



Case Study: **CULLY BOULEVARD GREEN STREET PROJECT**

The City of Portland used \$1.2 million of Transportation System Development Charges (TSDC) to rebuild a portion of NE Cully Blvd. with significant safety improvements, including new sidewalks, cycle tracks, and planting strips for pedestrian and bicycle safety. Estimating the impacts of development on infrastructure costs based on person trips, rather than the more common method using vehicle trips, allows the City to more accurately anticipate future infrastructure costs across a vibrant multi-modal transportation network that integrates transit, pedestrian, cycling, and vehicle trips.

Summary Overview

Project name	Cully Boulevard Green Street Project
Location	Portland, Oregon
Built environment	Urban
Type of infrastructure	Complete streets improvements including sidewalks, planting strips, cycle tracks, and a traffic signal at a 5-way intersection previously controlled only by a flashing red light
Value capture instrument	Impact fee
Total project cost	\$5.4 million
Amount of value capture	\$1.2 million in System Development Charge funds toward the total project cost of \$5.4 million
Duration of value capture	Ongoing
Value capture innovation	The City of Portland applies TSDC revenue to a wide range of transportation improvements including cycling and pedestrian facilities, and the calculation of fees is based on trip generation rather than vehicle trip generation, in recognition of a significant level of biking and walking and the multi-modal nature of the city's transportation system.
Statutory/regulatory changes	None (TSDC enabled under the Oregon Systems Development Act of 1989)

Key Takeaways

- > **Transportation System Development Charges (TSDCs) tie infrastructure funding to new growth.** Rapidly growing areas face a unique challenge, as the tax revenues generated by new growth often lag behind infrastructure demand. TSDCs coordinate the timing of funding with demand for new facilities.
- > **TSDC fees based on person-trips rather than vehicle trips better reflect the multi-modal nature of Portland's transportation system and high rates of walking and cycling.** Vehicle trip-based fee calculation reflect travel patterns observed in suburban areas and ignore the high rate transit trips, pedestrians and cyclists found in urban areas. The person trips-based methodology used in Portland more accurately reflects the demands (cost) of new development on the City's transportation system.
- > **Portland's TSDC program funds a wide range of new transportation infrastructure including sidewalks, cycle tracks, transit, and roads.** This enables the City to meet the infrastructure needs created by growth in all parts of the city and across all aspects of the transportation system, such as those in the Cully Boulevard Green Streets project area.
- > **Temporary TSDC Overlay Areas allow the City to respond to the infrastructure needs of specific neighborhoods experiencing particularly high growth.** High demand for development in an Overlay Area is leveraged to support an additional TSDC fee collected only within the Overlay Area and used only for infrastructure within that Overlay Area. The Overlay Area TSDC fee sunsets when the infrastructure need created by the period of high growth has been met.

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Introduction

Prior to the Cully Boulevard Green Street project, the 0.6-mile segment of NE Cully Boulevard between NE Prescott Street and NE Killingsworth Street presented numerous safety issues for vehicles as well as pedestrians and cyclists. NE Cully Boulevard intersects the street grid at an angle, creating irregular intersections with wide openings to unimproved local streets. Narrow shoulders placed bicycle and pedestrian traffic very close to vehicle traffic. The southern end of the project area, the intersection of NE Cully / NE Prescott / NE 60th, forms a 5-way intersection with average daily traffic of approximately 18,800 vehicles, formerly controlled only by a red flashing light. This intersection serves neighborhood retail including a grocery store and pharmacy, as well as emergency vehicles from a fire station. A Tri-Met bus station that connects to a nearby MAX light rail station and transit hub generates significant pedestrian activity. In the decade before the improvement program, 18 vehicle crashes and two collisions involving pedestrians or cyclists occurred in the intersection.

The improvement program rebuilt Cully Blvd Green Street project rebuilt NE Cully Boulevard between NE Prescott Street and NE Killingsworth Street, including the following program elements:

- Two 6-foot wide sidewalks
- 4-foot planting strips
- 7.5-foot cycle tracks

- 11-foot travel lanes (one in each direction)
- Sideway connections to existing sidewalks on Cully Boulevard south of Prescott Street and ADA ramps that tie into the side streets (narrowing previously wide intersections and improving visibility)
- On-street parking where needed
- Traffic signals at the 5-way intersection of NE Cully / NE Prescott / NE 60th

These improvements increase safety by adequately separating pedestrians, cyclists and vehicles from each other and improving visibility and reducing confusion at intersections. The \$5.4 million budget drew from the Metropolitan Improvement Program (MTIP), City General Fund as well as the City’s Transportation System Development Charge fund (TSDC).

