# OREGON MODERN IN BOHMANN PARK: A CASE STUDY OF NORTHWEST MID-CENTURY ARCHITECTURE

by

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A THESIS

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THESIS ABSTRACT

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This thesis explores the Bohmann Park neighborhood of Washington County as a case study of contemporary style in Oregon. As both individual and the largest grouping of homes by Robert Rummer, Bohmann Park informs treatment of Rummer homes and contemporary resources. Nationally, contemporary homes by architects and builders have been recognized for their architectural and historic value through the historiography, National Register listing, and local protections. Modern architecture in Oregon has yet to be equally rigorously explored. Rummer's prolific work is an ideal point of exploration. Within the context of architectural history and preservation practice, two condition assessments of individual residences in the neighborhood analyze the varied care and common threats faced by these resources. The adverse effects faced by Bohmann Park from the City of Portland's Fanno Creek Pump Station and its mitigation efforts explore challenges faced by the subdivision as a potential historic district.

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# CHAPTER I

# INTRODUCTION

Modernist buildings in Oregon, especially homes for middle-income families, are a relatively rare historic resource that would benefit from greater understanding. Oregon-born builder Robert “Bob” Rummer built several hundred homes in a particular subset of Modernism known as the contemporary style, adapting the design to the particular materials available where he was building. These homes exist at a historic intersection of technological developments for building materials, suburban development and speculative construction, and interest in Modernist design. Today they are valuable historic resources deserving of documentation and protection. Existing documentation of historic context is limited and scattered across many sources; protections are inconsistently applied or inadequate and not well-known enough for the average homeowner or concerned citizen to request; and detailed information about trends in wear and changes of properties and materials is lacking. Through qualitative exploration of primary and secondary sources on the history of materials and builders; direct contact with properties through condition assessment case studies; and comparison of existing legal protections with public and private protections applied to comparable properties, Bohmann Park can be used as a case study for treatment and protection of Rummer homes and contemporary homes generally in Oregon.

As Rummer homes and other similar properties around the state reach the fifty-year mark for consideration as historic resources, homeowners and preservation professionals alike would benefit from improved understanding of their place in the historic narrative and appropriate future treatment. Scrutinizing a single subdivision of Rummer homes, Bohmann Park, allows for a greater understanding of all Rummer homes and similar properties. By first framing it in historic context and studying the

characteristics of the neighborhood as a whole in chapter II, the significance in the greater historical narrative and common defining features of the resources are more clearly comprehended. Defining contemporary homes from a design perspective, as well as through materials, is integral to understanding context and condition. The history of the design and the history of Portland area suburban development provides an understanding of the Bohmann Park subdivision. This is useful for historic context when performing or reviewing condition assessments and for local or higher level register nominations.

Engaging with individual homes as resources by performing condition assessments on multiple properties in chapters III and IV provides greater insight into how historic materials have fared over time in this climate. It also provides qualitative and quantitative information on common maintenance and remodel practices and trends. Comparing the local protections applicable to the Bohmann Park and how their application has fared in the face of a specific construction project's adverse effects with the protections afforded to similar resources in other states in chapter V provides alternatives for enhanced management and protection of Rummer homes as cultural resources. The flaws in the current protections provided by Washington County's ordinances are explored, at which point alternative approaches are possible. Both private citizen efforts and public legislation provide promising options for the protection of Bohmann Park and similar resources in the Portland metro area and around the state.

## Defining Contemporary Style

There is a very specific, almost Jetsonian house style that is labelled in McAlester's *Field Guide to American Houses*– a book often referred to as the preservation "bible of style"–

the Contemporary style, a subset of Modernism.[1] The style might be just as accurately referred to as “California Modern,” based on its birthplace. In the *Field Guide*, the many examples of Contemporary homes are correlated with high style Modernist philosophies. This style is inspired by such philosophies, to be sure, considering the earliest examples were designed by trained architects such as Robert Anshen, a disciple of Frank Lloyd Wright, and A. Quincy Jones for design-build firms. It derives from ideas about modular design, honesty of materials, open spaces, and a dialogue between the interior and exterior of a building. However, the strict adherence to a particular style is useful more as a reference, or when completing an inventory of homes in this style to add to a historic resource database for protection on a local or state level. The many iterations of the style along the West Coast and around the country have been influenced by regional building traditions and accessibility to materials and technology based on the time and location of construction. This is to an amount that it is more correct to refer to these homes as “contemporary,” a vernacular housing style typically constructed by speculative developers and inspired by Modern design, rather than “Contemporary,” as if it were a strictly-defined, high style classification. The use of the “Contemporary” moniker is best suited for checking boxes in the limited field options of a SHPO reconnaissance survey form or as needed for nomination to a register.

The architect-designed nature of the earliest contemporary homes conveyed a sense of individuality and made a bold design statement for those who chose to purchase such a home. At the same time, it was affordable for a middle-income family. This was due in part to the relatively low cost of higher end building materials at the time these houses were initially built, such as redwood and copper, as well as development of

1 Virginia Savage McAlester, *A Field Guide to American Houses* (New York: Alfred A. Knopf, 2003), 628-646.

new construction technology in cheaper, relatively new materials. Specifically, these materials were float glass and exterior-grade plywood. Additionally, speculative developers were able to mix and match elements of the design and build subdivisions with only a few different models of home that still looked distinct from one another with only small changes in paint color, siding pattern, or roof type. This economical method of building provided a further sense of individuality to each house while still being affordable for developers. What is defined here as contemporary homes are residences characterized at the exterior primarily by exposed wood; many windows, often of floor-to-ceiling plate or float glass; unboxed, overhanging eaves; vertical siding; minimal insulation; and flat or low-pitched roofs (Figure 1). There is an overall emphasis on horizontality of structure, and very little of it is concealed by sheetrock, stucco, paint, or other common sheathing materials. The interior of a contemporary residence is characterized by an atrium or other semi-indoor space such as a deep carport; a great deal of natural light; exposed wood, especially the structural beams; drywall or wood paneling with vertical grooves; and open floor plan of public spaces of the house with clear line of sight throughout much of that space (Figures 2 and 3).

**Figure 1 - Example of a contemporary exterior in Bohmann Park, 8590 Southwest Cecilia Terrace, facing south.**

**Figure 2 - Atrium, 7115 Southwest 84th Avenue, Bohmann Park.**

**Figure 3 - Living room, 7115 Southwest 84th Avenue, Bohmann Park.**

The most well-known builder of contemporary homes was Joseph Eichler, whose company, Eichler Homes, built speculative housing in this style all around California. Many builders around the United States were inspired by the aesthetic, popularity, and profitability of Eichler's homes. The economic viability of small-scale speculative development with relatively high-quality materials spurred expansion of further construction in this style around the country. The most success and highest numbers were found along the West Coast. Among these notable builders are California's John C. Mackay and Colorado's H.B. Wolff and Brad Wolff. The homes constructed by Eichler and these many other builders have been managed as historic resources in several ways, with a range of success in outcomes.

Another Eichler-inspired builder whose work has been recognized to some degree within his local community, but not yet fully realized as historic resources on either a greater or more codified scale, is Robert "Bob" Rummer. Rummer is an Oregon-born speculative developer who prolifically designed homes in the same contemporary style as Joseph Eichler. His most well-known homes are within the Oak Hills Historic

District on the National Register of Historic Places, but there are many other examples of his work around Oregon.[2] It is not necessarily Rummer himself as a builder that is highly significant, as there are construction firms across the country that built similar or even identical houses. Their significance comes from the number of contemporary residences built by Rummer Homes. It also derives from the way in which these homes have consistently been valued for their comparatively distinctive design within the locale and the fact that they are valued today as historic resources by their owners, neighbors, and the community members who interact with them.

## Contemporary Homes as Historic Resources

Modern architecture and interior design has seen a dramatic uptick in popularity and a return to a respected place at the design table across the United States and the world for the past decade. This has been alongside a surge in pop culture representation in everything from shows like *Mad Men* to articles in *Vogue* to Pinterest do-it-yourself fanatics to recreations by companies from Rejuvenation to Target.[3]

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2 National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

3 Megan Buerger, "Why Mid-Century Modern Is Forever," *The Washington Post*, August 17, 2016, https://www.washingtonpost.com/lifestyle/home/why-mid-century-modern-is-forever/2016/08/16/f9b50a92-5e77-11e6-8e45477372e89d78_story.html (accessed April 16, 2018).
Laura Fenton, "Why the World Is Obsessed with Midcentury Modern Design," *Curbed*, April 8, 2015, https://www.curbed.com/2017/11/22/16690454/midcentury-modern-design-mad-men-eames (accessed April 16, 2018).
Mieke Ten Have, "California Dreaming: Kameon's Gardens are for Living Introduces Mid-Century Modern to the Outdoors," *Vogue*, March 4, 2014, https://www.vogue.com/article/judy-kameon-gardens-are-for-living (accessed April 16, 2018).
"Inspiration," Rejuvenation, https://www.rejuvenation.com/catalog/categories/my-project (accessed April 16, 2018).
David A. Keeps, "We've Certainly Been 'Mad' for Modern," *Los Angeles Times*, May 16, 2016, http://www.latimes.com/home/la-hm-mad-men-20150516-story.html (accessed April 16, 2018).
"Why Mad Men Is Still Relevant for Mid-Century Modern Design Lovers," *Essential Home*, http://essentialhome.eu/blog/mad-men-relevant-mid-century-modern-design-lovers/ (accessed April 16, 2018).

The ranch style specifically may have become ubiquitous, but more striking designs such as Eichler and Rummer's contemporary residences have met the same conflict as more high-style architecture. It can be difficult to persuade people that something only fifty years old, made in styles and materials invented within their lifetime, has the potential to be a valuable historic resource– no mean feat on its own, as anyone who has ever reviewed a Section 106 project or surveyed a town with an average population age leaning more toward Baby Boomer than Generation Z can attest. Once folks are generally on board with the guidelines of the National Historic Preservation Act, they are not necessarily willing to consider the homes they grew up in or architecture they dislike as potentially significant.

Contemporary residential architecture has both its supporters and detractors. There are those who dislike contemporary homes for highly subjective reasons, such as a preference for modular living over open floor plans or a distaste for what might be perceived as the now-kitschy nature of the style or the interior design choices often made by owners.More objectively, people have legitimate concerns around the challenges of owning and residing in such a property. The single-pane, floor-to-ceiling glass, marine plywood or thinly-clad exterior walls, and lack of attic space lead to low R-values and limited opportunities to improve insulation without damaging historic fabric. While functioning radiant floor heating is overall more efficient, the system can be very difficult to service, requiring floors and portions of the foundation to be removed for access and potentially requiring difficult-to-find or customized parts. Because of the lofty ceilings and minimal insulation, the overall temperature of these houses can be difficult to raise and keep consistent with this style of heating.[4] Additionally, even in the relatively

4 Roddy Scheer and Doug Moss, "Is Under-Floor Radiant Heating More Efficient Than Conventional Systems?," *Scientific American*, https://www.scientificamerican.com/

dry climates of the American Southwest, inconsistent or poor maintenance can lead to leaking roofs and plumbing problems.[5] Of course, some people are simply weary of mid-century modern design trends that have been dominating the market for the past decade.[6]

On the other side of the spectrum are those who see contemporary homes as an attractive model for residential building. This audience includes not only preservation professionals, but interior, graphic, and fashion designers, artists, architects, realtors, writers, and other general "creative types."[7] From a subjective perspective, many of these people value these homes for their aesthetic value, quality of materials, and demonstration of a future-minded and technologically-driven zeitgeist. Many see the simple lines, natural light, and lack of added ornament as an almost moralistic design trend focused on cleanliness and purity.[8]

As part of the narrative of architectural history on a national level, contemporary houses have an objective significance to go along with their subjective popularity and value. Whether or not a person prefers contemporary homes or Modernism in general, these buildings hold a place in the development of architecture from both stylistic and

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article/underfloor-radiant-heating/.

5 Kathleen Haley, "Unhappy with Eichler," *SFGate*, July 29, 2006, https://www.sfgate.com/homeandgarden/article/UNHAPPY-WITH-EICHLER-Retro-may-be-cool-but-it-2515339.php (accessed March 18, 2018).

6 Daniel Engber, "The Mid-Century Modern Craze: Clean-Looking Furniture for a Dirty World," *Los Angeles Times*, December 27, 2015, http://www.latimes.com/opinion/op-ed/la-oe-1227-engber-mid-century-modern-appeal-20151227-story.html (accessed March 18, 2018).
Steven Kurutz, "Why Won't Midcentury Design Die?," *The New York Times*, September 30, 2016,https://www.nytimes.com/2016/10/06/style/why-wont-midcentury-modern-design-die.html (accessed March 24, 2018).

7 Stan Houseman (homeowner, 8630 Southwest Cecilia Terrace), interview by author, digital recording, Washington County, Oregon, March 28, 2018.
Kurutz.

8 Engber.

engineering standpoints. Stylistically, the open floor plan, plain entry façades, exposed materials, and the blurring of delineation between indoors and outdoors, with an emphasis on functionality of interior spaces and views of the exterior, typified the contemporary style. This differed from concurrent styles such as the ranch, which were considered much "safer" from both a design and financial investment standpoint.[9]

These valuable historic resources have been recognized for their contribution through National Register of Historic Places nominations and research by contemporary enthusiasts.[10] Groups of contemporary homes, specifically the Green Gables and Greenmeadows subdivisions in Palo Alto, California and the Oak Hills subdivision in Beaverton, Oregon have been recognized between 2005 and 2013 on the National Register of Historic Places. These historic districts were deemed significant under Criterion C, as they embodied distinctive characteristics of a significant style of architecture. One group of architectural appreciators, the Eichler Network, is an actual business that was dedicated initially to a home-maintenance referral service for houses built by Eichler Homes. Today, this organization not only publishes a quarterly magazine on contemporary homes and residences in other mid-century architectural styles, but is a site for research and news about neighborhoods by Eichler and other contemporary builders, home maintenance and interior design recommendations, a forum for owners and enthusiasts to discuss their homes, and even current listings of contemporary homes for sale in California.[11]

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9 McAlester, 597-603, 629-635.

10 National Register of Historic Places, Greenmeadows Historic District, Palo Alto, Santa Clara County, California, National Register #04000862.
National Register of Historic Places, Green Gables Historic District, Palo Alto, Santa Clara County, California, National Register #04000863.

11 Eichler Network, accessed May 16, 2018, http://www.eichlernetwork.com/.

The materials used in contemporary residences commonly include old-growth wood beams, redwood or cedar siding and plywood, and copper piping for radiant floor heat, materials which today are either cost-prohibitive or no longer available for in-kind replacement. From a materials engineering and construction standpoint, the siding and windows are both significant. At the time of initial construction, exterior-grade plywood was a fairly new product, and large-scale use in homes was an experiment taken up by architects from the Eames in California to Oregon's own cutting edge Modernist, John Yeon. The methodology required to fit floor-to-ceiling plate glass windows into the post-and-beam style construction was likewise a bold use of materials and equipment that had only recently become cost-effective for residential use. Marine or exterior-grade plywood, while no longer a brand new material by 1965, was still perceived in a hyper-optimistic way.

## Contemporary Homes in Context: Portland Metropolitan Area Development

The Pacific Northwest as a whole lags behind other areas of the country when it comes to aesthetic trends, from fashion to architecture.[12] The Portland metropolitan area, as defined for the purpose of regulation and historical narrative within state boundaries, consists of Multnomah, Washington, and Clackamas counties and has as its focal point

12 John Cava, "American Architecture from a Preservation Perspective III," lecture, University of Oregon, Portland, OR, November 2016.

the city of Portland (Figure 4).[13] The metro area as a region has been documented to be interconnected area requiring cooperative short- and long-term planning and management of infrastructure across jurisdictions in rural, suburban, and urban areas

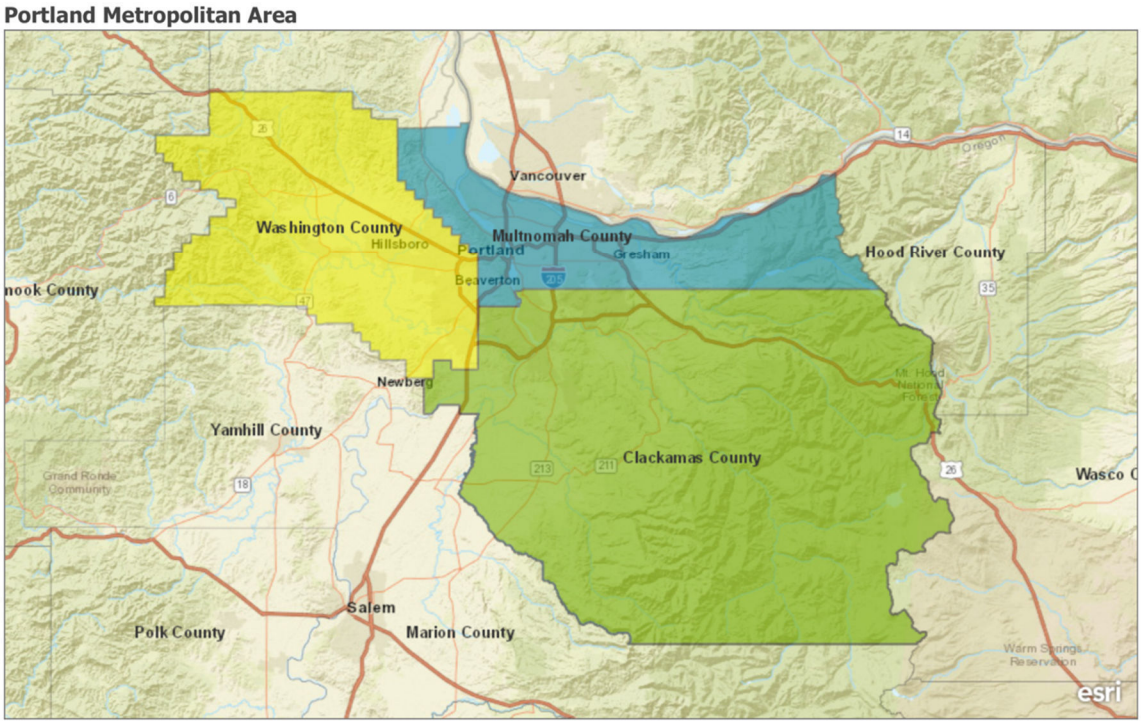


**Figure 4 - Map of counties in the Portland Metropolitan Area.**

since the 1950s.[14] This region as a single entity was governmentally and socially recognized as interconnected when Rummer houses were built and continues to be more interconnected today.

The adoption of Contemporary architectural style in the post-and-beam "Rummer homes" follows regional trends in suburban development and adoption of architectural styles. Robert Rummer is one of the most prolific builders in the Contemporary style in

13 "Cities and Counties in the Metro Region," Oregon Metro, https://www.oregonmetro.gov/regional-leadership/what-metro/cities-and-counties-region (accessed May 8, 2018).

14 "Cities and Counties in the Metro Region."

the state of Oregon. While many of his houses are scattered amongst other subdivisions, often in unincorporated county areas, small concentrations can be found in some areas. As aforementioned, the most emphasized Rummer homes are those within the Oak Hills historic district. However, this is a relatively sparse concentration, compared to the number of properties within the district and the main themes and character-defining features of the district as a cultural landscape. These homes are larger and more elaborate than many of the other houses Rummer designed, and also unlike many of them, are located within the boundaries of a city.

As a speculative developer, Rummer can be considered an Oregonian "merchant builder," only in the same sense of smaller scale, design-focused construction firms such that of Joseph Eichler.[15] It is initially tempting to compare Rummer and other "Likeler" developers to well-known names in construction and residential architecture such as Bill Lyon and William Levitt, if reaching for the merchant builder moniker. The way this term has been tied to both the vast scale of such builders and the more conscientious construction of one such as Eichler proves the versatility of the term in capturing a particular approach and development zeitgeist. While companies such as Eichler Homes and Rummer Homes used comparatively higher end materials than average construction and had a particular aesthetic focus, they dealt with speculative development and a limited number of house models.

15 The term "merchant builder" is drawn from Ned Eichler's *The Merchant Builder*, which documents the development of mass-produced speculative housing as practiced by his father, Joseph Eichler, and other builders of the postwar period. This is from the perspective of someone involved in the industry and reflecting back from the 1980s, a considerably different economic climate from the present, although with many political and social corollaries. The younger Eichler himself chooses to place the smaller scale of his father's work on the same level with national-level speculative development firms, largely because the business models and methodology of building are very similar at both scales for builders of this mindset.

These merchant builders were able to work at such a large scale because of the postwar economic recovery and changes to economic regulation surrounding loans for builders and mortgages for potential homeowners. The Portland metropolitan area underwent some development in the postwar period, like many other cities around the country, although at a smaller scale. Rummer's part in that development began as a builder working with standard early ranch styles, but quickly developed into his more well-known examples of vernacular modern after exposure to Eichler's designs. While Rummer did not work at the exact scale of merchant builders in the southwest and the east and was more open to customization of his buildings, his construction numbers were fairly large for the size and development scale of Portland at the time and his business practices and production methodology fall into the merchant building paradigm.

While Rummer may not have been the first to adapt modern architecture to middle-class homes in Oregon, he was one of the most influential. Rummer is a primary example of the design-build business method of the region, and he continues to be perhaps the most well-known non-architect builder in the Modern style in the state. The several hundred extant Rummer homes provide a material link to a historic narrative of suburbanization in the Portland metro area, accessible Modernism for middle-income Oregonians, and the use of new material technology in the field of construction.

## Bohmann Park in Context

The Bohmann Park homes in particular are distinctly valued by their owners, and Rummer homes as a whole bring the national architectural history of Contemporary building to a state and local level. Robert Rummer was by far the most prolific builder in the Contemporary style in Oregon, especially amongst speculative builders. In many ways, he introduced the style to the middle class of the state as an alternative to the ranch or split level that was more affordable than a custom-designed home by the likes

of William Fletcher. The subdivision itself is a quintessential example of suburban subdivisions reflecting the social values in flux on a national and local level. The homes are a showcase of Rummer's willingness to compromise and customize based on the needs of his buyers. Bohmann Park is also a notable subdivision in that it has the highest concentration of Rummer properties in Oregon, with sixty-five Rummer-built homes in a neighborhood of just over seventy houses.

A case study of one of Rummer's neighborhoods can be viewed as a microcosm of architectural trends and social philosophies meeting in a very particular regional iteration. The designed cultural landscape of planned neighborhood subdivision further emphasizes the snapshot in time of social and suburban development. Bohmann Park, a neighborhood located in unincorporated Washington County, is the single largest grouping of Rummer homes in the state of Oregon. It is the work of an individual builder capturing a snapshot of postwar housing in Oregon, specifically the Portland metro area, and as a regional example of the adaptation of contemporary design as typified by Eichler's designs and construction. This provides not only a large sample of individual homes for assessment, but allows for the study of Rummer's neighborhood planning as a holistic landscape. An exploration of Bohmann Park as a case study of Rummer's work provides valuable insight into the development of vernacular modern architecture in Oregon. This neighborhood is also a live testing ground for the social, urban planning, and technological challenges faced today in the preservation of such properties individually and in this and similar neighborhoods as cultural landscapes and historic resources.

In 2012, the Oregon State Historic Preservation Office conducted a reconnaissance-level survey of the Bohmann Park neighborhood (Figure 5). The preliminary conclusion of this was potential eligibility for listing as a historic district in the National Register of Historic Places, namely under Criterion C "for embodying distinctive

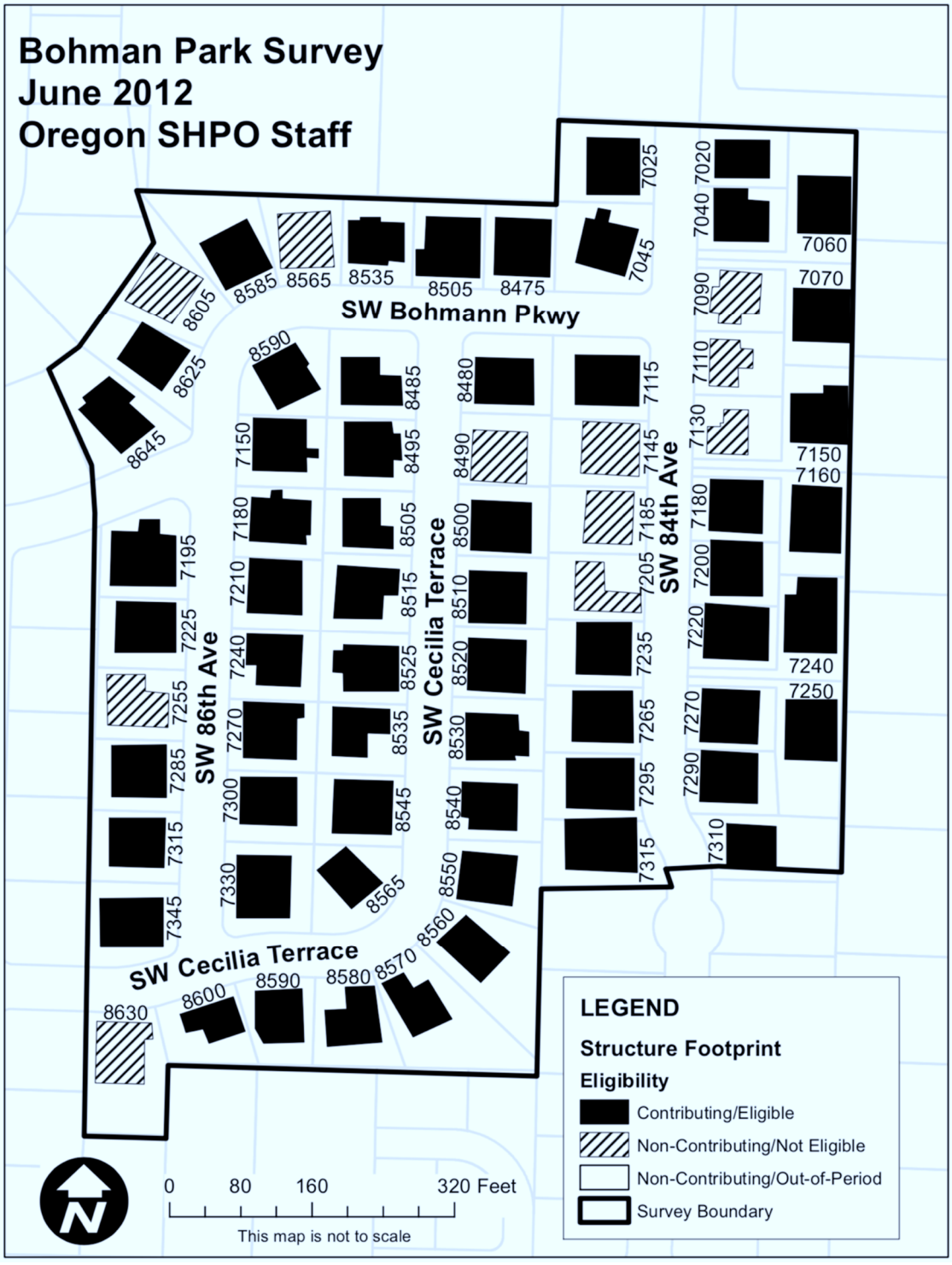


**Figure 5 - Reconnaissance level survey map of Bohmann Park, Oregon SHPO, 2012.**

architectural and planning characteristic in mid-twentieth century Oregon" and potentially under Criterion A "for its association [with] the development of 'high style' contemporary

homes for the mass market in the post-World War II era."[16] Eichler's homes were usually clad with redwood siding or redwood plywood. Rummer homes built a decade later were able to take advantage of the newly developed T-111 plywood, made with locally-sourced cedar. While most homes in the Portland area were commonly clad in horizontal cedar siding, Rummer homes were set apart by the vertical aesthetic of siding and fencing on the property, for which he was able to use vertical grain T-111 to mimic the vertical siding of other contemporary style homes at a much lower price point.

In order to more fully understand the houses in the Bohmann Park subdivision in this context as individual resources and one larger resource, case studies were required. The properties at 8510 Southwest Cecilia Terrace and 7310 Southwest 84th Avenue were examined more closely by interviewing respective owners and reviewing their personal records of property maintenance, examining records for original construction and later landscape and building alteration permits at the Washington County taxation and land use offices, and performing condition assessments. These two houses were also chosen because they are approximately the same Rummer model. Because they have had differing levels of maintenance and number of owners over the years but are otherwise extremely similar and near to each other in location within the subdivision, this provides as much control as is possible under the circumstances for a viable comparison and contrast. Additionally, five homeowners within the subdivision, including the owners of the two properties on which condition assessments were performed, were interviewed for a greater understanding of the meaning these historic homes hold as part of a cultural landscape and a neighborhood that has an intangible value of its own, along with the more objective data about maintenance and alterations to their properties.

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16 Oregon Parks and Recreation Department, Oregon State Historic Preservation Office, *Bohmann Park Neighborhood Reconnaissance Level Survey Report,* by Kenneth Gunn and Lys Opp-Beckman, (Salem, Oregon, June 2012, revised April 2015).


**Figure 6 - Map of Bohmann Park subdivision with boundaries, important properties, and Fanno Creek Pump Station. See Appendix A for greater detail.**

## A Case Study in Cultural Resource Management

The individual property condition assessment case studies are significant as an examination of how these buildings are likely to wear and require maintenance over time. These particular residences are examples of how Rummer houses have commonly been treated by owners in terms of maintenance standards, remodeling and updating materials and designs, and rehabilitation efforts as properties change hands. Interviews with current residents; a handbook on materials and subcontractors used in typical home construction, provided by Rummer himself to new homeowners; and other primary sources supplement this to provide guidance toward which preservation and rehabilitation needs are most likely. This information can be used to guide owners in this subdivision and around the state in sensitive maintenance.

Condition assessments were chosen as the method of engagement with individual properties in order to provide tangible, detailed information to both owners of individual Rummer homes and to preservationists. By interacting with homeowners and holistically investigating two homes of the same model, specific information about current material conditions and overall trends in common past management of the homes was obtained. The in-depth evaluation of material conditions and treatment of character-defining features provides the opportunity to provide specific recommendations to all Rummer homeowners for the sensitive care of their homes as historic resources through specific actions and listing of assistive resources. Condition assessments of multiple properties deliver information about how the resources have performed over time as a full building system and how specific materials have worn. Along with the patterns revealed in how the fabrics have been treated and how the building systems have been maintained and altered, this allows preservation

professionals to make informed decisions when handling Rummer homes and other contemporary resources in the Portland metro area and the Pacific Northwest in general.

As a whole grouping of historic resources and a historic landscape, Bohmann Park is especially vulnerable to stresses on historic resources by redevelopment and urban planning. Building in unincorporated Washington County and other unincorporated county areas was a cost-efficient advantage for Robert Rummer's construction firm, as there were fewer requirements on development projects than within city limits. These same areas continue to have fewer regulations for redevelopment and historic preservation today, even under statewide Goal 5 requirements.[17] This particular group of resources has been adversely affected by inadequate mitigation efforts and poor communication between project leads and community representatives by the Fanno Creek Pump Station, an ongoing City of Portland project.[18] The inter-county relationship, communication with community members, and treatment of this subdivision and other historic resources shows not only a need for further mitigation in this particular project, but the potential for adverse effects to other Rummer homes in unincorporated county areas, both in Washington County and around Oregon.

As the risk of harm has been established, exploration of the ways in which contemporary homes in other jurisdictions around the country have been protected provides examples for how Washington County– and the City of Portland– can better

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17 Goal 5 refers to Oregon's statewide planning goals within the state comprehensive plan. Goal 5, OAR 660-015-000(5), is "to protect natural resources and conserve scenic and historic areas and open spaces," and requires local governments to adopt programs that protect these resources and promote this goal, with planning and implementation guidelines provided by state government.
Oregon Department of Land Conservation and Development, *Oregon's Statewide Planning Goals & Guidelines*, (Salem, Oregon, March 2010), http://www.oregon.gov/LCD/docs/goals/compilation_of_statewide_planning_goals.pdf.

18 The City of Portland is located within the boundaries of Multnomah County, while Bohmann Park is located on the eastern edge of unincorporated Washington County bordering on Multnomah County.

comply with Goal 5 and be more sympathetic to the preservation of Bohmann Park specifically. This has been done in other municipalities through National Register and local listings of historic districts; context reports and inventories on historically significant buildings for reference when local, state, and federal agencies embark on projects; development of design guidelines in areas around contemporary or other Modern resources; and local protections enacted to safeguard these properties through local land use ordinances and long-term planning. Examination of the range of success these attempts have had provides alternate courses of administrators responsible for consideration of adverse effects and mitigation on Rummer homes and other contemporary properties. Comparing the Fanno Creek Pump Station project specifically to guidelines and regulations for similar resources in other locations will provide alternatives for regulation and protection of Rummer homes as historic resources in long-term planning.

# CHAPTER II

# EICHLERS AND LIKELERS: MAKING THE CASE FOR BOHMANN PARK

Contemporary housing evolved out of Modernist aesthetic and new developments in construction technology. These homes were more expensive to build than more common house styles of the same period, such as the ranch. Their economic viability was made possible by these new technological developments and interest in the novel Modern designs available to middle-income consumers because of this. Joseph Eichler was a speculative developer well-known for his subdivisions of contemporary homes, built using designs from several architectural firms with whom he collaborated on projects. As the design proved its popularity and commercial success, other builders in the Southwest and Pacific Northwest followed suit, adapting it somewhat based on climate and material availability.

## Construction Technology

Post and beam, sometimes also called plank and beam, construction was adapted from heavy timber framing and is used in contemporary homes.[19] The exposed beams of the roof from this framing type are a character-defining feature of the style. Composite wood panels used in conjunction with the larger stud sizes– four by four, rather than two by four– of the post and beam frame provide structural strength using less material. This is achieved by having fewer four by four studs required and less material needed for

19 American Wood Council, *Plank-and-Beam Framing for Residential Buildings – Wood Construction Data No. 4*, American Forest & Paper Association, 2003, 1, http://www.awc.org/pdf/codes-standards/publications/wcd/AWC-WCD4-PlankBeam-ViewOnly-0304.pdf (accessed May 16, 2018).

support (Figure 7).[20] This is provided by the plywood wall sheathing or vertical board cladding being affixed to glulam or other rigid wood composite sheets. In contemporary homes in particular, this was thoughtfully designed from the beginning. The eight-foot beam spacing is used to create the modular bays the houses were planned around, including the width of plate glass windows and chimneys and the module-based sizes of rooms. The exposed roof planks are utilized as the only ceiling treatment, becoming another character-defining feature.

