AGENDA
REGULAR MEETING
City Council of the Town of Colma
Colma Town Hall
1198 El Camino Real
Colma, CA 94014

Wednesday, November 28, 2018
7:00 PM

PLEDGE OF ALLEGIANCE AND ROLL CALL

ADOPTION OF AGENDA

PUBLIC COMMENTS

Comments on the Consent Calendar and Non-Agenda Items will be heard at this time. Comments on Agenda Items will be heard when the item is called.

CONSENT CALENDAR

1. Motion to Accept the Minutes from the November 14, 2018 Regular Meeting.
2. Motion to Adopt an Ordinance Amending Colma Municipal Code Section 5.12.030 Related to the Purposes and Use of the Housing Fund Pursuant to CEQA Guideline 15061(b)(3) (second reading).
3. Motion to Adopt an Ordinance Amending Colma Municipal Code Sections 1.01.060 and 1.02.080, Relating to Regular Meeting Locations and Bulletin Boards (second reading).
4. Motion to Adopt a Resolution Approving an Amendment to the Bulk Cable Television Services Agreement with Comcast to Include New Residential Units.
5. Motion to Approve the Final Systemic Safety Analysis Report (SSAR).
6. Motion to Adopt a Resolution Authorizing the Hiring of More Than One Part-Time Community Service Officer.

STUDY SESSION

7. **COST OF SERVICE**

This item is for discussion only; no action will be taken at this meeting.

REPORTS

Mayor/City Council

City Manager

ADJOURNMENT

The City Council Meeting Agenda Packet and supporting documents are available for review at the Colma Town Hall, 1198 El Camino Real, Colma, CA during normal business hours (Mon – Fri 8am-5pm). Persons interested in obtaining an agenda via e-mail should call Caitlin Corley at 650-997-8300 or email a request to ccorley@colma.ca.gov.

Reasonable Accommodation
Upon request, this publication will be made available in appropriate alternative formats to persons with disabilities, as required by the Americans with Disabilities Act of 1990. Any person with a disability, who requires a modification or accommodation to view the agenda, should direct such a request to Pak Lin, ADA Coordinator, at 650-997-8300 or pak.lin@colma.ca.gov. Please allow two business days for your request to be processed.

TOWN OF COLMA
COLMA
AUGUST 5, 1924
CALIFORNIA

MINUTES
REGULAR MEETING
City Council of the Town of Colma
Town Hall Council Chamber, 1198 El Camino Real
Colma, CA 94014
Wednesday, November 14, 2018

CLOSED SESSION – 6:00 PM

1. **In Closed Session Under Government Code § 54956.9(d)**, CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION

   Number of Cases: 1

CALL TO ORDER – 7:00 PM

Mayor Raquel Gonzalez called the meeting to order at 7:04 p.m.

Council Present – Mayor Raquel "Rae" Gonzalez, Vice Mayor Joanne F. del Rosario, and Council Members John Irish Goodwin, Diana Colvin and Helen Fisicaro were all present.

Staff Present – City Manager Brian Dossey, City Attorney Christopher Diaz, Administrative Services Director Pak Lin, Director of Public Works Brad Donohue, City Planner Michael Laughlin, Police Chief Kirk Stratton, Police Commander Sherwin Lum, Recreation Manager Cynthia Morquecho, City Clerk Caitlin Corley, and Human Resources Manager Letty Juarez were in attendance.

REPORT FROM CLOSED SESSION

Mayor Gonzalez announced that no action had been taken at the closed session.

ADOPTION OF THE AGENDA

Mayor Gonzalez asked if there were any changes to the agenda; none were requested. The Mayor asked for a motion to adopt the agenda.

Action: Vice Mayor del Rosario moved to adopt the agenda; the motion was seconded by Council Member Colvin and carried by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel Gonzalez, Mayor	✓				
Joanne F. del Rosario	✓				
John Irish Goodwin	✓				
Diana Colvin	✓				
Helen Fisicaro	✓				
	5	0			

PRESENTATION

Police Chief Kirk Stratton introduced and swore in our new Sergeant Dawn Marchetti.

Recreation Coordinator Cynthia Morquecho, along with Monica Devincenzi, Mike Mahoney, and Nicole Lee of Republic Services presented plaques to the winners of the Town's Halloween House Decorating Contest Winners: the Molloy Family, the Rangel Family, the Moreno Family and the Manela Family.

In recognition of Veterans Day on November 11, 2018, the Mayor presented a proclamation in honor of William Healey, a resident and veteran of the British Navy. William was not able to attend, however his family accepted on his behalf.

Council recognized and congratulated the following employees and Council Members on their service anniversaries:

- Jose Ascencio – 1 Year
- Sofia Cartagena – 1 Year
- Christian Huertas – 1 Year
- Thelma Coffey – 1 Year
- Officer Anthony Mckenna – 1 Year
- Officer Dawn Marchetti – 5 Years
- Darcy de Leon – 5 Years
- Rea Gogan – 10 Years
- Brian Dossey – 15 Years
- Sergeant Michael Pfotenhauer – 20 Years
- Joanne F. del Rosario – 12 Years
- Helen Fisicaro – 24 Years

There was a break for refreshments from 7:35 p.m. to 7:55 p.m.

PUBLIC COMMENTS

Mayor Gonzalez opened the public comment period at 7:55 p.m. and seeing no one come forward to speak, closed the public comment period.

CONSENT CALENDAR

2. Motion to Accept the Minutes from the October 24, 2018 Regular Meeting.
3. Motion to Approve Report of Checks Paid October 2018.
4. Motion to Adopt an Ordinance Amending Section 1.04.010 of the Colma Municipal Code, Relating to Compensation of Council Members (second reading).
5. Motion to Adopt a Resolution Amending the Fiscal Year 2018-19 Budget to Reflect the Actual Unspent Capital Improvement Project Budgets and Amending the Colma Administrative Code Section 4.01.070, Relating to Adjustments to Budget.
6. Motion Accepting the Fiscal Year 2018-19 Quarterly Financial Report Through September 30, 2018 and Authorizing a Copy to be Posted on the Town's Website.

   Motion to Adopt a Resolution Approving Lease Agreement with CSG Consultants.

   Action: Council Member Fisicaro moved to approve the Consent Calendar items #2 through 7; the motion was seconded by Council Member Goodwin and carried by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel Gonzalez, Mayor	✓				
Joanne F. del Rosario	✓				
John Irish Goodwin	✓				
Diana Colvin	✓				
Helen Fisicaro	✓				
	5	0			

PUBLIC HEARING

8. **HOUSING FUND USE**

City Planner Michael Laughlin presented the staff report. Mayor Gonzalez opened the public comment hearing at 7:58 p.m. Armando Sanchez, Executive Director of HEART, made a comment. The Mayor closed the public hearing at 8:00 p.m. Council discussion followed.

Action: Council Member Fisicaro moved to Introduce an Ordinance Amending Colma Municipal Code Section 5.12.030 Related to the Purposes and Use of the Housing Fund Pursuant to CEQA Guideline 15061(b)(3), and Waive a Further Reading of the Ordinance; the motion was seconded by Council Member Colvin carried by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel Gonzalez, Mayor	✓				
Joanne F. del Rosario	✓				
John Irish Goodwin	✓				
Diana Colvin	✓				
Helen Fisicaro	✓				
	5	0			

9. **REGULAR MEETNG AND BULLETIN BOARD LOCATIONS**

City Attorney Christopher Diaz presented the staff report. Mayor Gonzalez opened the public hearing at 8:03 p.m. and seeing no one come forward to speak, she closed the public hearing. Council discussion followed.

Action: Vice Mayor del Rosario moved to Introduce Ordinance Amending Colma Municipal Code Sections 1.01.060 and 1.02.080, Relating to Regular Meeting Locations and Bulletin Boards, and Waive Further Reading of the Ordinance; the motion was seconded by Council Member Goodwin carried by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel Gonzalez, Mayor	✓				
Joanne F. del Rosario	✓				
John Irish Goodwin	✓				
Diana Colvin	✓				
Helen Fisicaro	✓				
	5	0			

COUNCIL CALENDARING

The next Regular City Council Meeting will be on Wednesday, November 28, 2018 at 7:00 p.m. in the Council Chamber.

REPORTS

Raquel Gonzalez

Council of Cities, hosted by Belmont, 10/26/18
Mercy Housing Veterans Day Barbeque, 11/9/18

John Goodwin

SAMCEDA Connect18, 10/30/18
Mercy Housing Veterans Day Barbeque, 11/9/18

Helen Fisicaro

Mercy Housing Veterans Day Barbeque, 11/9/18

City Manager Brian Dossey gave a report on the following topics:

- The Public Works Department is currently putting up new holiday decorations on Town Hall
- The Town will host a Tree Lighting and Craft Night at Town Hall on November 30, 2018.
- The Grand Opening and Council Reorganization will be on Tuesday, December 4, 2018

ADJOURNMENT

Mayor Gonzalez adjourned the meeting at 8:10 p.m. in memory of Willie McCovey, San Francisco Giants legend, and Stan Lee, Marvel Comics visionary. The meeting was closed with a moment of silence in memory of those who lost their lives in the tragic fires in Northern and Southern California this past week.

Respectfully submitted,

Caitlin Corley
City Clerk

ORDINANCE NO. ___
OF THE CITY COUNCIL OF THE TOWN OF COLMA

ORDINANCE AMENDING COLMA MUNICIPAL CODE SECTION 5.12.030 RELATED TO THE PURPOSES AND USE OF THE HOUSING FUND PURSUANT TO CEQA GUIDELINE 15061(B)(3)

The City Council of the Town of Colma does ordain as follows[1]:

ARTICLE 1 SUBCHAPTER 5.12 AMENDED.

Subchapter 5.12, entitled "Inclusionary and Affordable Housing" shall be and hereby is amended to read as follows:

Subchapter 5.12 Inclusionary and Affordable Housing

5.12.010 In-Lieu Fees and Housing Impact Fees

(a) *Applicability.*

(1) For For-Sale Residential development projects of fewer than fifteen units, including Inclusionary Units, the requirements of this Subchapter may be satisfied by paying an in-lieu fee to the Affordable Housing Trust Fund as provided in this section.

(2) For For-Rent Residential development projects of five or more units, a Housing Impact Fee is required to be paid based on net new square footage of Residential Floor Area, excluding the square footage of units that are rented at an affordable rent to Moderate, Low or Very Low-income households, so long as such units are deed restricted as such.

(3) For Non-Residential/Commercial Developments over 5,000 square feet, a Housing Impact Fee is required to be paid based on net new square footage of Non-Residential/Commercial Development Floor Area.

(b) In-lieu Fee shall be in an amount equal to the Housing Impact Fee as set forth in the Town's Master Fee Schedule, and shall be imposed based on net new square footage of Residential Floor Area, excluding the square footage of units that are sold at an affordable sale price Moderate, Low or Very Low income households, so long as such units are deed restricted as such.

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[1] Substantive changes have been identified as follows: New text has been underlined; revised text has been underlined, without showing the prior wording; and deleted text is shown with a strike-through line. Non-substantive changes, such as grammar and formatting are not identified. All markings will be removed from the final version that is adopted by the City Council.

(c) *Housing Impact Fee.* The Housing Impact Fee shall be the fee established by the City to offset the impacts from the development of For-Rent Residential development and Non-Residential/Commercial development, as adopted by resolution of the City Council and set forth in the Town's Master Fee Schedule.

(d) *Timing of Payment*. The In-lieu fee or Housing Impact Fee must be paid prior to the Town's issuance of a building permit for the Development. For phased developments, payments may be made for each portion of the Development prior to Building Permit issuance for that phase.

(e) *Effect of No Payment.* No building permit will be issued unless fees required under this Section have been paid in full to the City.

[*History*: Ord. 639, 1/11/06; Ord. 764, 9/28/16]

5.12.020 Housing Fund

(a) *Establishment.* The Town of Colma Affordable Housing ~~Trust~~ Fund (the "Housing Fund") shall be and is hereby established. Separate accounts within such Housing Fund may be created from time to time to avoid commingling as required by law or as deemed appropriate to further the purposes of the Fund.

(b) *Administration.* The Housing Fund shall be administered by the City Manager, who shall have the authority to govern the Housing Fund consistent with this Subchapter, and to make recommendations on the use of the Fund, subject to review and approval by the Council.

[*History*: Ord. 639, 1/11/06; Ord. 764, 9/28/16]

5.12.030 Purposes and Use of Housing Fund

(a) Monies deposited in the Housing Fund along with any interest earnings on such monies shall be used solely to increase and improve the supply of housing affordable to households of moderate-, low- and very low-income households in the Town and~~.~~ in northern San Mateo County including, but not limited to:

(1) Acquisition of property and property rights;

(2) Cost of construction including costs associated with planning, administration, and design, as well as actual building or installation, as well as any other costs associated with the construction or financing of affordable housing;

(3) Reimbursement to the Town for such costs if funds were advanced by the Town from other sources; and,

(4) Reimbursement of developers or property owners who have been required or permitted to install facilities which are beyond that which can be attributed to a specific development.

(b) Monies may also be used to cover reasonable administrative expenses not reimbursed through processing fees, including reasonable consultant and legal expenses related to the establishment and/or administration of the Housing Fund and reasonable expenses for administering the process of calculating, collecting, and accounting for inclusionary and housing impact fees and any deferred Town fees authorized by this section.

(c) Monies in the Housing Fund shall be used to construct, acquire, rehabilitate or subsidize very low-, low- and moderate- income housing and/or to assist other governmental entities, private organizations or individuals in the construction and rehabilitation of very low-low-, and moderate-income housing. To the extent possible as determined by the Council, monies shall be targeted to benefit households at or below 80% of Median Income in San Mateo County. Monies in the Housing Fund may be disbursed, hypothecated, collateralized or otherwise employed for these purposes from time to time as the City Council determines is appropriate to accomplish the purposes of the Housing Fund. These uses include, but are not limited to, assistance to housing development corporations, equity participation loans, grants, pre-home ownership co-investment, pre-development loan funds, participation leases, other public/private partnership arrangements, or lent to the San Mateo County Housing Endowment and Regional Trust (HEART) for a specified term. The Housing Fund monies may be extended for the benefit of rental or owner-occupied housing or housing services.

(d) Expenditures by the City Manager from the Housing Fund shall be by contract and controlled, authorized and paid in accordance with general Town budgetary policies.

[*History*: Ord. 639, 1/11/06; Ord. 764, 9/28/16; Ord. XXX, X/X/XX]

ARTICLE 2 SEVERABILITY.

Each of the provisions of this Ordinance is severable from all other provisions. If any article, section, subsection, paragraph, sentence, clause or phrase of this Ordinance is for any reason held by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance.

ARTICLE 3 NOT A CEQA PROJECT.

The City Council finds that adoption of this Ordinance is not a "project," as defined in the California Environmental Quality Act because it does not have a potential for resulting in

either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment and concerns general policy and procedure making.

ARTICLE 4 EFFECTIVE DATE.

This ordinance, or a summary thereof prepared by the City Attorney, shall be posted on the three (3) official bulletin boards of the Town of Colma within 15 days of its passage and is to take force and effect thirty (30) days after its passage.

Certificate of Adoption

I certify that the foregoing Ordinance No. ___ was duly introduced at a regular meeting of the City Council of the Town of Colma held on November 14, 2018 and duly adopted at a regular meeting of said City Council held on November 28, 2018 by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel "Rae" Gonzalez, Mayor					
Joanne F. del Rosario					
John Irish Goodwin					
Diana Colvin					
Helen Fisicaro					
Voting Tally					

Dated _____

_____
Raquel "Rae" Gonzalez, Mayor

Attest: _____
Caitlin Corley, City Clerk

ORDINANCE NO. ____
OF THE CITY COUNCIL OF THE TOWN OF COLMA

ORDINANCE AMENDING COLMA MUNICIPAL CODE SECTIONS 1.01.060 AND 1.02.080, RELATING TO REGULAR MEETING LOCATIONS AND BULLETIN BOARDS

The City Council of the Town of Colma does ordain as follows:

ARTICLE 1. CMC SECTION 1.01.060 AMENDED.

Section 1.01.060 shall be and hereby is amended as follows:

1.01.060 Bulletin Boards

Three official bulletin boards are hereby designated, upon which shall be posted all ordinances and other documents and papers required by law or the City Council to be posted, and shall be located at the following places: one at the Town Hall, located at the civic plaza adjacent to the Town Hall Parking lot ~~situated on the northwest corner of El Camino Real and Serramonte Boulevard~~; one at the entrance to Sterling Park Community Center located at 427 F Street; and one on the east side of Clark Street at the intersection with E Street.

[History: formerly § 1.106, Ord. 205, 12/8/76; Ord. 412, 4/11/90; Ord. 468, 7/13/94; Ord. 620, 9/8/04; Ord. 629, 5/11/05]

ARTICLE 2. CMC SECTION 1.02.080 AMENDED.

Subsection (a) of Section 1.02.080 shall be and hereby is amended as follows:

1.02.080 Regular Meetings

(a) The City Council shall meet regularly at 7:00 p.m. on the second and fourth Wednesday of each month, at Town Hall, 1198 El Camino Real, ~~the Colma Community Center, 1520 Hillside Boulevard~~, Colma, California, then and there to conduct such business as may properly come before it. When the second fourth Wednesday of any month falls on a public holiday, the regular meeting shall be held at 7:00 p.m. the following day. City Council's regular 7:00 p.m. start time can be modified by the City Manager, with the concurrence of the Mayor or other presiding officer, to commence earlier depending upon the volume of business for the City Council to consider at any given meeting. The City Clerk shall provide prior written notice of the adjusted start time consistent with the Ralph M. Brown Act. The City Council's intention is to make use of an earlier start time for closed session purposes or ceremonial type events, with all other regular agenda items continuing to commence at 7:00 p.m.

[History: formerly § 1.210, Ord. 205, 12/8/76; Ord. 390, 4/12/89; Ord. 436, 3/10/92; Ord. 444, 9/10/92; Ord. 620 9/8/04; Ord. 672, 9/10/08; Ord 717, 3/13/13; Ord 741, 5/13/15; Ord 750, 10/14/16]

ARTICLE 3. SEVERABILITY.

Each of the provisions of this Ordinance is severable from all other provisions. If any article, section, subsection, paragraph, sentence, clause or phrase of this Ordinance is for any reason held by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance.

ARTICLE 4. NOT A CEQA PROJECT.

The City Council finds that adoption of this Ordinance is not a "project," as defined in the California Environmental Quality Act because it does not have a potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment and concerns general policy and procedure making.

ARTICLE 5. EFFECTIVE DATE.

This ordinance, or a summary thereof prepared by the City Attorney, shall be posted on the three (3) official bulletin boards of the Town of Colma within 15 days of its passage and is to take force and effect thirty (30) days after its passage.

Certificate of Adoption

I certify that the foregoing Ordinance No. ___ was duly introduced at a regular meeting of the City Council of the Town of Colma held on November 14, 2018 and duly adopted at a regular meeting of said City Council held on November 28, 2018 by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel "Rae" Gonzalez, Mayor					
Joanne F. del Rosario					
John Irish Goodwin					
Diana Colvin					
Helen Fisicaro					
Voting Tally					

Dated _____

_____
Raquel "Rae" Gonzalez, Mayor

Attest: _____

Caitlin Corley, City Clerk

TOWN OF COLMA
COLMA
AUGUST 5, 1924
CALIFORNIA

STAFF REPORT

TO:	Mayor and Members of the City Council
FROM:	Michael Laughlin, City Planner
	Christopher Diaz, City Attorney
VIA:	Brian Dossey, City Manager
MEETING DATE:	November 28, 2018
SUBJECT:	Amendment to Comcast Agreement

RECOMMENDATION

Staff recommends that the Council adopt the following:

> RESOLUTION APPROVING AN AMENDMENT TO THE BULK CABLE TELEVISION SERVICES AGREEMENT WITH COMCAST TO INCLUDE NEW RESIDENTIAL UNITS

EXECUTIVE SUMMARY

The proposed resolution would authorize the Mayor to amend the existing contract with Comcast Corporation to provide television service to Veteran's Village (66 units) and the new single-family units on B and C Streets (9 units).

FISCAL IMPACT

The Town currently pays about $163,000 per year for 424 households and Town facility cable services. The amendment would add an additional 75 units to the agreement. At $30 per unit, the total annual increase in cable service costs is estimated at approximately $27,000 per year.

ANALYSIS

In 2002, the Town contracted with TCI Cablevision, the predecessor to Comcast Corporation, to provide cable television services to all residents. The Comcast contract was renewed every three to five years after 2002. A new five-year bulk services agreement was executed with Comcast in 2015.

Council Adopted Values

The recommendation is consistent with the Council value of **responsibility** because it will extend Comcast services to new residents.

Sustainability Impact

None.

Alternatives

The City Council could choose not to amend the agreement. This alternative is not recommended since the agreement was intended to provide cable services to all households within the Town.

CONCLUSION

Staff recommends the City Council adopt the resolution.

ATTACHMENTS

A. Resolution
B. Agreement Amendment w/Exhibit A address list

RESOLUTION NO. 2018-__
OF THE CITY COUNCIL OF THE TOWN OF COLMA

RESOLUTION APPROVING AN AMENDMENT TO THE BULK CABLE TELEVISION SERVICES AGREEMENT WITH COMCAST TO INCLUDE NEW RESIDENTIAL UNITS

The City Council of the Town of Colma does hereby resolve:

1. Background.

(a) In 1998, the Colma Recreation Advisory Committee, led by an outside, independent expert in recreational and leisure services and comprised of residents and staff members of the Town, filed a report recommending that the Town develop a comprehensive recreational program which should meet the following goals, inter alia:

(i) The Town should subsidize all new and existing recreation programs;

(ii) Programs should be consistent and sustainable;

(iii) There should be a variety of recreational programs which encompass the total needs of individuals, represent the demographic needs of the community, provide quality leisure experiences, and provide participants with exposure to positive images of diversity.

(b) Since then, the City Council has endeavored to develop such a comprehensive recreational program and, in furtherance thereof, adopted Guidelines for Recreation and Leisure Programs, Events and Activities (Colma Administrative Code § 2.01.010 et seq.). The Guidelines encourage the development of programs that encompass the total needs of the individual, including education, culture, personal relaxation, and self-improvement (Colma Administrative Code § 2.01.100) and provide for increased access for all citizens.

(c) In 2002, prior to adopting Resolution 2002-15, the Council reviewed the following documentary evidence: Town of Colma Recreation Activities Committee, Colma Recreation Activities Guide, 1998; City and County of San Francisco, Recreation and Park Department Assessment Project, 1998; California Park and Recreation Society, Vision Insight Planning Strategic Plan, 1999; Canadian Parks/Recreation Association, Benefits of Parks and Recreation Catalogue, 1997 (web site: http://www.lin.ca/htdocs/catackn.htm); and found, among other facts, that:

(i) Making cable television programs available to all residents of the Town of Colma provides a substantial public benefit because cable television offers so much informational, educational and recreational value to the viewer;

(ii) Adopting a program wherein the Town shall pay for all residents to have access to and continued availability of cable television services is desirable in a free and democratic society where the people are the electorate because the citizenry becomes more informed, more up to date on current issues affecting the nation, region, and locality, and more ready to meet the responsibilities of being an informed electorate; and

(iii) Making cable television services available to all residents of the Town is consistent with the Policies set forth in the Recreation Program Guidelines contained at Colma Administrative Code § 2.01.100.

(d) In 2002, after making these findings, the City Council adopted Resolution 2002-15, which approved a Bulk Services Agreement with TCI Cablevision, the predecessor to Comcast Corporation and authorized the Town to subsidize cable television programming for Town residents.

(e) Since 2002, the contract has been renewed every three to five years. In 2015, the Town extended the current contract with Comcast Corporation for an additional five years.

(f) The current contract does not currently cover new units, specifically the 66 units in Veteran's Village and the 9 new single-family units on B and C Streets.

2. Findings.

The City Council finds that each of the following facts are true:

(a) The California Department of Finance estimates the Town population at 1,506 residents.

(b) Recreational, educational, and cultural opportunities for Colma residents are limited. The total amount of land dedicated for park purposes is 2.43 acres. This amounts to approximately 1.5 acres of parkland per 1,000 residents. This is lower than the recommended target of 3.0 acres of parkland per 1,000 residents. Because of these limited recreational opportunities, the Town of Colma subsidizes recreational, educational and cultural opportunities for its citizens to increase accessibility for its residents. For example, the Town has sponsored and subsidized children's summer camps, summer picnics, holiday parties, and cultural trips to museums.

(c) Cable television programming provides significant informational, educational, cultural, civic, and recreational values to people. By subsidizing the distribution of cable television programming, the Town will bring these values to the entire community.

(d) The informational and news value of cable television programming is well-established. Among the ongoing programming of cable television are (i) network channels, including CNN, C-Span, C-Span 2, Fox, MSNBC, and CNBC, which report the news or offer informed commentary of current events 24 hours per day; (ii) local PEG channels covering the governmental and public affairs matters of importance to the Town; (iii) several local stations which each broadcast up-to-date local news and weather for the region, the state and the nation; (iv) a court channel; and (v) a weather channel. A wider penetration of news programming leads to a more informed and educated electorate and community.

(e) Cable television offers a wealth of educational programs. Many channels focus solely on one theme, such as Animal Planet channel, History channel and Discovery channel. Some news channels, such as C-Span, offer significant educational content when not reporting news. Just as news of current events leads to a more informed and educated public, educational and history programs help the public better understand civic, national and international events and issues.

(f) Self-improvement programming such as Food channel, Food Network, Discovery Health channel, and Home and Garden TV, also provide a benefit to the public. HGTV, for example, teaches people how to care for and improve their homes, which in turn preserves neighborhoods and maintains home values.

(g) Studies have shown that the average American who reaches the age of 70 spends approximately 27.5 years involved in some form of recreation. The average person will attribute the relative happiness of their life to the quality of their leisure time. To obtain relative happiness and quality leisure time, participants must have a variety of activities from which to choose. Television, despite its sometimes seemingly trivial side, offers a leisurely respite from the stresses of modern urban living.

(h) There is substantial evidence that the distribution of cable television services is a matter of great public importance and necessity. For example:

(i) The legislature of the State of California of California has found that the supplying of cable television services on a universal basis to be a desirable goal and has provided in Government Code section 53066.2 that "a city … shall assure that access to cable services is not denied to any group of potential residential subscribers because of the income of the residents of the local area ….";

(ii) Similarly, the State Legislature found and declared, in the Digital Infrastructure and Video Competition Act (DIVCA), Public Utilities Code section 5810 that: "Video and cable services provide numerous benefits to all Californians including access to a variety of news, public information, education, and entertainment programming…." and that the Legislature desired to promote "widespread access to the most technologically advanced cable and video services to all California communities in a non-discriminatory manner regardless of socioeconomic status";

(iii) In *Loretto v. Teleprompter Manhattan CATV Corp* (1982), the United States Supreme Court recognized that the penetration of the entire viewing area and citizenry with cable television services has "important educational and community aspects;" and

(iv) The Attorney General of the State of California has opined, in 76 Ops. Cal. Atty. Gen. 118, that the distribution of cable television services involve an "essential" and important public service, and has labeled the provision of cable television to be a "necessary" service, akin to other public utilities.

(i) Continuing the Town's program of subsidizing residents' access to and continued availability of cable television services provides a substantial public benefit, as more particularly described in the foregoing findings.

(j) Continuing the Town's program of subsidizing residents' access to and continued availability of cable television services is desirable in a free and democratic society where the people are the electorate in that the citizenry becomes more informed, more up to date on current issue affecting the nation, region, and locality, and more ready to meets the responsibilities of being an informed electorate.

(k) Continuing the Town's program of subsidizing residents' access to and continued availability of cable television services is consistent with the Policies set forth in the Recreation Program Guidelines contained at Colma Administrative Code § 2.01.100.

(l) The Town's program of subsidizing residents' access to and continued availability of cable television services should be expanded as appropriate to ensure all Town residents have access to the program's benefits.

3. Order.

(a) The Mayor is authorized to execute an amendment to the existing Bulk Cable Television Services Contract with Comcast Corporation for the purposes of including Veteran's Village and new residential units on B and C Streets in the program, with such technical amendments as may be deemed appropriate by the City Manager and the City Attorney.

Certification of Adoption

I certify that the foregoing Resolution No. 2018-__ was duly adopted at a regular meeting of said City Council held on November 28, 2018 by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel "Rae" Gonzalez, Mayor					
Joanne F. del Rosario					
John Irish Goodwin					
Diana Colvin					
Helen Fisicaro					
Voting Tally					

Dated _____

_____
Raquel Gonzalez, Mayor

Attest: _____
Caitlin Corley, City Clerk

AMENDMENT TO AMENDED AND RESTATED BULK VIDEO SERVICES AGREEMENT

THIS AMENDMENT TO AMENDED AND RESTATED BULK VIDEO SERVICES AGREEMENT (this "Amendment") is made and entered into this _____ day of _____, 2018 by COMCAST OF CALIFORNIA IX, INC. (hereinafter referred to as the "Company") and TOWN OF COLMA (hereinafter referred to as the "Town") who owns or has control over certain real estate and improvements thereon located in Colma, California 94014 (the "Premises").

W I T N E S S E T H:

WHEREAS, the Company and the Town entered into that certain Amended and Restated Bulk Video Services Agreement dated (the "Agreement"); and

WHEREAS, new residential units are being built and completed in the Town; and

WHEREAS, the Company and the Town desire to amend the Agreement as hereinafter provided; and

WHEREAS, unless otherwise defined herein, capitalized terms used in this Amendment shall have the meaning ascribed to such term in the Agreement.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. The foregoing recitals of facts are true and correct and, by this reference, are hereby fully incorporated herein.

2. Paragraph 1 of the Preamble is deleted in its entirety and replaced by the following:

   This Amended and Restated Bulk Video Services Agreement (the "Agreement") is effective June 1, 2015, and is between Comcast of California IX, Inc. (the "Company"), whose address is 3055 Comcast Place, Livermore, CA 94551, and Town of Colma (the "Town"), whose address is 1198 El Camino Real, Colma, CA 94014. As of the date of this Agreement, there are 424 covered Residential Dwelling Units ("Existing RDUs") in the Town as defined below and as listed in Exhibit A plus four (4) public buildings owned or occupied by agencies of the Town. In addition a new facility comprised of 66 residential units and 9 new single family homes are being built in the Town for a total of 75 additional residential dwelling units (the "New RDUs") Together, the Existing RDUs, the New RDUs are the "RDUs" and the RDUs total 499 units. The RDUs and the 4 public buildings comprise the "Premises".

3. Section 1. Wiring is deleted in its entirety and replaced by the following:

1. Wiring The Company has installed the facilities necessary to provide the Bulk Video Services to the Existing RDUs and the 4 public buildings (the "Company Wiring"). The Company will extend those portions of the Company Wiring necessary for the Company to distribute the Services to the New RDUs. The portions of the Company Wiring in the public rights of way shall be and will remain the property of the Company and subject to the requirements set forth in Certificate 0021. The ownership of those portions of the Company Wiring not within the public right of way shall be as agreed to between the RDU owners with respect to the RDUs or the Town with respect to the public buildings in accordance with applicable law. All work shall be done by the Company in a proper and workmanlike manner in accordance with Federal Communications Commission ("FCC") regulations, industry standards and local codes, unless otherwise provided in this Agreement. The Company shall be responsible for all costs and expenses incurred by it in operating, maintaining and repairing the Company Wiring. The Company agrees to repair and/or replace any damage to the Premises resulting from the operation, maintenance or repair of the Company Wiring, except as otherwise provided in this Agreement. The Company will be responsible for obtaining all necessary permits, licenses and approvals in connection with the operation of the Company Wiring.

4. Section 5. Fees and Charges for Bulk Video Services subsection (a) (b) (c) and (e) are hereby deleted in their entirety and replaced by the following:

a) The Company agrees to provide Bulk Video Services on one (1) outlet in each of the 499 RDUs and those portions of the Bulk Video Services that do not require two way communications to two (2) outlets in each of 499 RDUs and a total of twelve (12) outlets in the four (4) public buildings identified in Exhibit A. As of the date of this Agreement, the Bulk Video Service consists of the channel lineup set forth on Exhibit B attached hereto which is subject to change from time to time.

b) The Town shall pay the Company a monthly fee for Bulk Video Service equal to $26.75 per unit and a broadcast TV fee of $3.25 per unit for a "monthly per unit service fee" of $30.00, plus all applicable government fees and taxes, except for franchise fees, according to the Activation Schedule below. For the 499 dwelling units and four (4) public buildings, the initial total monthly fee will be $12,840.00 plus all applicable government fees and taxes. The monthly per unit service fee referenced above does not include any fees which may be billed directly to RDU residents for Additional Services (defined in Section 5(e) below) or any fees which may be billed directly to the Town for additional equipment or other technical services at the public buildings. The Town shall pay the Company a monthly per unit service fee for each unit that is activated and added to the Company's monthly invoice. The Town shall provide a written report to the Company no later than the 20th of each month in the months of February, March, April, May, June and July in 2019, listing the unit numbers and resident information for the units to be activated with the Bulk Service for the following month. The Town acknowledges: (i) if the

number of units listed on such report are less than the number of units to be activated that month on the Activation Schedule, the Town will be billed for the total number of units to be billed that month in accordance with the Activation Schedule below or: (ii) if the number of units listed on such report are more than the number of units to be activated, the Company will activate the additional units with the Bulk Service. Such units will be added to the Company's monthly per unit billing and the Activation Schedule will automatically be amended to reflect the additional units. Notwithstanding anything in this Bulk Addendum or the Agreement to the contrary, the Company shall have no obligation to provide the Bulk Service to any unit which has not been listed on the Town's monthly report for the Bulk Service and has not been added to the Company's monthly invoice. The monthly per unit service fee may be increased by the Company once annually upon thirty (30) days written notice and shall not exceed 3% and further provided that the rate increase shall not be greater than the service rate increases applicable to residential subscribers in Daly City, California for Digital Starter or equivalent service.

Billing Schedule

Activation Time	Number of New Units to be Activated	Number of Total Units to be Billed
October 2018	0	424
November 2018	9	433
December 2018	0	433
January 2019	0	433
February 2019	0	433
March 2019	0	433
April 2019	22	455
May 2019	22	477
June 2019	22	499
Each month thereafter	0	499

c) The Town may modify the RDUs covered by the Agreement for any homes or buildings added or constructed in the future. The parties agree to meet and confer in good faith from time to time, but no less than annually, to determine the number of legal residential dwelling units in the Town covered by the Agreement. After a determination that the number of residential dwelling units covered by the Agreement is different than 499 RDUs, the billing will be adjusted to reflect the adjusted number of RDUs beginning with the next quarter after the determination has been made. Notwithstanding the foregoing, the Company shall have no obligation to provide the Bulk Video Services to any RDU for which it is not receiving the monthly per unit Bulk

Video Service fee.

e) The Town acknowledges and understands that a digital receiver is required to receive the Bulk Video Service. To the extent that a resident does not have such equipment in their residential unit as of the effective date of this Agreement, the Company shall provide each resident with one (1) high definition digital primary receiver and one (1) remote control and with two (2) high definition digital secondary receivers and two (2) remote controls at no additional monthly charge provided that the resident enters into a separate agreement with the Company accepting responsibility for the receiver, remote(s) and any services purchased which are additional to the Bulk Video Service (the "Additional Services"). The Town assumes no liability or responsibility for service or equipment charges for Additional Services contracted for by individual residents. If a resident refuses to enter into such agreement or violates such agreement, the resident may be capable of viewing only those portions of Bulk Video Service that do not require a high definition digital receiver or digital adapter and the Company shall not be required to provide any reduction in the monthly per unit Bulk Video Service fee. The type of high definition digital receiver, high definition digital adapters and remotes provided to the residents shall be at the Company's sole discretion.

5. Each party represents to the other that the person signing on its behalf has the legal right and authority to execute, enter into and bind such party to the commitments and obligations set forth herein.

Except as herein amended, the Agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the undersigned have caused this Amendment to be signed, sealed and delivered as of the day and year first above written.

TOWN

Town of Colma

By: _____
Name: Raquel Gonzalez
Title: Mayor

COMPANY

Comcast of California IX, Inc.

By: _____
Name: Elaine Barden
Title: Regional VP Sales & Marketing

EXHIBIT A
Town of Colma Address Range List

Part 1 - RDUs

House #	Street Name	
401	B ST	
403	B ST	
405	B ST	
407	B ST	
409	B ST	APT A
409	B ST	APT B
411	B ST	APT A
411	B ST	APT B
413	B ST	APT A
413	B ST	APT B
415	B ST	APT A
415	B ST	APT B
416	B ST	APT A
416	B ST	APT B
417	B ST	APT A
417	B ST	APT B
418	B ST	
419	B ST	APT A
419	B ST	APT B
420	B ST	APT A
420	B ST	APT B
424	B ST	
426	B ST	
429	B ST	
429	B ST	1/2
429	B ST	APT A
430	B ST	
431	B ST	
433	B ST	
435	B ST	
436	B ST	
437	B ST	
438	B ST	
439	B ST	
441	B ST	
442	B ST	
444	B ST	
446	B ST	
448	B ST	
451	B ST	
453	B ST	
455	B ST	
456	B ST	
460	B ST	
461	B ST	

House #	Street Name	
462	B ST	
463	B ST	
464	B ST	
468	B ST	
469	B ST	APT A
469	B ST	APT B
470	B ST	
471	B ST	
472	B ST	
475	B ST	
476	B ST	
479	B ST	
480	B ST	
483	B ST	
484	B ST	
488	B ST	
492	B ST	
503	B ST	
504	B ST	
507	B ST	
508	B ST	
511	B ST	
512	B ST	
515	B ST	
516	B ST	
519	B ST	
520	B ST	
523	B ST	
524	B ST	
527	B ST	
528	B ST	
531	B ST	
532	B ST	
536	B ST	
540	B ST	
401	C ST	APT A
401	C ST	
409	C ST	
411	C ST	
413	C ST	
415	C ST	APT A
415	C ST	APT B
417	C ST	APT A
417	C ST	APT B

House #	Street Name	
419	C ST	APT A
419	C ST	APT B
420	C ST	APT A
420	C ST	APT B
421	C ST	
422	C ST	APT A
422	C ST	APT B
423	C ST	
424	C ST	APT A
424	C ST	APT B
426	C ST	APT A
426	C ST	APT B
427	C ST	
431	C ST	
435	C ST	APT 1
435	C ST	APT 2
435	C ST	APT 3
435	C ST	APT 4
435	C ST	APT A
438	C ST	
439	C ST	
440	C ST	
441	C ST	
441	C ST	APT A
442	C ST	
445	C ST	APT A
445	C ST	APT B
445	C ST	APT C
445	C ST	APT D
446	C ST	
449	C ST	
455	C ST	
464	C ST	
466	C ST	
467	C ST	
471	C ST	
472	C ST	
475	C ST	
476	C ST	
479	C ST	
480	C ST	
483	C ST	
484	C ST	
487	C ST	
491	C ST	
492	C ST	
503	C ST	
504	C ST	

House #	Street Name	
507	C ST	
508	C ST	
511	C ST	
512	C ST	
515	C ST	
516	C ST	
519	C ST	
520	C ST	
523	C ST	
524	C ST	
527	C ST	
528	C ST	
531	C ST	
532	C ST	
535	C ST	
536	C ST	
539	C ST	
540	C ST	
543	C ST	
544	C ST	
547	C ST	
548	C ST	
551	C ST	
552	C ST	
556	C ST	
560	C ST	
564	C ST	
350	CLARK AVE	
450	CLARK AVE	
550	CLARK AVE	
560	CLARK AVE	
570	CLARK AVE	
580	CLARK AVE	
429	D ST	
430	D ST	
431	D ST	
433	D ST	
434	D ST	
435	D ST	
436	D ST	
438	D ST	
439	D ST	
442	D ST	
443	D ST	
443	D ST	APT A
448	D ST	
452	D ST	

House #	Street Name	
455	D ST	
456	D ST	
459	D ST	
460	D ST	
463	D ST	
464	D ST	
467	D ST	
468	D ST	
471	D ST	
472	D ST	
475	D ST	
476	D ST	
479	D ST	
480	D ST	
483	D ST	
484	D ST	
487	D ST	
488	D ST	
490	D ST	
491	D ST	
503	D ST	
507	D ST	
511	D ST	
515	D ST	
519	D ST	
523	D ST	
527	D ST	
531	D ST	
535	D ST	
539	D ST	
543	D ST	
547	D ST	
551	D ST	
555	D ST	
559	D ST	
563	D ST	
567	D ST	
571	D ST	
575	D ST	
579	D ST	
401	E ST	APT 1
401	E ST	APT 2
401	E ST	APT 3
401	E ST	APT 4
412	E ST	
414	E ST	
415	E ST	

House #	Street Name	
416	E ST	
417	E ST	
419	E ST	
421	E ST	
423	E ST	
425	E ST	
427	E ST	
429	E ST	
435	E ST	
441	E ST	
443	E ST	
444	E ST	
445	E ST	
446	E ST	# A
446	E ST	# B
446	E ST	# C
448	E ST	
449	E ST	APT 1
449	E ST	APT 2
449	E ST	APT 3
450 1/2	E ST	
450	E ST	
455	E ST	
460 1/2	E ST	Apt Front
460	E ST	
461	E ST	
462	E ST	APT 1
462	E ST	APT 2
462	E ST	APT 3
463	E ST	
464	E ST	APT A
464	E ST	APT B
465	E ST	APT A
465	E ST	APT B
466	E ST	APT A
466	E ST	APT B
467	E ST	
469	E ST	
471	E ST	
478	E ST	
483	E ST	
490	E ST	

House #	Street Name	
1051	EL CAMINO REAL	
1180	EL CAMINO REAL	APT A
1180	EL CAMINO REAL	APT B
1180	EL CAMINO REAL	APT C
1180	EL CAMINO REAL	APT D
1180	EL CAMINO REAL	APT E
1180	EL CAMINO REAL	APT F
1180	EL CAMINO REAL	APT G
1180	EL CAMINO REAL	APT H
1180	EL CAMINO REAL	APT I
1180	EL CAMINO REAL	APT J
1180	EL CAMINO REAL	APT K
1180	EL CAMINO REAL	APT L
1180	EL CAMINO REAL	APT M
1180	EL CAMINO REAL	APT N
1180	EL CAMINO REAL	APT O
1180	EL CAMINO REAL	APT P
1180	EL CAMINO REAL	APT R
1180	EL CAMINO REAL	APT S
1222	EL CAMINO REAL	APT A
1222	EL CAMINO REAL	APT B
1242	EL CAMINO REAL	
1350	EL CAMINO REAL	
7685	EL CAMINO REAL	
7701	EL CAMINO REAL	
7623	EL CAMINO REAL	
7625	EL CAMINO REAL	
7627	EL CAMINO REAL	APT A
417	F ST	APT B
419	F ST	
421	F ST	
421	F ST	
433	F ST	
437	F ST	
439	F ST	
441	F ST	
601	F ST	
609	F ST	
611	F ST	
613	F ST	
615	F ST	
617	F ST	
619	F ST	
621	F ST	
623	F ST	
625	F ST	

House #	Street Name	
627	F ST	APT A
627	F ST	APT B
629	F ST	
1450	HILLSIDE BLVD	APT 1
1450	HILLSIDE BLVD	APT 2
1450	HILLSIDE BLVD	APT 3
1450	HILLSIDE BLVD	APT 4
1801	HILLSIDE BLVD	
1905	HILLSIDE BLVD	
2003	HILLSIDE BLVD	
2005	HILLSIDE BLVD	
2300	HILLSIDE BLVD	
2700	HILLSIDE BLVD	
2702	HILLSIDE BLVD	
2704	HILLSIDE BLVD	
2706	HILLSIDE BLVD	
2708	HILLSIDE BLVD	
2710	HILLSIDE BLVD	
302	HOFFMAN ST	
304	HOFFMAN ST	
306	HOFFMAN ST	
308	HOFFMAN ST	
316	HOFFMAN ST	
318	HOFFMAN ST	
320	HOFFMAN ST	
301	HOFFMAN ST	
303	HOFFMAN ST	
305	HOFFMAN ST	
307	HOFFMAN ST	
309	HOFFMAN ST	
311	HOFFMAN ST	
313	HOFFMAN ST	
315	HOFFMAN ST	
317	HOFFMAN ST	
319	HOFFMAN ST	
321	HOFFMAN ST	
1221	ISABELLE CIR	
1223	ISABELLE CIR	
1225	ISABELLE CIR	
1227	ISABELLE CIR	
1229	ISABELLE CIR	
1231	ISABELLE CIR	
1233	ISABELLE CIR	
1235	ISABELLE CIR	
1237	ISABELLE CIR	
1239	ISABELLE CIR	

House #	Street Name
1241	ISABELLE CIR
1243	ISABELLE CIR
1245	ISABELLE CIR
1247	ISABELLE CIR
1249	ISABELLE CIR
1251	ISABELLE CIR
1321	ISABELLE CIR
1323	ISABELLE CIR
1325	ISABELLE CIR
1327	ISABELLE CIR
1331	ISABELLE CIR
1333	ISABELLE CIR
1335	ISABELLE CIR
1337	ISABELLE CIR
1339	ISABELLE CIR
1341	ISABELLE CIR
1343	ISABELLE CIR
1345	ISABELLE CIR
1347	ISABELLE CIR
1349	ISABELLE CIR
1349	ISABELLE CIR
1351	ISABELLE CIR
1353	ISABELLE CIR
1355	ISABELLE CIR
1357	ISABELLE CIR
1359	ISABELLE CIR

House #	Street Name	
1263	MISSION RD	
1267	MISSION RD	
1271	MISSION RD	
1275	MISSION RD	
1279	MISSION RD	
1283	MISSION RD	
1287	MISSION RD	
1291	MISSION RD	
1295	MISSION RD	
1299	MISSION RD	
1303	MISSION RD	
1307	MISSION RD	
1311	MISSION RD	
1315	MISSION RD	
1319	MISSION RD	
1323	MISSION RD	
1327	MISSION RD	
1341	MISSION RD	
1345	MISSION RD	
1349	MISSION RD	
1353	MISSION RD	
1357	MISSION RD	
1361	MISSION RD	
1365	MISSION RD	
1369	MISSION RD	
1373	MISSION RD	
1377	MISSION RD	
1420	MISSION RD	
1431	MISSION RD	
1433	MISSION RD	
1439	MISSION RD	
1445	MISSION RD	
1451	MISSION RD	
1457	MISSION RD	
1655	MISSION RD	APT A
1655	MISSION RD	APT B
1655	MISSION RD	APT C
1655	MISSION RD	APT D
1680	MISSION RD	Unit 101
1680	MISSION RD	Unit 102
1680	MISSION RD	Unit 103
1680	MISSION RD	Unit 106
1680	MISSION RD	Unit 107
1680	MISSION RD	Unit 109
1680	MISSION RD	Unit 110
1680	MISSION RD	Unit 111
1680	MISSION RD	Unit 113
1680	MISSION RD	Unit 114

House #	Street Name	
1680	MISSION RD	Unit 115
1680	MISSION RD	Unit 118
1680	MISSION RD	Unit 120
1680	MISSION RD	Unit 121
1680	MISSION RD	Unit 122
1680	MISSION RD	Unit 123
1680	MISSION RD	Unit 124
1680	MISSION RD	Unit 125
1680	MISSION RD	Unit 126
1680	MISSION RD	Unit 201
1680	MISSION RD	Unit 202
1680	MISSION RD	Unit 203
1680	MISSION RD	Unit 204
1680	MISSION RD	Unit 205
1680	MISSION RD	Unit 206
1680	MISSION RD	Unit 207
1680	MISSION RD	Unit 208
1680	MISSION RD	Unit 209
1680	MISSION RD	Unit 210
1680	MISSION RD	Unit 211
1680	MISSION RD	Unit 212
1680	MISSION RD	Unit 213
1680	MISSION RD	Unit 214
1680	MISSION RD	Unit 215
1680	MISSION RD	Unit 217
1680	MISSION RD	Unit 218
1680	MISSION RD	Unit 220
1680	MISSION RD	Unit 221
1680	MISSION RD	Unit 222
1680	MISSION RD	Unit 223
1680	MISSION RD	Unit 224
1680	MISSION RD	Unit 225
1680	MISSION RD	Unit 226
1680	MISSION RD	Unit 301
1680	MISSION RD	Unit 302
1680	MISSION RD	Unit 303
1680	MISSION RD	Unit 304
1680	MISSION RD	Unit 305
1680	MISSION RD	Unit 306
1680	MISSION RD	Unit 307
1680	MISSION RD	Unit 308
1680	MISSION RD	Unit 309
1680	MISSION RD	Unit 310
1680	MISSION RD	Unit 311
1680	MISSION RD	Unit 312
1680	MISSION RD	Unit 313
1680	MISSION RD	Unit 314

House #	Street Name	
1680	MISSION RD	Unit 315
1680	MISSION RD	Unit 3176
1680	MISSION RD	Unit 318
1680	MISSION RD	Unit 321
1680	MISSION RD	Unit 322
1680	MISSION RD	Unit 323
1680	MISSION RD	Unit 324
1680	MISSION RD	Unit 325
1680	MISSION RD	Unit 326

Town of Colma Address Range List

Part 2 – Government Buildings

1188 El Camino Real
1199 El Camino Real
427 F Street
1520 Hillside Blvd

STAFF REPORT

TO:	Mayor and Members of the City Council
FROM:	Brad Donohue, Director of Public Works
	Abdulkader Hashem, Project Manager
VIA:	Brian Dossey, City Manager
MEETING DATE:	November 28, 2018
SUBJECT:	Colma Systemic Safety Analysis Report (SSAR) - Final Report

RECOMMENDATION

Staff recommends that the City Council make the following:

MOTION TO APPROVE THE FINAL SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

EXECUTIVE SUMMARY

Kittelson & Associates completed their work on the Colma Systemic Safety Analysis Report (SSAR) and prepared the final report which has been reviewed and accepted by Caltrans per their Systemic Safety Analysis Report Program (SSAR) Guidelines.

The SSAR final report is the result of discussions and input gathered from the City Council, Public and Town Staff on the identified priority locations and countermeasures (engineered treatments to correct safety deficiencies). Two study sessions were held with the City Council on January 24, 2018 and April 11, 2018. The SSAR final report is attached as Attachment A.

The purpose of the SSAR project is to evaluate a number of major arterials and collector streets within the Town's roadway network, utilizing a proactive safety analysis approach to hopefully prevent future roadway fatalities and injuries that have and or can occur within the Town's roadway system. The final work product of the SSAR is Colma Transportation Safety Action Plan; this plan identifies traffic, pedestrian and bicycle safety issues and concerns, and makes recommendations for the proper countermeasures. A countermeasure is an action taken to help or assist in preventing an apparent danger or inefficiency with in the roadway system. The SSAR results are used to identify and prioritize various safety improvement projects that are eligible for Highway Safety Improvement Program (HSIP) funds and other safety funding programs.

FISCAL IMPACT

The report itself does not have a fiscal impact.

ANALYSIS

The purpose of the Systemic Safety Analysis Report (SSAR) is to provide a detailed analysis that will provide implementation of safety measures across the Town that will enhance safety for all modes of transportation (vehicles, bicycles and pedestrians). The project includes a safety analysis for several major arterials and collectors within the Town's roadway network. These roadway corridors include El Camino Real (State Route 82), Junipero Serra Boulevard, Hillside Boulevard, Serramonte Boulevard, Mission Road, Collins Avenue, Colma Boulevard, Lawndale Boulevard and F Street.

The SSAR includes the assessment of the existing road conditions, traffic count, evaluation of crash data and types, Selection and development of low-cost countermeasures, prioritization of proposed safety improvements for implementation based on higher benefit-cost ratio calculations, and preliminary engineering design of selected safety projects for five locations.

The SSAR Final Report was prepared in accordance with the Systemic Safety Analysis Report Program (SSARP) Guidelines including the following sections as per Caltrans's reporting requirements:

1. **Executive Summary**
   This section includes discussion on methodologies used to improve roadway safety. It describes the Town's roadway network, crash trends and patterns, priority locations, potential countermeasures, benefit-cost ratios of viable project scopes and prioritized list of safety projects.

2. **Engineer's Seal**
   Per Chapter 7; Article 3; Section 6735 of the Professional Engineer's Act of the State of California requirements, this Systemic Safety Analysis Report is attested by a licensed Civil Engineer with Kittelson & Associates by signing and stamping the report.

3. **Statement of Protection of Data from Discovery and Admissions**
   Per Section 148 of Title 23, United States Code [23 U.S.C. §148(h) (4)] about reports prepared under State's Strategic Highway Safety Plan and HSIP, the following statement is included in this section of the report as per Caltrans requirements:

   REPORTS DISCOVERY AND ADMISSION INTO EVIDENCE OF CERTAIN REPORTS, SURVEYS, AND INFORMATION—Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section, shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.

4. **Safety Data Utilized (Crash, Volume, Roadway):**
   This section documents the most recent crash data from January 2011 through December 2016 available in the Statewide Integrated Traffic Reporting System (SWITRS), University of California, Berkeley Transportation Injury Mapping System (TIMS) and Colma Police Department data. The crash data was used to determine crash patterns by location, type of crash, roadway/intersection types, roadway

characteristics, types of road users, and any circumstance of the crash which would lead to potential countermeasure identification. In addition, traffic volumes were collected at both point locations along roadway segments and at intersections. Also, roadway characteristics were analyzed to determine the risk factors associated with nominal safety design to aid in potential countermeasure identification and strategies.

5. **Data Analysis Techniques and Results**
   This section includes findings of townwide crash trend analysis, identifying the leading causes of crashes. Data analysis, including crash severity, road user type involved, and primary reported contributing factors are summarized in this section of the SSAR.

6. **Highest Occurring Crash types**
   This section focuses on the top crash types responsible for the crashes on the roadway network. It presents the findings of crashes by type and severity. Risk factors were also identified for intersections and roadway corridors based on roadway characteristics to help better understand potential contributing factors to crashes and treatments.

7. **High-Risk Corridors and Intersections (Crash History and Roadway Characteristics)**
   This section discusses the high-risk corridors and intersections responsible for crashes occurring on the roadway network. A list of priority locations (high-risk locations) were identified based on the crash history and roadway characteristics.

8. **Countermeasure identified to Address the Safety Issues**
   This section summarizes the systemic treatments identified for the roadway network and potential location-specific projects, in addition to roadway safety related policies; and education and enforcement strategies that could complement engineering projects to reduce crash frequency and/or severity.

9. **Viable Project Scopes and Prioritized List of Safety projects**
   Based on the crash data, trends, roadway characteristic, and corresponding countermeasures identified through the previous work from this project, a list of priority safety projects was developed that Town could implement to reduce the risk of crashes across all mode of travel. This list of projects was further prioritized, and a detailed scope was developed for the top twelve priority projects. Each project scope describes the project location, crash data and diagrams, countermeasures being applied, benefit/cost ratio calculations, project narrative, and concept design.

10. **Attachment and Supporting Documentation**
    This section is for the supporting documentation that includes 30 Percent Preliminary Design Plans and Cost Estimate for five top priority locations, in addition to a summary of traffic volumes collected in 2017.

Council Adopted Values

The recommendation is consistent with the Council value of ***responsibility*** in improving and enhancing safety features on and along the major arterials and collectors within the Town's roadways network.

Sustainability Impact

Future safety improvements to Colma roadways will be consistent with the Town's Sustainability goals allowing bicyclists and pedestrians greater and safer access to the roadway and walkways with in the Town.

Alternatives

None

CONCLUSION

Staff recommends that the City Council approve the Systemic Safety Analysis Report (SSAR) – Final Report.

ATTACHMENTS

A. SSAR – Final Report

Attachment A

COLMA TRANSPORTATION SAFETY ACTION PLAN

FINAL SYSTEMIC SAFETY ANALYSIS REPORT

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| October 2018

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1.0 EXECUTIVE SUMMARY

Kittelson & Associates, Inc. worked with the Town of Colma to identify countermeasures to improve roadway safety. This work was done through a Caltrans Systemic Safety Analysis Report Program (SSARP) Grant. This SSAR describes the Town's roadway network, crash trends and patterns, priority corridors, potential countermeasures, and benefit-cost ratios of viable project scopes. For this SSAR, the Town has identified several roadway corridors to be studies; these are listed below. Kittelson collected traffic volume and roadway data along these study corridors for the purpose of evaluating safety performance, and for identifying roadway characteristics associated with location exhibiting relatively frequent crashes, for subsequent analysis. The roadway corridor identified by the Town for study are:

- El Camino Real (State Highway 82);
- Junipero Serra Boulevard;
- Hillside Boulevard;
- Mission Road;
- Serramonte Boulevard;
- Collins Avenue;
- Colma Boulevard;
- Lawndale Boulevard; and,
- F Street.

The following is an overview of this SSAR content:

Safety Data Used

- Crash data was obtained and analyzed for the most recent six years of complete crash data available, from January 1, 2011 through December 31, 2016; there were 121 reported crashes in this period.
- Roadway data was provided by the Town of Colma which included information such as posted speed, median presence and break locations, number of lanes, bike lane presence, on-street parking, sidewalk presence, and access density and type. Some attributes were confirmed with Kittelson's field visit in November 2017 and others were collected via Google Earth.
- Kittelson collected traffic volumes at both point locations along roadway segments and at intersections, for a total of seven days in November 2017.
- High-priority intersections and segments were identified using the Equivalent Property Damange Only (EPDO) and Crash Rate network screening performance measures from the Highway Safety Manual (HSM).
- Kittelson factored existing and planned projects into consideration of selected priority locations and into recommended improvements.

Data Analysis and Techniques and Results

- Crash patterns and trends in the townwide data were considered by evaluating crash severity, crash type, primary reported contributing factor, lighting, year, and pedestrian crash characteristics.
- Crash trends along the key study corridors were considered by crash severity, crash type, and crash contributing factor.
- Intersections and roadway segments were ranked by EPDO scores.

Highest Occuring Crash Types

- Pedestrians were involved in 4% of the 121 reported crashes, and bicyclists were involved in 3%.
- Rear end (24%) and sideswipe (21%) crashes represent the largest shares of crash.
- Broadside crashes (71%), vehicle/pedestrian crashes (67%), and head-on crashes (50%) resulted in the highest proportion of injuries.
- The most frequently cited primary collision factors include improper turning (22%) and unsafe speed (19%).

High-Risk Corridors and Intersections

- Fifty-eight percent (58%) of reported crashes on Junipero Serra Boulevard and 50% of reported crashes on Hillside Boulevard resulted in injury, compared to a townwide fatal/injury rate of 43%.
- Two reported fatal crashes took place on Hillside Boulevard.
- Sixty-five percent (65%) of reported crashes on Colma Boulevard were rear end crashes, compared to 24% townwide.
- Thirty percent (30%) of reported crashes on Serramonte Boulevard and 29% of reported crashes on Colma Boulevard were attributed to unsafe speeds.

Proposed Countermeasures

- Roadway segment systemic treatment options include: Intersection Pavement Marking Delineation; Backplates with Retroreflective Borders; Green Pavement Markings for Bicycle-Vehicle Conflicts; Leading Pedestrian Intervals at Traffic Signals; No Right-Turn on Red; Enhanced Pedestrian Crossings; Pedestrian Hybrid Beacons (PHB) at Uncontrolled Marked Crossings; Mid-Block Crosswalks; Sidewalks; Bicycle Lanes (Class II); Speed Feedback Signs; Sight Distance Improvements; Road Diets; Road Segment Edgelines; Upgrade Street Name Signs; Gateway Treatments; Upgrade Regulatory and Warning Signs; Access Management; and Street Lighting.
- Location specific projects include: Intersection control evaluation at Mission Road/El Camino Real intersection; Reconfiguring roadway cross-section on Hillside Boulevard; Consistency in All Way Stop Control on Colma Boulevard; Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard Intersection; Reconfiguring Serramonte Boulevard/Collins Avenue Intersection; and Intersection control evaluation at Collins Avenue/El Camino Real intersection.
- Safety policies, Education, and Enforcement strategies were also identified based on input from the community and Town. The most feasible and effective options include adopting a Vision Zero policy; Road Safety Education to Children; Speed Monitoring Awareness Radar Trailer; Vulnerable Road User Education; Enhanced Police Enforcement; Photo Enforcement; and Speed Survey and Enforcement Campaigns.

Table 1 below shows the systemic treatments and location-specific projects identified as part of the corridors in the Town.

Table 1: Summary of the Systemic and Location Specific Projects for each Corridor

Corridor	Systemic Treatments	Location-specific Treatment
El Camino Real	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Install PHBs at uncontrolled marked crossings ▪ Sight-distance improvements ▪ Speed-feedback signs ▪ Gateway treatments ▪ Larger street-name signs ▪ Install bike lanes ▪ Road-diet candidate ▪ Street lighting ▪ Upgrade signs ▪ No right-turn on red	▪ Intersection Control Evaluation at Mission Road/El Camino Real ▪ Intersection Control Evaluation at Collins Avenue/El Camino Real
Junipero Serra Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ No right-turn on red ▪ Install sidewalks ▪ Sight-distance improvements ▪ Speed-feedback signs ▪ Gateway treatments ▪ No right-turn on red ▪ Street lighting	▪ Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard/ Intersection
Hillside Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Sight-distance improvements ▪ Speed feedback signs ▪ Enhanced pedestrian crossings ▪ Larger street-name signs ▪ Upgrade signs ▪ Gateway treatments ▪ Street lighting ▪ Mid-Block pedestrian crossings	▪ Reconfiguring roadway cross-section from Serramonte Boulevard Intersection to Lawndale Boulevard Intersection
Mission Road	▪ Backplates with retroreflective borders ▪ LPIs at traffic signals ▪ Sight-distance improvements ▪ Speed feedback signs ▪ Mid-Block pedestrian crossings	▪ Intersection Control Evaluation at Mission Road/El Camino Real

Corridor	Systemic Treatments	Location-specific Treatment
Serramonte Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ No right-turn on red ▪ Larger street-name signs ▪ Enhanced Pedestrian Crossings ▪ Install bike lanes ▪ Road-diet candidate ▪ Upgrade signs ▪ Access management ▪ Road segment Edgelines ▪ Mid-Block pedestrian crossings ▪ Street lighting	▪ Reconfiguring Serramonte Boulevard/Collins Avenue Intersection ▪ Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard/ Intersection
Collins Avenue	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Larger street-name signs ▪ Install bike lanes ▪ Upgrade signs ▪ Access management ▪ Sight-distance improvements ▪ Street lighting	▪ Reconfiguring Serramonte Boulevard/Collins Avenue Intersection ▪ Intersection Control Evaluation at Collins Avenue/El Camino Real
Colma Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ LPIs at traffic signals ▪ No right-turn on red ▪ Install sidewalks ▪ Larger street-name signs ▪ Install bike lanes ▪ Road-diet candidate ▪ Street lighting	▪ Consistency in All Way Stop Control
Lawndale Boulevard	▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Speed-feedback signs ▪ Close bike lane gap ▪ Larger street name signs ▪ Mid-Block pedestrian crossings at the school entrance	NA.

Corridor	Systemic Treatments	Location-specific Treatment
F Street	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ LPIs at traffic signals ▪ Sight-distance improvements ▪ Speed-feedback signs ▪ Larger street-name signs ▪ Install bike lanes ▪ Road segment edgelines ▪ Upgrade signs ▪ Intersection/Road segment street lighting	NA.

Viable Project Scopes and Prioritized List of Safety Projects

- Project scopes and concepts were developed for the top twelve locations in the Town. The project scopes were identified at the following locations: Hillside Boulevard from Serramonte Boulevard to Lawndale Boulevard Intersection; El Camino Real/Mission Road Intersection; Junipero Serra Boulevard/Serramonte Boulevard Intersection; Junipero Serra Boulevard from Colma Boulevard to Collins Avenue Intersection; Colma Boulevard from El Camino Real to Junipero Serra Boulevard Intersection; El Camino Real/F Street Intersection; El Camino Real/Serramonte Boulevard Intersection; El Camino Real/Colma Boulevard Intersection; Collins Avenue from El Camino Real to Junipero Serra Boulevard Intersection; El Camino Real/Collins Avenue Intersection; Serramonte Boulevard from El Camino Real to Hillside Boulevard Intersection; and Lawndale Boulevard from Mission Road to Hillside Boulevard Intersection.
- Of these, the project team developed 30 percent concept designs for five locations. A brief discussion on the respective projects being competitive for Highway Safety Improvement Program (HSIP) funding is also included at the end of each project scope and description in the later sections in the report. This decision was primarily based on the benefit-cost ratio values for the project scopes.
- The benefit-cost ratio expresses benefits in monetary terms, which requires an estimate of the number of crashes avoided as a result of the countermeasures proposed in the project scope, and the monetary value of each avoided crash on the corridor or at an intersection. For the countermeasures proposed in the project scopes that are eligible for HSIP benefit, the crash modification factors (CMFs) are provided in the Caltrans Local Road Safety Manual. Kittelson used these CMFs to calculate the expected reduction in crashes and convert that to a monetary value. Kittelson used the monetary value of the expected benefit divided by the estimated project cost to arrive at the benefit-cost ratio. This methodology is consistent with the Caltrans' HSIP Cycle 9 HSIP Analyzer tool used to calculate benefit cost ratios for the purpose of prioritizing proposed HSIP projects.

2.0 ENGINEER'S SEAL

By signing and stamping this Systemic Safety Analysis Report, Erin M. Ferguson, P.E., is attesting to this report's technical information and engineering data upon which local agency's recommendations, conclusions, and decisions are made.

3.0 STATEMENT OF PROTECTION OF DATA FROM DISCOVERY AND ADMISSIONS

Per Section 148 of Title 23, United States Code [23 U.S.C. §148(h) (4)] REPORTS DISCOVERY AND ADMISSION INTO EVIDENCE OF CERTAIN REPORTS, SURVEYS, AND INFORMATION—Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section, shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.

4.0 SAFETY DATA UTILIZED (CRASH, VOLUME, ROADWAY)

This section documents the most recent crash data used by Kittelson in the townwide and corridor-specific crash analysis as well as the network screening and systemic risk analysis. The discussion describes the following data, which was used for analysis:

- SWITRS data
- TIMS data
- Colma Police Department reported crash data
- Local roadway, traffic volume, roadway/intersection characteristics, and transit data

The following also documents the sources of the data, years they were collected or represent, and actions we took to clean or adjust the data for analysis purposes.

4.1 CRASH DATA

Kittelson downloaded and spatially located all reported crashes from January 1, 2011, through December 31, 2016 in the following databases:

Statewide Integrated Traffic Reporting System (SWITRS) – This database is maintained by the California Highway Patrol and provides attributes (like crash type and primary contributing factor) for all crashes that are reported from local jurisdictions.

University of California, Berkeley Transportation Injury Mapping System (TIMS) – The TIMS database, maintained by SafeTREC research center, maps all reported injury and fatal crashes from the SWITRS database and is used to aide in the spatial location of crashes.

There were 56 reported crashes in this period. The location data in both data sets were used to geocode the crashes and map them in GIS software. Crashes reported to occur on Interstate 280 within Town limits were excluded from the data set. All other reported crashes for public streets in Colma were included in the database. In addition to the crashes located from the databases above, the Town also provided supplementary crash data from October 2014 through 2016. All non-duplicative crashes with a reported severity level were added to the crash database. Kittelson identified these crashes as data entries with unique date and time information when compared to SWITRS and TIMS crashes; there were an additional 65 crashes added to the database as a result of this cross referencing.

This report includes analysis of the 121 reported crashes in the dataset described above. Of these, 2 resulted in fatal crashes, 50 resulted in injury crashes, and 69 resulted in the property damage only crashes.

4.2 TRAFFIC VOLUME DATA

Kittelson collected traffic volumes at both point locations along roadway segments and at intersections.

Roadway Segment Counts

Kittelson collected roadway segment counts for a total of seven days. The data collection has yielded directional average daily traffic (ADT), 85th percentile speeds by direction, and peak hour volumes at each of 13 points along the listed roadway segments in Table 2. These data are also stored in a spatial database and can be overlaid onto the roadway network for analysis.

Table 2: Roadway Segment Data Collection Locations and Dates

Roadway Segment	Location	Collection Dates
El Camino Real	Between F Street and Colma Boulevard	November 28 – December 3, 2017
El Camino Real	Just North of Mission Road	October 31 – November 6, 2017
Mission Road	North of Lawndale Boulevard	October 31 – November 6, 2017
Junipero Serra Boulevard	Just South of Philip Drive	October 31 – November 6, 2017
Junipero Serra Boulevard	North of Colma Boulevard	November 13 – November 19, 2017
Serramonte Boulevard	Between Collins Avenue and El Camino Real	October 31 – November 6, 2017
Serramonte Boulevard	Between El Camino Real and Hillside Boulevard	October 31 – November 6, 2017
Hillside Boulevard	Between Hoffman Street and F Street	October 31 – November 6, 2017
Lawndale Boulevard	Between Mission Road and Hillside Boulevard	October 31 – November 6, 2017
F Street	East of Clark Avenue	October 31 – November 6, 2017
Colma Boulevard	West of El Camino Real	October 31 – November 6, 2017
Collins Avenue	Between Serramonte Boulevard and El Camino Real	October 31 – November 6, 2017
Hillside Boulevard	South of Sand Hill Road	October 31 – November 5, 2017

Source: Kittelson & Associates, 2017.

Intersection Multimodal Turning Movement Counts

Kittelson also collected multimodal turning movement counts at the intersections listed below and added the following attributes into the spatial database:

- Total entering motor vehicle volume, AM and PM peak hour;
- Total entering motor vehicle volume by approach leg, AM and PM peak hour;
- Total entering bicyclist volume, AM and PM peak hour;
- Total entering bicyclist volume by approach leg, AM and PM peak hour;
- Total pedestrian crossing volume, AM and PM peak hour;
- Total pedestrian crossing volume by leg, AM and PM peak hour;

Counts were conducted on Wednesday, November 1, 2017, during both the AM peak period (7:00 AM to 9:00 AM) and the PM peak period (4:00 PM to 6:00 PM). In addition to vehicle turning movements, the counts collected bicyclist turning movement volume and pedestrian volume by crossing leg.

- Junipero Serra Boulevard/Colma Boulevard;
- El Camino Real/Colma Boulevard;
- El Camino Real/F Street;
- El Camino Real/Serramonte Boulevard;
- El Camino Real/Collins Avenue;
- El Camino Real/Mission Road;

- Junipero Serra Boulevard/Serramonte Boulevard - I-280 On-Ramp;
- Junipero Serra Boulevard /Southgate Avenue;
- Hillside Boulevard/F Street;
- Hillside Boulevard/Serramonte Boulevard;
- Hillside Boulevard/Lawndale Boulevard;
- Lawndale Boulevard/Mission Road; and,
- Serramonte Boulevard/Collins Ave.

Summary of traffic volumes collected in Colma in the year 2017 are enclosed in Attachment B.

4.3 ROADWAY SEGMENT CHARACTERISTIC DATA

The following data attributes are housed in GIS files referenced to the Town's roadway network, to allow for precise location. Some attributes were confirmed with a field visit in November 2017 and others were collected via Google Earth. These roadway characteristics and data collection sources are shown in Table 3.

Table 3: Roadway Characteristics and Sources

Roadway characteristic	Collection source
Posted speed	Field visit
Median presence and break locations	Field visit
Number of lanes	Field visit
Bike lane presence	Field visit
On-street parking presence	Field visit
Sidewalk presence	Google Earth
Access density and type	Google Earth
Street Lighting	Field visit

Source: Kittelson & Associates, 2017.

Intersection Characteristic Data

Kittelson also collected the following roadway characteristics at intersections within the Town with field confirmation:

- Type of control (signal, side-street stop control, all-way stop control); and
- Lane configuration

4.4 TRANSIT DATA

Kittelson obtained shapefiles including the spatial location of all SamTrans bus stops and routes within the Town of Colma, current as of May 4, 2017. We obtained this data from the San Mateo County Transit District website[1].

[1] http://www.smctd.com/Data.html

5.0 DATA ANALYSIS TECHNIQUES AND RESULTS

5.1 TOWNWIDE TREND ANALYSIS FINDINGS

This section includes findings and discussion of townwide crash trend analysis, including tables and figures as appropriate. Key findings include the following:

- From 2011 – 2016, there were 121 reported crashes in the Town of Colma and only 46% of these were included in SWITRS database. This is a significant discrepancy that would be beneficial to the Town to resolve.
- Pedestrians were involved in 4% of the 121 reported crashes, and bicyclists were involved in 3%.
- Rear end (24%) and sideswipe (21%) crashes represent the largest shares of crash.
- Broadside crashes (71%), vehicle/pedestrian crashes (67%), and head-on crashes (50%) resulted in the highest proportion of injuries.
- The most frequently cited primary collision factors include improper turning (22%) and unsafe speed (19%).
- Crashes with the cited primary collision factor automobile right of way resulted in a higher proportion of injury crashes at 69% compared to 42% for reported crashes Townwide.
- Two of five reported pedestrian crashes were coded as occurring in the road (including the shoulder), indicating the pedestrian was likely walking along the road or on the shoulder rather than trying to cross the street.

Kittelson considered crash patterns and trends in the townwide data by evaluating the following crash attributes:

- Crash severity;
- Crash type;
- Primary reported contributing factor;
- Lighting conditions;
- Year;
- Pedestrian crash characteristics ; and,
- Bicycle crash characteristics.

