnings can fold against the house during the winter and be replaced.

MAINTENANCE OF DOORS:

1. Check hardware attachments (screws of hinges, latch and lock) and secure them.
2. Replace weatherstripping whenever worn.
3. Check regularly for peeling paint; repaint if required.
4. Revarnish every year with marine varnish.
5. Clean oiled wood four times a year with tung oil.
6. Repair broken glass.
7. Repair caulking joints around frame if damaged; renew every two years.
8. Install screens and storm doors as the seasons dictate; take care to clean and maintain wood frames of these units.

MAINTENANCE OF WINDOWS:

1. Check regularly for peeling paint; repaint if required.
2. Repair broken glass.
3. Lubricate tracks that sash moves in, using common bar soap.
4. Install screens and storm windows as the seasons dictate; take care to clean and maintain the wood frames of these units.

REPAIRING DOORS:

1. All badly rotten wood must be replaced, but only those pieces affected by decay. This includes the door, frame and sill. Repair by removing the original material and replacing it with matching material. Doors which have begun to rot or badly weather (most commonly at the bottom) should be removed and rebuilt professionally replacing those pieces which are rotted.
2. Loose joints between members of wood in a panel door require dismantling and rebuilding. Use appropriate adhesives and clamping time. Refinish while dismantled.
3. Hardware repairs include locks, latches and hinges. Historically important

pieces which are highly visible, such as knobs and locks, should be rebuilt. Consult with a hardware supplier to find professionals who can perform this work.

4. Small amounts of decay can be repaired with epoxy consolidation. This is a process of injecting plastic into the wood to stabilize and strengthen it. The decayed material must be cleaned out, then epoxy injected. When dry, it can be sanded to original shape and painted to match. This process does not require the removal of the wood; it can be done in place and is easier than removal when there is only a small amount of decay. Refer to WOOD page 66.

REPAIRING WINDOWS:

1. Windows which are painted shut can be opened by cutting the paint all around. Use a putty knife and hammer, aimed away from the glass. Twist the putty knife occasionally (but not enough to mar the wood) to loosen the sash.

2. To repair a window which is swollen shut, begin by carefully removing the frame and trim. Sand or plane the edge of the window sash and soap the new edge. Test it. Replace the sash, frame and trim. Refinish.

3. Windows which do not stay open usually have broken cords connecting the counterweights. Carefully remove the trim and frame. The cord hangs in a slot in the frame and will fall to the bottom. Recover the weight and remove the old cord. Replace the cord with a metal chain, the length of the full weight and thread it through the pulley at the top of the window frame. Secure it to the top of the window. Test the installation. Replace the frame and trim. Refinish.

4. Decayed wood should be replaced or consolidated with epoxy. See items No. 1 and No. 4 of "Repairing Doors".

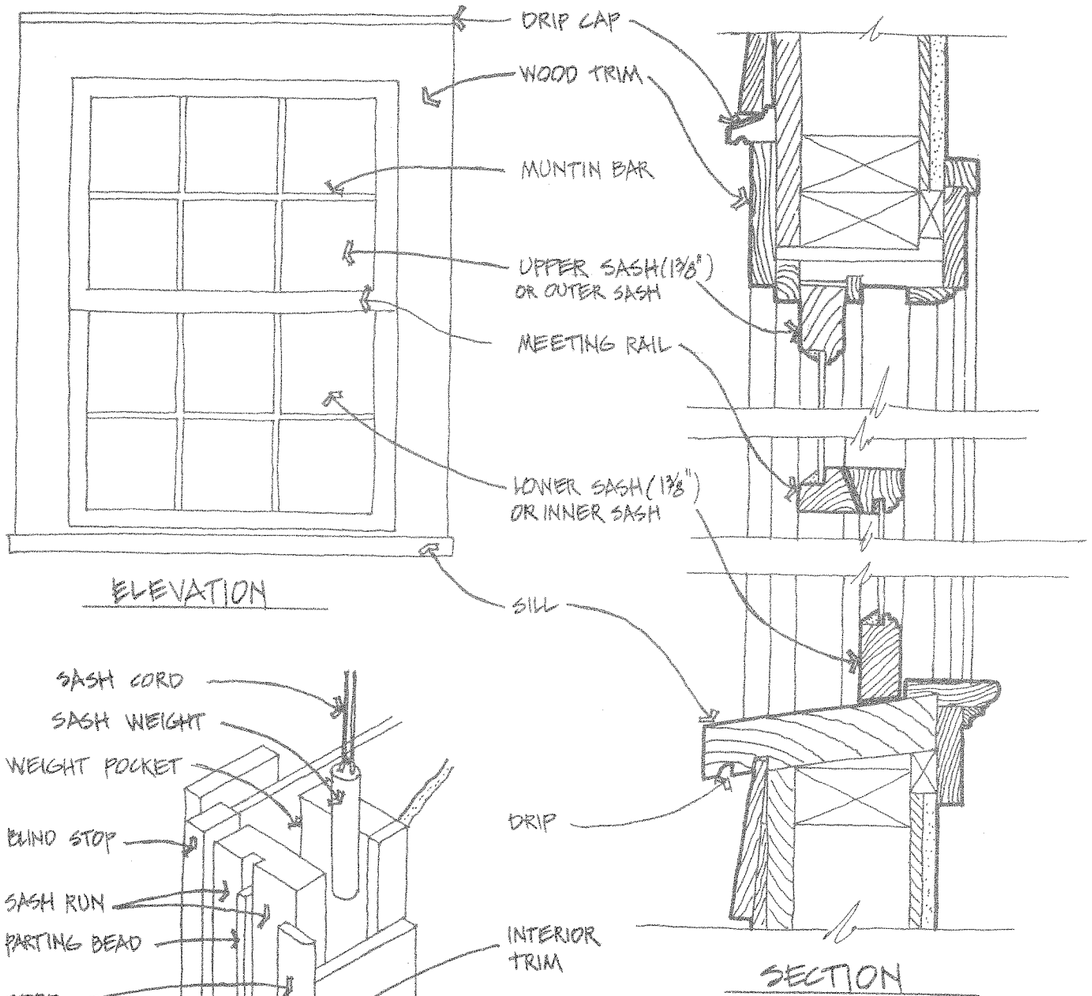
REPLACING:

1. The replacement of original doors or windows is not acceptable preservation work.

2. Badly deteriorating or inoperative units should be repaired if at all possible. Necessary replacements must duplicate the original door or window in size, material, color and detail.

3. Replace modified (not original) doors and windows with units which duplicate the original in size, material, color and detail.

4. Refer to ENERGY CONSERVATION, page 115, for information on Storm Doors and Windows.



REPAIRING PAINT STUCK SASH

- PRY OFF STOP TO REMOVE INNER SASH
- PRY OFF PARTING BEAD TO REMOVE OUTER SASH
- REMOVE PAINT BUILD UP FROM SASH & SASH RUN
- PUT WINDOW TOGETHER IN REVERSE ORDER

REPLACING SASH CORD

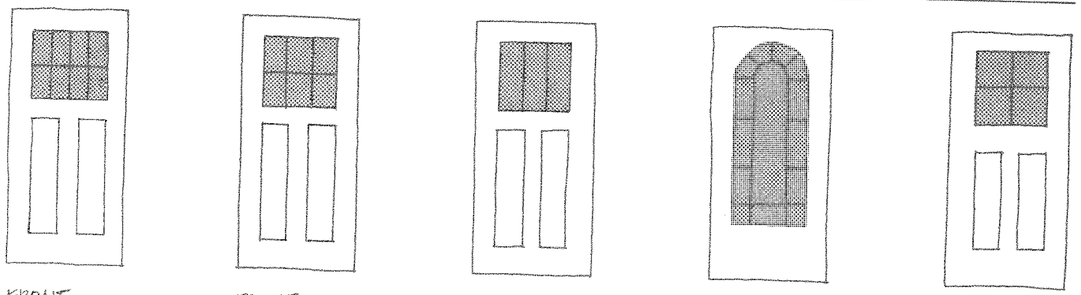
- PRY OFF INTERIOR TRIM
- REMOVE OLD SASH CORD
- ATTACH NEW SASH CORD OR CHAIN TO WEIGHT & SASH
- REPLACE WOOD TRIM

TYPICAL CIVIC PARK
DOUBLE HUNG WINDOW

APPROPRIATE DOOR PRESERVATION ACTION

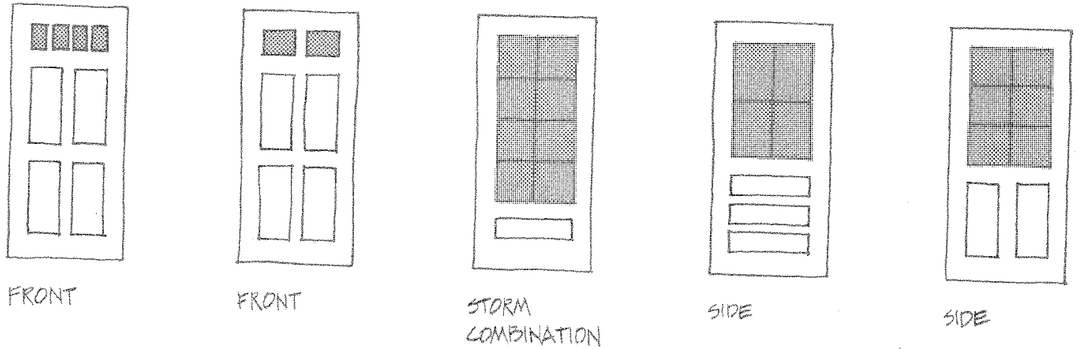
- REPAIR & MAINTAIN ORIGINAL DOORS
- REPLACE WITH ORIGINAL DOORS OR DUPLICATE DOOR
- REPLACE WITH AN ACCEPTABLE DOOR WHICH IS OF SIMILAR CHARACTER TO THE ORIGINAL
- USE DARK STAIN

ORIGINAL DOORS



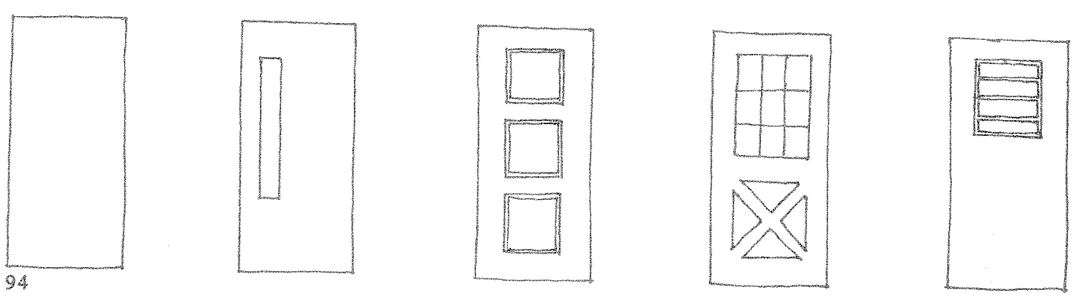
FRONT | FRONT | FRONT (BUNGALOW) | FRONT | SIDE

