



# ENGINEERING

## Monthly Report

Fiscal Year 2016-2017

April 2017

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## FROM THE DIRECTOR

In the 2017 - 2019 biennium City of Bend Councilors identified project management as a key objective in modernizing and professionalizing how the City operates. Over the past several years the City has become a projectized organization where we use project management to achieve business results. This requires a solid foundation in business fundamentals, communication, and leadership, as well as skills in project, program, and portfolio management.

Project management is emerging as one of the fastest-growing fields in the country with relevance to every industry and discipline out there. Because of this acquiring a Project Management Professional (PMP) certification became a focus for EIPD in 2014. All of our engineers are required to obtain a PMP certification within six months of hire. Today, I am proud to report that EIPD employs the largest number of certified project management professionals working for the City.

In the coming months we will be working with the IT Department to identify and implement a project management software to further our efforts in professionalizing our project management operations. Projects are a specific type of work that requires a very specific type of software to control the many elements of project management.

**Tom Hickmann, PE**  
**EIPD Director**  
**541 317-3029**

**Financial Impact Review:** Review by Finance Director, Sharon Wojda, determined no significant change to previously published financial information at this time. Future budget adjustments may be needed for projects with significant changes in scope and schedule, but estimates are unknown at this time.

**Operational Impact Review:** Review by Utility Director, Paul Rheault, determined operational impacts are in line with achieving greater efficiency in our systems.

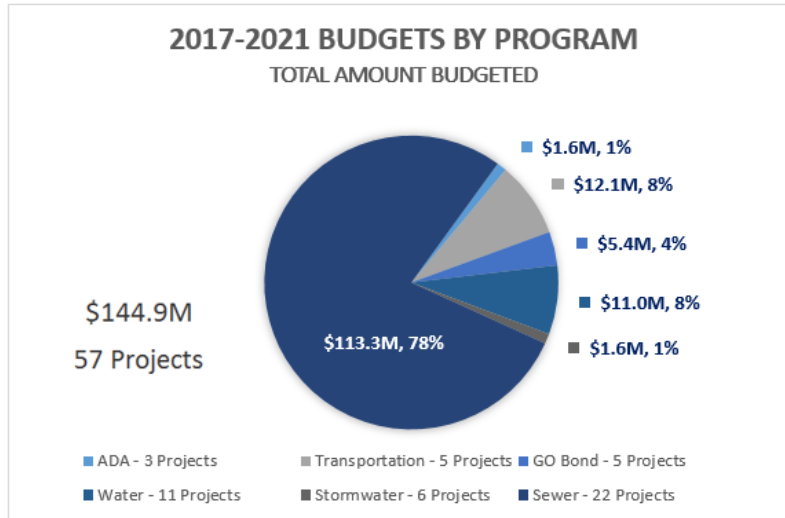
# Executive Summary

## CIP by the Numbers

This section identifies changes to the CIP for the reporting period: March 1, 2017 – March 31, 2017

**0 Project Changes** No new projects were initiated or completed in the month of March.

The graph below shows the number of projects, amounts budgeted and the percentage of budgets by program for the 2017-2021 CIP.



The table below shows the status of projects in the current CIP Plan.

Status	CIP	R&R
<b>Open (Active):</b> In planning, design or construction phase	20	1
<b>Substantially Complete (Active):</b> Asset transferred to Operations and City has beneficial use	7	0
<b>Closed (Not Active):</b> Completed 1-2 yr. warranty; Cancelled; Transferred project to Ops	0	0
<b>Pending (Not Active):</b> Scheduled to start within 5-Year CIP Plan	30	15
<b>Total</b>	<b>57</b>	<b>16</b>

The graph below show the 2017 Fiscal Year approved budgets, current estimates and capital expenditures by program.

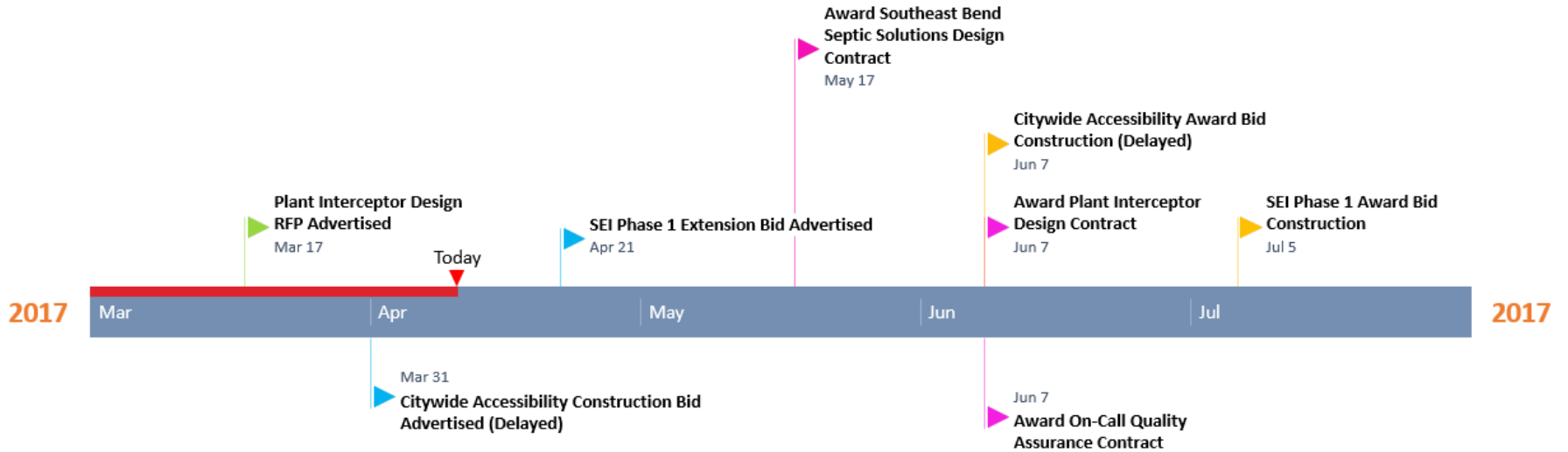


The table below shows current fiscal year expenditures and remaining budgets by program. Program budgets are approximately 33% spent for Fiscal Year 2016-17.

Program	Projects	2017 FY Budget	2017 FY Spent	Remaining
Water Reclamation	25	\$ 56,484,700	\$ 17,588,547	\$ 38,896,153
Water	13	\$ 2,443,100	\$ 2,178,554	\$ 264,546
Transportation	6	\$ 2,528,000	\$ 478,288	\$ 2,049,712
GO Bond	5	\$ 1,682,300	\$ 508,514	\$ 1,173,786
ADA Construction	4	\$ 1,267,000	\$ 492,029	\$ 774,971
Stormwater	7	\$ 350,000	\$ 245,241	\$ 104,759
<b>Totals</b>	<b>60</b>	<b>\$ 64,755,100</b>	<b>\$ 21,491,173</b>	<b>\$ 43,263,927</b>

KEY	
	Design RFP Advertised
	Award Design Contract
	Complete Design
	Bid Advertised
	Award Bid Construction
	Construction Start
	Complete Construction
	Contract Amendment

## EIPD Procurement Timeline



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**City of Bend 2017 - 2021 Capital Improvement Program Project List**

