



METHODOLOGY REPORT

Transportation Supplemental System Development Charge
Southeast Area Plan

FINAL REPORT | August 6, 2026

PREPARED FOR: City of Bend

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1 INTRODUCTION

This report presents the base assumptions, core methodology, and resultant supplemental transportation System Development Charge (SDC) for the southeast area of Bend that is legally supported by State law as a funding mechanism for transportation infrastructure necessary to serve future development of the area.

1.1 LEGAL CONTEXT

Oregon Revised Statutes (“ORS”) 223.297 to 223.316 authorize local governments to establish system development charges (“SDCs”). These are one-time fees imposed on new development and are paid at the time of building permit issuance. System Development Charges are intended to recover a fair share of the cost of existing and planned capital improvements that provide capacity to serve future growth, such as transportation improvements.

The imposition of SDCs within the City of Bend is authorized per Chapter 12.10 of the Bend Municipal Code (BMC). Specifically, BMC 12.040.B notes “The amount of system development charges will be set and revised by resolution of the City Council, relying on a methodology adopted by resolution. Any resolutions setting or revising the amount of any SDC will state the amount of the charge and the methodology used to set the amount of the charge, and, if the charge applies to a geographic area smaller than the entire city, the geographic area subject to the charge.”

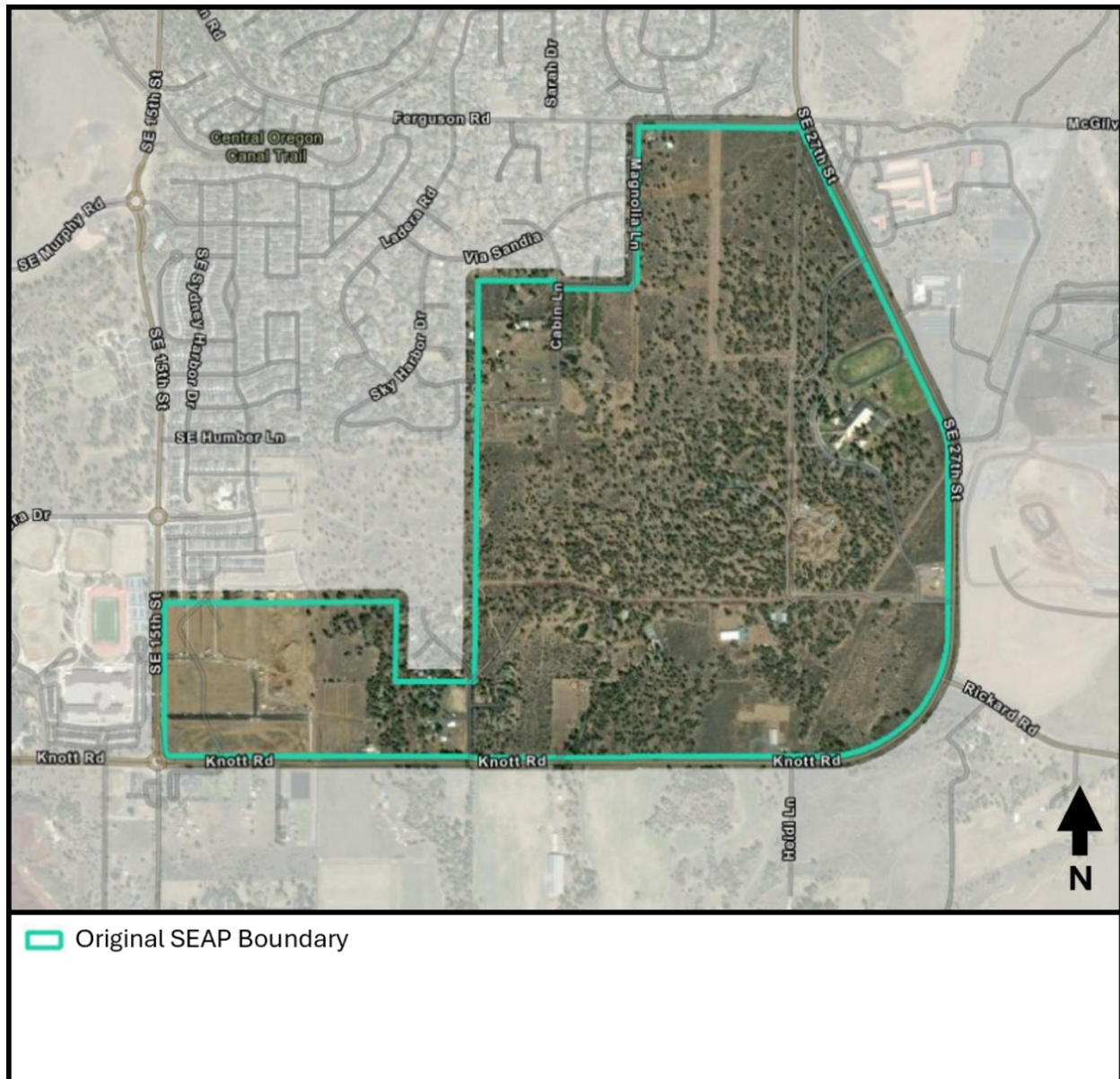
Chapter 12.10.050 of the BMC allows for the establishment or modification of a reimbursement fee and/or improvement fee. A reimbursement fee is defined as a fee used to fund improvements already constructed or under construction on the date of fee methodology adoption. An improvement fee is defined as a fee used to fund improvements to be constructed after the date of fee methodology adoption. The City intends to establish only an improvement fee, and not a reimbursement fee for the subject City southeast expansion area.

1.2 BACKGROUND

The Southeast Area is a special planned district located within the southeast corner of Bend’s Urban Growth Boundary (UGB). The area is generally bounded by 15th Avenue to the west, Knott Road to the south, 27th Street to the east, and Ferguson Road to the north.

The City of Bend expanded its UGB in 2016 to provide the land necessary for forecasted population, housing, and employment growth through 2028. The Southeast Expansion Area (SEA), also called the “Elbow Expansion Area,” is one of 10 designated expansion areas the City created during this process. It contains approximately 479 acres of land outside City limits, 443 acres of which were originally assumed to be developable. Figure 1 presents the original boundary of the Southeast Expansion Area Plan (SEAP). Figure 2 presents the current southeast area boundary for which this supplemental transportation SDC will apply. The fee calculated under this methodology will apply to development on properties within the area shown in Figure 2 following annexation into the City limits.

Figure 1. Original Southeast Area Plan (SEAP) Boundary



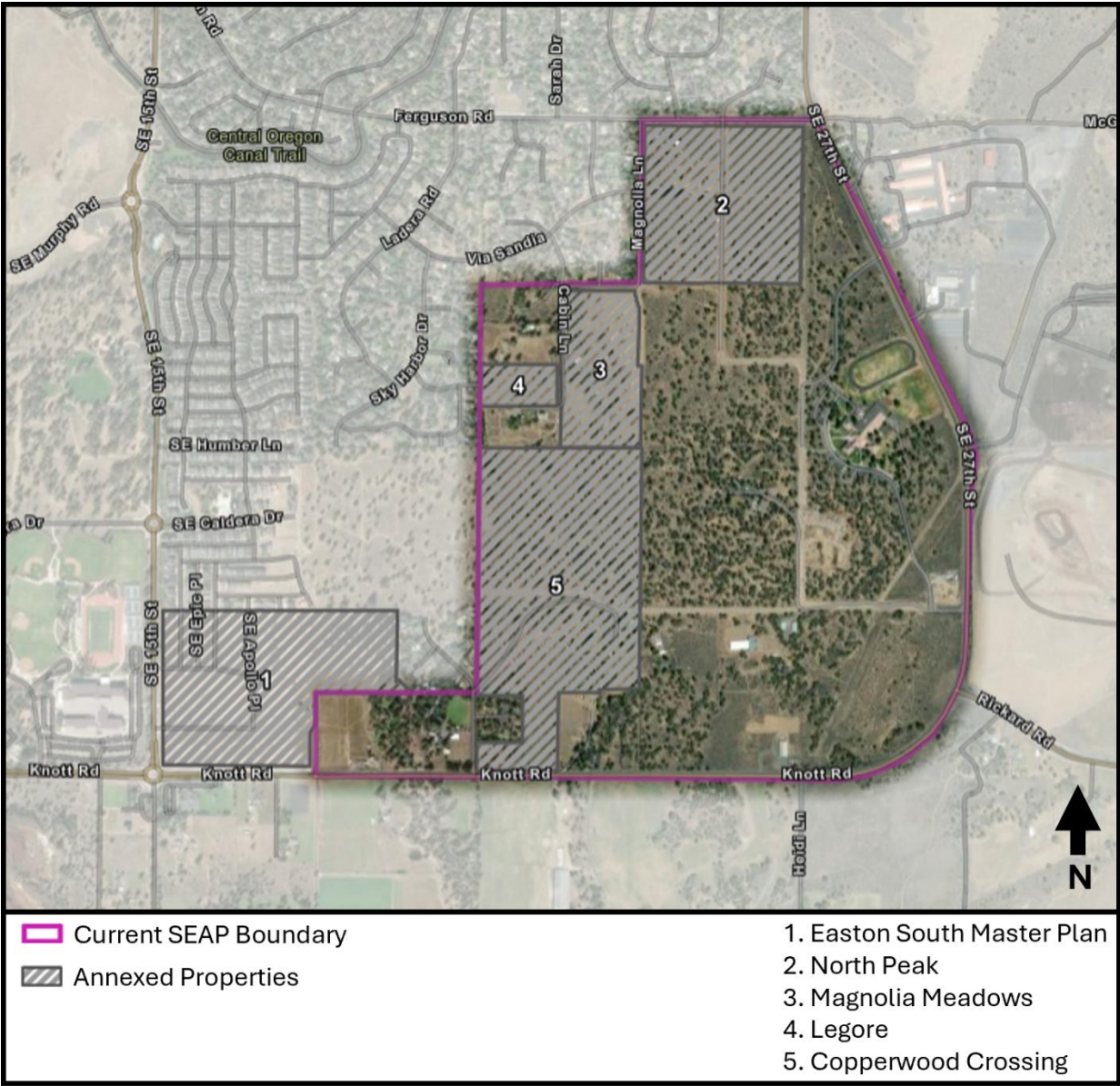
The SEAP was developed through a community process and adopted by the Bend City Council per Ordinance 2405 on April 21, 2021. The area plan creates development standards for the districts within the SEA in Bend Development Code Chapter 2.7, and the SEAP Summary Report, adopted into the City's Comprehensive Plan, includes a vision and guiding principles for the area and a transportation plan and infrastructure funding plan. The plan coordinates future land uses (a mix of commercial, industrial, mixed employment, residential, and public facility uses), infrastructure, public facilities, and funding opportunities within the SEA.

Several transportation improvement projects to support the SEAP were identified in the plan, such as construction of a north-south collector, an east-west collector, internal and perimeter roundabouts, and urban upgrades to perimeter arterials. Private development is anticipated to construct the primary internal transportation system improvements in conjunction with site development. Those improvements to local streets and internal collector roadways will be provided by the private sector as non-creditable improvements. The City's transportation funding plan for the SEAP reflects that partnership between public improvements funded and built by private development

paired with additional publicly constructed improvements funded by revenue collected through City transportation systems development charges coupled with right of way donations made by adjacent SEA property developments.

System Development Charges (SDCs) are an important funding source for transportation system infrastructure. In September 2020, the City adopted the Transportation System Plan (TSP) that identifies \$750 million (in 2020 dollars) in capital improvements needed for the system through 2040. Later in 2020, voters authorized a General Obligation (GO) bond to fund \$190 million in transportation improvements to address traffic congestion, expand walking and biking facilities, and improve neighborhood safety conditions. The City’s current TSDC rate is based on a TSDC Methodology Report published and adopted in 2024.

