Citizen Street Repair Review Panel 2013 Report

Implementation Update for Measure 20-145 Bonds to Fix Streets

GO Bonds
FIXING EUGENE'S STREETS

Eugene

Memorandum

Date: January 15, 2014

To: Jon Ruiz, City Manager

From: Street Repair Review Panel

Subject: Year Five Report of the Street Repair Review Panel

It is our pleasure to present the fifth annual report of the Street Repair Review Panel (SRRP). This panel was formed, and this report was written, in response to the accountability provisions in Measure 20-145 (2008 bond measure to fix streets). The panel will reconvene next year to begin reporting on Measure 20-197 (2012 bond measure to fix streets).

The 11-member panel met three times over a three-month period in preparation of this report, which included a physical inspection of the projects completed in 2013. We reviewed and accepted the report prepared by the City's external auditor (Appendix C) with respect to the City's use of the bond proceeds through November 30, 2013.

Based on this limited review and all materials presented to us, we unanimously conclude that the bond proceeds were used for the authorized purposes and in compliance with the limitations and restrictions outlined in Council Resolution 4953. We are also providing a detailed report, prepared at our request and with our approval, from the Public Works staff on the bond projects constructed in 2013.

Highlights from our review of the 2013 street bond projects include the following:

- **Economic Efficiencies** –Projects were often combined to maximize work efficiencies and mitigate impacts to the traveling public. In many cases these efficiencies were accomplished by leveraging bond funding with other sources of funding such as local gas tax revenues and state and federal grants.
- **Collaboration with Internal and External Utilities –** City staff coordinate with internal and external utility stakeholders to schedule and coordinate the street work with any needed upgrades and repairs to the nearby utility facilities. For example, the City frequently provides planning and design data to utility companies of the proposed street work to more accurately adjust utilities to the proposed street design. The City also frequently coordinates stormwater and wastewater repairs and upgrades with the street work, such as with the stormwater drainage improvements constructed on Alder Street in 2013 in conjunction with the bond-funded paving improvements from 19th to 24th avenues.
- **Coordination and Communication with Citizens and Businesses** – Major street repair projects, by their nature, tend to be disruptive. Examples of construction-related inconveniences include street closures, detours, dust and noise. These issues can affect residents, businesses and commuters. The committee has often expressed interest in this matter, and found that, overall, the Public Works Department actively engages stakeholders to inform them of impacts well in advance of construction activities and addresses impacts and stakeholder requests to the extent possible. The committee encourages the department to continue to look for new and better ways to proactively coordinate communications and minimize impact to the traveling public and impacted businesses and residents.

- **Sustainability** – The bond projects continued to support the community's Climate and Energy Action Plan through the use of warm mix asphalt pavement, in-place road recycling and increased use of reclaimed asphalt cement binder in pavements.
- **Active Transportation** - The bond measure has allowed meaningful progress toward enacting elements of the Pedestrian and Bicycle Master Plan. Shared-use paths, reconstructed to greater depth and width, will accommodate increased use well into the future. Meanwhile, street preservation often has provided an opportunity to leverage other funds to add bicycle and pedestrian improvements on streets at the time of the paving project. Thanks to conscientious staff efforts, programmed bond measure projects have incorporated new or wider bicycle lanes, shared lane markings, and improvements in pedestrian facilities. Even though few funds are available for the Pedestrian and Bicycle Master Plan (PBMP), the bond measure has facilitated the construction of some PBMP projects on bond measure streets.
- **Jobs Impact** – Based on the Oregon Department of Transportation Highway Division jobs multiplier model, the 11 bond measure repair projects completed in 2013 conservatively sustained approximately 151 full-time equivalent jobs during the period of construction.
- **Progress** – Over the last five years, the use of bond proceeds has allowed the City to spend $35.9 million to repair 85.4 lane miles of improved streets and reconstruct five miles of off-street shared-use paths.
- **Bottom Line** – Many roads and paths are getting fixed and the bonds are meeting the objectives of Ballot Measure 20-145.

We appreciate the support and thoughtful responses to our questions provided by Public Works Director Kurt Corey and his staff. The committee also expresses its appreciation to the voters and taxpayers of Eugene for their support of the bond measure. We believe the community at large is getting a good return for their investment.

Additional information about the Street Repair Review Panel, including action summaries of our meetings and a variety of reports and studies, can be found at www.eugene-or.gov/gobonds.

Please feel free to contact any of us for additional information.

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2013 Report to the Citizen Street Repair Review Panel

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Photos on cover from 2013 projects: Fifth Avenue in-place cement-treated base (top); paving Alder Street (lower left); completed Alder Street (lower right)

INTRODUCTION

BACKGROUND

This report has been compiled for use by the Street Repair Review Panel (SRRP). It is intended to give background on projects included in the 2008 voter-approved Bond Measure 20-145, the schedule for construction of these projects, and details of bond projects constructed in 2013. The street repair bond is a five-year bond, with construction of bond-funded projects starting in 2009 and completed in 2013.

KEY TERMS

Bond - Bond Measure 20-145, Bonds to Fix Streets, approved by Eugene voters in November 2008.

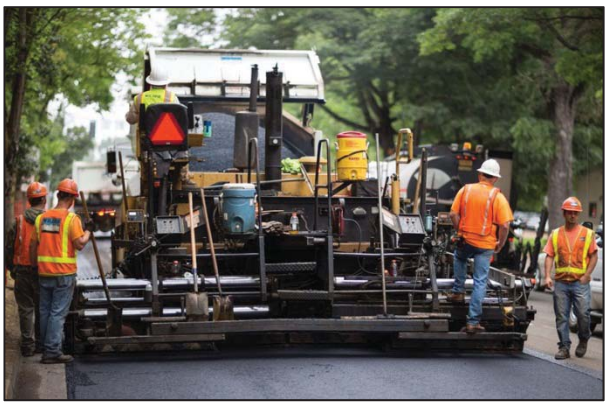
In-Place Recycling - A process in which a large piece of equipment called a reclaimer mixes the existing base rock and a portion of subgrade soils with dry cement and water to create a cement-treated base. This process greatly reduces the use of virgin materials and trucking that are needed using conventional remove-and-replace construction techniques.

Inlay – An inlay treatment consisting of removing a specified depth of the existing pavement surface and repaving that same depth with a new pavement surface. This treatment works well where the pavement distress is isolated to the removed portion of the pavement. At times, the inlay treatment needs to be supplemented with an "overlay," which is when an additional thickness of pavement is placed over the inlaid pavement. An overlay is used when engineering analysis shows that the existing structure does not have sufficient strength to accommodate the projected traffic loading. The term "overlay" is commonly used to describe both the inlay and overlay practices.

