CITY OF MOUNTAIN VIEW
RESOLUTION NO.
SERIES 2016

A RESOLUTION TO ADOPT A
NORTH BAYSHORE DEVELOPMENT IMPACT FEE

WHEREAS, the City Council adopts a Master Fee Schedule as a part of its annual budget, fixing and establishing fees, rates, and charges for goods and services provided by the City of Mountain View; and

WHEREAS, on November 10, 2015, the City Council adopted the North Bayshore Precise Plan ("Precise Plan"), which allows new commercial development in the North Bayshore area which encompasses the Shoreline Regional Park Community (jointly referred to as "North Bayshore"); and

WHEREAS, the Precise Plan identifies key public improvements needed in North Bayshore to serve projected commercial development in the area; and

WHEREAS, the Precise Plan includes a Funding Strategy that details how new public improvements in North Bayshore could be funded to serve new commercial development in the area; and

WHEREAS, the Funding Strategy identified the need for the completion of a North Bayshore Precise Plan Nexus Study ("Nexus Study") and adoption of development fees as a key element to fund public improvements needed to serve new development in the Precise Plan area; and

WHEREAS, the Nexus Study was completed by Economic and Planning Systems, Inc., in a report dated February 3, 2016, attached hereto as Exhibit B, which demonstrates the purpose of the proposed fees; the use to which the fees are proposed to be put; the reasonable relationship between the use of the proposed fees and the type of development project on which the fees would be imposed; the reasonable relationship between the need for the transportation, water, and sewer facilities and the impacts of planned commercial development in North Bayshore; and the proportional benefit to those proposed to be charged; and identifies a maximum allowable fee that could be levied on new North Bayshore commercial development for the three categories of public improvements: traffic, water, and sewer; and

WHEREAS, at least 10 days prior to the date this resolution is being heard, the Nexus Study was made available to the public indicating the amount of cost, or

estimated cost, required to provide the North Bayshore public improvement projects for which the North Bayshore Development Impact Fee is proposed to be levied and the other revenue sources anticipated to provide the facilities, including General Fund revenues, in accordance with Government Code Sections 66016 and 66019; and

WHEREAS, at least 14 days prior to the date this resolution is being heard, notice was provided to any persons or organizations who had requested notice, in accordance with Government Code Sections 66016 and 66019; and

WHEREAS, notice of the hearing on the proposed fees was published twice in a newspaper of general circulation in the manner set forth in Government Code Section 6062a as required by Government Code Section 66018; and

WHEREAS, at a public hearing held at its February 23, 2016 Regular Meeting, the City Council considered the Nexus Study, which demonstrates that fees imposed on new development are necessary to fully mitigate the impacts of new commercial development on the need for public improvements in North Bayshore; and

WHEREAS, the City Council has received and considered a Council report and any and all public comments, oral and written, received prior to or during the public hearing on the proposed North Bayshore Development Impact Fee; and

WHEREAS, the adoption of the North Bayshore Development Impact Fee is not subject to the California Environmental Quality Act (CEQA) in that pursuant to CEQA Guidelines, Section 15378(b)(4), the creation of government funding mechanisms which do not involve any commitment to any specific project which may cause a significant effect on the environment, is not identified as a "project" under CEQA; and

WHEREAS, the City Council desires to adopt a North Bayshore Development Impact Fee for all new commercial development in North Bayshore, in accordance with the Mitigation Fee Act;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Mountain View:

1. In accordance with the Mitigation Fee Act and the Nexus Study, and based on the facts and substantial evidence in the record, the North Bayshore Development Impact Fee is hereby adopted by the City Council based on the following findings:

a. Purpose

Substantial development activity within North Bayshore will create additional demand on the City's existing transportation and utility (water and sewer)

infrastructure. The purpose of this fee is to provide revenue that the City can use to help mitigate the impact new development will have on the existing transportation and utility systems.

b. Use of Fee

Fee revenue will be used as a funding source for transportation and utility (water and sewer) improvements in Mountain View and specifically the Shoreline Regional Park Community, particularly those improvements that will need to be made in North Bayshore to facilitate the growth in daily service population and projected water and sewer flow in the City.

c. Reasonable Relationship

New development in the North Bayshore will contribute an additional burden to Mountain View's transportation and utility infrastructure. Fee revenues that are collected from this new development will be spent to directly offset this burden by increasing the capacity of the existing transportation and utility (water and sewer) infrastructure as well as constructing new infrastructure to accommodate the projected growth.

d. Need

Each square foot of new development in the North Bayshore will add to the incremental need for transportation and utility facilities improvements in Mountain View. Improvements in this study were identified in the City's North Bayshore Precise Plan, North Bayshore Precise Plan Environmental Impact Report, the 2030 General Plan Update Utility Impact Study (GPUUIS), the 2010 Water/Sewer Master Plans, and the City-generated list of capital improvement projects. These required improvements are necessary to meet North Bayshore Precise Plan transportation objectives and effective utility level of service.

e. Proportionality

The fee charged to new development in the North Bayshore is based on the cost of identified transportation and utility investments that will need to be made in order to satisfy the proposed growth in Mountain View's service population. To determine the proportion of each transportation and utility improvement cost that is directly attributable to new development in North Bayshore, the Nexus Study applied the "but for" test which examines if a public investment would not need to be made "but for" new development square footage. This approach considered the relative location of the planned improvements and excluded all costs that are attributable to existing deficiencies within the transportation and utility networks.

2. **Adoption of North Bayshore Development Impact Fee.** A North Bayshore Development Impact Fee is hereby adopted as shown in the attached Exhibit A.

3. **Calculation of Fees.** The North Bayshore Development Impact Fee shown in Exhibit A shall be calculated based on either the net new gross floor area of new commercial development, as defined by the City of Mountain View Zoning Ordinance, that replaces existing development on the same site; or, for hotels, based on new guest rooms.

4. **Fee Payment Due Date.** The North Bayshore Development Impact Fee shown in Exhibit A shall be paid prior to issuance of the first Final Certificate of Occupancy for the development.

5. **Annual Fee Adjustment.** The North Bayshore Development Impact Fee shall be increased annually based on the Engineering News-Record construction cost index (CCI) and building cost index (BCI) for San Francisco (June to June) for purposes of calculating the Annual Fee Adjustment.

6. **Use of Funds.** All North Bayshore Development Impact Fees shall be deposited into separate accounts to be used for North Bayshore public improvement projects and for the purpose for which they were collected (transportation, water, or sewer).

7. **Environmental Review.** Prior to the approval of any transportation, water, or sewer project to be funded with North Bayshore Development Impact Fees, all necessary environmental review required by CEQA shall be completed. Adoption of these fees in no way limits the City's discretion in completing environmental review of the planned improvements. The planned improvements may be modified to provide for the use of additional Federal, State and local funds; to account for unexpected revenues, whether greater or lesser; to modify, add, or delete a project or program from the plan, consistent with the Mitigation Fee Act; to maintain consistency with the City's General Plan; or to take into consideration unforeseen circumstances, including, without limitation, circumstances that may come to light as a result of subsequent CEQA environmental review.

8. **Effective Date.** In accordance with Government Code Section 66017, this resolution shall take effect on April 23, 2016, which is at least 60 days after the date of adoption of this resolution.

– – – – – – – – – – –

MA/7/RESO
891-02-23-16r-E

Exhibits: A. Fee Schedule
B. North Bayshore Development Impact Fee Nexus Study

Exhibit A

FEE SCHEDULE FOR NORTH BAYSHORE DEVELOPMENT IMPACT FEES AS ADOPTED FEBRUARY 23, 2016

NORTH BAYSHORE DEVELOPMENT IMPACT FEE – COMMUNITY DEVELOPMENT DEPARTMENT

State Code § (if any)	Title of Fee	Amount of Fee	Fee Basis	Effective Date
§ 66000 *et seq.*	**NORTH BAYSHORE DEVELOPMENT IMPACT FEE**			4/23/16
	OFFICE/R&D			
	Transportation	$_____	Per sq. ft. net new gross floor area	
	Water	$6.35		
	Sewer	$1.18		
	RETAIL			
	Transportation	$_____	Per sq. ft. net new gross floor area	
	Water	$6.35		
	Sewer	$1.18		
	HOTEL			
	Transportation	$_____	Per guest room	
	Water	$3,929.00		
	Sewer	$707.00		

Exhibit B

Final Report

North Bayshore Development Impact Fee Nexus Study

The Economics of Land Use

Prepared for:
City of Mountain View

Prepared by:
Economic & Planning Systems, Inc.
Fehr+Peers
Schaaf & Wheeler

February 3, 2016

EPS #141147

Economic & Planning Systems, Inc.
One Kaiser Plaza, Suite 1410
Oakland, CA 94612
510 841 9190 tel
510 740 2080 fax

Oakland
Sacramento
Denver
Los Angeles

www.epsys.com

Table of Contents

Attachments

List of Tables

List of Figures

1. INTRODUCTION AND SUMMARY OF RESULTS

Purpose

This North Bayshore Public Facilities Impact Fee Update Report (Report) is designed to provide the City of Mountain View with the necessary technical documentation to support the adoption of a new North Bayshore Area-wide Impact fee (AIF) on new development within the North Bayshore Precise Plan (NBPP) area (see **Figure 1** for location). It has been prepared by Economic & Planning Systems, Inc. (EPS) with technical support from transportation engineers Fehr & Peers and civil engineers Schaaf & Wheeler, and with input from City staff.

Impact fees are one-time charges on new development collected and used by jurisdictions (e.g., a city or county) to cover the cost of capital facilities and infrastructure that is required to serve growth. Impact fees are generally collected upon issuance of a building permit or certificate of occupancy. Mountain View currently charges citywide Water and Wastewater Capacity Fees, Off-Site Storm Drainage Connection Fees, Housing Impact Fees, Rental Housing Impact Fees, Sewer Development Impact Fees, and Water Development Impact Fees among other subdivision and development fees.

The Fee Program described in this Report is consistent with the most recent relevant case law and the principles of AB 1600 or Government Code section 66000 et seq ("Fees for Development Projects"; except where specific citations are provided, this statute will be referred to in this Report as "Gov't 66000"). The Report establishes a nexus, or relationship, between the impacts of new development and the need for new capital facilities and infrastructure to serve the projected growth. This report also calculates the cost of the capital facilities attributable to the development. The City may elect to reduce the fees based on economic or policy considerations.

Figure 1 North Bayshore Precise Plan Area

Source: North Bayshore Precise Plan

Legal Context

This Report is designed to provide the necessary technical analysis supporting a schedule of fees to be established by a resolution. The key requirements of Gov't 66000, which determine the structure, scope, and amount of the proposed AIF, are as follows:

- **Collected for infrastructure improvements only**. Development impact fee revenue can be collected and used to cover the cost of capital facilities and infrastructure required to serve new development in the city. Impact fee revenue cannot be used to cover the operation and maintenance costs of these or any other facilities and infrastructure.

- **Used to fund facility needs created by new development rather than existing deficiencies**. Impact fee revenues can only be used to pay for new or expanded capital facilities needed to accommodate growth. Impact fee revenue cannot be collected or used to cover the cost of existing deficiencies in the City's infrastructure. In other words, the cost of capital projects designed to meet the needs of the City's existing jobs and residents must be funded through other sources. The costs associated with improvements that serve the needs of both new development and the existing population and employment are split on a "fair

share" basis according to the proportion attributable to each. Thus, the AIF program funding may need to be augmented by the City and other revenue sources to meet overall funding requirements.

- **Fee amount must be based on a rational nexus**. An impact fee amount must be based on a reasonable nexus, or connection, between new development and the needs and corresponding costs of the capital improvements needed to accommodate it. As such, an impact fee must be supported by specific findings that explain or demonstrate this nexus or relationship. In addition, the impact fee amount must be structured so that the revenue generated does not exceed the reasonable cost of providing the facility or improvement for which the fee is imposed.

Background

In 2012, the City of Mountain View adopted a long-range General Plan. The purpose of this plan was to guide the City's growth and future infrastructure investment. As part of the General Plan, the City identified various locations within the municipality that were considered "change areas"; the North Bayshore area was one such location. With the new designation as a "change area", the General Plan called for a more intensive planning study (a Precise Plan) to be done in the North Bayshore. Now complete, the Precise Plan provides the framework for future development standards and articulates changes to the area's zoning, infrastructure needs, and habitat preservation goals.

To better accommodate the growing demands of the area, the North Bayshore Precise Plan (NBPP) sets forth land use policies which allow for the intensification of development in the 649 acre site—which is now primarily occupied by low- and medium-density commercial uses. Specifically, the land use updates made by the Precise Plan will result in a net growth of 3.4 million square feet of net new development in the North Bayshore area, most of which will be office and research and development (R&D) uses, with some growth in retail space and lodging.[1] Note that new development is expected to span approximately 4.2 million gross new square feet, assuming about 800,000 square feet of existing R&D and industrial square footage will be demolished and replaced.

To support the projected growth in the local workforce with appropriately-scaled utilities and transportation infrastructure, the City is proposing a development fee which will be paid by new development in the North Bayshore area.

Nexus Findings

For each development impact fee category, the necessary "nexus" between new development in Mountain View and the proposed capital facilities is described, as required under Government Code Section 66000 (AB 1600). Nexus findings address: 1) the **purpose** of the fee and a related description of the facility for which fee revenue will be used; 2) the specific ***use*** of fee revenue; 3) the ***relationship*** between the facility and the type of development; 4) the relationship

[1] Note that the net new total growth is shown in the NBPP as about 3.32 million square feet of office, R&D, and retail and 290 new hotel rooms. Assuming new hotel development requires 500 gross square feet per hotel room results in an estimated 145,000 hotel square feet.

between the ***need*** for the facility and the type of development; and 5) the relationship between the amount of the fee and the ***proportionality*** of cost specifically attributable to new development. In addition, the methodology and technical calculations for determining existing deficiencies and future needs and the associated "fair share" allocation of costs to new development are provided within the **Transportation** and **Utilities** sections of this report and are discussed in further detail in **Attachment 1** and **Attachment 2**.

Overview of Methodology and Key Assumptions

The results of the analysis contained in this Report are based on a variety of assumptions regarding growth in the NBPP area, service standards and facility demand, and corresponding costs. Key issues that may warrant consideration in conjunction with this Report include:

- **Growth projections**. The impact fee calculations are based on projections related to growth in the NBPP over the next several decades. These growth assumptions are based on the "build out" allowed in the NBPP document. Due to the high-level of demand (measured by applications for square footage allocations) for growth in this area, it is assumed that all 3.4 million square feet of net new development will be realized.

- **Future capital facility needs.** As part of this analysis, the EPS team summarized the type and amount of new or expanded capital facilities and infrastructure to be provided by the City in the near future that will be needed either in part or in whole to accommodate new development in the North Bayshore area. This information is based on key City documents including the North Bayshore Precise Plan, the 2030 General Plan Update Utility Impact Study, the 2010 Water/Sewer Master Plans, and the City generated 2015-2020 five year CIP List. The City and the consultant team have only included facility costs which are not included in other fee programs to ensure that developers are not charged twice for an improvement.

- **Cost allocation to new and existing development.** This analysis allocates the cost of future capital improvements and facilities between new and existing development, as required by Gov't 66000, based on a variety of methodologies. In cases where new or expanded facilities or infrastructure improvements are determined to be needed entirely to accommodate new growth (e.g., there are no existing deficiencies), 100 percent of the costs are attributed to future development. In cases where new or expanded facilities are determined to serve or benefit both existing and new growth, costs are allocated in an appropriately proportional manner.

- **Cost allocation to land use categories.** The cost allocations to various land use categories (e.g., office/R&D, hotel, retail, etc.) are based on the relative demand or "fair-share" contribution of each land use category to the need for the facilities included. For example, the fee for water and sewer facilities are differentiated by land uses, based on the average gallons of water demanded or gallons of sewer flow generated.