While plywood and fiberboard were used in interiors as early as the 1910s, production did not increase until World War II, and the T-111 finish in particular was not popularized until the 1960s.[21]

**Figure 7 - Framing and plywood sheathing between a door frame and water heater in the garage of a Rummer home.**

Interior grade plywood was developed in Portland, Oregon in 1905 by the Portland Manufacturing Company. The new

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20 American Wood Council, *Details for Conventional Wood Frame Construction – Wood Construction Data No. 1*, American Forest & Paper Association, 2001, 4-6, http://www.awc.org/pdf/codes-standards/publications/wcd/AWC-WCD1-ConventionalWoodFrame-ViewOnly-0107.pdf (accessed May 16, 2018).
"Light-Frame Construction," ThinkWood, Products and Systems, https://www.thinkwood.com/products-and-systems/light-frame-construction (accessed May 20, 2018).
*Plank-and-Beam Framing for Residential Buildings – Wood Construction Data No. 4*.

21 U.S. Department of Agriculture, Forest Service, Technology and Development Program, *Early 20th-Century Building Materials: Fiberboard and Plywood*, Facilities Tech Tips, by Richa Wilson and Kathleen Snodgrass (Utah, March 2007), 1, 6-8, https://www.fs.fed.us/t-d/pubs/pdfpubs/pdf07732308/pdf07732308dpi72.pdf.
"T1-11 Siding," HomeAdvisor Inc., Resource Center, https://www.homeadvisor.com/r/t1-11-

material, made of Douglas fir, was initially used primarily for door panels and interior finishes.[22] Plywood, which is composed of rotary-peeled layers of wood adhered with grains running in the same direction to the required thickness, was superior in structural stability and economy of production than standard wood planks.[23] Production methodology was improved and grading was standardized as popularity of the product expanded.[24] Attraction came not only from cheap and easy production, but economy of labor. At the time that plywood became a viable solution from a technical perspective, construction costs were shifting toward labor being more expensive than procuring materials overall.[25] Fewer workers and labor hours were required for construction with plywood as a main building material because it was light and less was material was required for a structure, furthering its popularity.

In 1934, chemist Dr. James Nevin and technicians at Harbor Plywood Corporation developed a waterproof adhesive and put it to commercial use.[26] This invention allowed plywood to be used for outdoor purposes as exterior-grade softwood plywood or marine

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siding/ (accessed April 23, 2018).

22 "History of APA, Plywood, and Engineered Wood," APA – The Engineered Wood Association, About Us , https://www.apawood.org/apas-history (Accessed May 21, 2018).
*Plywood in Retrospect No. 1 – Portland Manufacturing Company*, Plywood Pioneers Association (Tacoma, WA, March 1967), 1-3, 6, https://www.apawood.org/data/Sites/1/documents/monographs/1-portland-manufacturing-co.pdf (accessed May 16, 2018).

23 Mark Hughes, "Plywood and Other Veneer-Based Products," in *Wood Composites* (Cambridge: Woodhead Publishing, 2015), 69-89.

24 Thomas C. Jester, "Plywood," in *Twentieth Century Building Materials*, ed. Thomas C. Jester (Los Angeles: Getty Publications, 2014), 101-104.
*Plywood in Retrospect No. 1 – Portland Manufacturing Company*, 6.

25 *Information on Super-Harbord, the Outdoor Plywood, and Other Harbor Products*, Harbor Plywood Corporation (Hoquiam, WA, 1938), 3.

26 "History of APA, Plywood, and Engineered Wood."
*Plywood in Retrospect No. 14 – Harbor Plywood Corporation*, Plywood Pioneers Association (Tacoma, WA, November 1974), 4-5.
*Prefabrication with Plywood*, Douglas Fir Plywood Association (Tacoma, WA, 1941).

plywood made of hardwood. The use of plywood in residential construction was spurred in part by the economic limitations of Great Depression, and the resulting housing shortages as the economy recovered and population skyrocketed.[27] Exterior-grade plywood became popularized as its use and economy was proven on the ground in World War II, being utilized for building everything from PT boats to gliders to barracks to machine parts.[28] Exterior plywood became an acceptable cladding for buildings ranging from barns to commercial structures. Because the majority of plywood produced when contemporary homes were built was Douglas fir softwood plywood manufactured in the Pacific Northwest using that local fir, this kept costs down for Rummer Homes, Inc. in the 1960s.

Glulam, or glued-laminated timber, was conceived at the same time exterior plywood was being developed. The two products were used in conjunction to build affordable homes, commercial buildings, and other wood structures. Glulam consists of layers of large wooden beams that have been bonded with strong adhesives. Larger structural timbers than would normally be producible with lumber available in the post-war era could be manufactured in this way.[29] These engineered wood products, including oriented strand board (OSB) and structural plywood, provided strength with a low-cost material. The cedar beams of the post-and-beam Rummer homes were, along with being made of center-cut wood as often as possible, made of glulam timbers in

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27 Gregory Dick Thomson, “Process or Artifact: The Preservation of Experimental Building Systems in Early Modern Architecture,” Master’s Thesis, University of Oregon, 2002.

28 “History of APA, Plywood, and Engineered Wood.”

29 “Glossary,” APA – The Engineered Wood Association, Resources, https://www.wooduniversity.org/
glossary (accessed May 21, 2018).
“History of APA, Plywood, And Engineered Wood.”

order to span the full length of the building.[30] The combination of of glulam beams and post-and-beam framing created sturdy homes resistant to racking and other structural degradation.[31]

Another set of character-defining features in contemporary homes, floor-to-ceiling windows and the resultant weaving of indoor and outdoor spaces, was made possible by the development of float glass, which was was devised in the 1950s by Pilkington Brothers, Ltd. in England as a replacement for plate glass.[32] Plate glass is made using a process of grinding and polishing, and had been used since the eighteenth century. The alteration of plate glass production into a mechanized process using essentially a plate glass ribbon that could be cut into larger, more consistent pieces was a vast improvement.[33] Plate glass made with this method was used for architectural features such as curtain walls of glass in Modernist commercial buildings. Float glass, instead, is made by pouring molten glass from a furnace into a bed of molten tin to form the shape

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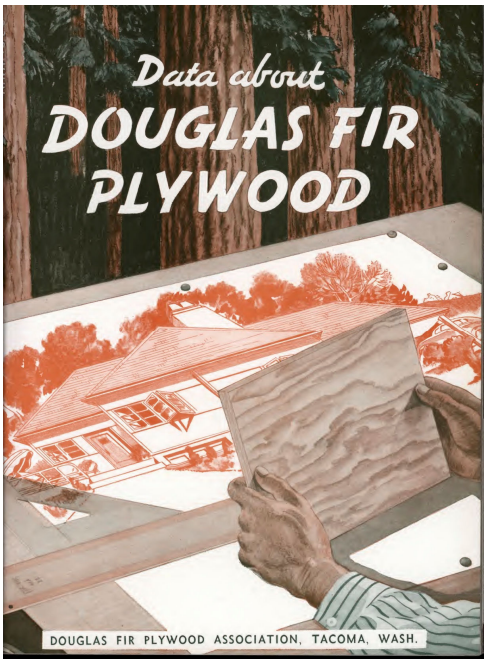
30 Janet Eastman, "Get Inside 6 Midcentury Modern Rummers: Restore Oregon's Home Tour," *The Oregonian*, September 4, 2016, http://www.oregonlive.com/hg/index.ssf/2016/09/rummer_midcentury_modern_eichl.html (accessed February 3, 2017).
Janet Eastman, "Southwest Midcentury Modern – Sleeping in Portland," *The Oregonian*, November 23, 2013, http://www.oregonlive.com/hg/index.ssf/2013/11/sleeping_in_portland_midcentur.html (accessed February 3, 2017).

31 Robert Rummer, "Conversation with Robert Rummer," interview by Vivian McInerny, *Oregon Home*, May 25, 2011, https://oregonhomemagazine.com/profiles/item/1495-conversation-with-robert-rummer (accessed May 18, 2018).
Robert Rummer, "Robert Rummer Speaks at Street of Eames," interview by Becca Cavell, Street of Eames, November 2009, video, 4:42, https://youtu.be/vUflotxK-0s (accessed May 18, 2018).

32 "All About Glass," Portland Glass, http://portlandglass.com/all-about-glass/ (accessed May 20, 2018).

33 "All About Glass."
L.A.B. Pilkington, "Review Lecture: The Float Glass Procedure," *Proceedings of the Royal Society of London: Series A, Mathematical and Physical Sciences* 314, No. 1516 (December 1969), 6-9.

and thickness required, then slowly cooled. This process removes internal stress from the glass, allowing larger pieces to be created.[34] Entire bays of contemporary homes are filled with the eight foot wide, eight-to-twelve foot tall windows made stronger with this new type of glass, which was perfected not long after Eichler started building in the style. The window walls are sturdy enough that they have been recorded to survive earthquakes in California and severe storms in Oregon.[35]




These cheap, new materials allowed the varied shapes of the contemporary home to be structurally sound. Because the materials were so new, it was thought, or at least marketed, that not only were they cheap and sound material, but that they would be long-lasting as well. The Douglas Fir Plywood Association, which would later become the American Plywood Association (APA), touted their product as being excellent for insulation and moisture-resistant for a variety of interior and structural uses. They also featured an exterior type "for permanent use outside."[36] Indeed, plywood was used in tandem with cedar beams and Douglas fir studs

34 L.A.B. Pilkington 1-25.

35 Susan Stamberg, "With Sunny, Modern Homes, Joseph Eichler Built the Suburbs in Style," *KWRG,* March 16, 2015, http://krwg.org/post/sunny-modern-homes-joseph-eichler-built-suburbs-style (accessed May 19, 2018).

36 *Prefabrication with Plywood*, 7.

**Figure 9 - Thinline and wideline siding patterns as supplied today by Eichler Siding (left, center), and Plank-Tex siding as supplied today by Eichler siding, based on pattern originally made by US Plywood (right).**

for all of these purposes in contemporary residences and the Rummer homes, specific examples of which will be provided in chapters III and IV.

## Joseph Eichler: Suburbs with Style

**Figure 8 - Cover of "Data about Douglas Fir Plywood" marketing publication by Douglas Fir Plywood Association, 1941.**

Joseph Eichler is the quintessential builder of contemporary homes. His construction firm, Eichler Homes, built over eleven thousand in about sixty California subdivisions between 1949 and 1966. These homes emphasized stylistic details common enough amongst Modernist designer in California using new construction materials. Eichler, and other developers like him, built homes that emphasized an open plan, horizontal structure, and use of natural materials.[37] Using plywood, redwood, Douglas fir, and cedar, builders made single-story post-and-beam residential structures. These homes featured flat or low-pitched roofs, blank street façades, and floor-to-ceiling glass windows facing into atriums and private yards. Eichler's early houses featured redwood tongue-and-groove cladding on exterior walls and plate glass windows before the advent of float glass. Later homes were sheathed in vertically-grooved redwood or Douglas fir plywood (Figure 9) with redwood or Douglas fir

37 Paul Adamson and Marty Arbunich, *Eichler: Modernism Rebuilds the American Dream* (Salt Lake City: Gibbs Smith, 2002), 111-116.
Dave Weinstein, "When Is an 'Eichler' Not an Eichler?," Eichler Network, April 18, 2014, http://www.eichlernetwork.com/blog/dave-weinstein/when-eichler-not-eichler (accessed May 26, 2018).

exposed beams– typically redwood– and float glass windows. Roofs were made of redwood tongue-and-groove planks with asphalt or tar and gravel finishes.[38]

Eichler was born to a Jewish family in New York in 1900; he went on to earn a business degree from New York University and work on Wall Street and in the family poultry business, moving to California in 1925 but continuing his involvement in the family industry.[39] He started Eichler Homes after World War II, inspired by his time spent renting the Bazett house, a Frank Lloyd Wright creation.[40] The Eichler construction firm took a leap by working with architecture firms for its many tract housing subdivisions. Eichler Homes workes specifically with three firms for all designs: Anshen and Allen, Jones and Emmons, and Claude Oakland.[41] These architects created designs that did

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38 "Eichler Home Pattern: Thinline, Wideline, and Plank-Tex," Eichler Siding, http://www.eichlersiding.com/eichler-patterns/ (accessed May 20, 2018).
National Register of Historic Places, Greenmeadow Historic District, Palo Alto, Santa Clara County, California, National Register #04000862.
National Register of Historic Places, Green Gables Historic District, Palo Alto, Santa Clara County, California, National Register #0400086.
Jeff Nichols, "Eichler Exterior Siding," Eichler Network, http://www.eichlernetwork.com/article/eichler-exterior-siding (accessed April 2, 2018).

39 Paul Adamson, "Joe Eichler Profile," Eichler Network, http://www.eichlernetwork.com/article/joe-eichler-profile (accessed May 26, 2018).
City of Sacramento Community Development Department, *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*, by GEI Consultants, Inc. and Mead & Hunt, Inc. (Sacramento, CA, September 2017), 3-32–3-33, http://www.cityofsacramento.org/-/media/corporate/files/cdd/planning/urban-design/preservation/mcm-context-statement-report_update-website.pdf.
Dave Weinstein, "Joe Eichler Is Featured in Exhibit about Jews and Modern Design," Eichler Network, May 14, 2014, http://www.eichlernetwork.com/blog/dave-weinstein/joe-eichler-featured-exhibit-about-jews-and-modern-design (accessed May 26, 2018).

40 Rachel Myrow,"How Joseph Eichler Introduced Stylish Housing for the Masses," *Bay Curious*, podcast audio, January 3, 2018, https://www.kqed.org/news/11635574/how-joseph-eichler-introduced-stylish-housing-for-the-masses (accessed May 18, 2018).

41 Anshen, as mentioned in chapter I, was somewhat of a protégé of Wright, so working with his firm made perfect sense on Eichler's part.
City of Sacramento Community Development Department, *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*.
Myrow.

not shy away from novel exploration of material and use of space, neatly dovetailing a daring style with Eichler's bold marketing and bolder social stances.[42]

Eichler's first project was a group of fifty-one designed by Anshen and Allen, which sold in under two weeks.[43] His following projects, stylistically and typologically contemporary, were more expensive than the typical speculative ranch tract housing project. These were close collaborations with Anshen and Allen and the two other architectural firms as well. Subdivisions of up to a few hundred houses with only a half dozen or so models were common; a few design elements were switched or the design flipped along an axis to make the entire subdivision feel unique. Several different Eichler subdivisions were featured in *Arts & Architecture* magazine due to the cooperation between architect and builder and the individualistic approach to design and marketing.[44] This approach translated to the individualistic, liberal-minded people who tended to buy the homes. This liberal mindset from in both business practice and homeowners built on Eichler's progressive Jewish upbringing.[45] Eichler was known for his non-discrimination

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42 Adamson, "Selling Modernism," 152-176.

43 John Entenza, ed., "Good Design and the Tract House, Anshen and Allen, Architects" *Arts & Architecture*, March 1951, 20, http://www.artsandarchitecture.com/issues/pdf01/1951_03.pdf (accessed May 18, 2018).

44 John Entenza, ed., "Experimental House X-100, A. Quincy Jones and Frederick E. Emmons, Architects," *Arts & Architecture*, February 1957, 20-21, http://www.artsandarchitecture.com/issues/pdf01/1957_02.pdf (accessed May 18, 2018).
"Good Design and the Tract House," 20-23.
John Entenza, ed., "The Ladera Project, A Quincy Jones, Frederick E. Emmons, Architects," *Arts & Architecture*, July 1951, 27-31, http://www.artsandarchitecture.com/issues/pdf01/1951_07.pdf (accessed May 18, 2018).
John Entenza, ed., "Tract Project By Anshen and Allen, Architects," *Arts & Architecture*, April 1960, 30-31, http://www.artsandarchitecture.com/issues/pdf01/1960_04.pdf (accessed May 18, 2018).

45 Edward S. Shapiro, "From Culture to Causes," in *A Time for Healing: American Jewry since World War II* (Baltimore: Johns Hopkins University Press, 1992), 195-228.
Dave Weinstein, "Joe Eichler Is Featured in Exhibit about Jews and Modern Design."

policy when it came to the race of prospective buyers in his subdivisions. He extended that policy into influencing the fair housing policies of state and federal government, although that was largely concealed from the general public for several decades in order to protect business.[46]

Several of Eichler's subdivisions have been formally recognized for their value as historic resources, either by the National Register of Historic Places or by local municipalities. This includes Greenmeadow and Green Gables in Palo Alto, and several smaller neighborhoods in cities including Cupertino, Sacramento, and Sunnyvale. The City of Sacramento Community Development Department commissioned a full historic context and survey report on all mid-century Modernist resources within its boundaries, which was completed in 2017.[47] This report included several Eichler subdivisions amongst its notable historic buildings and districts, meaning that future city planning and any projects utilizing federal or local government funding would consider these properties as resources in future development. Almost two decades before Sacramento's in-depth report, the City of Cupertino adopted a design handbook for the Fairgrove subdivision of Eichler homes in 2001.[48] A citywide architectural survey, similar to that performed in Sacramento later on, added the Fairgrove neighborhood to the inventory of potential historic resources of which Cupertino planning ought to be

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46 Ned Eichler, *The Merchant Builders* (Cambridge: MIT Press, 1982), 91-94.
Ocean Howell, "The Merchant Crusaders: Eichler Homes and Fair Housing, 1949-1974," *Pacific Historical Review* 85, no. 3 (August 2016): 379-407, https://doi.org/10.1525/phr.2016.85.3.379.

47 City of Sacramento Community Development Department, *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results.*

48 City of Cupertino Community Development Department, *Eichler Design Handbook: Fairgrove* (Cupertino, CA, January 2001), 1-18, https://www.cupertino.org/home/showdocument?id=414.

mindful.[49] Based on this survey and community concern, separate voluntary guidelines and mandatory design review requirements were applied to the neighborhood.[50] Sunnyvale has similar Eichler design guidelines to Cupertino, adopted in 2009 for a number of Eichler tracts. These are actually a separate set of design guidelines for Eichler houses than those applied to other single family residences in the city, regardless of whether or not these Eichler properties are on the historic register.[51] The guidelines recognize, according to their own statement of intent, "the unique character of Eichler homes and their neighborhood."[52] Aside from local level recognition, two National Register historic districts of Eichler subdivisions have been listed. Greenmeadow, designed by Jones and Emmons and built in 1954, is a development of two hundred and forty-three homes centered around a three-acre community center.[53] Green Gables is a slightly smaller subdivision, now a district with forty-five contributing and eighteen non-contributing buildings.[54] Both historic districts were listed in the National Register of Historic Places on June 16, 2005 under Criterion C and with period of significance confined to dates of construction. The listings were in recognition of the subdivisions'

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49 Ibid, 1-2.

50 See chapter V for further detail on the development and results of these guidelines and the guidelines in Sunnyvale.

51 City of Sunnyvale Planning Commission, *Eichler Design Guidelines* (Sunnyvale, CA, July 2009), 1-28, https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?BlobID=23807.

52 Ibid, 5.

53 John Entenza, ed., "A Community Development by A. Quincy Jones and Frederick E. Emmons, Architects," *Arts & Architecture*, August 1954, 22-24, http://www.artsandarchitecture.com/issues/pdf01/1954_08.pdf (accessed May 18, 2018). National Register of Historic Places, Greenmeadow Historic District, Palo Alto, Santa Clara County, California, National Register #04000862.

54 National Register of Historic Places, Green Gables Historic District, Palo Alto, Santa Clara County, California, National Register #04000863.

contributions as exemplary resources in modern architectural styles.[55] This affirms that the National Park Service acknowledges the historic relevance of contemporary homes on their own merit, not requiring them to be associated with a significant architect or builder in order to be worth of listing or protections.

## Contemporary Architects and Likelers

Both architects and developers were inspired to create contemporary homes, with varying levels of change to their designs based on climate considerations and availability of materials. Architects such as the firms of Palmer and Krisel and Ralph Haver are parallels to Jones and Emmons or Claude Oakland, the architects who worked primarily with Joseph Eichler, but interacted with other builders at one time or another as well. Many speculative builders, inspired either by the economic success or novel design of the Eichler houses, built their own contemporary homes in other places around the country. These builders were sometimes referred to as “Eichler copycats,” but more commonly known as “Likelers” due to their probable muse. They worked on far smaller scales than Eichler did, though still with impressive craftsmanship and dedication to design.

Architects Dan Palmer and William Krisel started their firm, Paler and Krisel, in 1949 and continued for the next several decades.[56] They designed over thirty thousand homes to be built by speculative developers in southern California, mainly the San

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55 Further discussion of the outcomes of this recognition and protection can be found in chapter V.
Dave Weinstein, “Historic Quest: Eichlers in the National Register,” Eichler Network, http://www.eichlernetwork.com/article/historic-quest-eichlers-national-register (accessed May 18, 2018).

56 “Living-Conditioned Homes,” Los Angeles Conservancy, Locations, https://www.laconservancy.org/locations/living-conditioned-homes (accessed May 20, 2018).
Claire Noland, “Architect William Krisel, Who Influenced the Look of Midcentury Palm Spring, Dies at 92,” *Los Angeles Times*, June 6, 2017, http://www.latimes.com/home/la-me-krisel-obit-20170606-story.html (accessed May 20, 2018).

Fernando Valley, and Nevada, primarily in Las Vegas.[57] Their contemporary designs featured more exaggerated and alternative rooflines than other architects and builders. The most iconic example of this is the butterfly roof seen on many homes in Las Vegas subdivisions and a few in California (Figure 10).[58] Residences were also adapted in terms of materials with the use of stucco finish, more masonry, and limited greenery in landscaping to reflect climatological needs. Palmer and Krisel designed thousands more tract homes than any other contemporary architects because they worked with so many developers, rather than partnering with primarily one as Jones and Emmons or Claude Oakland. The firm's work is more an example of the typology of contemporary residency

57 "William Krisel," Palm Spring Modern Committee, https://psmodcom.org/william-krisel/ (accessed May 20, 2018).

58 Laura Dominguez, "William Krisel, Southern California's Architect," The Getty, Art & Archives: Outside the Box, December 18, 2012, http://blogs.getty.edu/iris/treasures-from-the-vault-william-krisel-southern-californias-architect/ (accessed May 20, 2018).
Kimberly Harvey, *William Krisel Butterfly Roof Home in Paradise Palms*, June 18, 2014, Wikimedia Commons, Las Vegas, Nevada, https://commons.wikimedia.org/wiki/File:William_Krisel_butterfly_roof_home_in_Paradise_Palms.jpg
Noland.

and minimal required adaptation to local climates than the economics or construction technology aspects.

Haver and Nunn designed over twenty thousand contemporary residences and other Modernist buildings in Arizona, Colorado, and New Mexico between 1945 and about 1985.[59] Ralph Haver is most well-known for his contemporary style homes, along the same lines as the designs made by Anshen and Allen's and Jones and Emmons's firms for Eichler.[60] Along with architects Jimmie Nunn and James Salter at various times,

**Figure 10 - A Krisel & Palmer-designed home featuring the butterfly roof in Paradise Palms, a Las Vegas, Nevada subdivision. Photo by Kimberly Harvey.**

Ralph Haver, like Palmer and Krisel, was not necessarily connected with a single specific builder. Haver homes were adapted from the basics of the contemporary with larger than typical overhangs in order to provide more shade, smaller clerestory windows

59 David Brown, "Phoenix: Up from the Desert," *Modernism Magazine* 10, no. 3 (Fall 2007): 96-100, http://www.azwriter.com/documents/10120_phoenix_profile_modernism_magazine_2007.pdf.
Alison King, "Ralph Haver: Everyman's Modernist," ModernPheonix.net, 2011, http://www.modernphoenix.net/haver/haverbiography.htm (accessed May 20, 2018).

60 "Ralph Haver Homes and Neighborhoods," Dwell Arizona, https://dwellarizona.com/mid-century-modern/ralph-haver (accessed May 20, 2018).

than those on homes in cooler or cloudier climates, and more masonry and stucco sheathing instead of wood siding.[61] These were efforts toward climate control and insulation using common local materials. One Haver subdivision, Starlite Vista, is a particularly impressive example of the contemporary development practice of slight modifications to the same limited number of plans within a single neighborhood. This subdivision uses a single floorplan that has been reoriented or flipped along an axis to create the sense of distinctiveness integral to contemporary design.[62] The Town and County neighborhood in Scottsdale, Arizona is a City of Scottsdale Historic District. It is recognized by city planning for having high overall integrity, with most homes being

61 Alison King, *Town and Country Home in Janet Manor by Ralph Haver AIA*, 2011, Wikimedia Commons, Phoenix, Arizona, https://commons.wikimedia.org/wiki/File:Town_and_Country_home_in_Janet_Manor_by_Ralph_Haver_AIA.jpg (accessed May 21, 2018). "Ralph Haver Classic: Phoenix, Arizona," *Dwell*, https://www.dwell.com/home/ralph-haver-classic-fe49cc47 (accessed May 21, 2018).

62 "Haver Homes in Starlite Vista," Modern Phoenix, http://modernphoenix.net/haver/starlitevista.htm (accessed May 21, 2018).

extant examples of four main models of Haver homes and still contributing to its architectural significance in terms of style and construction (Figure 11).[63]

**Figure 11 - Town and Country model home in Janet Manor subdivision, Phoenix, Arizona. Photo by Alison King.**

Aside from the architects who designed single-family contemporary residences for many speculative building firms, there were the builders themselves. These builders, known sometimes as Likelers, constructed tracts of contemporary housing across the American West and Southwest.[64] One example of this is the father-son team of Hiram "H.B." Wolff and Brad Wolff, who built contemporary homes in the mid-1950s. Not much specific information is known about the builders themselves or their practice, other than their Modernist subdivisions in Denver, Colorado. It has been documented that they

63 City of Scottsdale Historic Preservation Office, *Historic Preservation Guidelines for Town and Country Scottsdale Historic District* (Scottsdale, AZ, February 2006), 1-45, http://www.scottsdaleaz.gov/Assets/ScottsdaleAZ/Historic+Preservation/HPPlan+Town+and+Country+Design+Guidelines.pdf.

64 Even amongst die-hard Eichler enthusiasts, the term "Likeler" does not seem to take on a pejorative intent. It is simply used as a shorthand way to refer to other contemporary builders who were likely inspired by the designs of Anshen and Allen, Jones and Emmons, or Claude Oakland that were built by Eichler Homes.

visited Eichler homes under construction before completing their projects.[65] Krisana Park, their first project, is a neighborhood of one hundred and seventy-seven homes, which was built between 1954 and 1957.[66] Lynwood Park, another Wolff tract, has also garnered attention as a contemporary, potentially Eichler-inspired neighborhood. These homes show little deviation from stylistic or typological standards. Today these neighborhoods have had their historic value protected using land use ordinances rather than preservation law, an interesting choice on the part of homeowners that will be discussed further in chapter V.[67]

The Streng brothers, a Sacramento-based building team and admirers of Eichler's work, built almost four thousand homes in forty subdivisions from 1959 through the mid-1980s.[68] They modified twelve single-family contemporary plans and four halfplex plans as designed by architect Carter Sparks.[69] These designs were

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65 "History," Krisana Park, About KP, http://www.krisanapark.community/kp-history-1/ (accessed May 23, 2018).
Erica Meltzer, "Some Denver Mid-Century Modern Homes May Be Protected – Krisana Park Could Be Just the Beginning," *Denverite*, November 3, 2016, https://www.denverite.com/denver-mid-century-modern-homes-protection-krisana-park-21453/ (accessed May 23, 2018).

66 "History," Krisana Park.
Randy Sorter, "Krisana Park Turns the Big Five-O," *Atomic Ranch*, January 2006.
Dave Weinstein, "Eichler Copycats Score a Win in Denver," Eichler Network, January 25, 2017, http://www.eichlernetwork.com/blog/dave-weinstein/eichler-copycats-score-win-denver (accessed May 23, 2018).

67 Weinstein, "Eichler Copycats Score a Win in Denver."

68 "Bill and Jim Streng – Builders," Streng Brothers Homes, About, https://www.strengbroshomes.com/about.html (accessed May 22, 2018).
City of Sacramento Community Development Department, *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*, 3-34.
"Halfplex Plans," Streng Brothers Homes, Floor Plans, https://www.strengbroshomes.com/floor-plans.html (accessed May 22, 2018).
"Single Family Plans," Streng Brothers Homes, Floor Plans, https://www.strengbroshomes.com/floor-plans.html (accessed May 22, 2018).

69 City of Sacramento Community Development Department, *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*, 3-27.
Justin Wood, "Carter Sparks Archive: An Informal Archive of Carter Sparks' Custom

contemporary with alterations based on the climatic needs of central California, which was significantly hotter and drier than the Bay Area or adaptations by other builders for Pacific Northwest and High Plains.[70] These extremes lent themselves to the most radical changes seen in terms of both technology and actual floorplan with any contemporary construction firm. The Strengs modified the design for forced air cooling, and their homes did not have the radiant floor heat that was a character-defining feature to Eichler houses and many other contemporary homes.[71] These residences were also designed with either shifted or fully enclosed atrium spaces so that residents were not regularly moving between indoor and outdoor spaces in extreme temperature differences (Figure 12).[72] Streng Brothers Homes was, as a construction firm, far more focused on keeping homes cool than heating them in the climate of Sacramento, and moisture was comparatively less of a concern. As with many other contemporary style speculative

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Sacramento Homes," Carter Sparks Archive, http://cartersparks.org/ (accessed May 22, 2018).

70 "Single Family Plans."

71 Dave Weinsten, "Greater Sacramento Strengs: Walley of the Atriums," Eichler Network, http://www.eichlernetwork.com/article/greater-sacramento-strengs-valley-atriums (accessed May 22, 2018).

72 "Single Family Plans."

builders, the Strengs only built a few hundred houses a year, intentionally keeping their numbers low in order to allow greater customization of houses for individual buyers.[73]

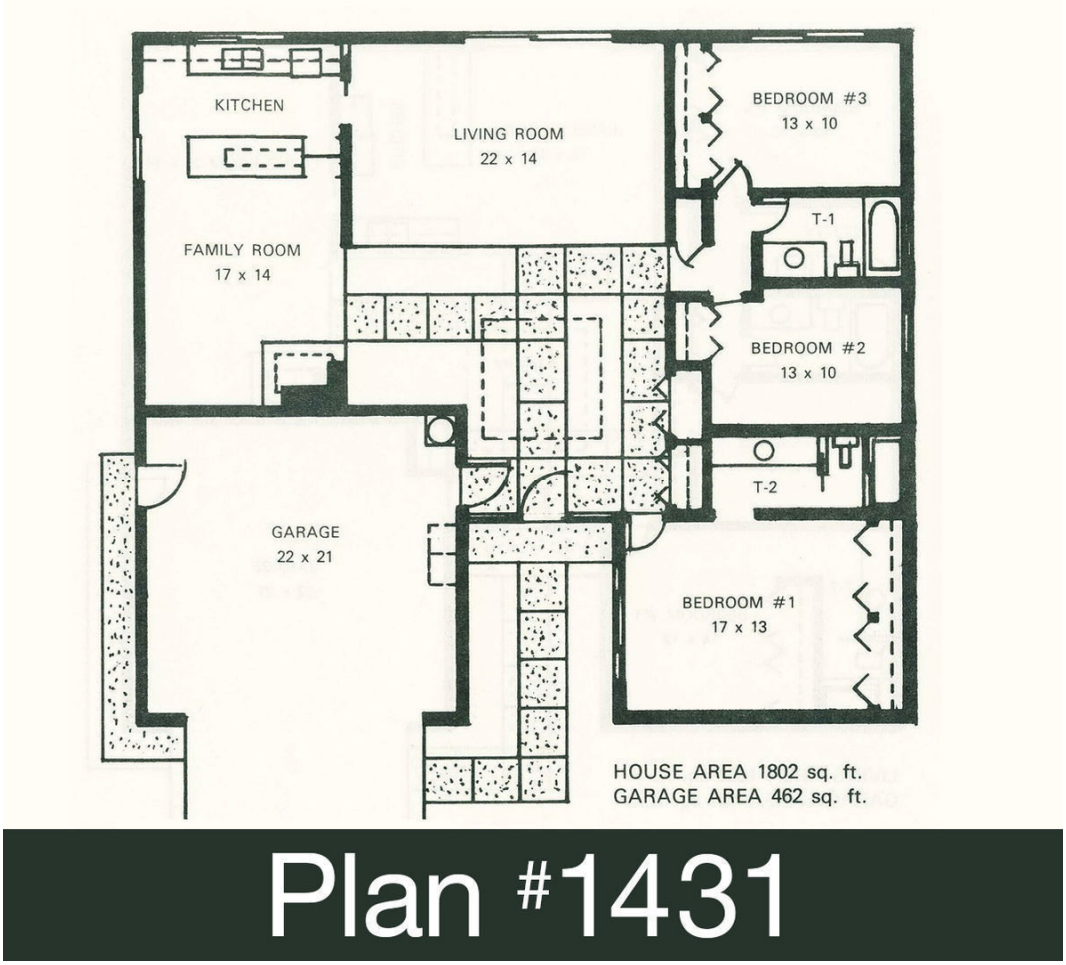


**Figure 12 - Streng Brothers model #143, reverse floor plan, as published on the company website.**

John Calder Mackay, another Likeler, built several hundred contemporary homes in Santa Clara in the 1950s. Many of these were very near Eichler subdivisions, to the point that some have today been confused for extended pockets of those tracts. Mackay was likely initially inspired by the success of local builder Earl “Flat Top” Smith’s tract

73 City of Sacramento Community Development Department, *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*, 3-34.

homes. He collaborated with Eichler's partner firm Anshen and Allen– just as Robert Rummer would later meet with A. Quincy Jones– although Mackay's firm continued through the completion of several floorplans with Anshen and Allen's firm.[74] His homes are more commonly found as single homes or in small clusters; this is notable in that it is similar and perhaps more comparable to the smaller groupings of Rummer homes versus the large tracts of other Likeler builders. Mackay homes are significant because they are a slightly different variation of the contemporary style with a more affordable set of materials. Mackay Homes also eventually switched his business model over and built in more common styles such as the standard ranch, just as Rummer Homes would when it became too difficult to garner financing for comparatively outlandish Modernist designs.[75]

Various builders in California, along the West Coast and in the American Southwest built anywhere from a single subdivision to an entire career of contemporary homes. Some may have intentionally copied designs by Eichler. Others were simply inspired by a style they saw as new and exciting, along with commercially successfully. This includes Jacobson Construction Company, Lawrence Construction Company, Nevis Brothers, Ruben Weber, and countless others who were inspired by this design and tweaked it as appropriate for climates and clients, mixing and matching design aspects

74 "About Mackay Mid-Century Modern Architecture," Mackay Homes, Neighborhood, http://www.fairmede.com/neighborhood.html (accessed May 31, 2018).
Dave Weinstein, "Mid-Century Mackay Homes Deserve Respect," Eichler Network, April 15, 2015, http://www.eichlernetwork.com/blog/dave-weinstein/mid-century-mackay-homes-deserve-respect (accessed May 22, 2018).

