

An aerial night view of San Francisco, California, featuring the Transamerica Pyramid and the Bay Bridge. A central green park area is highlighted, showing a building and surrounding greenery.

CITYWIDE NEXUS UPDATE OVERVIEW

Seung-Yen Hong & Mat Snyder
Senior Planner / November 3, 2021 / CAC



San Francisco
Planning

Background

- In 2014, the City completed a Citywide Nexus Analysis and the Infrastructure Level of Service Analysis for a number of infrastructure categories.
- In 2015, the City completed a Transit Sustainability Fee Nexus Study and proposed changes to transit impact fees.
- The City is required to update the nexus study every five years. This project will update both of those studies into a single, updated Citywide Nexus Study.

Infrastructure Categories Evaluated

- Open space and recreation facilities
- Child care facilities
- Transit
- Bicycle, Pedestrian and Streetscape improvements (Complete Streets)
- Fire facilities*
- Library facilities*

Note: All relevant City agencies have been consulted

Infrastructure Level of Service Overview

- Evaluates existing levels of infrastructure provision and distribution
- Sets forth citywide LOS targets
- Provides the foundation for the Nexus Analysis



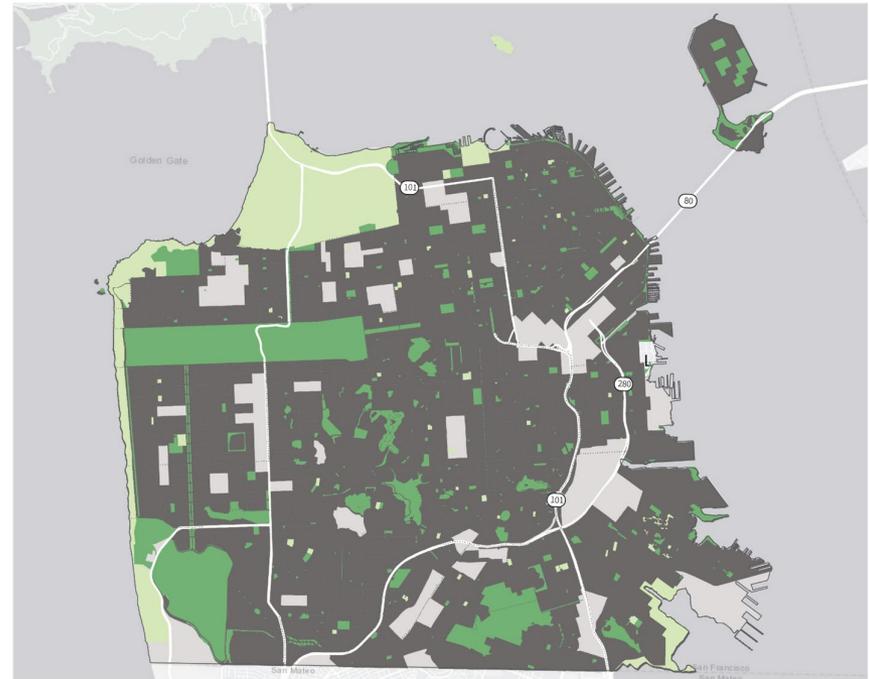
Level of Service Analysis and Goals Recreation and Open Space

■ Level of Service Analysis

- 3.0 acres of City-owned open space per 1,000 service population units
- 100% of SPU are within a 10-minute (half-mile) walk of open space

■ Goals

- Maintain 3.0 acres of City-owned open space per 1,000 service population units
- Maintain 100% of SPU within a 10-minute (half-mile) walk of public open space, and improve quality of open space



Proximity of Service Population to Recreation and Open Space

- Within 5 minutes walk
- 5 to 10 minutes walk

The walking network for the City of San Francisco was obtained from Open Street Map as a series of nodes and a database of distances and connections between nodes. "Node" refers to any intersection of two or more paths. Any node located inside of or next to (within 50 feet of) a park was set as a Point of Interest (POI), and then the network distance from each node to the nearest POI was calculated based on the database of distances and connections between nodes (as opposed to "as the crow flies"). Finally, each analysis zone was assigned the average walking distance of the nodes within its boundaries.

