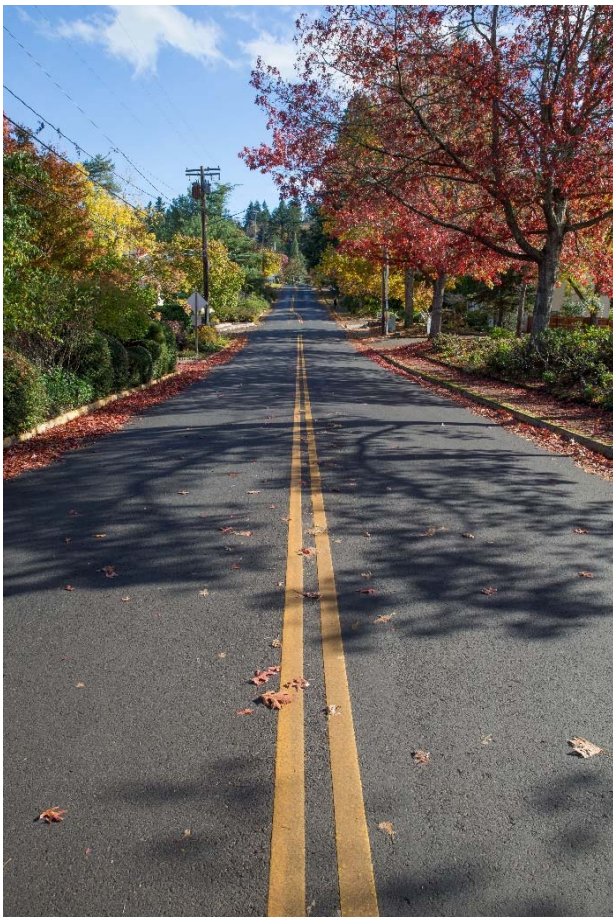
# Citizen Street Repair Review Panel
# 2016 Report
## Implementation Update for Measure 20-197 Bonds to Fix Streets



# Memorandum

Date: February 8, 2017

To: Jon Ruiz, City Manager

From: Street Repair Review Panel

Subject: 2016 Report of the Street Repair Review Panel

It is our pleasure to present the 2016 annual report of the Street Repair Review Panel, focusing on the third year of implementing the 2012 bond measure to fix streets. This panel initially was formed in 2009 to review the implementation of the 2008 street repair bond. This report was written in response to the accountability provisions in Measure 20-197, the 2012 bond measure to fix streets.

The 13-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 2016. We reviewed and accepted the report prepared by the City's external auditor (Appendix D) with respect to the City's use of the bond proceeds through December 31, 2016.

**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 5063.** 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 2016.

Highlights from our review of the 2016 street bond projects include the following:

- **Progress** – The projects funded in 2016 by the 2012 voter-approved bond measure resulted in the reconstruction or resurfacing of 15 streets and totaled more than 14.2 lane miles. The backlog of street repair projects in 2016 increased to $92 million, primarily due to increasing construction costs over the last five years. However, as noted in previous reports, the 2007 Pavement Management Report projected the anticipated backlog for rehabilitation needs would reach more than $282 million in 2016 if steps were not taken to reduce the backlog. That's a difference of nearly $200 million. In terms of miles, since the implementation of the 2008 bond, more than 130 lane miles of street work has been completed using bond funds. After accounting for the 14.2 lane miles treated in 2016, just over 436 lane miles of the total 1,247 lane miles that make up the improved street system are in need of some level of treatment at this time. The 2012 measure also allocated funding for bicycle and pedestrian projects guided by the Pedestrian and Bicycle Master Plan, City staff and the Bicycle and Pedestrian Advisory Committee. In 2016, significant safety improvements for people who walk and bike continued, including the installation of sidewalk ramps and pedestrian crossing beacons, increased buffer zones for bicycle lanes, and new shared lane markings.
- **Acknowledging Variability in Funding Forecasts** – Preliminary estimates indicate the City came in under budget on the 2016 projects, but forecasting future costs remains a challenge. One challenge is that estimates are based on surface observations while the actual treatment is determined by rigorous project-specific scientific testing. For the 2016 projects, as shown in Appendix A, the actual costs were $2,083,000 less than programmed—but the actual costs could just as easily have been greater than programmed depending on more significant repairs being needed than originally anticipated, as well as variability and trends impacting local and macro-economic conditions. We will let you know if we perceive any significant trends developing as the bond measure continues to be implemented. The pedestrian and bicycle improvement costs for the first three years continues to exceed the expected annual average of $516,000, but it's our understanding that staff intentionally "front loaded" the cost of

the bicycle and pedestrian projects to accommodate the scheduling of large grant projects in future years.

- **Collaborating with Partners and Leveraging Bond Funds –** Eugene's Pavement Preservation Program (PPP) requires strong coordination with internal and external utility stakeholders to schedule and coordinate the street work with any needed upgrades and repairs to the nearby streets and utility facilities to avoid emergency repairs. The 2016 projects created opportunities to repair underground utilities including the wastewater and stormwater systems. We also appreciate the ability to leverage bond funds with other sources of revenue. We commend City staff for getting good value for the bond dollars.
- **Continuing to Communicate with Citizens and Businesses** – Construction, by nature, is disruptive. City staff continued to work with residents and stakeholders to minimize inconveniences. We continue to encourage the department to coordinate projects and look for new and better ways to proactively coordinate communications and minimize impact to the public, impacted businesses and residents.
- **Achieving Sustainability Goals** –The PPP is designed to extend the life of city streets before they fall into the reconstruct category. This helps to not only extend the life of the streets, but when combined with recent paving techniques, greatly reduces the City's environmental footprint. Eugene is a leader in using reclaimed asphalt materials, reducing the mining and production of virgin rock and asphalt materials. The continued use of warm mix asphalt saves energy, reduces emissions, and is an excellent example of the department's commitment to sustainability efforts, consistent with the City's Climate Recovery Ordinance.
- **Building Safe and Complete Streets** – The bond projects are designed to improve safety for people of all ages and abilities, balance the needs of different modes, and support local land uses, economies, cultures, and natural environments. This ties into the Council's strategy of "Vision Zero," a resolution that calls for eliminating traffic-related deaths or serious injuries on city streets. The improvements funded through the bond enhance safety for all road users, whether driving, walking or bicycling.
- **Understanding the Process for Selecting Projects** – SRRP members often are asked what process is used to select streets for repairs. The streets chosen for bond funding were selected using the criteria listed on page 3 of the attached report. The selection of bicycle and pedestrian projects is guided by the Pedestrian and Bicycle Master Plan, City staff and the Active Transportation Advisory Committee. The memo by Associate Transportation Planner Reed Dunbar (in Appendix C) explains in more detail how these safety improvement projects are selected.
- **Recognizing the Continued Economic Value of Street Bond Projects** – A functioning transportation system is important for the community and economy. The bond is essential to maintaining the City's infrastructure. Based on the Oregon Department of Transportation Highway Division jobs multiplier model, the bond measure projects completed in 2016 conservatively sustained approximately 69 full-time equivalent jobs during the period of construction.
- **Bottom Line** – We believe the community is getting a good return for its investment in street repairs, and the bond funds are being used wisely to meet the objectives of Ballot Measure 20-197. An upfront investment in repairing and maintaining Eugene's streets saves the community significant money.

We feel Public Works Director Kurt Corey and his staff are doing an excellent job designing and constructing bond measure projects. We appreciate the support they have given us in the course of our review. The committee also continues to express its appreciation to the voters and taxpayers of Eugene for their ongoing support of the bond measures that have made our community a better place to live and do business.

Additional information about the Street Repair Review Panel can be found at www.eugene-or.gov/gobonds. Please feel free to contact any of us for additional information.