- **Facility costs.** This information is based on key City documents noted above. All cost estimates have been inflated to 2016 dollars based on the Construction Cost Index published in Engineering News Record.

Preliminary Maximum Fee Scenarios

A summary of the maximum allowable impact fees calculated in this analysis by land use category is provided in **Table 1**. The maximum allowable impact fee represents the highest fee the City may charge based on the requirements of Gov't 66000 and the nexus analysis conducted

Table 1 reports two proposed fee scenarios by development and improvement type; a Baseline Scenario and an Alternative Scenario. While the water and sewer fees remain consistent from one scenario to the next, the distribution of the traffic fee changes substantially from the baseline scenario to the alternative scenario. Both scenarios reflect legally defensible methodologies. Decision-makers and staff members may select either option based on policy and administration considerations.

- **Baseline scenario – Distributed traffic fee.** In the baseline scenario, traffic fees are distributed to each land use type based on their associated trip rates.[2] Office and R&D development demand a higher rate of daily vehicle trips per square foot than retail or hotel uses; therefore their traffic fee obligation is substantially higher than the other land uses.

- **Alternative scenario – Consolidated traffic fee.** The Alternative Scenario excludes retail and hotel land uses from any fee allocations associated with transportation improvements. This exclusion is based on the projection that vehicle trips to new retail and hotel uses will originate with the office/R&D uses. That is, retail patrons are anticipated to be primarily office/R&D workers getting lunch and conducting errands. Additionally, the presence of retail and hotel uses within the North Bayshore area will effectively mitigate a portion of daily trips to and from the North Bayshore by reducing the need for office/R&D workers to travel to other parts of the City such as Downtown and San Antonio Village for their daily conveniences.

[2] For detailed calculations of trip rates by land use, please see **Attachment 1**, Table 3: Trip Rate Factors.

Table 1 Summary of Maximum Fee Scenarios

Fee Scenario	Fee Type	Land Use		
		Office/R&D (per sq.ft.)	**Retail** (per sq.ft.)	**Hotel** (per room)
Baseline Scenario	Traffic Fee	$25.82	$9.42	$8,002
	Water Fee	$6.35	$0.01	$3,929
	Sewer Fee	$1.18	$0.79	$707
	Total Fee	$33.35	$10.22	$12,638
Alternative Scenario (consolidated traffic fee)	Traffic Fee	$26.55	$0.00	$0
	Water Fee	$6.35	$0.01	$3,929
	Sewer Fee	$1.18	$0.79	$707
	Total Fee	$34.08	$0.80	$4,636

For detailed fee calculations, see Table 9.
Note that all fees per square foot are rounded to the nearest penny. Hotel fee per room is rounded to the nearest dollar.

Source: Fehr + Peers, Schaaf & Wheeler, EPS

Fee Generation and Need for Other Funding Sources

Table 2 provides further detail on the improvement categories proposed to be funded in part or in whole by the AIF. This table illustrates that both scenarios generate equal revenue to the City to fund the AIF, they only differ slightly in how the AIF is dispersed amongst land uses. In both scenarios, the AIF will fund approximately $116.4 million of local traffic, water, and sewer improvements, leaving a financing gap of roughly $61.5 million.[3] In order to fund necessary improvements, the City will need to identify and obtain funding for the non-AIF sources.

[3] Note that the City's estimate of the level of community benefit contributions anticipated from developments in the NBPP is deducted from the costs allocated to the NBPP fee program. These contributions are anticipated to be made by developers seeking approvals through a community benefit process in place with the City through the NBPP and other policies.

Table 2 Total Costs and Fee Revenue Estimated Projection *(millions)*

Fee Scenarios	Fee Type	Total Project Costs	Resources Required for Program						
			Community Benefit Resources	AIF Revenue Generated				Costs to be Funded from Other Sources	
				Office/R&D	*Retail*	*Hotel*	*Total*	*$*	*% of Total*
Baseline Scenario	Traffic	$193.7	$48.9	$85.5	$0.1	$2.3	$87.9		
	Water	$25.1	$0.0	$21.0	$0.0	$1.1	$22.2		
	Sewer	$5.8	$0.0	$3.9	$0.0	$0.2	$4.1		
	Total	**$224.6**	**$48.9**	$110.4	$0.1	$3.7	**$114.2**	**$61.5**	**27%**
Alternative Scenario (consolidated traffic fee)	Traffic	$193.7	$48.9	$87.9	$0.0	$0.0	$87.9		
	Water	$25.1	$0.0	$21.0	$0.0	$1.1	$22.2		
	Sewer	$5.8	$0.0	$3.9	$0.0	$0.2	$4.1		
	Total	**$224.6**	**$48.9**	$112.8	$0.0	$1.3	**$114.2**	**$61.5**	**27%**

Source: Fehr + Peers, Schaaf & Wheeler, EPS

2. PRECISE PLAN LAND USE INTENSIFICATION

The North Bayshore Precise Plan (NBPP) was adopted by the City of Mountain View in November 2014. The NBPP covers approximately 649 acres of territory and identifies the North Bayshore area as a place that protects and provides stewardship for natural habitat, while facilitating highly sustainable and innovative commercial development. **Figure 1** (page 2) presented a map of the territory included in the NBPP area.

Both the existing and future land uses of North Bayshore reflect the commercial nature of this area. Of the roughly 7.4 million square feet of existing development, nearly 7 million is currently being used for either Office or R&D (other uses include church and a handful of residential properties). The North Bayshore Precise Plan allows for net additional growth up to 3.465 million square feet of development to be added to this area, almost all of which will be absorbed by new office growth.

The increased demand for commercial uses coupled with the presence of under-utilized parcels justified the commission of a Precise Plan for the North Bayshore Area. The drafting of the North Bayshore Precise Plan allowed the City to make changes to both land use designations as well as promote new environmental protection measures. This was done through the creation of four unique "Character Areas"[4] which range in scale and building intensity. Higher density development is permitted closer to existing transportation corridors while lower density development and open space is encouraged around the edge of the plan area to provide a natural buffer to sensitive habitat areas.

A summary of development program changes is shown in **Table 3**. Note that net new square footage by land use and service population are key allocation metrics used in the subsequent chapter to allocate costs to new development and among land uses. The current Precise Plan has no residential development growth; however, an update to the plan is currently underway and may include new residential units. If an amendment to the Precise Plan is adopted with residential growth, an update to this nexus study will be needed.

[4] The four "Character Areas" are identified and referenced throughout the North Bayshore Precise Plan to indicate the scale and type of development for different locations within the North Bayshore area. The four "Character areas" outlined in the NBPP are as follows: Gateway, Core, General, and Edge, with "Gateway" representing the most dense area and "Edge' the least dense.

Table 3 Current and Future Land Uses

Land Use Type	Units	Existing Land Uses (2013)	Precise Plan Allocation	Total New Development
		a	*b*	*c=b-a*
Office/R&D/Industrial				
Office	Square Feet	170,000	4,230,000	4,060,000
R&D	Square Feet	6,750,000	6,100,000	(650,000)
Industrial	Square Feet	270,000	170,000	(100,000)
Subtotal		7,190,000	10,500,000	3,310,000
Retail				
Services	Square Feet	160,000	120,000	(40,000)
Restaurant	Square Feet	10,000	10,000	0
Retail	Square Feet	20,000	70,000	50,000
Subtotal		190,000	200,000	10,000
Hotel (1)	290 rooms	0	145,000	145,000
Total Square Footage		**7,380,000**	**10,845,000**	**3,465,000**

(1) Square Footage of Hotel rooms is estimated based on 500 gross sq. ft. per room. Note that this estimate is for illustrative purposes only. The hotel fee will be charged on a "per hotel room" basis.

Source: Draft EIR North Bayshore Precise Plan, City of Mountain View: Table 2.3-1, EPS

3. IMPACT FEE CALCULATION

This chapter is divided into two sections, each presenting the methodology and fee calculation for the capital facilities covered by the fee. Fees are calculated for transportation and utilities (including water and sewer) infrastructure types. Each section explains the purpose of the fee, the methodology for determining existing deficiencies and future needs, the allocation of costs among land uses, and the calculation of the impact fee. This chapter concludes with a summary of the fee calculation and resulting fee level.

Transportation

Fehr & Peers (F&P) transportation engineers conducted an analysis of transportation improvement needs and developed key allocation factors for use in calculating the impact fee for growth in the North Bayshore. The detailed analysis is included as **Attachment 1.** The remainder of this section summarizes or draws upon sections of F&P's work to illustrate the impact fee calculation.

Transportation Improvements

Intensifying land uses within the North Bayshore area while avoiding worsening traffic conditions will require a change in the travel mode of future North Bayshore workers. To that end, the Precise Plan includes standards and policies to achieve reductions in single-occupancy vehicle (SOV) trips to the area. The Precise Plan notes single-occupancy vehicle trips make up about 61 percent of travel in the North Bayshore area primarily during the morning commute hours. Transportation improvements proposed in the Precise Plan aim to reduce the proportion of single occupancy vehicle trips to a maximum of 45 percent during the morning commute hours.

The list of transportation improvement projects forming the basis of the fee program has been taken directly from the NBPP (see Chapter 8, Table 34). The improvement list includes the bicycle and pedestrian network (new bicycle only lanes and greenways throughout the site), several new access streets providing additional east-west and north-south circulation, a new pedestrian/bicycle bridge over Highway 101, major transit center upgrades, a new Shoreline Boulevard North Bayshore off-ramp from Highway 101, a reversible transit-only lane, and right-of-way acquisition.

Table 4 reports transportation improvements included in the NBPP document.[5]

[5] Note that the improvements are characterized as "high", "medium" and "shoreline corridor" improvements, consistent with the North Bayshore Precise Plan terminology.

Table 4 Transportation Project Costs

Item	Project Costs from NBPP (2014 $)	Stormwater Treatment Facilities Cost Factor	Utility Relocation Cost	Estimated Project Total Cost (2016 $)
High-Priority Improvements				
Shoreline: Hwy 101 to Plymouth	$9,400,000	10%		$10,843,000
Shoreline: Plymouth to Amphitheatre	$5,400,000			$5,662,000
Charleston: Shoreline to Amphitheatre	$17,100,000			$17,931,000
Garcia Avenue: Amphitheatre to Bayshore Pkwy	$4,700,000			$4,928,000
Plymouth/Space Park Connection Across Shoreline	$800,000	10%	20%	$1,091,000
East-West Greenway Connection #1	$5,100,000			$5,348,000
East-West Greenway Connection #2	$2,400,000			$2,517,000
Bridge over Hwy 101 West of North Shoreline	$19,000,000	10%		$21,916,000
Signalized Bike Crossings	$800,000			$839,000
N-S Connection Between Pear & Charleston East of Shoreline	$7,300,000	10%		$8,420,000
Total High-Priority Improvements	**$72,000,000**			**$79,495,000**
Medium-Priority Improvements				
Frontage Road Along Hwy 101 From Landings Drive to Plymouth	$4,400,000	10%		$5,075,000
North Rengstroff: Charleston to Hwy 101	$2,000,000			$2,097,000
San Antonio: Bayshore Pkwy to Hwy 101	$1,900,000			$1,992,000
Amphitheatre: Shoreline to Charleston	$8,700,000			$9,123,000
Bicycle Facilities Connecting Hwy 101, Shoreline and Plymouth	$600,000			$629,000
Shoreline NB off-Ramp	$6,200,000			$6,501,000
Total Medium Priority Improvements	**$23,800,000**			**$25,417,000**
Shoreline Corridor Improvements				
Shoreline Corridor Cycle Track	$8,000,000			$8,389,000
Shoreline Corridor Bus Lane	$6,000,000			$6,292,000
Transit Center Shuttle Improvements	$2,000,000			$2,097,000
Other Transit Center Upgrades	$48,000,000			$50,333,000
Corridor Protection/ROW Acquisition	$20,000,000			$20,972,000
Transit Center Master Plan	$700,000			$734,000
Total Shoreline Corridor Improvements	**$84,700,000**			**$88,817,000**
Total Transportation Improvements	**$180,500,000**			**$193,729,000**

Inflation Rate of 4.86% was used to adjust 2014 dollar figures to 2016 dollars.
Source: Fehr + Peers, North Bayshore Precise Plan

Transportation Cost Allocation Procedures

In order to include these capital projects in the North Bayshore AIF program, it is necessary to establish a nexus relationship between the new North Bayshore development that will be charged the fee and each of the projects. The following procedures have been used to evaluate that nexus relationship. Note much of the information used in this analysis is taken from the *North Bayshore Precise Plan – Final Transportation Impact Analysis Report*, dated October 2014 (referred to as the NBPP TIA), which contains the results of all of the transportation impact analysis that was later summarized in the North Bayshore Precise Plan EIR (NBPP EIR).

Existing Deficiencies

To account for existing deficiencies, an adjustment factor was calculated to determine the proportion of the project cost attributable to accommodating existing demand. The improvement project will provide additional system capacity to accommodate both the existing demand that exceeds the current capacity and the future demand that will be generated by new development. The adjustment factor is therefore calculated as: Existing Overcapacity Demand / (Existing Overcapacity Demand+Future Demand). Existing deficiencies impact six improvement items on

the AIF transportation program list, based on the performance of key intersections (described further in **Attachment 1**). The existing deficiency accounts for 14 percent of future demand for the improvement. Thus the cost of projects related to those two existing deficiency locations should be reduced by 14 percent before including them in the AIF program.

Costs Attributable to North Bayshore

The next step in the nexus analysis is to determine the portion of each project's costs attributable to growth in the North Bayshore area (compared with growth occurring elsewhere in the City). In this analysis, the projects identified as High- and Medium-Priority Improvements are distinguished from the projects identified as Shoreline Corridor Improvements. The High- and Medium-Priority Improvements are located within the North Bayshore area; the Shoreline Corridor Improvements extend beyond the North Bayshore area. Different allocation factors were applied to the different project locations.

In this analysis, all High- and Medium-Priority Projects as well as the Shoreline Corridor Bus Lane (T-18) are allocated fully to the AIF program, under the rationale that these improvements would not be needed "but for" the growth occurring in North Bayshore. All additional Shoreline Corridor Improvements (T-17 and T-19 through T-22) are designed to serve growth throughout the city and their costs are allocated proportionally among all citywide growth. For these improvements, the percentage of their costs that are allocated to North Bayshore development is based on the proportion of service population growth (residents + employees) citywide that is attributable to service population growth in the North Bayshore. In other words, new North Bayshore service population divided by new citywide service population, the result of this calculation is 35%. This key service population proportion is shown in **Table 5** and is discussed further in **Attachment 1.**

Table 6 applies these service population percentages and existing deficiencies to the transportation improvement costs. As shown, the total costs for planned improvements (High-Priority, Medium-Priority, and Shoreline Corridor) are approximately $194 million. Of this total, $137 million is allocated to demand from NBPP area growth. Approximately $49 million is deducted from this amount to account for funding from other sources within the NBPP area expected by the City.[6] Of the remaining costs, about $88 million is allocated to the AIF program.

[6] Note that these other funding sources are made up of expected commitments by developers in North Bayshore to partially or wholly fund projects as a part of their proposed community benefits packages.