In-place recycling on Alder Street

One of the benefits of performing an inlay treatment is that the new pavement surface will match existing adjacent structures and not increase the street cross grade. Another benefit of an inlay is that in the removal of the existing pavement, contractors grind up the old pavement and stockpile the material to be recycled into new pavement. The use of reclaimed asphalt pavement, or "RAP", has been used for more than 20 years in Eugene. In 2013, approximately 11,700 tons of RAP material (30% by weight) was incorporated into the pavement on bond-funded projects.

PPP - Pavement Preservation Program. This is the current capital project program to preserve Eugene's improved street system. The priority for this program is to preserve streets that have not yet degraded to a point where reconstruction is required. Preserving a street through overlay or similar treatment is four to five times more cost effective than waiting to repair a street after it requires reconstruction. This program was initiated in 2003 and, until passage of the 2008 street repair bond, was predominately funded with local fuel tax revenue and the reimbursement fee component of transportation system development charges.



Paving on Hilyard Street

Warm Mix Asphalt - Warm mix asphalt pavement is identical to conventional hot mix asphalt pavement, except that through a special mixing process it is produced at a temperature approximately 50 to 100 degrees cooler than conventional hot mix asphalt. In Eugene, all asphalt concrete producers have retrofitted their plants to produce warm mix asphalt using a water foaming process. The foaming process allows temperature reductions of approximately 50 degrees. This reduction in temperature has several advantages:

1. Reduces energy consumption to produce asphalt concrete, lowering costs and greenhouse gas emissions.
2. Reduces off-gassing (smoke) of asphalt concrete by keeping temperature under the boiling point of "light oils" in the liquid asphalt, benefiting construction workers and the public.
3. Because the light oils are not boiled off, the liquid asphalt coating the rock particles is slightly thicker, which slows the aging process of the asphalt.
4. Reduces the oxidation caused during high temperature production that causes premature aging of the asphalt, which should provide a longer life product.

The use of warm mix asphalt pavement is specified for all City of Eugene paving projects.

SRRP Mission

Per Resolution No. 4953, the SRRP "will prepare a report, separate and distinct from the report prepared by the outside auditor, documenting the City's use of the bond proceeds and noting whether the bond proceeds were used in compliance with the terms of this Resolution."

CRITERIA FOR PROJECT SELECTION AND SCHEDULING

Street Projects

Street projects to be included in the bond were specifically listed (see Appendix A). All street projects were identified by the Public Works Maintenance Pavement Management System as priorities for repair. In addition, the following criteria were used to select streets for the bond measure:

1. Citizen input with respect to prioritizing major streets in need of reconstruction.
2. Scientific information about needed street rehabilitation and reconstruction from the pavement management system.
3. Geographic distribution throughout the community to ensure all areas of the City receive a benefit from the bond proceeds.

Based on the favorable bidding climate early in the bond and cost reductions due to rehabilitation and reconstruction techniques realized in the first two years of bond construction, the City constructed the majority of the projects prior to 2013. The original bond allowed that if all of the projects listed in the bond measure were completed and there were bond proceeds remaining, the council could add other street preservation projects to the list. In 2011, the Eugene City Council approved additional streets to be repaired with remaining bond funds (See Appendix A).

A list of the street bond projects, their estimated repair cost from the Pavement Management System in 2008 dollars, and the year constructed is included in Appendix A. The list includes a comparison of programmed costs to actual costs with any difference noted. Differences in total project costs on individual projects affected the funding available for future projects.

Off-Street (Shared-Use) Path Projects

The 2008 bond measure stated that the City will allocate not less than $350,000 each year to fund the overlay and reconstruction of existing off-street bicycle and pedestrian paths. These projects were not named in the bond measure, but a list of prioritized projects was developed based on condition of the paths and input from a citizens' advisory committee. As with streets, Public Works Maintenance performs routine inspection of off-street paths. Information on path condition was cross-referenced with path pedestrian and bicycle usage counts collected by the Public Works Engineering Transportation Planning team. City staff presented the data to the citizen Bicycle and Pedestrian Advisory Committee (BPAC) and collaboratively developed a prioritized list of off-street path repair projects. This list is included in Appendix A (also see the accompanying bond project map in Appendix B).

Reconstruction of South Bank Path

USE OF OTHER FUNDS IN CONJUNCTION WITH STREET BOND FUNDS

The use of street-repair bond funds is limited to the overlay or reconstruction of the driving surface of streets as well as to preserve existing integral elements of the street such as curbs, gutters, sidewalks, on-street bike lanes, traffic signals, street lights, medians, traffic calming devices, and other integral parts of a street preservation project (Resolution 4953, Section D).

However, there is often a need or an opportunity to complete additional work as part of the construction contracts for street preservation. The additional work may be funded by wastewater and stormwater utility funds, local gas taxes, transportation system development charges, or state and federal grants.

Wastewater and stormwater utility funds are used to repair and rehabilitate the existing wastewater and stormwater systems, respectively, that underlie much of the city's street system. Making these repairs in coordination with the street bond projects is a cost-effective way to accomplish the work and precludes emergency repairs in the future that would require cutting new pavement.

Local gas taxes were used for preliminary engineering conducted in advance of the street bond measure's passage. This assured a quick start of bond measure projects in 2009. Local gas taxes have also been used to include adjacent streets in the street bond project contracts. Upon final accounting of the bond projects, the expenditures above the available bond funding will be funded by local gas taxes.

Transportation system development charges (SDCs) are often used to upgrade existing signal systems during pavement preservation projects. The work typically includes installing new conduit under the pavement to connect the traffic detection loops to the signal controllers and installing audible pedestrian devices for pedestrian crossing signals.

Federal grants and state participation have been used to improve bicycling and pedestrian facilities on several projects by reconstructing or adding sidewalk, installing pavement markings, and upgrading pedestrian signals.

SUSTAINABILITY

The City of Eugene continually strives to improve the quality, environmental footprint, and cost efficiency of its projects. In 2013, Eugene continued to use warm mix asphalt pavement and in-place recycling to meet these sustainability criteria. In addition to the use of warm mix asphalt pavement and in-place road recycling, the City specified the increased use of reclaimed binder on one of its projects in 2013.