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# *2016 Report to the Citizen Street Repair Review Panel*

## *TABLE OF CONTENTS*

**INTRODUCTION** ..... **1**
**CRITERIA FOR PROJECT SELECTION AND SCHEDULING** ..... **3**
**FUNDING STATUS AND FORECAST** ..... **7**
**5TH AVENUE, 6TH AVENUE, 7TH AVENUE, AND COMMERCIAL STREET** ..... **9**
**FAIRFIELD AVENUE AND JACOBS DRIVE** ..... **10**
**8TH AVENUE, LINCOLN STREET, AND WASHINGTON STREET** ..... **11**
**27TH AVE, CAPITAL DR, POTTER ST, SPRING BLVD, AND VAN NESS ST** ..... **12**
**CENTENNIAL LOOP** ..... **13**
**WILLAMETTE STREET** ..... **14**
**2016 PEDESTRIAN AND BICYCLE IMPROVEMENT PROJECTS** ..... **15**
**APPENDIX A (BOND PROJECT COSTS AND FORECAST, BY YEAR)** ..... **16**
**APPENDIX B (MAP OF BOND PROJECTS, BY NUMBER)** ..... **18**
**APPENDIX C (PROJECTS FOR PEOPLE WHO WALK AND BIKE)** ..... **21**
**APPENDIX D (REPORT OF THE INDEPENDENT AUDITOR)** ..... **26**

Photos on cover from 2016 projects: Completed paving on 27th Avenue (left); Sign Installation on River Road (upper right); Completed paving on Spring Blvd (lower right)

# INTRODUCTION

## *BACKGROUND*

This report has been compiled for use by the Street Repair Review Panel (SRRP). It is intended to provide background on projects included in the 2012 voter-approved Bond Measure 20-197, the schedule for construction of these projects, and the details of bond projects constructed in 2016. The street repair measure approved $43 million in bonding authority over a five-year period, with construction of bond-funded projects starting in 2014 and completing in 2018.

## *KEY TERMS*

**Bond** - Bond Measure 20-197, Bonds to Fix Streets, approved by Eugene voters in November 2012.

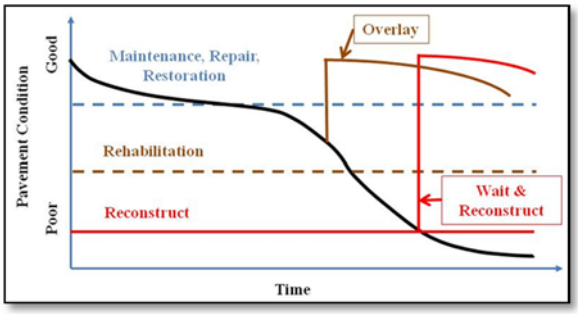
**Inlay** – An inlay treatment consisting of removing a specified depth of the existing pavement surface and repaving that same depth with a new pavement surface. This treatment works well where the pavement distress is isolated to the removed portion of the pavement. At times, the inlay treatment needs 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 volume. The term "overlay" is commonly used to describe both the inlay and overlay practices.

**Pavement Removal on 5th Avenue**

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.

**In-Place Cement Treated Base (ICTB**) – A reconstruction treatment that utilizes and reuses existing road base materials. The existing surfacing is removed and cement slurry is added to strengthen the existing base. The base is pulverized to a specified depth and allowed to cure for 18-48 hours. Once cured, the roadway is repaved. This treatment works well on roadways where the existing base is primarily aggregate. Two of the benefits of performing an ICTB treatment are the savings in resources from reusing existing materials and the reduction in the duration of impact for the surrounding neighborhood.

**Pavement Preservation Program (PPP)** - This is the current capital project program to preserve Eugene's improved street system. A 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 until after it requires reconstruction. This program was initiated in 2003 and, until passage of the 2008 and 2012 street repair bonds, was predominately funded with local fuel tax revenue and the reimbursement fee component of transportation system development charges.




**Pavement Life Cycle – City of Eugene Transportation Service Profile Presentation**

**Reclaimed Asphalt Pavement (RAP)** - Reclaimed asphalt pavement is the grindings from the existing pavement during the inlay process described above. While reclaimed asphalt materials can be used as base rock and shoulder materials, the most common and effective use of this material is to supplement virgin materials used to make new asphalt pavement and reduce the use of costly asphalt binder. In Oregon, it is common to specify up to 30 percent of asphalt pavement can be made up of reclaimed asphalt pavement. Other reclaimed asphalt materials, such as shingles, can also be used to replace virgin asphalt binder in pavements.

**Paving on Spring Blvd**

**Reconstruction** – Once the street has deteriorated to the point that it can no longer be repaired with an inlay or overlay, it is repaired by reconstructing the pavement and underlying base. Traditional reconstruction involves digging up the existing pavement, any existing base rock, and subsurface soils to the depth that will accommodate a new pavement structure. As discussed above, in-place recycling may sometimes be used as an alternative to traditional reconstruction. Reconstruction is the most expensive of the repair options, which is why the City prioritizes preserving streets before they reach the point of needing reconstruction. Reconstruction may be four to five times more expensive than an inlay treatment.

**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. It reduces energy consumption to produce asphalt concrete, lowering costs and greenhouse gas emissions.
2. It reduces off-gassing (smoke) of asphalt concrete by keeping the 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. It 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. 5063 the SRRP “will prepare an annual 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 financed by the bond were specifically listed in the Bond (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.

The City has a longstanding policy to use capital preservation funds on the improved street system. An improved street has been designed for the type of soils and traffic use of the street and includes a storm drainage system. Curb and gutter is the traditional mark of a storm drainage system, but can include roadside swales and planters. The bond measure street list consisted of improved streets in need of preservation as identified in the pavement management system.

The list of the street bond projects, with their estimated repair cost from the Pavement Management System and the year constructed or planned year of construction, is included in Appendix A of this report. In scheduling the street repair projects, the priorities were preserving streets prior to their needing reconstruction, grouping projects by location for cost savings, and coordinating with utility work. The list includes a comparison of programmed costs to actual costs with any difference noted. Differences in total project costs on individual projects may affect the funding available for future projects.

## *Bicycle and Pedestrian Improvement Projects*

The 2012 bond measure stated that the City will allocate an annual average of $516,000 to support bicycle and pedestrian projects. These projects were not named in the bond measure; rather, the selection of the projects would be guided by the Pedestrian and Bicycle Master Plan, City staff and the Bicycle and Pedestrian Advisory Committee. In 2016, the practice continued to add pedestrian and bicycle improvements to several paving projects and to complete a stand-alone project. These improvements are further described in the project details, below, and included in Appendix C of this report.

## *Complete Streets and 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. In addition, the City will allocate an annual average of $516,000 of the bond proceeds over a period of five years to fund bicycle and pedestrian projects. (Resolution 5063, 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.

**Stormwater Planter on Jacobs Drive**

Wastewater and stormwater utility funds are typically 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 have been used to include adjacent streets in the street bond project contracts.

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.

## *Vision Zero*

In November of 2015, the Eugene City Council joined a growing number of cities around the country in adopting a Vision Zero Resolution that states “no loss of life or serious injury on our transportation system is acceptable.” Vision Zero is a data-driven approach to educate the community and enable the City to prioritize resources based on evidence of the greatest need and impact.

The City regularly combines Vision Zero principles with ongoing pavement preservation projects. Cost effective intersection enhancements such as countdown pedestrian signals and audible pedestrian signals will continue to be a priority and standard practice on future projects. Enhanced pedestrian crossings have been implemented on a number of recent projects including 13th Avenue, Blair Blvd, and 30th Ave and University Street. In the next two years the City is undertaking large-scale corridor wide improvements on the Amazon corridor. The City is partnering Bond funds with Federal funds to improve the corridor by adding a cycle track and enhanced pedestrian crossings. ODOT has shown that the inclusion of these types of enhancements can significantly reduce fatal and serious injury crashes.

## *ADA Transition Plan*

As part of Title II of the Americans with Disabilities Act (ADA) of 1990, the City of Eugene conducted an evaluation of its public rights-of-way, and developed a transition plan that outlines in detail how the organization will ensure safe access to all of its facilities for all individuals. Public Works collected detailed data on over 15,000 ramps and 250 pedestrian signals to develop transition schedules specific to these facilities. The Public Works Director approved the ADA Transition Plan for the Public Rights-of-Way was approved by Administrative Order in July 2015. All capital rehabilitation projects are evaluated for access compliance and potential improvements during scoping and preliminary design.

238 sidewalk ramps were upgraded as part of 2016 capital paving projects.

## *Sustainability and Gains through Technical Developments*

In 2010, Eugene created the Community Climate and Energy Action Plan (CEAP), joining a growing list of forward-thinking cities around the world that are addressing climate change and energy challenges by planning with vision and creativity. The Climate Recovery Ordinance (CRO), adopted in 2014 and updated in 2016, is our community’s next step toward fulfilling these efforts. The 2016 update established the goal of reducing the 2010 levels of community fossil fuel use by 50 percent by the year 2030. Eugene is on a path to reach this goal.