Source: San Francisco Recreation and Park Department, San Francisco Open Street Map, City Parks 2018, San Francisco population estimates 2019.



LEGEND

- County Boundary —
- Highways —
- Neighborhoods

Open Space by Ownership

- City-owned open space
- Non-city owned open space

Proximity of Residents to Open Space

Level of Service Analysis and Goals

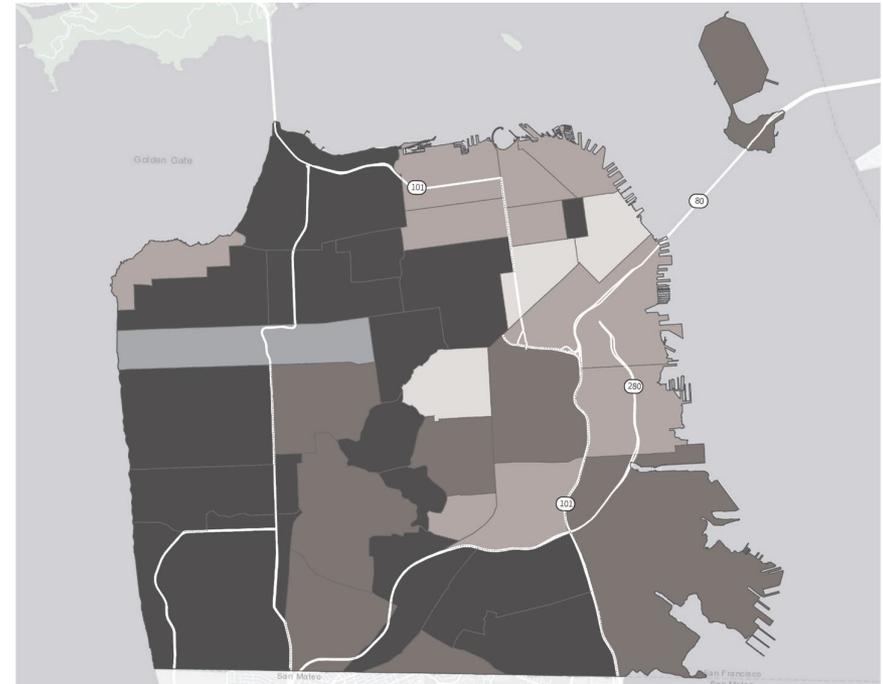
Child Care Facilities

■ Level of Service Analysis

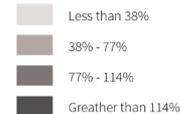
- 19% of infant/toddler child care demand served by available slots
- 88% of preschool child care demand served by available slots

■ Goals

- Accommodate 100% of new demand for infant/toddler child care space
- Accommodate 100% of new demand for preschool child care space



Percent of Demand Served by Available Licensed Slots



LEGEND



Citywide average: 88% of preschool age children demand served by available licensed slots.

Note: Due to security reasons specific location of childcare facilities are not shown on the maps.

Source: San Francisco Human Services Agency, San Francisco Early Care and Education Needs Assessment (2017), San Francisco Infrastructure Level of Service Analysis (2014)

Share of Preschool-age (3-4) Child Care Demand Served by Available Licensed Slots