Figure 2. Current Southeast Area Boundary for TSSDC Methodology



Transportation improvements serving the City’s southeast area were not included in the Citywide Transportation SDC methodology report adopted in 2024. The SEA Plan Summary Report Funding Plan advised the City on how

needed infrastructure in the SEA could be funded; the Funding Plan recommended a supplemental SDC as one potential mechanism to fund required transportation infrastructure to fund required infrastructure improvements not included in the Citywide SDC project list. This methodology implements this funding recommendation by establishing a Transportation Supplemental System Development Charge (TSSDC) for future SEAP development. The TSSDC rate will be charged on a per PM peak hour trip basis in addition to the City’s current Citywide TSSDC rate established under City of Bend Development Code Chapter 12.10.

1.3 TSSDC SUMMARY

This methodology report summarizes the costs associated with future SEA transportation improvements and the number of PM peak hour trips generated within the SEA (Figure 2). Supporting technical memoranda addressing transportation capital improvement costs and SEAP trip generation estimates provide detailed documentation on cost and trip estimating assumptions and methodology. The recommendations of both memoranda are summarized herein and are utilized to calculate the TSSDC rate for the SEAP.

Cost estimates for the southeast area transportation infrastructure improvements were developed by DEA and the City utilizing construction year 2026 costs as documented in the Bend SEAP TSSDC Methodology: Transportation Costs Estimate technical memorandum published on August 4, 2026, by David Evans and Associates for the City of Bend. Land development assumptions and resulting PM peak hour trip generation forecasts are documented in the Bend SEAP TSSDC Methodology: Trip Generation Estimates technical memorandum published August 4, 2026, by David Evans and Associates for the City of Bend. Both memoranda, together with this Methodology Report, form the legal basis for the establishment of the Bend Southeast Area Plan’s Transportation Supplemental Systems Development Charge.

The number of PM peak hour trips generated within the SEA were estimated by applying Institute of Transportation Engineers (ITE) trip rates to a reasonable mix of land development assumptions based upon existing Comprehensive Plan designations, Zoning, and development densities and uses similar to recently development entitled properties located within the Southeast Area Plan boundary.

$$\text{SEAP TSSDC} = \frac{\text{Cost of SEAP Transportation Improvements}}{\text{Number of PM Trips Generated within SEAP}}, \text{ Where SEAP TSSDC is in \$ per PM peak hour trip}$$

Equation 1. Transportation Supplemental SDC Rate Formula

2 ANALYSIS

The methodology used to calculate transportation SDCs begins with the determination of growth capacity needs (number of PM peak hour trips) and costs of resulting transportation improvement projects. This section describes the analysis for both components.

2.1 GROWTH

This section presents the projected growth in trips over the TSP planning period for the southeast area properties.

The adopted SEAP included approximately 479 acres of land outside City limits, 443 acres of which were originally assumed to be developable. The following land uses were adopted as part of the SEAP:

- High-Density Residential (RH)
- Medium-Density Residential (RM)
- Standard-Density Residential (RS)
- Low-Density Residential (RL)
- Mixed Employment (ME)
- General Commercial (CG)
- Light Industrial (IL)
- Public Facilities (PF)

Figure 3 below presents the current land use designations within the current SEAP boundary. As noted in the figure, two properties currently have a different land use designation than originally adopted with the SEAP in 2021. A reasonable mix of uses including a mix of approximately 80% commercial and 20% affordable housing within the General Commercial (CG) zone and approximately 20% commercial and 80% multifamily residential within the Mixed Employment (ME) zone were developed as the basis for trip generation estimates within the SEAP.

Table 1. Land Use Assumptions for SEAP

Land Use	Zoning Designation	Current SEAP Boundary Gross Area (Acres)	Average Development Density	Development Assumption
High-Density Residential	RH	9.20	26.4 du/acre	243 du
Medium-Density Residential	RM	17.08	15.6 du/acre	266 du
Standard-Density Residential	RS	90.14	5.7 du/acre	514 du
Low-Density Residential	RL	2.89	2.6 du/acre	8 du
Mixed Employment (Non-Residential)	ME	20.72	0.42 FAR	379,100 SF
Mixed Employment (Residential)	ME	82.86	17.5 du/acre	1,450 du
Mixed Employment (Elementary School)	ME	30.20	19.9 students/acre	600 students
General Commercial (Non-Residential)	CG	29.73	0.29 FAR	375,600 SF
General Commercial (Affordable Housing)	CG	7.43	33.4 du/acre ²	248 du
Light Industrial	IL	35.19	0.25 FAR	367,900 SF
Public Facilities ¹	PF	33.10	1.0 FAR	33.10 acres
TOTAL		358.54 acres		

Notes:

1. Does not assume re-development of existing 24.1-acre High Desert Middle School site.
2. Resultant development density for entire General Commercial zone is 6.67 du/acre.

The land use assumptions presented in Table 1 were used to prepare trip generation estimates for the SEAP. In general, land use categories available in ITE's *Trip Generation Manual*, 12th Edition were reviewed for consistency with allowable uses in each zone per the Bend Development Code.

Figure 3. 2021 Comprehensive Plan Designations (SEAP)

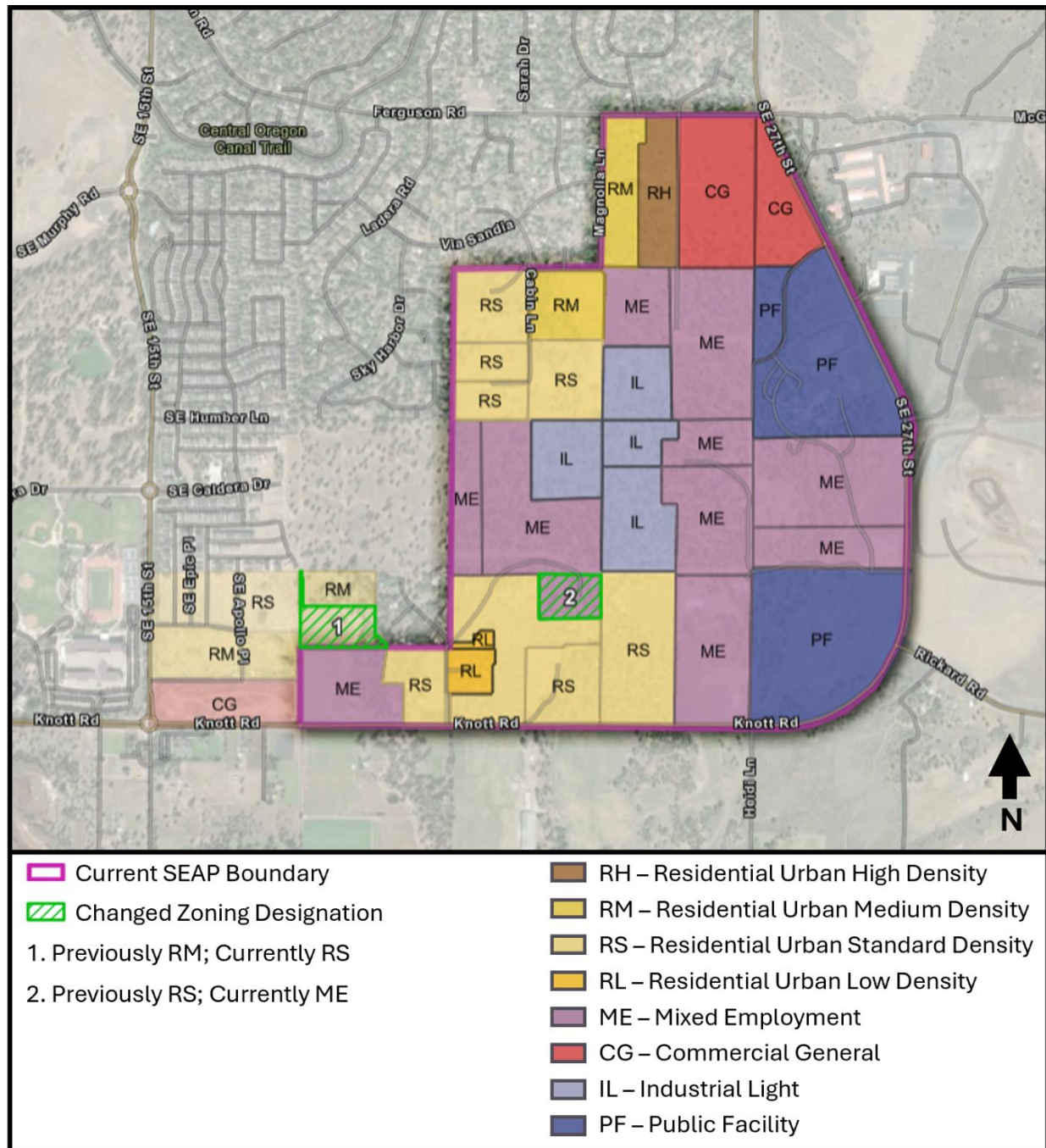


Table 2. Trip Generation Estimates per SEAP Zoning Designation

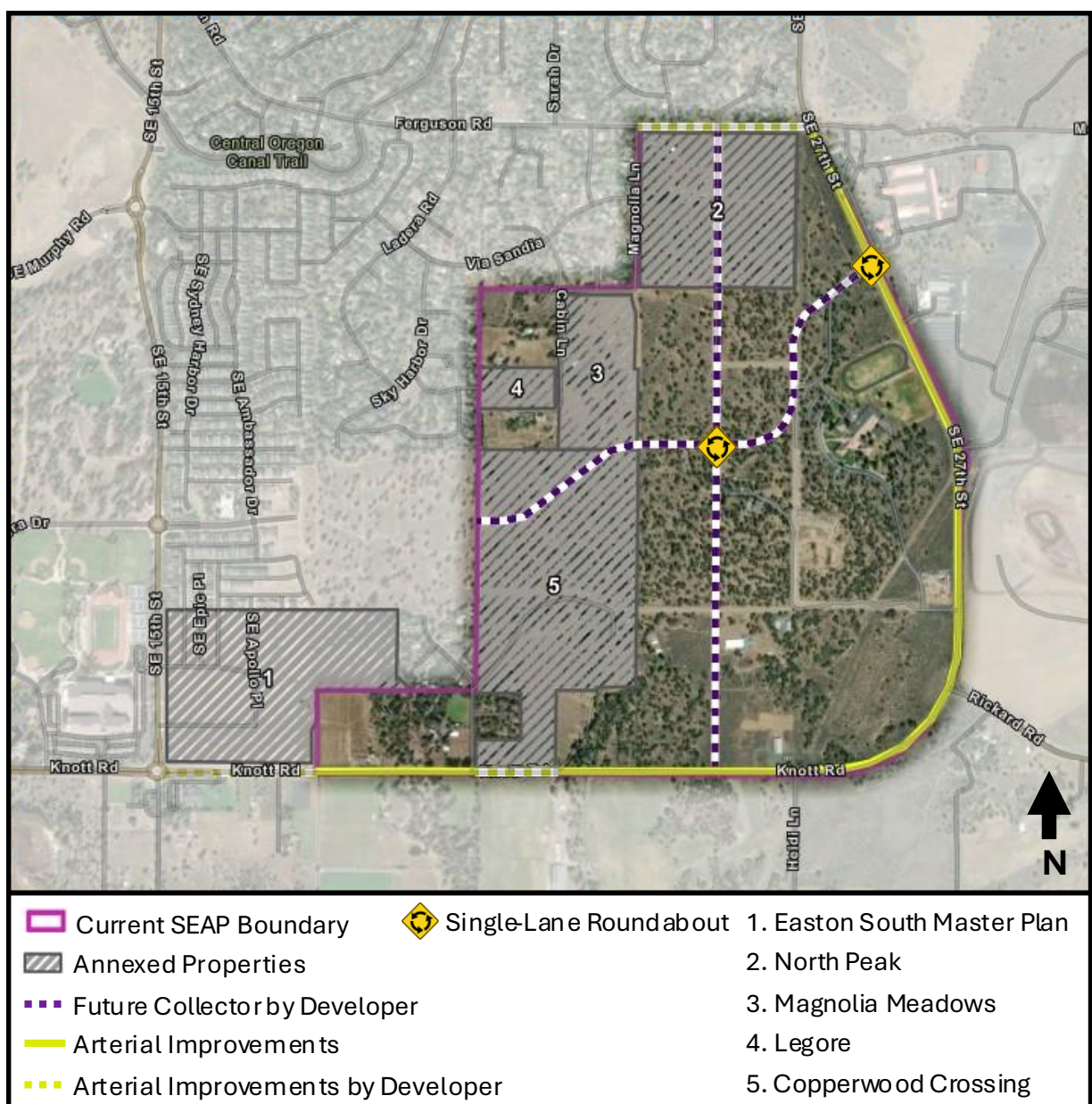
Land Use	Zoning	Development Assumption	ITE Land Use Assumption	PM Peak Hour Trip Rate	PM Peak Hour Trips
High-Density Residential	RH	243 du	Multifamily Housing (Mid-Rise) (LUC 221)	0.38	92
Medium-Density Residential	RM	266 du	Multifamily Housing (Low-Rise) (LUC 220)	0.52	138
Standard-Density Residential	RS	514 du	Single-Family Attached Housing (LUC 215)	0.51	262
Low-Density Residential	RL	8 du	Single-Family Detached Housing (LUC 215)	0.93	7
Mixed Employment (Non-Residential)	ME	379,100 SF	Office Park (LUC 750)	1.21	459
Mixed Employment (Residential)	ME	1,450 du	Multifamily Housing (Mid-Rise) (LUC 221)	0.38	551
Mixed Employment (Elementary School)	ME	600 students	Elementary School (LUC 520)	0.16	96
General Commercial (Non-Residential)	CG	187,800 SF	Shopping Plaza (>150k) (LUC 820)	3.26	612
General Commercial (Non-Residential)	CG	187,800 SF	Shopping Plaza (40-150k) (LUC 821)	8.58	1,611
General Commercial (Residential)	CG	248 du	Multifamily Housing (Mid-Rise) (LUC 221)	0.38	94
Light Industrial	IL	367,900 SF	Industrial Park (LUC 130)	0.23	85
Public Facilities	PF	33.10 acres	Public Park (LUC 411)	0.15	5
TOTAL					4,012