Table 5 Existing and Projected Service Population

Population Category	Total	
North Bayshore Service Area (1)		
Existing		
Employees	23,009	
Residents	757	
Existing Service Population	**23,766**	*a*
New		
Employees	13,346	b
Residents	-33	c
Total Future Service Population	**37,079**	*d=a+b+c*
Mountain View		
Existing		
Employees	66740	
Residents	73860	
Existing Service Population	**140,600**	*e*
Total Future, with North Bayshore Growth		
Employees	92,600	*f*
Residents	86,332	*g*
Future Service Population	**178,932**	*h=e+f+g*
Key Service Population Proportion		
Future NB Growth as % of Future Citywide Growth = Net New North Bayshore / Net New Mountain View	35%	*i=(h-e)/(d-a)*

(1) The NBS Service Area includes the mobile home park on the eastern edge of the plan area.
Source: Fehr + Peers, Mountain View General Plan, EPS

Table 6 Detailed Summary of Transportation Improvements and Allocation to NBPP AIF

Projects		Est. Cost from NBPP (in 2014 $)	Additional Cost Factor for Stormwater Treatment Facilities	Additional Cost Factor for Major Utility Relocation	Est. Project Total Cost (in 2016 $)	Existing Deficiencies		Allocation to NBS		(less) Community Benefit Contributions (projected) (1)	Total Transportation Costs Allocated to Fee
						Applicable?	Adjustment Factor	Percent Allocation	$ Allocated to NBS		
High-Priority Improvements											
T-1	Shoreline: Hwy 101 to Plymouth	$9,400,000	10%		$10,843,000	X	14%	100%	$9,324,980		
T-2	Shoreline: Plymouth to Amphitheatre	$5,400,000			$5,662,000	-	-	100%	$5,662,000		
T-3	Charleston: Shoreline to Amphitheatre	$17,100,000			$17,931,000	-	-	100%	$17,931,000		
T-4	Garcia Avenue: Amphitheatre to Bayshore Pkwy	$4,700,000			$4,928,000	-	-	100%	$4,928,000		
T-5	Plymouth / Space Park Connection Across Shoreline	$800,000	10%	20%	$1,091,000	-	-	100%	$1,091,000		
T-6	East-West Greenway Connection #1	$5,100,000			$5,348,000	-	-	100%	$5,348,000		
T-7	East-West Greenway Connection #2	$2,400,000			$2,517,000	-	-	100%	$2,517,000		
T-8	Bridge over Hwy 101 West of North Shoreline	$19,000,000	10%		$21,916,000	-	-	100%	$21,916,000		
T-9	Signalized Bike Crossings	$800,000			$839,000	-	-	100%	$839,000		
T-10	N-S Connection Between Pear & Charleston East of Shoreline	$7,300,000	10%		$8,420,000	-	-	100%	$8,420,000		
Subtotal:	High-Priority Improvements				$79,495,000				$77,976,980		
Medium-Priority Improvements											
T-11	Frontage Road Along Hwy 101 From Landings Drive to Plymouth	$4,400,000	10%		$5,075,000	-	-	100%	$5,075,000		
T-12	North Rengstorff: Charleston to Hwy 101	$2,000,000			$2,097,000	-	-	100%	$2,097,000		
T-13	San Antonio: Bayshore Pkwy to Hwy 101	$1,900,000			$1,992,000	-	-	100%	$1,992,000		
T-14	Amphitheatre: Shoreline to Charleston	$8,700,000			$9,123,000	-	-	100%	$9,123,000		
T-15	Bicycle Facilities Connecting Hwy 101, Shoreline and Plymouth	$600,000			$629,000	-	-	100%	$629,000		
T-16	Shoreline NB off-Ramp	$6,200,000			$6,501,000	X	14%	100%	$5,590,860		
Subtotal:	Medium-Priority Improvements				$25,417,000				$24,506,860		
Shoreline Corridor Improvements											
T-17	Shoreline Corridor Cycle Track	$8,000,000			$8,389,000	-	-	35%	$2,936,150		
T-18	Shoreline Corridor Bus Lane	$6,000,000			$6,292,000	X	14%	100%	$5,411,120		
T-19	Transit Center Shuttle Improvements	$2,000,000			$2,097,000	-	-	35%	$733,950		
T-20	Other Transit Center Upgrades (Scope TBD)	$48,000,000			$50,333,000	-	-	35%	$17,616,550		
T-21	Corridor Protection/ROW Acquisition	$20,000,000			$20,972,000	-	-	35%	$7,340,200		
T-22	Transit Center Master Plan	$700,000			$734,000	-	-	35%	$256,900		
Subtotal:	Shoreline Corridor Improvements				$88,817,000				$34,294,870		
Total Transportation Improvements		**$180,500,000**			**$193,729,000**				**$136,778,710**	**-$48,905,195**	**$87,873,515**

NOTES:

High-Priority and Medium-Priority Improvements are located in the NBS area. Shoreline Corridor Improvements are partially or fully located outside of NBS.

Inflation factor of 4.86% was used to adjust the cost estimates from 2014$ to 2016$ (that is 2.4% per year for two years).

Existing Deficiencies are flagged at those locations where the traffic analysis in the NBPP TIA identified an intersection currently operating at LOS E or F.

Allocation: For projects located in NBS or directly serving new NBS development (T-1 through T-16 and T-18), the % allocation is assumed to be solely the responsibility of new NBS development (i.e., project would not be built in absence of demand from new NBS development).
For all other projects, the project would meet Citywide policy objectives and serve growth throughout the City, so the % allocation is calculated as new NBS service population (residents plus employees) as a proportion of new citywide service population (35%).

Transportation Nexus Findings

The Transportation development impact fee will cover new development's share of the costs associated with new transportation facilities. Investment in new transportation improvements within the City of Mountain View will be required as the city's service population increases. The subsections summarize the nexus findings for the proposed transportation impact fee.

Nexus Findings

Purpose

Substantial development activity within the City of Mountain View will create additional demand on the city's existing transportation infrastructure. The purpose of this fee is to provide revenue that the City can use to help mitigate the impact new development will have on the transportation system.

Use of Fee

Fee revenue will be used as a funding source for transportation improvements in Mountain View, particularly those improvements that will need to be made in the North Bayshore area to facilitate the growth in daily service population.

Relationship

New development in the North Bayshore will contribute an additional burden to Mountain View's transportation infrastructure. Fee revenues that are collected from this new development will be spent to directly offset this burden by improving the existing transportation infrastructure as well as constructing new infrastructure to accommodate the projected growth.

Need

Each square foot of new development in the North Bayshore will add to the incremental need for transportation facilities improvements in Mountain View. Improvements in this study were identified in the City's Environmental Impact Report and are estimated to be necessary to maintain the City's effective level of service.

Proportionality

The AIF that is charged to new development in the North Bayshore is based on the cost of identified transportation investments that will need to be made in order to satisfy the proposed growth in Mountain View's service population. In order to include a project into the AIF program it is necessary that a nexus relationship be established between the North Bayshore development that will be charged the fee and each of the identified transportation projects. To determine the proportion of each transportation improvement cost that is directly attributable to new development in North Bayshore this analysis applied the "but for" test which examines if a public investment would not need to be made "but for" new development square footage. This approach considered the relative location of the planned improvements, and excluded all costs that are attributable to existing deficiencies within the transportation network.

Utilities

Schaaf & Wheeler civil engineers conducted an analysis of water and sewer infrastructure needs and appropriate allocation factors for use in calculating the utilities impact fee for growth in the

North Bayshore. The detailed analysis is included as **Attachment 2.** The remainder of this section summarizes or draws upon sections of Schaaf & Wheeler's work to illustrate the impact fee calculation.

Existing Water and Wastewater Capacity Fee

The City of Mountain View currently charges a water and wastewater capacity fee to net new development within the City. This existing fee is based on a system "buy in" approach, one where new development must pay into the system that it is accessing. Fees are calculated by dividing the total costs of existing assets by the projected demands on the systems through 2030. Unlike the proposed impact fee which ensures that new development in the North Bayshore will pay for *future* infrastructure improvements needed to accommodate growth, the existing capacity fee is a tool for the city to recuperate costs associated with the *past* construction of infrastructure. The analysis of civil engineers Schaaf & Wheeler did not find any overlap between the existing capacity fee and the planned impact fee, therefore, net new development would be subject to both. More detail is provided on the existing capacity fee in **Attachment 2** of this report.

Water and Sewer Improvements

Schaaf & Wheeler engineers reviewed the NBPP, the 2030 General Plan Update Utility Impact Study (GPUUIS), the 2010 Water/Sewer Masters Plans (WMP/SMP), and the City-generated 2014 Capital Improvement Projects (CIP) list to determine the City's published capital improvement projects in the North Bayshore area.

- **Water costs.** 28 potable water improvements and 6 recycled water improvements are included in the fee program. These project costs total $25 million.
- **Sewer costs.** Fourteen capital projects are located within the North Bayshore area with a total of 38 pipe segments, totaling $5.8 million.

Utility Cost Allocation Procedures

Existing Deficiencies

Water Projects

Potable Water

The potable water system deficiencies identified in North Bayshore are considered to be a direct result of growth within North Bayshore and independent of any demand changes throughout the rest of the City. Therefore the full costs of new potable water improvements required to serve the North Bayshore area are fully attributed to new development in the area.[7] Potable water improvements include 28 projects and total $13.6 million.

Recycled Water

A total of six recycled water projects (four pipe looping projects, one reservoir, and one pumping station) are included in the fee program. A contribution rate of 75% was assigned to these

[7] Full list of potable water Capital Improvement Projects and their associated costs included in **Attachment 2** Table 2.

projects for new North Bayshore development bringing the total costs of recycled water improvements attributable to new development to $8.6 million.[8]

Total Water

For the AIF, potable and recycled water projects are combined to form a single water fee. The total water improvement costs allocated to the AIF total $22.2 million.

Sewer Projects

The sewer system in the City flows from south to north through North Bayshore from other parts of the City. Three main trunks run through North Bayshore. Benefits from projects related to the Western Trunk and the Eastern Trunk will not support new development in the NBPP, therefore these two trunks are not analyzed.

For the third trunk, the Central Trunk, deficiencies are the result of increased flow associated with the NBPP and the General Plan Update Utility Impact Study (GPUUIS) from other parts of the City creating a reasonable nexus with new North Bayshore development. Costs are apportioned based on the incremental sewer flow attributed to new growth. These proportions are described further in the technical memo included in **Attachment 2** and range from less than 1 percent to 100 percent.

Costs Attributable to New Development in North Bayshore

Table 7 summarizes the total sewer and water improvement costs attributable to new growth in the North Bayshore which total $26.3 million.

Table 7 Utility Costs and Allocation to NBPP

Item	Project Costs (2016$s)	Costs Attributable to NBS (1)
Water (Potable and Recycled) Improvements	$25,050,610	$22,184,860
Sewer Improvements	$5,787,714	$4,112,500
Total Water and Sewer Improvement Costs (2)	**$30,838,324**	**$26,297,360**

(1) 75% of Recycled water costs are attributable to new development in NBS.

(2) These total costs allocated to NBPP area are the basis of the fee calculation in subsequent tables.

See **Attachment 2** for detailed calculation of Water and Sewer project costs.

Utility Nexus Findings

The water and sewer impact fees will cover new development's share of the costs associated with expanding the existing water and wastewater infrastructure system. Investment in new utility improvements within the City of Mountain View will be required as the city's service population increases. The subsections below summarize the nexus findings for the proposed water and sewer impact fees.

[8] A detailed list of each recycled water project and their cost is included in **Attachment 2** Table 3.

Nexus Findings

Purpose

Substantial development activity within the City of Mountain View will create additional demand on the city's existing water and sewer infrastructure. The purpose of this fee is to provide revenue that the City can use to help mitigate the impact new development will have on the existing utility system.

Use of Fee

Fee revenue will be used as a funding source for utility improvements in Mountain View, particularly those improvements that will need to be made in order to accommodate the projected increase in water and sewer flow in the City.

Relationship

New development in the North Bayshore will contribute an additional burden to Mountain View's utility infrastructure. Fee revenues that are collected from this new development will be spent to directly offset this burden by improving the existing utility infrastructure as well as constructing new infrastructure to accommodate the projected growth.

Need

Each square foot of new development in the North Bayshore will add to the incremental need for additional utility facilities improvements in Mountain View. Improvements in this study were identified in the North Bayshore Precise Plan (NBPP), the 2030 General Plan Update Utility Impact Study (GPUUIS), the 2010 Water/Sewer Master Plans, and the City-generated list of capital improvement projects.

Proportionality

The AIF that is charged to new development in the North Bayshore is based on the cost of identified water and sewer investments that will need to be made in order to satisfy the proposed growth in Mountain View's service population. In order to include a project into the AIF program it is necessary that a nexus relationship be established between the North Bayshore development that will be charged the fee and each of the identified utility improvements. To determine the proportion of each transportation improvement cost that is directly attributable to new development in North Bayshore this analysis applied the "but for" test which examines if a public investment would not need to be made "but for" new development square footage. This approach considered the relative location of the planned improvements, and excluded all costs that are attributable to existing deficiencies within the utility network.

Fee Calculation

Total costs allocated to the AIF program resulting from infrastructure demands from net new development in the North Bayshore area are $114 million (see **Table 8**).

Table 8 Total Improvement Costs Allocated to New NBPP Development

Item	Total Costs to be Fee-Funded
Transportation	$87,873,515
Water	$22,184,860
Sewer	$4,112,500
Total	**$114,170,875**

Source: Fehr + Peers; Schaaf & Wheeler, North Bayshore Precise Plan, EPS.

These costs attributable to new growth in the North Bayshore area are allocated to new development based on each land use's contribution demand for the new facilities. **Table 9** illustrates the fee calculation procedures and **Figure 2** summarizes the results. The calculation procedures are as follows:

- **Development program**. The net new square feet by use are shown for office/R&D, retail, and hotel uses.
- **Transportation fee.** The proportion of trips generated by each use is shown followed by the transportation improvement cost allocated to net new growth in the North Bayshore area.
- **Water and sewer fee.** For both utility fees, the demand factors by land use are shown (in either gallons of water demanded per day or gallons of sewer generated per day). These factors are used to allocate sewer and water improvement costs allocated to net new growth in the North Bayshore area, among the land uses.

Two alternatives are shown in **Table 9**. The utility fee calculation is constant in both scenarios, but two legally defensible methods of allocating transportation costs are presented:

- **Baseline scenario – Distributed traffic fee.** Traffic fees are distributed to each of the land use types based on their associated trip rates.[9] Office and R&D development demand a higher rate of daily vehicle trips per square foot than retail or hotel uses; therefore their traffic fee obligation is substantially higher than the other land uses.
- **Alternative Scenario – Consolidated traffic fee.** The Alternative Scenario excludes retail and hotel land uses from any fee allocations associated with transportation improvements. This exclusion is based on the projection that vehicle trips to new retail and hotel uses will originate with the office/R&D uses. That is, retail patrons are anticipated to be primarily office/R&D workers getting lunch and conducting errands. Additionally, the presence of retail and hotel uses within the North Bayshore area will reduce the need for office/R&D workers to travel to other parts of the City for their daily conveniences.

[9] For detailed calculations of trip rates by land use, please see **Attachment 1***, Table 3: Trip Rate Factors.*

Table 9 North Bayshore Area Impact Fee Calculation

Item	Baseline Scenario (1)	Alternative Scenario (2)
Development Program - Net New Square Feet or Hotel Rooms		
Office/ R&D (sq.ft.)	3,310,000	3,310,000
Retail (sq.ft.)	10,000	10,000
Hotel (rooms)	290	290
Transportation		
Costs Allocated to NBPP New Dev.	$87,873,515	$87,873,515
Adjusted Peak AM Hr. Trip Rate (3)		
Office/ R&D (per 1,000 sq.ft.)	1.71	n/a
Retail (per 1,000 sq.ft.)	0.62	n/a
Hotel (per 1,000 sq. ft.)	0.53	n/a
Total Trips at NBPP Buildout (4)	5,820	n/a
Cost per trip	$15,098	n/a
Fee per Sq.Ft. or Per Room		
Office/ R&D	$25.82	$26.55
Retail	$9.42	$0.00
Hotel (per room)	$8,002	$0
Water		
Costs Allocated to NBPP New Dev.	$22,184,860	$22,184,860
Water Demand Factors (gallons per day) (5)		
Office/ R&D (per 1,000 sq.ft.)	210	210
Retail (per 1,000 sq.ft.)	130	130
Hotel (per room)	130	130
Total Gallons Water Demanded per Day at NBPP Buildout (4)	734,100	734,100
Cost per gallon of water demand	$30.22	$30.22
Fee per Sq.Ft. or Per Room		
Office/ R&D	$6.35	$6.35
Retail	$0.01	$0.01
Hotel	$3,929	$3,929
Sewer		
Costs Allocated to NBPP New Dev.	$4,112,500	$4,112,500
Sewer Demand Factors (gallons per day) (6)		
Office/ R&D (per 1,000 sq.ft.)	150	150
Retail (per 1,000 sq.ft.)	100	100
Hotel (per room)	90	90
Total Gallows Sewer Demanded per Day at NBPP Buildout (4)	523,600	523,600
Cost per gallon of sewer demand	$7.85	$7.85
Fee per Sq.Ft. or Per Room		
Office/ R&D	$1.18	$1.18
Retail	$0.79	$0.79
Hotel	$707	$707
Total Fee per Sq.Ft. or Per Room		
Office/ R&D (per sq.ft.)	**$33.35**	**$34.08**
Retail (per sq.ft.)	**$10.22**	**$0.80**
Hotel (per room)	**$12,638**	**$4,636**

(1) Baseline scenario assumes transportation costs are allocated among all land uses.

