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Roadway Not Improved: Exploring temporary uses and community-based alternatives for unimproved streets

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Unimproved Streets in Portland

An exploration of opportunities & challenges
Roadway Not Improved is a project of LARKE Planning, a group of five Portland State University graduate students in urban and regional planning. Between January and June of 2010, LARKE worked with the Woodstock Neighborhood Association to explore temporary uses and community-based strategies for unimproved streets.

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Unless otherwise noted, all images were produced by LARKE Planning.
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CLIENT

Terry Griffiths, Woodstock Neighborhood Association, Land Use Committee Chair

WOODSTOCK RESIDENTS

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“Will the City Pay to Maintain or Improve Our Street?

The City of Portland does not currently share in the cost of constructing streets or maintaining substandard streets. Since the beginning of the City’s history, most or all of these costs have been paid for by adjacent property owners. The City receives revenue from the gasoline tax, the weight-mile tax, and vehicle registration fees to fund transportation needs, with the first priority being to use these resources to maintain the $8.1 billion investment its citizens have made in its existing transportation infrastructure instead of building new transportation infrastructure. Property taxes are used for police, fire, parks and other services, but are not being used for transportation infrastructure. Improving all of the City’s dirt and gravel streets would cost at least $300 million.¹

The City’s resources have not kept pace with what is needed to build new transportation infrastructure. Maintaining substandard streets would be especially expensive and is generally ineffective. Maintenance of streets that have not been accepted by the City is the responsibility of abutting property owners. Once a street has been improved to the City’s standard, the City includes the street as part of its transportation system. Then street maintenance is provided using general transportation revenues.”

Portland Bureau of Transportation

¹ PBOT estimates that paving all unimproved streets, including unpaved and substandard streets, to city standard would cost $1.6 billion.
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EXECUTIVE SUMMARY

Roadway Not Improved is an exploration of the opportunities and challenges created by unimproved streets in the city of Portland. Conducted by a group of five Portland State University graduate students in urban and regional planning, Roadway Not Improved spanned from January to June 2010.

Terry Griffiths of the Woodstock Neighborhood Association (WNA) served as the client representative, while Matt Wickstrom of the Bureau of Planning and Sustainability (BPS) served as the project advisor.

UNIMPROVED STREETS

The term “unimproved street” reflects both the physical quality of a street segment, as well as the party responsible for street maintenance. Unimproved streets typically lack curbs, and have a surface of dirt, gravel, or substandard pavement. The City of Portland has not accepted maintenance responsibility for these streets, leaving adjacent property owners responsible for maintenance and any potential liability issues. City Code requires that streets must be fully improved before being accepted for maintenance.

Property owners adjacent to unimproved streets may conduct basic maintenance without permits, or seek permits for more complex projects. Full improvements are typically completed through Local Improvement Districts (LIDs), or by permit. All options require investment by property owners adjacent to unimproved streets.

CONTEXT

Portland includes 128 lane miles of unimproved roadway, which are a legacy of historic policies, development patterns, and annexation patterns. Their continued existence largely reflects financial constraints.

Current policy reflects the optimistic expectation that streets will be incrementally improved and accepted by the City for maintenance. During the course of this study, it has become apparent that considerable progress towards this goal will not occur in the foreseeable future.

Two barriers to the full improvement of neighborhood streets are the high cost of improvements and the preferences of property owners on unimproved streets. The costs of improvement are often unmanageable for property owners, even when associated with development. Property owners also fear that full improvements will result in increased traffic, changing the character of the street and the neighborhood.
In light of these issues, we must accept that there is no forthcoming “quick fix” that will result in full improvements. Without additional funding sources and comprehensive policy reform, many streets will remain unimproved for some time. The City of Portland has thus far taken a hands-off approach to unimproved streets. For example, city regulations regarding private encroachments into the public right-of-way (ROW) have been enforced inconsistently and typically only in response to complaints. The findings of this study suggest that a more deliberate approach to unimproved streets is needed.

**FINDINGS**

- Many unimproved streets are in extremely poor condition.
- Many property owners are unaware of or confused about the types of maintenance that are allowed.
- Property owners lack the tools needed to make good decisions about maintenance.
- Property owners are intimidated by the process of coordinating contractors and materials.
- Many residents feel that city staff members are unresponsive.
- Deteriorating unimproved streets directly conflict with current city policies.
- The City’s laissez-faire approach to unimproved streets encourages unfavorable behavior and reduces awareness of the public interest in these spaces.

**Survey of Woodstock Residents & Visitors:**

If money were not a concern, would you prefer that ALL streets in the Woodstock Neighborhood were paved with curbs and sidewalks?

- YES, 20
- NO, 39
In absence of funding and policy changes facilitating the full improvement of unimproved streets, a focus on supporting maintenance and interim improvements is crucial. The City could facilitate maintenance and interim improvements through increased communication, the provision of technical assistance, the provision of resources, and the installation of pilot projects.

In addition, current paths to full improvement do not incorporate any prioritization of improvements. Some unimproved streets are located in proximity to libraries, schools, community centers, and other important services. Others are located next to challenging inclines which prohibit long-term connectivity. However, the improvement process does not reflect an analysis of these factors. Developers and willing property owners drive the improvement process. Development requirements and LIDs lead to an ad-hoc single block approach that fails to prioritize improvements. A systems approach could lead to a more effective transportation network.

**RECOMMENDATIONS**

- Create an information campaign designed to inform and guide property owners adjacent to unimproved streets.
- Provide property owners pursuing interim solutions with the same level of assistance provided to property owners pursuing full improvements.
- Facilitate periodic maintenance of unimproved streets citywide through the procurement of materials and services.
- Pursue pilot projects on unimproved streets, which provide a unique opportunity for innovative practice.
- Partner with neighborhood associations to create neighborhood transportation plans in order to identify and prioritize essential improvements to unimproved streets.
CASE STUDY

Roadway Not Improved included extensive outreach in the Woodstock neighborhood. While 2% of city roadway is unimproved, approximately 8% of roadway in the Woodstock neighborhood is unimproved. The vast majority of public input came from residents adjacent to unimproved streets in Woodstock.

Problem assessment included an investigation of physical conditions, an exploration of resident views, and research about regional goals. An inventory of neighborhood streets revealed a wide range of conditions.

Resident views were solicited through interviews, an online survey, and a public meeting called a Discovery Session. Resident views of these spaces span a wide spectrum, with most participants identifying both positive and negative aspects of unimproved streets.

Residents appreciate the traffic calming effect of these streets, but are concerned about connectivity, safety, and aesthetic value. Regional priorities and goals relevant to transportation infrastructure mirror these concerns.

A survey of international and national trends revealed a movement towards transportation infrastructure that balances vehicle access with other transportation modes, and the role of streets as multi-faceted public spaces.

Our research led us to generate a list of criteria synthesizing the primary issues relevant to the conditions and potential alterations of unimproved streets.

Through a survey of best practices, we identified creative examples of streets that address multiple criteria successfully. These examples informed the development of potential design concepts for unimproved streets.

Design concepts were first presented to a Technical Advisory Committee (TAC) composed primarily of City staff members. After revision, design concepts were presented to the Woodstock neighborhood.

PRODUCTS

This Report is designed to provide local decision-makers with an understanding of issues relevant to unimproved streets.

The companion to this Report is the Roadway Not Improved Community Toolkit. The Toolkit is designed to serve as a resource for property owners and residents living adjacent to unimproved streets. The Toolkit informs property owners of their rights and responsibilities under current city policy, provides information about choices, outlines strategies for collaborating with neighbors, and plants the seeds for a neighborhood approach to maintenance and advocacy.

For more information, and electronic versions of both documents, visit: roadwaynotimproved.com
Unimproved streets account for 2% of Portland roadway. The City does not accept maintenance responsibility for these streets.

INTRODUCTION

UNIMPROVED STREETS

In Portland, OR, the term “unimproved street” reflects both the physical quality of a street segment, as well as the party responsible for street maintenance. The vast majority of streets within the city of Portland are fully paved with sidewalks and maintained by the Portland Bureau of Transportation. In contrast, unimproved streets typically lack curbs, and have a surface of dirt, gravel, or substandard pavement. In other cities, these streets are sometimes called “underdeveloped streets” or “unaccepted streets.” Approximately 128 lane miles of Portland streets are unimproved. The City of Portland has not accepted maintenance responsibility for these streets, leaving adjacent property owners responsible for maintenance and any potential liability issues. Roadway Not Improved is primarily an investigation of space in the public right-of-way (ROW) on unimproved streets.
ROADWAY NOT IMPROVED

The Roadway Not Improved project began in January 2010, and formally concludes with the production of a Community Toolkit and this Report in June 2010. With the project, we sought to explore the opportunities and challenges presented by unimproved streets in Portland, using the Woodstock neighborhood of southeast Portland as a case study. The vast majority of public input provided during the course of the project came from residents of the Woodstock neighborhood living adjacent to unimproved streets.