Level of Service Analysis and Goals

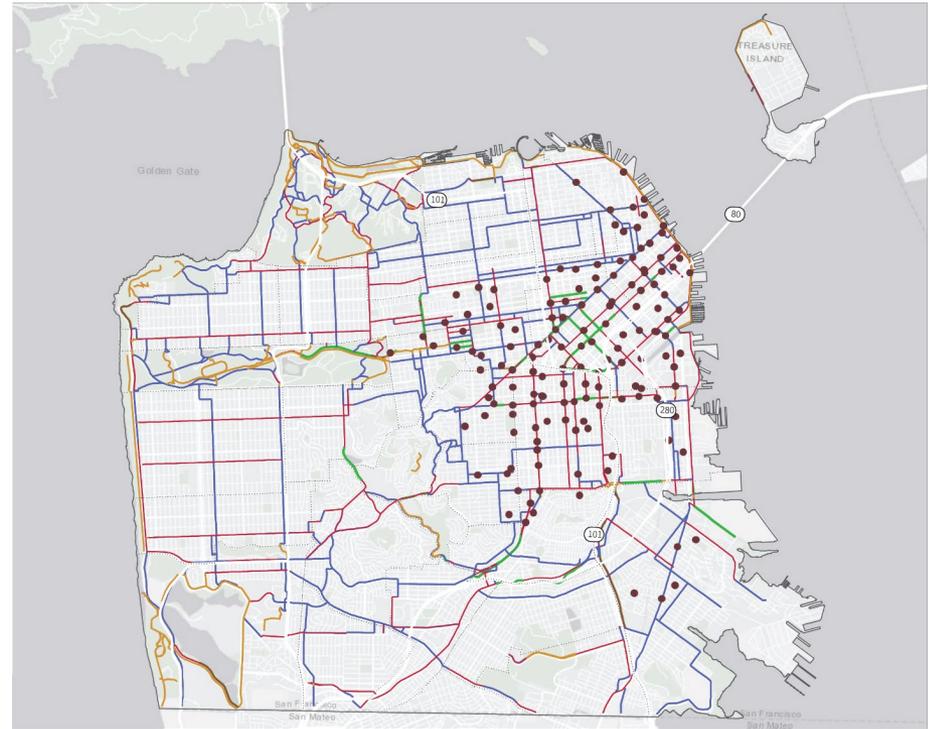
Complete Streets Infrastructure

- Level of Service Analysis

- 118 square feet of Complete Streets Sidewalk per service population unit

- Goals

- Maintain 118 square feet of Complete Streets Sidewalk per service population unit



- Class I: 62 miles
- Class II: 139 miles
- Class III: 209 miles
- Class IV: 20 miles



- LEGEND**
- County Boundary
 - Highways
 - Neighborhoods

- Bike Share Facilities**
- Bike Share Docking Stations

1. Bikeways, also known as bike paths or shared-use paths, are facilities with exclusive right of way for bicyclists and pedestrians, away from the roadway and with cross flows by motor traffic minimized. Some systems provide separate pedestrian facilities
2. Bikeways are bike lanes established along streets and are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel. Bike lanes are one-way facilities, typically striped adjacent to motor traffic travelling in the same direction.
3. Bikeways, or bike routes, designate a preferred route for bicyclists on streets shared with motor traffic not served by dedicated bikeways to provide continuity to the bikeway network. Bike routes are generally not appropriate for roadways with higher motor traffic speeds or volumes.
4. Separated bikeway, often referred to as a cycle track or protected bike lane, is for the exclusive use of bicycles, physically separated from motor traffic with a vertical feature.

Source: SFMTA Bikeway Network, Bike Share Stations, Bikeway Classification Brochure by Caltrans

Existing Bike Facilities

Level of Service Analysis and Goals

Transit Infrastructure

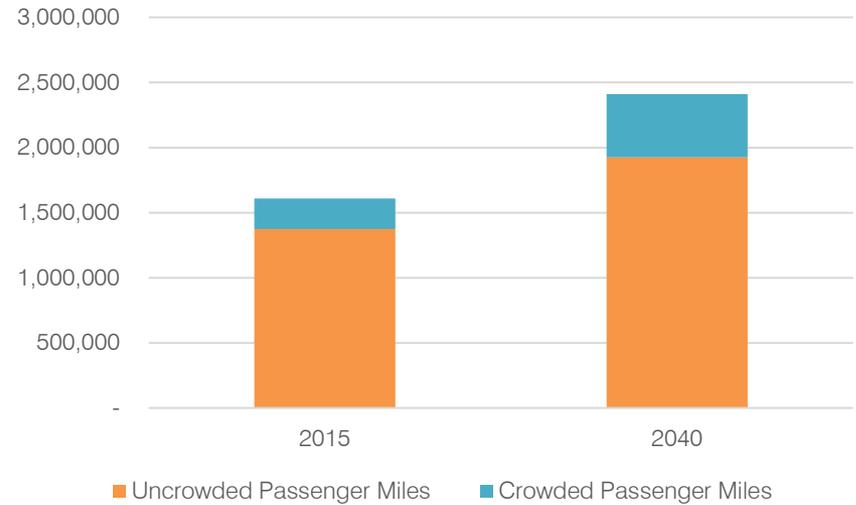
■ Level of Service Analysis

- 15% of passenger miles traveled in crowded conditions
- 1.45 revenue service hours per 1,000 daily trips