Project Name & Number	Project Start	Estimated Substantial Completion	Project Stage	Cost Estimate Class	Total Project Cost Estimate	Total Project Spent to Date	2016-17	2017-18	2018-19	2019-20	2020-21	2017-2021 Budgeted	Revisions Budget	Percent Project Estimate Spent
<b>ADA Construction</b>														
1A3AA South 3rd Street Pedestrian Improvements	2011	03/31/17	Design	1	815,000	749,191	100,000	-	-	-	-	100,000		92%
1ACAI Citywide Accessibility Improvements	2016	9/28/18	Design	2	1,156,000	187,795	400,000	300,000	-	-	-	700,000		16%
1ADCS Downtown City Offices Sidewalk	2016	06/30/17	Design	4	580,000	39,475	-	-	-	-	-	-	1	7%
1AADA Future ADA Projects	2017	07/10/05	Pending	5	-	-	767,000	-	-	-	-	767,000	1	0%
<b>Total ADA Construction Projects</b>					<b>2,551,000</b>	<b>976,461</b>	<b>1,267,000</b>	<b>300,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,567,000</b>		
<b>BURA - Murphy Crossing Construction</b>														
1TMPR Murphy & Parrell Roundabout	2015	07/29/16	Sub.Complete	1	2,000,000	1,038,396	1,014,000	-	-	-	-	1,014,000		52%
<b>Total BURA Projects</b>					<b>2,000,000</b>	<b>1,038,396</b>	<b>1,014,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,014,000</b>		
<b>Transportation Construction</b>														
1TGC Galveston Corridor Improvements	2011	10/15/16	Design	4	4,000,000	384,649	225,000	-	-	-	-	225,000		10%
1TSDP Complete Street Corridors (formerly Sidewalk Design and Projects)	2017	2018	Pending	5	3,500,000	965	140,000	380,000	1,830,000	1,150,000	-	3,500,000		0%
1TDCS Downtown City Offices Sidewalk	2016	07/10/05	Design	5	125,000	39,475	-	-	-	-	-	-		32%
1TNPS Neff and Purcell Intersection (Formerly Neff & Purcell Sidewalk)	2016	2020	Pending	5	4,000,000	-	50,000	350,000	300,000	3,300,000	-	4,000,000		0%
1TCSI Citywide Safety Improvements	2016	09/30/18	Design	4	3,344,000	362,451	1,099,000	1,470,000	775,000	-	-	3,344,000	1	11%
<b>Total Transportation</b>					<b>14,969,000</b>	<b>787,540</b>	<b>1,514,000</b>	<b>2,200,000</b>	<b>2,905,000</b>	<b>4,450,000</b>	<b>-</b>	<b>11,069,000</b>		<b>5%</b>
<b>GO Bond</b>														
1T14R 14th St. Reconstruction	2016	10/15/16	Design	4	4,681,093	249,453	513,000	3,643,527	-	-	-	4,156,527		5%
1T27R 27th Street Reconstruction	2017	2017	Pending	5	1,049,300	132,458	1,049,300	-	-	-	-	1,049,300		13%
1TPWP Powers & Brookwood Roundabout Phase II	2016	10/15/16	Design	2	50,000	-	45,000	-	-	-	-	45,000		0%
1TR27 Reed Mkt: Newberry to 27th	2012	10/15/15	Sub.Complete	1	4,841,330	4,851,450	30,000	21,000	-	-	-	51,000		100%
1TR3N Reed Mkt: 3rd to Newberry	2012	11/13/15	Sub.Complete	1	14,345,450	13,379,756	45,000	10,000	16,000	-	-	71,000		93%
<b>Total GO Bond</b>					<b>24,967,173</b>	<b>18,613,117</b>	<b>1,682,300</b>	<b>3,674,527</b>	<b>16,000</b>	<b>-</b>	<b>-</b>	<b>5,372,827</b>		
<b>Water</b>														
1XSWP Bridge Creek Intake and Pipeline	2008	06/30/16	Sub.Complete	1	73,954,698	72,178,883	783,100	-	-	-	-	783,100		98%
1WEWL Egypt Waterline	2012	2019	Planning	2	600,000	34,799	-	-	478,400	-	-	478,400		6%
1WSDC Water SDC Methodology Study	2017	07/09/05	Pending	-	60,000	578	60,000	-	-	-	-	60,000		1%
1WMP1 Water Master Plan Update	2017	07/09/05	Pending	-	500,000	-	500,000	-	-	-	-	500,000		0%
1WS3W Phase 2 South 3rd St. - Water portion	2016	03/31/17	Design	3	635,000	12,875	1,100,000	-	-	-	-	1,100,000		2%
1WAWP Awbrey Well Supply Expansion	2020	2020	Pending	5	2,021,760	-	-	-	-	2,021,760	-	2,021,760		0%
1WLPE Lafayette Pipe Enlargement	2020	2020	Pending	5	250,640	-	-	-	-	250,640	-	250,640		0%
1WCPS College Parallel Pipe Study	2020	2020	Pending	-	1,215,760	-	-	-	-	1,215,760	-	1,215,760		0%
1WVSS Valves Operational System Study	2021	2022	Pending	-	156,000	-	-	-	-	78,000	78,000	156,000		0%
1WSSC New Water Well Near NE Shirley Court	2021	2021	Pending	-	1,596,400	-	-	-	-	-	2,830,464	2,830,464		0%
1WSPP Parallel Piping Brookwood to Brosterhaus	2021	2021	Pending	-	2,830,464	-	-	-	-	-	1,596,400	1,596,400		0%
<b>Total Water</b>					<b>83,820,722</b>	<b>72,227,134</b>	<b>2,443,100</b>	<b>-</b>	<b>478,400</b>	<b>3,566,160</b>	<b>4,504,864</b>	<b>10,992,524</b>		
<b>Stormwater</b>														
1RABD South Awbrey Butte Drainage Study	2016	03/31/17	Design	-	285,000	124,735	200,000	-	-	-	-	200,000		44%
1R3AA South 3rd Street - Stormwater portion	2016	12/26/16	Design	1	185,000	162,491	150,000	-	-	-	-	150,000		88%
1RNPR Newport Pipe Replacement Design	2018	2019	Pending	5	442,000	-	-	-	442,000	-	-	442,000		0%
1RMP1 Stormwater Master Plan Update	2020	2022	Pending	5	130,000	-	-	-	-	-	130,000	130,000		0%
1RFGU Franklin & Greenwood Underpass	2021	2029	Pending	5	5,620,000	-	-	-	-	-	572,000	572,000		0%
1RRMC Roosevelt & McKinley	2020	2022	Pending	5	579,000	-	-	-	-	-	104,000	104,000		0%
<b>Total Stormwater</b>					<b>7,241,000</b>	<b>287,227</b>	<b>350,000</b>	<b>-</b>	<b>442,000</b>	<b>-</b>	<b>806,000</b>	<b>1,598,000</b>		