LARKE PLANNING

The project team, LARKE Planning, consists of five students at Portland State University (PSU) pursuing the Master of Urban and Regional Planning (MURP). The project was performed in accordance with the requirements of the Planning Workshop course, the capstone of the two-year graduate program. Workshop projects are intended to be projects of professional quality performed for community clients.

PROJECT ORIGIN & COMMUNITY CLIENT

The initial project proposal was generated by Matt Wickstrom of the Portland Bureau of Planning and Sustainability (BPS), as a result of ongoing conversations with members of the Woodstock Neighborhood Association (WNA). Although unimproved streets are a concern citywide, accounting for approximately 2% of Portland roadway, unimproved streets are abundant in the Woodstock neighborhood, accounting for 8% of neighborhood roadway. The WNA served as the client for Roadway Not Improved, represented by Terry Griffiths, the chair of the WNA Land Use Committee. Matt Wickstrom served as the project advisor.
TECHNICAL ADVISORY COMMITTEE

Roadway Not Improved required significant collaboration with the project advisor, Matt Wickstrom, and input from numerous city staff members. Several professionals served as members of the Technical Advisory Committee (TAC), providing feedback at a collective meeting on April 16th, 2010.

- Kurt Krueger (PBOT)
- Rich Eisenhauer (PBOT)
- David Nassif (PBOT)
- David Elkin (BES)
- Ginny Peckinpaugh (Staff of Mayor Sam Adams)
- Cary Turkon (Staff of Councilor Amanda Fritz)
- Harris Hyman (professional civil engineer)
- Terry Griffiths (Client)
PRODUCTS

Through primary observations, community outreach, research, and conversations with city staff members, we explored the opportunities and challenges presented by unimproved streets. As the project concludes, we are producing two written products: a Toolkit and this Report.

Geared towards residents on unimproved streets, the Toolkit is designed to educate property owners about their rights and responsibilities and to assist them in making good decisions about maintenance by providing information about the following:

- Policy
- Working with Neighbors & Decision-making
- Design Criteria, Menu & Concepts
- Neighborhood Approach & Advocacy Tools
- Resources

However, property owners’ choices are defined by a regulatory framework that is beyond their control. The purpose of this Report is to provide municipal decision-makers with an understanding of issues relevant to unimproved streets by providing information about the following:

- Historical and political context of unimproved streets
- Project outcomes, including findings and recommendations
- Project elements, including public outreach, research, and community products
The city of Portland currently includes 128 lane miles of unimproved streets, the majority of which are classified as neighborhood streets. Unimproved streets are the product of development patterns, annexation patterns, historic policies, current policies, and financial constraints. Although some unimproved streets have been improved through the development process, and to a lesser extent, the Local Improvement District (LID) process, additional unimproved streets have been added to the Portland street system through annexation.

Over time, citizen expectations of streets have expanded. Streets serve as travel corridors for an increasing variety of transportation modes, stormwater management systems, and public spaces. Unfortunately, funding streams for transportation infrastructure have not grown at the same pace as our ambitions. In the current economic climate, it is unlikely that private development will result in extensive street improvements. However, local government agencies and Portland residents have also been affected by financial constraints. These conditions exacerbate long-standing challenges regarding unimproved streets.

**HISTORY**

Although there is no single reason why so many streets throughout the city remain unimproved, several factors have contributed to the existence of these streets. Within the city of Portland, streets were platted as development occurred and regulations requiring improvements evolved over time. Some unimproved streets reflect policies from the 1940s through the 1960s which did not require sidewalks for all new developments.

Some areas of Portland were developed prior to annexation, and their form continues to reflect rural and suburban development standards. Many streets within the Woodstock neighborhood which were unimproved at the time of annexation during the early 20th century remain...
unimproved today. Annexation history also affects the expectations of property owners regarding unimproved streets. In recently annexed areas, improved transportation and sewer infrastructure may be expected in compensation for the payment of city taxes.

POLICIES

Title 17 of the City Code outlines the property owner’s responsibility for maintenance of unimproved streets adjacent to their property up to the center-line of the right-of-way (ROW). The City does not hold any liability or maintenance responsibility for unimproved streets. Property owners are responsible for the maintenance of the adjacent unimproved street but are limited in the way they may use or alter the existing conditions of the right-of-way.

Property owners are not provided with financial assistance in the maintenance or improvement of unimproved streets, except where special funding districts are created. For example, tax-increment financing (TIF) can be used for street improvements, which has led some neighborhoods to advocate for the creation of Urban Renewal Areas (URAs) for the primary purpose of dealing with unimproved streets. Occasionally, public funds have been used for stormwater management facilities installed during the improvement of unimproved streets.

Policies governing unimproved streets in Portland reflect evolving dynamics and values. In the later part of the 20th century, it was common practice to vacate unimproved streets. This process erased the public interest in the right-of-way, fully transferring the property to private property owners. The transfer allowed adjacent property owners to make full use of the right-of-way area, and returned the vacated right-of-way to the tax rolls for the purposes of property tax assessment. However, with a renewed policy emphasis on maintaining strong connectivity throughout Portland, street vacations now rarely occur. The loss of this option forces property owners to navigate policies regulating maintenance and improvement.

The City of Portland has initiated multiple examinations of unimproved streets. In 1989, Cogan Owens Cogan produced the report “Portland Alternative Street Standards Project” in its capacity as a consultant to the City of Portland. The study identified many challenges associated with the options available to property owners for improvement. The report directly influenced revisions to residential street standards in 1991 which incorporated greater flexibility into street standards.
## Relevant Policies

<table>
<thead>
<tr>
<th>Policy/Plan</th>
<th>Lead Implementation Bureau</th>
<th>Relevance to Unimproved Streets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title 17: Public Improvements</td>
<td>PBOT</td>
<td>Provides property owners with the authority to conduct maintenance under Expanded Maintenance Options, and outlines a path to full improvement through LIDs.</td>
</tr>
<tr>
<td>Title 29: Property Maintenance Regulations</td>
<td>BDS</td>
<td>Includes regulations relevant to the ROW, requiring clear emergency access routes and prohibiting encroachments, in the form of hedges and shrubs, and obstructions, including trash and debris.</td>
</tr>
<tr>
<td>Title 33: Planning &amp; Zoning</td>
<td>BDS</td>
<td>Includes regulations relevant to development review and approval.</td>
</tr>
<tr>
<td>Portland Pedestrian Design Guide</td>
<td>PBOT</td>
<td>Includes design criteria and practices designed to promote an environment conducive to walking. These guidelines influence requirements for proposed street improvements. The guide also includes suggested improvements appropriate for unimproved streets.</td>
</tr>
<tr>
<td>Stormwater Management Manual</td>
<td>BES</td>
<td>Includes requirements and policies relevant to stormwater management, as well as information about facility design, operation, and source controls.</td>
</tr>
<tr>
<td>Transportation System Plan (TSP)</td>
<td>PBOT</td>
<td>Guides long-range transportation investments in Portland. The TSP includes ranked lists of planned transportation projects. Some identified improvements are located on streets that are currently unimproved.</td>
</tr>
<tr>
<td>Portland Bicycle Plan for 2030</td>
<td>PBOT</td>
<td>Designed to increase cycling through the provision of transportation facilities, end-of-trip facilities, pro-cycling policies, and programs. Some planned bike routes include unimproved street segments.</td>
</tr>
<tr>
<td>Climate Action Plan (CAP)</td>
<td>BPS</td>
<td>Includes the following objectives: increase walking and biking, reduce motor vehicle travel, expand the urban forest canopy, and increase local food production and consumption. Changes to unimproved streets can further or impede these goals.</td>
</tr>
<tr>
<td>Portland Plan (&amp; Comprehensive Plan)</td>
<td>BPS</td>
<td>A 3-year process designed to identify strategies for the City of Portland, the Portland Plan will lead to a revised Comprehensive Plan. Documents generated to inform the Portland Plan clearly identify unimproved streets as a challenge and an opportunity.</td>
</tr>
<tr>
<td>Safe Routes to Schools</td>
<td>PBOT</td>
<td>Designed to make walking and biking to schools fun, easy, safe, and healthy for students and families. Unimproved streets near schools impede the goals of this program.</td>
</tr>
</tbody>
</table>
Property Owner Options for Maintenance & Improvement

Maintenance that does not significantly alter the roadway (width, drainage, etc) can be completed by property owners or contractors without a permit. This maintenance does not transfer maintenance responsibility to City.