■ Goals

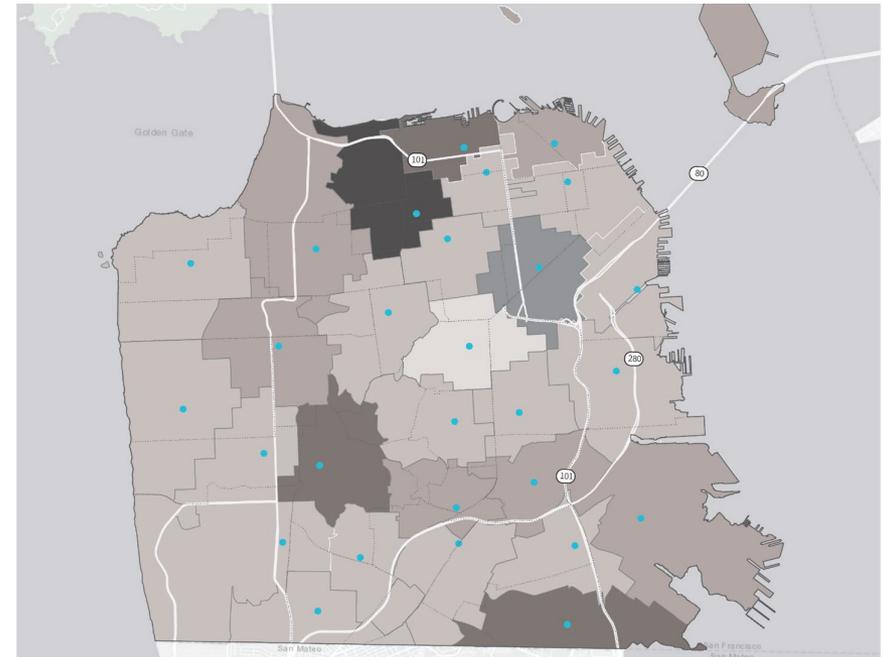
- Maintain existing LOS

Transit Crowding LOS Standard In 2015 and 2040

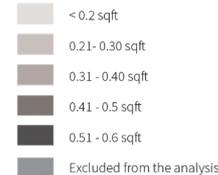


Level of Service Analysis and Goals Library Facilities

- Level of Service Analysis
 - 0.67 square feet of library per resident
- Goals
 - Maintain 0.6 square feet of library per resident



Square Feet of Library Space per Resident



By Closest Library Citywide Average: 0.67 sqft per resident

The San Francisco Planning Department estimates the total residents per Traffic Analysis Zones (TAZ) for 2019. Resident population is assigned to their closest library and divided by the total square footage of that library to arrive at a square feet per resident ratio.

Note: San Francisco Main Public Library was excluded from this analysis as an outlier.