The City of Eugene continually strives to improve the quality, environmental footprint, and cost efficiency of its projects. In 2016, Eugene continued to use warm mix asphalt pavement and increased use of reclaimed binder to meet these sustainability criteria.

Warm mix asphalt continued to be specified for all the paving projects in 2016 in place of conventional hot mix asphalt; approximately 35,000 tons of warm mix asphalt pavement was placed on capital paving projects in 2016. 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 when 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.

Reclaimed asphalt pavement (RAP) has been used in Eugene for more than 20 years. Like the State of Oregon, Eugene's current standard specification allows up to 30 percent RAP, by weight, to be used in new asphalt pavement mixes. For several years, local asphalt producers have supplied 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 greater than 20 to 30 percent is an emerging technology without much research conducted on long-term impacts to the pavement quality. Nationally, multiple organizations are experimenting with increasing the reclaimed asphalt binder content, and Eugene provided pavement samples for research to the Asphalt Pavement Association of Oregon in 2013.

In Eugene, typical RAP materials result in a one-to-one replacement of the virgin asphalt cement needed for a typical Level 2, ½" dense graded asphalt pavement used on residential and collector streets in Eugene. Since the asphalt cement generally makes up about a quarter 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 positive test results on pilot projects constructed in 2013 to increase RAP usage, Eugene continued to select projects to increase the reclaimed binder in asphalt pavements. In 2016, the City specified 40 percent binder replacement through the use of reclaimed asphalt materials on Centennial Loop as well as 35 percent binder replacement on several other Bond funded and Local Gas Tax funded roadways. The specification allows flexibility for the contractors to meet the 35 and 40 percent binder replacement value using RAP or a combination of RAP and reclaimed asphalt shingles (RAS) depending on the availability of materials and capabilities of the plant.

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 with higher than 30 percent binder replacement was replaced with a "softer" binder that should better resist cracking.

In the use of increased reclaimed binder content, Eugene is on the forefront of this technology and while we are being leaders, we are also proceeding with caution and choosing projects on a case-by-case basis. Typically, we are choosing streets with lower traffic volumes in order to minimize the chances of unintended consequences.

Nearly 12,000 tons of RAP was used on 2016 capital paving projects, reducing the need for nearly 690 tons of asphalt cement and 11,000 tons of aggregate to be mined, refined, processed and subsequently shipped to the pavement producers. Using warm mix asphalt with typical reclaimed asphalt pavement content resulted in an estimated reduction of 911 MT $CO_2e$ compared to using hot-mix asphalt pavement with no reclaimed pavement on 2016 capital paving projects.

## Funding Status and Forecast

In 2012, project costs were estimated for each street for the purpose of selecting streets to be included in the bond measure. These cost estimates were based on the overall surface condition of each street as described in the City's Pavement Management System. A unit cost was assigned to each street based on whether the street rehabilitation treatment was assumed to be a reconstruct or an overlay. Approximately 18 months prior to construction, more detailed pavement testing is conducted to determine specific treatments to each street based on the existing pavement structure, subgrade soil conditions and traffic loading. Actual rehabilitation treatments may be different than the original assumptions, requiring more, less or a combination of rehabilitation techniques.

For the streets scheduled for 2016 construction, the 2012 estimated cost with inflation was $7,564,000. As of January 1, 2016, although not all project contracts have been closed out, the projected actual cost for the 2016 bond projects is $5,481,000; a net difference of $2,083,000 below the costs projected in 2012. Several of the 2016 projects that were originally scoped as reconstruct projects were completed with alternative rehab techniques that reduced overall project costs. We continue to see a steady increase in construction costs and we expect that trend to continue over the remaining two years of the Bond. Details on an annual project-by-project basis are provided in the following pages and summarized in Appendix A. As construction is completed each year, Appendix A will be updated and included in future reports to track the funding status of the overall bond funds.

The 2012 bond measure also allocated an average of $516,000 for pedestrian and bicycle improvements each year. In 2016, the project expenditures on all pedestrian and bicycle improvements funded by the bond are estimated at $810,000, which is $293,000 over the annual average allocation. Due to expenditures to date, $547,000 is available for the final two years to maintain the annual average allocation.

# *2016 Bond Construction Projects*

The following pages are reports on individual projects. The total costs for each project listed are estimated as not all of the 2016 construction-related costs have been finalized as of January 1, 2017.

**Completed Paving on Fairfield Ave at Fairfield Elementary School**

## 5th Avenue, 6th Avenue, 7th Avenue, and Commercial Street

**Project Description:** This project consisted of rehabilitation of four streets in the West Eugene Community Organization neighborhood in Council Ward 8:

- 5th Avenue from Bertelsen Road to Commercial Street
- 6th Avenue from Bertelsen Road to Commercial Street
- 7th Avenue from Bertelsen Road to Oscar Street
- Commercial street from 5th Avenue to 7th Avenue

**Treatment Methodology:**

- 5th Avenue was reconstructed by utilizing a combination of in-place cement treated base (ICTB) method in the travel lanes and an inlay treatment in the parking lanes. The entire road width received a 2inch thick overlay.
- 6th Avenue and 7th Avenue were reconstructed by utilizing a combination of in-place cement treated base (ICTB) method on portions of each roadway and an inlay treatment was used on the remainder of the two roadways.
- Commercial Street was rehabilitated using an inlay treatment and repaving with 5 inches of asphalt pavement.

Spots of failed pavement were removed for their full depth and reconstructed using 16 inches of aggregate base prior to the rehabilitation treatments. The roadways were anticipated to require full depth reconstruction, but after testing of the existing roadway and underlying soils, the roadways were able to be rehabilitated at less expense.

**Costs:** Total project costs, from all funding sources, are estimated at $998,000.

| | |
|---|---|
| Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation = | $1,923,000 |
| Total Projected/Actual Paving Bond Funds Used = | $992,000 |
| Difference = | $931,000 |

**Additional Sources of Funding:** Stormwater and wastewater utility funds.

**Project Photos**

**Completed Paving on 5th Avenue**

**Completed Paving on 7th Avenue**

## Fairfield Avenue and Jacobs Drive

**Project Description:** This project consisted of rehabilitation of two streets in the Active Bethel Citizens neighborhood in Council Ward 7:

- Fairfield Avenue from Royal Avenue to Highway 99
- Jacobs Drive from Fairfield Avenue to Highway 99

**Treatment Methodology:**

- Fairfield Avenue was reconstructed using the ICTB process and the street was repaved using 8 inches of asphalt.
- Jacobs Drive was reconstructed utilizing the ICTB process and the street was repaved using 8 inches of asphalt.

**Costs:** Total project costs, from all funding sources, are estimated at $1,660,000.

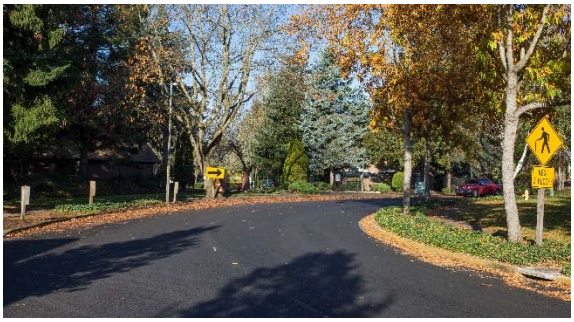
| | |
|---:|---:|
| Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation = | $1,541,000 |
| Total Projected/Actual Paving Bond Funds Used = | $1,430,000 |
| Difference = | $111,000 |

Bicycle and pedestrian bond funds were used to complete sidewalk infill between Royal Ave and Richard Avenue. The total amount of bond funds used for bicycle and pedestrian improvements on this project was approximately $50,000.

**Additional Sources of Funding:** Stormwater utility funds, wastewater utility funds, stormwater SDC funds. Using stormwater funds, planted rainwater treatment facilities were constructed to treat some of the rainwater draining from the street prior to it entering the underground pipe system.

**Project Photos:**

**Completed Paving Fairfield Avenue**



**Completed Paving Jacobs Drive**

## 8th Avenue, Lincoln Street, and Washington Street

**Project Description:** This project consisted of rehabilitation of two streets in the Downtown Neighborhood Association neighborhood in Council Ward 1. A third street funded by local gas-tax was also included in the contract.