Maintenance and intermediate improvements that change the roadway require a permit. Permits are issued on a case-by-case basis by PBOT. These changes do not transfer maintenance to the City.

The City can manage the planning and construction of full street improvements through LIDs. A group of property owners shares the cost of improvement. The City provides affordable financing, allowing payment over time. Completed streets are adopted by the City for maintenance.

Less commonly, full improvements can be installed by private contractors with a permit. This option works best when improvements are part of another construction project (property development), or when a property owner has experience planning construction projects.

These projects may be faster than LID projects, with cheaper labor costs. However, private financing is likely to be more expensive. Completed streets are adopted by the City for maintenance.
In 2000, an extensive study of the LID process resulted in the report, “Improving Portland’s Local Infrastructure: Recommendations for the Local Improvement District Process.” Since its adoption by City Council, several recommendations have been implemented. For example, the administration of LIDs has largely been consolidated under a single point of contact at the Portland Bureau of Transportation (PBOT).

Although the study focused on the LID process, it acknowledged that financial considerations limit the improvement of streets through this mechanism. As a result, the study directly addressed the maintenance of unimproved streets. In 2003, the Expanded Maintenance Options ordinance gave property owners more flexibility in maintaining unimproved streets.

Despite repeated efforts to formulate and implement improvements to the options available to property owners on unimproved streets, long-standing problems persist. Streets remain in poor condition, conflicting with neighborhood and city goals. Property owners remain confused and frustrated by their options, resulting in a lack of action, or even undesirable action in some cases.

Woodstock Resident
Sharing the Cost

Some other cities with unimproved streets have developed strategies for reducing the burden on adjacent property owners.

In Spokane, WA, a citywide bond funds 1/3 of LID projects on unimproved streets. Where no homes face the unpaved street, public funds cover 1/2 of the project cost. An “Unpaved Road Cost Sharing Fund” provides additional subsidy to low income families.

www.spokaneengineering.org/LocalImprovementDistricts.html

In Seattle, WA, Neighborhood Projects Funds (NPF) pay for community-proposed improvements to streets and parks. Neighborhood district coordinators (similar to liaisons), help prioritize the projects.

www.cityofseattle.net/neighborhoods/btgnsfcnf/

In contrast, the City of Ashland, OR, accepts maintenance responsibility for all streets within the city limits, including unimproved streets. Unpaved streets accounts for 10% of Ashland roadway.

www.ashland.or.us/Page.asp?NavID=11743

The varied and occasionally conflicting missions of city bureaus further complicate options for unimproved streets. Several bureaus have particular infrastructure needs which must be met within the limited space of the right-of-way. For a single project, PBOT may advocate for space for bicycle travel and parking, while the Bureau of Environmental Services (BES) may advocate for extensive stormwater improvements. These legitimate needs place additional burdens on property owners exploring improvement options. Conflicting bureau priorities also contribute to communication challenges, as no single point of contact can accurately communicate the full range of facilities that may be required of right-of-way improvements. However, there is a deliberate effort to increase inter-bureau communication and collaboration through special projects, such as “green streets” and “neighborhood greenways.”

The codes, policies, guides, and long-range planning efforts that affect the use of unimproved streets are numerous. Most recently, the Portland Plan Background Reports, created to inform the comprehensive plan review, refer to the need to include unimproved streets in infrastructure planning, as well as the opportunity these streets provide to explore innovative uses of ROW space beyond traditional transportation functions.
Current policy reflects the optimistic expectation that streets will be incrementally improved and adopted by the City of Portland for maintenance. During the course of this study, it has become apparent that the use of half-street construction requirements for new developments and voluntary Local Improvement Districts (LIDs) will not lead to considerable progress in the foreseeable future. Although a full analysis of the primary paths to improvement (development requirements and LIDs) is beyond the scope of this study, a few facts seem apparent.

- Full improvements are expensive. Full improvements are expensive because of the important functions that must be incorporated in streets, including stormwater management. Requirements such as the Americans with Disabilities Act (ADA) further increase costs. Improvements are also expensive because unique physical conditions characterize many remaining unimproved streets, increasing engineering costs. Many easier projects, the “low hanging fruit,” have already been targeted for improvement, leaving challenging projects for future consideration.

- The costs of full improvements are out of scale with the type of development that occurs in established neighborhoods and beyond the financial means of residential property owners. Developers and property owners do not believe that these costs can be recovered in future property sales. The Portland Bureau of Transportation (PBOT) has issued waivers to developers in lieu of requiring half-street improvements. These exceptions suggest that PBOT is aware of the financial challenges of these requirements and that piece-meal improvements are not always highly valued. Many recently completed LID projects included funding from other sources, including stormwater management funding from the Bureau of Environmental Services (BES).
We spent a lot of time organizing our neighbors to bring something to the city. Once we saw the estimate, we realized it is too expensive to bring streets up to code but something should be done.

Woodstock Resident

One of the benefits of Woodstock is that our children are safer on unpaved streets due to less traffic + slower moving vehicles.

Woodstock Resident

- Property owners who become discouraged by the LID process communicate negative impressions to other property owners. Many property owners on unimproved streets have not contacted PBOT regarding improvement options, but have heard second-hand reports of extremely high cost estimates.

- Property owners who complete the LID process communicate negative impressions to other property owners regarding consequences of full improvement. Many property owners on unimproved streets have heard second-hand reports of increased traffic on improved streets. Particularly in neighborhoods with a high density of unimproved streets, newly improved streets stand to gain a disproportionate amount of through traffic.

- Many residents do not want fully improved streets. In the Woodstock neighborhood, many residents perceive underdeveloped streets to be a core component of the character of the neighborhood. Conflicting views of unimproved streets complicate efforts to improve streets through LIDs. Residents who have explored the LID process have reported disappointment with the potential design options proposed by city employees.

Survey of Woodstock Residents & Visitors:
If money were not a concern, would you prefer that ALL streets in the Woodstock Neighborhood were paved with curbs and sidewalks?

![Survey Results]

YES, 20

NO, 39
FINDINGS

In light of these issues, we must accept that there is no forthcoming “quick fix” that will result in full improvements. Without additional funding sources and comprehensive policy reform, many streets will remain unimproved for some time. The City of Portland has thus far taken a hands-off approach to unimproved streets. For example, city regulations regarding private encroachments into the public right-of-way have been enforced inconsistently and typically only in response to complaints. The findings of this study suggest that a more deliberate approach to unimproved streets is needed.

Many unimproved streets are in extremely poor condition.

Potholes, furrows, pooling water, and overgrown vegetation are present on many unimproved streets. Poor conditions inhibit vehicle travel, as well as bicycle and pedestrian travel. Residents operating wheelchairs and strollers face significant obstacles in navigating unimproved streets. In the Woodstock neighborhood, the high density of unimproved streets further contributes to connectivity issues. The continued degradation of streets will increase the difficulty and cost of future improvements by property owners or government entities.
Many property owners are unaware of or confused about the types of maintenance that are allowed.

Despite the establishment of Expanded Maintenance Options, many property owners are not aware of the types of maintenance that are allowed. In the Woodstock neighborhood, even some property owners who explored the LID process, but chose not to pursue it, were not aware of any alternative options for maintenance. In addition, property owners fear that maintenance of unimproved streets will increase obligations and liability.

Property owners lack the tools needed to make good decisions about maintenance.

When choosing to conduct maintenance or install interim street improvements, property owners do not have easy access to information about potential changes to their street. Planned changes to utility or transportation infrastructure could potentially influence how property owners invest in these spaces, if the information were readily available. Although some information is available on PortlandMaps.com, other information is only available through direct inquiry from several different sources, including city bureaus and utility providers. Property owners who do not pursue these contacts operate in an informational void, or forgo maintenance altogether.

In addition, property owners are not educated about the role their street plays in a connected transportation system and what types of maintenance are most appropriate in their location. When neighboring property owners hold conflicting opinions about the need for maintenance and improvements on their street, they have no framework for evaluating choices and making collective decisions.
Property owners are intimidated by the process of coordinating contractors and materials.

Property owners find it difficult to assemble the resources required for maintenance. They are unsure of the services and materials appropriate for maintenance or how to obtain them. The need to reach agreement with neighbors further complicates the process.

Many residents feel that city staff members are unresponsive.