In the six years of data analyzed, 7% of reported crashes involved pedestrians or bicyclists, with the rest of crashes involved motor vehicles exclusively (Table).

KEY TERMS>>

- ***Descriptive crash statistics –*** *Townwide and segment-specific summaries of crash severity, crash type, and contributing factors.*
- ***Network Screening –*** *Evaluating the entire townwide street network to identify high-crash locations based on number of crashes, severity of crashes, and traffic volume.*
- ***Systemic analysis –*** *Identifying risk factors associated with high-crash locations and prioritizing locations based on risk factors and crash history.*
- ***Primary Collision Factor –*** *The element or driving action which, in the police officer's opinion, best describes the primary factor contributing to the collision.*

Crash Severity

Table 4 summarizes the reported crashes by severity and road user type involved (e.g. pedestrian, bicycle, motor vehicle). Severity is classified as fatal, injury, and property damage only (PDO). Injury crashes include severe injuries, other visible injuries, and injuries involving a complaint of pain but no visible injury.

Table 4: Road Users Involved and Crash Severity, Town of Colma, 2011 - 2016

Road Users Involved in Crashes	Fatal Crash	Injury Crash	Property Damage Only	Total
Bicycle – Vehicle	0 (0%)	4 (3%)	0 (0%)	4 (3%)
Pedestrian – Vehicle	1 (1%)	4 (3%)	0 (0%)	5 (4%)
Vehicle-Vehicle or Vehicle-Other	1 (1%)	42 (35%)	69 (57%)	112 (93%)
Total Crashes	**2 (2%)**	**50 (41%)**	**69 (57%)**	**121 (100%)**

Source: Town of Colma, SWITRS, Kittelson 2018

- Among crashes involving only motor vehicles, 36% of reported crashes resulted in an injury or fatality. Pedestrian- or bicyclist-involved crashes resulted in some level of injury, with one fatal pedestrian crash.
- Pedestrians were involved in 4% of reported crashes, and bicyclists were involved in 3% of reported crashes.

Contributing Factors

Figure 1 presents findings by reported primary collision factor and severity.

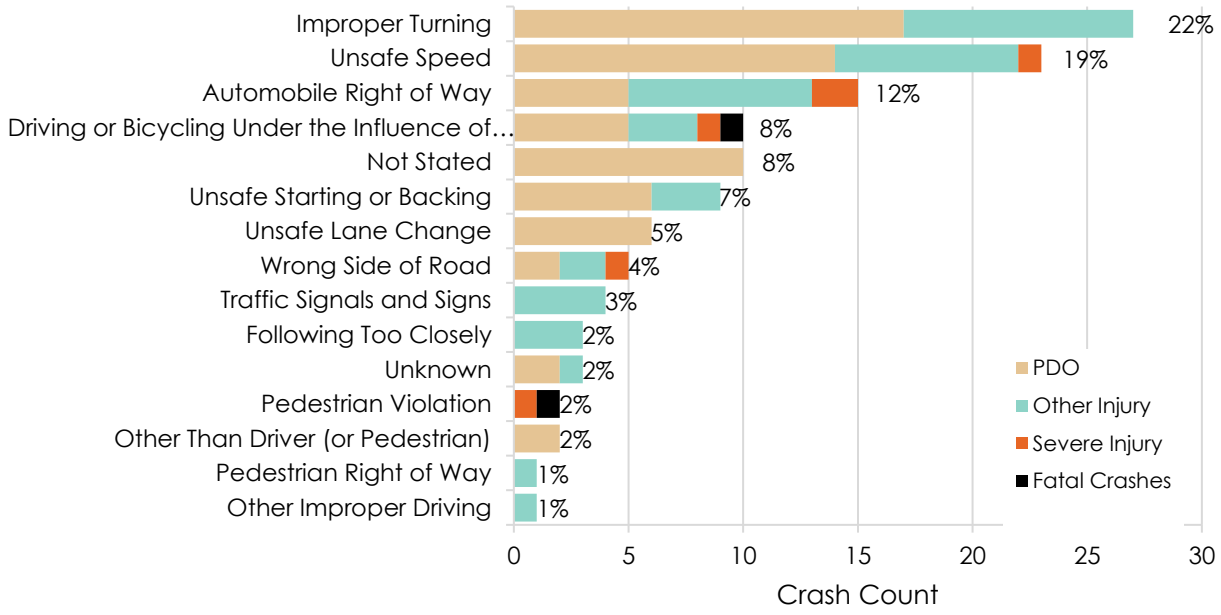


Figure 1: Crashes by Reported Primary Collision Factor, Town of Colma, 2011 - 2016

Automobile Right of Way refers to a crash resulting from one motorist's failure to yield to another motorist who had the right of way.

Pedestrian Violation refers to a crash in which a pedestrian violated a motor vehicle's right of way.

Traffic Signals and Signs refer to a crash resulting from a motorist's failure to comply with a traffic control device (traffic signal, yield sign, or stop sign).

Sources: Town of Colma, SWITRS, Kittelson 2018

- The most frequently cited primary collision factors include improper turning (22%), unsafe speed (19%), and automobile right of way (12%).
- The two fatal crashes included the following primary contributing factors: driving or bicycling under the influence and pedestrian violation.

- Among PCFs cited in ten or more crashes, automobile right of way crashes exhibited the highest proportion of injuries, at 69%. The proportion injury crashes for total reported crashes was 42%.
- The PCFs associated with multiple fatal or severe injury crashes include automobile right of way, driving or bicycling under the influence of alcohol or drugs, and pedestrian violation.

Lighting Conditions

Figure 2 presents findings by reported lighting conditions.

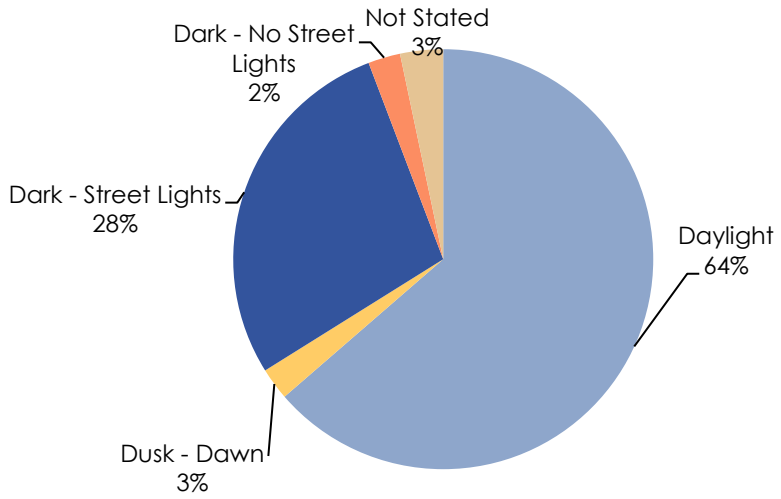


Figure 2: Crashes by Reported Lighting Conditions, Town of Colma, 2011-2016

Source: Town of Colma, SWITRS, Kittelson 2018.

- The majority of crashes occurred in daylight conditions (64%). Of the 38 crashes reported to have occurred in the dark, two percent (2%) occurred where no street lights were present.
- Kittelson reviewed pedestrian- and bicycle- related crashes, as well as crash severity by lighting conditions, and found no notable differences from the overall trends above.

Pedestrian Crashes

Of the five reported pedestrian crashes in the data set, four resulted in injuries and one in a pedestrian death. Two pedestrian crashes were coded as occurring in the road (including the shoulder), indicating the pedestrian was likely walking along the road or on the shoulder rather than trying to cross.

Bicycle Crashes

The four reported bicycle crashes in the data set resulted in injuries. Three bicycle crashes were coded as associated with "other/not stated" crash type, and one crash was coded as the sideswipe crash. The primary contributing factors for these crashes were biking on the wrong side of the road, automobile right-of-way, improper turning, and driving or biking under the influence of alcohol or drugs.

Time-of-Day

Figure 3 and Figure 4 present time-of-day findings.

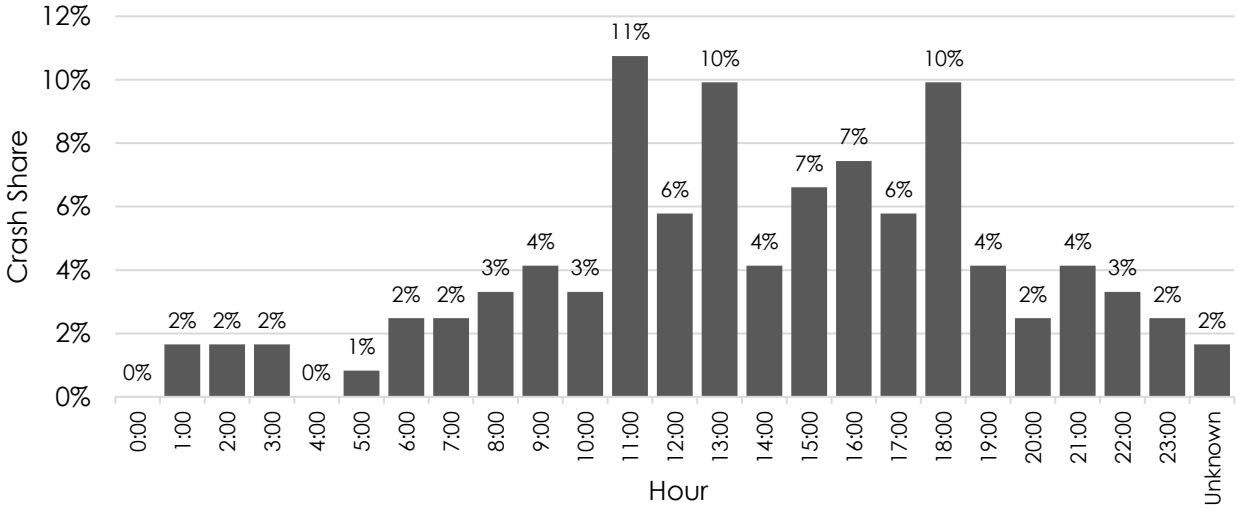


Figure 3: Crashes by Hour of Day, Town of Colma, 2011 - 2016

Source: Town of Colma, SWITRS, Kittelson 2018.

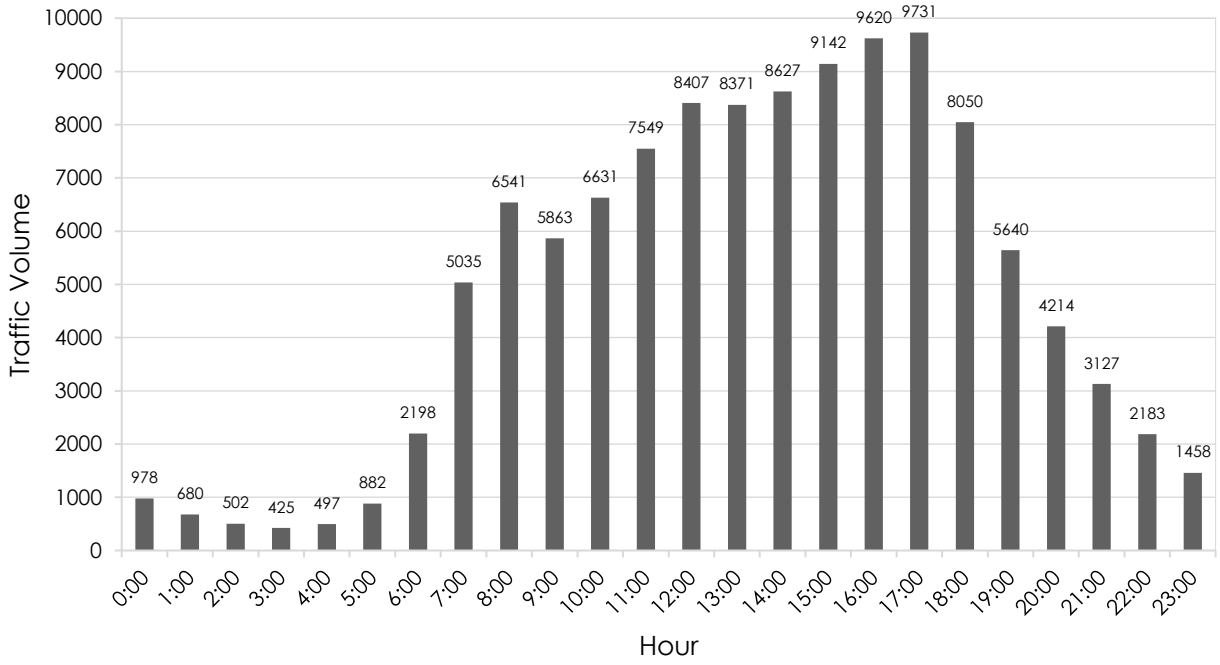


Figure 4: Traffic Volume by Hour of Day, Town of Colma, 2017[2]

Source: Kittelson & Associates, and Quality Counts Data, 2017.

- Crashes peaked from 11:00 AM through 6:00 PM, with higher crash frequency around the midday hours and again during the 6:00 PM hour. This trend corresponds to expected levels of traffic throughout the day, shown in Figure 4.

[2] The traffic volume information by hour of day was collected by KAI from October 31, 2017 to November 6, 2017 at all the study segments and intersections. The average values for traffic volumes throughout the week were shown in Figure 4memb.

5.2 TOWNWIDE RANKING

California's Office of Transportation Safety (OTS) maintains a ranking system to compare traffic safety statistics among similarly sized California cities and towns. The comparison allows cities to identify local safety performance relative to peers. Townwide (or citywide) rankings are based on population, daily vehicle miles traveled, crash records, and crash trends. OTS uses data from from SWITRS, Caltrans, California Department of Justice, and the Department of Finance. A number 1 in ranking in a category is the worst performer relative to other peers in the group. This section presents findings from the most recently published OTS rankings, from 2015. Given of the 121 reported crashes in Colma for this study only 46% were included in SWITRS, the OTS ranking for Colma is likely to show Colma performing better among its peers than the Town may actually be performing. OTS rankings are limited to consider crash data from SWITRS.

In 2015, Colma was one of twelve "Group G" towns/cities, which have a population of 1,000 – 2,500 people.

Findings

The Town of Colma has a composite OTS ranking of 12 out of the 12 cities in its grouping from 2015, ranking it the relative best in its category of peer cities. This composite ranking shows improvement over 2013, when the Town was ranked eleventh (out of 12 cities) among peer cities. This composite score, i.e. relative ranking is an aggregate of several rankings and indicates overall traffic safety. However, as noted above, there is an underreporting of crash issue in Colma that is greater than Kittelson has encountered for other jurisdictions. Therefore, actual performance relative to peers could be worse than what is shown in Table 5.

- Based on SWITRS data only, in 2015, the Town of Colma performed better than peer cities per the California OTS composite ranking, and was in the 25th percentile of peer cities in every category.
- From 2013 to 2015, the Town of Colma ranked in the lower third of peer cities in the following:
  - Bicyclist safety (2014)
  - Drivers aged 21-34 under the influence of alcohol (2013)
  - Hit and run (2013 and 2014)

Table 5: Town of Colma California Office of Traffic Safety Rankings

2015 OTS Category	2013 OTS	2014 OTS	2015 OTS
Composite	9/19	13/14	12/12
Total Fatal and Injury	19/19	11/14	11/12
Pedestrians	6/19	8/14	9/12
Pedestrians <15	7/19	8/14	10/12
Pedestrians 65+	18/19	13/14	11/12
Bicyclists	19/19	**2/14**	12/12
Bicyclists <15	14/19	11/14	11/12
Motorcycles	18/19	14/14	12/12
Alcohol Involved	2/19	12/14	12/12
Had Been Drinking, Driver <21	17/19	13/14	12/12
Had Been Drinking, Driver 21-34	**2/19**	14/14	12/12
Speed Related	18/19	13/14	12/12
Nighttime (9:00pm – 2:59am)	9/19	11/14	12/12
Hit and Run	**5/19**	**5/14**	12/12

Source: California Office of Traffic Safety

5.3 STUDY CORRIDOR-SPECIFIC TREND ANALYSIS FINDINGS

This section includes findings and discussion of the study corridor-specific crash trend analysis as it relates to townwide findings.

This section discusses crash trends along the key study corridors and highlights differences between patterns on a specific corridor and the townwide patterns already discussed. The analysis includes the following considerations:

- Crash severity by corridor;
- Crash type by corridor; and
- Crash contributing factor by corridor.

Crash Severity by Corridor

Figure 5 presents corridor findings by crash severity.

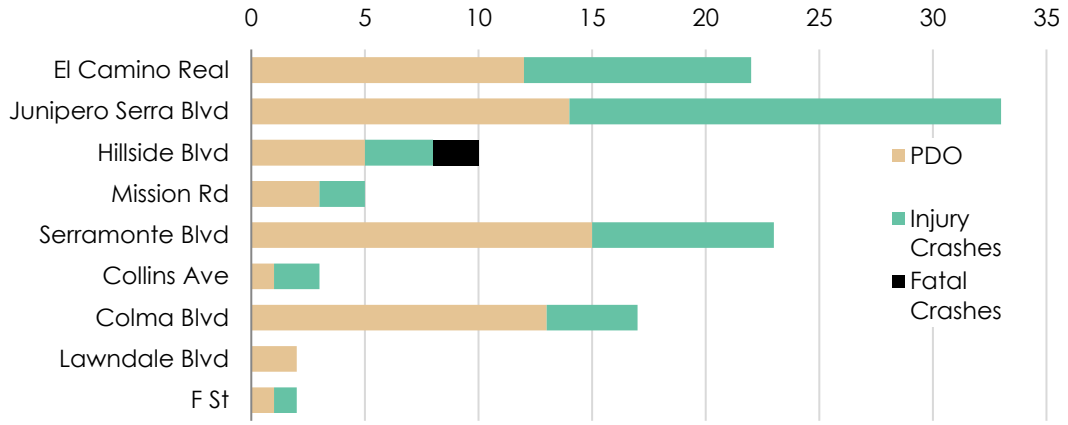


Figure 5: Crash Severity by Corridor, Town of Colma, 2011 - 2016

Source: Town of Colma, SWITRS, Kittelson 2018.

- Fifty-eight percent (58%) of reported crashes on Junipero Serra Boulevard and 50% of reported crashes on Hillside Boulevard resulted in injury, compared to 43% of a townwide reported crashes.

Crash Type by Corridor

Figure 6 presents corridor findings by reported crash type.

- Sixty-five percent (65%) of reported crashes on Colma Boulevard were rear end crashes, compared to 24% townwide.
- Forty percent (40%) of reported crashes on Hillside Boulevard were sideswipe crashes, compared to 21% townwide.

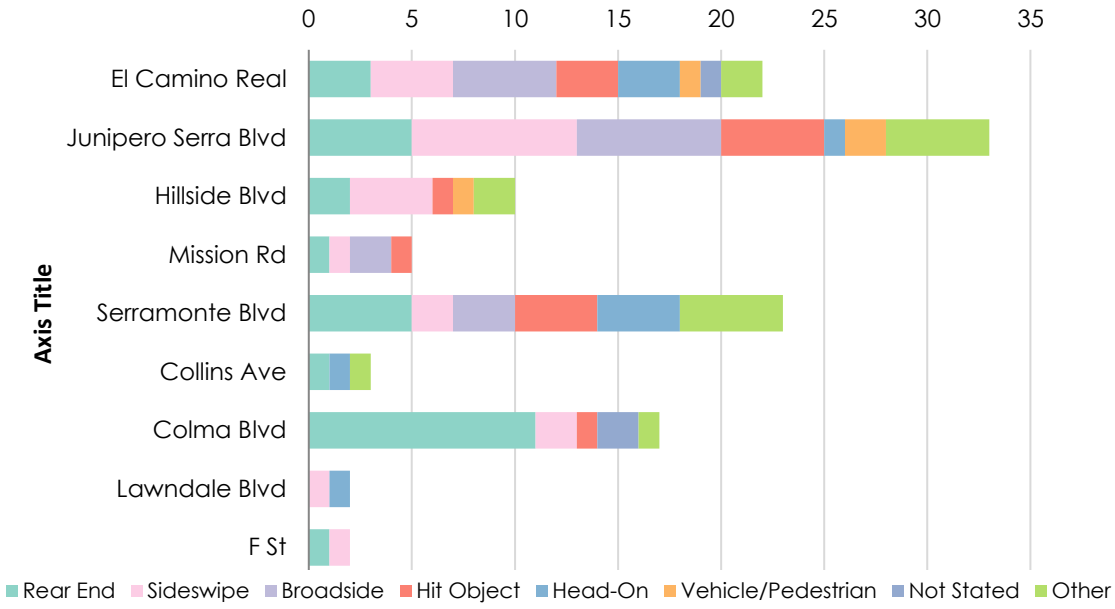


Figure 6: Crash Type by Corridor, Town of Colma, 2011 - 2016

Source: Town of Colma, SWITRS, Kittelson 2018.

Contributing Factor by Corridor

Table 6 presents corridor findings by primary contributing factors.

Table 6: Contributing Factors Rates by Study Corridor

Study Corridor	Reported Primary Collision Factor as Percent of Reported Crashes			
	Driving or Bicycling under the Influence of Alcohol or Drugs	Automobile Right of Way[1]	Unsafe Speed	Improper Turning
Junipero Serra Boulevard (33 crashes)	3%	18%	9%	39%
Serramonte Boulevard (23 crashes)	4%	22%	30%	9%
El Camino Real (22 crashes)	14%	18%	14%	18%
Colma Boulevard (17 crashes)	0%	0%	29%	18%
Hillside Boulevard (10 crashes)	40%	0%	20%	0%
Townwide Trends (121 crashes)	**8%**	**12%**	**19%**	**22%**

[1]*Automobile Right of Way* refers to a crash resulting from one motorist's failure to yield to another motorist who had the right of way.

Note: Corridors with ten or more crashes are included in this comparison. Similarly, the most frequently cited contributing factors townwide are presented. Shaded cells represent considerable deviation from the townwide rate. Source: Town of Colma, SWITRS, Kittelson 2018

- Thirty-nine percent (39%) of reported crashes on Junipero Serra Boulevard included improper turning as the PCF, compared to 22% townwide.
- Thirty percent (30%) of reported crashes on Serramonte Boulevard and 29% of reported crashes on Colma Boulevard were attributed to unsafe speeds. Serramonte Boulevard has a posted speed of 30 miles per hour throughout, and Colma Boulevard has a posted speed of 25 miles per hour.
- Forty percent (40%) of reported crashes on Hillside Boulevard involved a person under the influence of alcohol or drugs, compared to 8% townwide.

Key findings include the following:

- Fifty-eight percent (58%) of reported crashes on Junipero Serra Boulevard and 50% of reported crashes on Hillside Boulevard resulted in injury, compared to a townwide fatal/injury rate of 43%.
- Two reported fatal crashes took place on Hillside Boulevard.
- Sixty-five percent (65%) of reported crashes on Colma Boulevard were rear end crashes, compared to 24% townwide.
- Thirty percent (30%) of reported crashes on Serramonte Boulevard and 29% of reported crashes on Colma Boulevard were attributed to unsafe speeds.

Kittelson identified reported crashes on the study corridors; crashes at an intersection of two corridors were coded as occurring on the reported primary road to avoid double counting. That extraction process yielded 117 crashes, with the highest crash frequencies on the following corridors:

- Junipero Serra Boulevard – 33 reported crashes (27% of total);
- Serramonte Boulevard – 23 reported crashes (19% of total); and,
- El Camino Real – 22 reported crashes (18% of total).

5.4 NETWORK SCREENING AND SYSTEMIC FINDINGS

This section describes the network screening and systemic evaluation of the Town of Colma roadway network.

IN THIS SECTION>>

- Data and approach used for the network screening and systemic analysis
- Identification of potential risk factors and additional locations for consideration.

Data and Approach

Kittelson identified the high-priority safety intersections and roadway segments using the Equivalent Property Damage Only (EPDO) and Crash Rate network screening performance measures from the *Highway Safety Manual* (HSM). The EPDO screening was performed for reported crashes at intersections and along roadway segments. The Crash Rate screening was performed for the roadway segments where vehicle volume data was collected as part of this project. The two performance measures are described below.

Equivalent Property Damage Only

The EPDO performance measure assigns weighting factors to crashes by severity relative to property damage only (PDO) crashes. The weighting factors used for the network screening are based on the crash costs by severity used for Caltrans' Highway Safety Improvement Program Benefit Calculator Tool. The crash costs vary based on the location type: signalized intersection, unsignalized intersection, or roadway. The weights for each crash severity by location type are shown in Table 7.

Table 7: Crash Weights by Severity and Location Type

Location Type	Crash Weights by Severity				
	Fatal	Severe Injury	Other Visible Injury	Complaint of Pain Injury	Property Damage Only
Signalized Intersection	126	126	10.86	6.13	1
Unsignalized Intersection	200	200	10.86	6.13	1
Roadway	173	173	10.86	6.13	1

Source: Caltrans Highway Safety Improvement Program Benefit Calculator Tool, 2016

The weights generally reflect an order of magnitude difference between the societal costs of fatal and severe injury collisions versus non-severe injury collisions. The weighting factors intentionally weigh fatal and severe injuries equally to recognize that the difference between a severe injury crash versus a fatal crash are often more of a function of the individuals involved – therefore, both represent locations where the Town may want to prioritize improvements. The crash weights vary by location type due to the relative costs associated with the crash severity at those location types. Hence, fatal or severe crashes at an unsignalized intersection location result in more persons injured or more severely injured in a fatal or severe injury crash and, as a result, have a higher average cost than at a signalized intersection or roadway location. As a result, unsignalized intersections have higher weights for those severities than the other two location types.

Crash Rate

The crash rate performance measure normalizes the number of crashes relative to traffic volume. This performance measure is calculated by dividing the total number of crashes by the traffic volume, typically measured in crashes per million vehicle miles for segments and for total entering volume for intersections.

Intersection Analysis Methodology

Kittelson first coded reported crashes by severity. Crashes within 250 feet of an intersection were then spatially joined and summarized in ArcGIS to develop the total number of crashes by severity at each intersection.

Where intersections were less than 500 feet from each other, we assigned crashes to the nearest intersection. Crashes occurring more than 250 feet from any intersection were held out for the segment analysis discussed below.

Kittelson calculated the EPDO score for intersections by multiplying each crash severity total by its associated weight (by intersection type) and summing the results, using the following formula:

*EPDO Score = Fatal weight * # of fatal crashes + severe injury weight * # of severe injury crashes + other visible injury weight * # of other visible injury crashes + complaint of pain injury weight * # of complaint of pain injury weight crashes + PDO crashes*

We annualized the EPDO score by dividing the score by the number of years (6) of crash data used in the analysis. Similarly, we determined the crash rate for each by dividing the spatially joined crashes associated with each intersection by the total entering vehicular traffic in the PM peak hour at that location.

Segment Analysis Methodology

Following the approach used for intersection analysis, Kittelson first coded reported crashes by severity using a Python script in ArcGIS. This segmented the Town of Colma street network into one-fourth (1/4) of a mile segments, incrementing the segments by one-tenth (1/8) of a mile. This methodology helps to identify portions of roadways with the greatest potential for safety improvements.

Once the roadway segments were created, the script spatially joined crashes to the corridor segment (excluding those identified with intersections as described above). Similar to the intersection methodology above, we summarized the crashes by severity, and multiplied the totals by the EPDO weights for roadway segments. The weighted crashes were then summed and annualized by dividing the score by the number of years of crash data (6) to generate an annualized EPDO score. Additionally, for the corridors where volume data was available, we calculated crash rates (per million vehicle miles).

Risk Factor Identification

Kittelson applied a risk-based analysis of the top quartile of locations identified through the intersection and roadway segment network screening. Risk is defined in this instance as common traffic or physical characteristics shared by the top quartile of corridors and intersections. Based on this commonality, their presence is indicative of a potentially higher risk for crashes within the Town of Colma[3]. The risk factors will be used during the field visit to confirm the previously identified program areas and assist in identifying treatments to reduce the frequency and severity of crashes within the Town. These risk factors can also be used to identify additional locations where crashes have not yet been reported to make proactive low-cost improvements to those locations to further reduce the potential for future crashes.

Kittelson reviewed the following roadway characteristics for top quartile sites to help determine potential risk factors for intersections and roadway corridors:

- Roadway geometry;
- Number of vehicle lanes;
- Posted speed;
- On-street parking presence;
- Median presence;
- Driveway and curb cut presence;
- Traffic signal locations;

[3] Note: This commonality does not prove causality; it suggests a potential connection or contributing factor.

- Dedicated left- or right-turn lane presence;
- Intersection density (i.e., closely spaced intersections or access points);
- Transit stop presence;
- Intersection geometry (e.g., presence of offset approaches, intersection skew);
- Presence of marked crosswalks; and,
- Street Lighting

The roadway characteristic data was obtained via a combination of data provided by the Town of Colma and SamTrans (e.g., roadway alignment, transit stop location) as well as characteristics identified by field review and review of aerial imagery of the high-scoring segments and intersections (e.g., median presence, posted speed, driveways, on-street parking presence, number of approaches, right- and left-turn lane configuration). The combination of these sources provides a strong basis for determining common characteristics across sites.

Kittelson identified trends that were consistently present across the top locations and could be tied to a roadway characteristic. That characteristic was identified and documented as a risk factor. Segment and intersection potential crash risk factors are discussed in the Findings section.

Findings

Kittelson identified priority intersections and segments using the annualized EPDO scores as well as crash rates for segments where volumes were available. For intersection locations, the EPDO scores ranged from zero (no crashes occurring during the six-year time frame analyzed) to 36.8. For roadway segments, the EPDO scores ranged from zero (no reported crashes occurred during the six-year time frame analyzed) to 61.3.
Figure 7 and Figure 8 show the results of the EPDO scoring by quartile for roadway segment and intersection locations, respectively. Figure 9 shows the crash rate by quartile for roadway corridors where volume data was available. Intersections or segments shown as not falling within one of the quartiles indicates that there were no reported crashes at that location.

Figure 7

Town of Colma
CIP 993 Systemic Safety Analysis Project
Roadway Segment Equivalent PDO Score

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

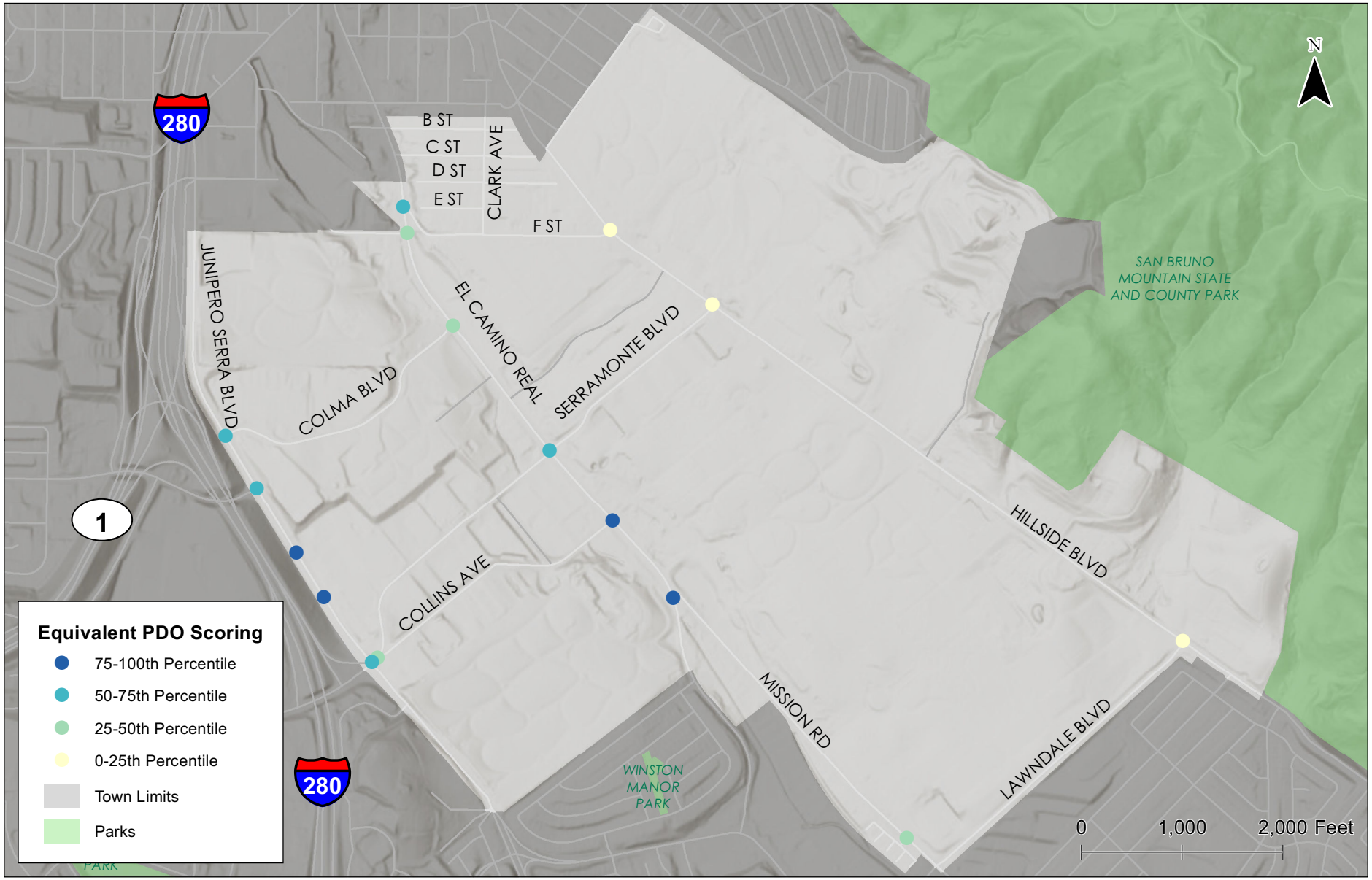


Figure 8

Town of Colma
CIP 993 Systemic Safety Analysis Project
Intersection Equivalent PDO Score

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

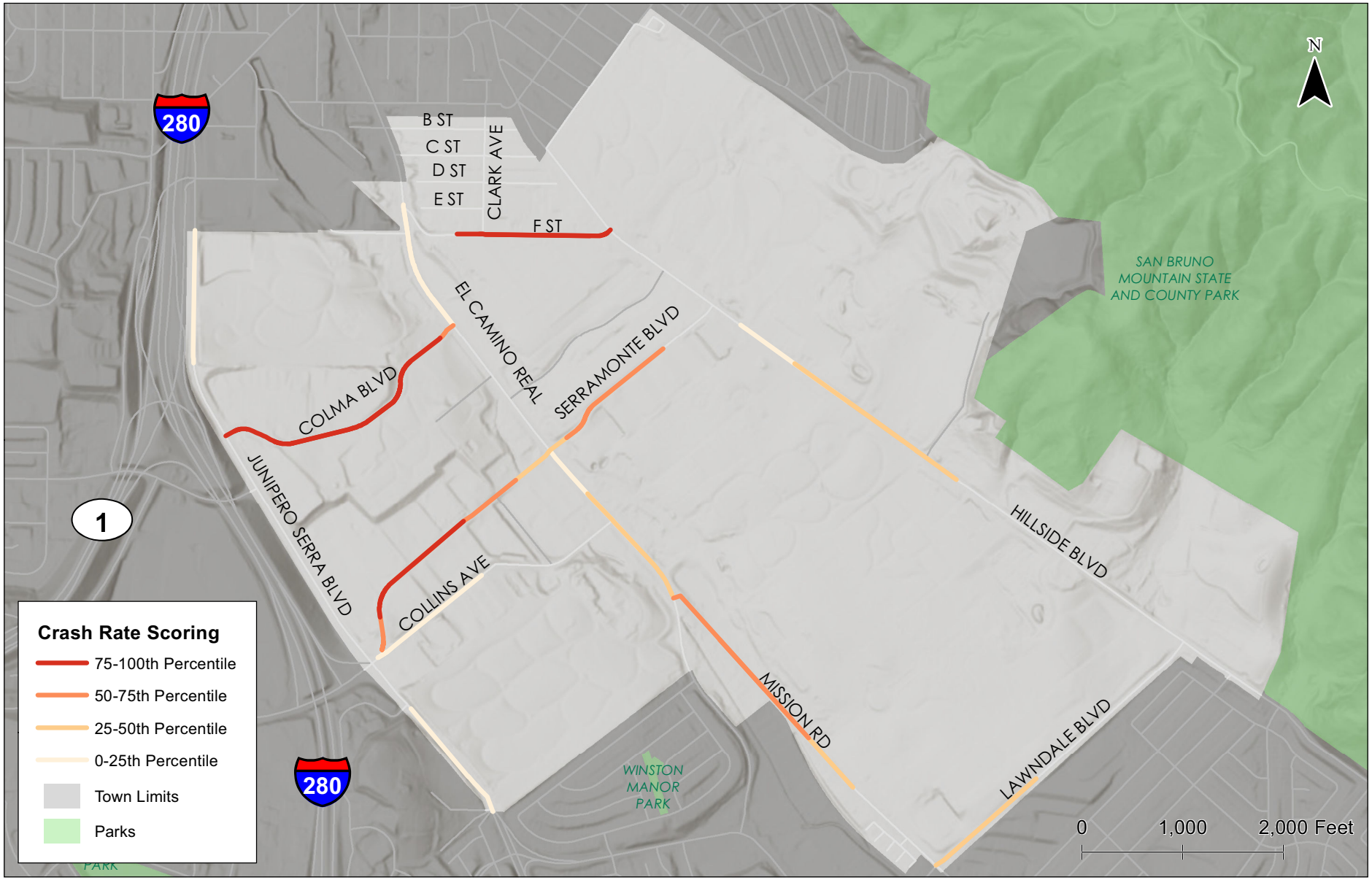


Figure 9

Town of Colma
CIP 993 Systemic Safety Analysis Project
Roadway Segment Crash Rates

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

Roadway Segment Screening Findings

Based on the EPDO scoring results shown in Figure 7, the top quartile of roadway segments with a reported crash history are located on the study corridors identified by the Town of Colma in their SSARP grant application. Table 8 indicates segments that may be considered for safety improvements.

Table 8: Network Screening Segment Results, Ranked

Roadway Segment and Extents	Highest Annualized Equivalent PDO Score Along Segment	Equivalent PDO Percentile Among Segments with Crashes	Crash Rate Percentile Among Segments with Crashes
Hillside Boulevard, Serramonte Boulevard to Sand Hill Road	61.3	Top 25th	Top 75th
Colma Boulevard, Junipero Serra Boulevard to El Camino Real	30.5	Top 25th	Top 25th
Serramonte Boulevard, Junipero Serra Boulevard to Hillside Boulevard	4.62	Top 25th	Top 25th
Collins Avenue, Serramonte Boulevard to Serramonte Ford Body Shop	1.8	Top 50th	Bottom 25th
Mission Road, El Camino Real to Holy Cross Catholic Cemetery	1.2	Top 50th	Top 50th
El Camino Real, northern town limits to Colma Boulevard	1.0	Top 75th	Bottom 25th
Junipero Serra Boulevard, northern town limits to Colma Boulevard	1.0	Top 75th	Bottom 25th
F Street, west of Clark Avenue to Hillside Boulevard	0.2	Bottom 25th	Top 25th
Southern half of Lawndale Boulevard	0.2	Bottom 25th	Top 50th
El Camino Real, Serramonte Boulevard to Mission Road	0.2	Bottom 25th	Top 75th

[1]Traffic volumes not collected for this segment; thus, no crash rate analysis was conducted.

Source: Town of Colma, SWITRS, Kittelson 2018

Roadway Segment Risk Factors

Kittelson identified the following characteristics as risk factors:

- Relatively high density of major access points[4] (greater than 2 per 1,000 feet);
- Undivided roadways; and,
- Horizontally curved roadway segments.

The risk factors identified for intersections and roadway corridors were used as part of the field reviews to help better understand potential contributing factors to crashes and treatments.

Intersection Screening Findings

Based on the EPDO scoring and crash rate results, the top quartile of intersections segments with a reported crash history are located on the study corridors identified by the Town of Colma in their SSARP grant application. Table 9 indicates intersections that may be considered for safety improvements.

[4] Major driveways or access points, as defined by the *Highway Safety Manual*, serve sites with 50 or more parking spaces.

Table 9: Network Screening Intersection Results, ranked

Intersection	Signalized	Annualized Equivalent PDO Score	Equivalent PDO Percentile Among Intersections with Crashes	Crash Rate Percentile Among Intersections with Crashes
Junipero Serra Boulevard & Serra Center (North)	No	36.8	Top 25th	N/A[1]
El Camino Real & Collins Avenue	No	34.5	Top 25th	Top 75th
El Camino Real & Mission Road	No	33.3	Top 25th	Bottom 25th
Junipero Serra Boulevard & Serra Center	Yes	28.3	Top 25th	N/A[1]
El Camino Real & F Street	Yes	24.0	Top 50th	Top 75th
Junipero Serra Boulevard & Serramonte Boulevard	Yes	11.8	Top 50th	Top 25th
El Camino Real & Serramonte Boulevard	Yes	6.0	Top 50th	Top 50th
Junipero Serra Boulevard & Colma Boulevard	Yes	5.3	Top 50th	Top 25th
Junipero Serra Boulevard & Southgate Avenue	Yes	4.8	Top 50th	Top 50th
El Camino Real & Colma Boulevard	Yes	3.6	Top 75th	Bottom 25th
Collins Avenue & Serramonte Boulevard	No	2.0	Top 75th	Bottom 25th
Mission Road & Isabelle Way	No	2.0	Top 75th	N/A[1]
Serramonte Boulevard & Hillside Boulevard	Yes	0.7	Bottom 25th	Top 25th
Hillside Boulevard & F Street	No	0.3	Bottom 25th	Top 50th

[1]Turning movement counts not collected for this intersection; thus, no crash rate analysis was conducted.

Source: Town of Colma, SWITRS, Kittelson 2018

Intersection Risk Factors

Kittelson identified the following risk factors based on roadway characteristics that were consistently present across the top quintile of intersection locations:

- Side-street stop control onto a major (4+ lane) roadway;
- Closely spaced intersections, or intersections close to major access points (under 300 feet); and,
- Complex geometry or horizontally curved roadway segment at an intersection[5].

Summary

Kittelson has identified the following potential roadway segments for further study:

- Hillside Boulevard, Serramonte Boulevard to Sand Hill Road;
- Colma Boulevard, Junipero Serra Boulevard to El Camino Real;

[5]Complex intersections refer to locations with large intersection footprints, atypical approaches, and/or large median islands present for free movements or separating turn lanes from through traffic.

- Serramonte Boulevard, Junipero Serra Boulevard to Hillside Boulevard;
- Collins Avenue, Serramonte Boulevard to the Serramonte Ford Body Shop;
- El Camino Real, northern town limits to Colma Boulevard; and,
- Junipero Serra Boulevard, northern town limits to Colma Boulevard.

Kittelson identified the following potential intersections for further study:

- Junipero Serra Boulevard & Serra Center Entrance (North);
- El Camino Real & Collins Avenue;
- El Camino Real & Mission Road;
- Junipero Serra Boulevard & Serra Center (South);
- El Camino Real & F Street; and,
- Serramonte Boulevard & Junipero Serra Boulevard.

Risk factors identified through analysis of the potential priority locations include:

- Presence of at least two major access points within 1,000 feet;
- Two- and four-lane undivided roadways;
- Horizontally curved roadway segments;
- Side-street stop controlled intersections onto a major roadway;
- Closely spaced intersections and/or access points (under 300 feet); and,
- Complex or curved roadway geometry at intersections (large intersection footprints, atypical approaches, and/or large median islands present for free movements or separating turn lanes from through traffic.).

6.0 HIGHEST OCCURRING CRASH TYPES

6.1 TOP CRASH TYPES

Figure 10 presents findings by crash frequency, severity, and type.

- Seventeen percent (17%) of crash types were either coded with crash type "Other" (including one fatal crash) or were not stated. These crashes were present in both SWITRS and town-provided crash data and relate to crashes that cannot be categorized into the other crash types (shown in the figure above) or do not have enough information to categorize it to a specific crash type.
- Rear end (24%), sideswipe (21%), and broadside crashes (14%) represent the largest shares of reported crash types.
- Broadside crashes (71%), vehicle/pedestrian crashes (67%), and head-on crashes (50%) resulted in the highest proportion of injuries.
- The reported crash types resulting in fatalities were vehicle/pedestrian crashes (1) and "other or not stated"(1) crashes. Severe injury crashes were associated with broadside (2), head-on (1), vehicle/pedestrian (2), and "other or not stated"(1) crash types.

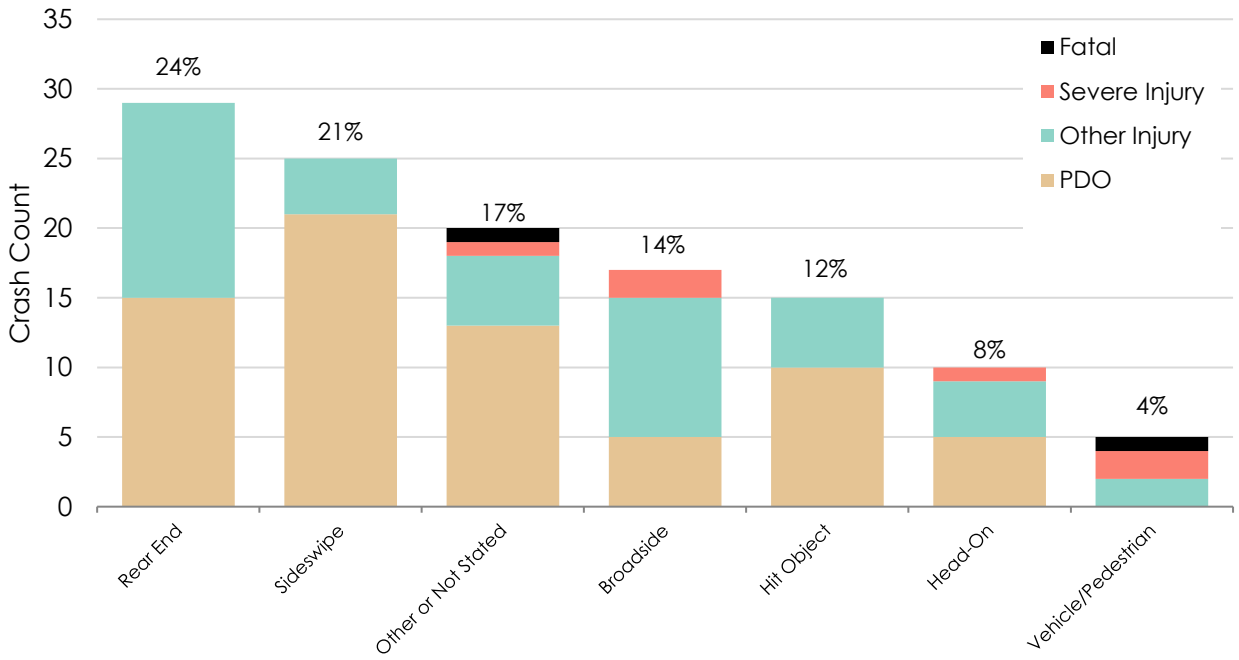


Figure 10: Crashes by Type and Severity, Town of Colma 2011 - 2016

Sources: Town of Colma, SWITRS, Kittelson 2018

6.2 RISK FACTORS

Intersection Risk Factors

Kittelson identified the following risk factors based on roadway characteristics that were consistently present across the top quintile of intersection locations:

- Side-street stop control onto a major (4+ lane) roadway;
- Closely spaced intersections, or intersections close to major access points (under 300 feet); and,
- Complex geometry or horizontally curved roadway segment at an intersection[6].

Roadway Segment Risk Factors

Kittelson identified the following characteristics as risk factors:

- Relatively high density of major access points[7] (greater than 2 per 1,000 feet);
- Undivided roadways; and,
- Horizontally curved roadway segments.

The risk factors identified for intersections and roadway corridors were used as part of the field reviews to help better understand potential contributing factors to crashes and treatments.

[6]Complex intersections refer to locations with large intersection footprints, atypical approaches, and/or large median islands present for free movements or separating turn lanes from through traffic.

[7] Major driveways or access points, as defined by the *Highway Safety Manual*, serve sites with 50 or more parking spaces.

7.0 HIGH-RISK CORRIDORS AND INTERSECTIONS (CRASH HISTORY AND ROADWAY CHARACTERISTICS)

7.1 HIGH RISK CORRIDORS

This section discusses the high-risk corridors and intersections based on crash history and roadway characteristics. The following segments were identified as the priority locations (i.e., high risk locations):

- Hillside Boulevard, Serramonte Boulevard to Sand Hill Road;
- Colma Boulevard, Junipero Serra Boulevard to El Camino Real;
- Serramonte Boulevard, Junipero Serra Boulevard to Hillside Boulevard;
- Collins Avenue, Serramonte Boulevard to the Serramonte Ford Body Shop;
- El Camino Real, northern town limits to Colma Boulevard; and,
- Junipero Serra Boulevard, northern town limits to Colma Boulevard.

7.2 HIGH RISK INTERSECTIONS

Kittelson identified the following intersections as the priority locations (i.e., high risk locations). The intersections **in bold** are located along a segment above:

- Junipero Serra Boulevard & Serra Center Entrance (North);
- El Camino Real & Collins Avenue;
- El Camino Real & Mission Road;
- Junipero Serra Boulevard & Serra Center (South);
- **El Camino Real & F Street**; and,
- **Serramonte Boulevard & Junipero Serra Boulevard**.

The high risk corridors and intersections are shown in Figure 11.

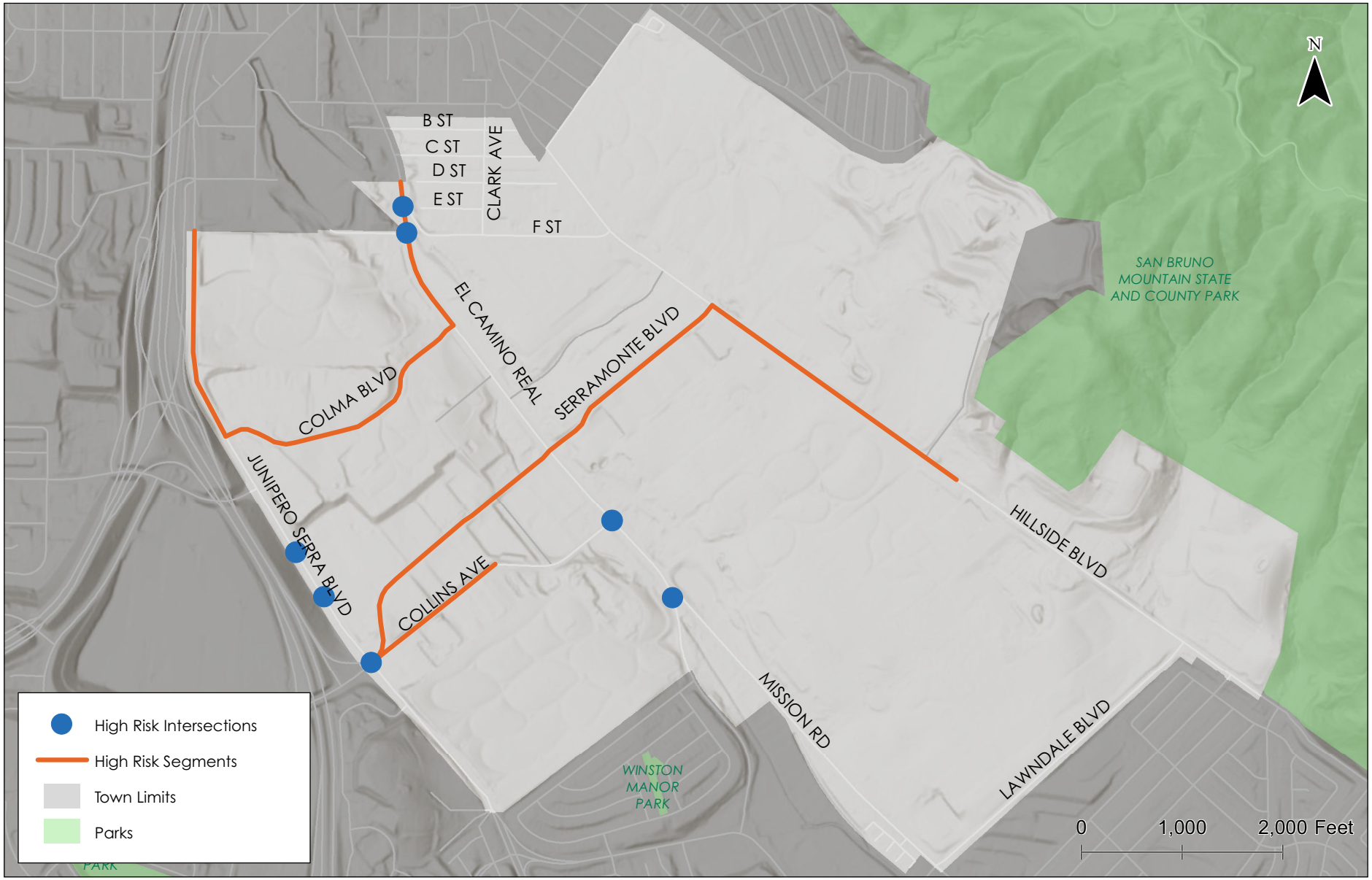


Figure 11

Town of Colma
CIP 993 Systemic Safety Analysis Project
High Risk Corridors and Intersections

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

8.0 COUNTERMEASURES IDENTIFIED TO ADDRESS THE SAFETY ISSUES

This section summarizes the systemic treatments that could be implemented across the Town, potential location-specific projects, roadway safety-related policies the Town could adopt, and education and enforcement strategies that could complement engineering projects to reduce severe crashes and crash risk. The countermeasures are identified based on the corroboration between field observations and crash data analysis. The crash reduction factors associated with the countermeasures are also specified in this section, to provide a quantitative safety improvement related to each countermeasure.

The following sub-sections summarize the study corridors; systemic treatments identified for Colma; location-specific improvements; roadway safety related policies; and education and enforcement strategies.

8.1 STUDY CORRIDORS FIELD REVIEW

Kittelson performed field reviews for the study corridors identified below. The field reviews were informed by the crash and roadway data analysis conducted in January 2018.
Study corridors:

- El Camino Real (State Highway 82);
- Junipero Serra Boulevard;
- Hillside Boulevard ;
- Mission Road;
- Serramonte Boulevard;
- Collins Avenue;
- Colma Boulevard;
- Lawndale Boulevard; and
- F Street.

Kittelson also conducted field visits at the following intersections, in addition to the above corridors:

- Junipero Serra Boulevard & Serra Center Entrance (North);
- Junipero Serra Boulevard & Serra Center Entrance (South);
- El Camino Real & Collins Avenue;
- El Camino Real & Mission Road;
- El Camino Real & F Street;
- Serramonte Boulevard & Junipero Serra Boulevard; and
- Serramonte Boulevard & Collins Avenue.

Systemic Treatments

Based on the systemic safety analysis approach outlined by Federal Highway Administration (FHWA) and field reviews to priority locations, Kittelson identified the following systemic treatments as those most likely to help reduce crash frequency and/or severity. Table 10 provides a summary of the systemic treatments, planning-level cost range, and potential safety effectiveness of the treatment in the form of crash modification factor (CMF).

KEY TERMS>>

- **Systemic Treatments –** Treatments that could be implemented at locations across the Town with similar physical characteristics and regardless of crash history. Implementing such treatments in a proactive manner could help further reduce crashes in the future.
- **Location-Specific Projects –** Potential projects, unique to specific locations that are intended reduce the likelihood of crashes.
- **Roadway Safety Related Policies –** Potential new policies the Town of Colma could adopt to further support reducing the frequency and/or severity of crashes
- **Education and Enforcement Strategies –** Non-engineering strategies targeting road user education and/or enforcement of traffic laws to help reduce the likelihood of risky road user behavior and related crashes.

Table 10: Summary of the Systemic Treatments and the Related Information

Caltrans LRSM[8] ID	Treatment	Cost Range	Year, and Source for Costs	CMF [Percent Crash Reduction]		Eligibility for Federal Funding
				National Research	Caltrans LRSM	
	At Signalized Intersections					
S8	a) Intersection Pavement Marking Delineation	$1.50 - $2.00 per linear foot	2018, Town of Colma	0.55 - 0.82 [18% - 45%]	0.90 [10%]	100%
S2	b) Backplates with Retroreflective Borders	$6,000 - $12,000 (per intersection)	2014, Virginia DOT	0.85 [15%]	0.85 [15%]	100%
NA.	c) Green Pavement Markings for Bicycle-Vehicle Conflicts	$5 - $10 per square foot	2018, Town of Colma	NA.	NA.	No
NA.	d) Leading Pedestrian Intervals at Traffic Signals	$1,000 - $2,000	2017, City of Oakland, Pedestrian Master Plan	0.41 [59%] for ped-veh crashes	NA.	100%
NA.	e) No Right-Turn on Red	$500 - $5000 (per approach)	2017, City of Oakland, Pedestrian Master Plan	NA.	NA.	No
	At unsignalized intersections and roadway segments					
	f) Enhanced Pedestrian Crossings					
NS17	High Visibility Markings	$2,000 - $8,000	2018, Town of Colma	0.81 [19%]	0.75 [25%]	100%
NS16	Pedestrian Refuge Island	$15,000 - $25,000	2017, City of Oakland, Pedestrian Master Plan 2017, Virginia DOT	0.74 [26%]	0.55 [45%]	90%
NS17	Pedestrian Crossing Warning Signs	$450-$1,020		NA.	0.75 [25%]	100%
NS8	Flashing Beacons	$15,000 - $40,000		NA.	0.70 [30%]	100%
NA.	Blinker Beacons	NA.	2018, Town of Colma NA.	NA.	NA.	No

[8] Caltrans Local Road Safety Manual

Caltrans LRSM[8] ID	Treatment	Cost Range	Year, and Source for Costs	CMF [Percent Crash Reduction]		Eligibility for Federal Funding
				National Research	Caltrans LRSM	
NA.	g) Pedestrian Hybrid Beacons (PHB) at Uncontrolled Marked Crossings	$75,000 - $150,000	2018, Town of Colma	0.43 [57%] for ped-veh crashes 0.88 [12%] for veh-veh crashes	NA.	No
R37	h) Sidewalks	$15 - $20 per square foot	2018, Town of Colma	NA.	0.20 [80%]	90%
R36	i) Bicycle Lanes (Class II)	$10 - $15 per linear foot	2018, Town of Colma	0.40 [60%] for ped-veh crashes 0.73 [27%] for veh-veh crashes	0.65 [35%]	90%
R30	j) Speed Feedback Signs	$2,000 - $11,000	2014, Hallmark & Hawkins	0.93 – 0.95 [5% - 7%]	0.70 [30%]	100%
NS10	k) Sight Distance Improvements	Varies	NA.	0.44 – 0.89 [11% - 56%]	0.80 [20%]	90%
R15	l) Road Diets (Roadway Reconfiguration)	$6- $10 per linear foot (changes to pavement marking only)	2018, Town of Colma	0.53 – 0.71 [29% - 47%]	0.70 [30%]	90%
R32	m) Road Segment Edgelines	$1.50 - $2.00 per linear foot	2018, Town of Colma	0.55 [45%]	0.75 [25%]	100%
NA.	n) Upgrade Street Name Signs	$750 - $1,250 per sign	2018, Town of Colma	0.98 [2%]	NA.	No
NA.	o) Gateway Treatments	Varies	NA.	NA.	NA.	No
NS5	p) Upgrade Regulatory and Warning Signs	$450 - $1,020 (per sign)	2017 Virginia DOT	0.66 – 0.70 [30% - 34%]	0.85 [15%]	100%
NA.	q) Access Management	Varies	NA.	0.93 [7%]	NA.	No
NS1/R1	r) Street Lighting	$5,000 - $10,000	2018, Town of Colma	0.63 [37%]	0.60 – 0.65 [35% - 40%]	100%

Location-Specific Projects

Kittelson identified the following locations and corresponding potential unique, projects as a means to further help reduce the potential for crash frequency and/or severity. Some of the locations also were identified as candidates to receive one or more of the systemic treatments. These locations were identified for additional location-specific projects because either the existing geometry and/or crash patterns indicated a greater potential for safety improvement if investment beyond the systemic treatments were made. The list of locations and brief explanation of the potential location-specific projects is provided below.

a. Intersection control evaluation at Mission Road/El Camino Real intersection;
b. Reconfiguring roadway cross-section on Hillside Boulevard from Serramonte Boulevard/Hillside Boulevard Intersection to Hillside Boulevard/Lawndale Boulevard Intersection;
c. Consistency in All Way Stop Control on Colma Boulevard;
d. Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard Intersection;
e. Reconfiguring Serramonte Boulevard/Collins Avenue Intersection; and
f. Intersection control evaluation at Collins Avenue/El Camino Real intersection.

Safety Policies, Education & Enforcement Strategies

The following summarizes potential roadway related safety policies, education and enforcement strategies identified to complement and support the systemic treatments and location-specific projects.

Roadway Safety Related Policies

Kittelson previously reviewed the existing Town policies as part of a broader Document Review Memorandum. Based on that review as well as the results from the crash and roadway data analysis findings, we recommend the Town consider developing and adopting a Vision Zero policy. The purpose of such a policy is to serve as a call for action and enable collaboration across Town functions.

Education Strategies

Education strategies are focused on teaching road users traffic safety. The Town could apply for grants to help develop the content for these strategies. There are also materials readily available and distributed for free through national resources such as the National Highway Traffic Safety Administration (NHTSA). Some of these resources include interactive activities, teaching notes, and information on road safety messages and concepts that can be taught at school or in the off-school activities. The recommended strategies are as follows:

- Road Safety Education to Children;
- Speed Monitoring Awareness Radar Trailer; and
- Vulnerable Road User Education.

Enforcement Strategies

Kittelson recommends the enhanced police enforcement be deployed on roadway segments with speeding-related crashes and driving under the influence of alcohol related crashes at the specific locations and during the recurring time periods identified from the crash data. The strategies recommended are as follows:

- Enhanced Police Enforcement;
- Photo Enforcement; and
- Speed Survey and Enforcement Campaigns.

8.2 SYSTEMIC TREATMENTS

IN THIS SECTION>>

- Description of systemic treatments
- Potential locations for systemic treatments to be implemented

The following presents the systemic treatments identified for the Town of Colma. These treatments were selected based on the crash patterns and trends from the systemic safety analysis, observations from field reviews, and professional resources such as the Caltrans Local Road Safety Manual, American Association of State Highway and Transportation Officials (AASHTO), the California Manual on Uniform Traffic Control Devices (CA MUTCD), and the National Association of City Transportation Officials (NACTO) regarding systemic safety. Some treatments are inexpensive retrofits, pavement markings, and signage that can be changed and quickly implemented. Some require greater study, coordination, and funding. Some of these countermeasures have been studied and/or researched extensively and have an associated crash modification factor (CMF).

The first section below discusses each systemic treatment, describing the treatment, the types of locations it is intended to be used at, and why it was selected for the Town of Colma. The following section identifies locations within the Town of Colma where each systemic treatment could be implemented.

KEY TERM>>

- Crash Modification Factor (CMF): This is a numerical value that indicates how effective a treatment is at reducing crashes.
- CMF Clearing House: This is a comprehensive and searchable online database of CMFs along with guidance and resources on using CMFs in road safety studies.
- When a CMF value is available for a treatment, it is noted below. Following that value in [brackets] is the corresponding estimated percent reduction in crashes.
- Crash Reduction Factor (CRF): This is the percentage crash reduction that might be expected after implementing a given treatment.

a) Intersection Pavement Marking Delineation (S8)

Planning-Level Cost Estimate: $1.50 - $2.00 per linear foot (Town of Colma, 2018).

Eligible for Federal Funding (Source: Caltrans Road Safety Manual): Yes (100%)

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.55 – 0.82 [18% - 45% crash reduction] (CMF Clearing House, 2018).

Brief Description: This treatment accentuates traffic lines, pavement markings, and channelization used to direct traffic on the roadway. Kittelson proposes this treatment in places where intersections having multiple adjacent turning lanes, more than four legs, and/or are skewed. Pavement marking delineation can help guide motorists to choose and stay in the proper lane and can also be used to visually narrow the lane in support of reduced speeds. An example of the treatment is shown in Figure 12.

Figure 12: Example of Marking Delineation

Why was this selected for Town of Colma?
This treatment was selected for the Town of Colma for the wide, complex intersections with multiple adjacent turn lanes (e.g., Junipero Serra Boulevard). Installing this treatment at these intersections will help guide drivers into the appropriate lane in the through and turning movement maneuvers.

b) Backplates with Retroreflective Borders (S2)

Planning-Level Cost Estimate: $6,000 - $12,000 per intersection (VDOT, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (100%)

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.85 [15% crash reduction] (CMF Clearing House, 2018).

Brief Description: This treatment improves the visibility of the illuminated face of the signal by introducing a controlled-contrast background. Signal heads with backplates equipped with retroreflective borders are more visible in daytime and nighttime conditions. This treatment is more effective when it is adopted as a standard treatment for signalized intersections across the town or jurisdiction (FHWA, 2018). Kittelson proposes this treatment to improve the visibility during the daytime (to help address glare from the sunlight) as well as nighttime. An example of the treatment is shown in Figure 13.

Figure13: Example of Signal Backplate with a Retroreflective Border
Source: (FHWA, 2018).

Why was this selected for Town of Colma?
This treatment was selected for the Town of Colma to help improve visibility of traffic signal heads particularly for motorists traveling through the larger signalized intersections where the distance across the intersection to view the signal head is greater. The retroreflective backplates are intended to help reduce drivers' unintentional running of red lights, and other violations of traffic signals.

c) Green Pavement Markings for Bicycle-Vehicle Conflicts

Planning-Level Cost Estimate: $5 - $10 per square foot (Town of Colma, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): No

Potential Effectiveness at Reducing Crash Frequency and/or Severity: NA.

Brief Description: This treatment places the green pavement markings in 'conflict zones' where motor vehicles cross the bicycle lanes to move into dedicated right-turn lanes at intersections. This treatment makes the driver aware of the bicyclists on the road at the intersection. An example of this treatment is shown in Figure 14.

Figure 14: Example of Green Pavement Markings
Source: (City of Milwaukee, 2018).

Why was this selected for Town of Colma?
This treatment was selected for the Town of Colma at intersections where motorists need to cross the bicycle lane to enter a right-turn lane. This treatment improves the visibility of bicycle lanes, helps raise motorists' awareness of potential bicyclists, and makes clear to bicyclists where they are expected to be at an intersection.

d) Leading Pedestrian Intervals at Traffic Signals

Planning-Level Cost Estimate: $1,000 - $2,000 (City of Oakland, 2017).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (100%)

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.41 [59% crash reduction] for pedestrian-vehicle crashes (CMF Clearinghouse, 2018).

Brief Description: This treatment typically gives pedestrians a 3 to 7 second head start when crossing an intersection. The pedestrian "Walk" sign is giving in advance of the motorists green signal in the same direction of travel. The intent is to allow pedestrians to start crossing the intersection in advance of allowing motorists to turn; this makes pedestrians more visible to turning motorists to help avoid turning vehicles – pedestrian crashes. An example of this treatment is shown in Figure 15.

Figure 15: Example of Leading Pedestrian Interval
Source: Kittelson & Associates, Inc.

Why was this selected for Town of Colma?

This treatment was selected for the Town of Colma signalized intersections particularly at use near transit stops and intersections with multiple vehicle-turn lanes. This treatment enhances the visibility of pedestrians at intersections and reinforces their right-of-way over turning vehicles.

e) No Right-Turn on Red

Planning-Level Cost Estimate: $500 - $5000 (per approach) (City of Oakland, 2017).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): No

Potential Effectiveness at Reducing Crash Frequency and/or Severity: NA.

Figure 16: Example of No Right-Turn on Red
Source: (Flickr, 2018).

Brief Description: This treatment prohibits vehicles from turning right when pedestrians have the right-of-way to cross the adjacent street. In combination with thoughtful signal phasing, this can reduce or eliminate the conflict of turning-vehicles and pedestrians crossing the street. An example of an intersection with right-turn on red prohibited is shown in Figure 16. The no right-turn on red is a dynamic restriction that occurs only when the pedestrian push button is activated.

Why was this selected for Town of Colma?

This treatment was selected to reduce the number of motorists turning right into the path of people crossing the street. This was recommended in areas where the drivers have been observed and reported as not yielding.

f) Enhanced Pedestrian Crossings (NS8, NS16, NS17)

Planning-Level Cost Estimate:

High visibility markings	$2,000 - $8,000 (Town of Colma, 2018)
Pedestrian refuge island	$15,000 - $25,000 (City of Oakland, 2017)
Pedestrian crossing warning signs	$450 - $1,020 per sign, assuming 7' sign post (VDOT, 2018)
Flashing beacons	$15,000 - $40,000 (Town of Colma, 2018)
Blinker beacons	NA.

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (90%,100%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.74 – 0.81 [19% - 26% crash reduction] (CMF Clearing House, 2018); (City of Bristol, 2018).

Brief Description: Enhanced pedestrian crossing treatments are for uncontrolled, marked crosswalks that cross multilane arterials or collectors. The enhanced crossing alerts the drivers of crossing pedestrian by way of high visibility markings, warning signs, flashing beacons, and by providing pedestrian refuge islands. The pedestrian refuge island allows people to cross in two stages – the first stage looking for a safe gap in traffic or vehicles to yield in one direction and then the second stage to look for a safe gap in traffic or vehicles to yield in the other direction. An example of the treatment is shown in Figure 17.

Why was this selected for Town of Colma?

There are several multilane streets within Colma along which there are transit stops and other pedestrian origins/destinations. Enhanced pedestrian crossings at such locations can help increase motorists' yielding behavior and reduce the risk of pedestrian-vehicle crashes.

Figure 17: Example of Enhanced Pedestrian Crossing

Source: (NACTO, 2013).

g) Pedestrian Hybrid Beacons

Planning-Level Cost Estimate: $75,000 - $150,000 (Town of Colma, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): No

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.43 [57% crash reduction] for pedestrian-vehicle crashes and CMF = 0.88 [12% crash reduction] for vehicle-vehicle crashes (CMF Clearinghouse, 2018)

Brief Description: This treatment is designed to help pedestrians safely cross multilane streets and/or higher-speed roadways at uncontrolled, marked crosswalks. The beacon head consists of three lenses. The beacon is activated by pedestrians wanting to cross the street. Once pedestrian has crossed the street, the hybrid beacon turns dark. An example of pedestrian hybrid beacon mounted on a mast arm is shown in Figure 18.

Figure 18: Example of a Pedestrian Hybrid Beacon Mounted on a Mast Arm

Source: (FHWA, 2015).

Why was this selected for Town of Colma?

There are two marked, uncontrolled pedestrian crosswalks across El Camino Real which is a multilane roadway with higher vehicle speeds. Kittelson recommends implementing at Pedestrian Hybrid Beacon at those two locations. The Town could also consider them for other locations with similar characteristics.

h) Install Sidewalks (R37)

Planning-Level Cost Estimate: $15 - $20 per square foot (Town of Colma, 2018).

Eligible for Federal Funding (Source: Caltrans Road Safety Manual): Yes (90%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.20 [80%].

Brief Description: This treatment provides a separate, protected space for pedestrians to walk along the roadway. It helps to increase comfort, increase visibility of pedestrians to motorists, and can help prevent vehicles from departing the roadway and striking pedestrians. An example sidewalk is shown in Figure 19.

Why was this selected for Town of Colma?

This treatment was selected for the Town of Colma along the corridors on one side or both sides where there sidewalk facilities are not present, and there is a greater potential for or existing pedestrian activity.

Figure 19: Example of Sidewalk along Corridor

i) Install Bicycle Lanes [Class II] (R36)

Planning-Level Cost Estimate: $10 - $15 per linear foot (Town of Colma, 2018).

Eligible for Federal Funding (Source: Caltrans Road Safety Manual): Yes (90%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.40 – 0.73 [27% - 60% crash reduction] (CMF Clearing House, 2018).

Brief Description: This treatment defines specific space within the street cross-section for bicyclists. It can increase driver awareness of the bicyclists along a street. An example bicycle lane is shown in Figure 20.

Why was this selected for Town of Colma?

To address gaps in bicycle facilities within Colma. Larger streets, with multiple vehicle lanes, should consider buffered bicycle lanes, separated bicycle lanes, or parallel multiuse paths. These could be implemented through road diets (see treatment "m" further below).

Figure 20: Example of Bike Lane on the Roadway

j) Speed Feedback Signs (R30)

Planning-Level Cost Estimate: $2,000 - $11,000 per sign (Hallmark & Hawkins, 2014).

Eligible for Federal Funding (Source: Caltrans Road Safety Manual): Yes (100%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.93 – 0.95 [5% - 7% crash reduction] (CMF Clearing House, 2018).

Brief Description: This treatment is designed to provide a message to drivers exceeding a certain speed threshold. They are also known as dynamic warning signs, radar speed/message signs, and dynamic speed display signs. An example speed feedback sign is shown in Figure 21.