**City of Bend 2017 - 2021 Capital Improvement Program Project List**

Project Name & Number	Project Start	Estimated Substantial Completion	Project Stage	Cost Estimate Class	Total Project Cost Estimate	Total Project Spent to Date	2016-17	2017-18	2018-19	2019-20	2020-21	2017-2021 Budgeted	Revisions Budget	Percent Project Estimate Spent
<b>Sewer - Water Reclamation</b>														
1S2S3 SEI Schedule 2S&3	7/1/2015	12/30/17	Construction	1	32,500,000	13,225,694	18,284,000	9,070,000	-	-	-	27,354,000		41%
1S45R SEI Schedule 4&5R	42025	12/30/16	Sub.Complete	1	12,500,000	12,241,650	4,180,500	-	-	-	-	4,180,500		98%
1SP1X SEI Phase 1 Extension	3/1/2016	12/31/17	Design	4	10,500,000	466,577	4,637,500	3,402,500	-	-	-	8,040,000		4%
1SNAF North Area Force Main	2016	12/31/17	Design	2	4,450,000	4,163	2,834,850					2,834,850		0%
1SNAS North Area Gravity Main	2016	12/31/17	Design	2	3,855,000	1,097,344	2,834,850					2,834,850		28%
1SRLS Riverhouse Lift Station Hydraulic Upgrade	2016	06/30/17	Design	2	555,000	15,296	370,000	-	-	-	-	370,000		3%
1SBSS Southeast Bend Septic Solutions (New)	2017	2019	Design	5	24,000,000	145	-	-	-	-	-	-		0%
1SPIR Plant Interceptor Rehabilitation	2015	06/30/17	Design	5	10,700,000	23,065	5,970,000	-	-	-	-	5,970,000		0%
1SVOC Valhalla Sewer Relocation	2011	10/16/16	Sub.Complete	1	1,860,370	1,644,396	2,000,000	-	-	-	-	2,000,000		88%
1XCOL Colorado Pump Station and Force Main	2013	01/10/17	Sub.Complete	1	13,620,132	13,338,150	4,525,000	-	-	-	-	4,525,000		98%
1SWRF Secondary Expansion	2009	06/30/17	Construction	1	45,000,000	40,823,031	2,353,000	-	-	-	-	2,353,000		91%
1SSHI Solids Handling Improvement Project	2016	2019	Pending	5	17,000,000	-	6,000,000	4,000,000	7,000,000	-	-	17,000,000		0%
1SEIP East Interceptor (Formerly SEI Phase II North)	2016	2028	Pending	5	21,000,000	-	1,000,000	1,000,000	-	-	-	2,000,000		0%
1SNIP North Interceptor	2016	2021	Pending	5	23,000,000	-	1,000,000	1,000,000	7,000,000	7,000,000	7,000,000	23,000,000		0%
1SFPU WRF Facilities Plan Update	2018	2018	Pending	5	500,000	-	-	500,000	-	-	-	500,000		0%
1SPSO Parallel Sewer on Olney Avenue	2018	2018	Pending	5	581,000	-	-	605,000	-	-	-	605,000		0%
1SEPP WRF Evaporation Percolation Ponds	2019	2019	Pending	5	1,567,000	-	-	-	1,630,000	-	-	1,630,000		0%
1SAMM Amethyst/Mahogany Street Sewer	2019	2019	Pending	5	679,000	-	-	-	710,000	-	-	710,000		0%
1SM97 Mahogany Street/Hwy 97 Sewer	2019	2019	Pending	5	999,000	-	-	-	1,050,000	-	-	1,050,000		0%
1SSFU WRF Support Facilities Upgrade	2020	2020	Pending	5	2,400,000	-	-	-	-	2,500,000	-	2,500,000		0%
1SOC1 Odor Control Master Plan	2020	2020	Pending	-	1,000,000	-	-	-	-	1,050,000	-	1,050,000		0%
1SSLA Sewer Storage - Land Acquisition	2020	2020	Pending	-	700,000	-	-	-	-	730,000	-	730,000		0%
1SPIC Plant Interceptor Condition Assessment	2020	2020	Pending	5	600,000	-	-	-	-	630,000	-	630,000		0%
1SMP1 Collection System Master Plan (Years 6-10)	2020	2020	Pending	-	1,000,000	-	-	-	-	1,050,000	-	1,050,000		0%
1SGPA Gravity Pipe Condition Assessment	2020	2035	Pending	5	200,000	-	-	-	-	210,000	208,000	418,000		0%
<b>Total Sewer</b>					<b>230,766,502</b>	<b>82,879,511</b>	<b>55,989,700</b>	<b>19,577,500</b>	<b>17,390,000</b>	<b>13,170,000</b>	<b>7,208,000</b>	<b>113,335,200</b>		
<b>Total 2017-2020 Capital Improvement Program</b>					<b>344,365,853</b>	<b>176,809,386</b>	<b>64,260,100</b>	<b>25,752,027</b>	<b>21,231,400</b>	<b>21,186,160</b>	<b>12,518,864</b>	<b>144,948,551</b>		



## S. 3rd St. Pedestrian Improvements

Project is a collaboration with ODOT to provide continuous pedestrian facilities along the 3rd Street corridor between Wilson Avenue and Powers Road by repairing existing facilities that are either non-compliant or deteriorated. In addition, the project will also construct pedestrian facilities where none currently exist. The project is being coordinated with several other projects (water, stormwater, streets) within the corridor.



Project Engineer: Jason Suhr | [jsuhr@bendoregon.gov](mailto:jsuhr@bendoregon.gov)

### Scope

Design, right of way acquisition, and construction of sidewalks, curb ramps that is coordinated with other infrastructure for water, stormwater, and streets. Stormwater scope increased to now include catch basin and drill hole vault replacement.

### Schedule

Start Date: 11/1/2011  
 Substantial Completion: 7/31/2017  
 Final Closeout: 7/31/2018

### Cost

Total Estimated: \$1,031,000  
 Spent to Date: \$902,836  
 % Spent to Estimated: 88%

Sub-Projects:	Est.	Spent
ADA	\$815,000	\$709,497
Water	\$31,000	\$30,612
Stormwater	\$185,000	\$162,491

### Status: On Scope

Adjustments: No change from prior month

### Status: On Schedule

Adjustments: No change from prior month

### Status: On Budget

Adjustments: No change from prior month

**Status Update:** Construction resumed March 6 on east side of Wilson to Brosterhaus and west side from Reed Lane to Powers Road. Construction hours are from 5AM to 2PM weekdays with outer travel lane closures.

### Cost Estimate Classification: 1



## Phase 2 - S. 3<sup>rd</sup> Street Improvements

Phase 2 projects are capital improvement projects and address maintenance issues. The timing is being driven to occur in advance of the street preservation work within 3rd Street that is planned for the summer of 2017. Due to the impacts to the 3rd Street roadway, it is imperative that they occur prior to the grind and inlay preservation work.



### Scope

Includes design and construction for streets, water, and stormwater. This work will include an analysis of the drainage basin to assess the condition of the existing stormwater facilities; creation of a striping and paving plan; replace existing 2-inch sub-standard waterlines with 8-inch pipelines.

### Schedule

Start Date: 10/1/2015  
 Substantial Completion: 6/30/2017  
 Final Closeout: 7/1/2018

- Stormwater portion complete
- Streets portion complete

### Cost

Total Estimated:	\$670,000	
Spent to Date:	\$35,129	
% Spent to Estimated:	5%	
<u>Sub-Projects:</u>	<u>Est.</u>	<u>Spent</u>
Water	\$635,000	\$12,875
Stormwater	\$5,000	\$6,150
Streets	\$30,000	\$16,104

**Status: On Scope**

**Status: Behind Schedule**

**Status: On Budget**

Adjustments: No change from prior month

Adjustments: Staffing constraints put project on hold until further notice

Adjustments: No change from prior month

**Status Update:** Water portion remains on hold due to workload constrains.

### Cost Estimate Classification: 4



## Citywide Accessibility Improvements

Through the help of dedicated volunteers on the City of Bend Accessibility Advisory Committee (COBAAC) and the Central Oregon Coalition for Access (COCA), key corridors and neighborhoods across the city have been prioritized for accessibility improvements. This project will design, construct, or repair these curb ramps and sidewalks including those identified through the City's Barrier Removal Request process.