- 8th Avenue from Lincoln Street to Monroe Street, funded by local gas-tax
- Lincoln Street from 13th Avenue to 5th Avenue
- Washington Street from 13th Avenue to 8th Avenue

**Treatment Methodology:**

- Lincoln Street was rehabilitated by removing the existing pavement and repaving over the existing subgrade with 2 to 3.5 inches of asphalt. The intersections were reconstructed at 8th Avenue, Broadway, and 12th Avenue.
- Washington Street was rehabilitated by utilizing select panel replacement between 8th Avenue and 11th Avenue. The travel lanes between 11th Avenue and 13th Avenue were reconstructed using 10 inches of concrete on top of a 12 inch layer of aggregate.

**Costs:** Total project costs, from all funding sources, are estimated at $2,198,000.

| | |
|---|---|
| Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation = | $1,143,000 |
| Total Projected/Actual Bond Funds Used = | $1,210,000 |
| Difference = | ($67,000) |

Bicycle and pedestrian bond funds were used to add a marked buffer zone between the parking lane and the bicycle lanes on Lincoln Street between 5th Avenue and 11th Avenue. The total amount of bond funds used for bicycle and pedestrian improvements on this project were approximately $12,000.

**Additional Sources of Funding:** Local gas-tax for non-bond street paving, stormwater and wastewater utility funds.

**Project Photo:**

**Completed Paving Lincoln Avenue**

## 27th Ave, Capital Dr, Potter St, Spring Blvd, and Van Ness St

**Project Description:** This project consisted of rehabilitation of five streets in the Fairmount Neighbors and Amazon Neighbors Association neighborhoods in Council Ward 3:

- 27th Avenue from Capital Drive to Chula Vista Drive
- Capital Drive from Cresta De Ruta Street to Spring Boulevard
- Potter Street from 29th Avenue to 24th Avenue
- Spring Boulevard from Capital Drive to Fairmount Boulevard
- Van Ness Street from 27th Avenue to 23rd Avenue

**Treatment Methodology:**

- 27th Avenue was rehabilitated using a 2 inch deep inlay treatment.
- Capital Drive was rehabilitated using an inlay treatment to depths of 2 inches or 4 inches. Some sections of existing pavement were removed to a depth of 4 inches or to the underlying Portland Cement Concrete (PCC), and the street was repaved with 4 inches of asphalt for some sections. In other sections, existing pavement was removed to a depth of 2 inches and repaved with 2 inches of asphalt.
- Potter Street was rehabilitated using an inlay treatment. Existing pavement was removed to a depth of 0 to 2 inches, and the street was repaved with 2 inches of asphalt.
- Spring Boulevard was also rehabilitated using an inlay treatment to a depth of 4 inches and repaved.
- Van Ness Street was rehabilitated with a 2 inch thick overlay.

**Costs:** Total project costs, from all funding sources, are estimated at $1,113,000.

| | |
|---|---|
| Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation = | $1,666,000 |
| Total Projected/Actual Paving Bond Funds Used = | $1.068,000 |
| Difference = | $598,000 |

During design, it was found that the existing roadway could be rehabilitated and still meet City design standards for less cost than the originally anticipated reconstruction treatment.

**Additional Sources of Funding:** Stormwater and wastewater utility funds.

**Project Photos:**

**Completed Paving Capital Drive**

**Completed Paving Van Ness Street**

## Centennial Loop

**Project Description:** This project consisted of rehabilitation of this street in the Harlow Neighbors neighborhood in Council Ward 4:

- Centennial Loop from MLK Blvd (east) to MLK Blvd/Club Rd

**Treatment Methodology:** Centennial Loop was rehabilitated by removing the existing pavement and 1 to 3 inches of aggregate base as needed. The street was repaved with 7 inches of asphalt.

**Costs:** Total project costs, from all funding sources, are estimated at $351,900.

| | |
|---|---|
| Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation = | $678,000 |
| Total Projected/Actual Paving Bond Funds Used = | $347,000 |
| Difference = | $331,000 |

The roadway was anticipated to require full depth reconstruction, but after testing of the existing roadway and underlying soils, the roadway was able to be rehabilitated at less expense.

**Additional Sources of Funding:** Stormwater utility funds

**Project Photos:**

**Completed Paving Centennial Loop**

## Willamette Street

**Project Description:** This project consisted of rehabilitation of this street in the Downtown Neighborhood Association neighborhood in Council Ward 1:

- Willamette Street from 13th Avenue to 10th Avenue

**Treatment Methodology:**

- Willamette Street was reconstructed by removing the existing pavement, building an 18 inch aggregate working platform wrapped in subgrade geotextile fabric, and repaving with 11 inches of asphalt.

**Costs:** Total project costs, from all funding sources, are estimated at $580,000.

| | |
|---|---|
| Preliminary Estimate based on Pavement Management System (PMS) Surface Evaluation = | $613,000 |
| Total Projected/Actual Bond Funds Used = | $434,000 |
| Difference = | $179,000 |

The total amount of bond funds used for bicycle and pedestrian improvements on this project were approximately $71,000.

**Additional Sources of Funding:** Stormwater utility funds, LTD funds and private funds from the Capstone development.

**Project Photo:**

**Completed Paving Willamette Street**

## 2016 Pedestrian and Bicycle Improvement Projects

**Project Description:** In addition to the pedestrian and bicycle improvements incorporated into the paving projects described above, pedestrian and bicycle improvements were constructed at four locations for $682,500:

- Install sidewalk ramps, median and rectangular rapid flashing beacon on River Rd.
- Install sidewalk ramps, median and rectangular rapid flashing beacon on Division Ave.
- Install sidewalk ramps and sidewalk on Goodpasture Island Rd.
- Install school zone signage and striping on 30th Ave and University St.

See the Memo in Appendix C for additional projects that included bond funds for pedestrian and bicycling improvements.

**Pedestrian and Bicycle Improvements Funded in 2016:** The 2012 bond measure allocated a total of $2,580,000 for pedestrian and bicycle improvements. The average total amount per year is $516,000 over the five year bond. Over the last three years, this project and expenditures on all pedestrian and bicycle improvements funded by the bond have totaled $2,033,200. The remaining available funds for pedestrian and bicycle improvements are $546,800 for 2017 - 2018.