Figure 21: Example of a Speed Feedback Sign
Source: http://images.policemag.com/articles/M-TrafficEnforcement.jpg

Why was this selected for Town of Colma?
Colma has several multilane streets that appear designed for peak shopping hours on the weekend. Throughout much of the weekday and other off-peak periods, the multilane streets enable motorists to travel speeds exceeding the speed limit. This is one of several systemic treatments identified to try to manage speeds during off-peak periods.

k) Sight Distance Improvements (NS10)

Planning-Level Cost Estimate: Varies

Eligible for Federal Funding (Source: Caltrans Road Safety Manual): Yes (90%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.44 – 0.89 [11% - 56% crash reduction] (CMF Clearing House, 2018).

Brief Description: Sight distance improvements can often be achieved by clearing sight triangles to restore sight distance obstructed by vegetation, roadside appurtenances, buildings, bus stations, and other objects which are in the right-of-way. The other strategy to improve sight distance is to eliminate on-street parking that restricts sight distance especially on approach to or adjacent to intersections. Figure 22 is an example of a sight triangle for an intersection.

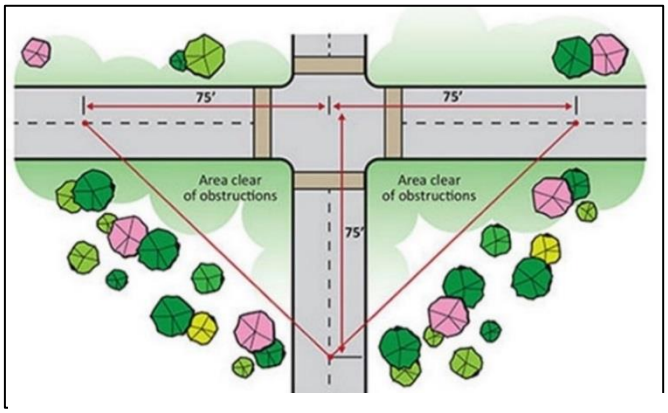


Figure 22: Example of Intersection Sight Distance
Source: http://www.mikeontraffic.com/sight-distance-explained/

Why was this selected for Town of Colma?
This treatment was selected for the Town of Colma based on community comments and Kittelson field observations that some locations within Colma may be easier for road users to navigate if sight distance was increased.

l) Road Diets (R15)

Planning-Level Cost Estimate: $6 - $10 per linear foot (changes to pavement marking only) (Town of Colma, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (90%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.53 – 0.71 [29% - 47% crash reduction] (CMF Clearing House, 2018).

Brief Description: Reduce the number of vehicle lanes on a roadway to manage vehicle speeds and reduce risk of crashes for all road users. A common road diet is to convert a four-lane undivided roadway to a three-lane cross-section, with one lane in each direction and a two-way center left turn lane. This enables space for bicycle lanes and sidewalks. An example three-lane cross-section, i.e. road diet is shown in Figure 23.

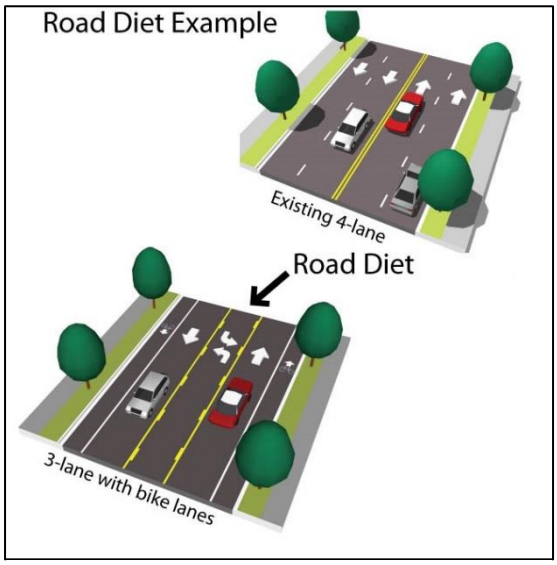


Figure 23: Road Diet Example

Why was this selected for Town of Colma?

Colma has several multilane streets that appear designed for peak shopping hours on the weekend. Throughout much of the weekday and other off-peak periods, the multilane streets enable motorists to travel speeds exceeding the speed limit. This is one of several systemic treatments identified that would reduce motorists' speeds, provide additional space for bicyclists and/or pedestrians, and help provide vehicular access for turning into and out of commercial and business driveways along streets such as Colma Boulevard and Serramonte Boulevard.

The resulting benefits of road diets include a crash frequency and/or severity reduction, reduced vehicle speed differential, improved mobility and access for all types of users, and integration of roadway into surrounding uses that enhance the quality of life of people living in the community.

m) Road Segment Edgelines (R32)

Planning-Level Cost Estimate: $1.50 - $2.00 per linear foot (Town of Colma, 2018).

Eligible for Federal Funding (Source: Caltrans Road Safety Manual): Yes (100%)

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.55 [45% crash reduction] (CMF Clearing House, 2018).

Brief Description: This treatment involves installing/marking the edge lines of the roadway along the corridors. Kittelson proposes this treatment in places where the lanes are wide and edge lines can help narrow the travel lanes in support of reduced speeds. An example of the treatment is shown in Figure 24.

Figure 24: Example of Edgelines

Why was this selected for Town of Colma?

This treatment was selected for the Town of Colma to help manage vehicle speeds on roadways throughout the Town.

n) Upgrade Street name Signs

Planning-Level Cost Estimate: $750 - $1,250 per sign, assuming 10' long and 2' tall on average (Town of Colma, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): No

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.98 [2% crash reduction] (CMF Clearing House, 2018).

Brief Description: At intersections with multiple lanes coming together across the two intersecting streets, larger street name signs posted on mast arms help improve wayfinding. An example of larger street name signs for such contexts is shown in Figure 25.

Why was this selected for Town of Colma?
Given some of the large intersections, increased street names could help ease wayfinding for road users.

Figure 25: Example of Larger Street Name Sign
Source: City of Windsor, Ontario

o) Gateway Treatments

Planning-Level Cost Estimate: Varies

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): No

Potential Effectiveness at Reducing Crash Frequency and/or Severity: NA.

Brief Description: This treatment involves applying the gateway treatments to the Town at the entrance and exits, i.e. boundaries and is intended to mark the transition to the town. An example gateway treatment is shown in Figure 26.

Why was this selected for Town of Colma?
There are a number of entry points to Colma along major arterials. This treatment was selected as an example of potential scale of such gateways given the scale of the roadways providing access to Colma.

Figure 26: Example Gateway Treatment
Source: City of Rochester, NY

p) Upgrade Stop Signs, Warning and Regulatory Signs (NS5)

Planning-Level Cost Estimate: $450 - $1,020 per sign, assuming 7' sign post (VDOT, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (100%)

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.66 – 0.70 [30% - 24% crash reduction] (FHWA Office of Safety, 2018).

Brief Description: This treatment improves stop, warning and regulatory sign visibility at intersections and/or intersection approaches. An example of a regulatory is shown in Figure 27.

Why was this selected for Town of Colma?

During field reviews, Kittelson observed a few locations where sign height could be increased to improve visibility and sign type could be improved to clarify the messages for motorists.

Figure 27: Example of a Stop Sign
Source: (FHWA Office of Safety, 2018).

q) Access Management

Planning-Level Cost Estimate: Highly variable.

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): No

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.93 [7% crash reduction] (CMF Clearing House, 2018).

Brief Description: This treatment improves access management on the corridors by implementing driveway consolidations and driveway relocations. This treatment also involves implementing driveway turn restrictions along the corridors. This is done to decrease the vehicle conflicts, while helping to clarify access to businesses.

Why was this selected for Town of Colma?

This treatment was selected for the Town of Colma because there are some corridors along which the businesses have multiple driveways and accesses that are in close proximity to each other.

r) Street Lighting (NS1/R1)

Planning-Level Cost Estimate: $5,000 - $10,000 (Town of Colma, 2018).

Eligible for Federal Funding (Source: Caltrans Road Safety Manual): Yes (100%)

Potential Effectiveness at Reducing Crash Frequency and/or Severity: CMF = 0.63 [37% crash reduction] (CMF Clearing House, 2018).

Brief Description: This treatment involves installing lighting on roadway segments and at unsignalized intersections. This is done to increase the visibility of non-motorized users to drivers and decrease the crashes.

Why was this selected for Town of Colma?

This treatment was selected for the Town of Colma because there are some roadway segments and unsignalized intersections that have crashes due to non-motorized users not being visible to the drivers, especially during the night time.

8.3 POTENTIAL LOCATIONS FOR SYSTEMIC TREATMENTS

Kittelson identified the following locations as candidates for receiving one or more of the systemic treatments. These locations were identified based on their crash patterns and trends, roadway characteristics present, and observations from the field reviews. Figure 28 through Figure 30 show the different locations at which the above discussed systemic treatments could be implemented in the Town.

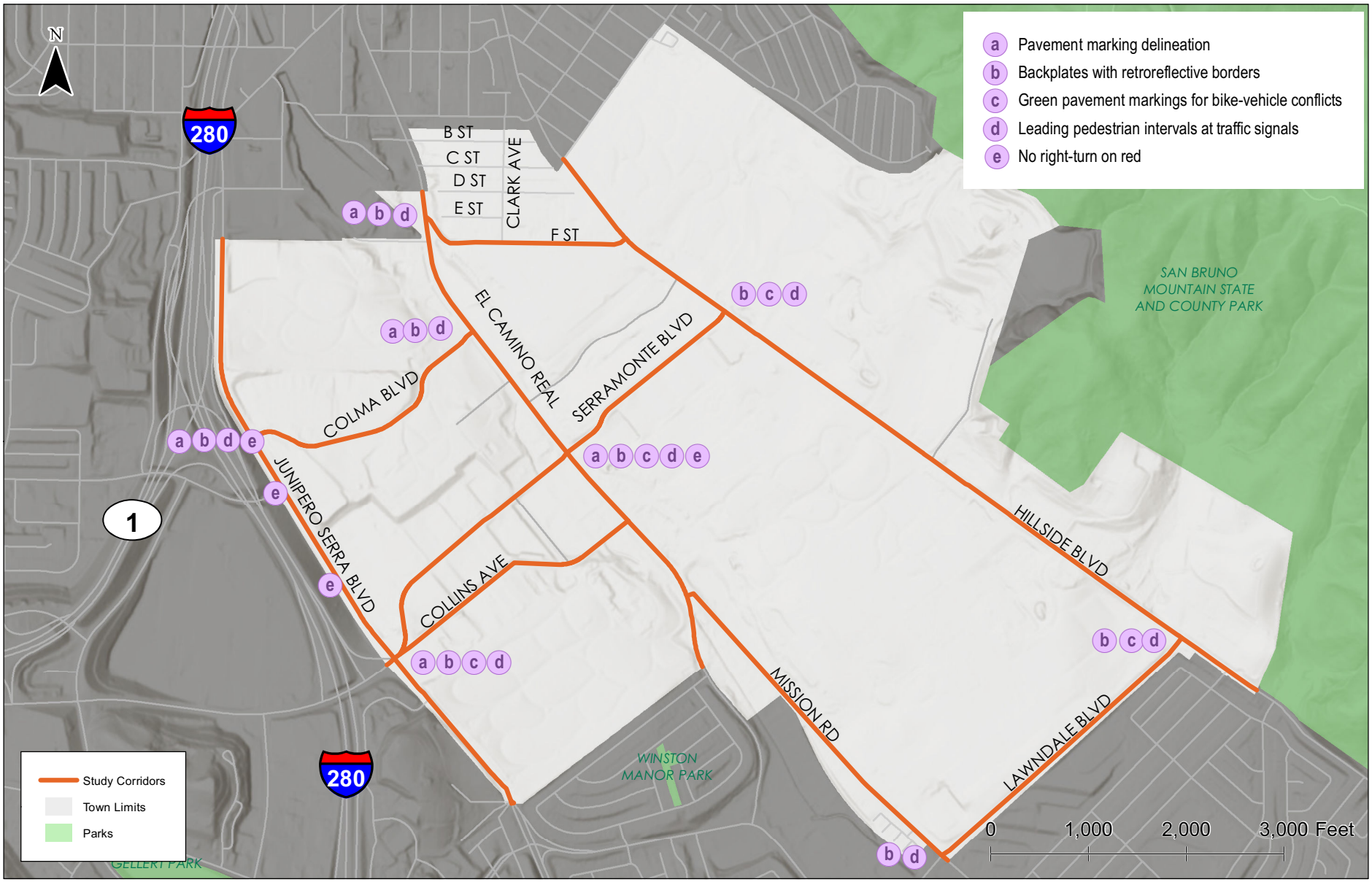
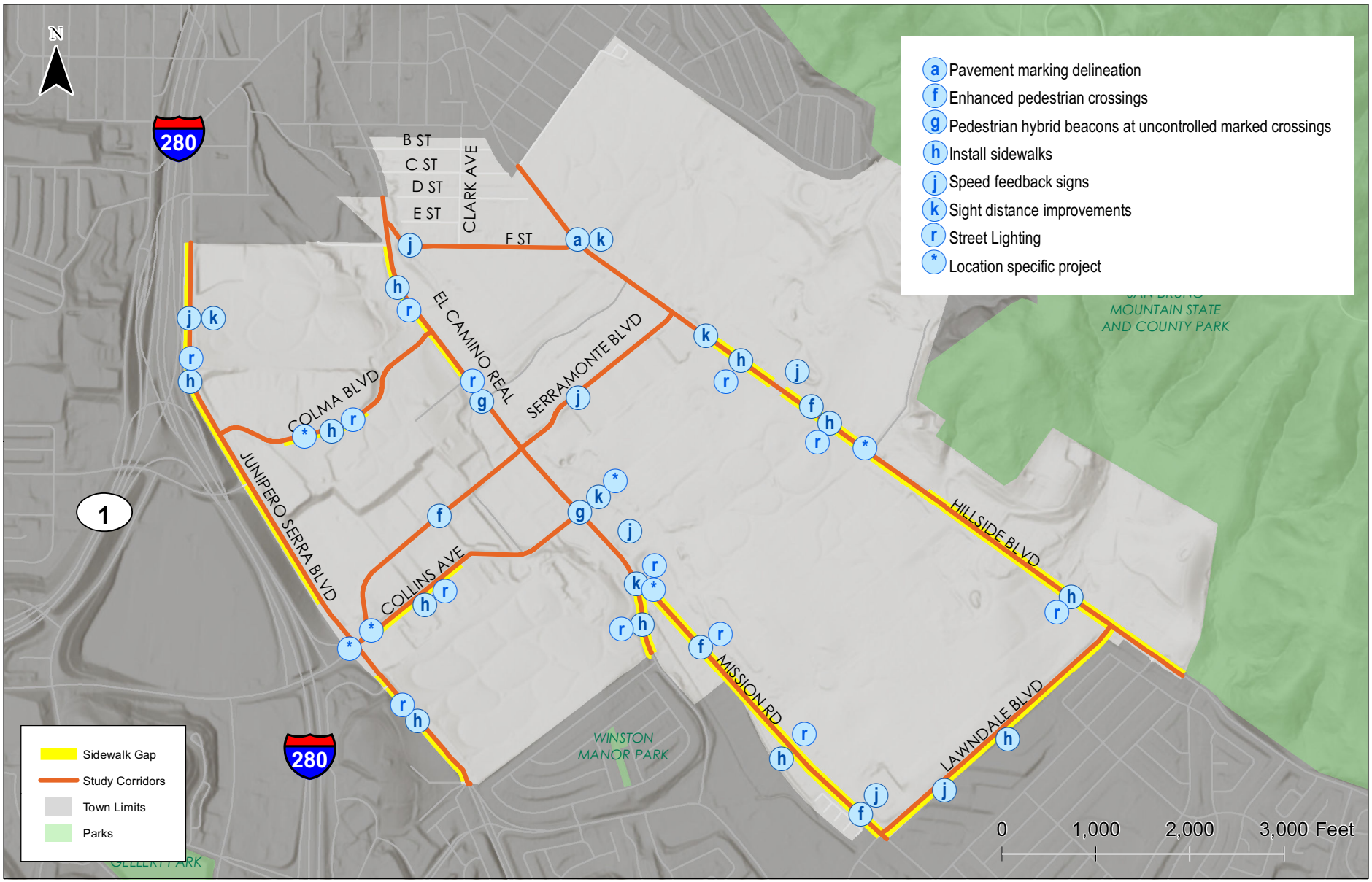


Figure 28

Town of Colma
CIP 993 Systemic Safety Analysis Report Project
Systemic Treatments at Signalized Intersections

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

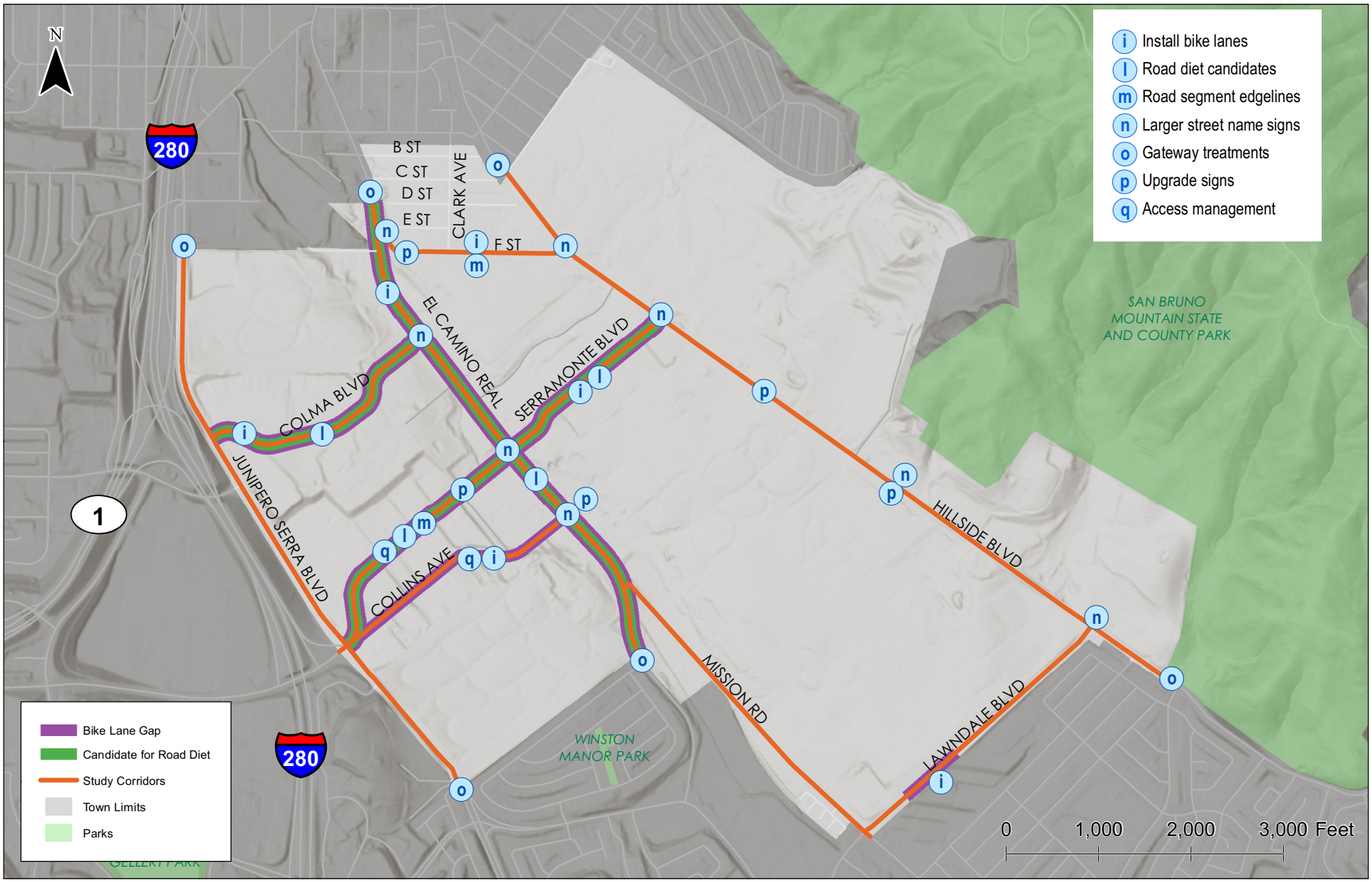


Town of Colma
CIP 993 Systemic Safety Analysis Report Project
Systemic Treatments at Unsignalized Intersections and Segments

Figure 29

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County



Town of Colma
CIP 993 Systemic Safety Analysis Report Project
Systemic Treatments at Unsignalized Intersections and Segments

Figure 30

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

Summary

The following are key points regarding the systemic treatments:

- Systemic treatments are a proactive way to help reduce the potential for crashes throughout the Town.
- Systemic treatments could be first applied at priority corridors and intersections.
- The planning level cost estimates, and the estimated safety effectiveness included for each systemic treatment can inform implementation at the study corridors while serving as a basis to implement treatments at non-study locations.

8.4 LOCATION-SPECIFIC PROJECTS

Kittelson identified locations that could benefit from specific, unique (non-systemic) location-specific projects to help reduce the potential for crashes. This section identifies those locations and describes those potential improvements. These locations were identified based on their crash patterns and trends, roadway characteristics present, and observations from the field reviews. The following sections outline the existing conditions at the locations and the potential location-specific projects (that are different than the systemic treatments discussed in the previous section).

IN THIS SECTION>>

- Locations identified as potentially benefiting from additional improvements
- Potential location-specific projects to help reduce crash frequency and/or severity

Mission Road/El Camino Real Intersection

Existing Conditions

Kittelson observed the El Camino Real (ECR) intersection is an unusual configuration with Mission Road intersecting ECR at a skew and free flow northbound movement from Mission Road to ECR. The skew results in long crossings of conflicting movements and the 40 mph posted speed limits gaps for drivers negotiating the stop controlled movements. The free flow movement creates a weaving section northbound for Mission Road drivers that are destined for Collins Avenue and/or the cemetary or commercial uses located south of Collins Avenue on the western side of ECR.

Proposed Location-Specific Projects

a) Consider Intersection Control Evaluation

Kittelson recommends the Town evaluate the existing intersection to consider changes in the traffic control. The intersection control evaluation (ICE) should consider geometric modifications and possible applications of stop, yield (roundabout), or signalized control. This is shown in Figure 31.

Figure 31: Location along Mission Road In Need of Traffic Control.

For a Stop Control:

Planning-Level Cost Estimate: $450 - $1,020 per sign, assuming 7' sign post (VDOT, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (100%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: 0.49 [51% crash reduction] (CMF Clearing House, 2018).

For a Yield Control (Roundabout):

Planning-Level Cost Estimate: $194,000 - $500,000 (FHWA, 2018)

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (100%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: 0.54 – 0.87 [13% - 46% crash reduction] (CMF Clearing House, 2018).

For a Signal Control:

Planning-Level Cost Estimate: $50,000 - $200,000 (ITE, 2018).

Eligible for Federal Funding (*Source: Caltrans Road Safety Manual*): Yes (100%).

Potential Effectiveness at Reducing Crash Frequency and/or Severity: 0.56 - 0.65 [35% - 44% crash reduction] (CMF Clearing House, 2018).

Hillside Boulevard from Serramonte Boulevard Intersection to Lawndale Boulevard Intersection

Existing Conditions

Kittelson observed people walking and biking along Hillside Boulevard in the area between Serramonte/Hillside Bouldevard intersection and Hillside/Lawndale Boulevard Intersection. It was evident that some of the activity was the result of the businesses and cemetries along Hillside. Countermeasures that accommodate these travel patterns and road users along and crossing Hillside Boulevard (including the Serramonte/Hillside Bouldevard intersection)could be implemented. The existing roadway configuration is shown in Figure 32.

Figure 32: Existing Roadway Configuration on Hillside Boulevard

Proposed Location-Specific Projects

b) Reconfiguring roadway cross-section to install sidewalk and striped bike lanes

Kittelson recommends the Town consider installing sidewalk and bicycle facility along the corridor where these facilities are not present. There could be sufficient space to provide an adjacent, raised multiuse path for portions of this segment. Alternative configurations could be considered to determine the most optimal given the on-street parking needs and walking/biking needs to access the businesses and cemeteries. These changes would help increase driver awareness and visibility of the non-motorized users and reduce motorist speeds along the corridor. The planning level cost estimate and potential effectiveness of such changes would depend on the preferred roadway cross-section configuration selected.

All Way Stop Control Consistency on Colma Boulevard

Existing Conditions

Kittelson observed that the Colma Boulevard corridor has inconsistency in the stop control. At the intersection near Best Buy, the intersection has an all-way stop control. At the immediate intersection westbound on Colma Boulevard towards Junipero Serra Boulevard, there is stop control only on the driveway to the shopping center. This inconsistency could violate driver expectancy while traveling along Colma Boulevard.

Proposed Location-Specific Projects

c) Consider all way stop control consistency

Kittelson recommends the Town consider evaluating the two intersections to determine if all-way stop control or two-way stop control are the most appropriate. The information on planning level cost estimates, funding eligibility, and the potential safety effectiveness for stop control are discussed above as part of Mission Road ICE project discussion.

Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard Intersection

Existing Conditions

The Junipero Serra Boulevard/Serramonte Boulevard intersection is controlled by a traffic signal and includes access to the I-280 on-ramp. Figure 33 shows in an aerial of the five-legged Junipero Serra Boulevard/Serramonte Boulevard intersection.

Figure 33: Junipero Serra Boulevard/Serramonte Boulevard and Serramonte Boulevard/Collins Avenue Intersections

Source: Google Earth, 2018.

Serramonte Boulevard curves horizontally through the intersection with Collins Avenue and in the eastbound direction beings to drop down vertically. As a result, the current alignment creates sight distance challenges for turning motorists as well as limited time to react to the different movements and activities occurring at the intersection. The multiple legs of the intersection and access to I-280 also requires multiple lanes, overhead signs, and pavement markings on the northbound and eastbound approaches to pre-segregate motor vehicles into the proper lanes based on motorists' desired destinations.

Proposed Location-Specific Projects

d) Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard Intersection

The Town could consider options to simplify the Junipero Serra Boulevard/Serramonte Boulevard intersection to reduce the amount of decisions that drivers need to make to successfully navigate the intersection. For example, one option that could be explored, would be to eliminate the connection to I-280 that occurs at the intersection and instead have motorists use the ramp access on Serramonte Boulevard that is approximately 250 feet to the west of the intersection. Signal coordination adjustments may need to be made with that adjacent signal; however, such a change would simplify the intersection and help simplify and reduce conflicts at the adjacent Serramonte Boulevard/Collins Avenue intersection as well.

Reconfiguring Serramonte Boulevard/Collins Avenue Intersection

Existing Conditions

The Serramonte Boulevard/Collins Avenue intersection is stop controlled on the Collins Avenue approach. Figure 25 shows an aerial that includes the Serramonte Boulevard/Collins Avenue intersection (intersection to the right in the figure). In addition to the sight distance challenges on Serramonte Boulevard for motorists because of the horizontal curve alignment, the Serramonte Boulevard/Collins Avenue intersection is also missing a marked pedestrian crossing across the Collins Avenue approach.

Proposed Location-Specific Projects

e) Reconfiguring Serramonte Boulevard/Collins Avenue Intersection

Kittelson recommends the Town explore options to realign the Serramonte Boulevard/Collins Avenue intersection to try to improve sight distance, add a pedestrian marked crosswalk across Collins Avenue, and minimize the pedestrian crossing distance across Collins Avenue. The reconfiguration would need to take into account and design for the necessary large vehicles that need to access the businesses along Collins Avenue.

Collins Avenue/El Camino Real Intersection

Existing Conditions

The El Camino Real (ECR)/Collins Avenue intersection is situated between ECR/Mission Road intersection and ECR/Serramonte Boulevard intersection. There is an existing, marked, uncontrolled crosswalk at this locaiton for pedestrians to cross ECR. On-street parking is permitted on approach to the intersection along ECR. There are three vehicle lanes southbound at the intersection, one of which is marked as being eliminated as it passes through the intersection. There are also three lanes northbound through the intersection and a center median. Figure 34 shows an aerial of the intersection.

Figure 34: Collins Avenue/El Camino Real Intersection

Source: Google Earth, 2018.

If the need for intersection control at ECR/Mission Road is realized, it would be better to consider some intersection control at the ECR/Collins Avenue intersection as well. The additional lanes on ECR approaching Collins Avenue need to be tapered to reduce the pedestrian crossing distance at the intersection.

Proposed Location-Specific Projects

f) Consider Additoinal Intersection Enhancements

As part of the treatments, Kittelson suggests considering implementing a traffic signal at this location to meet the intended outcomes at this intersection. To further reduce the potential risk for crashes at this location, the Town could also consider:

- Eliminating the southbound lane drop thorugh the intersection so the lane is dropped north of the intersection to arrive at two southbound through lanes;
- Eliminating one of the northbound through lanes to shorten the crossing distance;
- Further restricting on-street parking adjacent to the crosswalk and intersection to increase the available sight distance for motorists on Collins Avenue and pedestrians waiting to cross ECR;

Figure 35 identifies the locations for the potential unique, location-specific projects that could be implemented across the Town.

Figure 35

Town of Colma
CIP 993 Systemic Safety Analysis Report Project
Location Specific Improvements

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

Summary of Locations

Table 11 provides a summary of the location, brief description of the potential location-specific projects, planning-level cost range, and potential effectiveness at reducing crash frequency and/or severity.

Table 11: Summary of the Location Specific Projects and the Related Information

Treatment (With Location)	Cost Range	CMF [% Crash Reduction]
a) Intersection Control Evaluation at Mission Road/El Camino Real ▪ Stop Control ▪ Yield Control (Roundabout) ▪ Signal Control	$450 - $1,020 per sign, assuming 7' sign post $194,000 - $500,000 $50,000 - $200,000	0.49 [51%] 0.54-0.87 [13% - 46%] 0.56–0.65 [35% - 44%]
b) Reconfiguring Roadway Cross-section on Hillside Boulevard from Serramonte Boulevard to Sand Hill Road ▪ Sidewalks ▪ Bike lane striping	$8.04 - $9.90 (per square-foot) $250 - $270 (per stencil)	NA. NA.
c) All Way Stop Control consistency on Colma Boulevard	$450 - $1,020 per sign, assuming 7' sign post	0.49 [51%]
d) Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard Intersection	Varies	NA.
e) Reconfiguring Serramonte Boulevard/Collins Avenue Intersection	Varies	NA.
f) Intersection Control Evaluation at Collins Avenue/El Camino Real ▪ Signal Control	$50,000 - $200,000	0.56–0.65 [35% - 44%]

Summary

The following are key points regarding location-specific treatments:

- Location-specific projects address potential changes that are unique from the systemic treatments.
- These projects are intended to help further reduce the potential of crashes for road users.

Table 12 provides a summary of the location, and brief description of the potential systemic and location-specific projects for each corridor in the town.

Table 12: Summary of the Systemic and Location Specific Projects for each Corridor

Corridor	Systemic Treatments	Location-specific Treatment
El Camino Real	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Install PHBs at uncontrolled marked crossings ▪ Sight-distance improvements ▪ Speed-feedback signs ▪ Gateway treatments ▪ Larger street-name signs ▪ Install bike lanes ▪ Road-diet candidate ▪ Street lighting ▪ Upgrade signs ▪ No right-turn on red	▪ Intersection Control Evaluation at Mission Road/El Camino Real ▪ Intersection Control Evaluation at Collins Avenue/El Camino Real
Junipero Serra Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ No right-turn on red ▪ Install sidewalks ▪ Sight-distance improvements ▪ Speed-feedback signs ▪ Gateway treatments ▪ No right-turn on red ▪ Street lighting	▪ Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard/ Intersection

Corridor	Systemic Treatments	Location-specific Treatment
Hillside Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Sight-distance improvements ▪ Speed feedback signs ▪ Enhanced pedestrian crossings ▪ Larger street-name signs ▪ Upgrade signs ▪ Gateway treatments ▪ Street lighting ▪ Mid-Block pedestrian crossings	▪ Reconfiguring roadway cross-section from Serramonte Boulevard Intersection to Lawndale Boulevard Intersection
Mission Road	▪ Backplates with retroreflective borders ▪ LPIs at traffic signals ▪ Sight-distance improvements ▪ Speed feedback signs ▪ Mid-Block pedestrian crossings	▪ Intersection Control Evaluation at Mission Road/El Camino Real
Serramonte Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ No right-turn on red ▪ Larger street-name signs ▪ Enhanced Pedestrian Crossings ▪ Install bike lanes ▪ Road-diet candidate ▪ Upgrade signs ▪ Access management ▪ Road segment Edgelines ▪ Mid-Block pedestrian crossings ▪ Street lighting	▪ Reconfiguring Serramonte Boulevard/Collins Avenue Intersection ▪ Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard/ Intersection
Collins Avenue	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Larger street-name signs ▪ Install bike lanes ▪ Upgrade signs ▪ Access management ▪ Sight-distance improvements ▪ Street lighting	▪ Reconfiguring Serramonte Boulevard/Collins Avenue Intersection ▪ Intersection Control Evaluation at Collins Avenue/El Camino Real

Corridor	Systemic Treatments	Location-specific Treatment
Colma Boulevard	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ LPIs at traffic signals ▪ No right-turn on red ▪ Install sidewalks ▪ Larger street-name signs ▪ Install bike lanes ▪ Road-diet candidate ▪ Street lighting	▪ Consistency in All Way Stop Control
Lawndale Boulevard	▪ Backplates with retroreflective borders ▪ Green pavement markings for bike-vehicle conflicts ▪ LPIs at traffic signals ▪ Install sidewalks ▪ Speed-feedback signs ▪ Close bike lane gap ▪ Larger street name signs ▪ Mid-Block pedestrian crossings at the school entrance	NA.
F Street	▪ Pavement marking delineation ▪ Backplates with retroreflective borders ▪ LPIs at traffic signals ▪ Sight-distance improvements ▪ Speed-feedback signs ▪ Larger street-name signs ▪ Install bike lanes ▪ Road segment edgelines ▪ Upgrade signs ▪ Intersection/Road segment street lighting	NA.

8.5 POLICY, EDUCATION, & ENFORCEMENT STRATEGIES

Kittelson identified the following potential roaday safety related policies; education strateiges; and enforcement strategies to complement engineering treatments and projects discussed above.

IN THIS SECTION>>

Potential policy, education, and enforcement strategies that could be pursued by the Town

Roadway Safety Related Policies

Kittelson recommends the Town of Colma consider establishing a Vision Zero policy to emphasize improving roadway safety.

'Vision Zero' Policy

The goal of Vision Zero is based on the institutionalized, system-level change for the Town of Colma. This Vision Zero policy will build safety and livability into the streets of the Town of Colma, protecting the people who move about the Town every day. The key priorities for road safety culture in the Town of Colma include:

- Eliminating the fatal and severe injury crashes, and promoting safe road user behavior throughout the Town;
- Protecting non-motorized users, pedestrians and bicyclists, through infrastructure improvements;
- Using different forms of education to inform road users of the risks posed to the non-motorized users;
- Using education and enforcement strategies to discourage motorists from driving under the influence of alcohol, dangerous drugs, or other substances; and
- Using roadway design and enforcement strategies to encourage motorists to travel the posted speeds or slower on the roadways.

An example Vision Zero purpose statement that the Town of Colma can modify or develop further is below.

"The Town of Colma's commitment to Vision Zero is based on the principle of Crash Severity, i.e. fatalities and serious injuries on our roadways, which are not acceptable and preventable. The Town of Colma and its partner jurisdictions commit to achieve a vision of zero fatalities and serious injuries on our roadways. This will be accomplished through developing, implementing and monitoring a comprehensive and multidisciplinary Transportation Safety Action Plan that is data informed and facilitates routine investment in roadway safety improvements."

Education Strategies

Education strategies are focused on teaching road users road safety principles. These strategies can be developed to include interactive activities, comprehensive teaching notes, and information on road safety messages and concepts that can be taught at school or in the off-school activities.

a) Road Safety Education to Children

The road safety education to children includes strategies such as safe routes to school, walking school bus, and bicycle trains that promote road safety to all users, particularly the non-motorized users. A 'safe routes to school' program encourages and enables children to walk and bike to school. This can improve their health, well-being, and safety. This also results in less traffic congestion and emissions caused by school-related travel. Walking school buses and bicycle trains encourage groups of children walking or biking to school, with one or more adults. The walking school buses and bicycle trains have been put into practice by some of the schools in Sacramento, California; Chapel Hill, North Carolina; and Duluth, Georgia (SRTS Guide, 2018). These strategies or practices have shown communities and families that walking, and biking can be a viable and safe transportation option, and thus can be incorporated into their own daily travel patterns.

b) Speed Monitoring Awareness Radar Trailer

The speed trailer is an educational device that helps drivers become more aware of their speed in relation to the posted speed. This awareness tool can also help residents survey the traffic speeds in their own neighborhood. This trailer is usually deployed in a street or neighborhood for a few days so the residents can monitor the speeds on their own streets and become aware of their own driving behaviors.

c) Vulnerable Road User Education

The road safety education regarding vulnerable road users like pedestrians, bicyclists, and motorcyclists includes strategies involving education from police officer. If the driver encroaches into the bike lane or fails to yield to the pedestrian at the crossing, the police officer pulls the driver over and hands them a flyer that has the information for drivers to adapt their behavior towards all road users; this can be in addition to a citation.

Enforcement Strategies

Crash data can help identify the priority locations and/or road segments and the times of the day when the crashes have occurred. This information can inform and guide the type of enforcement strategy to be selected at the most appropriate locations and time periods. Kittelson suggests the Town consider three types of enforcement strategies. They are as follows:

a) Enhanced Police Enforcement

Deploy enhanced police enforcement on Hillside Boulevard near Hillside/Serramonte Boulevard intersection. The crash data showed 40% of crashes on Hillside Boulevard were classified as driving under the influence of alcohol or drugs (DUI). There were two fatal crashes over the last five years along this corridor, and one of them was associated with a DUI. Enhanced police enforcement in this corridor and other corridors with speeding-related crashes, may reduce fatal and severe injury crashes.

b) Photo Enforcement

Deploy safety cameras solely to assist in reducing fatal and severe injury related crashes. The Town of Colma could use camera enforcement at traffic signals to detect drivers' red light running or along priority corridors to identify speeding-drivers.

c) Speed Survey and Enforcement Campaigns

Focus enforcement using data to pinpoint streets exhibiting speeding and crashes with non-motorized users. The Town could launch a campaign with a series of radio or television advertisements to raise awareness about the dangers of speeding and encourage safe driving behavior.

Summary

The following are the potential education and enforcement strategies:

- Vision Zero Policy
    - Encourage and enable consistent, intentional investment in reducing the risk of crashes
    - Monitor progress to be able to continually reassess and adjust, as needed
- Education Strategies
    - Road Safety Education to Children; and
    - Speed Monitoring Awareness Radar Trailer; and
    - Vulnerable Road User Education.
- Enforcement Strategies

9.0 VIABLE PROJECT SCOPES AND PRIORITIZED LIST OF SAFETY PROJECTS

Using the above findings and through discussion with the Town, Kittelson developed the following projects the Town could implement to reduce the risk of crashes across all mode of travel. These projects are based on the list of countermeasures and priority locations from the previous work from this project. This list of projects was further prioritized based on the annual EPDO scores, crash types and severities, feasibility of the project given field conditions, discussions with the Town staff, community concerns and feedback, and recently implemented projects in the project vicinity.

Project scopes

Kittelson worked with the Town to identify twelve priority projects to reduce the risk of crashes in the Town of Colma. Each project scope describes the project location, type of improvements, reasoning for the project, and the concept design for the project. The twelve locations are listed below.

1. Hillside Boulevard from Serramonte Boulevard to Lawndale Boulevard Intersection
2. El Camino Real/Mission Road Intersection
3. Junipero Serra Boulevard/Serramonte Boulevard Intersection
4. Junipero Serra Boulevard from Colma Boulevard to Serramonte Boulevard Intersection
5. Colma Boulevard from El Camino Real to Junipero Serra Boulevard Intersection
6. El Camino Real/F Street Intersection
7. El Camino Real/Serramonte Boulevard Intersection
8. El Camino Real/Colma Boulevard Intersection
9. Collins Avenue from El Camino Real to Serramonte Boulevard Intersection
10. El Camino Real/Collins Avenue Intersection
11. Serramonte Boulevard from El Camino Real to Hillside Boulevard Intersection
12. Lawndale Boulevard from Mission Road to Hillside Boulevard Intersection

Table 13 summarizes the projects for each priority location and the related information. Figure 36 shows the map of safety project locations in the Town of Colma.

Table 13: Summary of the Projects and the Related Information

S.No.	Priority Location	Projects and Related Information
1	Hillside Boulevard from Serramonte Boulevard to Lawndale Boulevard Intersection	This project aims to improve pedestrian and bicycle safety along the corridor within the existing right-of-way. ▪ Extending the curb return to shadow the southbound right-turn at Serramonte/Hillside Boulevard intersection and widening the sidewalk along the corridor on Hillside. ▪ Installing pedestrian crossing enhancements, i.e. rectangular rapid flashing beacons (RRFBs) on the already existing pedestrian crosswalk at Eternity Memorial park driveway. ▪ Installing flush median with a pedestrian cut-through at the Lucky Chances Casino driveway on Hillside Boulevard. ▪ Installing mid-block pedestrian crossing and RRFBs on Hillside Boulevard near the Golf Course Access Road intersection. ▪ Transitioning to a single lane in each direction from two-lanes near Hillside Boulevard and Lawndale Boulevard Intersection. ▪ Install street lighting at multiple locations on Hillside Boulevard.
2	El Camino Real/Mission Road Intersection	This project aims to improve vehicular, non-motorized safety and operations. ▪ Installing a traffic signal to meet the intended outcomes at this intersection. ▪ Eliminating the overlapping southbound left turn lanes and delineating the southbound Mission Road left turn lane south of Cypress Avenue. ▪ Maintaining two northbound lanes on ECR by removing northbound lane addition at Mission Road. ▪ Creating two continuous southbound lanes on ECR south of Collins Avenue intersection. The upstream two-lane section could be associated with the possible ECR/Collins Avenue intersection treatments. ▪ Channelizing this intersection with traffic separators, traffic islands, and pavement markings. ▪ Installing street lighting, and pedestrian crosswalks at the intersection. ▪ Adding a complementary northbound left turn lane and angling the southbound left turn to Cypress Avenue. ▪ Adding bike lanes on ECR in the northbound and southbound directions.

S.No.	Priority Location	Projects and Related Information
3	Junipero Serra Boulevard/Serramonte Boulevard Intersection	This project aims to improve bicycle safety and vehicle operations. ▪ Eliminating the fifth intersection leg, i.e. the diagonal on ramp stem from Junipero Serra Boulevard. ▪ Widening westbound Serramonte Boulevard from Junipero Serra Boulevard to the new two lanes on ramp connection to eastbound I-280. ▪ Modifying eastbound on ramp connection to match the existing ramp south of the ramp meter. ▪ Using striping to clearly define the two northbound lanes on Junipero Serra Boulevard departing the intersection. ▪ Striping bike lanes approaching the intersection including treatments at right-turn lanes. ▪ Modifying signing and pavement markings to eliminate the 'soft' left and right turns and modify the 'hard' left and right turns.
4	Junipero Serra Boulevard from Colma Boulevard to Serramonte Boulevard Intersection	This project aims to improve bicycle safety, pedestrian safety and vehicle operations. ▪ Installing raised median island for pedestrian refuge on the westbound approach of Junipero Serra Boulevard and Colma Boulevard intersection. ▪ Striping out the outside receiving lane on the northbound approach of the Junipero Serra Boulevard at the Colma Boulevard intersection to shadow right-turn lane from Colma Boulevard and better delineate bike lane. ▪ Narrowing to two receiving lanes on the eastbound approach at the Colma Boulevard intersection and delineate southbound left-turns through the intersection. ▪ Installing green bike lane transition markings at the right-turn lanes at intersections along the corridor. ▪ Installing bike box with green bike lane markings at the Serra center driveway intersection on the corridor. ▪ Eliminating the median nose for improved pedestrian access at the Serra center driveway intersection. ▪ Implementing leading pedestrian intervals at traffic signals and restricting right-turns on red at the intersections.

S.No.	Priority Location	Projects and Related Information
5	Colma Boulevard from El Camino Real to Junipero Serra Boulevard Intersection	This project aims to improve pedestrian and bicyclist safety along the corridor. ▪ Installing raised median to shadow left turn lane on westbound approach to Junipero Serra Boulevard. ▪ Transitioning from the current lane configuration on Colma Boulevard to three lane cross section (i.e. one lane on either side of the roadway with a two-way center turn lane), and bike lanes on both sides of the roadway. ▪ This reconfiguration includes sidewalk on one side of the roadway.
6	El Camino Real/F Street Intersection	This project aims to improve pedestrian safety and vehicle operations at this intersection. ▪ Reconfiguring access to Woodlawn Cemetery to right-in only, i.e. entrance only and not exit. ▪ Squaring up the F street northbound right-turn lane. ▪ Removing parking on northbound El Camino Real between F streets north and south of Bay Area Rapid Transit (BART) overcrossing and widening the sidewalk and curb. ▪ Widening the sidewalk and the north F street intersection crosswalk along El Camino Real. ▪ Striping a defined southbound right-turn lane and striping out the extra wide shoulder at the Woodlawn Memorial Park driveway. ▪ Closing the median opening in front of the north F street intersection. ▪ Consider closing or modifying the Woodlawn Memorial Park driveway near the south F street intersection. ▪ Widening the median on El Camino Real so that the left turn lanes to the south F street intersection begins after the Woodlawn Memorial Park driveway. ▪ Adding bike lanes on both sides of ECR, with two travel lanes in each direction.
7	El Camino Real/Serramonte Boulevard Intersection	This project aims to improve pedestrian safety and vehicle operations. ▪ Reducing curb return radii, adjusting and defining sidewalks. ▪ Creating angled left-turn lanes on El Camino Real to improve sight lines and facilitate turning movements. ▪ Defining better on street parking on El Camino Real outside the intersection area.

S.No.	Priority Location	Projects and Related Information
		▪ Restriping westbound Serramonte Boulevard to maintain two through lanes through the horizontal curves. The right-turn lane would be added in the tangent section approaching the intersection. ▪ Considering an eastbound left-turn lane from Serramonte Boulevard to the Town of Colma Police complex. A median in any form reduces the roadway to four lanes in this location and will support vehicle speed management down the hill. ▪ Adding bike lanes on both sides of ECR, with two travel lanes in each direction along the entire corridor.
8	El Camino Real/Colma Boulevard Intersection	This project aims to improve pedestrian and bicyclist safety. ▪ Reconfiguring ECR to two travel lanes in each direction, with buffered bike lanes on northbound and southbound El Camino Real. ▪ Extending the median to provide a pedestrian refuge area for the El Camino Real crossing. ▪ Providing angled left-turn lanes to adjacent driveways north of Colma Boulevard. ▪ Considering closing the driveway from the Greek Orthodox Memorial Park at Colma Boulevard or converting this access to one way outbound only.
9	Collins Avenue from El Camino Real to Serramonte Boulevard Intersection	This project aims at improving the vehicle operations along the corridor. ▪ Installing speed feedback signs at the location of existing speed limit signs. ▪ Restriping the corridor to delineate outer edges with parking and no parking areas. ▪ Narrowing the lanes to 11ft wide and including centerline with raised pavement markers. ▪ Providing continuous sidewalk along the corridor, i.e. providing sidewalk links to the existing sidewalk through the driveway area. ▪ Reconfiguring Collins Avenue/Serramonte Boulevard intersection. ▪ Installing a traffic signal at El Camino Real/Collins Avenue to meet the intended outcomes at this intersection.
10	El Camino Real/Collins Avenue Intersection	The project aims at improving pedestrian safety and vehicle operations at the intersection. ▪ Dropping the third southbound lane on ECR, thereby eliminating the lane drop downstream of the intersection.

S.No.	Priority Location	Projects and Related Information
		▪ The upstream two-lane section on ECR could be associated with the possible ECR/Mission Road lane configuration and the intersection treatments that eliminate the added third lane at Mission Road. ▪ Reconfiguring ECR with two travel lanes in each direction, and with bike lanes on both sides of the roadway. ▪ Extending the curb returns on the west side of the intersection and converting the third northbound lane into on-street parking. ▪ Extending the median to create a separated pedestrian refuge island. Enhance the existing pedestrian crossings on the west and north sides of the intersection. ▪ Adding painted channelizing island at angled northbound left turn lane on ECR to Collins Avenue to better channelize intersection movements. ▪ Installing a traffic signal to meet the intended outcomes at this intersection.
11	Serramonte Boulevard from El Camino Real to Hillside Boulevard Intersection	The project aims at improving pedestrian and bicyclist safety along the corridor. ▪ Transitioning from the current lane configuration on Serramonte Boulevard to three lane cross section, i.e. one lane on either side of the roadway with a two-way center turn lane, and bike lanes on both sides of the roadway. ▪ This reconfiguration includes adding non-motorized facilities along the corridor.
12	Lawndale Boulevard from Mission Road to Hillside Boulevard Intersection	This project aims at improving the non-motorized travel along the corridor. ▪ Providing bike lane links to the existing bike lane, by closing the bike lane gap near the ECR High School driveway. ▪ Aligning and extending the curb along the travel lane near the ECR High School driveway to eliminate the entry and exit tapered curb width sections and provide a consistent cross section along the corridor. ▪ Installing mid-block pedestrian crossing at the ECR High School driveway entrance. The path across the median is designed to help with visually impaired wayfinding to traverse the street and align with receiving ADA ramps. ▪ Installing pedestrian crossing enhancements, i.e. RRFBs on the mid-block pedestrian crossing at the ECR High School driveway entrance.

Figure 36

Town of Colma
CIP 993 Systemic Safety Analysis Report Project
Map of Safety Project Locations

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Data Source: Town of Colma, San Mateo County

9.1 PROJECT SCOPES

The following presents projects scopes for the top ten locations. This list of locations was identified from crash patterns, roadway characteristics, and risk factors, community input through the interactive map and community engagement meetings served as the initial list of the projects. The project locations were then further prioritized based on the discussions with Town staff, the community concerns in the town, and other on-going or recently implemented projects in the project vicinity.

IN THIS SECTION>>

- Detailed project scopes for 10 locations
- Description of project need

Observations from field reviews and professional resources such as the Caltrans Local Road Safety Manual and the Federal Highway Administration's resources regarding systemic safety, and discussions with the Town staff aided in developing the scopes of the projects.

The following project scopes include the project location, description of the project, and reasoning for why that location and why the respective countermeasures were selected.

Project descriptions

The following presents information for the top ten projects prioritized for the Town of Colma. These were prioritized based on crash history at the location as well as through discussions with Town Staff and consideration of community input. Of these, the project team developed 30 percent concept designs for five locations. A brief discussion on the respective projects being competitive for Highway Safety Improvement Program (HSIP) funding is also included at the end of each project scope and description. This decision was primarily based on the benefit-cost ratio values for the project scopes.

The benefit-cost ratio expresses benefits in monetary terms, which requires an estimate of the number of crashes avoided as a result of the countermeasures proposed in the project scope, and the monetary value of each avoided crash on the corridor or at an intersection. For the countermeasures proposed in the project scopes that are eligible for HSIP benefit, the crash modification factors (CMFs) are provided in the Caltrans Local Road Safety Manual. Kittelson used these CMFs to calculate the expected reduction in crashes and convert that to a monetary value. Kittelson used the monetary value of the expected benefit divided by the estimated project cost to arrive at the benefit-cost ratio. As per HSIP guidelines, Kittelson used five years of crash data, i.e. years 2011-2015 for calculating benefit-cost ratios in HSIP Analyzer, for priority projects in the Town of Colma. This methodology is consistent with the Caltrans' HSIP Cycle 9 HSIP Analyzer tool used to calculate benefit cost ratios for the purpose of prioritizing proposed HSIP projects.

Project #1: Reconfiguring Roadway Cross-Section on Hillside Boulevard

Project Description

This project includes reconfiguring the roadway cross-section on Hillside Boulevard by installing sidewalk and bicycle facility along the corridor where these facilities are not present, providing sufficient space for all the road users to utilize the facility. The project would restrict parking on the corridor to one side of the road, where available on both sides in the existing conditions. This project would focus on improvements that reduce the vehicle speeds on the corridor and improve the roadway conditions for non-motorized users within the existing right-of-way. Kittelson team suggests the Town consider widening the sidewalk, and installing enhanced pedestrian crossing facilities, that improve the safety of pedestrians walking along the corridor. Kittelson suggests the Town consider the following:

- Extending the curb return to shadow the southbound right-turn at Serramonte/Hillside Boulevard intersection and widening the sidewalk along the corridor on Hillside.
- Installing pedestrian crossing enhancements, i.e. rectangular rapid flashing beacons (RRFBs) on the already existing pedestrian crosswalk at Eternity Memorial park driveway.
- Installing flush median with a pedestrian cut-through at the Lucky Chances Casino driveway on Hillside Boulevard.
- Installing mid-block pedestrian crossing and RRFBs on Hillside Boulevard near the Golf Course Access Road intersection.
- Transitioning to a single lane in each direction from two-lanes near Hillside Boulevard and Lawndale Boulevard Intersection.
- Installing street lighting at multiple locations on Hillside Boulevard.

Kittelson recognizes removing on-street parking can be contentious. In this location, removing on-street parking from one side of the street is necessary to provide sidewalk on side of the street and adequate bicycle lanes in each direction. If the Town found it infeasible to remove parking on one side of the street, a sidewalk could still be added; however, bicyclists would either need to share the lane with motor vehicles in one direction of travel or a narrow bicycle lane could be provided. Those conditions (narrow bicycle lane or bicycles sharing a motor vehicle lane at this location) are less ideal from a safety perspective. Figure 37 shows the project scope for this location. The estimated cost for this project is $ 3,531,000, and the benefit-cost ratio is 2.00.

Figure 37

Hillside Boulevard from Serramonte Boulevard to Lawndale Boulevard

Estimated Cost: $3,531,000 **Benefit/Cost Ratio: 2.00**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- The corridor is a minor arterial and used by traffic traveling between Colma and Daly City (as alternative route to El Camino Real, and Junipero Serra Boulevard).
- There is walking and biking activity along the corridor.
- There are some businesses and cemeteries along the corridor that generate non-motorized traffic.
- There is a casino near the Hillside Boulevard/Serramonte Boulevard intersection.

Crash Summary

Crash Type and Contributing Factors

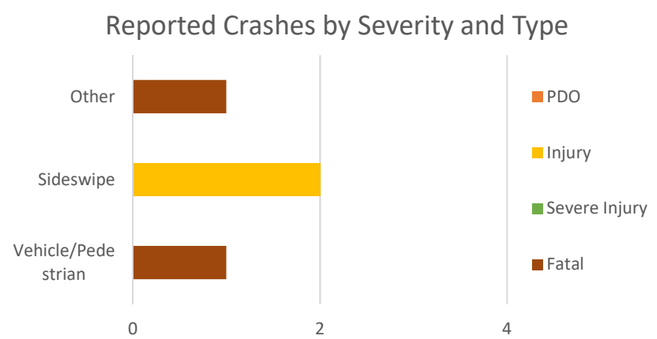
- 1 vehicle/pedestrian crash, pedestrian violation
- 2 sideswipe crashes; DUI, vehicle violation
- 1 DUI (other) crash

Crash Severity

- 2 fatal crashes (pedestrian violation, DUI)
- 2 other visible injury crashes (DUI, vehicle violation)

Crash Severity Score **73.54**

Number of Crashes **4**



Project Description

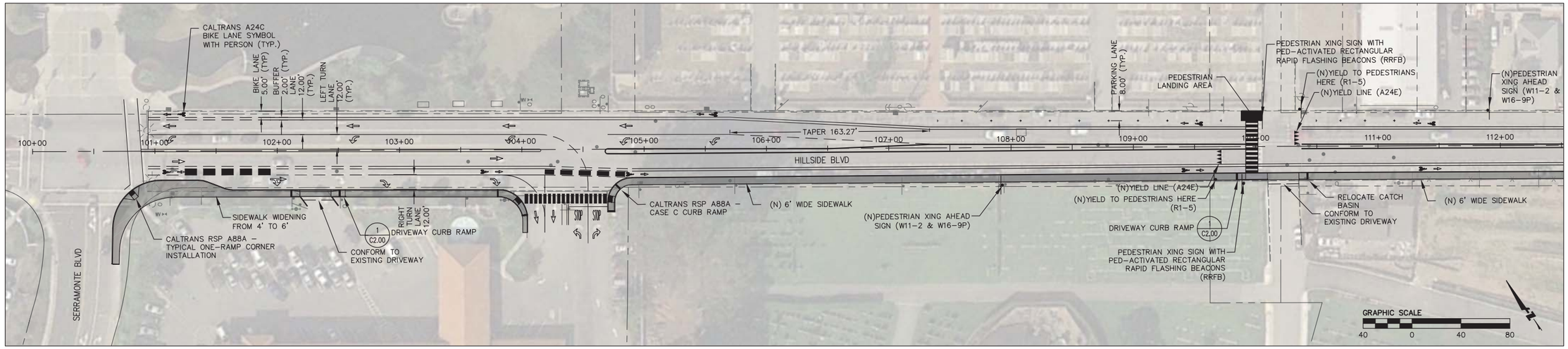
This concept sketch illustrates an approach to improve pedestrian and bicycle safety along the corridor within the existing right-of-way. Key items from the concept include:

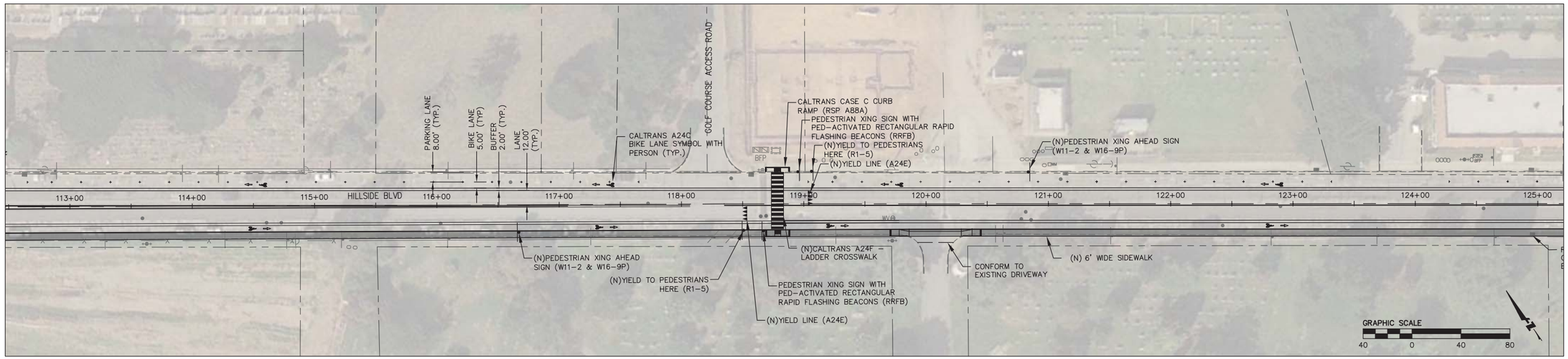
- Extending the curb return to shadow the southbound right-turn at Serramonte/Hillside Boulevard intersection and widening the sidewalk along the corridor on Hillside.
- Installing pedestrian crossing enhancements, i.e. rectangular rapid flashing beacons (RRFBs) on the already existing pedestrian crosswalk at Eternity Memorial park driveway.
- Installing flush median with a pedestrian cut-through at the Lucky Chances Casino driveway on Hillside Boulevard.
- Installing mid-block pedestrian crossing and RRFBs on Hillside Boulevard near the Golf Course Access Road intersection.
- Transitioning to a single lane in each direction from two-lanes near Hillside Boulevard and Lawndale Boulevard Intersection.
- Installing street lighting at multiple locations along the corridor.

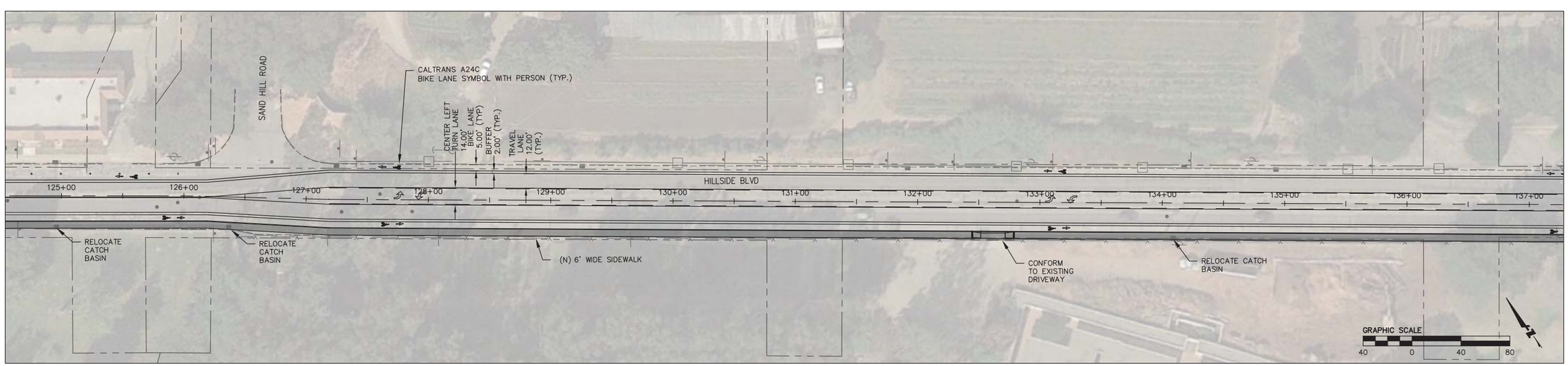
Design Considerations

- This project includes reconfiguring the roadway cross-section on Hillside Boulevard by installing sidewalk and bicycle facility along the corridor where these facilities are not present, providing sufficient space for all the road users to utilize the facility.
- The project would restrict parking on the corridor to one side of the road, where available on both sides in the existing conditions. However, the Town may find it infeasible to remove parking on Hillside Boulevard to accommodate the ideal cross-section proposed by the Kittelson team.

Note: Preliminary Design provided in the next page







BKF 100 YEARS
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Drawing Number:
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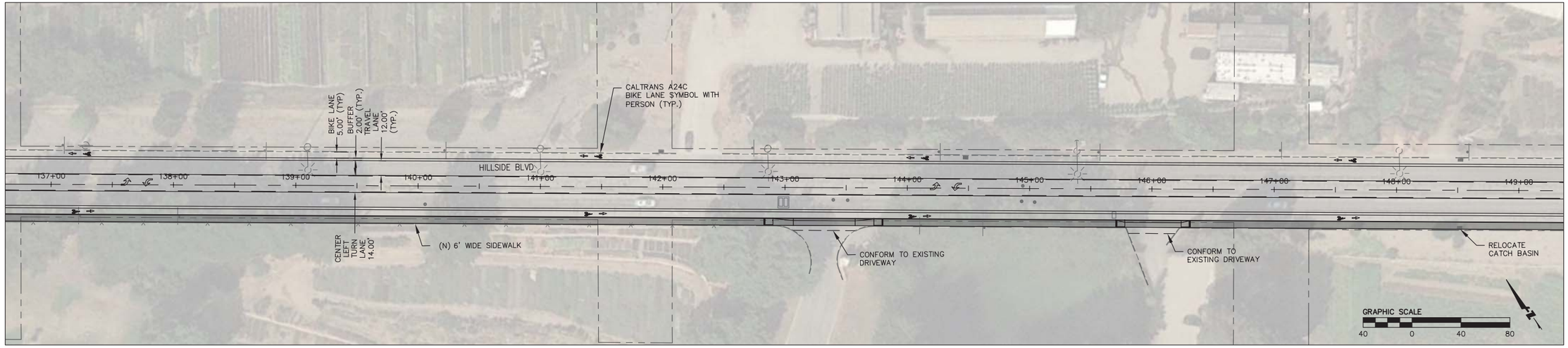

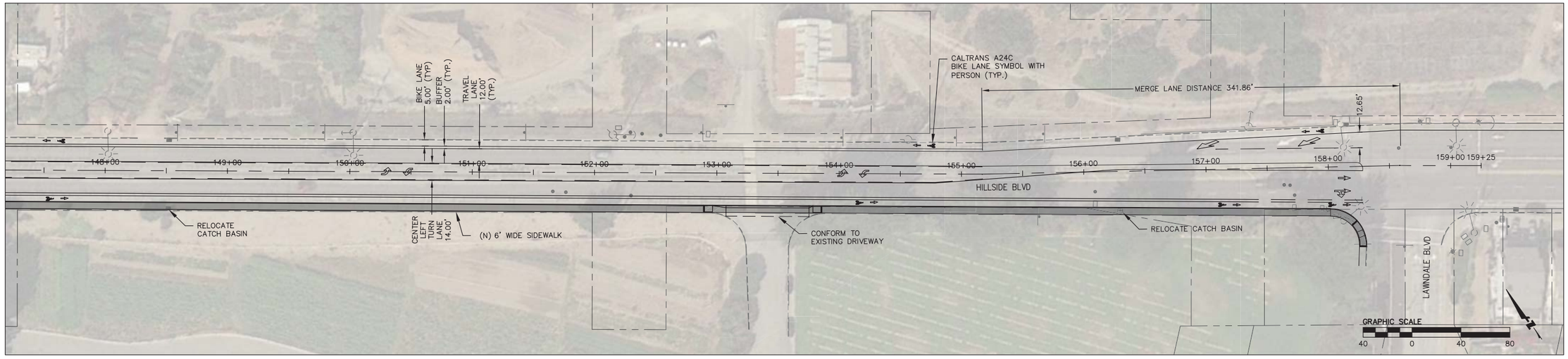

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Existing Conditions

Kittelson observed people walking and biking along Hillside Boulevard in the area between Serramonte/Hillside Bouldevard intersection and Hillside/Lawndale Boulevard Intersection. It was evident that some of the activity was the result of the businesses and cemetries along Hillside. This project would remove the parking on one side of the Hillside Boulevard and accommodate a new sidewalk and widen the existing bike lane on the corridor.The existing roadway configuration is shown in Figure 38.

Figure 38: Existing Roadway Configuration on Hillside Boulevard

Project Needs Identified

Kittelson identified that there were two reported fatal crashes and two injury crashes along this corridor during the years 2011-15. One of the fatal crashes involved a pedestrian violation, two crashes were due to driving under the influence (DUI), and the other crash was due to vehicle violation. Community input, discussions with Town Staff, and input from City Council meetings identified a desire to accommodate walking and biking needs to access businesses and cemeteries. These changes to incorporate non-motorized facilities are developed to increase driver awareness, visibility of the non-motorized users, and reduce motorist speeds along the corridor.

A part of this project would likely be competitive for HSIP funding because the improvements would address past severe crash occurrences. It could also be considered as an application for Active Transportation (ATP) grant funding due to the connections between neighborhoods and key destinations within the Town.

Project #2: El Camino Real/Mission Road Intersection

Project Description

This project would reduce the effects of skew and lack of channelized turning movements at El Camino Real (ECR) and Mission Road intersection. The project design concept uses contemporary intersection features to better define traffic movements and manage vehicle speeds. Kittelson suggests implementing street lighting at this intersection. In addition to this, Kittelson suggests the Town of Colma consider changes in the traffic control to the existing intersection. The intersection control evaluation (ICE) would consider geometric modifications and possible applications of signalized control that meets the intended outcomes at this intersection. Kittelson suggests the Town consider the following:

- Installing a traffic signal to meet the intended outcomes at this intersection.
- Eliminating the overlapping southbound left turn lanes and delineating the southbound Mission Road left turn lane south of Cypress Avenue.
- Maintaining two northbound lanes on ECR by removing northbound lane addition at Mission Road.
- Creating two continuous southbound lanes on ECR south of Collins Avenue intersection. The upstream two-lane section could be associated with the possible ECR/Collins Avenue intersection treatments.
- Channelizing this intersection with traffic separators, traffic islands, and pavement markings.
- Installing street lighting, and pedestrian crosswalks at the intersection.
- Adding a complementary northbound left turn lane and angling the southbound left turn to Cypress Avenue.
- Adding bike lanes on ECR in the northbound and southbound directions.

Figure 39 shows the project scope for this location. The estimated cost for this project is $ 4,125,000, and the benefit-cost ratio is 0.56.

Figure 39

El Camino Real and Mission Road

Estimated Cost: $4,125,000 **Benefit/Cost Ratio: 0.56**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- Mission Road intersects El Camino Real at a skew and provides a free flow northbound movement from Mission Road via an added third lane.
- State facility intersection.
- El Camino Real is a four-lane facility to the south of Mission Road. There are two southbound through lanes and a left turn lane to Mission Road. Southbound left turn lanes to Mission are overlap with a southbound left turn lane to Cypress Avenue
- Mission Road is a two lane roadway with bicycle lanes.

Crash Summary

Crash Type and Contributing Factors

- 1 head-on crash, traveling on wrong side of road

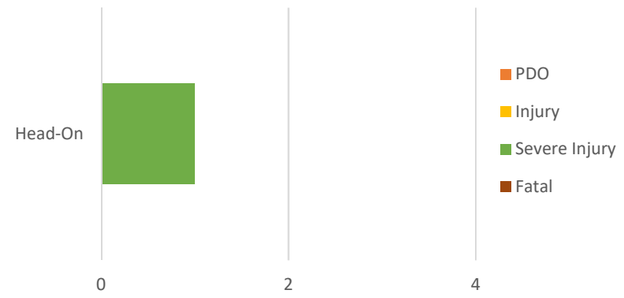
Crash Severity

- 1 severe injury crash (traveling on wrong side of road)

Crash Severity Score **40**

Number of Crashes **1**

Reported Crashes by Severity and Type



Project Description

This concept sketch illustrates an approach to improve vehicular safety and operations. Key items from the concept include:

- Installing a traffic signal to meet the intended outcomes at this intersection.
- Eliminating the overlapping southbound left turn lanes an delineating the southbound Mission Road left turn lane south of Cypress Avenue.
- Maintaining two northbound lanes on El Camino Real by removing the northbound lane addition at Mission Road.
- Creating two contiguous southbound lanes on El Camino Real south of Collins Ave. The upstream two lane section could be associated with possible El Camino Real/Collins Avenue intersection treatments that drop the southbound third lane north of Collins Avenue.
- Channelizing the Mission Road intersection with traffic separators, traffic islands, and pavement marking.
- Adding bike lanes on ECR on both sides of the roadway, and a complementary NB left turn lane to Cypress Avenue.

Design Considerations

- The basis of this design is reducing countering the effects of skew and lack of channelized turning movements. The intersection geometry is a result of a former rail line along a Collins Road alignment. At the time the intersection was created, vehicle volumes an speeds were much lower than today. The design should fundamentally consider contemporary intersection features to better define traffic movements and manage speeds. Studies should include evaluating southbound El Camino Real lane drop options in advance of Collins Ave. and possibly revising the northbound Mission Rd. movement to a conventional right turn lane with no lane addition.
- Since El Camino Real is a Caltrans facility, a Step 1 Intersection Control Evaluation (ICE) could be a first step. Given the proximity and relationship with Collins Avenue, the ICE could include both intersections.

Note: Preliminary Design provided in the next page

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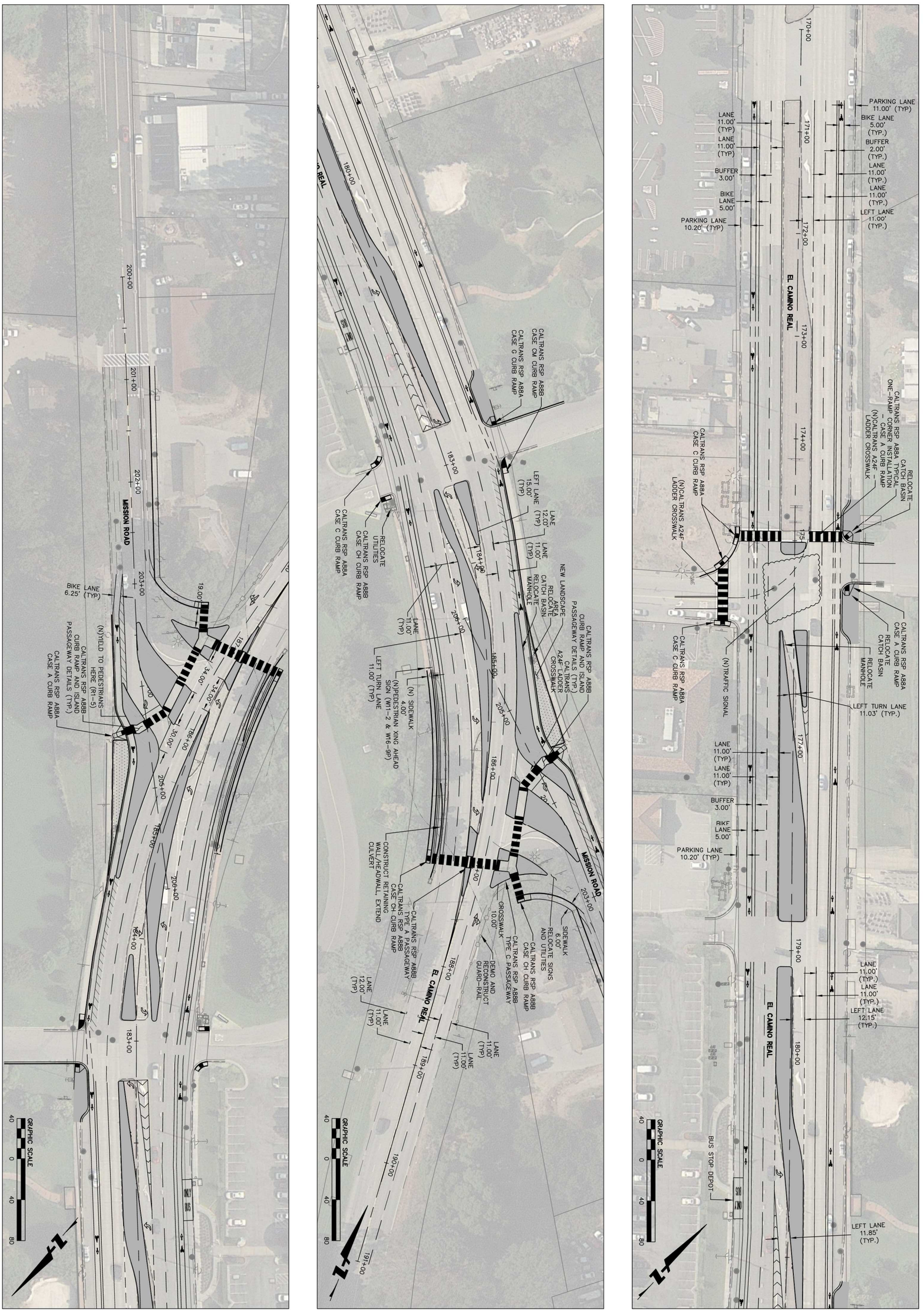

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Existing Conditions

Kittelson observed the ECR intersection is an uncommon configuration with Mission Road intersecting ECR at a skew and free flow northbound movement from Mission Road to ECR via an added third lane. The skew results in long crossings of conflicting movements and the 40 mph posted speed limits gaps for drivers negotiating the stop controlled movements. The free flow movement creates a weaving section northbound for Mission Road drivers that are destined for Collins Avenue and/or the cemetary or commercial uses located south of Collins Avenue on the western side of ECR.