The land use assumptions presented in Table 1 were used to prepare trip generation estimates for the SEAP. Land use categories available in ITE's Trip Generation Manual, 12th Edition were reviewed for consistency with allowable uses in each zone per the Bend Development Code. The properties within the SEA are estimated to generate 4,012 PM peak hour trips.

2.2 PROJECT COSTS

The City's current Citywide SDC project list does not identify transportation improvements serving the City's southeast area, except the eastern half of Knott Road and SE 27th Street which is currently included in the City's 2024 TSDC Methodology and SDC project list, as further explained below. The transportation projects identified in this report have no other public funding source. Figure 4 shows all SEAP related collector and arterial road improvements plus two planned roundabouts, including both the improvements slated to be constructed by pending or future approved development (dashed line) and the improvements included as part of the TSSDC methodology (solid line). Local and internal collector street improvements, including required right of way are anticipated to be dedicated and constructed by developers as costs of the private development without public contribution. Any project not included in a SDC project list is not eligible for credit against SDCs assessed.

Figure 4. Transportation Improvements Map

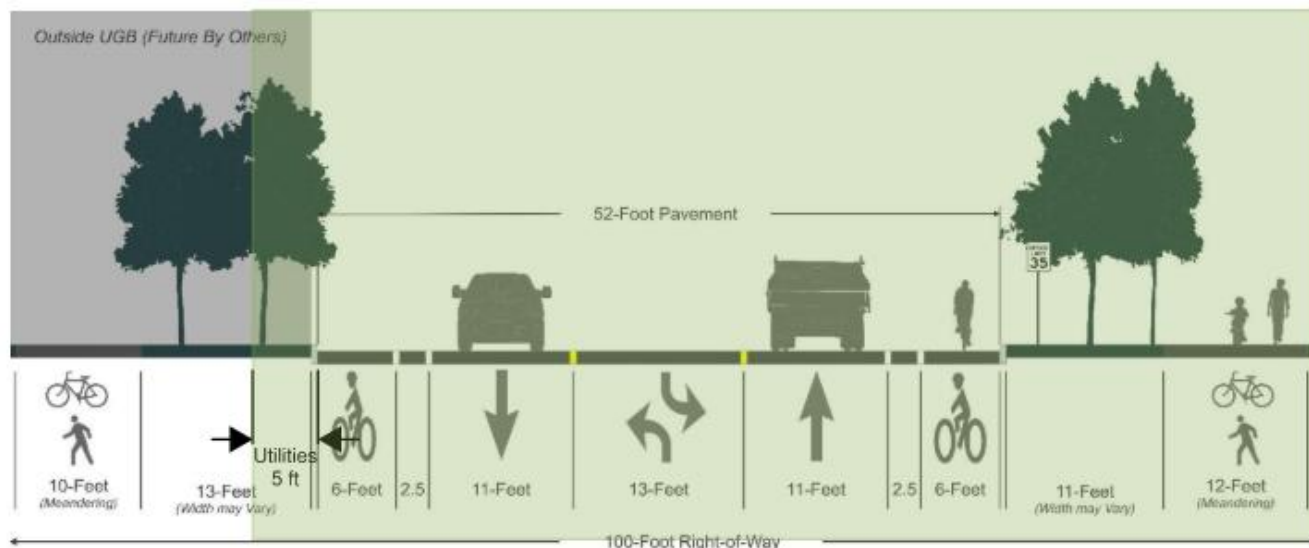


2.3 ARTERIAL IMPROVEMENTS

Figure 5 depicts the cross-section for Knott Road to be constructed by the Easton South Master Plan development. This cross-section is also planned for the remainder of Knott Road and 27th Street from Ledger Lane to Ferguson Road with construction anticipated to be mostly delivered by the City of Bend utilizing a combination of funding from the City-wide SDC together with funding from this transportation supplemental system development charge (TSSDC) and adjacent urban right of way (north of Knott Road and west of 27th Street) to be dedicated by Southeast Area developers at no cost to the City. A small portion of Knott Road is anticipated to be improved by the Copperwood Crossing development, as required by their Annexation Agreement.

Cost estimates for arterial roadway improvements along Knott Road and 27th Street incorporated into the TSSDC represent only 36% of the total project costs as this project is included as part of the Citywide TSDC list (Project M-22-26) covering 64% of its cost. The cost was based upon data developed by DEA using local construction costs for similar, publicly delivered projects and assumes the inclusion of purchasing adjacent rural right of way (south of Knott Road and east of 27th Street to account for utilities) coupled with donated dedication of adjacent urban right of way (north of Knott Road and west of 27th Street) in conjunction with development, to yield a total right of way width of 82 feet.

Figure 5. Knott Road Cross Section



2.3.1 Cost Estimates

Table 3 presents the cost estimate for the planned public improvements to the existing Arterials in the SEA. Improvement costs are rounded to the nearest \$1,000 and reflect the allocation of cost between the City-wide TSDC (64%) and the SEA TSSDC (36%). The full cost estimate for the Knott Road and 27th Street improvements from Ledger Lane to Ferguson Road was estimated at \$18,971,749 for an approximately 8,760-foot segment.

Table 3. Roadway Cost Estimates

Project ID	Project Name	Segment Length (feet)	Cost per Lineal Foot	Total Project Cost ¹
A-1	Knott Road/27th Street – Ledger Lane to Ferguson Road	8,760	\$2,165.72	\$ 18,972,000
36% Supplemental TSSDC ELIGIBLE COST				\$6,830,000

Notes:

1. Project cost rounded to the nearest \$1,000.

Cost estimates for the SEA transportation infrastructure improvements were prepared utilizing construction year 2026 pricing.

2.4 FUTURE COLLECTOR ROADWAYS (BY PRIVATE DEVELOPERS)

The SEAP calls for two (2) future Collector roadways providing east-west and north-south connectivity. For east-west connectivity, Caldera Drive will be extended from its current terminus at SE Ambassador Drive with development of the Easton Master Plan area. The extension of Caldera Drive from the eastern boundary of the Easton Master Plan area to 27th Street will be completed by private developers. For north-south connectivity, Journey Drive will be extended from its current terminus at Ferguson Road with development of the Magnolia Meadows development. These collectors and other associated improvements on the Collector roadway system such as enhanced trail and pedestrian crossings, Rectangular Rapid Flashing Beacon (RRFB), and enhanced landscape medians are all anticipated to be funded by private development and are not included in the TSSDC project list.

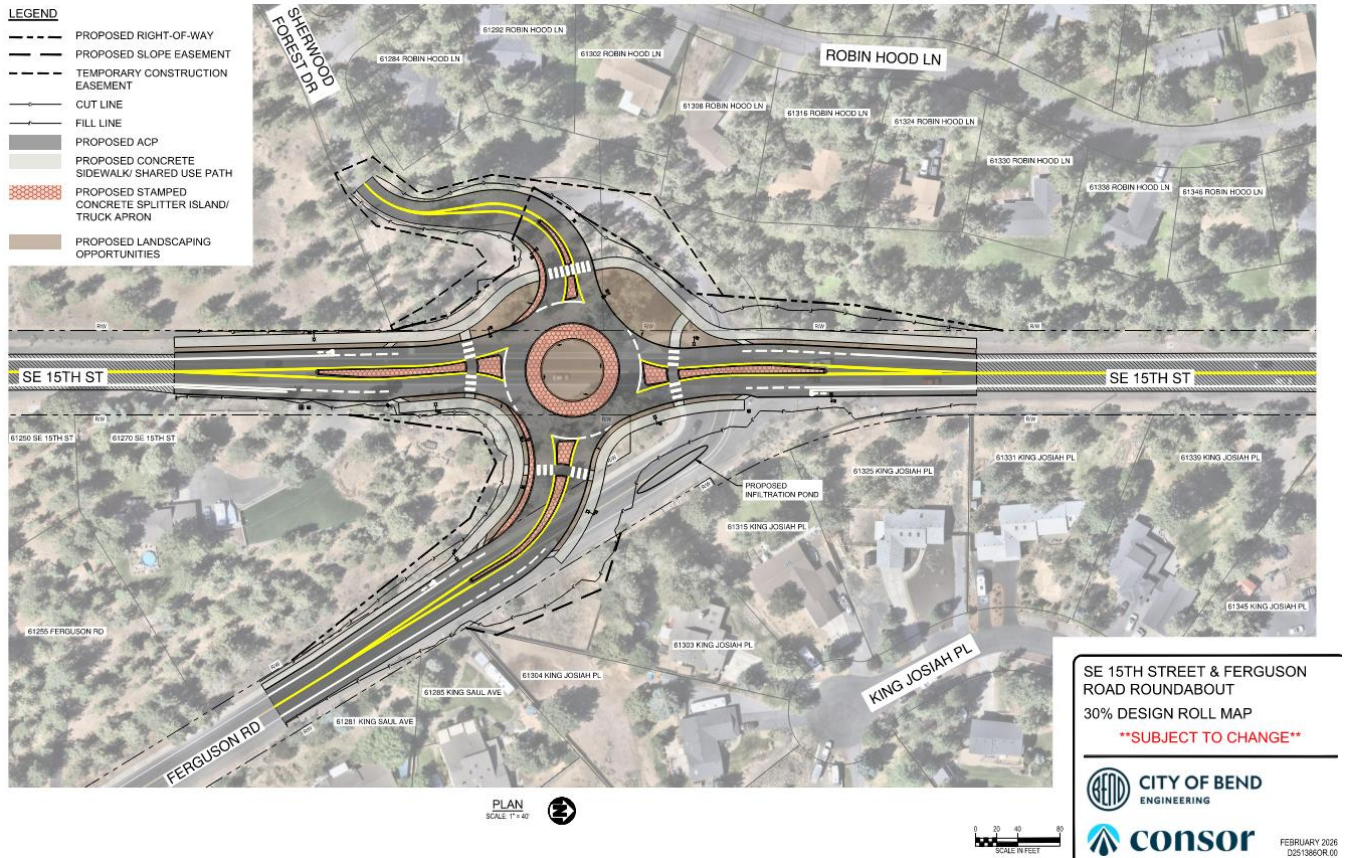
Cost estimates for collector roadways are not included as part of the TSSDC rate methodology and are not TSSDC or SDC creditable.