**Project Photos:**

**Goodpasture Island Rd Sidewalk Infill**

**River Road RRFB**

## 5-Year Street Bond Project List - Costs and Forecast

| Project Map # | Street name | From | To | Ward(s) | Proposed Treatment | Programmed Cost (2012) plus inflation | *Projected /* Actual Cost | Difference |
|---|---|---|---|---|---|---|---|---|
| **Construction Year 2014** | | | | | | | | |
| 1 | 1st Avenue (C) | Washington St | Van Buren St | 7 | Overlay | $ 544,000 | $ 2,154,000 | $ (95,000) |
| 55 | Madison Street (L) | 1st Ave | 8th Ave | 1, 7 | Reconstruction | $ 969,000 | | |
| 58 | Monroe Street (L) | 1st Ave | Blair Blvd | 1, 7 | PCC panel replacement | $ 546,000 | | |
| 8 | 13th Avenue (C/A) | Washington St | Garfield St | 1 | Reconstruction/Overlay | $ 2,392,000 | $ 2,109,000 | $ 283,000 |
| 9 | 13th Avenue (C) | Bertelsen Rd | Commerce St | 8 | Reconstruction/Overlay | $ 169,000 | $ 410,000 | $ 78,000 |
| 44 | Interior Street (L) | north end | south end | 8 | Reconstruction/Overlay | $ 319,000 | | |
| 21 | 43rd Avenue (C) | North Shasta Lp | Dillard Rd | 2 | Pavement Removal and Replacement | $ 165,000 | $ 1,319,000 | $ (618,000) |
| 40 | Firland Blvd (C) | Spring Blvd | Agate St | 2 | Reconstruction | $ 97,000 | | |
| 59 | North Shasta Loop (C) | Firland Blvd | North Shasta Lp | 2 | Reconstruction/Overlay | $ 439,000 | | |
| 25 | Broadway (C) | Mill St | Pearl St | 1, 3 | Overlay | $ 184,000 | $ 854,000 | $ (482,000) |
| 33 | Coburg Road (A) | south end of Ferry Street Bridge | north end of viaduct | 3, 7 | Pavement Removal and Replacement | $ 188,000 | | |
| 43 | Goodpasture Loop (C) | Goodpasture Island Road | | 5 | Overlay | $ 1,103,000 | $ 925,000 | $ 178,000 |
| | | | | | **Construction Year 2014 Totals =** | **$ 7,115,000** | **$ 7,771,000** | **$ (656,000)** |
| **Construction Year 2015** | | | | | | | | |
| 10 | 15th Avenue (L) | Fairmount Blvd | Agate St | 3 | Reconstruct | $ 1,020,000 | $ 1,908,000 | $ (235,000) |
| 11 | 17th Avenue (L) | Fairmount Blvd | Agate St | 3 | Reconstruct | $ 653,000 | | |
| 12 | 19th Avenue (L) | Fillmore St | Chambers St | 1 | Pavement Rem/Overlay | $ 85,000 | $ 701,000 | $ 162,000 |
| 13 | 22nd Avenue (L) | Friendly St | Polk St | 1 | Pavement Rem/Overlay | $ 181,000 | | |
| 39 | Fillmore Street (L) | 19th Ave | 24th Ave | 1 | Pavement Rem/Overlay | $ 597,000 | | |
| 14 | 25th Avenue (C) | Hawkins Ln | Brittany St | 8 | Overlay | $ 231,000 | $ 958,000 | $ (23,000) |
| 32 | City View Street (L) | 28th Ave | 29th Ave | 8 | Reconstruct | $ 278,000 | | |
| 67 | Timberline Drive (C) | Warren St | Wintercreek Dr | 8 | Reconstruction/Overlay | $ 426,000 | | |
| 19 | 39th Avenue (C) | Willamette St | 100' East of Densmore | 2 | Overlay | $ 215,000 | $ 836,000 | $ 63,000 |
| 20 | 40th Avenue (C) | Hilyard St | Donald St | 2 | Overlay | $ 169,000 | | |
| 24 | Brae Burn Drive (C) | 39th Ave | Willamette St | 2 | Overlay | $ 515,000 | | |
| 22 | Avalon Street (L) | Echo Hollow Rd | Juhl St | 6 | Reconstruct | $ 298,000 | $ 627,000 | $ 199,000 |
| 30 | Cascade Drive (L) | Avalon St | Juhl St | 6 | Reconstruct | $ 170,000 | | |
| 37 | Elizabeth Street (L) | Knoop Ave | Royal Ave | 6 | Overlay | $ 120,000 | | |
| 48 | Juhl Street (L) | north side of address 1424 | south end | 6 | Reconstruct | $ 160,000 | | |
| 49 | Knoop Avenue (L) | Echo Hollow Rd | Elizabeth St | 6 | Overlay | $ 78,000 | | |
| 56 | Mahlon Avenue (L) | Garden Way | Honeysuckle Ln | 4 | Pavement Rem/Overlay | $ 232,000 | $ 75,000 | $ 157,000 |
| | | | | | **Construction Year 2015 Totals =** | **$ 5,428,000** | **$ 5,105,000** | **$ 323,000** |
| **Construction Year 2016** | | | | | | | | |
| 4 | 5th Avenue (L) | Bertelsen Rd | west end | 8 | Reconstruct | $ 664,000 | $ 992,000 | $ 931,000 |
| 5 | 6th Avenue (L) | Bertelsen Rd | Commercial St | 8 | Overlay | $ 166,000 | | |
| 6 | 7th Avenue (L) | Bertelsen Rd | Oscar St | 8 | Reconstruct | $ 863,000 | | |
| 34 | Commercial Street (L) | 5th Ave | south end | 8 | Overlay | $ 230,000 | | |
| 15 | 27th Avenue (L) | Columbia St | south end | 3 | Overlay | $ 117,000 | $ 1,068,000 | $ 598,000 |
| 28 | Capital Drive (L) | Spring Blvd | 50' north of Crest De Ruta | 3 | Reconstruct | $ 418,000 | | |
| 62 | Potter Street (L) | 24th Ave | 29th Ave | 3 | Reconstruct | $ 847,000 | | |
| 66 | Spring Boulevard (L) | Fairmount Blvd | Capital Dr | 3 | Overlay | $ 150,000 | | |
| 70 | Van Ness Street (L) | 23rd Ave | 27th Ave | 3 | Overlay | $ 134,000 | | |
| 31 | Centennial Loop (L) | MLK Jr Blvd | | 4 | Reconstruct | $ 678,000 | $ 347,000 | $ 331,000 |
| 38 | Fairfield Avenue (C) | Hwy 99 | Royal Ave | 7 | Reconstruct | $ 701,000 | $ 1,430,000 | $ 111,000 |
| 46 | Jacobs Drive (L) | Hwy 99 | Fairfield Ave | 6, 7 | Reconstruct | $ 840,000 | | |
| 53 | Lincoln Street (L) | 5th Ave | 13th Ave | 7 | Overlay | $ 392,000 | $ 1,210,000 | $ (67,000) |
| 71 | Washington Street (A) | 8th Ave | 13th Ave | 1 | Reconstruct | $ 751,000 | | |
| 75 | Willamette Street (L) | 10th Ave | 13th Ave | 1 | Reconstruct | $ 613,000 | $ 434,000 | $ 179,000 |
| | | | | | **Construction Year 2016 Totals =** | **$ 7,564,000** | ***$ 5,481,000*** | ***$ 2,083,000*** |
| **Construction Year 2017** | | | | | | | | |
| 2 | 1st Avenue (L) | west end | Blair Blvd | 7 | Reconstruct | $ 548,000 | | $ - |
| 3 | 2nd Avenue (C) | Garfield St | Blair Blvd | 7 | Reconstruct | $ 1,255,000 | | $ - |
| 16 | 30th Avenue (A) | Spring Blvd overpass | Agate St | 2, 3 | Reconstruct | $ 2,871,000 | | $ - |
| 23 | Best Lane (L) | Willakenzie Rd | Kentwood Dr | 4 | Overlay | $ 157,000 | | $ - |
| 27 | Calvin Street (L) | Western Dr | Harlow Rd | 4 | Reconstruct | $ 273,000 | | $ - |
| 36 | East Amazon Drive (A) | Hilyard St | Dillard Rd | 2 | Reconstruct | $ 1,322,000 | | $ - |
| 42 | Garfield Street (C) | Roosevelt Blvd | 6th Ave | 7 | Reconstruct | $ 1,891,000 | | $ - |
| 45 | Ione Avenue (L) | Best Ln | Adkins St | 4 | Overlay | $ 77,000 | | $ - |
| 47 | Jefferson Street (C) | 8th Ave | 18th Ave | 1 | Reconstruct | $ 1,237,000 | | $ - |
| 52 | Leigh Street (L) | Western Dr | north end | 4 | Reconstruct | $ 184,000 | | $ - |
| 54 | Lydick Way (L) | Tomahawk Ln | Harlow Rd | 4 | Overlay | $ 87,000 | | $ - |
| 60 | Pioneer Court (L) | Pioneer Pike | north end | 4 | Reconstruct | $ 112,000 | | $ - |
| 64 | Satre Street (C) | Bailey Ln | Western Dr | 4 | Overlay | $ 714,000 | | $ - |
| 68 | Tomahawk Lane (L) | Harlow Rd | 580' north of Harlow | 4 | Overlay | $ 92,000 | | $ - |
| 73 | Western Drive (L) | Calvin St | west end | 4 | Reconstruct | $ 454,000 | | $ - |
| | | | | | **Construction Year 2017 Totals =** | **$ 11,274,000** | ***$ -*** | ***$ -*** |
| **Construction Year 2018** | | | | | | | | |
| 7 | 7th Place (C) | Hwy 99 (7th Ave) | Bailey Hill Rd | 1, 7, 8 | Reconstruct | $ 3,417,000 | | $ - |