Warm mix asphalt continued to be specified for all the paving projects in 2013 in place of conventional hot mix asphalt; nearly 39,000 tons of warm mix asphalt pavement was placed on bond-funded streets in 2013. As explained in the Key Terms section of this report warm mix asphalt provides environmental and human health benefits as well as a potentially longer lasting product. The National Cooperative Highway Research Program (NCHRP) estimates that there is a CO_2 savings of 12 pounds per ton of pavement using warm mix as compared to hot mix asphalt. The NCHRP also estimates that the use of warm mix asphalt reduces the energy used in the asphalt batch plant by about 30% compared to hot mix asphalt.

The City continued the practice of in-place recycling of existing roadbed and subgrade soils in 2013, maximizing the use of existing materials and reducing the production and hauling of virgin construction materials. In-place recycling (see Key Terms) was used on the street bond projects on 5th Avenue (Hwy 99 to Bailey Hill Rd), Alder Street and 18th Avenue. It is estimated that using the in-place recycling process for these streets eliminated the need to excavate and haul away 9,700 cubic yards of material and eliminated hauling 17,000 tons of new base rock to the site, saving over 1,900 truck trips for the three streets.

The City of Eugene started using the in-place recycling process to realize the environmental, economic and social benefits to the community that can come from this type of process. The reduction in land filling, material mining, and truck hauling all have direct environmental benefits; the reduction in excavating existing roadway materials and importing virgin construction materials have direct economic benefits; and the reduction in construction time has a direct social benefit.

As noted in the Inlay definition (see Key Terms), the use of reclaimed asphalt pavement (RAP) has been used in Eugene for more than 20 years. The current standard specification allows up to 30% RAP, by weight, to be used in new asphalt pavement mixes. For several years, local asphalt producers have been supplying mixes that maximize the allowed RAP content. Increasing the amount of reclaimed asphalt binder in pavement mixes potentially impacts the quality and longevity of the asphalt pavement, so increasing the allowed reclaimed asphalt binder in mixes needs to be done with consideration as RAP contents above 20-30% is an emerging technology without much research conducted on long-term impacts to the pavement quality. Some agencies are experimenting with increasing the reclaimed asphalt binder content and the City of Eugene chose to participate in this research on Alder Street.

The 30% by weight RAP content that is the standard specification for Eugene projects results in replacing approximately 26% of the virgin asphalt cement needed for a typical Level 2, ½" dense graded asphalt pavement which is typically used on residential and collector streets in Eugene. Since the asphalt cement generally makes up about ¼ of the cost of asphalt

pavement, reducing the amount of virgin asphalt cement used has the potential to decrease materials costs as well as conserving virgin resources.

Based on research, input from the Asphalt Pavement Association of Oregon, and the three local asphalt pavement producers for public works projects, the City specified a 35% reclaimed binder replacement asphalt pavement on the Alder Street project. The specification allowed flexibility for the contractors to meet the 35% binder replacement value using RAP or a combination of RAP and reclaimed asphalt shingles (RAS) depending on materials availability and plant capabilities.

By its nature, reclaimed asphalt binders are stiffer and pavements that contain higher contents of reclaimed asphalt binders are more susceptible to cracking. To compensate for this potential, the grade of virgin asphalt binder typically used for Eugene paving was replaced with a “softer” binder that should better resist cracking.

The Asphalt Pavement Association of Oregon (APAO) is participating in a national research project to test high binder replacement mixes. The City submitted samples from the Alder Street project as well as some standard asphalt pavement mixes to be tested and compared to better determine long term properties of these mixes. The high binder replacement mix performed well in the initial testing for crack resistance and appears to be a viable mix design to be incorporated in future projects as appropriate.

Funding Status and Forecast

In 2013, construction unit costs continued to increase over those in the early bond years. As noted in previous reports to the SRRP, construction bids, innovative treatment technologies, and other variables substantially reduced project costs through the first three years of the bond. The total budget for bond projects constructed in 2009 through 2013 was $35,770,000. Total expenditures are projected to be $35,948,000 for all projects using bond funds; including 10 of the 22 streets added by City Council in 2011(see Appendix A). The remaining 12 street sections will be constructed between 2014 and 2016 with local gas tax funds.

Recognition for the City of Eugene Pavement Preservation Program

As noted in the Key Terms section, above, the street repair bond projects are part of the City’s Pavement Preservation Program. The passage of the 2008 street repair bond has allowed the City to significantly increase the number of streets repaired under this program. Eighty-five 12-foot wide lane miles of streets were repaired through the 2008 street repair bond. Since the passage of the 2008 street repair bond, the City has received numerous awards and peer recognition for the excellent work completed through the Pavement Preservation Program. Perhaps the most significant recognition of the program accomplishments was with the resounding approval by voters of the 2012 bond measure to continue and build upon the 2008 bond for another five years. The $43 million 2012 street repair bond will repair 76 more streets and provide an average of $516,000 per year for bicycle and pedestrian projects.

In addition to the voter approval of the 2012 bond, other forms of recognition for the City’s Pavement Preservation Program since 2008 include:

- 2009 Oregon Chapter of the American Public Works Association (APWA) Julian Sustainable Practices Award – Warm Mix Asphalt;
- 2009 Oregon Transportation Safety Conference Engineering Collaborative Project – Bailey Hill Road Safety Committee (pavement repairs were bond funded);
- 2012 - Oregon Chapter of APWA Julian Sustainable Practices Award - Alder Street Transportation Corridor (pavement repairs were bond funded);
- 2012 - Asphalt Pavement Association of Oregon (APAO) 2012 Urban Arterial – 3rd Place – Green Acres Road;
- 2013 – Northwest Pavement Management Association – Jenifer Willer, Pavement Manager of the Year;
- 2013 Oregon Chapter of APWA Julian Sustainability Practices Award for a Program – Honorable Mention – City of Eugene Pavement Preservation Program;
- 2013 - The American Public Works Association Center for Sustainability published a case study on the City of Eugene's sustainability practices in the pavement preservation program on November 4, 2013. APWA is a national organization for public works professionals with over 28,000 members;

2013 Bond Construction Projects

The following pages are reports on individual street projects. The total costs for each project listed are estimated as not all of the 2013 construction-related costs have been finalized as of December 1, 2013.

Portland cement concrete paving on 18th Avenue

5th Avenue from High Street to Blair Blvd

Project Description: This project consisted of rehabilitation and reconstruction of 5th Avenue from High Street to Blair Blvd in downtown Eugene. This street was added to the list of original bond streets using the remaining bond funds. In order to coordinate the work and realize construction efficiencies, this street was combined with the Blair Boulevard and Van Buren Street projects.