75 Dave Weinstein, "Meet the Mackays," Eichler Network, http://www.eichlernetwork.com/article/meet-mackays (accessed May 22, 2018).

and materials as needed.[76] One exemplary builder of these slight adaptations, and the focus of this research, is Robert Rummer and Rummer Homes.

### Robert Rummer

In the context of a metropolitan area with comparatively less development than more populous and attractive urban centers of the country, where many other speculative builders successfully founded their businesses, Robert Rummer had already established himself as a fairly successful local developer. Rummer, a native Oregonian born in 1927, is a World War II veteran who originally worked in the insurance business. He was noticed by *The Oregonian* for building a beautiful home for himself and his wife Phyllis in 1959. Phyllis Rummer encountered Eichler's Rancho San Miguel subdivision in Walnut Creek, California soon afterwards. She shared with Rummer that she saw potential in the design of these homes, either for a new home for herself or for future construction by Rummer Homes, Inc.[77] This did not initially amount to anything, but when helping a friend with plans to build a new home the following spring, Rummer finally saw the plans and photos of an Eichler home himself and was immediately fascinated. He met with A. Quincy Jones of Jones and Emmons, a firm that worked closely with Eichler.[78] Rummer drew either direct or ancillary aesthetic and structural insight from Jones' designs for his first contemporary residences; interestingly, Rummer has given both these answers as responses in interviews depending on the occasion.[79]

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76 City of Sacramento Community Development Department, *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*, 2-36.
Weinstein, "Greater Sacramento Strengs."

77 Barthlow 1-2.

78 Camela Raymond, "Summer of Rummer," *Portland Monthly*, August 2006, 133-145.

79 Barthlow 1.
Robert Rummer, "Rosé and Rummer," Lecture, DoCoMoMo Oregon, Washington County, OR,

Rummer started building contemporary homes in1959 and continued to do so until 1975.[80] His company eventually built a total of seven hundred and fifty homes in the Portland Metro Area, some in the contemporary style before being forced by market and building code pressures into more standard ranch style homes.[81] Only about three hundred or so of the Rummers were contemporary designs, based on years of research by Rummer enthusiasts and confirmed through fieldwork by the author.[82] These homes are known as an example of how Robert Rummer embraced contemporary design and altered it as needed for the climate and materials of the Pacific Northwest.[83] He used locally-sourced cedar beams and T-111 plywood siding as building materials, rather than importing redwood beams and other types of plywood siding from manufacturers in California.[84] Rummer successfully combined this economical cladding on both interiors and exteriors with an architectural design that is material-focused and ornamented chiefly by its exposed fabric and exterior views. This use of T-111 and local sources was

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August 27, 2017.

80 Jack Bookwalter, “Rummers in Oregon: A Legacy of Mid-Century Modern Homes,” Rummer Connection, https://rummer.weebly.com/rummer.html (accessed May 20, 2018).

81 Barthlow 1-2.

82 Eastman, "Get Inside 6 Midcentury Modern Rummers."
Stan Houseman (homeowner, 8630 Southwest Cecilia Terrace).
Raymond 140.
Rummer, “Rosé and Rummer.”

83 Eastman, “Get Inside 6 Midcentury Modern Rummers.”

84 Eichler used three specific siding patterns, two of which were more common styles and the third of which was manufactured by U.S. Plywood. The verticality emphasized in this pattern can be seen on Rummer homes, although the patterns are different. Rummer used unmarked, thin-grooved, and wide-grooved sheets of T-111, and very occasionally cedar tongue-and-groove siding.
Barthlow 2.
“Eichler Home Patterns: Thinline, Wideline, and Plank-Tex.”
Nichols, “Eichler Exterior Siding.”

far more cost-effective, allowing his business to be profitable in a time when development around the rest of the country was slowing and the style was no longer economical in California. Additionally, instead of using copper piping for radiant floor heat, Rummer used PVC or opted for forced-air heat at floor level when a lot required a full foundation rather than a concrete slab.[85] His atriums either incorporated skylights or were initially covered by corrugated plastic. Rummer homes are historically significant as clear examples of a Pacific Northwest vernacular form of the contemporary style of residential architecture.[86]

This level of detailed information about materials used in Rummer homes is available without any destructive investigation due in part to the guides Rummer provided to new homeowners in his subdivisions (Figure 13). Rummer utilized local materials and local subcontractors to build these designs that were not found in quite the same way anywhere else in Oregon. Lists of materials and recommended treatment, contractors to contact, and how to use new technology that came integrated with the house, such as the garbage disposal or radiant heat, were outlined and explained in these pamphlets.[87] All Rummer homes had approximately identical service guides, differing essentially only in that the address and homeowner name was printed on the second page. This guide was an outline of the guarantee or limited warrantee on the technology and materials in these homes and on their lots. Today, these pamphlets can be viewed as a handbook outlining details on Rummer's materials, construction

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85 Barthlow 2.

86 Gary Higginbotham, "When Ranch Goes Modern: Celebrating Rummer Homes," *Portland Architecture* blog, August 2012, http://chatterbox.typepad.com/portlandarchitecture/2012/08/when-ranch-goes-modern-celebrating-rummer-homes.html (accessed March 3, 2017).

87 Robert Rummer, *Rummer Home Service Guide* (Washington County: Rummer Homes, circa 1959), 1-19.

methods, and business practices for architectural historians and preservationists. Beyond that, the warranties and recommendations on home maintenance inform on expectations about weathering and material lifetime, which can be compared to maintenance trends on properties and current material conditions in chapters III and IV.

Rummer's interpretation of contemporary houses have already been acknowledged to be significant, as there are twenty-nine Rummer homes specifically identified in the Oak Hills Historic District.[88] This district became the first mid-century modern district in Oregon when it was nominated in 2013. although its nomination was focused more on the planning aspect of the larger neighborhood and the variety of midcentury architectural styles found within than the Rummer homes specifically.[89] Nonetheless, the nomination was under Criterion C for Modernist construction and planning, and these properties were counted amongst the significant Modernist properties. This lends strength to the argument that other Rummer properties

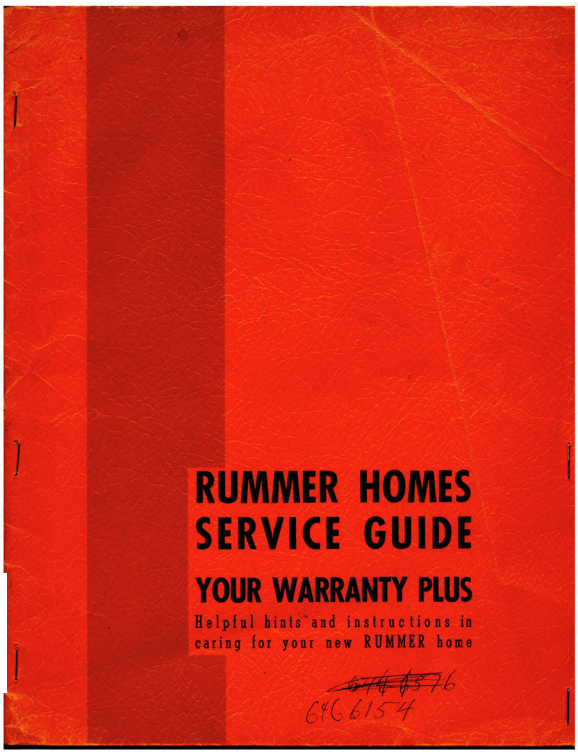


**Figure 13 – Cover of *Rummer Services Home Guide* printed for 8495 Southwest Cecilia Terrace.**

88 National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

89 Denise Bartelt, "Return to Rummer," Restore Oregon, September 22, 2016, https://restoreoregon.org/return-to-rummer/ (accessed May 20, 2018).
National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

should also be classified as eligible for to be historic resources, including those in Bohmann Park.

## Suburban Development in Portland

The economic development of the city of Portland and the surrounding areas within Multnomah County, Washington County, and Clackamas County followed the general trends of the country. The period between 1940 to 1970 saw a population increase of over 70 million in the United States, with much of that concentrated on the West Coast.[90] The Portland metro area saw development of automobile suburbs, although most land was still rural.[91] According to US Census Data, about one percent of the country's population was located in Oregon between 1940 and 1970, with forty-one percent of that concentrated in the metro area.[92] Between 1940 and 1970, both the total population and total number of housing units in Clackamas, Multnomah, and Washington Counties nearly doubled.[93] The state's rapidly increasing population was settling primarily in the metro area, causing increased pressure for urban and suburban development.

Counties in Oregon were not authorized to adopt their own zoning and building codes until 1947, or their own service districts until 1955 or later.[94] Washington County

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90 California Department of Transportation, Cultural Studies Office, *Tract Housing in California, 1945-1973: A Context for National Register Evaluation* (Sacramento, CA, 2011), 12-18, http://www.dot.ca.gov/ser/downloads/cultural/tract_housing_in_ca_1945-1973.pdf.

91 City of Portland Bureau of Planning and Sustainability, *East Portland Historical Overview and Historic Preservation* Study, by Liza Mickle and Nicholas Starin (Portland, OR, March 2009), 32.

92 University of Oregon Bureau of Governmental Research and Service, *1940-1970 Population and Housing Trends: Cities and Counties of Oregon* (Eugene, OR, December 1971), 5-6.

93 Ibid 21, 57.

94 Portland Metropolitan Study Commission, A *Study of the East Washington County Urban Area* (Portland, OR: Portland State University, April 1970), 54.

adopted a county charter in 1963, enlarging its powers to include these codes and districts once their regulation entered the county's scope of potential and population density and need for services were high enough. Only a little over five percent of the state's population resided in Washington County by 1960, and compared to the city of Portland and other towns of the area, the portion of the county that would become Bohmann Park was relatively underserviced by fire stations and other city services by the year 1970.[95] This indicates that the suburban tracts such as the Rummer speculative houses were still within a relatively rural context in this respect. Citizens of Garden Home, the larger neighborhood of which Bohmann Park is a part, joined with other neighborhoods to create the East Washington County Advisory Council in an attempt to increase citizen participation in county government around the time that the Bohmann Park subdivision was being constructed. These changes and expansions in county power and resident involvement, along with a period of rapid urban expansion and population increase, created a sense of hasty and intense change in the area. This anxiety can also be seen in an article in *The Oregonian* entitled "The Californians Are Coming!" which details the perceived increase in the influx of Southern Californians into the Willamette Valley at this time. According to this article, population increases in several counties, an increase in encounters with Californians – especially those seeking work, and a rise in property value are signals of this incursion, the result of which was allegedly a flight of native Oregonians from metropolitan areas.[96] While this may have been a difficulty for Oregon homeowners, newcomers willing to pay much higher prices

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95 Hillsboro City Planning Commission, *Population Trends*, by Frank N. Frost (Hillsboro, OR, 1961), 19.
*Study of the East Washington County Urban Area*, 65.

96 Marjorie O'Hara, "The Californians Are Coming!," *The Sunday Oregonian*, November 21, 1965, 10.

for land and homes would have been a boon to developers. This would have been the overall infrastructural setting in which Bohmann Park came to fruition.

There was enough difference in both local suburban development and Robert Rummer's business practices that his construction firm continued to be profitable in a period when others such as Eichler were experiencing a downturn on the national level. This was arguably partially due to the unique style of the contemporary homes he built and due to trends in development and population in the Portland metro area. The materials of this style caused problems for Eichler when expanding to new markets and into the 1960s because of the cost of specialized materials and building methods.[97] This was transformed into a boon for Rummer when he brought the style to Portland, as Rummer was able to locally source materials by simply shifting the type of wood he was using for beams from redwood to cedar and locally sourcing his plywood, slightly altering character-defining features of the style to fit the climate and bringing in a touch of northwest regionalism.

**Bohmann Park**

The Bohmann Park subdivision is part of unincorporated Washington County at the time of building, despite the listing of Portland in the mailing addresses of its residents and their service by a post office located in Tigard. The subdivision was built on land that was previously cultivated as a filbert orchard by the Bohmann family, from whom the neighborhood gets its name.[98] Bohmann Park is also sometimes referred to as Vista Brook by residents because of its proximity to an older neighborhood by that name in the

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97 Eichler 116.

98 Oregon Parks and Recreation Department, *Bohmann Park Neighborhood Reconnaissance Level Survey Report*.
Stan Houseman (homeowner, 8630 Southwest Cecilia Terrace).

Garden Home-Fanno Creek area, according to residents.[99] The homes within the subdivision were built between 1964 and 1971, with most concentrated between 1965 and 1966. There are seventy-one homes within the boundaries of the historic subdivision, which is bordered largely by ranch style and split-level homes. All but a few homes in the southeast corner of the subdivision were built by Rummer's construction firm. Since the properties in the Bohmann Park subdivision were developed, all houses have retained their original use as a single-family residence in the R-5 residential zone.[100] The only comparable grouping is in the Oak Hills National Register Historic District, also located in Washington County, which contains several Rummer homes within its boundaries, although the twenty-nine properties in the district are less concentrated than the sixty-two Rummer houses in the Bohmann Park subdivision of seventy-nine properties.[101]

The houses were cheaper to build in an unincorporated area rather than within the urban boundary of a city. This was, as typical of considerations made by many developers, due to fewer requirements for development of amenities such as sidewalks, streetlights, or connections to infrastructure by the builders than those required within the boundaries of surroundings cities.[102] This was an advantage for Rummer as a developer. As will be elaborated on in chapter V, this has become a disadvantage as

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99 Stan Houseman (homeowner, 8630 Southwest Cecilia Terrace).
"Vista Brook Park," Tualatin Hills Parks & Recreation District, Parks and Trails, http://www.thprd.org/parks-and-trails/detail/vista-brook-park (accessed May 18, 2018).

100 R-5 zoning in Washington County designates a residential district with four to five units per acre and has the lowest urban land use district density in the county.
"Urban and Rural Land Use Districts," Washington County Land Use and Transportation, https://www.co.washington.or.us/lut/divisions/currentplanning/applications/urban-rural-land-use-districts.cfm (accessed March 26, 2018).

101 National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

102 Eichler 12-14, 62-64.

these buildings and other resources in the neighborhood have been threatened or demolished due to the lack of representation of residents and fewer legal repercussions for impacting them.

Other groups of contemporary homes, specifically the Green Gables and Greenmeadow subdivisions in Palo Alto, California and the Oak Hills subdivision in Beaverton, Oregon have been recognized between 2005 and 2013 on the National Register of Historic Places. These historic districts were deemed significant under Criterion C, as they embodied distinctive characteristics of the same significant style of architecture as can be found in Bohmann Park. This strengthens the argument for consideration and protection of Bohmann Park, and thus the need to engage with its buildings more deeply.

# CHAPTER III

# CASE STUDY ONE: 8510 SOUTHWEST CECILIA TERRACE

## Introduction

This report is a condition assessment of the building on the property at 8510 Southwest Cecilia Terrace, located in the Bohmann Park subdivision of unincorporated Washington County. The report is based on a February 2018 site visit by Samantha Gordon, University of Oregon graduate student and Historic Preservation, MS candidate. This visit was conducted at the invitation of the property owner, in response to a request by Samantha Gordon in relation to research on contemporary style houses built by Robert Rummer. All the data supplied below were gathered through visual observations. No destructive testing was applied to the structure. No formal hazardous material testing was undertaken and no hazardous material was observed; it is possible that materials may contain asbestos or lead paint given the time period of construction and documentation of standard materials used by the builder for this house type. The building is currently inhabited, and no hazardous materials were found. The findings in this report were based upon the presumption that the building will continued to be inhabited and maintenance will continue at the current level.

### House History

The house at 8510 SW Cecilia Terrace was built in 1966, and the period of significance for the property is 1966. This house has been owned by four different families since its

construction, and has been under the care of its current owner since 2013.[103] According to public records from Washington County, the only permits on file for this property since it was built are for minor upgrade to electrical, plumbing, and mechanical systems.[104]

**Site**

The subdivision is located in unincorporated Washington County, sharing borders with Beaverton, Tigard, and the city of Portland. The house at 8510 SW Cecilia Terrace is located on the east side of Cecilia Terrace, facing west, at an approximate latitude of 45.467948 and longitude of -122.764564. This is on the eastern side of the subdivision. It it set back from the property line with an average-sized lawn for the neighborhood, with a concrete path leading up to the door and a concrete driveway leading to the two-car garage. The property line is delineated by a vertical board wooden fence with gates at the north and south corners of the west (primary) elevation to provide access to the backyard.

The site itself features a grass lawn in the front yard, which is split by the concrete driveway and paths to entrances. Each portion of the lawn has a small tree, with the one to the north being a Japanese maple, and the one to the south being a young deciduous tree.[105] A gravel footpath runs along the southern edge of the lawn to the south fence gate. The backyard contains a concrete deck bordered with gravel, gravel bordering the house on all sides, cinderblock terracing planted with primarily native trees and shrubs, and grass in all other areas.

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103 Barbara Hansen (homeowner, 8510 Southwest Cecilia Terrace), interview by author, digital recording, Washington County, OR, February 13, 2018.

104 “Permits Project & Activity Report for 1S123DA00331,” Washington County Technology Services, http://washims.co.washington.or.us/GIS/index.cfm?id=14&sid=4&IDValue=1S123DA00331 (accessed February 15, 2018).

105 Japanese maples are a common feature in this subdivision and other clusters of contemporary homes built by Rummer.

## Exterior Condition Assessment

### Roof

**Figure 14 - Metal roofing and vents, north façade facing east.**

This roof is a single gable, low-pitched along the line of the main entry and flat on both the bedroom and service wings. There are no overhanging trees or other structures. A chimney is located on the east façade, skylights are concentrated to the southern side of the building, and vents are located around the entire roof system.

#### Metal Roofing

Unfortunately, the author/surveyor did not possess the proper equipment to safely investigate the roof of the house to the fullest extent in the inclement weather conditions at the time of survey in March 2018. Observations of roof conditions were made based on visual inspection from the ground, an eight-foot ladder, and interior evidence of damage. The original roof was asphalt and gravel. The current aluminum roofing material is not original to the house. It has been replaced and repaired multiple times since the original construction.

The powder coating on the roofing material appears in good condition, and there was no breakage or gapping in the aluminum or the seams between pieces. However, interior water damage indicates that seams, especially in areas with high risk of standing water, are not watertight. There was some biogrowth along many of these seams, as well as rust from the metal roofing nails and screws. These areas should be cleaned, and the nails and screws replaced as needed.

**Figure 15 - Metal roofing, east parapet, and south chimney flashing, south and east façades facing north.**

There were large pools of standing water on the north side of the roof where the low-pitched slope of the gable meets the flat portion of the roof and the eastern corner of the flat portion of the roof on the south side (Figures 14 and 15). This standing water, along with t and other evidence, indicates a dip in the roof at these points and poor drainage due to inadequate or blocked gutters. Decaying leaves and other plant debris were collected in the standing water and behind the parapet, along with dirt washed from higher portions of the roof onto the flat portions. The accumulation of dirt and decaying foliage in these areas will lead to more rapid degradation of roofing material, and should be cleared on a regular basis. There was biogrowth along the both the vertical and sloping portions of the parapet coping, most notably on the north façade (Figure 16). This should be addressed with appropriate pressure of power-washing and application of

chemicals to remove existing biogrowth and discourage further propagation. Most importantly, options for creating additional scuppers or other roof drainage without altering the building's façades should be explored.

**Figure 16 - Biogrowth along cornice, north façade.**

**Eaves**

The aluminum eaves, fascia board, and parapet and cedar soffits extend on portions of all four façades. They are overall in good condition. The cedar roof planks, which extend lengthwise across the house from east to west, have been painted over their original finish but are in otherwise good condition. There is some evidence of insect and arachnid activity, such as spider webs and abandoned wasp nests, which should be removed, although there is no indication of insects that would more immediately harm the building condition. Round holes in some of the roof planks making up the eaves, aligned or very near to current downspout placement, indicates that these have likely been moved from their original location. These holes have been covered appropriately and raw edges protected with paint, do not show evidence of any water damage, and

should not require any further repair or attention other than as would be needed for roofing materials. There are limited surface checks along a few of the roof planks, which are protected with paint and would not result in weakened structural integrity, and thus does not require further action. The painted, exposed rafter ends are in similar good condition, with some addition checking along the ends.

Some of the soffit planks, most notably on the south façade, have begun to separate from each other and the fascia boards. In some places, the pieces of the fascia boards have also begun to separate from one another along their joins. This separation should be monitored, and in the case of further separation, especially if there is evidence of torsion or warping, water leakage, or fascia boards coming loose, beams and boards should be repaired and replaced as appropriate.

**Chimney and Vents**

The chimney, which goes through the roof system, is made of multicolored, unglazed bricks measuring eight inches by two inches by three and a half inches, with corbeling at the top row of bricks and a concrete chimney crown. The bricks are laid in a stretcher bond with a half-inch mortar that has been mixed with brick dust to create a reddish tint, and this mortar has been applied with a concave profile.

Overall, the chimney is in good condition. The flashing where the chimney meets the roof is tight and shows no signs of rust, water leakage, or biogrowth. The portion of the chimney below the eave line is in the best condition, as it has been largely protected from weathering and water damage by the eave overhang. There is some efflorescence, particularly on the south corner of the chimney and in some of the mortar (Figure 17), likely due to higher accumulation and evaporation of water on this portion of the house.

Cleaning this efflorescence is not essential to the building condition, but it will improve the appearance and provide a cleaner surface if there is a future need to repoint the mortar. Additionally, there is a great deal of dark, low-profile biogrowth on the portion

**Figure 17 - Chimney, east façade facing west.**

of the chimney above the gable, which has not affected the overall structural integrity of the chimney, but has, along with weathering, led to some delamination and cracking on both the brick and concrete vent. Appropriate cleaning methods to remove efflorescence and biogrowth include dry-brushing with a stiff natural or nylon bristle brush followed by wet brushing with the same brush or a gentle, acid-based chemical cleaner, while removing biogrowth and discouraging future growth. Any cleaning method should be patch-tested on an unobtrusive area before being used on the entire chimney. The bricks should not be treated with abrasive methods such as power-washing or sand-blasting, as this will damage both brick and mortar and lead to deterioration of the material.

Detailed recommendations for cleaning the brick of this historic resource can be found in Preservation Brief 1, *Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings*, written by Robert C. Mack and Anne Grimmer, and more

information on the damage done by abrasive cleaning methods can be found in Preservation Brief 6, *Dangers of Abrasive Cleaning to Historic Buildings*, written by Anne Grimmer.

There are several metal vents along the north side of the roof (Figure 1), which all have been affected with some level of oxidation. Although they could not be more closely inspected due to safety constraints, it is recommended that their connections to the roof be examined at a later date for water damage and leaking, and the vents either cleaned and repainted or replaced.

**Figure 18 - Skylights on roof, south façade facing west.**

### Skylights and Lighting

This building has four skylights, all of which are in good condition. The historic atrium skylight was removed by the previous owner of the property, but replaced with a new skylight by the current owner. The skylights show no signs of degradation, biogrowth, or rust, and there are no interior signs of water damage from the skylights or their framing.

There are three sets of exterior lights on the house. The main light, which is a historic globe light similar in fashion to those found on other midcentury and Northwest regional residences, including other Rummer properties, is located at the west (primary) façade. This light is in excellent condition. The backyard directional lighting appears to be historic as well, and is in good condition, with only minor oxidation of the metal shade.

The third exterior light is an industrial-style light over the door from the garage to the side yard, which is a later addition and is in excellent condition.

**Gutters and Downspouts**

The gutters are contained to the east and west façades, and there are six downspouts of three-inch diameter on the building. Two downspouts each are located on the east and west façades and one each on the north and south façades. The gutters have a mesh over them that is meant to prevent large pieces of debris from blocking the gutters or downspouts, but there were enough smaller pieces of foliage, sticks, and other debris that went through the mesh to block the gutters and downspouts (Figure 19). There are

**Figure 19 - Gutter and downspout detail, east façade.**

pine needles protruding from the downspout joints as well. These signs indicate that the gutters and downspouts require either a finer mesh protection or more regular clearing so that they are able to properly remove water from the roof and prevent build-up of biogrowth, degradation of materials, and water damage. The downspout on the south façade does not quite meet up with the piping to move the water away from the house, and if this is not rectified, the water will continue to flow directly against the siding and foundation.

## Walls

The building is a post and beam constructed frame made of cedar two-by-fours connected to the concrete slab foundation by sill plates. The cladding of this house is tongue-and-groove cedar vertical board, which has been painted light blue. Cladding is applied to the studs with nails, using only a secondary layer of particle board as insulation. There are large gaps between the siding and the exposed rafter ends around most of the building, indicating either incorrect measurement at the time of application or shifting and warping of the plywood and vertical boards over time.

### West (Primary) Elevation

The siding on the west elevation, which is the main façade of the house, is in overall good condition. There is some minor weathering of the batten along the bottom edge of this façade. Slight warping and swelling at the meeting edge due to water infiltration has loosened these boards somewhat, but they can easily be reaffixed or replaced.

### North Elevation

The siding along the north façade is in good condition. There is minor weathering to the paint and some gaps and warping along the seams of the plywood panels.

**East Elevation**

The majority of the east façade is dedicated to fenestration and the brick chimney, the conditions of which are detailed in other sections of this report. The siding and wood framing on this elevation shows only minor weathering, with swelling and warping of plywood near the blocked gutter.

**South Elevation**

The south façade is in fair to good condition. The east and west corners of this elevation show more weathering than other areas of the house. The paint has worn off or chipped in several places on both corners, exposing the vertical board siding more directly to water, insects, and other potential damage. Warping of boards is most pronounced at this façade, especially in places where roof planks and the fascia board are also damaged from water infiltration (Figure 20).

**Figure 20 - Warped vertical board siding detail, south façade.**

## Fenestration

### Windows

There are sixteen windows across the exterior façades of the building, not including skylights or windows to the atrium, which is treated as an interior space. All windows are original to the house and in original wood or aluminum frames, excluding the west window of the south façade. This window, S1, is located in the bedroom B; this window has been replaced with vinyl. The glazing of all windows is in good condition and does not need to be repaired at this time.

The wood frames of the plate glass windows, which are located on both east and west façades, are in fair to good condition. There is some paint peeling and wear and small gaps at joining edges. Paint peeling is most severe on the window frames over the garage doors. These frames should be painted to protect the wood, and the gaps should be monitored to ensure that they are not widening, in which case portions of the frame would need repair or replacement. The frames show no signs of rot. Glass in all windows is in excellent condition, with no cracks or broken panes. The largest plate glass windows on the east façade have reflective films applied to the top portions, which has not affected the historic material and can be easily removed. The aluminum window frames and sashes are all in excellent condition.

### Doors

There are six doors on the exterior façades of the building, including the front door, two garage doors, a door from the garage to the north façade, and two sliding glass doors on the east façade. The front or main entryway, which leads to the atrium, is the original blue, hollow-core wooden front door with non-original hardware, with a non-historic white metal security door attached to the frame. The frame of this door is in good condition, with slight wearing of the paint. The security door is in fair condition, with oxidation on

the metal screen and around the bolts attaching it to the door frame. Ideally, the security door would be removed to restore historic character of the property. If the door is retained, it should be painted to prevent further oxidation.

The sliding glass doors at the east façade and their aluminum frames and sashes are all in excellent condition, with the only suggested maintenance being regular cleaning and oiling of the sliding track to prevent sticking. The hollow-core door at the north façade is in good condition, as is the frame. The hardware on this door does not appear to be original. This door shows only minor wear. The garage doors are in excellent condition, and the frames are in fair condition. The garage doors are not original to the building, as they were replaced by the current owners for safety, but are similar in design to what the originals would have been. There are several spots along the garage door frames where blunt force has damaged the wood (Figure 21), removing small chunks and exposing the wood to water and weather damage where paint is missing. The paint is also peeling heavily at the top of the garage door frames, although the exposed wood does not show signs of rot. These areas should be repainted, but do not require further repair as long as they are not damaged further.

**Figure 21 - North garage door frame damage detail, west façade.**

## Foundation

The foundation of the house is a concrete slab on grade with PVC pipes running through it for radiant floor heat using a radiant heat boiler and pump. The foundation is in fair to good condition. There is noticeable cracking and erosion of the foundation from water, caused by both from misaligned downspouts and from the nature of the landscape,

running against it or pooling around certain areas. Other damage is due to settling of the clay-heavy soil under the foundation. This has already led to multiple repairs, most notably the restoration of the Roman shower in the master bathroom, and should be consistently monitored to ensure that further damage is prevented by directing water away from the foundation as much as possible. There are several large cracks in the foundation visible in the garage, likely caused by settling from the waterlogged nature of the landscape, which is further detailed in the following section. These should be sealed with an elastomeric sealant and then monitored for further cracking or damage, especially because of the make-up of the soil and likelihood of future potential sources of water damage or drastic settling.

## Landscape

### Grounds

The house is located on property near Fanno Creek. This proximity has led to the emergence of spontaneous natural springs at unpredictable locations on properties on the east side of the subdivision, causing consistent challenges with drainage, especially in moving water away from the building. Several drainage projects have been undertaken by the current owner, and more drainage will likely need to be added over time as more natural springs appear and move. This should be closely monitored in order to keep as much water as possible away from the building. Gravel around the foundation on all sides provides a place for water dripping from the coping and clogged gutters to drain away from the house. Non-historic but sympathetic vertical board screening fencing at the property line is in good condition. Non-historic terracing has been added to the hill at the eastern edge of the property by the current owner, and the trees and low plants that have been planted along each level. This will help prevent erosion of the soil that would potentially adversely affect the grade of the ground at lower

levels and make it more difficult to keep water away from the house, and thus should be maintained. Non-historic vertical board screening fences at the north, east, and south are in fair to good condition.

**Figure 22 - Terracing, lawn, fence, and concrete pathways and deck, east façade facing north.**

### Concrete Pathways and Deck

The property features several concrete pathways and a concrete plaza or deck, all of medium-aggregate concrete that has been power-washed to expose the top layer of aggregate. This concrete is fair overall condition. There are several cracks in the concrete of the driveway, likely from changes to the grade of the site due to the natural springs in the landscape. Those at the top-wearing surfaces should be patched with concrete of a similar mix and those toward the sides of the slabs should be treated with elastomeric sealant, and all cracks should be monitored for further deterioration. Biogrowth is present on pathways around the house, most heavily concentrated on the

deck in the backyard, which experiences the most moisture. This should be removed and the concrete treated with appropriate chemicals to discourage future growth as much as possible, as the biogrowth with speed deterioration of the historic landscaping concrete.

## Interior Condition Assessment

### Overview

The interior of the building ranges in condition from fair to good. The most recent of the previous owners removed or painted much of the historic fabric of the interior. Unless otherwise noted, ceilings and walls have been painted a matte white.

A variety of historic and non-historic materials can be found in different rooms. In several places where historic fabric has been painted or removed, the character of the interior can be retained or restored by removing the paint using methods such as careful hand scraping and sanding and by replacing materials incompatible with the historic appearance of the building with those that are more sympathetic. Water damage to the ceilings and upper portions of the walls due to standing water on the roof can be repaired or at least maintained, but the primary way this can be mitigated and further deterioration prevented is through exterior repair of the roof and proper landscape drainage. The current owners have done some interior rehabilitation to historic material where possible.

### Ceilings

The ceilings are, as mentioned above and in the Contemporary style, simply the exposed, continuous plank roof of the building, the same planks as the exterior soffits. These are in fair to good condition. Ceiling height ranges from eight feet, five inches to eleven feet, seven inches. The ceilings of the entire house were painted white prior to

2013. Roof beams are painted white as well, aside from in the atrium, where they are a dark blue matching rafter ends and wood frames on the exterior.

There are several places in each room of the house where planks have begun to separate, creating gaps of up to about one inch. Major evidence of water damage can be seen directly under pools of standing water on the roof, specifically in the front children's bedroom (Figure 23). Peeling paint on the planks and roof beams in the northeast indicates that beams are consistently exposed to water and at risk for rot, if they have not already begun to rot under the paint. There is notable warping and discoloration of roof planks in the garage, indicating water damage from the standing water on the roof directly above. A portion of the roof beams in the atrium was recently replaced due to severe water damage and brown rot, and it is likely that at least some of the other beams and planks in high-risk areas such as the meeting of the gable and flat portions of the roof also have brown rot. There is some checking in exposed roof beams throughout the house, but no indication of torsion or warping in these structural beams or water damage and rot unless mentioned above.

**Figure 23 - Ceiling and top of wall, northeast corner of front bedroom.**

### Skylights

The interior of all four skylights are in good to excellent condition. The atrium skylight was replaced after 2013, as the original was removed by a previous owner, and the replacement is in excellent condition. Other skylights around the house have original or near-original wood materials on the interior frames and do not show any signs of leaking or water damage.