ACCEPTABLE DOORS



FRONT | FRONT | STORM COMBINATION | SIDE | SIDE

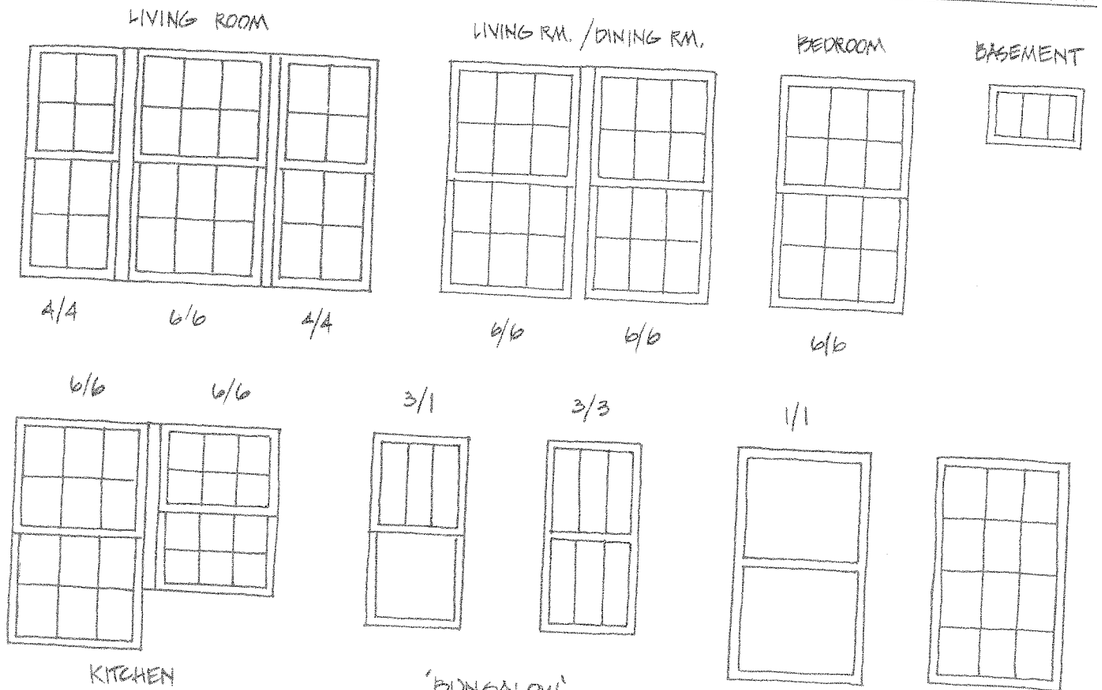
UNACCEPTABLE DOORS



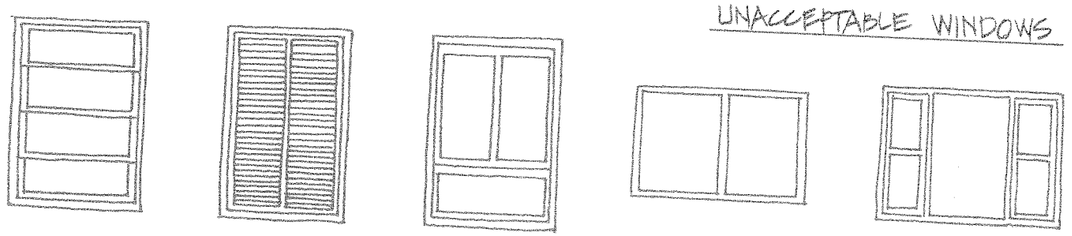
APPROPRATE WINDOW PRESERVATION ACTION

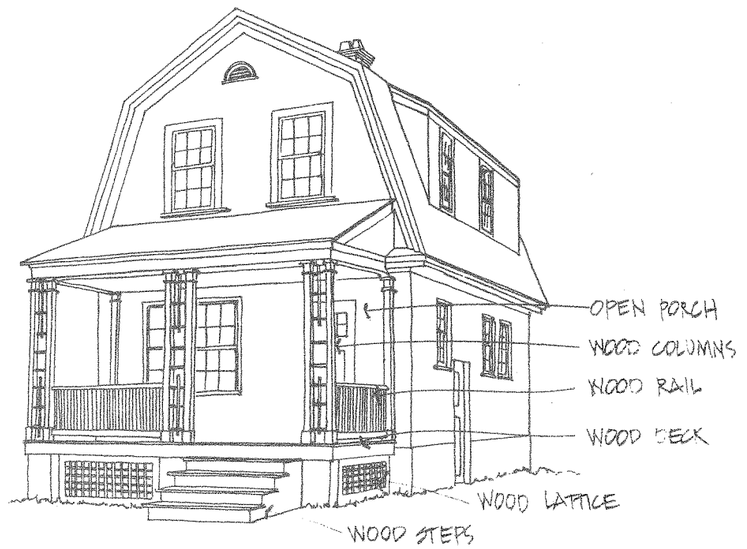
- REPAIR & MAINTAIN ORIGINAL WINDOWS
- REPLACE WITH ORIGINAL WINDOWS OR DUPLICATE WINDOWS
- MAINTAIN SAME SIZE WINDOW DIMENSION OPENINGS

ORIGINAL & ACCEPTABLE REPLACEMENT WINDOWS



UNACCEPTABLE WINDOWS





introduction

A porch is not an element of technology or a building material with singular characteristics such as slate or metal. It is, however, an important element in the architecture of a house and an important social element in the function of those who live in the house.

As an architectural element, the porch in Civic Park is a single-story form which projects from the primary mass of the house. It breaks up the box-like nature of the house, and adds the texture and visual interest of wood railings, columns, trellises and trim. Thus the porch is not merely an extension but also an important part of the scale and detail of the whole composition.

The porch was designed as a functioning element of the house in 1920. It provided an outdoor room for the socializing of the family. The lifestyle of the 1920's differed from that of today's in that people often strolled along the street in the evenings and met with neighbors who were relaxing on their porches.

secretary of the interior standards for historic preservation

Recommended

Retaining porches and steps that are appropriate to the building and its development. Porches or additions reflecting later architectural styles are often important to the building's historical integrity and, wherever possible, should be retained.

Repairing or replacing, where necessary, deteriorated architectural features of wood, iron, cast iron, terra cotta, tile, and brick.

Not Recommended

Stripping porches and steps of original material such as handrails, balusters, columns, brackets, and roof decorations of wood, iron, cast iron, terra cotta, tile, and brick.

Enclosing porches and steps in a manner that destroys their intended appearance.

Removing or altering porches and steps that are appropriate to the building's development and style.

civic park guidelines

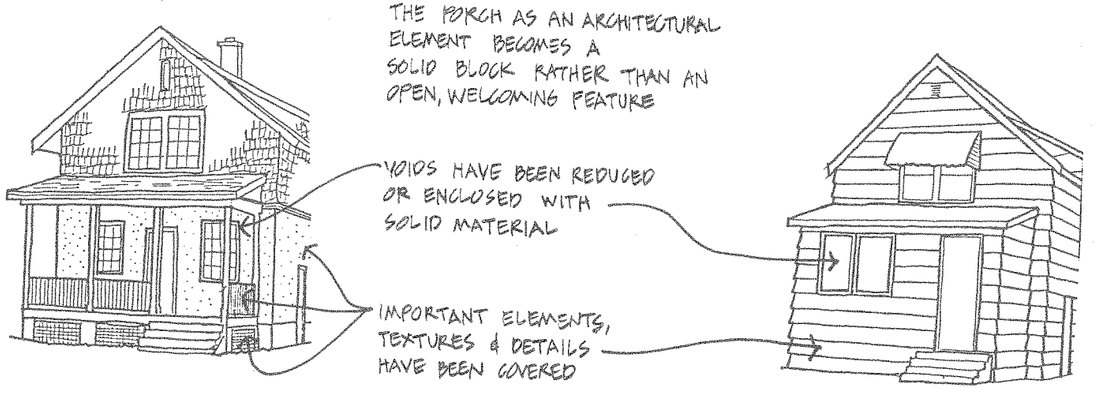
The original porches of Civic Park homes are wood construction, between 100 and 200 square feet in area. They are built on masonry piers, the floor height at approximately 2 feet above the ground. All the original porch design are variations of six schemes. The preservation and restoration of the porch should be an important priority in Civic Park.

Wood porches are subject to severe cases of the typical deterioration of any wood building element, particularly water related. Refer to WOOD, page 63 . The porch is also subject to damage due to the structural movement of the masonry piers. A porch is a popular spot, with heavy traffic; railings are often used as benchs, porch swings add weight to the roof structure, and completely open porches are subject to severe weather variations including wind, ice, water, sun and humidity.

Few of the Civic Park houses have the original porches with columns, trellis and rails still intact. People who have houses that have the original porches should make every effort to maintain and preserve them.

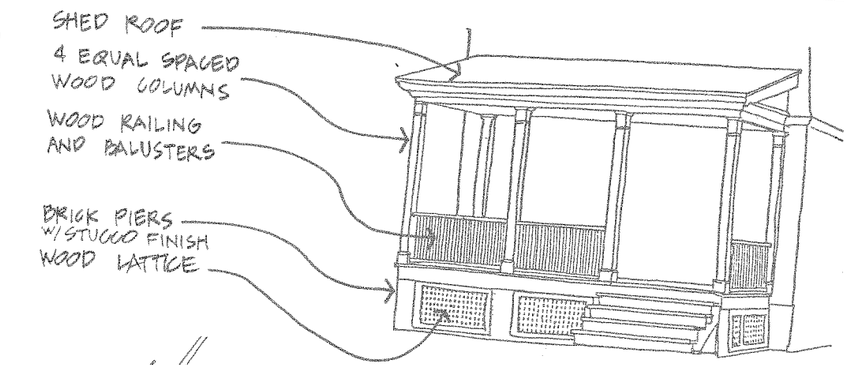
Many of the porches have been enclosed; details removed; wood columns and railing have been replaced with "wrought iron" or the porches removed. Porches can be reconstructed using the original drawings, refer to ARCHITECTURAL STYLES pages 23 , and the detail drawings found in this section. Some porches have been enclosed which are sensitive to the original architecture (maintaining columns, rails and trellis work). Porch enclosures have been used to add floor area and recently to provide a buffer from winter cold. Such enclosures are practical and can maintain the original porch features as illustrated in the following pages. The enclosure illustrated provides a winter buffer (storm window inset) and screens for energy efficient cooling with the summer breezes.

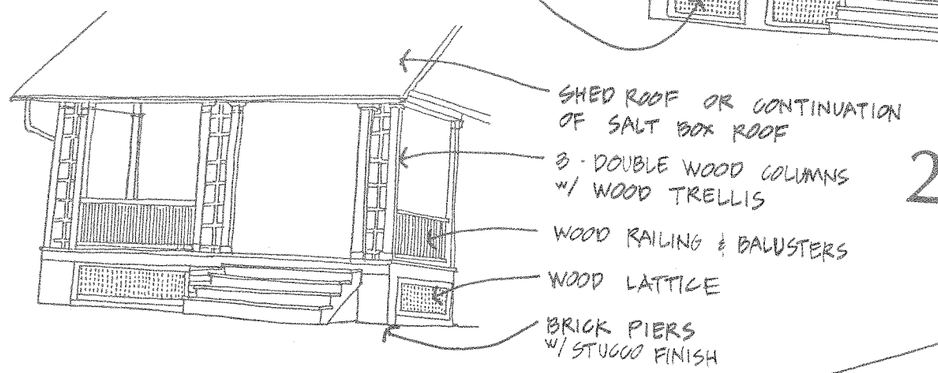
There also appears to be porch roof damage in many of the Saltbox styles. In those houses affected, the front beam of the porch roof is sagging. Refer to STRUCTURAL SYSTEM page 40.