Project Engineer: Rory Rowan | [rrowan@bendoregon.gov](mailto:rrowan@bendoregon.gov)

### Scope

Survey, design, and construction of accessibility improvements, as funding allows, in the Wells Acres, Bear Creek, Division, Downtown & Old Mill and Brookwood/Southwest neighborhoods.

### Schedule

Start Date: 3/1/16  
 Substantial Completion: 9/29/2017  
 Final Closeout: 09/29/2018

### Cost

Total Estimated: \$1,156,000  
 Spent to Date: \$187,795  
 % Spent to Estimated: 16%

### Status: On Scope

Adjustments: No change from prior month

### Status: On Schedule

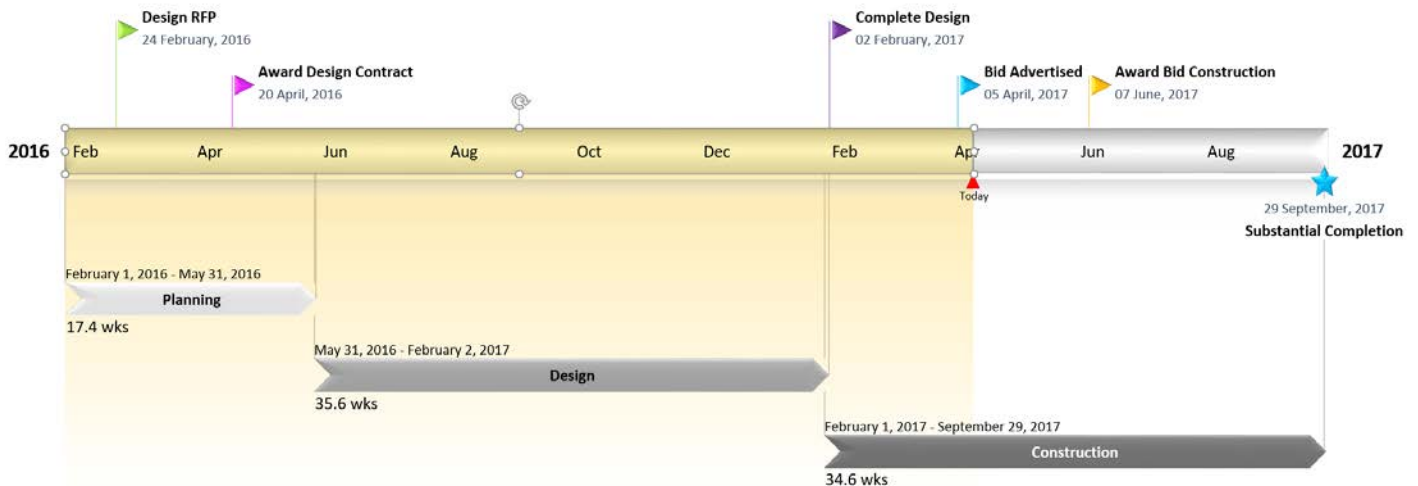
Adjustments: No change from prior month

### Status: On Budget

Adjustments: Increase for construction of the three new project locations.

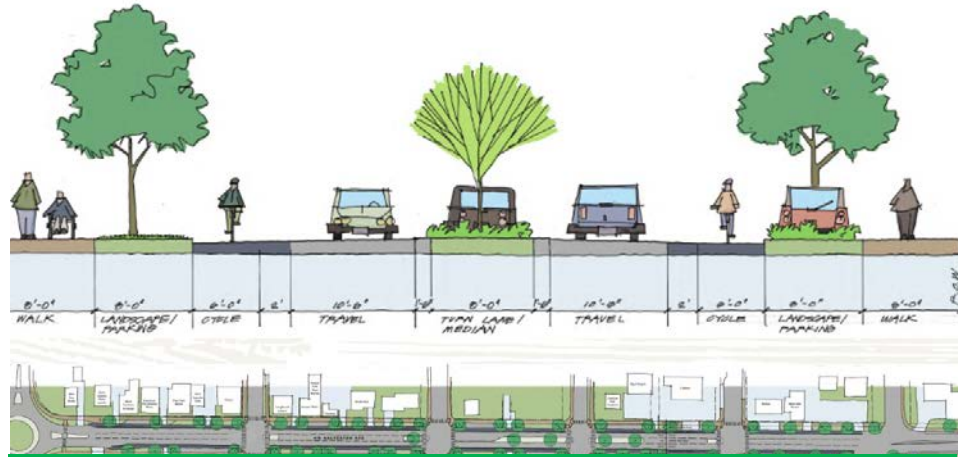
**Status Update:** Procurement submitted for review March 15, 2017.

### Cost Estimate Classification: 2



## Galveston Corridor Improvements

The project is the highest ranked Traffic Safety Advisory Committee (TSAC) arterial and collector street safety project to improve vehicle, bicycle, and pedestrian safety, access, and connectivity. It also continues the bike and pedestrian improvements on Galveston from 14th to Lindsey Ct. The project will improve bicycle and pedestrian safety, access, stormwater system, and parking.



Project Engineer: Garrett Sabourin | [gsabourin@bendoregon.gov](mailto:gsabourin@bendoregon.gov)

### Scope

Study to improve safety, access, and connectivity for vehicles, bicycles, and pedestrians. Also to improve the streetscape along a newly emerging mixed use corridor. A collaborative process has formed between City staff and property/business owners with a taskforce to devise project concepts and designs. At 30% design project will be brought to council to decide the Stormwater and other elements to be carried forward.

### Schedule

Start Date: 06/01/2011  
Substantial Completion: TBD  
Final Closeout: TBD

### Cost

Total Estimated: \$4,000,000  
Spent to Date: \$380,329\*  
% Spent to Estimated: 10%

\* Includes planning.

### Status: On Scope

Adjustments: No change from prior month

### Status: On Schedule

Adjustments: No change from prior month

### Status: On Budget

Adjustments: No change from prior month

**Status Update:** Project only received authority for 30% design. Once City Council goal setting complete and 2018-2022 Capital Improvement Program approved future of project direction will be determined. No update will be provided until then.

### Cost Estimate Classification: 4



## Citywide Safety Improvements

With the help of the community and a prior safety study, the city has identified multiple locations across the city where there have been a high number of crashes. Several treatments are proposed to make these locations safer for people walking, riding bicycles, and driving. This project will further develop the design of these treatments and construct them with additional community input.



**Project Engineer: Rory Rowan | [rrowan@bendoregon.gov](mailto:rrowan@bendoregon.gov)**

### Scope

Survey, design, traffic analysis, public involvement, and construction of safety improvements at the following locations: 3rd St at Hawthorne, Franklin, Roosevelt, and Reed Market, Colorado Ave & Bend Pkwy (US Hwy 97) interchange, Neff Rd at Williamson Blvd, 27th St at Conners Ave, Brosterhous Road railroad underpass.