2.5 FUTURE ROUNDABOUTS

The adopted SEAP calls for six (6) roundabouts, three (3) of which have already been constructed along 15th Street with recent development and one (1) which will be constructed at the Ferguson Road/27th Street intersection by existing approved development. The City will construct two (2) new roundabouts along Caldera Drive at the Journey Drive and 27th Street intersections as development within the SEAP occurs, as determined by the City, utilizing revenue collected through the SEAP TSSDC.

The roundabout internal to the development area at Caldera Drive and Journey Drive is assumed to be a mini roundabout. The outer roundabout at Caldera Drive and 27th Street is assumed to be a single-lane roundabout with an inscribed diameter of 130 feet, consistent with the recently constructed roundabout at the 15th Street/Ferguson Road.

Figure 6. 15th Street/Ferguson Road Roundabout 30% Design



2.5.1 Cost Estimates

Cost estimates for the new roundabouts were provided by the City based upon prior similar project costs as presented in the City's currently adopted Five Year Capital Improvement Program (CIP). Table 4 presents the cost estimates for the intersection improvement projects rounded to the nearest \$1,000.

Table 4. Intersection Cost Estimates

Project ID	Project Name	Project Cost
R-1	Caldera Drive/Journey Drive Mini Roundabout	\$2,500,000
R-2	27th Street/Caldera Drive Roundabout	\$4,000,000
TOTAL		\$6,500,000

2.6 COST BASIS

In summary, cost estimates for the roadway and intersection projects are as follows:

- Roadway improvements: \$6,830,000 (At 36% TSSDC Eligibility)
- Intersection improvements: \$6,500,000
- **Total Cost of SEAP Transportation Improvements: \$13,330,000**

The SEAP TSSDC rate is based on the total cost of SEAP transportation improvements and the total PM peak hour trips generated within the SEAP, as noted in the TSSDC equation below. Additional information on projected eligible infrastructure costs totaling \$13,330,000 is included in the Bend SEAP TSSDC Methodology: Transportation Costs Estimate technical memorandum dated August 4, 2026 (Appendix B). The Bend SEAP TSSDC Methodology: Trip Generation Estimates technical memorandum dated August 4, 2026 (Appendix C) provides additional information on the development of PM Peak Hour trip generation forecasts for the SEAP District resulting in an estimate of 4,012 future PM Peak Hour vehicular trips. Together, the forecast TSSDC eligible transportation infrastructure costs of \$13,330,000 allocated across the forecast 4,012 future PM Peak Hour vehicular trips yields a recommended TSSDC rate of \$3,323 per PM peak hour trip.

Fees will be assessed on a per-trip basis at the time of development using the land use categories established in the 2024 Transportation SDC methodology update and subsequent resolutions. These categories will be included in the City's adopted fee resolution. The City may periodically review, and update SDC category definitions included in the City's SDC fee resolution(s) as needed to reflect more current editions of the ITE manual and evolving land use types and forms developing in the City. Such updates will not be considered changes to this methodology.

Using these categories and assumptions, plus the compliance cost described below, the initial SDC schedule for the Supplemental Transportation SDC described in this methodology is shown in Table A-1. Actual fees charged will be those adopted by Bend City Council by resolution, based on this methodology.

$$\text{SEAP TSSDC} = \frac{\text{Cost of SEAP Transportation Improvements}}{\text{Number of PM Trips Generated within SEAP}}, \text{ Where SEAP TSSDC is in \$ per PM peak hour trip}$$

$$\text{SEAP TSSDC} = \frac{\$13,330,000}{4,012 \text{ PM peak hour trips}}$$

$$\text{SEAP TSSDC} = \$3,323/\text{PM peak hour trip}$$

Pursuant to ORS 223.207, the supplemental SDC may include costs to the City of complying with the Oregon laws governing SDCs. City staff analyzed the finance and Community and Economic Development Department (CEDD) compliance costs used for the 2024 citywide SDC methodologies, to estimate costs for administering and ensuring compliance of the supplemental SDC. Compliance costs of 1.985% of the TSSDC rate, or \$65.96 per PM peak hour trip will be added based on an estimation of staff time for reporting and other compliance requirements. **This results in a total TSSDC rate of \$3,388.96 per PM peak hour trip and will be rounded to \$3,389 for financial simplicity.** This charge has been added to the TSSDC rate per PM Peak Hour trip shown in Table A-1.

As allowed by SDC Statutes (see, ORS 223.304), the City may annually update the SDCs adopted by resolution based on application of an independent cost index. The City will use information published by the Engineering News Record (ENR) Construction Cost index to determine the annual inflationary adjustment, or other index identified in the Bend Municipal Code. This adjustment is warranted to reflect the impact to the City of advancing the funds for the Project and receiving reimbursement over time through this supplemental TSSDC.

2.7 EXEMPTIONS

For the reasons set forth in the 2024 Transportation System Development Charges Methodology Report (March 31, 2024), which are incorporated herein by this reference, the following development types are exempt from payment of 100% of TSSDCs under this methodology, subject to recording of deed restrictions and repayment as provided in the Bend Municipal Code:

1. Rental housing that is affordable for households with an income at or below 80 percent of the area median income (“AMI”) as determined by the State Housing Council based on information from the United States Department of Housing and Urban Development.
2. Owner-occupied or lease-to-purchase housing for households with an income at or below 80 percent of the AMI as determined by the State Housing Council based on information from the United States Department of Housing and Urban Development.
3. Homeless shelters, providing shelter on a temporary basis, and other accessory services, for individuals and families who lack permanent housing.
4. Childcare facilities, as defined in the Bend Development Code.

TSSDCs may be payable on conversion or redevelopment of an exempt use to a non-exempt use, as provided in the Bend Code and depending on the type of deed restriction recorded for the exempt use.

Supplemental Transportation SDC Schedule - Table A-2

Categories	Unit of Measure	SE Area Transp \$/Unit
Residential Categories		
Single Unit & Middle Housing		
Average		\$ 3,084
Tier 1 <600 SQ FT	Dwelling Unit	\$ 1,830
Tier 2 (601-1200 SQ FT)	Dwelling Unit	\$ 2,203
Tier 3 (1201-1600 SQ FT)	Dwelling Unit	\$ 2,745
Tier 4 (1601-2200 SQ FT)	Dwelling Unit	\$ 3,220
Tier 5 (2201-3000 SQ FT)	Dwelling Unit	\$ 3,525
Tier 6 (>3001 SQ FT)	Dwelling Unit	\$ 3,626
Multi Unit Housing		
Housing >4 units	Dwelling Unit	\$ 1,762
Manufactured Dwelling Park, per pad	Dwelling Unit/Pad	\$ 1,559
Micro-Units/Single Occupancy	Dwelling Unit	\$ 1,077
Dormitories	Room	na
Sr. Housing (55+ restricted, no care)	Dwelling Unit	\$ 847
Other Housing		
Continuing Care Facility	Units	\$ 644
Accessory Dwelling Unit	Dwelling Unit	\$ 373
Nonresidential Categories		
Standard Categories		
Industrial ^a	1,000 SQ FT	\$ 1,898
Warehouse/ Storage/ Dist. Center ^a	1,000 SQ FT	\$ 508
Movie Theater	1,000 SQ FT	\$ 16,640
Indoor Fitness & Recreation	1,000 SQ FT	\$ 8,845
Church/Religious Organization	1,000 SQ FT	\$ 1,457
Hospital	1,000 SQ FT	\$ 2,915
Medical - Dental - Vet Office	1,000 SQ FT	\$ 11,997
General Office	1,000 SQ FT	\$ 3,999
Stand-Alone Retail/Services with >50% Floor Area Warehouse/Storage	1,000 SQ FT	\$ 4,751
Retail/Services & Integrated Development Over 150K SQ FT (Tier 2)	1,000 SQ FT	\$ 4,751
Retail/Services & Integrated Development Less than 150K SQ FT (Tier 1)	1,000 SQ FT	\$ 7,557
Super store (with or w/out membership & discount) ^a	1,000 SQ FT	\$ 9,918
Vehicle Sales ^a	1,000 SQ FT	\$ 12,709
Supermarket ^a	1,000 SQ FT	\$ 14,299
Convenience Store	1,000 SQ FT	\$ 26,190
Furniture Store	1,000 SQ FT	\$ 908
Bank/Financial Institution	1,000 SQ FT	\$ 18,499
Restaurant (Table Service)	1,000 SQ FT	\$ 7,961
Quick Service Restaurant ^a	1,000 SQ FT	\$ 30,104

Special Unit Categories

Public Park, Private/Public Golf Course, Common Area ^a	Acre	\$	508
Community Space	1,000 SQ FT	See Park rate, if applicable	
Golf Course Club House	1,000 SQ FT		
Restroom	Each		
Outdoor Pool	1,000 SQ FT Surface Area		
Childcare (presently exempted in methodologies)	Child	\$	2,677
School K-12	Student	\$	520
College/University	Student	\$	441
Gas Sales/Service Station ^a	Fuel or Service Position or Site	\$	5,787
Manual Car Wash ^a	Bay	\$	15,894
Automated Car Wash ^a	Bay	\$	15,894
Hotel/Motel/RV Park ^a	Room or Space	\$	1,593

na = not applicable

NOTE: See category definitions in 2024 Methodology and adopted fee resolution; controlling definitions are found in the City's adopted Citywide SDC fee resolution.

^aIndividual category rate applies even if part of an Integrated Retail/Services development. For Quick Service Restaurants, only those with a drive-thru will be charged individual category rates, even if included in an integrated development.

SE Area Supplemental Transportation SDC - Cost Per Trip

\$3,389



BEND SEAP TSSDC METHODOLOGY: TRANSPORTATION COSTS ESTIMATE

City of Bend

TECH MEMO | August 4, 2026

PREPARED FOR: City of Bend

ATTN: Ryan Oster, PE | Engineering Director/City Engineer

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1.1 SOUTHEAST AREA PLAN (SEAP)

Figure 1. Original Southeast Area Plan (SEAP) Boundary



1.1.1 Background and History

The City of Bend expanded its UGB in 2016 to provide the land necessary for forecasted population, housing, and employment growth through 2028. The Southeast Expansion Area (SEA), also called the “Elbow Expansion Area,” is one of 10 designated expansion areas the City created during this process. It contains approximately 479 acres of land outside City limits, 443 acres of which were originally assumed to be developable. Figure 1 presents the original SEAP boundary.

The SEAP was developed through a community process and adopted by the Bend City Council per Ordinance 2405 on April 21, 2021. It supports livability within the SEAP and compatibility with existing City infrastructure by guiding design of the SEA’s urban systems. The plan coordinates future land uses (a mix of commercial, industrial, mixed employment, residential, and public facility uses), infrastructure, public facilities, and funding opportunities within the SEA. Several transportation improvement projects to support the SEAP were identified in the plan, such as construction of a north-south collector, an east-west collector, internal and perimeter roundabouts, and urban upgrades to perimeter arterials. Private development has expressed a desire to construct the primary internal transportation system improvements in conjunction with site development. Those improvements to local streets and internal collector roadways will be provided by the private sector as non-creditable improvements. The City’s transportation funding plan for the SEAP reflects that partnership between non-creditable public improvements funded and built by private development paired with additional publicly constructed improvements funded by revenue collected through City transportation systems development charges coupled with right of way donations made by adjacent SEA property developments.

System development charges are a significant mechanism employed for funding SEAP projects. As established in the March 2024 Transportation System Development Charges Methodology Report, the City currently charges a Transportation System Development Charge (TSDC) for new development. The current TSDC rate, however, accounts for development and capital project needs within prior City limits; but also includes 64% of the cost of the SEAP arterial improvements to Knott Road and 27th Avenue. To fully fund SEAP projects currently outside of City limits, the City wishes to establish a TSSDC rate schedule to be imposed on new development within the SEAP which will supplement the funding generated by the Citywide TSDC revenue source. The TSSDC methodology report will establish a SEAP TSSDC rate and provide the City with a mechanism to fund the balance of arterial and collector system transportation infrastructure identified and located within the SEAP not being funded and built by private development.