**Figure 24 - Original wall paneling finish, storage closet.**

## Walls

The interior walls of this post-and-beam light-frame constructed building are plywood paneling and sheetrock applied to the cedar two-by-four studs. This paneling has been painted white in the entire house, with the exception of a small portion of the storage closet, which exhibits the original finish (Figure 24).

The wall paneling is in generally good condition throughout the house. A major exception is in the front bedroom. The area where the wall meets the ceiling in the northeast corner exhibits cracking and peeling paint, and the meeting of the west wall and ceiling has a large crack, both of which indicated water damage. The crack on the west wall should be monitored to ensure that there is no further separation, which would indicate continuing water damage to post or beams or foundation settling, which may compromise structural integrity. There is also some paint peeling on the south wall of the walk-in closet of the master bedroom, which corresponds approximately with the location of an exterior downspout, which is the likely source of the water damage. There is some non-historic molding missing from the southwest corner of the southwest corner bedroom.

## Built-Ins

**Figure 25 - Guest bathroom sink built-in and original tile.**

There are several built-ins throughout the house, including kitchen and laundry room cabinetry, closets in the hallway and all bedrooms with shelving, bathroom sinks (Figure 25), and shelving in the storage closet. Painted, wood composite built-ins, most affixed to the walls with metal bracketing are in fair to good condition.

The storage closet, is not original to the house. It has some peeling paint on the shelving, and should either be removed or repainted. Built-ins in the kitchen have been painted and remodeled multiple times, including modernization of the stove and sink. The kitchen cabinet under the sink has water damage and some mold, and the plumbing should be repaired to prevent further water damage to the wood. The sink built-in in the master bathroom was replaced since 2013 with a modernized sink and cabinetry that, while not historic, is not directly opposing the historic character. Any future remodels and modernization of the kitchen and bathrooms should emphasize restoration of original materials where extant and continue to consider sympathetic designs and colors to the historic layout and color scheme in areas where historic materials have been removed.

## Fenestration

### Windows

The interior of windows and window frames are in overall good condition. Glazing of all windows is in good condition, no window glass was cracked or damaged. No draft or condensation was detected around any window sashes or frames. There is some gapping and deterioration of wood frames around the plate glass windows in the east

elevation, which should be stripped of paint, repaired, and repainted if gaps continue to grow. A great deal of dirt and debris was found in plate glass windows W1-W3 of the garage. Along with peeling paint, this indicates that there is some interior degradation resulting from the gaps in the frames seen from the exterior. Some oxidation of aluminum window frames and metal screws is evident in bathrooms, but these windows are in otherwise good condition and do not require any repair other than cleaning.

Further information on the repair of historic wood windows can be found in Preservation Brief 9, *The Repair of Historic Wooden Windows*, by John H. Myers.

**Figure 26 - View of atrium facing west.**

### Doors and Door Openings

The interior doors are generally in excellent condition, and doors to the exterior are in good condition, as detailed above. Interior doors include single panel hollow-core doors from common spaces to bedrooms, bathrooms, and the laundry room; the sliding glass doors of the atrium (Figure 26); and the single panel solid-core door from the

kitchen to the garage. There is slight oxidation on the aluminum frame of the atrium doors, which can be treated with an appropriate cleaning agent. There is some difficulty in moving the sliding doors along the track, which can simply be treated by removing dirt and lubricating with a non-stick silicone lubricant, respectively. The non-historic, solid-core door from the kitchen to the garage is painted on the kitchen side and varnished on the garage side. It is cracked and separating along the bottom edge, indicating some water damage, and has some surface level scratches. It is otherwise in fair condition and should be glued or epoxied and painted to protect against further damage. All other interior doors are painted white and in good to excellent condition. Hardware appears to generally be original.

## Flooring

The original flooring in the house was carpet, ceramic and asbestos tiles, and concrete. This historic material has been replaced throughout most of the house.

It is recommended that, as maintenance and restoration budget allows, the various non-historic flooring materials be removed and replaced with clear sealant on the concrete slab, wood floors, cork, or carpeting and tiles similar in color scheme and pattern to what would have been historically found in this or similar Contemporary houses as a restoration project.

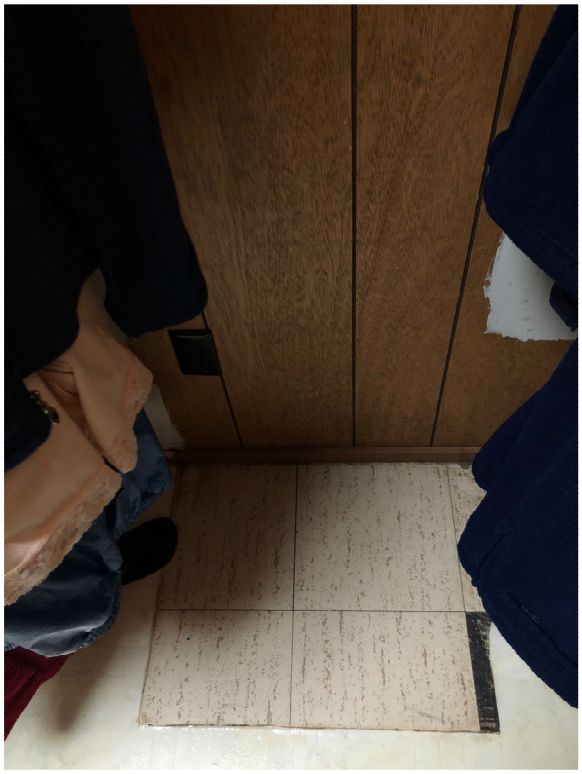

**Figure 27 - Original asbestos tile and modern linoleum, storage closet.**

**Carpet**

Most of the rooms in the house have a non-historic short-weave, light gray carpet. This carpet is in good condition, carpet padding and plywood subfloor underneath does not feel damaged, and the carpet does not show any signs of water damage or any deterioration outside of normal wear.

**Concrete and Brick**

The atrium of the building is floored in medium-aggregate concrete in the same style as the exterior spaces, with wooden separators between blocks. This concrete is in excellent condition and has no signs of cracking or water damage (Figure 26). There are two rows of brick in good condition between the concrete and the south wall of the atrium.

**Tile and Linoleum**

Three kinds of tile and one style of linoleum are found around the building. A small sample of the original asbestos tile can be found in the storage closet directly against the unpainted portion of the wood paneling (Figure 27), and is in good condition. The sink area of the guest bathroom has pink tiling that appears to be historic (Figure 25), which is in good condition, including the dark grout between tiles. Bedroom A and the storage closet both have non-historic white linoleum flooring in fair condition, with some divots and separation of pieces at the seam. The

**Figure 28 - Bedroom wing hallway facing east.**

bedroom hallways, kitchen, laundry room, dining room, and living room hallway are all tiled in a mottle light gray tile with dark grout (Figure 28). This tile was installed by the previous owner as a do-it-yourself project. Despite being in overall good condition, this tile is misaligned and detracts from the historic character of the rooms in which it is found.

**Figure 29 - Living room facing east, incuding interior face of chimney.**

## HVAC and Plumbing Systems

The main heating source for the building is the historic radiant floor system, which remains in good working condition. There are no signs of any leaks or pipe damage that would be a risk to the foundation or other materials of the house. A permit for repairs or improvement of gas piping for the boiler and another for the heating open loop system were approved in early 2017, and the project is recorded as complete. Because of the unique style and good condition of heating, this system should be carefully maintained. The interior face of the chimney, located in the living room, is in overall excellent condition, excepting minor degradation of mortar between bricks, and the chimney is in

working order. A few insect cocoons were found in the spaces between bricks left by the recessed mortar, and it is recommended that these be removed. If there is further evidence of insect activity in this area, it should be explored for possible areas of ingress and an insect repellent applied to the areas of the chimney that have cocoons so as to avoid a propagation that may damage extant historic material.

Non-historic ventilation ductwork is visible in the guest bathroom, bedroom hallway, and master bedroom and bathroom (Figure 28), and is not exposed in other places throughout the house. This ventilation is in good working condition. There is also a vent in the kitchen, which is sealed and not in use, but could be reopened for intended use and improved ventilation throughout the house. There is no air-conditioning in the building. If possible, a restoration project to remove the historically insensitive ductwork should be undertaken.

The plumbing in the building is in good condition. This assessment is based partially on experiences of the homeowner shared during an interview by the author/surveyor, providing details of renovations to bathrooms, the modernized kitchen sink and laundry room appliances. It is also based on lack of evidence of water damage in walls or at the floor and foundation level, outside of damage that is clearly linked to standing water on the roof and the flow of water from exterior drainage. Specifically, the Roman shower was renovated and repaired due to natural springs leaking through cracks and erosion in the foundation into the shower, the floor of which is slightly below ground level, and not from any of the plumbing in the house, as was confirmed by a licensed plumber contracted by the building owner. A licensed plumber should be contacted for any questions or concerns related to maintenance of plumbing.

### Electric and Lighting

Due to the abundant natural lighting provided by the many large windows throughout the building, there is little built-in lighting within the house. The only extant historic globe pendant lights are the light over the main entrance and one in the entry hall. Most, if not all, internal historic light fixtures and their switches have been removed. These should remain, and should they become a safety hazard, a specialized electrician qualified to conduct sensitive electrical updates should be consulted. The only other lights found are in the bathrooms, master bedroom, a few closets, and the bedroom hallway. The bathroom lights are not original while the hallway light is, and all are in good condition.

Electrical wiring of the house meets code, based on the records held by Washington County showing a permit for an electrical upgrade project for any wiring and outlets that are 200 amps or less, and that project permit is listed as final. There were no concerns or further notes over condition or maintenance of electrical and lighting, although a licensed electrician should be contacted with any questions or concerns related to maintenance of electrical systems.

## Summary

The greatest challenge faced by this property is mitigating existing water damage and prevent future water damage as much as possible. The most important steps to this repair and maintenance of the property have been identified. The first is improved drainage of the roof through gutter maintenance and exploration of further options for guiding water away from the flat portions such as adding roof drains and wall scuppers that funnel water through downspouts from the sections that most commonly have standing water. The second is regular monitoring for further deterioration in areas that have been identified as having water damage or high risk of such damage. The third is to regularly determine where new natural springs have begun on the property and

maintaining appropriate drainage and grading to keep as much water away from the foundation as possible.

The second great challenge to this property is the damage done by a succession of several owners with limited budgets, and in many cases without the understanding that this property might be a valuable resource within a larger historic neighborhood. The current owners have done a great deal of work to mitigate water damage at both ground and roof levels, repaired materials and systems throughout the house, and think of their home as a historic resource. However, there has been a great deal of damage to historic materials, and a lack of consistent maintenance over time has taken a toll on extant original fabrics. Even relatively simple rehabilitation projects such as removing paint from the interior of roof planks would require an investment of time and money that is not feasible for many property owners. Other changes and damage to historic building fabric from water damage and do-it-yourself renovation projects cannot be reversed without completely removing the damaged, painted, or poorly-installed materials, many of which are difficult or impossible to replace in-kind or with the same fabrics as existed originally due to the material type. Extant historic material, most importantly character-defining features of original window glass, wood window frames, the chimney, and pendant lights should be preserved with regular maintenance.

Recommended resources for a property owner to use appropriate maintenance methods for the management of this property as a historic resource include Preservation Briefs 1 and 6, regarding historic masonry; Preservation Brief 39, regarding moisture control; Preservation Brief 47, regarding the maintenance of smaller historic buildings; and Preservation Tech Notes Number 22, regarding the maintenance and repair of historic aluminum windows. These resources are curated by the National Park Service (NPS) and can be freely accessed online on the Park Service website. While not all information in these resources is necessarily directly applicable to this building or

intended for a small-scale private residence, they are excellent guides to appropriate handling of materials and overall maintenance. For further interest in the detailed or technical aspects of preservation of a historic resource such as this property, Preservation Briefs 17 and 18 provide guidelines for identifying character-defining architectural feature and identifying and preserving the defining elements of a building interior. In addition, Oregon Heritage maintains directories of historical assessment consultants, preservation contractors, and material suppliers which may be useful to homeowners undertaking rehabilitation and restoration projects.[106]

106 Oregon Parks and Recreation Department, Oregon Heritage, *Oregon Preservation Contractor Directory: Consultants* (Salem, OR, June 2014), http://www.oregon.gov/oprd/HCD/docs/HistoricalAssessmentConsultants.PDF.
Oregon Parks and Recreation Department, Oregon Heritage, *Oregon Preservation Contractor Directory: Contractors* (Salem, OR, June 2014), http://www.oregon.gov/oprd/HCD/docs/BuildingContractors.PDF.
Oregon Parks and Recreation Department, Oregon Heritage, *Oregon Preservation Contractor Directory: Suppliers* (Salem, OR, June 2014), http://www.oregon.gov/oprd/hcd/docs/suppliers.pdf.

## Site Map


**Figure 30 - Site map of 8510 Southwest Cecilia Terrace.**

# CHAPTER IV

# CASE STUDY TWO: 7310 SOUTHWEST 84TH AVENUE

## Introduction

This report is a condition assessment of the building on the property at 7310 SW 84th Avenue, located in the Bohmann Park subdivision of unincorporated Washington County. The report is based on a March 2018 site visit by Samantha Gordon, University of Oregon graduate student and Historic Preservation, MS candidate. This visit was conducted at the invitation of the property owner, in response to a request by Samantha Gordon in relation to research on contemporary style houses built by Robert Rummer. All the data supplied below were gathered through visual observations. No destructive testing was applied to the structure. No formal hazardous material testing was undertaken and no hazardous material was observed; it is possible that materials may contain asbestos or lead paint given the time period of construction and documentation of standard materials used by the builder for this house type. The building is currently inhabited, and no hazardous materials were found. The findings in this report were based upon the presumption that the building will continued to be inhabited and maintenance will continue at the current level.

### House History

The house at 7310 SW 84th Avenue was built in 1970, and the period of significance for the property is 1970, due to this and architectural significance being the main criterion for the property's classification as a historic resource. This house has been owned by four different families and rented by several others since its construction, and has been under the care of its current owner since 1988. In an interview, the current owners noted themselves to be the second owners of the property and those residing in the building

between the original owner and themselves to be renters. Records show that the original owners held the property for eleven years, to the second owner for two years, the third owner for two years, a return to the second owner for another two years, and then finally to the current owners.[107] According to public records from Washington County, the only permits on file for this property since it was built are for minor upgrade to electrical and plumbing systems.[108]

**Site**

The subdivision is located in unincorporated Washington County, sharing borders with Beaverton, Tigard, and the city of Portland. The house at 7310 SW 84th Avenue is located on the east side of 84th Avenue, facing west, at an approximate latitude of 45.467167 and longitude of -122.763417. This is on the eastern side of the subdivision. It it set back from the property line with an average-sized lawn area for the neighborhood. There is a straight concrete path connecting the sidewalk to the front door and a concrete driveway leading to the two-car garage. The property line is delineated by a vertical board wooden fence on all but the west (primary) elevation and the westernmost portion of the south elevation.

The site itself features a lawn with portions of grass and portions of woodchips in the front yard; the yard is split by the concrete driveway and paths to entrances. There are three large deciduous trees and one large evergreen tree in the front yard, along with several shrubs and a small deciduous tree that is not a Japanese maple, unlike many of the other properties in the subdivision. A dirt footpath runs along the southern

107 Sue Bowers (homeowner, 7310 Southwest 84th Avenue), interview by author, digital recording, Washington County, OR, February 20, 2018.
Chain of Title for taxlot 1S124CB05121, Washington County Department of Revenue and Taxation, Hillsboro, Oregon.

108 "Permits Project & Activity Report for 1S124CB05121," Washington County Technology Services, http://washims.co.washington.or.us/GIS/index.cfm?id=14&sid=4&IDValue=1S124CB05121 (accessed March 20, 2018).

edge of the lawn to the backyard. The backyard contains a concrete deck bordered with gravel, gravel and dirt bordering the house on all sides, a retaining wall placed about two feet away from the fence along the eastern side of the property planted with trees and shrubs, and grass in all other areas.

**Figure 31 - Membrane roofing and vents, north façade, facing southeast.**

## Exterior Condition Assessment

### Roof

This roof is a single gable, low-pitched along the line of the main entry and flat on both the bedroom and service wings. There are no overhanging trees or other structures. A chimney is located on the east façade, skylights are concentrated to the southern side of the building, and vents are located around the entire roof system.

#### Membrane Roofing

Unfortunately, the author/surveyor did not possess the proper equipment to safely investigate the roof of the house to the fullest extent in the inclement weather conditions at the time of survey in March 2018. Observations of roof conditions were made based on visual inspection from the ground, an eight-foot ladder, and interior evidence of damage.

The original roof was asphalt and gravel. The current PVC resin-based membrane roofing material, a 60 millimeter-thick IB Roof Systems system installed in 2016 by the Hillsboro-based company Orion Roofing, is not original to the house (Figure 31).[109] It has been replaced and repaired three times since the original construction. The membrane roofing appears in good condition, and there was no gapping or breakage in the seams of the material or evidence of tears large enough to provide visibility of the lower layers. There is little to no warping of the membrane or interior water damage indicating that the watertight nature of this roofing material has been compromised.

**Figure 32 - Membrane roofing, east parapet, wood and chicken wire grating over skylight, and south chimney flashing, south and east façades facing northeast.**

109 "Residential Materials," Orion Roofing and Sheet Metal, https://www.orion-nw.com/residential-roofing/residential-materials (accessed March 20, 2018).
Technical Data Sheet: IB PVC Single-Ply 60 (IB Roof Systems, Inc., 2015).

Because of the low-pitched and flat nature of the different portions of the roof, there were several places with standing water and indications that such stagnant pools were commonplace in those areas. There was some biogrowth in the seams of the roof membrane and in the pools of standing water, as well as foliage, dirt, and other organic debris, mainly concentrated in these pools and against the aluminum parapet (Figures 31 and 32). This is especially prominent on the southern portion of the roof, where there was one stagnant water area that was much larger than others around the roof and had patterns of biogrowth and debris collection indicating that this larger collection of water was common in this area. This should be addressed with appropriate pressure of power-washing and application of chemicals to remove existing biogrowth and discourage further propagation.

**Eaves**

The aluminum eaves, fascia board, and parapet and cedar soffits extend on portions of all four façades. They are overall in good condition. The stained cedar roof planks, which extend lengthwise across the house from east to west, retain their original finish and are in good condition. There is some checking and a small amount of mildew concentrated in the areas around the rafters. The painted, exposed rafter ends are squared off and end several inches within the ending of the eaves themselves. The rafters are in excellent condition, with only minor weathering to their corners and paint. There is no evidence of separation between or warping of roof planks and soffits, and there are no gaps between rafter ends and planks or rafter ends and siding.

**Chimney and Vents**

The chimney, which goes through the roof system, is made of unglazed red bricks measuring eight inches by two inches by three and a half inches, with corbeling at the top row of bricks and a small metal chimney crown. The bricks are laid with a half-inch

mortar in a stretcher bond, and this mortar has been applied with a concave profile, rather than a mortar surface flush with the brick.

Overall, the chimney is in good condition. The flashing where the chimney meets the roof is tight and shows no signs of rust, water leakage, or biogrowth on the membrane or aluminum surfaces or seams (Figure 32). There is some biogrowth on the brick itself, largely on the southwest corner of the upper portion of the chimney, although there are no major concentrations. The most notable concentration is most likely because of the greater amount of sun to which this area of the chimney is exposed, allowing for more moss growth. The portion of the chimney below the eave line is in the best condition, as it has been largely protected from weathering and water damage by the eave overhang. There is some efflorescence on the chimney, particularly on the north side near window bays and on the east and south portions of the chimney near where tools or other items in the yard touch the bricks (Figure 33), likely due to accumulation and evaporation of rainwater and dew around these objects.

**Figure 33 - Chimney, east façade facing west.**

Cleaning this efflorescence is not essential to the building condition, but it will improve the appearance and provide a cleaner surface if there is a future need to repoint the mortar. It is not recommended that any sealant be applied to the brick, as this may create more damage in the long term as moisture currently in the brick or absorbed through unsealed points over time as it is unable to be released, as well as potentially causing more efflorescence or other discoloration. Appropriate cleaning methods to remove efflorescence and biogrowth include dry-brushing with a stiff natural or nylon bristle brush followed by wet brushing with the same brush or a gentle, acid-based chemical cleaner, while removing biogrowth and discouraging future growth. Any cleaning method should be patch-tested on an unobtrusive area before being used on the entire chimney. The bricks should not be treated with abrasive methods such as power-washing or sand-blasting, as this will damage both brick and mortar and lead to deterioration of the material.

Detailed recommendations for cleaning the brick of this historic resource can be found in Preservation Brief 1, *Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings*, written by Robert C. Mack and Anne Grimmer, and more information on the damage done by abrasive cleaning methods can be found in Preservation Brief 6, *Dangers of Abrasive Cleaning to Historic Buildings*, written by Anne Grimmer.

There are several metal vents along the north portion of the roof and one on the western side of the peak of the single, low-pitched gable. These only have a small amount of biogrowth on them, mostly concentrated on the north side. The only appreciable site of oxidation was located the vent on the gable peak, which shows noticeable oxidation along the shaft, although little to no damage on the cap. Although the vents could not be more closely inspected due to safety constraints, there is no internal evidence of water damage around the vent sites, and the only recommendation

is for cleaning and painting in places on vents that show oxidation in order for them to last longer before requiring replacement.

**Skylights and Lighting**

This building has three skylights, all of which are all in good to excellent condition. The original atrium skylight was replaced in 2013 by the current owner with a more efficient and watertight model (Figure 34). The other skylights in the house are still the original material, according to the owner's records. The trim and framing of all skylights was repaired in 1999. The skylights show no signs of degradation, biogrowth or rust, and there are no interior signs of water damage around the skylights and their framing.

**Figure 34 - Skylights and pooled water from poor drainage on roof, south façade facing north.**

There are four sets of exterior lights on the house on the north and east façades. This house does not have any exterior pendant globe lights, which is unusual for a Rummer home and, along with material scarring in soffits on the west elevation and extant interior lights, indicates that historic lighting was removing. Three sets of industrial-style directional lighting can be found on the north façade of the building. None of these sets match each other or other lighting around the building. These lights, while a later addition, are in excellent condition. The backyard directional lighting appears to be

historic, and is in excellent condition, showing no oxidation of the metal shade or evidence of moisture or wear in the light casing.

**Roof Drainage and Downspouts**

The drainage systems of the house are not historic. The building does not have any visible traditional gutters, but does have scuppers around the parapet. These drain into downspouts three inches in diameter found on each façade. The owners report no drainage problems and the amount of standing water on the roof did not indicate any blockage. The west and east façades have two downspouts, the north façade has one, and the south façade has three. The downspouts connect to a pipe that directs water along the side of the house to drain into the street. The only other opportunity for introduction of debris is at the site where downspouts meet the drainage pipe (Figure 35). This connection, while open, is protected by a tight-meshed metal screen that

**Figure 35 - Downspout and drainage join detail, south façade.**

prevents debris such as pine needles, sticks, and other foliage from entering and blocking the drain. The downspouts and drainage are in excellent condition.

## Walls

The building is a post and beam constructed frame made of cedar two-by-fours connected to the concrete slab foundation by sill plates. The cladding of this house is T-111 exterior grade plywood panel siding, about four feet per panel, which has been painted a very light pastel green-gray. Cladding is applied to the studs with nails, using only a secondary layer of particle board as insulation.

### West (Primary) Elevation

The siding of the west elevation, or main façade of the house, is in excellent condition. The siding on this elevation saw repairs and some in-kind replacement of historic material in 2002.

### North Elevation

The siding along the north façade is in good condition. There is very minor weathering of the wood along the edges of grooves and joins, but no other signs of wear or damage. Some of the siding on the western side of this elevation was repaired or replaced in-kind in 2002. This façade has a wood awning that was affixed to the building with metal brackets and toenailing after the period of significance. While this awning is in good condition aside from a small amount of biogrowth along the top, joins, and north side and weathering along the edges, removal would be best in terms of restoring historic character.

### East Elevation

The east façade, which faces the backyard, is primarily dedicated to floor-to-ceiling glass windows, sliding glass doors, and the brick chimney. The details of these features and their conditions can be found in other sections of this report. There is a significant gap

between the roof beams and the chimney, and insulation can be seen through the gap on the south side. It is recommended that these gaps be sealed to prevent infiltration of water or insects that would hasten decay. In the meantime, these gaps should be monitored to ensure they are not getting larger or showing evidence of racking in the structure or chimney by changing in angle. Aside from these gaps, this façade, including siding, is in good condition.

**South Elevation**

The south façade is in excellent condition. There is some minor weather at the corners of this façade, but no other signs of wear or damage. Large portions of the siding on this façade was repaired or replaced in-kind in 2016.

**Figure 36 - Siding and windows, south façade facing east.**

## Fenestration

### Windows

There are sixteen windows across the exterior façades of the building, not including skylights or windows to the atrium, which is treated as an interior space. The most notable and character-defining window is located on the west façade in the front bedroom. This stained-glass window sets this property apart from other Rummer houses sharing this model, as it was a customization request made by the original owner of this property during the building process (Figure 37). The window features a tree with a brown braided trunk and branches, green leaves, and draping vines set against a white background and sitting in a blue pool of water with a pile of gray stones in the bottom right corner.

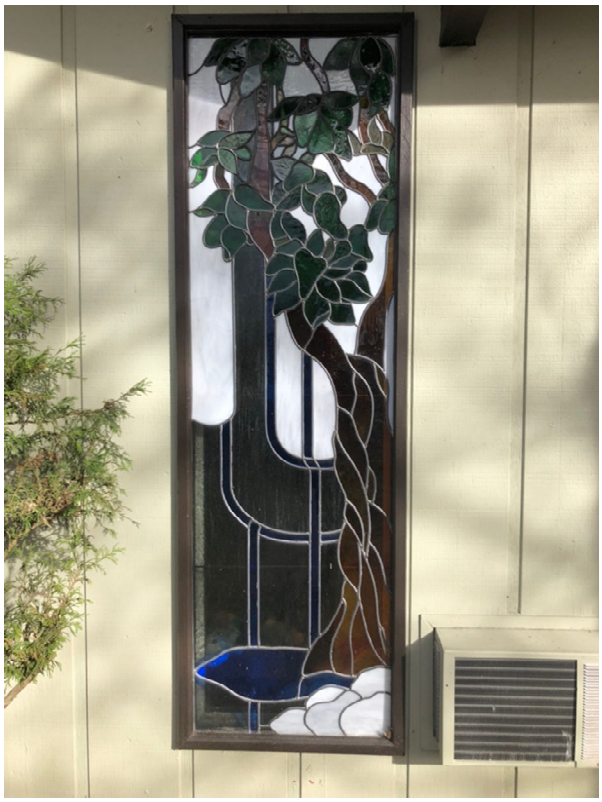

**Figure 37 – Stained-glass window, west façade.**

Many of the windows have had their original single-pane glass replaced over time as the unknown historic tint became oxidized and discolored, although the original

wood frames have been retained in the plate glass windows. All of the window frames on the south façade have been replaced with vinyl and historic trim with plywood. The frames on the north side retain their historic materials. The glazing of all windows is in good condition and does not require repair at this time. There is some separation between the window frames and the rafters at the exterior, which should be monitored and insulated if possible. The wood frames and trim of the plate glass windows, which are located on both the east and west facades, are in excellent condition. There is no peeling paint, evidence of moisture damage, or other signs of weathering.

**Doors**

There are seven doors on the exterior façade of the building, including the front door, two garage doors, a door from the garage to the north façade, one sliding glass door on the north façade, and two sliding glass doors on the east façade. The front or main entryway, which leads to the atrium, is the non-historic red-brown solid-core door with non-historic hardware and a non-historic black metal security door attached to the frame. The frame of this door, the door itself, and the security door are in excellent condition, with no peeling paint or signs of weathering. Ideally, the security door would be removed to restore historic character of the property, but this is a minor detail. The sliding glass doors on the north and east façades are overall in excellent condition. The sliding doors of the east and north façades have both been replaced with new glass in vinyl frames between late 2017 and early 2018. The plywood, horizontal-paneled garage doors, which appear to be historic and have no record of being changed, are in fair to good condition. Their frames are in good condition, having some minor scratches and a few chunks of wood missing, but this has been painted over to avoid further deterioration (Figure 38).

**Figure 38 - South garage door and frame detail, west facade.**

## Foundation

The foundation of the house is a concrete slab on grade with PVC pipes running through it for radiant floor heat using a radiant heat boiler and pump. The foundation is in good condition. There were some repairs done in 2016 due to leaking pipes causing flooding in the interior. The foundation has a few small cracks and some efflorescence, mostly on the east and south façades. Cracks and efflorescence are due to settling of the clay-heavy soil under the foundation and poor drainage and water running directly against the concrete. The cracks should be sealed with an elastomeric sealant and then monitored for further cracking or damage, especially because of the make-up of the soil and likelihood of future potential sources of water damage or drastic settling.

## Landscape

### Grounds

The house is located on property near Fanno Creek. This proximity has led to the emergence of spontaneous natural springs at unpredictable locations on properties on the east side of the subdivision, causing consistent challenges with drainage, especially in moving water away from the building. The current owner has undertaken drainage projects including the downspout and drainpipe to street as detailed above and the addition of further use of gravel in the yard spaces and other drainage around the property, the most recent of which was added in 2017. More drainage may need to be added over time; while this property has to date had few or no natural springs occurring unlike some other properties in the subdivision, more natural springs may appear and other drainage challenges will continue. This should be closely monitored in order to keep as much water as possible away from the building. Gravel around the foundation on all sides provides a place for water dripping from the coping to drain away from the house.

Non-historic vertical board screening fences at the property lines and camouflaging the pathway from the west façade to the north façade and backyard are in fair to good condition. The west façade fence is in the best condition and other portions are showing signs of heavy weathering and discoloration. The historic terracing of the eastern edge of the property has been maintained by the current owner, although many of the original trees were removed due to their blocking light into the house and overcrowding as they matured. The terracing is in poor to fair condition, with a stable retaining wall, although this wall shows a great deal of wear and heavy biogrowth, especially on the stairs to the upper level. This should be removed and the concrete

treated with appropriate chemicals to discourage future growth as much as possible, as the biogrowth will speed deterioration of the historic landscaping concrete.

**Figure 39 - Terracing, landscaping, wooden deck, fence, and concrete paths and deck facing southeast.**

### Concrete Pathways and Deck

The property features several concrete pathways and a concrete plaza or deck, all of a medium-aggregate concrete that has been power-washed to expose the top layer of aggregate. The concrete is overall in good condition. There is also a wooden deck situated on top of a concrete deck in the rear yard (Figure 39). There are some cracks in the concrete of the driveway, likely from settling and wear. Those at the top-wearing surfaces should be patched with concrete of a similar mix and those toward the sides of the slabs should be treated with elastomeric sealant, and all cracks should be monitored for further deterioration. Biogrowth is present on pathways around the house, most heavily concentrated on the individual stepping stones of the concrete path in the backyard and minimally along the paths at the north façade. This should be removed

and the concrete treated with appropriate chemicals to discourage future growth as much as possible, as the biogrowth with speed deterioration of the historic landscaping concrete. The pressure-treated wooden deck, added in 2017, is in excellent condition.

## Interior Condition Assessment

### Overview

The interior of the building ranges in condition from fair to excellent. The current owners have done some interior rehabilitation and made some surface-level remodels, but overall have retained the character of the interior and kept as much historic fabric as possible. A variety of historic and non-historic materials can be found in different rooms, with most changes being either superficial or sympathetic to the original design.

### Ceilings

The ceilings are, as aforementioned and following the contemporary style, simply the exposed, continuous cedar plank roof of the building, the same material as the exposed plank seen in the exterior soffit. These are in fair to good condition. Interior ceiling height ranges from eight feet, five inches to eleven feet, seven inches.

The finish of the planks is the original light varnish and there is minor checking to some planks and places where wood putty has been used to fill nail holes. There are a few places throughout the house where planks have begun to separate, likely due to racking of the walls from concrete slab settling or the planks themselves expanding and contracting from water infiltration. This has created gaps of up to about a quarter of an inch. The only notable warping and discoloration is found in the bathrooms and one plank in the master bedroom, due to inadequate ventilation of steam and moisture. This has led to some darker or lighter areas that are likely mildew and mold or fungus. Further testing of spores would be required for correct identification, but as these areas show no apparent characteristics of extremely hazardous materials on a macroscopic

level, this is not likely to be necessary. This growth should be treated by primarily improving ventilation and also by cleaning affected planks by vacuuming to collect loose spores and applying a mild solution of vinegar or detergent and wiping with a clean, damp towel.

**Figure 40 - Ceiling and top of wall, master bathroom.**

There is some checking in exposed cedar roof beams throughout the house, but no indication of torsion or warping in these structural beams or water damage and rot unless mentioned above. Roof beams are painted the historic brown color, and the portions of the beams in the atrium were repainted in 2012 to protect them from weathering and water. There is a false beam in the bedroom wing hallway, with much smaller dimensions than and at an opposing angle to the actual structural roof beams, which conceals plumbing and ductwork.

**Skylights**

The interior of all three skylights are in good to excellent condition. The atrium skylight was replaced in 2013 with a new fixture sympathetic to the original design, and the replacement is in excellent condition. The other skylights around the house have original or near-original materials, other than the pressure-treated wood trim that was added in

1999. All are in good to excellent condition and do not show any signs of leaking or water damage.

### Walls

The interior walls of this post-and-beam light-frame constructed building are largely drywall applied to the cedar two-by fours. This departure from the more characteristic plywood paneling was done at the request of the original buyer and owner, according to the understanding of the current owners. The drywall is in excellent condition throughout the house and shows no signs of moisture intrusion. There are vertical cracks in the wall of the southwest bedroom running from the southwest corner window to the ceiling, most likely from settling in the structure after the disturbance caused by replacing the window. The atrium and the south wall of the living room are clad with T-111 plywood siding painted the same color as the exterior, which is in excellent condition.