Treatment Methodology: Pavement testing recommended that most of this section be reconstructed. Upon further evaluation, there were potions of the section that could be rehabilitated with the removal and replacement of the existing surfacing.

Costs: Total project costs, from all funding sources, are estimated at $1,825,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 2,430,000
Total Projected/Actual Bond Funds Used =	$ 1,788,000
Difference =	$ 642,000

Additional Sources of Funding: Stormwater and wastewater utility funds and transportation system development fees used to reconfigure the pedestrian crossings at High Street.

Project Photos:

5th Avenue pre-construction

5th Avenue post-construction

5th Avenue from Highway 99 to Bailey Hill Road

Project Description: This project consisted of rehabilitation and reconstruction of 5th Avenue from Highway 99 to Bailey Hill Road in west Eugene. This street was added to the list of original bond streets using the remaining bond funds.

Treatment Methodology: The pavement design report recommended a combination of rehabilitation and full or partial-depth reconstruction. The final design used a combination of in-place cement-treated base with asphalt pavement as an alternative to full depth reconstruction and inlay asphalt pavement rehabilitation in the sections that did not need to be reconstructed.

Costs: Total project costs, from all funding sources, are estimated at $1,129,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 1,950,000
Total Projected/Actual Bond Funds Used =	$ 991,000
Difference =	$ 959,000

Using the reclamation technique for construction was significantly less expensive than a conventional reconstruction as originally anticipated.

Additional Sources of Funding: Stormwater and wastewater utility funds. Local gas tax funds were used to supplement the bond funds for paving work.

Project Photos:

5th Avenue pre-construction

5th Avenue post-construction

10th Avenue, Broadway, and Olive Street

Project Description: This project consisted of rehabilitation and reconstruction of these three downtown streets. Due to their proximity to each other, these three street sections were combined into a single project to maximize design and construction efficiencies. These streets were added to the list of original bond streets using the remaining bond funds.

Treatment Methodology: Surface distresses and pavement testing showed that 10th Avenue and Broadway needed to be reconstructed. Recommendations for Olive Street were a combination of inlay/overlay and reconstruction. Sections of Olive Street and 10th Avenue were significantly strengthened to accommodate the high frequency of bus loading.

Costs: Total project costs, from all funding sources, are estimated at $1,820,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 1,518,000
Total Projected/Actual Bond Funds Used =	$ 1,512,000
Difference =	$ 6,000

It was originally planned to rehabilitate Olive Street from 10th Avenue to 13th Avenue, but due to conflicts with adjacent private development, 11th to 13th Avenue was delayed to 2014 and will be rehabilitated with local gas tax funds.

Additional Sources of Funding: Stormwater utility fund was used for minor storm system repairs. Transportation system development fees were used for signal upgrades, including the addition of audible pedestrian devices at the 10th and Olive intersection, and adding shared-lane markings pavement markings to Broadway. Local gas tax funds were used to supplement the bond funds for paving work.

Project Photos:

Olive Street post-construction – New concrete pavement at the LTD station

Broadway post-construction

18th Avenue from Washington Street to 510’ east of Chambers Street

Project Description: This project included reconstruction of 18th Avenue from Washington Street to 510 feet east of Chambers Street. This section of 18th Avenue was added to the list of original bond streets using the remaining bond funds. This is the third phase of repairs on 18th Avenue to be completed under the 2008 Bond – Chambers Street to City View Street was paved in 2010 and the section from Patterson Street to Washington Street was reconstructed in 2011.

Treatment Methodology: Sections of this street were in poor condition and pavement testing and evaluation showed that the street needed full depth reconstruction. Prior to the project, the street was a Portland cement concrete (PCC) surface, with an asphalt overlay on some of the intersections. Public Works Maintenance requested the new surface continue to be PCC because it is simpler for them to maintain over time. Engineering honored the request because we could phase the construction on this street in a way that made the PCC construction more feasible than on some other streets we rehabilitate. Portland cement concrete also was a good choice given that the street is an arterial with heavy transit loading.

Costs: Total project costs, from all funding sources, are estimated at $2,973,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 2,800,000
Total Projected/Actual Bond Funds Used =	$ 2,663,000
Difference =	$ 137,000

Additional Sources of Funding: Stormwater and wastewater utility funds were used for minor storm and wastewater system repairs. Transportation system development fees were used installing underground conduit for future signal upgrades and a pedestrian refuge island at Van Buren Street. Local gas tax funds were used to supplement the bond funds for paving work.

Project Photos:

18th Avenue pre-construction

18th Avenue post-construction

Alder Street from 18th Avenue to 24th Avenue

Project Description: This project included reconstruction of Alder Street from 18th Avenue to 24th Avenue. This street was added to the list of original bond streets using the remaining bond funds. Bicycle lane markings and shared-lane markings were added to the street to complement and extend the bicycle boulevard treatment north of 18th Avenue.

Treatment Methodology: Sections of this street were in poor condition and pavement testing and evaluation showed that the street needed full depth reconstruction. The final design used in-place cement treated base with asphalt pavement as an alternative to full depth reconstruction. The intersection of Alder and 19th was repaved with Portland cement concrete to better withstand the heavier commercial and transit traffic loading occurring in the intersection.

Costs: Total project costs, from all funding sources, are estimated at $923,000.

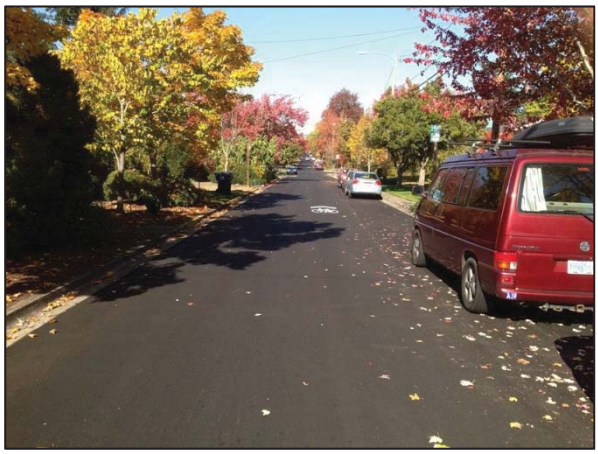
Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 1,043,000
Total Projected/Actual Bond Funds Used =	$ 689,000
Difference =	$ 354,000

Using the reclamation technique for construction was less expensive than a conventional reconstruction as originally anticipated.

Additional Sources of Funding: Stormwater and wastewater utility funds.