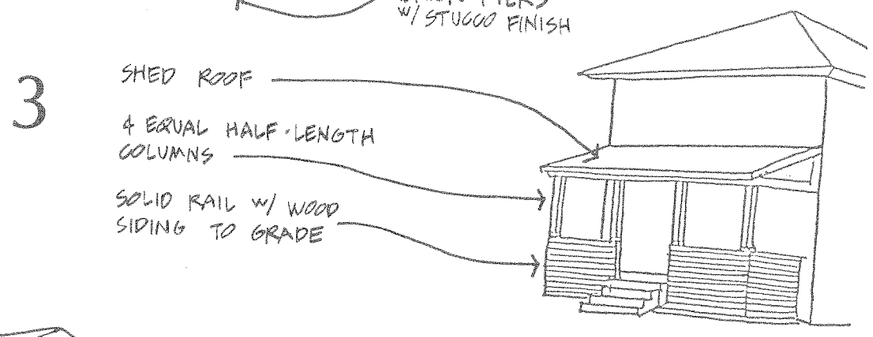


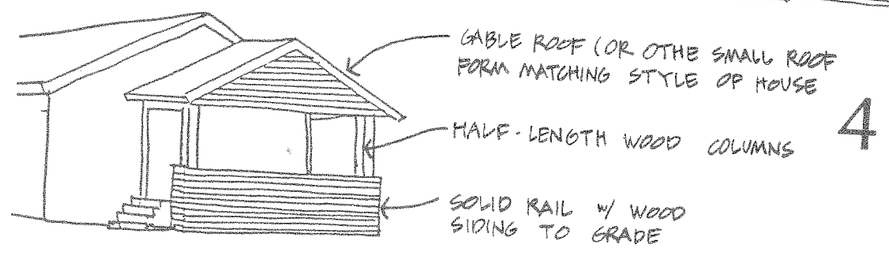
ORIGINAL CIVIC PARK PORCH

PORCH ENCLOSURE WITHOUT REGARD TO ARCHITECTURAL FEATURES









MAINTENANCE:

1. Regularly check for loose and missing elements such as balusters, trim, planking and trellis. Secure all loose pieces.
2. Keep the porch clean, it is not a storage room.

3. Regularly check masonry piers for cracks or other indications of structural movement, for deterioration of brick or mortar.

4. Regularly check to see that water drains off porch, away from building and does not have a chance to keep the wood wet.

5. Repaint as required.

6. Clean gutters and downspouts at least twice a year to prevent clogging and water backup.

REPAIRING:

1. Repair loose, rotted, broken or missing pieces of trim or flooring with wood of the same size and profile. Small areas of rotted wood which are not structural (floor, beams or columns) can be consolidated with epoxy without being removed Refer to WOOD, page 66 .

2. If there is evidence of structural damage, such as a sagging roof and floor, a qualified contractor, architect or engineer should be consulted to confirm the reason for the damage. To correct the sagging, the porch pier must be built up, thus raising the floor and roof back to their original locations. Refer to STRUCTURAL SYSTEM page 40 .

3. Repair any cracked piers, or piers with deteriorating masonry and mortar. These are structural elements and cannot be left unattended. Repoint all open joints and replace damaged brick. Refer to BRICK, page 48 .

4. Eliminate any excess water from around the porch. Excess water will be absorbed by the masonry and then will freeze, damaging the brick and thus the structure itself. Refer to BRICK page 46 . Avoid concentrating drainage in one location. Repair damaged piers. Lift porch floor to original level if sagging or settlement has occurred.

5. Repair gutters and downspouts as required.

REPLACING:

1. Do not replace wood with any other material other than wood or epoxy consolidation.

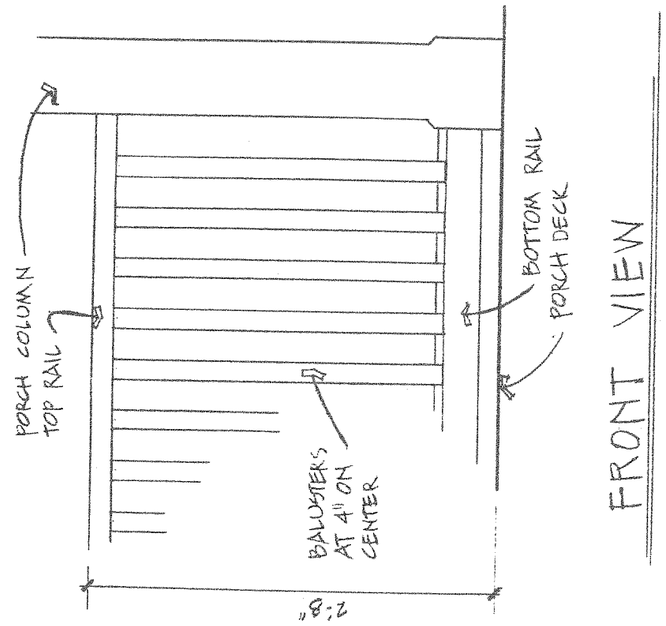
2. Wood steps are vulnerable and can be replaced with steps constructed with treated lumber or concrete units of the same size. Paint the concrete the same color as the porch.

3. Remove any material, including plastic or aluminum siding, which covers the ori ginal porch. Repair the wood below.

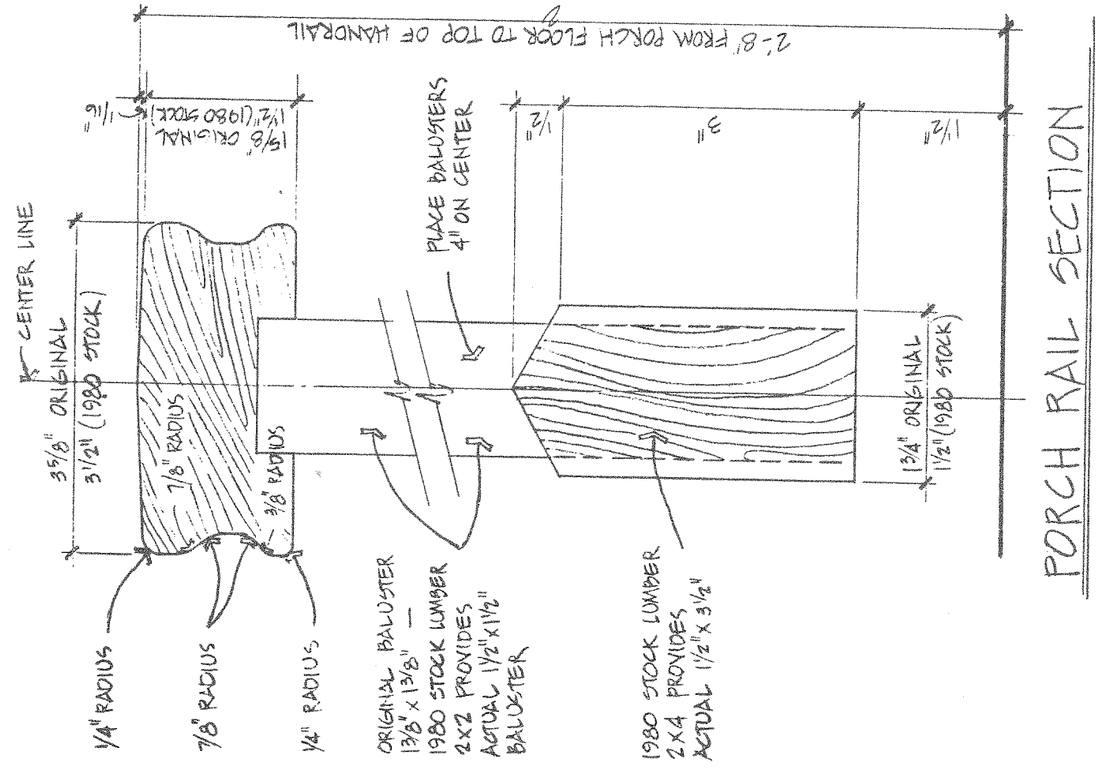
4. Remove unsympathetic porch enclosures. Replace with an acceptable enclosure or restore original porch.