### Built-Ins

There are several built-ins throughout the house, including kitchen cabinetry, laundry room amenities, closets in the hallway and all bedrooms with shelving, bathroom sinks, and shelving in the storage closet. Painted, wood composite built-ins, most affixed to the walls with metal bracketing, are in overall good condition. Closet doors retain the historic grasscloth fabric finish (Figure 41). The shelving shows no signs of water damage or damage from the building racking or settling.

Built-ins in the kitchen are non-historic or refinished from a remodel in 2013. These kitchen built-ins are in the original footprints and color of the historic cabinetry, aside from the counter separating the main kitchen from the breakfast nook, which is eight inches higher than the original. These built-ins are in excellent condition. The vanity built-in in the master bathroom was replaced in 2015 with a modernized sink and cabinetry that is sympathetic to the historic character. Any future remodels and

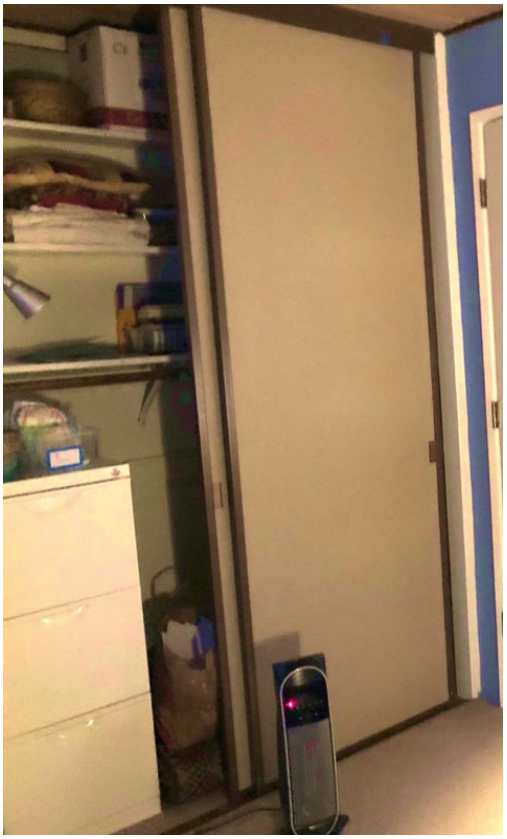

**Figure 41 - Closet and built-in shelving, east children's bedroom.**

modernization of the kitchen and bathrooms should emphasize restoration of original materials where extant and continue to consider sympathetic designs and colors to the historic layout and color scheme in areas where historic materials have been removed.

## Fenestration

### Windows

The interior of windows and window frames are in overall good condition. Glazing of all windows is in good condition, no window glass was cracked or damaged, and no draft or condensation was detected around any window sashes or frames.

Records kept by the current owner on rehabilitation and adaptive changes made to the building show that the glass of windows over the garage were replaced and wooden frames repaired in 1995, glass and frames in the south elevation were replaced with new glass and vinyl windows in 2002, and the living room window glass on the east

elevation was replaced with low emissivity argon-filled glass in 2017-2018. All windows were replaced with the same type as the original and occupy the same window opening. There is some gapping between wood pieces and deterioration of wood frames around the float glass windows that have not yet been replaced, which should be stripped of paint, repaired, and repainted if gaps continue to grow. These windows are in otherwise good condition and do not require any repair other than regular cleaning and maintenance. Further information on the repair of historic wood windows can be found in Preservation Brief 9, *The Repair of Historic Wooden Windows*, by John H. Myers.

**Doors and Door Openings**

The interior doors are generally in excellent condition, and doors to the exterior are in good condition, as detailed above. Interior doors include single panel, hollow-core doors from common spaces to bedrooms, bathrooms, garage, linen closet, and the laundry room, as well as the sliding glass doors of the atrium. All sliding glass doors in the atrium, which are the only interior sliding door, have had at least their frames replaced

**Figure 42 - Historic linen closet doorknob.**

and possibly the glass as well, although this is unclear from records. These doors are in excellent working condition. Hardware on single-panel doors appears to all be original textured brass.

## Flooring

The original flooring in the house was carpet, asbestos tiles, linoleum, and concrete. This historic material, with the exception of the concrete areas, has been replaced the house with newer carpet, tile, and cork flooring; the replacements have been sympathetic to historic design themes and colors.

### Carpet

The bedrooms, aside from the master bedroom, have a non-historic short-weave, beige carpet. This carpet is in good condition, carpet padding and plywood subfloor underneath does not feel damaged, and the carpet does not show any signs of water damage or any deterioration outside of normal wear.

### Concrete

The atrium and main hallway of the building is floored in medium-aggregate concrete in the same style as the exterior spaces, with wooden separators between blocks. This concrete is in excellent condition and has no signs of cracking or water damage. This is a character-defining feature of the building interior and should be maintained and monitored for cracks or wear that would require the use of concrete patching or an elastomeric seal.

### Tile

The guest bathroom, master bathroom, and the living room have large tile flooring that was replaced or added in 2002, 2011, and 2016 respectively (Figure 43). The bathrooms originally had either asbestos tile or linoleum.

**Figure 43 - Living room facing northeast.**

The living room was originally carpeted. This carpeting was removed and the current tile placed when plumbing pipes failed and caused cracks in the foundation and flooding that destroyed the historic carpet. The current white stone tile flooring is in excellent condition.

**Cork**

The historic carpeting in the master bedroom was removed and replaced with cork flooring in 2015. This flooring in in excellent condition.

**Teak**

The service wing of the house has a Haddon Hall parquet patterned teakwood floor that was installed by the first owner (Figure 44). Current owners have stated that this was applied over the original tile, but it may have been installed after removing the original tiling, based on the height of this flooring in comparison to the rest of the house. This flooring should be treated as historic material and cared for appropriately. It is currently in excellent condition.

**Figure 44 - Breakfast nook and kitchen facing northwest.**

## HVAC and Plumbing Systems

The main heating source for the building is the historic radiant floor system, which remains in good working condition. Because of the unique style of heating and the condition, this system should be maintained for as long as possible. The interior face of the chimney is in overall excellent condition, excepting a small amount of efflorescence. The chimney is in working order, although not currently in use. There is a non-historic wall-mounted air conditioning unit in the kitchen, above the built-in cabinets and next to window N5, that is in excellent condition. Because of its condition, its unobtrusive nature as a small wall unit, and the gap and resulting noticeable patchwork it would leave in the drywall to repair the hole if removed, it is not recommended to remove the air conditioner.

The plumbing in the building is in overall good condition. This assessment is based on several sources, mainly experiences of the homeowner shared during an interview by the author/surveyor and records of renovations to bathrooms, the modernized kitchen sink and laundry room appliances. There is no evidence of water damage in walls or at the floor and foundation level, outside of damage that is clearly linked to standing water on the roof and the flow of water from exterior drainage. While there was a pipe failure in 2016 that caused foundation and flooring problems mentioned above, the damage to both plumbing and foundation was repaired by the current owners in the same year. Additional hot water pipes crossing the house from north to south were installed at the same time as updates were made to the defective pipes, and these were routed through walls and hidden in a false beam through the bedroom hallway, as aforementioned. This did not damage historic materials or compromise the character or integrity of the structure. A licensed plumber should be contacted for any questions or concerns related to maintenance of plumbing.

### Electric and Lighting

Due to the higher-than-average amount of natural lighting provided by the many large windows throughout the building, there is relatively little built-in lighting within the house. There are four historic globe pendant lights found throughout the house. These should remain, and should they become a safety hazard, a specialized electrician qualified to conduct sensitive electrical updates should be consulted. Several projects were undertaken by the current owners to add lighting throughout the house, which is generally sensitive to the historic design. This includes the 2013 addition of lighting in the kitchen, the wiring of which is routed through a hollow created in one of the structural roof beams (Figure 44). Lighting added in the living room and kitchen consists of downward-angled aluminum light fixtures affixed with metal brackets to the exposed roof

beam on the side closest to the wall and wired to new switches. Wiring for the living room lighting was left external to the beam, while cut-outs were made and then covered in the beam in the kitchen to hide the wiring.

Electrical wiring of the house meets code, based on the records held by Washington County showing permits for circuit upgrades and new grounding placed concurrent to plumbing upgrades, which are listed as final and completed projects. There were no visible causes for concern or further notes over condition or maintenance of electrical and lighting, although a licensed electrician should be contacted with any questions or concerns related to maintenance of electrical systems.

## Summary

The greatest challenge faced by this property is to prevent future water damage as much as possible. The most important step in the maintenance of the property is regular monitoring for further deterioration in any areas that have experienced leaks or water damage in the past, whether these areas have been repaired or not, as they will likely be the highest risk for future damage. This includes monitoring the membrane roof, downspouts, windows, foundation cracks, and springs in the property, among other things. The roof should not require replacement for at least twenty years based on the materials and warranties, but as it is the highest risk area for water intrusion and damage, regular condition checks and clearing of debris and standing water in the roof and drainage system is recommended, and connected drainage will definitely require regular maintenance.

The second notable challenge to this property is in continued overall maintenance and the treatment of this property as a historic resource. There has been little damage or compromise of original design through remodels or maintenance, and it is encouraged that the level of thoughtfulness applied in past work be continued. A

general recommendation for this property is maintenance of historic materials throughout the house, including but not limited to roof planks, teak flooring, stained glass and original plate glass windows, pendant lights, and medium-aggregate concrete. Recommended resources for a property owner to use appropriate maintenance methods for the management of this property as a historic resource include Preservation Briefs 1 and 6, regarding historic masonry; Preservation Brief 39, regarding moisture control; Preservation Brief 47, regarding the maintenance of smaller historic buildings; and Preservation Tech Notes Number 22, regarding the maintenance and repair of historic aluminum windows. These resources are curated by the National Park Service (NPS) and can be freely accessed online on the NPS website. While not all information in these resources is necessarily directly applicable to this building or intended for preservation of a small-scale, privately-owned residence, they are excellent guides to appropriate handling of materials and overall maintenance. For further interest in the detailed or technical aspects of preservation of a historic resource such as this property, Preservation Briefs 17 and 18 provide guidelines for identifying character-defining architectural feature and identifying and preserving the defining elements of a building interior. In addition, Oregon Heritage maintains directories of historical assessment consultants, preservation contractors, and material suppliers which may be useful to homeowners undertaking rehabilitation and restoration projects.[110]

110 Oregon Parks and Recreation Department, Oregon Heritage, *Oregon Preservation Contractor Directory: Consultants*.
Oregon Parks and Recreation Department, Oregon Heritage, *Oregon Preservation Contractor Directory: Contractors*.
Oregon Parks and Recreation Department, Oregon Heritage, *Oregon Preservation Contractor Directory: Suppliers*.

## Site Map


**Figure 45 - Site map of 7310 Southwest 84th Avenue.**

# CHAPTER V

# RESOURCE MANAGEMENT OF BOHMANN PARK AS INDIVIDUAL PROPERTIES AND A HISTORIC DISTRICT

## Case Study Conclusions

The Rummer homes in Bohmann Park– along with other Rummer contemporary houses throughout the state of Oregon– are threatened by only a few environmental factors. Nevertheless, each of those factors can lead to the rapid deterioration and loss of a resource if left unchecked. These two properties are near one another in the subdivision, and their floor plans are nearly identical. In fact, the two floor plans are only slight modifications on an Eichler floor plan (Figure 46).[111] Case study one converts the east children's bedroom into a storage space and removes the hall between the guest bathroom and corner bedroom in order to have more space in the existing rooms; case study two removes the same hallways to add a linen closet and more space to the corner bedroom and removes the hobby room door in exchange for a sliding glass door in the kitchen. These similarities allow conclusions drawn from each case to be cross-referenced with a higher degree of reliability in order to establish likely trends.

The greatest direct threat to any contemporary style residence in Oregon and anywhere in the Pacific Northwest is precipitation. This style was designed for a much drier climate in California; contemporary resources have generally held up well throughout the American Southwest because of this. The flat or low-pitched roofs of Rummer homes are poorly suited for the amount of precipitation experienced in the Willamette Valley. If homeowners do not consistently clear drains and make regular

111 "Fairhills #OC-274-R/#OC-574 (Claude Oakland)," Eichler SoCal, Eichler Floor Plans – Fairhills, http://www.eichlersocal.com/the-eichler-community/eichler-floor-plans-fairhills/ (accessed May 20, 2018.)

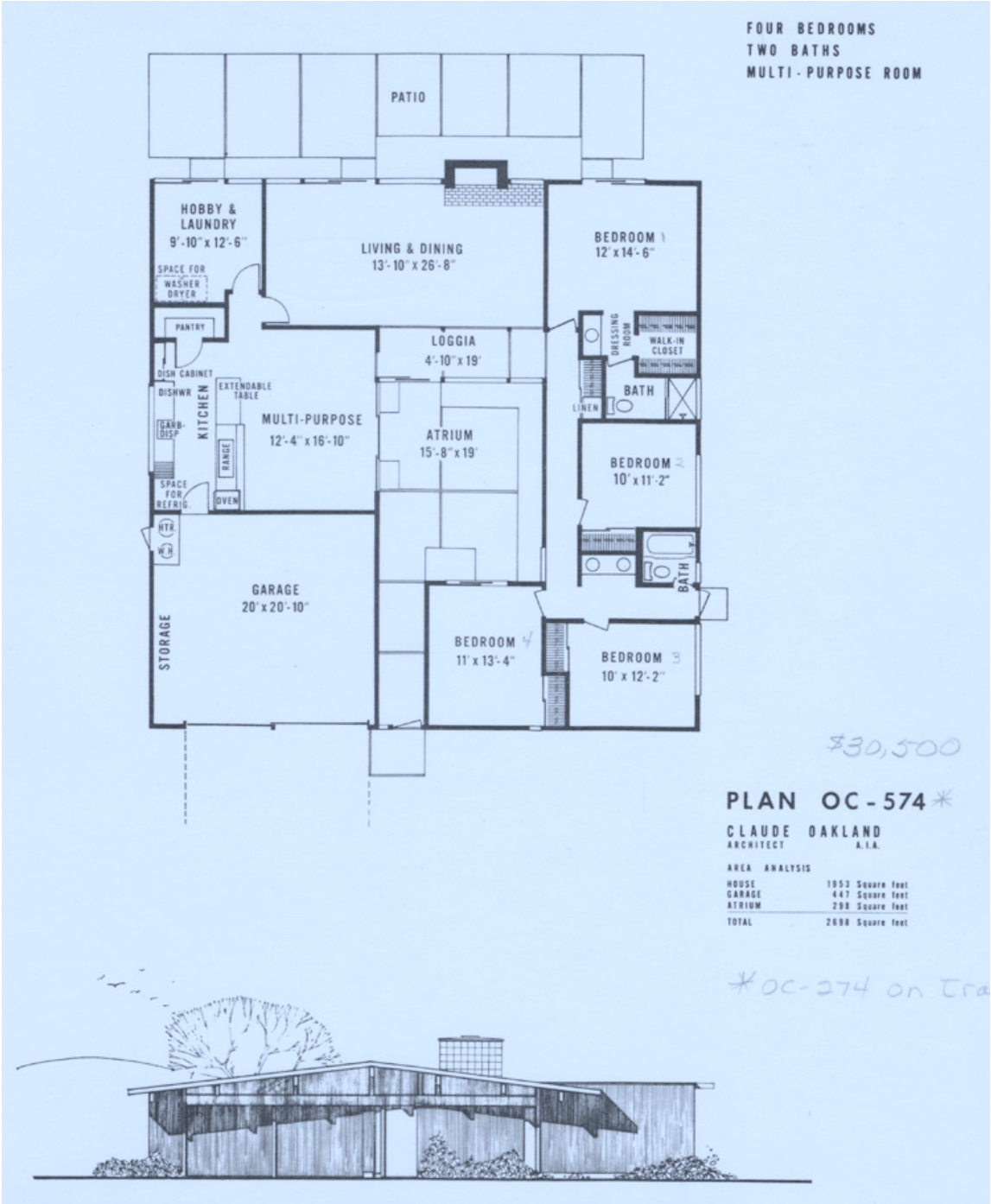


**Figure 46 - Eichler home plan #OC-574 by Claude Oakland.**

upgrades and repairs to their roofs, water damage is quick to occur in roofing materials and throughout the building. The two houses reviewed in condition assessments had very different levels of maintenance on their roofs. This was a major indicator for prediction of interior and siding water damage. These properties were the same model

and had the same roof type. The low pitch and limited space for drainpipes and gutters is generally unsuited for the amount of rain and plant debris found in this climate. Light-colored membrane or aluminum roofs are more resilient than the original asphalt, but additional scuppers, drains, gutters, and downspouts with adequate filtering protection to avoid filling with plant debris are a suitable solution to this problem without ruining a major character-defining feature of the building.

The aluminum roof of Cecilia Terrace was in fair to good condition, as it did not have adequate drainage, and the aluminum is more likely to slowly wear into dips that hold water and leaks in the seams, which indicates that while this is an acceptable choice for maintaining character, it may not last as well in the long term without proper maintenance. The longevity of a membrane roof on the 84th Avenue house is yet untested, due to the relatively brief time since installation, but it has thus far faired very well due to a much higher number of drains and more downspout protection. The east and west façades of both houses, which are the main or front façade and back façade respectively, have eaves overhanging their walls, which protect the siding and all parts of the fenestration, and provide partial protection to the foundation. This protection has been immensely helpful in maintaining better overall condition on these elevations. The addition of eaves or other overhangs on the side façades would be prohibitively expensive and detrimental to the integrity of the building; this is not recommended for any Rummer home, though it is a reminder to anyone caring for one of these resources to provide extra care and attention to the monitoring of the less-protected portions of the building.

The second major source of deterioration to Rummer homes is foundation-level water damage. This is exclusive to the Bohmann Park subdivision specifically. The properties in this subdivision are located near Fanno Creek, and the area has poor

drainage due to the clay levels in the soil.[112] On properties such as the Cecilia Terrace house or many others in the area, this results in spontaneous creation of creeks on the property during heavy rain. The water from these creeks will run to the foundation and cause wear, deterioration, and settling of the ground under the building over time. Without maintenance of proper drainage or channels that keep flowing water away from the building, any resource in this neighborhood is at risk for this damage.

In the case of the Cecilia Terrace property, one result of this was a consistent flooding of the Roman baths, which was initially thought to be due to a basic plumbing problem and was found to be a much larger issue. This was due to the amount of damage caused by aforementioned improper drainage over time, which led to the necessity of changing the style of the bathroom so that it would continue to be usable and not constantly fill with water. The owners also added drainage ditches and gravel around the property to channel water away from the building and out to the street, which has mitigated further damage. Other properties including the 84th Avenue property and another home across the street have also added more and better drainage systems to their properties over time, including ditches, French drains, artificial creek channels, and piping to move water away from the foundations, often having to install multiple alternative styles and position of water containment and spending tens of thousands of dollars over the years.[113] While this is a costly maintenance measure, it is imperative for the preservation of all resources in this subdivision, and it is one that would be required

112 Jeff Gottfried (homeowner, 7040 Southwest 84th Avenue), interview by author, digital recording, Washington County, OR, March 15, 2018.

113 Sue Bowers (homeowner, 7310 Southwest 84th Avenue.
Jeff Gottfried(homeowner, 7040 Southwest 84th Avenue).
Barbara Hansen(homeowner, 8510 Southwest Cecilia Terrace).
Stan Houseman(homeowner, 8630 Southwest Cecilia Terrace).
Paul Nickell (homeowner, 7115 Southwest 84th Avenue), interview by author, digital recording, Washington County, OR. February 15, 2018.

for the longevity and value of a building on property in this area regardless of its status as a historic building.

A third source of damage to historic fabric in Rummer houses is insensitive remodel. This is a threat seen by all contemporary style houses and other midcentury residences. The comparative results of a less sensitive remodel under financial constraints and a thoughtfully-designed adaptation with greater leeway can be seen in the case studies. At the property on Cecilia Terrace, previous owners made drastic changes. They removed interior historic fabric such as flooring and lighting, and damaged other fabric by painting the roof beams and wall paneling, both of which are difficult or impossible to restore. Because of minimal previous maintenance to the foundation and plumbing, the current owners have had to make exceptional changes.

Beyond that, the threat of historic fabric damage and insensitive remodel is lauded far more often than it should be in architecture and design magazines highlighting the rehabilitation of Modernist properties. As one preservationist bitingly states, the Portland-based magazine *Atomic Ranch* might be more accurately titled "*Abusing Atomic Ranches*" because it often features homes that have high integrity of historic fabric and the potential to be preserved as an excellent example of design and construction methods, which are then altered so heavily that few, if any, character-defining features remain. In *Atomic Ranch*, these actions are lauded alongside or ahead of careful and sensitive updates to internal systems and degraded materials that have been preserved as-is or replaced in-kind, in preservation and rehabilitation efforts meeting or exceeding the Secretary of the Interior's standards, whether the home is registered as a historic property or not.[114] An insensitive remodel of another home in the

114 Ross MacTaggart, "My Love/Hate Relationship with *Atomic Ranch*," *Restoring Ross: Other Cool Things*, blog, December 3, 2016, https://restoringross.com/my-lovehate-relationship-with-atomic-ranch/ (accessed February 16, 2017).

Bohmann Park neighborhood, on Bohmann Parkway, was featured in *Dwell* magazine as an example of a "great renovation." While the interior design choices made by the designers who bought the house are stylish and sleek, the couple obscured several character-defining features of the building; painting the fireplace, roof materials, and paneling; applying wallpaper; and remodeling the kitchen with unsympathetic granite and steel.[115]

The most important indicator for predicting condition of historic materials and character-defining features of a Rummer home is owner longevity and access to preservation tools. Owners who have lived in their Rummer house longer, have access to more liquid assets, perform maintenance of their property regularly, or have the social capital for connecting with architects and designers are much more likely to have properties with historic fabric intact and in good to excellent condition. While the owners of the property on Cecilia Terrace have spent a great deal of time and money on the maintenance of their property and have been as careful and thoughtful as possible with their changes to the house, it is overall in poorer condition than the property on 84th Avenue because of the preservation blunders and limited maintenance funds of previous owners. Both properties have enough integrity to be contributing resources in a potential

**Figure 47 - 8535 Southwest Bohmann Parkway, Bohmann Park, facing northwest.**

115 Amara Holstein, "Just Do It," *Dwell*, April 2009, 90-97.

National Register district or locally designated historic district. However, the property on Cecilia Terrace is at higher risk for losing status as a contributing resource or for general deterioration. It would be potentially cost-prohibitive to fully rehabilitate it as a resource on the part of the average homeowner.

There are many educational and financial forms of assistance available to owners of historic properties, and raising awareness of these options amongst Rummer home owners would be a benefit to the preservation of each as a resource. This includes free and readily available Preservation Briefs and other materials created by the National Park Service, Association for Preservation Technology, Oregon Heritage, and others.[116] Financial assistance for historic homeowners includes private grants and public funds. Many of these are only available to buildings that are on the National Register of Historic Places or the local equivalent as either an individual resource or a district. The Bohmann subdivision has been deemed a likely candidate for National Register eligibility as a district by the Oregon State Historic Preservation Office, and has the potential for access to these financial resources if homeowners were to consent to designation.[117]

## Fanno Creek Pump Station

Regardless of potential options for maintenance and damage mitigation assistance on an individual property level, the setting and integrity of these properties as a whole have been threatened previously. They are open to continued threats without greater protections and thoughtfulness in short- and long-term urban planning. As

116 For examples, see suggested sources for property owners listed in chapters III and IV.

117 Oregon SHPO performed a reconnaissance level survey of the Bohmann Park subdivision in July 2012, at which time the neighborhood was deemed eligible for National Register nomination. The author has researched the history of the subdivision, Robert Rummer, and the integrity of properties within district boundaries to an extent that there is a high level of confidence that if such a nomination was put forward to the Oregon State Advisory Committee on Historic Preservation and then to the National Park Service, it would be accepted fairly quickly under Criteria A and C.

aforementioned, the homes in the Bohmann Park subdivision are located in unincorporated Washington County because it was more cost-effective when they were being built, but this also leaves them open to the potential for exploitation now. The same is true for many other Rummer resources, both in Washington County and other parts of the Portland Metro area.

**Figure 48 - View of second set of Fanno Creek Pump Station buildings from Fanno Creek Trail, facing southwest.**

The most prominent example of this, in both the minds of the owners of these resources and from a preservation standpoint, is the construction of the Fanno Creek pump station (Figure 48 and 49), which according to City of Portland records, officially would affect one hundred and fifteen surrounding properties in a one-thousand-foot radius, including those in Bohmann Park.[118] This station is owned and operated by the

118 "SW 86th Avenue Pump Station Neighborhood Information Meeting Announcement", City of Portland Bureau of Environmental Services and Washington County Department of Land Use and Transportation, February 28, 2012, http://extension.oregonstate.edu/washington/sites/default/files/sw86thavepsneighbormeetingminutes2-28-12final.pdf.

City of Portland, which has chosen to build a pump station to the north of the Bohmann Park subdivision to send raw sewage uphill to the city's treatment plant. Stan Houseman, one of the homeowners interviewed for more information about Rummer homes, kept meticulous records of his own and the subdivision community's interactions with the City of Portland Bureaus of Environmental Services and City Council.[119] Personal records and newspaper articles citing Washington County representatives both similarly report City of Portland officials as being unwilling to compromise or consider alternatives due to environmental, economic, or historic concerns on this project.

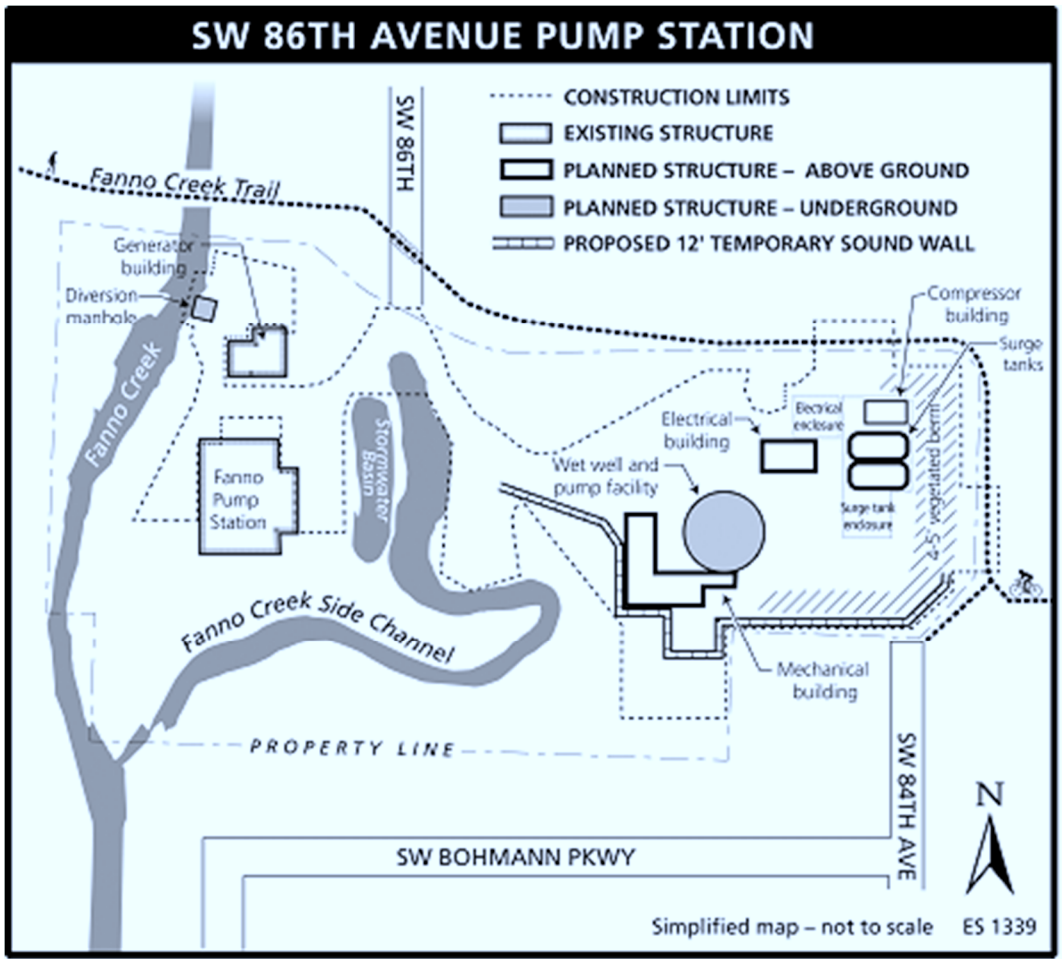


**Figure 49 - Map of Fanno Creek Pump Station, City of Portland Bureau of Environmental Services.**

119 Stan Houseman (homeowner, 8630 Southwest Cecilia Terrace).

The original permit for the pump station was issued in 1998, and further building and expansion has continued intermittently over time, include a period from 2008 to 2010 when the original station was inoperable and before a second station was constructed in 2013.[120] Other options discussed at various points in the planning and construction of this project included paying Washington County the cost of sewage treatment for City of Portland properties on the west side of the hills at a county plant and construction at another site in an industrial area not far from the original pump station and planned site– although this second potential site was within the boundaries of the city of Beaverton, which would require further regulation and care than that required by solely Washington County.[121]

The expansion of this station led to the City of Portland purchasing a historic property previously owned by the Shaver family sometime between 2010 and 2013. This resource was demolished for placement of the new buildings and structures.[122] This loss of a circa-1930s property with high integrity and local significance shows that there is a higher potential level of threat for immediately adjacent properties that are much younger in age and less recognized for their significance by Washington County or the City of Portland. Residents of Garden Home appealed the permit for the construction, running, and maintenance of this station, but over time ran out of options for appeal, had personal

120 Nathalie Weinstein, "Controversial Sewage Project Appealed to State," *Daily Journal of Commerce Oregon*, October 15, 2010, http://djcoregon.com/news/2010/10/15/controversial-sewage-project-appealed-to-state/.

121 Jeff Gottfried (homeowner, 7040 Southwest 84th Avenue).
Stan Houseman (homeowner, 8630 Southwest Cecilia Terrace).

122 Val Ballestrem, "A Visit to Vista Brook," Architectural Heritage Center, http://visitahc.org/a-visit-to-vista-brook/ (accessed April 8, 2018).

damages to self and property value mitigated by the city, or needed to cease their support for personal reasons.[123]

The Fanno Creek station has been an ongoing engineering problem for the Bureau of Environmental Services in Bohmann Park and beyond. The first pump station proved to be undersized, and the second station and additional tanks, completed in 2013, was the cause of most conflict with Bohmann Park residents.[124] Leaks and overflows were common occurrences before and during construction of the secondary site. During this time, construction equipment put additional stresses on the roads of Bohmann Park, a significant feature of the subdivision when considered as a cultural landscape.[125] In February 2018, the city was fined by the state Department of Environmental Quality for discharging into a tributary of Fanno Creek in 2017.[126]

Listing the subdivision as a district now will not help with the Fanno Creek Pump Station, as that is an ongoing conflict between the City of Portland and Bohmann Park residents in which a historic resource has already been lost. Local or National Register designation, if pursued, would help protect these resources from further encroachment of other projects, whether those be incompatible private development or another

123 Shannon O. Wells, "Meeting Yields Few Concessions on Fanno Creek Pumping Station," *Beaverton Valley Times*, October 17, 2013, accessed April 16, 2018, http://pamplinmedia.com/bvt/15-news/198147-meeting-yields-few-concessions-on-fanno-creek-pumping-station.

124 Shannon O. Wells, "Pumping Station Project Begins," *Beaverton Valley Times*, May 23, 2013, accessed April 10, 2018, http://portlandtribune.com/bvt/15-news/153144-pumping-station-projects-begin.
Brad Schmidt, "Sewer Bureau Hopes $1 Million Surge Tank Will Alleviate Constant Fanno Creek Headaches: Portland City Hall Roundup," *The Oregonian* December 6, 2012, accessed April 18, 2018, http://blog.oregonlive.com/portlandcityhall/2012/12/sewer_bureau_hopes_1_million_s.html.

125 Wells, "Meeting Yields Few Concessions on Fanno Creek Pumping Station."

126 City of Portland Department of Environmental Services, "Environmental Services statement responding to DEQ fine for discharge to Woods Creek," February 9, 2018, https://www.portlandoregon.gov/bes/article/672498 (accessed April 17, 2018).

problematic and poorly-planned public works project. Preservation as a land use control or to perpetuate NIMBY-ism and environmental racism is unethical and antithetical to what the field stands for. In the case of Bohmann Park, historic preservation is being used correctly as a land use and planning control to attempt to delay, avoid, or mitigate adverse effects to a vulnerable historic neighborhood.

## Existing Historic Preservation Ordinances and Incentives in Washington County

The Washington County Community Development Code section 373, Historic and Cultural Resource Overlay District, is part of the set of county comprehensive plan documents, and it is the ordinance dedicated to the preservation and protection of historic resources within the county.[127] It ties into Policy 11 in the Washington County Comprehensive Plan. Each section of the ordinance outlines part of the county's legal abilities and responsibilities. These sections reveal small inherent problems with actually using the ordinance to protect resources, although overall the county has a strong code. The ordinance was adopted before 1990, well before development threatened the Bohmann Park subdivision.[128] This ordinance was also, notably, adopted before the 1995 law allowing historic designations to be removed from properties and before the 2016 case of *Lake Oswego Preservation Society v. City of Lake Oswego* limited this

127 "Comprehensive Plan Documents," Washington County Planning and Development, Land Use and Transportation Publications, https://www.co.washington.or.us/LUT/Divisions/LongRangePlanning/Publications/index.cfm.
Washington County Community Development Code 373 – Historic and Cultural Resource Overlay District, https://library.municode.com/or/washington_county/codes/community_development_code?nodeId=ARTIIILAUSDI_373HICUREOVDI (accessed May 10, 2018).