(2) Alternative scenario calculates the maximum fee assuming transportation costs are allocated to office/R&D uses only.

(3) See Table 3 in Attachment 1 for trip rates.

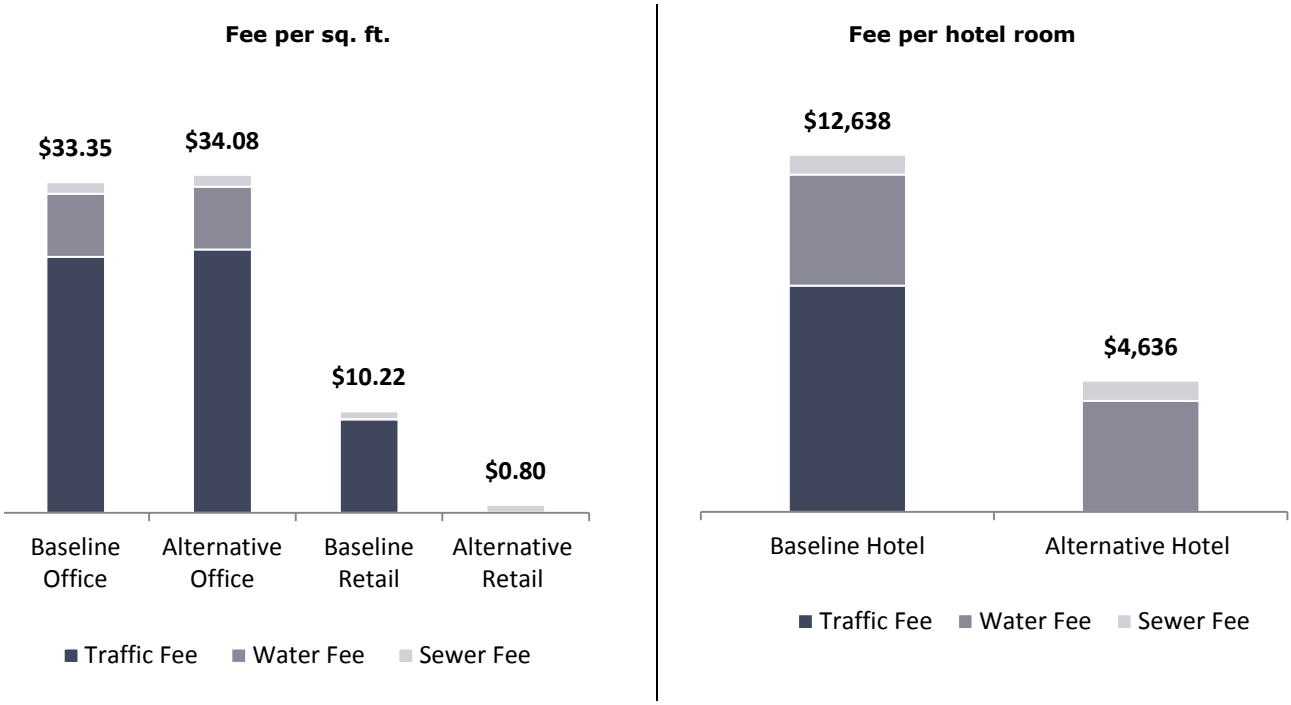
(4) Cost per unit of demand is calculated by totaling demand generated by land uses, based on the rates provided, and dividing by the total costs allocated to the NB.

(5) See water demand factors discussion in Attachment 2 technical memorandum, Table 7.

(6) See water demand factors discussion in Attachment 2 technical memorandum, Table 8.

Source: Fehr + Peers; Schaaf & Wheeler, North Bayshore Precise Plan, EPS

Figure 2 Proposed Fee Scenarios, Baseline and Alternative by Land Use



For detailed fee calculations see **Table 9.**

4. IMPLEMENTATION AND ADMINISTRATION OVERVIEW

The implementation and administration of the AIF will be established in more detail in the AIF resolution or Ordinance. The key elements and issues are summarized below.

Annual Review

This Report and the technical information it contains should be maintained and reviewed periodically by the City as necessary to ensure Impact Fee accuracy and to enable the adequate programming of funding sources. To the extent improvement requirements, costs, or development potential changes over time, the AIF Program will need to be updated. Specifically, Gov't 66000 stipulates each local agency that requires payment of a fee make the following information available to the public annually within 180 days of the last day of the fiscal year:

- A description of the type of fee in the account
- The amount of the fee
- The beginning and ending balance of the fund
- The amount of fees collected and interest earned
- Identification of each public improvement constructed
- The total cost of the improvements constructed
- The fees expended to construct the improvement
- The percent of total costs funded by the fee

If sufficient fees have been collected to fund the construction of an improvement, the agency must specify the approximate date for construction of that improvement. Because of the dynamic nature of growth and infrastructure requirements, the City should monitor development activity, the need for infrastructure improvements, and the adequacy of the fee revenues and other available funding. Formal annual review of the AIF Program should occur, at which time adjustments should be made. Costs associated with this monitoring and updating effort are included in the Impact Fee as part of the program compliance component.

Fee Escalation Factors

Most fee programs are automatically escalated based on a construction cost index. This allows the fee level to keep pace with cost inflation without requiring an annual approval process by authorizing jurisdictions.

Engineering News-Record (ENR) publishes a well-known and widely used index tracking cost inflation in the construction industry. ENR publishes a construction cost index (CCI) and a building cost index (BCI). ENR's CCI is a general purpose index used to chart the costs of basic construction materials (standard structural steel shapes, Portland cement, and lumber) and union labor. It is a weighted aggregate cost index where the construction materials and the weights of the materials and labor

quantities are held constant over time. Weights are determined based on the relative importance of the cost components to construction as determined by industry experts. The BCI incorporates the same methodology but it substitutes common labor with skilled labor consisting of three trades, bricklaying, carpentry, and ironworkers. The two ENR indices are published for the nation and for 20 major U.S. cities, including San Francisco.[10]

Surplus Funds

If any portion of a fee remains unexpended in an account for five years or more after deposit of the fee, Gov't 66000 requires the City Council to make findings every 5 years: (1) to identify the purpose to which the fee is to be put, (2) to demonstrate a reasonable relationship between the fee and the purpose for which it was charged, (3) to identify all sources and amounts of funding anticipated to complete financing of incomplete improvements, and (4) to designate the approximate dates on which the funding identified in (3) is expected to be deposited into the appropriate fund (Govt. Code §66001(d)).

If adequate funding has been collected for a certain improvement, an approximate date for commencement of construction on the improvement must be specified. If the findings show no need for the unspent funds, or if the conditions discussed above are not met, and the administrative costs of the refund do not exceed the refund itself, the local agency that has collected the funds must refund them (Govt. Code §66001(e)(f)). Alternatively, Govt. Code §66001(f) provides that if the administrative costs of refunding unexpended revenues exceed the amount to be refunded, the City may, after a noticed published hearing, allocate the revenues be allocated for some other purpose for which fees may be collected and which serves the project on which the fee was originally imposed.

Securing Supplemental Funding

The impact fee recommended here does not fund the full amount of all capital project costs identified in this Report. The City will have to identify funding and pay for improvements related to existing and new developments and improvements not funded by the AIF Program. Examples of such sources include the following:

- **Shoreline Regional Park Community (Shoreline Community).** The Shoreline Community was created in 1969 by the Shoreline Regional Community Act (The Act) for the development and support of the Shoreline Regional Park and to enhance the surrounding North Bayshore area economically and environmentally. The Act prescribes the powers of the Shoreline Community and designates the tax increment generated by assessed value increases to be used in the Shoreline Community to achieve the purposes described in the Act.
- **General Fund Revenues**. In any given year, the City could allocate a portion of its General Fund revenues for discretionary expenditures. Depending on the revenues generated relative to

[10] RSMeans also produces a historical cost index (HCI), also a weighted aggregate cost index. However, unlike the ENR indices, the HCI by RSMeans uses actual average usage of quantities in current building practice to weight the components of the index. The types of materials and their weighting in the index reflect common practice by contractors and subcontractors. The quantities and costs represent approximately 80 construction materials, 24 trades, and 9 types of construction equipment. By basing the index weights on the average usage of quantities in current building practices, RSMeans HCI also captures the effect on building cost inflation that arises from changing construction practices and technology. The HCI is produced for hundreds of U.S. cities.

costs and City priorities, the City may allocate General Fund revenues to fund capital facilities not covered by the Fee Program or other funding sources.

- Water and Wastewater are utility funds that account for the cost, operation and maintenance of all facilities required to supply, distribute and meter the water used by consumers in the City's service area and transport and process wastewater. The City can allocate revenues for the cost of capital improvements or bond for these improvements and the Water and Wastewater funds can pay debt service from the utility rates in compliance with Proposition 218.
- **State or Federal Funds**. The City might seek and obtain a grant of matching funds from State and Federal sources to help offset the costs of required capital facilities and improvements. As part of its funding effort, the City should research and monitor these outside revenue sources and apply for funds as appropriate.

ATTACHMENT 1

Transportation Area Impact Fee
Technical Memorandum

Fehr & Peers

FEHR PEERS

TECHNICAL MEMORANDUM

Date: February 2, 2016

To: Jason Moody, EPS

From: Julie Morgan and Ben Fuller, Fehr & Peers

Subject: North Bayshore Area-wide Impact Fee: Documentation of Transportation Nexus Analysis

WC15-3234

INTRODUCTION

As part of the team preparing a nexus study for the North Bayshore Area-wide Impact Fee (AIF), we have evaluated several options for addressing the transportation elements of the impact fee. This memorandum documents the assumptions and methods used in this evaluation.

TRANSPORTATION PROJECT LIST

The list of transportation improvement projects to be included in the AIF has been taken directly from the North Bayshore Precise Plan (NBPP). Chapter 8 of the NBPP addresses issues related to plan implementation; Table 34 specifically lists all of the transportation improvements needed to support the implementation of the plan. A table (Table 1) has been attached to this memorandum containing all of the projects listed in Table 34 of the NBPP, including the description of each project and its estimated cost. Note the cost estimates presented in the NBPP have been updated to 2016$, and costs for additional construction elements have been added to some projects based on recent direction from City staff; specifically, a 10% additional cost factor has been added to projects T-1, T-5, T-8, T-10, and T-11 for stormwater treatment facilities not included in the original cost estimates, and a 20% additional cost factor has been added to project T-5 because that project will involve significant utility relocation. The total cost of all projects is approximately

$194 million (in 2016$). Table 1 also contains the results of the nexus analysis procedures described in the following sections of this memorandum.

NEXUS ANALYSIS PROCEDURES

In order to include these capital projects in the AIF program, it is necessary to establish a nexus relationship between the new North Bayshore development that will be charged the fee and each of the projects. The following procedures have been used to evaluate that nexus relationship. Note much of the information used in this analysis is taken from the *North Bayshore Precise Plan – Final Transportation Impact Analysis Report*, dated October 2014 (referred to as the NBPP TIA), which contains the results of all of the transportation impact analysis that was later summarized in the North Bayshore Precise Plan EIR (NBPP EIR).

First, there has been an evaluation of whether there is an existing deficiency at any of the project locations, and if so, the magnitude of that deficiency. Existing deficiencies are accounted for by reducing the project cost that is included in the fee program.

Second, there has been an evaluation of the proportion of the remaining project cost that is attributable to new development in the North Bayshore area, and therefore could be the subject of a fee program.

EXISTING DEFICIENCIES

The concept of accounting for existing deficiencies in a fee study is that new development should not be charged the full cost of improving a facility that is not meeting current operating standards. The information used in this existing deficiency analysis has been taken from the NBPP TIA; this report includes an evaluation of existing conditions, addressing a large number of intersections throughout Mountain View and surrounding areas.

To account for existing deficiencies, an adjustment factor was calculated to determine the proportion of the project cost that is attributable to accommodating existing demand (i.e., the existing deficiency). The concept is that the improvement project will provide additional system capacity to accommodate both the existing demand that exceeds the current capacity and the future demand that will be generated by new development. The adjustment factor is therefore calculated as:

$$Adjustment\ Factor = \frac{(Existing\ Demand\ Over\ Capacity)}{(Existing\ Demand\ Over\ Capacity) + (Future\ Demand)}$$

To provide a numerical example of this concept, consider a hypothetical situation where an intersection is currently operating at a level that does not meet the City's standards. First, we calculate the amount of "excess" traffic using the intersection that is causing this situation; in this example, let's assume that if the volumes were reduced by 100 vehicles, the intersection would operate within the standards. Therefore, the existing demand exceeds the current capacity by 100 vehicles. The future forecasts project that new growth will add 400 more vehicles to that intersection, so the new future demand is 400 vehicles. The adjustment factor would then be calculated as 100 / 500, or 20%. That is, 20% of the improvement project at that location would serve to accommodate the existing "excess" demand, while 80% would serve to accommodate the future demand. In this example, 20% of the project cost would be removed from the fee program and 80% would remain in the program.

Around the North Bayshore area, the AM peak hour is the most critical time period, so the adjustment factor was developed based on AM peak hour conditions. Based on the information presented in the NBPP TIA (see Figure 9 and Table 6 of that report, which is available online at http://mountainview.gov/depts/comdev/planning/activeprojects/northbayshore_/default.asp), two signalized intersections in the North Bayshore area are currently not meeting the City's standards during the AM peak hour:

- US 101 Northbound Ramps/Shoreline Boulevard
- Pear Avenue/Shoreline Boulevard

Adjustment factors were first calculated for each intersection separately; the results were very similar, and to simplify the calculation an overall adjustment factor that is the average of the factors from each intersection was used. The calculations are shown in Table 2, and the resulting adjustment factor is 14%, meaning 14% of the demand accommodated by the future improvement is existing demand while the remaining 86% is future demand. Thus, the costs of projects related to those two existing deficiency locations should be reduced by 14% before including them in the AIF program. This factor has been applied to the following projects directly related to those locations:

- T-1: Shoreline (Hwy 101 to Plymouth)
- T-16: Shoreline NB Off-Ramp
- T-18: Shoreline Corridor Bus Lane

COSTS ATTRIBUTABLE TO NORTH BAYSHORE

The next step in the nexus analysis is to determine the proportion of project costs attributable to the new development in the North Bayshore area. In this analysis, the projects that are located in the North Bayshore area or immediately serving that area are distinguished from the projects located outside the North Bayshore area and serving a broader area. Different allocations were developed for the two sets of projects.

For the projects located within the North Bayshore area (shown on Table 1 as projects T-1 through T-16), as well as the Shoreline Corridor Bus Lane that would almost exclusively serve travel to and from North Bayshore (project T-18), this analysis assumes the need for these projects is completely driven by the future growth in the North Bayshore area. This scenario presumes that if no further growth occurred in North Bayshore, none of these projects would be constructed. Therefore, new development in the North Bayshore area would be responsible for 100% of the project costs (after accounting for existing deficiencies).