ECR is a four-lane facility to the south of the Mission Road. There are two southbound through lanes and a left turn lane to Mission Road. Southbound left turn lanes to Mission overlap with a southbound left turn lane to Cypress Avenue. Mission Road is a two-lane roadway with bicycle lanes. Figure 40 shows the Mission Road/ECR intersection in the existing conditions.

Figure 40: Location along Mission Road in Need of Traffic Control.

Project Needs Identified

Kittelson identified that there was one reported severe injury crash at this intersection, which was with a vehicle traveling on wrong side of the road during the years 2011-15. The discussions with Town Staff, it's uncommon configuration, and the proximity of this intersection to the southern end of the Town limits led to considering a project for this intersection.

Given the crash history, the project may be competitive for HSIP funding. However, based on HSIP Cycle 9 requirements, it is not feasible to install a traffic signal at the intersection using HSIP funding.

Project #3: Reconfiguring Junipero Serra Boulevard/Serramonte Boulevard Intersection

Project Description

This project would consider improving the bicycle safety and vehicle operations at this intersection. The major part of this project is to simplify the Junipero Serra Boulevard/Serramonte Boulevard intersection to reduce the amount of decisions that drivers need to make to successfully navigate the intersection. Kittelson suggests the Town consider working with Caltrans to remove the access to I-280 on ramp from Junipero Serra boulevard and modifying the I-280 on ramp configuration from Serramonte Boulevard to make it a four-legged intersection. The modified ramp would operate as it does today with the revised ramp configuration matching prior to the ramp meter. The various movements to I-280 would remain the same as they are today, and the lane numbers and arrangements are essentially the same. Kittelson suggests the Town consider the following:

- Eliminating the fifth intersection leg, i.e. the diagonal on ramp stem from Junipero Serra Boulevard.
- Widening westbound Serramonte Boulevard from Junipero Serra Boulevard to the new two-lane on ramp connection to eastbound I-280.
- Modifying eastbound on ramp connection to match the existing ramp south of the ramp meter.
- Using striping to clearly define the two northbound lanes on Junipero Serra Boulevard departing the intersection.
- Striping bike lanes approaching the intersection including treatments at right-turn lanes.
- Modifying signing and pavement markings to eliminate the 'soft' left and right turns and modify the 'hard' left and right turns.

Figure 41 shows the project scope for this priority location. The estimated cost for this project is $ 2,815,400, and the benefit-cost ratio is 0.10.

Figure 41

Junipero Serra Boulevard and Serramonte Boulevard

Estimated Cost: $2,815,400 **Benefit/Cost Ratio: 0.1**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- The five-legged intersection is controlled by a traffic signal and includes access to I-280 on-ramp.
- The configuration creates “hard” and “soft” left and right turns on various movements creating conflicting travel paths.
- Serramonte Boulevard curves horizontally through the intersection, and begins to drop vertically in the eastbound direction.
- Sight distance challenges for turning vehicles.

Crash Severity Score **5.22**

Number of Crashes **6**

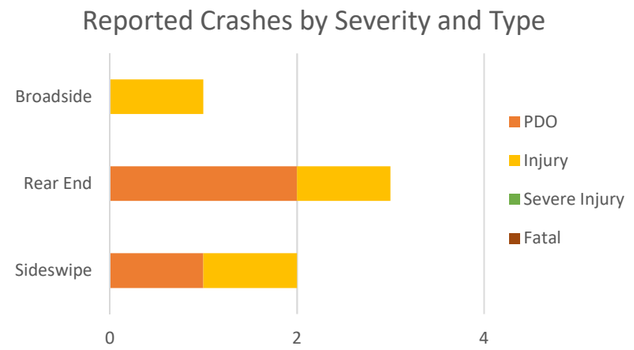
Crash Summary

Crash Type and Contributing Factors

- 2 sideswipe crashes; improper turning
- 3 rear-end crashes; following too closely, improper turning, unsafe speed)
- 1 broadside crash (automobile right-of-way)

Crash Severity

- 1 Other Visible Injury crash (improper turning)
- 2 Complaint of Pain Injury crashes (following too closely, automobile right-of-way)
- 3 PDO crashes (2 improper turning, 1 unsafe speed)



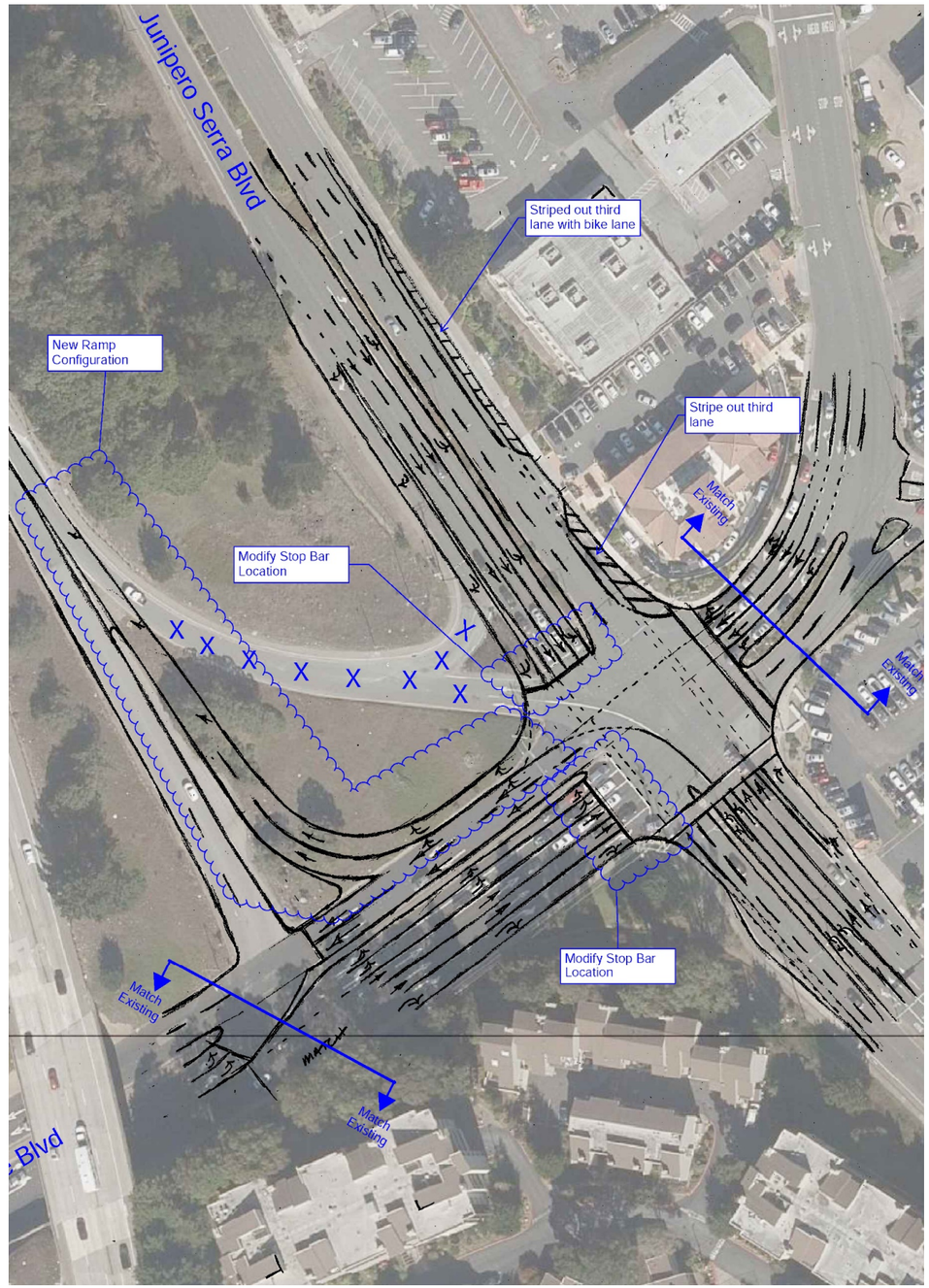
Project Description

This concept sketch illustrates an approach to improve bicycle safety and vehicle operations. Key items from the concept include:

- Eliminating the 5th intersection leg (the diagonal ramp stem from Junipero Serra Boulevard.)
- Widening westbound Serramonte Blvd from Junipero Serra Blvd to the new two lane ramp connection to eastbound I-280.
- Modifying the eastbound ramp connection to match the existing ramp south of the ramp meter.
- Using striping to clearly define the two northbound Junipero Serra Blvd. lanes departing the intersection.
- Striping bike lanes approaching an through the intersection including treatments at right turn lanes.
- Modifying signing and pavement marking to eliminate the “soft” left and right turns and modify the “hard” left and right turns.

Design Considerations

- The basis of this design is to eliminate the fifth intersection leg and locate the I-280 on-ramp movement with the existing ramp terminal intersection on Serramonte Blvd. The modified ramp would operate as it does today with the revised ramp configuration matching prior to the ramp meter. The various movements to I-280 remain essentially as they are today and the lane numbers and arrangements are the same. Eliminating the fifth leg removes ambiguity of movements from each leg without fundamentally changing approach lane numbers and arrangements.
- As the intersection modifies a Caltrans’ facility, coordination with District 4 staff would be a positive early step.
- The Collins Avenue corridor could include treatments that affect the Collins Avenue/Serramonte Blvd. intersection. Given the close proximity to Juniper Serra Blvd, intersection treatments at Junipero Serra Boulevard could potentially include the Collins Avenue intersection.



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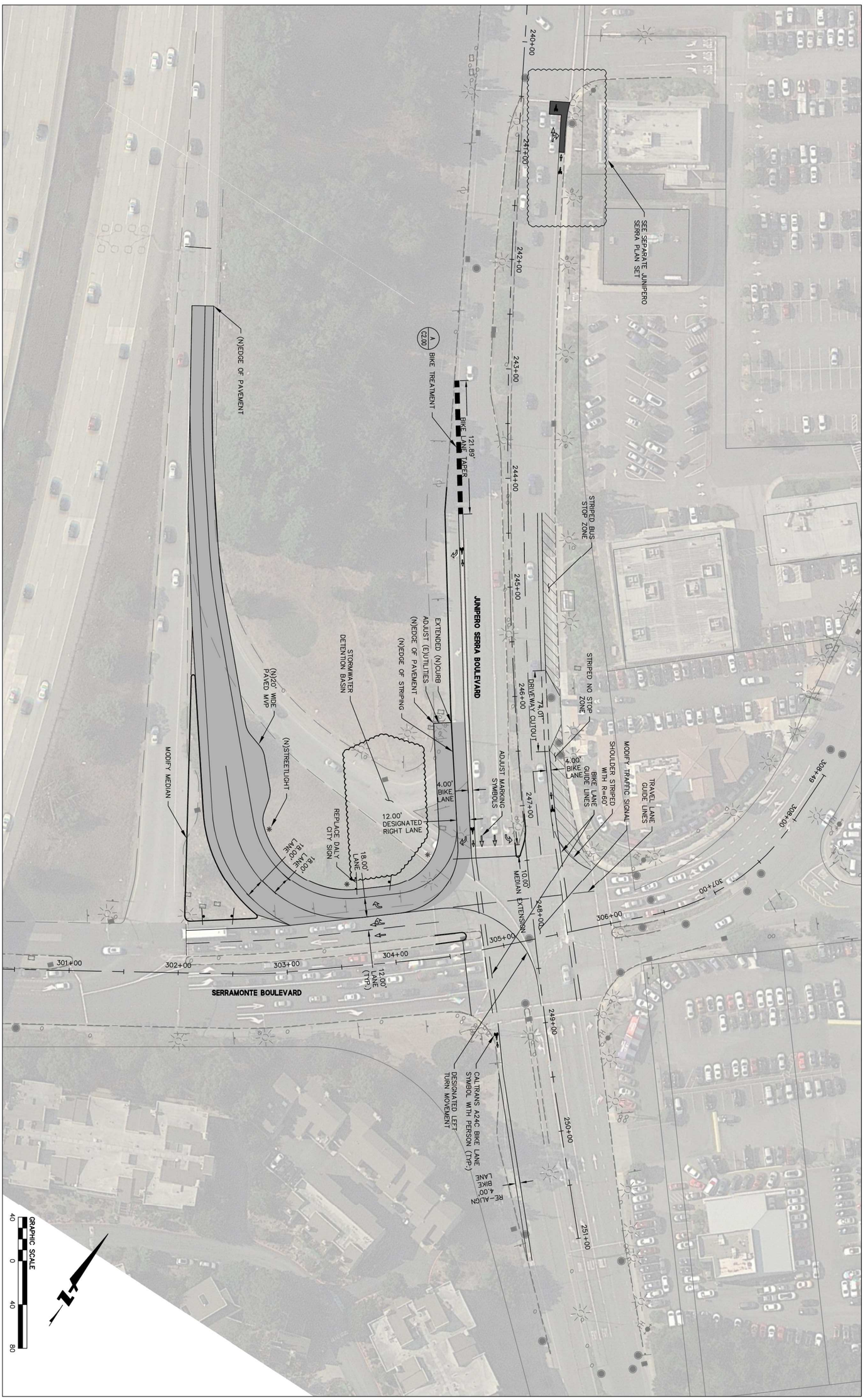

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Existing Conditions

The Junipero Serra Boulevard/Serramonte Boulevard is a five-legged intersection, is controlled by a traffic signal and includes access to the I-280 on-ramp. This configuration creates 'hard' and 'soft' left and right turns on various movements creating conflicting travel paths. Figure 42 shows an aerial of the Junipero Serra Boulevard/Serramonte Boulevard intersection. Serramonte Boulevard curves horizontally through the intersection with Collins Avenue and beings to drop vertically in the eastbound direction. As a result, the current alignment creates sight distance challenges for turning motorists as well as limited time to react to the different movements and activities occurring at the intersection. The multiple legs of the intersection and access to I-280 also requires multiple lanes, overhead signs, and pavement markings on the northbound and eastbound approaches to pre-segregate motor vehicles into the proper lanes based on motorists' desired destinations.

Figure 42: Junipero Serra Boulevard/Serramonte Boulevard and Serramonte Boulevard/Collins Avenue Intersections

Source: Google Earth, 2018.

Project Needs Identified

Kittelson identified that there were six reported crashes at this intersection (1 other visible injury, 2 complaint of pain injuries, and 3 property damage only (PDO)) crashes, during the years 2011-15. The complex and closely-spaced intersection form, access to shopping center and I-280, and the discussions with Town staff identified a desire to reconfigure this intersection. While the intersection provides access to I-280, it is also an important intersection for people walking or biking to access transit stops on Junipero Serra Boulevard as well as to access the commercial uses on Junipero Serra Boulevard and Serramonte Boulevard. Improvements at this location would need to be coordinated with Caltrans. Given the crash history, the project would not be competitive for HSIP funding.

Project #4: Junipero Serra Boulevard from Colma Boulevard to Serramonte Boulevard

Project Description

This project would consider improving bicyclist safety, pedestrian safety and vehicle operations along the corridor. The basis for the project is to improve bike facilities along the corridor, improve pedestrian access, and better delineate the pavement markings for vehicle movements and operations. Town staff has also received concerns from residents that motorists do not properly yield ot people crossing the street in the crosswalks. Kittelson suggests the Town consider the following:

- Installing leading pedestrian intervals or restricting right-turns on red to address the concern that motor vehicles do not yield properly to people crossing the street.
- Installing raised median island for pedestrian refuge on the westbound approach of Junipero Serra Boulevard and Colma Boulevard intersection.
- Striping out the outside receiving lane on the northbound approach of the Junipero Serra Boulevard at the Colma Boulevard intersection to shadow right-turn lane from Colma Boulevard and better delineate bike lane.
- Narrowing to two receiving lanes on the eastbound approach at the Colma Boulevard intersection and delineate southbound left-turns through the intersection.
- Install green bike lane transition markings at the right-turn lanes at intersections along the corridor.
- Install bike box with green bike lane markings at the Serra center driveway intersection on the corridor. This is a good treatment for non-motorized traffic traveling through the corridor.
- Eliminating the median nose for improved pedestrian access at the Serra center driveway intersection.

Figure 43 shows the project scope for the corridor. The estimated cost for this project is $ 335,000, and the benefit-cost ratio is 0.90.

Figure 43

Junipero Serra Boulevard from Colma Boulevard to Serramonte Boulevard

Estimated Cost: $335,000 **Benefit/Cost Ratio: 0.9**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- Junipero Serra Boulevard is a north-south study corridor running in parallel to ECR and I-280.
- Corridor segment has a rolling grade with up and down grades.
- The corridor has sidewalk on the east side of the corridor until the Serramonte/Junipero Serra Boulevard intersection.
- Serramonte Boulevard interchanges with I-280 providing a freeway connection to the town through this corridor.

Crash Severity Score **4.08**

Number of Crashes **5**

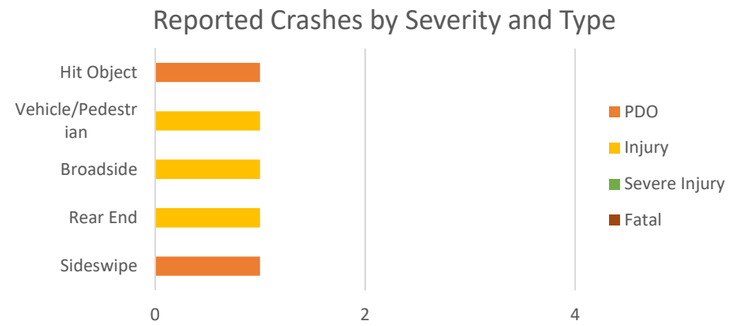
Crash Summary

Crash Type and Contributing Factors

- 1 broadside crash, automobile right of way
- 1 rear-end crash, following too closely
- 1 vehicle/pedestrian crash, pedestrian right-of-way
- 1 sideswipe crash, improper turning
- 1 hit object crash, unsafe lane change

Crash Severity

- 3 Complaint of Pain Injury crashes
- 2 PDO crashes (improper turning, unsafe lane change)



Project Description

This concept sketch illustrates an approach to improve bicycle safety, pedestrian safety and vehicle operations.

- Installing raised median island for pedestrian refuge on the westbound approach of Junipero Serra Boulevard and Colma Boulevard intersection.
- Striping out the outside receiving lane on the northbound approach of the Junipero Serra Boulevard at the Colma Boulevard intersection to shadow right-turn lane from Colma Boulevard and better delineate bike lane.
- Narrowing to two receiving lanes on the eastbound approach at the Colma Boulevard intersection and delineate southbound left-turns through the intersection.
- Installing green bike lane transition markings at the right-turn lanes at intersections along the corridor.
- Installing bike box with green bike lane markings at the Serra center driveway intersection on the corridor.
- Eliminating the median nose for improved pedestrian access at the Serra center driveway intersection.

Design Considerations

- This project would consider improving bicyclist safety, pedestrian safety and vehicle operations along the corridor.
- The basis for the project is to improve bike facilities along the corridor, improve pedestrian access, and better delineate the pavement markings for vehicle movements and operations.
- Kittelson suggested implementing leading pedestrian intervals at traffic signals and restricting the right-turns on red at the intersections.

Note: Preliminary Design provided in the next page

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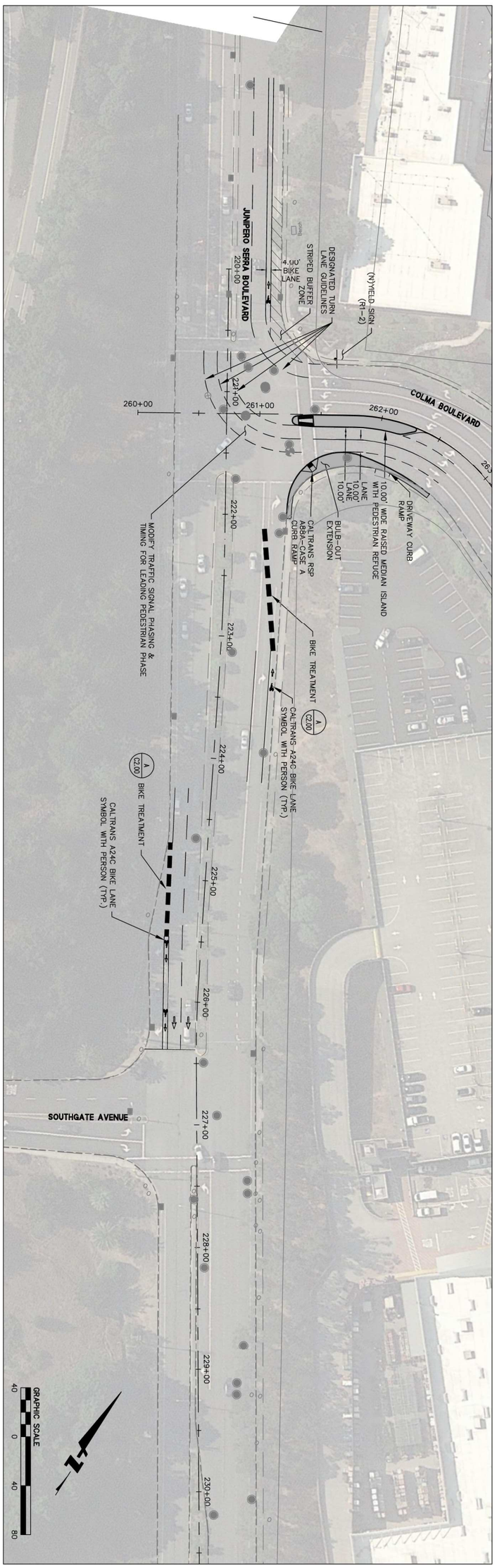

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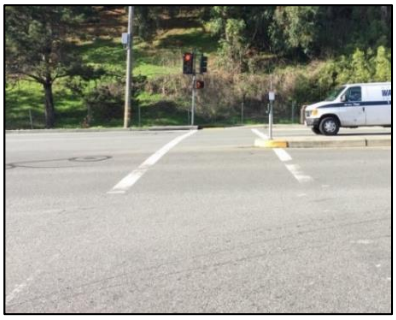
Existing Conditions

Junipero Serra Boulevard (JSB) is a north-south study corridor running in parallel to ECR and I-280, between the northern and southern town limits . The corridor has commercial development at the Serramonte Center. Serramonte Boulevard interchanges with I-280 providing a freeway connection to the town. The corridor segment has a rolling grade with up and downgrades. The corridor has sidewalk on the east side of the corridor until the Serramonte Boulevard/JSB intersection. Figure 44 shows the existing conditions on the corridor.



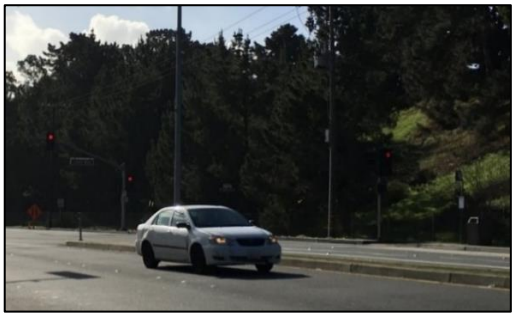


Figure 44: Existing Conditions on JSB Corridor

Project Needs Identified

Kittelson identified that there were 5 reported crashes on the corridor from Colma Boulevard to Collins Avenue intersection on JSB, during the years 2011-15. The discussions with Town Staff, proximity to the commercial development, and access to I-280 identified a desire to consider improvements on the JSB corridor. The crash history would not lead to a competitive HSIP application. Town staff and community input indicate there is pedestrian and bicyclist activity along the corridor, especially at the JSB/Colma Boulevard intersection, and general concern about drivers not yielding to pedestrians crossing the street at this intersection. Low cost countermeasures such as implementing 'Leading Pedestrian Intervals' or 'No Right-Turn on Red' at the signalized intersections could be implemented by the Town in the near-term.

Project #5: Reconfiguring Colma Boulevard from El Camino Real to Junipero Serra Boulevard

Project Description

This project would consider converting the current cross-section on Colma Boulevard from ECR to the driveway near Burger King to a road-diet, with bike lane on both sides of the roadway, and sidewalk on one side of the roadway. This change could align with the driver expectancy while traveling along this corridor. The project team suggests installing street lights along the corridor. Kittelson suggests the Town consider the following:

- Installing raised median to shadow left turn lane on westbound approach to Junipero Serra Boulevard.
- Transitioning from the current lane configuration on Colma Boulevard to three lane cross section (i.e. one lane on either side of the roadway with a two-way center turn lane), and bike lanes on both sides of the roadway, with sidewalk on one side of the roadway.

Figure 45 shows the project scope for this location. The estimated cost for this project is $ 956,250, and the benefit-cost ratio is 0.43.

Figure 45

Colma Boulevard from El Camino Real to Junipero Serra Boulevard

Estimated Cost: $956,250 **Benefit/Cost Ratio:0.43**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- Colma Boulevard is an east-west study corridor running in between El Camino Real and Junipero Serra Boulevard.
- The corridor has cemeteries near El Camino Real intersection and commercial development to the west approaching Junipero Serra Boulevard.
- The corridor has higher vehicle speeds traveling east, because of the downgrade towards El Camino Real.

Crash Severity Score **3.45**

Number of Crashes **7**

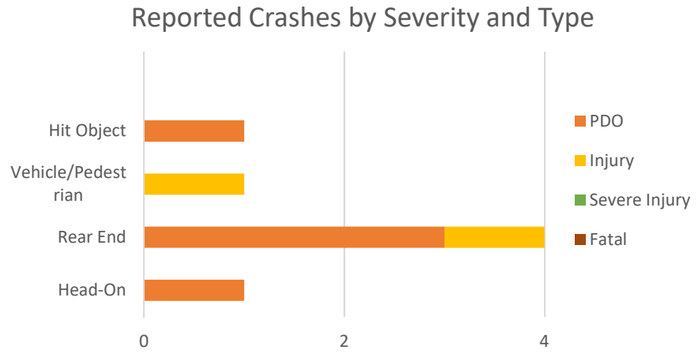
Crash Summary

Crash Type and Contributing Factors

- 4 rear-end crashes; improper turning, unsafe speed
- 1 vehicle/pedestrian crash, unsafe starting and backing
- 1 hit object crash, improper turning
- 1 head-on crash, lane change

Crash Severity

- 2 Complaint of Pain Injury crashes (improper turning, unsafe starting and backing)
- 5 PDO crashes (unsafe speed, improper turning, lane change)



Project Description

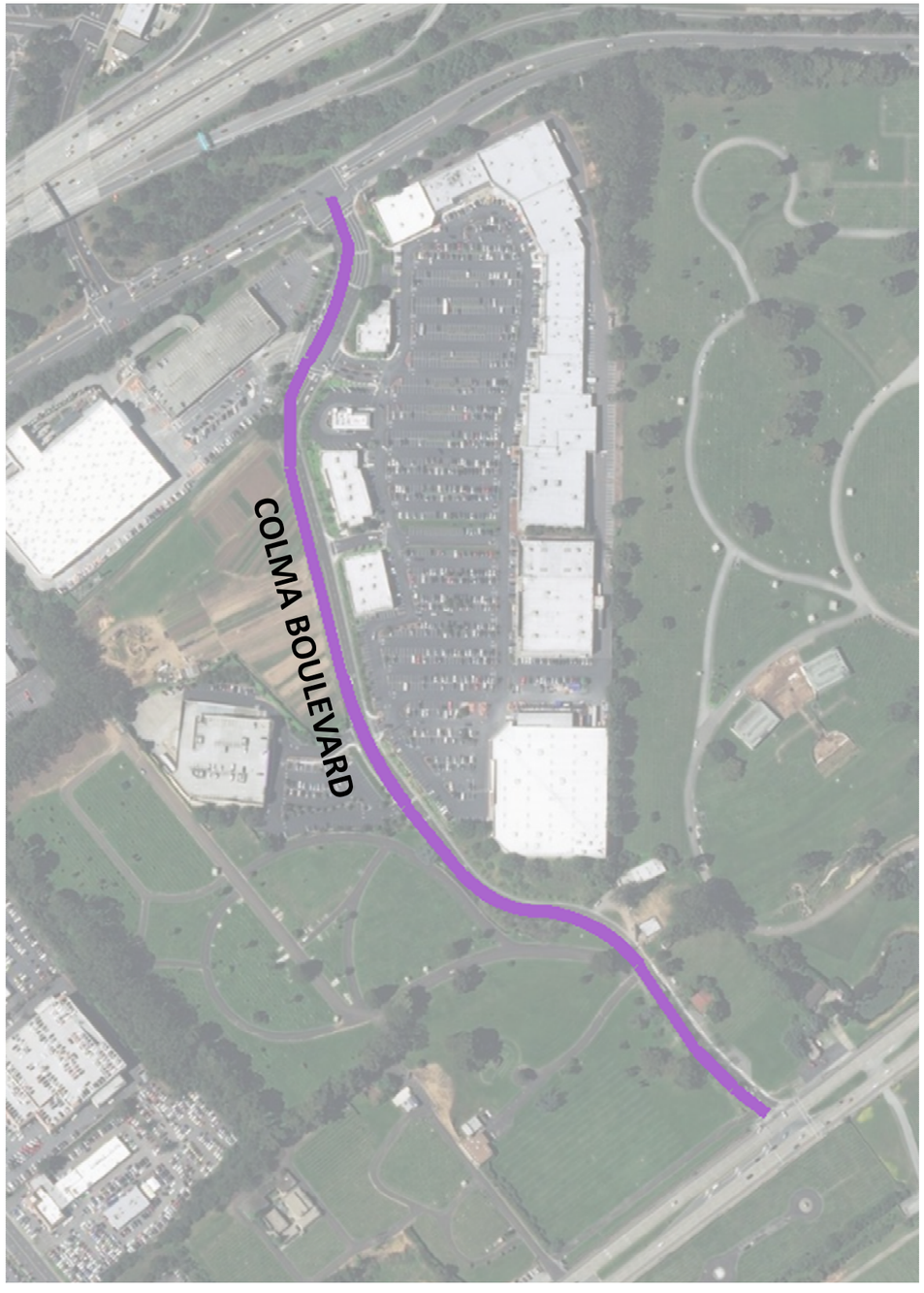
This concept sketch illustrates an approach to improve bicycle safety, pedestrian safety. Key items from the concept include:

- Installing raised median to shadow left turn lane on westbound approach to Junipero Serra Boulevard.
- Transitioning from the current lane configuration on Colma Boulevard to three lane cross-section (i.e. one lane on either side of the roadway with a two-way center turn lane), and bike lanes on both sides of the roadway, with sidewalk on one side of the roadway.
- This reconfiguration includes sidewalk on one side of the roadway.

Design Considerations

- This project would consider converting the current cross-section on Colma Boulevard from ECR to the driveway near Burger King to a road-diet, with bike lane on both sides of the roadway. This change could align with the driver expectancy while traveling along this corridor.

Note: Preliminary Design provided in the next page



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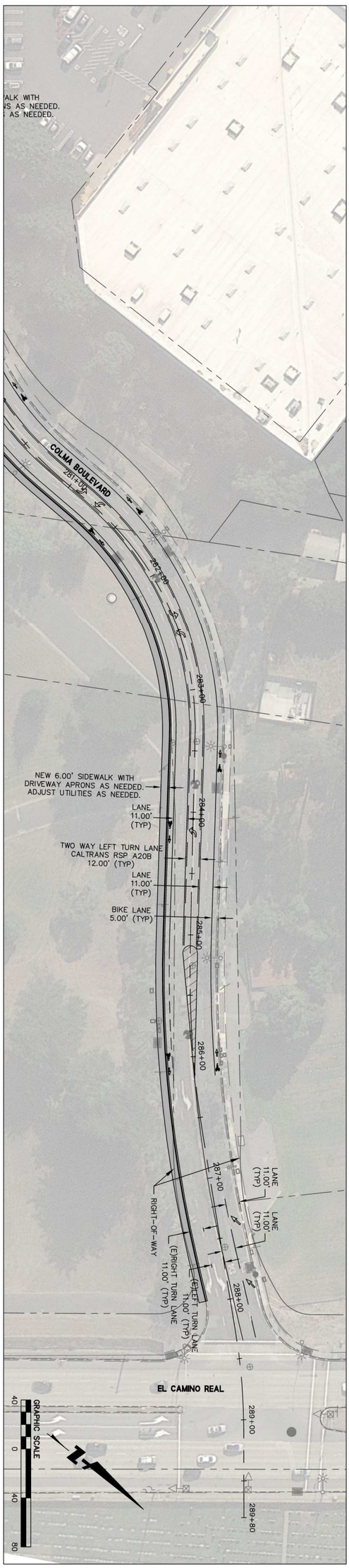

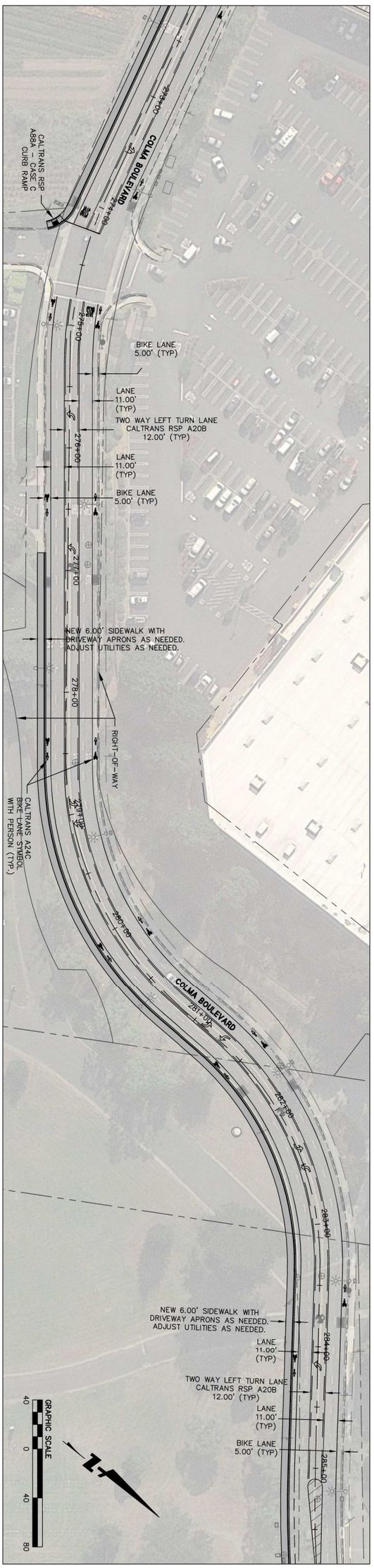

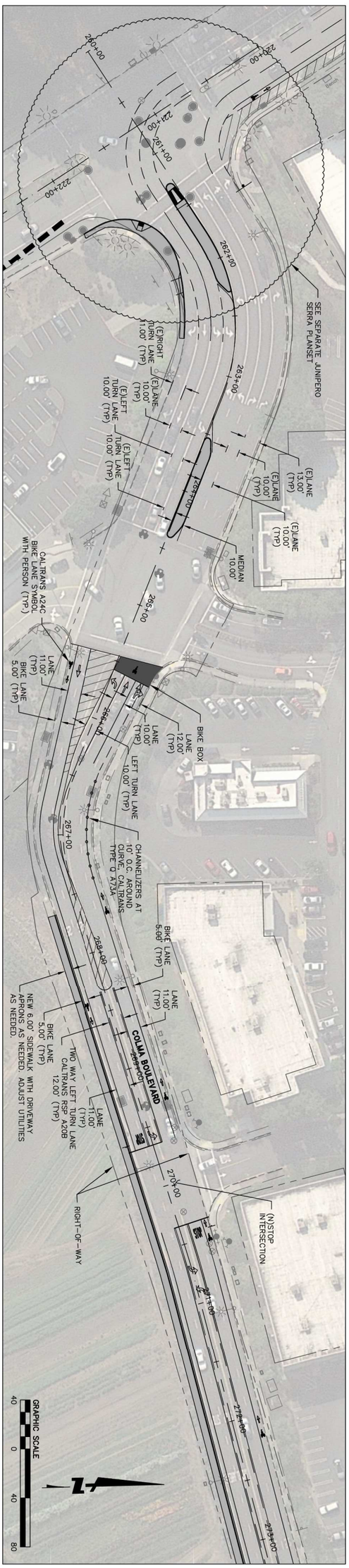

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	Approved	JCM		
	Job No	20170252		

COLMA SSAR
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PLAN, SIGNING & STRIPING

TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

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30% CONCEPT PLANS

Existing Conditions

Colma Boulevard is an east-west study corridor between ECR and JSB . The corridor has cemeteries near the ECR intersection and commercial development to the west approaching JSB. The corridor has four lanes at ECR that widens at the JSB intersection. The roadway is inclined going west from ECR and vehicle speeds are higher traveling east, down hill toward ECR. The corridor has sidewalk on the north side the entire length of the corridor and on both sides from the commercial development westward. Figure 46 shows existing conditions on Colma Boulevard.

Figure 46: Existing Conditions on Colma Boulevard

Project Needs Identified

Kittelson identified that there were seven reported crashes along the corridor, of which two were complaint of pain injuries, and five were PDO crashes, during the years 2011-15. The presence of commercial development on the westside of the corridor, proximity/connection to two major corridors in town (i.e. ECR and JSB) and discussions with Town Staff identified a desire to reconfigure the cross-section on the corridor. The crash history along this corridor would not lead to a competitive HSIP application. However, the risk factors related to the non-motorized users, community concerns regarding the drivers not yielding to pedestrians at the Colma Boulevard/JSB intersection, and retail centers along the corridor may help the Town pursue Caltrans ATP or Transportation Planning grant program funding for improvements on the corridor.

Project #6: El Camino Real/F Street Intersection

Project Description

The project would consider improving pedestrian safety and vehicle operations at this intersection. The basis of this design is to improve sight lines at the north F street intersection by squaring up the westbound approach, eliminating parking, and widening sidewalk under the BART overcrossing. The project concept would simplify the south F street intersection by well defining and modifying access to the Woodlawn Memorial Park. Kittelson suggests that the access to Woodlawn Cemetery should be right-in only, i.e. entrance only and not exit. In addition to this, Kittelson also suggests installing speed feedback signs near the ECR/F Street intersection approach to reduce westbound vehicle speeds. Kittelson suggests the Town consider the following at this intersection:

- Squaring up the F street northbound right-turn lane.
- Removing parking on northbound ECR between F streets north and south of Bay Area Rapid Transit (BART) overcrossing and widening the sidewalk and curb.
- Widening the sidewalk and the north F street intersection crosswalk along ECR.
- Striping a defined southbound right-turn lane and striping out the extra wide shoulder at the Woodlawn Memorial Park driveway.
- Closing the median opening in front of the north F street intersection.
- Consider closing or modifying the Woodlawn Memorial Park driveway near the south F street intersection.
- Widening the median on ECR so that the left turn lanes to the south F street intersection begins after the Woodlawn Memorial Park driveway.
- Adding bike lanes on both sides of the roadway, with two travel lanes in each direction of the ECR corridor.

Figure 47 shows the project scope for this priority location. The estimated cost for this project is $ 342,100, and the benefit-cost ratio is 0.30.

Figure 47

El Camino Real and F Street (Eastern Intersection)

Estimated Cost: $342,100 **Benefit/Cost Ratio:0.3**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- F street branches off El Camino Real with a steep upgrade and then levels off to the north side.
- Parked cars on northbound El Camino Real decrease intersection sight distance from F street.
- A gentle right turn curb return results in poor sightlines to northbound El Camino Real.
- State facility intersection.
- El Camino Real is a six-lane facility with a median.
- Two northbound left-turn lanes at the south F Street leg increases the pedestrian crossing distance across El Camino Real.

Crash Severity Score **3.40**

Number of Crashes **2**

Reported Crashes by Severity and Type

Crash Summary

Crash Type and Contributing Factors

- 1 broadside crash, traffic signals and signs violation
- 1 rear-end crash, unsafe speed

Crash Severity

- 1 Other Visible Injury crash (traffic signals and signs violation)
- 1 Complaint of Pain Injury crash (unsafe speed)

Project Description

This concept sketch illustrates an approach to improve pedestrian safety and vehicle operations. Key items from the concept include:

- Squaring up the F street northbound right-turn lane
- Removing parking on northbound El Camino Real between F Streets north and south of the BART overcrossing and widening the sidewalk and curb.
- Widening the sidewalk and the north F Street intersection cross walk along El Camino Real.
- Striping a defined southbound right-turn lane to and striping out the extra wide shoulder at the Woodlawn Memorial Park driveway.
- Closing the median opening in front of the north F Street intersection.
- Consider closing or modifying the Woodlawn Memorial Park driveway near the south F Street intersection.
- Widening the median so that the left turn lanes to the south F Street intersection begins after the Woodlawn Memorial Park driveway.

Design Considerations

- The basis of this design is to improve sight lines at the north F Street intersection by squaring up the westbound approach and eliminating parking and widening the sidewalk under the BART overcrossing. The concept could simplify the south F Street intersection defining and possibly modifying access to Woodlawn Memorial Park.
- The concept identifies opportunities to better define access to the Woodlawn Memorial Park facility. Future study activities should include understanding facility operations and working cooperatively with the facility staff.
- Investigating treatments for the north and south F Street intersections should include considering access and circulation at the Woodlawn Memorial Park facility.
- As the intersection modifies a Caltrans' facility, coordination with District 4 staff would be a positive early step.
- Adding bike lanes on both sides of the roadway, with two travel lanes in each direction of ECR.

Existing Conditions

Kittelson observed that there are cemeteries near this intersection, and F street branches off ECR with a steep upgrade and then levels off to the north side. ECR has 40 mph posted speed limit in the Town of Colma, and has pedestrian crosswalk at the southern end of the intersection. Parked cars on northound ECR decrease intersection sight distance from F street. A gentle right turn curb return results in poor sightlines to northbound ECR. ECR has three through travel lanes on both sides of the roadway and two northbound left-turn lanes at the south F street intersection leg, which increases pedestrian crossing distance across ECR. Figure 48 shows the existing conditions at ECR/F Street intersection.

Figure 48: Existing Conditions at El Camino Real/F Street Intersection.

Project Needs Identified

Kittelson identified that there were two reported crashes at this intersection, one other visible injury and the other was complaint of pain injury during the years 2011-15. The discussions with town staff, community input, and the intersection being in residential area identified a desire to consider improvements to this intersection.

Given the crash history, and the improvements identified, this project would not be eligible for HSIP funding. With the nature of the improvements, we also do not think it would be a competitive ATP grant application. For changes at this intersection, the Town would need to coordinate with Caltrans about potential improvements.

Project #7: El Camino Real/Serramonte Boulevard Intersection

Project Description

This project would consider improving pedestrian safety and vehicle operations at the intersection. The basis of this design is to reduce curb radii and enhance pedestrian crossings at the ECR intersection. Each roadway has multiple lanes each direction and that width could potentially serve large trucks. Serramonte Boulevard has a downgrade approaching ECR, and the downgrade contributes to westbound speeds. This project proposed median in any form that narrows the roadway to four lanes in this location and would contribute to speed management down the hill. Kittelson suggests the Town consider the following:

- Reducing curb return radii, adjusting and defining sidewalks.
- Creating angled left-turn lanes on El Camino Real to improve sight lines and facilitate turning movements.
- Defining better on street parking on El Camino Real outside the intersection area.
- Restriping westbound Serramonte Boulevard to maintain two through lanes through the horizontal curves. The right-turn lane would be added in the tangent section approaching the intersection.
- Considering an eastbound left-turn lane from Serramonte Boulevard to the Town of Colma Police complex. A median in any form reduces the roadway to four lanes in this location and will support vehicle speed management down the hill.
- Adding bike lanes on both sides of ECR, with two travel lanes in each direction along the entire corridor.

Figure 49 shows the project scope for this priority location. The estimated cost for this project is $ 335,900, and the benefit-cost ratio is 0.20.

Figure 49

El Camino Real and Serramonte Boulevard

Estimated Cost: $335,900 **Benefit/Cost Ratio:0.2**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- This intersection is a four-legged intersection with skewed crosswalks on the north and south legs of the intersection.
- Turn lanes are developed on westbound Serramonte at a horizontal curve creating undefined travel paths near adjacent driveways
- State facility intersection.
- El Camino Real is a six-lane facility with a wide median.
- Serramonte Boulevard is a four lane roadway, with auto dealerships and commercial development along the corridor.

Crash Summary

Crash Type and Contributing Factors

- 1 hit-object crash, improper turning
- 1 rear end crash, unsafe speed
- 1 other crash, unknown

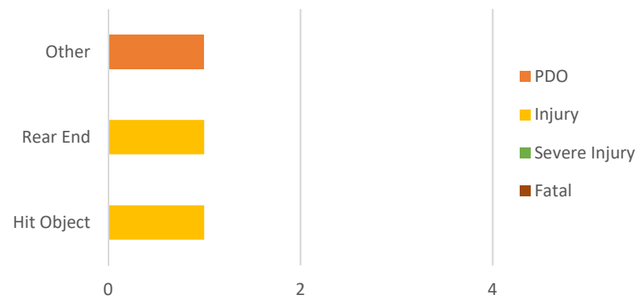
Crash Severity

- 2 Complaint of Pain Injury crashes (improper turning, unsafe speed)
- 1 PDO crash (unknown)

Crash Severity Score **2.65**

Number of Crashes **3**

Reported Crashes by Severity and Type



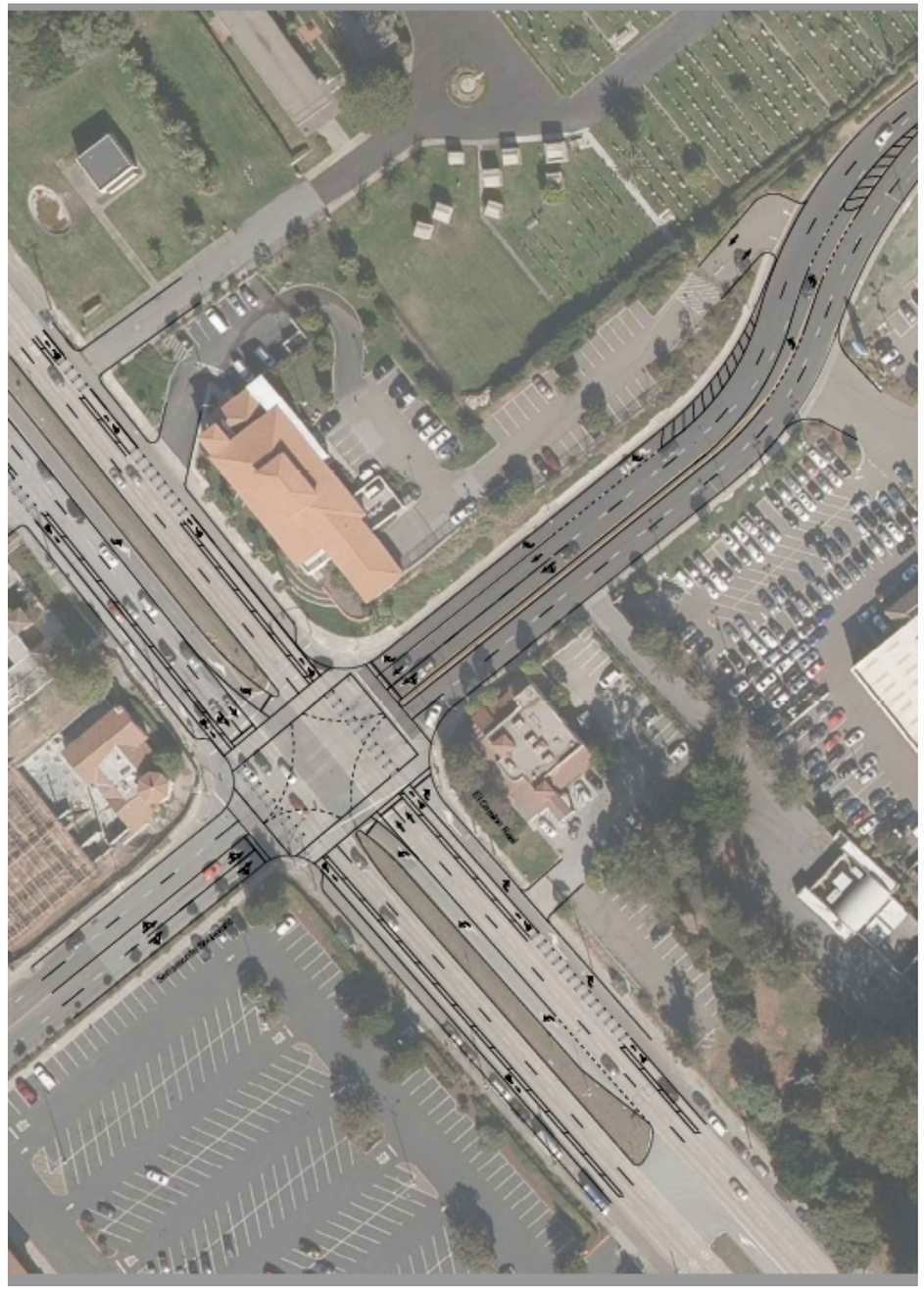
Project Description

This concept sketch illustrates an approach to improve pedestrian safety and vehicle operations. Key items from the concept include:

- Reducing curb return radii adjusting and defining sidewalks.
- Creating angled left turn lanes on El Camino Real to improve sight lines and facilitate turning movements.
- Better defining on street parking on El Camino Real outside the intersection area.
- Restriping westbound Serramonte Boulevard to maintain two through lanes through the horizontal curves. The right turn lane would be added in the tangent section approaching the intersection.
- Considering an eastbound left turn lane from Serramonte Blvd. to the Town of Colma Police complex. A median in any form narrows the roadway to four lanes in this location and support speed management down the hill.
- Adding bike lanes on both sides of ECR, with two travel lanes in each direction along the entire corridor.

Design Considerations

- The basis of this design is to reduce curb return radii and enhance pedestrian crossings at the El Camino Real intersection. Each roadway has multiple lanes each direction and that width could potentially serve large trucks.
- Serramonte Blvd has a down grade approaching El Camino Real. The down grade contributes to westbound speeds. The northbound right turn lane is added in the horizontal curve contributing to a wider, undefined roadway near the Town Police facility and auto sales complex. Access and circulation at these locations should be investigated to optimize configurations . Developing the northbound right turn lane after the horizontal curve separates conflicts from the through and turning movements to the driveways.
- Design vehicle needs for each movement will need to be evaluated.
- As the intersection modifies a Caltrans' facility, coordination with District 4 staff would be a positive early step.



Existing Conditions

ECR/Serramonte Boulevard is a four-legged intersection with skewed crosswalks on the north and south legs of the intersection. ECR is a six-lane facility with a wide median. Turn lanes are developed on westbound Serramonte at a horizontal curve creating undefined travel paths near adjacent driveways. Serramonte Boulevard is a four-lane roadway, with auto dealerships and commercial development along the corridor. Figure 50 shows existing conditions at this intersection.

Figure 50: Existing Conditions at El Camino Real and Serramonte Boulevard Intersection.

Project Needs Identified

Kittelson identified that there were three reported crashes (one PDO and two complaint of pain injury crashes) during the years, 2011-15 at this intersection. Because of the proximity of this location to several auto dealerships, and commercial development, the Town of Colma identified a desire to make necessary improvements to this intersection, and to improve the walking facilities at the intersection. Given the crash history and the improvements identified, this project would not be eligible for HSIP funding. Changes to ECR would require coordination with Caltrans.

Project #8: El Camino Real/Colma Boulevard Intersection

Project Description

This project would consider improving pedestrian and bicyclist safety. The basis of this design is to better define and delineate pedestrian crossing treatments across ECR and Colma Boulevard and providing buffered bike lanes along ECR. This project would consider investigating and proposing changes to the Greek Orthodox Memorial Garden access at Colma Boulevard, which will require coordinating with the facility and understanding access and circulation needs. Kittelson suggests the Town consider the following:

- Reconfiguring ECR to two travel lanes in each direction, with buffered bike lanes on both sides of the roadway.
- Extending the median to provide a pedestrian refuge area for the El Camino Real crossing.
- Providing angled left-turn lanes to adjacent driveways north of Colma Boulevard.
- Considering closing the driveway from the Greek Orthodox Memorial Park at Colma Boulevard or converting this access to one way outbound only.

Figure 51 shows the project scope for this intersection. The estimated cost for this project is $ 126,400, and the benefit-cost ratio is 0.50.

Figure 51

El Camino Real and Colma Boulevard

Estimated Cost: $126,400 **Benefit/Cost Ratio:0.5**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- Colma Boulevard has a significant downgrade eastbound approaching El Camino Real. The downgrade increases vehicles speeds approaching El Camino Real .
- State facility intersection.
- El Camino Real is a six-lane facility with a wide median.
- Colma is a four lane roadway.
- There is currently a standard crosswalk on the north leg of the intersection.
- Near-side transit stops are on either side of Colman Boulevard

Crash Summary

Crash Type and Contributing Factors

- 1 head-on crash, traffic signals and signs violation

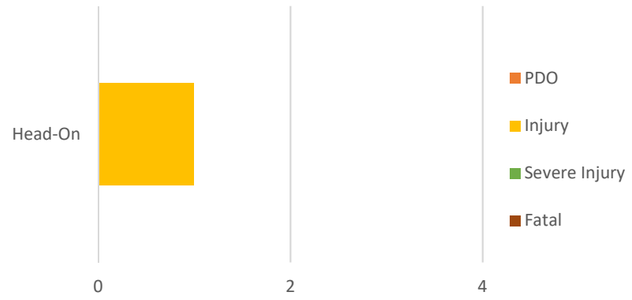
Crash Severity

- 1 Other Visible Injury crash (traffic signals and signs violation)

Crash Severity Score **2.17**

Number of Crashes **1**

Reported Crashes by Severity and Type



Project Description

This concept sketch illustrates an approach to improve pedestrian and bicyclist safety. Key items from the concept include:

- Reconfiguring ECR to two travel lanes in each direction, with buffered bike lanes on either sides of the roadway.
- Extending the median to provide a pedestrian refuge area for the El Camino Real crossing.
- Providing angled left-turn lanes to adjacent driveways north of Colma Blvd.
- Considering closing the driveway from the Greek Orthodox Memorial Park at Colma Blvd or converting this access to one way outbound only.

Design Considerations

- The basis of this design is to better define and delineate pedestrian crossing treatments across El Camino Real and Colma Blvd and providing buffered bike lanes along El Camino Real.
- Investigating changes to the Greek Orthodox Memorial Garden access at Colma Blvd will require coordinating with the facility to understand access and circulation needs.
- The sidewalk on the south side of Colma Blvd terminates at a stair case. Studies of the potential driveway closure or modification should consider ADA compatible approaches to serving pedestrians at this location.
- As the intersection modifies a Caltrans' facility, coordination with District 4 staff would be a positive early step.

Existing Conditions

Colma Boulevard has a significant downgrade eastbound approaching ECR, and Kittelson observed higher vehicle travel speeds approaching ECR. Colma Boulevard has sidewalk on the north side of the corridor and is a four-lane roadway. Near-side transit stops are on either side of Colma Boulevard. Figure 52 shows the existing conditions on Colma Boulevard/ECR intersection.

Figure 52: Existing Conditions at Colma Boulevard/ECR.

Project Needs Identified

Kittelson identified that there was one reported other visible injury crash at this intersection, which was a head-on crash during the years 2011-15. The discussions with the Town staff, field observations, and the community concerns identified a desire to consider improvements at this intersection. Given the crash history, and the improvements, the project would not be competitive for HSIP funding. Changes on ECR would require coordination with Caltrans.

Project #9: Collins Avenue from El Camino Real to Serramonte Boulevard

Project Description

The project would consider improving vehicle operations along the corridor. The basis for the project is to facilitate slower vehicle speeds along the corridor, and to provide pedestrian accommodations continuously throughout the corridor. Kittelson suggests implementing street lighting along the entire corridor. Kittelson suggest the Town consider the following:

- Installing speed feedback sign at the location of existing speed limit sign.
- Restriping the corridor to delineate outer edges with parking and no parking areas.
- Narrowing the lanes to 11ft wide and including centerline with raised pavement markers.
- Providing continuous sidewalk along the corridor, i.e. providing sidewalk links to the existing sidewalk through the driveway area.
- Reconfiguring Collins Avenue/Serramonte Boulevard intersection.
- Installing a traffic signal at Collins Avenue/El Camino Real intersection, to meet the intended outcomes at this intersection.

Figure 53 shows the project scope for the corridor from ECR to JSB intersection. The estimated cost for this project is $ 1,470,000, and the benefit-cost ratio is 0.10.

Figure 53

Collins Avenue from El Camino Real to Serramonte Boulevard

Estimated Cost: $1,470,000 **Benefit/Cost Ratio: 0.1**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- Collins Avenue is an east-west study corridor running in between El Camino Real and Junipero Serra Boulevard.
- El Camino Real is a state facility.
- The corridor has industrial development with car dealerships near Serramonte Boulevard on the south side.
- The corridor has shopping center near the El Camino Real/Collins Avenue intersection on the north side.
- There is on-street parking on the west side of the corridor, and on both sides near the Serramonte Ford Body Shop.

Crash Severity Score **2.18**

Number of Crashes **1**

Crash Summary

Crash Type and Contributing Factors

- 1 head-on, improper turning crash

Crash Severity

- 1 Other Visible Injury crash (improper turning)

Reported Crashes by Severity and Type

Project Description

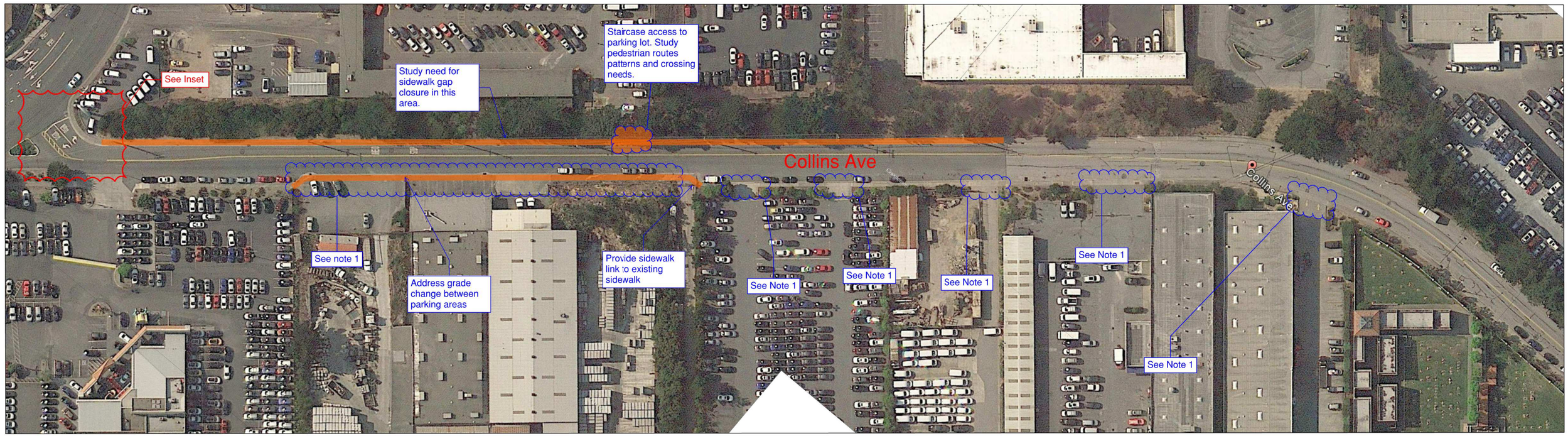
This concept sketch illustrates an approach to improve vehicle operations along the corridor. Key items from the concept include:

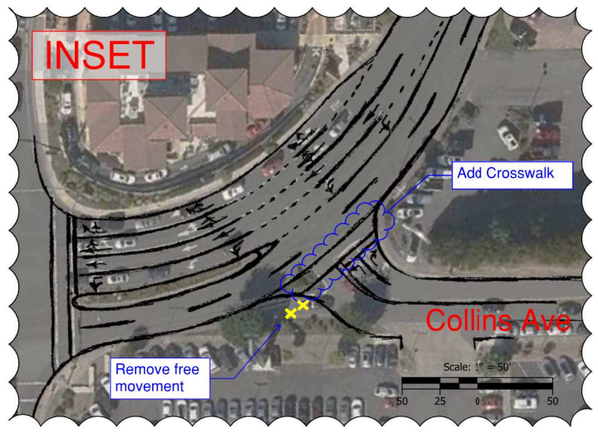
- Installing speed feedback signs at the location of existing speed limit sign.
- Restriping the corridor to delineate outer edges with parking and no parking areas.
- Narrowing the lanes to 11ft wide and including centerline with raised pavement markers.
- Providing continuous sidewalk along the corridor, i.e. providing sidewalk links to the existing sidewalk through the driveway area.
- Reconfiguring Collins Avenue/Serramonte Boulevard intersection.
- Installing a traffic signal at Collins Avenue/El Camino Real intersection, to meet the intended outcomes at the intersection.

Design Considerations

- The project would consider improving vehicle operations along the corridor. The basis for the project is to facilitate slower vehicle speeds along the corridor, and to provide pedestrian accommodations continuously throughout the corridor.

Note: Concept provided in the next page

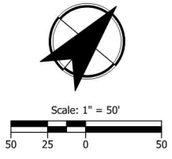


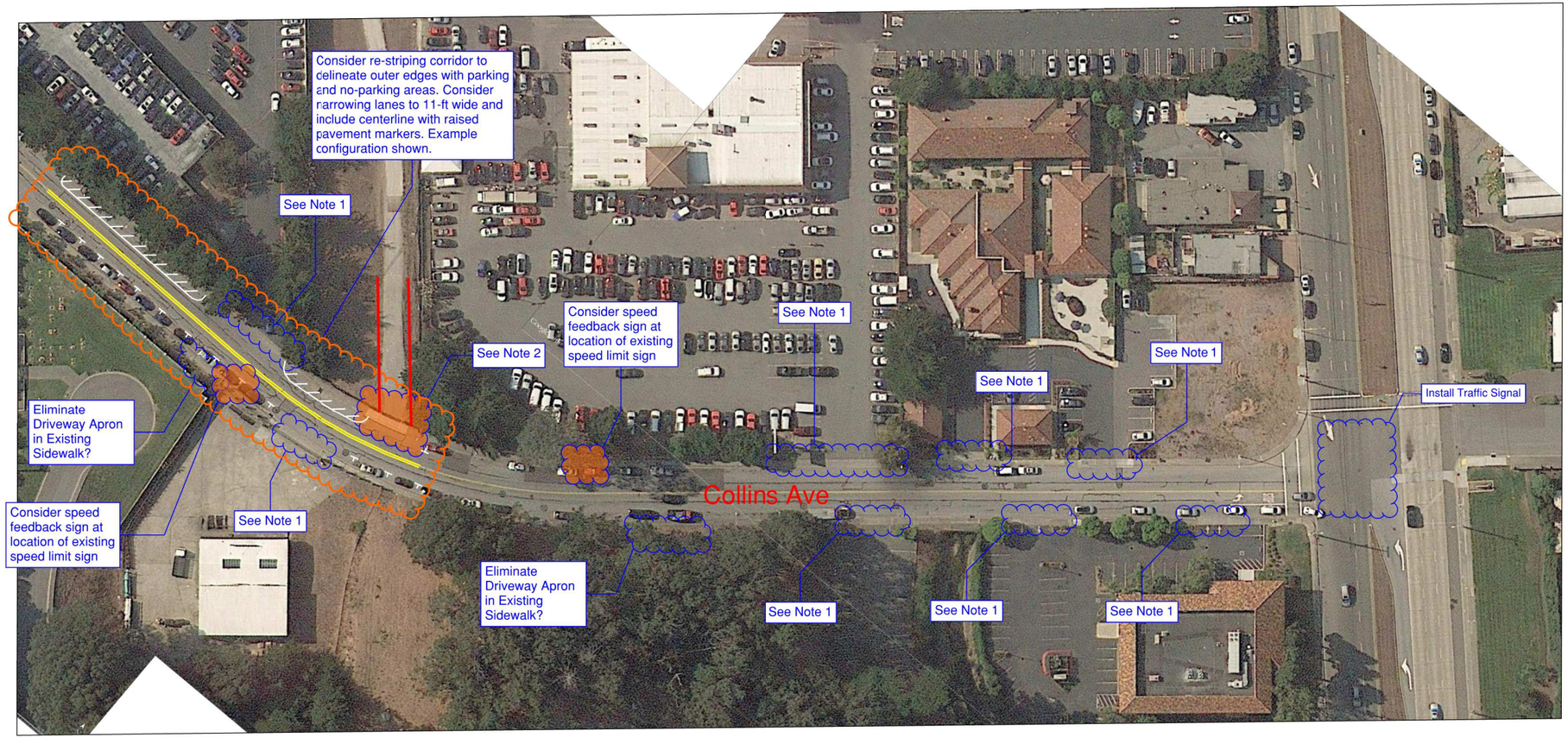


Notes:

1. Study and consider improvements to continuity of accessible sidewalk path through driveway area.

2. Possible future street connection. If constructed:
   -Maintain adequate intersection sight distance (additional parking restrictions may be required).
   -Consider needs for marked pedestrian crossing as well as need for pedestrian activated warning lights (i.e. rectangular rapid flashing beacon). Consider curb extensions/bulb-outs to increase pedestrian visibility.





Existing Conditions

Collins Avenue is an east-west study corridor between Serramonte Boulevard and ECR. The corridor has industrial development with car dealerships near Serramonte Boulevard on the south side, and some car dealerships and a shopping center (i.e. Kohl's) near the ECR/Collins Avenue intersection on the north side of the corridor. There is on-street parking on one side of the corridor on the west side, and on both sides near the Serramonte Ford Body Shop along the Collins Avenue corridor. Figure 54 shows the existing conditions on Collins Avenue corridor.

Figure 54: Existing Conditions along Collins Avenue

Source: Google Street View, 2018.

Project Needs Identified

Kittelson identified that there was one other visible injury along this corridor, which was a head-on crash, during the years 2011-15. The discussions with Town staff, and the unusual configuration of the Collins Avenue/Serramonte Boulevard intersection combined with the cross-section of the corridor identified a desire to make improvements to this corridor. Given the crash history, and the improvements, the project would not be competitive for HSIP funding. Improvements could be integrated into the Town's on-going Serramonte-Collins Master Plan project.

Project #10: El Camino Real/Collins Avenue Intersection

Project Description

This project would consider improving pedestrian safety and vehicle operations at the intersection. The basis of this project is reducing the number of lanes on ECR south of Serramonte Boulevard intersection, and maintaining two lanes in each direction on ECR until the north of Collins Avenue intersection. The key items include dropping the southbound lane on ECR, adding a northbound lane downstream of the intersection on ECR, and enhancing pedestrian crossing treatments at the intersection. To further reduce the potential risk for crashes at this location, Kittelson suggests the Town consider the following:

- Dropping the third southbound lane on ECR, thereby eliminating the lane drop downstream of the intersection.
- The upstream two-lane section on ECR could be associated with the possible ECR/Mission Road lane configuration and the intersection treatments that eliminate the added third lane at Mission Road.
- Extending the curb returns on the west side of the intersection and converting the third northbound lane into on-street parking.
- Extending the median to create a separated pedestrian refuge island. Enhance the existing pedestrian crossings on the west and north sides of the intersection.
- Adding painted channelizing island at angled northbound left turn lane on ECR to Collins Avenue to better channelize intersection movements.
- Reconfiguring ECR with two travel lanes in each direction, and with bike lanes on both sides of the roadway.
- Installing a traffic signal to meet the intended outcomes at this intersection.

Figure 55 shows the project scope at this intersection. The estimated cost for this project is $ 2,688,000, and the benefit-cost ratio is 0.03.

Figure 55

El Camino Real and Collins Avenue

Estimated Cost: $2,688,000 Benefit/Cost Ratio:0.033

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- The intersection is a three-legged intersection with a slightly offset driveway access on the west side of the intersection.
- State facility intersection.
- El Camino Real is a four-lane facility to the south and six-lane facility to the north with a wide median.
- Collins is a two lane roadway.
- There are currently standard striped crosswalks on the west and north legs of the intersection.

Crash Summary

Crash Type and Contributing Factors

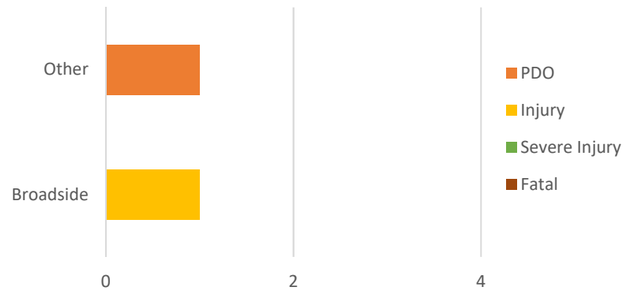
- 1 improper turning crash, other
- 1 broadside, automobile right-of-way crash

Crash Severity

- 1 complaint of pain injury crash (automobile right-of-way)
- 1 property damage only crash (other)

Crash Severity Score **1.43**

Number of Crashes **2**



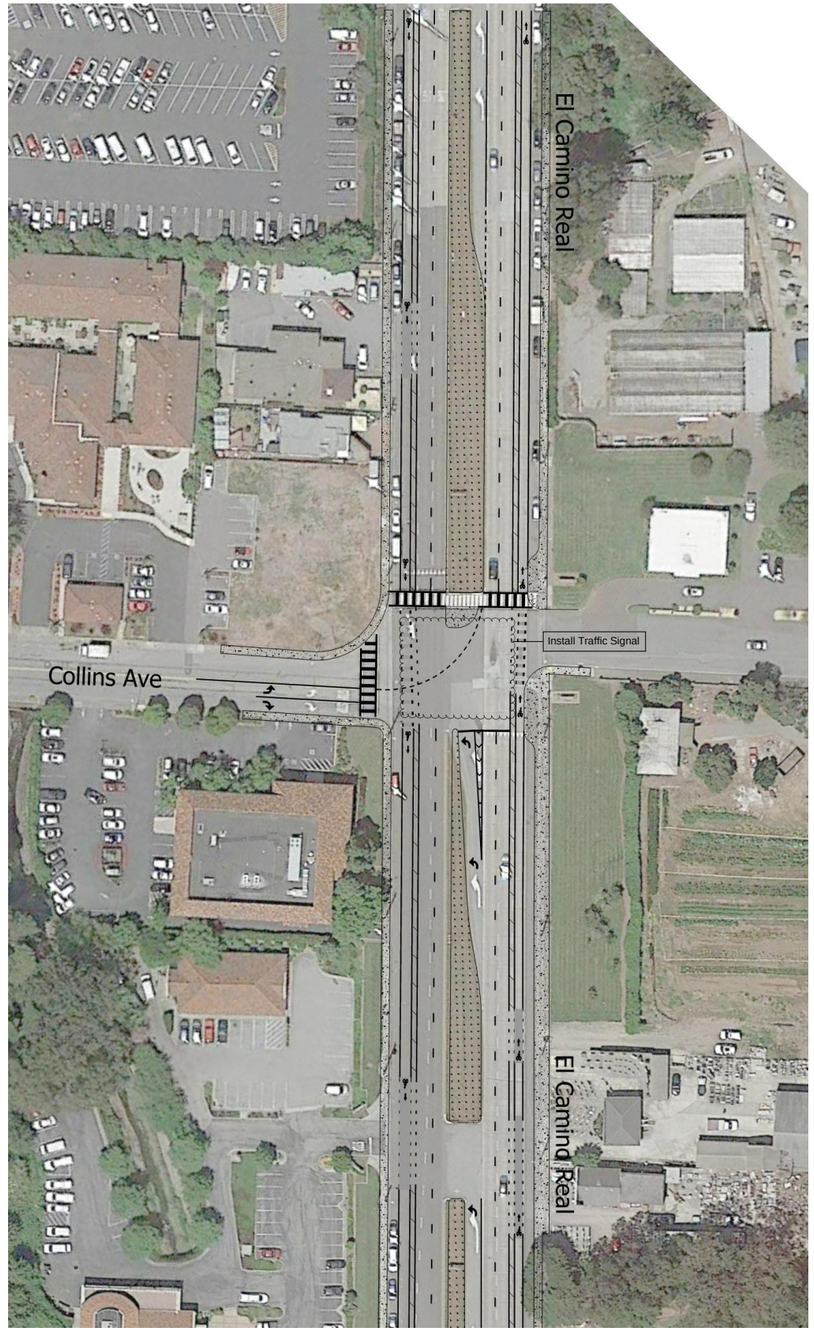
Project Description

This concept sketch illustrates an approach to improve pedestrian safety and vehicle operations. Key items from the concept include:

- Dropping the third southbound lane on El Camino Real at Collins and, therefore, eliminating the lane drop downstream of Collins
- The upstream two lane section could be associated with possible El Camino Real/Mission Road intersection treatments that eliminate added third lane at Mission Road.
- Reconfiguring ECR with two travel lanes in each direction, and with bike lanes on both sides of the roadway.
- Extending curbs on the west side of the intersection and convert third northbound lane into parking.
- Extending the median to create a separated pedestrian refuge.
- Adding painted channelizing island at angled northbound left turn lane to Collins Avenue to better channelize intersection movements.
- Installing a traffic signal to meet the intended outcomes at this intersection.