5. Replace any metal handrails with wood.

6. Remove indoor/outdoor carpet from the porch floor. This material retains water and rotting wood is almost guaranteed.

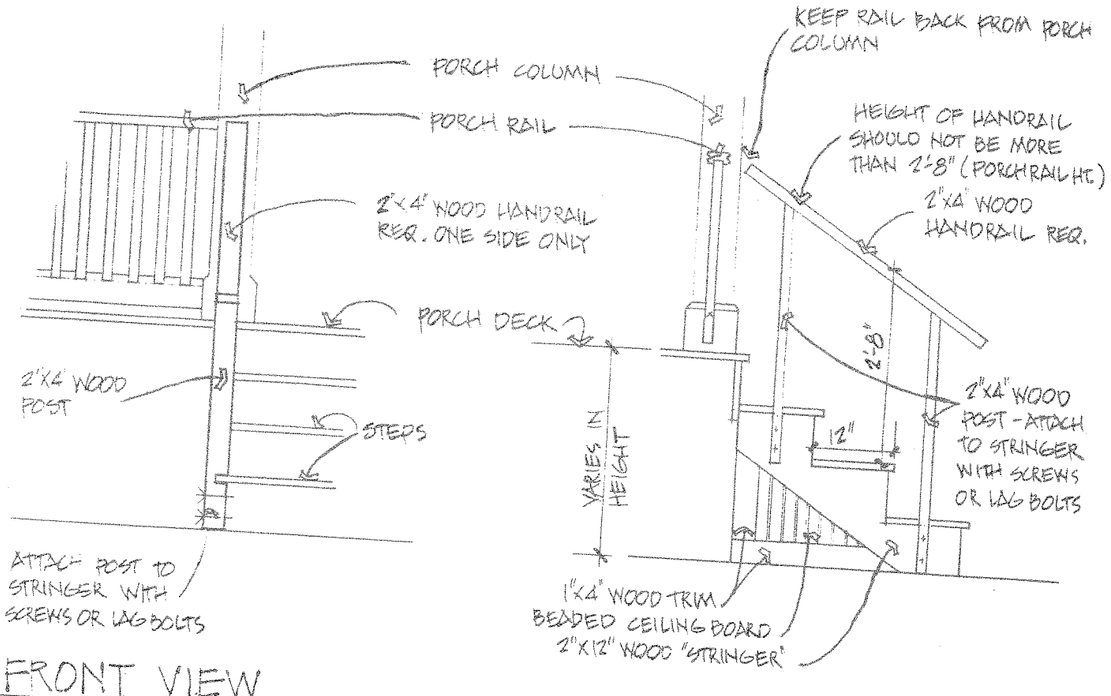


FRONT VIEW



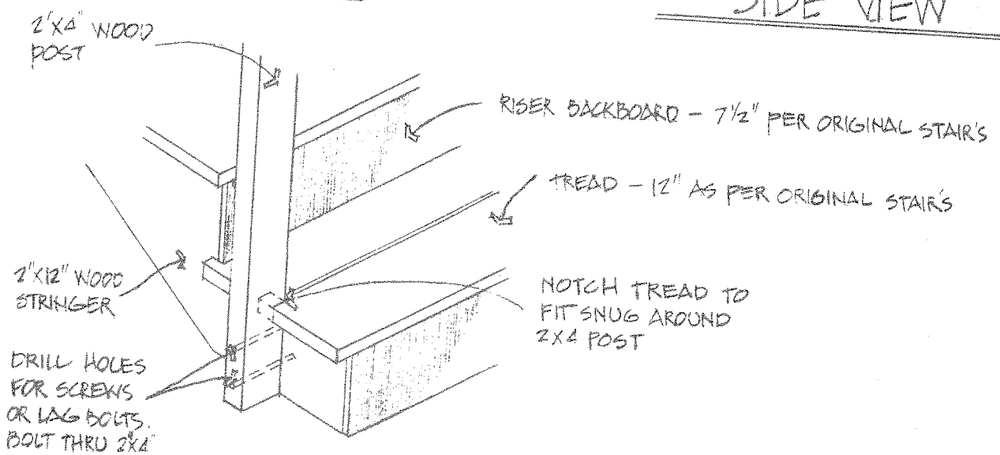
PORCH RAIL SECTION

CIVIC PARK
PORCH RAIL DETAIL
tomblinson, harburn, yurk & associates 12/80



FRONT VIEW

SIDE VIEW

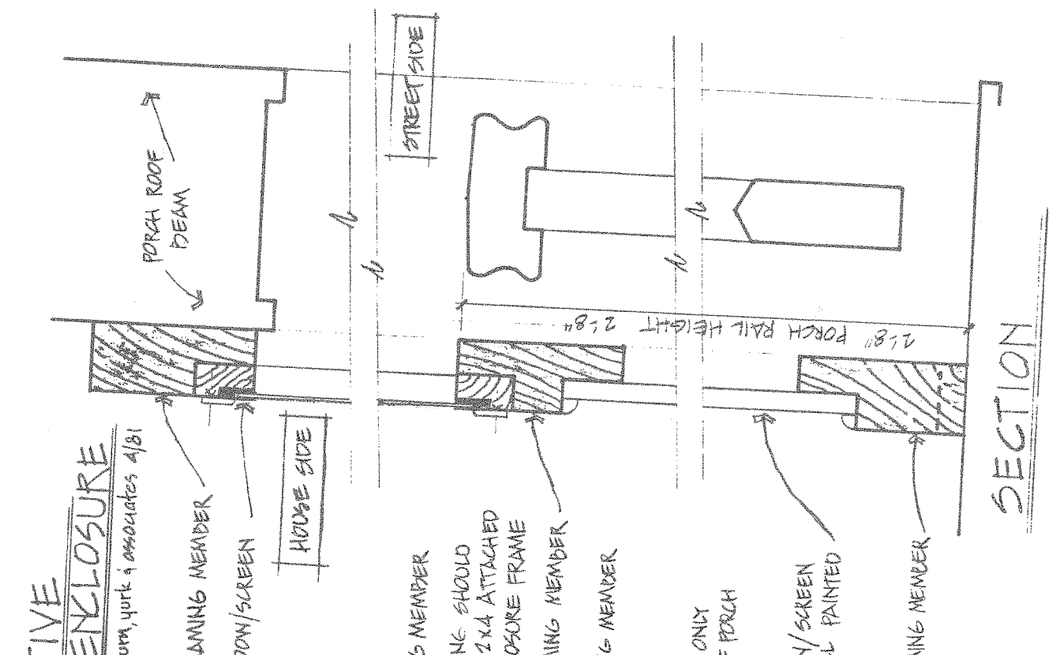


ISOMETRIC VIEW

FLINT BUILDING OFFICIAL APPROVED

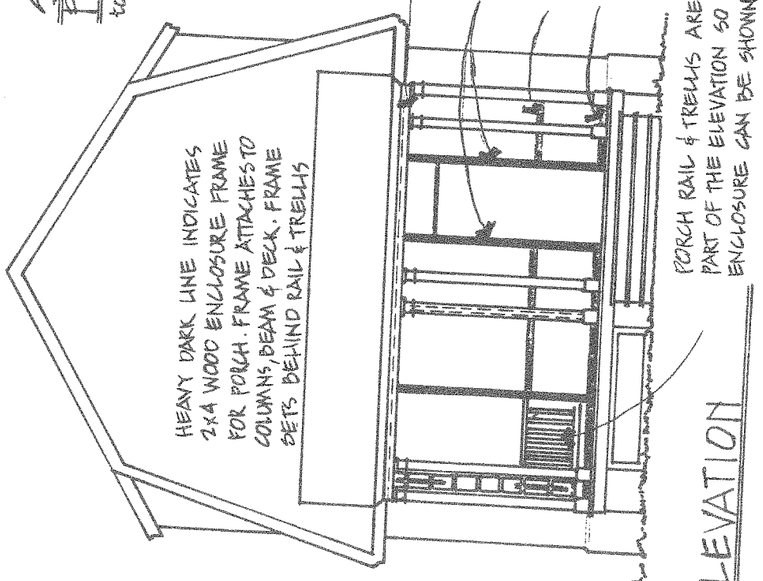
CIVIC PARK
STAIR HANDRAIL DETAIL

tomblinson, harburn, yurk & associates
12/80

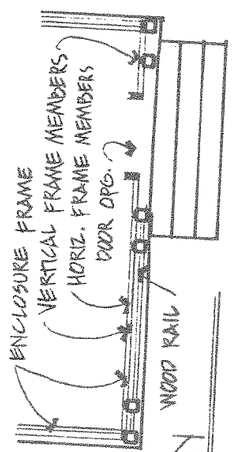


SENSITIVE PORCH ENCLOSURE

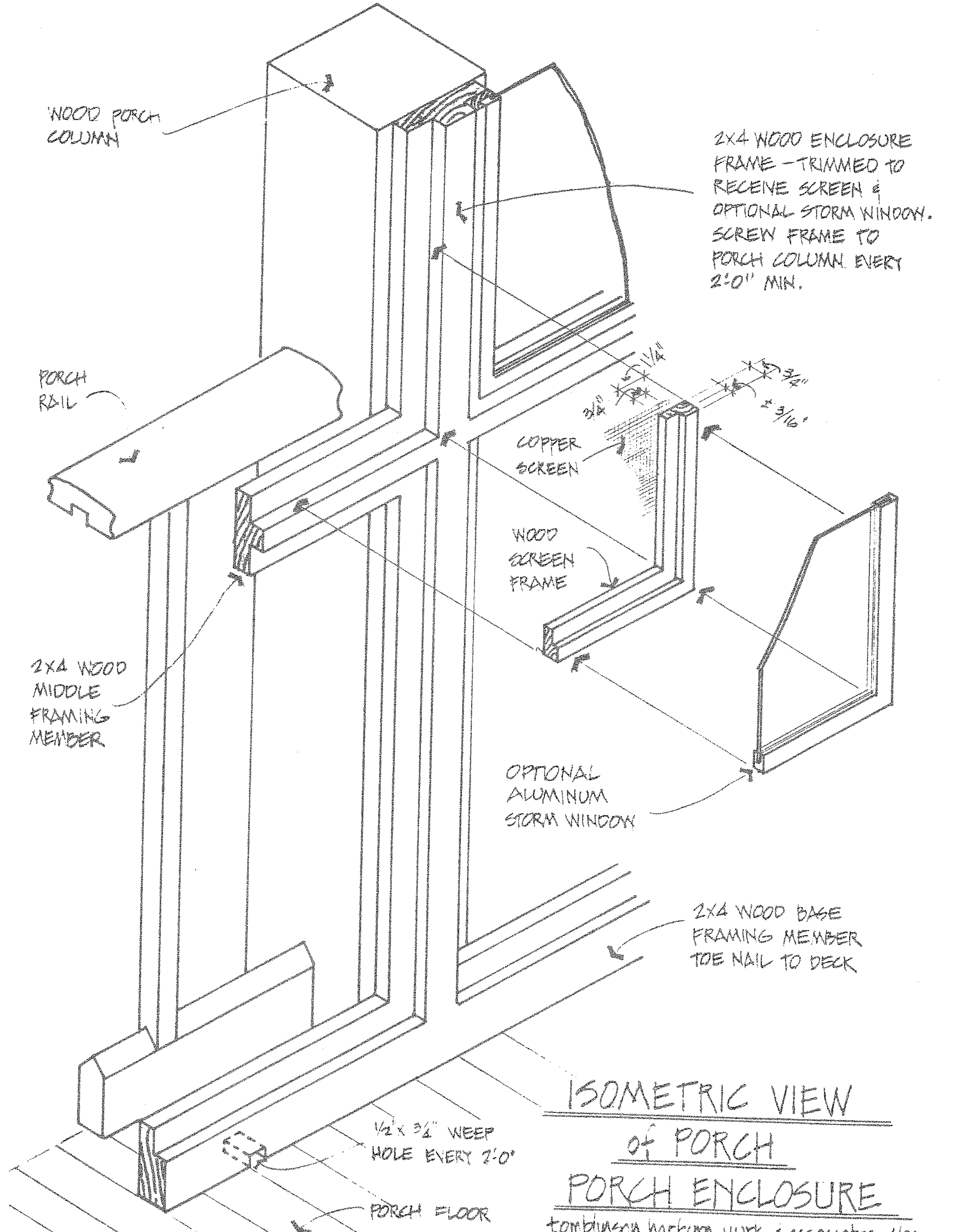
tomblinson, harburn, yurk & associates 4/81

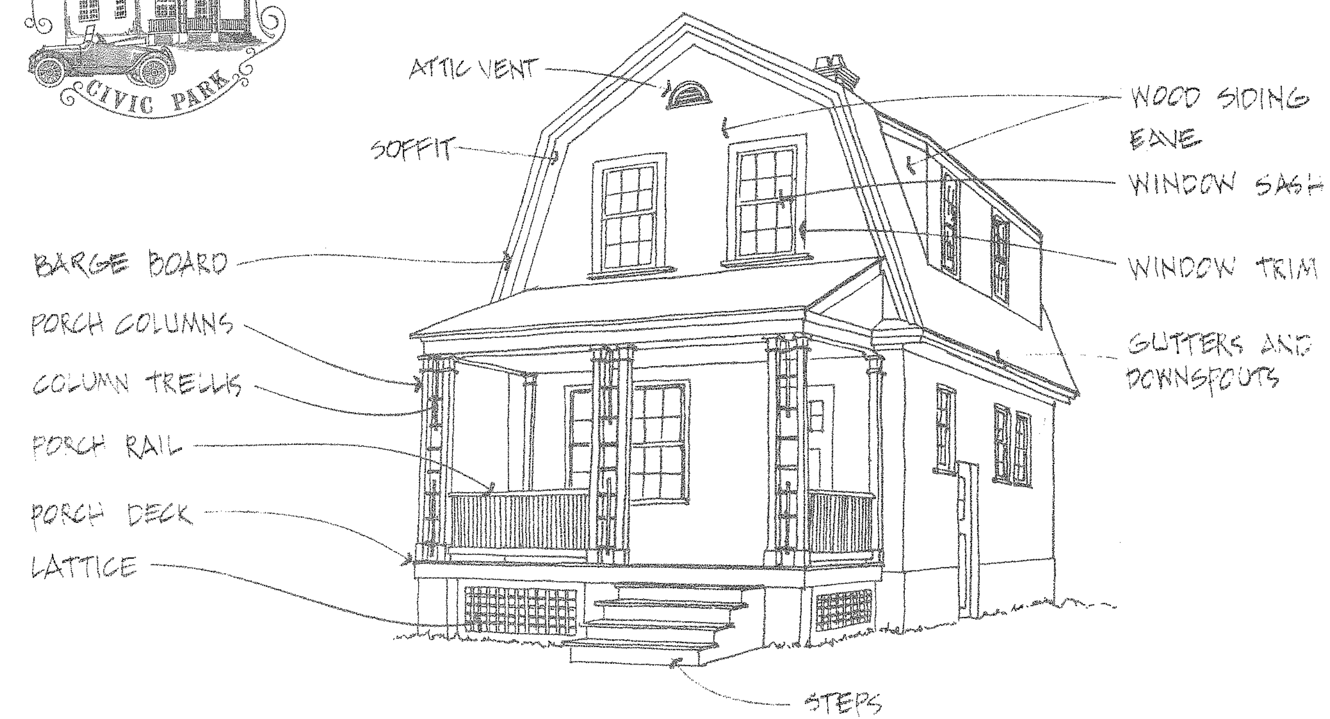


ELEVATION



PLAN





introduction

Paint as a decorative material predates recorded history. Caves and ancient pottery attest to this. Paint remained primarily decorative for the thousands of years between the cave dwellers and the modern 16th century. At that time, paint became equally popular as a protective coating. Since 1700 the paint industry has mushroomed and a great variety of paints are now available.