LEGEND



Community Facilities



Square Feet of Library per Resident

Level of Service Analysis and Goals

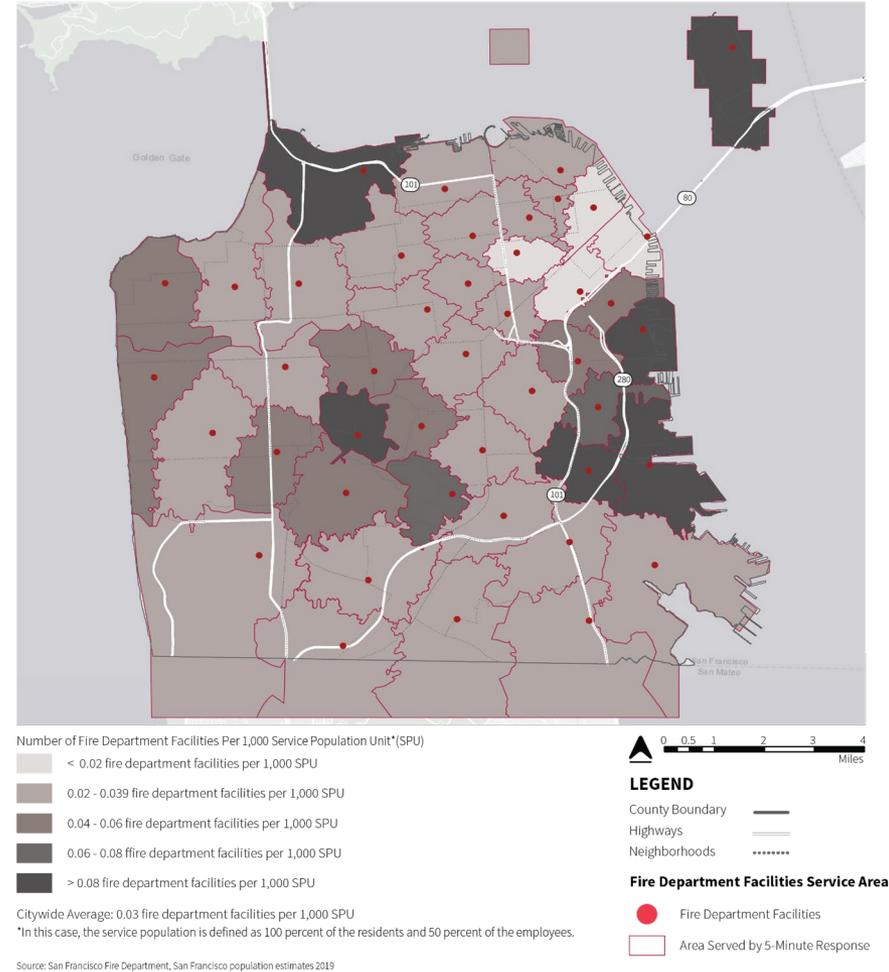
Firefighting Facilities

- Level of Service Analysis

- 0.04 fire stations per 1,000 service population units

- Goals

- Maintain 0.04 fire stations per 1,000 service population units



Fire Department Facilities per Capita

Nexus Study Overview

- **Nexus Study:** documents the relationship (i.e. **nexus**) between new development and the need for additional infrastructure
- Establishes the **cost** to serve the new population brought on by new development largely based on LOS
- **Nexus Fee Amounts:** Maximum infrastructure fee the City can change based on expected costs in relationship to amount of development
- Meets the requirements of the California Mitigation Fee Act and of Section 410 of the City Planning Code, which requires that all nexus studies be updated on a five-year basis.

Nexus Study Methodology

- A Level Of Service (LOS) based approach: Recreational and open space; Child care facilities; Transit; Complete Streets; Firefighting facilities; and Library facilities
 - Development's share of the cost to provide the target level of service.
- A linkage approach: Child care
 - Development's share of the cost to meet the new demand created by that development.

Next Steps

- Complete the Nexus Study report – Winter 2021
- Adopt the study and update references in Chapter 4 of the Planning Code – Spring 2022