Design Considerations

- The basis of this design is reducing the number of lanes on El Camino Real south of the Serramonte Blvd. intersection and maintaining two El Camino Real lanes in each direction until north of Collins Ave. Presently, signing and marking of the third southbound lane begins south of Serramonte Blvd. and within the Collins Ave. intersection. This creates undefined vehicular paths and places the lane drop activity within the pedestrian crossing. Studies should include evaluating lane drop options in advance of Collins Ave. in addition to dropping the lane at Collins Ave. The third El Camino Real lane is presently added at Mission Rd. The third lane should be studied as a possible lane drop north of Cypress Ave. or as part of a Mission Rd. study to consider revising the northbound Mission Rd. movement to a conventional right turn lane with no lane addition.
- Since El Camino Real is a Caltrans facility, a Step 1 Intersection Control Evaluation (ICE) could be a first step. Given the proximity and relationship with Mission Rd, the ICE could include both intersections.



Existing Conditions

The ECR/Collins Avenue intersection is situated between ECR/Mission Road intersection and ECR/Serramonte Boulevard intersection. The intersection is a three-legged intersection with a slightly offset driveway access on the east side of the intersection. This is a state facility intersection, because ECR is a Caltrans facility. Collins Avenue is a two-lane roadway. There are currently standard striped crosswalks on the west and north legs of the intersection. On-street parking is permitted on approach to the intersection along ECR. There are three vehicle lanes southbound at the intersection, one of which is marked as being eliminated as it passes through the intersection. There are also three lanes northbound through the intersection and a center median. Figure 56 shows an aerial of the intersection.

If a taffic signal at ECR/Mission Road is constructed, the Town could consider a traffic signal at ECR/Collins to further help to coordinate traffic flow and manage speeds on ECR. The additional lanes on ECR approaching Collins Avenue are tapered as part of this project to reduce the pedestrian crossing distance at the intersection.

Figure 56: Existing Conditions at Collins Avenue/El Camino Real Intersection

Source: Google Earth, 2018.

Project Needs Identified

There were two reported crashes at this intersection, one complaint of pain, and the other PDO crash, during the years 2011-15. The discussions with Town staff, and placement of intersection between Mission Road and Serramonte Boulevard on ECR identified a desire to consider changes in the cross-section and configuration of the intersection. Given the crash history, and the improvements, the project may not be competitive for HSIP funding. Changes implemented on ECR would require coordination with Caltrans.

Project #11: Serramonte Boulevard from El Camino Real to Hillside Boulevard

Project Description

This project would consider converting the current cross-section on Serramonte Boulevard from driveway near Acura Car dealership to Hillside Boulevard to a road-diet, with bike lane on both sides of the roadway. This change could align with the driver expectancy while traveling along this corridor. Kittelson suggests the Town consider the following:

- Transitioning from the current lane configuration on Serramonte Boulevard to three lane cross section (i.e. one lane on either side of the roadway with a two-way center turn lane), and bike lanes on both sides of the roadway.
- This reconfiguration includes adding non-motorized facilities on the corridor.

Figure 57 shows the project scope at this intersection. The estimated cost for this project is $ 50,000, and the benefit-cost ratio is 2.30.

Figure 57

Serramonte Boulevard from El Camino Real to Hillside Boulevard

Estimated Cost: $50,000 **Benefit/Cost Ratio: 2.3**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- Serramonte Boulevard is an east-west corridor running in between El Camino Real and Hillside Boulevard.
- El Camino Real is a state facility.
- The corridor has cemeteries on the north side and industrial development with car dealerships on the south side.
- There is a casino at the intersection of Serramonte and Hillside Boulevard.

Crash Severity Score **7.99**

Number of Crashes **10**

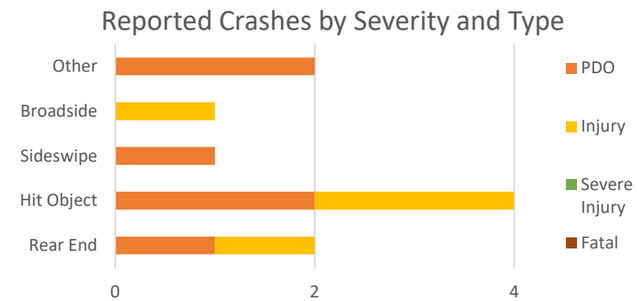
Crash Summary

Crash Type and Contributing Factors

- 2 rear-end, unsafe speed crashes
- 4 hit object, improper turning, 2 DUI, unsafe speed crashes
- 1 sideswipe, DUI crash
- 1 broadside, automobile right-of-way crash
- 2 other, unsafe speed, and unknown crashes

Crash Severity

- 6 PDO crashes (3 unsafe speed, 2 DUI, unknown)
- 2 complaint of pain injury crashes (unsafe speed, improper turning)
- 2 other visible injury crashes (DUI, automobile right-of-way)



Project Description

This concept sketch illustrates an approach to improve bicycle safety, and pedestrian safety. Key items from the concept include:

- Transitioning from the current lane configuration on Serramonte Boulevard to three lane cross-section (i.e. one lane on either side of the roadway with a two-way center turn lane), and bike lanes on both sides of the roadway.
- This reconfiguration includes adding non-motorized facilities on the corridor.

Design Considerations

- This project would consider converting the current cross-section on Serramonte Boulevard from driveway near Acura Car dealership to Hillside Boulevard to a road-diet, with bike lane on both sides of the roadway. This change could align with the driver expectancy while traveling along this corridor.

Note: Concept provided in the next page

Scale: 1" = 40'

40 20 0 40

Existing Conditions

Serramonte Boulevard is an east-west study corridor between ECR and Hillside Boulevard. The corridor has cemeteries on the north side and industrial development with car dealerships on the south side. The corridor has four lanes at Hillside Boulevard that widens at the ECR intersection. The roadway is inclined going west onto ECR and vehicle speeds are higher traveling west, down hill toward ECR. The corridor has sidewalk on the south side the entire length of the corridor and partially on the north side of the corridor. Figure 58 shows existing conditions on Serramonte Boulevard.

Figure 58: Existing Conditions on Serramonte Boulevard

Source: Google Street View, 2018.

Project Needs Identified

Kittelson identified that there were ten reported crashes along the corridor, of which two were other visible injury crashes, two were complaint of pain injuries, and six were PDO crashes, during the years 2011-15. The presence of car dealerships on the south side of the corridor, proximity/connection to two major corridors in town (i.e. ECR and Hillside Boulevard) and discussions with Town Staff identified a desire to reconfigure the cross-section on the corridor. The crash history along this corridor would not lead to a competitive HSIP application. However, the risk factors related to the non-motorized users may help the Town pursue Caltrans ATP or Transportation Planning grant program funding for improvements on the corridor.

Project #12: Lawndale Boulevard from Mission Road to Hillside Boulevard

Project Description

This project would consider improving non-motorized travel along the corridor. The basis for this project is to provide pedestrian and bicycle accommodations continuously throughout the corridor. Kittelson suggests the Town consider the following:

- Providing bike lane links to the existing bike lane, by closing the bike lane gap near the ECR High School driveway.
- Aligning and extending the curb along the travel lane near the ECR High School driveway to eliminate the entry and exit tapered curb width sections and provide a consistent cross section along the corridor.
- Installing mid-block pedestrian crossing at the ECR High School driveway entrance. The path across the median is designed to help with visually impaired wayfinding to traverse the street and align with receiving ADA ramps.
- Installing pedestrian crossing enhancements, i.e. rectangular rapid flashing beacons (RRFBs) on the mid-block pedestrian crossing at the ECR High School driveway entrance.

Figure 59 shows the project scope at this intersection. The estimated cost for this project is $ 175,000, and the benefit-cost ratio is 0.03.

Figure 59

Lawndale Boulevard from Mission Road to Hillside Boulevard

Estimated Cost: $175,000 **Benefit/Cost Ratio: 0.03**

COLMA TRANSPORTATION SAFETY ACTION PLAN

Existing Conditions

- Lawndale Boulevard is an east-west study corridor running in between Mission Road and Hillside Boulevard.
- The corridor has residential development for about quarter length of the corridor and school for the other part of the corridor.
- ECR High School is on the south side near Mission Road.
- The roadway segment has a downgrade from Hillside Boulevard to Mission Road.

Crash Severity Score **0.60**

Number of Crashes **3**

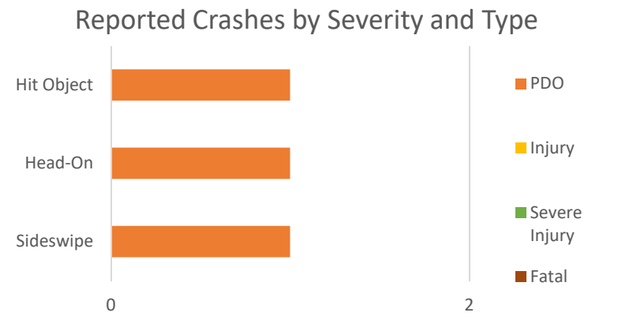
Crash Summary

Crash Type and Contributing Factors

- 1 head-on, vehicle (code) violation crash
- 1 sideswipe, unsafe speed crash
- 1 hit object, unsafe speed crash

Crash Severity

- 3 PDO crashes (vehicle (code) violation, 2 unsafe speed)



Project Description

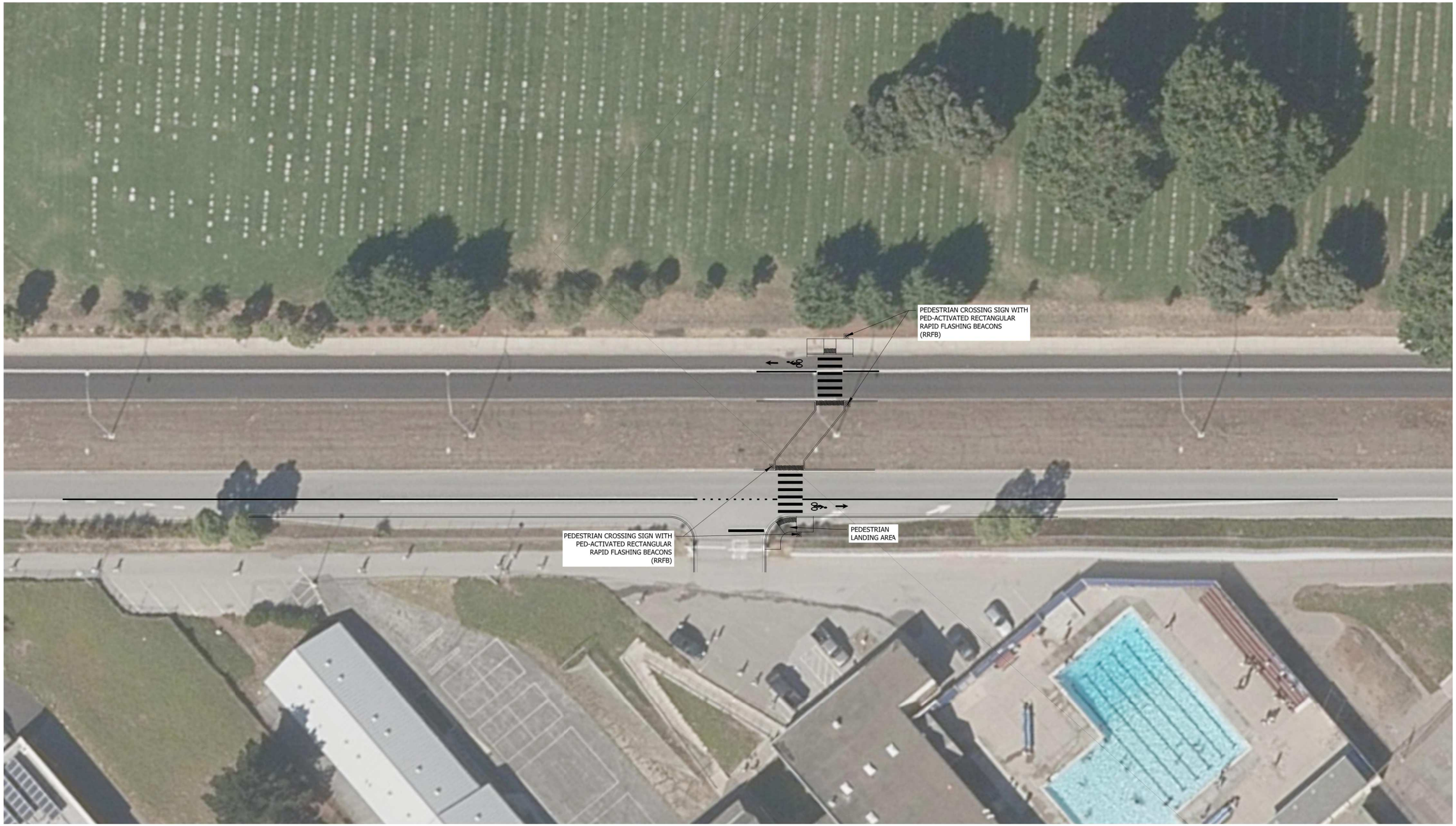
This concept sketch illustrates an approach to improve non-motorized travel along the corridor. Key items from the concept include:

- Providing bike lane links to the existing bike lane, by closing the bike lane gap near the ECR High School driveway.
- Aligning and extending the curb along the travel lane near the ECR High School driveway to eliminate the entry and exit tapered curb width sections and provide a consistent cross section along the corridor.
- Installing mid-block pedestrian crossing at the ECR High School driveway entrance. The path across the median is designed to help with visually impaired wayfinding to traverse the street and align with receiving ADA ramps.
- Installing pedestrian crossing enhancements, i.e. rectangular rapid flashing beacons (RRFBs) on the mid-block pedestrian crossing at the ECR High School driveway entrance.

Design Considerations

- The project will improve non-motorized travel along the corridor. The basis for the project is to provide pedestrian and bicycle accommodations continuously throughout the corridor.

Note: Concept provided in the next page



Scale: 1" = 20'

20 10 0 20

Existing Conditions

Lawndale Boulevard is an east-west study corridor between Mission Road and Hillside Boulevard. The corridor has residential development for about quarter length of the corridor and school for the other part of the corridor. ECR High School is on the south side near Mission Road. Figure 60 shows existing conditions on Lawndale Boulevard.

Figure 60: Existing Conditions at Lawndale Boulevard

Source: Google Street view, 2018.

Project Needs Identified

Kittelson identified that there were three reported crashes along the corridor, of which all three were PDO crashes, during the years 2011-15. The presence of residential development along the quarter length of the corridor, proximity/connection to two major corridors in town (i.e. Mission Road/ECR and Hillside Boulevard) and discussions with Town Staff identified a desire to accommodate non-motorized facilities along the corridor. The crash history along this corridor would not lead to a competitive HSIP application. However, the risk factors related to the non-motorized users may help the Town pursue Caltrans ATP or Transportation Planning grant program funding for improvements on the corridor.

Summary

The following are key findings regarding project scopes and descriptions:

- Many of projects involve managing vehicle speeds and installing/improving walking and bicycle facilities.
- Many projects focus on reducing conflicting movements of vehicles and thereby could help improve access and circulation as well.
- Some of the projects could be competitive for HSIP grants, ATP grants or other state or regional grant funding opportunities.

10.0 ATTACHMENTS AND SUPPORTING DOCUMENTATION

ATTACHMENT A – TOP FIVE 30 PERCENT DESIGN PLANS AND COST ESTIMATES

ATTACHMENT B – SUMMARY OF TRAFFIC VOLUMES COLLECTED IN 2017

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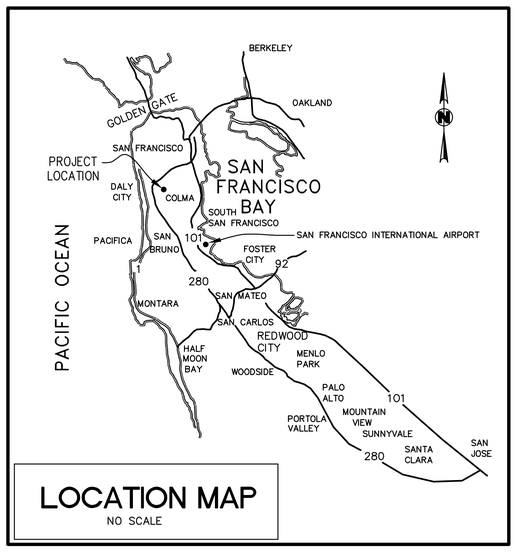
ATTACHMENT A – TOP FIVE 30 PERCENT DESIGN PLANS AND COST ESTIMATES

HILLSIDE BLVD

SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



LOCATION MAP
NO SCALE

PROJECT SUMMARY

OWNER: TOWN OF COLMA
1198 EL CAMINO REAL
COLMA, CA 94014

ENGINEER: BKF ENGINEERS
255 SHORELINE DRIVE
REDWOOD CITY, CA 94065
(650) 482-6300

SHEET INDEX:

LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY		
CURB AND GUTTER		
CATCH BASIN UTILITY		
POLE/GUY-WIRE		
MANHOLE		
PARKING STALL CROSSLINE		
UTILITY BOX/VAULT		
STREET LIGHT		
BIKE LANE SYMBOL		
SIGN WITH POST(S)		
FENCE		
TRAFFIC SIGNAL POLE		

GENERAL NOTES

1. THE PROPOSED IMPROVEMENTS SHOWN ON THESE DRAWINGS ARE SUPERIMPOSED ON A BASE SHEET. THE BASE DOES NOT INCLUDE TOPOGRAPHIC SURVEY, IT WAS BASE ON GOOGLE EARTH, COUNTY GIS, AND RECORD DRAWINGS, WITH LIMITED SITE OBSERVATIONS.
2. WORK SHALL BE PREFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, TOWN OF COLMA STANDARDS, CALTRANS STANDARD PLANS AND THESE NOTES.
3. REVISIONS TO THESE PLANS MUST BE REVIEWED AND APPROVED IN WRITING BY THE CIVIL DESIGN ENGINEER PRIOR TO CONSTRUCTION OF AFFECTED ITEMS, REVISIONS SHALL BE ACCURATELY SHOWN ON REVISED PLANS.
4. STANDARD CONSTRUCTION ACTIVITIES SHALL BE LIMITED HOURS REGULATED BY THE CITY. CONTRACTOR SHALL CONFIRM WITH CITY. NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE ON SUNDAY AND LEGAL HOLIDAYS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM THE CITY BEFORE COMMENCING WORK. THE CONTRACTOR SHALL ALSO PROVIDE FLAGMEN, CONES OR BARRICADES, AS NECESSARY TO CONTROL TRAFFIC AND PREVENT HAZARDOUS CONDITIONS. THE CONTRACTOR SHALL LEAVE A 24-HOUR EMERGENCY TELEPHONE NUMBER WITH POLICE, FIRE AND PUBLIC WORKS DEPARTMENTS, AND KEEP THEM INFORMED DAILY OF DETOURS.
6. EXISTING PUBLIC PEDESTRIAN WALKWAYS, BIKEPATHS & HANDICAP ACCESS PATHWAYS SHALL BE MAINTAINED DURING CONSTRUCTION TO THE SATISFACTION OF THE CITY ENGINEER.
7. SHOULD IT APPEAR THAT THE WORK OUTLINED ON THESE PLANS IS NOT SUFFICIENTLY DETAILED OR SPECIFIED IN THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE CIVIL DESIGN ENGINEER, BKF ENGINEERS AT (650) 482-6300, BEFORE PROCEEDING WITH THE WORK IN QUESTION AND REQUEST CLARIFICATION.
8. AN ENCROACHMENT PERMIT IS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENT AND MUST BE OBTAINED PRIOR TO THE START OF WORK.
9. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.
10. CONTRACTOR SHALL COMPLY WITH STATE, COUNTY AND CITY LAWS AND ORDINANCES; AND REGULATIONS OF THE DEPARTMENT OF INDUSTRIAL RELATIONS, OSHA AND INDUSTRIAL ACCIDENT COMMISSION RELATING TO SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR PERSONNEL.
11. CONTRACTOR TO REMOVE EXISTING PAVEMENT MARKINGS OR MARKERS WITHIN THE LIMITS OF WORK PRIOR TO MICROSURFACING. CONTRACTOR TO MICROSURFACE THE PROJECT LIMIT.
12. RECONSTRUCT DRIVEWAYS AND WALKWAYS TO RIGHT-OF WAY AS NEED TO CONFORM.
13. CONTRACTOR TO MAINTAIN 7' VERTICAL CLEARANCE BELOW PROPOSED IMPROVEMENTS INCLUDING BUT NOT LIMITED TO ALL NEW SIGNAGE, RRFB ASSEMBLIES, AND POWER SUPPLIES.
14. CONTRACTOR SHALL ACQUIRE CITY APPROVAL OF STRIPING LAYOUT, BASED ON CAT TRACKS, PRIOR TO INSTALLATION.
15. ALL RECTANGULAR RAPID FLASHING BEACONS SHALL ADHERE TO FHWA INTERIM APPROVAL IA-21 MEMORANDUM: MUTCD INTERIM APPROVAL FOR OPTIONAL USE OF PEDESTRIAN-ACTUATED RECTANGULAR RAPID-FLASHING BEACONS AT UNCONTROLLED MARKED CROSSWALKS.

ABBREVIATIONS

SYMBOL	DESCRIPTION
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
ADD'L	ADDITIONAL
AGG	AGGREGATE
APPROX	APPROXIMATE
AVG	AVERAGE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BLDG	BUILDING
BM	BENCH MARK
BOW	BOTTOM OF WALL
BPM	BLUE PAVEMENT MARKER
BW	BACK OF WALK
CB	CATCH BASIN
CF	CUBIC FEET
C&G	CURB & GUTTER
CL, ℄	CENTERLINE
CO	CLEANOUT
CONC	CONCRETE
CY	CUBIC YARD
DIA	DIAMETER
DR.	DRIVE
DW	DOMESTIC WATER
D/W	DRIVEWAY
(E)	EXISTING
E	ELECTRICAL, or EASTING
EA	EACH
EC	END OF CURB
EG	EXISTING GRADE
EL	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
F/C	FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FP	FINISHED PAVEMENT
FT	FEET
G	GAS
GB	GRADE BREAK
GE	GRATE ELEVATION
GND	GROUND
GR	GRADE
GV	GATE VALVE
JB	JOINT BOX
JP	JOINT POLE
JT	JOINT TRENCH
L	LENGTH
LF	LINEAR FEET
LP	LOW POINT
Lt, LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MIS	MISCELLANEOUS

SYMBOL	DESCRIPTION
MSEP	MINOR SIDEWALK ENCROACHMENT PERMIT
MVG	MODIFIED VALLEY GUTTER
N	NORTHING
NG	NATURAL GROUND
NO., #	NUMBER
NTS	NOT TO SCALE
(N)	NEW
P.A.E.	PUBLIC ACCESS EASEMENT
O.C.	ON CENTER
OH	OVERHEAD
(P)	PROPOSED
P	PAD
PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
PE	PAD ELEVATION OR POLYETHYLENE
PG&E	PACIFIC GAS AND ELECTRIC
PI	POINT OF INTERSECTION
PL, ℙ	PROPERTY LINE
PP	POWER POLE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
RD	ROAD
RCP	REINFORCED CONCRETE PIPE
RIM	RIM ELEVATION
RPA	REDUCED PRESSURE ASSEMBLY
RRFB	RECTANGULAR RAPID FLASHING BEACON
Rt, RT	RIGHT
R/W	RIGHT OF WAY
S	SLOPE
SDAD	STORM DRAIN AREA DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDJB	STORM DRAIN JUNCTION BOX
SF	SQUARE FEET
SHT	SHEET
SNS	STREET NAME SIGN
STA	STATION
STD	STANDARD
S/W, SW	SIDEWALK
T	TELEPHONE
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TEMP	TEMPORARY
TP	TOP OF PAVEMENT
TW	TOP OF WALL
TYP.	TYPICAL
UG	UNDER GROUND
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
W	WATER
WH	WALL HEIGHT

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COLMA SSAR
HILLSIDE BLVD
TITLE SHEET
TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

Revisions

No.	

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
C0.00
1 OF 5

30% CONCEPT PLANS

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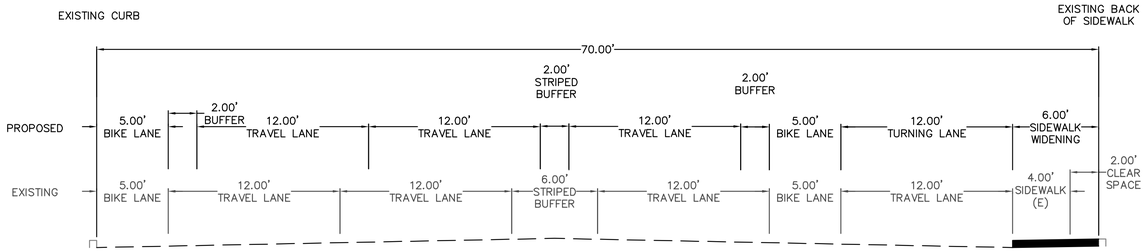

A-A
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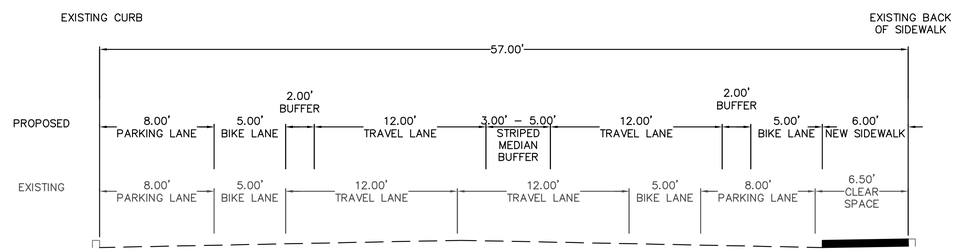
HILLSIDE BLVD
STA 100+88.84 TO 107+33.47



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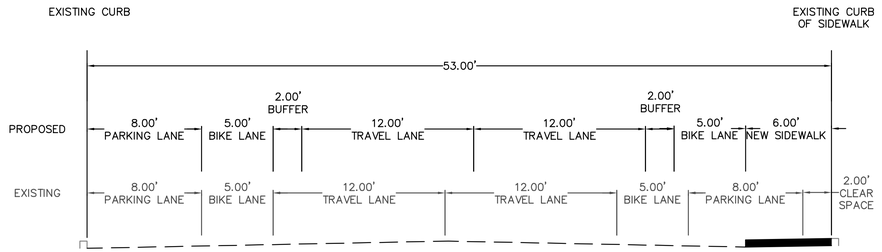

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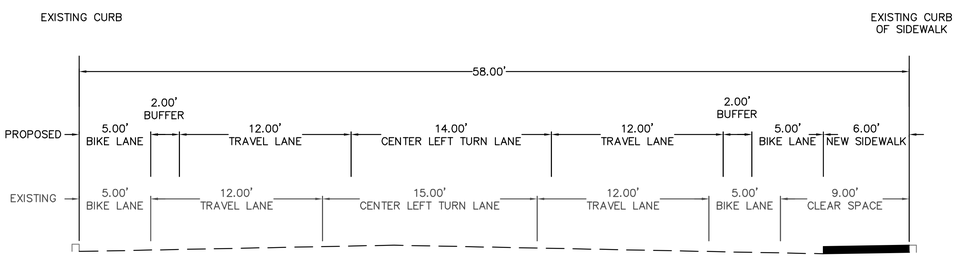

D-D
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HILLSIDE BLVD
STA 126+18.84 TO 158+27.78

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COLMA SSAR
HILLSIDE BLVD
TYPICAL SECTION

TOWN OF COLMA
SAN MATEO COUNTY
CALIFORNIA

Revisions	No.

Date 08/06/18
Scale N.T.S.
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
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30% CONCEPT PLANS

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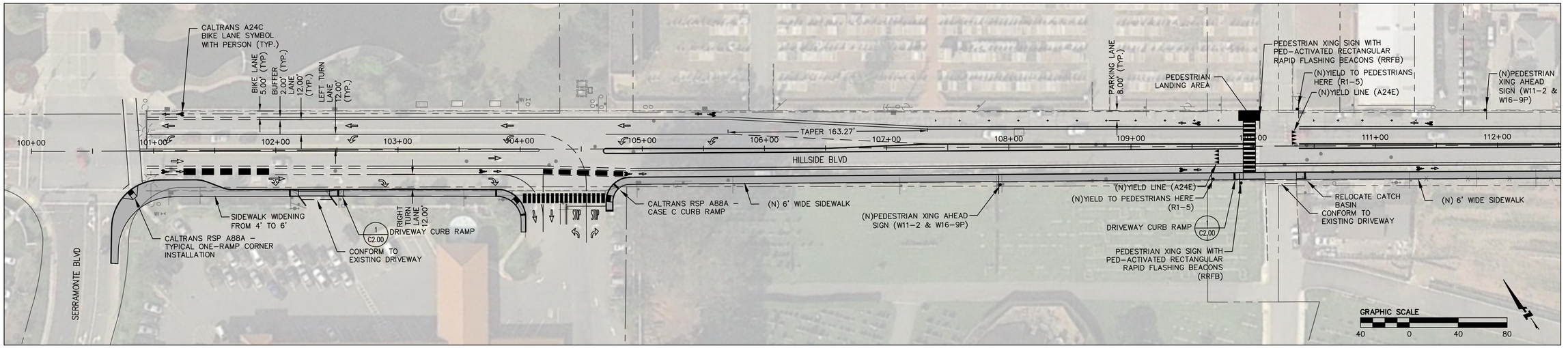

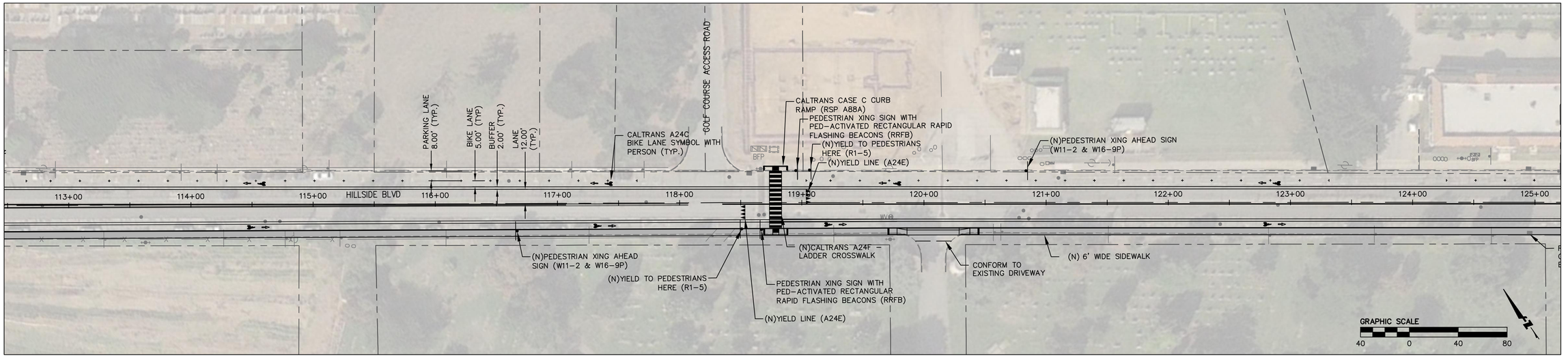

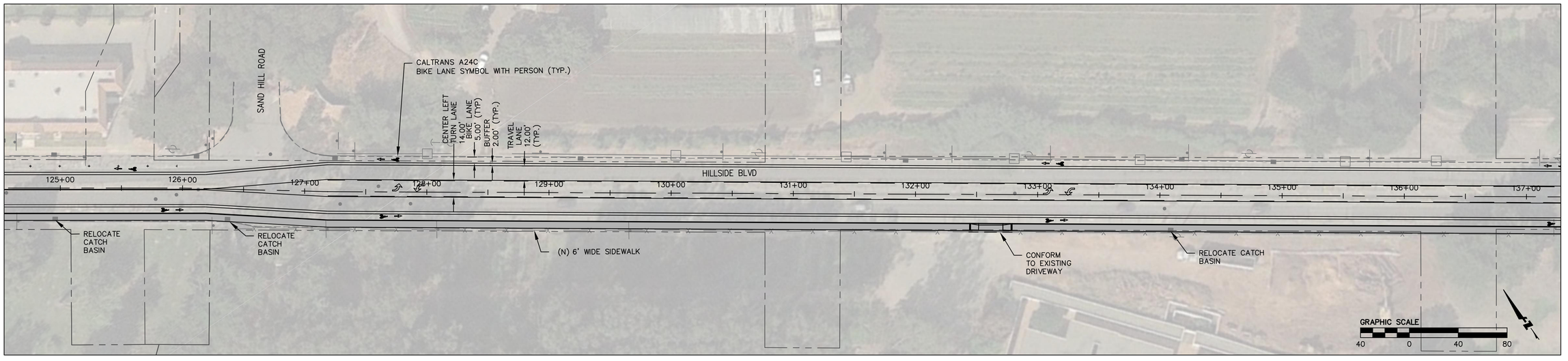

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COLMA SSAR
HILLSIDE BLVD
PLAN, SIGNING AND STRIPING
CALIFORNIA

TOWN OF COLMA
SAN MATEO COUNTY

Revisions

No.	

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
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3 OF 5

30% CONCEPT PLANS

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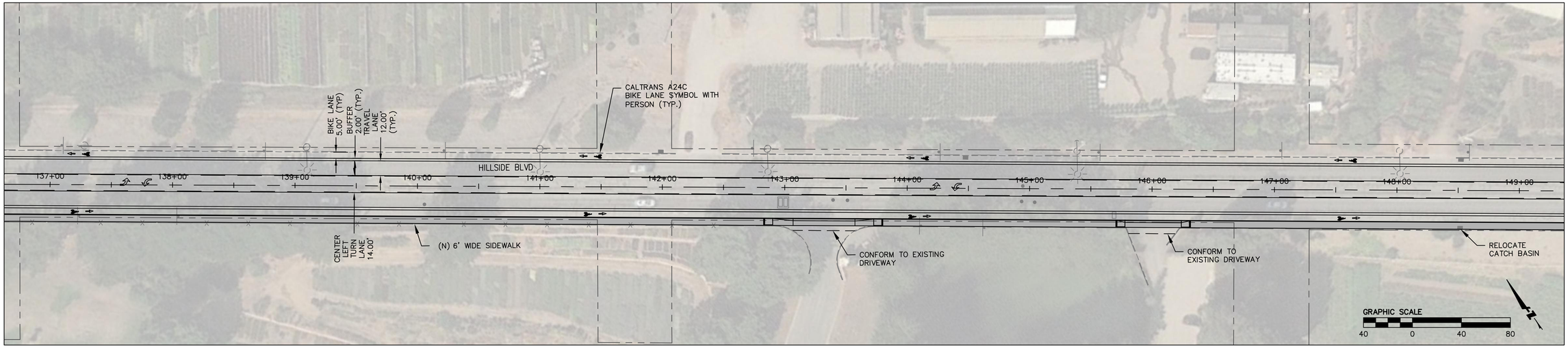

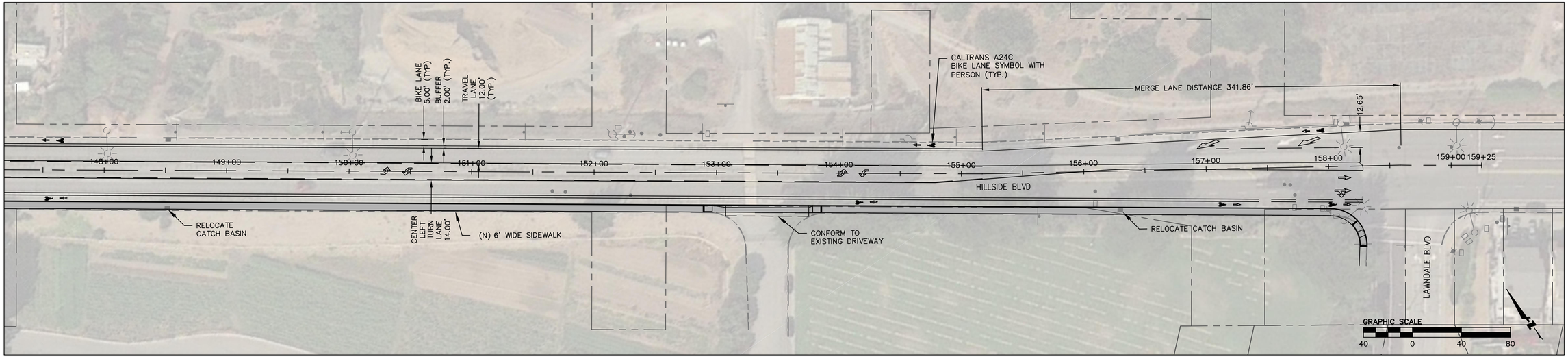

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TOWN OF COLMA
CALIFORNIA

KITTELSON & ASSOCIATES

COLMA SSAR
HILLSIDE BLVD
PLAN, SIGNING & STRIPING

TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

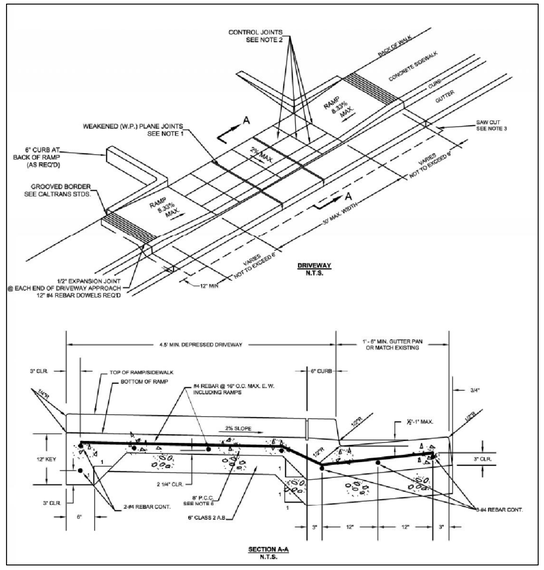
Revisions	No.

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
C1.01
4 OF 5

30% CONCEPT PLANS

DRAWING NAME: \\bkf-rc\VOL4\2017\170252_SSAR_Town_of_Colma\ENG\SHEETS\1_Hillside.dwg
PLOT DATE: 08-06-18 PLOTTED BY: lola



A — DRIVEWAY DETAIL
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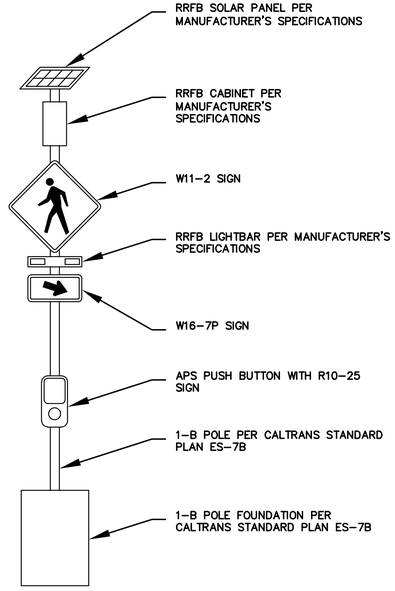
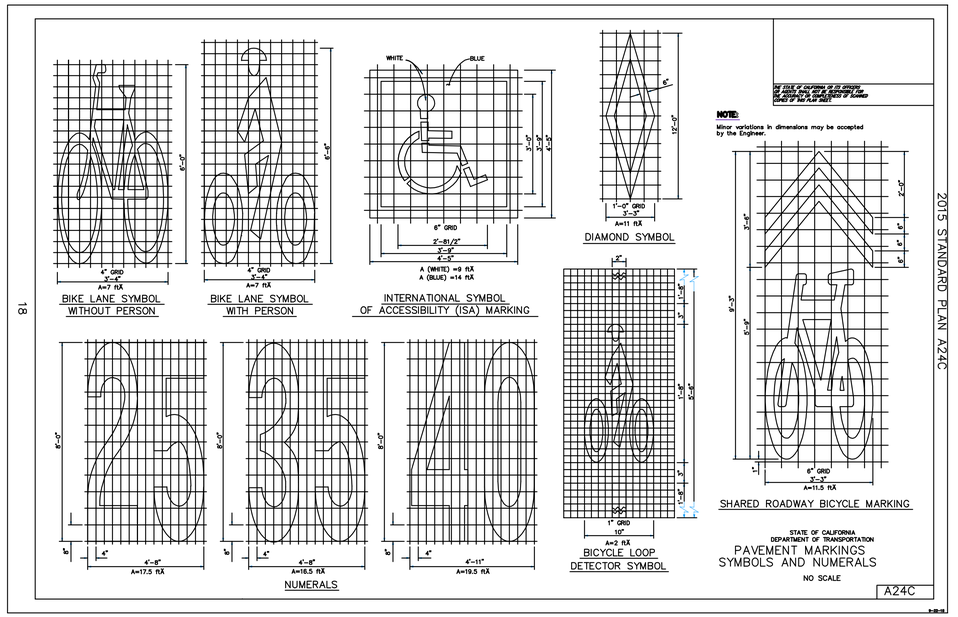


B — RECTANGULAR RAPID FLASHING BEACON (RRFB)
N.T.S.



C — CALTRANS – PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)
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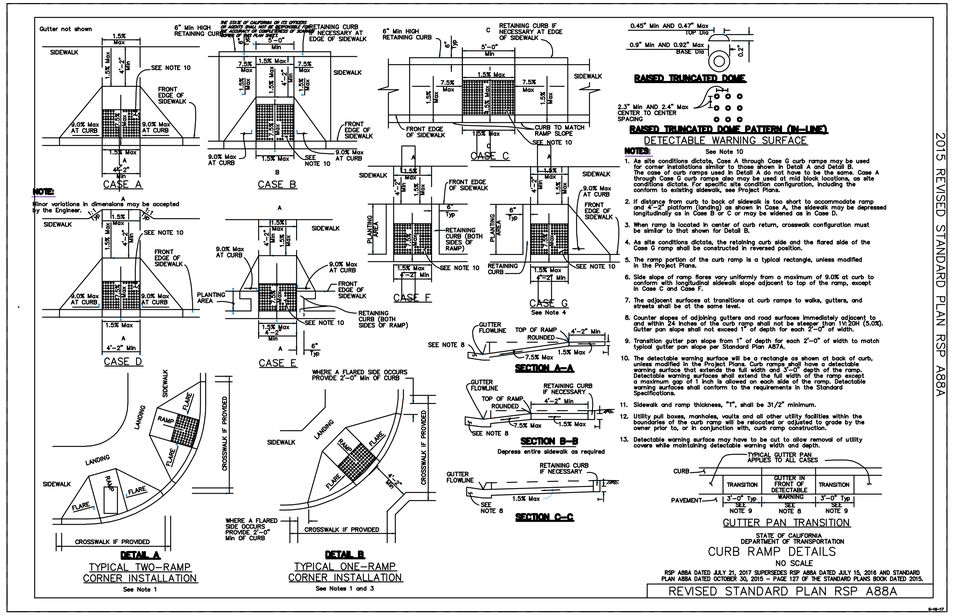

D — CALTRANS – CURB RAMP DETAILS RSP A88A
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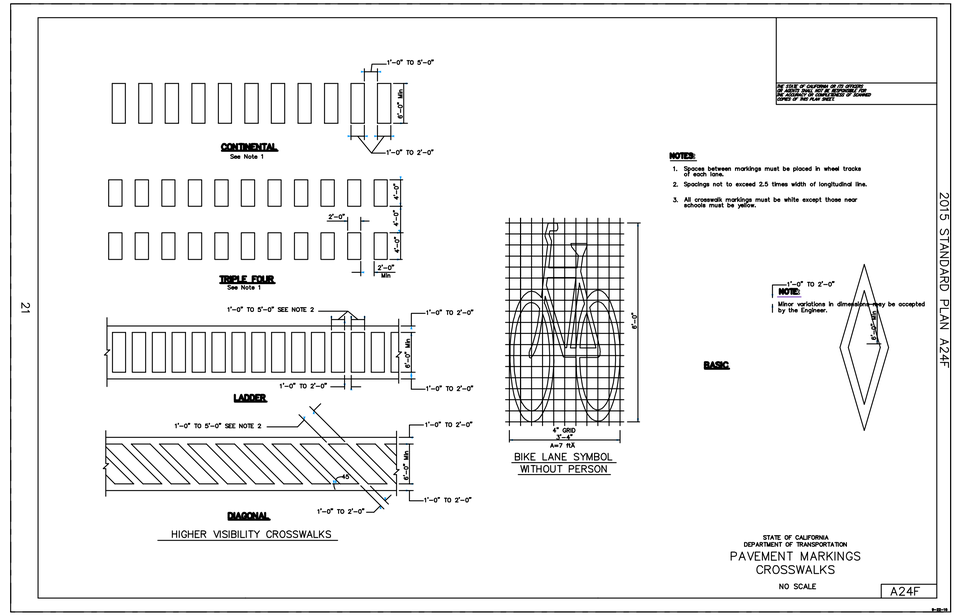

E — CALTRANS – PAVEMENT MARKINGS & CROSSWALKS (A24F)
N.T.S.

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TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

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Approved JCM
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C2.00
5 OF 5

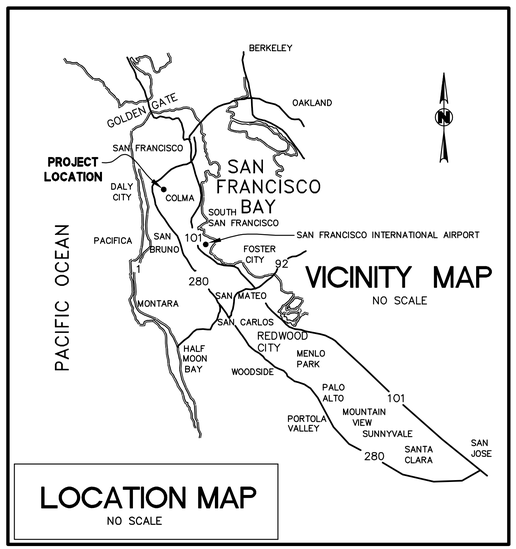
30% CONCEPT PLANS

DRAWING NAME: \\bkf-rc\VOL4\2017\170252_SSAR_Town_of_Colma\ENG\SHEETS\1_Hillside.dwg
PLOT DATE: 08-06-18 PLOTTED BY: iaia

EL CAMINO REAL

SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



PROJECT SUMMARY

OWNER: TOWN OF COLMA
1198 EL CAMINO REAL
COLMA, CA 94014

ENGINEER: BKF ENGINEERS
255 SHORELINE DRIVE
REDWOOD CITY, CA 94065
(650) 482-6300

SHEET INDEX:

LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY		
CURB AND GUTTER		
CATCH BASIN UTILITY		
POLE/GUY-WIRE		
MANHOLE		
PARKING STALL CROSSLINE		
UTILITY BOX/VAULT		
STREET LIGHT		
BIKE LANE SYMBOL		
SIGN WITH POST(S)		
FENCE		
TRAFFIC SIGNAL POLE		

GENERAL NOTES

1. THE PROPOSED IMPROVEMENTS SHOWN ON THESE DRAWINGS ARE SUPERIMPOSED ON A BASE SHEET. THE BASE DOES NOT INCLUDE TOPOGRAPHIC SURVEY, IT WAS BASE ON GOOGLE EARTH, COUNTY GIS, AND RECORD DRAWINGS, WITH LIMITED SITE OBSERVATIONS.
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ABBREVIATIONS

SYMBOL	DESCRIPTION
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
ADD'L	ADDITIONAL
AGG	AGGREGATE
APPROX	APPROXIMATE
AVG	AVERAGE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BLDG	BUILDING
BM	BENCH MARK
BOW	BOTTOM OF WALL
BPM	BLUE PAVEMENT MARKER
BW	BACK OF WALK
CB	CATCH BASIN
CF	CUBIC FEET
C&G	CURB & GUTTER
CL, ℄	CENTERLINE
CO	CLEANOUT
CONC	CONCRETE
CY	CUBIC YARD
DIA	DIAMETER
DR.	DRIVE
DW	DOMESTIC WATER
D/W	DRIVEWAY
(E)	EXISTING
E	ELECTRICAL, or EASTING
EA	EACH
EC	END OF CURB
EG	EXISTING GRADE
EL	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
F/C	FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FP	FINISHED PAVEMENT
FT	FEET
G	GAS
GB	GRADE BREAK
GE	GRATE ELEVATION
GND	GROUND
GR	GRADE
GV	GATE VALVE
JB	JOINT BOX
JP	JOINT POLE
JT	JOINT TRENCH
L	LENGTH
LF	LINEAR FEET
LP	LOW POINT
Lt, LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MIS	MISCELLANEOUS

SYMBOL	DESCRIPTION
MSEP	MINOR SIDEWALK ENCROACHMENT PERMIT
MVG	MODIFIED VALLEY GUTTER
N	NORTHING
NG	NATURAL GROUND
NO., #	NUMBER
NTS	NOT TO SCALE
(N)	NEW
P.A.E.	PUBLIC ACCESS EASEMENT
O.C.	ON CENTER
OH	OVERHEAD
(P)	PROPOSED
P	PAD
PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
PE	PAD ELEVATION OR POLYETHYLENE
PG&E	PACIFIC GAS AND ELECTRIC
PI	POINT OF INTERSECTION
PL, ℙ	PROPERTY LINE
PP	POWER POLE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
RD	ROAD
RCP	REINFORCED CONCRETE PIPE
RIM	RIM ELEVATION
RPA	REDUCED PRESSURE ASSEMBLY
RRFB	RECTANGULAR RAPID FLASHING BEACON
Rt, RT	RIGHT
R/W	RIGHT OF WAY
S	SLOPE
SDAD	STORM DRAIN AREA DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDJB	STORM DRAIN JUNCTION BOX
SF	SQUARE FEET
SHT	SHEET
SNS	STREET NAME SIGN
STA	STATION
STD	STANDARD
S/W, SW	SIDEWALK
T	TELEPHONE
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TEMP	TEMPORARY
TP	TOP OF PAVEMENT
TW	TOP OF WALL
TYP.	TYPICAL
UG	UNDER GROUND
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
W	WATER
WH	WALL HEIGHT

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TITLE SHEET
TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

Revisions

No.	

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
C0.00
1 OF 4

30% CONCEPT PLANS

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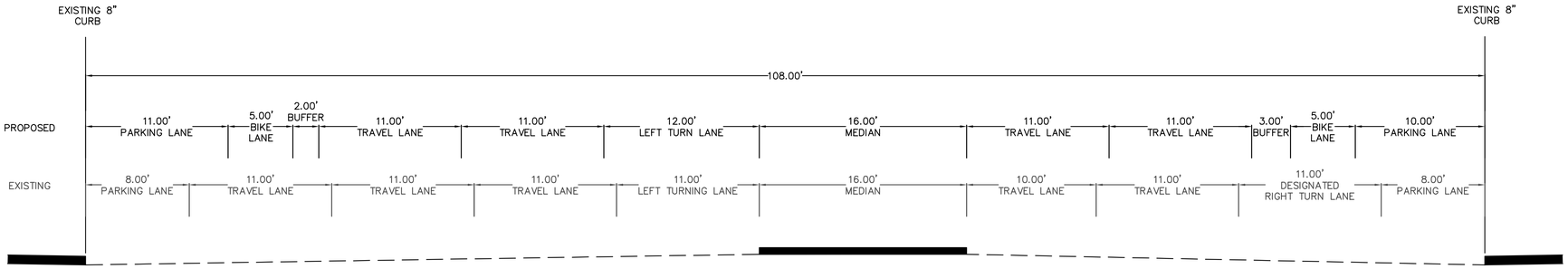

A-A
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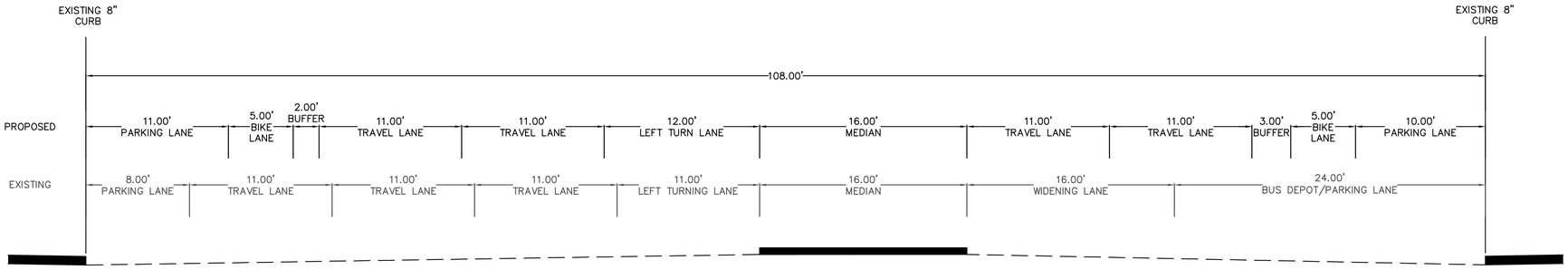
EL CAMINO REAL
STA 170+68.91 TO 175+10.70



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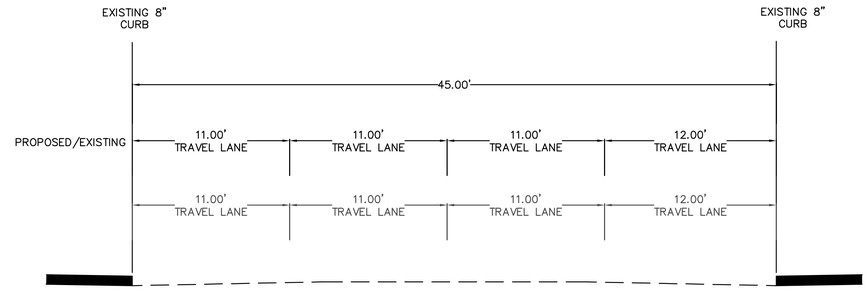

C-C
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EL CAMINO REAL
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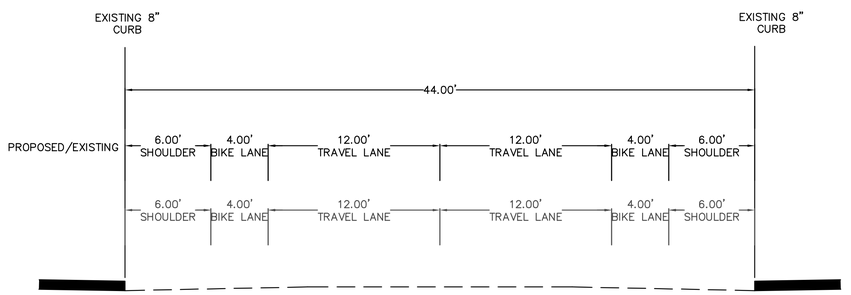

D-D
–
MISSION ROAD
STA 201+30.85 TO 203+10.20

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TYPICAL SECTIONS

TOWN OF COLMA
SAN MATEO COUNTY
CALIFORNIA

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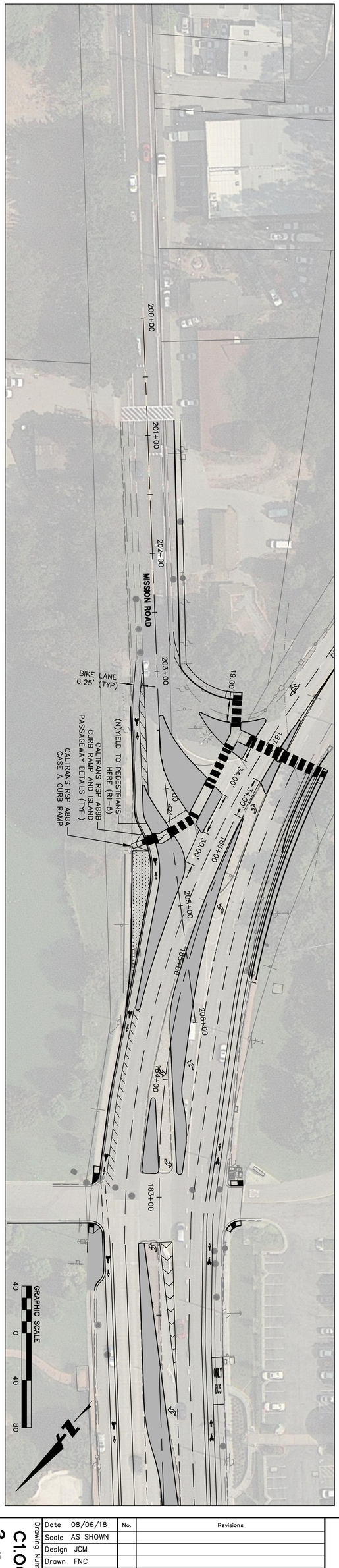

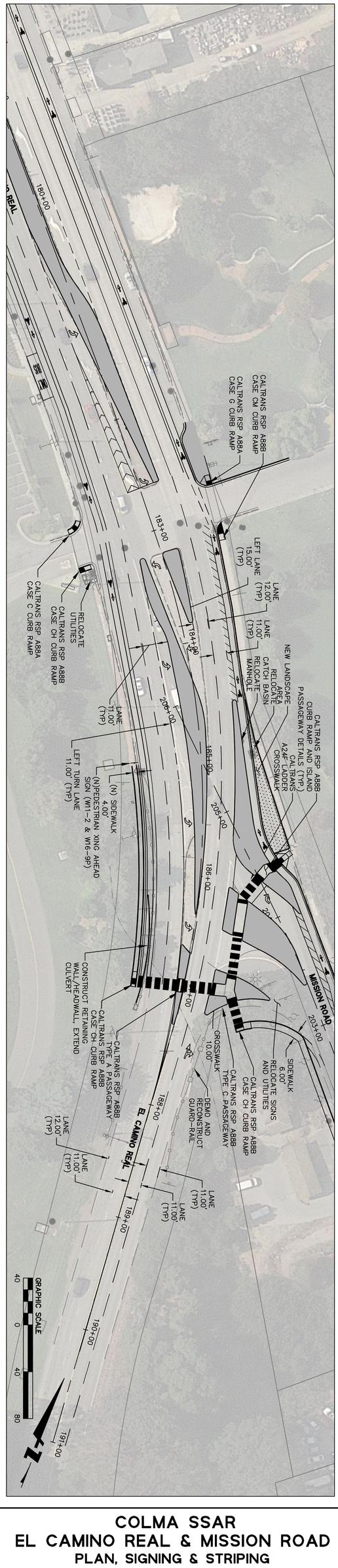

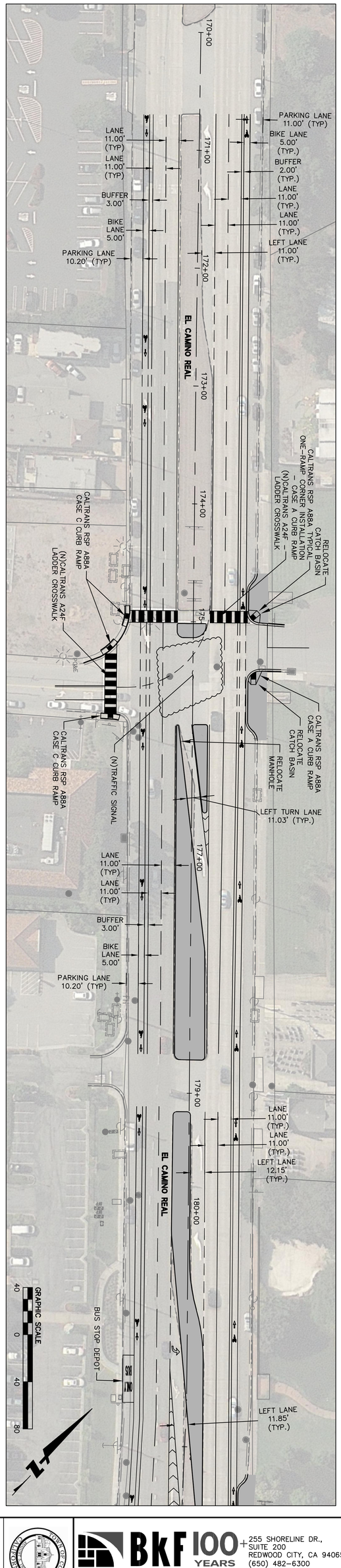

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3 OF 4

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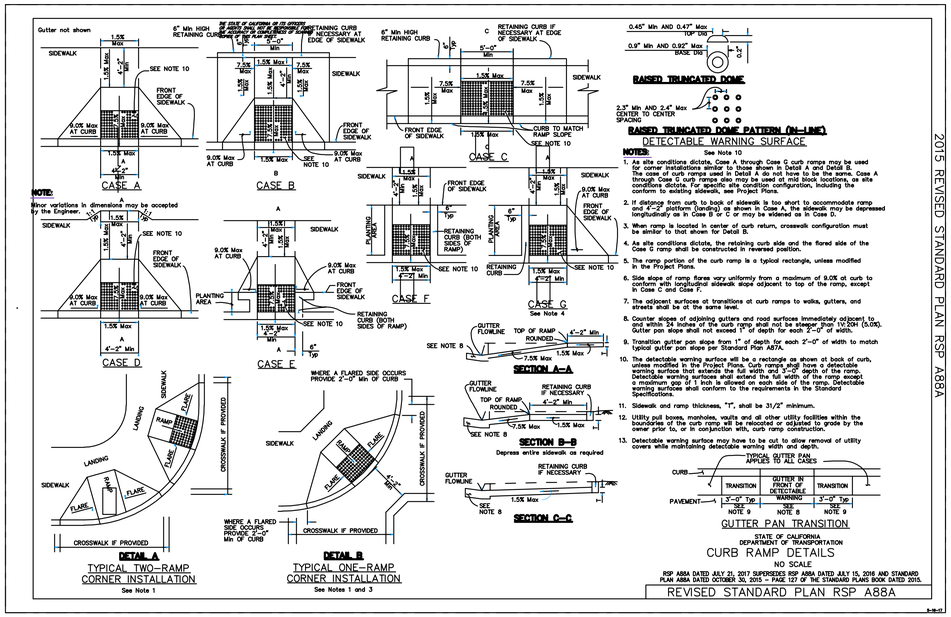

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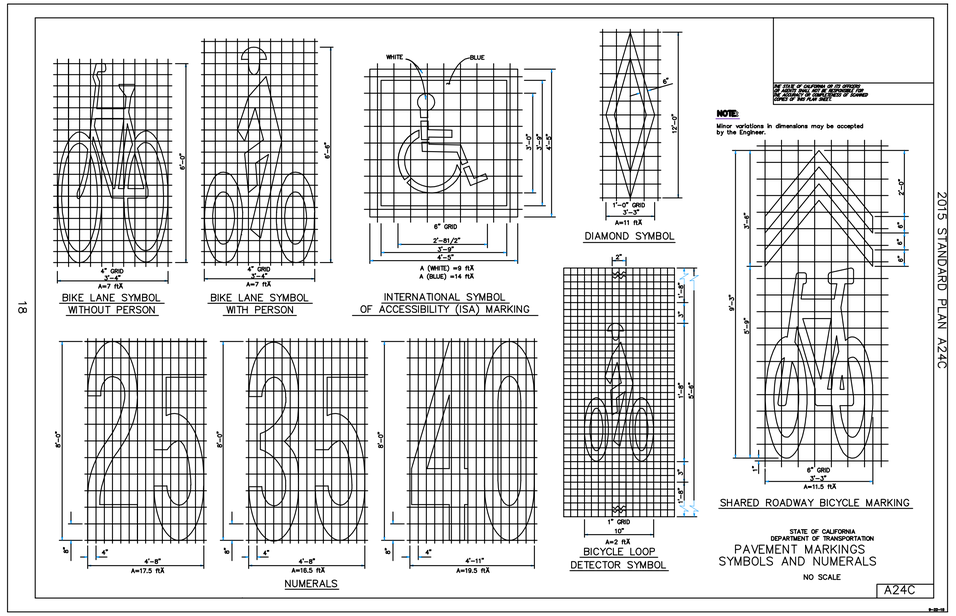

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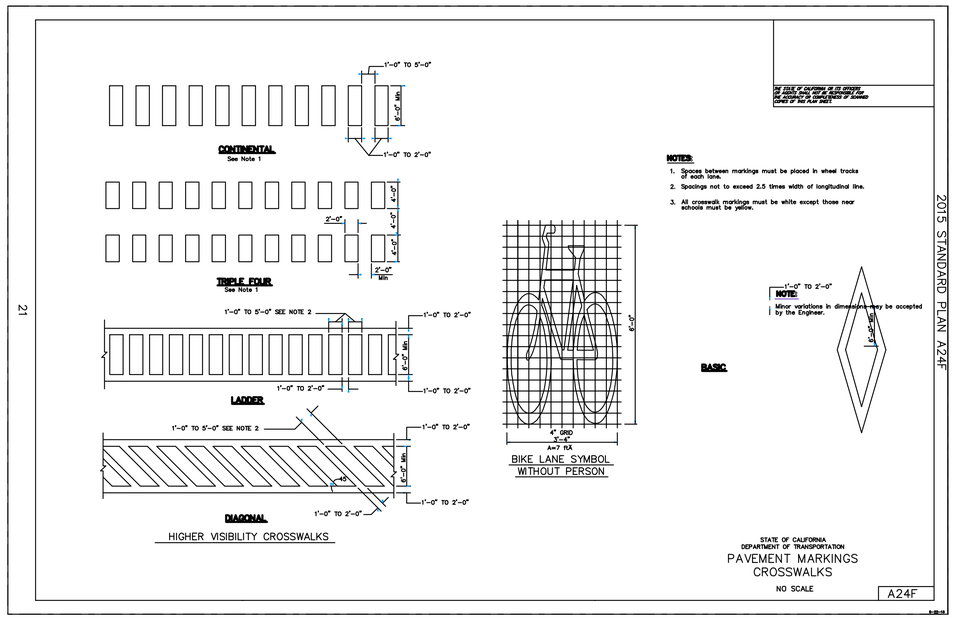

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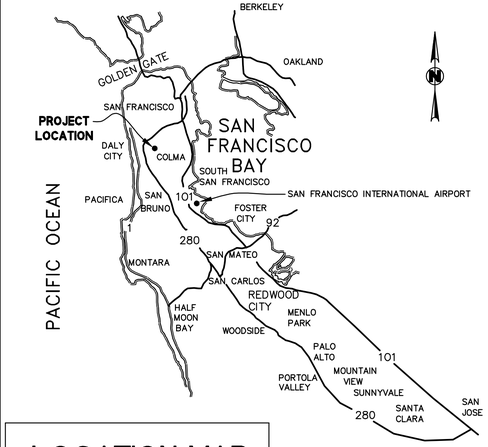
PLOT DATE: 08-08-18 PLOTTED BY: chri

SERRAMONTE BLVD + JUNIPERO SERRA BLVD
SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)
IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



LOCATION MAP
NO SCALE

PROJECT SUMMARY

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1198 EL CAMINO REAL
COLMA, CA 94014

ENGINEER: BKF ENGINEERS
255 SHORELINE DRIVE
REDWOOD CITY, CA 94065
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GR	GRADE
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JT	JOINT TRENCH
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Lt, LT	LEFT
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MIS	MISCELLANEOUS

SYMBOL	DESCRIPTION
MSEP	MINOR SIDEWALK ENCROACHMENT PERMIT
MVG	MODIFIED VALLEY GUTTER
N	NORTHING
NG	NATURAL GROUND
NO., #	NUMBER
NTS	NOT TO SCALE
(N)	NEW
P.A.E.	PUBLIC ACCESS EASEMENT
O.C.	ON CENTER
OH	OVERHEAD
(P)	PROPOSED
P	PAD
PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
PE	PAD ELEVATION OR POLYETHYLENE
PG&E	PACIFIC GAS AND ELECTRIC
PI	POINT OF INTERSECTION
PL, ℄	PROPERTY LINE
PP	POWER POLE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
RD	ROAD
RCP	REINFORCED CONCRETE PIPE
RIM	RIM ELEVATION
RPA	REDUCED PRESSURE ASSEMBLY
RRFB	RECTANGULAR RAPID FLASHING BEACON
Rt, RT	RIGHT
R/W	RIGHT OF WAY
S	SLOPE
SDAD	STORM DRAIN AREA DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDJB	STORM DRAIN JUNCTION BOX
SF	SQUARE FEET
SHT	SHEET
SNS	STREET NAME SIGN
STA	STATION
STD	STANDARD
S/W, SW	SIDEWALK
T	TELEPHONE
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TEMP	TEMPORARY
TP	TOP OF PAVEMENT
TW	TOP OF WALL
TYP.	TYPICAL
UG	UNDER GROUND
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
W	WATER
WH	WALL HEIGHT

VICINITY MAP
NO SCALE

LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY		
CURB AND GUTTER		
CATCH BASIN UTILITY		
POLE/GUY-WIRE		
MANHOLE		
PARKING STALL CROSSLINE		
UTILITY BOX/VAULT		
STREET LIGHT		
BIKE LANE SYMBOL		
SIGN WITH POST(S)		
FENCE		
TRAFFIC SIGNAL POLE		

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TOWN OF COLMA
CALIFORNIA

KITTELSON & ASSOCIATES

COLMA SSAR
SERRAMONTE + JUNIPERO SERRA
TITLE SHEET
TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

No.	Revisions

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
C0.00
1 OF 3

30% CONCEPT PLANS

DRAWING NAME: K:\2017\170252_SSAR_Town_of_Colma\ENG\SHEETS\3_Serramonte.dwg
PLOT DATE: 08-06-18 PLOTTED BY: chof

DRAWING NAME: K:\2017\170252_SSAR_Town_of_Colma\ENG\SHEETS\3_Serramonte.dwg
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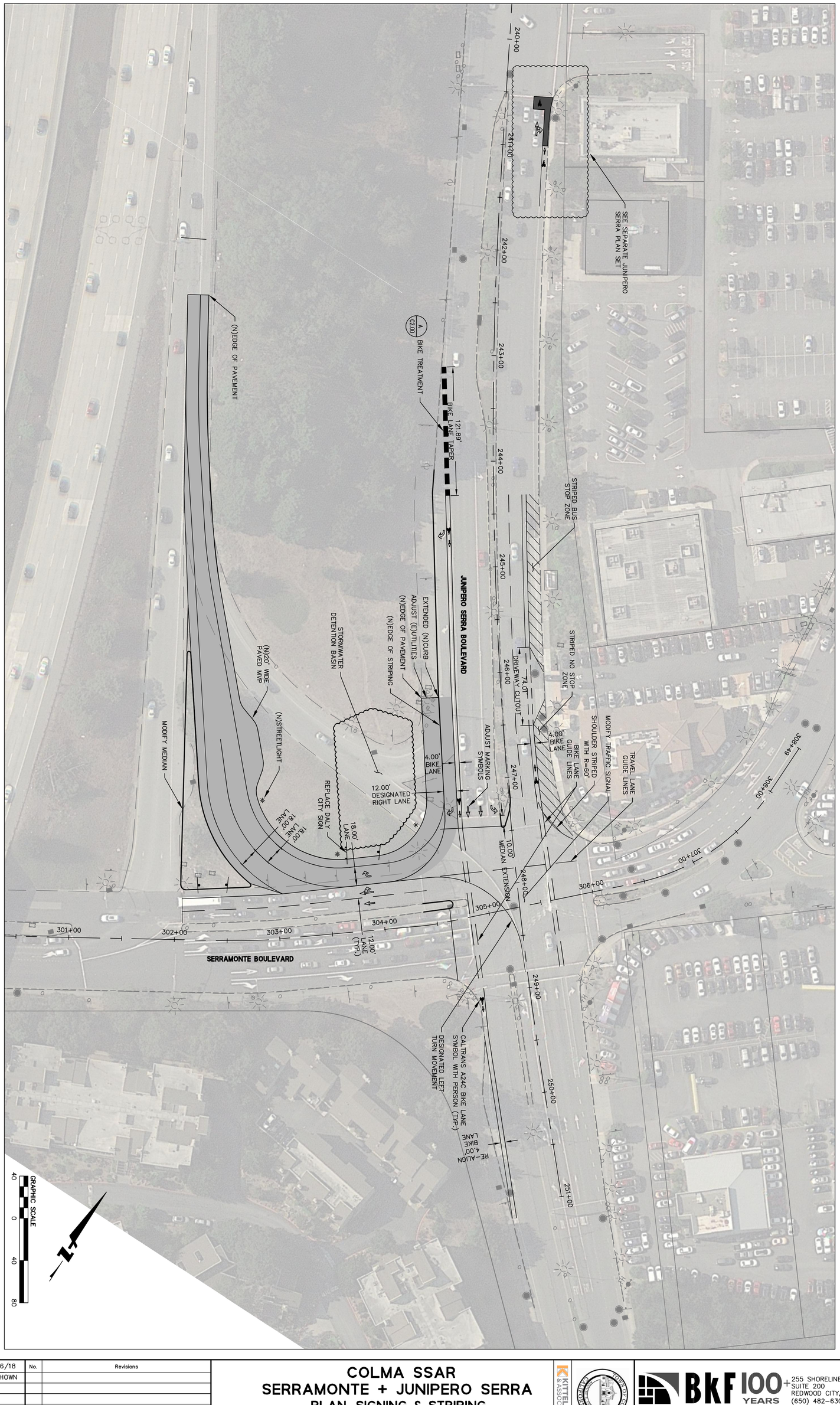

Date	08/06/18	No.	Revisions
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Drawn	FNC		
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Drawing Number: C1.00
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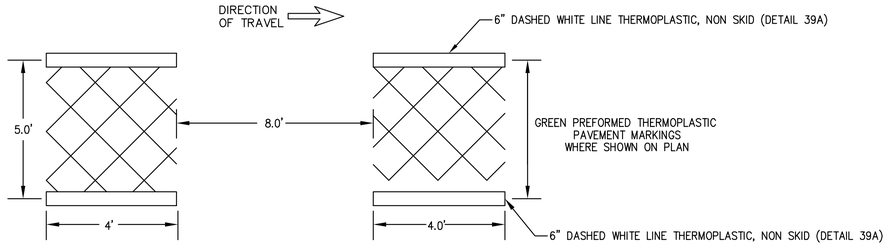

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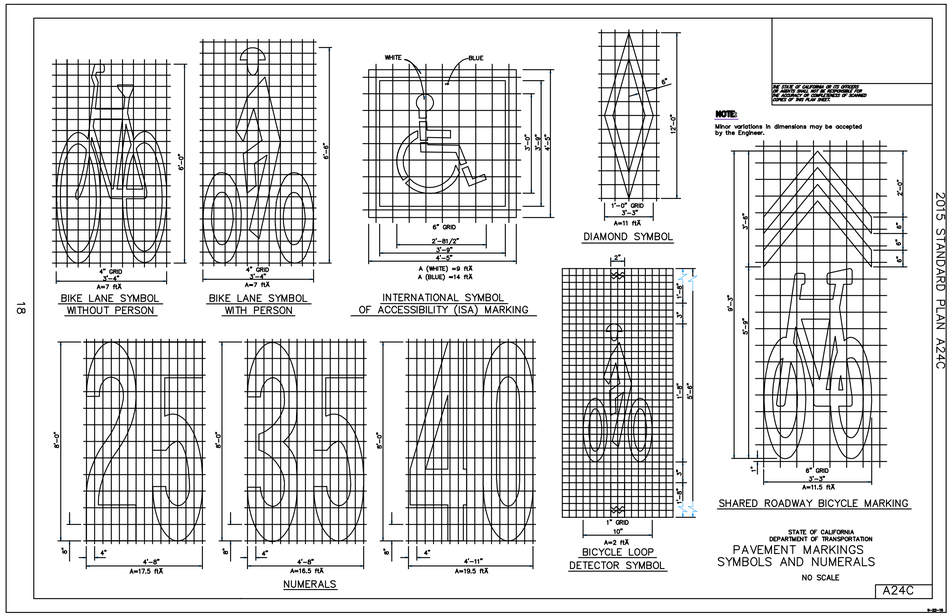
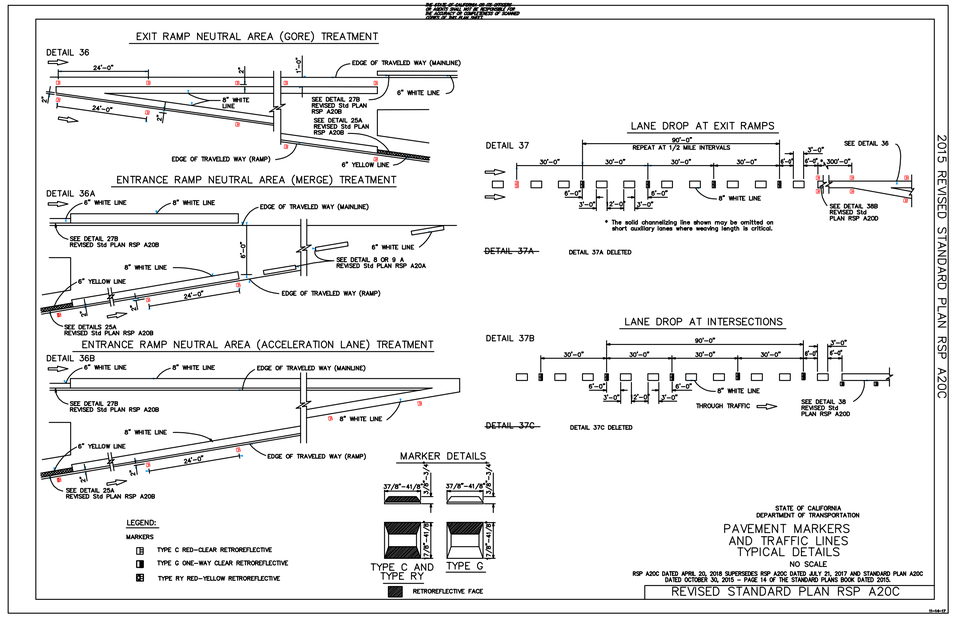


B – CALTRANS – PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)
N.T.S.