Paint is a liquid which dries to form a solid film on the surface it covers The same ancient principle is used today; a combination of pigment (color) and vehicle (liquid). It is a colorful, decorative, washable finish which provides water protection on surfaces above grade. Paint, however, has a short life span and requires regular maintenance.

Exterior house paint is either oil or water based. Oil based is more durable but water based is easier to apply. In either case, exterior color paints must be nonfading. Different materials, such as wood and masonry (brick, concrete, stucco and concrete block) may require different paints. Paint is not necessary as a protective coating on masonry. It is merely decorative. Wood, however, must be painted to be protected; thus paint on wood is both decorative and protective.

Brushing, rolling or spraying are acceptable methods of applying paint. Paint is applied in either a two-coat or three-coat method. The first coat is the priming coat, the others are finish coats. Each coat must be allowed to dry thoroughly before the next is applied. The drying time required is 48 hours for oil based, 24 hours for water-based. Paint can be removed with paint remover, wire brushes, heat, sanding, chemicals or water washing. The method used is determined by the type of paint and the surface painted.

Preparation of the surface to be painted is as important as the paint itself. The paint must adhere to the surface and the presence of any moisture, dirt or stains will prevent that. The preparation of wood includes:

- Removal of all loose paint
- Removal of surface blisters
- Filling of cracks and holes
- Cleaning the surface of dirt
- Replacement or consolidation of decayed wood. Refer to WOOD, page 63 .
- Removal of stains
- Smoothing of wood surface
- Proper drying

Before painting wood which is damp due to weather or interior moisture, allow at least one week of clear dry weather. During that time the wood will be allowed to dry and future peeling of paint due to moisture will be avoided.

A masonry surface must also be clean, dry, as smooth as possible (without eliminating the natural texture of the material) and free of loose paint and organic growth. In addition, all efflorescence must be removed. This is the salt deposits caused by excessive moisture traveling through the masonry. Brush the deposit off. Wash the masonry with water, in two or three applications until the salts have been removed.

Temperature affects paint. Best results are obtained when it is applied between 60°-80° F., but it should never be applied below 50°F. Do not apply paint when it is raining or snowing or when surfaces are damp.

secretary of the interior standards for historic preservation

Recommended

Preserving existing paint color and finishes, or repainting to match existing conditions.

Not Recommended

Removing existing paint color and finishes.

civic park guidelines

Paint was used originally as a protective covering of all the wood on the exterior. Although the masonry was not painted originally, much of it has been painted subsequently. The preservation aspect of paint in Civic Park is not to re-use the original paint types but to restore the original color. The original paint was, most likely, lead based oil paint. When lead based paint peels, it can be a danger to small children. If ingested, it can cause lead poisoning.

Paint deteriorates rapidly compared to most building materials. Its thinness leaves it subject to severe stresses from weathering. As it ages, it becomes brittle and may crack. If moisture is trapped in the wall, the paint will blister and peel as the moisture attempts to escape. Frequent repainting builds up excessively thick coatings which are subject to peeling, cracking, and blistering. If this is the case, it is better to touch-up than to repaint.

Paints primary function is protection, a renewable film or skin that protects the outside of your house, the beauty it adds is a side benefit. A good quality job, properly applied should offer protection for 5 - 7 years. Refer to VINYL, ASBESTOS & ALUMINUM page . Paint shows the first signs of wear on windows, eaves and south exposures. The cause of most paint deterioration is lack of adequate surface preparation or moisture. Some of the common paint problems and cures include:

- BLISTERING occurs when vapor, water or chemicals try to escape. Cut the blister open. If there's bare wood then water moisture probably caused it. High humidity inside or the wood being exposed to water outside is the probable cause. Correct the water problem first; then scrape, prime and repaint. If there direct sun. The sun dries the skin before the paint solvents have a chance to n the hot evaporate. Just scrape, sand and repaint.

- CHALKING can be identified when residue is left on the hand after rubbing a painted surface. Excessive chalking is caused because a poor quality paint was used, inadequate surface preparation or a latex paint was applied when the temperature was 40° or colder. Repaint only after washing the surface with 1/2 cup detergent per gallon of water; rinse thoroughly; let dry and prime.

- CRACKING results when paint has aged to an excessively hard finish. The hairline cracks allow water to be trapped. If caught early, wire brushing and repainting usually corrects it. An advance stage of cracking is known as ALLIGATORING because of its alligator skin appearance. The only cure is to remove the paint down to the wood, prime and repaint.

- WRINKLING results when a second coat of paint is applied before the first coat is dry or when a coat is applied too heavily and is not properly brushed out. Wrinkling has a leather-like texture appearance and if not too pronounced can be sanded off and repainted.

- MILDEW is one of the most common causes of paint failure. Industry reports that it cost the nation's homeowners hundreds of thousands of dollars each year -needlessly. Mildew is the visible result of a fungus growth....a mold that grows on the surface of organic matter. It first appears as tiny spots of brown, black or purple discoloration. The visual appearance becomes progressively worse as the fungus grows and entraps dirt. Mildew is not caused by paint, it receives its food from the paint or the surface under the paint. To sterilize a surface before repainting wash with a solution of 3 quarts water, 1 cup liquid bleach, 2/3 cup trisodium phosphate (borox) and 1/3 cup detergent. Scrub area with this solution and a medium soft brush, rinse thoroughly with fresh water, allow surface to dry and apply a mildew resistant paint as soon as possible after drying.

MAINTENANCE:

1. Regularly check for peeling, blistering or cracked paint.

2. Perform maintenance repainting of trim or other areas of excessive exposure more often than major repainting.

REPAINTING:

1. Prepare surface: Remove loose paint and surface blisters, fill cracks and

holes, remove dirt, decay and organic growth, insure that wood is completely dry and remove all efflorescence from masonry.

2. Paint only in dry weather when the temperature is between 60°F. and 80°F.

3. Repaint with the same type of paint previously applied, whether oil or latex.

4. Always tint the primer with a little of the finish paint to give it the same tone.

5. If there are places where wood siding appears to peel more than others, put "breathers" in the wall. Small metal screws in this area will let the moisture out and prevent peeling.

6. Paint the large surfaces first, then the trim.

7. Color selections: Refer to COLOR, page110.

Additions to a house should not be emphasized with color. They should blend into the composition of the original house. Garages should also be painted to harmonize.

introduction

In order to create a coherent composition, the original paint colors were selected to harmonize with the colors of the natural materials. The body trim, details and other major elements were drawn together by their color scheme. Variations of color along a block or throughout the neighborhood followed an overall scheme. The original color scheme of Civic Park is an important element which should be restored. It is as much a part of the preservation effort as the restoration of any other detail such as the porch, the roof or the chimney. All new painting and restoration work should be done according to the original scheme, which is presented here.

In 1920, the prevailing tastes in color were calmer than the Victorian colors of the 1890's. After the turn of the century, trim was painted lighter than the main or body color of the house, not darker. Fewer colors were used and they were generally lighter in tone than the intense Victorian shades. Trim became simpler and was painted to finish the house, not to decorate it. In general, colors lightened up and simplicity became the rule.

The palette of historical or original colors in Civic Park is based upon the natural materials used:

- Slate — brown, gray, green, blue, purple and pink
- Stucco — gray
- Brick — brown and red
- Concrete Foundation — gray

To complement the dark earth tones of these materials, the trim and siding was painted in one of these schemes, all variations of brown, yellow and green:

1. Light trim, dark window sash

2. Light trim, light window sash

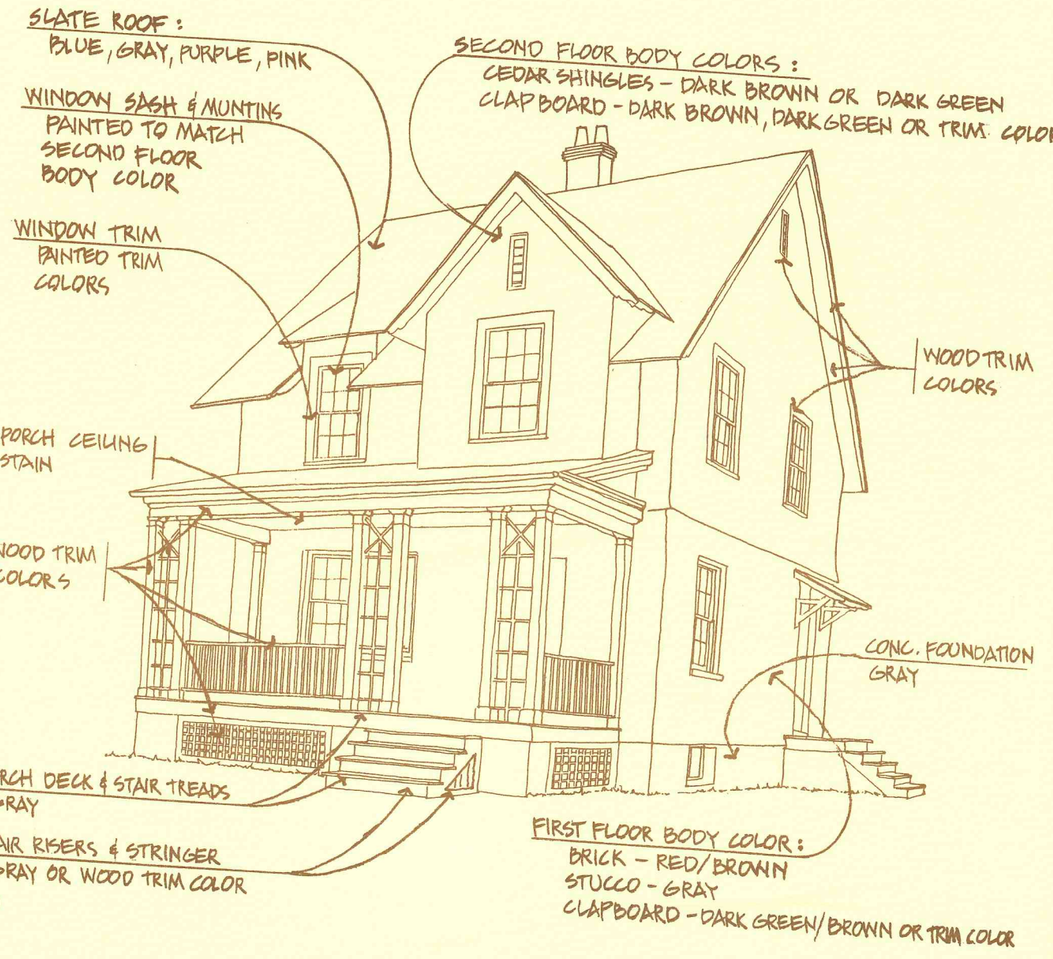
3. Dark trim, dark window sash

These three schemes show again the concern for variety with which Civic Park was built. It also indicates that, possibly, owners were allowed to choose from an established palette of colors before their house trim was painted.