## 5-Year Street Bond Project List - Costs and Forecast

| Project Map # | Street name | From | To | Ward(s) | Proposed Treatment | Programmed Cost (2012) plus inflation | *Projected /* Actual Cost | Difference |
|---|---|---|---|---|---|---|---|---|
| 17/18 | 30th Avenue (L) | Willamette Street | Ferry Street | 2 | Reconstruct | $ 437,000 | | $ - |
| 26 | Buff Way (L) | Woodside Dr | Forrester Wy | 4 | Reconstruct | $ 179,000 | | $ - |
| 29 | Carmel Avenue (L) | Minda Dr | 400' south | 5 | Reconstruct | $ 132,000 | | $ - |
| 35 | Corydon Street (L) | Forrester Wy | Tandy Turn | 4 | Reconstruct | $ 41,000 | | $ - |
| 41 | Forrester Way (L) | Coburg Rd | west side of driveway 1033 | 4 | Reconstruct | $ 248,000 | | $ - |
| 50 | Larkspur Avenue (L) | Norkenzie Rd | 604' west | 5 | Reconstruct | $ 211,000 | | $ - |
| 51 | Larkspur Loop (L) | Norkenzie Rd | | 5 | Reconstruct | $ 171,000 | | $ - |
| 57 | Mill Street (L) | 30th Avenue | | 2 | Reconstruct | $ 49,000 | | $ - |
| 61 | Piper Lane (L) | Chasa St | Fir Acres Dr | 5 | Reconstruct | $ 196,000 | | $ - |
| 63 | Roland Way (L) | Oakway Rd | Cal Young Rd | 5 | Reconstruct | $ 216,000 | | $ - |
| 65 | Sharon Way (L) | Coburg Rd | east side of driveway 1023 | 4 | Reconstruct | $ 376,000 | | $ - |
| 69 | Tulip Street (L) | Crescent Ave | Holly Ave | 5 | Reconstruct | $ 118,000 | | $ - |
| 72 | West Amazon Drive (A) | Hilyard St | Fox Hollow Rd | 2 | Reconstruct | $ 1,463,000 | | $ - |
| 74 | Willamette Street (A) | 24th Ave | 29th Ave | 1, 2 | Reconstruct | $ 1,232,000 | | $ - |
| 76 | Woodside Drive (L) | Cal Young Rd | Sharon Wy | 4 | Reconstruct | $ 423,000 | | $ - |
| | (x) Street Classification Key: (L) = Local; (C) = Collector; (A) = Arterial | | | | **Construction Year 2018 Totals =** | **$ 8,909,000** | **$ -** | **$ -** |
| | | | | | **Total Programmed Costs =** | ***$ 40,290,000*** | ***$ 18,357,000*** | ***$ 21,933,000*** |

## Pedestrian and Bicycle Improvements Project List

| **Projects** | | | **Average Annual Allocation $516,000** | ***Projected /* Actual Cost** | **Difference** |
|---|---|---|---|---|---|
| **Construction Year 2014** | | | | | |
| 2014 Pedestrian & Bicycle Repairs | | | | $ 410,000 | |
| Acorn Park Sidewalks | | | | $ 128,000 | |
| 1st, Madison, Monroe | | | | $ 92,000 | |
| 13th Avenue (Washington to Garfield) | | | | $ 25,000 | |
| Goodpasture Island Loop Pedestrian Signals | | | | $ 29,000 | |
| Roosevelt Blvd Pedestrian Signals and Sidewalk Infill | | | | $ 58,000 | |
| | | | **Construction Year 2014 Pedestrian & Bicycle Repairs Total =** | $ 742,000 | **$ (226,000)** |
| **Construction Year 2015** | | | | | |
| 2015 Pedestrian & Bicycle Improvement Project | | | | $ 349,000 | |
| 15th and 17th Avenues Markings | | | | $ 38,000 | |
| Fillmore and Friendly Streets Markings | | | | $ 10,000 | |
| Donald Street Crossing | | | | $ 19,000 | |
| Garden Way and Willakenzie Markings | | | | $ 20,000 | |
| Valley River Way Pedestrian Signal Upgrades | | | | $ 20,000 | |
| South Willamette Street Improvements | | | | $ 12,700 | |
| Tugman Bridge and Sidewalk Improvements | | | | $ 12,500 | |
| | | | **Construction Year 2015 Pedestrian & Bicycle Repairs Total =** | $ 481,200 | **$ 34,800** |
| **Construction Year 2016** | | | | | |
| 2016 Pedestrian & Bicycle Improvement Project | | | | $ 683,000 | |
| Fairfield Avenue Sidewalk Infill | | | | $ 44,000 | |
| Willamette Street Markings & Sidewalk Improvements | | | | $ 71,000 | |
| Lincoln Avenue Bike Buffer | | | | $ 12,000 | |
| | | | **Construction Year 2016 Pedestrian & Bicycle Repairs Total =** | $ 810,000 | **$ (294,000)** |
| **Construction Years 2016 - 2018** | | | $ 546,800 | | |
| | | | **Total Pedestrian and Bicycle Improvement Project Costs =** | **$ 2,580,000** | **$ 2,033,200** | **$ 546,800** |

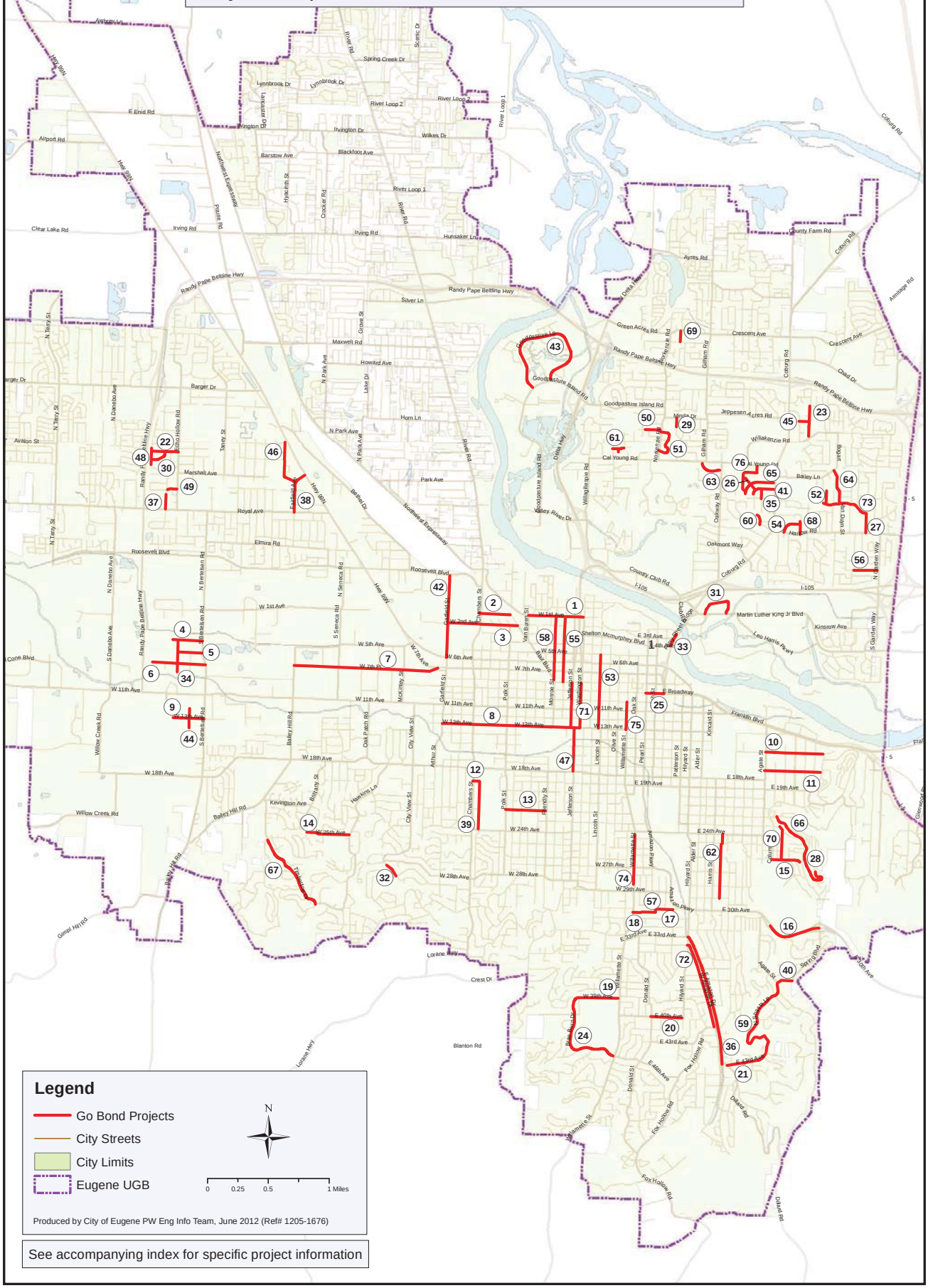
***Summary of Bond Costs***

**Total Street Projects in 2012 Dollars with inflation = $ 40,290,000**
**Total Pedestrian & Bicyclist Improvements = $ 2,580,000**
**Bond Issuance Costs = $ 130,000**
**Total Bond Costs = $ 43,000,000**