Project Photos:

Alder Street pre-construction



Alder Street post-construction

Blair Boulevard from 2nd Avenue to Monroe Street

Project Description: This project included the reconstruction of Blair Boulevard from 2nd Avenue to Monroe Street. In order to coordinate the work and realize construction efficiencies, this street was combined with the 5th Avenue and Van Buren Street projects.

Treatment Methodology: Surface condition and pavement testing indicated this pavement needed to be reconstruction due to extensive base failures.

Costs: Total project costs, from all funding sources, are estimated at $1,431,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 1,228,000
Total Projected/Actual Bond Funds Used =	$ 1,090,000
Difference =	$ 138,000

Additional Sources of Funding: Community Development Block Grant (federal) for sidewalk improvements, stormwater and wastewater utility funds, and transportation system development fees for signal upgrades and Oregon Department of Transportation funds for upgrades to ODOT facilities on 6th and 7th Avenues.

Project Photos:

Blair Boulevard pre-construction

Blair Boulevard post-construction

Coburg Road from County Farm Road to Chad Drive

Project Description: This project included rehabilitation of Coburg Road in northeast Eugene from County Farm Road to Chad Drive. Coburg Road from Crescent to Beltline was in the original bond measure. ODOT repaved Beltline to Chad Drive and this section did not need to be repaved with this project. The section of Coburg Road from County Farm to Crescent Avenue was added to the list of original bond streets using the remaining bond funds. This project is the second section of repairs on Coburg Road to be completed under the 2008 Bond – Willakenzie Road to Oakway Road was paved in 2010. The City also used federal Surface Transportation Funds-Urban to rehabilitate Coburg Road from Willakenzie Road to Beltline in 2013.

Treatment Methodology: This street was in need of rehabilitation as it was exhibiting some low and medium severity alligator cracking from County Farm Road to north of the Chad Drive intersection. The intersection of Coburg Road and Chad Drive, including the southbound lanes on the north side of the intersection required frequent maintenance due to rutting and shoving of the pavement from heavy commercial and transit loading. While most of the project was able to be rehabilitated by removing the top layers of pavement and repaving, the Chad Drive intersection was repaved with Portland cement concrete to better withstand the heavier loading and reduce the maintenance needs.

Costs: Total project costs, from all funding sources, are estimated at $842,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 847,000
Total Projected/Actual Bond Funds Used =	$ 791,000
Difference =	$ 56,000

Additional Sources of Funding: Stormwater and wastewater utility funds, and transportation system development fees for signal upgrades, including adding audible pedestrian devices for the pedestrian crossing signals at the Chad Drive intersection.

Project Photos:

Coburg Road post-construction (concrete intersection paving)

Coburg Road post-construction

Hilyard Street from Broadway to 11th Avenue

Project Description: This project consisted of rehabilitation of Hilyard Street from Broadway to 11th Avenue in downtown Eugene. This street was added to the list of original bond streets using the remaining bond funds. Hilyard Street from 11th to 13th Avenue was added to the project using Transportation SDC funds.

Treatment Methodology: Pavement testing confirmed that this section could be rehabilitated with an inlay treatment (remove existing and repave same pavement thickness) of 2 inches of asphalt pavement.

Costs: Total project costs, from all funding sources, are estimated at $497,000 (includes Hilyard from Broadway to 13th Avenue).

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 245,000
Total Projected/Actual Bond Funds Used =	$ 148,000
Difference =	$ 97,000

Additional Sources of Funding: Stormwater and wastewater utility funds, and transportation system development fees for paving and signal upgrades. Transportation SDC funds were used to complete the section between 11th and 13th Avenue.

Project Photos:

Hilyard Street pre-construction

Hilyard Street post-construction

Van Buren Street from the Railroad Crossing to Blair Boulevard

Project Description: This project included the reconstruction of Van Buren Street from the Railroad Crossing to Blair Boulevard. In order to coordinate the work and realize construction efficiencies, this street was combined with the 5th Avenue and Blair Boulevard projects.

Treatment Methodology: Van Buren Street consisted of Portland cement concrete with an asphalt pavement overlay. The underlying PCC pavement had deteriorated to the point that rehabilitation of the asphalt pavement would have quickly declined with reflective cracking. The entire pavement structure needed to be reconstructed.

Costs: Total project costs, from all funding sources, are estimated at $404,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 305,000
Total Projected/Actual Bond Funds Used =	$ 382,000
Difference =	$ -77,000

The preliminary estimate based on Pavement Management System (PMS) surface evaluation indicated that this street could be rehabilitated without significant reconstruction. This street substantially deteriorated from the time of the preliminary estimate to construction and most of this street needed to be reconstructed.

Additional Sources of Funding: Stormwater and wastewater utility funds.

Project Photos:

Van Buren Street pre-construction

Van Buren Street post-construction

Willamette Street from 19th Avenue to 23rd Avenue

Project Description: This project consisted of rehabilitation of Willamette Street from 19th Avenue to 23rd Avenue in downtown Eugene. This street was added to the list of original bond streets using the remaining bond funds. In re-striping the street, wider bike lanes, with buffers at some locations, were marked as part of the project.

Treatment Methodology: This street consisted of two pavement sections – an asphalt pavement section and a composite section of asphalt pavement over Portland cement concrete. The asphalt pavement section exhibited medium to high severity alligator cracking and the composite section exhibited medium severity cracking from reflective joints and cracked slabs. Both sections of pavement could not be rehabilitated due to existing damage and needed strengthening to support projected traffic loading. Based on this information, this street was reconstructed.

Costs: Total project costs, from all funding sources, are estimated at $927,000.

Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation =	$ 332,000
Total Projected/Actual Bond Funds Used =	$ 186,000
Difference =	$ 146,000

The preliminary estimate based on Pavement Management System (PMS) surface evaluation indicated that this street could be rehabilitated without significant reconstruction. This street substantially deteriorated from the time of the preliminary estimate to construction and most of this street needed to be reconstructed.

Additional Sources of Funding: Stormwater and wastewater utility funds, and transportation system development fees for signal upgrades. Local gas tax funds were used to supplement the bond funds for paving work.

Project Photos:

Willamette Street pre-construction

Willamette Street post-construction

South Bank Path Repairs

Project Description: This project was to rehabilitate the South Bank Path between Riverplay and the DeFazio Bridge.

Treatment Methodology: This project relocated a segment of the shared use path adjacent to the Willamette River in Skinners Butte Park. The project also replaced numerous panels of existing concrete path that had failed.