Some property owners contact city staff members when seeking information about maintenance and improvement options. In the Woodstock neighborhood, some property owners have expressed dissatisfaction with the responsiveness of city to their inquiries. They indicate that they must take all of the initiative and even harass staff members in order to receive guidance. They often feel ignored by the City. Without guidance, property owners feel ill-equipped to make decisions about maintenance and improvements.

Deteriorating unimproved streets directly conflict with current city policies.

There is a significant body of existing policy which addresses infrastructure maintenance, stormwater treatment, and accessibility for all transportation modes. The existence of completely unmaintained streets is in conflict with the implementation of several existing policies.

The City’s laissez-faire approach to unimproved streets encourages unfavorable behavior and reduces awareness of the public interest in these spaces.

The City provides little guidance regarding the use of unimproved streets and limited enforcement of regulations. In this vacuum, some property owners have ceased to consider the public interest in the right-of-way. Private uses have extended into the street. Such encroachments are not limited to temporary uses, such as gardens, but include fences and permanent structures. In some cases, vegetation is used deliberately to impede access to the right-of-way.

The City clearly views these spaces as assets potentially necessary for future infrastructure needs, as indicated by the reduced use of street vacations. However, limited participation in their current maintenance and use will make it more challenging to plan for these streets in the future. Should the City exercise its property interests at a later date, it will face confusion and resistance from property owners who have grown accustomed to full control of these spaces. Future proposals will face additional, and perhaps unnecessary, challenges in obtaining community support because of conflicting expectations.
CHALLENGES & OPPORTUNITIES

The challenges inherent in the paths to full improvement create a need for guidance about maintenance and interim solutions. However, there are additional reasons to embrace interim strategies. Unimproved streets generate savings for the City of Portland. The maintenance of improved streets is a challenge for the City. The proportion of paved streets in poor condition has increased over time, and is predicted to continue to increase.

The continued existence of unimproved streets reduces maintenance costs. Street cleaning is not conducted on unimproved streets, and adjacent property owners are not eligible to request services such as street lighting. These avoided costs provide an additional motivation to facilitate the maintenance of unimproved streets and a potential argument for modest public investments in these spaces.

In addition, the paths to full improvement do not incorporate any prioritization of improvements. Some unimproved streets are located in proximity to libraries, schools, community centers, and other important services. Others are located next to challenging inclines which prohibit long-term connectivity. However, the improvement process does not reflect an analysis of these factors. Developers and willing property owners drive the improvement process. Development requirements and LIDs lead to an ad-hoc, single block approach that fails to prioritize improvements. A systems approach could lead to a more effective transportation network.
There are a number of changes that would facilitate the path to full improvement. Changes to the LID process could potentially increase the number of streets adopted by the City of Portland for maintenance.

- Provide public funding for a portion of full street improvements in established neighborhoods where development potential is limited or where physical conditions increase construction costs. This may be especially appropriate where improved streets would significantly increase connectivity or access to important services. Barriers to this change are self-evident.
- Expand the design alternatives for LIDs to include bike and pedestrian paths, community gardens, and public plazas if they contribute to established city goals.
- Ensure that a range of design alternatives are communicated to residents considering an LID, rather than focusing on a design that is financially out of reach.

Many residents are strongly motivated to pursue street improvements leading to the permanent transfer of maintenance responsibility. In the Woodstock neighborhood, some residents who previously explored and abandoned the LID process reported an interest in revisiting the option if the aforementioned changes were made.

The reports “Portland Alternative Street Standards Project” and “Improving Portland’s Local Infrastructure: Recommendation for the Local Improvement District Process” include additional suggestions for policy reform. Although some policies have changed since the publications of these reports in 1989 and 2000, respectively, many of the findings and recommendations included in these documents continue to be relevant.

In the absence of funding and policy changes facilitating the full improvement of unimproved streets, a focus on the facilitation of maintenance and intermediate improvements is crucial. The City could facilitate maintenance and intermediate improvements through increased communication, the provision of technical assistance, the provision of resources, and the installation of pilot projects.

**Create an information campaign designed to inform and guide property owners adjacent to unimproved streets.**

PBOT’s website should clearly identify and illustrate all of a property owner’s choices regarding an adjacent unimproved street. Just as the City provides detailed information about completed green street projects, the City should publicize case studies of successful projects that fall under Expanded Maintenance Options, permits, and Local Improvement Districts. The ability to view the results and associated costs of each option would empower property owners to make good choices. Case studies could illustrate best practices, reducing potential conflicts. Construction plans are currently available for select LID projects, but only one project (the SW Texas Green Street LID) features photographs documenting prior conditions and resulting improvements.

In addition, direct contact with property owners through mailings would provide a valuable reminder of the regulations regarding unimproved streets and reinforce the City’s interest and rights in these spaces.
Provide property owners pursuing interim solutions with the same level of assistance provided to property owners pursuing full improvements.

The Local Improvement District (LID) process is the most common route used by property owners to fully improve streets, permanently transferring maintenance responsibility and liability to the City. Through the LID process, the City provides groups of property owners with assistance in planning improvements, making a shared decision, and financing the costs of the improvements. The City devotes considerable staff time to preliminary discussions with property owners regarding the LID process. Finally, the City manages the physical construction of the improvements.

Property owners not seeking full improvements are also in desperate need of these services, which could improve the quality and durability of maintenance and improvement efforts. With technical assistance, property owners might feel empowered to install ambitious interim solutions. For example, where streets are currently impassable, property owners could install a paved path for cyclists and pedestrians, creating new routes for alternative forms of transportation. By establishing relationships with property owners along unimproved streets, the City could advocate for better outcomes, even if maintenance responsibility is not to be transferred.

As a first step to providing such services, city staff members must be instructed to provide property owners with basic information about all maintenance and improvement options. Each option should be explicitly assigned to a staff member prepared to provide more detailed information.

Facilitate periodic maintenance of unimproved streets citywide through the procurement of materials and services.

The City of Portland has access to materials and services central to the maintenance of unimproved streets. The City could arrange for rotating grading services for Portland neighborhoods, as well as the delivery of gravel for a fee. The provision of these resources through an organized program would relieve property owners of the need to arrange for private contractors and the procurement of supplies. Moreover, the economies of scale generated by a large-scale effort would result in lower costs for property owners.

Such involvement may generate concerns about an increase in the liability of the City. As an alternative, grant funding could be provided to neighborhood coalitions, who could conduct periodic maintenance using city resources or private contractors. There may also be a concern that periodic maintenance may create expectations of city maintenance and confusion about responsibilities. However, there could hardly be more confusion about rights and responsibilities regarding unimproved streets than currently exists.

The City must balance the risk of greater expectations and the value of maintenance likely to result from the provision of resources. The implementation of city sponsored maintenance could reduce the compaction of roadway surfaces, which inhibits stormwater infiltration and leads to impassable road conditions. Such maintenance could also reduce the future costs of full improvements.
Partner with neighborhood associations to create neighborhood transportation plans in order to identify and prioritize essential improvements to unimproved streets.

Currently, maintenance and intermediate improvements are driven and carried out by private property owners. A neighborhood plan may help guide these efforts by providing property owners with a broader perspective of how these streets interact with larger circulation needs.

The documentation of neighborhood challenges and opportunities through a group process may also result in cohesive, neighborhood-scale efforts to improve conditions. In the short-term, these efforts may take the form of neighborhood clean-ups and work days targeting unimproved streets. In the long-term, they may lead to a greater willingness of residents to financially contribute to the improvement of neighborhood assets through halo LIDs, or neighborhood improvement districts.

Pursue pilot projects on unimproved streets, which provide a unique opportunity for innovative practice.

The City of Portland has developed a reputation for innovative approaches to transportation challenges. Through technical assistance and the provision of grant funding, Metro contributes to these efforts. Green streets, bicycle boulevards, and neighborhood greenways represent attempts to respond to changing conditions and priorities through creative infrastructure solutions.

Because unimproved streets contain little or no infrastructure catering to motor vehicles, they provide a unique opportunity for pilot projects that provide for multi-modal travel, environmental restoration, and community resources. Such projects may take the form of corridors devoted to bicycle and pedestrian travel, stormwater facilities, or community gardens. There may be greater community support for such projects on unimproved streets, where change does not result in the loss of existing transportation infrastructure, residents value limited auto traffic, and responsibility for improvements would otherwise fall to adjacent property owners.