C – CALTRANS – PAVEMENT MARKINGS AND TRAFFIC LINES TYPICAL DETAILS (A20C)
N.T.S.

DRAWING NAME: K:\2017\170252_SSAR_Town_of_Colma\ENG\SHEETS\3_Serramonte.dwg
PLOT DATE: 08-06-18 PLOTTED BY: chof

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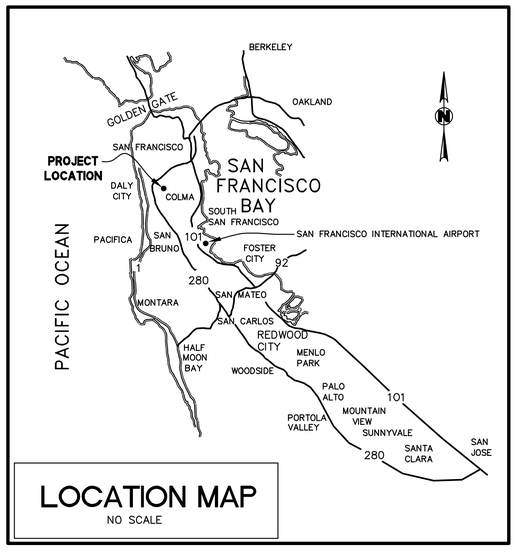
No.	Revisions

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
C2.00
3 OF 3

30% CONCEPT PLANS

JUNIPERO SERRA BLVD
SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)
IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



LOCATION MAP
NO SCALE

PROJECT SUMMARY

OWNER: TOWN OF COLMA
1198 EL CAMINO REAL
COLMA, CA 94014

ENGINEER: BKF ENGINEERS
255 SHORELINE DRIVE
REDWOOD CITY, CA 94065
(650) 482-6300

SHEET INDEX:

LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY		
CURB AND GUTTER		
CATCH BASIN UTILITY		
POLE/GUY-WIRE		
MANHOLE		
PARKING STALL CROSSLINE		
UTILITY BOX/VAULT		
STREET LIGHT		
BIKE LANE SYMBOL		
SIGN WITH POST(S)		
FENCE		
TRAFFIC SIGNAL POLE		

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ABBREVIATIONS

SYMBOL	DESCRIPTION
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
ADD'L	ADDITIONAL
AGG	AGGREGATE
APPROX	APPROXIMATE
AVG	AVERAGE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BLDG	BUILDING
BM	BENCH MARK
BOW	BOTTOM OF WALL
BPM	BLUE PAVEMENT MARKER
BW	BACK OF WALK
CB	CATCH BASIN
CF	CUBIC FEET
C&G	CURB & GUTTER
CL, ℄	CENTERLINE
CO	CLEANOUT
CONC	CONCRETE
CY	CUBIC YARD
DIA	DIAMETER
DR.	DRIVE
DW	DOMESTIC WATER
D/W	DRIVEWAY
(E)	EXISTING
E	ELECTRICAL, or EASTING
EA	EACH
EC	END OF CURB
EG	EXISTING GRADE
EL	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
F/C	FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FP	FINISHED PAVEMENT
FT	FEET
G	GAS
GB	GRADE BREAK
GE	GRATE ELEVATION
GND	GROUND
GR	GRADE
GV	GATE VALVE
JB	JOINT BOX
JP	JOINT POLE
JT	JOINT TRENCH
L	LENGTH
LF	LINEAR FEET
LP	LOW POINT
Lt, LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MIS	MISCELLANEOUS
MSEP	MINOR SIDEWALK ENCROACHMENT PERMIT
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VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
W	WATER
WH	WALL HEIGHT

VICINITY MAP
NO SCALE

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TITLE SHEET
TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

Revisions	No.

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number: C0.00
1 OF 4

30% CONCEPT PLANS

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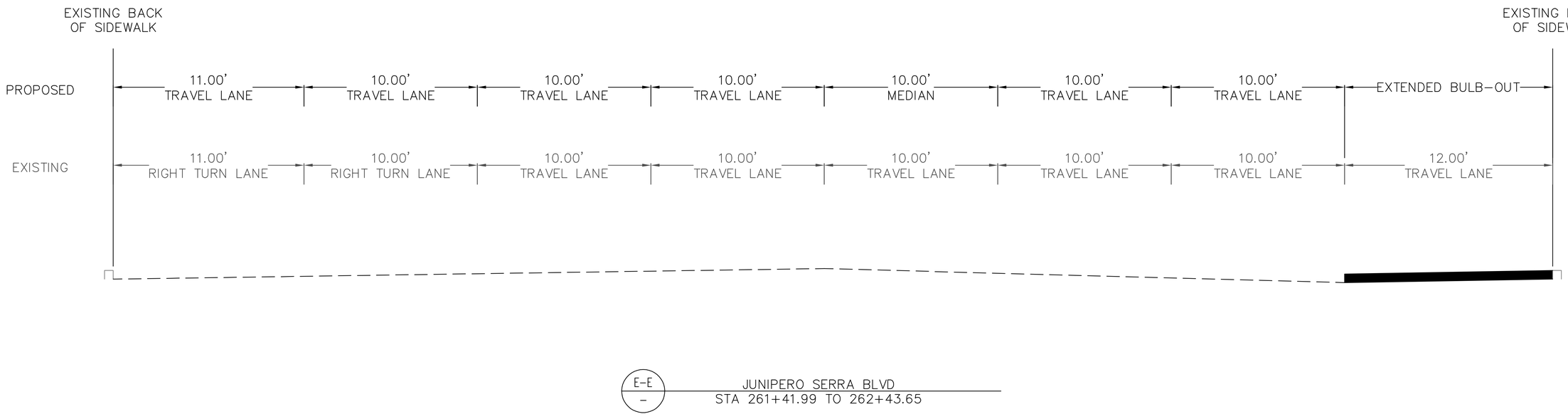

E-E
–
JUNIPERO SERRA BLVD
STA 261+41.99 TO 262+43.65

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JUNIPERO SERRA BLVD
TYPICAL SECTIONS
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Revisions	No.

Date 08/06/18
Scale AS SHOWN
Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
C0.01
2 OF 4

30% CONCEPT PLANS

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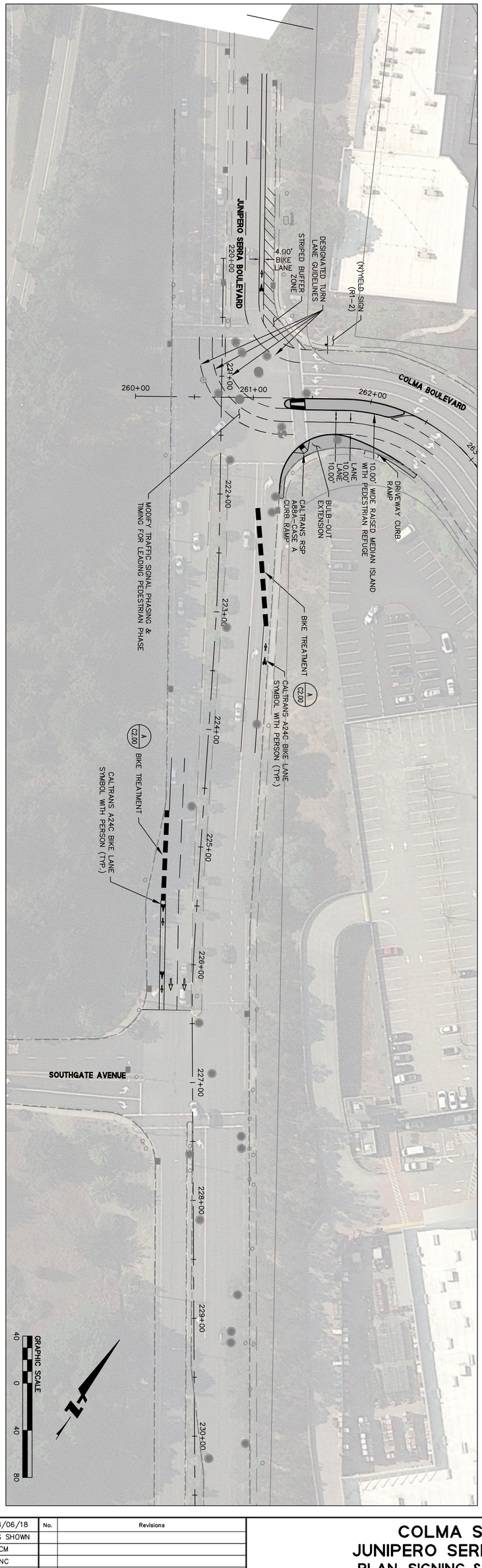

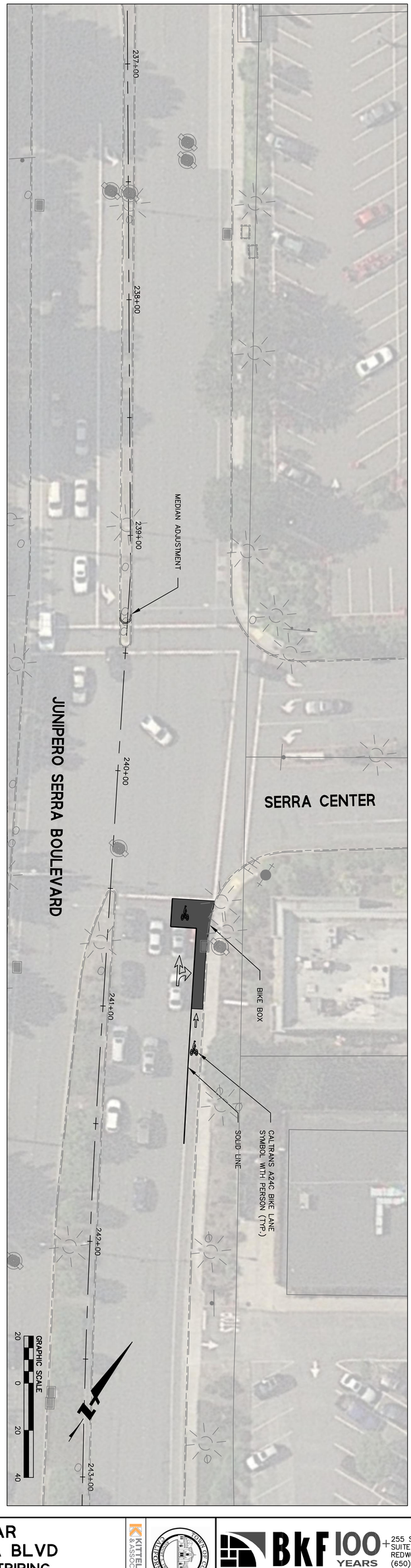

Date	08/06/18	No.	Revisions
Scale	AS SHOWN		
Design	JCM		
Drawn	FNC		
Approved	JCM		
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Drawing Number: C1.00
3 OF 4

COLMA SSAR
JUNIPERO SERRA BLVD
PLAN, SIGNING & STRIPING

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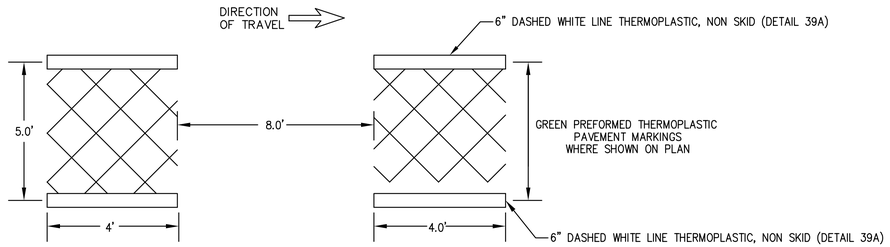
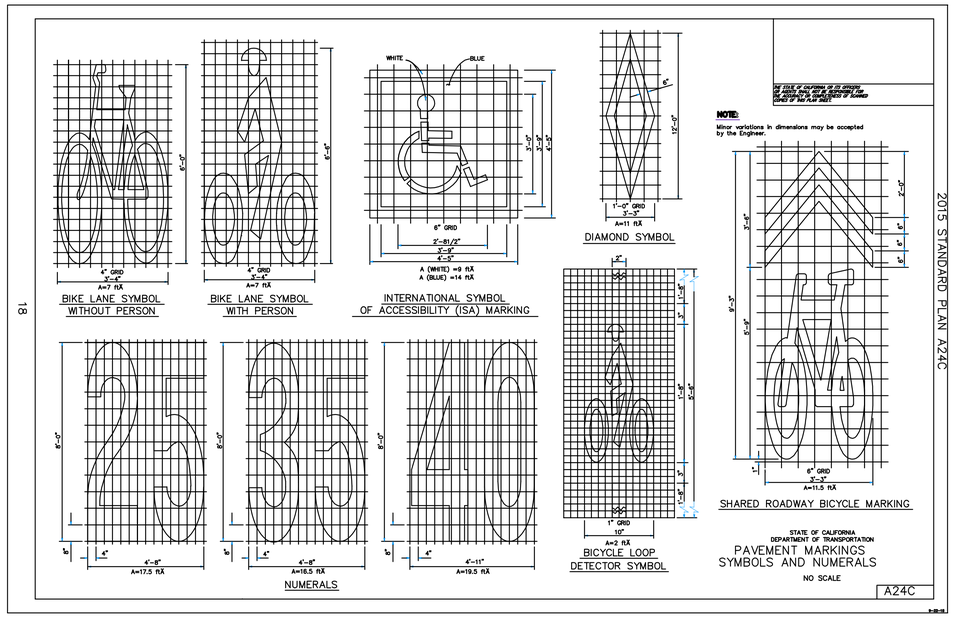
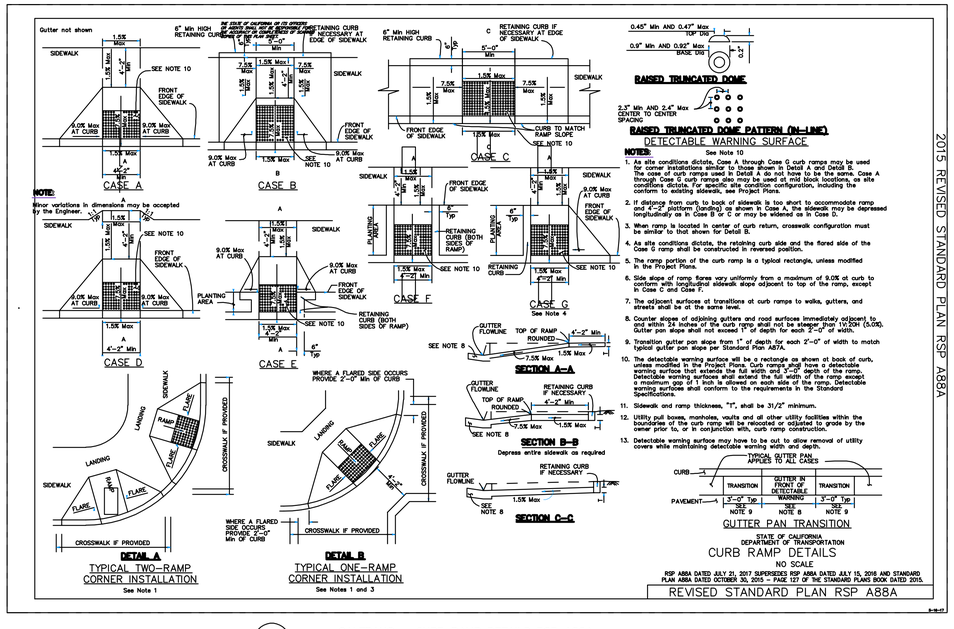


A — N.T.S. BIKE LANE TREATMENT



B — N.T.S. CALTRANS – PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)



C — N.T.S. CALTRANS – CURB RAMP DETAILS RSP A88A

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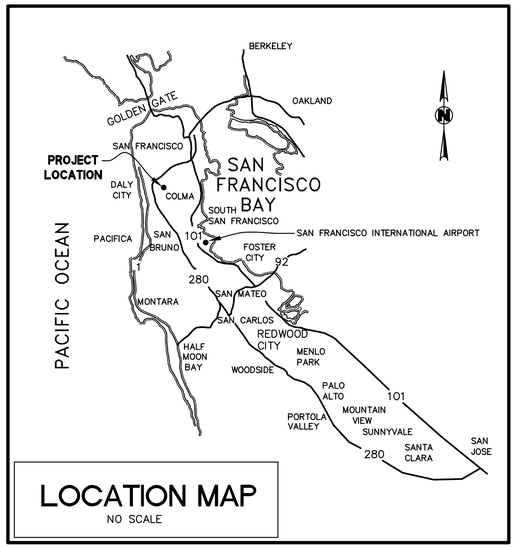
PLOT DATE: 08-06-18 PLOTTED BY: chaf

COLMA BLVD

SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



LOCATION MAP
NO SCALE

PROJECT SUMMARY

OWNER: TOWN OF COLMA
1198 EL CAMINO REAL
COLMA, CA 94014

ENGINEER: BKF ENGINEERS
255 SHORELINE DRIVE
REDWOOD CITY, CA 94065
(650) 482-6300

SHEET INDEX:

LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY		
CURB AND GUTTER		
CATCH BASIN UTILITY		
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C&G	CURB & GUTTER
CL, ℄	CENTERLINE
CO	CLEANOUT
CONC	CONCRETE
CY	CUBIC YARD
DIA	DIAMETER
DR.	DRIVE
DW	DOMESTIC WATER
D/W	DRIVEWAY
(E)	EXISTING
E	ELECTRICAL, or EASTING
EA	EACH
EC	END OF CURB
EG	EXISTING GRADE
EL	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
F/C	FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FP	FINISHED PAVEMENT
FT	FEET
G	GAS
GB	GRADE BREAK
GE	GRATE ELEVATION
GND	GROUND
GR	GRADE
GV	GATE VALVE
JB	JOINT BOX
JP	JOINT POLE
JT	JOINT TRENCH
L	LENGTH
LF	LINEAR FEET
LP	LOW POINT
Lt, LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MIS	MISCELLANEOUS

SYMBOL	DESCRIPTION
MSEP	MINOR SIDEWALK ENCROACHMENT PERMIT
MVG	MODIFIED VALLEY GUTTER
N	NORTHING
NG	NATURAL GROUND
NO., #	NUMBER
NTS	NOT TO SCALE
(N)	NEW
P.A.E.	PUBLIC ACCESS EASEMENT
O.C.	ON CENTER
OH	OVERHEAD
(P)	PROPOSED
P	PAD
PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
PE	PAD ELEVATION OR POLYETHYLENE
PG&E	PACIFIC GAS AND ELECTRIC
PI	POINT OF INTERSECTION
PL, ℙ	PROPERTY LINE
PP	POWER POLE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
RD	ROAD
RCP	REINFORCED CONCRETE PIPE
RIM	RIM ELEVATION
RPA	REDUCED PRESSURE ASSEMBLY
RRFB	RECTANGULAR RAPID FLASHING BEACON
Rt, RT	RIGHT
R/W	RIGHT OF WAY
S	SLOPE
SDAD	STORM DRAIN AREA DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDJB	STORM DRAIN JUNCTION BOX
SF	SQUARE FEET
SHT	SHEET
SNS	STREET NAME SIGN
STA	STATION
STD	STANDARD
S/W, SW	SIDEWALK
T	TELEPHONE
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TEMP	TEMPORARY
TP	TOP OF PAVEMENT
TW	TOP OF WALL
TYP.	TYPICAL
UG	UNDER GROUND
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
W	WATER
WH	WALL HEIGHT

VICINITY MAP
NO SCALE

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COLMA SSAR
COLMA BLVD
TITLE SHEET

TOWN OF COLMA SAN MATEO COUNTY CALIFORNIA

Revisions	No.

Date 08/06/18
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Design JCM
Drawn FNC
Approved JCM
Job No20170252

Drawing Number:
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1 OF 4

30% CONCEPT PLANS

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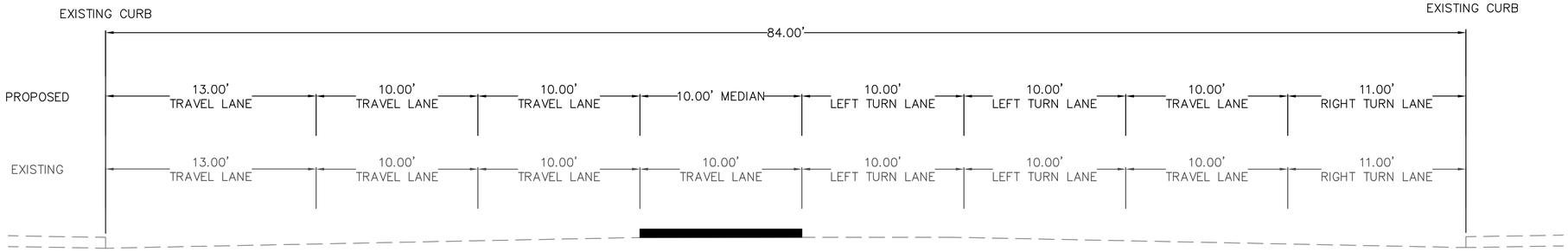
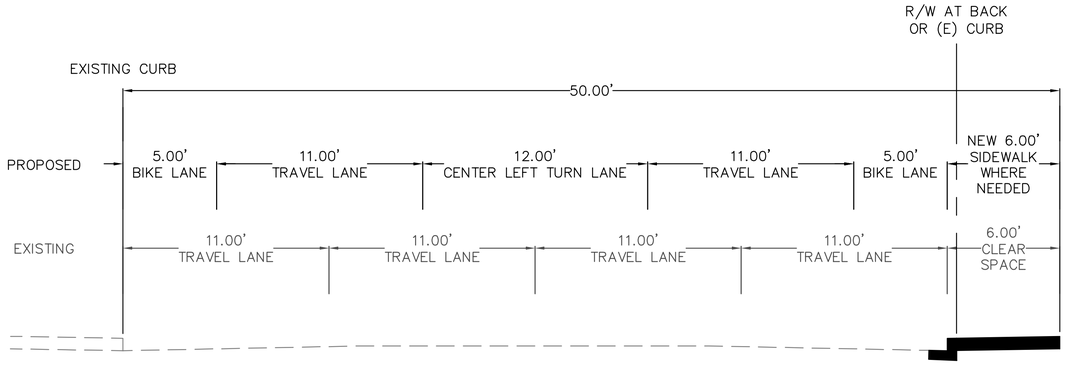


A-A / –
COLMA BOULEVARD
STA 263+32.53 TO 264+40.11



B-B / –
COLMA BOULEVARD
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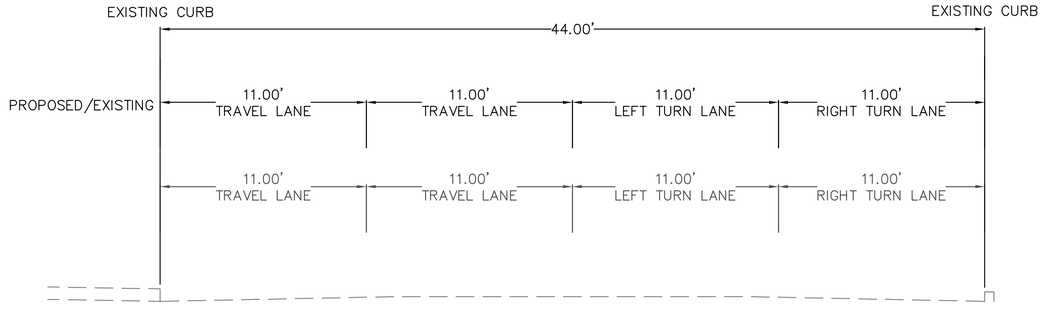

C-C / –
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STA 283+94.00 TO 288+34.37

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TYPICAL SECTIONS

TOWN OF COLMA
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2 OF 4

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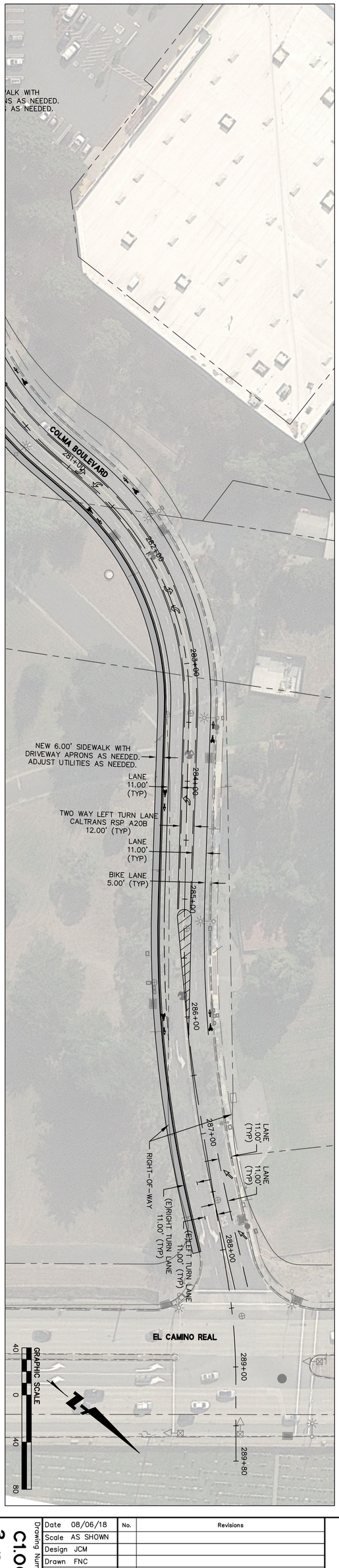

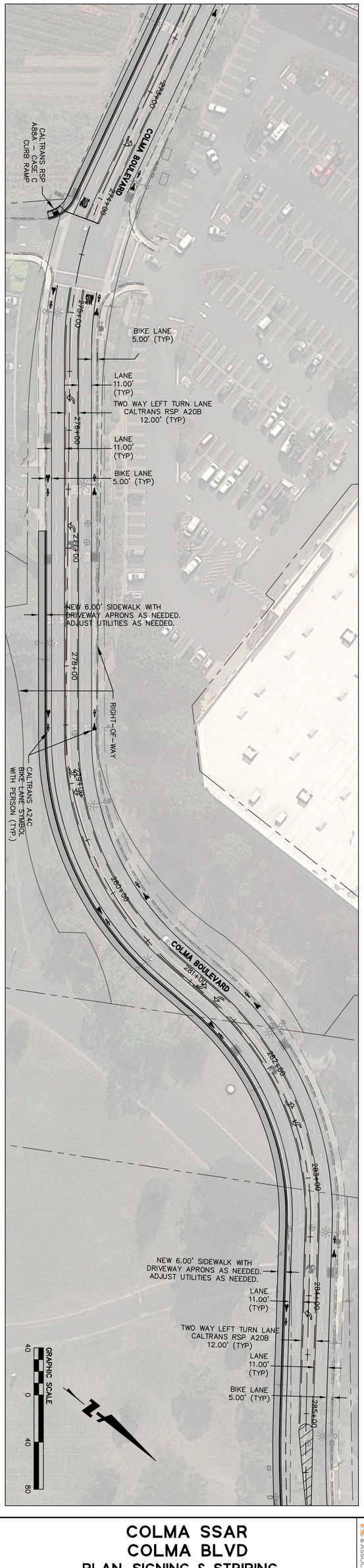

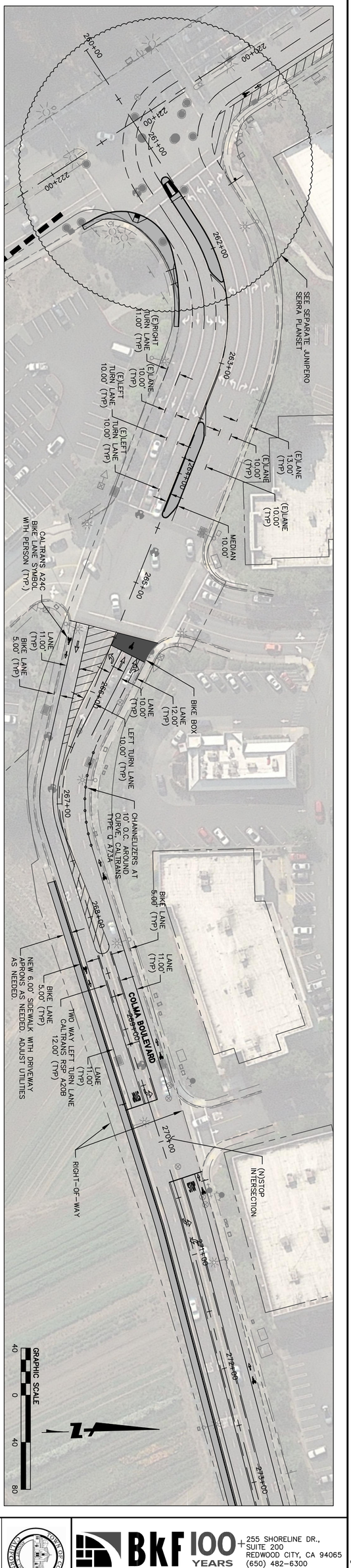

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PLAN, SIGNING & STRIPING

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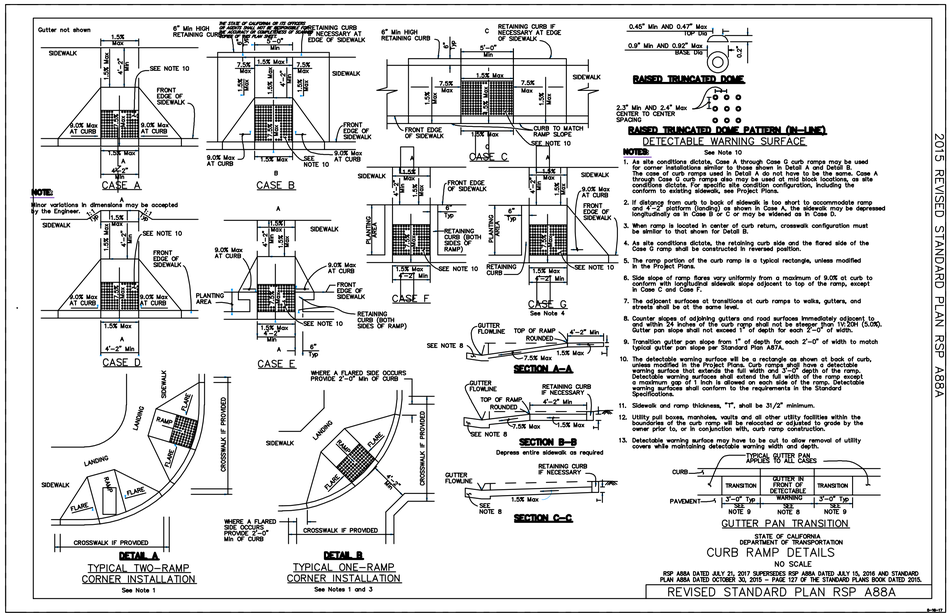

A — CALTRANS – CURB RAMP DETAILS RSP A88A
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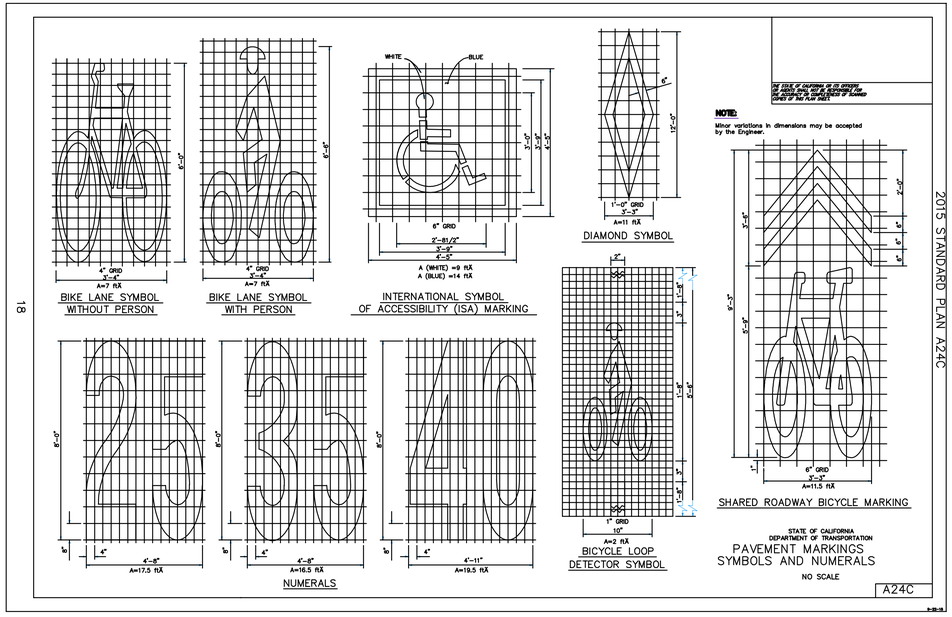

B — CALTRANS – PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)
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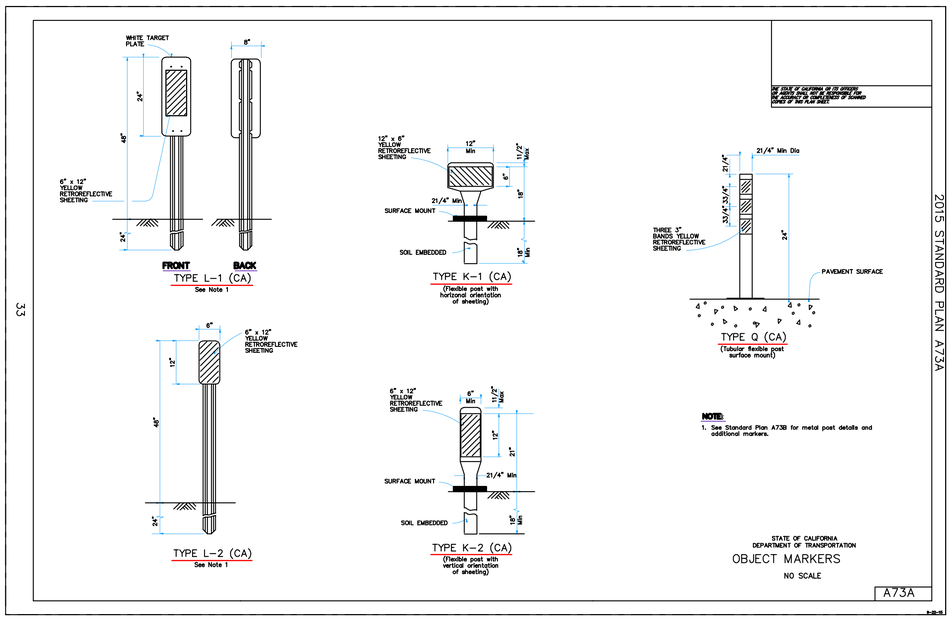

C — CALTRANS – OBJECT MARKERS (A73A)
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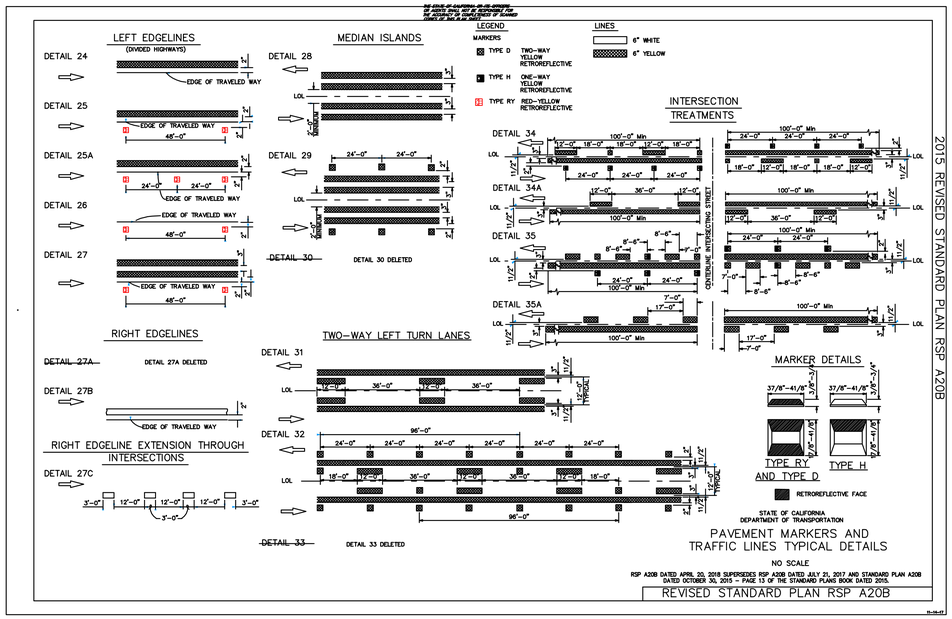

D — CALTRANS – PAVEMENT MARKINGS & TRAFFIC LINES TYP. DETAILS (A20B)
N.T.S.

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June 29, 2018
Job No. 20170252-10

OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON HILLSIDE BLVD TOWN OF COLMA

SUMMARY

A.	**ROAD WORK**		$ 1,473,000
B.	**DEMOLITION WORK**		$ 94,000
C.	**UTILITY WORK**		$ 105,000
D.	**MISCELLANEOUS WORK**		$ 230,000
E.	**SIGNING AND STRIPING**		$ 200,000
		SUBTOTAL	$ 2,102,000
	10% MINOR ITEMS		$ 211,000
	25% CONSTRUCTION CONTINGENCY		$ 526,000
		TOTAL CONSTRUCTION COST	**$ 2,839,000**

General Notes:

TOTAL PROJECT COST $ 2,839,000

1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Hillside between Serramonte Blvd and Lawndale Blvd.
2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
5) Total costs round off to the nearest thousand dollars.
6) Driveway, walkway, and conform work on private property is excluded.

Project Description:

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.

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OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON HILLSIDE BLVD TOWN OF COLMA

ITEMS	*DESCRIPTION*	*QUANTITY*	*UNIT*	*UNIT PRICE*	*AMOUNT*
A.	**ROAD WORK**				
1	Curb and Gutter	5,400	LF	$30.00	$ 162,000
2	Concrete Sidewalk	41,000	SF	$20.00	$ 820,000
3	ADA Ramps	6	EA	$6,000.00	$ 36,000
4	Concrete Driveway	7	EA	$15,000.00	$ 105,000
5	Microsurfacing	300,000	SF	$1.00	$ 300,000
6	Conform (Asphalt)	2,500	SF	$20.00	$ 50,000
				SUBTOTAL	$ 1,473,000
B.	**DEMOLITION WORK**				
1	Remove Existing Concrete	3,650	SF	$20.00	$ 73,000
2	Sawcut	5,400	LF	$2.00	$ 10,800
3	Remove Existing Markings	1	LS	$10,000.00	$ 10,000
				SUBTOTAL	$ 93,800
C.	**UTILITY WORK**				
1	Relocate Existing Catch Basin	6	EA	$15,000.00	$ 90,000
2	Adjust Utility Box to Grade	1	LS	$15,000.00	$ 15,000
				SUBTOTAL	$ 105,000
D.	**MISCELLANEOUS WORK**				
1	Pedestrian Landing Area (Include Bollards)	1	EA	$10,000.00	$ 10,000
2	Traffic Control	1	LS	$100,000.00	$ 100,000
3	Erosion Control	1	LS	$20,000.00	$ 20,000
4	Rectangular Rapid Flashing Beacon	4	EA	$25,000.00	$ 100,000
				SUBTOTAL	$ 230,000
E.	**SIGNING AND STRIPING**				
1	Signing and Striping	1	LS	$200,000.00	$ 200,000
				SUBTOTAL	$ 200,000

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OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON EL CAMINO REAL TOWN OF COLMA

SUMMARY

A.	**ROAD WORK**		$ 1,055,000
B.	**DEMOLITION WORK**		$ 54,000
C.	**UTILITY WORK**		$ 165,000
D.	**MISCELLANEOUS WORK**		$ 470,000
E.	**SIGNING AND STRIPING**		$ 700,000
		SUBTOTAL	$ 2,444,000
	10% MINOR ITEMS		$ 245,000
	25% CONSTRUCTION CONTINGENCY		$ 611,000
		TOTAL CONSTRUCTION COST	**$ 3,300,000**

General Notes:

TOTAL PROJECT COST $ 3,300,000

1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Hillside between Serramonte Blvd and Lawndale Blvd.
2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
5) Total costs round off to the nearest thousand dollars.
6) Driveway, walkway, and conform work on private property is excluded.

Project Description:

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.

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June 29, 2018
Job No. 20170252-10

OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON EL CAMINO REAL TOWN OF COLMA

ITEMS	*DESCRIPTION*	*QUANTITY*	*UNIT*	*UNIT PRICE*	*AMOUNT*
A.	**ROAD WORK**				
1	Curb and Gutter	1,100	LF	$30.00	$ 32,985
2	Curb	3,670	LF	$25.00	$ 91,753
3	Concrete Sidewalk	23,210	SF	$20.00	$ 464,200
4	ADA Ramps	12	EA	$6,000.00	$ 72,000
5	Microsurfacing	193,600	SF	$1.00	$ 193,600
6	Asphalt	5,014	SF	$20.00	$ 100,276
7	Landscaping	1	LS	$100,000.00	$ 100,000
				SUBTOTAL	$ 1,054,814
B.	**DEMOLITION WORK**				
1	Remove Existing Curb	1,610	SF	$20.00	$ 32,192
2	Sawcut	5,663	LF	$2.00	$ 11,326
3	Remove Existing Markings	1	LS	$10,000.00	$ 10,000
				SUBTOTAL	$ 53,518
C.	**UTILITY WORK**				
1	Relocate Existing Catch Basin	5	EA	$15,000.00	$ 75,000
2	Relocate Manhole	1	EA	$15,000.00	$ 15,000
3	Relocate Existing Water Structure	1	EA	$15,000.00	$ 15,000
4	Relocate Streetlight	2	EA	$15,000.00	$ 30,000
5	Adjust Utility Box to Grade	2	LS	$15,000.00	$ 30,000
				SUBTOTAL	$ 165,000
D.	**MISCELLANEOUS WORK**				
1	Traffic Control	1	LS	$200,000.00	$ 200,000
2	Erosion Control	1	LS	$20,000.00	$ 20,000
3	Culvert Headwall	1	LS	$250,000.00	$ 250,000
				SUBTOTAL	$ 470,000
E.	**SIGNING AND STRIPING**				
1	Signing and Striping	1	LS	$100,000.00	$ 100,000
2	Traffic Signal	1	LS	$600,000.00	$ 600,000
				SUBTOTAL	$ 700,000

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OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON SERRAMONTE BLVD AND JUNIPERO SERRA BLVD INTERSECTION TOWN OF COLMA

SUMMARY

A.	**ROAD WORK**		$ 913,000
B.	**DEMOLITION WORK**		$ 18,000
C.	**UTILITY WORK**		$ 84,000
D.	**MISCELLANEOUS WORK**		$ 320,000
E.	**SIGNING AND STRIPING**		$ 340,000
		SUBTOTAL	$ 1,675,000
	10% MINOR ITEMS		$ 168,000
	25% CONSTRUCTION CONTINGENCY		$ 419,000
		TOTAL CONSTRUCTION COST	**$ 2,262,000**

General Notes:

TOTAL PROJECT COST $ 2,262,000

1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks at the Serramonte Blvd and Junipero Serra Blvd intersection.
2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
5) Total costs round off to the nearest thousand dollars.
6) Driveway, walkway, and conform work on private property is excluded.

Project Description:

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.

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June 29, 2018
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OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON SERRAMONTE AND JUNIPERO SERRA INTERSECTION TOWN OF COLMA

ITEMS	*DESCRIPTION*	*QUANTITY*	*UNIT*	*UNIT PRICE*	*AMOUNT*
A.	**ROAD WORK**				
1	Curb and Gutter	100	LF	$30.00	$ 3,000
2	Curb	580	LF	$25.00	$ 14,500
3	Concrete Median	5,390	SF	$20.00	$ 107,800
5	Microsurfacing	83,000	SF	$1.00	$ 83,000
6	Asphalt	30,250	SF	$20.00	$ 605,000
7	Landscaping	1	LS	$100,000.00	$ 100,000
				SUBTOTAL	$ 913,300
B.	**DEMOLITION WORK**				
1	Remove Existing Curb	300	LF	$20.00	$ 6,000
2	Sawcut	450	LF	$2.00	$ 900
3	Remove Existing Street Light	1	EA	$1,500.00	$ 1,500
4	Remove Existing Markings	1	LS	$10,000.00	$ 10,000
				SUBTOTAL	$ 18,400
C.	**UTILITY WORK**				
1	Relocate Existing Catch Basin	1	EA	$15,000.00	$ 15,000
2	Adjust Existing Utilities	1	LS	$15,000.00	$ 15,000
3	New Street Light	3	EA	$18,000.00	$ 54,000
				SUBTOTAL	$ 84,000
D.	**MISCELLANEOUS WORK**				
1	Traffic Control	1	LS	$300,000.00	$ 300,000
2	Erosion Control	1	LS	$20,000.00	$ 20,000
				SUBTOTAL	$ 320,000
E.	**SIGNING AND STRIPING**				
1	Signing and Striping	1	LS	$40,000.00	$ 40,000
2	Traffic Signal	1	LS	$300,000.00	$ 300,000
				SUBTOTAL	$ 340,000

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OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON JUNIPERO SERRA TOWN OF COLMA

SUMMARY

A.	**ROAD WORK**		$	74,000
B.	**DEMOLITION WORK**		$	10,000
C.	**UTILITY WORK**		$	15,000
D.	**MISCELLANEOUS WORK**		$	50,000
E.	**SIGNING AND STRIPING**		$	50,000
		SUBTOTAL	$	199,000
	10% MINOR ITEMS		$	20,000
	25% CONSTRUCTION CONTINGENCY		$	50,000
		TOTAL CONSTRUCTION COST	**$**	**269,000**

General Notes: **TOTAL PROJECT COST $ 269,000**

1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Junipero Serra between Serramonte Blvd and Colma Blvd.
2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
5) Total costs round off to the nearest thousand dollars.
6) Driveway, walkway, and conform work on private property is excluded.

Project Description:

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.

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OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON JUNIPERO SERRA TOWN OF COLMA

ITEMS	*DESCRIPTION*	*QUANTITY*	*UNIT*	*UNIT PRICE*	*AMOUNT*
A.	**ROAD WORK**				
1	Curb and Gutter	180	LF	$30.00	$ 5,400
2	Curb	240	LF	$25.00	$ 6,000
3	Concrete Sidewalk & Median	1,170	SF	$20.00	$ 23,400
4	Detectable Warning Surface	820	SF	$20.00	$ 16,400
5	ADA Ramps	1	EA	$6,000.00	$ 6,000
6	Concrete Driveway	1	SF	$15,000.00	$ 15,000
7	Microsurfacing	1,650	SF	$1.00	$ 1,650
				SUBTOTAL	$ 73,850
B.	**DEMOLITION WORK**				
1	Remove Existing Curb	230	SF	$20.00	$ 4,600
2	Sawcut	440	LF	$2.00	$ 880
3	Remove Existing Markings	1	LS	$5,000.00	$ 5,000
				SUBTOTAL	$ 10,480
C.	**UTILITY WORK**				
1	Adjust Utility Box to Grade	3	EA	$5,000.00	$ 15,000
				SUBTOTAL	$ 15,000
D.	**MISCELLANEOUS WORK**				
1	Traffic Control	1	LS	$50,000.00	$ 50,000
				SUBTOTAL	$ 50,000
E.	**SIGNING AND STRIPING**				
1	Signing and Striping	1	LS	$50,000.00	$ 50,000
				SUBTOTAL	$ 50,000

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June 29, 2018
Job No. 20170252-10

OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON COLMA BOULEVARD TOWN OF COLMA

SUMMARY

A.	**ROAD WORK**		$	411,000
B.	**DEMOLITION WORK**		$	15,000
C.	**MISCELLANEOUS WORK**		$	50,000
D.	**SIGNING AND STRIPING**		$	90,000
		SUBTOTAL	$	566,000
	10% MINOR ITEMS		$	57,000
	25% CONSTRUCTION CONTINGENCY		$	142,000
		TOTAL CONSTRUCTION COST	**$**	**765,000**
		TOTAL PROJECT COST	**$**	**765,000**

General Notes:

1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Colma Boulevard between El Camino Real and Juniperro Serra.
2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
5) Total costs round off to the nearest thousand dollars.
6) Driveway, walkway, and conform work on private property is excluded.

Project Description:

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.

BkF
ENGINEERS / SURVEYORS / PLANNERS

255 SHORELINE DRIVE
SUITE 200
REDWOOD CITY, CA
PH. 650. 482-6300
Fax 650. 482-6399

June 29, 2018
Job No. 20170252-10

OPINION OF PROBABLE CONSTRUCTION COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE PEDESTRIAN IMPROVEMENTS ON COLMA BOULEVARD TOWN OF COLMA

ITEMS	*DESCRIPTION*	*QUANTITY*	*UNIT*	*UNIT PRICE*		*AMOUNT*
A.	**ROAD WORK**					
1	Concrete Sidewalk/Median	15,000	SF	$20.00	$	300,000
2	Microsurfacing	100,100	SF	$1.00	$	100,100
3	Caltrans Type Q Posts	9	EA	$500.00	$	4,500
4	ADA Ramps	1	EA	$6,000.00	$	6,000
				SUBTOTAL	$	410,600
B.	**DEMOLITION WORK**					
1	Sawcut	2,500	LF	$2.00	$	5,000
2	Remove Existing Markings	1	LS	$10,000.00	$	10,000
				SUBTOTAL	$	15,000
C.	**MISCELLANEOUS WORK**					
1	Traffic Control	1	LS	$50,000.00	$	50,000
				SUBTOTAL	$	50,000
D.	**SIGNING AND STRIPING**					
1	Signing and Striping	1	LS	$90,000.00	$	90,000
				SUBTOTAL	$	90,000

ATTACHMENT B - SUMMARY OF TRAFFIC VOLUMES COLLECTED IN 2017

The following summarizes recent traffic volume data collected in Colma as well as Kittelson's observations from field reviews.

F Street from El Camino Real to Hillside Boulevard

F Street is a east-west corridor, and the segment in between El Camino Real and Hillside Boulevard is the study corridor. The corridor has cemeteries on the south side, and residential development on the north side. The corridor branches off of El Camino Real with a steep up grade and then levels off. The entire segment has brick surface, on-street parking and sidewalk on both the sides. The visibility of the 'stop ahead' warning signs could be improved given the adjacent trees. There are 'stop ahead' warning signs on the pavement augmenting the street signs. There is a horizontal curve on F Street on the approach to Hillside Boulevard. The traffic volume information for this corridor is shown in Figure 1. This information helps in understanding the hourly vehicular traffic patterns on the corridor throughout the day.

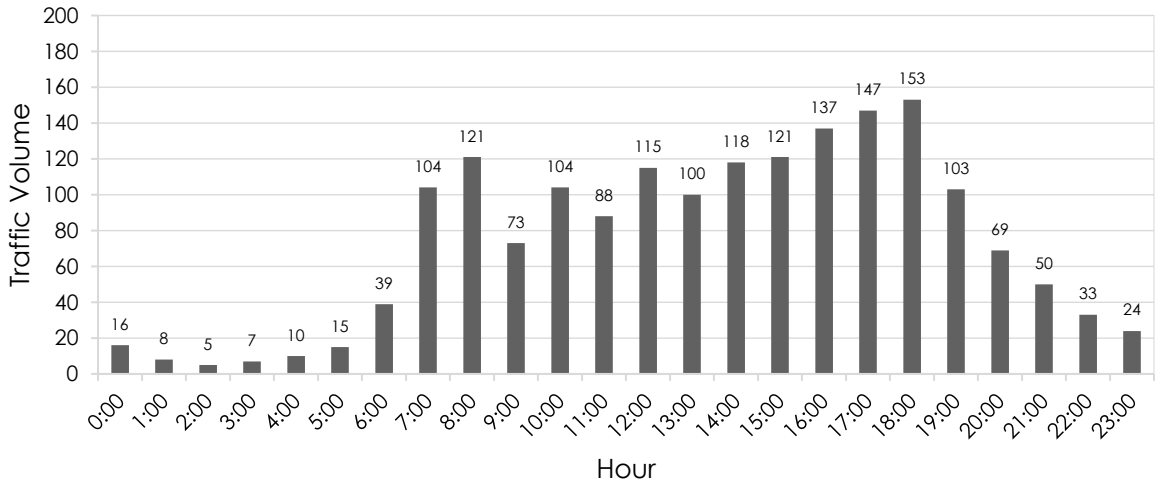


Figure 1: Traffic Volume Information for F Street

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Pavement Markings

F Street has no pavement markings. Lane delineation could be helpful near the Hillside Boulevard intersection because of the presence of horizontal curve at the approach. The community input included comments on vehicle speeds. Adding pavement markings allocate and define roadway space. Adding right edge lines or parking "T"s visually narrow the travel lanes which could reduce vehicle drift and support lower travel speeds along the corridor.

ii. Street Signs

Some stop signs, warning signs, and streetname signs are obscured by vegetation. Others are placed at a relatively low height. Signing examples are shown in Figure 2.

Lack of intersection markings (i)

Obscured sign (ii)

Figure 2: Photos Show Existing Features on F Street

El Camino Real from Northern Town Limits to Southern Town Limits

El Camino Real (ECR), State Highway 82, is a north-south through the Town of Colma. The corridor has cemeteries on the east and west sides until Colma Boulevard and industrial and/or commercial developments around Serramonte Boulevard/ECR intersection. ECR has a posted speed of 35 mph in South San Francisco area that changes to 40 mph in the Town of Colma. The hourly traffic volume information for this corridor is shown in Figure 3. This information helps in understanding the hourly vehicular traffic patterns on the corridor throughout the day.

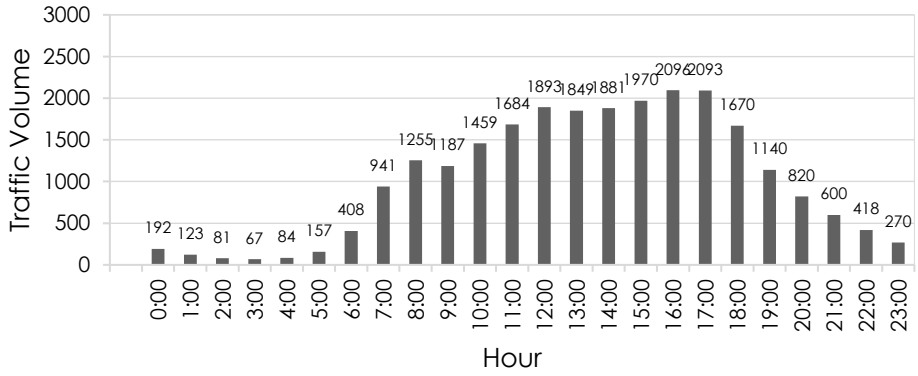


Figure 3: Traffic Volume Information for El Camino Real

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Traffic Signals

The traffic signals at ECR intersections do not have reflective backplates on the signal heads. This limits the traffic signal visibility during the daytime.

ii. Pedestrian Crossing

Community members provided comments about cars traveling on ECR not yielding to pedestrians. Examples of the limited signal visibility is shown in Figure 4.

Figure 4: Limited Signal Visibility

Colma Boulevard from Junipero Serra Boulevard to El Camino Real

Colma Boulevard is an east-west study corridor between ECR and Junipero Serra Boulevard (JSB) . The corridor has cemeteries near the ECR intersection and commercial development to the west approaching JSB. The corridor has four lanes at ECR that widens at the JSB intersection. The roadway is inclined going west from ECR and vehicle speeds are higher traveling east, down hill toward ECR. The corridor has sidewalk on the north side the entire length of the corridor and on both sides from the commercial development westward. The hourly traffic volume information this corridor is shown in Figure 5.

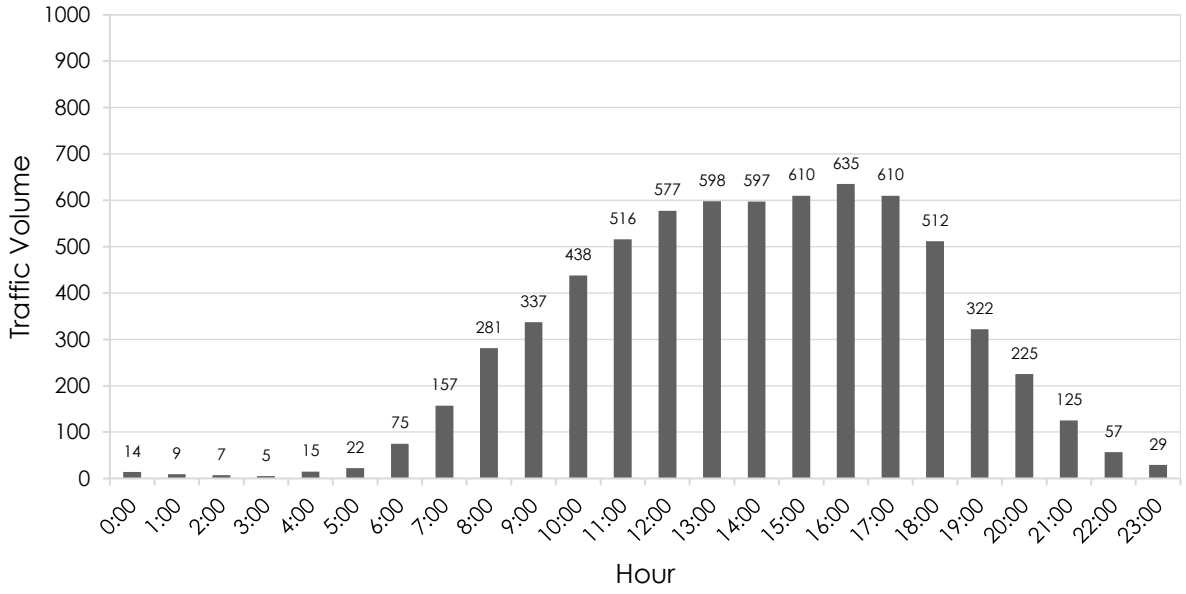


Figure 5: Traffic Volume Information for Colma Boulevard

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Traffic Signals

The traffic signals at ECR/Colma Boulevard and JSB/Colma Boulevard do not have reflective backplates limiting visibility of the signal display when drivers are heading in the direction of sun.

Junipero Serra Boulevard from Northern Town Limits to Southern Town Limits

JSB is a north-south study corridor running in parallel to ECR and I-280 running between the northern and southern town limits . The corridor has Sam Trans Bus stops and Colma BART Station on the northlimit and commercial development at the Serramonte Center on the southcorridor limit. Serramonte Boulevard interchanges with I-280 providing a freeway connection to the town. A northbound I-280 entrance ramp connects directly to JSB. The corridor segment has a rolling grade with up and downgrades. The corridor has sidewalk on the east side of the corridor until the Serramonte Boulevard/JSB intersection. The corridor has sidewalk on both sides from the Serramonte Boulevard/JSB intersection to the southern town limit. The hourly traffic volume information for this corridor is shown in Figure 6.

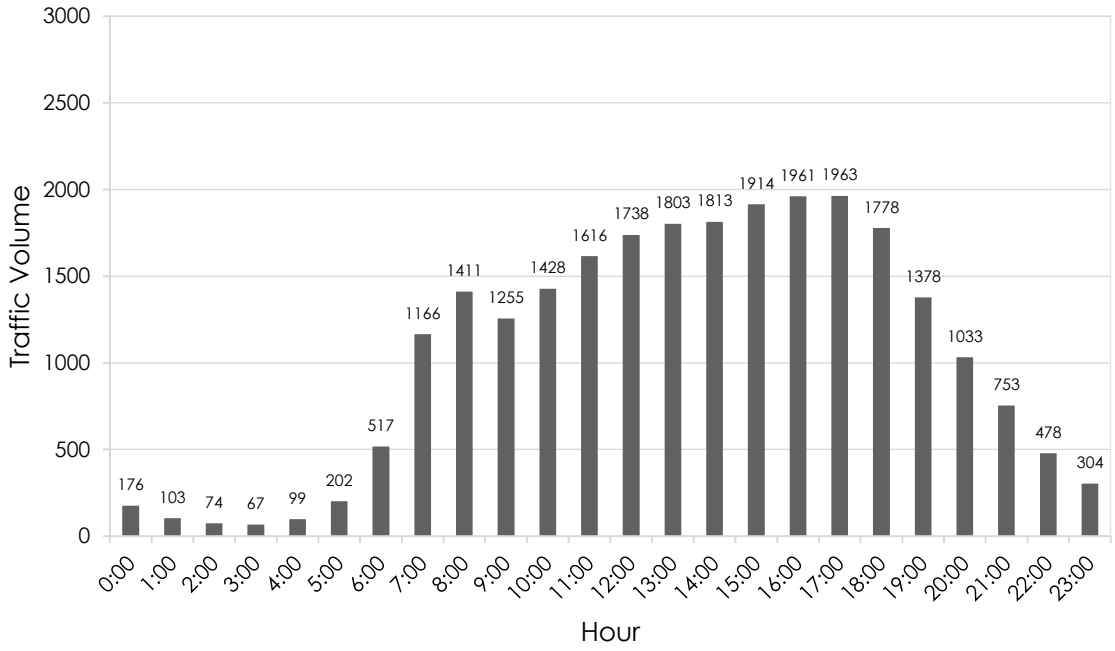


Figure 6: Traffic Volume Information for Junipero Serra Boulevard

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Warning Signs

The crash data shows that improper turning was reported for 39% of crashes along this corridor. The driveways at the Extra Space storage driveway are not conspicous and can go unnoticed by northbound JSB driver. Southbound drivers turning into left-in only turn pocket have limited sight distance to northbound vehicles on JSB.

ii. Pedestrian Crossing

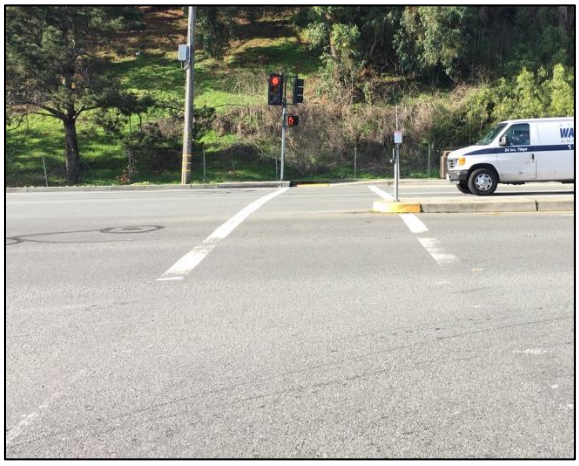
Pedestrian crossings are some times limited in visibility and drivers are inconsistent in yielding to the pedestrian crossings on the street because of the operating speeds. Community members provided input about the cars not yielding to pedestrians at some corridor locations.

iii. Traffic Signals

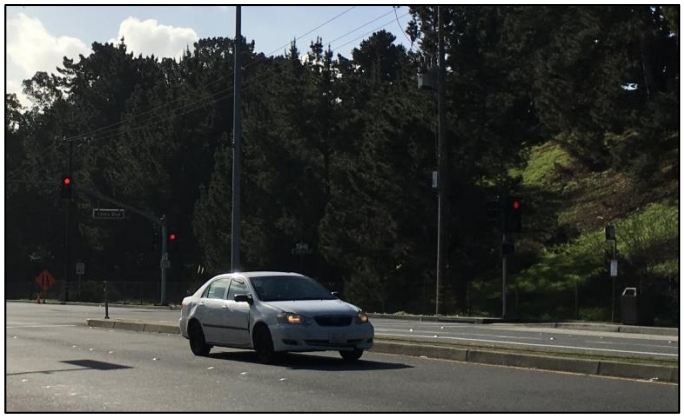
The traffic signals do not have reflective backplates limiting visibility of the signal display when drivers are heading in the direction of sun.

Examples from the corridor are shown in Figure 7.

Left-in only driveway access (vi)



Limited visiblity of crosswalk (vii)



Limited signal visibility (viii)

Figure 7: Photos show Existing Features on Junipero Serra Boulevard

Serramonte Boulevard from Hillside Boulevard to Northbound I-280

Serramonte Boulevard is a east-west corridor providing access to I-280 and commercial development on either side of I-280. The study corridor is between JSB and Hillside Boulevard. The corridor has commercial development, i.e. shopping center near the JSB/Serramonte Boulevard and Collins intersection. The corridor later transitions to auto dealerships near the eastern limit. There is a casino at the Serramonte Boulevard terminus with Hillside Boulvevard. The hourly traffic volume information for this corridor is shown in Figure 8.

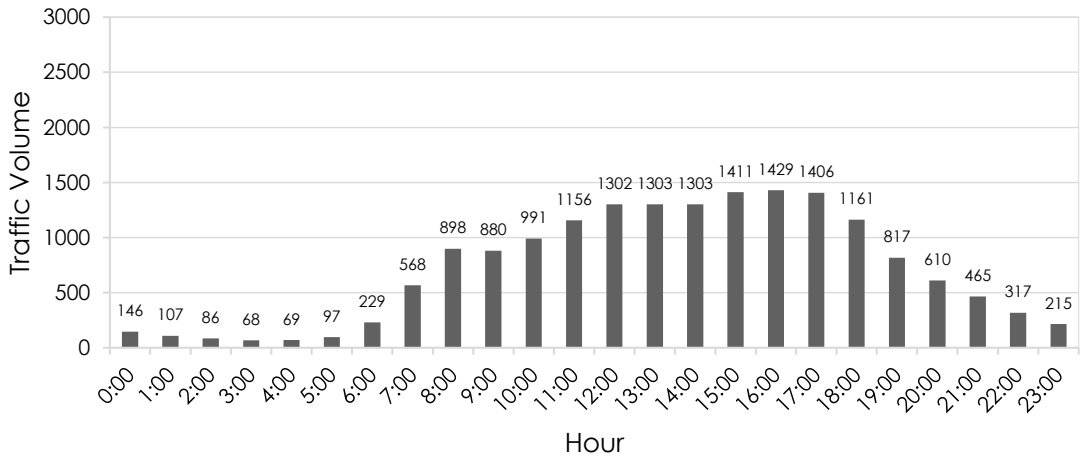


Figure 8: Traffic Volume Information for Serramonte Boulevard

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Pedestrian Crossing/Enhanced Pedestrian Crossing

The crash data shows that 30% of reported crashes on Serramonte Boulevard are associated with speeding. Community input indicates motorists do not yield consistently to pedestrians.

ii. Street Signs

Some streetname signs, and warning signs are less visible due to vegetation. Others are placed at a relative low height.