Table 1. Cully Boulevard Green Street Project

Funding Source	Amount
Transportation System Development Charge (TSDC)	\$1.2 million
MTIP (2007 allocation)	\$773,000
MTIP (2009 allocation)	\$1.6 million
City General Fund	\$1.875 million
Total	\$5.4 million (rounded)

Source: City of Portland (<https://www.portlandoregon.gov/transportation/article/370405>).

Overview of System Development Charges

SDCs are one-time fees charged to property owners to help pay for the infrastructure facilities (including, but not limited to, transportation systems) required to support the growth associated with new development. SDCs represent a “cost recovery” approach to value capture, as fees are determined based on the costs imposed by new development rather than on the amount of benefit the infrastructure confers to beneficiaries. Agencies across the country utilize SDCs under a variety of names including impact fees, mitigation fees, mobility fees, service availability charges, fair share fees, or facility fees.

As with other types of impact fees, SDCs help tie infrastructure provision with the pace of growth and allow new public facilities to be constructed as they are needed to avoid declining levels of service for existing residents and businesses. SDC programs also provide predictability to developers and builders about the type, timing, and amount of exactions required by local governments. As one-time, standardized charges included in the development process, SDCs typically have low implementation costs. However, local agencies need a robust framework for estimating the costs of development on existing infrastructure and services.

One criticism of SDCs is that the fees discourage development by raising its cost. However, this effect has not been observed in Portland and, in general, SDC fees are easier to implement in robust real estate markets where developers may be more willing to pay an additional levy to build a highly profitable development. Another potential issue is that public may not be aware of the details of SDC fees, such as who bears the cost of SDCs or what benefits they bring,

necessitating some amount of public education surrounding what could be perceived as a new tax.

Portland's Transportation System Development Charges

As Oregon's largest city, Portland is a major jobs center and a magnet for growth. Portland is projected to add 140,000 new jobs and 260,000 new residents by 2040, creating continued demand to build and fund infrastructure systems that accommodate continued growth.¹

Like other Oregon cities, Portland has turned to new local revenue sources to help address growing infrastructure investment needs amid flatness in other revenue sources, especially in transportation. Despite inflation, the State gas tax did not increase from 1993 to 2011. Furthermore, Oregon's Ballot Measure 5 places limits on property taxes, with property taxes for non-school purposes capped at one percent of real market value. This limitation has made it harder for municipalities to devote property tax revenue to transportation investments. SDC offers one option to fill these gaps.

Portland's TSDC program is part of a broader set of system development charges (SDCs) the City uses to fund improvements and capacity increases to transportation systems, parks and recreation facilities, and water/sewer enabled by the Oregon Systems Development Act of 1989. This statute provides a framework for TSDC assessments and imposes a variety of requirements on local governments with SDC programs. The statute includes provisions that require Oregon cities to adopt a capital improvement plan to delineate what can be funded with SDCs), establish a standard methodology for the SDC, and calculate the SDC as either a "reimbursement" fee (to pay for improvements already constructed) or an "improvement" fee (to pay for improvements to be constructed).

Portland adopted TSDCs in 1997 as a financing mechanism to help compensate for the traffic impacts created by rapid urban growth. The following sections describe 1) The City's methodology for determining TSDC rates and program details related to fee collection, and 2) The selection criteria and process used to establish the list of projects eligible for TSDC funds.

Methodology for Calculating TSDC Rates

TSDCs are calculated by dividing the eligible cost of transportation capital improvements by the number of additional PM peak hour trips that will be generated by development, resulting in a cost per trip associated with new development. Under this methodology, the Bureau of Transportation charges TSDC fees according to rates associated with 27 land use categories (see Table 2). The rates reflect the anticipated trip generation associated with the proposed land use. The greater the impact a development will have on the transportation system, the higher its TSDC rate.

¹ Portland 2035 Transportation System Plan. March 2020. <https://www.portlandoregon.gov/transportation/77358>