Public rights-of-way account for the largest proportion of public space in the city of Portland. As such, they are often a key area of focus in responding to the challenges the City faces. In light of forecasts regarding the availability of fuel sources and climate change, we are likely to need new strategies. Unimproved streets can serve as a valuable laboratory for creative solutions to forthcoming problems.
CASE STUDY: WOODSTOCK UNPAVED

WOODSTOCK LAND USE ZONES
- Single-Family Residential
- Multi-Family Residential
- Commercial
- Park
- Institutional

ADJACENT NEIGHBORHOODS
- STEELE
- HOLGATE
- DUKE
- BRENTWOOD/DARLINGTON
- LENTS
- RICHMOND
- SOUTH TABOR
- CRESTON-KENILWORTH
- FOSTER-POWELL
- EASTMORELAND
- REED
- MT. SCOTT-ARLETA
- WESTMORELAND

MAJOR STREETS OF WOODSTOCK
- WOODSTOCK

MAJOR ROADS IN METRO REGION
Located in southeast Portland, the Woodstock neighborhood is bisected by Woodstock Blvd., a commercial corridor designated as a 2040 Main Street by the Metro Regional Government. The western boundary of the neighborhood follows SE Cesar Chavez Blvd. (formerly SE 39th Ave). The northern boundary of the neighborhood is SE Holgate Blvd. The eastern boundary of the neighborhood begins on SE 60th Ave., but moves west to SE 45th Ave. along SE Duke St. and SE Henry St., respectively. Historically, and for the purposes of this case study, Johnson Creek serves as the southern boundary of the neighborhood, although SE Crystal Springs Blvd. is increasingly designated as the southern boundary.

The neighborhood includes several landmarks:

- Woodstock Community Center
- Woodstock Library
- Woodstock Park
- Lewis Elementary
- Woodstock Elementary

Notable commercial businesses include Papaccino's Coffeehouse, Otto's Sausage Kitchen & Meat Market, the Delta Café, the Joinery, and Bi-Mart. Although located outside of the western boundary of the neighborhood, Reed College is a nearby destination.

As of the 2000 census, the Woodstock neighborhood was home to 8,472 residents in 3,652 households, creating a higher population density than the city as a whole. The neighborhood also features a higher homeownership rate (74%) than the city of as a whole (56%).
Major Transportation Corridors, Landmarks, and Unpaved Streets in the Woodstock Neighborhood

- Holgate
- Steele
- Woodstock Bld
- 39th/César Chávez

- Woodstock Park
- Woodstock Elementary
- Reed College
- Lewis Elementary

- 52nd

- Unpaved street w/ vehicle access
- Unpaved street pedestrian access only
- Unpaved street no access
- Main transportation corridor
- School
- Woodstock Library
- Commercial point of interest
- Commercial area
- Park / Natural area
- Springwater Corridor / Johnson Creek
HISTORY

Platted in 1889, the Woodstock neighborhood was annexed between 1890 and 1910. However, much of the neighborhood did not develop until the 1940s and 1950s. The urban form of the neighborhood reflects this incremental development. Commercial and residential development surrounding Woodstock Blvd. reflects the former presence of a streetcar.

I think unimproved roads are a wonderful part of Woodstock's culture.
Woodstock Resident

They are a complete pain. We are in a new Century. It is time to make improvements.
Woodstock Resident

No one seems to agree on what to do with these spaces
Woodstock Resident

Unimproved Streets in Woodstock
Woodstock Neighborhood Plan (1995)
http://www.woodstockpdx.org/resources.html

Map 5
Unimproved Rights of Way

Legend:
- Unimproved Rights of Way
- Neighborhood Boundary
- City Boundary
- Railway (Springwater Corridor)

Location Map

WOODSTOCK Neighborhood Plan
June 1995
Bureau of Planning
City of Portland, Oregon

50
Infrastructure Plans in the Woodstock Neighborhood

2030 Bike plan priority
2030 Bike plan long-term
2040 Metro Main Street
Safe Routes to School
School
line, while mid-century development reflects the dominance of the car. Some recent infill development is evident. Incremental development, changing development requirements, and limited infill development contribute to the current condition of streets in the neighborhood.

STREETS
In 1995, an inventory of neighborhood streets was completed as part of the Woodstock Neighborhood Plan. An inventory completed as part of Roadway Not Improved reflects a few updates. Clearly, unimproved streets are prevalent in the neighborhood, creating some intersections composed entirely of unpaved streets. Many unimproved streets are clustered around Woodstock Blvd., leaving few nearby east-west alternatives for vehicle travel. Many of the homes along unimproved streets face neighboring improved streets. This could be one of the reasons why streets have not been paved.

Since 1975, only one Local Improvement District (LID) has been completed in the Woodstock neighborhood. Paved in 1999, the street segment is located on SE 48th Ave., between SE Mitchell St. and SE Raymond St. The LID was the product of a development so controversial that plat approval was appealed to the Oregon Land Use Board of Appeals (LUBA).

A study of street classifications and designated routes reveals conflicts with the current conditions of Woodstock streets. For example, SE Tolman Ave. is currently designated as a Bicycle Boulevard, or “Neighborhood Greenway,” in the Portland Bicycle Plan for 2030, despite being unpaved for 10 consecutive blocks.

FUTURE
The Woodstock Neighborhood Plan of 1995 identifies challenges and opportunities in the neighborhood. Regarding unimproved streets, the plan calls for the inventory and classification of unimproved streets, the development of a network of pedestrian and bicycle pathways, and the consideration of alternative uses, including linear parks. The plan also recognizes Woodstock’s designation as a 2040 Main Street.
Problem assessment required an investigation of physical conditions, an exploration of resident views, and research about regional goals. These activities were conducted in several overlapping project phases. We began meeting with neighborhood representatives and our project advisor in January. We defined the scope of the project and articulated the client-consultant relationship through the development of a Memorandum of Understanding. Components of data collection included a windshield survey of street conditions throughout the neighborhood and a detailed inventory of unpaved streets. We held a Discovery Session and conducted a survey in order to collect information about how residents perceive unpaved streets and what ideas they have about potential future changes. Finally, we collected information about regional goals relevant to unimproved streets, recognizing that neighborhood streets are part of the regional transportation system.

### INTERVIEWS & FOCUS GROUP

Throughout *Roadway Not Improved*, we conducted interviews with individuals during site visits and neighborhood events. We also facilitated a focus group of property owners who had explored the potential of forming a Local Improvement District.
A Discovery Session provided an opportunity for 42 attendees to learn about policies relating to unimproved streets, voice opinions about the streets’ positive and negative qualities, and brainstorm potential uses for space in unimproved rights-of-way (ROWs). Nearly all attendees reported living adjacent to unimproved streets within the Woodstock neighborhood.

When noting positive features of unimproved streets, residents identified the traffic calming effect of unpaved surfaces. Residents also expressed appreciation for the country charm of unimproved streets, which provides a connection to nature. Residents living on unimproved streets valued the opportunity to use ROW space for personal activities, such as gardening and recreation.

When noting negative features of unimproved streets, residents reported a lack of connectivity and accessibility due to the unmaintained nature of many streets. Residents also expressed concern about reckless driving on unimproved streets, where high speeds are not expected. The issue of security was raised by residents living on unimproved streets with limited visibility and evidence of undesirable activities. Finally, many residents expressed dissatisfaction with the appearance of unmaintained streets.

When asked about potential changes to unimproved streets, attendees suggested a variety of natural and recreational uses. Residents also suggested potential alterations to travel patterns on unimproved streets, including the prohibition of truck and/or vehicle access to some streets. Many residents suggested that such decisions should involve planning at the neighborhood level, to ensure a comprehensive approach.

*Woodstock Resident*

I am unclear about trees/fences/private paving in terms of city regulations as well as how to implement when boundaries are unclear.

The ONLY way I will support paving these roads is if speed bumps are put in. The last thing I want is to increase the frequency and speed of traffic for those just cutting through my neighborhood to get to theirs.

*Woodstock Resident*
SURVEY

A survey completed by 60 respondents confirmed the results of the Discovery Session. Of 60 respondents, 43 reported living on an unimproved street in the Woodstock neighborhood. The majority of respondents identified both positive and negative aspects of unimproved streets in the Woodstock neighborhood. When asked if they would prefer that all neighborhood streets were paved to city standard, a majority of respondents indicated that this would not be their preference.

Do you think that any of these are POSITIVE aspects of unpaved streets in Woodstock?

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less or Slower Vehicle Traffic</td>
<td>48</td>
</tr>
<tr>
<td>Natural</td>
<td>36</td>
</tr>
<tr>
<td>Space for Private Use</td>
<td>33</td>
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<td>Special Neighborhood Character</td>
<td>29</td>
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<td>18</td>
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<tr>
<td>Space for Parking</td>
<td>12</td>
</tr>
<tr>
<td>None of These</td>
<td>7</td>
</tr>
</tbody>
</table>

Enough already with the paving.
Woodstock Resident

I like the ‘country feel’ of them.
Woodstock Resident

Please keep our unpaved streets unpaved! It is absolutely why we bought a home in Woodstock and why we purchased the lot on the unpaved street that we did.
Woodstock Resident
Illicit sexual activity and drug deals are common along with street people and homeless folks living in their cars.