Structural fibers were incorporated into the new concrete path to help prevent cracking due to soil expansion and contraction. The pavement structure thickness is based on the soil conditions and use of the path by emergency and maintenance vehicles.

Costs: Total project costs, from all funding sources, are estimated at $400,000.

Total Bond Funds Programmed to the Project =	$ 350,000
Total Projected/Actual Bond Funds Used =	$ 418,000
Difference =	$ -68,000

Project Photos:

South Bank Path post-construction

5-Year Street Bond Project List - Actual and Projected Costs

Project Map #	Street name	From	To	Ward(s)	Proposed Treatment	Programmed Cost (2008)	*Projected /* Actual Cost	Difference
Construction Year 2009								
6	Bailey Hill Rd	18th Ave	East Side Of Bertelsen	8	Reconstruct/Overlay	$ 1,866,000	$ 883,000	$ 983,000
15	Goodpasture Is Rd	Norkenzie Rd	Delta Hwy Bridge	5	Overlay	$ 367,000	$ 435,000	$ (68,000)
20	Railroad Blvd	Van Buren	Chambers	7	Overlay	$ 421,000	$ 398,000	$ 23,000
					Construction Year 2009 Totals =	**$ 2,654,000**	**$ 1,716,000**	**$ 938,000**
Construction Year 2010								
1	18th Ave	510' East Of Chambers	City View	1	Reconstruct/Overlay	$ 1,733,000	$ 1,333,000	$ 400,000
14	Goodpasture Is Rd	Bridge Over Slough	Kingsley Rd	5	Reconstruct/Overlay	$ 1,319,000	$ 689,000	$ 633,000
		1750-feet North of Valley River Dr	1250-feet North of Valley River Dr					
16	Harlow Rd	I-5	Coburg	4	Reconstruct/Overlay	$ 1,202,000	$ 889,000	$ 313,000
18	Patterson	E 13th Ave	23rd Ave	3	Reconstruct	$ 2,134,000	$ 1,285,000	$ 849,000
2	18th Ave	Hilyard	Patterson	1				
3	23rd Ave	Hilyard	Patterson	3				
29	Willamette St	306' North Of 29th Ave	140' South Of 29th Ave	2	Reconstruct	$ 405,000	$ 556,000	$ (151,000)
29	Willamette St	46th Ave	52nd Ave	2	Overlay	$ 500,000	$ 412,000	$ 88,000
					Construction Year 2010 Totals =	**$ 7,293,000**	**$ 5,164,000**	**$ 2,132,000**
Construction Year 2011								
2	18th Ave	Patterson	Washington	1,3	Reconstruct/Overlay	$ 2,052,000	$ 1,773,000	$ 279,000
5	Alder	Broadway	18th Ave	3	Reconstruct/Overlay	$ 964,000	$ 1,348,000	$ (384,000)
9	Coburg Rd	850' North Of Cal Young	450' North Of I-105 Off Ramp	4	Overlay	$ 1,479,000	$ 1,457,000	$ 22,000
11	Conger St	7th Ave	11th Ave	7	Overlay	$ 147,000	$ 190,000	$ (43,000)
17	Hilyard St	E 24th Ave	34th Ave	2,3	Reconstruct	$ 2,900,000	$ 1,360,000	$ 1,540,000
19	Pearl	4th Ave	200' North Of Broadway	7	Reconstruct/Overlay	$ 470,000	$ 667,000	$ (197,000)
21	River Rd	Horn Ln	Railroad	7	Overlay	$ 2,000,000	$ 1,118,000	$ 882,000
29	Willamette St	140' South Of 29th Ave	46th	2	Reconstruct/Overlay	$ 2,254,000	$ 1,755,000	$ 499,000
30	Wilson St	W 5th Ave	W 7th Ave	7	Overlay	$ 100,000	$ 81,000	$ 19,000
					Construction Year 2011 Totals =	**$ 12,366,000**	**$ 9,749,000**	**$ 2,617,000**
Construction Year 2012								
4	24th Ave	Jefferson	Chambers	1	Reconstruct/Overlay	$ 622,000	$ 900,000	$ (278,000)
31	Augusta St	16th Ave	26th Ave	3	Reconstruct	$ 1,516,000	*$ 1,153,000*	*$ 363,000*
23	Riverview St	Sylvan	16th Ave					
22		Franklin Off Ramp	247' South Of Franklin Off Ramp					
8	Brewer St	Gilham Rd	Norkenzie Rd	5	Reconstruct/Overlay	$ 146,000	$ 337,000	$ (191,000)
12	Curtis Ave	550' East Of Norkenzie	Norkenzie	5	Overlay	$ 38,000	$ 86,000	$ (48,000)
13	Gilham Rd	Honeywood St	Crescent	5	Overlay	$ 305,000	$ 478,000	$ (173,000)
14	Goodpasture Is Rd	Kingsley Rd	1250-Feet N of Valley River Drive	5	Overlay	$ 448,000	$ 242,000	$ 206,000
24	Royal Ave	Hwy 99	100' East Of Waite St	8	Reconstruct	$ 1,565,000	$ 1,027,000	$ 538,000
25	Silver Ln	River Rd	Grove	7	Overlay	$ 305,000	$ 435,000	$ (130,000)
32	Taney St	Barger	Marshall	6	Reconstruct	$ 349,000	$ 505,000	$ (156,000)
26	Terry St	1100' North Of Avalon St	Royal	6	Reconstruct/Overlay	$ 978,000	$ 387,000	$ 591,000
28	Warren St	Bailey Hill	Timberline Dr	8	Reconstruct/Overlay	$ 217,000	$ 443,000	$ (226,000)
					Construction Year 2012 Totals =	**$ 6,489,000**	**$ 5,993,000**	**$ 496,000**
Construction Year 2013	* These streets were added by City Council and were not part of the original Bond Measure							
7	Blair Blvd			7	Reconstruct/Overlay	*$ 1,228,000*	*$ 1,090,000*	*$ 138,000*
27	Van Buren	RR Crossing	Blair Blvd	7	Reconstruct	*$ 305,000*	*$ 382,000*	*$ (77,000)*
9	Coburg Rd	Crescent	South Onramp Beltline	4	Overlay	*$ 515,000*	*$ 791,000*	*$ (276,000)*
41		City Limits*	Crescent Ave*	4,5		*		
33	5th Avenue*	High Street	Blair Street	7	Reconstruct/Overlay	*	*$ 1,788,000*	*$ -*
34	5th Avenue*	SS HWY 99	ES Bailey Hill Rd	7,8	Reconstruct	*	*$ 991,000*	*$ -*
36	10th Avenue*	WS Olive St	WS Jefferson St	7	Reconstruct	*	*$ 1,512,000*	*$ -*
40	Broadway*	WS Lincoln St	ES Monroe St					
49	Olive Street*	NS 10th Ave	NS 13th Ave					
37	18th Avenue*	Washington Street	510' East of Chambers	1	Reconstruct	*	*$ 2,663,000*	*$ -*
39	Alder Street*	SS 18th Ave	NS 24th Ave	3	Reconstruct	*	*$ 689,000*	*$ -*
47	Hilyard Street*	SS E Broadway	NS E 11th Ave	3	Overlay	*	*$ 148,000*	*$ -*
54	Willamette Street*	NS 19th Ave	NS 23rd Ave	1	Overlay	*	*$ 186,000*	*$ -*
					Construction Year 2013 Totals =	**$ 2,048,000**	***$ 10,240,000***	***$ (215,000)***
					Total 5-Year Street Costs =	**$ 30,850,000**	***$ 32,862,000***	***$ (2,012,000)***