1.1.2 Annexed SEAP Properties

Several properties within the SEAP have been annexed to date and are currently under development, as presented in Table 1. While several properties have been annexed, they will not be excluded from the Bend TSSDC methodology calculations with the exception of the Easton South Master Plan area. The resultant new SEAP boundary to be considered in the TSSDC methodology is depicted in Figure 2.

Table 1. SEAP Parcel Annexation Since City of Bend 2021 SEAP Adoption

Property Map No.	Ordinance Number	Annexation Title	Annexation Date	Property Area (Acres)	Zoning	Included in TSSDC Methodology?
1	NS-2416	Easton South Master Plan	August 4, 2021	50.95	RS, RM, CG	No
2	NS-2469	North Peak	March 15, 2023	41.00	RM, RH, CG	Yes
3	2489	Magnolia Meadows	December 20, 2023	19.12	RM, RS	Yes
4	NS-2501	Legore	June 20, 2024	5.00	RS	Yes
5	NS-2546	Copperwood Crossing	March 4, 2026	66.46	ME, IL, RL, RS	Yes

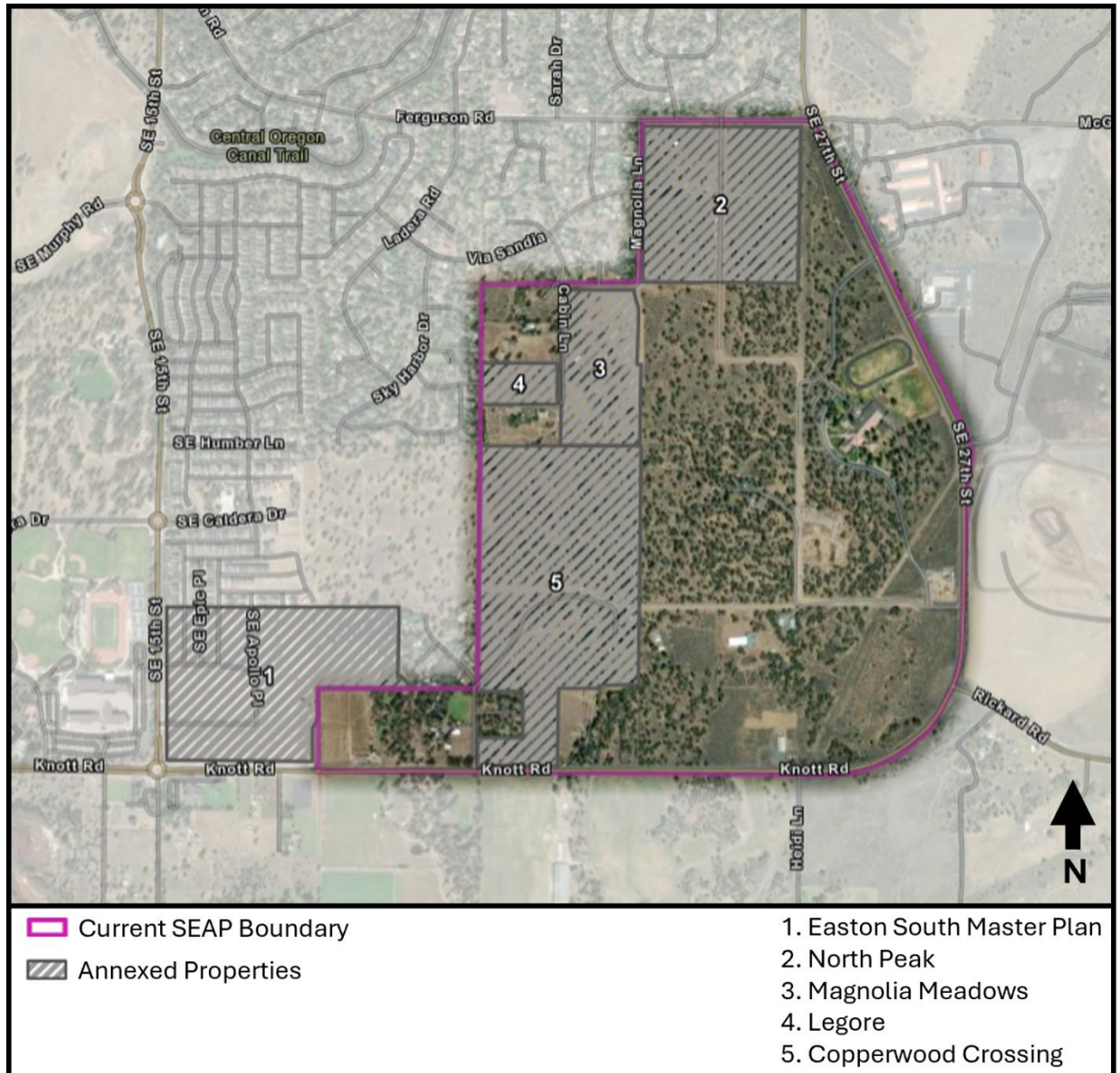
The Annexation Agreements for the annexed SEAP properties include the transportation projects to be constructed by each developer, as applicable. A summary of these projects by developer is presented in Table 2.

Table 2. Transportation Projects by SEAP Annexed Properties

Property Map No.	Annexation Title	Projects Constructed by Developer
1	Easton South Master Plan	- SE Knott Road frontage (3/4) improvements between SE 15th Street and eastern property line - SE 15th Street/SE Caldera Drive single-lane roundabout - Multi-use path on east side of SE 15th Street (TSDC creditable) - SE 15th Street sidewalk from Chloe Lane to King Hezekiah Way (TSDC creditable) - Coid pedestrian bridge from Chloe Lane to Coid canal (TSDC creditable)
2	North Peak	- Ferguson Road/27th Street single-lane roundabout (TSDC creditable) - Ferguson Road/15th Street single-lane roundabout
3	Magnolia Meadows	None
4	Legore	None
5	Copperwood Crossing	- SE Knott Road frontage (3/4) improvements through property extents - Caldera Drive through property extents

Projects to be constructed by the SEAP developers, as presented in Table 2, are excluded from the TSSDC capital project costs and thus excluded from the TSSDC rate calculations. As such, they are thus not deemed TSSDC creditable.

Figure 2. Current SEAP Boundary for TSSDC Methodology



1.1.3 Next Steps

This technical memorandum summarizes the costs associated with transportation improvements within the SEAP, or the “numerator” utilized to calculate the TSSDC rate for the SEAP.

$$\text{SEAP TSSDC} = \frac{\text{Cost of Transportation Improvements}}{\text{PM Trips Generated within SEAP}}, \text{ Where SEAP TSSDC is in \$ per PM peak hour trip}$$

2 TRANSPORTATION INFRASTRUCTURE ASSUMPTIONS

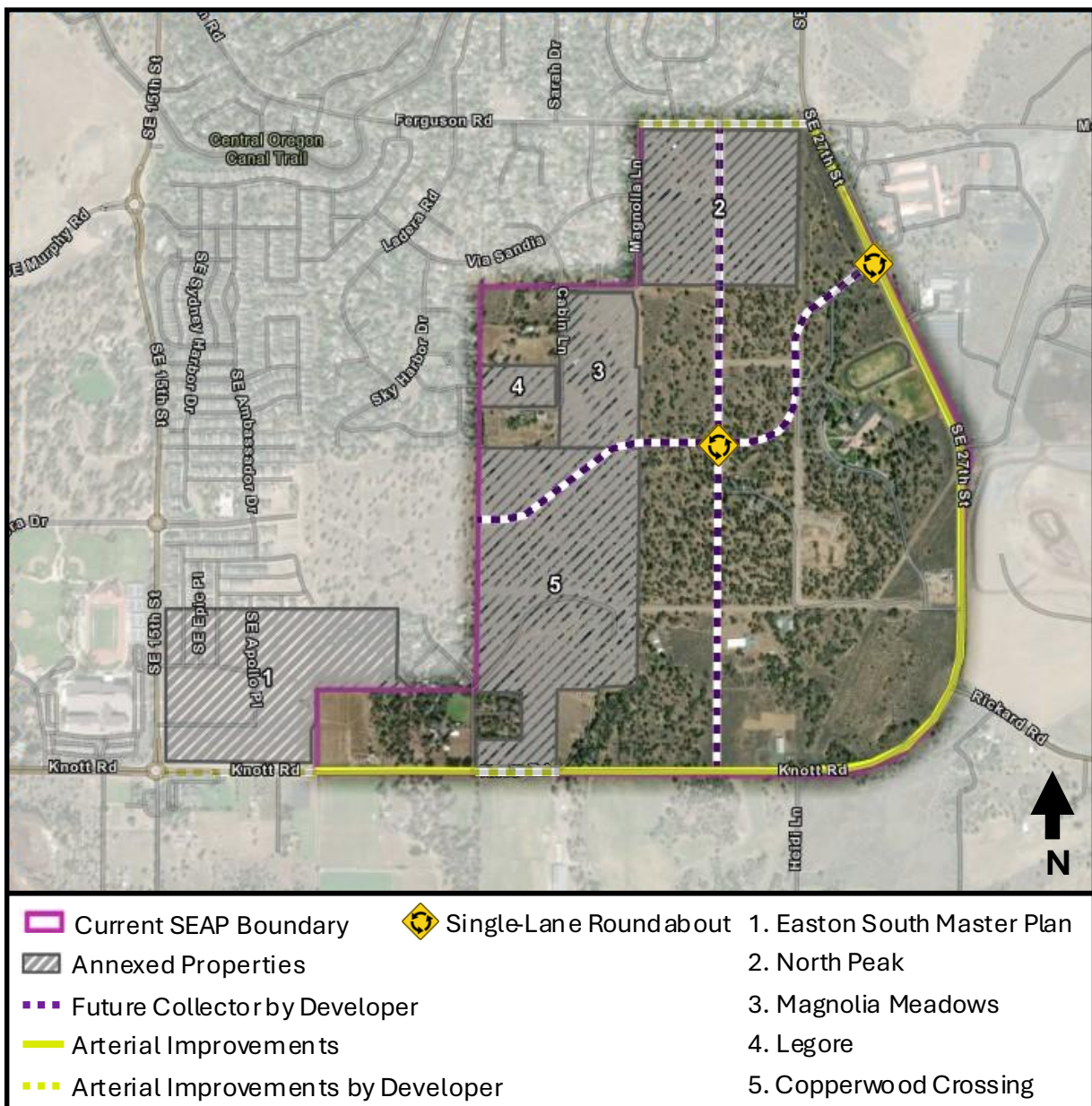
The transportation infrastructure projects to be constructed within the SEAP and applicable design assumptions were reviewed and established as a basis for improvements' cost estimates as part of the TSSDC methodology.

2.1 PROJECT ASSUMPTIONS

The roadway improvement projects to be completed for the SEAP include the following as depicted in Figure 3:

- Existing arterial improvements (to be built by City)
- Future collector roadways (to be built by private developers)
- Single-lane roundabouts (to be built by City)

Figure 3. Transportation Improvements Map



Design assumptions impacting cost estimates for these projects (except the future collector roadways to be funded and constructed by future SEAP developers) are described in greater detail below. Figure 3 shows all SEAP related improvements, including both the improvements slated to be constructed by pending or approved development (dashed line) and the improvements included as part of the TSSDC methodology (solid line).

2.1.1 Improvements to Arterial Roadways

The SEAP is bounded by three (3) existing Arterials: Knott Road to the south, 27th Street to the east, and Ferguson Road to the north. The entirety of the Ferguson Road segment along the SEAP boundary will be improved by developers and is thus excluded from the SEAP TSSDC program. The segment of Knott Road between SE 15th Street and the eastern boundary of the Easton South Master Plan area (approximately Ledger Lane) is already planned for construction by development as is the frontage of the Copperwood Crossing on Knott Road. With both of these segments built by private development and accounting for the length of 27th Street within the Ferguson Road and Caldera Drive roundabouts, the length of arterial reconstruction on Knott Road and 27th Street is estimated at 8760 feet.