Table 2. SDC Rates Collected by the Portland Bureau of Transportation

Land Use	Property Type	Unit	Rate Per Unit*
Residential	Single Family (1,200 ft ² or larger)	Dwelling	\$5,433.00
	Single Family (1,199 ft ² or smaller)	Dwelling	\$2,772.00
	Multi Family (2 or more units)	Dwelling	\$2,728.00
	Senior Housing/Assisted Living/Nursing Home	Dwelling/bed	\$1,406.00
Commercial (Services)	Bank	Gross floor area (ft ²)	\$40.51
	Day Car	Gross floor area (ft ²)	\$7.41
	Hotel/Motel	Room	\$3,732.00
	Service Station/Fuel Sales	Vehicle fueling positions	\$33,294.00
	Movie Theater/Event Hall	Gross floor area (ft ²)	\$13.98
	Carwash	Wash stall	\$19,477.00
	Health Club	Gross floor area (ft ²)	\$16.79
Commercial (Institutional)	School (K-12)	Gross floor area (ft ²)	\$5.43
	University/College/Junior College	Student	\$633.00
	Church	Gross floor area (ft ²)	\$2.52
	Hospital	Gross floor area (ft ²)	\$4.46
	Park	Acre	\$506.00
Commercial (Restaurant)	Restaurant (Stand-Alone)	Gross floor area (ft ²)	\$31.58
	Quick Service Restaurant (Drive-Through)	Gross floor area (ft ²)	\$99.43
Commercial (Retail)	Shopping/Retail	Gross floor area (ft ²)	\$12.37
	Convenience Market	Gross floor area (ft ²)	\$97.82
	Free-Standing Retail/Supermarket	Gross floor area (ft ²)	\$25.33
	Car Sales New/Used	Gross floor area (ft ²)	\$11.17
Commercial Office	Administrative Office	Gross floor area (ft ²)	\$5.73
	Medical Office/Clinic	Gross floor area (ft ²)	\$17.02
Industrial	Light Industrial/Manufacturing	Gross floor area (ft ²)	\$3.72
	Warehousing/Storage	Gross floor area (ft ²)	\$1.06
	Self-Storage	Gross floor area (ft ²)	\$1.06

*Rates are effective as of July 1, 2020. Rates are for citywide SDC only. Additional fees apply if property is located in an overlay area
 Source: City of Portland Bureau of Development Services, Systems Development Charges Fact Sheet. <https://www.portland.gov/bds/current-fee-schedules/systems-development-charges-sdcs> (accessed 22 April 2021)

The SDC assessment process is executed alongside applications for commercial or residential building permits. If applicants disagree with the amount of TSDC assessed for their development, they may appeal by submitting information showing that the development does not generate as many person trips as shown in the city’s rate study. To do so, applicants must hire a professional Oregon traffic engineer to prepare a detailed report justifying the alternate rate, using generation data at three similar locations on three consecutive midweek days.

The Bureau of Transportation's 2017 TSDC methodology update, which changed from a vehicle trip-based methodology to a person-trip based methodology², better represents the urban and multi-modal nature of Portland's transportation system and reduced the opportunity for appeal.

Fee Exemptions, Discounts, Credits and Payment Terms

TSDCs apply only to developments that will increase person-trips. Remodels of buildings less than 3,000 square feet with no change of occupancy and remodels that do not change the use of a building and developments that will have a negligible impact on the overall trip generation of a site are exempt.

The Bureau of Transportation offers TSDC person trip adjustments that automatically discount TSDC charges for developments in areas with higher pedestrian traffic and bicycle use, as long as they comply with zoning code standards.

In addition, developers may apply for an exemption when building affordable housing units.

There are also options for reducing the amount of TSDC fees owed to the city through the use of TSDC credits. The Bureau of Transportation offers dollar-for-dollar TSDC credits for investments in qualified public improvements to specific transportation facilities on the Bureau of Transportation's list of eligible capital projects. TSDC credit transfers are transferable but may only be used for development upon the same parcel from which the credit originated and within a 10-year period.

TSDC charges are typically paid up-front, however the program allows developers to request a deferral of fee payment for a period of 6, 9, or 12 months from the issuance of the building permit, depending on the project valuation. In this case, developers must pay interest during the deferral period, in addition to a small finance fee. Alternatively, developers may pay TSDCs in monthly or biannual installments, with interest, over 5, 10, or 20 years. The city secures these loans and deferrals by recording a lien on the relevant property that remains in effect until the TSDCs are paid in full.

Eligible Projects and the TSDC Project List

TSDC fees cover part of the cost of building transportation facilities needed to serve development and redevelopment. TSDC funding must be used on capital projects that increase transportation system capacity to serve new development; TSDC funding cannot be used to address existing system deficiencies or operating and maintenance activities such as pothole repair, seismic upgrades, transit operating costs, or planning studies. Permissible project types include new bicycle facilities; sidewalks and pedestrian crossings; roadway realignments; streetcar projects; and transportation information and communications technology.

² The Transportation System Development Charge Update (October 2017) presents the details of the trip-based methodology. The document is available at <https://www.portland.gov/sites/default/files/2020-08/citywide-rate-study-october-2017.pdf>.

Funds collected through the TSDC program can only be used to pay for projects that are on the TSDC project list.³ The TSDC project list is a list of eligible projects that the city updates every 10 years. The TSDC project list is a subset of projects from the city’s larger Transportation System Plan (TSP) and other city and regional plans. Projects on this list must add to person-trip capacity, serve new growth in population and employment, and be planned for construction before within 10 years (see Figure 1). By coordinating the TSDC project list with the City’s most recent TSP update, the City also leveraged existing public engagement efforts to ensure that the current project list included a broad mix of projects with public support. Portland’s Bureau of Transportation also assigns each project on the TSDC list a TSDC eligible percentage based on the portion of the project that is growth- and capacity-related. The remaining portion must be funded by other sources.