The other Shoreline Corridor projects (projects T-17 and T-19 through T-22) fulfill citywide policy objectives and serve growth throughout the City. Thus, the analysis allocates the need for these projects proportionally among all of the new growth citywide. The percent allocated to North Bayshore is calculated as the new North Bayshore service population (defined as population+employees) divided by the new citywide service population; the result of this calculation is 35%.

As shown in Table 1, the total transportation project cost to be included in the AIF program would be approximately $137 million.

TRIP RATE FACTORS

The costs attributable to new development in North Bayshore, described above, can be distributed across the various land uses that will make up the new development, in order to determine a reasonable fee for each land use category. A typical method for achieving this distribution is to develop a set of factors that relate the transportation demands of different land use categories to each other. Table 3 presents a set of factors for the land use categories that might occur in the North Bayshore area; these factors are drawn from the commonly-used ITE Trip Generation manual, 9th Edition, and an adjustment of 35% for pass-by trips is applied to retail

uses. The factors are then normalized to the Office/R&D category, since this category is expected to make up the majority of the new development in North Bayshore. The resulting equivalency factors will be used to define the relative differences in fee levels across the variety of land use types expected to occur in North Bayshore.

This concludes the technical elements of the transportation nexus analysis. Please see the *North Bayshore Development Impact Fee Nexus Report*, by Economic & Planning Systems, for a presentation of the fee calculations.

Table 1: North Bayshore Area-wide Impact Fee Transportation Project List

		Est. Cost from NBPP (in 2014 $)	Additional Cost Factor for Stormwater Treatment Facilities	Additional Cost Factor for Major Utility Relocation	Est. Project Total Cost (in 2016 $)	Existing Deficiencies		Allocation to NBS	
						Applicable?	Adjustment Factor	Percent Allocation	$ Allocated to NBS
High-Priority Improvements									
T-1	Shoreline: Hwy 101 to Plymouth	$9,400,000	10%		$10,843,000	X	14%	100%	$9,324,980
T-2	Shoreline: Plymouth to Amphitheatre	$5,400,000			$5,662,000	-	-	100%	$5,662,000
T-3	Charleston: Shoreline to Amphitheatre	$17,100,000			$17,931,000	-	-	100%	$17,931,000
T-4	Garcia Avenue: Amphitheatre to Bayshore Pkwy	$4,700,000			$4,928,000	-	-	100%	$4,928,000
T-5	Plymouth / Space Park Connection Across Shoreline	$800,000	10%	20%	$1,091,000	-	-	100%	$1,091,000
T-6	East-West Greenway Connection #1	$5,100,000			$5,348,000	-	-	100%	$5,348,000
T-7	East-West Greenway Connection #2	$2,400,000			$2,517,000	-	-	100%	$2,517,000
T-8	Bridge over Hwy 101 West of North Shoreline	$19,000,000	10%		$21,916,000	-	-	100%	$21,916,000
T-9	Signalized Bike Crossings	$800,000			$839,000	-	-	100%	$839,000
T-10	N-S Connection Between Pear & Charleston East of Shoreline	$7,300,000	10%		$8,420,000	-	-	100%	$8,420,000
Medium-Priority Improvements									
T-11	Frontage Road Along Hwy 101 From Landings Drive to Plymouth	$4,400,000	10%		$5,075,000	-	-	100%	$5,075,000
T-12	North Rengstorff: Charleston to Hwy 101	$2,000,000			$2,097,000	-	-	100%	$2,097,000
T-13	San Antonio: Bayshore Pkwy to Hwy 101	$1,900,000			$1,992,000	-	-	100%	$1,992,000
T-14	Amphitheatre: Shoreline to Charleston	$8,700,000			$9,123,000	-	-	100%	$9,123,000
T-15	Bicycle Facilities Connecting Hwy 101, Shoreline and Plymouth	$600,000			$629,000	-	-	100%	$629,000
T-16	Shoreline NB off-Ramp	$6,200,000			$6,501,000	X	14%	100%	$5,590,860
Shoreline Corridor Improvements									
T-17	Shoreline Corridor Cycle Track	$8,000,000			$8,389,000	-	-	35%	$2,936,150
T-18	Shoreline Corridor Bus Lane	$6,000,000			$6,292,000	X	14%	100%	$5,411,120
T-19	Transit Center Shuttle Improvements	$2,000,000			$2,097,000	-	-	35%	$733,950
T-20	Other Transit Center Upgrades (Scope TBD)	$48,000,000			$50,333,000	-	-	35%	$17,616,550
T-21	Corridor Protection/ROW Acquisition	$20,000,000			$20,972,000	-	-	35%	$7,340,200
T-22	Transit Center Master Plan	$700,000			$734,000	-	-	35%	$256,900
Total Transportation Improvements		**$180,500,000**			**$193,729,000**				**$136,778,710**

NOTES:

Inflation factor of 4.86% was used to adjust the cost estimates from 2014$ to 2016$ (that is 2.4% per year for two years).

Existing Deficiencies are flagged at those locations where the traffic analysis in the NBPP TIA identified an intersection currently operating at LOS E or F.

Allocation: For projects located in NBS or directly serving new NBS development (T-1 through T-16 and T-18), the % allocation is assumed to be solely the responsibility of new NBS development (i.e., project would not be built in absence of demand from new NBS development).

For all other projects, the project would meet Citywide policy objectives and serve growth throughout the City, so the % allocation is calculated as new NBS service population (residents plus employees) as a proportion of new citywide service population (35%).

TABLE 2: EXISTING DEFICIENCY CALCULATIONS

Intersection	Existing Demand Over Capacity	Future Demand	Total, Existing + Future	Existing Deficiency Adjustment Factor
US 101 NB/Shoreline	536	2,670	3,206	17%
Pear/Shoreline	295	2,345	2,640	11%
AVERAGE				14%

TABLE 3: TRIP RATE FACTORS

Category	ITE Code	Unit	AM Peak Hour Trip Rate	Pass-by Adjustment	Adjusted AM Peak Hour Trip Rate	Equivalency Factor
Office/R&D	750	KSF	1.71	0	1.71	1.00
Retail	820	KSF	0.96	-35%	0.62	0.36
Hotel	310	Room	0.53	0	0.53	0.31
Apartments	220	DU	0.51	0	0.51	0.30
Light Industrial	110	KSF	0.92	0	0.92	0.54

Notes: KSF = Thousand square feet. DU = Dwelling unit.
Source: ITE Trip Generation, 9th Edition.

ATTACHMENT 2

Water and Sewer Area Impact Fee
Technical Memorandum

Schaaf & Wheeler

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

1171 Homestead Road., Suite 255
Santa Clara, CA 95050-5485
t. 408-246-4848
f. 408-246-5624
s&w@swsv.com

MEMORANDUM

TO:	Jason Moody (Economic & Planning Systems, Inc.)	DATE:	February 1, 2016
FROM:	Leif Coponen, PE (C70139)	JOB#:	EPSI.01.P5
SUBJECT:	North Bayshore Development Impact Fee (Wet Utilities)		

Economic & Planning Systems, Inc. (EPS) has contracted with Schaaf & Wheeler to determine the costs of capital improvements to wet utility infrastructure to meet demand of new development as outlined in the North Bayshore Precise Plan (NBPP) adopted by the City of Mountain View. Schaaf & Wheeler's analysis will be used as a basis for EPS's work preparing the North Bayshore Development Impact Fee Nexus Study.

Data Sources

Schaaf & Wheeler engineers reviewed the NBPP, the 2030 General Plan Update Utility Impact Study (GPUUIS), the 2010 Water/Sewer Masters Plans (WMP/SMP), the 2014 Recycled Water Feasibility Study by Carollo Engineers, and the City provided North Bayshore CIP Project List (Appendix A) to determine the City's published capital improvement projects in the North Bayshore area. Projects were sorted by location to determine any overlapping projects between the reports. The working lists of potable water, recycled water, and sewer CIPs can be found in Appendix B, C, and D, respectively.

Per City direction, required CIPs identified in the 2010 WMP/SMP are considered existing system deficiencies. Future system deficiencies were based upon the combination of the GPUUIS and NBPP and only include infrastructure within the NBPP boundary.

Methodology

Potable Water

The potable water system deficiencies identified in North Bayshore are considered to be a direct result of growth within North Bayshore and independent of any demand changes throughout the rest of the City. Highway 101 serves as the southern boundary condition for the water system analysis; any highway crossings are deemed as part of the North Bayshore system.

Recycled Water

The existing recycled water system consists of 84 installed meters, of which 32 are active customers. According to the 2014 Recycled Water Feasibility Study conducted by Carollo Engineers, hydraulic analysis of the existing system did not identify any significant existing deficiencies. Expansion of the recycled water system to additional customers in North Bayshore is included in Phase 1 of the feasibility study's recommended alternative. This phase may require additional system storage in order to provide peak hourly demand above the treatment plant agreed peak supply capacity.

Recycled water pipeline looping and the addition of a storage reservoir and pump station are identified in the City's North Bayshore CIP Project List. Looping will increase system reliability as recycled water demand increases with new development. The storage reservoir and pump station are needed to meet increase in peak demands with current supply capacity limits. The City has specified all pipeline looping projects, the storage reservoir, and the pump station identified in the City's North Bayshore CIP Project List shall be included in the impact fee. New development will have a 75% contribution to the need for the proposed infrastructure based on City directive.

Sewer

The sewer system in the City flows from south to north through North Bayshore from various other parts of the City. Three main trunks run through North Bayshore: the Central Trunk, East Trunk, and West Trunk. The trunks terminate at the Shoreline Sewer Pump Station and from there flow is pumped to the Palo Alto Regional Water Quality Control Plant. These trunks convey the majority of the City flows, and collect both upstream flows as well as sewage originating in North Bayshore. To determine the impact of the NBPP, only flows originating from new development in North Bayshore and the corresponding capacity requirements in the system for those flows, is considered. The new developments' contribution to future construction requirements is determined by looking at the existing flows, future flows, and a combination of existing flows in North Bayshore and future flows throughout the rest of the City.

The West Trunk does not have any identified deficiencies and all flow to the East Trunk originates outside of North Bayshore, therefore these trunks are not further analyzed; Central Trunk system deficiencies are considered to be the result of increased flow associated with a combination of new development within North Bayshore as well as other areas of the City. CIPs identified on the branches of the Central Trunk within North Bayshore are assumed to be the direct result of the NBPP development. The impact fee is only assessed for capital improvement projects that are a result of development within North Bayshore.

Since the Central Trunk carries flow from outside the study area, a method is needed to differentiate the portion of required improvements to the main (within North Bayshore) attributed to North Bayshore development from development in other parts of the City. To determine the impact of the NBPP, three model scenarios are investigated. The model scenario names and descriptions are located in Table 1.

Table 1. Model Scenarios

Model Scenario	Description
Existing	Sewer flows based upon the City's 2010 SMP and 1992 General Plan land uses. In general, the existing sewer system has sufficient capacity for this flow.
Future	Projected 2030 flow to sewer system based upon the 2030 General Plan Update and NBPP land uses.
Hybrid	Sewer flows based on 2010 SMP and 1992 General Plan land uses in North Bayshore planning area and projected 2030 sewer system flows based upon the 2030 General Plan land uses in other parts of the City.

An equation to determine the percentage of additional flow resulting from new development in North Bayshore is used to determine the percentage of the total CIP cost that can be included in the impact fee. The average dry weather flow is considered the basis for comparing the flow impacts from new

development recorded in the three model scenarios and is used to calculate the percentage. The total change in flow through North Bayshore is the difference between the Future model and the Existing model. The change in flow that is a direct result of North Bayshore development is the difference between the Future model and the Hybrid model. The equation to determine the percentage of flow attributed to North Bayshore development using these models is as follows:

$$\frac{Future\ model - Hydrid\ model}{Future\ model - Existing\ model} = Percentage\ of\ flow\ attributed\ to\ North\ Bayshore\ Development$$

The percentages are applied to individual segments, as the change in flow for each individual pipe segment differs. Deficiencies identified for segments on branches of the Central Trunk are assigned a value of 100% as all flow increases can be attributed to North Bayshore development. The total cost is calculated for each individual segment and the calculated percentage is applied to determine the cost allocation for North Bayshore.

Storm

The 2014 North Bayshore Storm Drain Master Plan by Schaaf & Wheeler compared the proposed NBPP land uses with existing land uses. The proposed development shows little potential increase in impervious area and should not significantly impact the drainage system. As a result, there are no storm drain system improvement projects considered in the impact fee.

Results

Cost Calculation

The City generated North Bayshore CIP Project List is the basis for Schaaf & Wheeler's cost calculation for each improvement project. The impact fee is calculated in 2016 dollars, therefore Schaaf & Wheeler's analysis escalates the City CIP List to 2016 using a unit cost to establish the estimated construction cost per linear foot. The North Bayshore CIP Project List's 2014 dollars unit costs were updated to 2016 dollars using an inflation rate based upon the ENR Construction Cost Index (2.4% 2014-2015, 2.4% 2015-2016). Since the storage reservoir and pump station are a lump sum cost, they are adjusted for inflation as a whole.

The 2016 unit cost per linear foot is used to calculate the estimated construction cost. Construction contingency is 25% of the estimated construction cost. Design, inspection, and miscellaneous costs are 48% of the sum of construction cost and construction contingency. City administration cost is 6.5% of previously calculated costs. All costs are summed to calculate the estimated total cost. This method of calculation is established to stay consistent with Estimated Total Costs in the City's North Bayshore CIP Project List.

Potable Water

All potable water projects within North Bayshore are necessary to serve customers in North Bayshore. Therefore, all future CIPs are included in the impact fee assessment. There are twenty-nine CIPs in the North Bayshore area. Twenty-eight were uniquely identified by the NBPP while one CIP is identified in all plans including the WMP. This one project is considered to be an existing deficiency and is not included in the impact fee to new development. Of the twenty-eight projects included in the impact fee, there are twenty-eight pipe segments and three pipe casings. The total cost of future potable water projects in North Bayshore is approximately $13.6 million. Table 2 lists the projects identified by the NBPP.

Table 2. NBPP Potable Water Projects

Project ID	Project Description	Length (ft)	Diameter (in)	Total NBPP Cost[1]
52	**N. Shoreline Blvd (La Avenida St to Terra Bella Ave)**	1,900	16	
		1,100	Casing	
		3,000		**$2,039,010**
53	**N. Shoreline Blvd (Plymouth St to La Avenida St)**	1,000	16	**$557,580**
54	**US 101 Crossing (Macon Ave to San Rafael Ave)**	940	12	
		500	Casing	
		1,440		**$815,690**
56	**Armand Ave (Villa to La Avenida St)**	345	12	**$135,950**
57	**Armand Ave (Pear Ave to Villa)**	700	12	**$275,840**
58	**Armand Ave (Space Park Way and Pear Ave)**	645	12	**$254,160**
59	**Pear Ave**	1,400	12	**$551,670**
60	**Space Park Way**	1,285	12	**$506,350**
61	**Shorebird Way**	570	12	**$224,610**
62	**N. Shoreline Blvd (Amphitheatre Pkwy to Charleston Rd)**	1,050	16	**$585,460**
63	**Crittenden Ln**	375	12	**$147,770**
64	**Joaquin Rd**	1,305	12	**$514,240**
65	**Huff Ave**	1,480	12	**$583,190**
66	**Overland (south of Joaquin Rd and Plymouth St)**	535	12	**$210,820**
67	**Plymouth St**	2,135	12	**$841,300**
80	**US 101 Crossing (near Rengstorff Ave)**	450	16	
		450	Casing	
		900		**$651,660**
81	**Overland (east of Salado Dr)**	320	16	**$178,430**
82	**Salado Dr**	810	12	**$319,180**
83	**Garcia Ave (Salado Dr to Amphitheatre Pkwy)**	1,045	12	**$411,780**
84	**Charleston Rd**	990	12	**$390,110**
85	**Garcia Ave (west of Salado Dr)**	935	12	**$368,440**
86[2]	**Garcia Ave (east of Marine Way)**	890	12	**$350,700**

Table 2. NBPP Potable Water Projects (continued)

Project ID	Project Description	Length (ft)	Diameter (in)	Total NBPP Cost[1]
87	**Overland (golf course to Garcia Ave)**	595	12	**$234,460**
88[2]	**Marine Way (Casey Ave to Garcia Ave)**	1,635	14	**$811,780**
89[2]	**Coast Ave**	495	12	**$195,050**
90	**Broderick Way**	520	12	**$204,910**
91	**Terminal Blvd**	760	12	**$299,480**
92	**Bayshore Pkwy and San Antonio Rd**	2,355	12	**$927,990**
Total		29,515		**$13,587,610**

Recycled Water

A total of four pipeline looping projects, as well as a 1.8 MG storage reservoir and 300 HP pump station, are identified in the City's North Bayshore CIP Project List for inclusion in the impact fee. Based upon a 75% contribution rate, the total impact fee from recycled water projects to new development in North Bayshore is approximately $8.6 million. Recycled water projects identified by description are listed in Table 3.