Following annexation of properties within the SEAP, the City limits will be extended to the south right of way boundary of Knott Road and east right of way boundary of 27th Street. Therefore, only 3/4 improvements will be constructed and are assumed as part of the cost estimation for these Arterial roadways. Improvements assume the urban cross-section standards presented in Table 3, without rural edge planter, street trees, and sidewalk on the south side of Knott Road and east side of 27th Street. Street lighting is assumed to be comprised of two staggered street lights at each existing and future intersection along Knott Road and 27th Street between Ledger Lane and Ferguson Road. The improvement costs for Knott Road and 27th Street will include the cost of the necessary right-of-way acquisition on the rural side, estimated at an average cost of \$5.05 per square foot. The cost estimates do not include potential acquisition costs where adjacent UGB land is not developed concurrent with City constructed arterial improvements. Right of way dedicated on the urban side adjacent to developable SEAP properties is assumed to be dedicated by developers without offset SDC credit.

Table 3 presents the cross-section standards for 27th Street and Knott Road that were assumed in the cost estimates. Figure 4 depicts the cross-section for Knott Road to be constructed by the Easton South Master Plan development and matches the cross-section to be constructed for the remainder of Knott Road and 27th Street from Ledger Lane to Ferguson Road. As shown on Figure 4, the cost estimates assume right-of-way acquisition on the rural side to establish 31-feet from road centerline, which allows for construction of utilities.

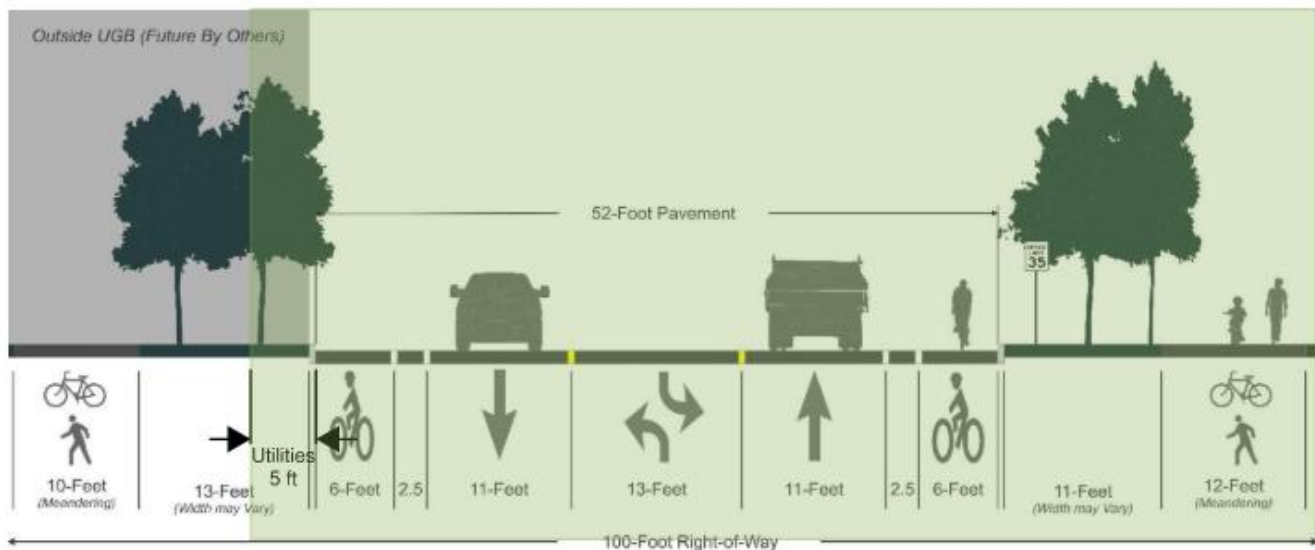
Table 3. Arterial Street Cross-Section Standards for 27th Street and Knott Road

Planned Right-of-Way	Minimum Pavement Width	Sidewalk with Shared Use Path ¹	Planter Strips ²	Bike Lanes	Travel Lane Width	Left Turn Lane	Median Safety Island
100'	52'	12'	Varies	6' + 2.5'	11'	13'	10'

Notes:

1. Assumes sidewalk on the urban side of the roadway only.
2. Assumes planter strip on the urban side of the roadway only.

Figure 4. Knott Road Cross Section



Improvements to existing Arterial roadways for which cost estimates were prepared are depicted in yellow (solid line) on Figure 3 and identified as the following projects:

A-1. Knott Road/27th Street – Ledger Lane to Ferguson Road less Copperwood Crossing Frontage

2.1.2 Future Collector Roadways (by Private Developers)

The adopted SEAP calls for two (2) future Collector roadways providing east-west and north-south connectivity. For east-west connectivity, Caldera Drive will be extended from its current terminus at SE Ambassador Drive with development of the Easton Master Plan area. The extension of Caldera Drive from the eastern boundary of the Easton Master Plan area to 27th Street will be completed by private developers. For north-south connectivity, Journey Drive will be extended from its current terminus at Ferguson Road with development of the Magnolia Meadows development. The extension of Journey Drive from the southern boundary of Magnolia Meadows to Knott Road will be completed by future private developers with the exception of that portion of the Collectors located within the planned mini-roundabout at Caldera Drive and Journey Drive.

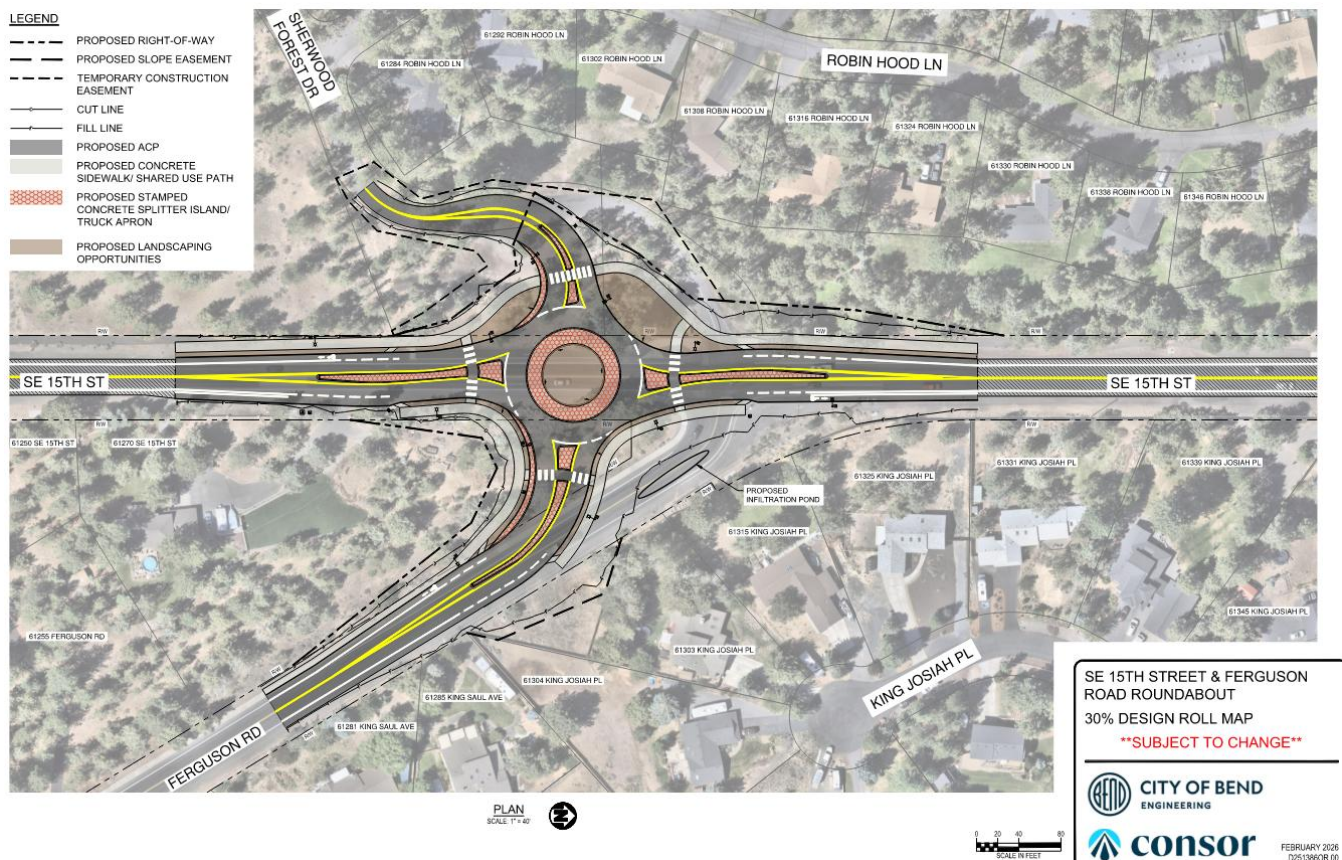
Cost estimates for these collector roadways are not included as part of the TSSDC capital improvement costs and are thus excluded from the TSSDC rate methodology. They are not TSSDC creditable.

2.1.3 Future Roundabouts

The adopted SEAP calls for six (6) roundabouts, three (3) of which have already been constructed along 15th Street with recent development and one (1) which will be constructed at the Ferguson Road/27th Street intersection by existing approved development. The City will construct two (2) new roundabouts along Caldera Drive at the Journey Drive and 27th Street intersections utilizing TSSDC revenue as development within the SEAP occurs.

The roundabout internal to the development area at Caldera Drive and Journey Drive is assumed to be a mini roundabout. The outer roundabout at Caldera Drive and 27th Street is assumed to be single-lane roundabout with an inscribed diameter of 130 feet, consistent with the recently constructed roundabout at the 15th Street/Ferguson Road as presented in Figure 5.

Figure 5. 15th Street/Ferguson Road Roundabout 30% Design



The future roundabouts for which cost estimates were prepared are depicted with a roundabout sign on Figure 3 and identified as the following projects:

- R-1. Caldera Drive/Journey Drive
- R-2. 27th Street/Caldera Drive

3 TRANSPORTATION INFRASTRUCTURE COST ESTIMATES

Cost estimates were prepared to be utilized as part of the TSSDC rate numerator as described above in Section 1.1.3 of this memo.

3.1 COST ESTIMATES SUMMARIES

Cost estimates for the SEAP transportation infrastructure improvements were developed with DEA providing arterial roadway cost estimates and roundabouts' cost estimates provided by City staff. They are summarized below for roadway and intersection projects. Detailed bid tab format cost estimates are attached to this memo for reference.

3.1.1 Roadway Improvement Cost Estimates

Cost estimates for arterial roadway improvements along Knott Road and 27th Street represent only 36% of the total project costs as this project is included as part of the Citywide TSDC list (Project M-22-26) covering 64% of its cost. The construction cost estimates for the Knott Road improvements from 15th Street to Ledger Lane were estimated at \$2,165.72 per lineal foot based on an approximately 8,760-foot segment.

Table 4 presents the cost estimates for the existing Arterial improvement project. Improvement costs are rounded to the nearest \$1,000.

Table 4. Roadway Cost Estimates

Project ID	Project Name	Segment Length (feet)	Cost per Lineal Foot	Total Project Cost ¹
A-1	Knott Road/27th Street – Ledger Lane to Ferguson Road less Cottonwood Crossing Frontage	8,760	\$2,165.72	\$ 18,972,000
36% NON-SDC ELIGIBLE COST				\$6,830,000

Notes:

1. Project cost rounded to the nearest \$1,000.

3.1.2 Intersection Improvement Cost Estimates

Cost estimates for the new roundabouts were provided by the City based upon prior similar project costs as presented in the City's currently adopted Five Year Capital Improvement Program (CIP). Table 5 presents the cost estimates for the intersection improvement projects rounded to the nearest \$1,000.