Figure 1. Portland’s process for identifying TSDC projects and determining eligibility.

Source: City of Portland Bureau of Transportation, *Transportation Systems Development Charges Fact Sheet*, <https://www.portland.gov/transportation/permitting/transportation-system-development-charges> (accessed April 22, 2021)

Projects on the list are prioritized for funding as part of the Bureau of Transportation’s annual Capital Improvement Plan. The current project list, covering the 2017-2027 period, includes 169 total projects. The total cost of these projects exceeds expected TSDC revenues, and most projects are expected to use a combination of TSDC funds and other federal, state, and local

³ The 2017-2027 list is available at <https://www.portland.gov/sites/default/files/2020-08/citywide-tdsc-project-list-january-2018.pdf>, and a map showing project locations is available at <https://www.portland.gov/sites/default/files/2020-08/citywide-tdsc-project-map-january-2018.pdf>.

government and private sector funds. This approach provides the city flexibility to apply TSDC funds to leverage other funding sources and maximize the impact of limited local funds. If the city collects less revenue TSDC than anticipated, some projects on the list will not be built, according to the capital improvement plan priorities.

Between 1997 and 2020, the Bureau of Transportation funded 53 projects with TSDC funding, representing 63 percent of the TSDC project list. On average, TSDC funds represent about 30 percent of total project costs, although TSDC eligibility on the current project list ranges from two percent to 100 percent of a project's total costs. Whether a project receives all the TSDC funding for which it is eligible depends on the priorities in the capital improvement and the availability of other funding sources. In addition to the Cully Boulevard Green Streets Project, TSDC funded projects include light rail and streetcar investments, enhancements to pedestrian and bike safety, a new neighborhood greenway, and other multi-modal improvements.

TSDC Overlay Zones

In 2009 and 2011, the Bureau of Transportation created two TSDC "overlay districts" to fund specific transportation infrastructure projects in areas projected to experience a high level of growth. Developments within these overlay districts pay additional TSDCs above those paid for development in other parts of the city. Overlay rates are determined using the same methodology used to develop citywide rates, but are based on overlay area-specific rate studies. Unlike the citywide TSDCs, which can fund projects anywhere in the city, the TSDC overlay charges are only used to fund projects within their respective overlay areas.

When the Overlay Zone project list is complete, it will sunset, rather than be updated along with the citywide list.

Program Updates

The City updates its TSDC program every 10 years, which includes updating the methodology used to determine TSDC fees as well as the list of transportation infrastructure projects the revenue can be applied to. These periodic updates allow the City to respond to changing transportation needs and priorities. In the 2017 update, the Bureau of Transportation developed a new methodology that uses person trips rather than vehicle trips to better capture multimodal use of the City's transportation system. The City also adjusts SDC fees for inflation annually at the beginning of the fiscal year (July 1) using the 10-year moving average of the Oregon Composite Construction Cost Index published by the Oregon Highway Division. Major changes to the TSDC program have been accompanied by robust stakeholder outreach to ensure support and understanding of program updates.

In the first twenty years of the program, TSDCs generated over \$129 million for new street connections, intersections, sidewalks, bike lanes, and transit enhancements throughout the city. The first three fiscal years of the current cycle, which began in the City of Portland's Fiscal Year 2017/18, have resulted in over \$42 million collected from new development. For the remainder of the 10-year cycle, the Bureau of Transportation expects to collect approximately \$10.5 million per year. The Bureau of Transportation expects to spend two to three percent of this revenue to administer the TSDC program, with the rest directly funding eligible projects.

Implications for Future Value Capture Implementations

Portland's TSDC program is enabled by high growth and strong demand for development where the supply of land available for development/redevelopment is limited. Demand keeps rent and sale prices high enough to support the fees without curtailing development. The citywide TSDC program provides a high degree of flexibility to fund transportation infrastructure across all modes of transportation, including transportation infrastructure in lower income areas affected by high growth in other parts of the city. This relatively flexible revenue source is useful to leverage state, federal, and private sector sources of funds which are often more restrictive. The ability to create Overlay Districts provides a way for the city to respond to the unique needs of higher growth areas without imposing additional costs on low income and slower growing areas.

In a less dynamic economy and real estate market, the fees could add more to development costs than the market will support through rent and purchase prices. This would divert development in the area where the fee is charged to one without the fee, potentially encouraging less compact and less fiscally and environmentally sustainable development patterns. Furthermore, because impact fees can increase rents and property purchase prices, they can disproportionately affect low-income populations. Policies and funding to support affordable housing, such as those employed by the City of Portland, may be necessary to mitigate these equity impacts.

Implications for Future Applications of Value Capture

CONTACT INFORMATION

City of Portland Bureau of Transportation
Rich Eisenhauer | Program Manager
City of Portland | Bureau of Transportation
richard.eisenhauer@portlandoregon.gov

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