Woodstock Resident

Imperative to consider that it is impossible for wheelchair navigation.

Woodstock Resident

Unpaved streets give idiots with their SUV’s a chance to use the 4WD. I cannot tell you how many times some yahoo feels the need to drive down my street, splashing through puddles or creating a huge dust cloud. We have small children and think the streets create a real safety hazard.

Woodstock Resident
If money were not a concern, do you think that space in unpaved streets should be used for any of the following non-transportation neighborhood uses?

- Community Gardens
- Community Compost Bins
- Parks
- Child Play Areas
- Community Art Projects
- Dog Play Areas
- Recreational Equipment
- None of These

Not all need paving... just some. It would be nice to have some paved east-west connectors.

Woodstock Resident

It would be great to see the space used as green space/gardens. Narrow them to make more green space and slow traffic. Produce local food in the gardens. Plant them with more trees.

Woodstock Resident
Pathways and stairs can serve as pedestrian connections, to shorten walking trips in places where the street system is discontinuous or where blocks are large. They may be located in unimproved street rights-of-way, in public walkway easements on private property, or on off-street paths in parks or other open space areas.


POLICY RESEARCH

Recognizing that neighborhood streets are part of a larger transportation system, we sought to understand the relevance of local and regional goals to unimproved streets. The Transportation System Plan (TSP) and newly adopted Portland Bicycle Plan for 2030 both support a decrease in trips taken by single occupancy vehicle, a goal which requires streets to accommodate biking and walking trips, including those made by residents with disabilities and small children. These groups face special challenges on poorly maintained unimproved streets. The Safe Routes to School program specifically provides funding for facility improvements and programming to encourage students to use alternative forms of transportation in their commute to school.

The City of Portland and Multnomah County Climate Action Plan 2009 also addresses the reduction of vehicle miles traveller (VMT), identifying the need for funding solutions. Additional goals seek to expand the urban forest canopy and increase local food production. The plan notes that achieving climate-related goals will also result in health benefits, improved stormwater systems, and savings from lower transportation expenses. Choices made by property owners on unimproved streets can either further or impede these policy goals.

More detailed guides are also relevant to unimproved streets. The Portland Bureau of Transportation (PBOT) is currently developing a document called “Private Encroachments in the Public Right of Way” in order to clarify regulations and policies regarding private activities on streets. Although the document describes uses commonly found in unimproved streets, such as planter boxes, it describes these uses in terms of fully constructed improvements, such as sidewalks. Many of the policy documents designed to advise property owners on appropriate use of the right-of-way are not applicable to unimproved streets. However, the Portland Pedestrian Design Guide includes a discussion of pathways appropriate for unimproved streets in its effort to support the creation of an environment conducive to walking.
After investigating resident views and city goals, we researched national and international trends potentially relevant to the use of unimproved streets. Just as residents want neighborhood streets to serve a variety of purposes, the allocation of space in streets is addressed in the national and international discourse.

TRANSPORTATION PLANNING

In the 1950s and 1960s, transportation planning in the United States prioritized the convenience of motor vehicle travel. However, several cultural shifts laid the groundwork for changes in transportation planning. The environmental movement generated concern about the impacts of human development patterns. The legendary author and urbanist Jane Jacobs drew attention to the value of dense multi-use urban spaces, which provide “eyes on the street” and other social benefits. Finally, the birth of the term “placemaking” reflected a desire among professionals to create public spaces that are not only functional, but also serve as enjoyable destinations.

Recent efforts have been made to balance environmental impacts, multiple transportation modes, and the role of streets as public spaces. The concept of “Context Sensitive Solutions” represents a joint project of American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) to incorporate environmental and community values in an effort to tailor transportation infrastructure to unique locations.
“Context sensitive solutions (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.”
AASHTO/FHWA Joint Summary Report 2007

“Creating complete streets means transportation agencies must change their orientation toward building primarily for cars. Instituting a complete streets policy ensures that transportation agencies routinely design and operate the entire right of way to enable safe access for all users.”
CompleteStreets.org

City of Portland and Multnomah County Climate Action Plan 2009

“In the 1990s, two environmental concepts began to influence transportation planning. Low Impact Development represented an effort to ensure that land use and transportation planning preserved natural features that supported watershed health. Similarly, Green Infrastructure reflected a return to natural systems to replace traditionally engineered facilities. For example, a system of vegetated swales may replace the use of stormwater drains on streets.

The National Complete Streets Coalition provides resources for community members to advocate for local policy changes that support the inclusion of facilities for a variety of transportation modes in streets. In the state of Oregon, the “bike bill” statute mandated the inclusion of bicycle and pedestrian facilities well before the complete streets movement, although compliance lagged for some time.

The practice of Traffic Calming, or reducing vehicle speeds through design, has also influenced local transportation planning. Traffic calming facilities are designed in part to promote safe and enjoyable pedestrian travel. These practices are often implemented on neighborhood streets, or in commercial areas.

EVALUATION CRITERIA
In combination with resident input and policy objectives, our survey of contemporary transportation theory led us to create a list of issues relevant to unimproved streets. Included in the Community Toolkit, our comprehensive list of criteria encourages property owners to consider issues beyond their personal priorities or realm of knowledge. The list serves as a point of reference when considering current conditions, evaluating best practices, and generating potential design options for unimproved streets.
CRITERIA

Connectivity & Traffic
Residents adjacent to unimproved streets are often concerned that changes that improve connectivity will bring increased vehicle traffic, potentially decreasing safety and quality of life. Meanwhile, nearby streets are burdened with a disproportionate amount of traffic.

Safety & Security
Residents appreciate that unimproved streets discourage vehicle travel, particularly at high speeds. When high speed traffic does occur, different expectations of the ROW can lead to conflicts. Poor conditions and a lack of lighting can also contribute to safety concerns. A lack of maintenance can make these spaces feel abandoned, leading to undesirable behavior and security concerns.

Accessibility
Unimproved streets present challenges for people with disabilities, families pushing strollers, and cyclists. Poorly designed intermediate improvements prioritizing vehicle travel can further reduce access.

Health
The transportation network can improve the health of users by facilitating active modes of transportation and discouraging vehicle travel and associated emissions. Unimproved streets often create dust, leading to air quality concerns. However, these spaces also provide space for gardening, increasing food security.
CRITERIA

Placemaking

Unimproved streets present special opportunities to enhance the role of streets as neighborhood gathering spaces. Street furniture and community art can help reinforce neighborhood character and create a network of public spaces that encourages social interaction in the street.

Environmental Quality

The physical components and design of streets have important implications for stormwater runoff, air quality, greenhouse gas emissions, and use of natural resources.

Public/Private

The boundary between public space and private space is often unclear on unimproved streets. Private uses, and occasionally structures, overflow into the public right-of-way, while visitors often veer onto private property to avoid obstacles in the roadway. Such tensions should be taken into account when changes are proposed.

Nature

Unimproved streets often feature extensive vegetation, providing habitat for local birds. Many neighborhood residents consider these spaces to be local greenways.

Durability & Maintenance

Choices about materials and installation methods directly affect the amount and type of maintenance required.
Traffic Calming is the management of traffic so that its negative impacts on residents, pedestrians and schools is minimized.

San Jose Traffic Calming Toolkit

ALTERNATIVE STREETS

In researching best practices, we investigated streets that addressed our criteria in creative ways. Several residents of the Woodstock neighborhood cited the “woonerf” as a potential model. In the Netherlands, woonerven, or “living streets,” are typically located in medium-density residential neighborhoods. Drivers, cyclists, pedestrians, and recreating residents share a single space without delineations. Vehicles are legally subordinate to cyclists and pedestrians and are required to travel at low speeds. Narrow widths, sometimes created by planters and outdoor furniture, further encourage low vehicle speeds. In the United Kingdom, streets called “home zones” replicate the Dutch tradition.

More recently, the “shared space” model has gained traction in Dutch transportation planning. Sometimes called “naked streets” or “naked roads,” these streets are characterized by a lack of signage or mode separation. Like the woonerf, the shared space prioritizes non-motorized travel, but solely through physical features, rather than explicit signage and rules. It is thought that uncontrolled spaces generate uncertainty, leading to more interaction among road users and more cautious travel behavior.