Hillside Boulevard from Northern Town Limits to Southern Town Limits

Hillside Boulevard is a north-south study corridor between the northern and southern town limits. The corridor has residential development and school zone at the north limit just beyond the Colma limit. Heading south into Colma, the land uses consist of cemeteries on either side of the corridor near F Street. The 'Lucky Chances' casino is near the Serramonte Boulevard intersection which is followed by cemeteries on either sides of the corridor until Lawndale Boulevard. The hourly traffic volume information for this corridor is shown in Figure 9.

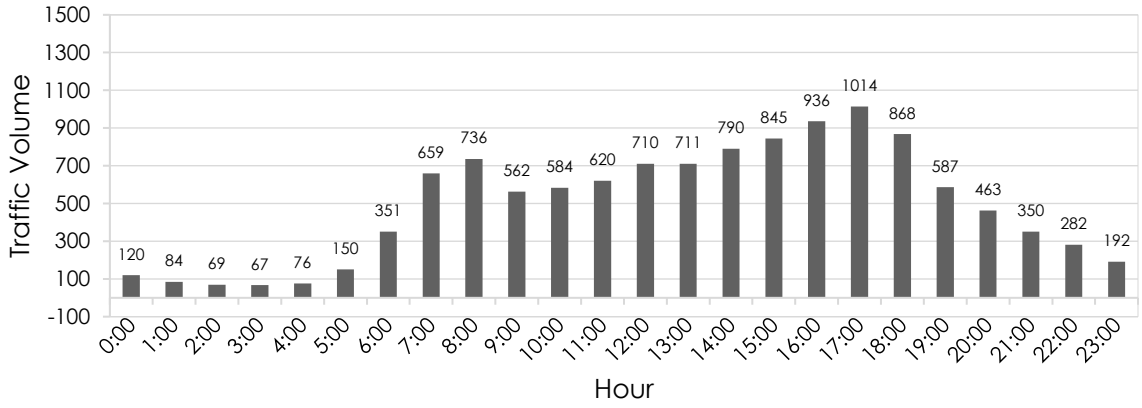


Figure 9: Traffic Volume Information for Hillside Boulevard

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Pedestrians

Pedestrian activity seems common along Hillside Boulevard particularly near the cemeteries with people needing to park on-street and walk to the cemeteries or other nearby businesses.

ii. Street Signs

Some speed limit signs, and warning signs are obscured by vegetation. Others are placed at a relative low height relative to on-street parked cars and other roadside conditions. Examples of these conditions are shown in Figure 10.

Undefined crossing (xi)

Obscured sign (xii)

Figure 10: Photos show Existing Features on Hillside Boulevard

Collins Avenue from Junipero Serra Boulevard to El Camino Real

Collins Avenue is an east-west study corridor between Serramonte Boulevard and ECR. The corridor has industrial development with car dealerships near Serramonte Boulevard on the south side, and some car dealerships and a shopping center (i.e. Kohl's) near the ECR/Collins Avenue intersection on the north side of the corridor. There is on-street parking on one side of the corridor on the west side, and on both sides near the Serramonte Ford Body Shop along the Collins Avenue corridor. The hourly traffic volume information for this corridor is shown in Figure 11.

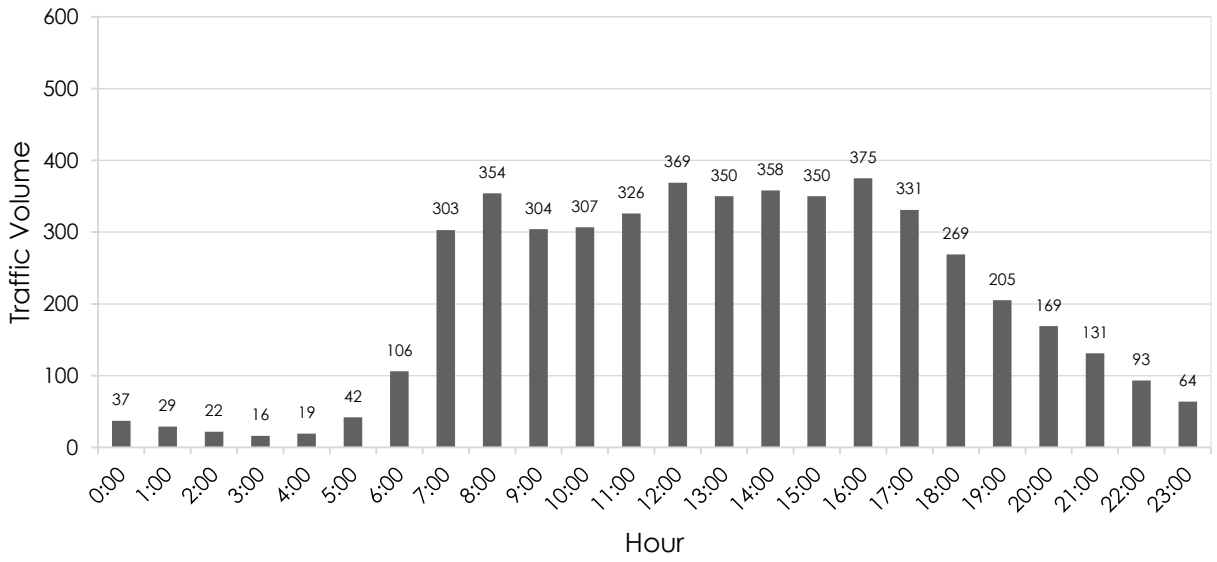


Figure 11: Traffic Volume Information for Collins Avenue

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Warning, speed limit Signs

During the field visit, Kittelson noticed the need for larger street signs near Collins Avenue and ECR intersection. Kittelson also noticed that the warning signs, and speed limit signs need to be upgraded along the corridor. Some where obscured by vegetation, and placed at a relative low height when relative to on-street parking and roadside conditions.

Lawndale Boulevard from Hillside Boulevard to Mission Road

Lawndale Boulevard is an east-west study corridor in between Hillside Boulevard and Mission Road. The corridor has residential development for about quarter length of the corridor and school for the other part of the corridor. ECR High School is on the south side near Mission Road. The roadway segment has a downgrade from Hillside Boulevard to Mission Road. The hourly traffic volume is shown in Figure 12.

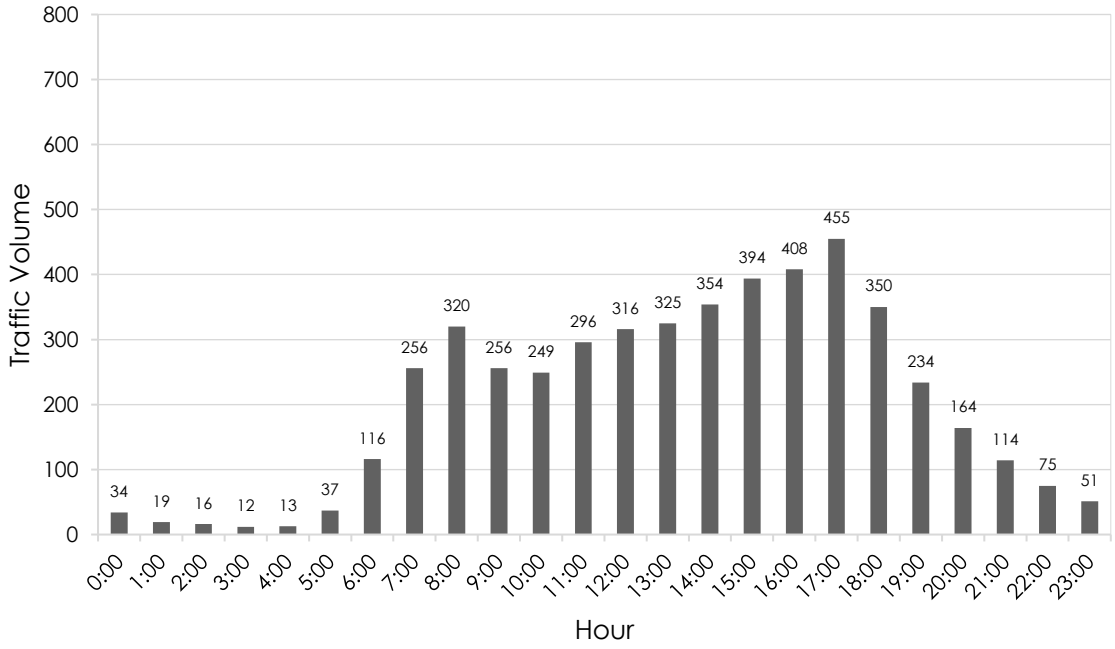


Figure 12: Traffic Volume Information for Lawndale Boulevard

Source: Tube Count Data Collected by Quality Counts, 2017.

Existing Features

i. Cross-section

Kittelson obsserved there were two receiving lanes westbound on Lawndale Boulevard from Hillside Boulevard. However, there is only a single left and right turn lane from Hillside Boulevard serving these two lanes. Therefore, a single receiving lane westbound would be sufficient to serve the traffic volume coming onto Lawndale Boulevard.

Mission Road from El Camino Real to Lawndale Boulevard

Mission Road is a north-south corridor that terminates at ECR on the north and Lawndale Boulevard on the south. Mission Road has residential development on the west side and cemeteries on the east side of the corridor. The crash data for this corridor showed speeding related crashes. This finding was also validated by the community input received. The hourly traffic volume information for this corridor is shown in Figure 13.

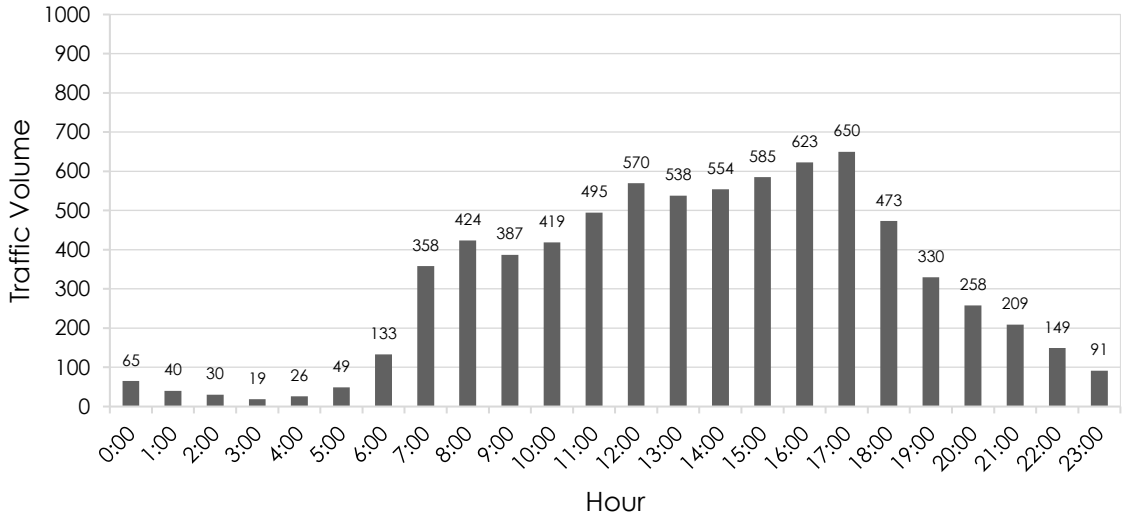


Figure 13: Traffic Volume Information for Mission Road

Source: Tube Count Data Collected by Quality Counts, 2017.

TOWN OF COLMA
COLMA
AUGUST 5, 1924
CALIFORNIA

STAFF REPORT

TO: Mayor and Members of the City Council

FROM: Kirk Stratton, Chief of Police

VIA: Brian Dossey, City Manager

MEETING DATE: November 28, 2018

SUBJECT: Part Time Community Service Officer

RECOMMENDATION

Staff recommends that the City Council adopt the following:

> RESOLUTION AUTHORIZING THE HIRING OF MORE THAN ONE PART-TIME COMMUNITY SERVICE OFFICER.

EXECUTIVE SUMMARY

The proposed resolution would allow the Colma Police Department to employ more than one part time community service officer (CSO) to fill the part-time CSO position. The Council previously authorized the hiring of one part-time CSO through the adoption of Resolution No. 2017-59. The hiring of a .5 FTE community service officer will enhance parking enforcement efforts by existing staff and continue to enforce parking in areas where enforcement is conducted after regular business hours, every day. Funding for the position will be established from the COPS fund surplus.

FISCAL IMPACT

None. The Fiscal Year 2018-19 COPS Fund can absorb the costs for a .5 FTE CSO position.

BACKGROUND

On November 8, 2017 the City Council adopted Resolution No. 2017-59 authorizing the hiring of one part time community service officer to supplement parking enforcement. The part time community service officer that was hired has had a positive impact on parking enforcement. However, this part time community service officer recently accepted a 40 hour per week parking enforcement position with the City of San Bruno. This means this individual will work less hours conducting parking enforcement for the Town of Colma. The part time community service officer now works approximately 10-15 hours per week, Monday, Wednesday and Thursday.

The Colma Police Department has a police patrol budget of $5,043,091 and the cost to hire an additional part time community service officer, at $34.41 per hour, step 1 of the community services officer salary schedule, would equate to approximately $34,000 annually. This hourly rate is comparable to other San Mateo County agencies that employ community service officers.

The community service officer position is funded through the COPS grant. The Fiscal Year 2018-2019 COPS fund has a budget of $177,000. $141,000 is budgeted for the fulltime community service officer position and $36,000 is budgeted for the part time community service officer position. The Fiscal Year 2018-19 COPS fund can accommodate 1.5 FTE's.

The .5 FTE community service officer position is an at will position with no benefits. A .5 FTE, community service officer would typically work (3-5) days per week, no more than 960 hours annually, or a schedule that meets the needs of the department.

ANALYSIS

Parking has been an ongoing issue in the Town of Colma, specifically, the Sterling Park neighborhood. The City Council recently approved an ordinance changing the existing parking regulations in the Sterling Park neighborhood and other areas such as El Camino Real fronting Sterling Park. The ordinance requires consistent parking enforcement as some areas are now enforced 24 hours per day, every day. The Colma Police Department has a full-time community service officer that works (5) eight-hour days, Monday through Friday. The full time CSO also manages the Property/Evidence room which requires additional time. The part time community service officer has been filling in during off hours but recently accepted a fulltime parking enforcement position with the City of San Bruno.

Changing the position from one part time CSO to .5 FTE CSO allows the Police Department the ability to hire more than one employee as the part time CSO, not to exceed 960 hours between the number of employees hired to fill the .5 FTE CSO position. The Town would benefit from this change, giving the department more flexibility in scheduling and hiring while maintain parking enforcement.

The recruitment and hiring process for this position takes less time than hiring a police officer due to the skills, qualification and experience required by a police officer. A parking enforcement officer does not require a POST certificate and the age requirement is 18 years and older, opposed to 21 and over for a police officer.

A community service officer supports front line law enforcement; therefore, funding may come from the COPS fund. State cops funding is allocated by the State Controller to counties for deposit by the county auditor in a Supplemental Law Enforcement Services Account known as SLESF, established in each county.

Council Adopted Values

The proposed resolution to hire a .5 FTE, community service officer is *responsible* as it is in the best interest of the Town and allows the police department to continue to provide quality services with regards to current parking issues and public safety without being limited to hiring only one individual for the part-time position.

ALTERNATIVES

The City Council could choose not to adopt the resolution. Doing so is not recommended as the police department needs additional resources to help enforce new parking regulations in the Sterling Park neighborhood, El Camino Real, Mission Road and other areas within the Town's jurisdiction.

CONCLUSION

Staff recommends council adopt the resolution to hire more than one community service officer not to exceed .5FTE.

ATTACHMENTS

A. Resolution
B. COPS Fund Expenditure Report

TOWN OF COLMA
COLMA
AUGUST 5, 1924
CALIFORNIA

RESOLUTION NO. 2018-__
OF THE CITY COUNCIL OF THE TOWN OF COLMA

RESOLUTION AUTHORIZING THE HIRING OF MORE THAN ONE PART-TIME COMMUNITY SERVICE OFFICER.

The City Council of the Town of Colma does hereby resolve:

1. Background.

(a) On November 8, 2017, the City Council adopted Resolution No. 2017-59 authorizing the hiring of one part-time temporary community service officer (CSO).

(b) Due to recent staffing changes, Police staff would like the flexibility to hire more than one individual to staff the part-time CSO position.

(c) As the City Council's adoption of Resolution No. 2017-59 limited the part-time position to one individual, staff is now asking the City Council to modify its previous authorization to allow more than one individual to staff the part-time CSO position.

(d) The Town of Colma currently has one full-time CSO, and one part-time CSO.

(e) Allowing the part-time CSO position to be staffed by more than one individual will enhance parking enforcement efforts by existing staff and continue to enforce parking after 5pm Monday through Friday and in areas where enforcement is conducted 24 hours per day, every day.

2. Order.

(a) The City Council hereby expands its previous authorization provided for in Resolution No. 2017-59 allowing for the hiring of one part-time CSO to now allow for the hiring of a .5 FTE part-time CSO. The Resolution authorizes staff to hire more than one individual to fill the .5 FTE part-time CSO position.

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Certification of Adoption

I certify that the foregoing Resolution No. 2018-__ was duly adopted at a regular meeting of said City Council held on November 28, 2018 by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Raquel "Rae" Gonzalez, Mayor					
Joanne F. del Rosario					
John Irish Goodwin					
Diana Colvin					
Helen Fisicaro					
Voting Tally					

Dated _____

_____
Raquel Gonzalez, Mayor

Attest: _____
Caitlin Corley, City Clerk

Town of Colma
Revenues and Expenditures Summary
For Period Ending September 30, 2018
For Citizens Option for Public Safety (COPS) Grant Fund (Fund 29)

Financial Summary for Fund 29	2018-19 Budget	2018-19 Actual to Date	Remaining Budget	% of Budget
	[a]	[b]	[a]-[b]	[b]/[a]
Revenues				
COPS Grant	100,000	48,747	51,253	49%
Interest Earnings	400	-	400	0%
Total Revenues	**100,400**	**48,747**	**51,653**	**49%**
Expenditures				
Salaries & Benefits	172,800	52,231	120,569	30%
Operating Services & Supplies	4,600	709	3,891	15%
Total Expenditures	**177,400**	**52,939**	**124,461**	**30%**
Operating Surplus/(Deficit)	(77,000)	(4,193)	(72,807)	5%
Fund Balance (unaudited) @ 7/1/2018	166,189	166,189	-	100%
Fund Balance (projected) @ 6/30/2019	**89,189**	**161,996**	**(72,807)**	**182%**

TOWN OF COLMA
COLMA
AUGUST 5, 1924
CALIFORNIA

STAFF REPORT

TO:	Mayor and Members of the City Council
FROM:	Brad Donohue, Director of Public Works
	Pak Lin, Administrative Service Director
	Michael Laughlin, City Planner
VIA:	Brian Dossey, City Manager
MEETING DATE:	November 28, 2018
SUBJECT:	Cost of Service Fee Study

RECOMMENDATION

This item is a study session for informational purposes only. City Council action is not required. This staff report is being presented to provide information to the City Council regarding certain fees related to City services.

EXECUTIVE SUMMARY

The Town recently completed a Cost of Service Study (Fee Study) to identify the cost of providing various user fee related services. The Town's chief purposes in conducting this Fee Study is to provide an opportunity for the City Council to re-align fee amounts with the adopted cost recovery policies and adjust fees to meet updated costs of providing service. As part of the study, a schedule of fees was prepared. The schedule of fees identifies services provided by, or on behalf of, the Town and the costs charged for providing these services. A fee adjustment based on the Fee Study would allow Planning, Building and Public Works revenues to generate revenue necessary for funding services performed for members of the community. The Fee Study and staff's recommendations are intended to be considered upon completion of this Study Session. This Study Session provides all interested parties an opportunity to comment or request clarification regarding any of the fees proposed prior to City Council adoption of new or changed fees.

FISCAL IMPACT

There is no immediate fiscal impact associated with this report. The direction provided by the City Council will have future fiscal impact.

BACKGROUND

The California Constitution (Article 13 C) and various state laws have placed both substantive and procedural limits on cities' ability to impose fees and charges. Proposition 26 contains a more general articulation of the cost of service principle and includes a requirement that **"***The local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity."*

California law prohibits jurisdictional entities to set user fees or charges based upon subjective justification or based on what neighboring cities charge. The Law is more specific and demanding, entitling jurisdictions to charge a fee that is fair and reasonable, and which does not exceed the reasonable costs of the jurisdiction to perform that service. To determine the Town's reasonable costs, the Town hired the services of NBS to review the Town's costs to perform the various services rendered by the Planning, Building and Engineering Divisions. The Fee Study included a thorough analysis of the total cost of providing services, including all applicable direct, indirect and overhead costs associated with specific services. This was a coordinated effort amongst the three aforementioned divisions and many meetings held between NBS and staff to review updates and provide feedback.

Fee-related services typically benefit an individual, business, or group. Since these services typically benefit a specific payor, municipalities often seek to recover all or a greater portion of the costs for services provided to the benefactor. It has been several years since the Town amended its fee schedule for the Planning, Building and Engineering Divisions. One of the City Council's priority focus areas is to enhance the Town's long-term financial stability. Adopting a new fee schedule with an annual review of fees and fee adjustments will assist the Town in its long-term financial stability by recovering a greater portion of costs. It's considered a best management practice to not only review fees annually, but also to have a thorough review and adjustment of the fees every five to ten years.

ANALYSIS

The following categories of fees were examined in this study:

- Planning services, including the reasonable costs of providing various types of reviews and adding application types where fees have not been collected in the past;
- Building services, establishing a base fee based on the value of the improvement (valuation), including development plan review, building plan check and inspection and other building safety activities;
- Public Works/Engineering services, including engineering land development review, encroachment permits, and NPDES permitting.
- Administrative Overhead handled by the Finance, City Manager, and City Clerk Departments, including application/permit processing for special business regulation permits.

The fees examined in this study specifically excluded utility rates, development impact fees, and special assessments, all of which fall under distinct analytical and procedural requirements different from the body of user/regulatory fees analyzed in this effort.

Methods of Analysis

The Comprehensive User Fee Study consisted of three primary phases of analysis:

- Cost of service analysis
- Cost recovery evaluation
- Fee establishment

The following data sources were used to support the cost of service analysis and fee establishment phases of this Study:

- The Town of Colma's Adopted Budget for Fiscal Year 2018-19
- Information on the current and historical utilization of Town contracted professional services related to Planning, Engineering, and Building services
- Prevailing fee schedules
- Annual workload data provided by each division studied

The Town's adopted budget is the most significant source of information affecting cost of service results. This Study has accepted the Town's budget as a legislatively adopted directive describing the most appropriate and reasonable level of Town spending.

COST OF SERVICE ANALYSIS

This cost of service analysis is a quantitative effort that compiles the full cost of providing governmental services and activities. There are two primary types of costs considered: direct and indirect costs. Direct costs are those that specifically relate to an activity or service, including the real-time delivery of the service. Indirect costs are those that support delivery of services in general but cannot be directly or easily assigned to a singular activity or benefactor.

Components of the full cost of service include direct labor costs, indirect labor costs, specific direct non- labor costs where applicable, allocated non-labor costs, and allocated Town-wide overhead. Definitions of these cost components are as follows:

> **Labor costs –** Salary, wages and benefits expenses for Town personnel specifically involved in the provision of services and activities to the Public.
>
> **Indirect labor costs –** Personnel expenses supporting the provision of services and activities. This can include line supervision and departmental management, administrative support within a department, and staff involved in technical activities related to the direct services provided to the public.
>
> **Specific direct non-labor costs –** Discrete expenses incurred by the Town due to a specific service or activity performed, such as contractor costs, third-party charges, and very specific materials used in the service or activity. (In most fee types, this component is not used, as it is very difficult to directly assign most non-labor costs at the activity level.)
>
> A**llocated indirect non-labor costs** – Expenses other than labor for the departments involved in the provision of services. In most cases, these costs

are allocated across all services provided by a department, rather than directly assigned to fee categories.

Allocated indirect organization-wide overhead – These are expenses, both labor and non- labor, related to agency-wide support services. Support services include general administrative services such as City Manager, Finance, etc. An agency's support services departments assist the direct providers of public service. The amount of costs attributable to each department or program included in this Study were sourced from a separate Indirect Cost Calculation, prepared by NBS.

It should be noted that the development of these time estimates was not a one-step process: Estimates received were carefully reviewed by both NBS and staff to assess the reasonableness of such estimates. Based on this review, the Town reconsidered its time estimates until both parties were comfortable that the fee models reasonably reflected the average service level provided by the Town. Then, time estimates were applied to the appropriate fully burdened labor rate to yield an average total cost of the service or activity.

All cost components in this Study use annual (or annualized) figures, representing a twelve-month cycle of expenses incurred by the Town in the provision of all services and activities agency-wide.

COST RECOVERY EVALUATION

Once the Cost of Service Analysis is completed, cost recovery targets need to be established. A cost recovery rate of 0% means no costs are recovered from fee revenues, and that the cost of the service was borne entirely by the Town, primarily the General Fund. A rate of 100% means that the full cost of service is recovered from the fee. A rate between 0% and 100% indicates partial recovery of the full cost of service through fees, while the remainder would be subsidized by the Town's General Fund.

Determining the targeted level of cost recovery from a new or increased fee is not an analytical exercise. Instead, its targets and recommendations always reflect agency-specific judgments linked to a variety of factors, such as existing Town policies, agency-wide or departmental revenue objectives, economic goals, community values, market conditions, level of demand, and others.

Questions to be considered in establishing user fees:

- If optimizing revenue potential is an overriding goal, is it feasible to recover the full cost of service?
- Will increasing fees result in non-compliance or public safety problems?
- Are there desired behaviors or modifications to behaviors of the service population helped or hindered through the degree of pricing for the activities?
- Does current demand for services support a fee increase without adverse impact to the citizenry served or current revenue levels? (In other words, would fee increases have the unintended consequence of driving away the population served?)
- Is there a good policy basis for differentiating between type of users (e.g.,

residents and non- residents, residential and commercial, non-profit entities and business entities)?
- Are there broader Town objectives that inform a less than full cost recovery target from fees, such as economic development goals and local social values?

Because this element of the Study is subjective, NBS provides the cost of service calculation based on 100% full cost recovery as well as the framework for the Town to adjust in accordance with the Town's goals as pertains to code compliance, cost recovery, economic development, and social values.

Another point to consider for future (Annual) fee schedule adjustments in keeping up with the cost of inflation is to approve an annual modifier to the fees such as the Consumers Price Index (CPI) or a percentage of labor cost increase. It is recommended that the fee schedule includes an automatic CPI adjustment. Annually, the City Council will assess the fees and determine whether to ratify the fee increase or to hold off fee increase for a year.

FEE ESTABLISHMENT

Once the full cost of service was established and cost recovery targets were set, fees were calculated. The fully burdened rate was applied to an average labor time estimate to generate the average total cost of service for the Planning, Building and Engineering Divisions. The attached fee schedules within the draft report reflect the recommendation for 100% Cost Recovery.

Much of the Town's fee schedule is composed of flat fees, which are linked to an average cost of service. The average cost method is the predominant approach in establishing the schedule of revised fees. Flat fee structures based on average costs of service is a generally accepted approach and is widely applied among other California municipalities. For the few activities where estimating an average was impossible – due to the highly variable or complex nature of the service in the Planning and Engineering Departments – use of fully burdened hourly rates coupled with time tracking is the preferred fee structure with exception to smaller projects being charged out to a flat rate charge. In other words, the Town would collect an initial deposit based on estimated hours needed to complete the project and charge the fully burdened hourly rate based on actual staff time spent. This process would require some degree of time estimation and time-tracking at the project level. The Building Department would continue to base their permitting and plan check charges on flat rates based on valuation of the project.

COMPARATIVE FEE STUDY

The Draft report presents the results of the Comparative Fee Survey for the Town of Colma. Often policy makers request a comparison of their jurisdiction's fees to surrounding or similar communities. The purpose of a comparison is to provide a sense of the local market pricing for services, and to use that information to gauge the impact of recommendations for fee adjustments.

NBS worked with the Town to choose five comparative agencies: Cities of Daly City, South San Francisco, Brisbane, Pacifica, and San Bruno. The following should be noted about the general approach to, and use of, comparative survey data:

- Comparative surveys do not provide information about the cost recovery policies or procedures inherent in each comparison agency.
- A "market based" decision to price services below the full cost of service calculation, is the same as planning to subsidize that service.
- Comparative agencies may or may not base their fee amounts on the estimated and reasonable cost of providing services.
- Comparative fee survey efforts are often non-conclusive for many fee categories. Comparison agencies typically use varied terminology for provision of similar services.

Reasonable attempts to source each comparison agency's fee schedule from the Internet and compile a comparison of fee categories and amounts for the most readily comparable fee items that match the client's existing fee structure.

DISCUSSION POINTS

The Fee Study shows the costs of various services if the Town was to recover a 100 percent of the cost of the service rendered. Part of the study session tonight is to discuss potential alternatives:

1. Would the City Council consider cost recovery to be in the range of 90 to 95 percent?

2. One of the challenges in setting fees for building permits is the cost of the permit. At times when the fee is set to high, individuals will overlook getting the permit because they feel the cost of the permit is excessive. Listed below are a few considerations.

    a. (Section # V.B1) Reroofing Signal Family Residential Units

        i. Proposed fee $469.00 current fee $93.00, Recommendation $100.00

    b. (Section # VI.C2) Requested inspection prior to issuance of building permit.

        i. Proposed fee $274.00, current fee $45.00, recommendation $100.00

    c. (Section IX.b2) Water heater residential

        i. Proposed Fee $156.00, Current fee $36.00, Recommended fee $50.00

CONCLUSION

The Staff Report is for review and discussion regarding the draft user fees and proposed charges. Staff is requesting that City Council give their opinions and make suggested changes that will lend to fair and equitable cost recovery for services that are rendered to the public for specific services.

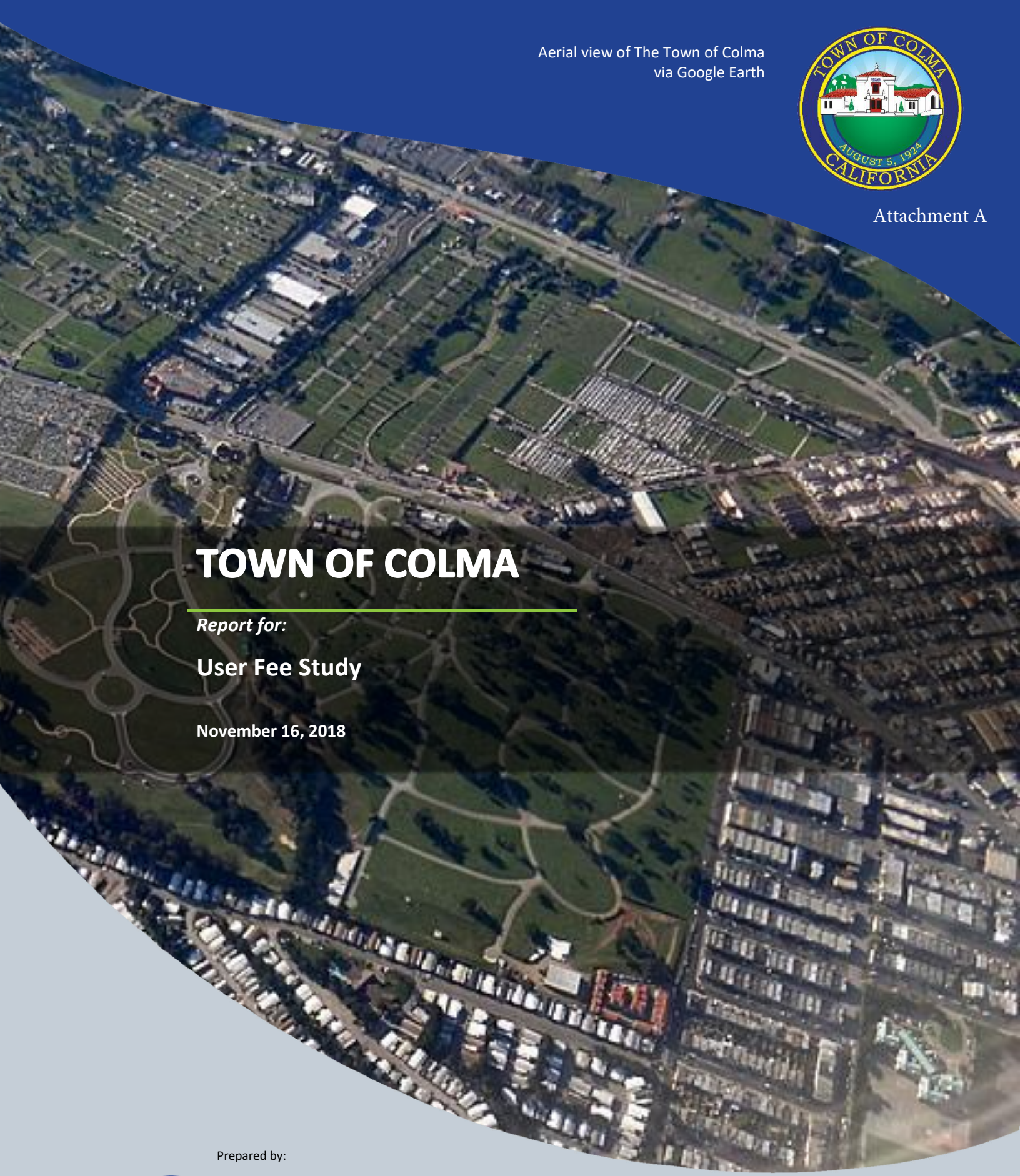
CITY COUNCIL VALUES

By reviewing and commenting on the proposed "Draft" User Fee and Charges Study, City Council taking a **Responsible** approach in amending the Towns Master Fee Schedule in such a way where it treats all persons, claims and transactions in a fair and equitable manner.

ATTACHMENTS

A. Draft User Fee and Charges Study
B. Council Meeting Presentation for 11.28.18

TOWN OF COLMA
COLMA
AUGUST 5, 1924
CALIFORNIA



Aerial view of The Town of Colma
via Google Earth

Attachment A

TOWN OF COLMA

Report for:

User Fee Study

November 16, 2018

Prepared by:

NBS
helping communities fund tomorrow
nbsgov.com

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Toll free: 800.676.7516

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

NBS performed a User Fees and Charges Study (Study) for the Town of Colma (Town). The purpose of this report is to describe the Study's findings and recommendations, which intend to defensibly update and establish user and regulatory fees for service for the Town of Colma, California.

California cities impose user fees and regulatory fees for services and activities they provide through provisions of the State Constitution. First, cities may perform broad activities related to their local policing power and other service authority as defined in Article XI, Sections 7 and 9. Second, cities may establish fees for service through the framework defined in Article XIIIC, Section 1. Under this latter framework, a fee may not exceed the estimated reasonable cost of providing the service or performing the activity. For a fee to qualify as such, it must relate to a service or activity under the control of the individual/entity on which the fee is imposed. For example, the individual/entity requests service of the municipality or his or her actions specifically cause the municipality to perform additional activities. In this manner, the service or the underlying action causing the municipality to perform service is either discretionary and/or is subject to regulation. As a discretionary service or regulatory activity, the user fees and regulatory fees considered in this Study fall outside requirements for imposition of taxes, special taxes, or fees imposed as incidences of property ownership.

The Town's chief purposes in conducting this Study were to ensure that existing fees do not exceed the costs of service and to provide an opportunity for the Town Council to re-align fee amounts with the adopted cost recovery policies.

1.1 Findings

This Study examined user and regulatory fees managed by the Town's Public Works & Planning Department. The Study identified approximately $302,000 currently collected per year from fees for service, versus $570,000 of eligible costs for recovery from fees for service. The following table provides a summary of results for each service area studied:

Division	Estimated Annual Current Fee Revenue	Estimated Annual Full Cost Recovery Fee Revenue	Annual Cost Recovery Surplus / (Deficit)	Current Cost Recovery %	Estimated Annual Recommended Fee Revenue	Recommended Cost Recovery %
Planning	$ 101,971	$ 213,871	$ (111,900)	47.68%	$ 212,964	99.58%
Engineering	57,728	145,449	(87,722)	39.69%	145,447	100.00%
Building	142,010	210,552	(68,542)	67.45%	209,791	99.64%
Total	**$ 301,709**	**$ 569,873**	**$ (268,164)**	**52.94%**	**$ 568,202**	**99.71%**

As shown, the Town is recovering approximately 53% of costs associated with providing user and regulatory fee related services. Should the Council elect to adopt fee levels at 100% of the full cost recovery amounts determined by this Study, an additional $268,000 in costs could be recovered.

However, as discussed in Section 1 of this report, there are often reasons for adopting fees at less than the calculated full cost recovery amount. As such, Town staff provided initial recommended fee amounts for

Council's consideration. If Council elects to adopt fee levels at staff's initial recommendations, an additional $266,000 in costs could be recovered, for a 99% cost recovery outcome for services provided.

1.2 Report Format

This report documents analytical methods and data sources used throughout the Study, presents findings regarding current levels of cost recovery achieved from user and regulatory fees, discusses recommended fee amounts, and provides a comparative survey of fees to neighboring agencies for similar services.

- Section 1 of the report outlines the foundation of the Study and general approach
- Sections 2 through 4 discuss the results of the cost of service analysis performed, segmented by category of fee and/or department. The analysis applied to each category/department falls into studies of: the fully burdened hourly rate(s), the calculation of the costs of providing service, the cost recovery policies of each fee category, and the staff-recommended fees for providing services.
- Section 5 provides the grand scope conclusions of the analysis provided in the preceding sections
- Appendices to this report include additional analytical details for each department or division studied, and a comparison of fees imposed by neighboring agencies for similar services

2. INTRODUCTION AND FUNDAMENTALS

2.1 Scope of Study

The following is a summarized list of fees studied for each division of the Public Works & Planning Department:

- Planning Division:
  - Environmental / CEQA Review
  - Conditional / Special Use Permits
  - Parcel / Subdivision Maps
  - Planned Development Plans
  - Other types of Planning entitlements and permits
- Engineering Division:
  - Grading Inspection and Plan Check
  - Improvement Inspection and Plan Check
  - Encroachment Permits
- Building Division
  - Building Permits and Plan Checks
  - Miscellaneous minor residential permits
  - Mechanical, Plumbing, Electrical Permits

The fees examined in this Study specifically excluded utility rates, development impact fees, and special assessments, all of which fall under distinct analytical and procedural requirements different from the body of user/regulatory fees analyzed in this effort. Additionally, this Study and the resultant Master Fee Schedule excluded facility and equipment rental rates, as well as most of fines and penalties that may be imposed by the Town for violations to its requirements or codes. (The Town is not limited to the costs of service when charging for entrance to or use of government property, or when imposing fines and penalties.)

2.2 Methods of Analysis

There are three phases of analysis completed for each Town department or program studied:

1. Cost of service analysis
2. Fee establishment
3. Cost recovery evaluation

2.2.1 COST OF SERVICE ANALYSIS

This cost of service analysis is a quantitative effort that compiles the full cost of providing governmental services and activities. There are two primary types of costs considered: direct and indirect costs. Direct costs are those that specifically relate to an activity or service, including the real-time provision of the service. Indirect costs are those that support provision of services in general, but cannot be directly or easily assigned to a singular activity or service.

Components of the full cost of service include direct labor costs, indirect labor costs, specific direct non-labor costs where applicable, allocated non-labor costs, and allocated Town-wide overhead. Definitions of these cost components are as follows:

- **Labor costs –** Salary, wages and benefits expenses for Town personnel specifically involved in the provision of services and activities to the public.[1]
- **Indirect labor costs –** Personnel expenses supporting the provision of services and activities. This can include line supervision and departmental management, administrative support within a department, and staff involved in technical activities related to the direct services provided to the public.
- **Specific direct non-labor costs –** Discrete expenses incurred by the Town due to a specific service or activity performed, such as contractor costs, third-party charges, and very specific materials used in the service or activity. (In most fee types, this component is not used, as it is very difficult to directly assign most non-labor costs at the activity level.)
- A**llocated indirect non-labor costs** – Expenses other than labor for the departments involved in the provision of services. In most cases, these costs are allocated across all services provided by a department, rather than directly assigned to fee categories.
- **Allocated indirect organization-wide overhead** – These are expenses, both labor and non-labor, related to agency-wide support services. Support services include general administrative services such as City Manager, Finance, etc. An agency's support services departments assist the direct providers of public service. The amount of costs attributable to each department or program included in this Study were sourced from a separate Indirect Cost Calculation, prepared by NBS.

All cost components in this Study use annual (or annualized) figures, representing a twelve-month cycle of expenses incurred by the Town in the provision of all services and activities agency-wide.

Nearly all of the fees under review in this Study require specific actions on the part of Town staff to provide the service or conduct the activity. Because labor is the primary underlying factor in these activities, the Study expresses the full cost of service as a fully burdened cost per labor hour. NBS calculates a composite, fully burdened, hourly rate for each department, division, program, or activity, as applicable to the specific organization and needs of each area studied. The rate serves as the basis for further quantifying the average full cost of providing individual services and activities.

Deriving the fully burdened labor rate for each department, and various functional divisions within a department, requires two figures: the full costs of service and the number of hours available to perform those services. The full costs of service are quantified through the earlier steps described in this analysis. NBS derives the hours available from a complete listing of all Town employees and/or hours of service available from contracted professionals.

The Town has supplied NBS with the total number of paid labor hours for each function/service within the Planning, Engineering, and Building divisions. These available hours represent the amount of productive time available for providing both fee-recoverable and non-fee recoverable services and activities. The productive labor hours divided into the annual full costs of service equals the composite fully burdened

[1] *The Town utilizes contracted professionals to provide all Public Works and Planning Department services relevant to this User Fees and Charges Study. Therefore, NBS utilized both historical tracked hours and adopted budget expenses as the basis for analysis.*

labor rate. Some agencies also use the resulting rates for other purposes than setting fees, such as when the need arises to calculate the full cost of general services, or structure a cost recovery agreement with another agency or third party.

Fully burdened labor rates applied at the individual fee level estimate an average full cost of providing each service or activity. This step required the development of staff time estimates for the services and activities listed in the Town's fee schedule. For all fee programs studied, time tracking records were useful in identifying time spent providing general categories of service (e.g. division administration, plan review, inspection, public information assistance, etc.). However, the Town does not systematically track activity service time for all departments or all individual fee-level services provided. Consequently, interviews and questionnaires were used to develop the necessary data sets describing estimated labor time. In many cases, the Town estimated the average amount of time (in minutes and hours) it would take to complete a typical occurrence of each service or activity considered. Every attempt was made to ensure that each department having a direct role in the provision of each service or activity provided a time estimate.

It should be noted that the development of these time estimates was not a one-step process: estimates received were carefully reviewed by both NBS and departmental management to assess the reasonableness of such estimates. Based on this review, the Town reconsidered its time estimates until both parties were comfortable that the fee models reasonably reflected the average service level provided by the Town. Then, time estimates were applied to the appropriate fully burdened labor rate to yield an average total cost of the service or activity.

2.2.2 FEE ESTABLISHMENT

Much of the Town's fee schedule is composed of flat fees, which are linked to an average cost of service. The average cost method is the predominant approach in establishing the schedule of revised fees. Flat fee structures based on average costs of service is a generally accepted approach and is widely applied among other California municipalities. For the few activities where estimating an average was impossible – due to the highly variable or complex nature of the service – use of fully burdened hourly rates coupled with time tracking is the preferred fee structure. In other words, the Town would collect a deposit and charge a fee per hour of staff time, requiring some degree of time estimation or outright time-tracking at the case level.

Establishing fees also includes a range of considerations, as described below:

- **Addition to and deletion of fees** – The Study's process provided each department the opportunity to propose additions and deletions to their fee schedules, as well as rename, reorganize, and clarify fees imposed. Many such revisions better conform fees to current practices, as well as improve the calculation of fees owed by an individual, the application of said fees, and the collection of revenues. In other words, as staff is more knowledgeable and comfortable working with the fee schedule, the accuracy achieved in both imposing fees on users and collecting revenues for the Town is greater. Beyond this, some additions to the fee schedule were simply identification of existing services or activities performed by Town staff for which no fee is currently charged.
- **Revision to the structure of fees** – In most cases, the current structure of fees did not change; the focus is to recalibrate the fee amount to match the costs of services. In several cases,

however, fee categories and fee names were simplified or re-structured to increase the likelihood of full cost recovery, or to enhance the fairness of how the fee applies to various types of fee payers.

- **Documentation of tools to calculate special cost recovery –** The Town's fee schedule should include the list of fully burdened rates developed by the Study. Documenting these rates in the fee schedule provides an opportunity for the City Council to approve rates for cost recovery under a "time and materials" approach. It also provides clear publication of those rates, so fee payers of any uniquely determined fee can reference the amounts. The fee schedule should provide language that supports special forms of cost recovery for activities and services not contemplated by the adopted master fee schedule. These rare instances use the published rates to estimate a flat fee, or bill on an hourly basis, at the discretion of the director of each department.

2.2.3 COST RECOVERY EVALUATION

The NBS fee model compares the existing fee for each service or activity to the average total cost of service quantified through this analysis. A cost recovery rate of 0% identifies no current recovery of costs from fee revenues (or insufficient information available for evaluation). A rate of 100% means that the fee currently recovers the full cost of service. A rate between 0% and 100% indicates partial recovery of the full cost of service through fees. A rate greater than 100% means that the fee exceeded the full cost of service.

User fees and regulatory fees examined in this Study should not exceed the full cost of service. In other words, the cost recovery rate achieved by a fee should not be greater than 100%. In most cases, imposing a fee above this threshold could require the consensus of the voters.

NBS also assists with modeling the "recommended" or "targeted" level of cost recovery for each fee, always established at 100%, or less, than the calculated full cost of service. Targets and recommendations always reflect agency-specific judgments linked to a variety of factors, such as existing Town policies, agency-wide or departmental revenue objectives, economic goals, community values, market conditions, level of demand, and others.

A general means of selecting an appropriate cost recovery target is to consider the public and private benefits of the service or activity in question.

- To what degree does the public at large benefit from the service?
- To what degree does the individual or entity requesting, requiring, or causing the service benefit?

When a service or activity completely benefits the public at large, there is generally little to no recommended fee amount (i.e., 0% cost recovery), reflecting that a truly public-benefit service is best funded by the general resources of the Town, such as General Fund revenues (e.g., taxes). Conversely, when a service or activity completely benefits an individual or entity, there is generally closer to or equal to 100% of cost recovery from fees, collected from the individual or entity. An example of a completely private benefit service may be a request for exemption from a Town regulation or process.

In some cases, a strict public-versus-private benefit judgment may not be sufficient to finalize a cost recovery target. Any of the following other factors and considerations may influence or supplement the public/private benefit perception of a service or activity:

- If optimizing revenue potential is an overriding goal, is it feasible to recover the full cost of service?
- Will increasing fees result in non-compliance or public safety problems?
- Are there desired behaviors or modifications to behaviors of the service population helped or hindered through the degree of pricing for the activities?
- Does current demand for services support a fee increase without adverse impact to the citizenry served or current revenue levels? (In other words, would fee increases have the unintended consequence of driving away the population served?)
- Is there a good policy basis for differentiating between type of users (e.g., residents and non-residents, residential and commercial, non-profit entities and business entities)?
- Are there broader Town objectives that inform a less than full cost recovery target from fees, such as economic development goals and local social values?

Because this element of the Study is subjective, NBS provides the cost of service calculation based on 100% full cost recovery as well as the framework for the Town to adjust in accordance with the Town's goals as pertains to code compliance, cost recovery, economic development, and social values.

2.2.4 COMPARATIVE FEE SURVEY

Appendix B presents the results of the Comparative Fee Survey for the Town of Colma. Often policy makers request a comparison of their jurisdiction's fees to surrounding or similar communities. The purpose of a comparison is to provide a sense of the local market pricing for services, and to use that information to gauge the impact of recommendations for fee adjustments.

NBS worked with the Town to choose five comparative agencies: Cities of Daly City, South San Francisco, Brisbane, Pacifica, and San Bruno. The following should be noted about the general approach to, and use of, comparative survey data:

- Comparative surveys do not provide information about the cost recovery policies or procedures inherent in each comparison agency.
- A "market based" decision to price services below the full cost of service calculation, is the same as making a decision to subsidize that service.
- Comparative agencies may or may not base their fee amounts on the estimated and reasonable cost of providing services. NBS did not perform the same level of analysis provided for this Study on the comparative agencies' fees.
- Comparative fee survey efforts are often non-conclusive for many fee categories. Comparison agencies typically use varied terminology for provision of similar services.

In general, NBS reasonably attempts to source each comparison agency's fee schedule from the Internet, and compile a comparison of fee categories and amounts for the most readily comparable fee items that match the client's existing fee structure.

2.2.5 DATA SOURCES

The following data sources were used to support the cost of service analysis and fee establishment phases of this Study:

- The Town of Colma's Adopted Budget for Fiscal Year 2018-19
- Information on the current and historical utilization of Town contracted professional services related to Planning, Engineering, and Building services
- Prevailing fee schedules
- Annual workload data provided by each division studied

The Town's adopted budget is the most significant source of information affecting cost of service results. NBS did not audit or validate the Town's financial management and budget practices, nor was cost information adjusted to reflect different levels of service or any specific, targeted performance benchmarks. This Study has accepted the Town's budget as a legislatively adopted directive describing the most appropriate and reasonable level of Town spending. Consultants accept the City Council's deliberative process and ultimate acceptance of the budget plan and further assert that through that legislative process, the Town has yielded a reasonable expenditure plan, valid for use in setting cost-based fees.

Original data sets also support the work of this Study: primarily, estimated or tracked time at various levels of detail. To develop these data sets, consultants prepared questionnaires and conducted interviews with each division. In the fee establishment phase of the analysis, each division supplied estimates of average time spent providing a service or activity corresponding with an existing or new fee. NBS and Town management reviewed and questioned responses to ensure the best possible set of estimates.

3. PLANNING FEES

The Planning Division is responsible for Advanced (long range) Planning, Current Planning (application processing), Climate Action, Economic Development and Neighborhood Services (code enforcement). The Planning staff, in partnership with other Town staff, residents, and the business community, implements the community vision for the physical development of Colma, as described in the General Plan.

3.1 Cost of Service Analysis

The following categorizes the Planning Division's costs across both fee and non-fee related services, resulting in the fully-burdened hourly rate applicable toward establishing the full cost of providing fee related services.

	Allocated or Direct Assignment of Cost to Functional Activity						
Expenditure Type	**Prof. Planning Services - Current - Fee Recoverable**	**Prof. Planning Services - Current - Public Services**	**Prof. Planning Services - Advanced**	**Neighborhood Services**	**Sustainability Services**	**Code Amendments and Legal Mandates**	**Total**
Operating Expenses	$ 100,771	$ 53,229	$ 48,500	$ 24,860	$ 55,000	$ 90,590	$ 372,950
Department / Citywide Overhead	18,044	9,531	8,684	4,451	9,848	16,221	66,779
Allocated Common Activities	36,787	1,799	1,639	840	1,858	3,061	45,983
Total	**$ 155,602**	**$ 64,558**	**$ 58,823**	**$ 30,151**	**$ 66,707**	**$ 109,872**	**$ 485,713**
Cost Recovery Targeted from Fees	100%	50%	0%	0%	0%	10%	41%
Amount Targeted for Consideration in Billings/Fees	155,602	32,279	-	-	-	10,987	**$ 198,868**
Amount Requiring Another Funding Source	-	32,279	58,823	30,151	66,707	98,885	**$ 286,845**
Fully Burdened Hourly Rate	**$ 126**	**$ 26**	**$ -**	**$ -**	**$ -**	**$ 9**	**$ 161**
					Reference: Direct Hours Only		1,237

All subsequent cost of service calculations at the individual fee level assume a fully burdened hourly rate of **$161**, with eligible recovery of approximately $156,000 in costs from fees for service.

The expenditure type columns shown in the table above were adapted and summarized from Division staff interviews. To assist the reader in understanding the underlying costs and assumptions used to calculate the fully burdened hourly rate, the following provides summary descriptions of each cost category:

- **Professional Planning Services – Current – Fee Recoverable –** Development review and approval comprises the majority of this Division's work efforts. 100% of these costs are eligible for recovery from the Division's fees for service.

- **Professional Planning Services – Current – Public Services –** Activities associated with responding to phone calls and general information requests that support the development review process. Typically, some portion of costs for provision of general public information and assistance do not apply toward recovery from fees, and are considered a basic function of governmental services to the public. Planning staff estimated that approximately 50% of these costs support land use application review activities, while the remaining costs should be not be considered in the calculation of fees for services.

- **Prof. Planning Services - Advanced –** Planning staff support the ongoing maintenance and cyclical update of the Town's General Plan and local zoning ordinances. These costs are not considered for recovery from Planning fees and require an alternate funding source

- **Neighborhood Services –** Activities associated with code enforcement, neighborhood improvement, permit compliance, and weed abatement. These costs are not considered for recovery in Planning fees and require an alternate funding source.

- **Sustainability Services –** Activities associated with Climate Action Plan implementation, internal staff coordination and outreach, business outreach and education, and residential outreach. These costs are not considered for recovery in Planning fees and require an alternate funding source.

- **Code Amendments and Legal Mandates –** Activities associated with ordinance amendments, local hazard mitigation plan implementation, general plan and housing element annual report, and legal mandate implementation. Planning staff estimated that approximately 10% of these costs support land use application review activities, while the remaining costs should be not be considered in the calculation of fees for services.

Significant analytical and policy decisions revolve around inclusion of categorized activity costs in the fully burdened hourly rate. The decision of whether to apply or exclude certain costs toward recovery in fees for service stems from the basic fee setting parameters offered by the California State Constitution and Statutes, which requires that any new fee levied or existing fee increased should not exceed the estimated amount required to provide the service for which the charge is levied.

3.2 Fee Establishment

The list of fees as shown in Appendix A to this report reflects minor changes from the Town's prior fee schedule. Highlights include:

- Deletion of fees that are no longer used or not needed
- Reorganization of fee list to alpha-order
- Addition of new fee categories for: Accessory Dwelling Unit, Address Assignment, Landscape Plan Check Water Use, Zoning Letter, Master Sign Program, Stormwater Review Deposit (Preliminary), Mitigation Monitoring, and fees to capture Planning Division time spent in support of Building Division plan check and permitting.

Section 1, *Methods of Analysis*, provides additional discussion on the Study's approach to adding, deleting, and revising fee categories.

3.3 Cost Recovery Evaluation

Appendix A.1 presents the results of the detailed cost recovery analysis for the Town's Planning fees. The "Cost of Service per Activity" column establishes the maximum adoptable fee amount for the corresponding service identified in the "Fee Name" list. This Cost of Service per Activity is reflective of the Planning Division's costs for review of each entitlement/permit, as well as any supporting

department/division's review as required by the Town's established development review processes, such as the Engineering Division and Attorney Department.

The Town's current Planning fees recover approximately 48% of the Town's total cost of providing services. As shown in the following table, the Town collects approximately $102,000 per year in revenues at current fee amounts. At full cost recovery, the same demand for these services would recover approximately $213,000.

Division	Estimated Annual Current Fee Revenue	Estimated Annual Full Cost Recovery Fee Revenue	Annual Cost Recovery Surplus / (Deficit)	Current Cost Recovery %	Estimated Annual Recommended Fee Revenue	Recommended Cost Recovery %
Planning	$ 101,971	$ 213,871	$ (111,900)	47.68%	$ 212,964	99.58%

NBS provided the full cost of service information and the framework for considering fees, while those closest to the fee-paying population, the Town departments, considered appropriate cost recovery levels at or below that full cost. The "Recommended Fee / Deposit Level" column in Appendix A displays the Town staff's initial recommended fee amounts. Staff recommends all fees to recover 100% of the costs of providing services except for the following fee categories:

- Appeals / Requests for Reconsideration – Staff recommends charging below full cost recovery for appeals and requests for reconsideration in order to avoid discouraging public participation in the entitlement process.

- Staff suggests keeping the following fees affordable for the community:
  - Sign Permits / Sign Review
  - Special Event Permits
  - Temporary Banner Permits
  - Temporary Use Permits
  - Zoning Clearance for Retail Merchandising Unit

These initial recommendations for adjusted fee amounts are projected to recover approximately 99% of the total costs of providing fee related services, assuming current demand for services stays constant.

4. ENGINEERING AND BUILDING FEES

The Engineering and Building divisions of the Public Works Department provide the following key services:

- Comprehensive land development engineering including processing, plan checking and inspecting of grading, encroachment and public improvement projects, as well as review of certain planning entitlement applications
- Building permit processing, plan review, and inspection services

4.1 Cost of Service Analysis

The following table categorizes the Engineering and Building's costs across both fee and non-fee related services, resulting in respective fully-burdened hourly rates applicable toward establishing the full cost of providing fee related services.

	Allocated or Direct Assignment of Cost to Functional Activity			
Expenditure Type	**Engineering Permitting/Fee Recoverable Services**	**Building Permitting/Fee Recoverable Services**	**Non-User/ Regulatory Fee Services**	**Total**
Operating Expenses	$ 81,224	$ 180,641	$ 460,958	$ 722,823
Department / Citywide Overhead	20,420	45,414	115,888	181,722
Allocated Common Activities	48,625	3,525	284,950	337,100
Total	**$ 150,270**	**$ 229,579**	**$ 861,795**	**$ 1,241,645**
Cost per Direct Hour Recoverable from Fees for Service	**$ 209**	**$ 156**		
Reference: Direct Hours Only	719	1,467		

All subsequent cost of service calculations at the individual fee level assume fully burdened hourly rates as follows:

- Engineering - $209 - Total costs of providing fee recoverable services approximate $150,000
- Building - $156 – Total costs of providing fee recoverable services approximate $230,000

The Engineering and Building divisions are also responsible for several other services that are not fee recoverable and mostly funded by grants or the General Fund. Examples of these services include Code Enforcement, capital improvement projects, Town website services, and public facilities, sewer, and street light maintenance.

Significant analytical and policy decisions revolve around inclusion of categorized activity costs in the fully burdened hourly rate. The decision of whether to apply or exclude certain costs toward recovery in fees for service stems from the basic fee setting parameters offered by the California State Constitution and Statutes, which requires that any new fee levied or existing fee increased should not exceed the estimated amount required to provide the service for which the charge is levied.

4.2 Fee Establishment

The list of fees as shown in appendices A.2 and A.3 to this report reflect significant changes to the Town's fee schedules and fee amounts for Engineering and Building services. In general, fee structures had not been comprehensively updated in many years. The project focused on modernizing fee names and categories to be more in line with current industry practice. For example, Engineering separated Improvement Plan Check fees from Improvement Inspection fees in order to ensure fees align with services provided, at the time the service is provided. Building fees were revised to match typical fee structures in agencies utilizing construction valuation as the criteria for determining permit fees, intended to produce a graduated scale of fee amounts as valuation increases. Additionally, the project team focused on creating itemized permits for smaller residential projects and stand-alone mechanical, plumbing, and electrical permits.

Section 1, *Methods of Analysis*, provides additional discussion on the Study's approach to adding, deleting, and revising fee categories.

4.3 Cost Recovery Evaluation

Appendix A.2 presents the results of the detailed cost recovery analysis for the Town's Engineering fees; Appendix A.3, Building fees. The "Cost of Service per Activity" column establishes the maximum adoptable fee amount for the corresponding service identified in the "Fee Name" list. This Cost of Service per Activity is reflective costs for each Division's review of each fee category or service, as well as any supporting department/division's review as required by the Town's established development review processes.

The Town's Engineering fees currently recover approximately 39% of the total cost of providing services; Building fee, approximately 67%. As shown in the following table, the Town collects approximately $58,000 per year in Engineering fee revenues and $142,000 in Building fee revenues at current fee amounts. At full cost recovery, the same demand for these services would recover approximately $147,000 and $211,000, respectively.

Division	Estimated Annual Current Fee Revenue	Estimated Annual Full Cost Recovery Fee Revenue	Annual Cost Recovery Surplus / (Deficit)	Current Cost Recovery %	Estimated Annual Recommended Fee Revenue	Recommended Cost Recovery %
Engineering	57,728	146,979	(89,251)	39.28%	146,976	100.00%
Building	142,010	210,552	(68,542)	67.45%	209,791	99.64%

NBS provided the full cost of service information and the framework for considering fees, while those closest to the fee-paying population, the Town departments, considered appropriate cost recovery levels at or below that full cost. The "Recommended Fee" column in appendices A.2 and A.3 display Town staff's initially recommended fee amounts. Staff recommends all fees to recover 100% of the costs of providing services, except for when building permit valuation is below $2,000. These initial recommendations for adjusted fee amounts recover an additional $89,000 in the Town's costs of providing engineering services, and $68,000 in providing building regulation services annually.

5. CONCLUSION

Based on the Cost of Service Analysis, Cost Recovery Evaluation, and Proposed Fee phases of analysis in this Study, the proposed master schedule of fees formatted for implementation has been prepared and included in the Town's accompanying staff report.

As discussed throughout this report, the proposed fee schedule includes fee increases intended to greatly improve the Town's recovery of costs incurred to provide individual services, as well as to adjust fees downward where fees charge exceed the average costs incurred.

Predicting the amount to which any adopted fee increases will affect Department revenues is difficult to quantify. For the near-term, the Town should not count on increased revenues to meet any specific expenditure plan. Experience with these fee increases should be gained first before revenue projections are revised. However, unless there is some significant, long-term change in activity levels at the Town, proposed fee amendments should – over time – enhance the Town's revenue capabilities, providing it the ability to stretch other resources further for the benefit of the public at large.

The Town's Master Fee Schedule should become a living document but handled with care:

- A fundamental purpose of the fee schedule is to provide clarity and transparency to the public and to staff regarding fees imposed by the Town. Once adopted by the Council, the fee schedule is the final word on the amount and manner in which fees should be imposed by the departments. Old fee schedules should be superseded by the new master document.

- The Town should consider adjusting these user fees and regulatory fees on an annual basis to keep pace at least with cost inflation. For all fees and charges, the Town could use either a Consumer Price Index adjustment or a percentage of Labor Cost increase, and that practice would be well applied to the new fee schedule. Conducting a comprehensive user fee Study is not an annual requirement; it becomes worthwhile only over time as significant shifts in organization, local practices, legislative values, or legal requirements change. In NBS' experience, a comprehensive analysis such as this should be performed every three to five years. It should be noted that when an automatic adjustment is applied annually, the Town is free to use its discretion in applying the adjustment; not all fees need to be adjusted, especially when there are good policy reasons for an alternate course. The full cost of service is the Town's only limit in setting its fees.

As a final note in this Study, it is worth acknowledging the path that fees in general have taken in California. The public demands ever more precise and equitable accounting of the basis for governmental fees and a greater say in when and how they are imposed. It is inevitable in the not too distant future that user fees and regulatory fees will demand an even greater level of analysis and supporting data to meet the public's evolving expectations. Technology systems will play an increased and significant role in an agency's ability to accomplish this. Continuous improvement and refinement of time tracking abilities will greatly enhance the Town's ability to set fees for service and identify unfunded activities in years to come.

In preparing this report and the opinions and recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, conditions and events that may occur in the future. This information and assumptions, including the Town's budgets, time

estimate data, and workload information from Town staff, were provided by sources we believe to be reliable; however, NBS has not independently verified such information and assumptions.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report, some assumptions will invariably not materialize as stated herein and may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

APPENDIX A.1

Cost of Service Analysis – Planning Fees

The Town of Colma
Planning - User Fee Study Fiscal Year 2019
Cost of Service Estimate for Fee Related Services and Activities

APPENDIX A.1

Planning FBHR=>	$ 161
Engineering FBHR=>	$ 209
City Attorney Hourly Rate =>	$ 382

			Activity Service Cost Analysis			Cost Recovery Analysis				Annual Estimated Revenue Analysis			
Fee No.	Fee Name	Notes	Fee Unit / Type	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee/Deposit Level	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
1.10.120	**Public Records and Copying Fees**	[3]											
1.10.122	Document photocopying, in house	[3]											
a	8.5" x 14" or smaller					$ 0.10							
b	8.5" x 17"					$ 0.15							
c	Plus hourly fee					$ 20							
1.10.124	Document photocopying, outside	[3]				Actual Cost + $20 / hour							
1.10.126	Audio cassette copy	[3]				$ 20							
1.10.128	Videotape copy	[3]				$ 40							
1.10.100	**Appeal and Re-consideration Fees**												
1.10.102	Filing fee for appeal from administrative decision												
	Adjacent Property Owner		per request	21.00	**$ 3,376**	$ 100	3%	$ 500	15%	-	$ -	$ -	$ -
	Applicant or Other Party		per request	21.00	**$ 3,376**	$ 100	3%	$ 2,000	59%	-	$ -	$ -	$ -
1.10.104	Filing fee for request for reconsideration of City Council decision												
	Adjacent Property Owner		per request	30.00	**$ 4,823**	$ 100	2%	$ 1,000	21%	-	$ -	$ -	$ -
	Applicant or Other Party		per request	30.00	**$ 4,823**	$ 100	2%	$ 3,000	62%	-	$ -	$ -	$ -
1.10.200	**Land Use Development Processing Fees, Planning Services (Flat Fees)**												
new	Accessory Dwelling Unit		per project	4.00	**$ 643**	new	%	$ 643	100%		$ -	$ -	$ -
new	Address Assignment		per project	1.75	**$ 281**	new	%	$ 281	100%		$ -	$ -	$ -
1.10.202	Administrative Use Permit		per permit	12.00	**$ 1,929**	$ 280	15%	$ 1,929	100%		$ -	$ -	$ -
1.10.204	Design Review, Minor (New development or modifications to existing use < 1,000 sqft or under $1,000,000 value)		per project	13.00	**$ 2,090**	$ 325	16%	$ 2,090	100%		$ -	$ -	$ -
new	Landscape Plan Check Water Use		per project	1.75	**$ 281**	new	%	$ 281	100%		$ -	$ -	$ -
1.10.206	Sign Permit		per permit	8.75	**$ 1,407**	$ 382	27%	$ 500	36%	1	$ 382	$ 1,407	$ 500
1.10.208	Sign Review		per project	2.75	**$ 442**	$ 102	23%	$ 300	68%		$ -	$ -	$ -

Planning FBHR=>	$ 161
Engineering FBHR=>	$ 209
City Attorney Hourly Rate =>	$ 382

			Activity Service Cost Analysis			Cost Recovery Analysis				Annual Estimated Revenue Analysis			
Fee No.	**Fee Name**	**Notes**	**Fee Unit / Type**	**Estimated Average Total Labor Time Per Unit (hours)**	**Cost of Service Per Activity**	**Current Fee**	**Existing Cost Recovery Percentage**	**Recommended Fee/Deposit Level**	**Recommended Cost Recovery Percentage**	**Estimated Volume of Activity (Performed)**	**Annual Estimated Revenues at Current Fee**	**Annual Estimated Revenues at Full Cost Recovery Fee**	**Annual Estimated Revenues at Recommended Fee**
1.10.1100	Special Event Fees and Deposits												
	Special Event Permit		per permit	5.75	$ 924	$ 100	11%	$ 150	16%		$ -	$ -	$ -
	Initial deposit against Departmental Service Charges for a Special Event Impacting Public Property	[3]				$ 500		$ 500					
	Initial deposit against Departmental Service Charges for a Special Event on Private Property	[3]				$ 200		$ 200					
	Initial deposit against Departmental Service Charges for a Spublic Assembly Event	[3]				$ 500		$ 500					
	Initial deposit against Departmental Service Charges for a Commercial	[3]				$ 300		$ 300					
1.10.205	Temporary Banner Permit		per permit	0.75	$ 121	$ 50	41%	$ 70	58%		$ -	$ -	$ -
1.10.209	Temporary Use Permit (Tier 1)		per permit	0.75	$ 121	$ 50	41%	$ 121	100%		$ -	$ -	$ -
1.10.210	Temporary Use Permit (Tier 2)												
	One-Time / Initial		per permit	8.75	$ 1,407	$ 280	20%	$ 1,000	71%	-	$ -	$ -	$ -
	Recurring		per permit	8.75	$ 1,407	$ 280	20%	$ 500	36%	-	$ -	$ -	$ -
1.10.212	Tree removal permit												
	Minor - Up to 5 trees		per permit	12.00	$ 1,929	$ 474	25%	$ 1,929	100%	3	$ 1,422	$ 5,788	$ 5,788
	Major - 6+ trees		deposit	27.00	$ 4,341	$ 474	11%	$ 4,341	100%		$ -	$ -	$ -
1.10.214	Use Permit, Home Occupation		per permit	0.75	$ 121	$ 50	41%	$ 121	100%		$ -	$ -	$ -
1.10.216	Use Permit, Minor (New development or modifications to existing use < 2,000 sq ft)		per permit	47.50	$ 7,637	$ 905	12%	$ 7,637	100%	1	$ 905	$ 7,637	$ 7,637
1.10.218	Zoning Clearance for Retail Merchandising Unit		per project	3.25	$ 523	$ 184	35%	$ 250	48%		$ -	$ -	$ -
new	Zoning Letter		per project	6.50	$ 1,045	new	%	$ 1,045	100%		$ -	$ -	$ -
1.10.220	**Land Use Development Processing Fees, Planning Services (Deposit Against Actual Cost)**												
1.10.222	Design Review, Major (New development or modifications to existing use > 1,000 sq ft)		deposit	46.50	$ 7,476	$ 4,190	56%	$ 7,476	100%	2	$ 8,380	$ 14,952	$ 14,952
1.10.224	General Plan Amendment		deposit	71.00	$ 11,415	$ 6,730	59%	$ 11,415	100%		$ -	$ -	$ -
1.10.226	Lot Line Adjustment		deposit	51.50	$ 8,859	$ 2,540	29%	$ 8,859	100%	2	$ 5,080	$ 17,718	$ 17,718
new	Master Sign Program		deposit	47.50	$ 7,637	n/a	%	$ 7,637	100%	2	$ 9,829	$ 15,273	$ 15,273
1.10.228	Parcel Map		per map, deposit	49.50	$ 8,151	$ 3,950	48%	$ 8,151	100%		$ -	$ -	$ -
1.10.230	Planned Development Plan		deposit	45.50	$ 7,315	$ 4,880	67%	$ 7,315	100%	3	$ 14,640	$ 21,945	$ 21,945
new	Stormwater Review Deposit (Preliminary)		deposit	8.00	$ 1,576	n/a	%	$ 1,576	100%		$ -	$ -	$ -
1.10.232	Subdivision Map		per map, deposit	59.50	$ 10,290	$ 5,465	53%	$ 10,290	100%	3	$ 16,395	$ 30,870	$ 30,870
1.10.234	Use Permit, Major (New development or modifications to existing use > 2,000 sq ft)		deposit	47.50	$ 7,637	$ 4,245	56%	$ 7,637	100%	4	$ 16,980	$ 30,547	$ 30,547

Planning FBHR=>	$ 161
Engineering FBHR=>	$ 209
City Attorney Hourly Rate =>	$ 382

			Activity Service Cost Analysis			Cost Recovery Analysis				Annual Estimated Revenue Analysis			
Fee No.	Fee Name	Notes	Fee Unit / Type	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee/Deposit Level	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
1.10.238	Vacation or abandonment of Public Easement, including Street Easement		deposit	43.50	$ 6,994	$ 5,705	82%	$ 6,994	100%		$ -	$ -	$ -
1.10.240	Variance to Zoning Regulation		deposit	47.50	$ 7,637	$ 4,720	62%	$ 7,637	100%	1	$ 4,720	$ 7,637	$ 7,637
1.10.242	Zoning Reclassification		deposit	58.50	$ 9,405	$ 5,245	56%	$ 9,405	100%		$ -	$ -	$ -
1.10.244	**City Attorney Time** (the deposit is required whenever City Attorney time will be spent in processing an application, and shall be in excess of any other deposit or fee required, with the deposit determined by the level of CEQA review required for the application)												
a	CEQA Exemptions not requiring a Major Permit or Major Design Review application - under 2,000 sq ft		deposit	2.00	$ 764	$ 250	33%	$ 764	100%		$ -	$ -	$ -
b	CEQA Exemption requiring a Major Permit or Major Design Review application - 2,000 square feet and over		deposit	5.00	$ 1,910	$ 1,500	79%	$ 1,910	100%	2	$ 3,000	$ 3,820	$ 3,820
c	CEQA Negative Declarations, Mitigated Negative Declarations		deposit	10.00	$ 3,820	$ 2,000	52%	$ 3,820	100%	4	$ 8,000	$ 15,280	$ 15,280
d	Environmental Impact Reports		deposit	n/a	$ 7,640	$ 4,000	52%	$ 7,650	100%		$ -	$ -	$ -
e	Agreements - City Attorney Deposit		deposit	n/a	$ -	$ 2,000	%	Deposit based on estimated number of hours or $2,000 minimum	%		$ -	$ -	$ -
1.10.250	**Land Use Development Project Fees, CEQA Review (Deposit Against Actual Cost).** The following deposits will be required for environmental review of applications through the Planning Department to develop property. These fees are in addition to the processing fees for planning or engineering services. The initial deposits shown below are due and payable upon filing an application. Additional deposits may be required from time to time. Any unused deposit will be returned to the applicant. The deposit for an amendment is the same as the fee for an initial application. The total processing fee will not exceed the actual, reasonable cost of providing the service.												
1.10.252	Categorical Exemption	[4]	per permit	1.75	$ 281	$ 100	36%	$ 281	100%	3	$ 300	$ 844	$ 844
1.10.254	Negative Declaration or Mitigated Negative Declaration												
	Prepared by Town	[4, 5]	deposit	52.50	$ 8,441	$ 4,780	57%	$ 8,441	100%	1	$ 4,780	$ 8,441	$ 8,441
	Prepared by Consultant	[4, 6]	deposit	n/a	$ -	Consultant Costs + 10% as an initial deposit to cover staff time	%	Consultant Costs + 10% as an initial deposit to cover staff time	%	-	$ -	$ -	$ -
1.10.256	Environmental Impact Reports	[4, 6]	deposit	n/a	$ -	Consultant Costs + 10% as an initial deposit to cover staff time	%	Consultant Costs + 10% as an initial deposit to cover staff time	%	1	$ 1,408	$ -	$ -

The Town of Colma
Planning - User Fee Study Fiscal Year 2019
Cost of Service Estimate for Fee Related Services and Activities

APPENDIX A.1

Planning FBHR=>	$ 161
Engineering FBHR=>	$ 209
City Attorney Hourly Rate =>	$ 382

			Activity Service Cost Analysis			Cost Recovery Analysis				Annual Estimated Revenue Analysis			
Fee No.	Fee Name	Notes	Fee Unit / Type	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee/Deposit Level	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
1.10.258	Environmental Document pursuant to a Certified Program (CRP)	[4, 7]	deposit	n/a	$ -	Consultant Costs + 10% as an initial deposit to cover staff time	%	Consultant Costs + 10% as an initial deposit to cover staff time	%	-	$ -	$ -	$ -
new	Mitigation Monitoring		deposit	n/a	$ -	new	%	Deposit based on estimated number of hours or $1,000 minimum	%	-	$ -	$ -	$ -
	Business Registration Application Processing	[8]	flat	0.70	$ 113	$ 25	22%	$ 113	100%	230	$ 5,750	$ 25,884	$ 25,884
Support to Building Fees													
new	Building Permit, Residential Interior		flat	0.50	$ 80	new	%	$ 80	100%	11	$ -	$ 884	$ 884
new	Building Permit, Residential Addition		flat	0.50	$ 80	new	%	$ 80	100%	3	$ -	$ 241	$ 241
new	Building Permit, Commercial T.I.		flat	0.50	$ 80	new	%	$ 80	100%	12	$ -	$ 965	$ 965
new	Building Permit, Commercial Addition		flat	0.75	$ 121	new	%	$ 121	100%	31	$ -	$ 3,738	$ 3,738
new	Building Permit, Commercial or Multi-Residential		flat	7.00	$ 1,125	new	%	$ 1,125	100%	-	$ -	$ -	$ -
TOTAL PLANNING											**$ 101,971**	**$ 213,871**	**$ 212,964**

[1] No fee charged
[2] City Attorney rate provided by Town of Colma at $382/hr.
[3] Placeholder for master fee schedule. NBS did not evaluate.
[4] Plus $50 Document Handling Fee
[5] Plus $2,181.25 California Department of Fish and Game fee.
[6] Plus $3,029.75 California Department of Fish and Game fee
[7] Plus $1,030.25 California Department of Fish and Game fee
[8] Current fee reflects Planning's portion of the City's fee only. Current fee is listed in the Municipal Code and requires an Ordinance Amendment to change.