The original colors in Civic Park were based upon the natural use of materials and paint colors that complemented the earth tones. Slate, stucco, brick and concrete was <u>not</u> painted but left natural (less maintenance). Wood was either stained or painted. Second floor cedar shingles on the brick or stucco houses were a dark brown or green. Porch and trim colors of these houses were light variations of brown, yellow or green that complemented and defined these features against the dark body color. Houses that had wood clapboard siding were painted with the same shades of light or dark browns and greens used on the brick or stucco houses.

The color ranges include:

- Slate Shingles: Originally a range of blue gray, purple and pink should be matched. Black slate should not be installed.
- Asphalt Shingles: Choose a color of asphalt shingle which falls within the range of original colors. Thus a blue gray shingle is acceptable, a green or black shingle is not.
- Wood Siding, Trim and Window Sash: Originally the colors were cream, light yellow, green and beige. These or similar colors are available from most quality paint companies. Choose a color which is within the range, which is light and harmonious with the brick, slate and concrete.
- Body Colors, Brick & Stucco: Restore the original stucco color of gray.
- Concrete Foundation: Restore the original gray color.

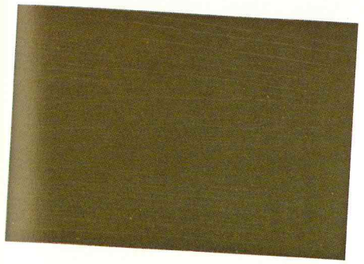


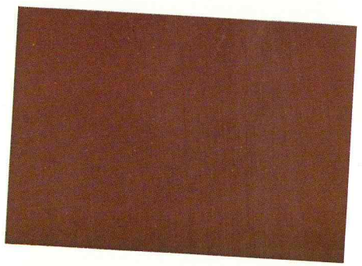
Slate Shingles

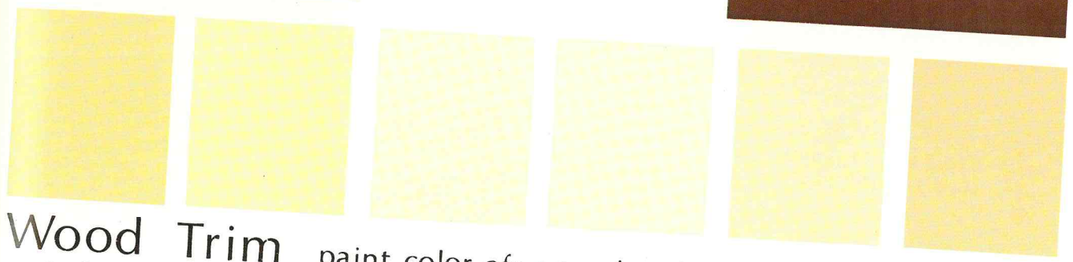
- range of natural slate color

Cedar Shingles

paint color of:
- cedar shingles
- window sash
- window muntins
- clapboard siding







Wood Trim

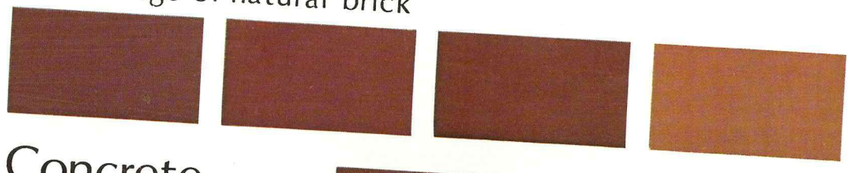
paint color of:
- window frame & trim
- attic vents
- gutters
- eaves & soffits
- clapboard
- porch columns, rails, lattice & trellis

Mortar

- natural color

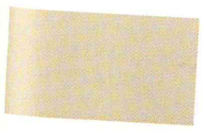
Brick

- range of natural brick



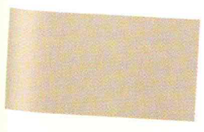
Concrete

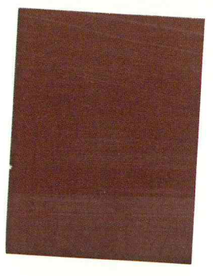
- natural/unpainted



Stucco

- natural/unpainted





Porch Ceilings

stain color of:
- porch ceilings
- exterior doors

civic park guidelines

The typical Civic Park house is small, approximatly 1,100 square feet. As time has passed since originally constructed, there have been additions to the houses and porches have been enclosed in order to make more living space. These are real space needs of the family which cannot be ignored and should not be legislated against. In the preservation program of Civic Park, additions have become another element to be explored.

When additions are made or porches are enclosed, the original structure of the Civic Park house must be respected. Scale, texture, massing and proportion are the architectural measuring sticks. Just as the porch or large dormers are important elements of the architectural composition, so is an addition.

Scale: An addition should never be talier than the original house. Therefore, a Bungalow house should have a 1 or 1/2 story addition depending upon its height.

Proportion: The addition should maintain the same relationship of height to width as the house. The low horizontal Bungalow should have an addition which maintains that proportion. This is equally true of the taller, two story styles.

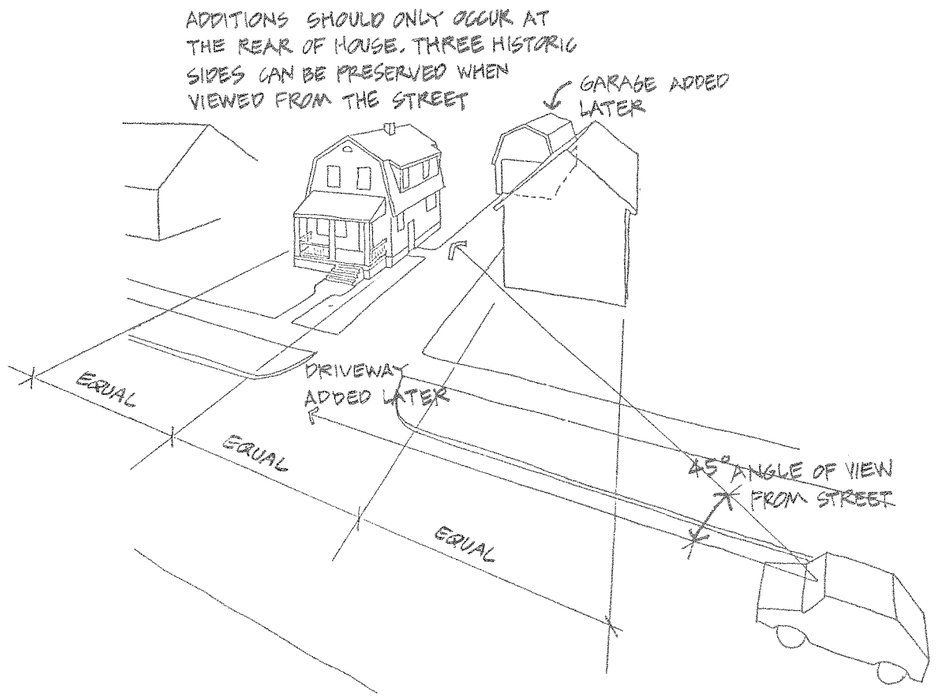
Massing: The addition must not destroy the original massing of the house. The original mass is determined by the roof form and the major projections from that, the porch, dormers and first floor bay windows.

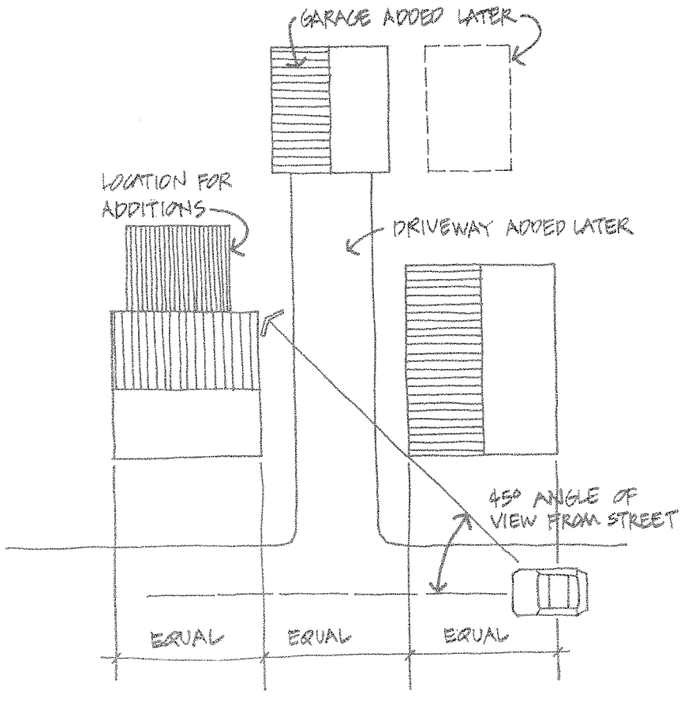
Texture: The addition should be constructed of the same original materials as the house. Color and detail must be complemented, but not duplicated. An addition should not copy history. The same size windows and doors should be used, as well as simple wood trim and detailing on an addition. An addition to a brick house can be of wood as matching the original brick may be impossible but can be painted to match the same color of the brick.

The original detailing of the porch should be retained when any porch is enclosed. Refer to PORCH page 97, for a sensitive porch enclosure.

The placement of an addition is the final criterion. It is important to preserve the original streetscape of each block in Civic Park. In order to do that, the original spacing of the houses and their relation to one another must be maintained. Therefore, all building additions should be limited to the rear of the house. This preserves three of the four historic facades of the house as well as the rhythm of the streetscape.

All the materials of an addition or porch enclosure should be maintained and repaired as the rest of the house. Porch enclosures which do not destroy the original architectural elements can be removed in the future, thus restoring the original porch.





introduction

Energy conservation is directly related to the loss of heat from inside the house in winter and the build-up of heat (heat gain) inside the house in the summer. Energy is used to heat the cold air and to cool the warm air. In Michigan, winter heat loss is the most critical problem. Heat loss is not only uncomfortable but also life-threatening, as temperatures drop to 0° F. To save energy, the heat loss and gain must be reduced.

Civic Park houses were built at a time when all construction was more energy efficient than recent construction. It has been found that the least energy efficient structures were built between 1940 and 1975, when oil, gas and electricity were inexpensive. Older buildings, being more energy-conserving to begin with, require less improvements than newer buildings. The energy advantages that Civic Park houses were built with include:

- Houses are small and compact; therefore simple to heat.
- Operable windows for good cross-ventilation and use of natural breezes.
- Small window areas; thus minimal heat loss through the glass.
- Heavy construction and use of masonry which has thermal lag properties.
- Wood construction, a good insulator.
- Shade trees protecting homes from summer sun.

There are additional energy conserving measures which can be taken in a Civic Park home. The goal of all actions should be to use LESS energy; that is, to reduce heat loss in winter and heat gain in summer. To merely change to a different fuel, such as wood, is not energy conservation.

In historic Civic Park, all energy conservation modifications must respect the original architecture. Nothing should be done which replaces or alters important architectural features. Even more seriously, nothing should be done which can cause future damage to the historic materials through chemical reactions or moisture related deterioration. The actions suggested below do not alter the historic architecture, cause damage to materials if properly installed and are listed in order of economic benefit.

Common sense items:

1. Modify personal requirements for a completely controllable living climate. When fuel was abundant and inexpensive, we became used to a perfect 72° F. environment. We could heat and cool continuously to obtain this. This is no longer true. It is cheaper today to insulate ourselves with sweaters rather than heating our homes to over 70° F.

2. Reduce thermostats in winter and raise them in summer (for air conditioning).

3. Open the windows to catch natural ventilation and cooling breezes. Maintain the windows so that they are operable and glass is not broken.