Table 3. North Bayshore Recycled Water Projects

Project Description	Length (ft)	Diameter (in)	Total Cost	Total North Bayshore Cost
Amphitheatre Pkwy Loop	1,380	6	$428,000	**$321,000**
Bayshore Pkwy/Salado Dr Loop	1,140	6	$353,000	**$264,750**
Broderick Way/Terminal Blvd Loop	1,670	6	$518,000	**$388,500**
Huff Ave Loop	600	6	$186,000	**$139,500**
Storage Reservoir 1.8 MG	n/a	n/a	$8,367,000	**$6,275,250**
Booster Pump Station 300 HP	n/a	n/a	$1,611,000	**$1,208,250**
Total	4,790		$11,463,000	**$8,597,250**

Total Water

Potable and recycled water projects are combined for a total impact fee to new development in North Bayshore. This method is in line with the City's current capacity charges that combine all water use. The total cost for water projects is just over $22 million. The total potable and recycled water costs are listed in Table 4.

Table 4. Total Water Projects

Utility	Total North Bayshore Cost
Potable Water	$13,587,610
Recycled Water	$8,597,250
Total Water	**$22,184,860**

Sewer

A total of fourteen CIPs are identified within the North Bayshore area with a total of thirty-eight pipe segments. Twelve of the thirty-eight segments are along the Central Trunk and therefore the percentage of flow increase caused by North Bayshore development is calculated. The total impact fee from sewer projects to new development in North Bayshore is approximately $4.12 million. Sewer projects identified by Project ID (GP for General Plan, PP for Precise Plan) are listed in Table 5 along with the associated segment costs and total costs for each project that are a result of North Bayshore new development.

Table 5. NBPP Sewer Projects

Project ID	Project Description	Length (ft)	Diameter (in)	Total Segment Cost	NBPP % Contribution	NBPP Contribution Cost	Total NBPP Contribution Cost[1]
PP-1	**Garcia Ave (Amphitheatre Pkwy to east of Bayshore Pkwy)**	312	12	$135,238	100%	$135,240	
		262	12	$113,565	100%	$113,570	
		269	12	$116,599	100%	$116,600	
		359	12	$155,610	100%	$155,610	
		266	12	$115,299	100%	$115,300	
		240	12	$104,029	100%	$104,030	
		1,708					**$740,350**
PP-2	**Armand Ave (south of Space Park Way)**	322	12	$139,573	100%	$139,570	**$139,570**
GP-55	**Bayshore Pkwy (Salado Dr to Garcia Ave)**	306	12	$132,637	100%	$132,640	
		293	12	$127,002	100%	$127,000	
		599					**$259,640**

Table 5. NBPP Sewer Projects (continued)

Project ID	Project Description	Length (ft)	Diameter (in)	Total Segment Cost	NBPP % Contribution	NBPP Contribution Cost	Total NBPP Contribution Cost[1]
GP-56	**Charleston Rd (to south of Amphitheatre Pkwy)**	294	12	$127,436	100%	$127,440	**$127,440**
GP-100	**N. Shoreline Blvd (Terra Bella Ave to Charleston Rd)**	341	21	$239,180	20.13%	$48,140	
		418	21	$293,189	20.13%	$59,010	
		166	21	$116,434	15.83%	$18,430	
		364	21	$255,313	24.10%	$61,520	
		509	21	$357,017	24.49%	$87,440	
		375	21	$263,028	5.53%	$14,560	
		294	21	$206,214	0.070%	$140	
		232	21	$162,727	0.066%	$110	
		2,699					**$289,350**
GP-102	**Space Park Way (east of N. Shoreline Blvd)**	286	15	$159,468	100%	$159,470	**$159,470**
GP-103	**Charleston Rd (Huff Ave to parking lot entrance east of N. Shoreline Blvd)**	360	12	$156,044	100%	$156,040	
		356	15	$198,499	100%	$198,500	
		332	15	$185,117	100%	$185,120	
		336	27	$238,983	100%	$238,980	
		337	18	$195,208	100%	$195,210	
		34	27	$24,183	52.83%	$12,780	
		17	36	$16,513	56.72%	$9,370	
		1,772					**$996,000**
GP-104	**Joaquin Rd (south of Charleston Rd)**	367	12	$159,078	100%	$159,080	**$159,080**
GP-105	**Easement south of Charleston Rd through Shorebird Way**	26	15	$14,497	100%	$14,500	
		289	15	$161,141	100%	$161,140	
		316	15	$176,196	100%	$176,200	
		314	15	$175,080	100%	$175,080	
		945					**$526,920**
GP-106	**Crittenden Ln east of N. Shoreline Blvd**	356	12	$154,310	100%	$154,310	**$154,310**
GP-107	**Easement west of N. Shoreline Blvd and north of Crittenden Ln**	281	12	$121,801	100%	$121,800	**$121,800**

Table 5. NBPP Sewer Projects (continued)

Project ID	Project Description	Length (ft)	Diameter (in)	Total Segment Cost	NBPP % Contribution	NBPP Contribution Cost	Total NBPP Contribution Cost[1]
GP-108	**N. Shoreline Blvd north of Crittenden Ln**	98	21	$68,738	68.68%	$47,210	
		143	21	$100,301	68.68%	$68,880	
		241					**$116,090**
GP-109	**San Antonio Rd from Casey Ave to Terminal Blvd**	56	15	$31,225	100%	$31,230	
		460	15	$256,487	100%	$256,490	
		516					**$287,720**
GP-112	**Easement south east of the intersection of N. Shoreline Blvd and the Permanente Creek**	105	8	$34,755	100%	$34,760	**$34,760**
Total		9,589		$5,787,714			**$4,112,500**

Land Use Demand Factors

The cost per gallon per day for water and sewer system improvements is independently determined by comparing existing and future demands based on land uses and the demand factors for the land uses. Demand factors are based upon City standard demand factors found in the SMP/WMP and the Water and Sewer Capacity Charge documents.

Existing and future land uses are based upon the North Bayshore Precise Plan. Table 6 shows existing and future building square footages or number of rooms for each land use considered in North Bayshore.

Table 6. Existing and Future Land Use

Land Use[3]	Existing	Future
Office/R&D	6,920,000 ft²	10,330,000 ft²
Retail	180,000 ft²	190,000 ft²
Hotel	0 rooms	290 rooms
Restaurant	10,000 ft²	10,000 ft²
Industrial	270,000 ft²	170,000 ft²

Future land uses that replace existing land uses will receive a credit for the existing land use they replace based upon the demand factor for that land use.

Water

Water demands for land uses in North Bayshore are in Table 7. Existing and future total gallon per day usage is calculated from these demand factors for the existing and future quantities of each land use. The existing and future gallon per day usage includes both potable and recycled water.

Table 7. Water Demand Factors

Land Use	Demand Factor
Office/R&D[4]	210 gpd/1000 ft²
Retail[4]	130 gpd/1000 ft²
Hotel[5]	130 gpd/room
Restaurant[6]	1,000 gpd/1000 ft²
Industrial[4]	80 gpd/1000 ft²

The existing use is 1.508 mgd, the future use is 2.255 mgd. The increase in use is .747 mgd. Using the total water cost for North Bayshore in Table 4, the cost per gallon per day is calculated as $29.70.

Sewer

Sewer demands for land uses in North Bayshore are in Table 8. Existing and future total gallon per day sewage generation is calculated from these demand factors for the existing and future quantities of each land use.

Table 8. Sewer Demand Factors

Land Use	Demand Factor
Office/R&D[4]	150 gpd/1000 ft²
Retail[4]	100 gpd/1000 ft²
Hotel[7]	90 gpd/room
Restaurant[8]	700 gpd/1000 ft²
Industrial[4]	60 gpd/1000 ft²

The existing ADWF is 1.079 mgd, the future ADWF is 1.612 mgd. The increase in flow is .533 mgd. Using the total NBPP Cost in Table 5, the cost per gallon per day is calculated as $7.72.

City Water and Wastewater Capacity Charge

The City currently charges new development projects a fee for the City's water and sewer systems based on the differential (net) increase of needed system capacity for the new construction. Schaaf & Wheeler engineers have reviewed the City of Mountain View's Water and Wastewater Capacity Charge Study by Bartle Wells Associates (2014) to ensure that new impact fees do not overlap the current capacity charges.

The current capacity charges utilize a system buy-in approach; meaning new development has to "buy in" to the existing water and sewer system infrastructure. The charge is calculated by dividing the total costs of *existing* assets by the projected demands on the systems through 2030. New development will be

given usage credit for the existing land use that it is replacing. This approach assumes the existing infrastructure has capacity for projected demands.

The City's capacity charge differs from the impact fee. The capacity charge only takes into account existing infrastructure and does not account for capital improvement projects required to meet the demands of future development, while the impact fee only charges for these future CIPs directly resulting from new development. Within the City of Mountain View Water and Wastewater Capacity Charge Study, Bartle Wells Associates acknowledges "some expansion-related capital improvements would likely be needed to meet… projected demand in 2030, so this level of capacity may overstate the functional capacity of the existing water system." This analysis assumes new development in North Bayshore will be responsible for paying the capacity charge to cover existing infrastructure capacity and the impact fee to cover costs of necessary upgrades to the infrastructure as a result of increased usage.

---

1 Cost based on City's North Bayshore CIP Project List and 2014 unit costs.

2 Pipe moved to Marine Way in City's North Bayshore CIP Project List.

3 Square footage based upon Table 2.3-1 of 2014 North Bayshore Precise Plan Draft EIR.

4 Demand rate based upon GPUUIS Table 2-1 and Table 2-2

5 Demand rate back-calculated assuming a .7 return-to-sewer factor for sewer demand rate based upon Water and Sewer Capacity Charge document stating 45% of single-family detached residence.

6 Demand rate back-calculated assuming a .7 return-to-sewer factor for sewer demand rate based upon City of Mountain View Water and Wastewater Capacity Charge Study Table 15.

7 Demand rate based upon Water and Sewer Capacity Charge document stating 45% of single-family detached residence.

8 Demand rate based upon City of Mountain View Water and Wastewater Capacity Charge Study Table 15.

APPENDIX A

CITY OF MOUNTAIN VIEW NORTH BAYSHORE CAPTIAL IMPROVEMENT PROJECT LIST

DRAFT

NORTH BAYSHORE PRECISE PLAN

Proposed Capital Improvement Project List

Preliminary Planning-level Cost Estimate

WATER IMPROVEMENTS

Project ID No.	Roadway	Limits	Existing Diameter (inches)	Proposed Diameter (inches)	Pipe Length (feet)	N = new R = replace P = parallel	Estimated Construction Cost	Construction Contingency 25.0%	Design (30%), Inspection (8%), & Misc. (10%) Costs 48.0%	City Administration 6.5%	ESTIMATED TOTAL COST 2014 $
53**	N. Shoreline Blvd	Terral Bella Ave and Sterlin Rd	12	18	2250	R	$ 729,000	$ 182,300	$ 437,400	$ 87,700	$ 1,436,000
52^^	**N. Shoreline Blvd (+)**	**btw La Avenida St and Terra Bella Ave** NOTE: Terra Bella to La Avenida outside NBSPP	**-** **-**	**16** **Casing**	**1900** **1100**	**R** **R**	$ 1,006,100	$ 251,500	$ 603,600	$ 121,000	$ 1,982,000
53**	N. Shoreline Blvd	btw Plymouth St and La Avenida	12	16	1000	R	$ 280,000	$ 70,000	$ 168,000	$ 33,700	$ 552,000
54**	US 101 Crossing	btw Macon Ave and San Rafael Ave	- -	12 Casing	940 500	N N	$ 394,100	$ 98,500	$ 236,400	$ 47,400	$ 776,000
56**	Armand Ave	btw Villa and La Avenida	8	12	345	R	$ 65,600	$ 16,400	$ 39,400	$ 7,900	$ 129,000
57**	Armand Ave	btw Pear Ave and Villa	-	12	700	N	$ 133,000	$ 33,300	$ 79,800	$ 16,000	$ 262,000
58**	Armand Ave	btw Space Park Way and Pear Ave	-	12	645	N	$ 122,600	$ 30,700	$ 73,600	$ 14,700	$ 242,000
59**	Pear Ave	btw N. Shoreline Blvd and Armand Ave	8	12	1400	R	$ 266,000	$ 66,500	$ 159,600	$ 32,000	$ 524,000
60**	Space Park Way	btw N. Shoreline Blvd and Armand Ave	8	12	1285	R	$ 244,200	$ 61,100	$ 146,500	$ 29,400	$ 481,000
61**	Shorebird Way	south of Charleston Rd	-	12	570	N	$ 108,300	$ 27,100	$ 65,000	$ 13,000	$ 213,000
62**	N. Shoreline Blvd	btw Amphitheatre Pkwy and Charleston Rd	12	16	1050	R	$ 293,500	$ 73,400	$ 176,100	$ 35,300	$ 578,000
63**	Crittenden Ln	east of N. Shoreline Blvd	8	12	375	R	$ 71,300	$ 17,800	$ 42,800	$ 8,600	$ 141,000
64**	Joaquin Rd	btw Charleston Rd and Plymouth St	8	12	1305	R	$ 248,000	$ 62,000	$ 148,800	$ 29,800	$ 489,000
65**	Huff Ave	btw Charleston Rd and Plymouth St	8	12	1480	R	$ 281,200	$ 70,300	$ 168,700	$ 33,800	$ 554,000
66**	Overland	south of Joaquin Rd and Plymouth St	8	12	535	R	$ 101,700	$ 25,400	$ 61,000	$ 12,200	$ 200,000
67**	Plymouth St	btw Alta Ave and Shoreline Blvd	8	12	2135	R	$ 405,700	$ 101,400	$ 243,400	$ 48,800	$ 799,000
80^^	**US 101 Crossing (+)**	**near Rengstorff Ave**	**14** **-**	**16** **Casing**	**450** **450**	**R** **R**	$ 315,500	$ 78,900	$ 189,300	$ 37,900	$ 622,000
81**	Overland	east of Salado Dr	12	16	320	R	$ 86,400	$ 21,600	$ 51,800	$ 10,400	$ 170,000
82**	Salado Dr	btw Garcia Ave and Bayshore Pkwy	8	12	810	R	$ 153,900	$ 38,500	$ 92,400	$ 18,500	$ 303,000
83**	Garcia Ave	btw Salado Dr and Amphitheatre Pkwy	8	12	1045	R	$ 198,600	$ 49,700	$ 119,200	$ 23,900	$ 391,000
84**	Charleston Rd	btw Amphitheatre Pkwy and Landings Dr	8	12	990	R	$ 188,100	$ 47,000	$ 112,800	$ 22,600	$ 371,000
85**	Garcia Ave	west of Salado Dr	8	12	935	R	$ 177,700	$ 44,400	$ 106,600	$ 21,400	$ 350,000
86^^	**Garcia Ave**	**east of Marine Way**	**8**	**12**	**890**	**R**	$ 169,100	$ 42,300	$ 101,500	$ 20,300	$ 333,000
87**	Overland	btw golf course and Garcia Ave	-	12	595	N	$ 113,100	$ 28,300	$ 67,900	$ 13,600	$ 223,000
88^^	**Marine Way**	**btw Casey Ave and Garcia Ave**	**12**	**14**	**1635**	**R**	$ 400,400	$ 100,100	$ 240,200	$ 48,100	$ 789,000
89^^	**Coast Ave**	**east of Marine Way**	**8**	**12**	**495**	**R**	$ 94,100	$ 23,500	$ 56,400	$ 11,300	$ 185,000
90**	Broderick Way	btw Terminal Blvd and Casey Ave	8	12	520	R	$ 98,800	$ 24,700	$ 59,300	$ 11,900	$ 195,000
91**	Terminal Blvd	btw San Antonio Rd and Broderick Way	8	12	760	R	$ 144,400	$ 36,100	$ 86,600	$ 17,400	$ 285,000
92**	Bayshore Pkwy and San Antonio Rd	north of Garcia Ave	8	12	2355	R	$ 447,500	$ 111,900	$ 268,500	$ 53,800	$ 882,000
							WATER TOTAL				**$ 14,457,000**