THANK YOU



**San Francisco
Planning**

**Seung-Yen Hong &
Mat Snyder**
Senior Planner
San Francisco Planning

Seungyen.hong@sfgov.org
Mathew.Snyder@sfgov.org
www.sfplanning.org



Existing Fees

Fee Area	Recreational and Open Space	Child Care	Complete Streets	Transit	Total Impact Fee
Residential Fees (\$/GSF)					
Child Care: Citywide	-	\$2.15	-	-	\$2.15
Transit Center - Transportation	-	-	\$5.00	\$9.00	\$14.00
Transit Center - Open Space	\$3.38	-	-	-	\$3.38
Transportation Sustainability Fee	-	-	\$0.32	\$9.98	\$10.29
Balboa Park	\$3.66	\$1.89	\$4.80	\$1.64	\$12.00
Eastern Neighborhoods	\$12.00	\$1.64	\$7.83	\$2.53	\$24.00
Market/Octavia	\$2.98	\$1.14	\$6.25	\$3.12	\$13.49
Market/Van Ness SUD	\$5.00	\$2.01	\$10.48	\$5.00	\$22.49
Rincon Hill	\$2.17	-	\$10.73	-	\$12.90
Visitacion Valley	\$2.27	\$1.51	\$3.09	-	\$6.87
Central SoMa - Infrastructure	\$10.47	-	-	\$9.53	\$20.00
Maximum Fee	\$22.47	\$2.15	\$17.04	\$22.04	-
Commercial Fees (\$/GSF)					
Child Care: Citywide	-	\$1.85	-	-	\$1.85
Downtown Park Fee	\$3.00	-	-	-	\$3.00
Union Square Park Fee	\$6.00	-	-	-	\$6.00
Transit Center - Transportation ⁵	-	-	\$11.00	\$21.00	\$32.00
Transit Center - Open Space	\$12.00	-	-	-	\$12.00
Transportation Sustainability Fee	-	-	\$0.74	\$23.30	\$24.04
Balboa Park	\$0.69	\$0.36	\$0.90	\$0.31	\$2.25
Eastern Neighborhoods	\$1.33	\$0.44	\$7.52	\$11.72	\$21.00
Market/Octavia	\$0.75	-	\$3.27	\$1.07	\$5.10
Market/Van Ness SUD	\$4.73	-	\$7.10	\$10.65	\$22.49
Rincon Hill	\$2.17	-	\$10.73	-	\$12.90
Visitacion Valley	\$2.27	\$1.51	\$3.09	-	\$6.87
Central SoMa - Infrastructure	-	-	-	\$41.50	\$41.50
Maximum Fee	\$15.00	\$1.85	\$11.74	\$76.52	-

Nexus Study Methodology

Transit Infrastructure

- The Transportation Sustainability Fee (TSF) is a citywide development fee that funds costs associated with increased transit service provided by SFMTA to accommodate development impacts.
- To determine the maximum possible transit fee, the analysis updates two components of the TSF, one component to fund transit capital maintenance and one component to fund transit capital facilities.

Nexus Study Methodology

Recreational and Open Space

- Purpose of the recreational and open space development impact fee revenue is to fund expansion of San Francisco’s park capacity to meet the demand from new development.
- Maximum supportable fee calculation for recreation and open space infrastructure combines the proposed recreation and open space LOS metric with residential and job growth projections and the cost to provide recreation and open space.

	Proposed (Max)	Existing (Max)	Percent of Existing Fee Covered by Maximum Supportable Nexus (Maximum/Existing)	Proposed Max > 10% Above Existing
Residential (\$/GSF)	\$46.22	\$22.47	206%	YES
Non-Residential (\$/GSF)	\$33.05	\$15.00	220%	YES

Existing and Proposed Level of Service Recreation and Open Space

	2014 LOS Analysis	2019 LOS Analysis
Recreational and Open Space		
Metrics	<ul style="list-style-type: none"> Acres of City-owned open space per 1,000 service population units Acres of open space per 1,000 adjacent residents 	<ul style="list-style-type: none"> Acres of City-owned open space per 1,000 service population units Percent of service population units within a 10-minute (half-mile) walk of open space
Level of Service	<ul style="list-style-type: none"> 4.0 acres of City-owned open space per 1,000 service population units Average of 2.7 acres of open space per 1,000 adjacent residents; Median of 0.7 	<ul style="list-style-type: none"> 3.0 acres of City-owned open space per 1,000 service population units 100% of SPU are within a 10-minute (half-mile) walk of open space
Goals	<ul style="list-style-type: none"> Maintain 4.0 acres of City-owned open space per 1,000 service population units Achieve 0.5 acres of open space per 1,000 adjacent residents at all parks 	<ul style="list-style-type: none"> Maintain 3.0 acres of City-owned open space per 1,000 service population units Maintain 100% of SPU within a 10-minute (half-mile) walk of public open space, and improve quality of open space