128 Washington County Long Range Planning, "Ordinances Amending the Community Development Code Adopted After November 24, 1989," November 21, 2013, https://www.co.washington.or.us/lut/divisions/longrangeplanning/publications/upload/adopted-ordinance-list.pdf.

right to only the owner at time of designation.[129] Both the law and subsequent challenge brought the contentious issue of owner consent in historic resource designation into the preservation limelight in Oregon and created greater complications to designation of historic properties. Understanding of the preservation ordinance of Washington County as it stands provides context for the protections reasonably available to Bohmann Park now, which can then be compared to other potential avenues of protection.

Section one establishes the intent and purpose of the county government's legal ability to identify, designate, and protect historic properties and districts within its boundaries. Section two defines terms used in preservation for laypeople and county authorities. Section three specifies review authorities for handling applications identified in the ordinance, depending on the type of procedure. In most preservation ordinances, this section would detail the historic preservation commission of the city or county, along with the commission's relationship with other government staff. Washington County does not have dedicated staff or commissioners for preservation, other than long-term planners with varying degrees of expertise in preservation. This leads to inconsistency and complications in protections of these resources within the county and when collaborating with other entities in the Portland metro area, such as the City of Portland. This has led to direct repercussions in the case study of Bohmann Park.

Section four reveals that for a resource to be designated, the nominator must go through the process of creating an amendment to the Community Development Plan. Unlike in many other areas of the state, Washington County does not require owner consent for local designation if application is done through the legislative process, although it does allow owner appeal, including by proving the economic burden that

129 State of Oregon, Oregon Revised Statute, §197.772 (2017), https://www.oregonlaws.org/ors/197.772.
*Lake Oswego Preservation Society v. City of Lake Oswego*, 51 Or. S. Ct., (2016).

would imposed by maintenance to a historic property or resultant limitations on use. In section five, the code states that plan maps must be updated so that tax lots that contain the resources must reflect which buildings or structures are significant, importing, or contributing. Section six details requirements for public hearing and appeal if a property owner desires permits for exterior alternation, relocation, or demolition of a designated property, excepting ordinary maintenance and repair. It also requires meeting the Secretary of the Interior's standards for rehabilitation, preservation, and restoration. These sections are fairly standard for any historic preservation ordinance, aside from the noted exception, and do not affect the ability of the code to be effective.

Section seven provides exemptions through executive decision because of the Oregon statute on consent for designation as a historic property, and section eight requires that historic buildings meet applicable regulations of the building code.[130] Section ten expands the allowed uses for a historic building from solely those allowed by zoning overlay to include those that might preserve or improve a resource that would otherwise be lost or demolished. Section eleven provides a process for the removal of a designation under a variety of circumstances, including undue economic burden. These sections are again fairly standard, and section ten would overall be an advantage to protection of historic properties by allowing expanded uses for resources beyond what would normally be permitted within a zoning region, which would be a boon to developers focused on revitalization efforts.

The code provided by the county is overall very strong. The greatest problem is that there is no established, dedicated historic preservation commission to oversee that it is being applied correctly, or that properties which should be locally designated are being designated and protected by county regulations. The Washington County Board of

130 State of Oregon, Oregon Revised Statute, §197.772 (2017).

Commissioners and long-term planners in the Washington County Department of Planning and Development have been designated a multitude of other specific responsibilities. While these positions seem the most likely candidates for overseeing preservation ordinances on a county level, it is unrealistic to assume that they would have the capacity to do so. Additionally, people appointed to or voted into these positions may not have professional expertise in historic preservation or architectural history, which is vital to an effective preservation or landmarks commission. The existing Washington County Cultural Resources Inventory is limited in effectiveness because of the lack of designated officials actively ensuring that the code is being followed. Instead, there is a reliance on the public following the code with no dedicated regulatory agency or advisory committee and little to no community engagement.

## Public and Private Protections of Contemporary Resources in Out-of-State Municipalities

Other contemporary subdivisions or individual resources around the country have been protected in a variety of way. National Register and local register designation and have been tied to protections for Modernist resources in other municipalities. Long-term urban planning conscientious of the management of these resources and mitigation of impacts to them has provided better public awareness of contemporary and other Modern historic resources. Enforcement of statewide and local comprehensive plans requiring sensitivity to historic resources has ensured their continued existence for the public good.

The most successful examples of protection have generally revolved about neighbors and concerned preservation enthusiasts rallying around imminently-threatened properties, but this is not sustainable in the long term. In some cases, such as in Seattle, successful protection can be as simple as inclusion in local design

guidelines.[131] Design guidelines and review created by the City of Scottsdale Historic Preservation Office have also been helpful in protecting Modernist resources in neighborhoods that have been locally designated as historic district sand treated accordingly.[132] The contemporary neighborhood of Town and Country designs by Ralph Haver have their own set of design guidelines, separate from other historic alteration review guidelines and non-historic planning guidelines throughout the city.[133] This allows a different standard to be applied to these homes than other single-family residences, protecting character-defining features that might otherwise be lost to a one-size-fits-all code. Similar codified planning standards protecting tracts such as Fairhaven in California's City of Orange have been enthusiastically supported by homeowners.[134]

The most explicit examples of this can be seen in the design guidelines provided by the City of Sunnyvale's for Eichler homes, published in 2009, the *Eichler Design Handbook* published by the City of Cupertino for the Fairgrove subdivision of Eichler houses, and the support provided by survey and historic context statement commissioned by the City of Sacramento planning department. As discussed in chapter II, the guidelines for Fairgrove, standardized in 2001, and those for Sunnyvale's

131 City of Seattle, Department of Planning and Development, *Seattle Design Guidelines: Design Review*, by Lesley Bain and Cheryl Sizov (Seattle, WA, December 2013), http://www.seattle.gov/Documents/Departments/OPCD/Vault/CitywideDesignGuidelinesUpdate/SeattleDesignGuidelines.pdf.

132 City of Scottsdale, Historic Preservation Office, *Historic Preservation Guidelines for Village Grove 1-6 Historic District* (Scottsdale, AZ February 8, 2006), http://www.scottsdaleaz.gov/Assets/ScottsdaleAZ/Historic+Preservation/HPPlan+Village+Grove+Design+Guidelines.pdf.

133 City of Scottsdale Historic Preservation Office, *Historic Preservation Guidelines for Town and Country Scottsdale Historic District*.

134 Jonathan Winslow, "Orange Planning Standards to Keeps Its 350 Eichlers Preserved," *Orange County Register*, September 19, 2017, https://www.ocregister.com/2017/09/19/orange-planning-standards-to-keep-its-350-eichler-homes-preserved/ (accessed April 1, 2018).

subdivisions, published in 2009, were developed out of community interest and based on recognition of Eichler homes as exemplary resources of contemporary construction. The Fairgrove guidelines created mandatory design review requirements, ensuring that certain aspects of massing and typology of the Eichler neighborhood would be preserved. Further voluntary guidelines were provided so that neighbors who were more impassioned about their historic resource could do more to protect and preserve their home.[135] In Sunnyvale, separate architectural design guidelines were adopted for identified Eichler tracts and houses than those applied to other single family residences throughout the city, whether or not those homes are recorded on the local historic register or inventory.[136] The level of flexibility in designation and allowances for protection shown by both of these municipalities allows more properties to be recognized as potentially eligible for some form of protection. Thusly, these resources are less likely to have their integrity lowered and more likely to be treated well and potentially brought to a higher level of recognition by owners, preservationists, and other architectural history or Modernism enthusiasts.

An active partnership with local preservation organizations, community members, and long-term planners in Denver's Krisana Park led to the creation of a conservation zone. This type of zoning overlay requires ninety percent owner support in order to be applied. Because these homes developed by H.B. and Brad Wolff have been recognized for their historic value as Modernist resources in Colorado and there was such strong community support overall for their protection due to rarity and the value of their place in the historic narrative, the Denver City Council approved a conservation zone with an owner support rate just shy of the amount normally required. This overlay prevented

135 City of Cupertino Community Development Department, *Eichler Design Handbook: Fairgrove*.

136 City of Sunnyvale Planning Commission, *Eichler Design Guidelines.*

additions of second stories or alteration of massing, but allowing owners flexibility to expand their homes to the rear. Although this overlay does not prevent alteration of other character-defining features of the homes, such as windows or cladding, it does maintain the overall typology within the neighborhood. Neighbors in the Krisana Park community seem to believe that the enthusiasm that most contemporary homeowners have for their properties will adequately protect the Wolff resources from extreme alterations. This strikes a balance between the protections provided by official designation as a historic district, which did not amass adequate support within the neighborhood, and completely forgoing any sort of protection whatsoever. Krisana Park's planning success has led to increased public interest in Modernist properties, development of guidelines for Wolff property homeowners, and consideration of similar protection in other neighborhoods including Lynwood Park, another Wolff subdivision in Denver. The enthusiasm also translated into the development of a pattern book for the tract completed with the help of

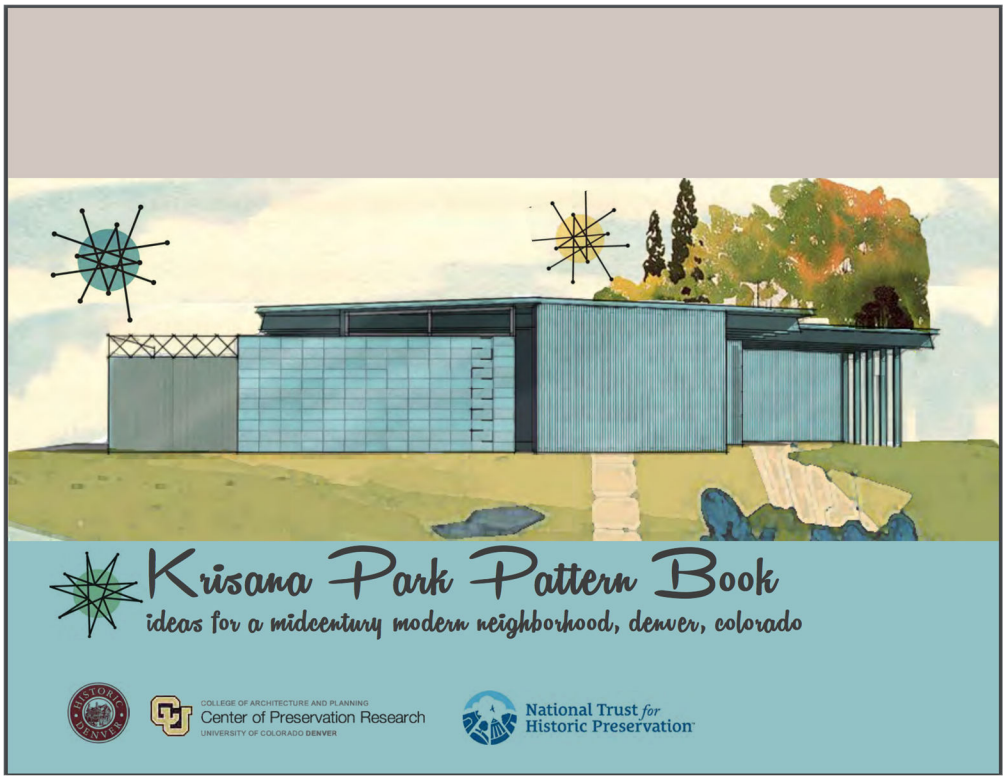


**Figure 50 - Cover of Krisana Park Pattern book.**

the National Trust and the University of Colorado Center of Preservation Research, filled with best practices in preservation and interior design advice (Figure 50).

National Register of Historic Places listings in Greenmeadows and Green Gables, the Eichler subdivisions nominated in 2005, and Oak Hills, the multi-builder Modernist subdivision in Beaverton, Oregon nominated in 2013, were nominated for Criterion C and with period of significance confined mainly to their dates of construction. This was in recognition of their contribution specifically as exemplary resources in modern architectural styles and planning.[137] These nominations allowed these properties a greater level of distinction in the Modernist narrative at local and national levels. Any additional protections brought to the properties, however, is based on local ordinance, rather than necessarily from benefits directly from being on the register. The trade-off for the prestige of a nomination is the fear that many private property owners have that their control over their own property, property values, rights, or safety will diminish more than would be equitable in exchange.[138] While this level of recognition is vital in terms of widening the perspective and historiography of Modernist discussion, it may not be so vital to the actual protection of these resources on the ground.

## Improved Application of Current Code Protections and Potential for Enhanced Resource Management

If Bohmann Park were to be protected under local designation by Washington County, there would have been a higher standard in 2012 and 2013 for the City of

137 National Register of Historic Places, Greenmeadow Historic District, Palo Alto, Santa Clara County, California, National Register #04000862.
National Register of Historic Places, Green Gables Historic District, Palo Alto, Santa Clara County, California, National Register #04000863.
National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

138 Ken Bernstein, "The Top Ten Myths About Historic Preservation," Preservation Sacramento, http://www.preservationsacramento.org/preservation-myths/ (accessed May 31, 2018).

Portland to meet in working with the community to ensure that historic resources were not being negatively impacted by constructing the sewage pump station on the Fanno Creek Trail tax lot. As it stood, there were not county officials adequately dedicated to defending the resources, and the City of Portland was unable to justify dedicating more time and expense to mitigating for an undesignated resource.

Some Rummer homeowners have expressed interest in the creation of a noncontiguous Rummer Network Homeowners Association when interviewed about their homes. Potential private protections include developing design guidelines and establishing property covenants protecting the character-defining features of Rummer properties. This idea was sparked in part by the enthusiasm found in Eichler homeowners who have become active contributors to forums on the Eichler Network. This would be a private and voluntary homeowners association prescribing and enforcing design guidelines for these houses and other Rummer homes, as well as providing information on education and financial assistance for maintenance and interior remodeling.[139] While this private venture may not have the infrastructural backing of district designation or related protections, in a state such as Oregon where rights around private property are almost sacred values, this may potentially be a more successful solution for protection of Rummer homes than government-sanctioned and codified intervention. Another private resource inspired by the Eichler Network is the idea of an online network of Rummer homeowners. An extremely limited version of this found some success as the Rummer Connection website.[140] This website is a passion project of Rummer homeowner and real estate agent Stan Houseman, with input by some other Rummer neighbors. Unfortunately, this website has not been kept up to date due to the

139 Stan Houseman (homeowner, 8630 Southwest Cecilia Terrace).

140 Rummer Connection, https://rummer.weebly.com/ (accessed May 14, 2018).

technical needs of the site, and does not have a forum function, capacity for in-depth research, or the financial backing that is part of what has made the Eichler Network so successful. Rummer enthusiasts without any preservation or construction training have been able to provide one another with valuable maintenance and rehabilitation resources using even this limited platform. A more expansive, search engine optimized website connected to an official group of Rummer homeowners would provide even greater benefit.

In many cases, contemporary resources such as Eichler subdivisions were not officially designated on local registers or on the National Register in order to receive protections. Municipalities based their recognition of historic important on existing architectural history research and National Register designations such as Greenmeadow, determining eligibility and thus the appropriateness of protecting these resources in urban planning. A successful method of this was publishing design guidelines. Because contemporary homes in general share character-defining features and many of the same materials, the design guidelines and conservation overlays that have been published for Eichler subdivisions and resources built by other contemporary style developers can easily be adapted to Rummer homes and the local and state ordinances of Oregon counties.

Utilizing the successful methods applied to contemporary resources in the Southwest and West in general would be beneficial to Bohmann Park and Rummer houses in general, as most of these properties are located within similar jurisdictional circumstances. Based on the concerns expressed by Rummer homeowners, the difficulty in achieving earlier attempts at National Register nomination, and shortcomings in current options for local designation, there are a few potential avenues of best success. The most promising private avenues of preservation would be a partnership with Restore Oregon’s preservation easement program to create a large group of

Rummer easements or a private Rummer Homeowners Association. Both of these would allow for strict guidelines on external design, mandatory setting aside of funds, and any involvement in the program would be voluntary. The public options that are most likely to be successful are either application of land use overlay that preserves the typology of Rummer homes or the creation of separate Rummer home design guidelines. A conservation land use overlay preserving Rummer typology, as is used for the Wolff homes in Denver's Krisana Park, would likely only be useful for larger clusters of Rummer homes. This would benefit Oak Hills and Bohmann Park, and thus has limited applicability to most of these resources, but would prevent potential incompatible in-fill or extremely insensitive remodel. Separate design guidelines for Rummer homes is likely to be a more feasible and successful option. This would be useful for Rummer homes and other contemporary homes throughout the state; it could be easily adapted from the many guidelines already in existence for contemporary homes by Eichler, the Wolffs, Haver, and others. The style is easily recognizable on visual inspection, and planning staff or landmark commissioners could quickly review these cases.

# CHAPTER VI

# CONCLUSION

The Bohmann Park subdivision has been recognized in a limited way by state and local government for its value in the architectural history narrative in the state of Oregon. Constructed with contemporary design in mind by an Oregon native, these comparatively unusual and statement-making resources are an excellent example of the path of Modernism on a local level in the Portland metropolitan area and on a statewide level. Robert Rummer should be recognized for his part in bringing Modernism to middle class Oregonians through the number of homes built by his firm, Rummer Homes, Incorporated. More importantly than Rummer himself and his firm, these homes are an example of the intersection of construction technology and suburban development in the Pacific Northwest, and the Bohmann Park neighborhood is a case study as to why these homes are historic resources deserving of legal protections and further study.


**Figure 51 - Street signs and "Historic Garden Home" sign, Southwest Bohmann Parkway and Southwest 84th Avenue.**

## Re-Establishing Historic Context

Rummer homes were, at their first construction, already a rare building type. The rarity of resources with intact integrity constructed by Robert Rummer's firm, especially in such a

concentration, creates an inherent level of value. The ability of exploration of these contemporary style resources in the state derives from many factors. It is likely due in part to the California-derived aesthetic and a mindset of futurism and urbanism that is in some ways incompatible with the nature-minded and libertarian-leaning culture of Oregon. It is certainly due in large part to the challenges of building and maintaining resources in a style intended for a drier and less wearing climate than the Pacific Northwest. Despite these challenges, adaptations made to the original Eichler design for these Pacific Northwest resources, such as the initial choice to use T-111 plywood siding and local materials rather than importing redwood and other materials from California, and later preservation maintenance choices such as adding design-friendly, non-intrusive drainage on roofs and in the ground, tell a story of architectural experimentation and people's willingness for adaptation.

## Condition Trends and Treatment Recommendation

Rummer homes are made largely of cedar, Douglas fir plywood, float glass, and concrete. These materials have been studied on their own and in a variety of building types and settings. The way these materials have been used to create the particular character-defining features of the contemporary houses, along with the regional and specific location of the Bohmann Park subdivision, has led to common patterns in wear, as seen in the condition assessments of chapters III and IV. Also in evidence are tendencies in how these properties have been maintained, based on this wear and a variety of owner-dependent factors. These clear trends allow for a set of recommendations for treatment of Bohmann Park properties in particular, many of which are also applicable to other Rummer homes.

The greatest direct threat to any Rummer home in the Bohmann Park subdivision, or to any contemporary home in the Pacific Northwest, is water. One source

of this, specific to the Bohmann Park homes, is the natural springs and spontaneous creeks resulting from proximity to Fanno Creek. Because the subdivision is near the creek and the soil is very clay-heavy, these properties are susceptible to inadequate drainage. This leads to foundational damage that can be very severe if not rapidly mitigated and repaired; common character-defining features such as Roman baths may need to be removed if adequate drainage cannot be maintained, as these will become sites of exterior water infiltration into the foundation, plumbing system, and interior materials. As the style was designed for the drier climates of California, contemporary resources in the Portland metro area face challenges that were not anticipated. The flat and low-pitched roofs of Rummer homes are poorly suited for the amount of precipitation in the metro area. If homeowners do not consistently clear drains and make regular upgrades and repairs to their roofs, water damage is quick to occur in roofing materials and then throughout the building. The two houses reviewed in condition assessments were the same model and had the same roof type. These properties had very different levels of maintenance on their roofs, and this was a major indicator for prediction of interior and siding water damage.

A third source of damage to historic fabric in Rummer houses is insensitive remodel. This is a common threat to contemporary style houses and historic resources in general. The results of a historically insensitive remodel and a thoughtfully designed upgrade can be seen in each of the two houses explored in this case study. At the property on Cecilia Terrace, previous owners made drastic changes, including removing interior historic fabric such as flooring and lighting, and damaging other fabric such as painting the roof beams and wood wall paneling, which are difficult or impossible to restore, respectively. While the home at 84$^{th}$ Avenue has had several alterations to interior materials, these owners have held the property for approximately twenty years and have access to an architect experienced with historic structures. As a result, the

changes made to this property have been fairly limited in terms of removing or changing historic material unless necessary, and voluntary changes made have been in materials and styles compatible with the original design of the property.

There is a multitude of assistance available to historic property owners in Oregon. Raising awareness of these options amongst Rummer homeowners would be a benefit to the preservation of each as a resource. These resources include Preservation Briefs and other materials created by the National Park Service, Association for Preservation Technology, Oregon Heritage, and others, which are available online for free. Financial assistance for historic homeowners includes public funds and some private grants. Many of these are only available to buildings that are on the National Register of Historic Places or the local equivalent, and thus are not currently available to Bohmann Park or most Rummer homes outside of Oak Hills. This neighborhood has been deemed a likely candidate for National Register eligibility as a district by a qualified government agency, and it has the potential for access to these financial resources if homeowners consent to designation.

## Threats to a Historic Resource

The historic resources of Bohmann Park have been recognized as such and eligible for a National Register historic district or local designation by the Oregon SHPO. A reconnaissance level survey and further research in July 2012 by a SHPO team confirmed this, and homeowners were initially interested in the prospect of designation. Interest in designation diminished as property owners felt that the process would not meet their needs. There was concern that going through the process would not require the City of Portland to put more effort into consideration of their Washington County neighbors near Fanno Creek Pump Station construction or provide what subdivision residents felt to be adequate community outreach and mitigation of the adverse effects

of this project. Additionally, the potential length of the nomination process would potentially mean that the level of adverse effect would be too great by the time it was complete, and that regulation overlaid on the properties would outweigh the benefit of greater protections provided.

The properties continue to be under threat of loss of integrity or inadequate protections. Challenges will continue to face these houses, from the weather to financial limitations on owners to governmental pressures such as eminent domain. There are many possibilities for their protection in the future however, including careful maintenance by residents, owner actions for designation in the National Register, lobbying for options for local designation, use of local and state protections and assistance, and the activation of the strong preservation community in the Portland area on behalf of this example of Modernism in Oregon.

This subdivision is a resource requiring a great deal of attention and management. Its value as a case study does not come solely from its uniquely high concentration of Rummer houses or resulting opportunities for comparison of maintenance and preservation on an individual property level. The information taken from individual property case studies and from observing the neighborhood as a whole is applicable to Rummer homes across the state, which are all extremely valuable resources because of the rarity of surviving middle-income Modernist residences in Oregon, especially of the quality and integrity often seen in Rummer homes.

From a legal perspective, Washington County has a duty as a municipality to protect Bohmann Park as a historic resource. Chapter 660 of the Oregon Administrative Rules for the Land Conservation and Development Department requires cities and counties to apply the current statewide Comprehensive Goal 5 protections for historic resources to land use regulations and ordinances. Washington County does so through Community Development Code 373. This ordinance currently has limited enforcement

because there is no specific authority dedicated to designating and protecting local historic resources. An improved Washington County Cultural Resources Inventory would provide for better local protections for Bohmann Park and other Rummer homes in unincorporated Washington County. Successful protection of these resources would hopefully instigate interest in improved protection by property owners and long-term planners in other counties with Rummer homes, especially in the metro area.


**Figure 52 – Entrance to original Fanno Creek Pump Station construction, facing south.**

The fact that the resources of Bohmann Park have been recognized and continue to be under threat of loss of integrity or inadequate protections is a loss for built environment representation of the architectural history narrative in Oregon. Challenges will continue to face these houses, from the weather to financial limitations on owners to housing pressure exerted on surrounding land. There are many options of their protection in the future however, including careful maintenance by residents, owner actions for designation in the National Register and local designation, use of local and

state protections and assistance, and the activation of the strong preservation community in the Portland area on behalf of this example of Oregon Modernism.

## Potential Protection

Applying the effective methods already employed to protect and manage contemporary resources in other parts of the West Coast and America Southwest would benefit both Bohmann Park specifically and Rummer homes as a whole, as f these properties are generally found within similar municipal circumstances. Based on the apprehensions commonly expressed by Rummer owners, the struggle in previously attaining National Register nomination, and inadequacies in existing alternatives for local designation, there are a few potential paths of greatest success.

**Figure 53 - 7315 Southwest 86th Avenue, Bohmann Park, facing west.**

The most likely private avenues of preservation would be a partnership with Restore Oregon's preservation easement program to create a large group of Rummer easements, or alternatively a private Rummer Homeowners Association. Both would allow for stringent guidelines on external design, mandatory reservation of funds, and voluntary involvement. The public options that are most likely to be successful are either

application of land use overlay that preserves the typology of Rummer homes or the creation of separate Rummer home design guidelines. A conservation land use overlay preserving Rummer typology and massing, as is used for the Wolff homes in Denver's Krisana Park, would likely only be useful for larger clusters of Rummer homes, such as Oak Hills and Bohmann Park, and has limited applicability to most of these resources. This option would prevent potential incompatible in-fill or extremely insensitive remodel. Discrete design guidelines for Rummer homes is likely to be a more practicable and fruitful option. This would be advantageous for Rummer homes and other contemporary homes throughout the state; it could be easily modified from the many guidelines already in existence for contemporary homes by Eichler, H.B. and Brad Wolff, Haver, and others. The style is easily identifiable on visual inspection, and planning staff or landmark commissioners could rapidly review these situations.

**Figure 54 - 8495 Southwest Cecilia Terrace, facing west.**

## Future Projects and Research

Further study on Rummer houses specifically and contemporary homes in general within the state of Oregon and the Pacific Northwest would be of great value for improved

cultural resource management in terms of Modernist buildings. This is from a materials treatment standpoint, for the benefit of community engagement and education, and for greater consideration of these resources in the regulation of development and municipal infrastructure projects.

A more complete inventory of the number and location of other Rummer homes outside of Oak Hills and Bohmann Park would be beneficial in providing improved exact numbers and statistical information about extant Rummer homes. Knowing the locations of more Rummer homes allows for better dissemination of educational information on historically-sensitive maintenance to owners. This also would provide long-term planners and other municipal administrators with vital information for the consideration and protection of these resources in order to best follow both the letter and spirit of Oregon's Goal 5 guidelines.

Further exploration of a Historic American Landscape Survey and potential homeowner interest within Bohmann Park specifically in pursuing a National Register of Historic Places nomination as a historic district would add to the national, state, and local understanding of the narrative of Modernist architecture. This would not necessarily require further new research beyond what is already available here and in articles and other published records, articles, and interviews with Robert Rummer and Phyllis Rummer. A non-contiguous historic district made up of A nationally-accessible record of these resources would provide an addition to the historiography of Eichler and other contemporary style builders inspired by his work to a wider community of architectural historians and the public.

Development of design guidelines for repairs, additions, remodels, and in-fill around Rummer homes would be another beneficial tool that could be a step forward as far as future projects. This could include some of the same recommendations made in condition assessment reports for homeowners here, in terms of material treatments,

design-friendly upgrades, and more detailed resources for care and management. It could also recommend contractors and craftspeople in the Portland area in the same way that the Eichler Network recommends businesses familiar with contemporary homes in California and Oregon Heritage compiles a list of contractors in Oregon who are qualified to work with historic properties. Design guidelines would help prevent future construction projects, either private residential in-fill or municipal infrastructure, from disturbing the setting of these resources or severely impacting their integrity.


**Figure 55 - 8505 Southwest Bohmann Parkway, facing northeast.**

There are several avenues of promising future academic research into the contemporary style in Oregon. One avenue would be further study into the Rummer Homes, Inc. construction firm in terms of business and construction practices, a more rigorous examination of its place within a historic context, and comparison to other Modernist builders in the state and around the country. Researchers such as Dolores

Hayden, Gwendolyn Wright, Alice T. Friedman, and Diane Harris have done a great deal of exploration into the roles of race and gender in the development of suburban housing and Modernist homes in particular. Contemporary housing in Oregon, has a particular history of race relations different than other regions of the country and a relationship with private property. An examination of this in relation to gender and domestic space in homes of this style would add to the historiography. Another would be deeper investigation of materials used in the homes, including condition assessments of more properties, destructive investigation of the different layers of materials, especially in areas have commonly experienced changes such as kitchens or roofs, and scientific study of samples of plywood, any extant asphalt roofs, and other historic fabric. This would provide more understanding of how these materials fare on this architectural style in the Pacific Northwest climate and further confirm trends observed in the Bohmann Park subdivision.

# APPENDIX A

# MAP OF BOHMANN PARK


Author: Samantha Gordon

Sources: Oregon Metro RLIS and project information courtesy of author

Date: 4/10/2018

# APPENDIX B

# HISTORIC AMERICAN LANDSCAPE SURVEY DRAFT

**HISTORIC AMERICAN LANDSCAPES SURVEY**

**BOHMANN PARK**
**(Robert Rummer Subdivision of Garden Home)**

**HALS NO.**
**OR-##**

Location: The Bohmann Park neighborhood is a subdivision located in the Garden Home-Raleigh Hills area. The boundaries of the neighborhood were determined by construction date and architectural style of buildings, information on development of the subdivision, and identification of its builders.

The neighborhood is bounded by the southern edge of the Fanno Creek Pump Station, Fanno Creek Trail, and the northern property lines of tax lots with houses facing onto Southwest Bohmann Parkway to the north, which are the odd-numbered properties numbered 8475 to 8645 on Bohmann Parkway and properties numbered 7020, 7025, and 7060 on Southwest 84th Avenue. To the south, the boundary is Southwest Garden Home Road and the southern property lines of tax lots with houses facing onto Southwest Cecilia Terrace, which includes properties numbered 7440 and 7485 on Southwest 84th Avenue and even-numbered properties between 8570 and 8630 on Cecilia Terrace. The west boundary is the western property lines of the tax lots with houses facing Southwest 86th Avenue, which are the odd-numbered properties numbered 7195 to 7345. The neighborhood's east boundary is the eastern property lines of tax lots with houses facing Southwest 84th Avenue, which are the even-numbered properties numbered from 7060 to 7440.

Bohmann Park is located in the vicinity of Beaverton, unincorporated Washington County, Oregon.

Latitude: 45.467811, Longitude: -122.765053 (Approximate center of subdivision, Google Earth, WGS84)

Significance: The Bohmann Park subdivision is the largest single grouping of homes by Oregon developer Robert "Bob" Rummer. The post-and-beam constructed tract housing built by Rummer during the post-war period is a regional example of a national housing trend made iconic by builder Joseph Eichler. Rummer himself is the one of, if not the most, prolific builders of contemporary homes in Oregon. While he may not have been the first to adapt modern architectural stylings to

middle-class homes in the state, he was one of the most influential and continues to be well-known amongst architects, preservationists, and the general public. This particular neighborhood is unique– aside from being the largest grouping of Rummer homes– because Robert Rummer designed the layout of the entire subdivision himself. As such, it is the preeminent example of his work from a both landscape architecture and built environment perspective. The period of significance for this neighborhood is 1964-1970, the dates of construction for the speculative housing and the full planned neighborhood.

Two subdivisions by Joseph Eichler's construction firm, Eichler Homes, were listed on the National Register under Criterion C. Green Gables and Greenmeadow, both in Palo Alto, were recognized under Criterion C as exemplary resources in modern architectural styles.[141] Oak Hills, a planned community in Washington County that includes 29 Rummer homes, was added to the National Register of Historic Places in 2013, also under Criterion C. At this time, it became the first midcentury modern historic neighborhood in in the state of Oregon, as well as the youngest historic district in the state.[142] The existence of this district affirms that both the state of Oregon and the National Park Service recognize Rummer homes as being historically significant local architecture. Oak Hills was primarily recognized as an example of midcentury neighborhood planning, and a portion of its nomination is based on this merit as a cultural landscape.

The Bohmann Park neighborhood consists exclusively of contemporary style homes and graded lots that were designed and built by by Robert Rummer as a single subdivision between 1964 and 1970.[143] The planning of this neighborhood follows some of the same designed landscape stylings as Oak Hills, but was entirely under the control of Rummer himself. Of the seventy-nine properties established to be in the Bohmann Park neighborhood between the 2012 Oregon SHPO survey and a survey conducted in February 2017, about seventy are Rummer-designed and Rummer-built

141 National Register of Historic Places, Green Gables Historic District, Palo Alto, Santa Clara County, California, National Register #04000863.
National Register of Historic Places, Greenmeadow Historic District, Palo Alto, Santa Clara County, California, National Register #04000862.

142 National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

143 Oregon Parks and Recreation Department, *Bohmann Park Neighborhood Reconnaissance Level Survey Report*.

houses.[144] Notably, it includes the historic residence of Rummer himself, at 8535 Southwest Bohmann Parkway.

Description: The Bohmann Park neighborhood was built between the years of 1964 and 1966 on a plot of land that was formerly dedicated to hazelnut farming.[145] At this time, the farmland was converted into the subdivision largely as it is laid out and surrounded today. The use of the subdivision has been consistently residential since its construction.

The overall shape of the neighborhood has not changed since its design and construction. The largest change was the addition of Southwest 86th Pump Station to Fanno Creek Pump Station to the north of the subdivision in 2015.[146] However, this change was outside the boundaries of the district and impacted historic resources outside the period of significance and scope of the neighborhood.

Each tax lot of the district has one building, generally a contemporary style single-family residence. There are seventy-nine buildings within the district. They are clustered facing the street on each block.

The streets of Bohmann Park are laid out in a curvilinear fashion, creating a block with two rounded street corners and two pointed street corners, with a second linear block on Southwest 84th Avenue with offshoot side streets on the east side of the street that lead to a second row of Rummer homes and associated landscape on the northern half of that avenue. The majority of the roads do not feature sidewalks, aside from a portion of Southwest Cecilia Terrace, the linear portion of Southwest Bohmann Parkway, and the northern portion of Southwest 84th Avenue. There is a driveway from the street onto each property at the main façade. There are wooden fences or masonry walls along property lines between all tax lots in the neighborhood. Some of the wood fences are not in a style that would not have been produced during the period of significance, but the masonry, much of which is Roman brick or concrete, appears to be historic. The presence of such physical barriers and delineation on each property border indicates that some form of fencing has

144 The February 2017 survey was a limited reconnaissance level survey conducted by this form's preparer for a graduate-level course on survey and inventory methodology at the University of Oregon.