Table 5. Intersection Cost Estimates

Project ID	Project Name	Project Cost
R-1	Caldera Drive/Journey Drive Mini Roundabout	\$2,500,000
R-2	27 th Street/Caldera Drive Roundabout	\$4,000,000
TOTAL		\$6,500,000

4 COST ESTIMATES SUMMARY

In summary, cost estimates for the roadway and intersection projects are as follows:

- Roadway improvements: \$6,830,000 (At 36% TSSDC Eligibility)
- Intersection improvements: \$6,500,000
- **Total Cost of SEAP Transportation Improvements: \$13,330,000**

The SEAP TSSDC rate is based upon the total cost of SEAP transportation improvements as noted in the TSSDC equation below. As presented in the Land Use and Trip Generation Review tech memo, the number of PM trips estimated to be generated within the SEAP is 4,012, resulting in a TSSDC rate of \$3,323 per PM peak hour trip.

$$\text{SEAP TSSDC} = \frac{\text{Cost of Transportation Improvements}}{\text{PM Peak Trips Generated within SEAP}}, \text{ Where SEAP TSSDC is in \$ per PM peak hour trip}$$

$$\text{SEAP TSSDC} = \frac{\$13,330,000}{4,012 \text{ PM peak hour trips}}$$

$$\text{SEAP TSSDC} = \$3,323 \text{ per PM peak hour trip}$$

APPENDIX A: KNOTT ROAD/27TH STREET CONSTRUCTION COSTS

Project Name:	Knott Rd/27th St
----------------------	-------------------------

Project Limits:	Western boundary (Ledger Lane) to Ferguson, not including 450' of roadway included with Ferguson/27th roundabout and 500' of roadway included with Caldera roundabout and including a deduction of 675 feet for the frontage improvements associated with Copperwood Crossing
-----------------	---

Description:	Reconstruct existing arterial to 52' paved width, including bike lanes and curb, with landscape strip and 12' multi-use path on internal edge.
--------------	--

City of Bend	Date:	
Engineer's Conceptual Estimate	Project Length:	8760 LF

Item Number	Bid Item	Unit	Unit Price	Quantity	Total Price
	Mobilization (10%)	LS	\$ 1,116,174.64	1	\$1,116,174.64
	Traffic Control (5%)	LS	\$ 558,087.32	1	\$558,087.32
	Erosion Control (2%)	LS	\$ 223,234.93	1	\$223,234.93
	Removal of Structures and Obstructions (2% of Clear & Grub + Earthwork)	LS	\$ 13,437.63	1	\$13,437.63
	Clearing and Grubbing	ACRE	\$ 7,500.00	5.23	\$39,214.88
	Removal of Surfacing	SY	\$ 22.00	54,507	\$1,199,146.67
	General Earthwork	CY	\$ 40.00	15,817	\$632,666.67
	Aggregate Base (10")	CY	\$ 60.00	16,763	\$1,005,777.78
	Concrete Walks / Multi-Use Path	SF	\$ 12.00	87,600	\$1,051,200.00
	Level 3, 1/2 Inch Dense ACP (8")	TON	\$ 165.00	22,495	\$3,711,644.44
	ADA curb ramps/detectible warning allowance	EA	\$ 1,500.00	32	\$48,000.00
	Subgrade Geotextile	SY	\$ 1.80	56,453	\$101,616.00
	Concrete Curbs - Standard Curb & Gutter	LF	\$ 45.00	17,520	\$788,400.00
	Storm Drain Pipes (8" lateral)	LF	\$ 50.00	6,360	\$318,000.00
	Curb inlets	EA	\$ 2,800.00	106	\$296,800.00
	Sedimentation Manholes	EA	\$ 6,500.00	53	\$344,500.00
	Drywells	EA	\$ 16,500.00	53	\$874,500.00
	Permanent Landscaping and Irrigation	SF	\$ 5.50	87,600	\$481,800.00
	Street Trees	EA	\$ 600.00	64	\$38,400.00
	Pavement Markings, Complete	LF	\$ 3.00	8760	\$26,280.00
	Signage, Complete	LF	\$ 5.00	8760	\$43,800.00
	Illumination System, Complete	EA	\$ 10,000.00	16	\$160,000.00
CONSTRUCTION COSTS - SUBTOTAL:					\$13,072,680.96
	Design and Construction Engineering		25%		\$3,268,170.24
	Contingency		20%		\$2,614,536.19
	Right-of-Way Dedication	SF	\$ 8.00	3240	\$25,920.00
MARKUPS - SUBTOTAL					\$5,908,626.43
TOTAL PROJECT COST:					\$18,981,307.39

Cost Estimating methodology and notes:

Project assumptions and typical section are based on descriptions and data in Easton Master Planned Development section of Bend Development Code passed November 1, 2025.

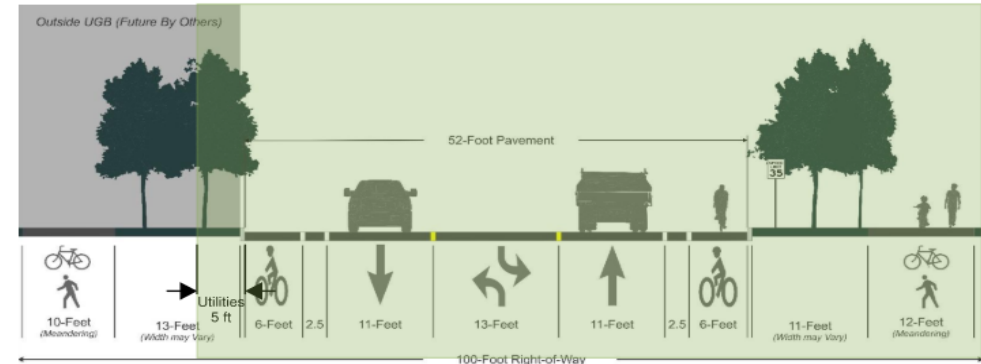
Street lighting assumes 2 Option A lights per intersection and 8 intersections.

ROW purchase assumed to be 31-feet from centerline on rural side only.

Project scope contains limited detail and is based on generic typical section information and project limits.

No engineering design work was performed. Cost estimate is based on assumptions and engineering judgement, using limit project specific technical detail.

Unit cost information is based on available state wide bid price data in 2025 dollars.





BEND SEAP TSSDC METHODOLOGY: TRIP GENERATION ESTIMATES

City of Bend

TECH MEMO | August 4, 2026

PREPARED FOR: City of Bend

ATTN: Ryan Oster, PE | Engineering Director/City Engineer

PREPARED BY DAVID EVANS AND ASSOCIATES, INC.

FROM: Janet Jones, PE | Project Manager
Colin Cooper, AICP | Land Use Planner
Don Odermott, PE | Transportation Engineer

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1.1.1 Background and History

The City of Bend expanded its UGB in 2016 to provide the land necessary for forecasted population, housing, and employment growth through 2028. The Southeast Expansion Area (SEA), also called the “Elbow Expansion Area,” is one of 10 designated expansion areas the City created during this process. It contains approximately 479 acres of land outside City limits, 443 acres of which were originally assumed to be developable. Figure 1 presents the original SEAP boundary.

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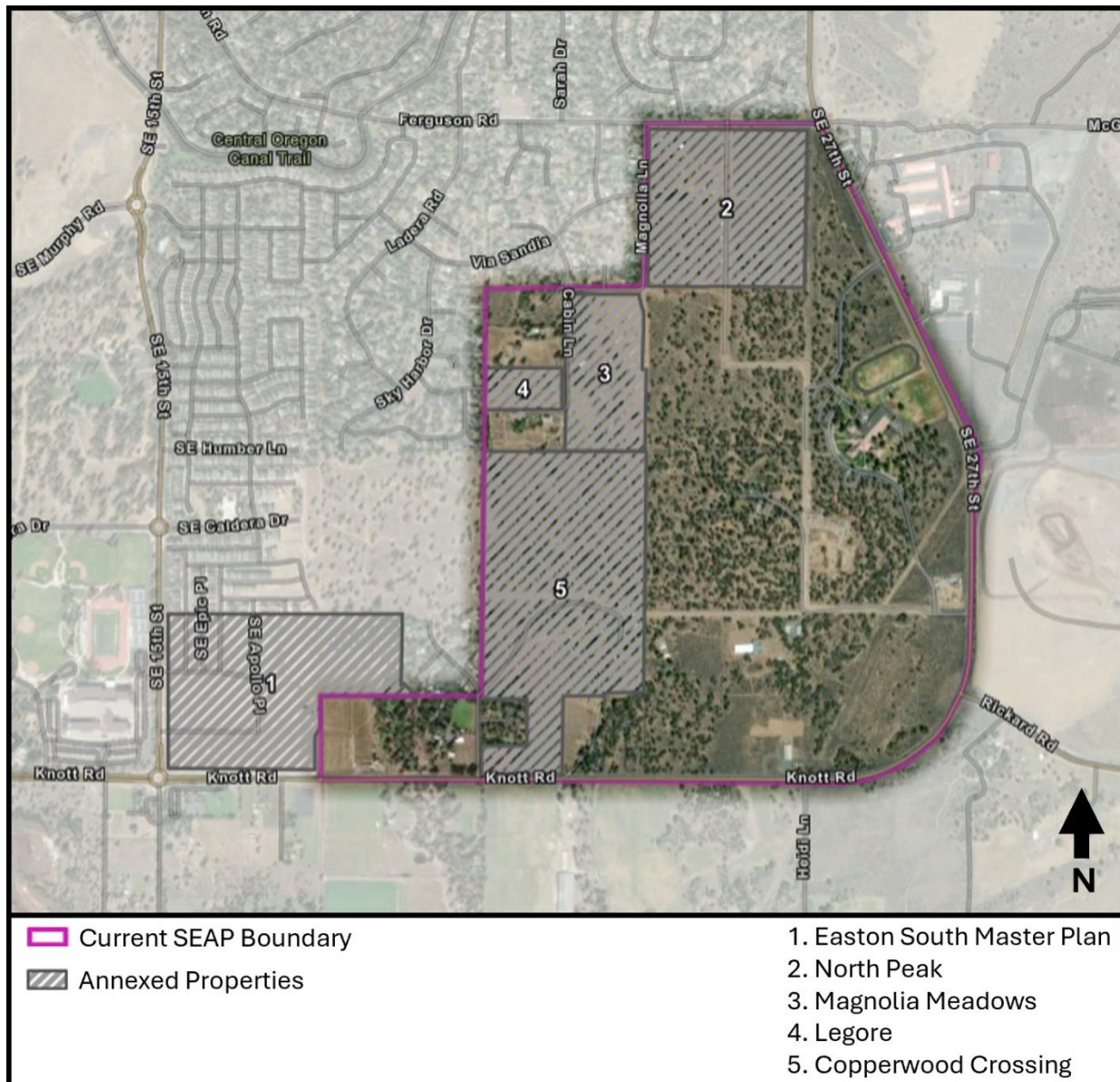
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4	Legore	None
5	Copperwood Crossing	- SE Knott Road frontage (3/4) improvements through property extents - Caldera Drive through property extents

Projects to be constructed by the SEAP developers, as presented in Table 2, are excluded from the TSSDC capital project costs and thus excluded from the TSSDC rate calculations. As such, they are thus not deemed TSSDC creditable.

Figure 2. Current SEAP Boundary for TSSDC Methodology



1.1.3 Next Steps

This technical memorandum evaluates the number of trips generated within the SEAP, or the “denominator” utilized to calculate the TSSDC rate for the SEAP.

$$\text{SEAP TSSDC} = \frac{\text{Cost of Transportation Improvements}}{\text{PM Trips Generated within SEAP}}, \text{ Where SEAP TSSDC is in \$ per PM peak hour trip}$$

2 LAND USE ASSUMPTIONS

The land use assumptions associated with the SEAP as adopted in the City of Bend's Comprehensive Plan and Development Code were reviewed as a basis to prepare trip generation estimates as part of the TSSDC methodology.