Existing and Proposed Level of Service Child Care Facilities

	2014 LOS Analysis	2019 LOS Analysis
Child Care Facilities		
Metrics	<ul style="list-style-type: none"> Percent of infant/toddler child care demand served by available slots Percent of preschool child care demand served by available slots 	<ul style="list-style-type: none"> Percent of infant/toddler child care demand served by available slots Percent of preschool child care demand served by available slots
Level of Service	<ul style="list-style-type: none"> 37% of infant/toddler child care demand served by available slots 99.6% of preschool child care demand served by available slots 	<ul style="list-style-type: none"> 19% of infant/toddler child care demand served by available slots 88% of preschool child care demand served by available slots
Goals	<ul style="list-style-type: none"> Maintain 37% LOS capacity for infant/toddler child care demand Achieve 100% LOS capacity for preschool child care demand 	<ul style="list-style-type: none"> Accommodate 100% of new demand for infant/toddler child care space Accommodate 100% of new demand for preschool child care space

Existing and Proposed Level of Service Complete Streets Infrastructure

	2014 LOS Analysis	2019 LOS Analysis
Complete Streets		
Metrics	<ul style="list-style-type: none"> • Square feet of improved sidewalk per service population unit 	<ul style="list-style-type: none"> • Square feet of Complete Streets Sidewalk per service population unit
Level of Service	<ul style="list-style-type: none"> • 103 square feet of sidewalk per service population unit 	<ul style="list-style-type: none"> • 118 square feet of Complete Streets Sidewalk per service population unit
Goals	<ul style="list-style-type: none"> • 88 square feet of improved sidewalk per service population unit 	<ul style="list-style-type: none"> • Maintain 118 square feet of Complete Streets Sidewalk per service population unit

Existing and Proposed Level of Service Transit Infrastructure

	2014 LOS Analysis	2019 LOS Analysis
Transit		
Metrics	<ul style="list-style-type: none"> • Transit crowding: boardings exceeding 85% of vehicle capacity • Transit travel time 	<ul style="list-style-type: none"> • Transit crowding: passenger miles in vehicles with less than three square feet per standing passenger • Transit maintenance
Level of Service	<ul style="list-style-type: none"> • No LOS reported • 33.7 minutes per average travel time 	<ul style="list-style-type: none"> • 15% of passenger miles systemwide in crowded conditions • 1.45 revenue service hours provided per 1,000 daily auto plus transit trips
Goals	<ul style="list-style-type: none"> • Decrease crowding • 33.6 minutes per average travel time 	<ul style="list-style-type: none"> • Improve existing LOS (decrease percent crowded passenger miles) • Maintain existing LOS

Existing and Proposed Level of Service Library Facilities

	2014 LOS Analysis	2019 LOS Analysis
Library Facilities		
Metrics	<ul style="list-style-type: none"> Not included in 2014 report 	<ul style="list-style-type: none"> Square feet of library per resident
Level of Service	<ul style="list-style-type: none"> Not included in 2014 report 	<ul style="list-style-type: none"> 0.67 square feet of library per resident
Goals	<ul style="list-style-type: none"> Not included in 2014 report 	<ul style="list-style-type: none"> Maintain 0.6 square feet of library per resident

Existing and Proposed Level of Service Firefighting Facilities

	2014 LOS Analysis	2019 LOS Analysis
Firefighting Facilities		
Metrics	<ul style="list-style-type: none"> Not included in 2014 report 	<ul style="list-style-type: none"> Fire stations per 1,000 service population units
Level of Service	<ul style="list-style-type: none"> Not included in 2014 report 	<ul style="list-style-type: none"> 0.04 fire stations per 1,000 service population units
Goals	<ul style="list-style-type: none"> Not included in 2014 report 	<ul style="list-style-type: none"> Maintain 0.04 fire stations per 1,000 service population units

Nexus Study Methodology

Child Care Facilities

- Purpose of the child care development impact fee is to fund expansion of San Francisco's child care capacity to meet the demand from new development. That is, impact fee revenues are intended to be used to mitigate the child care demands of the increasing population.
- The child care fee uses a linkage approach. A linkage analysis for the nexus determination addresses the indirect social impacts caused by the addition of residents and businesses associated with new development, as compared to the direct public facility impacts addressed by traditional development fees.