** City of Mountain View - 2030 General Plan - Updated Water System Modeling, Memorandum, June 17, 2014, by Schaaf & Wheeler

^^ City of Mountain View - Water System Computer Modeling - UGP CIP Analysis Alternative 1, Memorandum, November 7, 2014, by Schaaf & Wheeler

(+) evaluation being conducted under Utility Alignment Study, which is currently in progress

DRAFT

NORTH BAYSHORE PRECISE PLAN

Proposed Capital Improvement Project List

Preliminary Planning-level Cost Estimate

RECYCLED WATER IMPROVEMENTS***

Project ID No.	Roadway	Limits	Notes	Proposed Pipe Diameter (inches)	Pipe Length (feet)	Estimated Construction Cost	Construction Contingency 25.0%	Design (30%), Inspection (8%), & Misc. (10%) Costs 48.0%	City Administration 6.5%	ESTIMATED TOTAL COST 2014 $
--	Charleston Rd	from Shoreline Blvd to end (eastward)	portion of Alternative 1	8	2200	$ 352,000	$ 88,000	$ 211,200	$ 42,300	$ 694,000
--	Shorebird Wy	from Shoreline Blvd to Charleston Rd	portion of Alternative 1	8	2400	$ 384,000	$ 96,000	$ 230,400	$ 46,200	$ 757,000
--	Amphitheatre Pkwy loop	--	--	6	1380	$ 207,000	$ 51,800	$ 124,200	$ 24,900	$ 408,000
--	Bayshore Pkwy/Salado Dr loop	--	--	6	1140	$ 171,000	$ 42,800	$ 102,600	$ 20,600	$ 337,000
--	Broderick Way/Terminal Blvd loop	--	--	6	1670	$ 250,500	$ 62,600	$ 150,300	$ 30,100	$ 494,000
--	Huff Ave loop	--	--	6	600	$ 90,000	$ 22,500	$ 54,000	$ 10,800	$ 177,000
--	Storage Reservoir ^	north of Hwy 101	portion of Alternative 1	1.8 MG		$ 4,050,000	$ 1,012,500	$ 2,430,000	$ 487,000	$ 7,980,000
--	Booster Pump Station^	same site as new reservoir	portion of Alternative 1	300 HP		$ 780,000	$ 195,000	$ 468,000	$ 93,800	$ 1,537,000
						RECYCLED WATER TOTAL				**$ 12,384,000**

*** Recycled Water Feasibility Study, March 2014, by Carollo Engineers

^ Does not include land acquisition costs

STORM DRAIN IMPROVEMENTS****

Project ID No.	Project / Project Type	Notes	Proposed Pipe Size (inches)	Pipe Length (feet)	Flap Gates (each)	Connections (each)	Estimated Construction Cost	Construction Contingency 25.0%	Design (30%), Inspection (8%), & Misc. (10%) Costs 48.0%	City Administration 6.5%	ESTIMATED TOTAL COST 2014 $
--	Alternative 1 Addition to existing system	preferred alternative to bypass Charleston Pump station; allows for High Level Ditch connection to Crittenden Pump Station	48	3840	--	14	$ 2,220,000	$ 555,000	$ 1,332,000	$ 267,000	$ 4,374,000
--	Plymouth Improvement to existing system	located near Permanente Creek; special permits may be required to install flap gate	54	--	1	--	$ 50,000	$ 12,500	$ 30,000	$ 6,000	$ 99,000
--	High Level Ditch Abandonment Addition to existing system	cannot be completed unless Alternative 1 is complete that removes Charleston Pump Station	30 - 36	900	--	4	$ 410,000	$ 102,500	$ 246,000	$ 49,300	$ 808,000
--	Crittenden Improvement to existing system	not likely to be completed unless another project or construction in area	24	360	--	1	$ 130,000	$ 32,500	$ 78,000	$ 15,600	$ 256,000
--	Shorebird Improvement to existing system	not likely to be completed unless another project or construction in area	30	601	--	2	$ 250,000	$ 62,500	$ 150,000	$ 30,100	$ 493,000
							STORM DRAIN TOTAL				**$ 6,030,000**

**** North Bayshore Storm Drain Master Plan, July 2014, by Schaaf & Wheeler

DRAFT

NORTH BAYSHORE PRECISE PLAN

Proposed Capital Improvement Project List

Preliminary Planning-level Cost Estimate

SANITARY SEWER IMPROVEMENTS

Project ID No.	Roadway	Limits	Existing Diameter (inches)	Proposed Diameter (inches)	Pipe Length (feet)	N = new R = replace **P = parallel**	Estimated Construction Cost	Construction Contingency 25.0%	Design (30%), Inspection (8%), & Misc. (10%) Costs 48.0%	City Administration 6.5%	**ESTIMATED TOTAL COST** 2014 $
U-1	Garcia Ave*	Amphitheatre Pkwy to east of Bayshore Pkwy	10	12	1708	R	$ 358,700	$ 89,700	$ 215,200	$ 43,100	$ 707,000
U-2	Armand Ave*	south of Space Park Way	10	12	322	R	$ 67,600	$ 16,900	$ 40,600	$ 8,100	$ 133,000
55	Bayshore Pkwy#	Salado Dr to Garcia Ave	8	12	599	R	$ 125,800	$ 31,500	$ 75,500	$ 15,100	$ 248,000
56	Charleston Rd#	to s/o Amphitheatre Pkwy	8	12	294	R	$ 61,700	$ 15,400	$ 37,000	$ 7,400	$ 122,000
-- (+)	from VTA bus site	to La Avenida to Inigo Wy to Pear Ave NOTE: Pear to Plymouth segment included in 30" gravity sewer.	n/a	18	1700	N	$ 476,000	$ 119,000	$ 285,600	$ 57,200	$ 938,000
100	Shoreline Blvd#	Plymouth St to Charleston Rd NOTE: Terra Bella to Charleston proposed in GPUUIS.	18	21	1500	R	$ 510,000	$ 127,500	$ 306,000	$ 61,300	$ 1,005,000
101	west of Shoreline Blvd#	south of Pear Ave	12	15	95	R	$ 25,700	$ 6,400	$ 15,400	$ 3,100	$ 51,000
102	Space Park Wy#	east of Shoreline Blvd	8	15	286	R	$ 77,200	$ 19,300	$ 46,300	$ 9,300	$ 152,000
103	Charleston Rd#	Huff Ave to parking lot entrance e/o Shoreline Blvd	varies 8 - 31	varies 12 - 36	2113	R	$ 563,200	$ 140,800	$ 337,900	$ 67,700	$ 1,110,000
104	Joaquin Rd#	south of Charleston Rd	8	12	367	R	$ 77,100	$ 19,300	$ 46,300	$ 9,300	$ 152,000
105	easement#	south of Charleston Rd through Shorebird Wy	12	15	945	R	$ 255,200	$ 63,800	$ 153,100	$ 30,700	$ 503,000
106	Crittenden Ln#	east of Shoreline Blvd	8	12	356	R	$ 74,800	$ 18,700	$ 44,900	$ 9,000	$ 147,000
107	easement#	w/o Shoreline Blvd & n/o Crittenden Ln	10	12	281	R	$ 59,000	$ 14,800	$ 35,400	$ 7,100	$ 116,000
108	Shoreline Blvd#	n/o Crittenden Ln	21	24	241	R	$ 8,200	$ 2,100	$ 4,900	$ 1,000	$ 16,000
109	San Antonio Rd#	Casey Ave to Terminal Blvd	varies 8 - 12	15	517	R	$ 139,600	$ 34,900	$ 83,800	$ 16,800	$ 275,000
112	easement#	se/o intersection of Shoreline Blvd and Permanente Creek	6	8	105	R	$ 16,800	$ 4,200	$ 10,100	$ 2,000	$ 33,000
--	30" line for new gravity sewer##	NOTE: Proposed 30" on Shoreline Blvd fr La Avenida to Pear Ave (700' +/-) is not included in this project. New 18" line proposed from VTA bus site to Pear Ave [see project above].	n/a	30	3800	N	$ 1,330,000	$ 332,500	$ 798,000	$ 159,900	$ 2,620,000
--	42" line for new gravity sewer##	--	n/a	42	11000	N	$ 6,050,000	$ 1,512,500	$ 3,630,000	$ 727,500	$ 11,920,000
							SANITARY SEWER TOTAL				**$ 20,248,000**

* North Bayshore Precise Plan, Public Draft, July 2014

General Plan Update Utility Impact Study, October 20, 2011, by Infrastructure Engineering Corp.

2010 Sewer Master Plan, August 2010, by Infrastructure Engineering Corp.

(+) evaluation being conducted under Utility Alignment Study, which is currently in progress

TOTAL COST OF CAPITAL IMPROVEMENTS IN NORTH BAYSHORE PRECISE PLAN STUDY AREA (2014$): $ 252,270,000

APPENDIX B

POTABLE WATER UTILITY IMPROVEMENT PROJECT WORKING LIST

North Bayshore Development Impact Fee

Working List of Potable Water CIPs in North Bayshore – Project Source Comparison

Location/Description	Model ID	Length (ft)	Existing Diameter (in)	Master Plan		General Plan		Precise Plan	
				Project Number	Recommended Replacement Diameter (in)	Project Number	Recommended Replacement Diameter (in)	Project Number	Recommended Replacement Diameter (in)
N. Shoreline Blvd, btw La Avenida St and Terra Bella Ave		1900	-					52	16
		1100	-						Casing
N. Shoreline Blvd, btw Plymouth St and La Avenida St		1000	12					53	16
US 101 Crossing, btw Macon Ave and San Rafael Ave		940	-					54	12
		500	-						Casing
Armand Ave, btw Villa and La Avenida St		345	8					56	12
Armand Ave, btw Pear Ave and Villa		700	-					57	12
Armand Ave, btw Space Park Way and Pear Ave		645	-					58	12
Pear Ave, btw N. Shoreline Blvd and Armand Ave		1400	8					59	12
Space Park Way, btw N. Shoreline Blvd and Armand Ave		1285	8					60	12
Shorebird Way, south of Charleston Rd		570	-					61	12
N. Shoreline Blvd, btw Amphitheatre Pkwy and Charleston Rd		1050	12					62	16
Crittenden Ln, east of N. Shoreline Blvd		375	8					63	12
Joaquin Rd, btw Charleston Rd and Plymouth St		1305	8					64	12
Huff Ave, btw Charleston Rd and Plymouth St		1480	8					65	12
Overland, south of Joaquin Rd and Plymouth St		535	8					66	12
Plymouth St, btw Alta Ave and Huff Ave		2135	8					67	12
US 101 Crossing, near Rengstorff Ave		450	-					80	12
		450	-						Casing
Overland, east of Salado Dr		320	12					81	16
Salado Dr, btw Garcia Ave and BayshorePkwy		810	8					82	12
Garcia Ave, btw Salado Dr and Amphitheatre Pkwy		1045	8					83	12
Charleston Rd, btw Amphitheatre Pkwy and Landings Dr		990	8					84	12
Garcia Ave, west of Salado Dr		935	8					85	12
Garcia Ave, east of Marine Way		525	8					86	12
Overland, btw golf course and Garcia Ave		595	-					87	12
Overland, btw Coast Ave and Garcia Ave		1000	-					88	12
Overland, btw Casey Ave and Coast Ave		515	-					89	12
Broderick Way, btw Terminal Blvd and Casey Ave		520	8					90	12
Terminal Blvd, btw San Antonio Rd and Broderick Way		760	8					91	12
Bayshore Pkwy and San Antonio Road, north of Garcia Ave		2355	8					92	12
Overland at golf course	93	760	8	P-41	12	P-41	12	93	12

CIPs in blue not included in North Bayshore impact fee.

North Bayshore Development Impact Fee

Working List of Potable Water CIPs in North Bayshore – Impact Fee Project Cost Breakdown

Location	Project ID	Length (ft)	Diameter (in)	Estimated Construction Cost (2016)*	Construction Contingency (25%)	Design, Inspection, and Miscellaneous Cost (48%)	City Administration (6.5%)	Total (2016)	Total NBS PP Cost (2016)
N. Shoreline Blvd, btw La Avenida St and Terra Bella Ave	52	1900	16	$537,700	$134,425	$322,620	$64,658	$1,059,400	$2,039,010
		1100	Casing	$497,200	$124,300	$298,320	$59,788	$979,610	
N. Shoreline Blvd, btw Plymouth St and La Avenida St	53	1000	16	$283,000	$70,750	$169,800	$34,031	$557,580	$557,580
US 101 Crossing, btw Macon Ave and San Rafael Ave	54	940	12	$188,000	$47,000	$112,800	$22,607	$370,410	$815,690
		500	Casing	$226,000	$56,500	$135,600	$27,177	$445,280	
Armand Ave, btw Villa and La Avenida St	56	345	12	$69,000	$17,250	$41,400	$8,297	$135,950	$135,950
Armand Ave, btw Pear Ave and Villa	57	700	12	$140,000	$35,000	$84,000	$16,835	$275,840	$275,840
Armand Ave, btw Space Park Way and Pear Ave	58	645	12	$129,000	$32,250	$77,400	$15,512	$254,160	$254,160
Pear Ave, btw N. Shoreline Blvd and Armand Ave	59	1400	12	$280,000	$70,000	$168,000	$33,670	$551,670	$551,670
Space Park Way, btw N. Shoreline Blvd and Armand Ave	60	1285	12	$257,000	$64,250	$154,200	$30,904	$506,350	$506,350
Shorebird Way, south of Charleston Rd	61	570	12	$114,000	$28,500	$68,400	$13,709	$224,610	$224,610
N. Shoreline Blvd, btw Amphitheatre Pkwy and Charleston Rd	62	1050	16	$297,150	$74,288	$178,290	$35,732	$585,460	$585,460
Crittenden Ln, east of N. Shoreline Blvd	63	375	12	$75,000	$18,750	$45,000	$9,019	$147,770	$147,770
Joaquin Rd, btw Charleston Rd and Plymouth St	64	1305	12	$261,000	$65,250	$156,600	$31,385	$514,240	$514,240
Huff Ave, btw Charleston Rd and Plymouth St	65	1480	12	$296,000	$74,000	$177,600	$35,594	$583,190	$583,190
Overland, south of Joaquin Rd and Plymouth St	66	535	12	$107,000	$26,750	$64,200	$12,867	$210,820	$210,820
Plymouth St, btw Alta Ave and Huff Ave	67	2135	12	$427,000	$106,750	$256,200	$51,347	$841,300	$841,300
US 101 Crossing, near Rengstorff Ave	80	450	16	$127,350	$31,838	$76,410	$15,314	$250,910	$651,660
		450	Casing	$203,400	$50,850	$122,040	$24,459	$400,750	
Overland, east of Salado Dr	81	320	16	$90,560	$22,640	$54,336	$10,890	$178,430	$178,430
Salado Dr, btw Garcia Ave and BayshorePkwy	82	810	12	$162,000	$40,500	$97,200	$19,481	$319,180	$319,180
Garcia Ave, btw Salado Dr and Amphitheatre Pkwy	83	1045	12	$209,000	$52,250	$125,400	$25,132	$411,780	$411,780
Charleston Rd, btw Amphitheatre Pkwy and Landings Dr	84	990	12	$198,000	$49,500	$118,800	$23,810	$390,110	$390,110
Garcia Ave, west of Salado Dr	85	935	12	$187,000	$46,750	$112,200	$22,487	$368,440	$368,440
Garcia Ave, east of Marine Way	86	890	12	$178,000	$44,500	$106,800	$21,405	$350,700	$350,700
Overland, btw golf course and Garcia Ave	87	595	12	$119,000	$29,750	$71,400	$14,310	$234,460	$234,460
Overland, btw Coast Ave and Garcia Ave	88	1635	14	$412,020	$103,005	$247,212	$49,545	$811,780	$811,780
Overland, btw Casey Ave and Coast Ave	89	495	12	$99,000	$24,750	$59,400	$11,905	$195,050	$195,050