* These streets were added by City Council and were not part of the original Bond Measure

Off-Street (Shared Use) Path Project List

Project Map ID	Off-Street Path Project	From	To	Ward(s)	Proposed Treatment	Programmed Cost (2008)	*Projected /* Actual Cost	Difference
Construction Year 2009								
A	Amazon Path	19th Ave	31st Ave	3	Reconstruct	$ 648,000	$ 748,000	$ (100,000)
Construction Year 2010								
B	Fern Ridge Path	Van Buren St.	Chambers St.	1	Reconstruct	$ 410,000	$ 417,000	$ (7,000)
C	Westmoreland Connector Path	Polk Street	500' West of Polk St.	1	Reconstruct			
Construction Year 2011								
D	South Bank Path	Maurie Jacobs Park	River Play Park	7	Reconstruct	$ 367,000	$ 467,000	$ (100,000)
Construction Year 2012								
E	West Bank Path	Greenway Bridge	Stephens Dr.	7	Reconstruct	$ 350,000	$ 402,000	$ (52,000)
Construction Year 2013								
F	South Bank Path	River Play Park	DeFazio Bridge	7	Reconstruct	$ 350,000	$ 418,000	$ (68,000)
					Total 5-Year Off-Street Path Project Costs =	**$ 2,125,000**	**$ 2,452,000**	**$ (327,000)**

BOND RECONCILIATION:

Summary of Bond Resources and Programmed Uses (2008 dollars)	**Programmed**	
Street projects (2008 dollars)	$ 30,850,000	
Inflation	$ 2,795,000	
Shared-use path projects	$ 2,125,000	
Sub-total project amounts		$ 35,770,000
Bond issuance amount		$ 130,000
Sub-total 2008 Bond Resources		$ 35,900,000
Other income (utility reimbursements/interest)		$ 110,000
Total Project Resources		**$ 36,010,000**

Summary of Actual/Projected Bond Expenditures	**Actual/Projected**	
Street projects	$ 32,862,000	
Shared-use path projects	$ 2,452,000	
Pre-design expenditures	$ 634,000	
Sub-total projected project costs		$ 35,948,000
Bond issuance		$ 62,000
Total Bond Expenditures		**$ 36,010,000**

Construction Year 2014 - 2016 Street Projects (paid for with Local Gas Tax Funds)

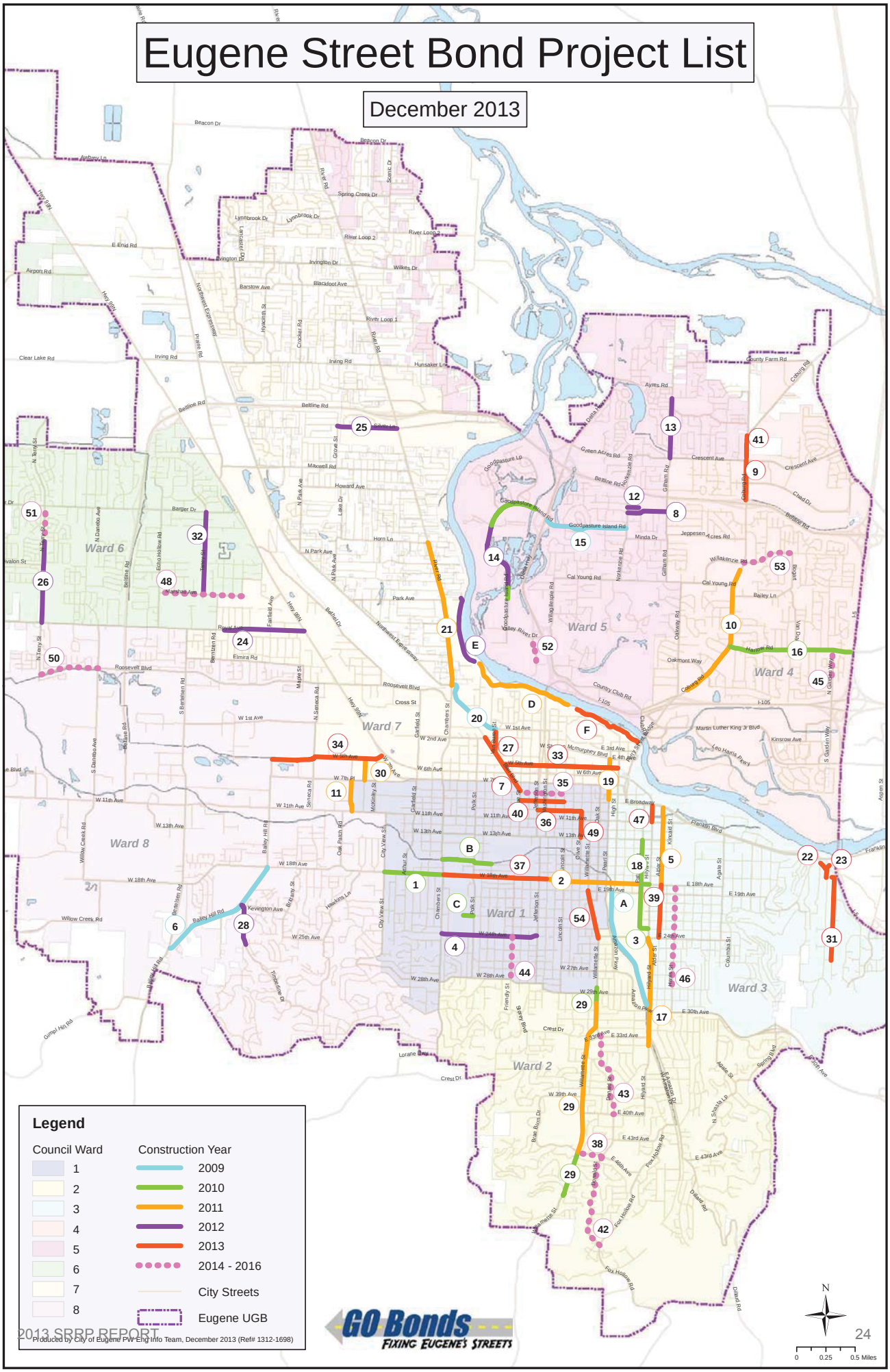
* These streets were added by City Council and were not part of the original Bond Measure