145 Eastman, "Southwest Midcentury Modern – Sleeping in Portland."

146 City of Portland Environmental Services, "Fanno Pump Station," https://www.portlandoregon.gov/bes/article/395528.

always been used between these properties and has consistently been maintained over time.

Small scale features in existence include street signs, telephone poles, mailboxes, and one sculpture. The rectangular, green street signs are not historic, and have been updated by Washington County to be consistent with county-wide street sign designs over time. The streets of this neighborhood have an additional blue street sign at the top of each signpost proclaiming them part of "Historic Garden Home," an effort by residents to recognize what is locally deemed to be a historic neighborhood.[147] Standard telephone poles along sidewalks appear to be either historic or in-kind replacements. The mailboxes of the individual properties vary and are not historic features; these mailboxes have either been swapped for custom mailboxes by property owners or updated by the U.S. Postal Service with newer mailboxes over time. The property at 8565 Southwest Cecilia Terrace has a spherical sculpture approximately three feet in height that was added between 2011 and 2014, based on Google Street View images.

The spatial organization of individual features and resources in the district is on a curvilinear pattern, spaced out on approximately equally-sized tax lots along the streets. Topographically, Bohmann Park is consistent at a single elevation averaging approximately two hundred and twenty feet above sea level, varying only within a few feet in the entire district.

The historic vegetation of Bohmann Park included mainly small maple trees, grass, screening vegetation, and evergreen trees. Historically, grass would have been found in both front yards and backyards, maples in front yards, and evergreen trees in both front and back yards. Native vegetation and plant life that would adapt well to the Pacific Northwest was used to create a privacy screening between properties but allow a clear view of the main façade from the street.[148] Native vegetation and adaptable plants would also be found in the atrium spaces of each homes, which would be partially visible from the public right of way through the atrium glass. Today, most of the properties in the district maintain a grass lawn. Those that do not have opted for drought-resistant or otherwise hardy plant life, wood chipping, or sand and cement that is either native or compatible with the climate of the Pacific Northwest. This is sympathetic with the regionalism of Rummer's designs. Several properties have small Japanese maple trees or other small-scale vegetation such as evergreen bushes. Tall evergreen trees are

147 Garden Home History, "Donate," accessed November 30, 2017, https://gardenhomehistory.wordpress.com/donate/.

148 Rummer, "Rosé and Rummer."

scattered amongst the properties and along the sidewalks or streets, indicating from their size that they were planted during the historic period. Other common screening vegetation includes bamboo, evergreen privacy hedges, and some deciduous trees. The size and lifecycle limitations of these plants and trees indicate that they are not from the historic period, but their presence is sympathetic to the historic design of the landscape, which was influenced by the lushness of the Northwest Regional style of modernism.

History: The significance of the work of high-style, post-war architects such as Philip Johnson and the Eames was followed by the comparatively mass-produced homes of Joseph Eichler in California, which have been influential on vernacular modernism and architecture in their own way. However, Eichler was not the only person to build homes and design properties in the contemporary style. Many builders around the United States were inspired by the aesthetic and popularity of his work.

Robert Rummer, a native Oregonian born in 1927, is a World War II veteran who originally worked in the insurance business when he was noticed by The Oregonian for building a well-constructed and aesthetically pleasing home for himself and his wife Phyllis Rummer in 1959. However, his wife saw some of Eichler's successful subdivisions in Walnut Creek, California soon afterwards; she shared with Rummer how much she loved these homes.[149] This did not initially amount to anything, but when helping a friend with plans to build a new home the following spring, Rummer finally saw the plans and photos of an Eichler home himself and was immediately fascinated. He met with A. Quincy Jones of Jones & Emmons, a firm initially used by Eichler, in March of 1961.[150]

At the time that the subdivision was being built, Bohmann Park was– and continues to be– part of unincorporated Washington County, despite the listing of Portland in the mailing addresses of its residents. Counties in Oregon were not authorized to adopt their own zoning and building codes until 1947 or service districts until 1955 or later.[151] Washington County adopted a country charter in 1963, enlarging its powers to include these codes and districts once their regulation entered the county's scope of potential and population density and need for services were high enough. Compared to the city of Portland and other towns of the area, this portion of the county was relatively underserviced by fire stations and the like in the year 1970, indicating that the suburban tracts

149 Barthlow.

150 Ibid.

151 *A Study of the East Washington County Urban Area*, 54.

such as the Rummer speculative houses were still within a relatively rural context.[152] Citizens of Garden Home, the larger neighborhood of which Bohmann Park is a subdivision, joined with other neighborhoods to create the East Washington County Advisory Council in an attempt to increase citizen participation in county government, around the time that the Bohmann Park neighborhood was being constructed. These changes and expansions in county power and resident involvement, along with a period of rapid urban expansion and population increase, created a sense of rapid and intense change in the area, similar to sentiments expressed by many residents of the Portland Metro Area in the twenty-first century. This would have been the overall infrastructural setting in which Bohmann Park came to fruition.

Rummer started building homes that were based on those designed for Eichler and continued to do so until 1975; his company eventually built a total of about 750 homes in the Portland Metro Area.[153] These homes are known as an example of how Robert Rummer "embraced and executed Atomic Age styling in the Pacific Northwest" in a manner that is notably different than midcentury modern homes built in California and other areas due to environmental constraints and cultural influences that caused the homes to feature their openings to the outside toward the backyard of the home rather than toward the front and utilizing a covered atrium rather than an open courtyard.[154] Rummer homes are clear examples of a Pacific Northwest vernacular form of the contemporary style of residential architecture in a Pacific Northwest interpretation of a Modernist, suburban designed landscape.[155] Beyond the homes themselves, the landscape of individual properties was carefully designed to bring outdoor space into the interior of the home through the plate glass windows, vegetation in the atrium space, and use of concrete and other traditionally outdoor materials in both indoor and outdoor spaces, as well as being thematically intertwined with one another to create a seamless block of so-called “homes of the future” for a neighborhood meant to attract appropriately future-minded, middle-class families.

Sources: Barthlow, Joe. "Meet Builder Robert Rummer." Eichler Network. Accessed February 3, 2017. http://www.eichlernetwork.com/article/meet-builder-robert-rummer.

152 Ibid, 65.

153 Eastman, "Get Inside 6 Midcentury Modern Rummers."

154 Ibid.

155 Higginbotham.

Eastman, Janet. "Get Inside 6 Midcentury Modern Rummers: Restore Oregon's Home Tour." *The Oregonian*, September 4, 2016. Accessed November 17, 2017, http://www.oregonlive.com/hg/index.ssf/2016/09/rummer_midcentury_modern_eichl.html.

Eastman, Janet. "Southwest Midcentury Modern – Sleeping in Portland." *The Oregonian*, November 23, 2013. Accessed November 30, 2017. http://www.oregonlive.com/hg/index.ssf/2013/11/sleeping_in_portland_midcentur.html

Eichler, Ned. *The Merchant Builders*. Cambridge: MIT Press, 1982.

Higginbotham, Gary. "When Ranch Goes Modern: Celebrating Rummer Homes." *Portland Architecture* blog, August 2012. Accessed March 3, 2017. http://chatterbox.typepad.com/portlandarchitecture/2012/08/when-ranch-goes-modern-celebrating-rummer-homes.html.

National Register of Historic Places, Green Gables Historic District, Palo Alto, Santa Clara County, California, National Register #04000863.

National Register of Historic Places, Greenmeadow Historic District, Palo Alto, Santa Clara County, California, National Register #04000862.

National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

Portland Metropolitan Study Commission. *A Study of the East Washington County Urban Area.* Portland, OR: Portland State University, 1970.

Rummer, Robert. "Rosé and Rummer." Lecture, DoCoMoMo Oregon. Washington County, OR. August 27, 2017.

Historian: Samantha Gordon
Historic Preservation, MS candidate
University of Oregon.

May 1, 2017


**Figure 56: Satellite map of Bohmann Park (Google Maps, November 30, 2017).**

**Figure 57: North boundary of Southwest 84th Avenue, facing north toward Fanno Creek Pump Station and Fanno Creek Trail (Samantha Gordon, November 27, 2017).**


**Figure 58: Street signs for Southwest 84th Avenue and Southwest Bohmann Parkway, facing northwest (Samantha Gordon, November 27, 2017).**

**Figure 59: Condensation in a clerestory window of a Rummer house in an offshoot of 84th Avenue, facing north (Samantha Gordon, November 27, 2017).**

**Figure 60: View of Southwest Cecilia Terrace, facing east (Samantha Gordon, November 27, 2017).**

**Figure 61: View of Southwest Cecilia Terrace, facing north (Samantha Gordon, November 27, 2017).**

**Figure 62: View of offshoot of Southwest 84th Avenue, facing east (Samantha Gordon, November 27, 2017).**

**Figure 63: 8495 Southwest Cecilia Terrace, facing west (Samantha Gordon, February 28, 2017).**

**Figure 64: Front yard detail of 8495 Southwest Cecilia Terrace, facing west (Samantha Gordon, November 27, 2017).**

**Figure 65: 8550 Southwest Cecilia Terrace, facing east (Samantha Gordon, February 28, 2017).**

**Figure 66: 8580 Southwest Cecilia Terrace, facing northwest (Samantha Gordon, February 28, 2017).**

## RELEASE AND ASSIGNMENT

I, Samantha Gordon, am the owner, or am authorized to act on behalf of the owner, of the materials described below including but not limited to copyright therein, that the National Park Service has requested to use, reproduce, and make available as public domain materials at the Library of Congress as part of the Historic American Buildings Survey/Historic American Engineering Record collections. (If not the sole copyright owner, please specify in the space below any additional permissions needed to grant these rights.) I hereby transfer and assign to the National Park Service any and all rights including but not limited to copyrights in the materials specified below.

**Survey Number:** HALS No. _____

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Audiotape ____ Videotape ____ Other (describe) _____

**Detailed Description of Materials** (attach additional pages if necessary)**:**
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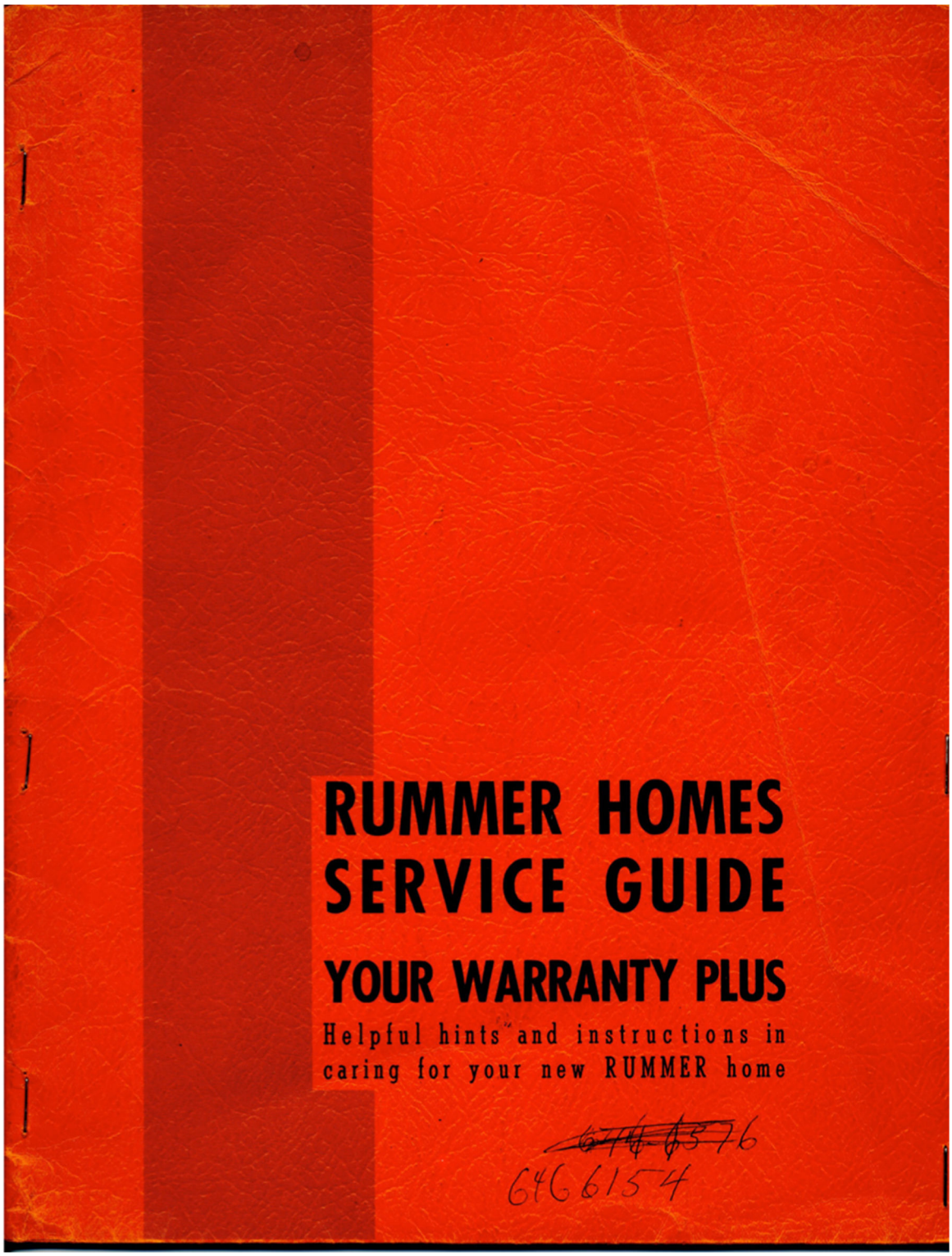
| Name (please print) | Signature | Date |

1061 SW Skyline Blvd, Portland, OR 97221 (909) 520-5443
Address Telephone Number

_____
Organization You Represent If Applicable

# APPENDIX C

# RUMMER HOMES SERVICE GUIDE



Virginia M. Marshall
8495 S. W. Cecelia Terr.
Portland, Oregon

## GUARANTEE - - STATEMENT OF POLICY

All RUMMER HOMES are guaranteed for a period of one year after date of occupancy against defects in workmanship and materials. Defective parts will be replaced free of charge during this period, except as noted herein. Guarantee is non-transferrable if the house is resold during this year.

## REGISTRATION

This guarantee becomes effective from the date of closing or occupancy agreement, whichever comes first. However, the purchaser must return the company-addressed guarantee card within four days after occupancy or the guarantee is null and void.

TABLE OF CONTENTS

INTRODUCTION AND EXPLANATION OF OUR SERVICE POLICY

We have made every effort possible to deliver to you the best in living at the lowest possible cost. Regardless of the extreme care taken to construct your house, some minor omissions or corrections may appear after occupancy. We maintain a service department to take care of these, as we hold ourselves responsible for defects in workmanship and materials. We cannot, however, attempt to maintain your house.

A few days after you move into your house, a hostess will stop by to welcome you, to explain the operation of the various appliances and to answer your questions about your new neighborhood, schools, shopping, etc. If for any reason the hostess has not called on you within one week after you have moved in, please call the salesman at the subdividion office. He will take your telephone number and have the hostess call you to set up an appointment.

Unoccupied houses seem to be an invitation to children, who sometimes break into them. Our office is not always aware of such occurrences and sometimes when you move into your house, you may find that some items have been stolen or damaged. Ordinarily we ask you to contact the appropriate subcontractors for service on items such as appliances, electrical, plumbing, etc.; however, if you find that anything in your house has been broken, cracked, chipped, damaged in any way or missing, contact our service department within four days after your have moved into your house so that we can repair or replace the necessary items. Do not contact the subcontractors for these things, as we will have to process ordering through our office.

Do not contact the subdivision salesman for service of any kind. The sales offices are not equipped to handle service problems. Always contact the subcontractor or our service department, whichever is appropriate. This booklet will explain whom to contact on the various items for service. Requests for service should be made in writing. NO TELEPHONE REQUESTS FOR SERVICE WILL BE TAKEN AT RUMMER HOMES SERVICE DEPARTMENT. Actually, writing will insure faster service for you and it will give you a record of your requests. This will also give us a complete file on all service requests in order to schedule the work efficiently. When writing to either a subcontractor or to our service department, please state in detail the nature of your complaint and list your telephone number so that if we have any questions, we can call you to clarify it. Also, if you both work, which means that the service men will have difficulty in gaining entrance to your house, please give us your business telephone number or let us know if we can enter your house with a pass key.

You must realize that a house is made of organic materials which are subject to shrinkage and expansion. Any adjustments necessitated by this type of movement are the responsibility of the owner and a maintenance item, not part of our service responsibility. The following will state in detail what is considered maintenance and what is considered service, covered under your warranty.

LUMBER & MILLWORK -

Posts, beams, paneling, roof decking, etc.:

Shrinkage in wood is inevitable. Shrinkage in the framing lumber causes certain moldings and trim to move or work out of their original positions. The shrinkage can also cause the joints in the woodwork to open or bulge slightly, and the doors to stick. Shrinkage can be minimized by maintaining temperatures as low as possible during the first heating season. Wood undergoes a certain amount of movement and checking after it is incorporated into a new home. This is the nature of wood and is perfectly normal. After a period of time, an equilibrium is reached and little or no further movement occurs. The nature of wood also precludes perfect matching of color or grain in the interior and it is impossible to match the doors and molding exactly to the paneling. There may also be a variation in the panels themselves in one or more rooms. A post or beam in your house may twist or warp. Should this occur to the point where it is structurally detrimental to your house, our service department will replace the particular item. However, shrinkage or cracking of the posts, beams or roof decking is considered normal and we do not perform service on these items. Roof decking is apt to shrink to the point where the tongue may appear to be coming out of the groove. This is not structurally detrimental, as this decking is covered by many layers of roofing material. (See section on roofing.)

Pitch pockets may appear in a beam or ceiling board. This is inherent in wood and there is no positive way to stop this. In order to protect your floors and furniture, we suggest that you scotch tape a small piece of paper, or a small paper cup, below this pitch pocket until it has had a chance to dry out. Once it has dried out, you should have no further trouble with it.

DOORS - (Wooden)

The doors supplied in your house are specially designed hollow-core doors and are warp resistant. However any door can warp. If a door sticks or drags, as it may tend to do when the weather changes, it can easily be adjusted by you and this is considered a maintenance item. Our service crew has adjusted all of the doors in your house prior to the time you moved in. If a door sticks when you first move in, notify our service department and the service crew will adjust it for you. However, if this occurs a month or more after you have moved in, it is considered maintenance and you should adjust it yourself. If you install carpeting, it will be necessary for you to have the doors shaved or cut down. Our service department is not equipped to do this and you should have it done on your own.

PAINT -

We use the finest paints available for the front doors, fascia, and beams. However, here too you must realize that the direct sunlight will tend to fade deep colors and may tend to crack or blister the paint on the beams. Any repainting of these areas which is necessary due to weathering or fading is considered a homeowner maintenance item.

EXTERIOR STAIN -

Your house has been stained with the best materials available. Is is characteristic of Rummer Homes construction to have most of the structure visible. A slick finish is not characteristic to a Rummer Home. The stain on the exterior walls will naturally weather. You may call the Service Department to find out what colors have been used on your house and where the paints and stains can be purchased in your area. Because of differences in weather conditions at the time the stain was applied, in the orientation, in the moisture content of the siding and in the weathering qualities in the various stain colors, the life of exterior stains will vary from house to house. The coat that we apply should last satisfactorily for about four to five years. You should be particularly careful when watering not to sprinkle directly on the siding when it is in the direct sun. The combination of hot sun and water spray sets up a bleaching action which will spot and fade the stain.

INTERIOR SHEETROCK WALLS -

Interior sheetrock walls should also be cleaned with a mild solution of detergent. Due to slight shrinkage, cracks may appear in the sheetrock. Cracks of this sort are considered a maintenance item and can easily and inexpensively be fixed with "Spackle". Where the beams may shrink and a gap occurs between the beam and the sheetrock, this gap can be filled with a caulking compound or a "Spackle" type of filler. Our service crew does not do this type of repair, since this is a maintenance item.

ROOF -

The roof on your house should last for many years without any repair. With every roof it is important that the downspouts be kept clear to allow proper drainage. Care should be exercized in using tools on the roof or in walking on it so as not to cut or pierce it. On your roof there are little ridges where the roof covers electrical conduits. If you find it necessary to walk on your roof, avoid walking on these ridges.

Roof - (Cont'd)

The most common source of roof leaks is the improper installation of radio or TV antennas, commercial installations included. If guy wires or posts are nailed or screwed into the roof, the roofing paper will be pierced. These holes must be properly sealed or they will leak. If you cannot secure the guy wires to a strap around the fireplace and to the wooden fascia and it is absolutely necessary to attach these stays to the roof, be sure the holes are sealed by a competent roofer. For a nominal fee, our roofing subcontractor will make an inspection of your roof after your antenna is installed to be sure that no damage has been done.

Don't be alarmed if after a rain you find water standing on some portions of your roof. This is not unusual in the type of house that we build because parts of your roof may be flat. Actually, if you could keep your entire roof immersed under water it would extend its life expectancy, as it would prevent the sun and wind from drying out the asphalt. This water will not cause roof leaks. After the roof decking is installed, the roofer applies a Fiberglas non-organic insulation vapor barrier, two layers of 15# felt mopped with 30#/100 sq. ft. asphalt, one ply Fiberglas permaply cap-sheet, saturated with hot mopped aspalt and covered with pea gravel.

It is also important to be very careful if you install extra electric fixtures which attach to the ceiling or any other type of extra installation which in any way is attached to the roof decking from the inside.

DISHWASHER & DISPOSAL -

Should you require service on your disposal or dishwasher, contact the manufacturer's representative directly. Give them your telephone number and tell them exactly what is wrong. They will want to set up an appointment to make the service call.

DISPOSAL -

There are some general rules which apply to the use of the disposal. Glass, metal, string, cloth and paper should not be placed in the disposal. It will handle meat, bones and most food waste readily. Fibrous matter such as core husks, artichoke leaves, etc. should be cut up into small pieces before being placed in the disposal. First turn on a good stream of COLD water, then start the disposer and feed the waste into it. Do not jam a lot of waste material into the disposer and then turn it on, as it may cause a stoppage which will require the services of a plumber. If the disposer stops while running, or refuses to start, it is probably jammed. Be sure that the disposer switch is off. Then reach a long-handled object through the opening in the sink, remove the waste and see that the grinding wheel is turning freely. After the grinding wheel is free, a re-set button located at the base of the disposer under the sink must be pressed before the disposer will operate again.

If the sink stopper for the disposer is missing when you move in, notify Rummer Homes service department in writing within four days.

DISHWASHER -

Before you start your dishwasher, be sure you have cleared all of the waste matter from the disposal, as the dishwasher and disposal have the same drain. If you have waste matter in the disposal while the dishwasher is running, you may cause a stoppage which will require the services of a plumber. This, naturally, would be a maintenance item. Instructions for the operation of your dishwasher, as well as tips on how to best stack dishes, different types of soap to use, etc. will be found in your dishwasher.

If any part of your dishwasher should be damaged or missing when you move in, notify Rummer Homes service department in writing within four days after occupancy.

RANGE & OVEN -

Here again, should you require service on your range or oven, contact the manufacturer's representative directly if either of these appliances are not working properly. If you have problems with the oven, it is best to call, rather than to write, since in many cases there is actually nothing wrong with the oven, just misunderstanding as to the proper use of the product. An instruction booklet which covers the use of both the range and the oven should have been left in your oven when it was installed. If this booklet is missing when you move in, contact the manufacturer and they will mail a booklet to you.

If a knob, drip pan, rack, etc. should be missing or damaged in any way when you occupy, contact Rummer Homes service department. in writing within four days after occupancy.

ELECTRICAL - Wiring, fixtures, plates, etc.

All wiring in your home meets code requirements and safety standards. If several additional appliances are to be connected, with a possibility of overloading the circuits, check with an electrician first. Circuit breakers are the safety valve of your home's electrical system. Check the location of the circuit breaker box as soon as you move in. When electric outlets or appliances fail to work, it is usually a sign that the circuit breaker has tripped. This may be caused by any of the following:

1. Overloading the circuit by plugging in too many appliances.
2. A short circuit resulting from a worn cord or defective plug connection.
3. Voltage too high for the appliance used.
4. The starting of an electric motor. (Motors require more current to start than to run.)

Before resetting a circuit breaker, locate the cause and correct it. Before you call the electrical subcontractor to make repairs, check all of the above to make sure none of these is the cause of the

ELECTRICAL - (Cont'd)

trouble. If you call the subcontractor and he finds that one of the above is the cause and that there is actually nothing wrong with your electric system, there will be a charge for the call.

Circuit breakers for each section of your home can be easily identified in case of emergency if you label each one with a piece of adhesive tape.

If you find any of the electric fixtures missing or broken when you move in, notify Rummer Homes service department in writing within four days after occupancy.

Your concealed wiring, switches, circuit breaker, receptacles and exhaust fan are guaranteed for a period of one year after occupancy. There is no guarantee against breakage or cracks in light fixtures.

PLUMBING -

The plumbing in your home is the result of the best workmanship and the finest materials available. Treat it with the care that its quality deserves. Like anything mechanical, plumbing requires periodic maintenance to perform properly. Faucet aerators will need to be removed from the faucet so that you can clean the dirt that they filter. Dripping faucets will require replacement of worn out washers. Toilet tanks will require periodic adjustment so that they operate properly. You will have to remove tub and sink stoppers to remove particles of soap, dirt, hair, etc. which, if not removed, will allow water to seep out of the tub or sink. All of these things are considered maintenance items and the responsibility of the owner.

The following items are warranted for a period of one year after occupancy:

Concealed piping
toilet tank
toilet bowl
lavatories
sinks and their exposed supply and drain piping
Water heater replacement labor

The following items are warranted for a period of 90 days after occupancy: (These are considered maintenance items and will require periodic adjustments to obtain maximum efficiency)

Toilet tank mechanisms
leaking faucets or hose bibs
mechanical trip waste and stoppers
water heater controls
radiant heat boiler controls
loose valve handles
packing nuts
all other types of adjustment items

PLUMBING - (Cont'd)

If you call the subcontractor for service on anything which is considered to be a maintenance item after you have lived in your house for 90 days, there will be a charge for the service call.

If any of the plumbing parts or fixtures are missing or damaged in any way, such as a chipped bathtub or sink, cracked sink or lavatory, bent faucet handle, notify Rummer Homes service department in writing within four days after occupancy.

HOT WATER HEATERS -

Most water heater manufacturers recommend that you drain off a quantity of water from the bottom of your water heater frequently. This should be done as often as recommended to get maximum use from your hot water heater. If your pilot light should go out due to excess drafts, follow the instructions on the hot water heater warranty to relight. There is a pressure and temperature relief valve on your hot water heater which may periodically release and pour water from your heater. If this occurs, it is probably caused by having the thermostat too high for the amount of water you use. If you will lower the temperature slightly, this will usually take care of this problem. It is imperative that you read your hot water heat instructions thoroughly.

SEWER STOPPAGES -

Any sewer stoppage is considered to be the responsibility of the homeowner unless it is in existence at the time you move into your house, in which case you should immediately notify Rummer Homes service department in writing. If you have a stoppage, it is not necessary that you contact our subcontractor. You can call any plumber, preferably in your immediate area for faster service. Sewer stoppages are caused by improper use of the disposer (see Disposer section above) or, introduction of foreign objects, such as toys, diapers, brushes, etc.

RADIANT HEAT -

Your Rummer Home is heated by a radiant heating system, tailor-made to the needs of your house. It is designed to provide clean, even, comfortable heat the year round, without drafts, dust or soot. "Set it and forget it" is the rule for good radiant heating comfort. You, as a new user, will find yourself changing your ways from habits learned with other heating systems. You do not need a blast of heat (which quickly becomes uncomfortable) to offset a chill. Learn to set your thermostat at a desired comfort level, varied by the season, then let it alone. Here is a suggested schedule of thermostat settings:

| | |
|---|---|
| December - February | 70 - 71° |
| March - May | 68 - 70° |
| June - September | 60 - 65° |
| October - November | 68 - 70° |

RADIANT HEAT - (Cont'd)

With all types of automatic heating systems there may be an occasional failure of controls. Usually a simple adjustment is all that is required. Your radiant heat system recirculates the same water and it is never necessary to drain the system, nor to use soft water.

When you move into your new home, you should call the subcontractor to turn on your system. He will want to explain the workings of your system to you and if you have any questions about the operation, he can advise you at that time.

Also, when your radiant heat system is turned on, the service man will balance the system. Should you install carpeting after this balancing is done, you may need the system balanced again. For any balancing of your system after the system has been turned on, there will be a service charge.

The following items are guaranteed for a period of one year after occupancy:

Piping in slab
Radiant heat boiler
Radiant heat pump
Thermostat
Controls
Manifolds
Valves
Expansion tank

The following items are considered maintenance and are covered by warranty for a period of 90 days after occupancy:

Adjustment of controls
Adjustment or cleaning of thermostat
Pilot adjustment
Cleaning of pilot and burner
Any other minor items of adjustment

FLOOR TILES -

The floor tiles in your house, with reasonable care, will maintain their natural good looks and enhance the beauty of your home. For detailed information we recommend that you get the Armstrong floor care booklet from our subcontractor if it is not in the back of this booklet. This booklet will give you detailed information on cleaning, waxing and polishing methods. Here are a few general rules. NEVER USE PASTE WAX. After thoroughly cleaning your floors, apply a thin coat of water emulsion wax. This will buff into a bright shine. It is not necessary to wax your floors more often than every 6 - 8 weeks. Between waxing, the floor should be washed with clear cold water. Use as little water as possible on the floors and avoid leaving water on the floors for a long time. Gasoline, benzine, turpentine, gasoline and organic solvents should never be used on the floor. Use only the recommended waxes. Wipe spillage away with a damp cloth or

FLOOR TILES -(Cont'd)

sponge immediately. This will save you frequent washing, which is tiresome and unnecessary.

ALWAYS use cups under the legs of your furniture to prevent indentations on the tiles from the legs of the furniture. This is particularly important on heavy furniture such as beds, pianos, dressers, etc. Replacement of any indented, scratched or broken tiles caused by furniture is the homeowner's responsibility.

If when you occupy your house you find that any of the floor tiles are missing, contact the floor tile subcontractor immediately. If you find any of the floor tiles have been damaged in any way, contact Rummer Homes service department immediately. If any of the floor tiles are loose or have been laid improperly, contact the floor tile subcontractor within 90 days after occupancy. Do not wait until the end of your year warranty to report floor tile problems, as we are unable to guarantee that any new floor tiles that are installed will match the old after that length of time.

MASONRY -

Your Rummer fireplace is of proven design. It is a solid, functioning, floor-to-ceiling unit built to give you comfortable fires. However, like many other parts of the house, it must cure with use. Don't build too hot a fire when you first start using your fireplace or you may loosen the mortar. Be sure the damper is open before you start a fire. You will find the damper lever just above the fireplace opening, inside the fireplace. During cold weather, when the fireplace is not in use, you may wish to keep the damper closed. This will greatly reduce your heat loss and save on your heating bills. If the fireplace leaks during the rains, contact Rummer Homes service department.

SHOWER ENCLOSURE -

The bottom track of your shower enclosure contains 'weep' holes on the inside of the door. These weep holes must be kept clear of dirt and soap deposits so that the water can drain out of this track to avoid water spilling onto your bathroom floor. If the shower door doesn't fit properly, or if it leaks, contact the subcontractor directly.

CERAMIC BATH TILE -

During the first year when the house normally settles, the result is usually a separation between the tub and the first row of wall tile and cracking of the grout between the tiles. This can easily be fixed by filling the crack with inexpensive tile joint filler, available at any hardware store. Repair of cracked grout is considered a maintenance item.

SHOWER -

If your shower leaks, contact Rummer Homes service department, rather than any of the subcontractors, since it is sometimes difficult to determine the cause. Our service crew will inspect it and determine the proper subcontractor to contact.

CONDENSATION -

In a few rare cases, condensation will occur in a new house. Condensation can be very annoying and when it occurs on the large fixed glass windows, it may stain your drapes. Condensation is caused by warm, moist air coming in contact with a colder surface, such as the underside of the roof insulation. The warm air inside the house, meeting the cold air from the outside at the large window areas can cause this to occur on the windows. Condensation is at its maximum in a new house. Literally tons of water go into the concrete, masonry, etc. When the house is occupied and the heat turned on, this water begins to evaporate, forming air of a higher moisture content than normal. You can reduce the effects of condensation by proper ventilation. Don't try to accelerate the drying out process by turning up the heat. Condensation, when it occurs from a skylight, may be mistaken for a roof leak or a leak in the skylight, particularly on rainy days. It will occur on cold days, when the difference between outside and inside temperatures is at its maximum.

DOOR HARDWARE -

Door hardware should be cleaned occasionally with a damp smooth cloth or a recommended metal polish. If the tumbler action of locks becomes stiff and works hard, put graphite powder in the mechanism. You should also use graphite powder, instead of oil, on the hinges, too. The locks in your house are master keyed, as this is necessary during the construction of your house. If you feel that this is a hazard to your safety or if you would feel more secure with another set of locks, it is up to you to replace the lock tumblers. This can be done easily and inexpensively.

SLIDING GLASS DOORS AND SLIDING DOOR SCREENS -

Your sliding glass doors are weatherstripped at the factory and you should have no air or water leakage. If any of the sliding doors or door screens do not work, kindly contact the subcontractor directly, as they will want to set up an appointment for the service call.

If when you occupy your house you find a handle or roller missing, a sliding door screen torn, or the door glass cracked, broken or badly scratched, contact Rummer Homes service department within four days after occupancy.