### Schedule

Start Date: 10/1/2014  
 Substantial Completion: 9/30/2018  
 Final Closeout: 9/30/2019

### Cost

Total Estimated: \$3,344,000  
 Spent to Date: \$362,451  
 % Spent to Estimated: 11%

### Status: On Scope

Adjustments: No change from prior month

### Status: Behind Schedule

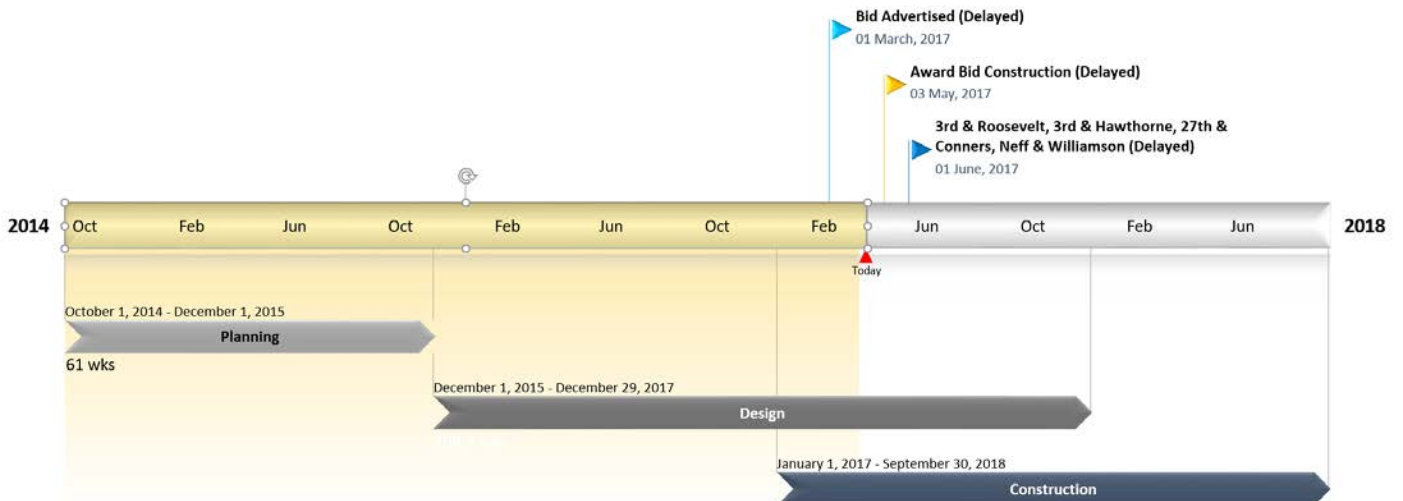
Adjustments: On hold until July

### Status: On Budget

Adjustments: No change from prior month

**Status Update:** Construction pushed out due to workload constraints. No update until July 2017.

### Cost Estimate Classification: 4



# 14<sup>th</sup> Street Reconstruction

Improve safety of corridor from SW Colorado Avenue to NW Newport Avenue for all modes of transportation. Project is part of voter approved General Obligation Bond and will focus on an up updated roadway configuration to include surfacing, striping, bike lanes, sidewalks and streetscape. Design will attempt to tie-in with suggested changes being made to the Galveston Corridor Improvements.



**Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov**

## Scope

Upgrade to City standard to include but not limited to: roadway, surface, curbs, sidewalks, and striping. Final scope to be determined at 30% concept level, but will include safety improvements for bicycles, pedestrians and vehicles.

## Schedule

Start Date: 06/30/2014  
 Substantial Completion: TBD  
 Final Closeout: TBD

## Cost

Total Estimated: \$4,681,093  
 Spent to Date: \$296,872  
 % Spent to Estimated: 6%

Sub-Projects:	Est.	Spent
GO Bond	\$4,051,093	\$296,872
Trans Con.	\$630,000	\$0

**Status: On Scope**

**Status: On Schedule**

**Status: On Budget**

Adjustments: No change from prior month

Adjustments: No change from prior month

Adjustments: No change from prior month

**Status Update:** Contract amendment to complete design approved March 1.

## Cost Estimate Classification: 4



## Powers & Brookwood Roundabout Phase II

The stormwater from the newly constructed roundabout on Brookwood and Powers is conveyed to and drains into stormwater structures through a swale to the northeast of the roundabout. The Powers & Brookwood Roundabout Phase II Project intent is to rehabilitate this swale. This will be done by cleaning out the storm structures and re-constructing the check dams to convert the swale into a series of retention ponds. This will ensure proper erosion control and sediment collection.



**Project Engineer: Garrett Sabourin | gsabourin@bendoregon.gov**

Scope	Schedule	Cost
Re-construct check dams to convey water at appropriate velocity and location. Check dam height will also convert swale into retention ponds for increased retention capacity and sediment collection.	Start Date: 07/01/2016 Substantial Completion: 05/30/17 Final Closeout: 05/30/2018	Total Estimated: \$50,000 Spent to Date: \$0 % Spent to Estimated: 0%
<b>Status: On Scope</b>	<b>Status: Behind Schedule</b>	<b>Status: On Budget</b>
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

**Status Update:** No update from prior month. Waiting for final approval on design. City is evaluating whether or not to self-perform.

### Cost Estimate Classification: 2



## Egypt Waterline Project

The Egypt Waterline seeks to create a redundant water source for Juniper Ridge. This project became a Capitol Improvement Project after it was identified in the 2011 Water master Plan Optimization study by Murray and Smith Associates. A redundant connection for Juniper Ridge is necessary to provide an adequate water supply during system disruptions due to maintenance activities, public emergencies, or catastrophic events.

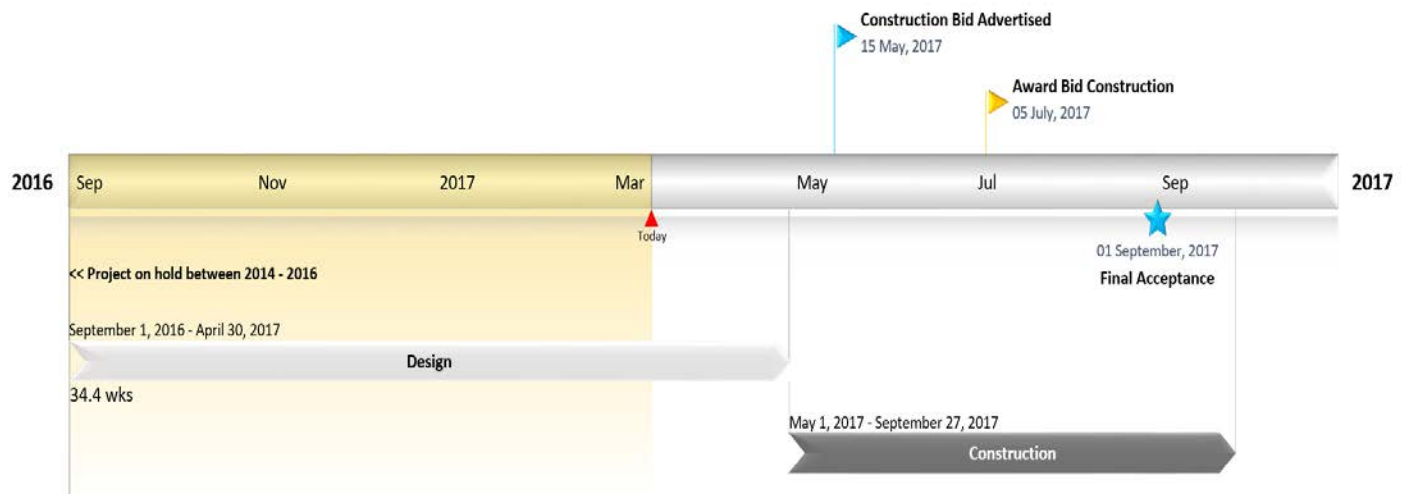


Project Engineer: Eric Forster | eforster@bendoregon.gov

Scope	Schedule	Cost
Design a waterline connection between Ranch Village Dr. and 18th Street. This work will include a pressure zone change to Juniper Ridge to match that of the neighborhood to the southwest.	Start Date: 7/1/2012 Substantial Completion: 09/13/2017 Final Closeout: 09/13/2018	Total Estimated: \$550,000 Spent to Date: \$0 % Spent to Estimated: 0%
<b>Status: On Scope</b>	<b>Status: On Schedule</b>	<b>Status: On Budget</b>
Adjustments: Initiated	Adjustments: Initiated	Adjustments: Initiated

**Status Update:** Utilities Department 60% design review completed on March 9. Project scheduled for 100% design in April with bid advertisement on May 15. Construction scheduled for summer 2017.