Appendix B

# Eugene Street Preservation Projects

## Project Map for 2012 Bond Measure to Fix Streets




See accompanying index for specific project information

# Project List for 2012 Bond Measure to Fix Streets

| Map # | Street Name | Limits |
|---|---|---|
| 1 | 01ST AVE | WASHINGTON ST - VAN BUREN ST |
| 2 | 01ST AVE | BLAIR BLVD - WEST END |
| 3 | 02ND AVE | BLAIR BLVD - GARFIELD ST |
| 4 | 05TH AVE | BERTELSEN RD - WEST END |
| 5 | 06TH AVE | BERTELSEN RD - COMMERCIAL ST |
| 6 | 07TH AVE | BERTELSEN RD - OSCAR ST |
| 7 | 07TH PL | 7TH AVE/HWY 99 - BAILEY HILL RD |
| 8 | 13TH AVE | WASHINGTON ST - GARFIELD ST |
| 9 | 13TH AVE | BERTELSEN RD - COMMERCE ST |
| 10 | 15TH AVE | FAIRMOUNT BLVD - AGATE ST |
| 11 | 17TH AVE | FAIRMOUNT BLVD - AGATE ST |
| 12 | 19TH AVE | FILLMORE ST - CHAMBERS ST |
| 13 | 22ND AVE | FRIENDLY ST - POLK ST |
| 14 | 25TH AVE | HAWKINS LN - BRITTANY ST |
| 15 | 27TH AVE | COLUMBIA ST - SPRING BLVD |
| 16 | 30TH AVE | SPRING OVERPASS - AGATE ST |
| 17 | 30TH AVE | MILL ST (WEST) - FERRY ST (EAST) |
| 18 | 30TH AVE | MILL ST - WILLAMETTE ST |
| 19 | 39TH AVE | WILLAMETTE ST - 100' EAST OF DENSMORE RD |
| 20 | 40TH AVE | HILYARD ST - DONALD ST |
| 21 | 43RD AVE | N SHASTA - DILLARD RD |
| 22 | AVALON ST | ECHO HOLLOW RD - JUHL ST |
| 23 | BEST LN | WILLAKENZIE RD - KENTWOOD DR |
| 24 | BRAE BURN DR | 39TH AVE - WILLAMETTE ST |
| 25 | BROADWAY | MILL ST - PEARL ST |
| 26 | BUFF WAY | WOODSIDE DR - FORRESTER WAY |
| 27 | CALVIN ST | WESTERN DR - HARLOW RD |
| 28 | CAPITAL DR | SPRING BLVD - 50' N OF CRESTA DE RUTA ST |
| 29 | CARMEL AVE | MINDA DR - 400' SOUTH OF MINDA DR |
| 30 | CASCADE DR | AVALON ST - JUHL ST |
| 31 | CENTENNIAL LP | MLK, JR BLVD (EAST) - MLK, JR BLVD/CLUB RD |
| 32 | CITY VIEW ST | 28TH AVE - 29TH AVE |
| 33 | COBURG RD | SS FERRY ST BRIDGE - 50' S OF EWEB ON/OFF RAMP |
| 34 | COMMERCIAL ST | 5TH AVE - SOUTH END |
| 35 | CORYDON ST | FORRESTER WAY - TANDY TURN |
| 36 | EAST AMAZON DR | HILYARD ST - DILLARD RD |
| 37 | ELIZABETH ST | KNOOP AVE - ROYAL AVE |
| 38 | FAIRFIELD AVE | WS HWY 99 - ROYAL AVE |
| 39 | FILLMORE ST | 19TH AVE - 24TH AVE |
| 40 | FIRLAND BLVD | SPRING BLVD - AGATE ST |
| 41 | FORRESTER WAY | COBURG RD - WS DRWY 1033 |
| 42 | GARFIELD ST | ROOSEVELT - 6TH AVE |
| 43 | GOODPASTURE LOOP | GOODPASTURE IS RD (EAST INTERSECTION) - GOODPASTURE IS RD (WEST INTERSECTION) |
| 44 | INTERIOR ST | NORTH END OF CUL DE SAC - SOUTH END OF IMPROVED SECTION |

| Map # | Street Name | Limits |
|---|---|---|
| 45 | IONE AVE | BEST LN - ADKINS ST |
| 46 | JACOBS DR | HWY 99N - FAIRFIELD AVE |
| 47 | JEFFERSON ST | 8TH AVE - 18TH AVE |
| 48 | JUHL ST | NS ADDR 1424 - SOUTH END |
| 49 | KNOOP AVE | ECHO HOLLOW RD - ELIZABETH ST |
| 50 | LARKSPUR AVE | NORKENZIE RD - 640 FEET WEST OF NORKENZIE RD |
| 51 | LARKSPUR LOOP | NORKENZIE RD (N) - NORKENZIE RD (S) |
| 52 | LEIGH ST | NORTH END - WESTERN DR |
| 53 | LINCOLN ST | 5TH AVE - 13TH AVE |
| 54 | LYDICK WAY | TOMAHAWK LN - HARLOW RD |
| 55 | MADISON ST | 1ST AVE - 8TH AVE |
| 56 | MAHLON AVE | GARDEN WAY - HONEYSUCKLE LN |
| 57 | MILL ST | 30TH AVE (NORTH) - 30TH AVE (SOUTH) |
| 58 | MONROE ST | 1ST AVE - BLAIR BLVD |
| 59 | NORTH SHASTA LOOP | FIRLAND - 43RD AVE |
| 60 | PIONEER CT | PIONEER PIKE - NORTH END |
| 61 | PIPER LN | CHASA ST - FIR ACRES DR (INCL CUL-DE-SAC) |
| 62 | POTTER ST | 24TH AVE - 29TH AVE |
| 63 | ROLAND WAY | OAKWAY RD - CAL YOUNG RD |
| 64 | SATRE ST | BAILEY LN - WESTERN DR |
| 65 | SHARON WAY | COBURG RD - ES DRWY 1023 |
| 66 | SPRING BLVD | FAIRMOUNT BLVD - CAPITAL DR |
| 67 | TIMBERLINE DR | WARREN ST - WINTERCREEK DR |
| 68 | TOMAHAWK LN | HARLOW RD - 580' NORTH OF HARLOW RD |
| 69 | TULIP ST | CRESCENT AVE - HOLLY AVE |
| 70 | VAN NESS ST | 23RD AVE - 27TH AVE |
| 71 | WASHINGTON ST | 8TH AVE - 13TH AVE |
| 72 | WEST AMAZON DR | ES HILYARD - SS FOX HOLLOW |
| 73 | WESTERN DR | CALVIN ST - WEST END/MONROE MIDDLE SCHOOL |
| 74 | WILLAMETTE ST | 24TH AVE - 29TH AVE |
| 75 | WILLAMETTE ST | 10TH AVE - 13TH AVE |
| 76 | WOODSIDE DR | CAL YOUNG RD - SHARON WAY |

Eugene Public Works
Engineering

**Appendix C**

December 2016

Street Repair Review Panel,

This memo summarizes the process for determining street characteristics for people who walk and bike and how the Pavement Bond Measure (PBM) is used to enhance the environment for active transportation modes. In addition, project summaries for 2016 and a look ahead to 2017 have also been provided.

Background

The 2012 Pavement Bond Measure includes the following language, "…Council determined that an annual average of $516,000 should be allocated over a period of five years to support bicycle and pedestrian projects guided by the Pedestrian and Bicycle Master Plan, City staff, and the Bicycle and Pedestrian Advisory Committee." Transportation Planning staff works with the Active Transportation Committee (formerly BPAC) to develop a list of bicycle and pedestrian projects for review. The projects include additions to pavement projects and stand-alone improvements for people who walk and bike.

Where do the Walking and Biking Projects Come From?

In 2012, City Council accepted the Pedestrian and Bicycle Master Plan as a resource for network improvements related to walking and bicycling. In 2017, the PBMP will be assimilated into the city's Transportation System Plan (TSP). The TSP, currently in review, is the city's transportation policy document and long-term vision for transportation resources. Policies, project tables, and maps for improving the walking and bicycling environment will be included in TSP and adopted by City Council.