4. Use window shades and drapes to block the hot summer sun in the day and to contain the heat on winter nights. Let direct sun in during the winter to heat the rooms.

5. Reduce the level of lighting. Lights not only use electricity, but produce heat which then must be eliminated with air conditioning (more electricity) in the summer.

6. Maintain all mechanical equipment including radiators, hot water heaters, furnaces, ducts and duct insulation, plumbing and fans so that they are efficient.

7. Use exterior paint colors which are dark in tone. In northern climates such as Michigan, this helps to absorb the heat of the winter sun and keep the house warmer. Refer to COLOR, page110.

8. Drain the hot water tank once a month to get rid of the sediment that accumulates at the bottom of the tank and reduces heat transfer. Change filters on forced air furnaces every 3 months of operation to get maximum efficiency. Refer to MAINTENANCE CHECKLIST page 123.

Air Infiltration:

1. Cold winter air leaks through any available crack or opening in the exterior of the house. This can account for 20-30% of the total heat loss from a house. Possible leaks include trim around doors and windows, loose mortar joints in brick walls and holes and cracks in siding. Leaks can be found by passing your hand along the inside woodwork on a cold winter day.

2. Choose a caulking compound recommended for the intended use. Caulk around door and window trim, at all joints in the exterior construction and around electrical outlet boxes on the interior.

3. Install weatherstripping around doors and windows.

4. Maintain the exterior paint to a tight film.

Attic Insulation: (wall insulation should be last step taken, see below)

1. The fact that hot air rises makes the roof of a house the major source of heat loss.

2. Insulation can be easily installed in an attic. Blanket or batt insulation is the easiest to install. Place 6" or 12" thick blankets between the ceiling joists (attic floor joists), not the rafters at the roof. The vapor barrier, or film backing, must be facing down.

3. Adequate ventilation of the attic must be provided to prevent moisture condensation and subsequent water problems inside. Make sure that the existing attic vents are open and protected on the inside with insect screen. Do not cover any vent with insulation. Air will move through

the attic and remove moist air. Provide one square foot of vent area per 300 square feet of attic area.

4. The types of insulation to be used in the attic include, in order of ease of installation:
   a. fiberglas, blankets
   b. mineral wood, blankets
   c. cellulose, blown-in (with boric acid as a fire retardant)
   d. wood, blown-in
   e. vermiculite, blown-in
   f. fiberglas, blown-in

Storm Door and Windows:

1. Doors and windows are sources of heat loss because of their "single layer" quality. They are not constructed with a space in which to trap air which can serve as an insulator.

2. The addition of storm doors and windows provides that air space and reduces heat loss.

3. When installing storm windows and doors, the first choice should be wood frames which match the original door and window configuration. Wood, a good insulator, is one of the original materials of the Civic Park house.

4. Paint aluminum storm doors and windows the same color as the window sash and door.

5. Interior storm windows can be thermally effective. However, it is highly probable that the sill will be damaged by moisture condensation on the colder, original sash.

Mechanical System:

1. Whenever existing mechanical equipment needs replacement, install new equipment which is more energy-efficient. This can include fans, switches, controls, recovery units, flue dampers, hot water heaters and tanks, heat pumps, dimmers, shower heads and toilets.

2. Use energy-efficient appliances; reduce dependence on electrical appliances.

Landscaping:

1. Plant deciduous (leaf-shedding) trees on the south and west sides of the house. In summer, when the trees have full leaves, they will screen the sunlight and protect the house from its heat. In the winter, when the trees lose their leaves, the winter sun can penetrate the house and warm it.

2. The above is a long-term action. Results will be realized only with large, mature shade trees. Many such trees already exist in Civic Park; thus every effort should be made to keep those trees healthy and happy.

3. Plant evergreen trees on the north and northwest sides of the house to

provide a windbreak for winter winds.

Wall Insulation:

1. Although heat loss occurs through the walls of a house, insulating the existing walls is the least desirable energy conservation measure to be taken. If improperly installed, if incorrect insulation is used, or if the space is not properly ventilated, the insulation will absorb and retain moisture, thus causing serious decay and paint problems. Wet material also loses all insulation value.

2. The method of installing wall insulation which has the least potential for damage to walls is also the most expensive and time consuming. This method involves removal of the exterior siding, installation of batt or blanket insulation with the vapor barrier facing in, and reinstallation of the original siding. This method also provides the opportunity to check for structural deterioration and to replace any decayed siding.

3. Insulating with the exterior siding in place can only be done with a poured-in or blown in type of insulation. These do not have vapor barriers and thus moisture problems are easily developed. Ventilation openings must be added at the base of the wall. It is nearly impossible to fill all voids because of fire stops in the wall, wiring or other unseen obstructions.

4. The types of wall insulation available include:

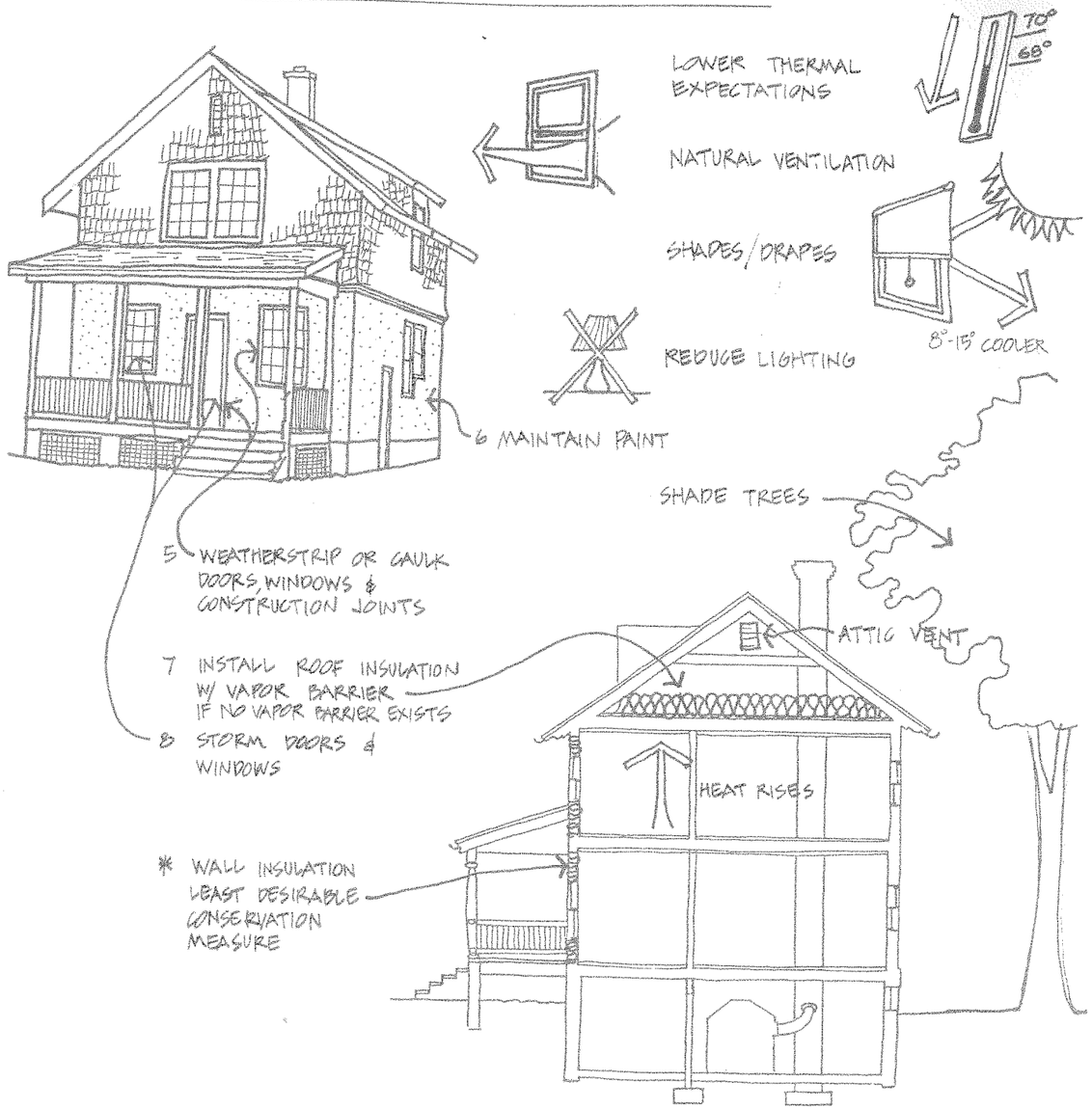
   a. Cellulose, blown-in (with boric acid as the fire retardant). This is the most preferable wall insulation as it flows into the wall cavity easily.
   b. Vermiculite, blown-in.
   c. Perlite, blown-in
   d. Urea-formaldehyde foam, injected. This is an undesirable insulation as its disadvantages outweigh its advantages of easy flow and high insulating value. Its major disadvantage is that it carries large quantities of moisture into the wall. As it cures, this moisture must be absorbed by the wall material. If there is paint on the wall, the moisture is trapped. Foams must be mixed and installed during correct temperature and humidity. This only complicates the installation.
   e. Do not use cellulose with aluminum or ammonium sulfate as a fire retardant. Moisture in the air reacts with the chemicals and forms sulfuric acid which corrodes metals and disintegrates building masonry.

INSULATING MATERIALS

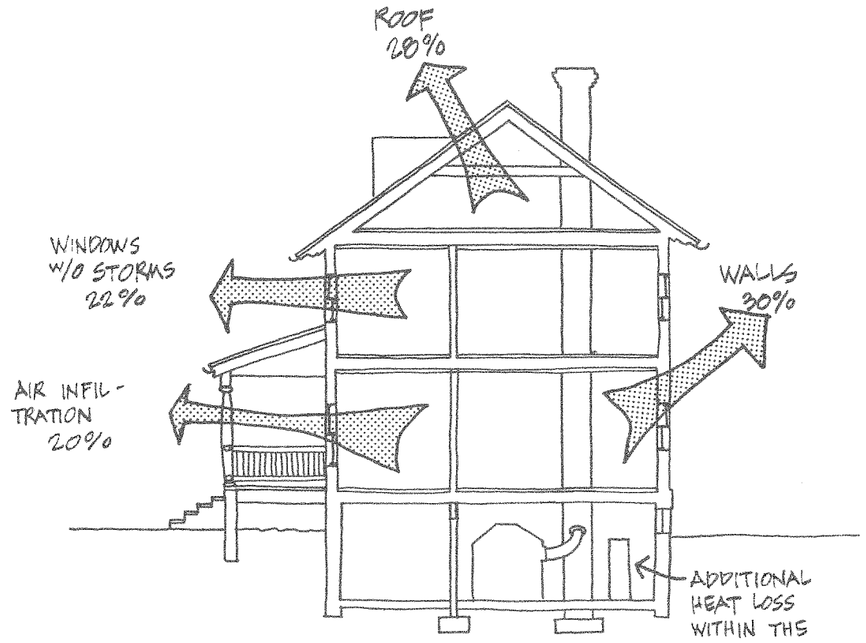
Values shown are per-inch thickness at 60° - 70° mean temperature. The higher the number, the more resistant the material to heat transfer; i.e., the better the insulating value of the material.