**Cost Estimate Classification: N/A**







## Southeast Interceptor Phase I

Large diameter gravity sewer pipeline extending from the southwest quadrant to the northeast quadrant of the City, approximately 4 ½ miles in length. This project reroutes or intercepts a significant volume of sewage away from the downtown and central sewer systems to the east side of the City in accordance with the Collection System Master Plan completed in 2014. Segment 2S&3 indicates the 2.5 mile stretch of 27<sup>th</sup> Street between Neff and Reed Market Rd.



Project Engineer: Eric Forster | eforster@bendoregon.gov

### Scope

Design and construction of gravity sewer, from South 3rd street to the Neff Road interim connection. Phase 1 Extension Project, approved in January 2016, adds approximately 3,000 feet of sewer main work.

### Schedule

Start Date: 7/1/2006  
Sewer Completion: 12/31/2017  
Street Completion: 7/31/2018  
Final Closeout: 7/30/2019

- Previous segments, as well as 4&5R, are complete.

### Cost

Total Estimated: \$73,000,000  
Spent to Date: \$42,687,452  
% Spent to Estimated: 58%

Sub-Projects:	Est.	Spent
Previous	\$17,500,000	\$16,753,532
4&5R	\$12,500,000	\$12,241,650
2S&3	\$32,500,000	\$13,225,694
P1EX	\$10,500,000	\$466,577

Status: On Scope

Status: Potential Schedule Revision

Status: Increased Budget

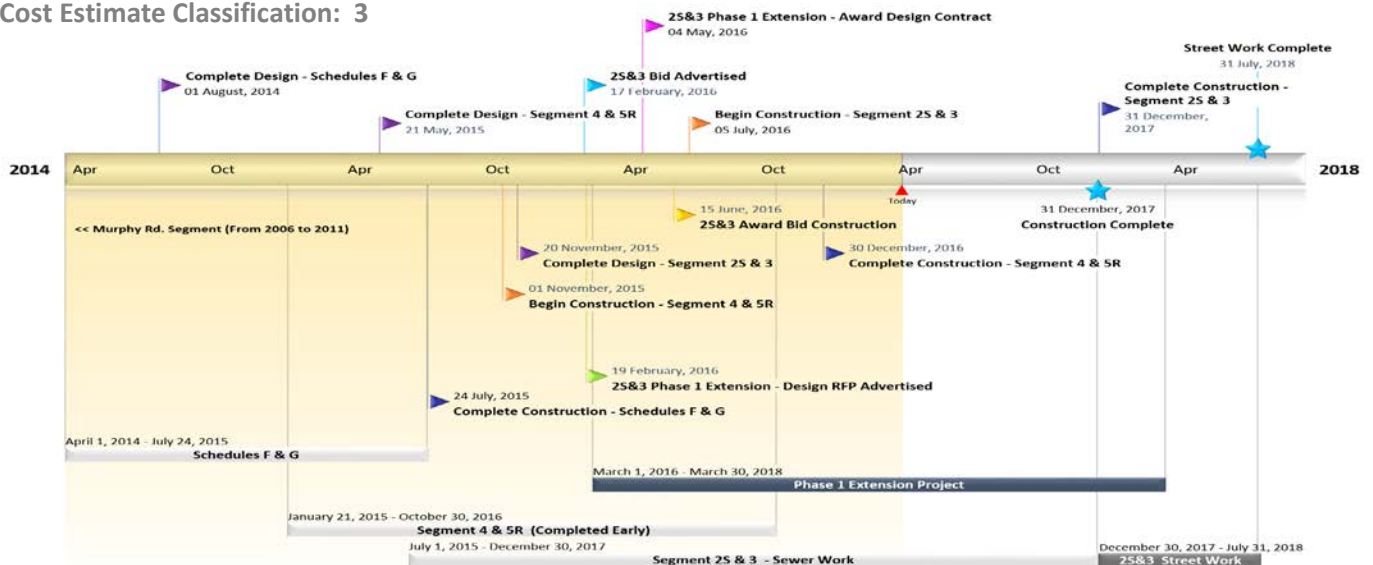
Adjustments: No change from prior month

Adjustments: No change from prior month

Adjustments: No change from prior month

**Status Update:** Easement negotiations ongoing for Phase 1 Extension may delay procurement. Additional construction crews deployed in March. The contract is trending ahead of schedule.

### Cost Estimate Classification: 3



## North Area Sewer Capacity Improvements

This project will increase the capacity of the gravity main downstream of the multiple force main discharge point at manhole 3157 and reroute the force main discharge from several lift stations and the NE 3rd Street pressure sewer. It will also reconfigure the structure at Mervin Sampels Bypass and include modifications to both the Sawyer and Riverhouse lift stations.



Project Engineer: George Franklet | gfranklet@bendoregon.gov

### Scope

Analysis of alternatives for pipeline route and construction methods for crossing of irrigation canals and railroad tracks; design and construction of gravity and force mains, pump station modifications, and flow bypass optimization.

### Schedule

Start Date: 10/1/2013  
 Substantial Completion: 12/31/17  
 Final Closeout: 12/31/18

### Cost

Total Estimated: \$8,860,000\*  
 Spent to Date: \$1,114,383  
 % Spent to Estimated: 13%  
 \* Includes street preservation work

Sub-Projects:	Est.	Spent
Force Main	\$3,855,000	\$4,163
Gravity	\$4,450,000	\$1,097,344
Lift Station	\$555,000	\$12,875