For pavement preservation projects city staff consult the TSP to determine what, if any, changes should be explored during project planning. Pavement projects present an opportunity to implement some improvements, such as bike lane striping, because striping will be entirely replaced as part of the project.

There are also projects developed based on community input, coordination with 4j and Bethel Safe Routes to School programs, and through site investigations by city staff.

What Bike/Ped Projects Were Built in 2016 Using the PBM?

Some of the walking and bicycling projects occur on streets where there is a pavement project while others do not. Projects developed in 2016 are listed below. Pictures for some projects are located at the end of this memo.

*Projects Occurring with Pavement Projects*

- Fairfield Avenue (HWY 99 to Royal): add sidewalk to the east side of Fairfield Avenue from Royal to Richard. This was per agreement with Bethel School District as part of their school bond measure and existing Safe Routes to School program.
- Lincoln Street (5th Avenue to 13th Avenue): the existing bike lane was buffered from 11th Avenue to 5th Avenue. There was also an advanced stop line added at 7th Avenue to help prevent "right hook" collisions of people bicycling on Lincoln Street.
- Willamette Street (10th Avenue to 13th Avenue): installed "super sharrows" (shared lane markings with additional striping to identify the path of bicycle travel); coordinated with Lane Transit District to relocate the transit shelter south of 12th Alley to be curbside. This included widening the sidewalk and relocating the shelter and bench. The previous position blocked some of the usable portion of the sidewalk and was not well located for bus pickup and drop off. The pavement in front of the bus stop was also replaced in concrete and was paid for by LTD. (See PIC #1)

*Discretionary Projects*

- Goodpasture Island Road Sidewalk Infill: after the bridge over Delta HWY was widened, there remained a gap in the sidewalk network from the east side of the bridge to Happy Lane. Both sides of Goodpasture were evaluated and it was determined that sidewalk could be added to the south side to fill the sidewalk gap. The north side was too costly since retaining walls would have been necessary to deal with the excessive slopes. (See PIC #2)
- School Speed Zone on East 30th Avenue: many students who attend Camas Ridge Elementary School on the north side of East 30th Avenue live on the south side of 30th. This requires students to cross this busy arterial street. There are also heavily used bus stops on both sides of 30th Avenue that draw pedestrian traffic across the street. A Pedestrian Hybrid Beacon was added in 2014 to create gaps in traffic to allow people adequate time to walk across the street. Still, the speed of traffic on East 30th Avenue is very high, so a school speed zone (20mph When Flashing) was added to slow traffic during school arrival and dismissal. The project included new school zone speed limit signs and flashers. (See PIC #3)
- Fir Lane RRFB (River Road): crossing River Road can be difficult because it has 4+ travel lanes and traffic moves at 35mph. One preferred crossing location that was identified by the River Road Community Organization was Fir Lane – which provides direct access to Maury Jacobs Park and the West Bank Path. There are also LTD bus stops near this location. A rectangular rapid flashing beacon (RRFB), pedestrian island, and crosswalk were added across River Road to help people walk across the street. (See PIC #4)
- Lone Oak RRFB (Division Avenue): the Division Avenue pavement project in 2015 included creating a better walking and bicycling connection from the West Bank Path to River Road along Division Avenue. One improvement that funding was not available to complete was a pedestrian crossing of Division Avenue near Lone Oak Avenue. In 2016, a rectangular rapid flashing beacon (RRFB) was installed at Lone Oak to cross Division Avenue.

<u>A Note about Spending Totals</u>

The annual expenditure was estimated to average approximately $516,000 throughout the life of the bond. Due in part to higher than expected bid prices, the high demand for walking and bicycling projects, and timing, spending was higher than $516,000 in the first years of the bond for walking and bicycling projects. While there were some surprises in the bid estimates received by contractors, city staff knowingly spent more money in the first years of the bond. This is due to upcoming state-funded walking and bicycling projects that are scheduled for 2017-18 and the limited capacity for city staff to design and manage these projects. Projects include:

- Jessen Path: construction of a shared use path through Golden Gardens Park from the Beltline Path to Ohio Street.
- Active Amazon Corridor: installation of a two-way protected bikeway on East Amazon Drive from Dillard to Hilyard. Installation of 3 pedestrian bridges across the Amazon Creek. Extending the Amazon Path from 34th Avenue south to Tugman Park.
- Northeast Greenways: development of "neighborhood greenways", or streets that are optimized for walking and bicycling, in the neighborhoods of Cal Young, Harlow, and Northeast. This includes wayfinding signage, pavement markings, and enhanced pedestrian crossings of arterial streets.

Annual spending for the final two years of the bond measure for walking and bicycling projects will be approximately half of the estimated annual allocation of $516,000.

<u>What Projects are you Exploring for 2017?</u>

Anticipated 2017 projects include:

- Revel Street RRFB (Irvington Drive): install rectangular rapid flashing beacons (RRFB) across Irvington Drive at Spring Creek Elementary School.
- Throne Drive RRFB (Royal Avenue): install rectangular rapid flashing beacons (RRFB) across Royal Avenue near Candlelight Park.
- E 24th Avenue Protected Bike Lane (Cost share with 4j School District): install buffers and flexible delineators to existing bike lanes on E 24th Avenue from Amazon Parkway to Patterson Street. 4j is paying 50% of the total cost.

- Street Signs on West Bank Path: add street signs to the accessways off the West Bank Path that lead to city streets.
- eBike Lockers (Cost share with ODOT): pay the grant match requirement to install 20 electronic bike lockers in downtown Eugene.
- School Zone Flashers on Willamette Street (Village School): install school speed zone flashers on Willamette Street near Village School.
- Shared Lane Markings on 3rd Avenue: as part of the paving project, add shared lane markings to 3rd Avenue between Washington Street and the beginning of Shelton McMurphey Blvd.

If you have any questions about planning for walking and bicycling projects, or use of PBM funds to deliver these projects, please contact me: reed.c.dunbar@ci.eugene.or.us, (541) 682-5727.

Sincerely,
Reed Dunbar, AICP
Associate Transportation Planner (Bicycle and Pedestrian Planner)

**PIC #1: Willamette Street**

**PIC #2: Goodpasture Island Road Sidewalk**

**PIC #3: East 30th Avenue School Speed Zone Flashers**

**PIC #4: Fir Lane RRFB (River Road)**

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# 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 expenditure of the 2012 general obligation bond funds approved for issuance through voter's approval of Ballot Measure 20-197 were expended in accordance with the purposes and limitations outlined in City Council Resolution No. 5063; namely that such expenditures were: a) used only for costs related to street preservation projects, fund bicycle and pedestrian projects and payment of bond issuance costs and not to expand the motor vehicle 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 from January 1, 2016 through December 31, 2016. 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. 5063 and Ballot Measure 20-197
- 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.

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

(1) *Expenditure testing*. From January 1, 2016 through December 31, 2016, total expenditures for the projects funded by the 2012 bond proceeds were $6,378,148 per the City's general ledger. We tested $3,850,753 or 60%, of those expenditures. All tested expenditures were supported by appropriate documentation such as vendor invoices, 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. 5063 or other street preservation projects approved by City Council, as permitted under Resolution 5063. No exceptions were noted.

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(2) We reviewed bids and contracts related to two of eight new construction projects during 2016. The bidding and contracting process for the two 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 the 2012 bond proceeds and project expenditures from inception of the Street Bond project to December 31, 2016:

| | Issuance to 12/31/2014 | 1/1/2015 12/31/2015 | 1/1/2016 12/31/2016 | Total |
|---|---|---|---|---|
| Bond proceeds | $ 8,500,000 | 6,289,700 | $ 6,690,000 | $ 21,479,700 |
| Project expenditures | 8,445,638 | 6,355,849 | 6,378,148 | 21,179,635 |

As of December 31, 2016, the City had $1,500,000 outstanding on the line of credit facility. From January 1, 2016 through December 31, 2016, the City received $6,690,000 in bond proceeds and was charged interest of $18,818; the City repaid $6,908,818 during the same period. At December 31, 2016, the City had $21,520,300 in authorized borrowing remaining on the bonds ($43,000,000 authorized less $21,479,700 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 5063.

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
January 27, 2017