Domestically, the “skinny streets” model parallels many of the effects of woonerven and shared spaces. The skinny streets movement seeks to reduce lane width requirements in localities across the United States. Traditionally, it was thought that mode segregation and wide lanes would decrease potential conflicts between road users, while providing convenient access for emergency service providers. However, advocates of skinny streets note that wide lanes often encourage high vehicle speeds, creating safety hazards and reducing the quality of the pedestrian environment. In 2000, the state of Oregon developed “Neighborhood
"Green Streets” are defined by their environmentally sensitive design, often evident in the inclusion of natural stormwater treatment and infiltration facilities. Such facilities often serve as traffic calming devices while improving the quality of pedestrian spaces. The City of Portland has installed several green street projects. Currently, a group of residents in the Richland neighborhood are advocating for the transformation of a neighborhood street into a curvilinear “country lane” with vegetated swales. The Brookland Country Lane Green Street Master Plan is proof that some residents are seeking streets that serve a variety of functions.

In Seattle, the Department of Transportation installs green streets, while Seattle Public Utilities has undertaken the Street Edge Alternatives (SEA) project under the Natural Drainage Systems (NDS) initiative to demonstrate creative drainage treatments. Residents commit to care for vegetation through a formal maintenance agreement.

Increasingly, the inclusion of natural stormwater treatment facilities is paired with the facilitation of multi-modal travel. Portland’s bicycle boulevards have been renamed “Neighborhood Greenways” representing the multi-faceted nature of innovative streets. The Holman Neighborhood Greenway is planned to include a diverter that limits vehicle connectivity while preserving pedestrian and bicycle connections and expanding a pocket park located in the Woodlawn neighborhood.
Vancouver Neighborhood Greenways

Initiated by residents, Vancouver’s Neighbourhood Greenways serve as short connectors for pedestrians and cyclists, while providing a public space for residents. They often create convenient links to important community destinations. City staff members provide assistance with planning, design, and execution, but community members accept responsibility for ongoing maintenance. Construction costs are shared by the City. The Tupper Neighborhood Greenway is located on a public right-of-way that was previously closed to vehicle traffic.

http://vancouver.ca/engsvcs/streets/greenways/neighbourhood/index.htm

Don’t pave ‘em!!
Unimproved streets slow traffic, and potentially make nice mini-parks and walkways. Neighbors should be encouraged to take care of them in creative ways, allowing public access.

Woodstock Resident
“With more miles of alleyways than any other city in the world, Chicago has a unique network of infrastructure integrated into the very fabric of our city. Recognizing this advantage, we have established new alley designs that help conserve our resources and improve our environment.”

Chicago Green Alley Handbook

### San Francisco Street Parks

In San Francisco, interested residents volunteer to maintain and “green” underutilized space in city rights-of-way, including “unaccepted streets.” The result of a partnership between the Department of Public Works and the San Francisco Parks Trust, the Street Park Program provides residents with technical assistance. Residents are encouraged to apply for grants to fund their efforts.


### ALLEYS, GREENWAYS, AND LINEAR PARKS

Although the unimproved ROWs in the Woodstock neighborhood are formally designated as streets and are as wide as traditional streets, many are effectively treated as alleys. Because unimproved streets are the sole responsibility of adjacent property owners, they share many commonalities with private roads and alleys. In some cases, all homes and garages face neighboring improved streets. In addition, space in unimproved streets is often used for private purposes, effectively narrowing the travel area to the width of an alley. In some instances, physical conditions prevent vehicle travel, and the unimproved streets are treated as pedestrian paths. Because of the way that residents interact with these spaces, we explored innovative approaches to alleys, greenways, and linear parks.

The City of Chicago has produced an award-winning Green Alley Handbook to showcase environmentally sensitive retrofits to public alleys and to encourage environmentally sensitive practices on adjacent properties. The innovative alley retrofits are planned, funded, and
constructed by city agencies. However, the document highlights the role of private property owners in maintaining these spaces and contributing to a variety of citywide goals, including the effective management of stormwater and mitigation of the heat island effect.

In Vancouver, BC, the Country Lanes demonstration project initiated by the city Engineering Department illustrated an environmentally sensitive retrofit of alleyways. Initially funded by the City, future installations are expected to be funded by property owners. Meanwhile, Vancouver “Neighbourhood Greenways” are developed through partnerships between city agencies, that install these connectors, and residents, who commit to ongoing maintenance.

In San Francisco, the Street Park Program allows residents to adopt public rights-of-way for the creation of neighborhood parks. Streets not accepted by the city are specifically targeted by the program. Within the Hosford-Abernathy neighborhood of Portland, there is currently a proposal to repurpose an existing right-of-way into a “linear park.” The linear park

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**San Francisco Ghost Streets**

An investigation of largely forgotten rights-of-way in San Francisco reveals a hodgepodge collection of alleys and paths. Many of these ROWs are characterized by steep grades, making them better suited for stairways than streets.


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木头街坊的居民

*Unpaved is an opportunity to give the neighborhood room to breathe.*

*Woodstock Resident*
“The mission of Community Greens is to catalyze the development of shared green spaces inside residential neighborhoods in cities across the United States.”

Clarence Eckerson

Internet is here

Clarence Eckerson

CommunityGreens.org

is proposed for a street which dead ends and is therefore not used as a neighborhood throughway. This circumstance has given the neighborhood the opportunity to propose an entirely new use for the right-of-way, while maintaining connectivity for pedestrians. The linear park is being created in partnership with PBOT. The bureau is drafting new policies to manage the process and guide similar efforts in the future.

Some residents in the Woodstock neighborhood have taken their own initiative in collaborative right-of-way improvement. One group of neighbors used recycled railroad ties to define the roadway while filling the potholes and smoothing the surface of the dirt street. In the remaining right-of-way, there are fruit trees, private garden beds, seating areas, and space for children to play.

PARALLEL PROBLEMS AND APPROACHES

Other sections of the right-of-way have given rise to creative community-based solutions to perceived problems. In Portland, the non-profit City Repair targets the intersections of neighborhood streets, which are perceived to accommodate vehicle travel at the expense of other community needs. City Repair assists residents with Intersection Repair, the process of transforming intersections into community gathering spaces using paint, planters, and art installations.

The public right-of-way is not the only communal space that may inspire community action. In many cities, residential blocks include a shared space in the center of the block. Without coordinated efforts, these spaces can become neglected, attracting undesirable uses. Ashoka’s Community Greens project provides resources for residents interested in transforming residential streets into attractive spaces.
Vacant spaces across the country have been transformed into community gardens. Many residents in the Woodstock neighborhood have already started private gardens in ROW space. Looking to the future, some have expressed an interest in the installation of community gardens managed by the city’s Community Gardens program. Currently, only 15% of Portland’s population lives within a quarter-mile of a community garden. Over 1,300 people are on the waiting list for garden plots. Community gardens demonstrate a potential use of ROW space, as well as a potential model for collaborative decision-making and maintenance.

**EXTREME TACTICS**

Street function is not simply a matter of engineering and policy. The role of a street is also affected by the way that residents interact with these public spaces. There are international, national, and even local examples of residents taking the initiative to radically change their streets. These unsanctioned tactics often arise out of frustration with formal channels of influence or the perceived inaction of public agencies.

In Dallas, Texas, residents of the Oak Cliff neighborhood took it upon themselves to convert a traditional street to a “complete street,” including a homemade cycle track and expanded sidewalks for outdoor dining. In New York City, the removal of a well-used bike lane prompted a midnight repainting by cycle advocates. In Portland, the perceived need for a crosswalk on E. Burnside resulted in a homemade version. There are numerous examples of such initiatives serving as the catalyst for formal improvements.
Renegade attempts to change traffic behavior using paint and the placement of furniture and prompts are often referred to as “roadwitching” or the installation of “mental speed bumps.” Although many of these exercises are meant to be long-term, others are short-term installations designed to provoke visitors to think about how space is allocated in the right-of-way.

The international event PARKing Day encourages participants to transform in-street parking spaces into parks and temporary gathering spaces. In many cities these efforts have been, and continue to be, illegal. In other cities, these efforts have eventually received approval and encouragement from city agencies.

These cases illustrate that residents, and their perceptions, are an important factor in street design. If ignored, public sentiment may appear in unexpected forms. Some unsanctioned actions have created serious safety hazards, while others have paved the way for strategies ultimately condoned and adopted by city agencies.