### Status: On Scope

Adjustments: No change from prior month

### Status: On Schedule

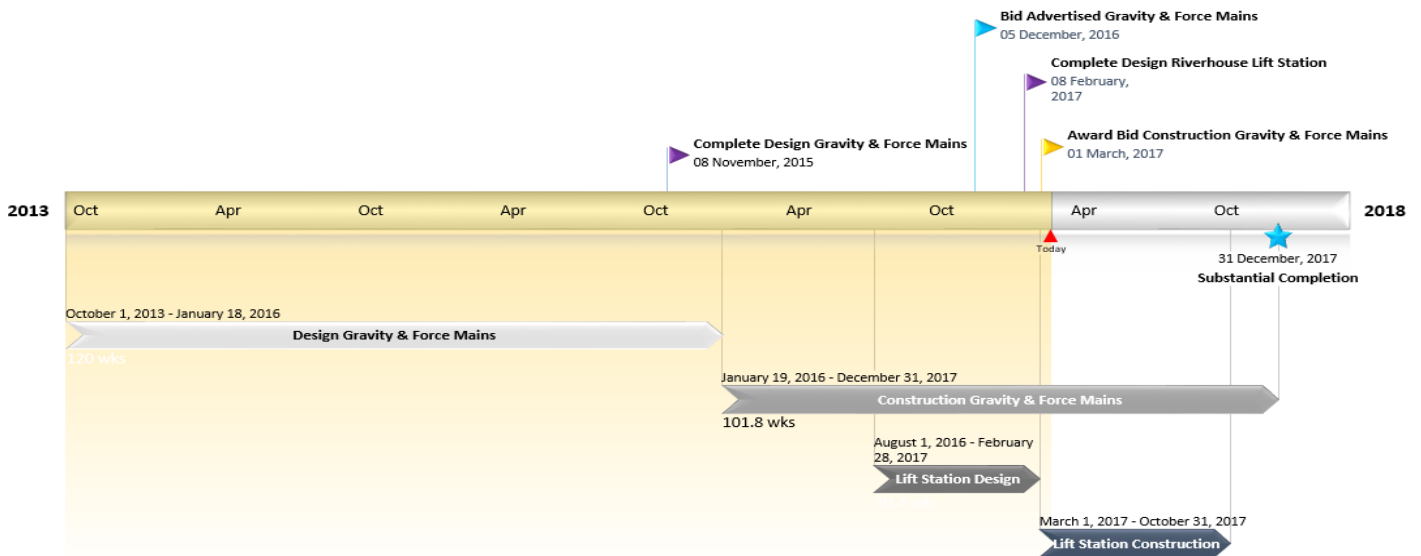
Adjustments: No change from prior month

### Status: On Budget

Adjustments: No change from prior month

**Status Update:** Pre-construction meeting held March 15. The North Unit Irrigation District did not issue U.S. Bureau of Reclamation crossing permit due to staffing constraints in their organization.

### Cost Estimate Classification: 1



## Southeast Bend Septic to Sewer Solutions

When constructed, existing residences, currently on septic systems, will eventually and systematically connect to the recently constructed South East Interceptor (SEI). This project will require phases to meet constructability limitations and to better meet community involvement requirements.

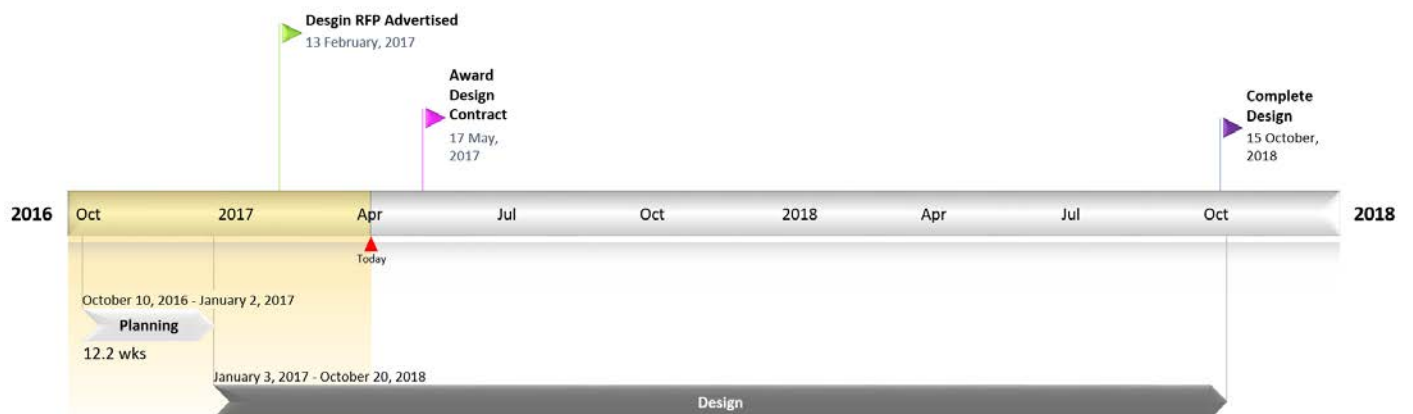


**Project Engineer: Skip Martin | [smartin@bendoregon.gov](mailto:smartin@bendoregon.gov)**

Scope	Schedule	Cost
Design 70,000 feet of gravity sewer through a portion of Southeast Bend area near King's Forest neighborhood.	Start Date: 10/10/2016 Substantial Completion: 01/10/2019 Final Closeout: 06/30/2019*	Total Estimated: \$24,000,000* Spent to Date: \$145 % Spent to Estimated: 0.01%
<b>Status: On Scope</b>	<b>Status: On Schedule</b>	<b>Status: On Budget</b>
Adjustments: No change from prior month	Adjustments: No change from prior month	Adjustments: No change from prior month

**Status Update:** Consultant selected for design and contract terms under negotiation. Anticipated council date to approve the contract is May 17.

### Cost Estimate Classification: 5



## Plant Interceptor Rehabilitation

The existing plant interceptor conveys all of the City’s sewage to the WRF. The concrete pipeline is deteriorating due to age as well as the sulfides breaking down the concrete wall. This project will rehabilitate the plant interceptor by designing and constructing a Cured-In-Place Pipe (CIPP) liner on the pipe segments in the worst structural condition to lengthen the operational life of the pipeline. All project aspects were previously identified in the Plant Interceptor Condition Assessment and incorporated into the CSMP projects list.



### Scope

Rehabilitate all pipe segments and manholes with a Cured-In-Place Pipe (CIPP) liner, and replace the existing siphon junction box.

### Schedule

Start Date: 3/1/2015  
 Substantial Completion: 11/30/18  
 Final Closeout: 11/30/19

### Cost

Total Estimated: \$10,700,000  
 Spent to Date: \$23,065  
 % Spent to Estimated: 0.22%