2.1 ADOPTED COMPREHENSIVE PLAN AMENDMENT

The adopted SEAP included approximately 479 acres of land outside City limits, 443 acres of which were originally assumed to be developable. The following land uses were adopted as part of the SEAP:

- High-Density Residential (RH)
- Medium-Density Residential (RM)
- Standard-Density Residential (RS)
- Low-Density Residential (RL)
- Mixed Employment (ME)
- General Commercial (CG)
- Light Industrial (IL)
- Public Facilities (PF)

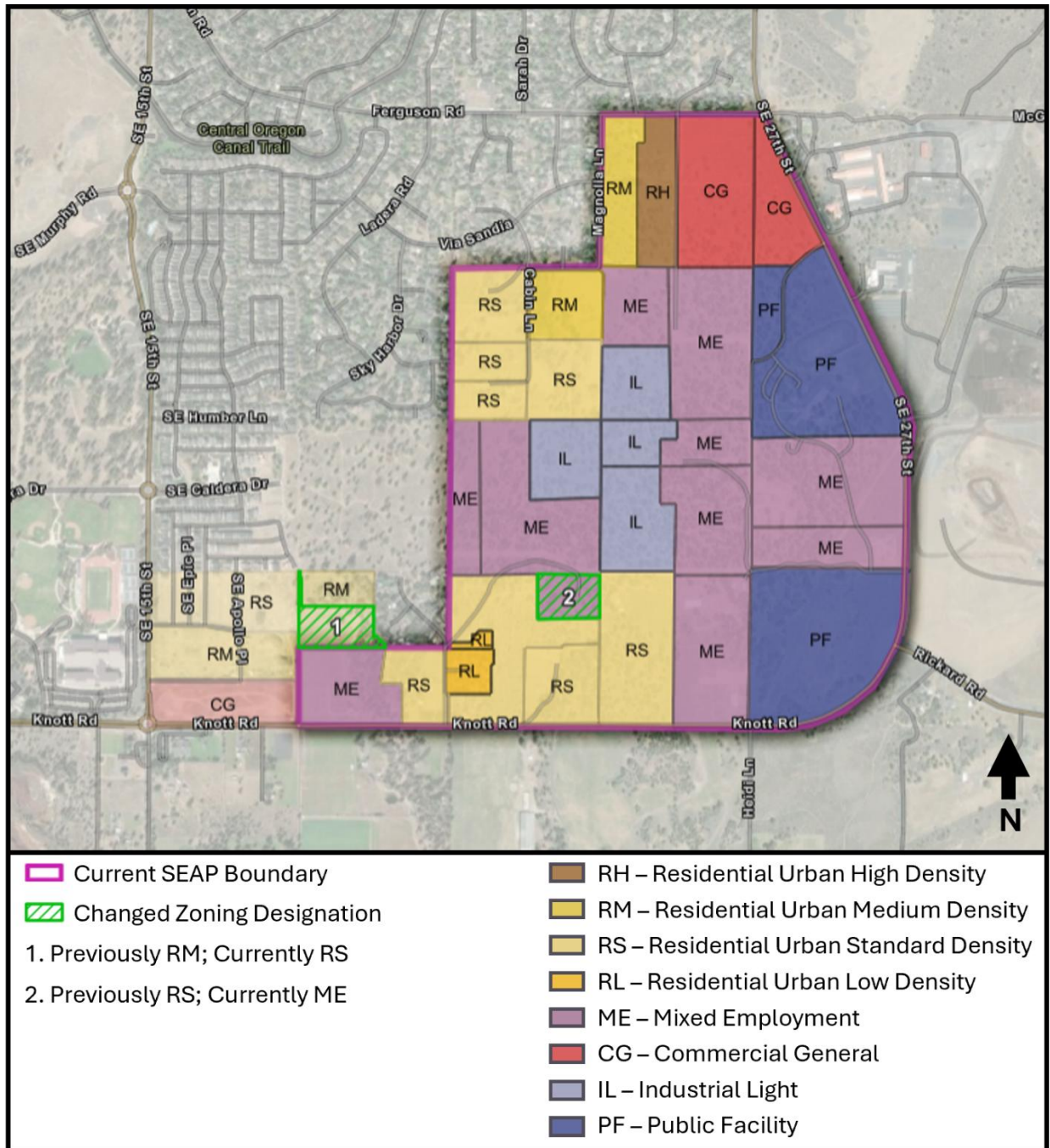
Figure 3 below presents the current land use designations within the current SEAP boundary. As noted in the figure, two properties currently have a different land use designation than originally adopted with the SEAP in 2021.

2.2 LAND USE ASSUMPTIONS

The adopted SEAP assumed a net developable area of 443 acres. This reflects a yield of approximately 93% of developable area based on the approximately 479 gross acres adopted as part of the original SEAP boundary. Based on DEA staff experience, developability tends to range closer to 80-90% of the gross acreage to account for site characteristics such as internal roadways and environmental constraints.

Planned land use and development density data for the recently annexed properties listed in Table 1 (and pending development plans) was reviewed to establish the basis for trip generation estimates by zone. The data was obtained from a transportation memorandum prepared by Transight Consulting and dated January 27, 2026 that presented the density for each annexation in relation to applicable Bend Comprehensive Plan designations and Bend's Implementing Zoning and Development Code density ranges.

Figure 3. 2021 Comprehensive Plan Designations (SEAP)



The development density ranges reflect a mix of approximately 80% commercial and 20% affordable housing within the General Commercial (CG) zone and approximately 20% commercial and 80% multifamily residential within the Mixed Employment (ME) zone.

Table 3 presents a summary of the minimum, maximum, and average development densities by zone for the approved or pending SEAP properties.

Table 3. Development Density for Approved or Pending SEAP Properties

Zone	Development Density		
	Minimum	Maximum	Average
High-Density Residential (RH)	26.4 du/gross acre	26.4 du/gross acre	26.4 du/gross acre
Medium-Density Residential (RM)	11.4 du/gross acre	19.8 du/gross acre	15.6 du/gross acre
Standard-Density Residential (RS)	4.4 du/gross acre	7.0 du/gross acre	5.7 du/gross acre
Low-Density Residential (RL) ¹	1.1 du/gross acre	4.0 du/gross acre	2.6 du/acre
Mixed Employment (ME) (Non-residential)	0.40 FAR	0.44 FAR	0.42 FAR
Mixed Employment (ME) (Residential)	13.1 du/gross acre	21.8 du/gross acre	17.5 du/gross acre
General Commercial (CG) (Non-residential)	0.25 FAR	0.32 FAR	0.29 FAR
General Commercial (CG) (Affordable Housing)	33.4 du/gross acre	33.4 du/gross acre	33.4 du/gross acre
Light Industrial (IL)	0.18 FAR	0.31 FAR	0.25 FAR
Public Facilities (PF) ²	1.0	1.0	1.0

Notes:

1. There are no currently approved or pending properties within the SEAP with RL designation. Therefore, the zoning density minimum and maximum are based on City of Bend standards per Table 2.1.600.
2. There are no currently approved or pending properties within the SEAP with PF designation. Therefore, an FAR of 1.0 was assumed to reflect park uses.

Using the average development density assumptions established in Table 3, development assumptions for the number of residential units and commercial building area by zoning designation were developed for the remaining properties within the current SEAP boundary as presented in Table 4. Development assumptions for the GC and ME zones include both commercial and affordable housing/multifamily residential uses. However, a cap of 20% of affordable housing to be developed within the GC zone per City code was assumed. The ME zone also assumes a 600-student elementary school, consistent with the January 2026 Transight memo. The Public Facilities (PF) zone does not assume redevelopment of the High Desert Middle School. Therefore, the 24.1-acre school site is excluded from the development estimates.

Table 4. Land Use Assumptions for SEAP

Land Use	Zoning Designation	Current SEAP Boundary Gross Area (Acres)	Average Development Density	Development Assumption
High-Density Residential	RH	9.20	26.4 du/acre	243 du
Medium-Density Residential	RM	17.08	15.6 du/acre	266 du
Standard-Density Residential	RS	90.14	5.7 du/acre	514 du
Low-Density Residential	RL	2.89	2.6 du/acre	8 du
Mixed Employment (Non-Residential)	ME	20.72	0.42 FAR	379,100 SF
Mixed Employment (Residential)	ME	82.86	17.5 du/acre	1,450 du
Mixed Employment (Elementary School)	ME	30.20	19.9 students/acre	600 students
General Commercial (Non-Residential)	CG	29.73	0.29 FAR	375,600 SF
General Commercial (Affordable Housing)	CG	7.43	33.4 du/acre ²	248 du
Light Industrial	IL	35.19	0.25 FAR	367,900 SF
Public Facilities ¹	PF	33.10	1.0 FAR	33.10 acres
TOTAL		358.54 acres		

Notes:

1. Does not assume re-development of existing 24.1-acre High Desert Middle School site.
2. Resultant development density for entire General Commercial zone is 6.67 du/acre.

As presented in Table 4, the current SEAP boundary is estimated to be 358.54 acres. This differs slightly from the area assumed in the Transight memo due to the exclusion of the existing High Desert Middle School site and slight variation in parcel sizes due to excluded right of way areas. These land use assumptions reflect the City's current development limitation of 20% commercial development within the ME zone and 20% limitation of affordable housing within the GC zone.

3 TRIP GENERATION ESTIMATES

Trip generation estimates were prepared to be utilized as part of the TSSDC rate denominator as described above in Section 1.1.3 of this memo.

3.1 BASIS OF TRIP GENERATION ESTIMATES

Trip generation estimates were prepared utilizing trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 12th Edition. The trip generation estimates below represent gross PM peak hour trips estimated to be generated by the current SEAP boundary. Reductions for internal trips (shared trips between uses), alternative mode trips, and pass-by trips were not taken to best reflect the total traffic impacts to be generated by future development within the current SEAP boundary. For consistency in methodology, average rates for the PM peak hour were utilized for all land uses/zoning designations.

3.2 TRIP GENERATION SUMMARIES

The land use assumptions presented in Table 4 were used to prepare trip generation estimates for the SEAP. Land use categories available in ITE's *Trip Generation Manual*, 12th Edition were reviewed for consistency with allowable uses in each zone per the Bend Development Code. Overall, the estimated number of total PM peak hour trips is consistent with Transight's estimate of 3,925 PM peak hour trips prior to Transight applying a reduction for internal trip capture.

Table 5. Trip Generation Estimates per SEAP Zoning Designation

Land Use	Zoning	Development Assumption	ITE Land Use Assumption	PM Peak Hour Trip Rate	PM Peak Hour Trips
High-Density Residential	RH	243 du	Multifamily Housing (Mid-Rise) (LUC 221)	0.38	92
Medium-Density Residential	RM	266 du	Multifamily Housing (Low-Rise) (LUC 220)	0.52	138
Standard-Density Residential	RS	514 du	Single-Family Attached Housing (LUC 215)	0.51	262
Low-Density Residential	RL	8 du	Single-Family Detached Housing (LUC 215)	0.93	7
Mixed Employment (Non-Residential)	ME	379,100 SF	Office Park (LUC 750)	1.21	459
Mixed Employment (Residential)	ME	1,450 du	Multifamily Housing (Mid-Rise) (LUC 221)	0.38	551
Mixed Employment (Elementary School)	ME	600 students	Elementary School (LUC 520)	0.16	96
General Commercial (Non-Residential)	CG	187,800 SF	Shopping Center (>150k) (LUC 820)	3.26	612
General Commercial (Non-Residential)	CG	187,800 SF	Shopping Plaza (40-150k) (LUC 821)	8.58	1,611
General Commercial (Residential)	CG	248 du	Multifamily Housing (Mid-Rise) (LUC 221)	0.38	94
Light Industrial	IL	367,900 SF	Industrial Park (LUC 130)	0.23	85
Public Facilities	PF	33.10 acres	Public Park (LUC 411)	0.15	5
TOTAL					4,012

4 TRIP ESTIMATES SUMMARY

In summary, PM peak hour trip estimates for the different zones are as follows:

- RH: 92
- RM: 138
- RS: 262
- RL: 7
- ME: 1,106
- CG: 2,317
- IL: 85
- PF: 5
- **Total Number of PM Trips Generated within SEAP: 4,012**

The SEAP TSSDC rate will rely on the total number of PM peak hour trips as noted in the TSSDC equation below. As presented in the Transportation Cost Estimates tech memo, the total cost of transportation improvements within the SEAP is estimated at \$13,330,000, resulting in a TSSDC rate of \$3,323 per PM peak hour trip.

$$\text{SEAP TSSDC} = \frac{\text{Cost of Transportation Improvements}}{\text{PM Peak Trips Generated within SEAP}}, \text{ Where SEAP TSSDC is in \$ per PM peak hour trip}$$

$$\text{SEAP TSSDC} = \frac{\$13,330,000}{4,012 \text{ PM peak hour trips}}$$

$$\text{SEAP TSSDC} = \$3,323 \text{ per PM peak hour trip}$$