*City provided CIP List in 2014 dollars. Schaaf & Wheeler escalated to match Nexus Study current dollars (2014 to 2015 2.4% inflation, 2015 to 2016 2.4% inflation)

North Bayshore Development Impact Fee

Working List of Potable Water CIPs in North Bayshore – Impact Fee Project Cost Breakdown

Location	Project ID	Length (ft)	Diameter (in)	Estimated Construction Cost (2016)*	Construction Contingency (25%)	Design, Inspection, and Miscellaneous Cost (48%)	City Administration (6.5%)	Total (2016)	Total NBS PP Cost (2016)
Broderick Way, btw Terminal Blvd and Casey Ave	90	520	12	$104,000	$26,000	$62,400	$12,506	$204,910	$204,910
Terminal Blvd, btw San Antonio Rd and Broderick Way	91	760	12	$152,000	$38,000	$91,200	$18,278	$299,480	$299,480
Bayshore Pkwy and San Antonio Road, north of Garcia Ave	92	2355	12	$471,000	$117,750	$282,600	$56,638	$927,990	$927,990
Total								**$13,587,610**	**$13,587,610**

*City provided CIP List in 2014 dollars. Schaaf & Wheeler escalated to match Nexus Study current dollars (2014 to 2015 2.4% inflation, 2015 to 2016 2.4% inflation)

APPENDIX C

RECYCLED WATER UTILITY IMPROVEMENT PROJECT WORKING LIST

North Bayshore Development Impact Fee

Working List of Recycled Water CIPs in North Bayshore – Project List

Project Description	Project Limits	Length (ft)	Diameter (in)	Purpose
Charleston Rd	from Shoreline Blvd to end (eastward)	2200	8	Extend to new customers
Shorebird Wy	from Shoreline Blvd to Charleston Rd	2400	8	Extend to new customers
Amphitheatre Pkwy loop	-	1380	6	System improvement
Bayshore Pkwy/Salado Dr loop	-	1140	6	System improvement
Broderick Way/Terminal Blvd loop	-	1670	6	System improvement
Huff Ave loop	-	600	6	System improvement
Storage Reservoir^ 1.8 MGD	north of Hwy 101	n/a	n/a	System improvement
Booster Pump Station^ 300 HP	same site as new reservoir	n/a	n/a	System improvement

*** Recycled Water Feasibility Study, March 2014, by Carollo Engineers

CIPs in blue not included in North Bayshore Impact Fee

North Bayshore Development Impact Fee

Working List of Recycled Water CIPs in North Bayshore – Impact Fee Project Cost Breakdown

Project Description	Length (ft)	Diameter (in)	Estimated Construction Cost (2016)*	Contingency Cost (25%)	Design (48%)	City Administration (6.5%)	Total (2016)	NBSPP % contribution	Total NBS PP Cost (2016)
Amphitheatre Pkwy loop	1380	6	$369,099	$54,300	$130,300	$26,100	$428,000	75%	$321,000
Bayshore Pkwy/Salado Dr loop	1140	6	$402,653	$44,800	$107,600	$21,600	$353,000	75%	$264,750
Broderick Way/Terminal Blvd loop	1670	6	$217,055	$65,700	$157,600	$31,600	$518,000	75%	$388,500
Huff Ave loop	600	6	$179,306	$23,600	$56,600	$11,300	$186,000	75%	$139,500
Storage Reservoir^ 1.8 MGD	n/a	n/a	$262,668	$1,061,700	$2,548,000	$510,700	$8,367,000	75%	$6,275,250
Booster Pump Station^ 300 HP	n/a	n/a	$94,372	$204,500	$490,700	$98,400	$1,611,000	75%	$1,208,250
Total							**$11,463,000**		**$8,597,250**

^ Does not include land acquisition costs

*City provided CIP List in 2014 dollars. Schaaf & Wheeler escalated to match Nexus Study current dollars (2014 to 2015 2.4% inflation, 2015 to 2016 2.4% inflation)

APPENDIX D

SEWER UTILITY IMPROVEMENT PROJECT WORKING LIST

North Bayshore Development Impact Fee

Working List of Sewer CIPs in North Bayshore – Project Source Comparison

Location/Description	Model ID	Upstream City MH ID	Downstream City MH ID	Length (ft)	Existing Diameter (in)	Slope	Master Plan		General Plan		Precise Plan	
							Project Number	Recommended Replacement Diameter (in)	Project Number	Recommended Replacement Diameter (in)	Project Number	Recommended Replacement Diameter (in)
Garcia Ave from Amphitheatre Pkwy to east of Bayshore Pkwy	85	C3-018	C3-002	312	10	0.005						12
	91	C3-020	C3-018	262	10	0.003						12
	92	C3-022	C3-020	269	10	0.002						12
	93	C3-024	C3-022	359	10	0.002					1	12
	106	C3-026	C3-024	266	10	0.004						12
	111	C3-028	C3-026	240	10	0.001						12
Armand Ave, south of Space Park Way	287	D5-005	D5-003	322	10	0.001					2	12
N Shoreline Blvd from Terra Bella Ave to Charleston Rd	260	D4-021	D4-050	341	18	0.004				21		
	290	D4-033	D4-021	418	18	0.004				21		
	306	D4-035	D4-033	166	18	0.004				21		
	241	D4-050	D4-068	364	18	0.005				21		
	209	D4-068	D4-004	509	18	0.015				21		
	377	E4-001	E4-060	32	18	0.005				21		
	478	E4-001	E4-006	150	18	0.007				21		
	331	E4-002	D4-035	375	18	0.004				21		
	389	E4-002	E4-001	88	18	0.005				21		
	424	E4-003	E4-062	37	18	0.007			100	21		
	525	E4-003	E4-008	188	18	0.002				21		
	434	E4-004	E4-003	50	18	0.007				21		
	446	E4-005	E4-004	66	18	0.007				21		
	457	E4-006	E4-005	115	18	0.007				21		
	492	E4-007	E4-001	141	18	0.002				21		
	501	E4-008	E4-007	57	18	0.002				21		
	349	E4-012	E4-002	294	18	0.004				21		
	373	E4-060	E4-012	232	18	0.003				21		
	420	E4-062	E4-002	200	18	0.005				21		
	607	F4-016	E4-003	596	18	0.004				21		
West of N Shoreline Blvd and south of Pear Ave	334	E4-004	E4-002	95	12	0.003			101	15		
Space Park Way east of N Shoreline Blvd	261	D4-023	D4-021	286	8	0			102	15		

#identified as part of the City's North Bayshore CIP Project List

CIPs identified in blue are not considered part of the North Bayshore impact fee.

North Bayshore Development Impact Fee

Working List of Sewer CIPs in North Bayshore – Project Source Comparison

Location/Description	Model ID	Upstream City MH ID	Downstream City MH ID	Length (ft)	Existing Diameter (in)	Slope	Master Plan		General Plan		Precise Plan	
							Project Number	Recommended Replacement Diameter (in)	Project Number	Recommended Replacement Diameter (in)	Project Number	Recommended Replacement Diameter (in)
Charleston Rd from Huff Ave to the parking lot entrance east of N Shoreline Blvd	168	C4-025	C4-027	360	8	0.003	1	n/a	103	12		
	172	C4-027	D4-002	342	8	0.005		12		12		
	173	D4-002	D4-034	356	10	0.001		12		15		
	176	D4-034	D4-004	332	10	0.002		12		15		
	182	D4-010	D4-008	336	12	0		n/a		27		
	181	D4-012	D4-010	337	12	0.002		n/a		18		
	178	D4-004	D4-006	34	21	0.017		n/a		27		
	179	D4-008	D4-006	17	30	0.008		n/a		36		
Joaquin Rd south of Charleston Rd	193	D4-028	D4-002	367	8	0.005			104	12		
Easement south of Charleston Rd through Shorebird Way	223	D5-010	D5-023	26	12	0.001			105	15		
	244	D5-018	D5-010	289	12	0.001				15		
	194	D5-020	C5-009	316	12	0.005				15		
	219	D5-023	D5-020	314	12	0				15		
Crittenden Ln east of N Shoreline Blvd	95	C4-002	C4-008	356	8	0.003			106	12		
Easement west of N Shoreline Blvd and north of Crittenden Ln	65	B4-009	B4-007	281	10	0.02			107	12		
N Shoreline Blvd north of Crittenden Ln	60	B4-005	B4-003	98	21	0			108	24		
	64	B4-007	B4-005	143	21	0.008				24		
San Antonio Rd, Casey Ave to Terminal Blvd	8	B2-008	B2-006	56	8	0.144			109	15		
	9	A2-003	B2-006	460	12	0.002				15		
Easement south east of the intersection of N Shoreline Blvd and the Permanente Creek	3869	B4-035	B3-014	105	6	0.019			112	8		
Bayshore Pkwy between Salado Dr to Garcia Ave	105	C2-006	C3-008	306	8	0.015			55	12		
	109	C3-010	C3-008	293	8	0.016				12		
Charleston Rd to the south of Amphitheatre Pkwy	135	C3-013	C3-028	294	8	0.004			56	12		
Gravity Sewer Trunk#	n/a	n/a	n/a	3800	30							
				11000	42							

#identified as part of the City's North Bayshore CIP Project List

CIPs identified in blue are not considered part of the North Bayshore impact fee.

North Bayshore Development Impact Fee

Working List of Sewer CIPs in North Bayshore – Impact Fee Project Cost Breakdown

Pipe ID	Project ID	Length (ft)	Diameter (in)	Estimated Construction Cost (2016)*	Contingency Cost (25%)	Design (48%)	City Administration (6.5%)	Total (2016)	NBSPP % contribution	Segment NBS PP Cost (2016)	Total Project Cost (2016)
85	PP-1	312	12	$68,640	$17,160	$41,184	$8,254	$135,238	100.00%	$135,240	$740,350
91		262	12	$57,640	$14,410	$34,584	$6,931	$113,565	100.00%	$113,570	
92		269	12	$59,180	$14,795	$35,508	$7,116	$116,599	100.00%	$116,600	
93		359	12	$78,980	$19,745	$47,388	$9,497	$155,610	100.00%	$155,610	
106		266	12	$58,520	$14,630	$35,112	$7,037	$115,299	100.00%	$115,300	
11		240	12	$52,800	$13,200	$31,680	$6,349	$104,029	100.00%	$104,030	
287	PP-2	322	12	$70,840	$17,710	$42,504	$8,519	$139,573	100.00%	$139,570	$139,570
105	GP-55	306	12	$67,320	$16,830	$40,392	$8,095	$132,637	100.00%	$132,640	$259,640
109		293	12	$64,460	$16,115	$38,676	$7,751	$127,002	100.00%	$127,000	
135	GP-56	294	12	$64,680	$16,170	$38,808	$7,778	$127,436	100.00%	$127,440	$127,440
260	GP-100	341	21	$121,396	$30,349	$72,838	$14,598	$239,180	20.13%	$48,140	$289,350
290		418	21	$148,808	$37,202	$89,285	$17,894	$293,189	20.13%	$59,010	
306		166	21	$59,096	$14,774	$35,458	$7,106	$116,434	15.83%	$18,430	
241		364	21	$129,584	$32,396	$77,750	$15,582	$255,313	24.10%	$61,520	
209		509	21	$181,204	$45,301	$108,722	$21,790	$357,017	24.49%	$87,440	
331		375	21	$133,500	$33,375	$80,100	$16,053	$263,028	5.53%	$14,560	
349		294	21	$104,664	$26,166	$62,798	$12,586	$206,214	0.07%	$140	
373		232	21	$82,592	$20,648	$49,555	$9,932	$162,727	0.07%	$110	
261	GP-102	286	15	$80,938	$20,235	$48,563	$9,733	$159,468	100.00%	$159,470	$159,470
168	GP-103	360	12	$79,200	$19,800	$47,520	$9,524	$156,044	100.00%	$156,040	$996,000
173		356	15	$100,748	$25,187	$60,449	$12,115	$198,499	100.00%	$198,500	
176		332	15	$93,956	$23,489	$56,374	$11,298	$185,117	100.00%	$185,120	
182		336	27	$121,296	$30,324	$72,778	$14,586	$238,983	100.00%	$238,980	
181		337	18	$99,078	$24,770	$59,447	$11,914	$195,208	100.00%	$195,210	
178		34	27	$12,274	$3,069	$7,364	$1,476	$24,183	52.83%	$12,780	
179		17	36	$8,381	$2,095	$5,029	$1,008	$16,513	56.72%	$9,370	
193	GP-104	367	12	$80,740	$20,185	$48,444	$9,709	$159,078	100.00%	$159,080	$159,080
223	GP-105	26	15	$7,358	$1,840	$4,415	$885	$14,497	100.00%	$14,500	$526,920
244		289	15	$81,787	$20,447	$49,072	$9,835	$161,141	100.00%	$161,140	
194		316	15	$89,428	$22,357	$53,657	$10,754	$176,196	100.00%	$176,200	
219		314	15	$88,862	$22,216	$53,317	$10,686	$175,080	100.00%	$175,080	
95	GP-106	356	12	$78,320	$19,580	$46,992	$9,418	$154,310	100.00%	$154,310	$154,310
65	GP-107	281	12	$61,820	$15,455	$37,092	$7,434	$121,801	100.00%	$121,800	$121,800
60	GP-108	98	21	$34,888	$8,722	$20,933	$4,195	$68,738	68.68%	$47,210	$116,090
64		143	21	$50,908	$12,727	$30,545	$6,122	$100,301	68.68%	$68,880	

*City provided CIP List in 2014 dollars. Schaaf & Wheeler escalated to match Nexus Study current dollars (2014 to 2015 2.4% inflation, 2015 to 2016 2.4% inflation)

North Bayshore Development Impact Fee

Working List of Sewer CIPs in North Bayshore – Impact Fee Project Cost Breakdown

Pipe ID	Project ID	Length (ft)	Diameter (in)	Estimated Construction Cost (2016)*	Contingency Cost (25%)	Design (48%)	City Administration (6.5%)	Total (2016)	NBSPP % contribution	Segment NBS PP Cost (2016)	Total Project Cost (2016)
8	GP-109	56	15	$15,848	$3,962	$9,509	$1,906	$31,225	100.00%	$31,230	$287,720
9		460	15	$130,180	$32,545	$78,108	$15,654	$256,487	100.00%	$256,490	
3869	GP-112	105	8	$17,640	$4,410	$10,584	$2,121	$34,755	100.00%	$34,760	$34,760
Total								**$5,787,714**		**$4,112,500**	**$4,112,500**

*City provided CIP List in 2014 dollars. Schaaf & Wheeler escalated to match Nexus Study current dollars (2014 to 2015 2.4% inflation, 2015 to 2016 2.4% inflation)