Project Map #	Street name	From	To	Ward(s)	Proposed Treatment	Programmed Cost (2008)
35	8th Avenue*	WS Lincoln St	WS Monroe St	7	Reconstruct	*$ 643,000*
38	46th Avenue*	WS Donald St	ES Willamette St	2	Reconstruct	*$ 257,000*
42	Donald Street*	SS E 46th Ave	NS Fox Hollow Rd	2	Overlay	*$ 763,000*
43	Donald Street*	Willamette St	40th Ave	2	Reconstruct/Overlay	*$ 500,000*
44	Friendly Street*	NS W 24th Ave	NS W 28th Ave	1	Overlay	*$ 346,000*
45	Garden Way*	SS Harlow Rd	S 110 Sisters View Av	4	Overlay	*$ 609,000*
46	Harris Street*	18th Ave	28th Ave	3	Reconstruct/Overlay	*$ 1,738,000*
48	Marshall Avenue*	Hughes	Echo Hollow Rd	6	Overlay	*$ 556,000*
50	Roosevelt Blvd.*	Danebo Rd	Terry St	8	Overlay	*$ 371,000*
51	Terry Street*	Olympic Circle	Barger	6	Overlay	*$ 264,000*
52	Valley River Way*	SS Valley River Dr	SS Cul-de-Sac	5	Reconstruct/Overlay	*$ 383,000*
53	Willakenzie Rd*	ES Bogart Ln	ES Coburg Rd	4	Overlay	*$ 593,000*
					Total =	*$ 7,023,000*

* These streets were added by City Council and were not part of the original Bond Measure

Eugene Street Bond Project List

December 2013



Produced by City of Eugene PW Eng Info Team, December 2013 (Ref# 1312-1698)

INDEPENDENT ACCOUNTANT'S REPORT ON APPLYING AGREED-UPON PROCEDURES

To Jon Ruiz, City Manager
City of Eugene
Eugene, Oregon

We have performed the procedures enumerated below, which were agreed to by the City of Eugene ("City"), solely to assist you in connection with the determination of whether the expenditure of general obligation bond funds approved for issuance through voter's approval of Ballot Measure 20-145 were expended in accordance with the purposes and limitations outlined in City Council Resolution No. 4953; namely that such expenditures were: a) used only for costs related to street preservation projects, off-street bicycle and pedestrian path preservation projects and payment of bond issuance costs and not to expand the capacity of the street system; and b) limited to projects included in Exhibit A to the Resolution unless upon completion of all of the projects listed in Exhibit A the Council adds other street preservation projects to the list in order to utilize unspent bond proceeds. Management is responsible for the accounting records pertaining to the use of the bond proceeds. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of these procedures is solely the responsibility of those parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

All procedures were performed for expenditures incurred between December 1, 2012 and November 30, 2013. All procedures we performed were limited to documentation and information supplied to us by the City, as follows:

- An Excel spreadsheet detailing all payments made, charges allocated and/or invoices received by the City for expenditures related to the use of the bond proceeds
- Copies of Resolution No. 4953 and Ballot Measure 20-145
- Copies of bids and contracts issued by the City for any projects to be completed using the bond proceeds
- Copies of supporting documentation including, but not limited to, invoices, cancelled checks, payroll records, certifications of payments and bank statements; and
- Copies of the City's general ledger detail for the bond fund accounts, as needed

The procedures we performed and the associated findings are as follows:

(1) *Expenditure testing*. From December 1, 2012 through November 30, 2013, total expenditures for the projects funded by the bond proceeds were $9,390,483 per the City's general ledger detail of the bond fund. We tested $5,538,378, or 59%, of those expenditures. All tested expenditures were supported by appropriate documentation such as invoices from vendors, certifications of payment, payroll records, signed contracts, and photographs of the work in progress. All tested expenditures were recorded in the proper account, fund and period and were spent on street projects included in Exhibit A of City Council Resolution No. 4953 or other street preservation projects approved by City Council, as permitted under Resolution 4953. No exceptions were noted.

(2) We reviewed bids and contracts related to 3 of 11 new construction projects between December 1, 2012 and November 30, 2013. The bidding and contracting process for the three projects complied with the City's procurement policies and procedures.

(3) We recalculated the amount of unspent bond proceeds and compared that amount to the actual amount of bond proceeds remaining. The following is a summary of bond proceeds and project expenditures from inception of the Street Bond project to November 30, 2013:

	From Issuance to 11/30/2010	From 12/1/2010 11/30/2011	From 12/1/2011 11/30/2012	From 12/1/2012 11/30/2013	Total
Bond proceeds	$ 8,350,000	$ 9,690,000	$ 7,460,000	$ 8,620,000	$ 34,120,000
Project expenditures	8,419,985	9,631,111	7,492,730	9,390,483	34,934,309

As of November 30, 2013 the City had $4,000,000 outstanding on the line of credit facility. The outstanding balance at December 1, 2012 was $4,000,000 and during the 12 months ended November 30, 2013 the City received $8,620,000 in proceeds and was charged interest of $11,373; the City repaid $8,631,373 during the same period. At November 30, 2013, the City had $1,780,000 in authorized borrowing remaining on the bonds ($35,900,000 authorized less $34,120,000 in proceeds received to date).

Based on our limited testing, we noted that the City followed the purpose and limitation of the City Council Resolution 4953.

We were not engaged to and did not conduct an audit, the objective of which would be the expression of an opinion on the financial records. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of the City Manager of the City of Eugene, and is not intended to be and should not be used by anyone other than this specified party.

Isler CPA

Isler CPA

Eugene, Oregon
December 20, 2013