Blown expanded polyurethane	5.56
Wood fiber blanket/batt	4.00
Styrofoam board	3.85
Cotton fiber blanket/batt	3.85
High density mineral wood blanket/batt	3.70
High density fiberglass blanket/batt	3.70
Mineral wool or fiberglass, loose fill	3.70

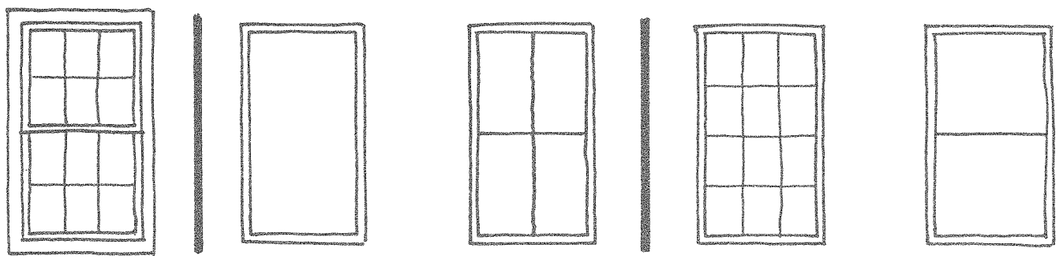
SUGGESTED ENERGY ACTIONS



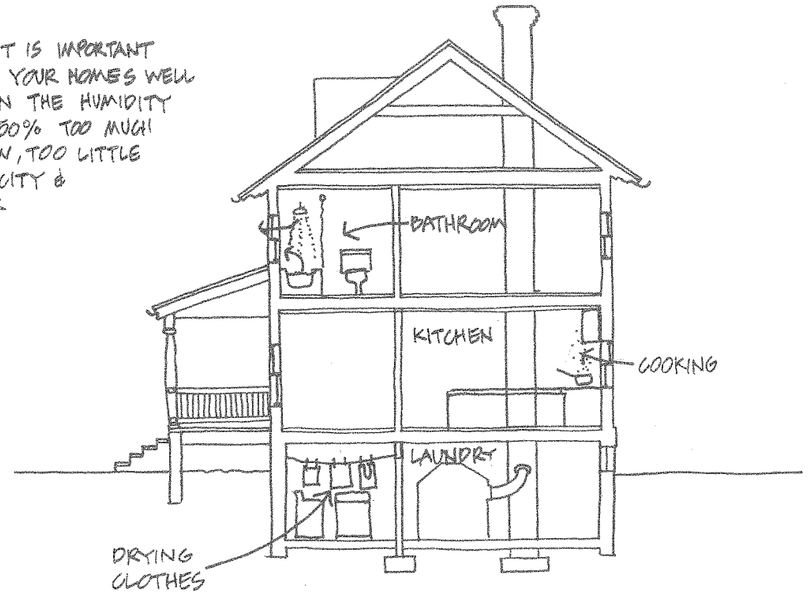
Source: Collins, Mac: "Insulation in Old Buildings", Clerestory, Michigan History Division, Department of State.



SOURCES OF HEAT LOSS IN A TYPICAL UNINSULATED OLD HOUSE



RELATIVE HUMIDITY: IT IS IMPORTANT FOR YOUR COMFORT AND YOUR HOMES WELL BEING, TRY & MAINTAIN THE HUMIDITY LEVEL BETWEEN 30 & 50% TOO MUCH MOISTURE CAUSES MILDEW, TOO LITTLE CAUSES STATIC ELECTRICITY & WOOD TO DRY & SHRINK



HIGH HUMIDITY SOURCES IN RESIDENCES

Major Insulation Use for Retrofit of Residential Buildings

Area of Building	Insulation				
	Mineral Batt	Loose Fill	Wood Fibreboard	Plastic Foam Board	Foamed-in-Place Urea Formaldehyde
ROOF/CEILING In-Frame Cavities	x	x			
Above Roof Sheathing				x	
Cathedral Ceiling	x		x	x	
WALL In-Frame Cavity	x	x			x
Sheathing				x	
FLOOR Wood Joisted	x	x			
BASEMENT WALL Interior	x			x	
Approx. Cost $/ft.2R	0.01-02	0.01-01	0.04-05	0.03-0.06	0.05-0.06
Major Advantages	Low Cost Non-combustible	Low Cost. All but cellulose non-combustible	Provides packing and structural support	Also acts as infiltration barrier	May act as infiltration barrier
Major Disadvantages	Facings may be combustible	Celluluse-combustible	Combustible	Combustible	Subject to shrinkage, reducing effective resistance. Can emit odor.

Source: Tye, Ronald P.: "Retrofit Thermal Insulation: An Evaluation of Materials for Energy Conservation," Technology & Conservation, Vol. 4, No. 3, Fall 1979,

introduction

Proper maintenance of the many parts of the building can prevent serious decay and costly repairs in the future. Because of the interrelatedness of all the parts, any problems should be attended to immediately. For example, a clogged gutter can lead to water damage in the roof, or peeling paint will allow water to penetrate wood siding and cause weathering or decay.

All building materials have a distinct life span and life cycle. Paint has a short life span; it must be replaced every few years. Stone has a long life span; it is considered permanent. The materials used in Civic Park are listed below in order of increasing life span:

- paint
- metal gutters
- asphalt shingles
- wood
- stucco
- concrete block
- brick
- concrete
- slate

The maintenance checklist is intended to be used as a reminder. Repair items are not included because proper maintenance should prevent the need for major repairs.

		Spring	Summer	Fall	Winter
SITE					
Mow lawn, fertilize, prune, weed and care for all landscaping. Each plant type requires specific care.	REFER TO BUILDING SITE	●	●	●	
Check fences and garage for damage.	Every 6 mos.	●		●	
Paint fences and garage.	Every 3 yrs.				
Check paving for damage and adequate drainage.	Every 6 mos.	●		●	
STRUCTURAL SYSTEM					
Check for water leaks, plaster cracks, sagging elements & leaning walls which indicate structural movement.	Every 6 mos.	●		●	

		SPRING	SUMMER	FALL	WINTER
FOUNDATIONS					
Check for cracks in concrete or concrete block walls.	Every 6 mos.	●		●	
Remove any growth from foundation walls.	Every 6 mos.	●		●	
Make sure water drains away from building.	Every 6 mos.	●		●	
SIDING AND TRIM					
Check for cracks in brick, mortar, or stucco which indicate movement.	Every 6 mos.	●		●	
Check for water damage in brick, mortar or stucco.	Every 6 mos.	●		●	
Remove any growth from surface of siding.	Every 6 mos.	●		●	
Check for missing or broken shingles or boards on wood siding.	Every 6 mos.	●		●	
Check for peeling paint.	Every 6 mos.	●		●	
Repaint or reseal siding.	Every 3 yrs.				
Check for water leaks, rot or insect attack.	Every 6 mos.	●		●	
Repaint wood trim.	Every 2 yrs.				
Make sure basement is well ventilated.	Yearly	●		●	
ROOF					
Check roofing for damage or missing units.	Every 6 mos.	●		●	
Clean gutters and downspouts.	Every 6 mos.	●		●	
Repaint gutters and downspouts.	As Required				
Check gutters and downspouts for loose straps, open joints, rust or broken units.	Every 6 mos.	●		●	
Check attic and walls for water leaks.	Every 6 mos.	●		●	
Check weathertightness of flashing.	Yearly	●		●	
CHIMNEY					
Check for structural cracks, tilted or leaning chimeny or loose mortar.	Yearly	●		●	

		SPRING	SUMMER	FALL	WINTER
DOORS AND WINDOWS					
Check all hardware: hinges, locks, weights and pulls.	Yearly			●	
Check weatherstripping and caulking.	Every 6 mos.	●		●	
Check for peeling paint.	Every 6 mos.	●		●	
Repaint or revarnish.					
Oil door which is not varnished.	Every 4 mos.	●	●	●	
Recaulk around frames.	Every 2 yrs.				
Install screens and storms.	Every 6 mos.	●		●	
PORCHES					
Check for loose, missing and decayed pieces.	Every 6 mos.	●		●	
Check for structural cracks in masonry foundation piers.	Every 6 mos.	●		●	
Repaint.	Every 2 yrs.				
ENERGY CONSERVATION					
Keep windows operable for ventilation: soap tracks.	Every 6 mos.	●		●	
Prune shade trees (each tree requires specific care).	Yearly			●	
Change air filters on heating & cooling units.	Every 3 mos.	●	●	●	●
Clean radiators and air registers.	Yearly			●	
Have furnace cleaned & adjusted.	Every 2 yrs.			●	
Caulk window and door frames.	Every 2 yrs.				
Check weatherstripping at doors.	Yearly			●	
Install storm doors and windows. Remove screens.	Yearly	●		●	
Have chimney & heating ducts cleaned.	Every 3 yrs.			●	

BIBLIOGRAPHY

Bluemenson, John. G., Identifying American Architecture: A Pictorial Guide to Styles and Terms, 1600-1945, American Association for State and Local History, Nashville, 1977.

Collins, Mac, "Insulation and Old Buildings", Clerestory, Michigan History Division, Department of State.

Conway, Brian D., "The Case Against Substitute Siding", The Old House Journal, Vol. VIII, No. 4, April 1980, p. 37.

Gillespie, A., "Early Development of the "Artistic" Concrete Block: The Case of the Boyd Brothers", Bulletin, The Association for Preservation Technology, Vol. XI, No. 2, 1979, p. 30-47.

Hoadley, Bruce, "Weather, Water and Wood, An Introduction to Practical Aspects of Wood - Moisture Relationships". Cooperative Extension Service, University of Massachusetts, July 1967.

Hornbostel, Caleb, Materials for Architecture; An Encyclopedia Guide, Reinbold Publishing Corporation, New York, 1961.

Insall, Donald, The Care of Old Buildings Today, The Architectural Press, London, 1972.

Labine, Clem, "The Energy-Efficient Old House", The Old House Journal, Vol. V, No. 9, September 1977, p. 97.

Lambert, Sheldon, Shell Answer #22: Home Energy Savings, 1980, Shell Oil Company Houston, Texas.

Mack, Robert C., Repointing Mortar Joints in Historic Brick Buildings, Preservation Brief No. 2, Technical Preservation Services Division, Office of Archaeology and H. P./ Heritage Conservation and Recreation Service, 1977.

Pittsburg Paints, Product and Painting Guide, PPG Industries, Inc., Pittsburgh, Pennsylvania 15222.

Poppeliers, John, What Style Is It?, the Preservation Press, National Trust for Historic Preservation, Washington, D. C. 20006.

Rifkind, Carole, A Field Guide to American Architecture, New American Library, New York, N.Y., 1980.

Slate Roofs, Vermont Structural Slate Co. Inc., Fair Haven, Vermont, 1926.

Smith, Baird M., "Preservation Briefs No. 3: Conserving Energy in Historic Buildings, "Technical Preservation Services Division, Office of Archaeology and Historic Preservation/Heritage Conservation and Recreation Service, U. S. Department of Interiors, Washington, D. C., April 1978.

Timmons, Sharon, Preservation and Conversation: Principles and Practices, Proceedings of the N. A. International Regional Conference, Williamsburg, Virginia and Philadelphia, Pennsylvania, September 10-16, 1972, Washington, D.C. The Preservation Press, 1976, p. 89-212.

Tye, Ronald P., "Retofit Thermal Insulation: An Evaluation of Materials for Energy Conservation, "Technology and Conversation, Fall 1979, Vol. 4, No. 3, p. 36.

Weiss, Norman R., "Cleaning of Building Exteriors: Problems and Procedures of Dirt Removal." Technology and Conversation, Fall 1976, 2/76, p. 8-13.

Whiffen, Marcus, American Architecture Since 1780: A Guide to the Styles, The M.I.T. Press, Cambridge, Massachusetts, 1969.

Wood Hankbook: Wood as an Engineering Material, U.S. Department of Agriculture, Forest Products Laboratory, Washington, D.C., 1974.

INDEX