	Proposed (Max)	Existing (Max)	Percent of Existing Fee Covered by Maximum Supportable Nexus (Maximum/Existing)	Proposed Max > 10% Above Existing
Residential (\$/GSF)	\$2.47	\$2.15	115%	YES
Non-Residential (\$/GSF)	\$4.86	\$1.85	263%	YES

Nexus Study Methodology

Complete Street Infrastructure

- Purpose of the complete streets development impact fee is to fund capital improvements to San Francisco's complete streets infrastructure.
- The maximum supportable fee calculation for complete streets infrastructure combines the proposed complete streets infrastructure provision LOS metric with total population and employment growth projections and the cost to provide complete streets infrastructure.

	Proposed (Max)	Existing (Max)	Percent of Existing Fee Covered by Maximum Supportable Nexus (Maximum/Existing)	Proposed Max > 10% Above Existing
Citywide				
Residential (\$/GSF)	\$16.19	\$8.15	199%	YES
Non-Residential (\$/GSF)	\$11.58	\$8.25	140%	YES
Downtown				
Residential (\$/GSF)	\$19.42	\$17.04	114%	YES
Non-Residential (\$/GSF)	\$13.89	\$11.74	118%	YES

Nexus Study Methodology

Library Facilities

- Currently, the City does not charge development impact fees for library infrastructure. The primary purpose of a library facilities impact fee would be to fund expansion of San Francisco's public library capacity to meet the demand generated by new development.
- The maximum supportable fee calculation for library facilities combines the proposed library infrastructure provision LOS metric with total population growth projection and the cost to provide library facilities.

	Proposed (Max)
Residential (\$/GSF)	\$2.50
Non-Residential (\$/GSF)	N/A

Nexus Study Methodology

Fire Department Facilities

- Currently, the City does not charge development impact fees for fire department facilities infrastructure. The purpose of the fire department facilities impact fee is to fund expansion of San Francisco's fire department capacity to meet the demand from new development.
- Estimates the maximum supportable fee based on the relationship between the cost to provide fire department facilities and the LOS provision to accommodate new development.

	Proposed (Max)
Residential (\$/GSF)	\$1.51
Non-Residential (\$/GSF)	\$1.08

Summary of Nexus Maximum Fees

	Maximum Supportable Fee (determined by this Nexus)	Highest Existing Fee (2019 fee rates)	Percent of Existing Fee Covered by Maximum Supportable Nexus (Maximum/Existing)
Recreational and Open Space			
Residential (\$/GSF)	\$46.22	\$22.47	206%
Non-Residential (\$/GSF)	\$33.05	\$15.00	220%
Child Care			
Residential (\$/GSF)	\$2.47	\$2.15	115%
Non-Residential (\$/GSF)	\$4.86	\$1.85	263%
Complete Streets: Non-Downtown			
Residential (\$/GSF)	\$16.19	\$8.15	199%
Non-Residential (\$/GSF)	\$11.58	\$8.25	140%
Complete Streets: Downtown			
Residential (\$/GSF)	\$19.42	\$17.04	114%
Non-Residential (\$/GSF)	\$13.89	\$11.74	118%
Transit			
Residential (\$/GSF)	\$24.24	\$22.04 ¹²	110%
PDR (\$/GSF)	\$46.82	\$9.45	495%
Non-Residential (ex. PDR) (\$/GSF)	\$83.75	\$76.52	110%
Libraries			
Residential (\$/GSF)	\$2.50	N/A	N/A
Non-Residential (\$/GSF)	N/A	N/A	N/A
Fire Department Facilities			
Residential (\$/GSF)	\$1.51	N/A	N/A
Non-Residential (\$/GSF)	\$1.08	N/A	N/A