Status: On Scope

Status: On Schedule

Status: On Budget

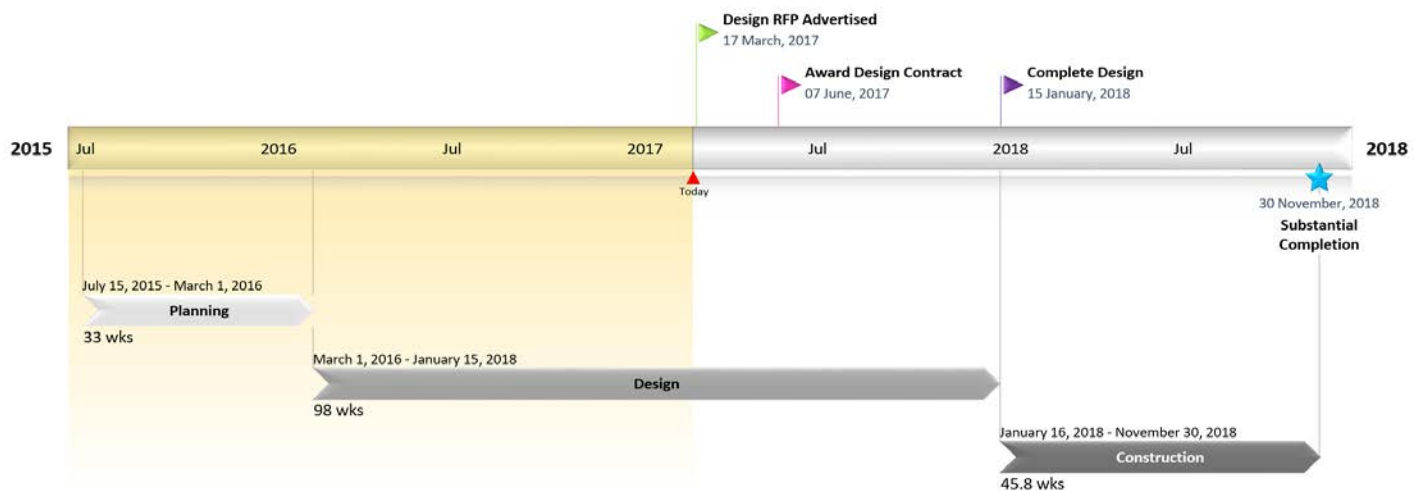
Adjustments: No change from prior month

Adjustments: No change from prior month

Adjustments: No change from prior month

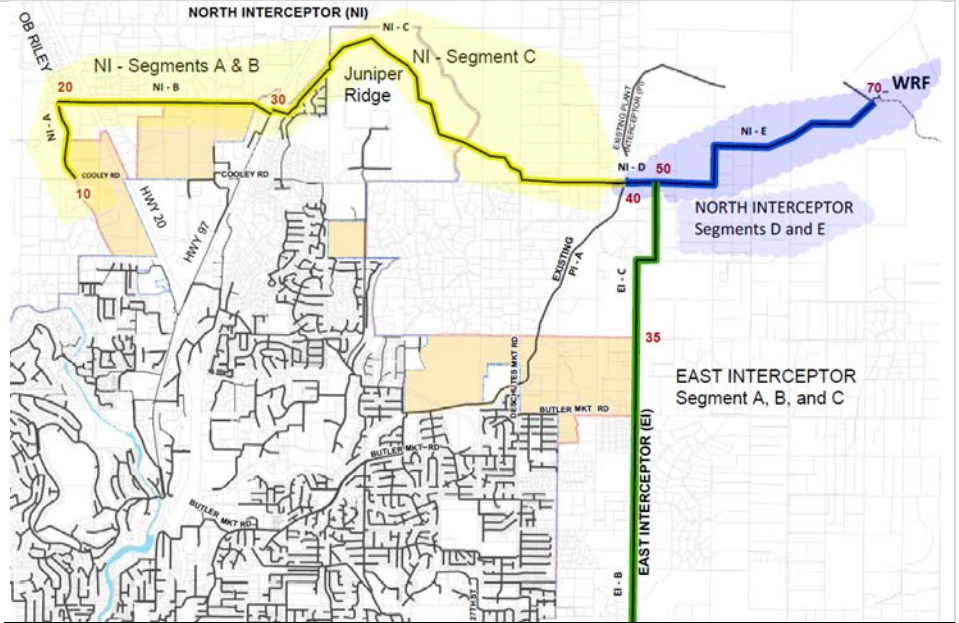
Status Update: Design proposals due April 18 with scoring scheduled for April 26.

### Cost Estimate Classification: 5



# North Interceptor Project

Sewer Interceptor running east to west on the Northern Edge of Bend's UGB, beginning at Cooley Road and OB Riley Road and running east past the Juniper Ridge development, connecting with existing Plant Interceptor, connecting with the East Interceptor, and continuing further east to deliver untreated waste water to the WRF. Segments NI-D and NI-E are designated as Priority 1 (~10,300 feet). Segments NI-A, NI-B, and NI-C are designated a Priority 2 (~26,300 feet).



**Project Engineer: Skip Martin | [smartin@bendoregon.gov](mailto:smartin@bendoregon.gov)**

## Scope

Design, bid, contract, and build approximately 36,000 feet of gravity sewer, various diameters running along the Northern edge of Bend's UGB. Connects to the WRF.

## Schedule

Start Date: 3/1/17  
 Substantial Completion: 12/31/2022  
 Final Closeout: 12/31/2023

## Cost

Total Estimated: \$23,000,000  
 Spent to Date: \$0.00  
 % Spent to Estimated: 0%

### Status: On Scope

Adjustments: No change from prior month

### Status: On Schedule

Adjustments: No change from prior month

### Status: On Budget

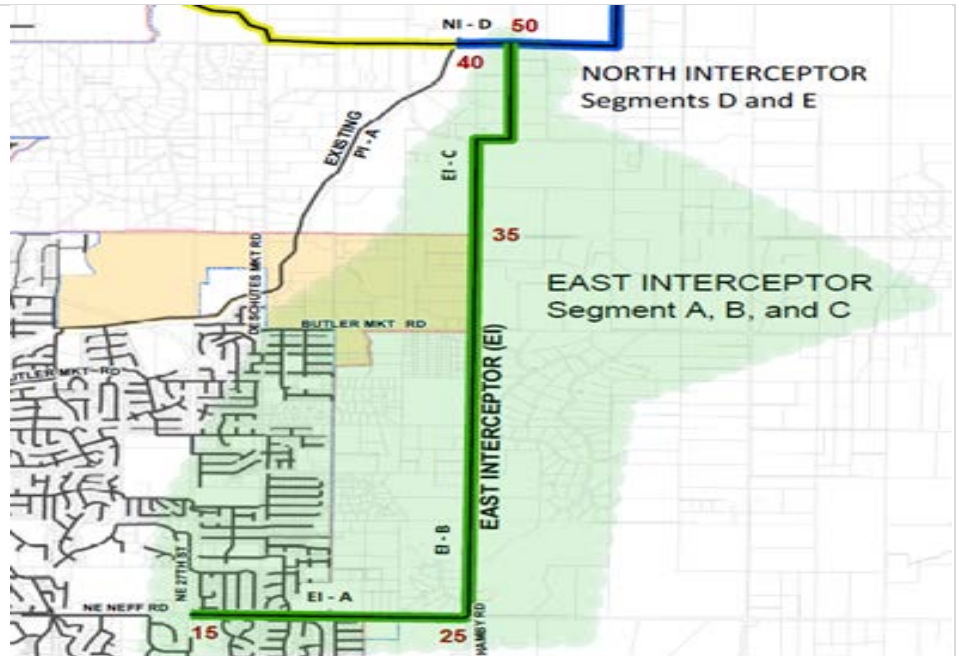
Adjustments: No change from prior month

**Status Update:** Project initiated in March 2017. Sub-projects are currently being scoped and will be named in subsequent updates.

**Cost Estimate Classification: 5**

## East Interceptor Project

Future Sewer Interceptor connecting with the SEI at Neff Rd and 27<sup>th</sup> St, proceeding east on Neff Rd to Hamby Rd (~5,300 feet), then turning north on Hamby and connecting to the North Interceptor (~16,500 feet). Total length of East Interceptor is approximately 21,800 feet.



Project Engineer: Skip Martin | [smartin@bendoregon.gov](mailto:smartin@bendoregon.gov)

### Scope

Design, bid, contract, and build approximately 22,000 feet of gravity sewer, various diameters running along the Eastern edge of Bend's UGB. Connects to the North Interceptor

### Schedule

Start Date: 3/1/17  
Substantial Completion: 12/31/2025  
Final Closeout: 12/31/2026

### Cost

Total Estimated: \$21,000,000  
Spent to Date: \$0.00  
% Spent to Estimated: 0%

### Status: On Scope

Adjustments: No change from prior month

### Status: On Schedule

Adjustments: No change from prior month

### Status: On Budget

Adjustments: No change from prior month

**Status Update:** Project initiated in March 2017.

**Cost Estimate Classification: 5**