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Action to be completed before 2010: “Develop policy and provide programmatic resources to significantly increase the percentage of home-grown and locally sourced food, including the support of farmers markets and community supported agriculture; the use of public and private land and rooftops for growing food; promoting fruit and nut trees as options for the 33,000 yard trees to be planted as part of the Grey to Green initiative; and develop or facilitate 1,000 new community garden plots.”
The companion to this Report is the Roadway Not Improved Community Toolkit. The Toolkit is intended to serve as a resource for property owners and residents along unimproved streets. It also provides guidance for talking to neighbors about issues, concerns, or opportunities for collaboration on a shared unimproved street. The Toolkit includes five sections geared toward laying the framework for conversation and potential collaboration of neighbors on an unimproved street segment, from starting a conversation with neighbors to making a collective decision.

The Toolkit is designed to achieve several goals:

- Help property owners and residents along unimproved streets understand their rights and responsibilities under current city policy
- Provide information about street design options, potential funding strategies, and resources for projects on unimproved street segments
- Give people tools for starting a conversation with neighbors, and provide criteria for considering collaborative actions on unimproved streets
- Provide resources for exploring neighborhood-wide solutions in areas with a high concentration of unimproved streets
- Provide tools for raising awareness about unimproved streets and advocating for policy change

Several design concepts were developed for inclusion in the Toolkit, to give residents a starting point in discussing potential changes to unimproved rights-of-way.
DESIGN CONCEPTS

The design concepts reflect varied, and occasionally conflicting, values expressed by Woodstock residents. Many are directly inspired by national and international models of street design. A few of the concepts could be attempted without city permitting through Expanded Maintenance Options. Some others push the boundaries of conventional street design and use. These projects would require some level of approval from, or partnership with, City bureaus. The Community Toolkit includes an expanded description of each concept, including advantages, disadvantages, considerations, and cost estimates.

DIY Street

The Do-It-Yourself Street reflects a minimalist approach. The concept is designed to enhance navigability while increasing aesthetic value. If in poor condition, the road surface may be graded. Edges of the vehicle area are defined with railroad ties, logs or other recycled materials. These simple improvements do not require permitting.

Gravel

The gravel concept is designed to provide an inexpensive option for improving the surface of the roadway by eliminating potholes and providing a clearly defined travel area for vehicles. Edges of the vehicle area are defined with railroad ties, logs, or other recycled materials. Lighting is included to improve visibility and security. These simple improvements do not require permitting.

Interim Pavement

Interim pavement provides a paved surface for multiple travel modes at reasonable cost, potentially creating a building block for standard improvement. The remaining right-of-way is available for residential uses, such as parking or gardening. It is recommended that the street be graded and interim paving be installed with 3.5" of asphalt over 6" of gravel for long-term durability.

Shared Court

The shared court offers a multi-purpose courtyard space that prioritizes pedestrian use and includes significant traffic calming elements. The shared court encourages use of the street as a shared community space while providing a paved surface for multiple travel modes. This concept includes a courtyard of stamped pavement, street furniture, and movable planters to slow traffic.
**Serpentine Street**

The curves of the serpentine street are intended to take into account existing natural features and calm traffic. The street provides for multi-modal access in a single shared travel lane and an opportunity for activities in the remaining right of way.

**Community Garden**

The underdeveloped right-of-way of unimproved streets offers an opportunity to create gardens, while increasing bicycle and pedestrian connectivity and aesthetic value. This concept includes an 8’ paved bike/pedestrian path, 10’x20’ garden plots, and space for composting or keeping chickens. This concept allows some access to homes adjacent to the right of way.

**Linear Park**

A linear park would repurpose the entire right-of-way for public green space with the inclusion of separate paved bicycle and pedestrian facilities. The linear park increases bicycle and pedestrian connectivity while increasing natural amenities and space for social interaction and recreation. This concept does not accommodate vehicles or parking.

**Shed Street**

The shed street concept, seen throughout the city where right-of-way space is limited, includes two paved lanes for travel with a curb and parking on one side. On the other side, a sidewalk is separated from the roadway by stormwater management facilities.

**Standard Improvement**

A standard improvement would include a fully paved street with two vehicle lanes, parking, curbs, sidewalks, and stormwater facilities. The standard improvement increases connectivity for all modes and provides a predictable mechanism for street improvements and maintenance.
No single alternative works on every street. Some streets should be completely improved, some should be vacated, and everything in between.

Open House Attendee

TECHNICAL ADVISORY COMMITTEE & OPEN HOUSE

Design concepts were presented to a Technical Advisory Committee (TAC) composed largely of city staff members in order to identify potential problems with implementation. The TAC provided feedback on the feasibility and durability of designs. This does not imply city approval of the design concepts. TAC advice resulted in several concept revisions as well as the removal of one concept entirely.

After revisions, the design concepts were presented to the Woodstock neighborhood during an Open House where 51 attendees were given the opportunity to provide feedback and discuss options with their neighbors. The “Community Garden” design concept received the most positive feedback during the Open House, although several attendees identified potential conflicts between residents and visitors. The “Standard Improvement” received the most negative feedback. Attendees were also invited to submit their own design ideas.
Great use of unimproved space!

Open House Attendee

Would compliment a bike path very well.

Open House Attendee

Got money?

Open House Attendee

Agreed. Waste of money.

Open House Attendee

Would ruin character of street and way too expensive.

Open House Attendee
SCALING UP

The Toolkit is primarily geared towards exploring strategies for an individual block or series of blocks. However, the prospect of doing a project on individual street segments raises larger questions for the neighborhood’s street system as a whole, and city policy. The “Neighborhood Approach” and “Advocacy” sections of the toolkit provide some information about how to move beyond a block-by-block approach.

Developing common visions around streets is difficult given the complex and sometimes conflicting interests at play in the right-of-way (ROW). However, unimproved streets present opportunities to explore new visions for neighborhood streets – as green spaces, as shared spaces, and as spaces that can become neighborhood assets. The Toolkit provides a starting point for neighbors to identify common interests and weigh the costs and benefits of alternative solutions for improving, maintaining, and using unimproved streets. Although the Toolkit includes information that is specific to the Woodstock neighborhood, the majority of the document would be applicable to other neighborhoods.
Unimproved streets are largely ignored by the City of Portland. As a general rule, the City does not maintain these spaces or fund their improvement. When conflicts arise, there is minimal enforcement of the few regulations that govern these spaces.

The consequences of this course of action are apparent. The poor conditions of many unimproved streets threaten the achievement of ambitious City goals. Potholes, furrows, pooling water, overgrown vegetation, and encroachments create obstacles in the roadway. These obstructions limit connectivity for all road users. Drivers must often veer into private yards to navigate these streets. Pedestrians and cyclists must alter their routes. Persons with disabilities and families with small children in strollers face special challenges.

Adjacent property owners are uncertain of their rights and responsibilities regarding these spaces. Some property owners have very little understanding of the public interest in the right-of-way. This misunderstanding may be exacerbated by a lack of City involvement. Other property owners are unaware of their authority to maintain these spaces.

The full improvement of streets would solve some basic problems. Currently, such change is largely driven by property owners and developers. Through Local Improvement Districts (LIDs) and development requirements, some streets have been paved and transferred to the City of Portland for maintenance. However, the high costs of these improvements make them unlikely in established neighborhoods. Residents rarely have the financial means to undertake such projects, and development potential is limited in the near-term.
Even if challenges were overcome, the full improvement of neighborhood streets to current standards may fail to meet the diverse needs and priorities of neighborhood residents. Despite flaws, unimproved streets often serve as neighborhood assets. Poor road conditions function as traffic calming devices. The limited use of the roadway makes room for landscaping, gardening, and recreation.

The piece-meal improvement of unimproved streets presents other challenges. Because there is no organized approach to identifying priority improvement projects, the block-by-block paving of streets does not necessarily increase connectivity in strategic locations. Full improvements create maintenance responsibility for City of Portland, without an assessment of public benefit.

Until a more deliberate approach is developed, the City could facilitate maintenance and intermediate improvements through increased communication, the provision of technical assistance, the provision of resources, and the installation of pilot projects. This approach could contribute to a more effective transportation system in the near-term, while preserving flexibility in the long-term.

The definition of a successful street has changed drastically in the past 50 years. Given the changes taking place in the world, the role played by neighborhood transportation infrastructure is likely to undergo further transformation in the future. A commitment to maintenance and intermediate improvements preserves our flexibility to meet unexpected challenges with creative neighborhood solutions.

“Prioritize funding for low-carbon transportation and access projects, policies and programs that will achieve emission reduction goals while also balancing safety, maintenance and freight movement.”

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City of Spokane. *Local Improvement Districts.* Retrieved from http://www.spokaneengineering.org/LocalImprovementDistricts.htm

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Woodstock Neighborhood Association vs. City of Portland and Joe Van Haverbeke, LUBA No. 94-093 (Land Use Board of Appeals of the State of Oregon 1994)