APPENDIX A.2

Cost of Service Analysis – Engineering Fees

				Plng. FBHR=>	$ 126								
				Eng. FBHR=>	$ 209								
				Activity Service Cost Analysis		Cost Recovery Analysis				Annual Estimated Revenue Analysis			
Fee No.	Fee Description	Fee Type/Unit	Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee [a]
1.10.400	**Land Use Development Processing Fees, Public Works and Engineering Services**												
1.10.402	Grading Plan Check 50 to 2,000 CY												
a	First 50 CY	flat		**0.50**	**$ 105**	$ 80	77%	$ 105	100%	-	$ -	$ -	$ -
b	Each additional 100 CY	flat		**0.41**	**$ 75**	$ 20	n/a	$ 75	n/a	-	$ -	$ -	$ -
1.10.404	Grading Plan Check over 2,000 CY												
a	First 2,000 CY	deposit		**8.50**	**$ 1,569**	$ 400	25%	$ 1,569	100%	3	$ 1,200	$ 4,706	$ 4,706
b	Each additional 100CY	deposit		**0.43**	**$ 78**	$ 2	n/a	$ 78	n/a	300	$ 600	$ 23,512	$ 23,512
1.10.406	Grading Permit 50 to 2,000 CY												
a	First 50 CY	flat		**3.00**	**$ 627**	$ 130	21%	$ 627	100%	-	$ -	$ -	$ -
b	Each additional 100 CY	flat		**0.18**	**$ 38**	$ 20	n/a	$ 38	n/a	-	$ -	$ -	$ -
1.10.408	Grading Permit over 2,000 CY												
a	First 2,000 CY	deposit		**6.50**	**$ 1,359**	$ 530	39%	$ 1,359	100%	3	$ 1,590	$ 4,076	$ 4,076
b	Each additional 100CY	deposit		**0.33**	**$ 68**	$ 7.50	n/a	$ 68	n/a	300	$ 2,248	$ 20,365	$ 20,365
1.10.410	Improvement Plan Checking, Contracts of $10,000 or less												
	Per Project	flat		**2.00**	**$ 418**	$ 250	60%	$ 418	100%	-	$ -	$ -	$ -
1.10.412	Improvement Plan Checking, Contracts between $10,000 and $100,000												
a	Base fee at $10,000	flat		**2.16**	**$ 452**	$ 500	111%	$ 452	100%	-	$ -	$ -	$ -
b	Each additional $1,000 of contract cost	flat		**0.03**	**$ 5**	$ 35	n/a	$ 5	n/a	-	$ -	$ -	$ -
1.10.414	Improvement Plan Checking, Contracts between $100,001 and $500,000												
a	Base fee at $100,000	deposit		**4.50**	**$ 941**	$ 3,650	388%	$ 941	100%	3	$ 10,950	$ 2,822	$ 2,822
b	Each additional $1,000 of contract cost	deposit		**0.04**	**$ 9**	$ 20	n/a	$ 9	n/a	300	$ 6,000	$ 2,590	$ 2,587
new	Improvement Plan Checking, Contracts more than $500,000		[3]										
a	Base fee at $500,000	deposit		**21.00**	**$ 4,390**	$ 13,650	311%	$ 4,390	100%	-	$ -	$ -	$ -
b	Each additional $1,000 of contract cost	deposit		**0.04**	**$ 9**	$ 20	n/a	$ 9	n/a	-	$ -	$ -	$ -
new	Improvement Inspection, Contracts of $10,000 or less		[3]										
	Per Project	flat		**2.16**	**$ 452**	new	%	$ 452	100%	-	$ -	$ -	$ -
new	Improvement Inspection, Contracts between $10,000 and $100,000		[3]										
a	Base fee at $10,000	flat		**2.16**	**$ 452**	new	%	$ 452	100%	-	$ -	$ -	$ -
b	Each additional $1,000 of contract cost	flat		**0.11**	**$ 23**	new	n/a	$ 23	n/a	-	$ -	$ -	$ -
new	Improvement Inspection, Contracts between $100,000 and $500,000		[3]										
a	Base fee at $100,000	deposit		**12.00**	**$ 2,509**	new	%	$ 2,509	100%	3	$ -	$ 7,526	$ 7,526
b	Each additional $1,000 of contract cost	deposit		**0.09**	**$ 18**	new	n/a	$ 18	n/a	300	$ -	$ 5,331	$ 5,331
new	Improvement Inspection, Contracts more than $500,000		[3]										
a	Base fee at $500,000	deposit		**46.00**	**$ 9,616**	new	%	$ 9,616	100%	-	$ -	$ -	$ -
b	Each additional $1,000 of contract cost	deposit		**0.09**	**$ 19**	new	n/a	$ 19	n/a	-	$ -	$ -	$ -
1.10.322	Parcel or Final Map Subdividing Property (4 lots)	flat		**20.00**	**$ 4,181**	$ 600	14%	$ 4,181	100%	-	$ -	$ -	$ -
a	Each additional lot	flat		**1.00**	**$ 209**	$ 50	24%	$ 209	100%	-	$ -	$ -	$ -
b	Plus recording costs (as established by County)	flat		**n/a**	n/a	Actual Cost	%	Actual Cost	0%	-	$ -	$ -	$ -

				Plng. FBHR=>	$ 126									
				Eng. FBHR=>	$ 209									
				Activity Service Cost Analysis		**Cost Recovery Analysis**				**Annual Estimated Revenue Analysis**				
Fee No.	**Fee Description**	**Fee Type/Unit**	**Notes**	**Estimated Average Total Labor Time Per Unit (hours)**	**Cost of Service Per Activity**	**Current Fee**	**Existing Cost Recovery Percentage**	**Recommended Fee Level**	**Recommended Cost Recovery Percentage**	**Estimated Volume of Activity (Performed)**	**Annual Estimated Revenues at Current Fee**	**Annual Estimated Revenues at Full Cost Recovery Fee**	**Annual Estimated Revenues at Recommended Fee [a]**
1.10.400	**Public Property and Public Rights-Of-Way**												
1.10.402	Encroachment Permit, single residential lot driveway	flat		**1.16**	**$ 242**	$ 60	25%	$ 242	100%	-	$ -	$ -	$ -
1.10.406	Encroachment Permit, single residential lot utility cut by contractor in asphalt street or concrete sidewalk	flat		**1.16**	**$ 242**	$ 60	25%	$ 242	100%	-	$ -	$ -	$ -
1.10.408	Encroachment Permit, single residential lot utility cut by contractor in an interlocking concrete paver surfaced street or sidewalk	flat		**1.66**	**$ 347**	$ 150	43%	$ 347	100%	1	$ 150	$ 347	$ 347
1.10.410	Encroachment Permit, fence and/or landscaping in right-of-way (Both may be covered by same permit)	flat		**1.16**	**$ 242**	n/a	%	$ 242	100%	-	$ -	$ -	$ -
1.10.412	Encroachment Permit, Utility company		[5]										
	Annual Processing Fee	flat		**3.00**	**$ 627**	$ 500	80%	$ 627	100%	-	$ -	$ -	$ -
	Minimum Deposit Amount	deposit		**12.00**	**$ 2,509**	n/a	%	$ 2,500	100%	-	$ -	$ -	$ -
1.10.414	Failure to give required notice under a Utility Company Annual Encroachment Permit												
	Per site, after second occurrence in 12-month period	flat		**1.00**	**$ 209**	$ 100	48%	$ 209	100%	-	$ -	$ -	$ -
1.10.416	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is less than $10,000												
	Per Project	flat		**3.16**	**$ 661**	$ 140	21%	$ 661	100%	29	$ 4,060	$ 19,157	$ 19,157
1.10.418	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is between $10,000 and $100,000												
a	Base fee at $10,000	flat		**5.00**	**$ 1,045**	$ 700	67%	$ 1,045	100%	5	$ 3,500	$ 5,226	$ 5,226
b	Each additional $1,000 of contract cost	flat		**0.46**	**$ 95**	$ 50	n/a	$ 95	n/a	89	$ 4,450	$ 8,474	$ 8,476
1.10.418	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is between $100,000 and $500,000												
a	Base fee at $100,000	flat		**46.00**	**$ 9,616**	$ 5,200	54%	$ 9,616	100%	3	$ 15,600	$ 28,848	$ 28,848
b	Each additional $1,000 of contract cost	flat		**0.24**	**$ 51**	$ 30	n/a	$ 51	n/a	246	$ 7,380	$ 12,470	$ 12,470
1.10.420	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is over $500,000												
a	Base fee at $500,000	deposit		**143.00**	**$ 29,893**	$ 17,200	58%	$ 29,893	100%	-	$ -	$ -	$ -
b	Each additional $1,000 of contract cost	deposit		**0.29**	**$ 60**	$ 30	n/a	$ 60	n/a	-	$ -	$ -	$ -

				Plng. FBHR=> $ 126									
				Eng. FBHR=> $ 209									
				Activity Service Cost Analysis		**Cost Recovery Analysis**				**Annual Estimated Revenue Analysis**			
Fee No.	**Fee Description**	**Fee Type/Unit**	**Notes**	**Estimated Average Total Labor Time Per Unit (hours)**	**Cost of Service Per Activity**	**Current Fee**	**Existing Cost Recovery Percentage**	**Recommended Fee Level**	**Recommended Cost Recovery Percentage**	**Estimated Volume of Activity (Performed)**	**Annual Estimated Revenues at Current Fee**	**Annual Estimated Revenues at Full Cost Recovery Fee**	**Annual Estimated Revenues at Recommended Fee [a]**
new	**Stormwater Fees**		[3]										
	Stormwater Management - Post construction	flat		**8.00**	**$ 1,672**	new	%	$ 1,672	100%	-	$ -	$ -	$ -
	Stormwater Regulatory Inspection												
a	C3 - Stormwater Mgmt. Inspection of privately maintained post construction treatment devices												
	Residential	flat		**1.00**	**$ 209**	new	%	$ 209	100%	-	$ -	$ -	$ -
	Commercial	flat		**2.00**	**$ 418**	new	%	$ 418	100%	-	$ -	$ -	$ -
b	C4 - Stormwater Permit Commercial Inspection	flat		**1.50**	**$ 314**	new	%	$ 314	100%	-	$ -	$ -	$ -
c	Each Reinspection	flat		**1.00**	**$ 209**	new	%	$ 209	100%	-	$ -	$ -	$ -
TOTAL ENGINEERING											**$57,728**	**$145,449**	######## ##

[3] New Fee Item

[5] Work under the annual permit is limited to minor work & maintenenace related work in accordance with CMC§5.08.050.

APPENDIX A.3

Cost of Service Analysis – Building Fees

The Town of Colma
BUILDING DEPARTMENT
User Fee Study
PROPOSED FEE SCHEDULE

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				Bldg. FBHR =>	$ 156								
				Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis			
Fee No.	Fee Name	Unit	Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
I. PERMIT APPLICATION FEE		Per project		**0.17**	**$26**	$7	**27%**	$26	100%	99	$ 693	$ 2,587	$ 2,587
II. BUILDING PERMIT FEES													
	$1 - $500	Minimum permit fee		**1.50**	**$235**	$25	**11%**	$50	21%	2	$ 50	$ 469	$ 100
	$ 500.01 to $ 2,000	Base Cost (For the first $500)		**1.75**	**$274**	$48	**17%**	$100	37%	5	$ 238	$ 1,369	$ 500
		Each Add'l $100		**0.08**	**$13.04**	n/a	**n/a**	$24.63	n/a	41	$ -	$ 537	$ 1,014
	$ 2,001 to $ 25,000.00	Base Cost (For the first $2,001)		**3.00**	**$469**	$230	**49%**	$469	100%	36	$ 8,262	$ 16,902	$ 16,902
		Each Add'l $1000		**0.14**	**$22.11**	n/a	**n/a**	$22.11	n/a	223	$ -	$ 4,922	$ 4,922
	$ 25,001 to $ 50,000	Base Cost (For the first $25,001)		**6.25**	**$978**	$525	**54%**	$978	100%	11	$ 5,775	$ 10,759	$ 10,759
		Each Add'l $1000		**0.43**	**$67.29**	n/a	**n/a**	$67.29	n/a	102	$ -	$ 6,863	$ 6,863
	$ 50,001 to $ 100,000	Base Cost (For the first $50,001)		**17.00**	**$2,660**	$832	**31%**	$2,660	100%	4	$ 3,326	$ 10,642	$ 10,642
		Each Add'l $1000		**0.04**	**$6.26**	n/a	**n/a**	$6.26	n/a	69	$ -	$ 433	$ 433
	$100,001 to $500,000	Base Cost (For the first $100,001)		**19.00**	**$2,973**	$999	**34%**	$2,973	100%	6	$ 5,994	$ 17,841	$ 17,841
		Each Add'l $1000		**0.02**	**$2.35**	$5.23	**n/a**	$2.35	n/a	1,047	$ 5,478	$ 2,459	$ 2,459
	$500,001 to $1,000,000	Base Cost (For the first $500,001)		**25.00**	**$3,912**	$3,086	**79%**	$3,912	100%	-	$ -	$ -	$ -
		Each Add'l $1000		**0.03**	**$4.07**	$5.23	**n/a**	$4.07	n/a	-	$ -	$ -	$ -
	$1,000,000 and over	Base Cost (For the first $1,000,001)		**38.00**	**$5,947**	$3,086	**52%**	$5,947	100%	13	$ 40,118	$ 77,309	$ 77,309
		Each Add'l $1000		**0.04**	**$5.95**	$5.23	**n/a**	$5.95	n/a	3,900	$ 20,397	$ 23,193	$ 23,193

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				Bldg. FBHR =>	$ 156								
				Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis			
Fee No.	Fee Name	Unit	Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
III. BUILDING ADMINISTRATIVE PLAN CHECK FEES		Processing Fee + Actual Cost											
	Town Processing Fee:												
	$1 - $500	Flat		**0.25**	**$39**	$16	**42%**	$39	100%	-	$ -	$ -	$ -
	$ 500.01 to $ 2,000.00	Flat		**0.50**	**$78**	$31	**39%**	$78	100%	4	$ 124	$ 313	$ 313
	$ 2,000.01 to $ 25,000.00	Flat		**1.00**	**$156**	$149	**95%**	$156	100%	30	$ 4,475	$ 4,695	$ 4,695
	$ 25,000.01 to $ 50,000.00	Flat		**1.00**	**$156**	$341	**218%**	$156	100%	7	$ 2,389	$ 1,095	$ 1,095
	$ 50,000.01 TO $ 100,000.00	Flat		**2.00**	**$313**	$540	**173%**	$313	100%	5	$ 2,702	$ 1,565	$ 1,565
	$100,000.01 to $500,000.00	Flat		**3.00**	**$469**	$649	**138%**	$469	100%	4	$ 2,597	$ 1,878	$ 1,878
	$500,000.01 to $1,000,000.00	Flat		**3.50**	**$548**	$2,006	**366%**	$548	100%	5	$ 10,030	$ 2,739	$ 2,739
	$1,000,000.01 and over	Flat		**5.00**	**$782**	$2,006	**256%**	$782	100%	8	$ 16,047	$ 6,260	$ 6,260
	Consultant Plan Review	Acutal Cost											
IV. OTHER PLAN CHECK FEES													
A2	Hourly Rate for Plan Review	First Hour		**1.75**	**$274**	$75	**27%**	$274	100%	18	$ 1,350	$ 4,930	$ 4,930
		Ea add'l hour		**1.00**	**$156**	$75	**48%**	$156	100%	-	$ -	$ -	$ -
A3	Site Plan Review for Accessibility Compliance	First 2 hours		**3.00**	**$469**	$150	**32%**	$469	100%	-	$ -	$ -	$ -
		Ea add'l hour		**1.00**	**$156**	$75	**48%**	$156	100%	-	$ -	$ -	$ -
A4	Deferred Submittals (i.e.: Truss Roof Plans/ Calculations)	First Hour		**1.75**	**$274**	$75	**27%**	$274	100%	-	$ -	$ -	$ -
		Ea add'l hour		**1.00**	**$156**	$75	**48%**	$156	100%	-	$ -	$ -	$ -
A5	Plan Revisions (after permit issued 2 hr. minimum charge)	First 2 hours		**2.75**	**$430**	$150	**35%**	$430	100%	5	$ 750	$ 2,152	$ 2,152
		Ea add'l hour		**1.00**	**$156**	$75	**48%**	$156	100%	-	$ -	$ -	$ -
A6	Repetitive/Excessive Plan Check 2 hr. minimum charge	First 2 hours		**3.00**	**$469**	$150	**32%**	$469	100%	-	$ -	$ -	$ -
		Ea add'l hour		**1.00**	**$156**	$75	**48%**	$156	100%	-	$ -	$ -	$ -
V. MISCELLANEOUS & FLAT FEE PERMITS													
B1	Re-Roofing- Single Family Residence	Per project		**3.00**	**$469**	$93	**20%**	$469	100%	10	$ 928	$ 4,695	$ 4,695
B4	Demolition Permit - per single structure (does not include C&D Deposit)	Per project		**3.00**	**$469**	$111	**24%**	$469	100%	7	$ 777	$ 3,286	$ 3,286
B5	Temporary Office Trailers or Storage Units at Construction Site	Per Trailer or Storage Unit		**1.75**	**$274**	$45	**16%**	$274	100%	-	$ -	$ -	$ -

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					Bldg. FBHR =>	$ 156								
					Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis			
Fee No.	Fee Name	Unit		Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
B6	Commercial Coaches, Portable/Re-locatable Structures, Trailers and Manufactured Homes (not including Plan Review)	Per project			**1.75**	**$274**	$250	**91%**	$274	100%	-	$ -	$ -	$ -
B7	Sign Re-face - per cabinet, no electrical work	Per project			**1.00**	**$156**	$163	**104%**	$156	100%	-	$ -	$ -	$ -
B8	Sign - new cabinet, including electrical circuit (does not include structural support/review)	Per project			**3.00**	**$469**	$163	**35%**	$469	100%	-	$ -	$ -	$ -
B9	Windows - residential, direct replacement, no structural alterations required, for purpose of verifying Energy Code Compliance	Per project			**2.00**	**$313**	$175	**56%**	$313	100%	-	$ -	$ -	$ -
B10	Change of Use Inspection	Per project			**2.00**	**$313**	$90	**29%**	$313	100%	-	$ -	$ -	$ -
	additional fees for plan check per hour	*see section IV*			**0.25**	**$39**	n/a	**n/a**	$39	100%				
B11	Solar: PVSystems													
	Residential - see GC 66015 (a) 1	Per project			**4.00**	**$626**	$254	**41%**	$350	56%	-	$ -	$ -	$ -
B12	Solar: PVSystems- includes Plan Review Fee													
	Commercial - see GC 66015 (b) 1													
	0 - 50 kW size system	Per project			**3.00**	**$469**	$254	**54%**	$460	98%	-	$ -	$ -	$ -
	51KW to 250kW	Per project			**3.25**	**$509**	$254	**50%**	$500	98%	-	$ -	$ -	$ -
	Over 250 kW	Per project			**5.00**	**$782**	$254	**32%**	$780	100%	-	$ -	$ -	$ -
VI. ADDITIONAL INSPECTION SERVICES														
C1	Inspections outside of normal business hour (2hr. minimum paid at time of request)	First 2 hours			**3.00**	**$469**	$180	**38%**	$469	100%	-	$ -	$ -	$ -
		Ea add'l hour			**1.00**	**$156**	$90	**58%**	$156	100%	-	$ -	$ -	$ -
C2	Requested Inspection - prior to permit issuance (at Building Official's discretion)	First Hour			**1.75**	**$274**	$45	**16%**	$274	100%	-	$ -	$ -	$ -
		Ea add'l hour			**1.00**	**$156**	$45	**29%**	$156	100%	-	$ -	$ -	$ -
C3	Re-inspection Fees(at Building Official's discretion)	First Hour			**1.50**	**$235**	$45	**19%**	$235	100%	-	$ -	$ -	$ -
	Charged separately: Inspection by California Access Specialist (CASp) 2 hr. minimum charge													
		Ea add'l 1/2 hour			**1.00**	**$156**	$45	**29%**	$156	100%	-	$ -	$ -	$ -
VII. OTHER PROVISIONS														
D1	Filing Appeals													
	Appeal of Building Official's Decision	Hourly with minimum deposit of $ 500			**n/a**	**n/a**	$500 deposit	**n/a**	n/a	0%	-	$ -	$ -	$ -
	Housing Advisory and Appeals Board	Hourly with minimum deposit of $ 500			**n/a**	**n/a**	$500 deposit	**n/a**	n/a	0%	-	$ -	$ -	$ -

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					Bldg. FBHR =>	$ 156									
					Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis				
Fee No.	Fee Name	Unit		Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
D2	Building Code Research and Written Interpretation	Per hour			**n/a**	**n/a**	$45	**n/a**	n/a	0%	-	$ -	$ -	$ -
D3	Application for Alternate Materials and Methods	Per Hour			**n/a**	**n/a**	$45	**n/a**	n/a	0%	-	$ -	$ -	$ -
D4	Permit File Research- Staff Time	Per hour			**n/a**	**n/a**	$45	**n/a**	n/a	0%	-	$ -	$ -	$ -
D5	Permit Refund - No Work Performed	Per project			**1.00**	**$156**	n/a	**n/a**	$156	100%	-	$ -	$ -	$ -
	Partial Work Performed	Per project			**1.00**	**$156**	n/a	**n/a**	$156	100%	-	$ -	$ -	$ -
D6	SMIP FEES (Strong Motion Instrument Program)	Per project			**n/a**	**n/a**	set by State	**n/a**	n/a	0%	91	$ 8,251	$ -	$ -
D7	SB1473jBSASRA Fees (Green Building Fund)	Per project			**n/a**	**n/a**	set by State	**n/a**	n/a	0%	107	$ 1,355	$ -	$ -
VIII. ELECTRICAL PERMIT FEES														
E1	Base Permit	Per project			**0.50**	**$78**	$7	**9%**	$78	100%	1	$ 7	$ 78	$ 78
E2	Plan Review, When Required, Miniumum 1 hour	hourly			**1.00**	**$156**	n/a	**n/a**	$156	100%	-	$ -	$ -	$ -
	PER UNIT FEE SCHEDULE:													
E3	Temporary Power Pole	Per project			**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
E4	New Circuits - Based on Number of Circuits (includes switches & receptacles													
	Up to 10 Circuits	First circuit			**1.00**	**$156**	$23	**15%**	$156	100%	4	$ 92	$ 626	$ 626
	Each Additional 10 Circuits	Per circuit			**0.25**	**$39**	$6	**15%**	$39	100%	3	$ 18	$ 117	$ 117
E5	For the Installation, Alteration, or Relocation of Each Electrical Service:													
	600 VOLTS OR LESS													
	First 200 Ampere Capacity with One Meter Socket/Base	Each			**1.00**	**$156**	$25	**16%**	$156	100%	1	$ 25	$ 156	$ 156
	Each Additional 100 Ampere Capacity or Fraction Thereof	Each			**0.25**	**$39**	$7	**18%**	$39	100%	-	$ -	$ -	$ -
	Each Additional Meter Socket/Base	Each			**0.25**	**$39**	$2	**5%**	$39	100%	-	$ -	$ -	$ -
	OVER 600 VOLTS													
	First 200 KVA Capacity w/One Meter Socket/Base	Each			**1.00**	**$156**	$48	**31%**	$156	100%	1	$ 48	$ 156	$ 156
	Each Additional 100 KVA Capacity	Each			**0.50**	**$78**	$25	**32%**	$78	100%	-	$ -	$ -	$ -
E6	For the Installation or Replacement of Each Motor (when not an integral part of a electrical appliance, fan, heating or cooling unit) Heater, Welding Machine, Kiln or Transformer.	Each			**1.00**	**$156**	$48	**31%**	$156	100%	-	$ -	$ -	$ -
B13	Portable Electrical Generator - Temporary Use	Per project			**0.50**	**$78**	$25	**32%**	$78	100%	-	$ -	$ -	$ -
E7	For the Installation of Each stationary Generator	Each			**2.00**	**$313**	$24	**8%**	$313	100%	-	$ -	$ -	$ -

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				Bldg. FBHR =>	$ 156								
				Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis			
Fee No.	Fee Name	Unit	Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
E8	For the Installation, Relocation, or Replacement of Each Fixed or Stationary Electrical Appliance, Including All Necessary Circuits, Receptacles and Switches (not listed above):												
	Residential-Type Appliance (wall-mounted electric ovens, counter-mounted cook tops, self-contained room, console, or through-wall type air conditioners, zone heaters and similar types of residential appliances.)	Each		**1.00**	**$156**	$12	**8%**	$156	100%	2	$ 24	$ 313	$ 313
	Commercial-Type Appliances (non-residential appliances not exceeding one horsepower (HP) or Kilowatt (KW) in rating and including, but not limited to medical or dental equipment, food, beverage and ice cream cabinets, install-hot water heaters, drinking fountains, laundry machines and	Each		**1.00**	**$156**	$12	**8%**	$156	100%	-	$ -	$ -	$ -
IX. PLUMBING PERMIT FEES													
P1	Base Permit	Per project		**0.50**	**$78**	$7	**9%**	$78	100%	1	$ 7	$ 78	$ 78
P2	Plan Review, When Required, Miniumum 1 hour	hourly		**1.00**	**$156**	n/a	**n/a**	$156	100%	-	$ -	$ -	$ -
	PER UNIT FEE SCHEDULE												
P3	For the Repair or Replacement of each												
	Waterline, Sewer Line or Drainage/Vent Piping System (or as determined by the Building Official)	Each		**1.00**	**$156**	$25	**16%**	$156	100%	6	$ 150	$ 939	$ 939
	Refrigerant Piping System	Each		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
P4	For the Replacement of the Water Piping System within a Single Family Dwelling	Each		**1.00**	**$156**	$14	**9%**	$156	100%	-	$ -	$ -	$ -
B2	Water Heater - Single Family Residence (,60 gallon capacity)	Per project		**1.00**	**$156**	$36	**23%**	$156	100%	-	$ -	$ -	$ -
P5	For the Replacement of a Water Heater or Water Storage Tank (>60 gallons)	Each		**1.00**	**$156**	$25	**16%**	$156	100%	2	$ 50	$ 313	$ 313
P6	For the Installation of a Tank-less water Heater Gas-fired (includes gas line & exhaust vent)	Each		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
P7	For Each Installation or Alteration of a Gas Piping System												
	From Meter to First 5 Outlets	Each		**1.00**	**$156**	$14	**9%**	$156	100%	-	$ -	$ -	$ -
	Each Additional 5 Outlets	Each		**0.25**	**$39**	$3	**8%**	$39	100%	-	$ -	$ -	$ -
P8	For the installation, relocation or replacement of each Plumbing Fixture or trap. (includes all necessary water, drainage or vent piping.)	Each		**1.50**	**$235**	$12	**5%**	$235	100%	-	$ -	$ -	$ -
P9	For the Installation of Each Lawn Sprinkler/Irrigation System	Each		**1.00**	**$156**	$12	**8%**	$156	100%	-	$ -	$ -	$ -

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				Bldg. FBHR =>	$ 156								
				Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis			
Fee No.	Fee Name	Unit	Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
P10	For the Installation of Each Interior Water Feature	Each		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
P11	For the Installation of Each New Domestic Water or Sewer Service	Each		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
P12	For the Installation of Each Storm Drainage or On-Site Retention System (Does not include review by Town's Engineering Department)	Each		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
X. MECHANICAL PERMIT FEES													
M1	Base Permit Fee	Per project		**0.50**	**$78**	$7	**9%**	$78	100%	-	$ -	$ -	$ -
M2	Plan Review, When Required, Miniumum 1 hour	hourly		**1.00**	**$156**	n/a.	**n/a**	$156	100%	-	$ -	$ -	$ -
	PER UNIT FEE SCHEDULE												
B3	Furnace Replacement- Single Family Residence (< 100K Btu and < 40 lineal feet of new duct)	Per project		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
M3	For the installation, relocation or replacement of each Commercial Heating, Cooling Refrigeration Appliance. (includes all necessary electrical circuits, fixtures, switches receptacles, gas piping, vents or water piping.)												
	0 to 1,000,000 Btu	Each		**1.00**	**$156**	$59	**38%**	$156	100%	3	$ 177	$ 469	$ 469
M4	For the Installation, relocation or replacement of each Boiler. (Includes all necessary electrical circuits, receptacles, switches, gas piping and vents - but does not include motors identified in E6 of the schedule)												
	0 to 1,000,000 Btu	Each		**1.00**	**$156**	$59	**38%**	$156	100%	-	$ -	$ -	$ -
M5	For the installation, relocation or replacement of Other Fuel Burning Appliances not listed in this schedule. (includes all necessary gas piping, vents, electrical circuits receptacles and switches.) Residential Appliances (excluding Residential Furnace) Replacement)												
	Commercial Appliance										$ -		
	0 to 1,000,000 Btu	Each		**1.50**	**$235**	$59	**25%**	$235	100%	-	$ -	$ -	$ -
M6	For the installation, relocation or replacement of Fans, exhaust fans, or make-up air units connected to a duct system.												
	0 to 500 cfm	Each		**1.00**	**$156**	$48	**31%**	$156	100%	-	$ -	$ -	$ -
	501 to 5,000 cfm	Each		**1.25**	**$196**	$82	**42%**	$196	100%	-	$ -	$ -	$ -
	5,001cfm and Over	Each		**1.50**	**$235**	$117	**50%**	$235	100%	-	$ -	$ -	$ -
M7	For the installation, relocation or replacement of each or Air Handler Unit, Heating or Cooling Coil or Element in a duct system. (includes all necessary electrical circuits, receptacles or switches and piping for cooling media.)												
	0 to 400,000 Btu	Each		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
	401,000 Btu and Over	Each		**1.50**	**$235**	$25	**11%**	$235	100%	-	$ -	$ -	$ -

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				Bldg. FBHR =>	$ 156									
				Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis				
Fee No.	Fee Name	Unit	Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
M8	For the installation, relocation or replacement of each Radiant Heating Panel Radiator or Convertor (including all necessary piping)												
	1 to 5 Devices	Each		**1.00**	**$156**	$25	**16%**	$156	100%	-	$ -	$ -	$ -
	Each Additional 5 Devices	Each		**1.50**	**$235**	$3	**1%**	$235	100%	-	$ -	$ -	$ -
M9	For the installation, relocation or replacement of each Type I and Type II Commercial Range Hood and Exhaust Duct connected thereto. (includes shaft, electrical circuits receptacles, switches, exhaust fan motor and plan review)	Each		**1.50**	**$235**	$59	**25%**	$235	100%	-	$ -	$ -	$ -
M10	For the installation, relocation or replacement of each Masonry or Concrete Chimney. (includes plan review)	Each		**1.50**	**$235**	$59	**25%**	$235	100%	-	$ -	$ -	$ -
M11	For the installation, relocation or replacement of each factory-built fireplace (including factory-built chimney, framing, electrical circuits, receptacles, switches an gas line.)	Each		**1.50**	**$235**	$59	**25%**	$235	100%	-	$ -	$ -	$ -
XI. COPYING, PRINTING AND ARCHIVES		[x]											
X1	Photocopying of public documents:												
	8.5" x 14" paper or smaller	Per sheet				$0.10							
	11" x 17" paper	Per sheet				$0.15							
	Larger formats - outside vendor	Per sheet				Actual Cost + 10%							
X2	Printing of Electronic Medium												
	8.5" x 14" paper or smaller	Per sheet				$0.02							
	11" x 17" paper	Per sheet				$0.05							
	Plan Sheet - Full Size	Per sheet				$5.00 Plus $20.00 per hour							
X3	Microfilming/Digital Scanning- Permit Archiving												
	8.5" x 14" paper or smaller	Per sheet				$0.05							
	11" x 17" paper	Per sheet				$0.07							
	Plan Sheet - Full Size	Per sheet				$5.00 Plus $20.00 per hour							

Draft Copy - Do not Cite / Distribute

				Bldg. FBHR =>	$ 156								
				Activity Service Cost Analysis		Cost Recovery Analysis				Annual Cost Recovery Analysis			
Fee No.	Fee Name	Unit	Notes	Estimated Average Total Labor Time Per Unit (hours)	Cost of Service Per Activity	Current Fee	Existing Cost Recovery Percentage	Recommended Fee Level / Deposit	Recommended Cost Recovery Percentage	Estimated Volume of Activity (Performed)	Annual Estimated Revenues at Current Fee	Annual Estimated Revenues at Full Cost Recovery Fee	Annual Estimated Revenues at Recommended Fee
X4	Plan Submittal in Electronic Format - generating hard copies for Permit Issuance												
	8.5" x 14" paper or smaller	Per sheet				$0.05							
	11" x 17" paper	Per sheet				$0.07							
	Plan Sheet - Full Size	Per sheet				$5.00 Plus $20.00 per hour							
TOTAL BUILDING											**$ 142,010**	**$ 210,552**	**$ 209,791**

Notes

[1] Note Current fee amount may differ from adopted fee schedule due to changes in fee structure as a result of this Study

[2] Building Plan Check Fees require a Town Processing Fee plus the Actual Costs of Consultant review

APPENDIX B.1

Comparative Fee Survey – Planning Fees

City of Colma				Comparative Agencies				
Fee No.	**Fee Description**	**Fee Type / Unit**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
1.10.100	**Appeal and Re-consideration Fees**							
1.10.102	Filing fee for appeal from administrative decision	per request	$ 100	$ 100.00	Appeal of Planning Commission's Decision to City Council by: Applicant: $ 1,667 Adj Property Owner: $833 City Resident/HOA/All Others: $1,667	$ 362.00	$ 375.00	$ 510.00
1.10.104	Filing fee for Request for Reconsideration of City Council Decision	per request	$ 100					$ 790.00
1.10.120	**Public Records and Copying Fees**							
1.10.122	Document photocopying, in house							
a	8.5" x 14" or smaller	per page	$ 0.10	*no comparison available*	$ 0.10	Per page, no labor time allowed	8.5" x 11: $.25/blk, $1/color 8.5" x 14": $.50/blk, $1.50/color	Public Records: $.25/page All Other: $.15/page or Actual Cost
b	8.5" x 17"	per page	$ 0.15		$ 0.20		$1/blk, $2 color	
c	Plus hourly fee	per hour	$ 20	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
1.10.124	Document photocopying, outside	per hour	Actual Cost + $20 / hour	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
1.10.126	Audio cassette copy	per cassette	$ 20	*no comparison available*	Copy of CD/DVD External File: $13 Non-Existing File: $19 City Clerk Meeting: $27	$ 16.00	$ 15.00	
1.10.128	Videotape copy	per tape	$ 40	*no comparison available*		*no comparison available*	$ 15.00	*no comparison available*
1.10.200	**Land Use Development Processing Fees, Planning Services (Flat Fees)**							
1.10.202	Administrative Use Permit	per permit	$ 280	*no comparison available*	$ 950.00	*no comparison available*	$209/hr	*no comparison available*

City of Colma				Comparative Agencies				
Fee No.	**Fee Description**	**Fee Type / Unit**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
1.10.204	Design Review, Minor (New development or modifications to existing use < 1,000 sqft or under $1,000,000 value)	per project	$ 325	Committee Review: $5,420 W/ Concurrent Entitlement: $1,295 At Staff Level: $290	Single Family: $1,171 Multi-Family: $2,088 Commercial/Industrial: $2,511 Require Plng Comm: $2,381 Resubmitted: $2,424	New Const Res: $1,669 New Const Non-Res/Mixed: $2,786 Remodeling: $1,557 Extension: $1,285	$209/hr	*no comparison available*
1.10.205	Temporary Banner Permit	per permit	$ 50	*no comparison available*	*no comparison available*	*no comparison available*	$ 105.00	*no comparison available*
1.10.206	Sign Permit	per permit	$ 382	*no comparison available*	*no comparison available*	w/ hearing: $735 w/o hearing: $309	*no comparison available*	*no comparison available*
1.10.208	Sign Review	per project	$ 102	*no comparison available*	Up to 25 sq.ft.: $167 Up to 100 sq. ft.: $833 Master Sign: $1,667	*no comparison available*	*no comparison available*	*no comparison available*
1.10.209	Tier 1 Temporary Use Permit	per permit	$ 50	*no comparison available*	$ 1,591.00	$ 1,060.00	*no comparison available*	Seasonal Sales: $280 Parking Lot/Site Event: $790 Other: $450
1.10.210	Tier 2 Temporary Use Permit	per permit	$ 280					
1.10.212	Tree removal permit			*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
	Minor - Up to 5 trees	per permit	$ 474					
	Major - 6+ trees	deposit	$ 474					
1.10.214	Use Permit, Home Occupation	per permit	$ 50	$ 75.00	*no comparison available*	$ 35.00	$ 105.00	*no comparison available*
1.10.216	Use Permit, Minor (New development or modifications to existing use > 2,000 sq ft)	per permit	$ 905	T.I. or Concurrent Entitlement: $2,465 No Concurrent Entitlement: $4,960	CUP: $3,344 - $4,336 depending on type Minor Use: $1,667 - $1,836 depending on type	$1,013 - $2,512 depending on type	$209/hr	$1,040 - $2,445 depending on type
1.10.218	Zoning Clearance for Retail Merchandising Unit	per project	$ 184	*no comparison available*	$ 167.00	*no comparison available*	*no comparison available*	*no comparison available*
new	Special Event Permit	per permit	new	*no comparison available*	*no comparison available*	*no comparison available*	$ 627.00	$ 350.00

City of Colma				Comparative Agencies				
Fee No.	**Fee Description**	**Fee Type / Unit**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
new	Landscape Plan Check Water Use	per project	new	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
new	Zoning Letter	per project	new	$ 350.00	$ 833.00	*no comparison available*	$ 105.00	$ 400.00
new	Address Assignment	per project	new	*no comparison available*	*no comparison available*	*no comparison available*	$ 209.00	*no comparison available*
new	Accessory Dwelling Unit	per project	new	*no comparison available*	*no comparison available*	$ 300.00	*no comparison available*	$ 925.00
1.10.220	**Land Use Development Processing Fees, Planning Services (Deposit Against Actual Cost)**							
1.10.222	Design Review, Major (New development or modifications to existing use > 1,000 sq ft)	deposit	$ 4,190	Committee Review: $5,420 W/ Concurrent Entitlement: $1,295 At Staff Level: $290	Single Family: $1,171 Multi-Family: $2,088 Commercial/Industrial: $2,511 Require Plng Comm: $2,381 Resubmitted: $2,424	New Const Res: $1,669 New Const Non-Res/Mixed: $2,786 Remodeling: $1,557 Extension: $1,285	$209/hr	*no comparison available*
1.10.224	General Plan Amendment	deposit	$ 6,730	$15,000 Deposit + $165/hr	$ 9,508.00	$ 1,603.00	$209/hr	Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit Required
1.10.226	Lot Line Adjustment	deposit	$ 2,540	$ 4,645.00	*no comparison available*	$ 924.00	*no comparison available*	$1,050 + Cost of Contract Engineer
1.10.228	Parcel Map	per map, deposit	$ 3,950	see subdivision map	$ 167.00	$ 2,776.00	$209/hr	Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit Required
1.10.230	Planned Development Plan	deposit	$ 4,880	Re-zoning Planned Development: $15,000 deposit	$ 9,511.00	Deposit Required	$209/hr	Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit Required

City of Colma				Comparative Agencies				
Fee No.	**Fee Description**	**Fee Type / Unit**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
1.10.232	Subdivision Map	per map, deposit	$ 5,465	Major Subdivision (5+ lots): $4,750 + $165/lot Minor Subdivision (1-4 lots): $4,750	$ 833.00	$ 2,776.00		Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit Required
new	Preliminary Energy Stormwater Review Deposit	deposit	n/a	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
new	Master Sign Program	deposit	n/a	no comparison available	no comparison available	$ 117.00	no comparison available	no comparison available
1.10.234	Use Permit, Major (New development or modifications to existing use > 2,000 sq ft)	deposit	$ 4,245	T.I. or Concurrent Entitlement: $2,465 No Concurrent Entitlement: $4,960	CUP: $3,344 - $4,336 depending on type Minor Use: $1,667 - $1,836 depending on type	$1,013 - $2,512 depending on type		$1,040 - $2,445 depending on type
1.10.238	Vacation or abandonment of Public Easement, including Street Easement	deposit	$ 5,705	*no comparison available*	*no comparison available*	*no comparison available*	$209/hr	*no comparison available*
1.10.240	Variance to Zoning Regulation	deposit	$ 4,720	$ 4,845.00	$ 4,166.00	New Const: $1,258 Remodel: $943 - $1,258 depending on type	$209/hr	Variance: $1,975 With Other Application: $1,045
1.10.242	Zoning Reclassification	deposit	$ 5,245	PD: $15,000 Deposit + $165/hr All Others: $10,000 Deposit + $165/hr	$ 8,333.00	*no comparison available*	$209/hr	Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit Required
1.10.244	City Attorney Time (the deposit is required whenever City Attorney time will be spent in processing an application, and shall be in excess of any other deposit or fee required, with the deposit determined by the level of CEQA review required for the application)							
a	CEQA Exemptions not requiring a Major Permit or Major Design Review application - under 2,000 sq ft	deposit	$ 250	$ 95.00	$ 167.00	No fee	No fee if project will have no effect on fish and wildlife	*no comparison available*
b	CEQA Exemption requiring a Major Permit or Major Design Review application - 2,000 square feet and over	deposit	$ 1,500					

City of Colma				Comparative Agencies				
Fee No.	**Fee Description**	**Fee Type / Unit**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
c	CEQA Negative Declarations, Mitigated Negative Declarations	deposit	$ 2,000	Neg Declaration: $2,520 or actual cost + 25% overhead Mit Neg Declaration: $2,995 or actual cost + 25% overhead	$ 5,000.00	$ 2,456.00	$ 2,280.75	Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit Required
d	Environmental Impact Reports	deposit	$ 4,000	Full Actual Cost + 25% Overhead + $50 Posting Fee	$ 9,999.00	Consultant Cost + 10%	$3,168 Contract amount + 10%	Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit
new	Mitigation Monitoring	deposit	new	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
new	Business Registration Application Processing	deposit	$ 29	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
Support to Building Fees								
new	Building Permit, Residential Interior	deposit	new	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
new	Building Permit, Residential Addition	deposit	new					
new	Building Permit, Commercial T.I.	deposit	new					
new	Building Permit, Commercial Addition	deposit	new					
new	Building Permit, Commercial or Multi-Residential	deposit	new					

APPENDIX B.2

Comparative Fee Survey – Engineering Fees

Town of Colma			Comparative Agencies				
Fee No.	**Fee Description**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
1.10.400	**Land Use Development Processing Fees, Public Works and Engineering Services**						
1.10.402	Grading Plan Check 50 to 2,000 CY						
a	First 50 CY	$ 80	1,000 c.y. or less - $160 + $80/lot				
b	Each additional 100 CY	$ 20	1,001-10,000 c.y. - $880 + $160/lot				
1.10.404	Grading Plan Check over 2,000 CY		10,001-100,000 c.y. - $2,320 + $64/lot				
a	First 2,000 CY	$ 400		50 cubic yards or less: $294	0-5 c.y. - No permit required		
b	Each additional 100CY	$ 2	100,001+ c.y. - $8,080 + $48/lot				
				51-1,000: $588	6-50 c.y. - $368		
1.10.406	Grading Permit 50 to 2,000 CY			1,001-10,000: $1,175	51-100 c.y. - $736		Permit Filing: $109
a	First 50 CY	$ 130		10,001-100,000: $1,469 + $8 each add'l 10,000 c.y.	101-1,000 c.y. - $13,199*	*no comparison available*	Plan checking/Engineering Review/Inspection Staff time charged at the hourly rate plus actual cost of third party services.
b	Each additional 100 CY	$ 20	1,000 c.y. or less - $320 + $160/lot	100,001-200,000: $1,542 + $7 each add'l 10,000 c.y.	1,001-10,000 c.y. - $19,803*		
			1,001-10,000 c.y. - $1,760 + $320/lot	200,001+: $1,616 + $81 each add'l 10,000 c.y.	10,001+ c.y. - Actual cost w/ Force Account (min $10,000)		
1.10.408	Grading Permit over 2,000 CY		10,001-100,000 c.y. - $4,6400 + $128/lot		* - Or create force account and billed on actual time		
a	First 2,000 CY	$ 530	100,001+ c.y. - $16,160 + $96/lot				
b	Each additional 100CY	$ 7.50					

	Town of Colma		Comparative Agencies				
Fee No.	**Fee Description**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
1.10.410	Improvement Plan Checking, Contracts of $10,000 or less						
	Per Project	$ 250	$160 + $160/lot	$ 588			$ 10
1.10.412	Improvement Plan Checking, Contracts between $10,000 and $100,000						
a	Base fee at $10,000	$ 500	$160 + $160/lot	$ 588			$ 10
b	Each additional $1,000 of contract cost	$ 35		$ 6			$ 1
1.10.414	Improvement Plan Checking, Contracts between $100,000 and $500,000						
a	Base fee at $100,000	$ 3,650	$3,360 + 120/lot	$ 1,175		$209/hr	$ 100
b	Each additional $1,000 of contract cost	$ 20		$ 22			$ 1
new	Improvement Plan Checking, Contracts more than $500,000						
a	Base fee at $500,000	$ 13,650	$12,960 + $80/lot	$ 5,876			$ 500
b	Each additional $1,000 of contract cost	$ 20		$ 12			$ 1
new	Improvement Inspection, Contracts of $10,000 or less				*no comparison available*		
	Per Project	new	$320 + $320/lot	$ 441			
new	Improvement Inspection, Contracts between $10,000 and $100,000						
a	Base fee at $10,000	new	$320 + $320/lot	$ 441			
b	Each additional $1,000 of contract cost	new		$ 4			
						$2,090 deposit + $209/hr	$138/hr
new	Improvement Inspection, Contracts between $100,000 and $500,000						
a	Base fee at $100,000	new	$6,720 + $240/lot	$ 661			
b	Each additional $1,000 of contract cost	new		$ 1			
new	Improvement Inspection, Contracts more than $500,000						
a	Base fee at $500,000	new	$25,920 + $160/lot	$ 1,469			
b	Each additional $1,000 of contract cost	new		$ 3			

	Town of Colma		Comparative Agencies				
Fee No.	**Fee Description**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
1.10.322	Parcel or Final Map Subdividing Property (4 lots)	$ 600	$ 3,200	$ 314	$ 6,409	$2,090 deposit + $209/hr	Applicants responsible for Actual Cost of Staff Time and Consultant Time - Deposit Required
a	Each additional lot	$ -	$ 80	$ 25	$ 500		
b	Plus recording costs (as established by County)	Actual Cost					
1.10.400	**Public Property and Public Rights-Of-Way**						
1.10.402	Encroachment Permit, single residential lot driveway	$ 60	$160/hr - $1,600 + per lot fee depending on type	$314 (covers 2 inspections) $147/visit beyond first 2 inspections	$92/hr + actual cost of inspection $500 minimum	$209/hr	Minor: $354 Regular: $296
1.10.406	Encroachment Permit, single residential lot utility cut by contractor in asphalt street or concrete sidewalk	$ 60					
1.10.408	Encroachment Permit, single residential lot utility cut by contractor in an interlocking concrete paver surfaced street or sidewalk	$ 150					
1.10.410	Encroachment Permit, fence and/or landscaping in right-of-way (Both may be covered by same permit)	n/a					
1.10.412	Encroachment Permit, Utility company						
a.	Option 1 - Blanket Permit						
	Annual Processing Fee	$ 500					
	Minimum Deposit Amount	n/a					
1.10.414	Failure to give required notice under a Utility Company Annual Encroachment Permit						
	Per site, after second occurrence in 12-month period	$ 100					
1.10.416	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is less than $10,000						
	Per Project	$ 140					
1.10.418	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is between $10,000 and $100,000						
a	Base fee at $10,000	$ 700					
b	Each additional $1,000 of contract cost	$ 50					
1.10.418	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is between $100,000 and $500,000						
a	Base fee at $100,000	$ 5,200					
b	Each additional $1,000 of contract cost	$ 30					
1.10.420	Encroachment Permit, for work not included in fixed fee schedules where the value of the contract is over $500,000						
a	Base fee at $500,000	$ 17,200					
b	Each additional $1,000 of contract cost	$ 30					

Town of Colma
Engineering - User Fee Study Fiscal Year 2019
Comparison of Charges for Fee Related Activities and Services

Town of Colma			Comparative Agencies				
Fee No.	**Fee Description**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
new	**Stormwater Fees**						
	Stormwater Management - Post construction	new	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
	Stormwater Regulatory Inspection						
a	C3 - Stormwater Mgmt. Inspection of privately maintained post construction treatment devices	new					
b	C4 - Stormwater Permit Commercial Inspection	new					
c	Each Reinspection	new					

APPENDIX B.3

Comparative Fee Survey – Building Fees

Town of Colma **Appendix B.3**

Community Development Department - Building - User Fee Study Fiscal Year 2019

Comparison of Charges for Fee Related Activities and Services

Town of Colma			Comparative Agencies				
Fee No.	Fee Description	Current Fee	Daly City	City of South San Francisco	City of Brisbane	City of Pacifica	City of San Bruno
1	**New Commercial Retail, trades included, 20,000 s.f. $1,400,000 valuation**						
	a. Plan Check Fee	$ 3,206.00	$ 4,752.09	$ 7,350.00	$ 9,960.00	$ 6,234.80	$ 11,075.00
	b. Building Permit/Inspection Fee	$ 5,086.00	$ 7,310.91	$ 9,728.00	$ 16,600.00	$ 9,592.00	
2	**Commercial Tenant Improvement, non-structural, 2,500 s.f. $150,000 valuation**						
	a. Plan Check Fee	$ 799.00	$ 843.97	$ 5,675.00	$ 5,250.00	$ 1,136.20	$ 2,021.00
	b. Building Permit/Inspection Fee	$ 1,249.00	$ 1,298.41	$ 2,351.50	$ 8,750.00	$ 1,748.00	
3	**New Custom Single Family Dwelling, 3,000 s.f. $400,000 valuation**						
	a. Plan Check Fee	$ 1,549.00	$ 1,781.59	$ 2,647.00	$ 1,110.00	$ 2,273.70	$ 4,371.00
	b. Building Permit/Inspection Fee	$ 2,499.00	$ 2,740.91	$ 4,379.00	$ 2,220.00	$ 3,498.00	
4	**Residential Addition, 450 s.f. $75,000 valuation**						
	a. Plan Check Fee	$ 341.00	$ 539.12	$ 921.25	$ 482.00	$ 735.80	$ 1,282.75
	b. Building Permit/Inspection Fee	$ 525.00	$ 829.41	$ 1,621.25	$ 964.00	$ 1,132.00	
5	**Residential Remodel (typical kitchen or bathroom project), 200 s.f. $15,000 valuation**						
	a. Plan Check Fee	$ 149.00	$ 158.90	$ 236.09	$ 147.00	$ 237.90	$ 396.95
	b. Building Permit/Inspection Fee	$ 230.00	$ 244.46	$ 413.50	$ 294.00	$ 366.00	

Town of Colma			Comparative Agencies				
Fee No.	**Fee Description**	**Current Fee**	**Daly City**	**City of South San Francisco**	**City of Brisbane**	**City of Pacifica**	**City of San Bruno**
6	**Re-roof Permit**	$93	$ 300.00	*no comparison available*	$35/1,000 sq.ft.	*no comparison available*	*no comparison available*
7	**Window / Door Replacement**	$ 175.00	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*	*no comparison available*
8	**Water Heater Permit**	$ 36.00	$ 82.00	*no comparison available*	*no comparison available*	$ 16	$ 105
9	**Electrical Service Upgrade Permit**	$ 32.00	$ 75.00	*no comparison available*	*no comparison available*	$ 44	$ 145
10	**HVAC Permit**	$ 55.00	$ 75.00	*no comparison available*	*no comparison available*	$ 25	$ 55
11	**Fully burdened hourly rate**	PC - 75; Insp. $90	$ 150.00	$ 108	*no comparison available*	PC - $209; INSP $126	$ 125

TOWN OF COLMA
COLMA
AUGUST 5, 1924
CALIFORNIA

Attachment B

Town of Colma

User Fee Study

Final Report Presentation

Town of Colma - City Council

November 28, 2018

NBS
helping communities
fund tomorrow

Presentation Outline

1	Project Purpose and Scope
2	Methodology and Approach
3	Summary of Findings
4	Cost Recovery Policy and Procedure

Project Purpose

User Fee Study

Defines full cost recovery potential of individually-based services

User Fees


YES
Cost Recovery Opportunities
YES
Revenues Implemented by City Council
NO
Taxes, Fines, Development Impact Fees, Utility Rates, etc.

Project Scope

Divisions Included:

Key Issues Framing This Study

1	Compliance with State Laws/Statutes
2	Defensible Methodology
3	Reasonable Cost of Providing Services
4	Cost Recovery Policy and Procedure

User Fee Guidance

- **Proposition 26**

  - Article XIIIC§1(e)(3) Inspections and Regulatory Permits are exempt from the definition of a *TAX* …however are still limited to the local government's reasonable costs.

- **CA Government Code §66014(a)**

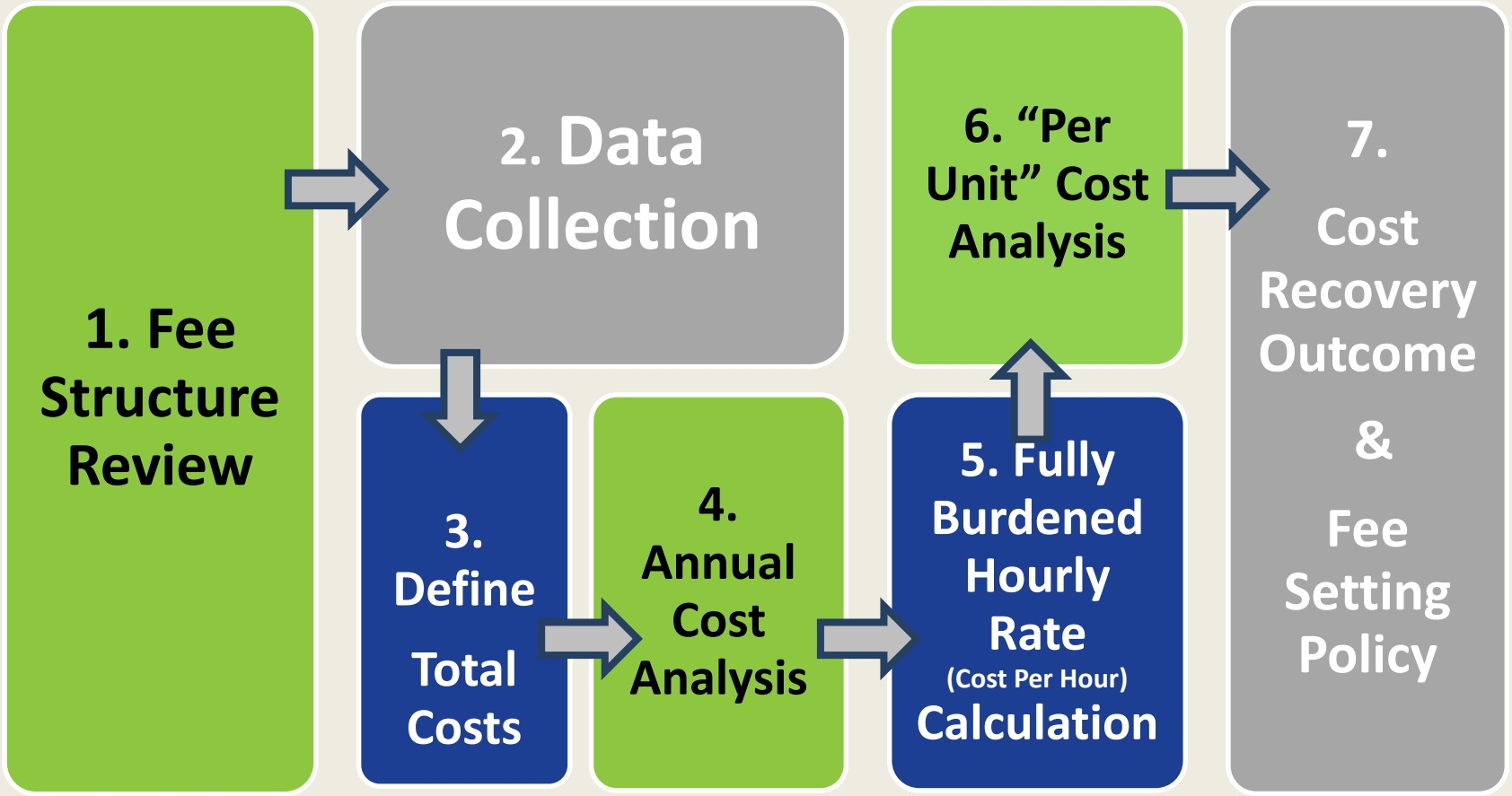
  - "Those fees may not exceed the *estimated reasonable cost* of providing the service for which the fee is charged"

  - Must Pair Revenues to Costs –

    What are the Costs?

Project Goals

User Fee Study Project Approach



Fee Structure Review

Flat Fees

Variable Fees Based on Project Characteristics

Variable Fees Based on Actual Time Tracked (with Deposits Managed as Needed)

Data Collection

1	FY 18/19 Adopted Budget and Staffing
2	Workload From Last Complete FY
3	Time Estimates per Fee Item
4	Current / Recommended Fees

Defining Total Costs

Direct

- Salaries and benefits
- Services and supplies

Indirect

- Program, Division, Departmental and Agency Wide

Support

- Review required from internal departments for approval

Systems and Maintenance

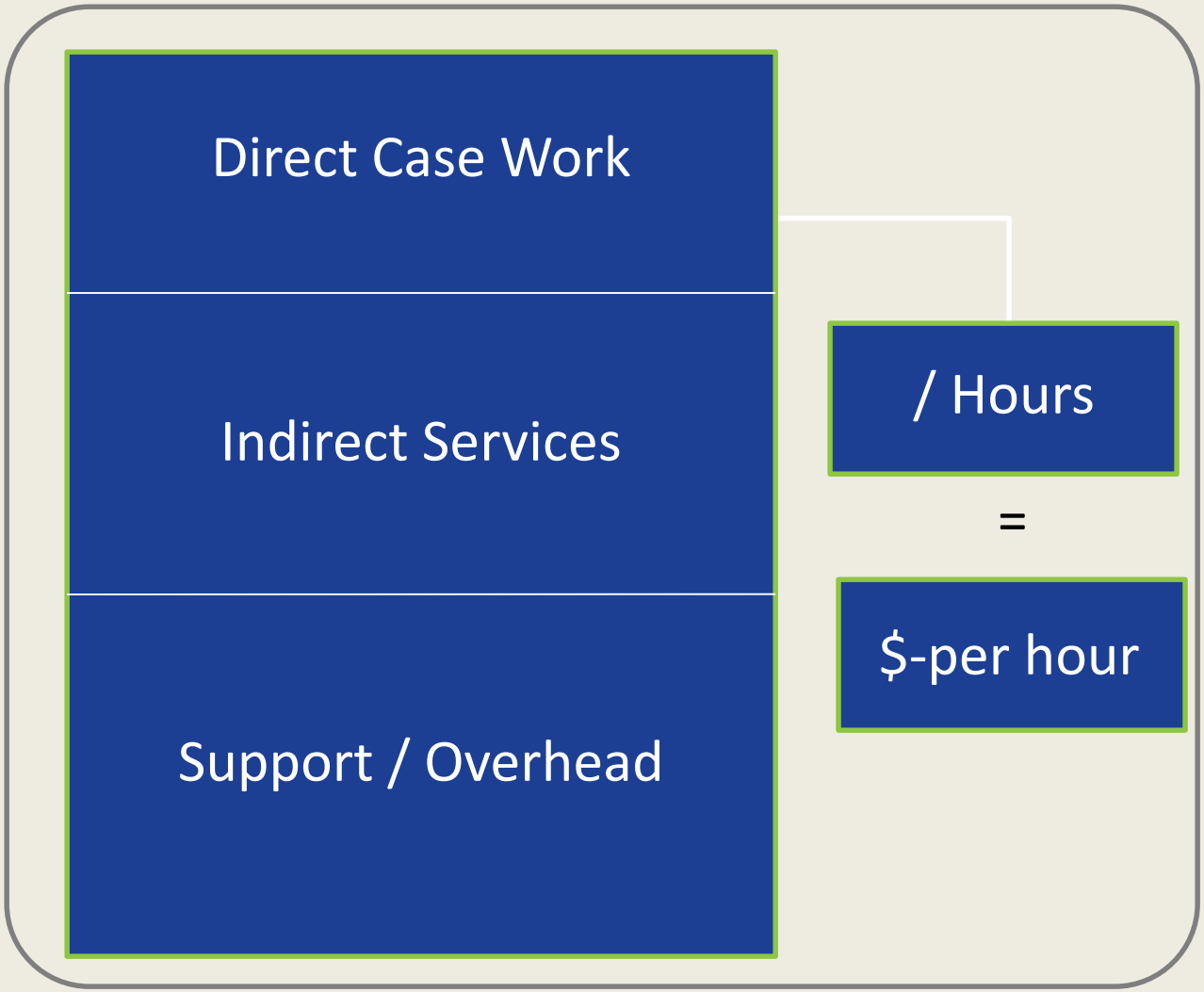
- Technology needs, General Plan Update/Maintenance

Annual Cost Analysis

Estimated and/or Tracked Efforts

Direct Services	Indirect / Other Services	Support / Overhead
Intake and Processing	Public Information and Assistance	Training
Plan Review – Initial and Iterations	Code, Policy, and Procedure Improvement	Divisional Administration
Inspection – Initial and Re-inspections	Code Enforcement	Departmental Administration
Permit Issuance		Support / Indirect Services
Commission Review		
Project Close Out		

Fully Burdened Hourly Rate Calculation

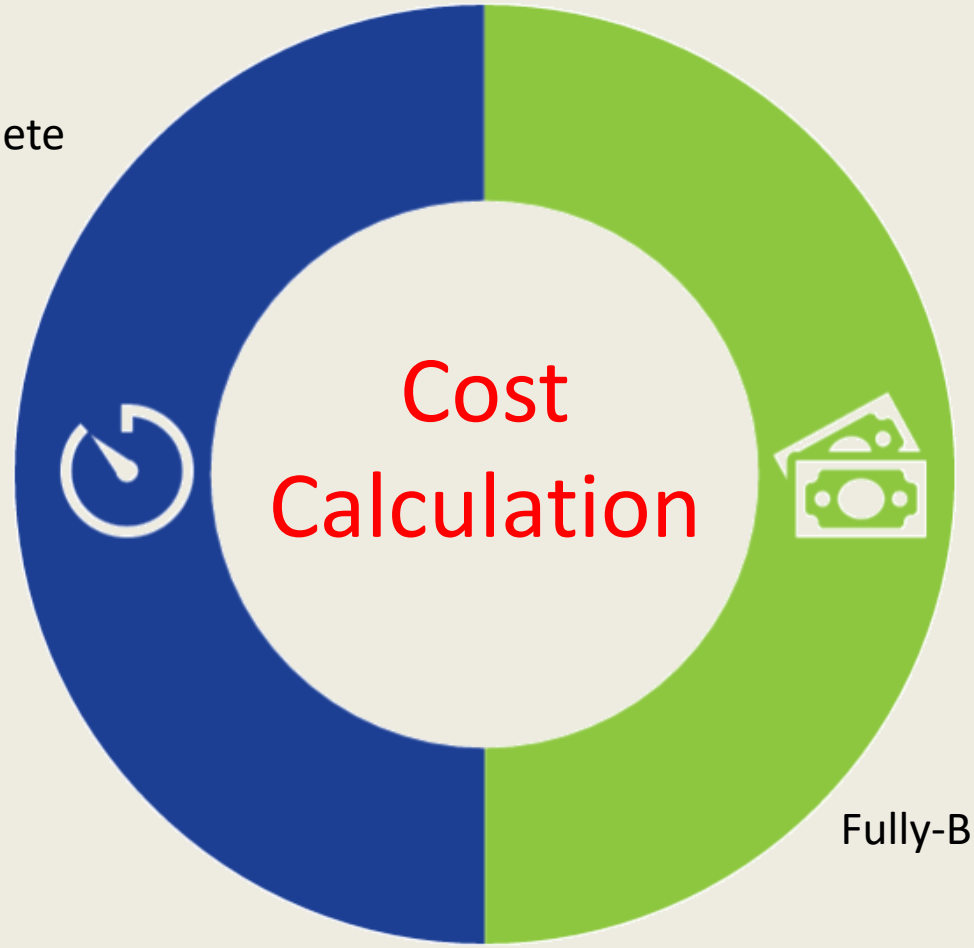


Hourly Rate Outcomes

- ✓ Planning $161
- ✓ Engineering $209
- ✓ Building $156

Per Unit Cost Analysis

Time to Complete

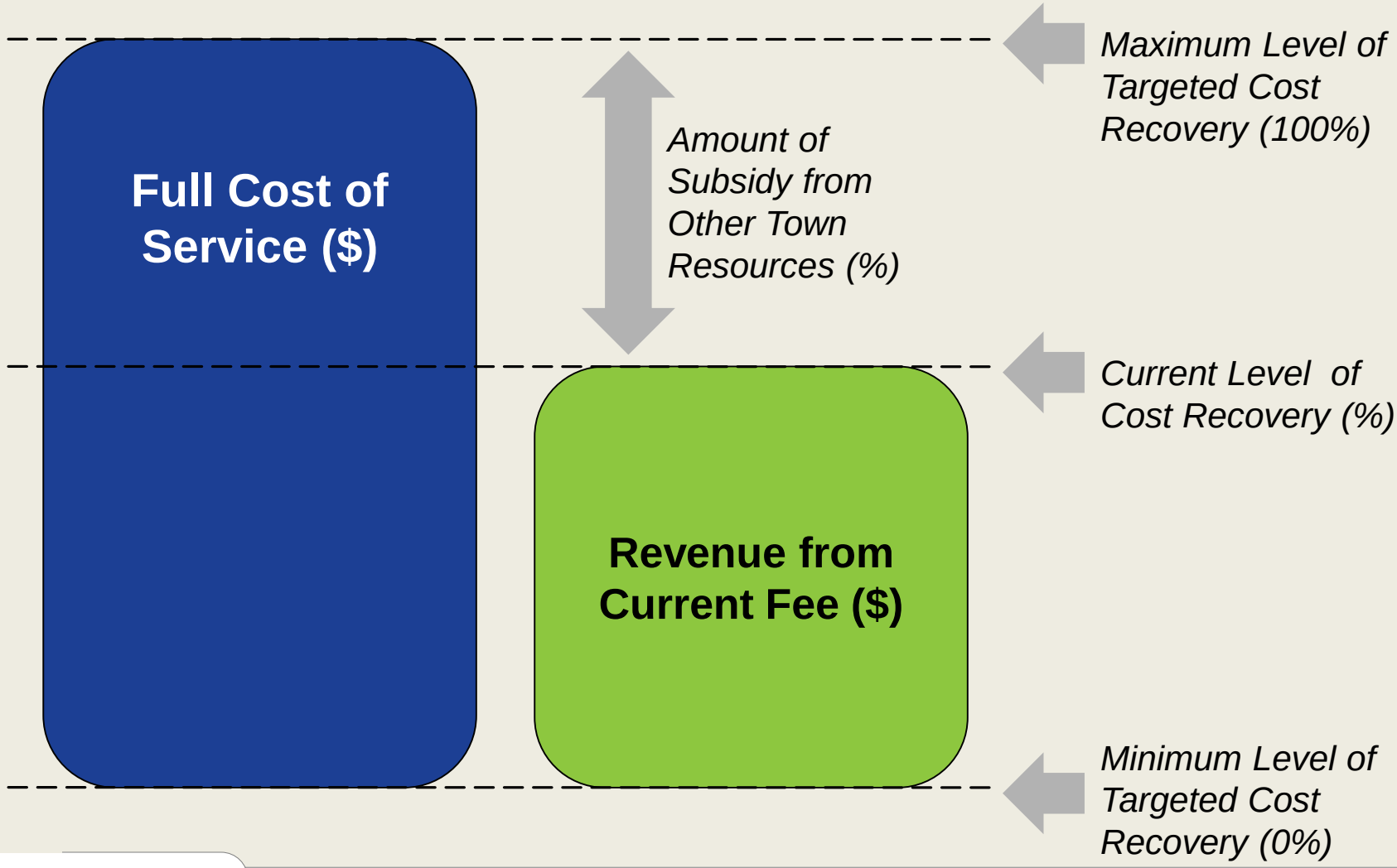


Fully-Burdened Hourly Rate

Fee Study Methodology - Summary Results

Division	Estimated Annual Current Fee Revenue	Estimated Annual Full Cost Recovery Fee Revenue	Annual Cost Recovery Surplus / (Deficit)	Current Cost Recovery %	Estimated Annual Recommended Fee Revenue	Recommended Cost Recovery %
Planning	$ 101,971	$ 213,871	$ (111,900)	47.68%	$ 212,964	99.58%
Engineering	57,728	145,449	(87,722)	39.69%	145,447	100.00%
Building	142,010	210,552	(68,542)	67.45%	209,791	99.64%
Total	**$ 301,709**	**$ 569,873**	**$ (268,164)**	**52.94%**	**$ 568,202**	**99.71%**

Fee Study Methodology - Cost vs. Price



Cost Recovery Policy - Decision Matrix

PUBLIC BENEFIT	BLENDED BENEFIT	PRIVATE BENEFIT
• Police Emergency Response • Park Maintenance	• Library/Recreation / Community Services • Fire Suppression/ Prevention	• Planning Entitlements • Engineering Permits • Building Permits • Police citation sign-off

TAX FUNDED → FEE FUNDED

Benefits of Realigning User Fees

1	Reduce General Fund Subsidy
2	Free Up Resources for Reduced or Eliminated Services
3	Fund Departments Efficiently
4	Set Realistic and Local Expectations for Cost Recovery

Fee Study Best Management Practices

1	Comprehensive Fee Study Every 3 - 5 years
2	More Frequent Study During Economic or Operational Fluctuations
3	Annual Increase Mechanism
4	Combined Municipal Fee Schedule
5	Established and Documented Cost Recovery Policy

Questions and Comments

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