SLIDING WINDOWS AND WINDOW SCREENS -

If any of your sliding windows leak or do not slide properly, contact our service department. If a window screen is cut or damaged in any way, contact our service department within four days after occupancy. These windows can be removed for cleaning. Occasionally clean the track and sliding portion of the sash and rub with paraffin for smooth operation.

GLASS -

We hold ourselves responsible for replacement of any glass in your house which is broken, chipped, cracked or badly scratched if this condition exists when you occupy your house. We must, however, be notified of this condition within four days after occupancy. We will perform no service on any of the above unless we are notified in WRITING within this time period.

If you break a window or if a window cracks from settlement after you have occupied your house, you should contact your insurance company and order this glass replaced from any glass company in your area. You should make sure you are completely covered by insurance for glass breakage.

The large fixed glass windows and patio glass doors are most easily cleaned by using a bucket, a long brush, a squeegee and a chamois or cloth as professional cleaners do. Use a small amount of ammonia or vinegar in warm water, apply it with the brush and scrape the windows down with the rubber edge of the squeegee, wiping the squeegee with the chamois or cloth between each stroke. It takes a little practice, but it is faster, easier and safer than other methods. Cleaning the windows with a cloth will sometimes scratch the surface of the glass, making these scrathces quite apparent when the sun shines on the glass.

The fixed glass windows in your house were not designed for the pressure exerted by spraying a garden hose against them and this pressure may loosen the putty which holds the glass in place, causing the windows to leak.

TABLE TOPS AND COUNTERS -

The table tops and kitchen counters in your Rummer Home are made of Formica, a tough, durable material which will take a lot of punishment and is very easy to keep clean. There has been some talk about the ability of Formica to withstand ANY temperature and ANY treatment. Formica does have a heat resistance point which should not be exceeded. Frying pans or baking dishes should not be placed directly on your kitchen counters from the oven or top of the stove. As a good general rule, place all hot pots and pans on mats. Sharp knives or cleavers should be used on the bread board in the kitchen of your home, NOT on the Formica. Several polishes are available to give your counter tops and table a nice shine. If any Formica in the house is in any way cut or damaged when you move in, notify us within four days after occupancy.

CONCRETE -

Concrete is not flexible. Due to climatic changes and the normal movement of soil, it can and will crack. This applies as much to your garage floor and house slab as it does to patios, walks and driveways. We do not guarantee against any cracks in concrete, whether they are in the house itself, where they will be covered with floor tile, or in the garage, walks, steps, patios, atrium or driveway. We mix all concrete with the standard basic ingredients and standard thicknesses, but there is nothing we can do to prevent concrete from cracking.

Sometimes during the construction of houses, the concrete may become stained or chipped. You may prefer to have the minor chips, rather than to have them repaired, since it is impossible to patch concrete with exactly the same color and texture, causing the patch to become more noticeable than the original damage.

If you have any complaints about a broken or damaged sidewalk, do not contact us or our subcontractor. The sidewalks in the subdivision will be accepted for maintenance by the City or County in which you live and will be inspected by them before they accept the sidewalks. At that time they will advise us of all repairs to sidewalks which are required.

LOT GRADING AND DRAINAGE -

Your lot is delivered to you rough-graded according to the engineer's plan for drainage. In almost every instance, the lot is graded to drain from the rear of the lot, down the side of the lot, to the street. When you are rototilling to prepare your lot for landscaping, and doing finish grading, be very careful not to disturb the engineer's pattern of drainage. Keep the slope away from the house. Never build planter boxes in the natural drainage channels at the side lot lines or pack crushed rock into the drainage swales. In doing your finish grading it is always a good idea to consult your neighbors. It is to your mutual interest to do a proper job. You must keep the swales free of loose leaves, rock, etc. so that these swales will carry the water to the street or to the rear of your yard, whichever the drainage pattern calls for. Slight ponding can easily be taken care of by hand raking. During extremely heavy rains you may have temporary ponding due to the following: soil becoming saturated, hence more runoff; grass, weeds, etc. causing the water to move slower; and the swales reaching their water carrying capacity.

In grading for lawns to the concrete patios, driveways or walks, make your grade lower than the concrete level. As your lawn grows and forms a turf, its level will rise. If the level of the lawn rises above the concrete level, the runoff of water from the lawn will collect on the concrete surfaces. Do not install header boards at a level higher than the concrete, or it will keep the water on the concrete and prevent it from running off as it should.

LOT GRADING AND DRAINAGE - (Cont'd)

When you take possession of your house, the wood siding is about 6" above ground level, all around the base. This clearance should be maintained. Do not place earth directly against the siding or you will invite insects and rot.

Once you have landscaped your lot, we cannot be responsible for drainage problems of any kind. Almost every case of drainage complaint after landscaping has been caused by the homeowner or gardener filling in the drainage swales with dirt, rock or planting.

CONCLUSION -

It is beneficial to all concerned to get repairs completed as soon as possible. We urge you to report all items that require repair as soon as they become apparent, rather than wait until a week or two before the expiration of warranty.

As the warranty states, the subcontractors' work, as well as ours, is guaranteed free of defects in material and workmanship for one year and you may contact the subcontractors and us during this period if anything goes wrong. If you have not received proper service from a subcontractor and there are still some items outstanding at the end of the warranty period, kindly advise our service department before your warranty expires. We will not accept complaints about any outstanding subcontractor items after the expiration of the warranty period.

When writing to either the subcontractors or to our service department, indicate your lot number, subdivision, address and telephone number. Do not under any circumstances report complaints to the salesmen, hostess, loan department or to any of the men in the field. Contact only our service department and subcontractors.

We hope that these few suggestions will be helpful to you in maintaining your house properly and in getting the maximum use and comfort out of it. In this kit are the names of the subcontractors who helped build your house, as well as pamphlets which should be helpful to you.

We wish you and your family many years of good health and happiness in your Rummer Home.

## WHO TO CALL FOR SERVICE AND/OR ADJUSTMENTS

| | | |
|---|---|---|
| Plumbing: | Name | Copper Plumbing |
| | Address | 9385 S. W. Greenburg Road, Tigard, Oregon |
| | Phone No. | ME9-2653 |
| Heating: | Name | Copper Plumbing |
| | Address | 9385 S. W. Greenburg Road, Tigard, |
| | Phone No. | ME9-2653 |
| Electrical System: | Name | Meeker Electric |
| | Address | 1544 Portland Road, Newberg, |
| | Phone No. | 538-3845 |
| Windows & Patio Doors | Name | Tom Benson Glass |
| | Address | 1350 N. W. Raleigh, Portland |
| | Phone No. | 226-7611 |
| Appliances: | Name | Thermador |
| | Address | 1960 N. W. 131st Ave., Portland |
| | Phone No. | 646-9195 |
| Garage Doors: | Name | Stanley Garage Doors |
| | Address | 8819 S. E. Powell Blvd, Portland |
| | Phone No. | 777-1774 |
| Floor Tile, Ceramic & Formica | Name | Allied Floor Covering |
| | Address | 252 S. W. First, Beaverton |
| | Phone No. | 646-2188 |
| Carpets: | Name | Newberg Interiors |
| | Address | 408 E. First St., Newberg |
| | Phone No. | 538-2200 |
| Cabinets: | Name | Sixty-Forty Cabinets |
| | Address | Box 364, Newberg |
| | Phone No. | 538-5439 |
| Roof: | Name | Griffith Roofing |
| | Address | 400 N. W. Beaverdam Road, Beaverton |
| | Phone No. | MI4-6846 |
| CEMENT: | Name | West Side Concrete |
| | Address | 15987 S. W. Parker, Lake Grove |
| | Phone No. | NE6-5264 |

| | | | |
|---|---|---|---|
| Ron Gevurtz | 6645 | S.W. 89th Ave. | 246-2718 |
| Rita Kolby | 8670 | S.W. Cecilia Terr. | 244-9589 |
| Bob Rummer | | | 244-4008 |

# REFERENCES CITED


Adamson, Paul. “Joe Eichler Profile.” Eichler Network. http://www.eichlernetwork.com/article/joe-eichler-profile

Adamson, Paul and Marty Arbunich. *Eichler: Modernism Rebuilds the American Dream*. Salt Lake City: Gibbs Smith, 2002.

American Wood Council. *Details for Conventional Wood Frame Construction – Wood Construction Data No. 1*. American Forest & Paper Association, 2001. http://www.awc.org/pdf/codes-standards/publications/wcd/AWC-WCD1-ConventionalWoodFrame-ViewOnly-0107.pdf

American Wood Council. *Plank-and-Beam Framing for Residential Buildings – Wood Construction Data No. 4*. American Forest & Paper Association, 2003. http://www.awc.org/pdf/codes-standards/publications/wcd/AWC-WCD4-PlankBeam-ViewOnly-0304.pdf

APA – The Engineered Wood Association. “Glossary.” Resources. Accessed May 21, 2018. https://www.wooduniversity.org/glossary

APA – The Engineered Wood Association. “History of APA, Plywood, and Engineered Wood.” About Us. Accessed May 21, 2018. https://www.apawood.org/apas-history.

Ballestrem, Val. “A Visit to Vista Brook.” Architectural Heritage Center. Accessed April 8, 2018. http://visitahc.org/a-visit-to-vista-brook/.

Bartelt, Denise. “Return to Rummer.” Restore Oregon. September 22, 2016. Accessed May 20, 2018. https://restoreoregon.org/return-to-rummer/.

Barthlow, Joe. "Meet Builder Robert Rummer." Eichler Network. Accessed February 3, 2017. http://www.eichlernetwork.com/article/meet-builder-robert-rummer

Bernstein, Ken. ”The Top Ten Myths About Historic Preservation.” Preservation Sacramento. Accessed May 31, 2018. http://www.preservationsacramento.org/preservation-myths/.

Bookwalter, Jack. “Rummers in Oregon: A Legacy of Mid-Century Modern Homes.” Rummer Connection. https://rummer.weebly.com/rummer.html.

Bowers, Sue (homeowner, 7310 Southwest 84th Avenue). Interview by author. Digital recording. Washington County, OR. February 20, 2018.

Brown, David. “Phoenix: Up from the Desert.” *Modernism Magazine* 10, no. 3 (Fall 2007): 96-100. http://www.azwriter.com/documents/10120_phoenix_profile_modernism_magazine_2007.pdf

Buerger, Megan. “Why Mid-Century Modern Is Forever.” *The Washington Post*, August 17, 2016. https://www.washingtonpost.com/lifestyle/home/why-mid-century-modern-is-forever/2016/08/16/f9b50a92-5e77-11e6-8e45477372e89d78_story.html.

California Department of Transportation, Cultural Studies Office. *Tract Housing in California, 1945-1973: A Context for National Register Evaluation*. Sacramento, CA, 2011. http://www.dot.ca.gov/ser/downloads/cultural/tract_housing_in_ca_1945-1973.pdf.

Chain of Title for taxlot 1S124CB05121. Washington County Department of Revenue and Taxation. Hillsboro, Oregon.

City of Cupertino Community Development Department. *Eichler Design Handbook: Fairgrove*. Cupertino, CA, January 2001. https://www.cupertino.org/home/showdocument?id=414.

City of Portland Bureau of Environmental Services and Washington County Department of Land Use and Transportation. “SW 86th Avenue Pump Station Neighborhood Information Meeting Announcement.” Febraury 28, 2012. http://extension.oregonstate.edu/washington/sites/default/files/sw86thavepsneighbormeetingminutes2-28-12final.pdf.

City of Portland Bureau of Planning and Sustainability. *East Portland Historical Overview and Historic Preservation* Study, by Liza Mickle and Nicholas Starin. Portland, OR, March 2009.

City of Portland Department of Environmental Services. “Environmental Services statement responding to DEQ fine for discharge to Woods Creek.” February 9, 2018. Accessed April 17, 2018. https://www.portlandoregon.gov/bes/article/672498.

City of Sacramento Community Development Department. *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*, by GEI Consultants, Inc. and Mead & Hunt, Inc. Sacramento, CA, September 2017. http://www.cityofsacramento.org/-/media/corporate/files/cdd/planning/urban-design/preservation/mcm-context-statement-report_update-website.pdf.

City of Scottsdale Historic Preservation Office. *Historic Preservation Guidelines for Town and Country Scottsdale Historic District.* Scottsdale, AZ, February 2006. http://www.scottsdaleaz.gov/Assets/ScottsdaleAZ/Historic+Preservation/HPPlan+Town+and+Country+Design+Guidelines.pdf.

City of Scottsdale, Historic Preservation Office. *Historic Preservation Guidelines for Village Grove 1-6 Historic District.* Scottsdale, AZ February 8, 2006. http://www.scottsdaleaz.gov/Assets/ScottsdaleAZ/Historic+Preservation/HPPlan+Village+Grove+Design+Guidelines.pdf.

City of Seattle, Department of Planning and Development. *Seattle Design Guidelines: Design Review*, by Lesley Bain and Cheryl Sizov. Seattle, WA, December 2013. http://www.seattle.gov/Documents/Departments/OPCD/Vault/CitywideDesignGuidelinesUpdate/SeattleDesignGuidelines.pdf.

City of Sunnyvale Planning Commission. *Eichler Design Guidelines*. Sunnyvale, CA, July 2009. https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?BlobID=23807.

Dominguez, Laura. The Getty. "William Krisel, Southern California's Architect." Art & Archives: Outside the Box, December 18, 2012. Accessed May 20, 2018. http://blogs.getty.edu/iris/treasures-from-the-vault-william-krisel-southern-californias-architect/.

"Ralph Haver Homes and Neighborhoods." Dwell Arizona. Accessed May 20, 2018. https://dwellarizona.com/mid-century-modern/ralph-haver.

Eastman, Janet. "Get Inside 6 Midcentury Modern Rummers: Restore Oregon's Home Tour." *The Oregonian*, September 4, 2016. http://www.oregonlive.com/hg/index.ssf/2016/09/rummer_midcentury_modern_eichl.html.

Eastman, Janet. "Southwest Midcentury Modern – Sleeping in Portland." *The Oregonian*, November 23, 2013. http://www.oregonlive.com/hg/index.ssf/2013/11/sleeping_in_portland_midcentur.html.

Eichler, Ned. *The Merchant Builders.* Cambridge: MIT Press, 1982.

Eichler Siding. "Eichler Home Pattern: Thinline, Wideline, and Plank-Tex." Accessed May 20, 2018. http://www.eichlersiding.com/eichler-patterns/

Eichler SoCal. "Fairhills #OC-274-R/#OC-574 (Claude Oakland)." Eichler Floor Plans – Fairhills. Accessed May 20, 2018. http://www.eichlersocal.com/the-eichler-community/eichler-floor-plans-fairhills/.

Engber, Daniel. "The Mid-Century Modern Craze: Clean-Looking Furniture for a Dirty World." *Los Angeles Times*, December 27, 2015. http://www.latimes.com/opinion/op-ed/la-oe-1227-engber-mid-century-modern-appeal-20151227-story.html

Entenza, John, ed. "A Community Development by A. Quincy Jones and Frederick E. Emmons, Architects." *Arts & Architecture*, August 1954. http://www.artsandarchitecture.com/issues/pdf01/1954_08.pdf.

Entenza, John, ed. "Experimental House X-100, A. Quincy Jones and Frederick E. Emmons, Architects." *Arts & Architecture*, February 1957. http://www.artsandarchitecture.com/issues/pdf01/1957_02.pdf.

Entenza, John, ed. "Good Design and the Tract House, Anshen and Allen, Architects." *Arts & Architecture*, March 1951. http://www.artsandarchitecture.com/issues/pdf01/1951_03.pdf.

Entenza, John, ed. “The Ladera Project, A Quincy Jones, Frederick E. Emmons, Architects.” *Arts & Architecture*, July 1951. http://www.artsandarchitecture.com/issues/pdf01/1951_07.pdf.

Entenza, John, ed. “Tract Project by Anshen and Allen, Architects.” *Arts & Architecture*, April 1960. http://www.artsandarchitecture.com/issues/pdf01/1960_04.pdf.

Fenton, Laura. “Why the World Is Obsessed with Midcentury Modern Design.” *Curbed*, April 8, 2015. https://www.curbed.com/2017/11/22/16690454/midcentury-modern-design-mad-men-eames.

Gottfried, Jeff (homeowner, 7040 Southwest 84th Avenue). Interview by author. Digital recording. Washington County, OR. March 15, 2018.

Haley, Kathleen. “Unhappy with Eichler.” *SFGate*, July 29, 2006. https://www.sfgate.com/homeandgarden/article/UNHAPPY-WITH-EICHLER-Retro-may-be-cool-but-it-2515339.php

Hansen, Barbara (homeowner, 8510 Southwest Cecilia Terrace). Interview by author. Digital recording. Washington County, Oregon February 13, 2018.

Harvey, Kimberly. *William Krisel Butterfly Roof Home in Paradise Palms*. June 18, 2014. Wikimedia Commons, Las Vegas, Nevada. https://commons.wikimedia.org/wiki/File:William_Krisel_butterfly_roof_home_in_Paradise_Palms.jpg.

Have, Mieke Ten. “California Dreaming: Kameon’s Gardens are for Living Introduces Mid-Century Modern to the Outdoors.” *Vogue*, March 4, 2014. https://www.vogue.com/article/judy-kameon-gardens-are-for-living.

Higginbotham, Gary. "When Ranch Goes Modern: Celebrating Rummer Homes." *Portland Architecture* blog, August 2012. Accessed March 3, 2017. http://chatterbox.typepad.com/portlandarchitecture/2012/08/when-ranch-goes-modern-celebrating-rummer-homes.html

Hillsboro City Planning Commission. *Population Trends*, by Frank N. Frost. Hillsboro, OR, 1961.

Holstein, Amara. “Just Do It.” *Dwell*. April 2009.

HomeAdvisor Inc. “T1-11 Siding.” Resource Center. Accessed April 23, 2018. https://www.homeadvisor.com/r/t1-11-siding/.

Howell, Ocean. “The Merchant Crusaders: Eichler Homes and Fair Housing, 1949-1974.” *Pacific Historical Review* 85, no. 3 (August 2016): 379-407. https://doi.org/10.1525/phr.2016.85.3.379.

Houseman, Stan (homeowner, 8630 Southwest Cecilia Terrace). Interview by author. Digital recording. Washington County, Oregon March 28, 2018.

Hughes, Mark. *Wood Composites*. Cambridge: Woodhead Publishing, 2015.

*Information on Super-Harbord, the Outdoor Plywood, and Other Harbor Products*. Hoquiam, WA: Harbor Plywood Corporation, 1938.

Jester, Thomas C., ed. *Twentieth Century Building Materials*. Los Angeles: Getty Publications, 2014.

King, Alison. “Ralph Haver: Everyman’s Modernist.” Modern Phoenix. 2011. Accessed May 20, 2018. http://www.modernphoenix.net/haver/haverbiography.htm.

King, Alison. *Town and Country Home in Janet Manor by Ralph Haver AIA*. 2011. Wikimedia Commons, Phoenix, Arizona. https://commons.wikimedia.org/wiki/File:Town_and_Country_home_in_Janet_Manor_by_Ralph_Haver_AIA.jpg

Krisana Park. “History.” About KP. Accessed May 23, 2018. http://www.krisanapark.community/kp-history-1/.

Kurutz, Steven. “Why Won’t Midcentury Design Die?” *The New York Times*, September 30, 2016. https://www.nytimes.com/2016/10/06/style/why-wont-midcentury-modern-design-die.html.

*Lake Oswego Preservation Society v. City of Lake Oswego*, 51 Or. S. Ct., (2016).

Los Angeles Conservancy. “Living-Conditioned Homes.” Locations. Accessed May 20, 2018. https://www.laconservancy.org/locations/living-conditioned-homes.

Mackay Homes. “About Mackay Mid-Century Modern Architecture.” Neighborhood Accessed May 31, 2018. http://www.fairmede.com/neighborhood.html.

Mactaggart, Ross. “My Love/Hate Relationship with *Atomic Ranch.*” *Restoring Ross: Other Cool Things*, blog. December 3, 2016. https://restoringross.com/my-lovehate-relationship-with-atomic-ranch/.

McAlester, Virginia Savage. *A Field Guide to American Houses*. New York: Alfred A. Knopf, 2003.

Meltzer, Erica. “Some Denver Mid-Century Modern Homes May Be Protected – Krisana Park Could Be Just the Beginning.” *Denverite*, November 3, 2016. https://www.denverite.com/denver-mid-century-modern-homes-protection-krisana-park-21453/.

Modern Phoenix. “Haver Homes in Starlite Vista.” Accessed May 21, 2018. http://modernphoenix.net/haver/starlitevista.htm

Myrow, Rachel. “How Joseph Eichler Introduced Stylish Housing for the Masses.” *Bay Curious*. Podcast audio, January 3, 2018. https://www.kqed.org/news/11635574/how-joseph-eichler-introduced-stylish-housing-for-the-masses

National Register of Historic Places, Green Gables Historic District, Palo Alto, Santa Clara County, California, National Register #04000863.

National Register of Historic Places, Greenmeadows Historic District, Palo Alto, Santa Clara County, California, National Register #04000862.

National Register of Historic Places, Oak Hills Historic District, Beaverton, Washington County, Oregon, National Register #13000482.

Nichols, Jeff. “Eichler Exterior Siding.” Eichler Network. http://www.eichlernetwork.com/article/eichler-exterior-siding

Nickell, Paul (homeowner, 7115 Southwest 84th Avenue). Interview by author. Digital recording. Washington County, OR. February 15, 2018.

Noland, Claire. “Architect William Krisel, Who Influenced the Look of Midcentury Palm Spring, Dies at 92.” *Los Angeles Times*, June 6, 2017. http://www.latimes.com/home/la-me-krisel-obit-20170606-story.html.

O’Hara, Marjorie. “The Californians Are Coming!” *The Sunday Oregonian*. November 21, 1965.

Oregon Department of Land Conservation and Development. *Oregon’s Statewide Planning Goals & Guidelines*, (Salem, Oregon, March 2010). http://www.oregon.gov/LCD/docs/goals/compilation_of_statewide_planning_goals.pdf.

Oregon Metro. “Cities and Counties in the Metro Region.” https://www.oregonmetro.gov/regional-leadership/what-metro/cities-and-counties-region.

Oregon Parks and Recreation Department, Oregon Heritage. *Oregon Preservation Contractor Directory: Consultants.* Salem, OR, June 2014. http://www.oregon.gov/oprd/HCD/docs/HistoricalAssessmentConsultants.PDF.

Oregon Parks and Recreation Department, Oregon Heritage. *Oregon Preservation Contractor Directory: Contractors.* Salem, OR, June 2014. http://www.oregon.gov/oprd/HCD/docs/BuildingContractors.PDF.

Oregon Parks and Recreation Department, Oregon Heritage. *Oregon Preservation Contractor Directory: Suppliers.* Salem, OR, June 2014. http://www.oregon.gov/oprd/hcd/docs/suppliers.pdf.

Oregon Parks and Recreation Department, Oregon State Historic Preservation Office. *Bohmann Park Neighborhood Reconnaissance Level Survey Report,* by Kenneth Gunn and Lys Opp-Beckman. Salem, Oregon, June 2012, revised April 2015.

Palm Spring Modern Committee. “William Krisel.” Accessed May 20, 2018. https://psmodcom.org/william-krisel/.

Pilkington, L.A.B. “Review Lecture: The Float Glass Procedure,” *Proceedings of the Royal Society of London: Series A, Mathematical and Physical Sciences* 314, No. 1516 (December 1969), 6-9.

Portland Glass. “All About Glass.” Accessed May 20, 2018. http://portlandglass.com/all-about-glass/.

Portland Metropolitan Study Commission. A *Study of the East Washington County Urban Area.* Portland, OR: Portland State University, April 1970.

*Plywood in Retrospect No. 1 – Portland Manufacturing Company*. Tacoma, WA: Plywood Pioneers Association, March 1967. https://www.apawood.org/data/Sites/1/documents/monographs/1-portland-manufacturing-co.pdf.

*Plywood in Retrospect No. 14 – Harbor Plywood Corporation*. Tacoma, WA: Plywood Pioneers Association, November 1974.

“Ralph Haver Classic: Phoenix, Arizona.” *Dwell*. https://www.dwell.com/home/ralph-haver-classic-fe49cc47

Raymond, Carmela. “Summer of Rummer.” *Portland Monthly*, August 2006.

Rejuvenation. “Inspiration.” Accessed April 16, 2018. https://www.rejuvenation.com/catalog/categories/my-project.

Rummer Connection. Accessed May 14, 2018. https://rummer.weebly.com/.

Rummer, Robert. “Conversation with Robert Rummer.” Interview by Vivian McInerny, *Oregon Home*, May 25, 2011. https://oregonhomemagazine.com/profiles/item/1495-conversation-with-robert-rummer.

Rummer, Robert. “Robert Rummer Speaks at Street of Eames.” Interview by Becca Cavell, Street of Eames, November 2009. Video, 4:42, https://youtu.be/vUflotxK-0s.

Rummer, Robert. “Rosé and Rummer.” Lecture. DoCoMoMo Oregon. Washington County, OR. August 27, 2017.

Rummer, Robert. *Rummer Home Service Guide*. Washington County: Rummer Homes, circa 1959.

Scheer, Roddy and Doug Moss. “Is Under-Floor Radiant Heating More Efficient Than Conventional Systems?” *Scientific American*. https://www.scientificamerican.com/article/underfloor-radiant-heating/.

Schmidt, Brad. “Sewer Bureau Hopes $1 Million Surge Tank Will Alleviate Constant Fanno Creek Headaches: Portland City Hall Roundup.” *The Oregonian* December 6, 2012. Accessed April 18, 2018, http://blog.oregonlive.com/portlandcityhall/2012/12/sewer_bureau_hopes_1_million_s.html.

Shapiro, Edward S. *A Time for Healing: American Jewry since World War II*. Baltimore: Johns Hopkins University Press, 1992.

Sorter, Randy. “Krisana Park Turns the Big Five-O.” *Atomic Ranch*, January 2006.

Stamberg, Susan. “With Sunny, Modern Homes, Joseph Eichler Built the Suburbs in Style.” *KWRG,* March 16, 2015. http://krwg.org/post/sunny-modern-homes-joseph-eichler-built-suburbs-style.

State of Oregon Oregon Revised Statute, §197.772 (2017).

Streng Brothers Homes. “Bill and Jim Streng – Builders.” About. Accessed May 22, 2018. https://www.strengbroshomes.com/about.html.

Streng Brothers Homes. “Halfplex Plans.” Floor Plans. Accessed May 22, 2018. https://www.strengbroshomes.com/floor-plans.html.

Streng Brothers Homes. “Single Family Plans.” Floor Plans. Accessed May 22, 2018. https://www.strengbroshomes.com/floor-plans.html.

ThinkWood. “Light-Frame Construction.” Products and Systems. Accessed May 20, 2018. https://www.thinkwood.com/products-and-systems/light-frame-construction.

Thomson, Gregory Dick. “Process or Artifact: The Preservation of Experimental Building Systems in Early Modern Architecture.” Master’s Thesis, University of Oregon, 2002.

Tualatin Hills Parks & Recreation District. “Vista Brook Park.” Parks and Trails. Accessed May 18, 2018. http://www.thprd.org/parks-and-trails/detail/vista-brook-park.

University of Oregon Bureau of Governmental Research and Service. *1940-1970 Population and Housing Trends: Cities and Counties of Oregon.* Eugene, OR, December 1971.

U.S. Department of Agriculture, Forest Service, Technology and Development Program. *Early 20th-Century Building Materials: Fiberboard and Plywood*, Facilities Tech Tips, by Richa Wilson and Kathleen Snodgrass. Utah, March 2007. https://www.fs.fed.us/t-d/pubs/pdfpubs/pdf07732308/pdf07732308dpi72.pdf.

U.S. Department of the Interior, National Park Service, Heritage Preservation Services. *Preservation Brief 1: Assessing Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings* by Robert C. Mack and Anne E. Grimmer. Washington, D.C. November 2000. https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/01Preserve-Brief-Cleaning.pdf.

U.S. Department of the Interior, National Park Service, Heritage Preservation Services. *Preservation Brief 6: Dangers of Abrasive Cleaning to Historic Buildings* by Anne E. Grimmer. Washington, D.C. 1979. https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/06Preserve-Brief-Cleaning.pdf.

U.S. Department of the Interior, National Park Service, Heritage Preservation Services. *Preservation Brief 9: The Repair of Historic Wooden Windows* by John H. Myers. Washington, D.C. 1981. https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/09Preserve-Brief-Wooden-Windows.pdf.

U.S. Department of the Interior, National Park Service, Heritage Preservation Services. *Preservation Brief 17: Architectural Character – Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character* by Lee H. Nelson. Washington, D.C. September 1988. https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/17Preserve-Brief-VisualAspects.pdf.

U.S. Department of the Interior, National Park Service, Heritage Preservation Services. *Preservation Brief 18: Rehabilitating Interiors in Historic Buildings – Identifying Character-Defining Features* by H. Ward Jandl. Washington, D.C. October 1988. https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/18Preserve-Brief-Interiors.pdf.

U.S. Department of the Interior, National Park Service, Heritage Preservation Services. *Preservation Brief 39: Holding the Line: Controlling Unwanted Moisture in Historic Buildings* by Sharon C. Park. Washington, D.C. October 1996. https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/39Preserve-Brief-Moisture.pdf.

U.S. Department of the Interior, National Park Service, Heritage Preservation Services. *Preservation Brief 47: Maintaining the Exterior of Small and Medium Size Historic Buildings* by Sharon C. Park. Washington, D.C. June 2007. https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/47Preserve-Brief-SmallMediumExteriors.pdf.

U.S. Department of the Interior, National Park Service, Technical Preservation Services. *Preservation Tech Notes 22: Maintenance and Repair of Historic Aluminum Windows* by Karen R. Staveteig. Washington, D.C. 2008. https://www.nps.gov/tps/how-to-preserve/tech-notes/Tech-Notes-Windows22.pdf.

Washington County Community Development Code 373 – Historic and Cultural Resource Overlay District. Accessed May 10, 2018. https://library.municode.com/or/washington_county/codes/community_development_code?nodeId=ARTIIILAUSDI_373HICUREOVDI.

Washington County Land Use and Transportation. “Urban and Rural Land Use Districts.” Accessed March 26, 2018. https://www.co.washington.or.us/lut/divisions/currentplanning/applications/urban-rural-land-use-districts.cfm.

Washington County Long Range Planning. “Ordinances Amending the Community Development Code Adopted After November 24, 1989.” November 21, 2013. https://www.co.washington.or.us/lut/divisions/longrangeplanning/publications/upload/adopted-ordinance-list.pdf.

Washington County Planning and Development. “Comprehensive Plan Documents.” Land Use and Transportation Publications. https://www.co.washington.or.us/LUT/Divisions/LongRangePlanning/Publications/index.cfm.

Washington County Technology Services. “Permits Project & Activity Report for 1S123DA00331.” Accessed February 15, 2018. http://washims.co.washington.or.us/GIS/index.cfm?id=14&sid=4&IDValue=1S123DA00331

Washington County Technology Services. “Permits Project & Activity Report for 1S124CB05121.” Accessed March 20, 2018. http://washims.co.washington.or.us/GIS/index.cfm?id=14&sid=4&IDValue=1S124CB05121.

Weinstein, Dave. “Eichler Copycats Score a Win in Denver,” Eichler Network, January 25, 2017. http://www.eichlernetwork.com/blog/dave-weinstein/eichler-copycats-score-win-denver.

Weinstein, Dave. “Greater Sacramento Strengs: Valley of the Atriums.” Eichler Network. http://www.eichlernetwork.com/article/greater-sacramento-strengs-valley-atriums

Weinstein, Dave. “Historic Quest: Eichlers in the National Register.” Eichler Network. http://www.eichlernetwork.com/article/historic-quest-eichlers-national-register.

Weinstein, Dave. “Joe Eichler Is Featured in Exhibit about Jews and Modern Design.” Eichler Network, May 14, 2014. http://www.eichlernetwork.com/blog/dave-weinstein/joe-eichler-featured-exhibit-about-jews-and-modern-design.

Weinstein, Dave. “Meet the Mackays.” Eichler Network. http://www.eichlernetwork.com/article/meet-mackays

Weinstein, Dave. “Mid-Century Mackay Homes Deserve Respect.” Eichler Network, April 15, 2015. http://www.eichlernetwork.com/blog/dave-weinstein/mid-century-mackay-homes-deserve-respect.

Weinstein, Dave. “When Is an ‘Eichler’ Not an Eichler?” Eichler Network, April 18, 2014. http://www.eichlernetwork.com/blog/dave-weinstein/when-eichler-not-eichler

Weinstein, Nathalie. “Controversial Sewage Project Appealed to State.” *Daily Journal of Commerce Oregon*, October 15, 2010. http://djcoregon.com/news/2010/10/15/controversial-sewage-project-appealed-to-state/.

Wells, Shannon O. “Meeting Yields Few Concessions on Fanno Creek Pumping Station,” *Beaverton Valley Times*, October 17, 2013. Accessed April 16, 2018. http://pamplinmedia.com/bvt/15-news/198147-meeting-yields-few-concessions-on-fanno-creek-pumping-station.

Wells, Shannon O. “Pumping Station Project Begins.” *Beaverton Valley Times*, May 23, 2013. Accessed April 10, 2018. http://portlandtribune.com/bvt/15-news/153144-pumping-station-projects-begin.

"Why Mad Men Is Still Relevant for Mid-Century Modern Design Lovers." *Essential Home*. http://essentialhome.eu/blog/mad-men-relevant-mid-century-modern-design-lovers/.

Winslow, Jonathan. "Orange Planning Standards to Keeps Its 350 Eichlers Preserved." *Orange County Register*, September 19, 2017. Accessed April 1, 2018. https://www.ocregister.com/2017/09/19/ orange-planning-standards-to-keep-its-350-eichler-homes-preserved/.

Wood, Justin. "Carter Sparks Archive: An Informal Archive of Carter Sparks' Custom Sacramento Homes." Carter Sparks Archive. Accessed May 22, 2018. http://cartersparks.org/.